

INTROVERTED ARCHITECTURE AND THE HUMAN DIMENSION: 1
The conflict of placemaking in the disconnected urban fabric of Doha, Qatar

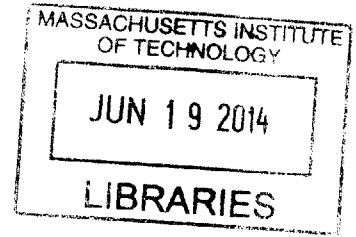
by Farrah Sabouni

Bachelor of Architecture | University of Houston | Houston, Texas | 2008

Submitted to the Department of Urban Studies and Planning and the Department of Architecture in partial fulfillment of the requirements for the degrees of

Master in City Planning and Master of Science in Architecture Studies

at the
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ABSTRACT

Doha, the capital city of Qatar, has become a metropolis of disconnected inward-facing mega-projects with no regard to the remaining fabric of the city. This can be owed to the relatively short urbanization period that the country has undergone, with its heavy reliance on international firms. The consequence is a city that has lost much of its historic core and vernacular architecture, and is defined by the large development projects that dot the capital. These mega-projects are treated as self-enclosed cities within the larger context of Doha. They are internally facing, turning their back to the city as a whole. The individual developments may be deemed successful, however not connecting to and addressing the larger fabric of the city negatively impacts Doha's urban environment. While proper design can address the disruptive nature of towers and mega-projects in the city fabric, the issue needs to be acknowledged at a larger scale. Unless there are regulations in place that enforce desired urban design qualities, the city as a whole will fall victim to the whims of each individual designer, which is the case in West Bay, the Central Business District of Doha. This project aims to demonstrate the insufficient built environment within the West Bay site, and note how the lack of regulations have created forms that turn their back to the city, producing an uninviting urban fabric with no regard to the human dimension. The realities of the planning process in Qatar are examined, along with comparative cases and literature on urban design, in order to propose recommendations for an alternative to the urbanism that currently exists.

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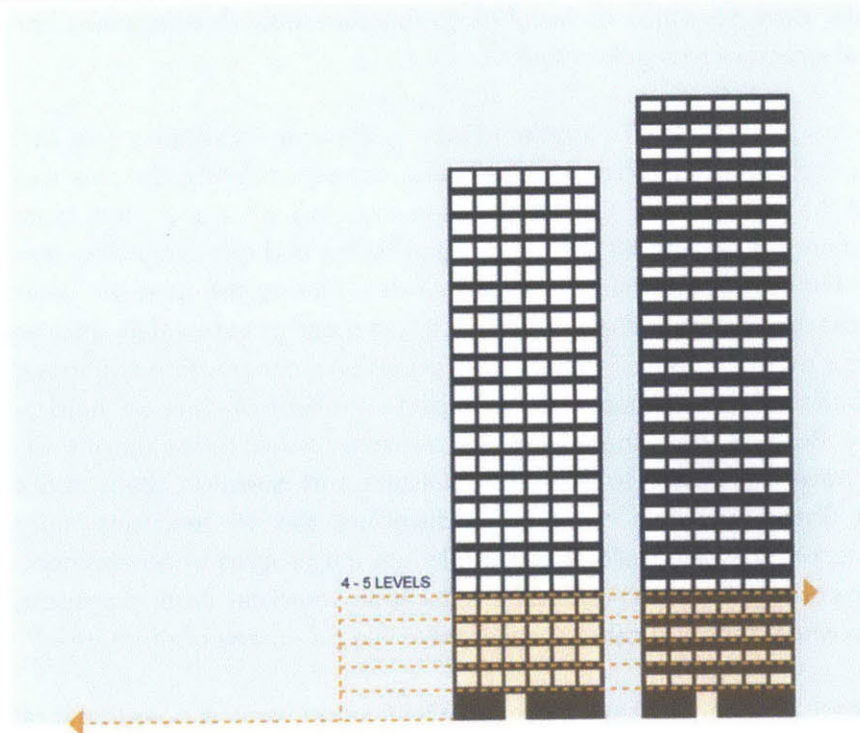
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CHAPTER 1: INTRODUCTION

The HUMAN DIMENSION refers to “the city as the people who will use city space experience it at eye level. It is not the large lines of the city or spectacular placement of buildings that are interesting here, but rather the quality of the human landscape as intuited by people walking and staying in the city.”¹

- Jan Gehl | *Cities for People*

FIGURE 1.1: Human Dimension of the City



The human dimension in Doha, Qatar is lacking as the city is planned for the car and the car only. Large development projects provide a relief from the car-centered design that is prevalent in the city, but do so at the expense of the greater context. This chapter provides an introduction to the evolution of the built environment in Doha, leading into the main argument of this thesis, that unless there are enforceable regulations that address the human dimension, the city will be at the mercy of individual designers, resulting in a deficient urban environment, which is demonstrated in the site of analysis in West Bay, Doha’s Central Business District.

¹ Gehl, *Cities for People*, 195.

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A. The Urban Fabric, from Traditional to Disconnected

Urbanization in Qatar is a 20th century phenomenon that ramped up significantly in the latter half of the century due to an increase in wealth from oil and natural gas.² Though oil was discovered in the country in 1939, its export was postponed almost a decade due to the impact of World War II. Although money from oil had begun to trickle in, rapid urbanization occurred only after Sheikh Khalifa bin Hamad al-Thani took power in 1972, a year after Qatar gained independence from Britain, which is the same year Qatar began extracting oil in large quantity.³ Prior to the 1970s, the ruler was directly involved in the physical planning of the country. During that time, there was no governance structure in place. John Moorehead's 1977 book on his personal observations in Qatar provides valuable insight into this period of development and the country's shift from a tribal structure to a government.

"One of the more striking innovations in modern Qatar is the ever-increasing role that the government plays in the lives of ordinary people and, correspondingly, the role that they play in the life of the government. Qataris are used to being left alone. Until quite recently the average man got on with his fishing or pearl diving and left everything else to the ruling Al Thani family. Skeikh Khalifa changed all that. During the past ten years he has transformed the government from a patriarchal, almost private affair into an instrument for running a modern state. The April 1970 provisional constitution confirmed the Al Thanis as hereditary rulers, and nearly all the important offices of state are held by members of the family. But nowadays there is also an advisory council made up of thirty leading citizens who have the power to summon ministers and question them about their policies. It was Sheikh Khalifa's decision to distribute the oil revenues more equitably through the country, which really drew people into the process of government. The state suddenly became the great provider. Education, medical care, transport, communications and a whole range of other services were laid on - many of them free."⁴

After Sheikh Khalifa bin Hamad al-Thani became the ruler, Qatar underwent a governmental restructuring. With the adoption of a new government structure, problems arose with gaps and overlaps of authority. Author Khalid Adham notes that the number of authorities who had jurisdiction in the built environment led to coordination problems, which were even further complicated when the "Emiri Diwan (the executive offices of the Emir) occasionally took control of particular projects especially high-profile ones, overriding the jurisdiction of the ministries."⁵ These complications highlight the friction between the newly adopted government structure

² Nagy, "Dressing Up Downtown," 125.

³ Adham, "Rediscovering the Island: Doha's Urbanity from Pearls to Spectacle," 225.

⁴ Moorehead, *In Defiance of the Elements a Personal View of Qatar*, 107.

⁵ Adham, "Rediscovering the Island: Doha's Urbanity from Pearls to Spectacle," 227-228.

and the traditional decision making system in Qatar, indicating that while the intent was to transition from one system to the other, the adopted government structure did not replace the traditional system. The existence of both systems is an issue that still persists to date, and will be discussed in further detail in Chapter Five.

Alongside the espousal of a new government structure, plans were implemented to modernize and direct the growth that was occurring in the capital city of Doha. The factors responsible for the city's rapid urbanization and increasing urban population include both economic and demographic aspects. The demographic factor includes an internal and external component. With the standard of living improving, Qatar saw a higher natural growth rate due to a decline in the mortality rate and an increase in the fertility rate.⁶ Migration to Doha increased as people flowed in hoping for work.⁷ The migrants included both Qatari and non-Qatari individuals. In terms of economic factors, Qatar saw an increase in revenues from oil and later natural gas, as well as an increase in trade and industry.⁸

The early periods of development in the 1970s were predominantly centered on projects geared to modernize the country.⁹ Similar to the other Gulf Countries, when Qatar began to realize its wealth, there were no native designers or planners to aid in the growth that followed. Instead the country had to hire international firms to create plans to direct the expansion that had begun to take place.¹⁰ The first master plan for Doha came in 1972 from Llewellyn-Davies, a British-based planning firm. One of the moves of the plan was to reclaim land from the shore to allow the government to possess a large parcel of land for future development.¹¹ This move was deemed necessary as land speculation had led to higher land values, which resulted in less people willing to sell their land. Reclaiming land from the sea was a more economically sound option than attempting to purchase land to piece together a large enough parcel for large scale development projects.¹² The reclaimed land also served to enable the Emiri Diwan to create a new image for Doha by creating a more scenic cove with prime waterfront properties.¹³

The Llewellyn-Davies plan also put into place five rings of unequal distance around the city. They represent of the historical development of the city since the 1950s.¹⁴ The rings, shown in

⁶ Al-Buainain, "Urbanisation in Qatar," 81–82.

⁷ Nagy, "Dressing Up Downtown," 128.

⁸ Al-Buainain, "Urbanisation in Qatar," 90.

⁹ Cadène and Dumortier, *Atlas of the Gulf States*, 62.

¹⁰ Nagy, "Dressing Up Downtown," 130–131.

¹¹ Adham, "Rediscovering the Island: Doha's Urbanity from Pearls to Spectacle," 231.

¹² Moorehead, *In Defiance of the Elements a Personal View of Qatar*, 86.

¹³ Nagy, "Dressing Up Downtown," 138.

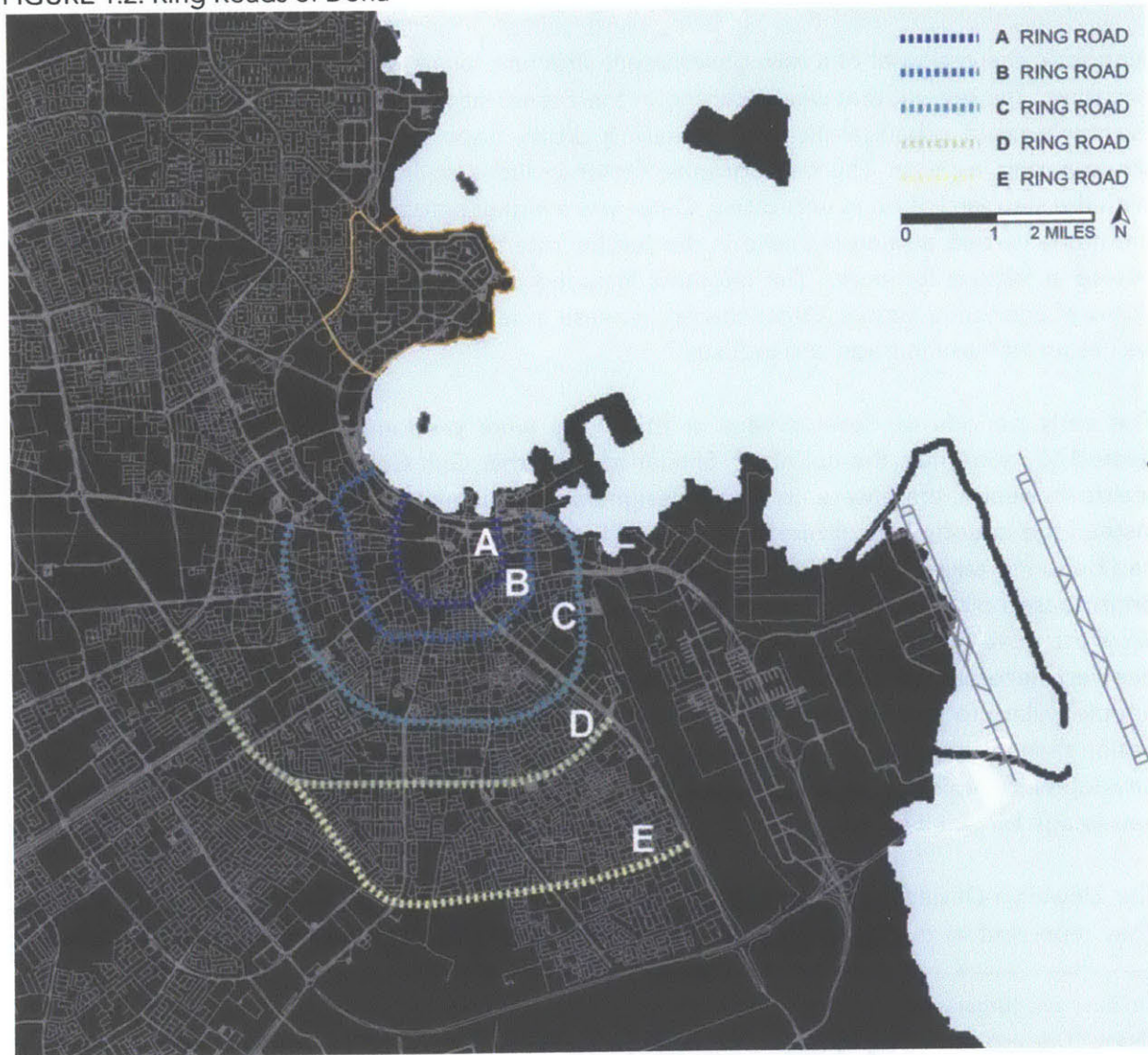
¹⁴ Rizzo, "Metro Doha," 537.

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Figure 1.2, were used by planning authorities in the 1970s and are used to this day as key circulation paths through the city.¹⁵

FIGURE 1.2: Ring Roads of Doha



Al-Buainain, who wrote his doctoral thesis on urbanization in Qatar, describes the central government's policies during the 1970s, which allocated large funds for infrastructure in major urban centers. The introduction of various public policies that favored Doha led to unbalanced development in the country, as all the funds and subsequently the developments were centered

¹⁵ Al-Buainain, "Urbanisation in Qatar," 182–183.

on the capital city.¹⁶ Al-Buainain goes on to describe the number of planning studies that were developed by many renowned international planning firms in the 25 years between 1972 and 1997, starting with Llewellyn-Davies in 1972 and ending with Louis Berger International in 1997, who carried out a plan for the entire country with HOK.¹⁷ While these plans were not fully realized, they each addressed different issues that the city and the country were facing in trying to direct growth. "The introduction and development of modern infrastructure [had] led to a rapid transformation process in most oil cities, [Doha included,] wherein the old dense town model with its clearly delineated boundaries was replaced by a new ever expanding agglomeration of peripheries and outskirts."¹⁸ With the accumulation of multiple plans that aimed to direct growth, there is a notable lack of plan adoption and implementation.¹⁹ This is not a matter unique to Qatar, but it does raise an issue that is important in understanding the realities of Qatar's planning process, which will be discussed in Chapter Five.

While civic infrastructure and modernization projects dominated the developments during the 1970s - 1990s, the late 1990s onward gave rise to private sector interest in developing the city in an attempt to attract investment, resulting in a "new phase of an investor-driven urbanism in the Gulf and thus the creation of major real estate holding corporations and development agencies."²⁰ The authors of *Demystifying Doha*, Salama and Wiedmann, explain that as a "direct consequence of the growing role of the private sector in urban development, major developers have started to operate as managers of large-scale developments and blueprints, in the form of new housing districts, business parks and mixed use projects."²¹

Increased private sector interest in real estate developments, coupled with a large degree of freedom in the planning process in Doha, has led to a city of ever-increasing large development projects.²² Agatino Rizzo, who writes on the phases of urban evolution in Doha, explains that there are three recent phases of development.

"First, the mid 1990s - 2006 phase is that of the beginning of the North Field exploitation – the latter being the world's largest gas condensate field located at the northern tip of the peninsula - as well as that of the ascendance of a new, less conservative ruler (in 1995). We call this period the "mega-projects" phase in which important urban developments are launched such as 'Education City' and Qatar Science and Technology

¹⁶ Ibid., 134.

¹⁷ Ibid., 207–212.

¹⁸ Salama and Wiedmann, *Demystifying Doha*, 30.

¹⁹ Nagy, "Dressing Up Downtown," 133.

²⁰ Salama and Wiedmann, *Demystifying Doha*, 37.

²¹ Ibid., 38.

²² Ibid.

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Park (both in 1996), the new Doha Financial Centre in West Bay, and the huge off-shore development 'The Pearl' (in 2004). [Another] phase began in 2007, with increasing property inflation due to oversupply of housing in concomitance with oil/gas prices dropping, this being triggered by the worldwide credit crunch of 2008. During this "slow development" phase many projects have been dramatically slowed down (most notably The Pearl). Finally, thanks to the successful bid for the 2022 FIFA World Cup, a new phase which we call the "continuation of the mega-projects" began in 2011, unlocking US\$ 60 billion of government spending over a 10-year period to build stadia, infrastructure and much needed public transport."²³

Mega-projects are now what define the capital city. These large projects are treated as self-enclosed cities within the larger context of Doha, see Figure 1.4. They face inward, turning their back to the city as a whole. This introverted architectural style may have been common a century ago in the residential architecture of Doha and other cities within the Gulf Region, but it is now apparent in the mega-projects throughout the capital city. While the individual projects can be successful, not connecting with the larger fabric of the city negatively impacts Doha. The development of these projects in Doha is what Pierre-Arnaud Barthel refers to as "fiction planning" where large development projects and trophy buildings "create quick iconic products rather than taking the time to build a common vision for the future." He goes on to criticize this practice as a "substitute for [an actual] urban strategy."²⁴ While the large developments within the city may offer the illusion of a planned environment, as can be seen in the Site Observations Section in Chapter Three - the lack of effective urban planning creates a deficient urban setting.²⁵ This is further perpetuated when public amenities get moved within private developments. These inward facing projects create quasi-public spaces within them, such as atriums and sky terraces, and in turn leave the actual public realm devoid of any such amenity.

B. Thesis Research

This thesis argues that while proper design can address the disruptive nature of towers and mega-projects in the city fabric, the issue needs to be addressed at a larger scale. Unless there are regulations in place that enforce desired urban design qualities that address the human dimension, the city as a whole will fall victim to the whims of each individual designer, which is the case in West Bay, the Central Business District in Doha. Within the selected site of focus in West Bay, this thesis looks to demonstrate how the introverted architectural typology prevalent in Doha conflicts with placemaking efforts that are necessary to create an attractive urban

²³ Rizzo, "Metro Doha," 536.

²⁴ Barthel and Hellman, "Arab Mega-Projects," 139.

²⁵ Rizzo, "Metro Doha," 538.

environment in order to reinforce the brand of the city for it to compete to attract global talent, capital and tourism. Placemaking is an important aspect in an urban environment because it seeks to “build or improve public space, spark public discourse, create beauty and delight, engender civic pride, connect neighborhoods, support community health and safety, grow social justice, catalyze economic development, promote environmental sustainability, and of course nurture a sense of place.”²⁶

C. Site Selection

The issue of a disconnected urban fabric due to introverted mega-projects is not unique to Doha or the Gulf Region. This is a subject that is receiving increased attention as more countries around the world are embarking on their own large development projects that are often designed with no regard to context or the human dimension. Despite their existence in other contexts, mega-projects are a Gulf Region phenomenon. This is because there are few actors responsible for the development decisions in the Gulf Countries, creating an environment of receptive decision making with a clear lack of opposition.²⁷ This is further perpetuated by Qatar’s lack of authoritative regulations and lack of a balanced review system, with no method for public input. The planning process in Qatar and in much of the region is exempt from public examination, as public participation has not yet been sought after as part of the process.

The selection of Qatar and the city of Doha as the case study for observations is based on the potential the many discrepancies in the city provide. There is a noticeable inconsistency between the projected image of the city and the actual experience of the city, which is source of disappointment, but also a source of opportunity. This discrepancy is apparent via a simple web search of “Doha,” where all the images that are generated show the newly built skyline boasting the monumental towers and the large development projects. What is not shown is the condition of the remaining city, the areas between the mega-projects. Figure 1.3 is an illustration taken from the Qatar Tourism Authority’s website. It shows some of the iconic projects in the country separated by desert. Unfortunately, the infill between the large developments in Doha is not desert; it is a disconnected urban fabric with no attempt at addressing the pedestrian realm (see Site Observations in Chapter Three). Figure 1.4 shows the location of several mega projects within the city of Doha.

²⁶ Silberberg, *Places in the Making: How Placemaking Builds Places and Communities*, 2.

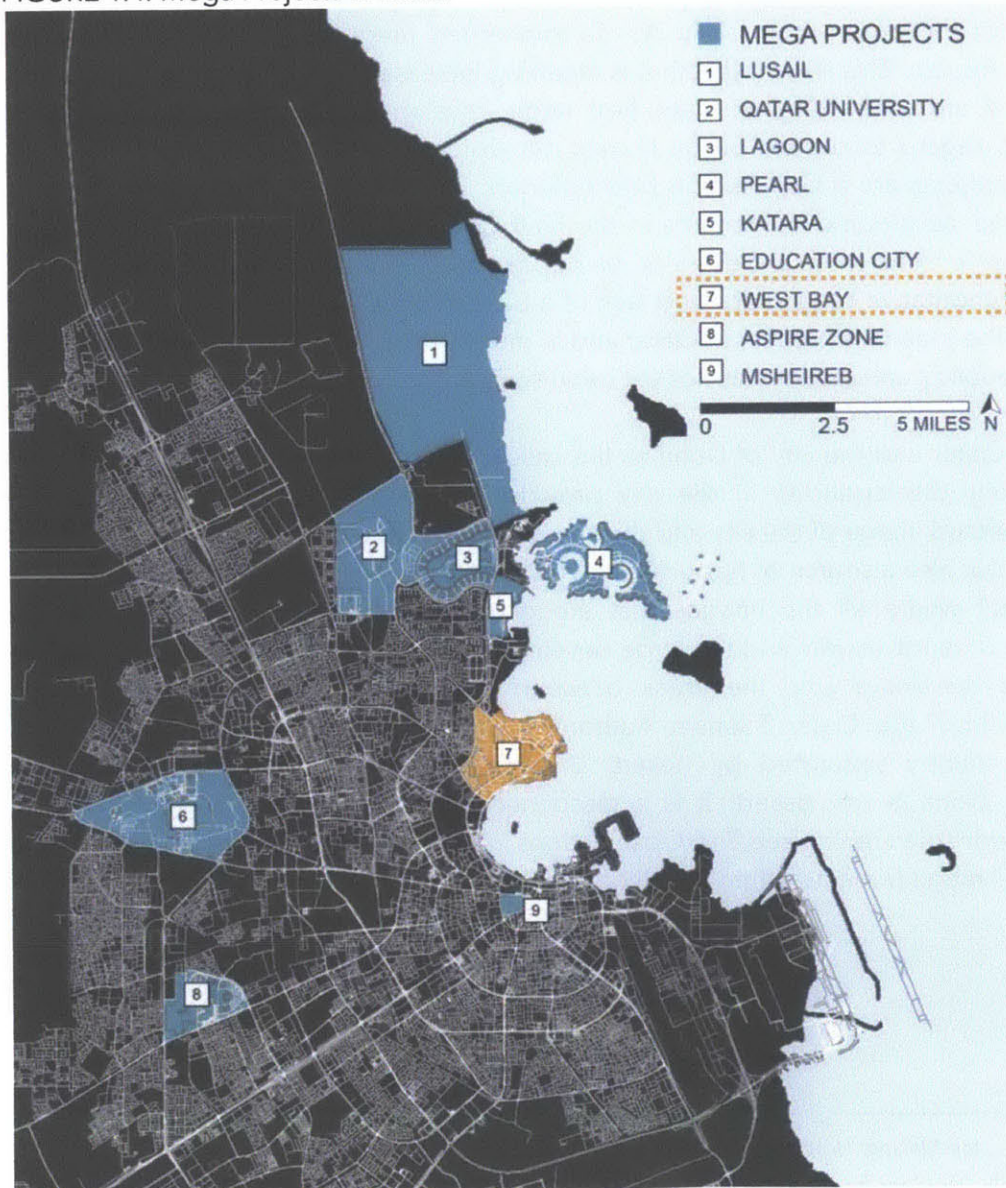
²⁷ Ponzini, “Large Scale Development Projects and Star Architecture in the Absence of Democratic Politics,” 252.

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FIGURE 1.3: Banner from Qatar's Tourism Authority Website



FIGURE 1.4: Mega Projects in Doha



Despite the discrepancy between the projected image of the city and the actual experience of the built environment, Doha is at an exciting point in its development process. As mentioned previously in Rizzo's citation, Qatar has been selected to host the FIFA World Cup in 2022, and in order to prepare the country for the mega-event, numerous development and infrastructure projects are currently underway and being planned. In addition, Doha is making grand moves to become recognized as a world city, competing in the global market against other cities of that stature. If the country wants to address the inconsistencies between the perceived city and the actual experience of the city, it is at a point in its development where it can do so. This will put a considerable strain on the built environment to deliver – to meet the expectations of tourists, residents, sport fans, students, corporations, etc. However, this strain can be the push the country needs to prioritize the need for an inclusive urban fabric for Doha that aims to address the human dimension of the city and create a quality urban environment.

Another site selection factor is that the country acknowledges the importance of placemaking and creating a quality pedestrian-oriented urban environment.²⁸ This acknowledgement is made at broad thematic discussions as well as in individual project discussions, but has not yet made its way to being translated into regulations or design standards for the city. It definitely is not apparent in the built form outside of any particular large development. Doha's disconnected urban fabric has been noted in the criticism on the city's built environment, see following examples on writings on West Bay.

"once one arrives in the West Bay, there is no public realm to speak of, just skyscraper islands and multi-lane traffic. The ecological imperatives of energy and water efficiency are leading us to think more of a symbiosis between the architecture and its surroundings, between the built and the unbuilt. With the project of the new metro Doha has a unique opportunity to do this, if the multi-modal nodes and the transit oriented urban quarters are designed well. It is about creating and connecting the existing urban fabric, densifying urban quarters, designing public realm."

- Anna Grichting Solder | Professor + Practitioner²⁹

"There is too much space in West Bay. The buildings are like toys, scattered accidentally on a floor; they are objects and the space between them is residual."

- Tim Makower | Architect³⁰

If Doha chooses to address the criticisms, to address the city's lack of a cohesive urban fabric, then the city is posed to face a fascinating urban challenge with many dynamic components.

²⁸ Qatar Urban Forum, "Qatar Urban Forum Tackles Place-Making in Era of Globalisation."

²⁹ Grichting Solder, "Doha: Notes," 93.

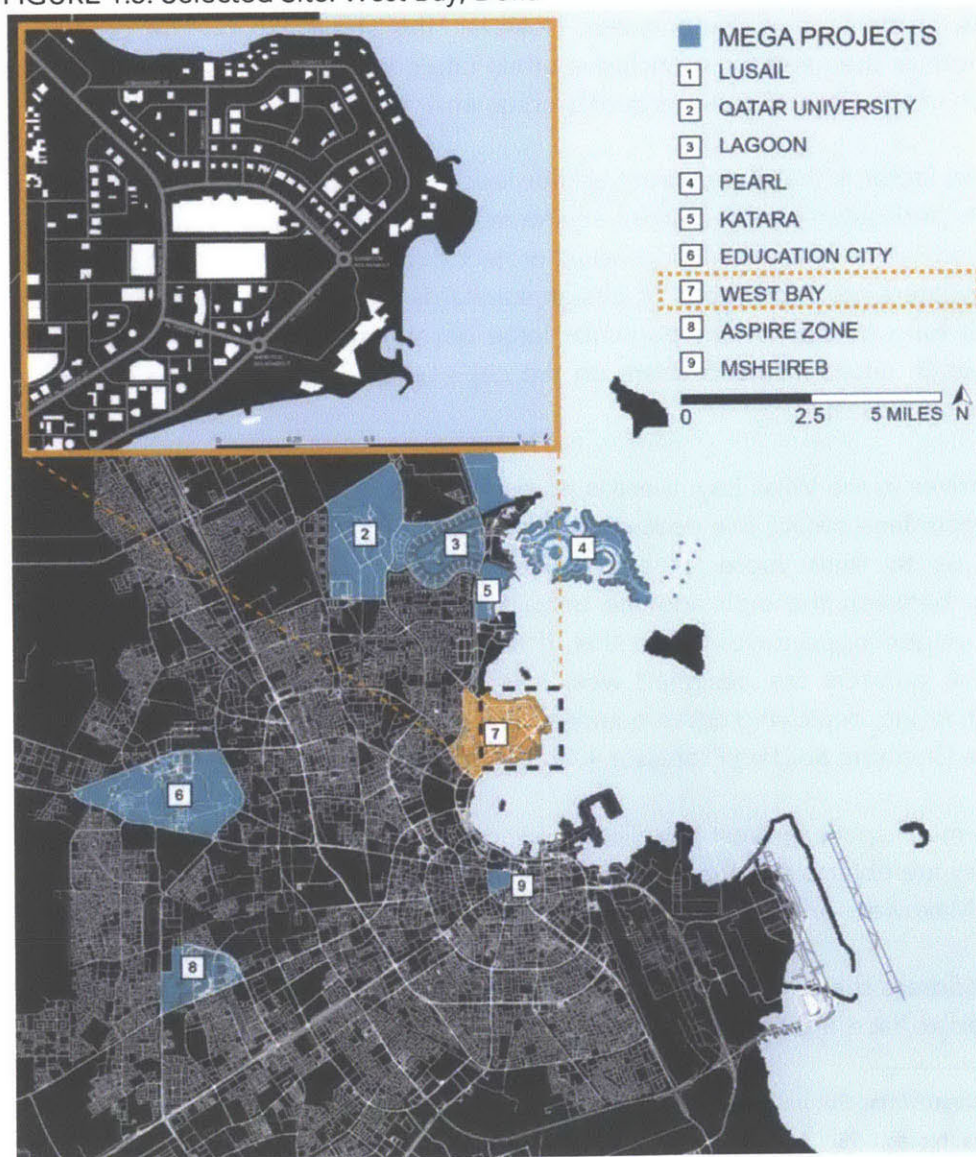
³⁰ Makower, "DOHA ON CENTRE: The Jigsaw of the City."

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Based on Qatar's urbanization history, a good city fabric does not just happen when left up to the individual designers and developers of the large mega-projects that dot the city. It is my belief that these acknowledgments will need to make their way to regulations or standards for the city in order for a quality urban environment to be achieved outside of the numerous mega-projects. Realistically, there are many barriers to achieving this, and those are discussed in Chapter Five. However, as an academic investigation, Doha provides an interesting case for the conflict between introverted mega-projects and placemaking.

FIGURE 1.5: Selected Site: West Bay, Doha



The West Bay district of Doha is seen as the emerging Central Business District of the city. The district is built on reclaimed land along the coastline and acts as the skyline for the city, showcasing many of Doha's iconic towers. West Bay provides a clear example of the non-integrated fabric left in between the mega-projects of the city. This is because each tower is in itself an inward facing mega-project, and since the towers are not as large as some of the other developments in the city (i.e., Education City, Lusail, the Pearl, etc...), the lack of attention paid to the larger fabric of the city is much more apparent in both my personal observations and in the literature on West Bay, see previous quotations by Solder and Makower.

My area of focus within West Bay is the space immediately surrounding the upcoming rail stop – West Bay Central – across from Gateway Mall and City Center Mall, see Figure 1.6. One reason for selecting this particular site in West Bay is due to the upcoming rail stop, which as previously mentioned in Professor Solder's quote, has the potential to be a catalyst for ground-level change in the area.³¹ Automobile transportation is the main transit mode in Qatar. The metro system that is being planned for the country aims to provide a more efficient means of transportation, connecting major nodes in the city. The rail will attempt to alleviate traffic congestion and offer significantly shorter transit times than private vehicles, some estimates showing a decrease of half the time.³² The rail stop will provide an alternate means of transportation to and from the area, with the aim of decreasing traffic and encouraging pedestrian activity. With the proposed influx of pedestrians, the human dimension and ground-floor experience of the site become increasingly important. As can be seen in Figure 1.6, the site has a number of large attractions or draws, including a large retail anchor – City Center Doha Mall, access to the Sheraton Park, access to the Corniche, and will host a new convention center and mixed-use tower, which will be over 1 million square feet when it opens in 2015/2016.³³ The site also contains a good cross-section of the types of buildings present in West Bay: iconic towers, traditional high-rises, and residential, office, and retail uses.

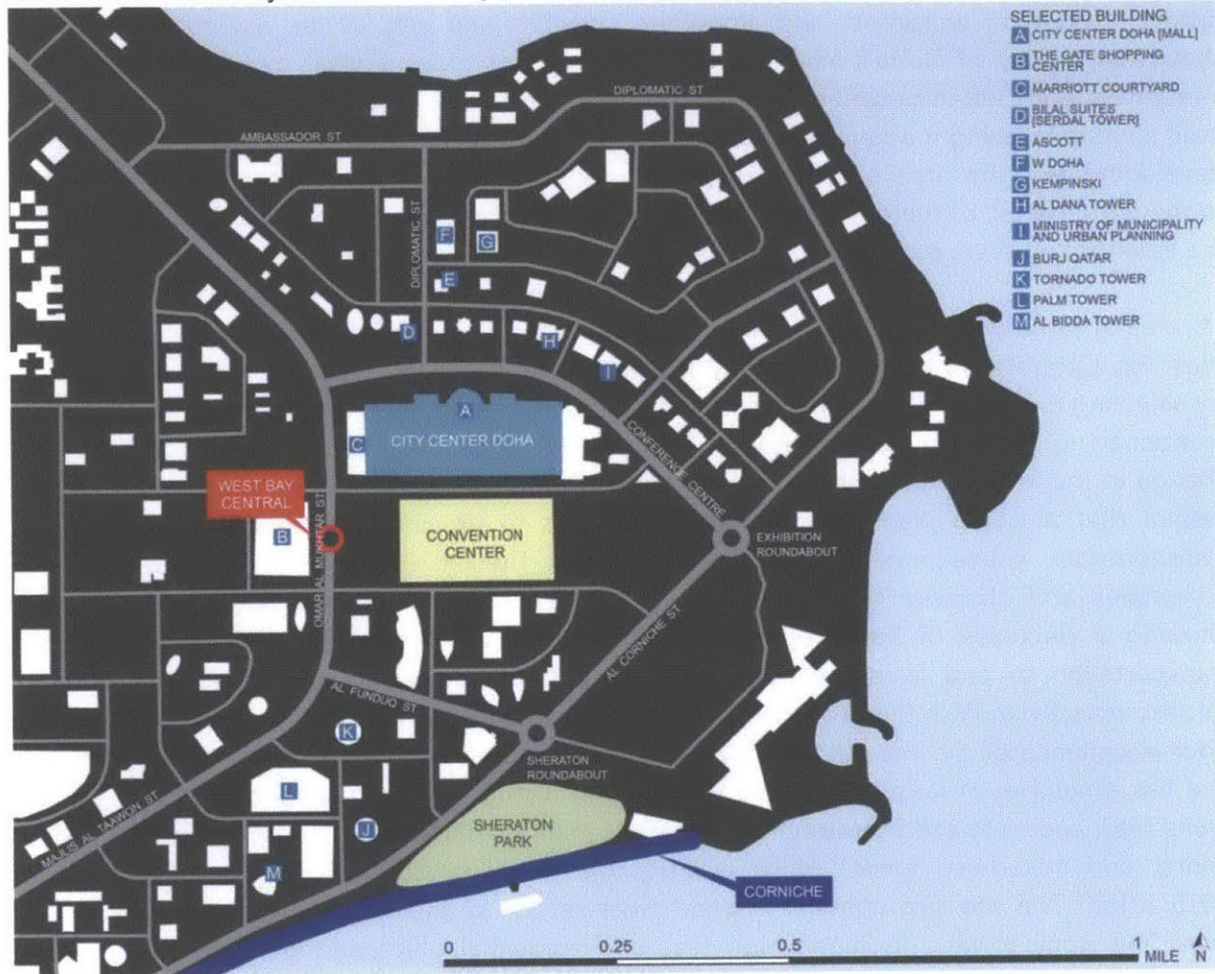
³¹ Grichting Solder, "Doha: Notes," 93.

