ISTANBUL TECHNICAL UNIVERSITY ★ GRADUATE SCHOOL OF SCIENCE ENGINEERING AND TECHNOLOGY

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M.Sc. THESIS

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Department of Architecture

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ISTANBUL TEKNİK ÜNİVERSİTESİ ★ FEN BİLİMLERİ ENSTİTÜSÜ

İSTANBUL ŞEHİR SİLÜETİNİN 1950 SONRASI DEĞİŞİMİ

YÜKSEK LİSANS TEZİ

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Ebru Şevkin, a M.Sc. student of İTU Graduate School of Science Engineering and Technology student ID 502141114, successfully defended the thesis/dissertation entitled "TRANSFORMATION OF ISTANBUL SKYLINE SINCE THE 1950S", which she prepared after fulfilling the requirements specified in the associated legislations, before the jury whose signatures are below.

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FOREWORD

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November 2017 Ebru ŞEVKİN

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ABBREVIATIONS

CBD **:** Central Business District
DP **:** Democrat Party
FDI **:** Foreign Direct Investment
FSM **:** Fatih Sultan Mehmet
IMF **:** International Monetary Fund
JDP **:** Justice and Development Party
MP **:** Motherland Party
WWII **:** World War II

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TRANSFORMATION OF THE ISTANBUL SKYLINE SINCE THE 1950S

SUMMARY

Without a doubt, Istanbul skyline which has been one of the key identifiers of the city through its long course of history, was transformed significantly after the 1950s with the aggressive verticality of the high-rises. Following the globalization of the world economy, numerous cities around the world faced with a rapid transformation concerning their distant image. Istanbul's unique physical characteristics vividly reveal and further dramatize the alterations in the skyline.

Even though it is a widely spoken phenomenon, the subject of urban skylines is relatively an unexplored research area. In the case of Istanbul, discussions revolve around the question of whether the image of Istanbul skyline is broken or not. The thesis documents the development of high-rises starting from the 1950s up to today and discusses the transformation of the skyline as the visual correlative of the changes in the social, political and economic structure of the city as a subject of architectural history. In this regard, this study aims to contribute the existing literature on the architectural history of Istanbul in the post-Second World War period, and addresses the subject of urban skylines as a tool to study urban history of Istanbul.

In order to achieve its aim the study documents the historical development of high-rises in the city and subsequent transformation of the skyline. The rapid and intense alterations were studied via skyline views observed from publicly accessible vista points. The transformation was documented based on certain time intervals that caused significant transformations in the city's built environment. The analysis vividly indicates that the new layer on the skyline represent a turning point in city's urban history. The skyline of Istanbul historically shaped by religious and governmental authority has now a new layer representing the financial power parallel with the city's new role in the global world order while dramatically transforming the traditional outlook. Regarding the skyline's ability to convey messages about a city and the unique physical features of the Istanbul further dramatizing the impact, transformation of Istanbul skyline deserves to be studied by different academic disciplines and professionals and from a multidimensional perspective.

İSTANBUL ŞEHİR SİLÜETİNİN 1950 SONRASI DEĞİŞİMİ

ÖZET

‘İstanbul Şehir Silüetinin 1950 Sonrası Değişimi’ başlıklı bu çalışma 1950’den bugüne yüksek yapıların kent morfolojisine eklenmesi ile birlikte İstanbul silüetinde meydana gelen değişimi ortaya koymayı hedefler. Şehir silüetleri tek bir bakışta kentin bütününe ilişkin güçlü bir imge sunmaları sebebi ile kentlerin önemli bileşenlerinden biridir. İstanbul gibi özgün fiziksel özelliklere ve zengin bir tarihi geçmişe sahip olan bir şehir için de silüet tarih boyu önemli bir kentsel öge olmuştur. Şehrin başkentlik ettiği iki büyük imparatorluk olan Bizans ve Osmanlı dönemlerinde İstanbul silüeti kent yönetimindeki mevcut dini ve siyasi otoriteleri temsil edecek biçimde şekillenmiş, sürekli bir değişim ve dönüşüme tabi olmuştur. Ancak İstanbul silüeti 1950 sonrasında yaşanan politik, ekonomik ve sosyal değişimlerin mimarideki karşılığı olarak hızla inşa edilmeye başlanan yüksek yapılarla beraber dramatik bir dönüşüme uğrar. Özellikle 1980’lerin sonundan itibaren hız kazanan bir süreçle kentin ülkenin global dünyadaki temsili haline gelmesi ile beraber sayısını artıran yüksek yapılar İstanbul silüetini güncel bir tartışma konusu haline getirir. Ancak bugün bu tartışmalar silüetin bozulup bozulmadığı gibi bir ikilemin içerisinde sürdürülmektedir. Oysa İstanbul silüetinde meydana gelen değişim 70 yıllık bir sürecin ürünüdür ve şehrin sosyal, ekonomik ve siyasi dengelerinde yaşanan önemli değişimlerin görsel bir karşılığı olarak daha derin bir perspektiften tartışılmayı hak der. Bu çalışma İstanbul silüeti konusunu mimarlık tarihi perspektifinden ele alarak 1950’den bugüne yaşanan değişimi belgeler.

“Silüet nedir” sorusu çalışmanın ilk kısmını oluşturur. İlk şehirlerin kuruluşundan beri insanoğlu yüksek yapılar inşa ederek kent silüetlerini şekillendirmiştir. Dini ve siyasi otoriteyi simgeleyen anıtsal ölçekteki yapılar Ortçağ şehir silüetlerini oluşturur. Endüstri devriminin kent morfolojisi üzerindeki ‘yıkıcı’ etkisi ile kiliselerle yarışmaya başlayan fabrika bacaları silüette önceliğin hangi yapılara ait olması gerektiği tartışmalarının erken örneklerini doğurur. Ancak gökdelenlerin kent morfolojisine dahil olması ve silüete ekledikleri dramatik dikeysellik silüet tartışmalarını bugünkü boyutuna taşır. 19.yy sonunda Amerika’da ortaya çıkan ve takip eden yüzyıllarda önce Avrupa sonra Asya şehirlerine yayılan gökdelenler ile şehir silüetlerinde hakim olan dini ve siyasi otoritenin yerini ekonomi almaya başlar. Bugün gökdelenlerle oluşmuş kent silüetleri finansal güç ile doğru orantılı olarak anılmaktadır.

Yüksek yapıların 2. Dünya savaşı sonrası Avrupa şehirlerine yayılaması ve tarihi yapıların silüetteki hakimiyetlerinin sarsılması silüet üzerine yapılan tartışmaları koruma eksenine çeker. 20.yy sonu’nda yükselmeye başlayan Asya şehirlerinde ise muazzam yüksekliklere ulaşan gökdelenlerle oluşturulan silüetler kentlerin kimlik

arayışına ve marka kent yaratma olgularına hizmet etmektedir. Özellikle son yıllarda silüet kentsel tasarımın önemli bir ögesi halini almış, silüetin kontrolü ve tasarlanması üzerine farklı mekanizmalar geliştirilmiştir. Farklı şehirler, kendi vizyonlarını ve önceliklerini göz önünde bulundurarak, konuyu çeşitli hassasiyet noktaları üzerinden ele alır. Bu durum silüet konusundaki tartışmaların sadece İstanbul ile sınırlı olmadığı, her şehrin kendi özgün dinamikleri ile konuyu ele aldığını ortaya koyması bakımından önemlidir.