³² Kovessy, "Qatar Rail Releases Detailed Route Maps for Upcoming Rapid Transit System."

³³ "Doha Convention Center Tower."

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FIGURE 1.6: West Bay Central Rail Stop in Doha



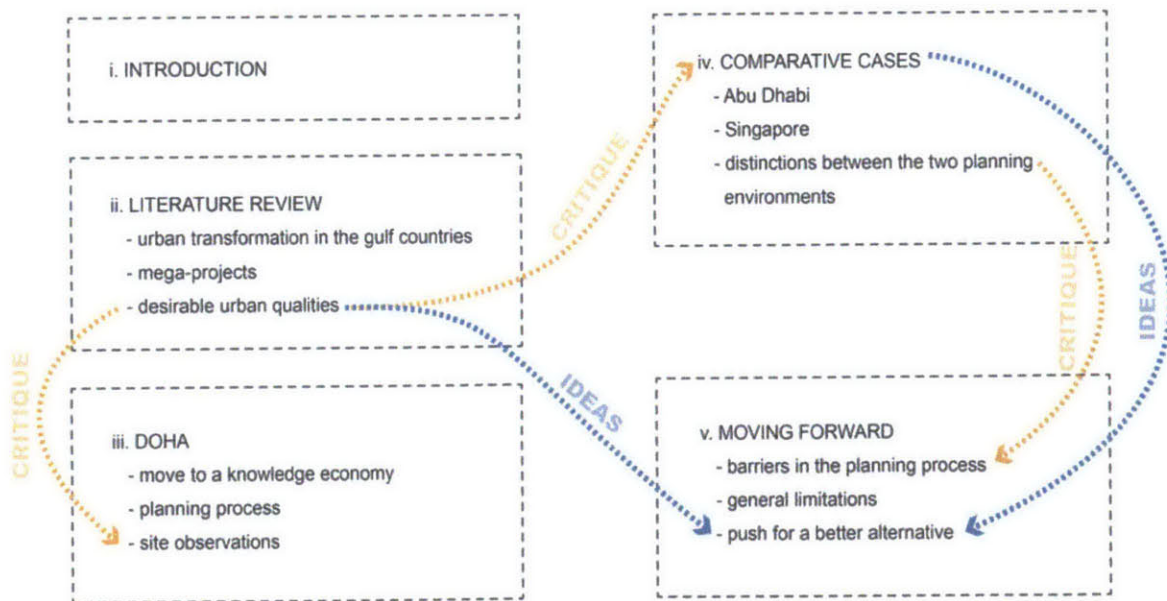
With all the dynamics occurring on the site, there is a clear lack of a pedestrian realm, see Chapter Three for further detail. The insufficient public realm is mentioned by Mirincheva et al, who note the condition in West Bay, with its monumental towers set back from the main roads and large block sizes, offering no “possibility for creating interface between the building occupants and street pedestrians. The lack of commercial ground floor activity further limits the possibilities for a social dynamic, not only for West Bay’s corporate occupants, but also for visitors to the area.”³⁴

³⁴ Mirincheva, Wiedmann, and Salama, “The Spatial Development Potentials of Business Districts in Doha,” 21.

D. Thesis Structure

This thesis research looks to demonstrate the insufficient built environment within the West Bay Site, and note how the lack of regulations pertaining to the public realm has created forms that turn their back onto the city, producing an uninviting disconnected urban environment. In order to form the basis for this assessment, literature on good urban design is consulted in Chapter Two, along with the history of urbanization in the Gulf Region. Chapter Three addresses the situation in Doha, looking at Qatar’s plan to diversify its economy and how that translates into the Vision for the country. The existing conditions of the site are then examined in relation to the literature on desirable urban qualities. Chapter Four delves into comparative cases, one in the region and another with similar global ambitions, to provide insight for Doha. Abu Dhabi, the capital city of the United Arab Emirates, is assessed for the city’s push for a transparent planning process. Singapore provides a case of urban design regulations that have been implemented in the built environment and created the intended urban design qualities within the public realm. Chapter Five offers a look at the realities of the site and addresses the different barriers that would need to be dealt with to achieve change in the physical environment in Doha. Sample guidelines are provided which are based on the literature review of desirable urban design qualities in Chapter Two and the comparative cases in Chapter Four.

FIGURE 1.7: Thesis Structure



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E. Comparative Cases

The decision to take on comparative cases is based on the lack of primary sources for Doha, especially as they relate to the built environment. Qatar, like many Gulf Countries, does not have a publicly accessible planning and design process. Therefore, the documents pertaining to the regulations and guidelines for buildings and developments in the city are not made public. Abu Dhabi, on the other hand, has made moves to create a transparent planning process, making its regulations, policies, and design standards readily available. Abu Dhabi's Urban Planning Council takes the vision of the emirate with its goals for the built environment, and translates them into a planning strategy with documents. These documents, which are examined in Chapter Four, aim to ensure the desired qualities in the built environment get achieved in a transparent way.

Abu Dhabi and Doha have more in common than their shared goals as presented in their respective 2030 Visions, Abu Dhabi Vision 2030³⁵ and Qatar National Vision 2030³⁶. They are both capital cities and have comparable environments, including similar cultures, social norms, political structures, demographics, weather, and a relatively analogous urbanization process. Since Abu Dhabi shares a lot of physical similarities with Doha, looking at the publically available design regulations for the city and the city's overall planning process can offer great insight for Doha. However, the true effectiveness of the transparent planning process and the documents that Abu Dhabi has issued cannot be measured due to the fact that not much construction activity has taken place since the documents' release in 2007 and 2010. Even without understanding their physical effectiveness, the transparent planning process in Abu Dhabi and the material in the manuals published still have value. This is because the Abu Dhabi Urban Planning Council has been able to take the large goals of the emirate and translate those goals into physical quantifiable guidelines. This translation can act as a reference for the city of Doha, who has the large goals and themes defined, but has yet to translate those goals into design guidelines for the city

In Singapore's Downtown, the Marina Bay Financial Centre Project by Kohn Pedersen Fox Architects is examined throughout its planning process and into its constructed form. The project provides an example of how rules and regulations that are designed to affect the urban design of a site can, when enforced, produce the intended built environment. The regulations also provide an example of how the human dimension can be addressed in the context of tall iconic towers that are important to the city's skyline.

³⁵ Abu Dhabi Council for Economic Development and Abu Dhabi Urban Planning Council, "Abu Dhabi Vision 2030."

³⁶ General Secretariat for Development Planning, "Qatar National Vision 2030."

CHAPTER 2: LITERATURE REVIEW

A. Urbanism in the Gulf Countries

The Arabian Gulf Countries share many commonalities, one of which is their relatively short and transformative urbanization experience. Urban development in these countries was spurred by the discovery of oil and natural gas in the region and the changes that the wealth from those resources brought. The term 'Gulf Countries' refers to the six countries that comprise the Gulf Cooperation Council (GCC), which was established in 1981 as a political and economic alliance between the countries of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. The neighboring countries shared similarities in their political and cultural objectives, and the GCC gave them a unified entity to address their ambitions collectively.³⁷ Despite the relatively small size of the region, with a low percentage of the global population, the area is of great importance to international politics and economics. That is because the Gulf Countries hold over 50 percent of the world's oil reserves and 40 percent of the world's gas reserves.³⁸ The wealth accrued from these natural resources is directly responsible for the urbanization that occurred in the Gulf Region.

FIGURE 2.1: GCC Countries and their Capitals



³⁷ Britannica, "Gulf Cooperation Council (GCC)."

³⁸ Cadène and Dumortier, *Atlas of the Gulf States*, 2–3.

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While the Gulf Countries did not undergo identical urbanization processes, this section highlights the similarities in their urban transformation, which are owed to the countries' relative homogeneity due to similar political, historical, physical, economic and socio-cultural characteristics. In his doctoral thesis, Al-Buainain examines the urbanization in the Gulf Countries and notes that the cities within pass through two distinct development phases. The first phase is the traditional, pre-modern stage, and the second phase is the modern, post-oil phase.³⁹

In the region, there were two types of traditional settlements: the coastal settlement and the inland oasis. The coastal settlements were common and reflected the inhabitants' reliance on the water for their livelihood, whether it be for trade, fishing, or pearling. Except for the religious cities of Medina and Mecca, the inland settlements found in Saudi Arabia and Oman were stops on the caravan mercantile routes. Of the six GCC Countries, Saudi Arabia has a distinct history of early urbanization. Being home to Medina and Mecca, two Islamic holy cities, the country has been the destination of pilgrims for centuries. Over the years, many of these pilgrims decided to stay permanently either within those cities or in Jeddah, a seaport city and gateway for the pilgrimages to Mecca, causing urban growth in these cities that was not experienced in other settlements in the Gulf Countries prior to the 1940s. This growth was incremental, and cannot compare in magnitude to the post-1940s growth in the Gulf. The Gulf Cities, both coastal and inland, contained four distinct building typologies: the market or the souq, the mosque, the private home, and the palace.⁴⁰ Except for Saudi Arabia, the Gulf Countries contained one main city that was the center of politics and economics. These capital cities served as the civic hub, the foreign affairs headquarters, and the center for commerce.⁴¹ The importance of these cities emerged overtime as they became headquarters of the ruling tribes in the region. Al-Buainain notes the evolution of such coastal towns as Manama, Kuwait, Doha, and Abu Dhabi into state capitals with both commercial and political administrative roles in their respective countries.⁴²

The physical form of the traditional settlements took into account the climate, building material availability and known construction techniques, and social spatial organizations. Qatari architect and author Ibrahim Jaidah notes that the "compact form of residential areas in traditional Islamic urban centers was a precise reflection of the values placed on social interactions, extended family, neighborly relationships and the preservation of privacy."⁴³ The traditional built fabric of the city was organic in nature, see Figures 2.2 and 2.3. Buildings were often

³⁹ Al-Buainain, "Urbanisation in Qatar," 75.

⁴⁰ Jaidah and Bourenane, *The History of Qatari Architecture from 1800 to 1950*, 25.

⁴¹ Al-Buainain, "Urbanisation in Qatar," 86–87.

⁴² *Ibid.*, 78.

⁴³ Jaidah and Bourenane, *The History of Qatari Architecture from 1800 to 1950*, 25.

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intertwined, indicating family relations and changing family dynamics. Roads were narrow and shaded by the adjacent buildings. Overall, the built fabric of the traditional settlements in the different Gulf Cities was strikingly similar even though each country had its nuances.

FIGURE 2.2: Doha in the Late 1940s



FIGURE 2.3: Abu Dhabi in 1961, traditional houses on the right side of the image juxtaposed to the first main road constructed, which is visible on the left.



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Another similarity in the region was the lack of colonization. While the Gulf Countries were not directly colonized, Britain had been involved in the region, excluding Saudi Arabia, in varying degrees, see Figure 2.4.⁴⁴ Britain's interest in the area was due to the country's involvement in India and the shorter, less expensive land and sea trading routes through the Gulf.⁴⁵

FIGURE 2.4: TIMELINE OF BRITISH PROTECTORATES IN THE GULF REGION

1763	First English East India Company factory established in the Gulf at Basra.
1793	English East India Company factory established in Kuwait.
1798	The Qawasim begin resisting British ambitions to control sea trade and attack British ships.
1805	Royal Navy raid from Bushehr against Qawasim.
1809	Second Royal Navy raid against Qawasim.
1819	Royal Navy expedition from Bombay against Qawasim fleet and bases.
1820	Agreement between the English East India Company and the Al Khalifa of Bahrain; maritime truce imposed on the Sheikdoms of the coast.
1835	British-Bahraini Peace Treaty; General Treaty of Peace imposed by the British on nine Sheikdoms.
1853	Treaty of the Perpetual Peace and Friendship changing the Arab Sheikdoms known as the Pirate Coast in British historiography into the Trucial States.
1861	Bahrain signs Protectorate Agreement with Britain.
1868	Anglo-Bahraini agreement by which Britain recognized the Al-Thani rulers of Bahrain.
1892	Trucial States signs Protectorate Agreement with Britain.
1899	Kuwait signs Protectorate Agreement with Britain.
1904	British political agent assigned to Kuwait.
1913	British monopoly on oil exploration and exploitation.
1916	Qatar signs Protectorate Agreement with Britain.
1935	Royal Navy Gulf Headquarters moved from Bushehr to Bahrain.
1940	British political agent assigned to Dubai.
1946	Senior British official in the Middle East is moved from Bushehr to Bahrain.
1956	Anti-British riots in Bahrain.
1961	Independence of Kuwait.
1963	Anti-British general strike in Qatar.
1971	Independence of Bahrain, Qatar and the Trucial States. Foundation of the UAE.

At the beginning of the 20th Century, the inhabitants of the traditional cities in the Gulf were heavily reliant on the sea, especially for pearls. While periods of drought brought with them tough times, it was the 1930s introduction of Japanese cultured pearls that truly devastated the

⁴⁴ Cadène and Dumortier, *Atlas of the Gulf States*, 15.

⁴⁵ Wake, "Abu Dhabi The City That Grew Out of a Desert," 33.

region, putting an end to the pearling trade in the Gulf.⁴⁶ The harsh decade was immediately followed with the discovery of oil in the region, starting in Bahrain in 1932, see Figure 2.5.⁴⁷ Oil quickly replaced the pearling industry as the source of income.

FIGURE 2.5: GCC Countries and the Dates of Oil Discovery and Extraction

Country	Oil First Discovered	Oil First Extracted in Quantity
Bahrain	1932	1940s
Kuwait	1938	1946
Oman	1964	1967
Qatar	1939	1971
Saudi Arabia	1933	1958
United Arab Emirates	1960s	1960s

While the discovery of oil did not bring immediate wealth to the GCC Countries, it did mark the transition to the second phase of development – the modern, post-oil phase. After World War Two, oil became an increasingly important commodity, leading to increased trade between the oil-producing countries of the GCC and the industrial world. Author Raymond Hinnebusch, recognizes oil “as the pivotal strategic commodity, crucial to military power and to the main industries – autos, aircraft, fertilizers, and petro-chemicals – of the energy-intensive world capitalist economy.”⁴⁸ As oil began to be extracted in large quantities, revenue increased drastically, bringing unprecedented wealth to the region. The oil revenue in turn was responsible for the rapid urbanization that occurred within the Gulf Countries. Al-Buainain points to the increased wealth as catalysts for the huge investment projects that occurred, typically in the capital cities. The oil revenues also led to increased opportunities for employment, drawing nationals to the city as well as migrant workers to the GCC Countries. As the wealth of the country increased, so then did standards of living, which resulted in a lower death rate and a higher fertility rate.⁴⁹ These factors contributed to the increasing population of the GCC Countries, centered around the capital cities. Each country encountered these factors at a different time based not only on their oil discovery, but also on the date of mass oil extraction. It is also important to note that the oil and natural gas reserves in the countries are not equal. Saudi Arabia hosts the largest oil reserves, producing roughly 40 percent of the Gulf’s oil. Qatar is seen as a small producer of oil, having more natural gas. Some of the

⁴⁶ Ibid., 34.

⁴⁷ Al-Buainain, “Urbanisation in Qatar,” 69.

⁴⁸ Hinnebusch, “The Middle East and Globalization,” 24.

⁴⁹ Al-Buainain, “Urbanisation in Qatar,” 81–82.

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countries are forecasted to be out of oil sooner than others, like Bahrain, who has nearly exhausted its oil reserves.⁵⁰

As the Gulf Countries began to experience rapid urbanization and large influxes of population, they adopted national development plans and master plans to direct and control the unmanaged growth that was occurring. At the beginning of urbanization, the countries lacked local expertise, resulting in the hire of many international consulting firms to draft the necessary plans. While each national plan had its own unique challenges, they all gave direction to where growth should be directed, assigned configurations of land use and circulation paths, and selected particular areas within the city for heavy investment. The rapid development that occurred coupled with a lack of local proficiency in planning led to much of the traditional cores of the GCC Cities being replaced or significantly modified in the name of modernization. Al-Buainain explains that the hired consultants lacked a “connection with the region's culture and heritage, [thereby] most of the master plans have... brought an end to the traditional cores of many cities across the GCC.”⁵¹ It is important to note that while some aspects of the plans and strategies were realized, much of the infrastructure and processes needed to actually follow through with the plans were not in place. The resulting built environment consisted of leapfrog unplanned developments and sprawl. Multiple master plans were often commissioned for a city, in conjunction with the national plans. World-famous planners and designers were hired in the hopes of controlling the growth that was occurring. The struggle to direct and control growth was not unique to any Gulf Country, as they all faced similar difficulties.

The 1950s and 1960s saw great changes in the Gulf Countries, but it was the surge of oil prices in the 1970s and early 1980s that fueled a major construction boom. The increase in oil revenue was met with an increase in labor migration to the region, beginning in the 1970s. The large development projects needed a workforce in order to be realized. The Gulf Countries also needed knowledgeable and highly skilled workers who had the know-how to run the country. The GCC Countries, with their immense oil wealth, were able to offer unmatched wages, thus attracting the desired talent.⁵²

With a practically endless supply of migrant labor, a seemingly infinite revenue source, and an inflow of large development and infrastructure projects directed at a receptive and eager audience, the built fabric in the Gulf Region began to take form and garner world attention as mega-projects emerged. Author Pierre-Arnaud Barthel, credits the unique emergence of this typology to the lack of a participatory approach in the region due to the authoritarian state power and the weak civil society. In order for projects of such magnitude to be realized, there

⁵⁰ Cadène and Dumortier, *Atlas of the Gulf States*, 27.

⁵¹ Al-Buainain, “Urbanisation in Qatar,” 43.

⁵² Mashabi, “Institutional Context of Spatial Development Planning,” 469–470.

needs to be a rather authoritarian structure of decision-making.⁵³ Architectural researcher Davide Ponzini notes the failed attempts of mega-projects, such as one in New York with a master plan by world-renowned architect Frank Gehry, due to the heavy resistance from the local community. In the cases that Ponzini provides in his paper, "despite massive economic resources, amendments of urban regulations and the aura of a star architect, the projects could not overcome political confrontation and local community problems." The actors responsible for development decisions in Gulf Countries are few, creating what Ponzini terms a "vacuum" in which decisions are made without opposition.⁵⁴

The mounting revenues from natural resources led to larger development projects underway in the region. The economies of the GCC Countries were heavily dependent on the exportation of resources as well as their own investments. The dependency on a sole revenue stream for economic prosperity was not new to the Gulf Region as many of the countries had previously been dependent on pearls. When the pearling industry saw its decline, the inhabitants of the region suffered greatly. The dependency on oil and natural gas wealth could prove to be just as devastating to the countries, especially since the industry was not stable, experiencing many fluctuations due to politics and the volatility in the region.⁵⁵ The 1970s saw soaring profits during the oil crisis, only to have them plummet in the 1980s.⁵⁶ In the *1985 Middle East Research and Information Project Report*, Joe Stork wrote that from "1980 to 1983, the members of the Gulf Cooperation Council... saw their oil revenues drop by half, from \$145 billion to \$72 billion."⁵⁷ This goes to show the magnitude of the variations in revenue.

Aside from the fluctuating revenues, another cause for concern in the oil industry was whether or not the countries would be running out of oil soon or if the world's reliance on oil would be dwindling. In 2005, the U.S. Department of Energy released a report titled "Peaking of the World Oil Production: Impacts, Mitigation, and Risk Management", which presented the idea that world petroleum production had peaked and would be declining. After the issuing of this document, this notion began to gain more acceptance. While this report came out in 2005, it is important to note that there had been speculations on the subject since 1956.⁵⁸ In 1998, King Abdullah of Saudi Arabia addressed his nation on the issue of oil revenue and the changes that their country would see as revenues declined, especially how that would affect their current lifestyles.⁵⁹

⁵³ Barthel and Hellman, "Arab Mega-Projects," 137–138.

⁵⁴ Ponzini, "Large Scale Development Projects and Star Architecture in the Absence of Democratic Politics," 252.

⁵⁵ Cadène and Dumortier, *Atlas of the Gulf States*, 25.

⁵⁶ Weber, "What Is a Knowledge Economy?," 163.

⁵⁷ Stork, "Prospects for the Gulf," 3.

⁵⁸ Weber, "What Is a Knowledge Economy?," 162.

⁵⁹ Ibid.

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The lifestyle of the natives of the GCC Countries, who for decades had been dependent on revenues from natural resources, was a cause for concern. The Arab Human Development Report of 2009 warns that “oil-based economies pose inherently greater security and development risks to citizens than more diversified, knowledge economies.” The report asks the governments of these economies to “address the weak structural underpinnings of the Arab oil economy, reduce income poverty and move towards knowledge-based, equitable and diversified economies that will create the jobs and protect the livelihoods on which coming generations will depend on in the post-oil era.”⁶⁰ Looking at the economic instability of the Gulf Region, assistant professor at the Weill Cornell Medical College in Qatar, Alan Weber explains that relying on income from one revenue source can be dangerous in that it “prevents private development of other sectors of the economy and creates a bloated public sector workforce, some of whom are not adequately trained for their positions – thus a national skills deficit arises, increasing reliance on expatriate labor forces. Skills deficit in the military (logistics, organization, training to use advanced equipment) pose serious security risks to a nation if military service, which is often highly lucrative for nationals in the Gulf, is viewed as an entitlement rather than a patriotic duty.”⁶¹

Beginning in the 1990s, the GCC Countries began to embark on education related investments to address the deficit in local knowledge and skills. Each country set forth a plan to move towards a knowledge-based economy, and the definition of knowledge-based economy is clearly dependent on the country and what industries it decided to focus on. National Associations and Foundations were formed to promote the education initiative. In order for these initiatives to be realized, the countries again had to look towards a foreign highly skilled and highly knowledgeable workforce to come in and create the institutions and programs. The push to create a more knowledge-based economy quickly found itself in the national plans in the GCC as part of the larger strategy to diversify the economy, moving away from the dependency on oil.

In moving away from a natural resource dependent economy, the Gulf Countries are competing globally for a share of the global capital. Part of the diversification strategy in the region is the encouragement of the tourism industry and the consumption of cultural experiences within the region. As such, many of the countries have created tourism strategies to increase their revenue from tourism.⁶² Creating an attractive global city is crucial for the Gulf Countries to not only attract tourists, but also to attract and retain the high-skilled knowledge workers, both expat and local, to keep the workforce up to date in order to compete globally. The issue with the local talent in the Gulf is that it is often not up to par with foreign talent. Therefore the “only

⁶⁰ Ibid., 163.

⁶¹ Ibid.

⁶² Cadène and Dumortier, *Atlas of the Gulf States*, 49.

realistic option is to increase intake of foreign talent through professional recruiters and 'headhunters'. Dubai [as well as the other Gulf Cities] face stiff competition for foreign talent from economies in Southeast Asia, Europe, and North America that offer incentives to retain key personnel. These more established centers also have a competitive advantage in attracting and retaining skilled labor due to their established networks and greater entrepreneurial opportunities."⁶³ The goal for the built environment in these cities therefore is to create a city that can both captivate a global audience and attract and retain the needed workforce. They attempt to portray an international image by including all the presumed prerequisites of a global city, such as iconic architecture designed by world-renowned architects, large cultural projects like museums and concert halls, an international airport, etc.

The built environment can directly address the brand or global image of the city. Buildings and skylines are what fill postcards, announce a modern society, and garner global attention. The Gulf Cities have relied increasingly on monumental buildings and world famous architects to create the image or brand for their city. This practice has fallen under heavy criticism, being referred to "fiction planning" by Pierre-Arnaud Barthel.⁶⁴ David Ponzini voices Barthel's sentiments, referring to the practice of utilizing iconic, designer projects to brand or revitalize a city as the "Bilbao effect", in reference to Frank Gehry's Guggenheim Museum in Bilbao. Ponzini notes that globally "cities apparently compete to collect new pieces of architecture as if they were pieces of art, sometime without taking into account their urban meaning and contextual functions."⁶⁵ The issue that arises from this practice that is especially pronounced in the Gulf is a disconnected urban fabric where the iconic buildings and mega-projects are designed without reference to the remaining city. The reason this is marked in the Gulf Region is the lack of authoritative regulations and the lack of a balanced review system. In the traditional Western design and implementation process, designs go through many rounds of review and are subject to scrutiny from numerous parties. The end result is a design that meets the goals of the client, while ensuring the project complies with international codes as well as local standards. When designers are exempt from that process of review, and when local standards or regulations are weakly enforced or do not exist, many design decisions are made that negatively impact the actual conditions of a place. This issue may not seem severe when referencing one or two projects, but in an environment like the Gulf, where many development projects are mega-projects, this lack of checks and balances can create a disastrous environment. Many of the prominent designers in the area see the Gulf as a blank slate where they can experiment with their designs, "finally liberated to experiment unburdened by Western society's aesthetic expectations and political pressures, literally in the desert, while the

⁶³ Malecki and Ewers, "Labor Migration to World Cities," 477.

⁶⁴ Barthel and Hellman, "Arab Mega-Projects," 139.

⁶⁵ Ponzini, "Large Scale Development Projects and Star Architecture in the Absence of Democratic Politics," 252.

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ruler gets to stamp his own vision with the authoritative imprimatur of world-class design.”⁶⁶ These experimentations lead to a built environment of trials and errors.

The site selected as the focus of this thesis in Doha has fallen victim to the lack of regulations and the “blank slate” mentality mentioned above. In order to understand the shortcomings this creates in the site and in the city of Doha as a whole, it is important to look at the role of urban design and the city.

B. Urban Design and the City

The physical form of the city can often be traced back to the many different theories of urban design. Looking at those theories along with the criticisms and proposals that address the topic of good urban design, this section aims to synthesize the different voices in the field to extrapolate desirable qualities of a good urban space. These qualities will then form the criterion for the evaluation of this thesis’ site in Doha, Qatar. These qualities will also be used as a base to propose ideas to enhance the site.

The built environment has a tremendous impact on the brand and projected image of the city. The reason for this is that while a city can technically project any image for itself, if the actual experience of the city is different from the expectations the user has based on the images presented, then there is great potential that this difference can negatively impact the city. Therefore, it is important that the image of the city match the user experience of the city. The way people experience the city is by moving through it - moving through the physical built form. This is not to say that iconic points, or Kevin Lynch’s nodes and landmarks, are not significant. These points in the city offer snapshots - the images that make it on the postcards and represent the city globally. However, these snapshots are just nodes within the city fabric. They are important in that they reinforce the projected identity and brand of the city as well as create points of interest, but they cannot stand alone. The urban fabric, which includes the architecture and the design of the built environment of the city, is crucial to how people experience a place. In order to address the urban fabric, designers and planners need to look beyond the façade and into the design of the urban area.

⁶⁶ Kanna, *The Superlative City*, 35.

C. Desirable Urban Qualities

In the first two pages of her book, *Good Urbanism*, Nan Ellin provides a summary of what comprises good urbanism:

"... there is now a virtual consensus among planners and urban designers about what constitutes good urbanism. This consensus holds that networks of quality public spaces should be lined with and punctuated by vital hubs of activity. Stated inversely, urban regions should be comprised of mixed-use cores (large hubs and smaller nodes) connected by corridors of transit, automobile, and bicycle routes as well as other quality public spaces to ensure walkability. These public spaces include outdoor places – for circulation, recreation, and preservation of natural landscapes – as well as indoor cultural institutions and gathering places. Good urbanism honors the past by preserving historic fabrics and adaptively reusing existing structures. It also honors the future by celebrating creativity through supporting new and innovative architecture, public art, and entrepreneurship at all scales. Good urbanism offers a full spectrum of housing options, accommodating a wide range of household types and income levels, comprising a diverse community that is actively engaged in shaping and managing its future.

Key to good urbanism is the connective tissue: infrastructure, public space, and community engagement. Whether retrofitted or new, for practical purposes or pleasure, infrastructure is integrated with public spaces and both are multipurpose, technologically advanced, attractive, and harmonious with natural and cultural settings. Community-building and engagement occur spontaneously in the quality public space as well as more deliberately through interesting and fun initiatives sponsored by municipal organizations, community groups, or businesses. In sum, good urbanism is vital, vibrant, safe, comfortable, legible, accessible, equitable, efficient, elegant, convenient, walkable, sustainable, beautiful, distinctive, and dynamic."⁶⁷

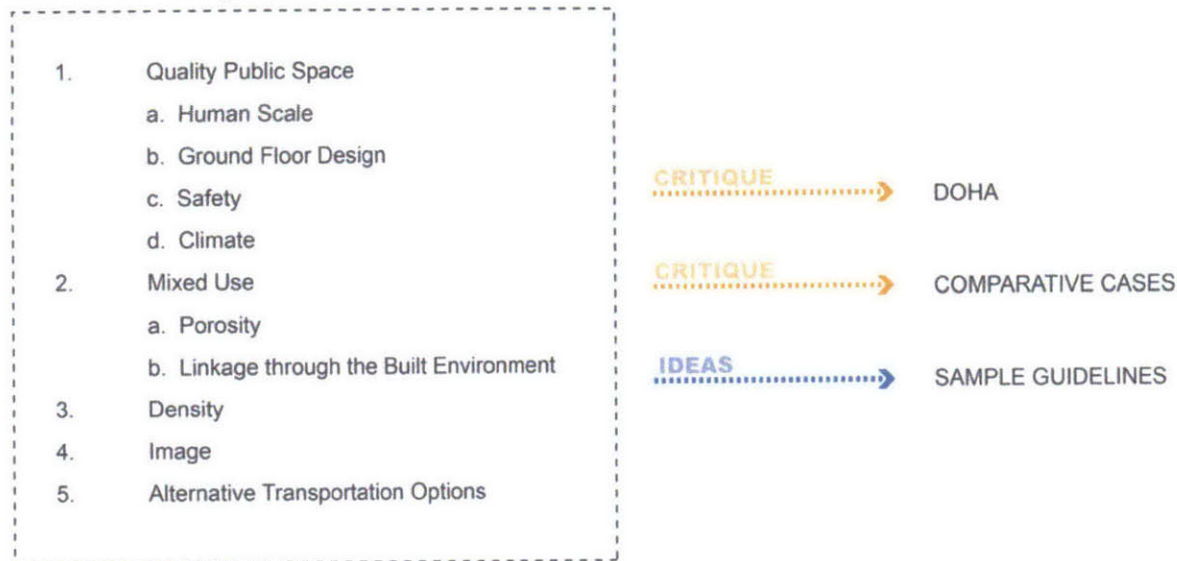
The subject of good urban design is one that has many authors, including Ellin. This thesis reviews the writings and recommendations of notable authors and practitioners on the subject to discern desirable physical urban qualities. Categories have been created in order to classify these qualities. It is important to note that the lines between these categories are blurred because much of the subject matter is interrelated. The categories that emerged from the literature review on physical urban design qualities are shown in Figure 2.6 along with how they relate to different parts of this thesis.

⁶⁷ Ellin, *Good Urbanism*, 1–2.

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FIGURE 2.6: Categories for Desirable Urban Qualities



1. Quality Public Space

William H. Whyte's research and observations of public space in New York City provides great insight into the relationship between quality public space and use. His research showed that not all spaces are used equally and that there were many factors that affected the usability of space in the public realm.⁶⁸ Public space affects and therefore should address the needs of the pedestrian. Quality public space is one of the five physical characteristics that Allan Jacobs and Donald Appleyard list as being crucial to creating a good urban environment in their paper "Towards an Urban Design Manifesto".⁶⁹ There are four elements to keep in mind when addressing quality public space: human scale, ground floor design, safety, and climate.

1. a. Human Scale

The pedestrian encounters the city at the human scale. Danish architect and prominent author Jan Gehl has spent much of his career studying and writing on the human dimension in the city. The human dimension is relevant to the part of the built environment that humans can perceive, which Gehl says is the ground floor and the following four floors above that. Floors higher do not interact with the pedestrian.⁷⁰ It is important to be conscious of the human scale and the physical features of the built environment that comprise that dimension in order to provide a sense of comfort to the occupants and users of the space. The building façade and the potential for activities along that front can offer rich experiences for the pedestrian.

⁶⁸ Hassan, Lee, and Yoo, "Evaluation of the Contemporary Urban Design through the Classic Urban Theories," 4.

⁶⁹ Appleyard and Jacobs, *Toward an Urban Design Manifesto*.

⁷⁰ Gehl, *Cities for People*, 41.

Tall buildings, especially those in high-rise developments, have been at the center of much of the criticism directed towards urban spaces. Their sheer height and design are often completely out of touch with the pedestrian and are meant to be viewed from a car or at some distance. Their scale immediately goes against the human scale unless there are interventions made at the levels in which the pedestrian can interact with the building. In *Cities for People*, Gehl looks at the issue of scale and the different scales architecture can be designed at. He compares the difference between the pedestrian, who walks at about 3 miles per hour, and the observer in a car, who travels at 37 miles per hour (per his example) or higher.