Çalışmanın ikinci kısmında İstanbul silüetinin tarihsel gelişimine odaklanılmıştır. Şehrin Ortodoks-Hristian Bizans İmpratorluğu'nun başkentliğinden Osmanlı İmparatorluğu tarafından fethi ile Türk-İslam kentine dönüşümünün silüet üzerinden okunurluğu silüet kavramının İstanbul kent tarihi çalışmaları açısından önemini ortaya koyar. Aynı şekilde Osmanlı İmparatorlu'ğunun sosyal, ekonomik ve politik yapısında yaşanan değişimler ve beraberinde getirdikleri yeni yapı tipleri, yapım teknikleri, yeni yerleşim alanları gibi fiziksel çevredeki dönüşümler de İstanbul silüetine yeni birer katman ekler. Tüm bunlar 1950 sonrasında yaşanan değişimin geniş bir panoramada nereye oturduğunu anlamak açısından önemlidir. Erken Cumhuriyet döneminde başkentlik statüsünü kaybeden İstanbul geri planda kalır. Ancak bu durum 1950 sonrasında ülkenin Soğuk Savaş döneminin iki kutuplu dünya düzeninde kendini yeniden konumlandırması, 1980'lerle beraber global dünya ekonomisine eklemlenmeye başlaması ve 2000'lerle İstanbul'un ülkenin global dünyadaki temsilcisi haline gelmesi ile değişime uğrar.

Son bölüm çalışmanın özgün kısmıdır. Burada 1950'den bugüne yüksek yapıların gelişimi ve buna bağlı olarak silüette yaşanan dönüşüm ortaya konmaktadır. İlk olarak 1950'den bugüne hem içlerinde yer aldıkları fiziksel bağlam hem de inşa edildikleri zaman dilimi göz önünde bulundurularak 'yüksek' olarak belirlenen yapılar GIS (Geographical Information System) isimli bilgisayar programı aracılığı ile, yapım yılı, kullanımı, mimarı, kat adedi, yükseklik bilgileri ile, harita üzerinde belgelenmiştir. Bu sayede hem yüksek yapıların coğrafi olarak kente yayılımı hem de gelişmindeki kırılma noktalarını oluşturan önemli yıl aralıkları belirlenmiştir. Çalışma esnasında hem sosyal, ekonomik ve politik yapıda değişimlerin meydana geldiği dönemler hem de yüksek yapıların coğrafi dağılımı üzerinde durulmuştur. 70 yıl gibi geniş bir zaman aralığına yayılan değişim 1950-1960, 1960-1980, 1980-1990, 1990-2000, 2000-2005, 2005-2010, ve 2010 sonrası olarak belirlenen zaman aralıklarında incelenmiştir. Çalışmanın özgün kısmı yüksek yapıların kente yayılımını kronolojik olarak takip eden üç ana bölümden oluşur.

İlk olarak 1950-1980 yılları arasında yüksek yapıların ilk olarak inşa edildikleri, aynı zamanda tarihi İstanbul imgesini oluşturan, Tarihi Yarımada, Beyoğlu, Üsküdar bölgesine odaklanılır. Bu bölgede inşa edilen Uluslararası Üsluptaki ilk yüksek yapılar ve Beyoğlu-Harbiye aksındaki otel projeleri ile İstanbul silüetinin dönüşümünün ilk sinyalleri verilir. İkinci kısımda yüksek yapıların 1980 sonrasında şehrin kuzeye doğru büyümesi ile beraber yayıldıkları Beyoğlu'nun kuzeyi ile TEM arasında kalan bölge ve Maslak ele alınmıştır. Bu bölge yüksek yapı gelişiminin en yoğun yaşandığı bölgedir. Dolayısıyla silüetinin dönüşümünde büyük pay sahibidir. Bu sebeple bu bölgedeki yüksek yapılar 4 alt başlıkta incelenmiştir; topografyanın yüksek yapıların görünürlüğünü önemli ölçüde etkilediği Dolmabahçe ve Maçka arasında kalan bölge, Barbaros Bulvarı, Dikilitaş ve Fulya, 1980'lerin sonundan bu yana inşa edilen ofis kuleleri ile silüete yeni bir kimlik ekleyen Zincirlikuyu-Maslak aksı, sadece Boğaz üzerinden değil Haliç üzerinden algılanan silüeti de, 2000 yılı sonrasında, çok kısa bir süre içinde dönüştüren Şişli, Bomonti, Mecidiyeköy

bölgeleri. Son olarak yüksek yapıların 2005 yılı sonrasında yayıldığı Anadolu Yakası ve beraberinde silüette meydana getirdiği değişimler incelenmiştir.

Çalışmada 1950'den bugüne İstanbul silüetinde meydana gelen değişim kamusal noktalardan çekilen fotoğraflar ve fotoğraflardaki yüksek yapılarla eşleşen haritalar aracılığı ile ortaya konmuştur. Tarih içinde sadece silüetin değil, bakı noktalarının da değiştiği göz önünde bulundurularak, sahil hattı, hakim tepeler ve ulaşım yolları üzerinden kamusallığı yüksek olan noktalar belirlenmiştir. Bu bağlamda Üsküdar, Kuzguncuk sahilleri ve Çamlıca Tepesi'nden, Beşiktaş-Kadıköy vapuru, Boğaziçi ve Fatih Sultan Mehmet Köprülerinden Boğaz üzerinden gözlenen silüet; Moda Sahili'nden, Boğaz'ın Marmara girişi üzerinden; Unkapanı Sahili ve Süleymaniye Camii'nden Haliç üzerinden gözlenen silüet ve Haliç Metro Köprüsü ve Cihangir Parkı'ndan Anadolu Yakası'nın silüeti değerlendirilmiştir.

Genel kabulün aksine İstanbul silüeti tarih boyunca değişime ve dönüşüme açık olmuştur. Bu çalışmada Bizans, Osmanlı ve Erken Cumhuriyet dönemleri boyunca süregelen bu değişime yeni bir halka olarak eklenen 1950 sonrası döneme odaklanılmıştır. Yaklaşık 70 yıllık bir süreçte hızla inşa edilen yüksek yapılarla beraber İstanbul silüetine yeni bir katman eklenir. Bu yeni katman çalışmada ülkenin değişen sosyal, ekonomik ve politik yapısının görsel bir ifadesi olarak ele alınmış, bu bağlamda İkinci Dünya Savaşı sonrası İstanbul kent tarihi literatürüne katkıda bulunulmuştur.

1. INTRODUCTION

Urban skylines give the first impression about a city by offering a wide view in a single glance. They could convey profound messages about what is valued in the community and could be read in terms of social, political and economic structure of the city. Throughout the history, city authorities have employed the representative quality of distant images. Furthermore, skylines, by their very nature, are never completed and transforms in accordance with the inner workings of the city. With regard to its crucial role in forming the city image, the urban skylines, as mentioned in Attoe's (1981) words 'one of the most meaningful measures of human civilization' (p.xii), is worth exploring.

Since the early history, humankind had made their mark on skyline by building tall structures. Mostly the buildings representing religious or governmental authority defined the distant image of medieval cities. First, the 'devastating' impact of the Industrial Revolution on the urban morphology introduced a new challenge concerning the skyline priorities. The cathedrals, for example, no longer dominated the skylines as it once did in many European cities. The smokestacks overshadowed the dominance of the church authority on the skyline. However, it was the dramatic verticality of skyscrapers that heated up the controversies. Even the invention of the term 'skyline' was simultaneous with the emergence of skyscrapers (Burchard and Bush-Brown, 1967, p.244; Attoe, 1981, p.xi; Kostof, 1991, p.279). With the emergence of skyscrapers that strongly stand out from their surroundings, the distant image of cities has gained a new importance. What was significant about the inclusion of skyscrapers to the urban skyline is; for the first time in history, the external force that shaped the urban skylines was not religious or governmental authority but the financial power. Skyscrapers representing corporate identities shaped the skylines of American cities in the early 20th century and became the worldwide symbol of financial supremacy.