“Driving in a car... we miss out on the opportunity to grasp detail and see people. At such high speeds spaces need to be large and readily manageable, and all signals have to be simplified and magnified so that drivers and passengers can take in the information. The 37 mph scale has large spaces and wide roads. Buildings are seen at a distance, and only generalities are perceived. Details and multifaceted sensory experiences disappear, and from the perspective of a pedestrian, all signs and other information are grotesquely magnified. Taking a walk in 37 mph architecture is an impoverished sensory experience: uninteresting and tiring.”⁷¹

It is important for design to be at the proper scale. In an area that wants to encourage pedestrian activity, design should not be oriented towards the car, but rather the human scale - for that is when people can actually encounter the details of the built environment.

In their book *The Future of the City: Tall Buildings and Urban Design*, authors Al-Kodmany and Ali note human scale as one of four dimensions that can help address placemaking with tall buildings. The human scale needs to be addressed to avoid dwarfing the pedestrian. Their book offers suggestions to mitigate the scale of the building with the human scale by addressing the tower base, which corresponds with Gehl's human dimension of the built environment.⁷² Different design elements can be put in place to break up the massiveness of the building. This does not have to be purely façade treatment, but can also be done through streetscaping elements such as furniture, landscaping, and canopies.⁷³

1. b. Ground Floor Design

In his writings, Gehl offers considerable insight on how the ground floor or the ground plane design can better address the pedestrian and human scale within the city. He proposes the principle of designing an attractive and cohesive built environment in the human dimension – at

⁷¹ Ibid., 44.

⁷² Al-Kodmany and Ali, *The Future of the City*, 115.

⁷³ Ibid., 117.

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eye level, and then placing larger buildings above them.⁷⁴ Providing a pedestrian-oriented tower base that respects the human scale is a plausible design solution that combines the need for density and the need to address the pedestrian scale.

1. c. Safety

Safety in the city is crucial in encouraging a quality environment. Safety can be seen as actual safety and perceived safety. Jane Jacobs was an advocate for eyes in the streets, meaning that the more active a space is, the more people perceive that space to be safer, consequently attracting more people, more activity. "The presence of others indicates that a place is acceptably good and safe... [It] has become meaningful and interesting for people in nearby buildings to follow what is going on in the street. When people make their daily rounds in city space, both the space and the people who use them becomes more meaningful and thus more important to keep an eye on and watch out for. A lively city becomes a valued city and thus also a safer city."⁷⁵

Another component to safety is safety from traffic. This includes appropriate separations between different flows of traffic, clear signals, and crosswalks. Due to the vulnerability of the exposed pedestrian, priority should be given to them when thinking about traffic safety within the city.

1. d. Climate

Vernacular buildings took climate adaptation into account in their physical forms. Today, with modern technology, all-glass buildings can exist in a desert providing a comfortable interior environment. The concern of the city is not limited to occupants within the building. A good quality urban environment needs to provide climatic adaptations to allow for users to pass through and linger in comfort. In order to do so, air temperature, humidity, wind chill, and solar heat need to be taken into account.⁷⁶

2. Mixed Use

The integration of different activities offers the potential for synergies between uses to occur that can create a lively atmosphere. In *The Death and Life of Great American Cities*, Jane Jacobs advocates for a variety of land uses in urban settings to create more vibrancy and ensure activity.⁷⁷ Including residential households in the mixture of an urban environment is mentioned in the literature on mixing uses as a good way to create a "24-hour vibrancy in downtown. Households demand goods and services and, as such, support downtown retail and service

⁷⁴ Gehl, *Cities for People*, 164.

⁷⁵ *Ibid.*, 98–99.

⁷⁶ *Ibid.*, 118.

⁷⁷ Jacobs, *The Death and Life of Great American Cities*.

establishments... A strong downtown residential base enlivens the streets, supports retail, and attracts office uses."⁷⁸ Two components that are important to be addressed in a mixed-use environment are porosity and linkages through the built environment.

2. a. Porosity

Porosity deals with the accessibility of the built environment through the physical envelope of the building. The opposite of a porous envelope is the superblock, with limited entrances that create a dull and uninteresting facade.⁷⁹ Ellin believes that good urbanism should celebrate the edges and boundaries within the built environment, neither fortifying them nor eliminating them.⁸⁰ Building access, especially in an environment of tall buildings, should stress visibility – entrances should be clearly visible. The focus should not be on automobile access to the buildings as it can discourage pedestrian activity and lead to depriving the tenants of the building an opportunity to interact with the surrounding city, an issue that Al-Kodmany and Ali refer to as the "drive-through" tall building mentality.⁸¹

2. b. Linkage through the Built Environment

Al-Kodmany and Ali discuss the linkages of indoor spaces and outdoor spaces in their book, and that link's importance in connecting tall buildings with city life. There has been a trend of many tall buildings and large developments internalizing traditionally outdoor spaces, such as parks, courtyards, and gardens. These spaces are quickly becoming private amenities that can be housed within the confines of a large project. The authors believe that "these indoor spaces, such as atriums, function as exclusive privatized indoor plazas that cater to smaller segments of people with a particular socioeconomic status. These spaces differ from the conventional urban spaces, which are inclusive to all segments of society. As such, these "indoor plazas" cease to be "true" public places. The atrium might be regarded anti urban because it turns the street outside-in and converts the street's edge and recesses into an enclosed, privatized space. Therefore, the design challenge for the architect is to move an atrium off the street without total denial of the street itself and establish a connection between the outdoor plaza and the atrium. The two spaces should reinforce each other and help pedestrians smoothly transition from one into the other."⁸²

3. Density

Density is often contributed to being one of the main elements in creating a lively city. Achieving higher density however does not automatically create a more interesting and active

⁷⁸ Burayidi, *Resilient Downtowns*, 47.

⁷⁹ Appleyard and Jacobs, *Toward an Urban Design Manifesto*.

⁸⁰ Ellin, *Good Urbanism*, 59–60.

⁸¹ Al-Kodmany and Ali, *The Future of the City*, 121.

⁸² *Ibid.*, 122.

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city. Nan Ellin explains that there are actually “three kinds of density: building, population, and programmatic. Livable and lovable places have the third, requiring some of the first two, though not necessarily excessive amounts. Mistakenly, in the quest for urban vitality and sustainable urbanism, many work toward achieving building and population density, when it is actually programmatic density – the adjacency of uses – that is most important.”⁸³ Density must be combined with a mixture of uses. Gehl concurs with Ellin’s assessment of density.⁸⁴ In order for an urban environment to attract individuals and activity, density in the built environment is important in that it provides the critical mass of individuals, or the potential for critical mass. New Urbanism also advocates for increased density, which offers the potential to create a more enjoyable place to live if different uses are placed conveniently and efficiently nearby.⁸⁵

4. Image

While Kevin Lynch’s *The Image of the City* has seen its share of criticism since its release in 1960, its impact on the urban planning discipline has been profound. His study on how people perceive their built environment offers great insight into the different components of the built fabric and how different occupants within the city see them. Author Gert-Jan Hospers looks to *The Image of the City* to derive lessons contemporary cities can take away to create value in their city image, identity, and brand. Hospers stresses the importance of a good city image as cities “have come to realize that in the competition for inhabitants, companies, students and visitors it is not enough to invest in infrastructure, cultural facilities and other amenities. A poor image of a place can devalue its attractiveness and thus its local-economic performance in the long run.”⁸⁶

In the *Future of the City: Tall Buildings and Urban Design*, imageability is one of the four dimensions offered to improve placemaking with tall buildings. Using Lynch’s Five elements: Landmarks, Paths, Edges, Districts and Nodes, the authors illustrate how each of the elements can present themselves in an environment of tall buildings and how design can impact imageability.

In the urban context, tall buildings can be seen as **landmarks**, reinforcing the image of the city. **Paths** can affect the image of the city via their proportions, spacing, alignment, rhythm, coherence, and terminus.

⁸³ Ellin, *Good Urbanism*, 58.

⁸⁴ Gehl, *Cities for People*, 68–69.

⁸⁵ “Creating Livable Sustainable Communities.”

⁸⁶ Hospers, “Lynch’s *The Image of the City* after 50 Years,” 2076.

proportion: "the relationship between the vertical scale formed by tall buildings and the horizontal plane, such as an adjacent land, street, and body of water."⁸⁷ Think of the ratio between the buildings height and street width: if that ratio is too low, the street will feel too wide. If that ration is too high, the street will feel too narrow.

spacing: tall buildings along the "path should be arranged in a structured and balanced manner. A dispersed arrangement of tall buildings along a path will likely weaken imageability and may convey chaos and disorder.

alignment: recessing buildings in a disorganized manner will break the imageability of a path. The relationship between visual exposure and enclosure of the street should be balanced and aligned to ensure the visual continuity of the path.

rhythm: changes in the heights of buildings along a path should be carefully studied.

coherence: architectural design, style, and facade treatment should be studied so that they all fit together harmoniously. While design diversity should be encouraged, the collective imageries of the path should communicate a coherent legible, and memorable image. Adjacent tall buildings in a group should blend with one another to reinforce visual conformity and continuity.

terminus: terminating a path with a vivid object may strengthen the path's imageability. This concept has been used often in ancient cities... Usually, these architectural elements receive special design treatment, for they are the most visible along the path."⁸⁸

Edges can be seen as natural elements, such as a river or road, or in the case of an urban environment, the building structure can act as an edge. **Districts** are areas that are clearly defined, that have a distinct character. A group of tall buildings can define a district, as is the case of many central business districts. **Nodes** are focal points in the city and can be buildings, intersection, or areas of interest.⁸⁹ Art can also be seen as a node or landmark in the city, and can tie in with the cultural associations or brand of the city as well as lessen the effects of nearby tall buildings.

⁸⁷ Al-Kodmany and Ali, *The Future of the City*, 110.

⁸⁸ *Ibid.*, 110–114.

⁸⁹ *Ibid.*, 110–115.

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5. Alternate Transportation Options

Transportation has had a great impact on the development of cities. Personal vehicles allowed for people to commute to work and greatly contributed to sprawl. Many cities soon lost touch with the human-scale and began to be designed for automobiles as the primary transit option. Recent congestion and environmental issues, among other concerns, have given rise to the encouraging of alternate transportation options in the city. New Urbanism calls for walkability and green transportation, with five of their 27 principles directly addressing the need for alternative transportation – especially walking.⁹⁰ An accessible and well-planned pedestrian and bicycle route should be planned for the city. To expand this network, buses and subways are a great means to support green transportation, lessen automobile congestion and allow for pedestrians to cover larger distances in relative comfort. Gehl estimates that an acceptable walking distance is roughly 0.3 miles – depending on the quality of the path.⁹¹ The more enjoyable and interesting the experience is along the route, the more the route will likely be used and distances can be slightly extended. Sidewalks should also be cautious of the many unnecessary interruptions and obstacles that find themselves breaking up the pedestrian flow.

While bicycle routes are typically seen as a positive element in many cities and are encouraged to be included in city life, there are some places where this is unrealistic due to climate or topography. Even though the winter season in the Gulf provides great outdoor weather, the majority of the time, the weather in Doha would make bicycling very difficult. There are projects that have been proposed in Doha going back to 2006 in an effort to encourage bicycling. However these projects are not for transportation, but rather to encourage exercise. They require heavy investments for a short trail that would include a fully shaded path with water misters.⁹² Therefore, bicycling lanes will not be a part of the criteria moving forward for alternative transportation options even though they are seen as an important transportation option in the literature.

⁹⁰ Congress for the New Urbanism, "Charter of the New Urbanism."

⁹¹ Gehl, *Cities for People*, 121–123.

⁹² "Cooled Cycling Infrastructure."

CHAPTER 3: DOHA

A. Towards a Knowledge Economy

For over a century, Qatar has been dependent on a singular revenue stream for its prosperity. While the product has changed from pearls to natural resources (oil and natural gas), the memory of economic instability caused by a non-diverse dependent economy lingers. In the book, *Atlas of the Gulf States*, authors Philippe Cadene and Brigitte Dumortier include a quote from the emir of Qatar in 1863, who said “[We] are all, from the most powerful to the humblest among us, slaves of just one mistress: the pearl.”⁹³ The emir’s sentiments are echoed across many sources, indicating that indeed the prime source of wealth in the region was pearl diving.⁹⁴ When the pearling trade began to falter in the 1930’s, reports of the desolate situation of Qatar were very bleak. The British Political Agent in Bahrain wrote on March 14, 1934 “a recently returned doctor reports that poverty is very marked... many people do not have enough to eat.”⁹⁵ Having experienced the dangers of relying on a singular resource, Qatar aimed to diversify its natural resource dependent economy with the goal of sustainable economic growth.

An outcome of the weaning process was the realization that much of the economy and infrastructure in Qatar was dependent on foreign workers. Not only were the Qataris a minority in their own country, but they were also unskilled and unsuited to compete in the global economy. The nation was dependent on foreign labor to build the infrastructure, but more importantly, it was dependent on importing knowledge and skill to run the country. Once again, Qatar found itself in a dangerous position of dependency. Qatar quickly made moves to shift its economy away from a natural resource dependent one, to a more diversified knowledge-based economy. Alongside this shift, the country wanted to wean itself from its dependency on foreign workers. The Qataris are a minority in their own country, which is highly dependent on foreign labor to not only build the infrastructure for the country moving forward, but also supply the knowledge and the skills needed to run a sustainable economy. In seeking to be less dependent on imported knowledge, Qatar Foundation was established in 1995 with the mission of serving “the people of Qatar by supporting and operating programs in three core mission areas: education, science and research, and community development. The Foundation strives to nurture the future leaders of Qatar. In all of its activities, the Foundation promotes a culture of excellence in Qatar and furthers its role in supporting an innovative and open society that aspires to develop sustainable human capacity, social, and economic prosperity for a

⁹³ Cadène and Dumortier, *Atlas of the Gulf States*, 20.

⁹⁴ Adham, “Rediscovering the Island: Doha’s Urbanity from Pearls to Spectacle,” 218.

⁹⁵ Moorehead, *In Defiance of the Elements a Personal View of Qatar*, 89.

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knowledge-based economy.”⁹⁶ By diversifying its economy and making a move towards a knowledge-based economy, Qatar is shifting its economic reliance and competing for a share of global capital, talent and tourism.

According to Architect and Assistant Professor Anna Grichting Solder, who teaches in Qatar, in terms of its built environment, “Doha has not tried to rival Dubai in the superlatives for the tallest building, the largest shopping mall, and the most artificial islands. Its bigness does not have to do as much with physical scale, but with influence. Qatar is taking a leading role in regional diplomacy, and also hosting many high-level international conferences. Doha has been given the FIFA World Cup in 2022 and is also preparing its third bid for the Olympics in 2024... Doha is expanding its small state with big ideas on diplomacy, education, climate, food security, and mega-events...”⁹⁷ Hosting these large-scale events is part of Qatar’s plan to diversify its economy and to assert its brand globally.

“Qatar nurses the ambition of becoming not only an educational and cultural centre (with the Museum of Islamic Art, the National Museum, and a symphony orchestra), but also a diplomatic and media hub. The Arab world’s most popular satellite news channel was set up and is financed by Skeikh Al-Thani, who has abolished censorship and shut down the Ministry of Information. Al-Jazeera, run by a cosmopolitan team, shuns all taboos and broadcasts debates on sensitive topics in Arabic from Doha since 1995, and in English from Kuala Lumpur since 2006. This channel has given an aura of openness to the dynasty and enhanced Qatar’s international repute, which far exceeds its military strength. Keen on playing mediator in conflicts involving Arab countries, Qatar has created facilities to host international conferences.”⁹⁸

In 2007, the Planning Council along with Qatar Foundation published a report called *Turning Qatar into a Competitive-Based Economy: Knowledge Economy Assessment of Qatar*. The World Bank was asked to carry out the assessment and prepare the report to aid Qatar in moving towards a knowledge-based economy.⁹⁹ The report acknowledges Qatar’s dedication to developing and moving towards such an economy and shows that one of the country’s key strengths is its current economic stability. The report goes on to note how Qatar’s current investments in education, health, construction and infrastructure projects have been uncoordinated without a clear vision for the nation’s future.¹⁰⁰ In moving towards a knowledge-

⁹⁶ Qatar Foundation, “About.”

⁹⁷ Grichting Solder, “Doha: Notes,” 93.

⁹⁸ Cadène and Dumortier, *Atlas of the Gulf States*, 63.

⁹⁹ Government of Qatar Planning Council, *Turning Qatar into a Competitive Knowledge-Based Economy: Knowledge Economy Assessment of Qatar*, 2.

¹⁰⁰ *Ibid.*, 5.

based economy, Qatar is diversifying its economic base, but found itself lacking a unified vision moving forward. In order to direct future growth in line with the new image of a diverse economy, in 2008, the country released Qatar National Vision 2030, which described the long-term objectives for the country.

B. Planning Documents

Qatar National Vision 2030

Qatar National Vision 2030 has the goal of “transforming Qatar into an advanced country by 2030, capable of sustaining its own development and providing for a high standard of living for all of its people for generations to come.”¹⁰¹ The document highlights five challenges for Qatar moving forward: modernization v. preservation; meeting the needs of this generation and future generations; managing growth and uncontrolled expansion; the size and quality of foreign labor; and economic, social and environmental management.¹⁰² It goes on to establish four pillars for development: human, social, economic, and environmental.¹⁰³ In terms of the physical built environment being addressed in the Qatar National Vision 2030, it is strangely absent other than one mention of the need for a “comprehensive urban development plan for Qatar that adopts a sustainable policy with regard to urban expansion and population distribution.”¹⁰⁴ However, many of the objectives highlighted within the document do touch on the built environment of the city, even though the text does not come out and say so. For example, the mention of a “high standard of living” when discussing economic development, does involve the built environment.¹⁰⁵ While the Qatar National Vision 2030 does not appear at first glance to address the built environment in the country, many of the objectives do imply the physical environment upon closer inspection. The document that begins to address the urban environment in Doha is the National Development Strategy 2011-2016, which aims to take the larger objectives of the Qatar National Vision 2030 and translate them into a clear course of direction for the country.

National Development Strategy

“When H.H. Sheikh Hamad Bin Khalifa Al Thani put forth the Qatar National Vision 2030 (QNV 2030), he envisioned a clear path to achieving this vision through the development of a step-by-step strategy that would turn each goal in the QNV 2030 into a concrete reality for Qatar. This plan is the first National Development Strategy 2011-2016...”¹⁰⁶ The first five-year National

¹⁰¹ General Secretariat for Development Planning, “Qatar National Vision 2030,” 2.

¹⁰² *Ibid.*, 3–9.

¹⁰³ *Ibid.*, 11.

¹⁰⁴ *Ibid.*, 33.

¹⁰⁵ *Ibid.*, 27.

¹⁰⁶ Ministry of Development Planning and Statistics, “About: National Development Strategy.”

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Development Strategy (NDS) was issued in 2011 as a means to achieving the objectives outlined in Qatar National Vision 2030.

While the National Development Strategy does break down the larger objectives listed in the Qatar National Vision 2030, it by no means provides any detail that could lead to actual implementation. Instead the NDS is meant to act like a resource to influence the "Ministries and agencies [that] will need to take ownership of the National Development Strategy 2011–2016, [to] develop their own operational plans and accept accountability for delivery. The Strategy will have to influence processes that drive decisions on how resources are used and provide operational tools for assessing individual projects and policy proposals in an integrated way."¹⁰⁷ The implementation of the NDS relies completely on the different agencies spearheading their own plans, which should be in line with the themes established within the NDS. In addressing the coordination issues that will surely arise, the NDS website states that "implementing agencies must take a sector wide view of their activities and coordinate with other actors on strategy, planning, budget and operations. Coordinating mechanisms at the centre of government, including new budget processes, will support this new orientation."¹⁰⁸ The vagueness of the National Development Strategy would not be an issue if it were followed by another document that did indeed produce definitive measures or regulations, however this document does not currently exist.

To assess the National Development Strategy 2011-2016 for the purposes of this thesis, I looked to see how the document addressed the desirable qualities of urban design that emerged from the literature review in Chapter Two. Of the qualities that were listed in the earlier chapter, only a few were touched on in the document, some more vaguely than others: safety, shade (climate), land use (mixed use), and alternative transportation. For alternative transportation, the document briefly mentions the interest and potential development of a metro and rail line in Qatar.¹⁰⁹

On pedestrian safety, the NDS calls for the improvement of road traffic safety in Qatar, where the pedestrian fatality rate is particularly high at 32%, see Figure 3.1.¹¹⁰

¹⁰⁷ Ministry of Development Planning and Statistics, "Moving from Strategy to Implementation."

¹⁰⁸ *Ibid.*

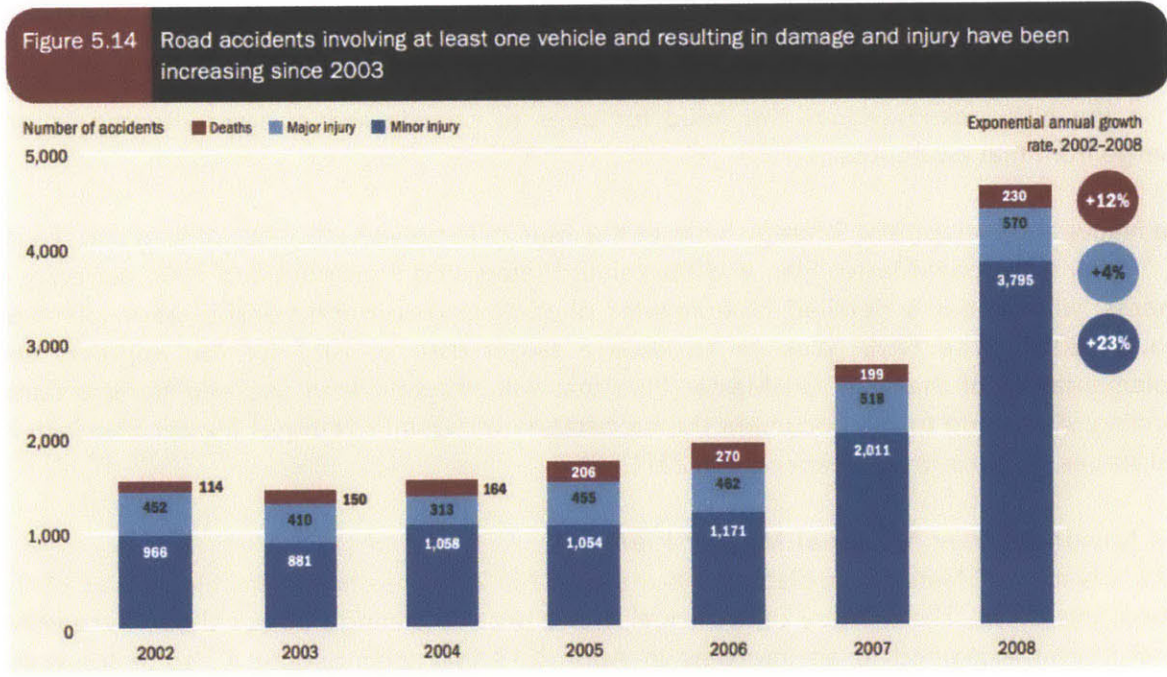
¹⁰⁹ General Secretariat for Development Planning, "Qatar National Development Strategy 2011-2016," 87.

¹¹⁰ *Ibid.*, 191.

FIGURE 3.1: Qatar Traffic Safety Statistics as of 2008

Table 5.8 Slightly more than a third of Qatar's traffic fatalities in 2008 involved pedestrians

Age group	Drivers	Passengers	Pedestrians	Total
0-1	0	0	0	0
1-9	0	0	1	1
10-19	10	4	3	17
20-29	36	4	4	44
30-39	21	15	14	50
40-49	13	19	20	52
50-59	8	14	21	43
60-69	3	8	11	22
Not stated	0	1	0	1
Total	91	65	74	230



The NDS states that these "pedestrian accidents are closely related to the number of safe crossing points," however no regulations or guidelines follow that statement.¹¹¹ Instead the approach the NDS suggests includes the following objectives: "reducing risk-based behavior, instilling courteous driving behavior, improving the safety of pedestrians, better protecting children and young people who are greatly overrepresented in casualty statistics, facilitating intergovernmental cooperation in traffic safety, particularly in urban planning, municipality

¹¹¹ Ibid., 190.

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management, traffic policing, public works design and construction, and education.”¹¹² There is no mention of the need for clear crosswalks, separate pedestrian paths, or any of the other features that could provide for a safer pedestrian environment. Instead the NDS mentions that it will analyze “provisions for pedestrians and cyclists” and moves on to announce its target to reduce the number of road accidents and related fatalities with no mention of how this reduction will occur.¹¹³

The NDS does bring up the issue that much of the urban environment within Doha lacks sidewalks and green spaces with trees for shade. According to the document, some of the most attractive world cities have tree-lined avenues and public gardens, which are features that not only make the city more livable but also help in attracting the high-skilled expatriates and tourists.¹¹⁴ The National Development Strategy claims that the “government is devoting special attention to the urban environment, which affects the lives of its citizens” in doing so, they will be incorporating green spaces so that by “2016 there [will] be three tree-shaded corridors free of car traffic. Planners will also design green spaces within future construction programmes.”¹¹⁵ While the NDS acknowledges the need for trees to provide shade, again, no regulations emerge from that awareness.

The National Development Strategy looks at the issue of improved efficiency of land use. To do so, “Qatar’s National Master Plan and the related Integrated Transportation Plan, currently in process, will set out a detailed blueprint for physical land use and transportation planning through 2032.” The NDS goes on to issue a target date of 2011 for the approval and implementation of the National Master Plan that will integrate land use and transportation planning. According to the document the preparation of “Qatar’s National Master Plan is in its final stages, and approval is expected in 2011.”¹¹⁶

The Missing Qatar National Master Plan

Qatar’s National Master Plan, slated to be released in 2011, has not been released as of the date of this thesis. The Ministry of Municipality and Urban Planning’s Senior Urban Researcher Ali al Khayat explained in an interview in April 2013 that their priority is “to prepare the regulation and zoning maps, which will help determine what types of buildings are to be built including commercial buildings.”¹¹⁷ However, even according to the scheduled issuance of those documents in the interview, the Master Plan is late. Without a master plan or detailed

¹¹² Ibid., 192.

¹¹³ Ibid.

¹¹⁴ Ibid., 229.

¹¹⁵ Ibid.

¹¹⁶ Ibid., 88.

¹¹⁷ Agonia, “Qatar’s Master Plan to Be Updated Soon.”

zoning and regulation documents, the themes and objectives that are presented in the Qatar National Vision 2030 and the National Development Strategy 2011-2016 do not get addressed in any enforceable manner. There is a missing step in the process from idea to implementation. There is nothing that translates the objectives into spatial dimensions and measurable guidelines with a voice of authority.

C. The Existing Urban Fabric

The lack of enforceable regulations has led to a built environment that is designed and constructed on the impulses of developers and designers. With no agency in place to represent the public and the residents of the city, the design of these projects becomes a balance between profit and image. When completed, these projects may be deemed successful if they provide the developer returns and the designer and Doha instant fame with an avant-garde design. However the fame and profit are not realized on the ground-floor of the projects, where the development encounters the larger context of the city. As is the case in Doha and numerous other cities, many large development projects or mega-projects are designed in isolation of the broader context. While they may add to the city's skyline, they often detract from the actual experience of the city. Tall buildings can be disruptive to the ground level experience of a city. The issue with towers is that they cannot be perceived at the human-dimension. People "cannot relate super tall buildings to the horizontal urban fabric unless viewing them from a distance as a part of the city's skyline. The design and articulation of the building bases, as experienced by pedestrians at the street level, create the true aesthetic quality of the urban environment."¹¹⁸ The challenge becomes how the mega-projects, including towers, affect urban placemaking and the human experience of the city.

The reasons for site selection are discussed in Chapter One. As can be see in the photos of the Site Observations Section, there is no consistency in dealing with the ground level or the human-dimension in the city. Since regulations in Doha are not publically available, 13 buildings within the site were selected for closer inspection – to assess their design, especially at the ground level, to see if there were any consistencies in their design that could point to regulations that were followed. The 13 buildings are shown in Figure 3.3, however aside from setbacks, there were no consistencies in the individual designs. Within the site, placemaking efforts are essentially non-existent as the pedestrian realm goes largely ignored. The urban fabric of the broader context of the city is not given a thought. The site observed in West Bay consists predominantly of towers, which were supply-driven as the government wanted to create a skyline for the city. Supply-driven projects present an interesting dilemma for the built environment in Doha. Typically when constructing a large project, there will be studies that are conducted to determine the feasibility of such an undertaking. That study will then help inform

¹¹⁸ Al-Kodmany and Ali, *The Future of the City*, 4.

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the type of development that gets built. The vast resources available in Doha create an environment in which large developments may be proposed and built without being justified, completely supply-driven. Without justification by the market and with no feasibility study, these large projects can be fully built and vacant. An example of this is West Bay, where the supply-driven towers that emerged found themselves vacant. To deal with this dilemma, the city moved many of its government offices to West Bay where they are currently still located.

D. Site Observation Analysis

The photos shown in the Site Observation Section were taken on three separate days in 2014: Friday January 24th, Wednesday January 29th, and Friday January 31st. Friday is a weekend in Doha and proved to be the best day to walk through the West Bay site, especially in the morning when there was little automobile traffic. It is important to note that Doha in January is pleasant in terms of temperature, and barely reached 70 degrees Fahrenheit during my site visits. However for a significant portion of the year, Doha has a much more severe temperature, surpassing 100 degrees Fahrenheit for days at a time.¹¹⁹

The Site Observations focus on the pedestrian realm and the photos clearly indicate a disregard for the public realm of the city. Photos 1 and 6 provide a good example of the typical pedestrian experience on the site, which is dull and also dangerous, with no buffer to automobile traffic and no buffer from the climate. The Site Observations demonstrate that the area was designed at the scale of the car, and not at the human-scale.

Quality Public Space: Human Scale

The human-dimension is ignored in much of the formal design aspects on the site. Some buildings like the Ministry of Municipality and Urban Planning Building shown in Photo 7, have a tower podium, which is one method of alleviating the height of a tall building and providing comfort to the pedestrian. However in the case of the tower podiums in West Bay, they are rendered ineffective because the buildings are set back from the pedestrian path. The only wide-spread human-scaled elements in the site are the car-shade canopies. While the canopies are of an adequate scale to address the human dimension, they impede visibility to the building, see Photos 2, 7, and 8 for examples. Streetscaping elements and public art are often ways to address the human-scale in an urban setting. Both those elements are not present in the site, except for within the interior of a project, like the Sheraton hotel atrium, see Photos 36 and 37, and along the Corniche, see Photo 38.

The facades of the buildings within the site area fall into three categories: glass and steel, play on the vernacular, and pieces of art. The glass and steel facades are often box-like and are not

¹¹⁹ "Average Weather for Doha, Qatar."

particularly expressive, see Photos 9 and 10. The play on the vernacular facades are more relatable to the human dimension as one can see different architectural elements that are at a smaller scale like windows and arches, see Photos 16 and 19. The pieces of art facades are seen in the more iconic towers on the site. These facades are more sculptural in nature and do not address the human scale, see Photos 30 and 31.

Quality Public Space: Ground Floor Design

The lower levels of the built projects on the site offer no consistencies in ground floor design. Some ground floors are sunken below the street level, see Photo 31, and some are raised higher than the street level, see Photo 17. Some buildings have a widened base, see Photo 20, and some come straight down, see Photo 25. Some buildings have design articulations to break up the façade at the lower floors, see Photo 25. There is no standard on how projects are designed on the ground floor. What is striking throughout the site, is how often the main entrances of buildings are not announced, see Photos 3 and 8. The entire city seems to be designed for the car and only the car, with no attempt to address an alternative scale.

Quality Public Space: Safety

While Doha is in general a safe city, the lack of pedestrian activity on the streets can lead to a perceived safety concern. While no locals were observed walking through the site, there were a number of expatriates that were out exercising or crossing through. Doha has a mix of different nationalities living within the city, many of whom come from cities in which walking was an acceptable and encouraged mode of transportation. The pedestrian environment within the site has plenty of gaps in terms of a continuous and safe network. This is partially due to the numerous construction projects that are underway throughout the city, which leads to some obstructive but temporary situations. Throughout the site, there was a lack of buffer between the automobile and the pedestrian. In some areas with a wide enough sidewalk, this is not problematic. However, there are areas in the site in which fast moving cars are immediately adjacent to narrow walkways, creating a huge safety concern, see Photo 11. Even within some of the developments there were no physical buffers between the pedestrian sidewalk and the driveway, see Photos 15 and 21. The ground level parking lots in front of some of the towers had clearly marked car spots with no demarcation for a pedestrian walkway through the lot, see Photo 5. Within the context of the city, crosswalks are provided, but as noted in Photo 12, their placement is often not ideal which leads to illegal street crossings, putting the pedestrian at great risk.

Quality Public Space: Climate

The lack of shade in the public realm is striking in the site. In a city where the sun has a strong presence and the temperatures reach higher than 100 degrees Fahrenheit, not shading the pedestrian realm is a clear indication that the city is designed for the automobile. Long

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expanses of sidewalk seem to go on with nothing but a pole casting a shadow, see Photos 22 and 23. Towers come straight down, offering no canopy or design element that can protect a person walking below, see Photo 25. Within the urban environment of the site, the only shading element was provided by the car-shading canopies, which are meant for cars, not humans. Along the Corniche, trees were used for shading, especially along the sidewalks, see Photo 39. Although there were instances where sidewalks would be completely exposed, which indicates that tree shading is by no means a comprehensive system, see Photo 41. Photo 40 shows the effect a shaded environment can have in the public realm as families bring their own chairs and food to picnic in the shade of the tree. In Photo 42, the park along the edge of the Corniche has some built in canopy elements to provide shade and offer a more pleasant environment for children to play. Shading elements such as the one in the park are only present along the Corniche, and do not appear in the rest of the site.

Mixed Use: Porosity

While the site does house different uses, most of the uses are not vertically mixed. There are residential towers, hotels, commercial retail centers, and office towers, but other than the inclusion of a small café or restaurant in an office tower, there is not significant mixing of uses within the same building, except for within City Center Doha Mall. The buildings located within the site are not very permeable. As mentioned previously, the main entrance is often hard to find and there was often no indication of a second or alternative entrance. The built projects seem to be highly controlled environments, so access in to and out of them is also controlled. One method of controlling flows is to limit the openings, which can be seen in many of the developments throughout the site. Even the new construction for Gateway Mall shows a lack of porosity, see Photo 24.

Mixed Use: Linkage Through the Built Environment

There is an issue of connectivity between the interior functions and amenities of a building and the exterior. The towers and developments within the site are often seen as exclusive retreats, offering private amenities that make no attempt to address the rest of the city. Allan Jacobs and Donald Appleyard famously wrote that cities "are becoming meaningless places beyond their citizen's grasp... It is little surprise that most withdraw from community involvement to enjoy their own private and limited worlds."¹²⁰ While the need for private space exists in any city, the replacement of public space with private space is what creates the issue in Doha and the site. Aside from the Corniche and the Sheraton Park, there is no adequate public space available within the site. Even if one were to loosen the idea of public, and look at the site from the lens of a pedestrian who wanted to purchase a cup of coffee, to spend money to sit within a café, or to buy a soda, there is in reality no place to walk to other than City Center Doha Mall. That is unless you knew that a nearby office tower had a public café in its lobby. The issue within the

¹²⁰ Appleyard and Jacobs, *Toward an Urban Design Manifesto*, 115.

site is that none of these public amenities are advertised because they are seen as private amenities to exist only within the realm of each individual development.

A great example is Tornado Tower, which was awarded the best tall building in the Middle East and Africa from the Council of Tall Buildings and Urban Habitat.¹²¹ Per my onsite observations, there is nothing about the building that addresses the urban habitat. Perhaps owed to its iconic form and award-winning design, one can easily find writings that document the innovations of the design of 52-floor iconic tower, with its column-free plates, 360-degree views, and flexible workspaces. The writings will also mention the restaurant and lounge on the 28th floor, the gym on the 27th floor, and the coffee shop right off of the lobby – the issue is – all these uses are exclusive, or seemingly exclusive. There is no reason why you would not be able to go grab a cup of coffee at the coffee shop in the building, other than that you would never know it existed. It is not advertised; there are no outward facing signs or indications that any food establishment exists. Couple this exclusive or introverted nature with the lack of external shading, the lack of a tower base that addresses the pedestrian, the inappropriate landscape, the lack of clear approaches, etc... and it becomes obvious that this building was designed for two purposes: for the internal occupant and for its image on the skyline.

Density

While the height of the buildings within the site offer the potential for population density, the lack of a public realm keeps that population indoors choosing to get around via automobile rather than traverse the site on foot.

Image

The site's human dimension is not attractive, see Photo 1. West Bay was clearly built to be encountered through an automobile, viewing the iconic towers from a car window. While many of the towers are landmarks, and can positively contribute to the image of the city, the journey to get to these towers in the public realm is unpleasant. There are no placemaking efforts within the site, nothing to reinforce the brand of the city at the human-scale.

Alternative Transportation Options

The walkability of the site was discussed above in Safety. The only other form of alternative transportation that currently exists within the site is a bus network. However, the bus system in Doha is not seen as a viable option for many of the occupants of the city as it is viewed as a transportation system for only the poor or lower class.

¹²¹ "Tornado Tower, Doha."

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FIGURE 3.2 West Bay's Location in Doha

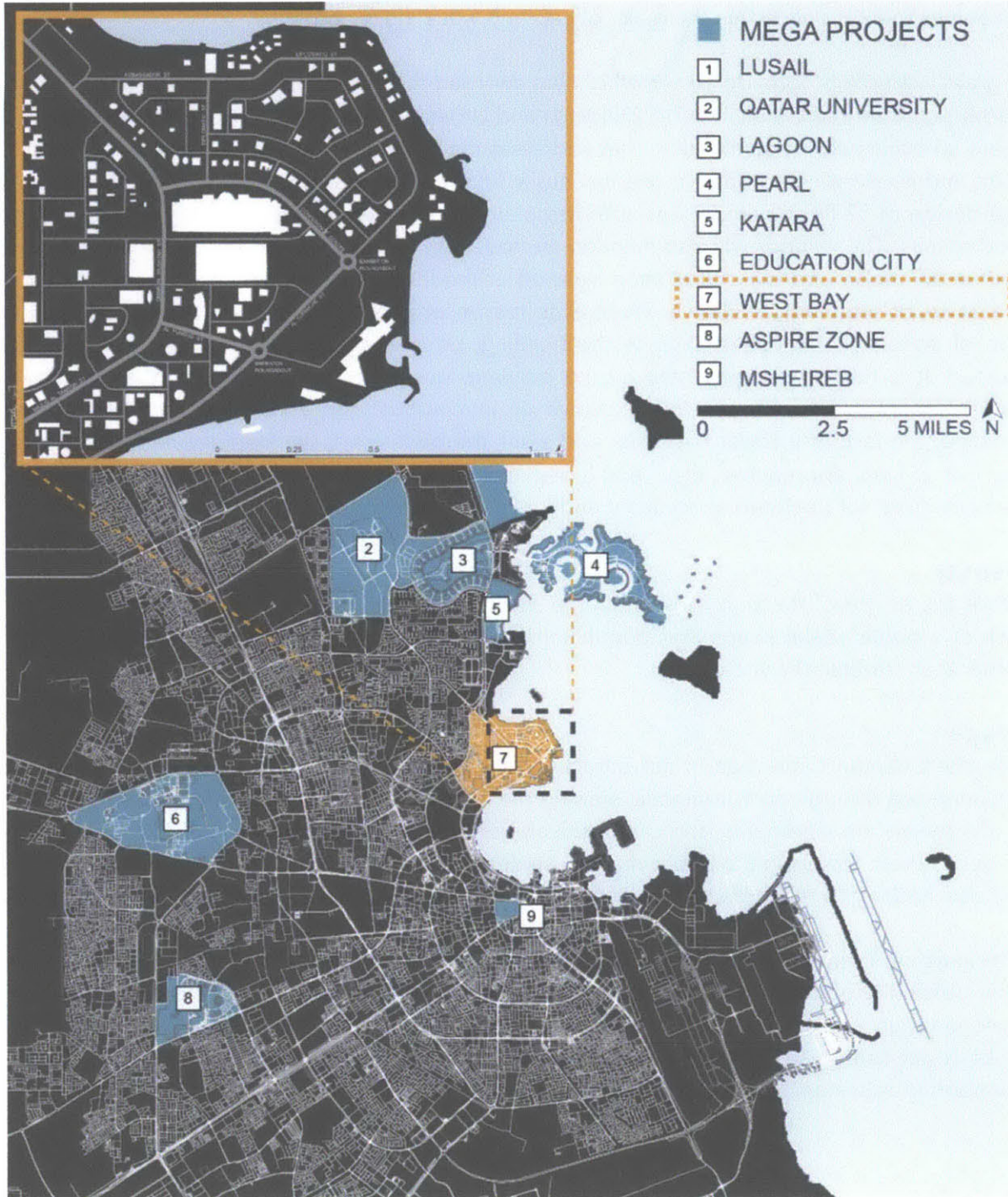
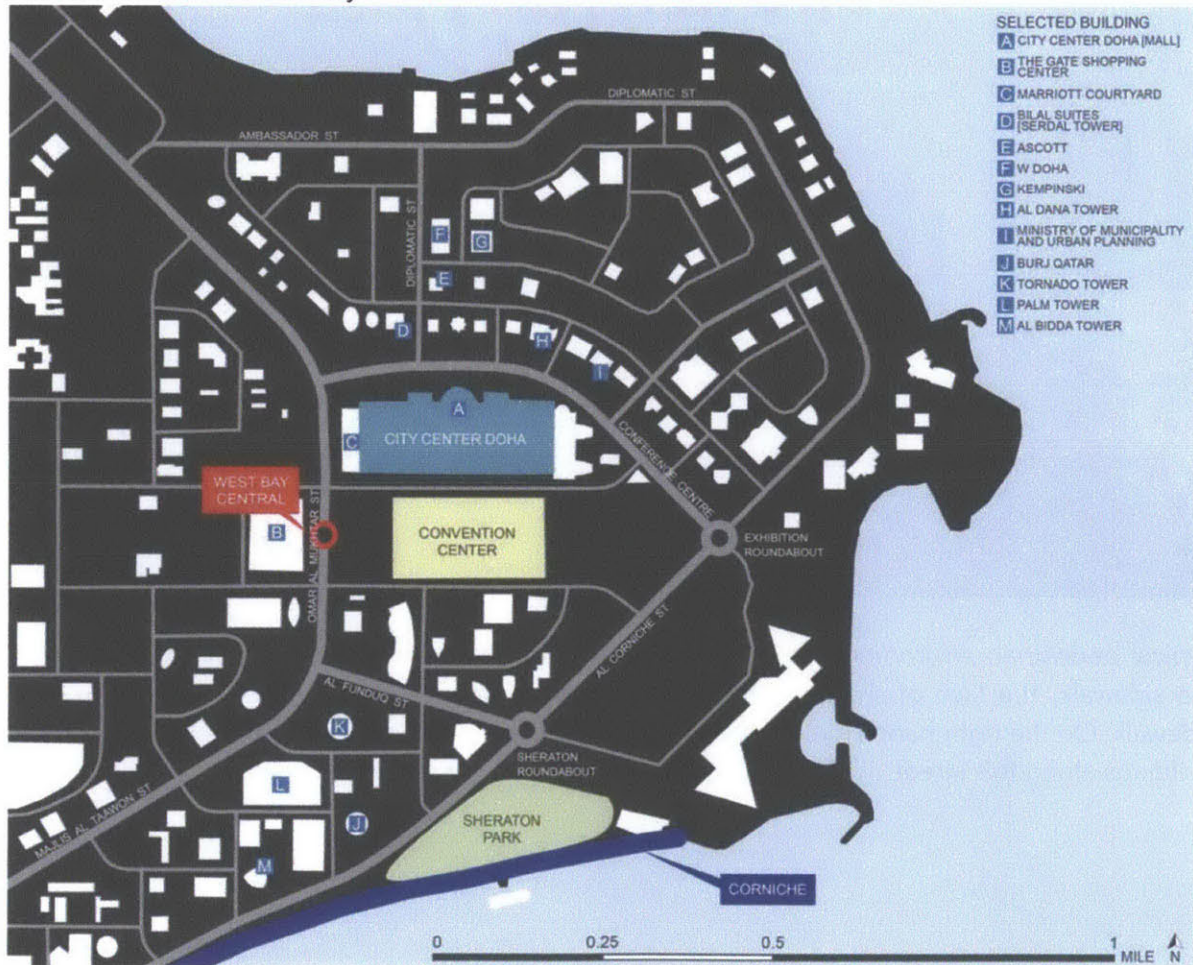


FIGURE 3.3 Site in West Bay



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Site Observation | Photo 1



Typical pedestrian environment in West Bay. Note the obstructions (poles) that emerge along the sidewalk, the lack of shading, the lack of a buffer between the street and the elevated sidewalk. On the right hand side, the canvases are to cover cars and they fill the entire lot of the buildings along this street.

Site Observation | Photo 2



Approach of the building is filled with car shades that impede visibility, especially if cars are parked. No indication where building entrance is and no pedestrian path to the entrance.

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Site Observation | Photo 3



Unannounced entrance to the building would be difficult to spot with cars parked. No path from the sidewalk to the entrance. While the shades are nice for sun protection, they impede views.

Site Observation | Photo 4



Barren pedestrian environment. Nothing of interest along the ground level. Buildings are set back so you pass them from a distance. As can be seen in the photograph, at certain times of the day, the buildings will offer shade, but there are no other shading devices along the sidewalk. The pedestrian walkways are not direct as can be seen here with four different crosswalks to cross to get to the other side of the road.

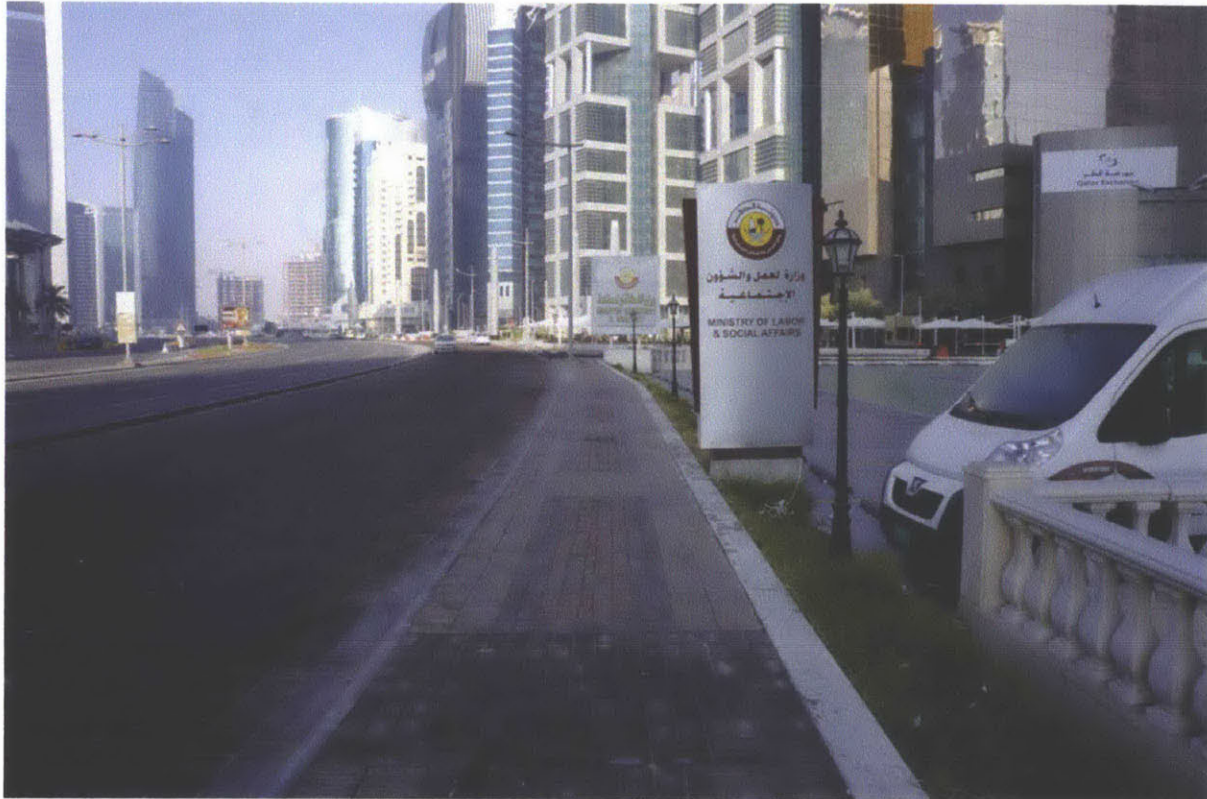
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Site Observation | Photo 5



Not all towers have car-shading devices in the front. Here is a building that has a relatively sterile lot for parking. There are no overhead lights and no shading devices. There are bollards located throughout the lot that emit lighting, so the lot is not completely dark at night. The building does have a unique design at the base with a pronounced entrance, but since the tower is setback so far in the lot, the height of the building is still noticeable. Note the lack of direct pedestrian access to the entrance. There is a narrow sidewalk that goes around the lot, which is the path the pedestrian on the sidewalk would need to take to not cross through the parking lot.

Site Observation | Photo 6



Uninteresting long and exposed sidewalk.

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Site Observation | Photo 7



The tower has a pedestrian podium, however, because of the parking canopies and an unpronounced building entrance, there is no clear indication of where one would enter the building.

Site Observation | Photo 8



Same building as Photo 7, the entrance is only slightly visible under the canopies. There is no clear pedestrian route or sidewalk to indicate the path to the entrance.

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Site Observation | Photo 9



With the buildings being setback further into the lot, their height is more evident to the pedestrian. In this sense, the car-shading devices actually do buffer the person on the ground floor from the tallness of the buildings, as they are more in line with human dimensions. However, the shades create visibility issues and make the ground floor of the building and the building entrance difficult to comprehend. The building on the left is new construction; see Photo 10 for an image of its entrance.

Site Observation | Photo 10



This building is newly constructed. As is evident in the photograph, there are no changes in how this building addresses the ground floor from how the existing buildings on the site address the ground floor. This indicates that no new regulations have been put in place or at least enforced that address how towers address the ground plane. While the entrance is not hidden in the façade, there is no clear indication of how the pedestrian is to traverse the parking lot to get to the building entrance. There is no sidewalk that leads to the building entrance. While this can be added on later in the construction process, there is no indication of a sidewalk design.

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Site Observation | Photo 11



In this spot, against four lanes of traffic going in one direction, the sidewalk narrows down with no buffer from the automobile on one side and a solid barrier on the other side.

Site Observation | Photo 12



The lack of adequate and appropriately placed crosswalks, leads to people crossing the street illegally and jumping barriers where they are present. Here are two men walking to get to City Center Doha Mall. If they were to cross via the provided crosswalks, they would have to walk all the way down to almost the end of the mall in order to get across the street. Then, due to lack of mall entrances, they would have to walk back up along the street to get to the main mall entrance.

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Site Observation | Photo 13



Sidewalks are completely exposed to the sun.

Site Observation | Photo 14



The landscaping here is used to enhance the image of the property around the entrance sign. There is no landscaping or any hint of shading devices along the sidewalk, which is directly adjacent to the main street.

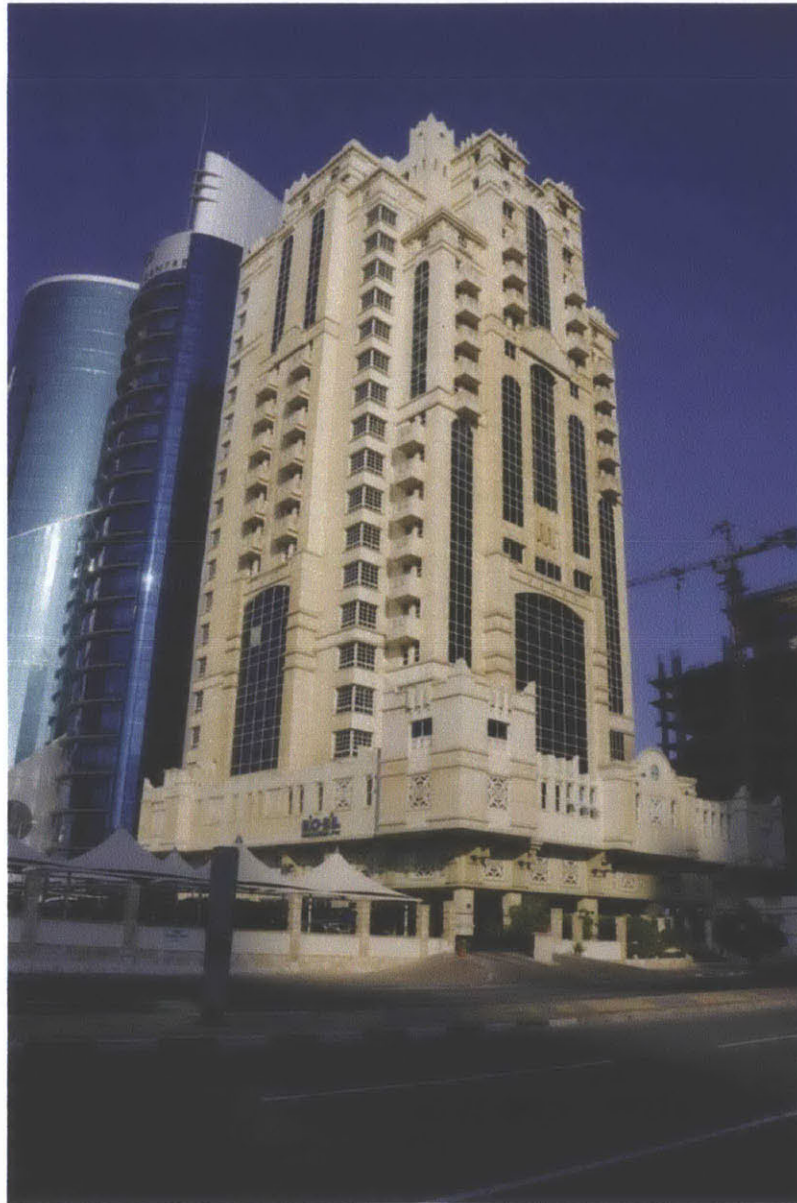
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Site Observation | Photo 15



No buffer between the sidewalk and the driveway for the car. The only separation is a strip of gray pavers indicating the divide between the two flows of traffic.

Site Observation | Photo 16



There are some buildings that are more expressive in their design, like the Bilal Suites, also known as Serdal Tower, shown above. This project provides more articulation in its design than the boxed forms seen elsewhere on the site. The tower podium steps out and alleviates some of the tallness of the building. Unlike some of the other buildings on the site, this tower is wider at its base, also making it appear less abruptly tall. Even though there is a sign on the lower corner of the podium indicating a business establishment, this project is completely fenced off.

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Site Observation | Photo 17



Note the change in elevation between the sidewalk and the parking lot to the right. This photo also shows the signs that are embedded within the sidewalk that act as obstacles to the pedestrians. The building to the right is the Ascott Residential Tower, the barrier that separates the property from the sidewalk goes all around the Ascott, as can be seen in Photos 18 – 19. The only break in the barrier is shown in Photo 19. Note the lack of buffer between the pedestrian path and car traffic. The lack of shading devices is also apparent along this sidewalk.

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Site Observation | Photo 18



The barrier between the sidewalk and the property wraps all the way around. On the bottom left hand side of the building, there is a small convenience-type store that has signage.

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Site Observation | Photo 19



Throughout the span of the property, the parking lot level is often at a different elevation than the surrounding sidewalk. At the point immediately in front of the entrance however, the surrounding sidewalk and the property ground floor are at the same elevation. There is one small break in the barrier here, which seems to allow for a connection into the property. The passage is narrow however and has a strange roughly 10" step that separates the property from the sidewalk.

Site Observation | Photo 20



The W Hotel has a tower base that has some articulation where the base pulls away from the tower adding some width as well as interest to the ground level. The photo shows the lights and green art that is placed at the intersection of the pedestrian crossing, which adds some interest to the public realm. All art or placemaking efforts are relatively low and offer no shade to the pedestrian.

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Site Observation | Photo 21



At the other front of the W Hotel, the same art elements appear along the sidewalk. Notice that the sidewalk does not continue to the building entrance, which is prominently announced. If the person walking along the sidewalk wanted to approach the building, they would have to walk among the cars in the car approach.

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Site Observation | Photo 22



The sidewalk along this route is wide and barren, see Photo 23. There are no elements of interest along the walk as well as no shading devices. On the other side of the street, Gateway Mall is a newly constructed development. The mall offers the public realm large expanses of blank walls, see Photo 24. There are no penetrations to access the project.

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Site Observation | Photo 23



Long straight path with nothing but the texture on the ground to offer interest. The towers prominent in West Bay dot the skyline, but from this perspective, it is clear that nothing is being designed to address the human dimension. There are no streetscaping elements, minus a bus stop further down the path, which offers some protection from the sun and a place to sit.

Site Observation | Photo 24



The walls of Gateway Mall provide a large uninteresting barrier to the pedestrian realm. They offer no opportunity to gain access to the retail uses inside of the project. While the project is still under construction, there are no openings along the wall to indicate that cafes, restaurants, or any other activity generating use will attempt to address the pedestrian.

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Site Observation | Photo 25



At the end of the Gateway Mall is an office tower, which offers no indication as to its building entrance, or in any way addresses the public realm. There are no signs minus the sign for the building, no shading, and no streetscape elements. While the lower levels of the tower have broad horizontal bands that architecturally break them up from the upper levels of the tower, the development provides no interest to a person on the ground floor – no reason to cross the street.

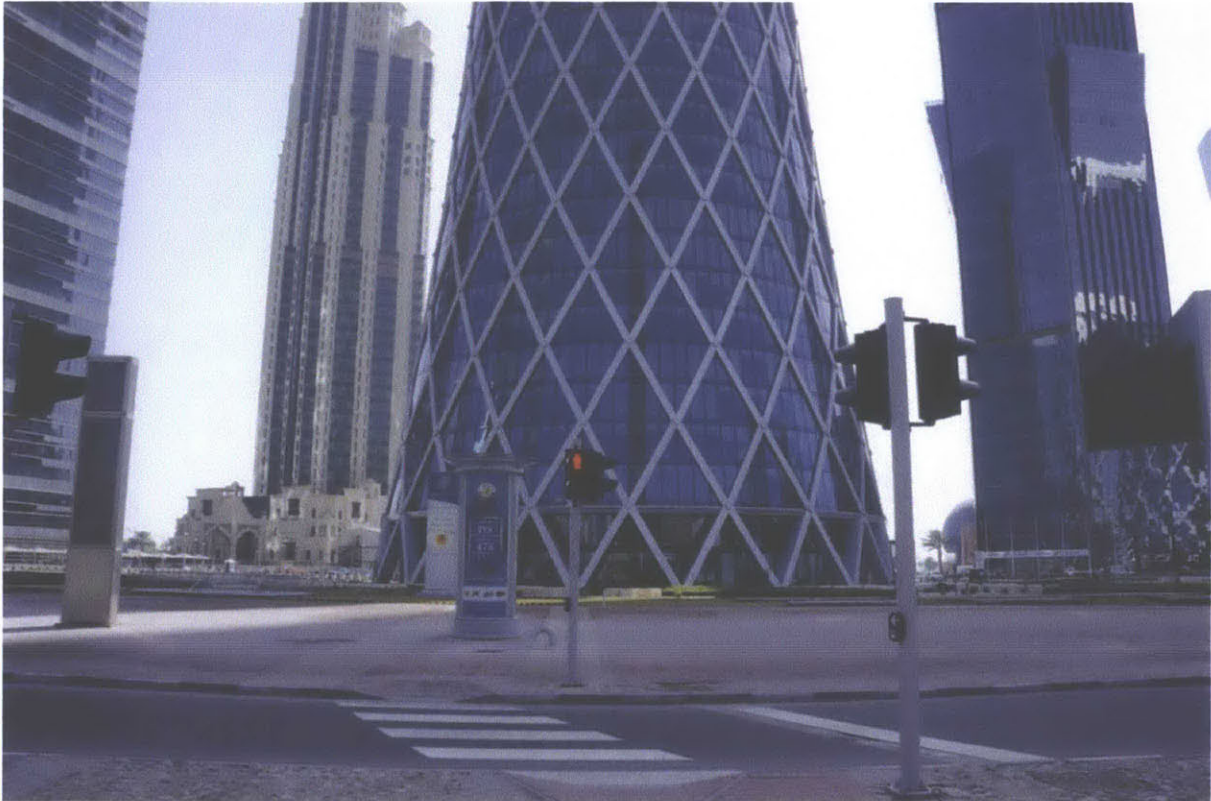
Site Observation | Photo 26



From the long walkway shown in Photo 23, this is how a pedestrian would approach Tornado Tower, which from a distance is a point of interest for those who appreciate architecture. Even though one can see the building straight on, there is no direct pedestrian path to access the project. One would have to take a series of crosswalks to get to the building, see Photo 27.

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Site Observation | Photo 27



The last crosswalk to Tornado Tower has the pedestrian approaching the project from this angle, where there is no indication of the building's entrance. There is a sign located on the property. The landscape plaza has only low elements, providing no shade.

Site Observation | Photo 28

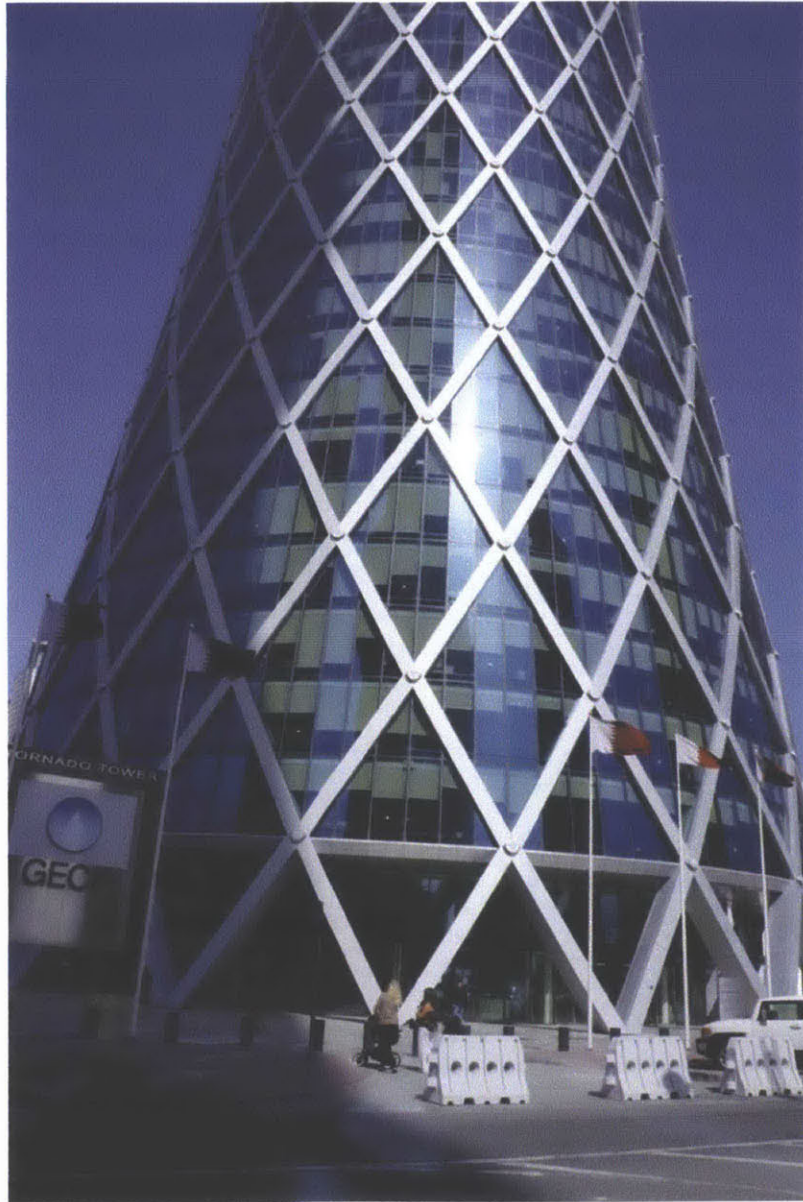


The low landscaping elements are evident in this photo. The building entrance can be seen on the right hand side, where automobile traffic is located.

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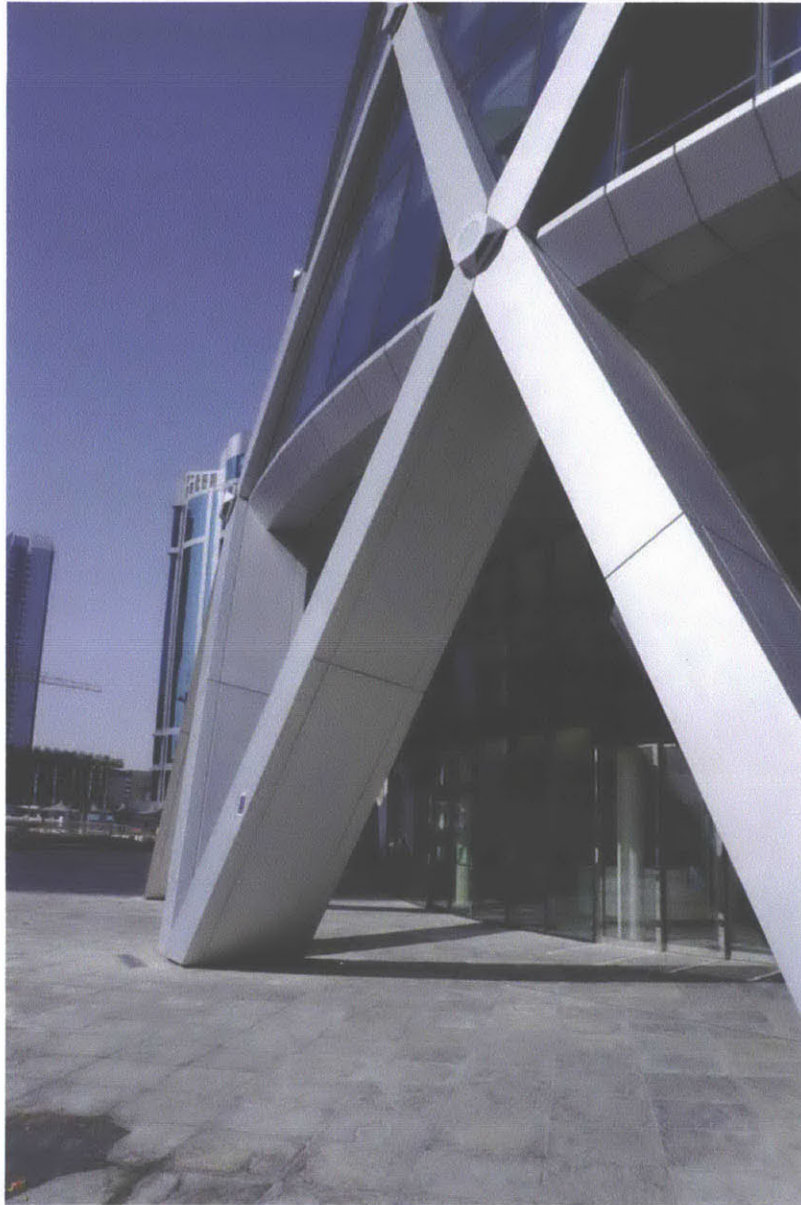
Site Observation | Photo 29



The flags surrounding the building along with the path from the on street parking indicate that the entrance is located here, although it is still not obvious as there are no signs or design elements to announce it.

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Site Observation | Photo 30



Here is the entrance. There are no signs announcing it or any of the amenities located inside, which include an art exhibit located immediately in the lobby, a bank, a restaurant, and a coffee shop. None of these services are advertised on the outside of the building, although if one walks inside the tower, they are evident.

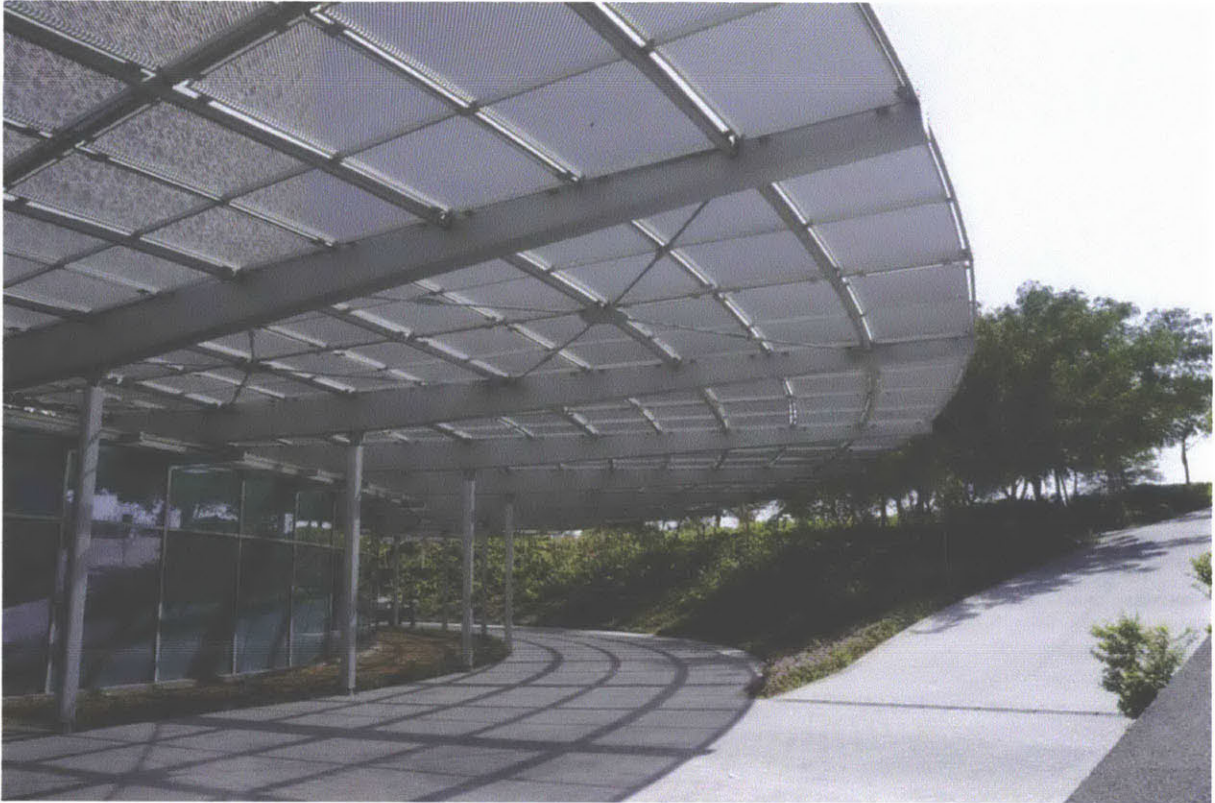
Site Observation | Photo 31



This photo shows the pedestrian approach to another of the iconic towers in West Bay, Burj Qatar. While the tower base does provide shading, see Photo 32, it does so only for those who are approaching the building. The ramp and stairs that lead from the sidewalk to the building separate people into two groups: those who belong in the project and those who do not. The entrance of the tower is located on a lower level than the surrounding city as the site is sunken in, ultimately removing it from its context within the city. This is apparent in Photo 33, which shows a view from the main entrance out into the surrounding context.

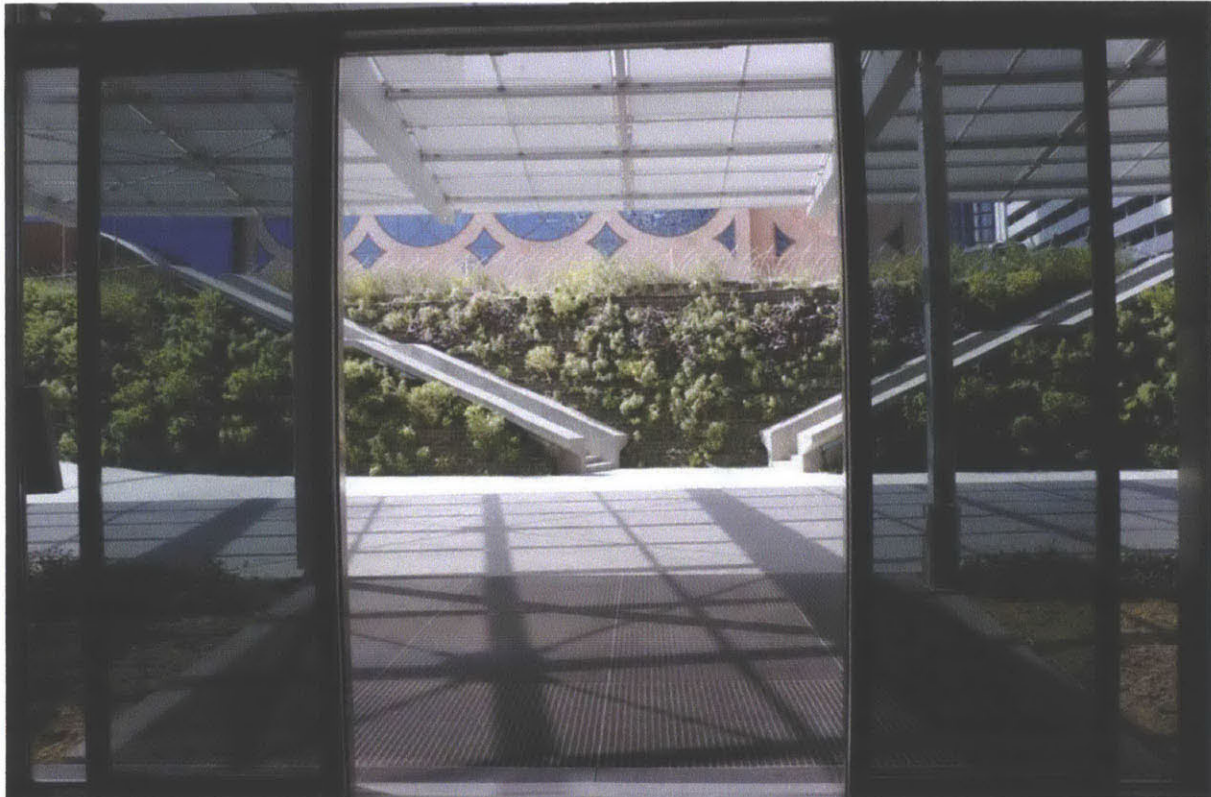
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Site Observation | Photo 32



Shading structure is built into the tower and provides proper shade for the tower's patrons.

Site Observation | Photo 33



This photo shows the view from the main entrance of Burj Qatar out to the surrounding context. The entire sunken ground level of the building is surrounded by a green wall, which creates an environment completely separate from the actualities of the city.

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Site Observation | Photo 34



While the tower base of Palm Tower does not offer any relief from the height of the building, this is the only tower on the site to have external signage offering pedestrians an invite into the project. While many of the towers and buildings visited did have cafes and coffee shops located inside, here is the only sign observed that advertised a retail function. The Palm Tower also hosts the Monoprix, a French supermarket chain, on the ground floor.

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Site Observation | Photo 35



The Sheraton hotel is a rare example in the site of a pedestrian approach that offers landscape shading.

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Site Observation | Photo 36



Streetscaping elements do not only belong on the street. This photo shows the height of the atrium in the Sheraton hotel and how more human-scaled elements are placed within to help alleviate the height and create a more comfortably scaled environment. The latticework dome shown in the photo covers a seating area that operates as a small café.

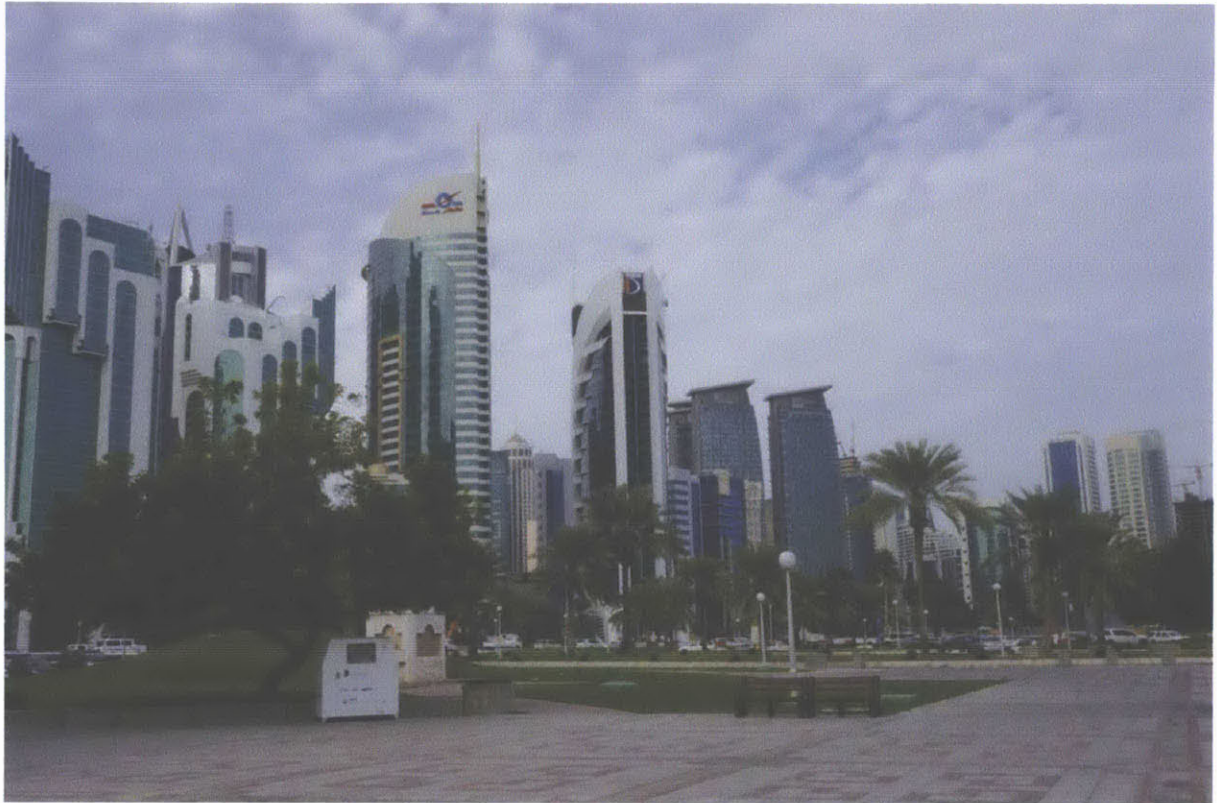
Site Observation | Photo 37



Human-scaled elements in the Sheraton atrium create a more comfortably scaled environment. These elements include planted trees, landscaping, and water features.

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Site Observation | Photo 38



The towers of West Bay as seen from the Corniche. At this distance, the height of the towers do not create any scale issue and it is pleasant to look upon the skyline of the city. Note the placement of landscaping and outdoor furniture. The tree on the left side of the photo offers shade for the donation drop-off box and the trash bin, while the two benches on the right are left completely exposed to the sun.

Site Observation | Photo 39



On the Corniche, trees are planted along some of the sidewalks and offer shade. Note the family that has brought their own lawn chairs to picnic and enjoy the view.

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Site Observation | Photo 40



Families bring their own chairs and picnic in the shade of the trees along the Corniche.

Site Observation | Photo 41



While some sidewalks along the green spaces of the Corniche have trees planted for shading, there are others that are completely exposed.

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Site Observation | Photo 42



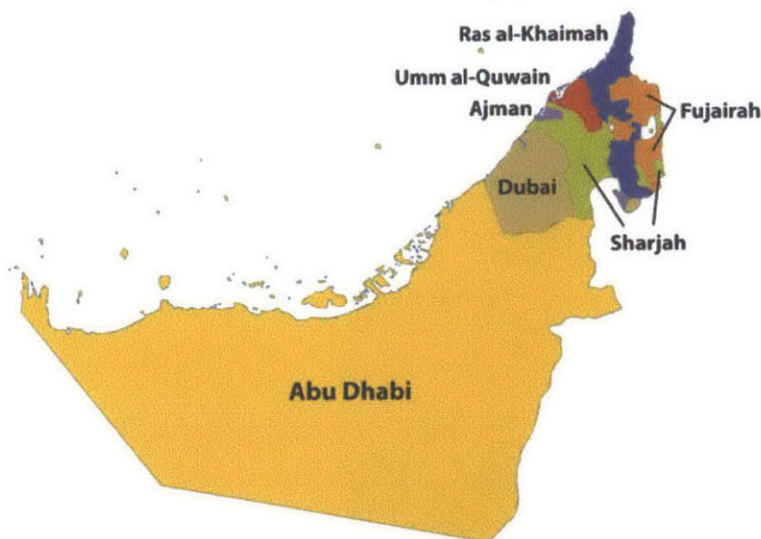
The children's park along the Corniche has built in canopies to offer protection from the sun.

CHAPTER 4: COMPARATIVE CASES

A. Abu Dhabi, United Arab Emirates

A.1. Urban Transformation

FIGURE 4.1: The Individual Emirates of the United Arab Emirates



The United Arab Emirates is made up of seven emirates: Abu Dhabi, Dubai, Sharjah, Ajman, Umm al-Quwain, Fujairah, and Ras al-Khaimah. Abu Dhabi, the capital city and the largest of the Emirates, has seen remarkable physical transformation since the 1960s, see Figure 4.2. Although oil was exported in 1962, Abu Dhabi did not see immediate spending or improvements in the physical conditions of the city like the other Gulf Sheikhdoms. This was due to the ruler, Sheikh Shakhbout, who refused to spend the royalties he began receiving in 1953 when Abu Dhabi Marine Areas Ltd received offshore oil concessions.¹²² The sheikh was wary of foreigners and a conservative spender, so while neighboring cities in the region were seeing massive investment projects and infrastructure developments brought on by oil revenue, Abu Dhabi remained in an underdeveloped condition. The Sheikh attempted to maintain the traditional way of life, prior to oil-discovery. He resisted large-scale projects and the introduction of modern technologies into the city. Mohammad Al-Fahim grew up during this period and recalls that the Sheikh refused to bring in electricity, with the exception of lighting up the palace.¹²³ Sheikh Shakhbout could only

¹²² Elsheshtawy, "Cities of Sand and Fog: Abu Dhabi's Global Ambitions," 264.

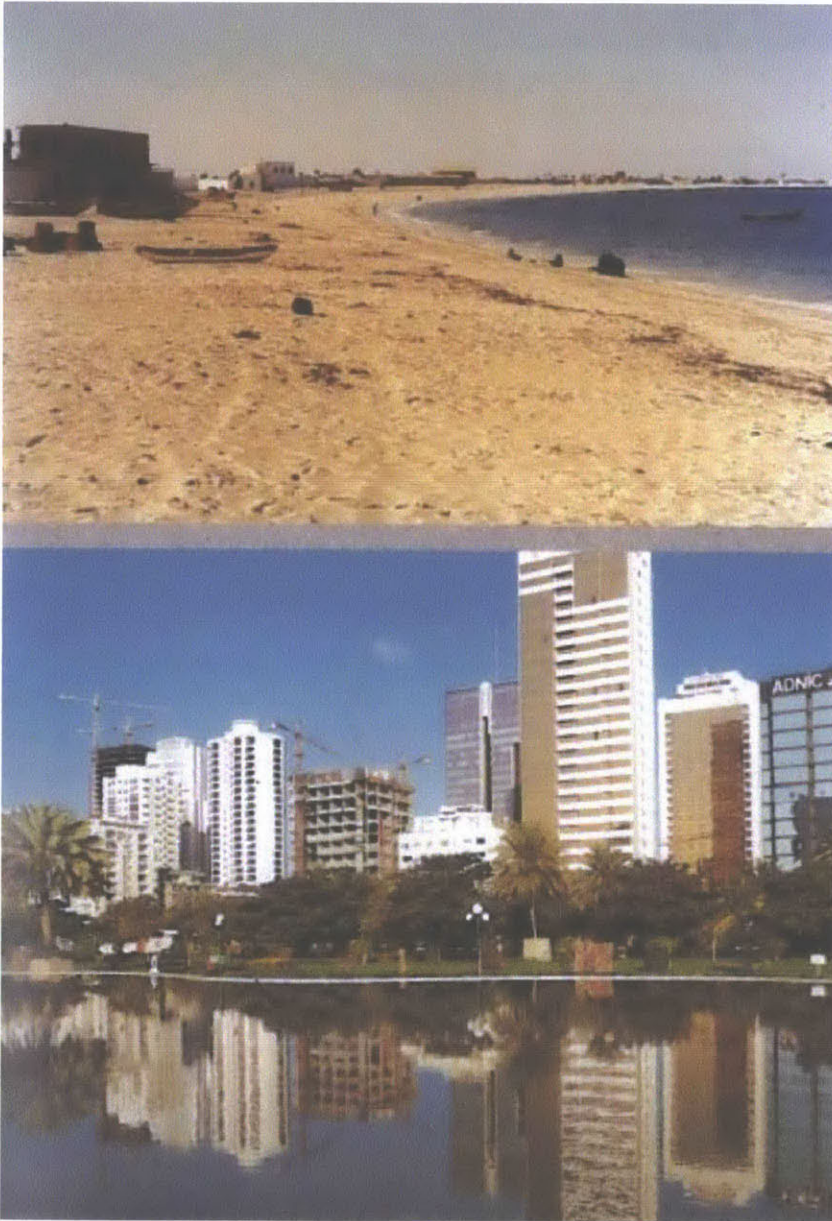
¹²³ Al Fahim, *From Rags to Riches*, 116.

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hinder progress in the emirate for so long before internal and external voices demanded change. With British help, Sheikh Shakhbout was removed in 1966, and his brother, Sheikh Zayed, was given charge of the emirate.¹²⁴

FIGURE 4.2: Transformation of Abu Dhabi's seashore, now Corniche. Top image, 1960. Bottom image, 1995.



¹²⁴ Elsheshtawy, "Cities of Sand and Fog: Abu Dhabi's Global Ambitions," 267.

Sheikh Zayed marshaled in a new phase of development in Abu Dhabi. His tolerance for change and receptiveness to foreign consultants made for a flurry of construction activity in the city, which went from being a fishing village to the modern capital city of the UAE. The 1970s and 1980s saw a lot of piecemeal development even though there was a master plan in place. This was in part due to the distribution of land to Emirati citizens, who then developed their own projects on small plots, resulting in multiple individual towers. In 1988, the Abu Dhabi Executive Council commissioned the Master Directive Plan for Abu Dhabi and its Environs – 1990-2010. This plan addressed the need to house a growing population by developing several islands around the city.¹²⁵ Larger projects commissioned by Sheikh Zayed include the Emirates Palace Hotel and the Grand Mosque. Both of these projects pay tribute to a more traditional style and addressed the Sheikh's desire to set Abu Dhabi apart from its neighboring city, Dubai.¹²⁶

It was not until the death of Sheikh Zayed in 2004 and the new rule of his son, Sheikh Khalifa, that the emirate began to see the emergence of mega-projects. This period ushered in a "new generation of ruling elite [with] a Western education and a strong orientation towards faster economic diversification and growth... Beginning in 2005, a season of reforms in real estate regulation introduced new rights for non-emirate individuals and companies."¹²⁷ Foreign ownership, which was previously not allowed, became permissible on some of the islands and within specific investment zones. The city began focusing on construction and real estate as key sectors of the economy, with heavy focus on different tourism sectors, such as sports tourism, cultural tourism, and business tourism.¹²⁸ The emirate took on a branding initiative in 2007 to create a cohesive brand for Abu Dhabi. The Office of the Brand of Abu Dhabi (OBAD) was created to head this effort.¹²⁹ In her article, Mya Frazier outlines the process the OBAD undertook in creating the brand of Abu Dhabi.

"The OBAD approached the branding initiative by defining the competitive market. It noted the challenge of destination marketing and of creating a brand that isn't "wallpaper"... The OBAD carefully refined its audience to "Cultural Seekers," or people who "see travel as a way to enrich themselves, always seeking new experiences in new countries and they have enough money to go wherever they choose...This group of luxury travelers are worldly and early adopters—the avant-garde of any trend." After defining this segment, OBAD conducted face-to-face workshops in the UK, Germany and France. Using an inverted pyramid, the branding process involved funneling down the various product features (desert, Bedouin, dates and coffee, mosques) functional

¹²⁵ Ibid., 270.

¹²⁶ Ibid., 273.

¹²⁷ Ponzini, "Large Scale Development Projects and Star Architecture in the Absence of Democratic Politics," 253.

¹²⁸ Cadène and Dumortier, *Atlas of the Gulf States*, 66.

¹²⁹ Frazier, "Abu Dhabi: A City Rich in Branding."

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benefits (year round summer, sun and sand), emotional rewards (authenticity, relaxation, pride) consumer values (confidence, adventure) brand personality (wealth, legacy, understated) and, finally, the summing up of all this information into a single word that defined the brand of Abu Dhabi: Respect."¹³⁰

The word 'respect' is supposed to reflect the values within the emirate. Respect for oneself, family, environment, culture, nature, visitors, etc.

As discussed in Chapter Two, a brand or image is not enough for a city. The experience of the city needs to live up to the brand. In order to build the physical city in line with the brand, major real estate projects needed to occur. Beginning in this period, the massive oil income that had previously been invested began to be used in large real estate projects ranging "from entire new residential and tourist complexes to vast malls and town-sized commercial and industrial developments – as well as developing the vast number of islands surrounding the city."¹³¹ The Abu Dhabi Urban Planning Council (UPC) was created in 2007 by Emiri Decree number 23 to be responsible for the urban environment in Abu Dhabi.¹³² Since its formation, the UPC has released numerous documents pertaining to the built environment in the emirate. On the UPC's website, (www.upc.gov.ae/), which is available to view in Arabic and English, one can find all the documents referenced in this Chapter, except for the Abu Dhabi Capital Development Code, which is discussed later in the Chapter. There is also an online design tool available to assist designers in creating a cross section of a street with the desired street elements per the regulations.¹³³ The documents issued from the UPC range from holistic visions that establish the overall goals of the emirate moving forward to specific development codes for particular parcels. The readily available documents translate the vision of the emirate into a planning strategy and further into tangible physical requirements.

A.2. Planning Process

Abu Dhabi's planning process is one that stands out in the Gulf Region. While the other Gulf Cities have their own dedicated planning departments, many of the planning and design documents are not publically accessible. There may be references to a master plan and often a small thumbnail image of one, however, viewing a comprehensive plan for the city is commonly reserved for a select group of individuals and not available for public view. The public is left seeing only what the government offices and developers decide to release. The difficulty in accessing documentation in the Gulf Countries has been well noted by researchers in the

¹³⁰ Ibid.

¹³¹ Elsheshtawy, "Cities of Sand and Fog: Abu Dhabi's Global Ambitions," 275.

¹³² Urban Planning Council, "Urban Structure Framework Plan," 1.

¹³³ Urban Planning Council, "Abu Dhabi Urban Street Design Manual Online Design Tool."

region. Barthel, who writes about mega-projects in the Arab world, notes that there are numerous obstacles faced by anyone who wants to understand the development of a project as there is no public record available to view the "backstage" of these projects, to allow understanding of the development phases, the objectives, or the stakeholders - essentially there is no method to understand the evolution of the project.¹³⁴ The same goes for the evolution of the master plan and development guidelines for the city. Al-Buainain conducted his doctoral research in Doha during the 1990s and writes about the difficulty he encountered being a non-Qatari researcher. He found it problematic to collect primary data sources because the data and information was considered sensitive.¹³⁵ What is released is essentially marketing material, with colorful graphics and vague, but equally colorful websites.

The planning and design documents pertinent to the built environment in Abu Dhabi and this thesis are examined in the following section. For the purposes of my research, the planning process is examined and not the actual built environment that the process creates. This is because the Urban Planning Council was established in 2007 making it a relatively new development. The UPC released the Abu Dhabi Economic and Urban Planning Vision 2030 along with Plan Abu Dhabi 2030: Urban Structure Framework Plan in 2007, the same year it was established. Immediately after, the region was hit with tough economic times and much of the development projects were stopped temporarily or abandoned completely. The next few years saw many news postings about one project or another being put on hold in Abu Dhabi and speculation that some of the larger developments were slowing in their construction efforts, like Saadiyat Island - the district to be developed as the cultural center for the emirate.¹³⁶ The economic environment did not stop the UPC from producing more documents and manuals, for example, the Urban Street Design Manual and Public Realm Design Manual were both released in 2010 and the Abu Dhabi Capital Development Code is dated April 2013. However, the true effectiveness of these documents cannot be measured due to the fact that not much construction activity has taken place since their release, especially the Development Code, which lacks clarity on whether it has been issued or not. The document is not available for download on the Urban Planning Council's website. In fact, there is no mention of it on the website. The document was downloaded through the Abu Dhabi Quality and Conformity Council's website (www.qcc.abudhabi.ae). The creation of the document is mentioned in a news article on Cityscape Abu Dhabi 2013, saying that a "summary of the key components of the Abu Dhabi Capital Development Code, the City's regulatory framework for managing land use and development as per Plan Capital 2030" would be available for view. The article also mentions that the Development Code will be released in June 2013.¹³⁷ The document obtained for review

¹³⁴ Barthel and Hellman, "Arab Mega-Projects," 134-135.

¹³⁵ Al-Buainain, "Urbanisation in Qatar," 9.

¹³⁶ Adam, "Guggenheim Abu Dhabi on Hold."

¹³⁷ "Abu Dhabi's Grand Vision 2030 in Motion at Cityscape Abu Dhabi 2013."

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for this thesis is dated April 2013. Another article mentions that the “UPC also added the Abu Dhabi Capital Development Code to its existing portfolio of guidelines and regulations... The Code... will regulate the type of development and building specifications allowed on a specific plot.”¹³⁸ Yet the Development Code is strangely absent from the UPC’s website. Whether or not the Development Code is currently being used in practice is not clear, therefore, the content within cannot be relied upon to have guided the built form in Abu Dhabi, which is not problematic for the relevance of this thesis since the Development Code, if the articles are correct, would only have been released for a year, having little impact on the built form in that time. For the purposes of my research, the Development Code will be looked at for its potential. The Code closely resembles a zoning document and offers seemingly authoritative direction as to what can and cannot be built on specific plots.

Across the UPC planning and regulation documents, there are some issues that come up. One issue that arises is the effectiveness of these documents. It is unclear if the UPC has authority to enforce the regulations it has set forth. For example, the Abu Dhabi Urban Street Design Manual explains that the design guidelines presented within the document range between mandatory, encouraged, and optional based on word choices used in the manual such as “should”, “shall not”, “is required”, “may”, etc...¹³⁹ While no source could verify the enforcement or authority of the UPC in terms of building requirements, the UPC website does provide an article that touches on their enforcement measures for signage regulations. New signage regulations were applied in March 2012, and the article, dated April 2013, mentions that over 60% of the businesses had so far complied. It goes on to mention that the Abu Dhabi Business Center had conducted roughly 20,000 field inspections and issued 3,150 violations. Aside from “urging business owners to quickly change their shops boards before the deadline to avoid violating set rules,” there is no indication of a follow up inspection or enforcement procedure.¹⁴⁰ While this article indicates that there are field inspections that occur, buildings and larger developments are more difficult to alter after they have been constructed than signs. For the regulations and requirements to be truly effective, the UPC will have to take on a heavily involved authoritative role in the design and construction process within the emirate. It is unclear at this point, if that is occurring. Davide Ponzini investigated the large developments in Abu Dhabi and is very critical in his writings of the UPC, who he believes has no legal power. In reference to Abu Dhabi 2030: Urban Structure Framework Plan, he writes “[even] if the Plan includes land use regulation statements, it does not have any statutory power. Each map in the document contains the following note: “These plans represent themes to be refined in further planning and design. Land uses, street patterns, and exact alignments in all areas are conceptual, and to be subjected to detailed evaluation and confirmation. Under no

¹³⁸ “Abu Dhabi Refines Vision 2030.”

¹³⁹ Urban Planning Council, “Abu Dhabi Urban Street Design Manual Online Design Tool,” 24.

¹⁴⁰ “End of July the Deadline to Change Signage in Abu Dhabi.”

circumstances should these plans be construed as final directives for specific sites or areas."¹⁴¹ The tone is different in the Development Code. The document clearly states that the "Code applies to all land (above and below water)... [and] no development... including the formation or reclamation of land, or the use, construction, occupation, enlargement, alteration or demolition of structures or land, shall occur except in compliance with the Code."¹⁴² However, the situation in Abu Dhabi and the rest of the Gulf Region is not black and white when it comes to planning and construction, even with a seemingly binding document. In this region, there are few key players in the real estate market, many of whom are well connected, if not directly connected, with the royal family. Even with a more specific planning document, there will typically be negotiations between the developers and the planning agencies. In the case of Abu Dhabi, this practice significantly affects the influence of the UPC. Ponzini describes the process of urban development in the emirate, where "large-scale projects are discussed and decided by the royal family and a cohesive network of relatives, publicly funded agencies, and development corporations. Compared to typical western democratic contexts, the separation between public and private sectors in Abu Dhabi is practically nonexistent because the same actors have key positions in public decision making and in the management of private companies."¹⁴³

Public participation is another topic that is mentioned in the publications from the UPC. Since all that is released from the UPC are the final manuals and plans, it is difficult to glean if the public was truly consulted in the creation of the guidelines. In creating the framework for the Abu Dhabi Economic and Urban Planning Vision 2030, the UPC conducted its own research, design charrettes, and site visits. According to their documents, they also held sessions with the public, stating that the "general public were invited to a number of events, where appropriate, during which local residents could discuss subjects such as healthcare, education, community facilities, amenities, and transportation..."¹⁴⁴ In another official document, it states that "interviews were completed with a cross-section of people in the Abu Dhabi community to understand their needs and wants to frame a statement of challenges and opportunities."¹⁴⁵ It is not clear who qualifies as the general public or community members, how these sessions were advertised, who attended, and how their feedback was incorporated into the plan. It is however, on paper, an acknowledgement to the importance of working with the community when planning, a slight move away from the top-down planning approach that is prevalent in the region.

¹⁴¹ Ponzini, "Large Scale Development Projects and Star Architecture in the Absence of Democratic Politics," 254.

¹⁴² Urban Planning Council, "Abu Dhabi Capital Development Code," 12.

¹⁴³ Ponzini, "Large Scale Development Projects and Star Architecture in the Absence of Democratic Politics," 254.

¹⁴⁴ Abu Dhabi Council for Economic Development and Abu Dhabi Urban Planning Council, "Abu Dhabi Vision 2030," 71.

¹⁴⁵ Urban Planning Council, "Urban Structure Framework Plan," 22.

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A.3. Planning Documents

The document that defines the overall goals of the emirate is the Abu Dhabi Economic and Urban Planning Vision 2030 (2007). From there, the Plan Abu Dhabi 2030: Urban Structure Framework Plan (2007) focuses on the metropolitan area of Abu Dhabi providing more detail, but is still very conceptual. The Abu Dhabi Public Realm Design Manual (2010) and the Abu Dhabi Urban Street Design Manual (2010) translate the conceptual goals into quantifiable design guidelines. The Development Code (2013) is the document that most clearly resembles a zoning document, offering clear instructions on the development in Abu Dhabi per parcel ID. As mentioned previously, it is difficult to assess if these plans, manuals, and guidelines have shaped the urban environment in Abu Dhabi. Even without understanding their physical effectiveness, they have value. The UPC has taken the large goals of the emirate and translated those goals into physical quantifiable guidelines, this translation can act as a reference for the city of Doha, who has the large goals defined, but has yet to translate those goals into design guidelines for the city.

Abu Dhabi Vision 2030

The Abu Dhabi Economic and Urban Planning Vision 2030 (hereafter referred to as Abu Dhabi Vision 2030) was created by the Abu Dhabi Urban Planning Council in collaboration with the Abu Dhabi Council for Economic Development at the request of Sheikh Zayed in 2006 to create a plan for economic diversification as well as a development program for the city.¹⁴⁶ The Vision is novel in that it combines coordinated urban planning and economic strategies to create the desired environment for the city.

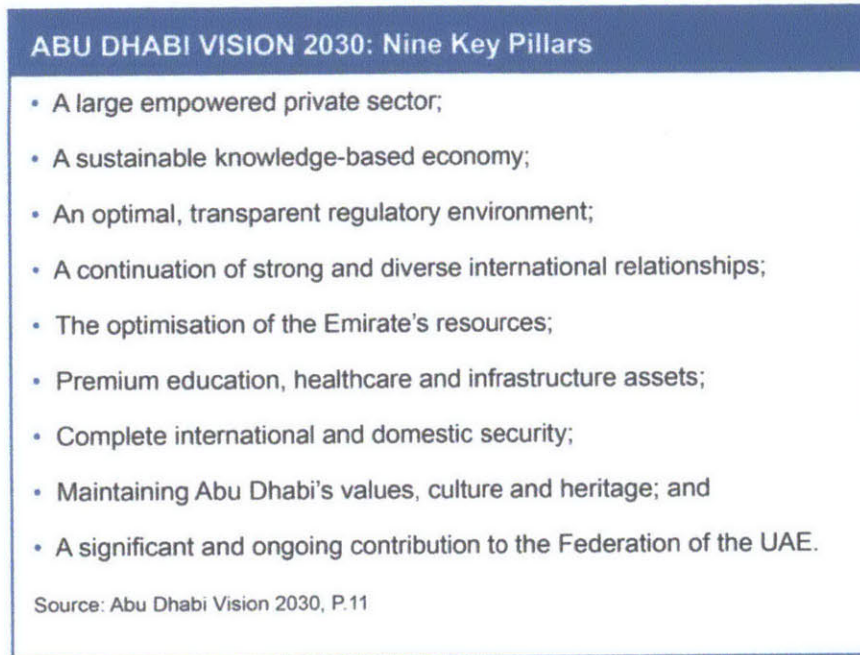
In its introductory text, Abu Dhabi Vision 2030 acknowledges the “clear impact oil has had on the Emirate’s wealth, Abu Dhabi’s Economic Vision 2030 aims to diversify the Emirate’s economy away from oil while developing ambitious plans to become a genuinely sustainable world-class capital city... It intends to do this through addressing different themes such as the quality of the public realm, community identification and social cohesion alongside the importance given to the development of infrastructure”¹⁴⁷ The Government established nine key pillars to form the social, political, and economic future for the city, see Figure 4.3.¹⁴⁸

¹⁴⁶ Cadène and Dumortier, *Atlas of the Gulf States*, 66.

¹⁴⁷ Abu Dhabi Council for Economic Development and Abu Dhabi Urban Planning Council, “Abu Dhabi Vision 2030,” 5.

¹⁴⁸ *Ibid.*, 11.

FIGURE 4.3: Abu Dhabi Vision 2030 Nine Key Pillars



Integral to Abu Dhabi Vision 2030 is the direction for the physical environment of the city, which can be seen in the sections in the text that are dedicated to the public realm. The Urban Planning Council has incorporated the following fundamental directions across all its plans: sustainability; liveability; economic development; managed urban growth; connectivity; safe, shaded and walkable streets; housing diversity; community development; cultural heritage; natural environment; and revitalization of existing communities that have the need for improvement.¹⁴⁹

Sustainability

Sustainability addresses the issue of balance between the city's natural resources and the built up environment. This is closely tied in with Estidama, a sustainable framework for the design and construction of more energy efficient buildings and developments in the Gulf.¹⁵⁰

Liveability

Liveability addresses how the built environment impacts the occupants, both local and tourist, of the city. This includes the public realm and transportation within the city, which are seen as

¹⁴⁹ Ibid., 79.

¹⁵⁰ Urban Planning Council, "Urban Structure Framework Plan," 1.

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being crucial in Abu Dhabi Vision 2030, creating an enjoyable atmosphere within the city for people to live, work, and relax.¹⁵¹

Economic Development

Abu Dhabi Vision 2030 is clear with its goal to diversify the economy by looking at specific industry sectors such as education, tourism, and media. The Vision provides the physical infrastructure necessary for Abu Dhabi to move into these new industries.¹⁵²

Managed Urban Growth

Managing the urban growth establishes measurements to restrict sprawl, while delivering the needed infrastructure and amenities to the growing population.

Connectivity

Connectivity addresses the city's reliance on automobile transportation and the city's aim to phase out this reliance by introducing a multi-layered transportation network to meet the needs of residents and visitors. The Urban Planning Council worked with the Abu Dhabi Department of Transport (DoT) to create a Surface Transportation Master Plan (STMP) to address the future of transit in the city.¹⁵³

Safe, Shaded and Walkable Streets

In order to create an attractive environment, the city needs to have safe, shaded and walkable streets. The Vision addresses this by pointing to clearly defined pedestrian walkways and crossings, more efficient pedestrian routes connecting areas of interest, and providing shade along those routes. "A commitment has been made to creating 'shadeways' that interconnect sidewalks, pedestrian paths, trails, and multi-modal routes to ensure that residents and visitors experience a 'City of Shade'."¹⁵⁴

Housing Diversity

Housing Diversity addresses the range of housing that is needed throughout Abu Dhabi to provide accommodations for all income levels. The Urban Planning Council's Affordable Housing Strategy aims to address the issue of housing in the city.¹⁵⁵

¹⁵¹ Abu Dhabi Council for Economic Development and Abu Dhabi Urban Planning Council, "Abu Dhabi Vision 2030," 80.

¹⁵² Ibid.

¹⁵³ Ibid., 82.

¹⁵⁴ Ibid.

¹⁵⁵ Ibid., 85.

Community Development

Community development addresses mixing of uses to create a more vibrant atmosphere within the community as well as offer convenience for residents. This subject also includes open spaces and civic facilities for the public.

Cultural Heritage

Aiming to preserve the emirate's unique heritage, this item addresses balancing the vernacular qualities of the built environment with the new developments that will be realized within Abu Dhabi.

Natural Environment

Abu Dhabi Vision 2030 protects and preserves the natural environment of Abu Dhabi that make the city unique. According to the Vision, it is important to "identify and conserve these distinct environmental and cultural amenities first and then determine where new development might best be located, striking a balance between conservation and development."¹⁵⁶

Revitalization

Revitalization addresses the existing communities that could be renewed through improved transit and pedestrian options, quality community facilities, and better housing options. While new buildings can be proposed, the idea is that they would occur on a site with an existing built fabric.¹⁵⁷

Urban Structure Framework Plan

Highlighted in Abu Dhabi Vision 2030, Plan Abu Dhabi 2030: Urban Structure Framework Plan (hereafter referred to as Urban Structure Framework Plan) was developed by the Abu Dhabi Urban Planning Council and released in 2007. The Urban Structure Framework Plan addresses Abu Dhabi's Metropolitan Area, with focus on the built environment. Many of the key directions in the Urban Structure Framework Plan reference qualities desired to create an attractive urban environment with human scale developments, layered transportation systems, improved pedestrian connectivity, and public plazas.¹⁵⁸ This Plan provides frameworks for transportation, public space, building heights, land uses, density, and revitalization strategies. It concludes with a set of policies that provide the agenda for the plan. The following is a summary from the Urban Structure Framework Plan of the areas of interest for this thesis.

¹⁵⁶ Ibid., 86.

¹⁵⁷ Ibid.

¹⁵⁸ Ibid., 99–101.

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Land Use

According to the Urban Structure Framework Plan, land use goes hand in hand with density. Each land use category has different densities associated with it, therefore needs to be addressed separately. The plan separates the different uses into Residential, Office, Retail, Industrial and Hotel, and describes the key goals for each use.¹⁵⁹

Transportation

The interest in providing efficient transportation throughout Abu Dhabi is addressed in the Transportation Framework. The framework encourages through-roads as opposed to dead-ends, a layered transit network to include a high-speed rail line, metro line, and above ground public transit, and improving the streetscape to encourage pedestrian activity.¹⁶⁰

Public Open Space

The Public Open Space Framework balances development, sprawl, and open space in Abu Dhabi, marking some areas of the emirate to be left undeveloped and protected. To balance the built up area in the city, major city parks, recreational parks, and public plazas are outlined, as well as green boulevards throughout the city which "make it possible to traverse the city under the cover of shade trees."¹⁶¹ A policy of interest included under Public Open Space is one that addresses private developments, requiring that they provide a "landscaping interface between the private and public realm."¹⁶² While this is subject to enforceability, this policy bridges the gap between public development by the government and the private developments that are occurring under the hands of developers.

Urban Design

As part of the plan, building heights are cohesive in each of the districts in Abu Dhabi, which will keep to its relatively short skyline (20-25 levels) except for certain areas which will be allocated taller heights. A Maximum Building Heights Plan is included within the Urban Structure Framework Plan that notes maximum heights, see Figure 4.4.¹⁶³ While the dimensions may be refined, the plan still indicates the general direction and character that the emirate wants to move in. Views are also considered in regard to building height, with certain landmarks limiting the surrounding building heights to signify the importance of the landmark.

¹⁵⁹ Urban Planning Council, "Urban Structure Framework Plan," 87–88.

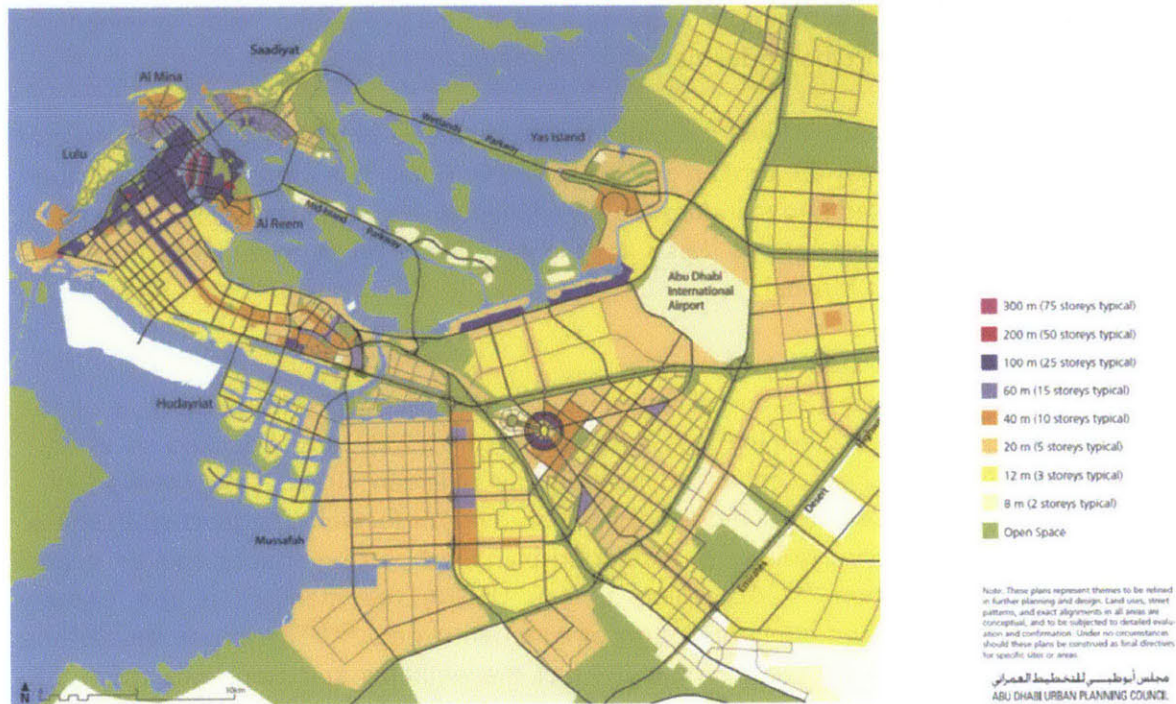
¹⁶⁰ *Ibid.*, 63–64.

¹⁶¹ *Ibid.*, 71.

¹⁶² *Ibid.*, 146.

¹⁶³ *Ibid.*, 85.

FIGURE 4.4: Maximum Building Heights



Central Business District Revitalization

An integral part of the Urban Structure Framework Plan is the regeneration of the existing city, of which the first step is to immediately begin improving the public realm, putting parking below ground or in multi-level structures, and putting in shading devices. These elements are not contingent on other developments, and are identified as early projects to tackle in order to improve the existing city.¹⁶⁴ The Urban Structure Framework Plan provides six steps to revitalize the existing central business district:¹⁶⁵

1. put all the parking underground or in structures
2. make some through-roads to help relieve traffic pressure from the boulevards
3. develop an interconnected public open space network
4. identify new infill building possibilities
5. add needed services and amenities to ensure vibrant inhabitation
6. design a coherent public realm

¹⁶⁴ Ibid., 97.

¹⁶⁵ Ibid., 130.

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These steps can be used to provide ideas to revitalize the site in Doha. Existing streets are also addressed under this section in an effort to create a more attractive public realm. Interventions include widening and shading the pedestrian path and dedicated transit lanes.¹⁶⁶

In the Urban Structure Framework Plan, the goals for the built environment are still discussed at a large-scale, even though they are broken down into further detail. It is within the UPC Manuals that these goals get translated into standards to be applied to the city at the scale of a project. Two of the manuals of interest for this thesis are the Abu Dhabi Urban Street Design Manual and the Public Realm Design Manual.

Abu Dhabi Urban Street Design Manual

The Abu Dhabi Urban Street Design Manual (USDM) acknowledges the importance of the design of streets. The manual, which was commissioned in 2009 and adopted in 2010,¹⁶⁷ includes elements that address “enhanced connectivity between streets, the creation of a connected street hierarchy serving all modes of travel, provisions for well designed open space, innovative shading and cooling solutions, expanded managed parking spaces and an overall pedestrian-friendly orientation.”¹⁶⁸ According to the USDM, the manual “is the primary document for the planning and concept design of all urban streets.”¹⁶⁹ The importance of the manual is that it takes the big picture objectives of the emirates and translates them into physical requirements or suggestions, with dimensions. This includes streetscape elements, designing building frontages, shade and climate adaptation, landscaping, lighting, signage and safety ¹⁷⁰ – all elements that need to be addressed to create a quality urban environment, see Chapter Two.

Abu Dhabi Public Realm Design Manual

The Abu Dhabi Public Realm Design Manual (PRDM) addresses the network of public spaces within the metropolitan area in an effort to provide policies, typologies, and guidelines to create attractive and inviting spaces. Of particular interest in the PRDM is the Streetscapes section, which classifies the different types of streetscapes depending on location and typology, and then prescribes a minimum standard for streetscape elements, which includes shading, public art, lighting, fences, etc... As with the USDM, the Public Realm Design Manual relies on word choice to indicate if a guideline is mandatory, recommended, or optional.¹⁷¹

¹⁶⁶ Ibid., 132.

¹⁶⁷ Urban Planning Council, “Abu Dhabi Urban Street Design Manual,” 18.

¹⁶⁸ Abu Dhabi Council for Economic Development and Abu Dhabi Urban Planning Council, “Abu Dhabi Vision 2030,” 181.

¹⁶⁹ Urban Planning Council, “Abu Dhabi Urban Street Design Manual,” 20.

¹⁷⁰ Ibid., 117–138.

¹⁷¹ Urban Planning Council, “Abu Dhabi Public Realm Design Manual,” 87.

The PRDM and the USDM address many similar elements in the physical environment. While those elements are important to creating the physical city that Abu Dhabi strives for, the lack of authority in the documents needs to be addressed, as they are easily perceived as offering suggestions as opposed to rules that need to be followed. As mentioned earlier, the Abu Dhabi Capital Development Code presents the requirements of the built environment as mandatory.

Abu Dhabi Capital Development Code

As mentioned earlier, the Development Code is supposed to be the law, the parameters set forth - which include FAR, building heights, plot coverage, setbacks, allowable uses, and so forth - are not suggestions but requirements. The Code does reference the guidelines set forth in the Urban Street Design Manual, which if the Development Code is enforceable, can lend some authority to the USDM. However the actual legalities of implementation are not discussed, so while the Code appears binding, its authority is unclear.

B. Marina Bay Financial Centre, Singapore

Singapore, a city-state on the southern tip of the Malay Peninsula, is known for its efficient and effective economic and physical development process since the small country's independence in 1965. With a total land area just over 700 square kilometers, the government has had to carefully manage the development on the island. While Singapore may not seem comparable to Doha on the surface, the two cases have similarities that go beyond their parallel ambitions to becoming global cities. Cities like Doha, who has an unequal share of the population of Qatar, have been referred to as pseudo city-states.¹⁷² In that sense, similar to Singapore, Doha does not have to deal with conflicts between city and national agendas. In terms of global power, both entities are physically small with a disproportionately large influence. Within the built environment, both Doha and Singapore are highly urbanized although at different densities. They also both have to deal with imperfect weather almost year-round. While the future development literature and global ambitions of the two cases are comparable, the similarities in the actual built environment are few, even though both contexts share similar elements such as reclaimed land, revitalized downtowns, iconic towers, and mega-projects. While there are many factors that contribute to this difference in the built environment, the planning process in place in Singapore will be looked at for its well-documented influence on creating a built environment in line with the city-state's vision. Marina Bay Financial Centre, a mixed-use project located in Singapore's Downtown Core, is examined from master plan to project implementation and provides a case where rules and regulations that have been enforced in the built environment, have provided desirable urban design qualities that affect not only the development, but also the greater context of the site.

¹⁷² Al-Buainain, "Urbanisation in Qatar," 30-31.

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B.1. Planning Process

Associate Professor Joan C. Henderson, who studies heritage and tourism in Singapore and the Asia Pacific Region, describes Singapore's government as a "hybrid regime, not quite democratic and not quite authoritarian. The government is well known for its pursuit of order and control through censorship, electoral regulations, libel laws and other restrictions which impinge on many aspects of life and inhibit active opposition."¹⁷³ Despite the criticism of authoritarian undertones, the strong role of government in Singapore has been crucial in the implementation of difficult policies that were deemed necessary for the nation's best interest.¹⁷⁴ The government's pursuit of order and control is evident in the planning environment, which is acclaimed for being straightforward, efficient, and heavily reliant on regulatory jurisdiction.¹⁷⁵ The limited land resource has facilitated the need for such a closely managed urban development system.

"Shortly after independence, the government introduced a system of centralized urban planning enacted through powers of compulsory acquisition. In 1971 the government devised the Concept Plan, which sets the direction for development over a forty- to fifty-year period, and is revised every ten years in light of changing circumstances and national goals. A more specific Master Plan follows from each Concept Plan revision and addresses how individual parcels of land will be used over a shorter ten- to fifteen-year time span. The Urban Redevelopment Authority (URA), under the Ministry of National Development [the entity responsible for the physical development of the city], deals with planning and development. The URA is considered by the government to be vitally important because of the country's finite land and the need to maximize its commercial potential and satisfy the housing, transportation, recreational and other needs of the population."¹⁷⁶

Zulkiflee M. Zaki, a city planner in the Urban Redevelopment Authority who went on to do his thesis research on Singapore, writes that "what distinguishes the planning environment in Singapore from other cities and countries is the political authority and commitment to managing the development of land."¹⁷⁷ He goes on to note that the regulatory powers entrusted to the URA are what allow the organization to realize its planning objectives.¹⁷⁸

¹⁷³ Henderson, "Planning for Success," 70.

¹⁷⁴ Zaki, "Implementation of Information Technology in Planning," 21.

¹⁷⁵ *Ibid.*, 7.

¹⁷⁶ Henderson, "Planning for Success," 72.

¹⁷⁷ Zaki, "Implementation of Information Technology in Planning," 22.

¹⁷⁸ *Ibid.*, 24.

Similar to the goals of Abu Dhabi, the planning process in Singapore aims to be transparent and invite public participation. In its mission statement, the URA states that it strives to “create a vibrant and sustainable city of distinction by planning and facilitating Singapore’s physical development in partnership with the community.”¹⁷⁹ In terms of the transparency in the planning process, the Urban Redevelopment Authority’s website (<http://www.ura.gov.sg/uol/>) offers a clear explanation of the history of the URA, makes available current planning documents and past planning documents, and offers tools for both professionals and the public. The organization of the website is straightforward, making it easy to navigate. One of the online tools available is OneMap (<http://www.onemap.sg/>), an interactive map of Singapore that among other features, allows the user to zoom in to any specific area and overlay recent master plans, building heights, and land use zoning plans. Not only does this tool speak to the transparency Singapore is promoting in their planning process, but it also speaks to the city-states’ accountability. In allowing the public to zoom in and inspect these documents, it gives confidence that the heights or land uses specified on the document will be met. It allows the public to act as a watch group and hold the URA accountable. This speaks to the URA’s confidence in its planning powers and their authority to implement the guidelines and regulations. Zaki notes that the URA commonly exhibits draft plans for public assessment and more recently, “planning authorities have also held themselves more accountable for the decisions they make. The URA has been more willing to discuss and clarify their policies and guidelines with affected parties. Proposal plans, planning reports, planning guidelines and land information are made available [online]... In this way, the URA hopes to encourage the public to air their views and concerns so that planning can be more responsive to meeting community needs.”¹⁸⁰

¹⁷⁹ “About Us: Mission.”

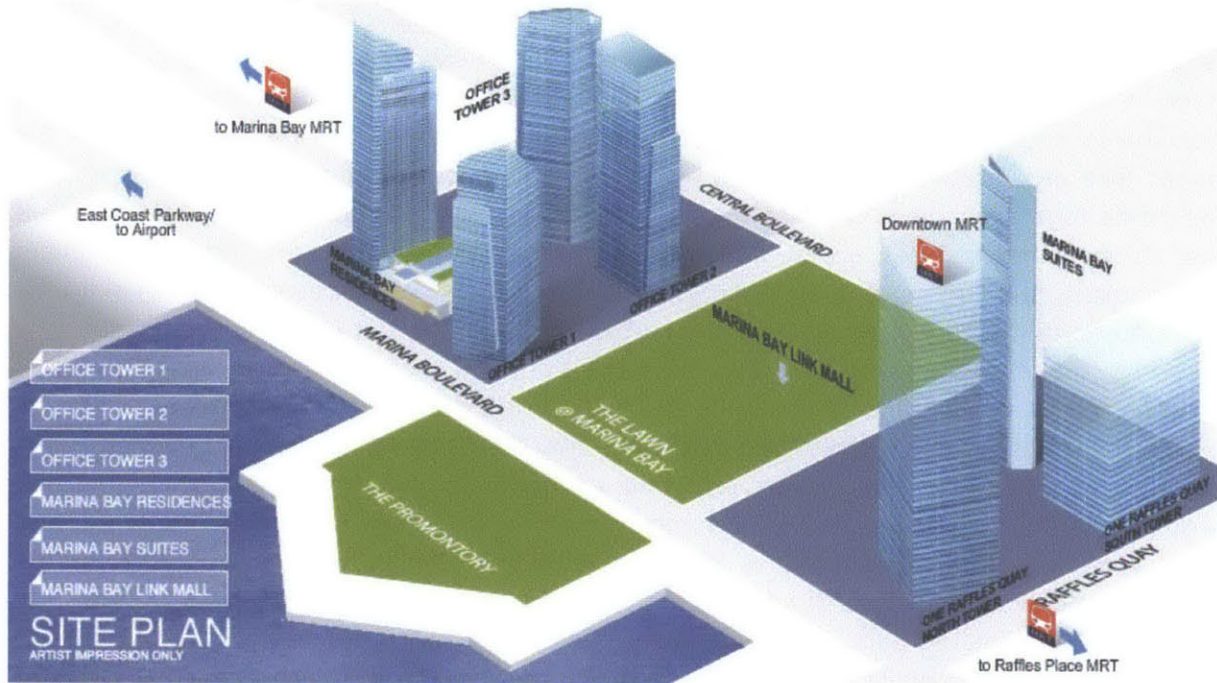
¹⁸⁰ Zaki, “Implementation of Information Technology in Planning,” 35.

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B.2. Planning as it Relates to Marina Bay Financial Centre Site

FIGURE 4.5: Marina Bay Financial Centre



Marina Bay Financial Centre

Constructed in 2012, the Marina Bay Financial Centre is a mixed use mega-project located in the Central Business District of Singapore. The project, designed by Kohn Pedersen Fox (KPF), consists of five towers (three office and two residential) on a 4.9 acres site.¹⁸¹ The site spans three land parcels with four of the towers on one land parcel, the underground mall covered by a city park on the middle parcel, and one of the residential towers, Marina Bay Suites, on the third land parcel, see Figure 4.6. The third land parcel includes two other towers that are not considered a part of the MBFC development. Within the site of focus in West Bay, Doha, the majority of the towers are office use. With that, the focus within the Marina Bay Financial Centre site will be the first parcel, the parcel with the three office towers located within it.

Within the land parcel that hosts the three office towers, a continuous podium base connects two of the office towers and one of the residential towers. KPF describes the project as having covered walkways that connect the at-grade retail component, horizontal louvers that project from the office towers to shade occupants, and a “public plaza around the lower building [that]

¹⁸¹ KPF, “Projects: Marina Bay Financial Centre.”

provides porosity through the site and a focal point for the retail component.”¹⁸² The emphasis on the pedestrian realm is apparent from the urban design regulations to the built environment.

FIGURE 4.6: MBFC Site



Master Plan 2003

The concept for Marina Bay Financial Centre was unveiled in 2006.¹⁸³ In order to understand how the regulations and guidelines affected the final built form, Master Plan 2003 was examined. Master Plan 2003 is available as an interactive map on the URA website, allowing for multiple layers to be overlaid to generate a more comprehensive understanding of the site and its context.¹⁸⁴ The MBFC Site is located within the Downtown Core-Central Subzone, which is part of the Central Region. FIGURES 4.7 - 4.9 show the MBFC Site within Master Plan 2003.

¹⁸² Ibid.

¹⁸³ Tay, "Sharpening Singapore's Investment Edge."

¹⁸⁴ Urban Redevelopment Authority, "URA MAP: Master Plan 2003."

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Indicated in the zoning map, see Figure 4.7, the MBFC Site is shaded in white, which according to the zoning interpretation table, means that this is intended to be used for “commercial, hotel, residential, sports & recreational and other compatible uses, or a combination of two or more of such uses as a mixed use development.”¹⁸⁵ Using white zoning sites is a new concept that the URA introduced to allow for a more sufficient mix of uses in the developments in Marina Bay. This is an example of how urban planning has been used to facilitate Singapore’s vision to increase entrepreneurship in order to maintain the city-state’s competitiveness on a global market. The land use zoning system introduced in Master Plan 2003 moves away “from the traditional, prescriptive land use zoning system... toward an impact-based zoning scheme... The implication of this perspective is a liberalization and recast of urban development to strengthen the creative cultures of the city and encourage flexibility and innovation.”¹⁸⁶ The new land use system allows businesses greater flexibility in location.

FIGURE 4.7: Master Plan 2003 | Zoning Map

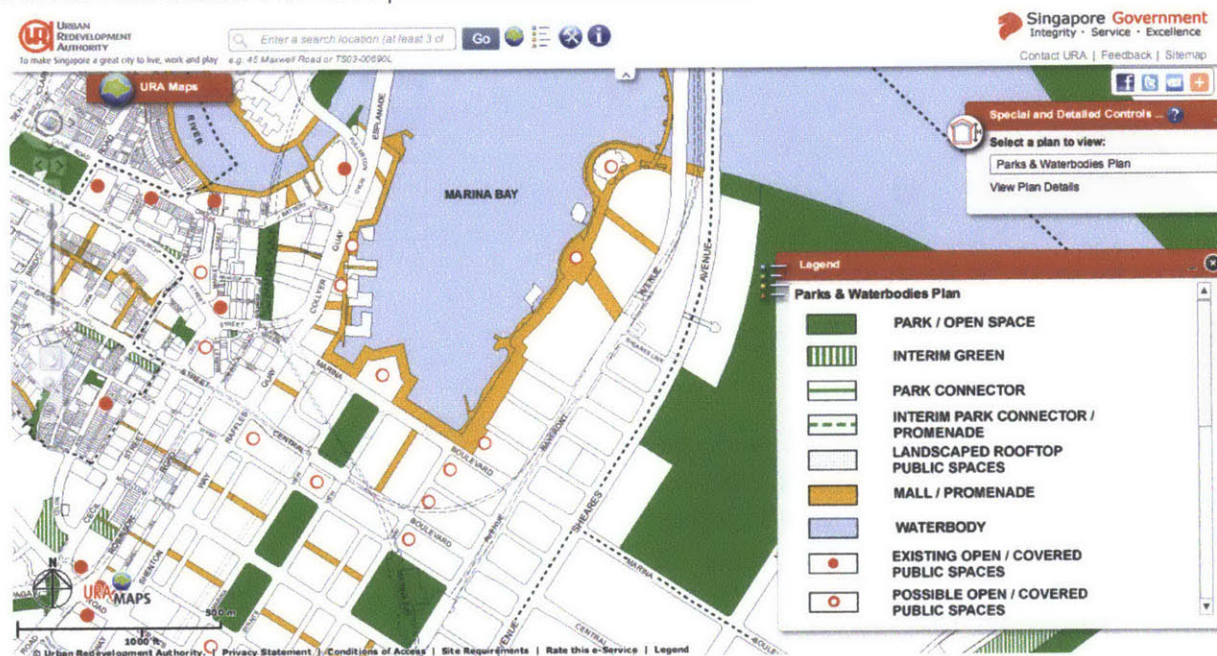


¹⁸⁵ Urban Redevelopment Authority, “URA Master Plan 2008: Table 1 - Zoning Interpretation.”

¹⁸⁶ Soh and Yuen, “Singapore’s Changing Spaces,” 5.

Within Master Plan 2003, there are two other overlaid plans that are of interest to the MBFC Site. The first is the Parks and Waterbodies Plan, see Figure 4.8. This plan indicates where parks and open spaces are to be located around the site as well as indicates where existing and potential public spaces will be located. The orange shade on the plan shows where malls and promenades are planned. The orange shade wraps around the marina and also cuts directly through the middle of the MBFC Site.

FIGURE 4.8: Master Plan 2003 | Parks and Waterbodies Plan



The second plan of interest in the Master Plan 2003 is the Activity Generating Uses Plan, see Figure 4.9. This plan indicates where activity generating uses are to be located – basement level, first floor (which is considered the ground floor in Singapore), or both. On the edge of the MBFC Site closest to the marina, there is to be basement level activity generating uses. The orange demarcated promenade/mall shown in Figure 4.8, is overlaid on this map with light blue, which indicates that the promenade/mall will have activity generating uses on the first floor.

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FIGURE 4.9: Master Plan 2003 | Activity Generating Uses Plan



Each plan corresponds with zoning and regulation documentation. Since the MBFC Site is located within the Downtown Core Planning Area, the Urban Design Guidelines for Developments within the Downtown Core need to be coupled with the plans to get a comprehensive understanding of all the rules and regulations for the site. Unfortunately the URA does not have all the archived documents that pertain to the Master Plan 2003. The only edition of the Urban Design Guidelines for Downtown Core Planning Area that is available is the 2013 version. While these documents are not the same version of those that would have gone into crafting the design of the Marina Bay Financial Centre, they do offer an understanding of the types of rules and regulations that the URA would expect a development within the MBFC Site to meet.

Urban Design Guidelines for Downtown Core Planning Area

The document, which is available on the URA website, includes links to appendices that illustrate in further detail the location of certain requirements.¹⁸⁷ The document works with the master plan to provide more stringent criteria that is applicable to the site. It is within those guidelines that definitions from the master plan emerge. For example, activity generating uses are defined in the guidelines as being uses such as "retail, food & beverage, entertainment,

¹⁸⁷ Urban Redevelopment Authority, "Urban Design Guidelines for Developments within Downtown Core Planning Area - Annex A."

sport and recreation (such as gymnasiums and fitness centres, etc) and other similar uses.”¹⁸⁸ Appendix Two, see Figure 4.10, is linked to give further location information in relation to activity generating uses, which are encouraged to create attractive streets for the pedestrian.¹⁸⁹ In order to create distinct streets, the urban design guidelines call for all developments to be built up to the edge of the site at a “minimum height of 19.0m (approximately 4 storeys). Up to 40% of the length of the building facades, between the corners of the development, can be set back” which allows for building form articulation.¹⁹⁰ Building edge requirements are also indicated in Appendix Three, see Figure 4.11.

The guidelines call for public space to be provided even within private developments, specifically those that are located along major boulevards or located near a major transportation node. The guidelines state that the

“open spaces are to be well-integrated with adjacent open and covered walkways, and are to be publicly accessible at all times... For selected developments, the building form and massing is to be designed such that the lower floors provide a high degree of visual and physical porosity... These [spaces] are intended to be used as sheltered public ‘city rooms’ that can be used for staging events, exhibitions or concerts... These sheltered public spaces are to be equivalent to at least 25% of the built footprint of the development at the 1st storey, excluding the covered walkways. These spaces are to be connected to the key pedestrian routes at the 1st storey and encouraged to be linked to the underground and 2nd story pedestrian networks within the development, where applicable.”¹⁹¹

The emphasis on the pedestrian network is apparent in the Urban Design Guidelines for Downtown Core. That is because the Downtown Core is designed to be pedestrian-friendly, which includes a comprehensive plan for a continuous and pleasant pedestrian network. The pedestrian network and public spaces are indicated in Appendix Two, see Figure 4.10. To create a more comfortable and shaded environment for the ground level pedestrian network, covered walkways are compulsory of all developments in the Downtown Core. The guidelines go on to state that covered walkways are seen as public amenities, so the area under them is not counted towards the maximum build out of the development. The document also indicates minimum widths of the walkway, which depends on what category of road the walkway fronts.¹⁹²

¹⁸⁸ Ibid., 2.

¹⁸⁹ Ibid.

¹⁹⁰ Ibid., 3.

¹⁹¹ Ibid., 4.

¹⁹² Ibid., 5.

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The guidelines also address the issue of car parking, which is seen to detract from the attractiveness of the urban environment and is therefore relegated to the basement level.¹⁹³

A unique aspect of the pedestrian network that is located on the MBFC Site is the through block link, see Figure 4.10, which is intended to “break down the scale and improve permeability of the streetblock.”¹⁹⁴ With the through block link, incentives are provided to encourage the link to connect with the greater pedestrian network around the site.

Appendices of the Urban Design Guidelines for Downtown Core

Appendix Two of the Urban Design Guidelines for Downtown Core deals with the pedestrian network and activity on the site, see Figure 4.10. On the MBFC Site, the orange outline indicates that covered pedestrian walkways are required along the edge of the entire site. The darker blue shade in the site illustrates that activity generating uses are required along the perimeter of the site. The yellow shading that cuts through the site marks a through block link, which is intended to allow pedestrians to cut through the site without having to walk all the way around the block. The three red rectangles located within the MBFC indicate vertical pedestrian circulation.¹⁹⁵

¹⁹³ Ibid., 7–8.

¹⁹⁴ Ibid., 6.

¹⁹⁵ Urban Redevelopment Authority, “Urban Design Guidelines for Downtown Core - Appendix 2: Urban Design Plan,” 3.

FIGURE 4.10: Urban Design Guidelines for Downtown Core 2013 | Appendix Two



LEGEND

- PLANNING AREA BOUNDARY
- CONSERVATION BUILDING/AREA
- NATIONAL MONUMENT
- ACTIVITY GENERATING USES**
- MANDATORY
- ENCOURAGED

PEDESTRIAN NETWORK

- COVERED WALKWAY
- THROUGH BLOCK LINK
- PEDESTRIAN MALL / PUBLIC SPACE
- VERTICAL PEDESTRIAN CIRCULATION
- CITY ROOM

LIST OF GAZETTED NATIONAL MONUMENTS

- 1 FORMER TELOK AYER MARKET
- 2 TELOK AYER CHINESE METHODIST CHURCH
- 3 FORMER EMPRESS PLACE BUILDING
- 4 YUEH HAI CHING TEMPLE

SCALE : 1:5000@A

0.25 HA

DRWG NO : DT/2013/53

DATE : NOV 2013

GROUP : CLDG/UP



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Appendix Three of the Urban Design Guidelines for Downtown Core addresses the building edge, see Figure 4.11. The thick black border that outlines the edge of the MBFC Site indicates that the building edge must be a minimum of 4 stories.¹⁹⁶

FIGURE 4.11: Urban Design Guidelines for Downtown Core 2013 | Appendix Three



B.3. Implementation, the Final Built Form

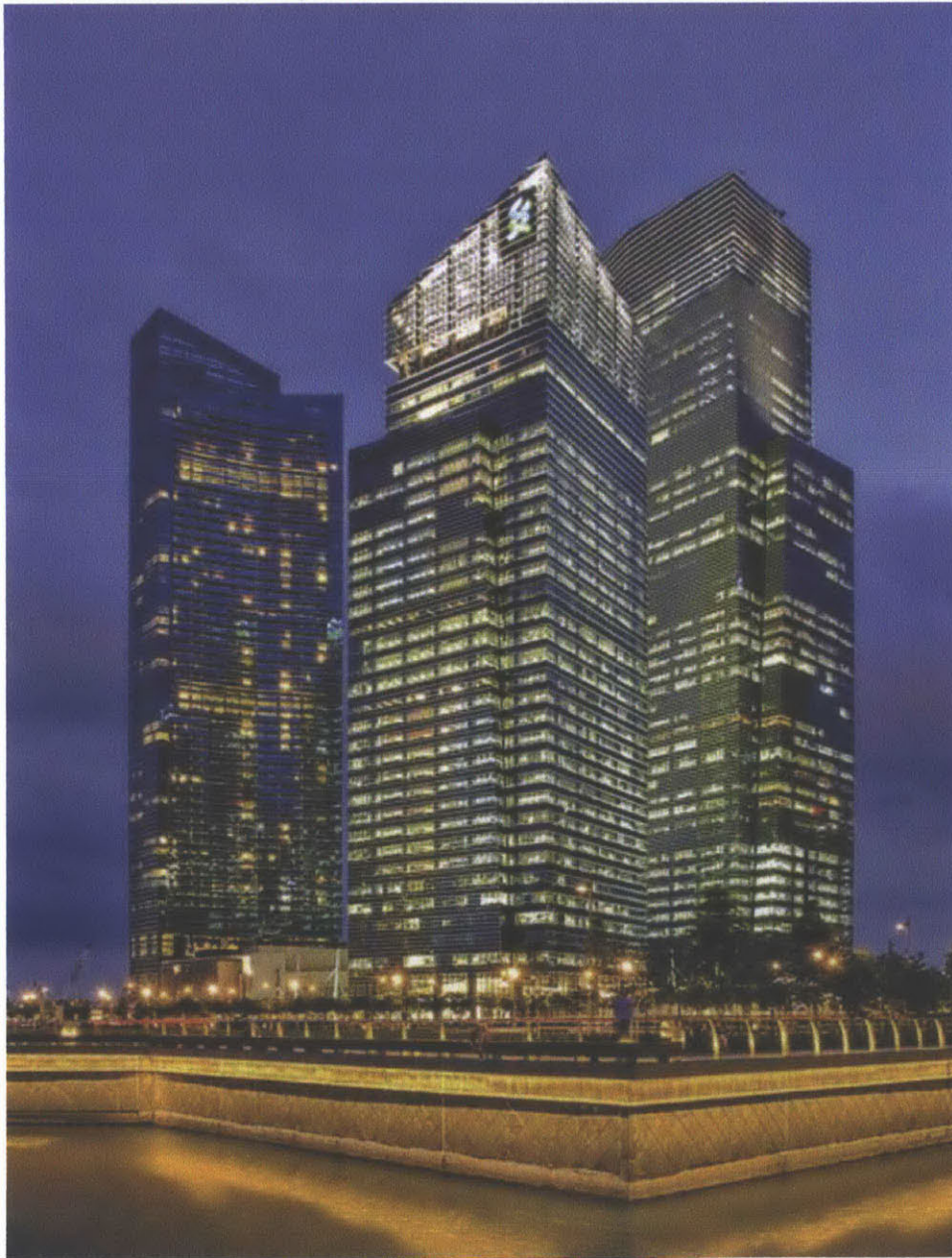
The Marina Bay Financial Centre development had its grand opening on May 15, 2013, though the project was complete in 2012.¹⁹⁷ Since that time, companies and residents have moved in and the buildings within the development have been the focus of many pictures aiming to capture the buildings in Singapore's skyline, see Figures 4.12 - 4.13. Since travel to Singapore

¹⁹⁶ Urban Redevelopment Authority, "Urban Design Guidelines for Downtown Core - Appendix 3: Building Edge," 3.

¹⁹⁷ "Marina Bay Financial Centre."

was not possible for thesis research, online photographs and Google Street View images have been utilized to assess whether the design guidelines and requirements that addressed the MBFC Site affected the final built form of the development. While there are limitations to this assessment method, the online available material was able to verify compliance in many areas.

FIGURE 4.12: Marina Bay Financial Centre Photo



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FIGURE 4.13: Marina Bay Financial Centre Skyline



Figure 4.14 shows the height of the towers located on the MBFC Site from the vantage point of the public park. There is some articulation within the façade of the buildings and the lower floors of the tower offer some visual interest, making the large mass of the tower appear lighter as it approaches the ground level. The park and the pedestrian realm along the perimeter of the MBFC Site offer human-scaled elements, such as trees, canopies, and landscaping elements, see Figure 4.15. The city park offers little shade, but if the temperature is uncomfortable, one can easily go below ground to the Marina Bay Link Mall that offers seamless and climate protected pedestrian connectivity.

FIGURE 4.14: Google Street View | Tall Buildings, Human-Scale Elements



Figure 4.15 is a Google street view image taken with the back towards the marina. This image shows the covered walkways that surround the perimeter of the site. The image also shows what appears to be a covered walkway that goes through the middle of the site, which I believe is the through block link that was indicated in Master Plan 2003, see Figure 4.8, and Appendix Two of the Urban Design Guidelines for Downtown Core, see Figure 4.10. The landscaping and tree planting shown in Figure 4.15 offer human-scaled elements within the plaza.

FIGURE 4.15: Google Street View | Through Block Link



Figure 4.16 shows the building edge treatment along one of the towers located on the MBFC Site. Appendix Three called for the edge of the site to be a minimum of four storeys, which has been met and surpassed by the towers. The built up environment extends to the edge of the site, per the urban design guidelines. The extruded metal canopy creates visual interest as well as covers the below walkway. Google street view did not allow for a close examination of the entire building edge all around the site. Therefore, I am unable to verify perimeter activity generating uses, building porosity, and covered walkways. Figure 4.16 also shows a pedestrian street crossing. Per the urban design guidelines, no street parking is apparent in the images.

FIGURE 4.16: Google Street View | Building Edge + Pedestrian Street Crossing



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Figure 4.17 shows a covered walkway during the construction phase of the development. While building uses on the ground level are not apparent, the building articulation on the lower levels of the towers add visual interest and break up the massing of the tall buildings.

FIGURE 4.17: Google Street View | Covered Walkway + Building Articulation



Figure 4.18 offers an inside look at a ground level plaza off one of the office towers in the MBFC Site. This view is looking from the plaza out to the site's edge. The plaza itself offers wide covered walkways, which are then connected to the smaller covered walkways that line the edge of the site, creating a network of covered walkways.

FIGURE 4.18: Google Street View | Covered Walkway Network



The Marina Bay Financial Centre Site has coupled desirable urban qualities in the pedestrian realm with iconic modern towers that define the skyline. This is something that West Bay in Doha has failed to do. Looking at the Marina Bay example illustrates how regulations can achieve desirable built forms and can offer ideas to address the site in Doha.

C. Distinct Planning Environments

The two comparative cases highlight distinctions between the planning environment in Singapore and that of Abu Dhabi. These distinctions have direct correlation to each planning establishment being able to achieve the envisioned built environment. The Singapore planning example is different from that of Abu Dhabi in that the Urban Redevelopment Authority in Singapore is endowed with an immense degree of authority. There is also great inter-agency cooperation within the government structure.¹⁹⁸ This was a deliberate move on the city-state's part. Singapore's Urban Redevelopment Authority has its roots as a group formed in the Housing and Development Board in the 1960s to tackle urban renewal. With the priority given to renewing the urban core of Singapore, the group became its own department in 1966 under the name Urban Renewal Department, still under the umbrella of the Housing Development Board. In 1973, parliament passed the Urban Redevelopment Authority Bill, which created the Urban Redevelopment Authority as a statutory board under the Ministry of National Development. The URA took over the functions of the Urban Redevelopment Board and had clear tasks and priorities focused on redeveloping the central area, a task it had achieved by the mid 1980s. At this point, the government merged the URA with the Planning Department and Research and Statistics Unit in order to have only one authority in charge of all planning functions. The newly merged authority took the name of the URA. Valerie Chew, who writes about the URA's history, notes that the "reorganization marked the beginning of the URA as Singapore's national planning and conservation authority. It has allowed nationwide urban planning to be undertaken in a more comprehensive manner, with better coordination across government agencies."¹⁹⁹ Singapore also has a clear vision for its future, and as demonstrated by its planning process, visibly translates that vision into detailed plans and regulations for the built environment. These regulations are then supported by effective policies in urban development and planning as well as the support and authority of the legal system.²⁰⁰

In contrast, Abu Dhabi's Urban Planning Council and the documents produced have no legal power, according to Davide Ponzini, who published an article on the development of large projects in the absence of democratic politics in Abu Dhabi.²⁰¹ He notes that the Urban Planning

¹⁹⁸ Zaki, "Implementation of Information Technology in Planning," 86.

¹⁹⁹ Chew, "Urban Redevelopment Authority."

²⁰⁰ Tan, Wang, and Sia, "Perspectives on Five Decades of the Urban Greening of Singapore," 25.

²⁰¹ Ponzini, "Large Scale Development Projects and Star Architecture in the Absence of Democratic Politics," 254.

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Council, which has been given high visibility, has further diminished influence because the council has to negotiate directly with developers. In those negotiations, with the “lack of legally binding planning tools and the limited number of large real estate operators who are typically well-connected to the government and royal family,” the effectiveness of the UPC and their issued documents are curtailed.²⁰² In the case of Abu Dhabi, the vision of the emirate has been clearly translated into effective regulations and policies, however, the lack of authority and legal power of the Urban Planning Council greatly diminish the effect of the planning environment in city. Even if the exact same design guidelines and regulations were issued in Singapore and Abu Dhabi, the built outcome would be different. The elements identified as crucial in the Singapore planning environment will be discussed further in Chapter Five as to how they relate to planning in Doha.

²⁰² Ibid.

CHAPTER 5: MOVING FORWARD

Mirroring the acknowledgements of the government, prominent designers and real estate developers in Qatar have publically recognized the importance of placemaking and a quality urban environment.²⁰³ However, these acknowledgements have yet to translate into guidelines or regulations that can be applied to new and renovated projects throughout the city of Doha. With or without these requirements, the city is getting built, as development moves forward one project at a time. If there is to be pedestrian activity in the city, which is indicated by the metro project with a stop located in the center of the site in West Bay as well as the general push for mass transit in major gulf cities, then the human dimension must be addressed.²⁰⁴ In order for Qatar to address the quality of its urban environment, the country needs to provide a vision for what it desires. That vision needs to be directly translated to the built environment; it cannot address themes or objectives only like the Qatar National Vision 2030,²⁰⁵ or the National Development Strategy.²⁰⁶ While those documents are necessary in establishing a comprehensive vision for the nation, they in no way offer enough guidance for the built environment. The document that was set to offer the additional guidance was the Master Plan, which has not yet been released. More important than a plan are actual measurable regulations and guidelines for the city. Moving forward however, it must be understood that even if regulations were to emerge that fully addressed the human dimension of the city and had the potential to offer a better alternative than the urban design that currently exists, there would be barriers to implementing those regulations.

A. Barriers in the Planning Process

Qatar faces an issue that the other GCC Countries face and that is one of plan and regulation implementation. This is evident in the amassing of Doha's master plans, as well as the plans of many other gulf cities. Despite the numerous plans and the renowned planning professionals, many of the cities grow unstructured creating both physical and economic problems. Although it is a different GCC Country, Saudi Arabia offers insight into the planning processes in place in the region. This is because the country opened its doors early on to international consultants who have since written about their professional experience in the Kingdom. These writings allow for a backstage look and understanding of the barriers to plan implementation in the gulf context.

²⁰³ Qatar Urban Forum, "Qatar Urban Forum Tackles Place-Making in Era of Globalisation."

²⁰⁴ ASC Staff, "Gulf Cities to Rival World's Most Advanced in 20 Years."

²⁰⁵ General Secretariat for Development Planning, "Qatar National Development Strategy 2011-2016."

²⁰⁶ Ibid.

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In his research on planning in Saudi Arabia, Omar A. Mashabi explains that the rigid guidelines in the master plans made the plans themselves unworkable. Mashabi continues on describing the shortcomings of the plans, noting how they do not in themselves establish any monitoring system or implementation methods, lack public participation, and lack coordination both horizontally and vertically between the different agencies.²⁰⁷ Edward Lynch, who served as the Senior Consultant to the Deputy Ministry for Town Planning in Saudi Arabia, notes the lack of not only public participation, but also local participation in the planning process. When foreign consultants were brought on board to create the master plans for the city, there were provisions in place that called for local participation with local professionals – a system set up similar to a mentorship role to create knowledge spillover and allow for growth of the local professionals. However, according to the reports by Sert Jackson International/SaudConsult, who created plans for Jeddah, those local roles were never filled.²⁰⁸ The lack of involvement with the Saudi counterparts goes beyond the creation of the plans; it also affects plan adoption and plan implementation. "Consultants were required to present planning reports and proposals to local officials for review and acceptance prior to acceptance of the work by the [Deputy Ministry for Town Planning]. When this occurred, however, local officials generally were not well versed in planning concepts to fully understand the materials they were accepting. Therefore it is not surprising, that they subsequently would have little interest in seeing the plan or its recommended regulations implemented."²⁰⁹ If and when the plan was accepted by the government, that usually signified the end of the consultant's role in the project, leaving the government agencies, particularly the municipalities and the Deputy Ministry for Town Planning, as the responsible parties for implementing the plan. Lynch explains that the lack of local official comprehension of the plan along with a clear lack of authority and legislation, resulted in many of these master plans being unrealized and shelved.²¹⁰ Although it is a different context, the shortcomings noted in the planning process of Saudi Arabian cities provides insight into potential conflicts that could arise within the planning process of Qatar, where the attitude towards the relationship between foreign consultants and local professionals mirrors that of Saudi Arabia in that local participation in a project is seen as educational, an opportunity to learn from the foreign experts.²¹¹

Moving beyond the master plan, Qatar needs to address the lack of comprehensive and authoritative building and urban development guidelines, if not for the entire country, at least for the urban environs of Doha. These guidelines could have a drastic impact on the built environment in the city. However, even if these guidelines were to emerge, there would still be

²⁰⁷ Mashabi, "Institutional Context of Spatial Development Planning," 71.

²⁰⁸ Lynch, "Urban Planning Experience," 296.

²⁰⁹ *Ibid.*, 296–297.

²¹⁰ *Ibid.*, 297.

²¹¹ Nagy, "Dressing Up Downtown," 133.

barriers within the planning process that could diminish the effect of the guidelines and regulations. Looking at why regulations work in Singapore (Chapter Four) along with the criticism of the planning process in Abu Dhabi (Chapter Four), the previously mentioned criticism of the planning process in Saudi Arabia, and the literature on Qatar, I have generated a list of barriers that the country will need to address to be able to implement authoritative urban design regulations. These barriers include the lack of public participation in the planning process, the lack of a clear vision for the built environment, the lack of clear planning coordination and delegation, and the lack of authority and enforcement of the guidelines.

Public Participation

Concerns for the lack of public involvement in Doha's planning environment relate back to the issues that were brought up in Chapter Four when looking at public participation in Abu Dhabi. Similar to Abu Dhabi, if the public were to be involved in the planning process in Doha, it would need to be clarified as to who constitutes the public, how the public would be invited to participate, and how their feedback would be incorporated. Altering these parameters would greatly affect the type of public input received. For example, if one were to garner public opinion on the existing pedestrian realm in West Bay, the feedback would vary greatly if the definition of public was only local Qataris, who heavily rely on their cars for transportation and often live outside the West Bay area, as opposed to the opinions of expatriates who live and or work in West Bay. The public could also play another role in the planning process – that of custodian of implementation, monitoring to verify that planning decisions get realized. In the current situation of Qatar, not allowing the public access to planning documents absolves the Ministry of Municipality and Urban Planning from accountability to the public.

Dr. David Roberts, the Deputy Director of the Royal United Services Institute (RUSI) Qatar wrote an article on the role of Qatari citizens in the country's policies. He writes that while "municipal officials have been elected since 1999, increasingly small popular participation in these elections reflects a widespread belief that the work of these officials is mostly insignificant. Indeed, the reality is that a small handful of people in Qatar make the majority of important decisions with relatively little external input."²¹² He goes on to discuss how there are relatively no signs that Qataris have taken an active role in constructing their country's foreign policy, seemingly leaving it to the rulers. Within the country, however, "Qatari citizens can and do have a significant impact on domestic politics."²¹³ However, that impact on internal affairs can contradict the overall goals of the country. For example, Dr. Roberts credits Qatari citizen pressure for the 2012 decree issued by the government that changed the language of instruction from English to Arabic in many courses at Qatar University.²¹⁴ This decision, made by

²¹² Roberts, "Democracy in Qatar? The Role of the Qatari People in Domestic and Foreign Policy."

²¹³ Ibid.

²¹⁴ Ibid.

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the Supreme Education Council, has been met with concerns regarding the impact it will have on graduates who are expected to compete in a global market.²¹⁵ This ties into a larger issue of global competition. For the last three years, Qatar has ranked within the top 15 on the Global Competitiveness Index. Within the same Global Competitiveness Report issued by the World Economic Forum, two of the top four “most problematic factors for doing business” in Qatar are the inadequately educated workforce and the inefficient government bureaucracy, the latter will be discussed further along in this chapter.²¹⁶ Qatar’s national strategy had addressed the issue of competing in a global market by emphasizing the importance of creating an English-speaking workforce, which the decree goes directly against.²¹⁷ This inconsistency provides an example of public pressure manifesting itself into a decision that undermines the larger goals of the country. It also goes back to the issue of who is defined by public, and how influential that public influence should be, especially when it culminates in demands that go against stated goals for the nation.

Clear Vision

As previously discussed in Chapter Three, there is a clear lack of vision for the built environment in Doha. While the Qatar National Vision 2030 offers a comprehensive look at the nation moving forward,²¹⁸ the objectives identified within the document are not translated to the built environment. The National Development Strategy 2011-2016 is the start of the translation process, but a clear vision for the physical environment in Doha does come out of that text.²¹⁹ The document that has been mentioned in the planning process to provide the vision is the Qatar National Master Plan, which as mentioned in Chapter Three, has not been released, leaving the current development situation void of a comprehensive framework.

Coordinated Effort

Sharon Nagy, who has written on urban development in Qatar, discusses the lack of coordination between the different ministries in the government of Qatar, citing an early example of the legislation that emerged for Qatari housing and land distribution in the 1980s, which gave the Ministry of Municipal Affairs, the Ministry of Finance, the Ministry of Labor and Social Affairs, and the office of the Emiri Diwan (the Court of the Ruler) the power to administer these grants. She notes that while four different ministries administered the grants, they were not handled cooperatively.²²⁰ Nagy goes on to mention how the “jurisdiction over physical and spatial planning has been spread among various bureaucratic agencies.” She chronicles the

²¹⁵ Fenton, “Qatar Cuts down on Lessons in English.”

²¹⁶ World Economic Forum, *The Global Competitiveness Report 2013-2014*, 322.

²¹⁷ Roberts, “Democracy in Qatar? The Role of the Qatari People in Domestic and Foreign Policy.”

²¹⁸ General Secretariat for Development Planning, “Qatar National Vision 2030.”

²¹⁹ General Secretariat for Development Planning, “Qatar National Development Strategy 2011-2016.”

²²⁰ Nagy, “Dressing Up Downtown,” 129.

evolution of the different Ministries and how their many tasks overlapped, especially as they relate to the built environment. In the year 2000, Nagy explained that the Ministry of Municipal Affairs, the Ministry of Labor and Social Affairs, the Ministry of Finance, the Ministries of Industry, Water and Power, Telecommunications, and individual municipalities all were involved in urban development projects.²²¹

John Lockerbie, an architect, planner, and educator who runs his own website (catnaps.org), has written on the architecture and planning process in Doha.²²² His writings, which are more recent than those of Nagy, indicate that the planning environment in Qatar has yet to change to reflect the need for organization and coordination. On discussing the need for green building regulations, Lockerbie writes that "for some time now there have been efforts made to design building regulations for Qatar. A number of laws have been promulgated and, from them, a variety of regulations published by different agencies. Regrettably, these do not fall into a coherent collection, but announcements have been made that progress is being made and that a green set of regulations will be produced."²²³ His statement illustrates the lack of coordination between the different agencies, but also reveals another issue that came up with the missing Qatar National Master Plan. The planning objectives set forth by the different government agencies are often not followed through leaving gaps, that along with the lack of coordination between the ministries, creates a complicated planning environment, and curtails the authority of the Ministry of Municipality and Urban Planning. The topic of coordination between ministries is not confined to planning the physical environment. A recent coordination issue has attracted media attention as the country moves towards FIFA World Cup 2022. There have been calls for greater management among the Ministry of Interior, the Ministry of Foreign Affairs, and the Ministry of Labour and Social Affairs as they have each issued conflicting rules and restrictions on the recruitment of the foreign skilled workers that the country needs to hire in order to get ready for the mega event.²²⁴

Authority

The authority to implement plans needs to come from the government and the nuances of power inherent within the system. Rosemarie Said Zahlan chronicles the rise of the ruling family of Qatar, noting that the current political situation is not without traditional tribal dynamics. Zahlan states that the "tribe is not only a social unit; it is also political. Its central political authority is the [sheikh] of the tribe, in this case the ruler. The Al-Thani being the leading family of Qatar, all other tribes also owe [the family] their allegiance."²²⁵ In the minds of the citizens,

²²¹ Ibid.

²²² Lockerbie, "John Lockerbie."

²²³ Lockerbie, "Building Regulations."

²²⁴ "Coordination among Ministries Must to Bring Qualified Workers."

²²⁵ Zahlan, *The Creation of Qatar*, 115.

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there is often no separation between the ruler and the state. The ruler, who represents Qatar, is seen as acting on behalf of his nation.²²⁶ This concept often includes the ruling family by extension.²²⁷ Many Al-Thani family members are appointed high positions within the government. While there may be different entities that compromise the government organization chart, the main players – the appointed heads of each entity – are often closely tied if not directly related to the royal family. This creates what Davide Ponzini terms a “vacuum”, an environment of decision making with little to no opposition.²²⁸ There are a number of individuals that play important roles often both in the government sector and private companies, who have considerable influence in the decisions made by the government. Nagy notes that “Doha’s ruling elite has long had a hand in land distribution and decisions about the built environment. Now, the responsibility for planning is distributed amongst specialized branches of the growing bureaucracy.”²²⁹ That shift however has not automatically removed those influential individuals from the equation, which diminishes the authority of government-issued documents if they come into conflict with the affairs of key individuals. There is friction between the adopted western government structure, which has its roots in the issuance of Qatar’s provisional constitution on April 2, 1970,²³⁰ and the traditional process of decision-making in Qatar.²³¹ This friction is not new as Zahlan writes about it in her 1979 book, *The Creation of Qatar*, describing the “latent tension between a tribally constituted power structure and the proclaimed democratic society as defined in the constitution.”²³² In his writings on current events, Lockerbie nicknamed the traditional or tribal decision making process, the majlis system, which he defines as not only the men’s sitting room of the house, but also the “informal institution where issues are aired and decisions made at a variety of scales within the society ranging from individual families through that of the [tribe], to that of the Ruler. It also describes the general system by which information is passed and decisions made.”²³³ The government structure requires a degree of openness and integration that the majlis system cannot by its very nature offer.²³⁴ Just as there is a lack of coordination apparent between the ministries, the two decision-making systems in play within Qatar – the government system and the majlis system – vie for results. This feeds into the lack of authority of the governmental agencies, who are criticized for being “toothless” and “powerless.”²³⁵

²²⁶ Ibid., 110.

²²⁷ Ibid., 112.

²²⁸ Ponzini, “Large Scale Development Projects and Star Architecture in the Absence of Democratic Politics,” 252.

²²⁹ Nagy, “Dressing Up Downtown,” 128.

²³⁰ Zahlan, *The Creation of Qatar*, 106–107.

²³¹ Lockerbie, “Planning for the Future.”

²³² Zahlan, *The Creation of Qatar*, 137.

²³³ Lockerbie, “Glossary.”

²³⁴ Lockerbie, “Planning for the Future.”

²³⁵ Roberts, “Why an Elected Majlis in Qatar Will Not Work.”

B. General Limitations

Outside the scope of the built environment, a pressing issue that Qatar needs to face is one of attraction and retention. By moving to a knowledge-based economy, Doha is shifting its economic reliance. Now the city relies on a skilled and knowledgeable workforce to further diversify its economy and to educate its citizens. Within the current labor pool in Doha, skilled and high-skilled labor categories make up a small percentage. This is due to the large amount of infrastructure and construction projects that are in progress and projected, especially moving towards FIFA World Cup 2022. While the high-skilled workers are a class of individuals Qatar is striving to retain "in order to benefit from their expertise", the vast majority of the foreign workers in Doha – those that have physically built the city – are seen as expendable.²³⁶ These workers, many of whom come from South Asia, are not part of Qatar's vision going forward, where it is clearly stated in the Qatar National Vision 2030 that the country recognizes the importance of the "recruitment of the *right mix* of expatriate labor, protecting their rights, securing their safety, and *retaining those who are outstanding among them.*"²³⁷

Qatar has a long history of nationalism and reluctance to open its doors to foreign citizens, starting from the disputes between the rulers of Qatar and Britain over granting Indians (who were British subjects) residency permission in the country,²³⁸ to the various policies that went into effect starting in the 1970s and 1980s that essentially put a quota system in place to regulate the foreign workforce.²³⁹ While demographics and inclusion have always been a shortcoming in Qatar, the currently used Kafala system is an issue that has received the most criticism in recent news. The Kafala system is a sponsorship system used to control and regulate foreign employees.²⁴⁰ To work in Qatar, one must have local sponsorship, typically an employer. There are many laws that affect legal work status, family visas, and exit permits, many of which in themselves provide a barrier to potential employees who view this system as restrictive. Within the system, there is a clear distinction in the sponsorship rules, which favor the high salaried, high skilled expatriate workers, whose involvement in Qatar is sought after. Therefore, their sponsoring company often arranges more favorable work conditions. One example of favoritism is that only expatriate workers who earn 10,000 Qatar Riyals a month (roughly \$2,746 USD) or more are usually able to have their families accompany them.²⁴¹ Alongside the favoritism in the

²³⁶ Toumi, "Qatar to Retain Highly Skilled Expat Workers."

²³⁷ General Secretariat for Development Planning, "Qatar National Development Strategy 2011-2016," 18.

²³⁸ Adham, "Rediscovering the Island: Doha's Urbanity from Pearls to Spectacle," 223.

²³⁹ Al-Buainain, "Urbanisation in Qatar," 156.

²⁴⁰ "Kafala System."

²⁴¹ Scott, "Moving Guide: 10 Things to Know before Relocating to Qatar."

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sponsorship system, there is a salary hierarchy that has been criticized as being "racist, exploitative and perpetuating global inequalities."²⁴²

In Qatar, "salaries can differ widely for people in the same occupations but from different countries. In short, recruiters recognize the need to offer the worker greater compensation than they would receive at home. In the case of professionals from the US and Europe, the salary in Doha is often similar to what they receive at home, but the tax savings and employer-provided housing can make the move economically worthwhile. Many of the Asian residents, however, are coming from countries with very high unemployment rates and, if unemployed, they may be willing to migrate for just about any salary... Wealth and income differentials are justified on the basis that even those receiving the lowest wages are better off than they would be in their own countries."²⁴³

Just because the salary hierarchy is justified by some, does not mean that the economic inequality created in Doha does not present a problem. It creates a drastic inequality in purchasing power within the country, which works against the notion of retention. The country has made moves in the past to address the barriers presented by the Kafala system by altering visa regulations.²⁴⁴ However, this system is not the only barrier to attracting and retaining high-skilled expatriates, who have a high-turn around in the city. Differing social practices and legal limitations placed on foreign workers add layers of difficulty in retaining the individuals that the country looks to retain. With no formal naturalization procedure and limitations on foreign property ownership, foreigners in Qatar view themselves as visitors.²⁴⁵ For these individuals, a high salary, often coupled with a nice relocation package, is the attraction to Doha, but retention is an issue. As Professor Ashraf M. Salama's 2012 survey highlights, there is an issue with short-term retention of the high-knowledge workers in Doha. His survey showed that out of 362 interviewees, 79 percent of those working in the high service sector were attracted to it because of the high-paying salary and not because of career advancement.²⁴⁶ Many of these individuals see their time in Doha as temporary. This poses a problem for a country where "economic development is almost exclusively dependent on foreigners... the future economic diversification process relies on not only the ambitions of foreigners to develop business, but also on their willingness to take risks. While multi-national companies may relocate offices to Doha in order to participate in its economic growth, start-up businesses within high service sectors based on individual initiatives are rare. In addition, many companies have difficulty employing staff on a long-term basis since most highly educated expatriate workers see the

²⁴² Nagy, "Making Room for Migrants, Making Sense of Difference," 124.

²⁴³ *Ibid.*, 123.

²⁴⁴ Rizzo, "Metro Doha," 540.

²⁴⁵ Nagy, "Making Room for Migrants, Making Sense of Difference," 122-125.

²⁴⁶ Salama and Wiedmann, *Demystifying Doha*, 218.

relocation to Doha as a temporary, short-term engagement."²⁴⁷ Qatar has to deal with the retention of both the highly knowledgeable expatriates as well as the educated and skilled Qataris that are emerging from Education City and other knowledge institutes around the world. In order for Qatar to compete in the global market, it needs to address the issue of attraction and retention and in that, money is not enough.

C. Push for a Better Alternative

The previous section has highlighted the barriers inherent in the planning process in Qatar and within the attraction and retention of the individuals who would inhabit the country. These barriers present the reality of the situation in Qatar. The country, like every other country, has its imperfections, some within its legal and political structures, and some that manifest themselves in the built environment. Being a student of architecture and city planning, my thesis focuses on the built environment. However I cannot do so without acknowledging the significance of the barriers in Qatar, both in the planning process and in general. Even with those realities, there is a present need for a better alternative to urban design in the capital city of Doha. While achieving the ideal qualities of urban design as discussed in Chapter Two is an unrealistic transition for a country that is so young in its development process, it is realistic to push for a better urbanism. While there is no perfect model to strive for, Singapore does present an example of a better alternative for an urban fabric that incorporates tall iconic towers while addressing the human dimension. With that, Doha can greatly benefit from Singapore's Downtown Core Urban Design Guidelines,²⁴⁸ as well as Abu Dhabi's Urban Street Design Manual,²⁴⁹ and Public Realm Design Manual²⁵⁰ to address the insufficiencies in the built environment in the West Bay site. In the table that follows, the previously mentioned documents are used to generate ideas for the existing shortcomings in the Doha site.

Following the table, sample guidelines are proposed that take into account the qualities of good urban design discussed in Chapter Two and the guidelines and regulations from the comparative cases in Chapter Three, which are also shown in the pursuant table. These guidelines address the site at the level of the district, the block, the building, and the pedestrian realm and offer recommendations that can impact the existing urban fabric.

²⁴⁷ Ibid., 217–218.

²⁴⁸ Urban Redevelopment Authority, "Urban Design Guidelines for Developments within Downtown Core Planning Area - Annex A."

²⁴⁹ Urban Planning Council, "Abu Dhabi Urban Street Design Manual."

²⁵⁰ Urban Planning Council, "Abu Dhabi Public Realm Design Manual."

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Doha: Existing Issue	Abu Dhabi	Singapore
PEDESTRIAN REALM		
<p>Pedestrian paths are exposed to climate</p>	<p>UPC-PRDM: A continuous shade is required on primary and secondary walkways. Shaded rest areas are required as well at specified intervals depending on the path type (main path, secondary path).</p> <p>UPC-USDM: Provide free-standing shade or trees in areas where there is regular pedestrian activity. Shade structures are to be located such that they do not obscure sightlines at junctions and building entrances.</p>	<p>URA-DTC: All developments are required to provide covered walkways at the 1st story along the site boundaries or the designated building setbacks. Appendix 2 for Urban Design Guidelines in Downtown Core – provides a map indicating the covered walkways of the pedestrian network.</p> <p>Alternatives to ground level pedestrian paths are underground pedestrian links and elevated pedestrian links, both of which offer protection from the climate.</p>
<p>Pedestrian paths are not appropriately scaled (too narrow)</p>	<p>UPC-PRDM: Minimum widths are designated per path type (main path, secondary path)</p> <p>UPC-USDM: Minimum and maximum dimensions are provided.</p>	<p>URA-DTC: Minimum widths are assigned depending on the category of road the walkway fronts.</p>
<p>Obstructions located within the pedestrian path.</p>	<p>UPC-PRDM: Pedestrian path is to be clear of obstructions.</p> <p>UPC-USDM: Maintain horizontal and vertical clearances along the pedestrian path. Temporary signs should not obstruct the pedestrian pathway or traffic islands.</p>	<p>URA-DTC: Walkways are to have clear widths that are to be kept free from obstruction.</p>
<p>Pedestrian paths are located at the edge of the site with no buffer from the street</p>	<p>UPC-PRDM: Recommendation to provide a buffer, such as landscaping, a bicycle lane, or street parking, between the pedestrian path and the road.</p> <p>UPC-USDM: Vertical separation between pedestrian path and vehicular path recommended.</p>	

<p>No pedestrian path through the site, must go around the perimeter</p>	<p>UPC-PRDM: Recommendation to provide mid-block pedestrian crossings on long blocks.</p> <p>UPC-USDM: Pedestrians should not be required to travel out of their way unnecessarily.</p>	<p>URA-DTC: Selected developments are required to provide through-block links or view corridors to break down the scale and improve permeability of the blocks. Minimum widths and heights for a through-block link are provided. Appendix 2 for Urban Design Guidelines in Downtown Core – provides a map indicating where through-block links are located.</p>
<p>No clear pedestrian access to the building, especially through the parking spaces</p>	<p>UPC-PRDM: Recommends providing one clear pedestrian route, that is uninterrupted by surface parking and driveways, through the parking area. Route should be shaded.</p>	
<p>Some cases, building entrance is obstructed by car shades</p>	<p>UPC-PRDM: Recommends that parking not be located between the buildings main facades and the street edge.</p> <p>UPC-USDM: Shade structures are to be located such that they do not obscure sightlines of building entrances.</p>	
<p>Street crossing is not ideal in location and also creates safety concerns with the unnecessarily long, non-direct path that exposes the pedestrian at multiple points with narrow traffic islands</p>	<p>UPC-PRDM: Pedestrian crossings are required to be connected to adjacent sidewalks. They are to be clearly indicated with appropriate surface markings, material variations, and signage. Traffic islands have a minimum width of 2.5 meters.</p> <p>UPC-USDM: Recommends raised crosswalks which reduces grade variation for the pedestrian crossing as well as acts as a traffic calming measure. Street crossings should be located not only at intersections, but also to align with prominent building</p>	

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	entrances.	
BUILDING		
No building podium to break up the scale of the towers		URA-DTC: Appendix 3 for Urban Design Guidelines in Downtown Core – provides a map indicating the minimum height at the building edge. A four story building edge provides a podium base for the towers.
Ground floor of buildings do not have and/or do not advertise activity generating uses (retail, food and beverage, recreation, entertainment, etc.)	UPC-USDM: Recommends encouraging activity along both fronts of a building when it has multiple frontages.	URA-DTC: Activity generating uses are to be provided along the first level of developments fronting key streets. Appendix 2 for Urban Design Guidelines in Downtown Core – provides a map indicating where activity generating uses are mandatory as well as encouraged.
Ground floor of the site is overwhelmed with grade level parking	UPC-PRDM: Parking is to be setback from key developments and designed to limit the impact on pedestrian circulation and streetscape. When parking areas are adjacent to the pedestrian path, bollards or landscaping buffers are recommended. Recommends that parking be behind or beside buildings, but away from primary street frontages and street corners.	URA-DTC: For key developments that front major roads and open spaces, car parking is required to be located in the basement levels. This is encouraged for all other developments. When there are site constraints that prevent below grade parking, grade level parking must be located away from the building frontages onto major roads and open spaces, and to be set back from the façade to provide active uses fronting the adjacent roads and spaces.
Buildings are set back from the pedestrian path		URA-DTC: In designated areas, buildings must be built all the way out to the setback line. Up to 40% of the length of the façade can be setback from this line to allow for building form articulation. Appendix 3 for Urban Design Guidelines in Downtown Core – provides a map indicating the minimum height at the building

		edge.
Lack of porosity in the built environment. Building entrances are often not well announced.	UPC-PRDM: Recommends minimizing perimeter fencing.	URA-DTC: see text on activity generating uses.
Lack of public amenity within developments		URA-DTC: Selected developments fronting major streets or near major transportation nodes are required to include public open spaces within the development site. These spaces are to be connected to the pedestrian network and accessible at all times. Appendix 2 for Urban Design Guidelines in Downtown Core – provides a map indicating where public spaces are to be located.
DISTRICT		
Lacking a mixture of uses		URA-DTC: Sites are zoned white – a new zoning category that allows for greater flexibility of uses and encourages a mixture of complimentary uses. Within particular subzones, certain uses have a minimum in order to create a district. Example: Central Subzone is to be a business and finance precinct, therefore, there is a minimum office use assigned in that zone.
No streetscape elements, art or point of visual interest exterior to the building	UPC-PRDM: Public art shall be used to enhance the public realm and create visual interest. UPC-USDM: Typical palette of common streetscape furnishings is provided. Streetscape elements are to enhance the character of the district.	
No cohesive character	UPC-USDM: Street furniture should be part of a coordinated	URA-DTC: Requires pavement for all covered walkways in the district

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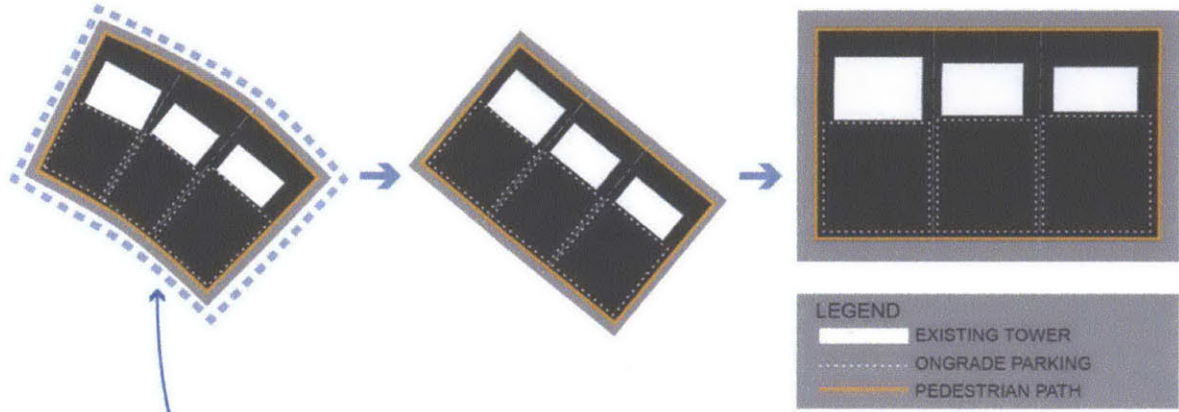
	suite to ensure consistent character. Typical palette of common streetscape furnishings is provided.	to maintain a distinct district character. Specifies granite type, size, color, and pattern. Street lighting and bollards are also specified.
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(URA-DTC) Urban Design Guidelines for Developments within Downtown Core Planning Area | Singapore | Urban Redevelopment Authority ²⁵¹
 (UPC-PRDM) Abu Dhabi Public Realm Design Manual | Abu Dhabi | Urban Planning Council ²⁵²
 (UPC-USDM) Abu Dhabi Urban Street Design Manual | Abu Dhabi | Urban Planning Council ²⁵³

²⁵¹ Urban Redevelopment Authority, "Urban Design Guidelines for Developments within Downtown Core Planning Area - Annex A."
²⁵² Urban Planning Council, "Abu Dhabi Public Realm Design Manual."
²⁵³ Urban Planning Council, "Abu Dhabi Urban Street Design Manual."

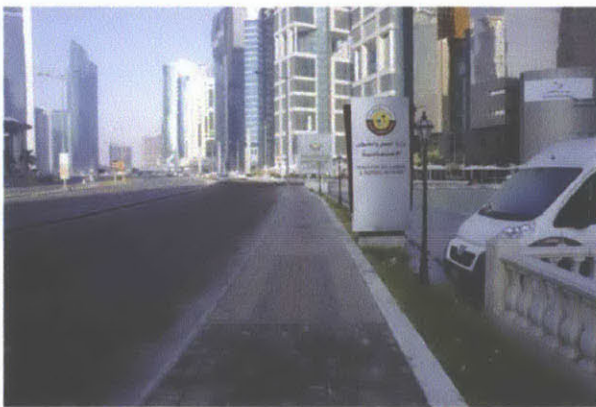
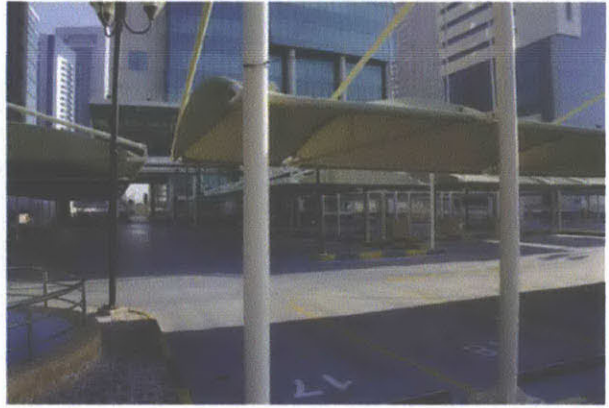
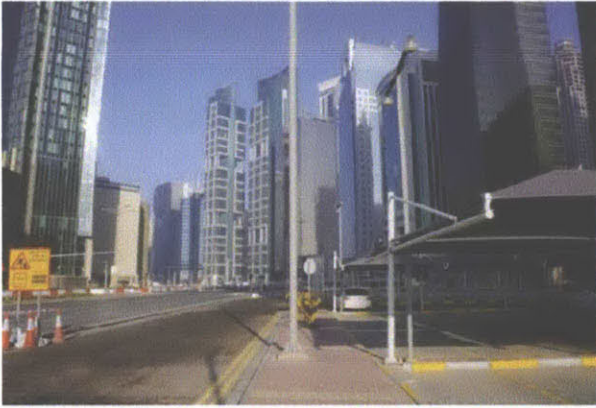
INTROVERTED ARCHITECTURE AND THE HUMAN DIMENSION: The conflict of placemaking in the disconnected urban fabric of Doha, Qatar

Actual block from site → Simplified block to be used in pursuant diagrams, based on block from site

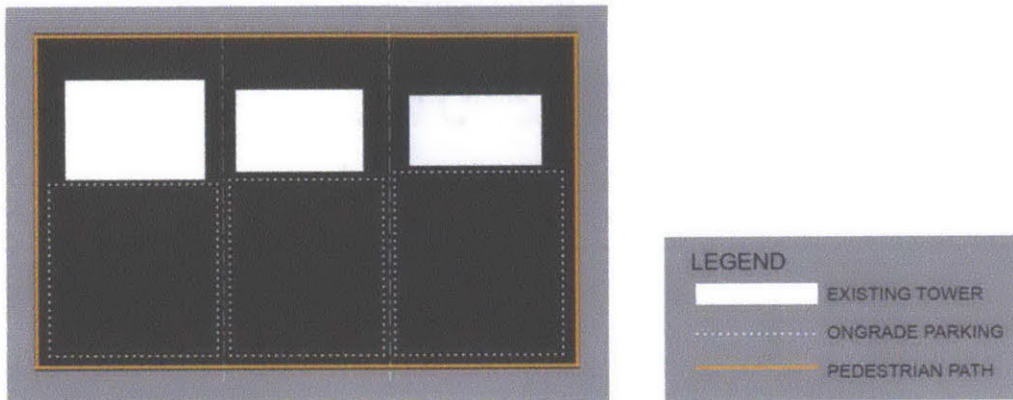


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Existing Condition at Selected Block



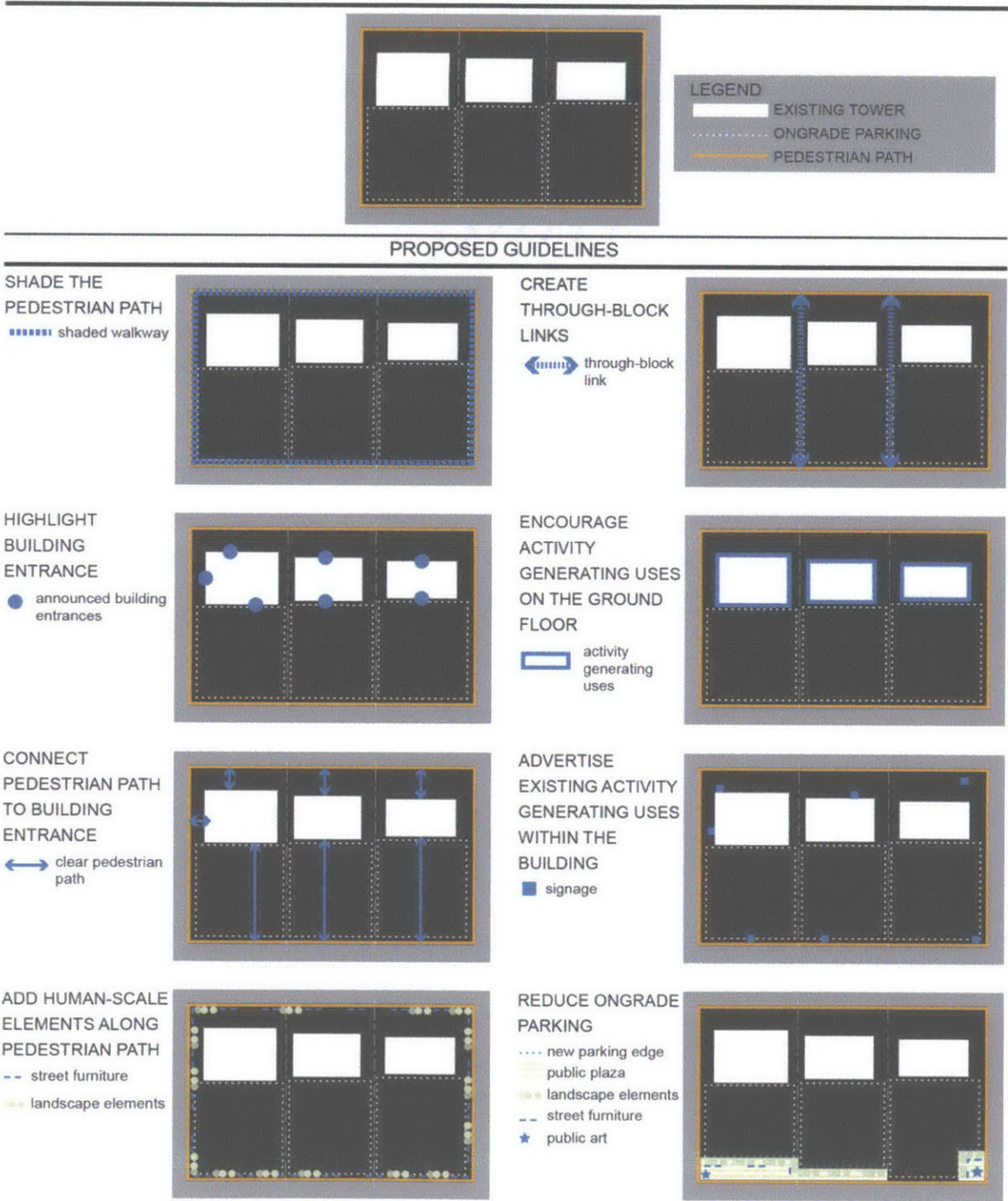
Existing Conditions



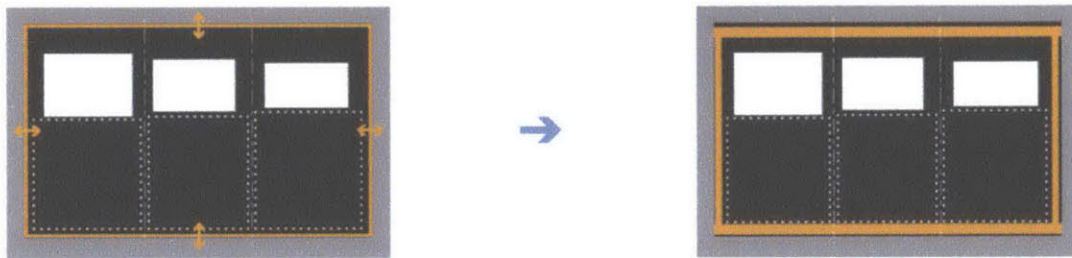
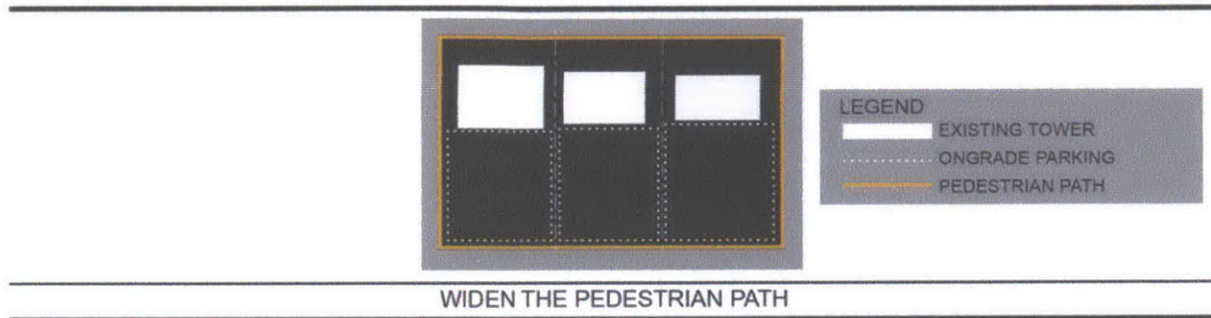
- Pedestrian paths are exposed to climate
- Pedestrian paths are not appropriately scaled
- Obstructions located within the pedestrian path
- Pedestrian paths are located at the edge of the site with no buffer from automobile traffic
- No pedestrian path through the site, must go around the perimeter
- No clear pedestrian path through the site, especially through the parking spaces
- Building entrance is not announced or obstructed by car shades
- Ground floor of buildings do not indicate or advertise activity generating uses located within (such as retail, food and beverage, recreation, entertainment, etc.)
- In some cases, building entrance is obstructed by car shades
- Ground floor of the site is overwhelmed with grade level parking
- Buildings are set back from the pedestrian path
- Lack of public amenity within developments
- No streetscape elements, art, or point of visual interest exterior to the building

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Regulations for the Pedestrian Realm



Negotiate a Wider Pedestrian Path

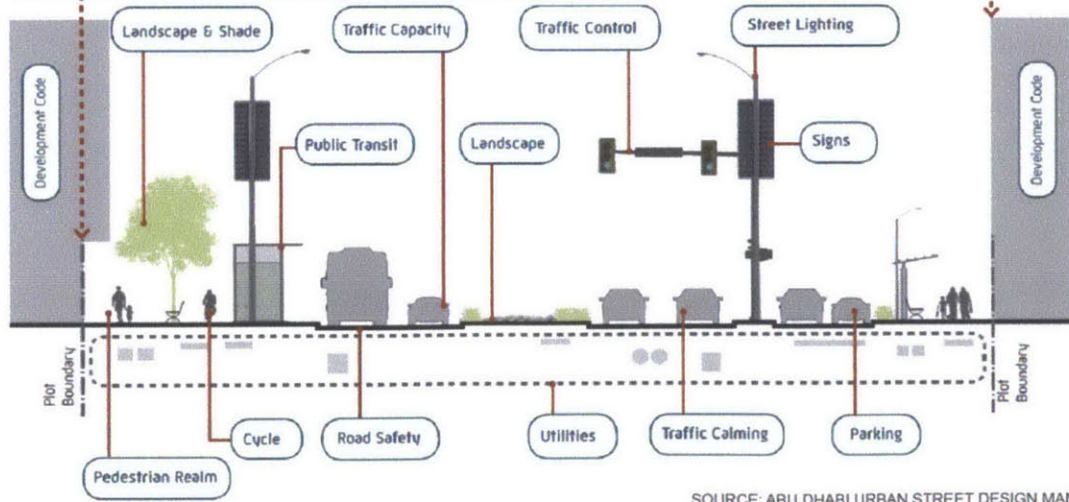


- Allows for a buffer to be introduced between the pedestrian path and the street
- Allows for a clear pedestrian path free of obstructions
- Path to be universally accessible

ELEMENTS THAT CAN BE INTRODUCED AS A BUFFER FROM AUTOMOBILE TRAFFIC

- landscaping
- street furniture
- public art

*Reference Abu Dhabi Urban Street Design Manual for ideas and dimensions

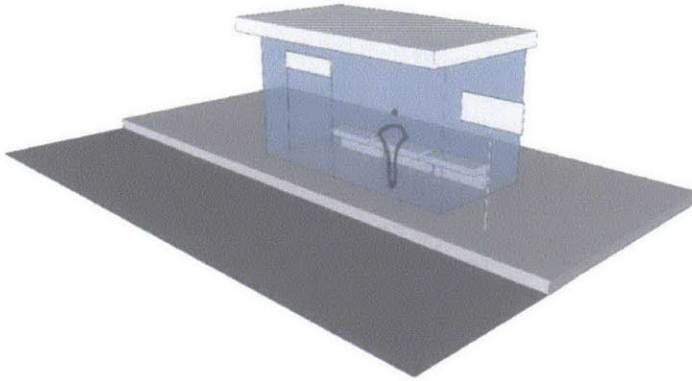


SOURCE: ABU DHABI URBAN STREET DESIGN MANUAL, P.23

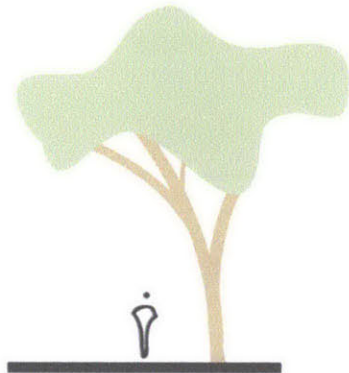
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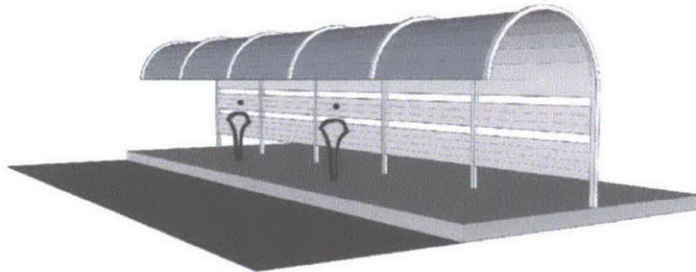
Elements to Provide Comfort Along the Pedestrian Path



AIR CONDITIONED BUS STOP
Reference: Dubai climate controlled bus stop
<http://www.flickr.com/photos/elvispayne/618281485/>



**SHADED PEDESTRIAN PATH:
LANDSCAPE ELEMENTS**

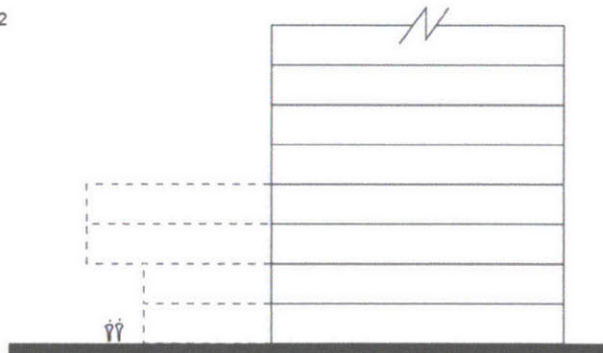


AIR CONDITIONED COVERED PATH
Reference: Doha air conditioned bike path
http://www.velomondial.net/page_display.asp?pid=32

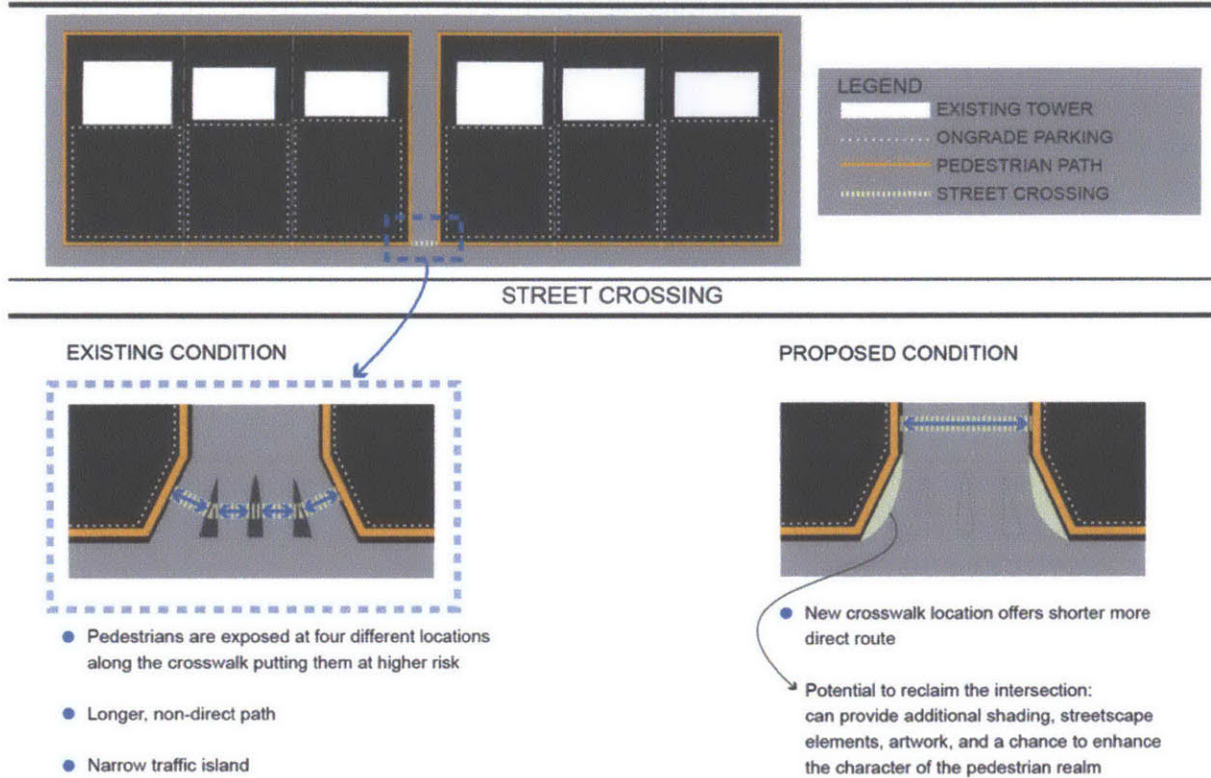


**SHADED PEDESTRIAN PATH:
FREE-STANDING CANOPY**

**NEW BUILDING OR BUILDING
INFILL: BUILD TO EDGE TO PROVIDE
SHADED PATH FOR PEDESTRIAN**

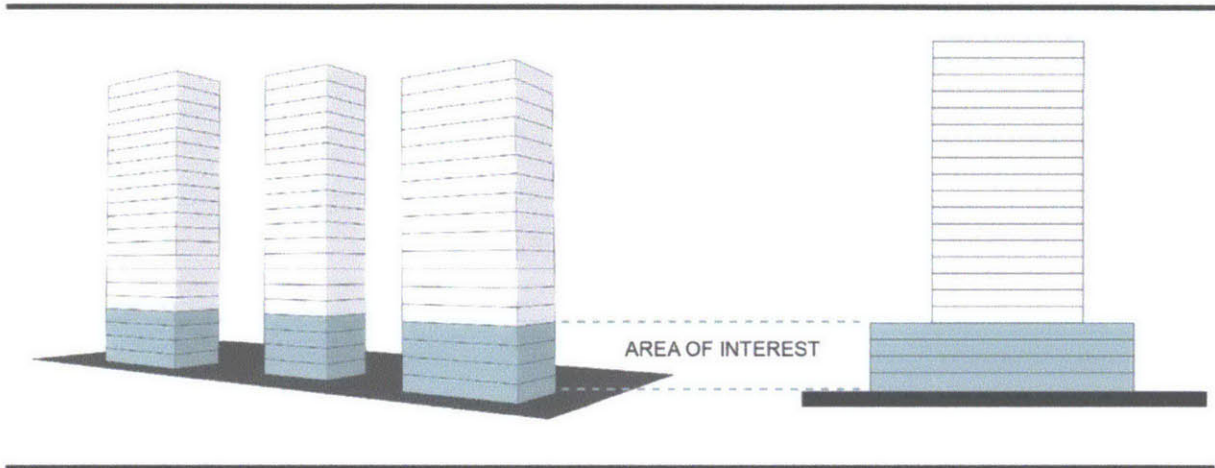


Ensure Pedestrian Safety at Street Crossings



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Regulations for the Building: Pedestrian Podium

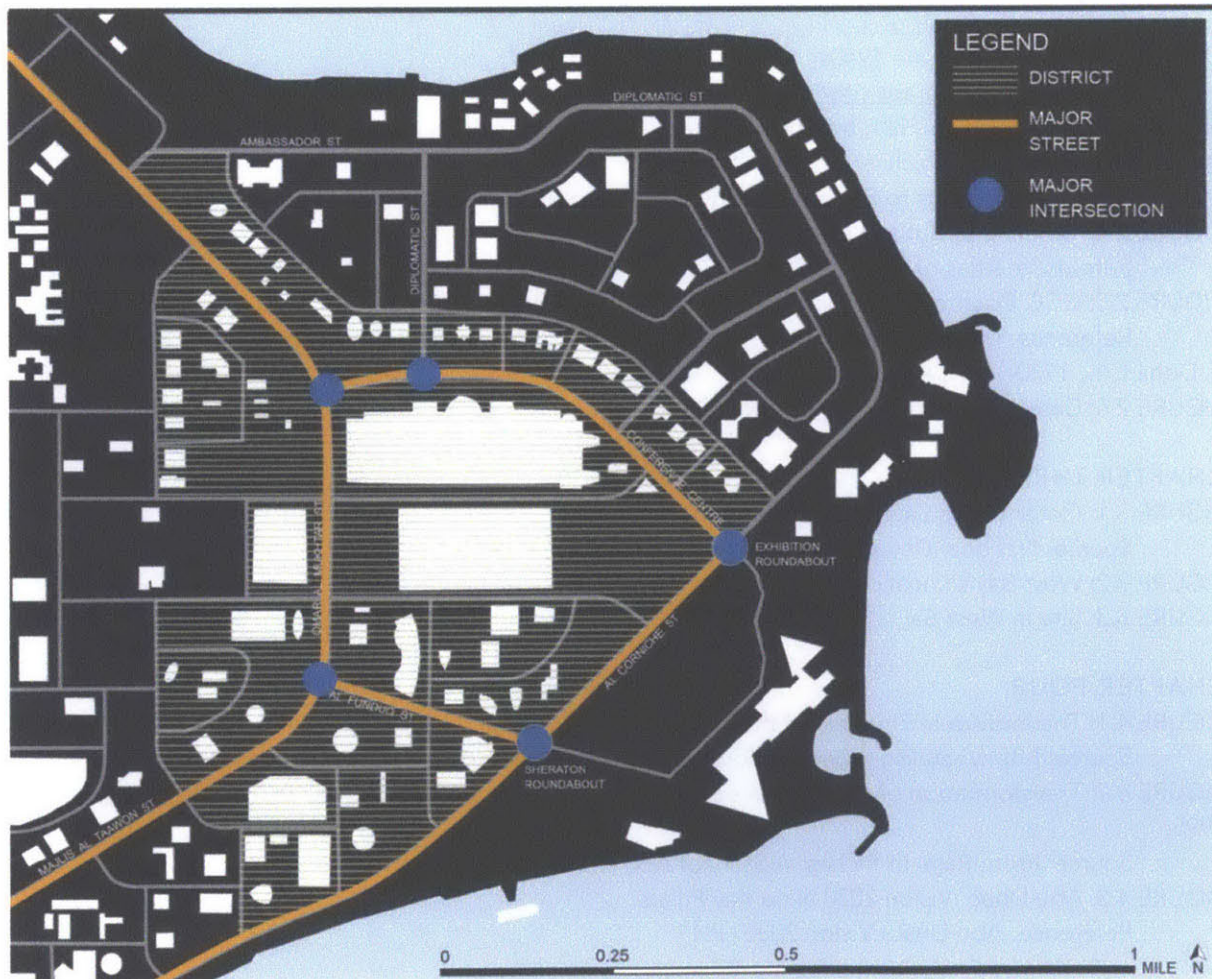


- Design should be at the human-scale
- Encourage a mixture of uses
- Ground floor should consist predominantly of activity generating uses (retail, food and beverage, recreation, entertainment, etc.)
- Build to the edge of the site (new construction) and utilize infill when possible for the existing fabric
- Offer multiple entrances when possible
- Cars should not overwhelm the ground floor, put parking underground when possible



Regulations for the District

- Define a special district to define specific regulations, example: Urban Core of West Bay
- Major streets and intersections should be marked
- Within the defined district:
 - Encourage a pedestrian friendly environment
 - Identify infill opportunities and offer incentives
 - Activate existing sites
 - Create a cohesive and covered pedestrian network
 - Create a cohesive character for the district which will be visible through unified design in streetscape elements, art, and way finding signs



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Source: <http://www.qatartourism.gov.qa/>

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FIGURE 1.6: West Bay Central Rail Stop in Doha

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Source: <http://www.24point0.com/ppt-shop/media/catalog/product/c/a/capital-ppt-map-of-gulf-cooperation-council-countries.jpg>)

FIGURE 2.2: Doha in the Late 1940s

Source: <http://catnaps.org/islamic/islaqatold.html>

FIGURE 2.3: Abu Dhabi in 1961, traditional houses on the right side of the image juxtaposed to the first main road constructed, which is visible on the left.

Source: From Rags to Riches: A Story of Abu Dhabi | Al-Fahim | P.112

FIGURE 2.4: Timeline of British Protectorates in the Gulf

Reference: Atlas of the Gulf States | Cadene et al | P.15

FIGURE 2.5: GCC Countries and the Dates of Oil Discovery and Extraction

Reference: Urbanisation in Qatar: A Study of the Residential and Commercial Land Development in Doha City, 1970-1997 | Al-Buainain | P.69

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FIGURE 3.1: Qatar Traffic Safety Statistics as of 2008

Source: *National Development Strategy 2011-2016*, P.191

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Source: http://catalog.flatworldknowledge.com/bookhub/2657?e=berglee_1.0-ch08_s05

FIGURE 4.2: Transformation of Abu Dhabi's seashore, now Corniche. Top image, 1960. Bottom image, 1995.

Source: From Rags to Riches: A Story of Abu Dhabi | Al-Fahim | P.107

FIGURE 4.3: Abu Dhabi Vision 2030 Nine Key Pillars

Reference: Abu Dhabi Vision 2030 | P.11

FIGURE 4.4: Maximum Building Heights

Source: Plan Abu Dhabi 2030: Urban Structure Framework Plan | P.85

FIGURE 4.5: Marina Bay Financial Centre

Source: <http://www.mbfcc.com.sg/location-map.html>

FIGURE 4.6: MBFC Site

Source: <http://www.marinabaylink.com.sg/find-the-link.html>

FIGURE 4.7: Master Plan 2003 | Zoning Map

Source:

http://www.ura.gov.sg/uramaps/?config=config_preopen.xml&preopen=Master%20Plan%202003

FIGURE 4.8: Master Plan 2003 | Parks and Waterbodies Plan

Source:

http://www.ura.gov.sg/uramaps/?config=config_preopen.xml&preopen=Master%20Plan%202003

FIGURE 4.9: Master Plan 2003 | Activity Generating Uses Plan

Source:

http://www.ura.gov.sg/uramaps/?config=config_preopen.xml&preopen=Master%20Plan%202003

FIGURE 4.10: Urban Design Guidelines for Downtown Core 2013 | Appendix Two

Source:

http://www.ura.gov.sg/uol/~media/User%20Defined/URA%20Online/circulars/2013/nov/dc13-14/dc13-14_App%202.pdf P.3

FIGURE 4.11: Urban Design Guidelines for Downtown Core 2013 | Appendix Three

Source:

http://www.ura.gov.sg/uol/~media/User%20Defined/URA%20Online/circulars/2013/nov/dc13-14/dc13-14_App%203.pdf P.3

FIGURE 4.12: Marina Bay Financial Centre Photo

Source: <https://www.flickr.com/photos/csng78/11681412316>

FIGURE 4.13: Marina Bay Financial Centre Skyline

Source: <https://www.flickr.com/photos/adforce1/8126895040>

FIGURE 4.14: Google Street View | Tall Buildings, Human-Scale Elements

Source:

<https://www.google.com/maps/@1.281294,103.853521,3a,90y,159.61h,109.97t/data=!3m4!1e1!3m2!1sCeqSx6AEsCvaT-0c8jW8tQ!2e0>

FIGURE 4.15: Google Street View | Through Block Link

Source:

<https://www.google.com/maps/@1.280454,103.854757,3a,75y,208.84h,89.1t/data=!3m4!1e1!3m2!1sA2qrW1UJ6xmhd3JBjEjyPQ!2e0>

FIGURE 4.16: Google Street View | Building Edge + Pedestrian Street Crossing

Source:

<https://www.google.com/maps/@1.27984,103.85567,3a,75y,260.81h,90.71t/data=!3m4!1e1!3m2!1sNQbvE8oGJpCB5JdPo4qnfW!2e0>

FIGURE 4.17: Google Street View | Covered Walkway + Building Articulation

Source:

https://www.google.com/maps/@1.278931,103.855,3a,90y,334.66h,101t/data=!3m4!1e1!3m2!1sW_pLlabKqS62NcKM2vy0YQ!2e0

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FIGURE 4.18: Google Street View | Covered Walkway Network

Source:

<https://www.google.com/maps/@1.280311,103.854214,3a,90y,76.93h,101.27t/data=!3m5!1e1!3m3!1sMPQSLI-JqCoAAAQluBLuvQ!2e0!3e2>

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