The skyscrapers had not stayed as the sole symbol of American cities for a long time. They have arrived to Europe after World War II and employed by the Asian cities

questing for world city status since the 1980s. The inclusion of high-rises to historic fabric of European cities introduced new challenges concerning the control of the urban skylines. Asian cities, on the other hand, employed high-rises for city-branding purposes. For both cases, the subject of urban skyline has become a popular topic. Each city responded to the challenge of including skyscrapers to their distant images in its own way concerning their primary goals and visions.

The skyline of Istanbul, as a city with unique physical features and constantly inhabited and transformed, has always been one of the key identifiers of the city. The inclusion of high-rises to this image caused dramatic transformations in the historic outlook and has turned the subject into a widely discussed topic. After the 1950s, high-rises included in the urban morphology of Istanbul in a period of changing political, economic and social conditions. Considering skyline's representative aspect, the new layer included in the skyline has marked a significant turning point in the city's urban history. The subject is widely covered by the press but only focusing on the question of whether the skyline of Istanbul is broken or not. However, it is important to note that this transformation covers almost 70 years and is the cumulative result of changes in the social, economic and politic structure of the city. The thesis, therefore, aims to reveal the transformation of the skyline since the 1950s and approaches to the subject as the visual indicator of the significant turning points in its history. The motivation behind the study was to document the rapid transformation of the skyline, observed only from publicly accessible vista points and from the eye level as the inhabitants of the city experienced in daily basis. The transformation has been studied based on certain time intervals that brought significant changes to the physical environment of the city.

Istanbul skyline was affected by the rapid development that the city underwent since the 1950s. Redefinition of its shorelines, the changes in the ratio between the built and natural environment, large-scale urban redevelopment projects has affected the distant image of Istanbul. However, the study specifically focuses on the high-rise developments' impact to the skyline that changed the historic outlook of the city with their aggressive verticality. The subject of Istanbul skyline could either be evaluated based on its current status or from an historic point of view. The thesis follows the latter and documents the development of high-rises starting from the 1950s up to today and discusses the transformation of the skyline as the visual correlative of the

changes in the social, political and economic structure of the city as a subject of architectural history. In this regard, this study aims to contribute the existing literature on the architectural history of Istanbul in the post-Second World War period, and addresses the subject of urban skylines as a tool to study urban history of Istanbul.

To examine the subject of urban skylines, the study first asks the question of what is a skyline? Even though it is a widely spoken phenomenon, the urban skyline is relatively unexplored research area. Even though several studies, especially on the global scale, address to the subject, there is only one book named 'Urban Skylines: Understanding and Molding Urban Silhouettes', written by Wayne Attoe, published in 1981, completely devoted to this field of study. Spiro Kostof's book called 'The City Shaped: Urban Patterns and Meanings Through History', published ten years later in 1991, devotes one chapter to urban skylines. In the study, the works of these two authors provided the primary sources to understand the notion. Studies from other disciplines such as urban planning or geography, not completely devoted but address the subject, also provided useful insight.

There is a considerable gap in the academic studies on urban skyline and the term is not well defined in the planning profession either. Besides, urban skylines are not fixed images but face with constant change as the city itself. That is why it is not easy to come up with a single definition applicable for all cities and times. Therefore, in the first chapter both the dictionary definitions of the term and different values attached to the notion explored to answer the question of what is urban skyline. Further questions such as what does a specific skyline should include or exclude, what message should a skyline convey about a city, who holds the power to decide on that message, that does not have a definitive answer but important to ask in order to understand the multi-dimensional nature of the topic, were asked. The emergence of skyscrapers as an American phenomenon, the arrival of skyscrapers to the historic skyline of European cities and to Asian cities emerging as new world powers were discussed. The impact of high-rises to different cities around the world is important to understand that the subject of urban skyline is widely discussed topic around the world. The various design and control mechanisms developed by different cities also examined to understand how do the cities around the world approach to the subject concentrating on different values attached to their skyline imagery.

Secondly, the historical development of Istanbul skyline was studied. The distant image of Istanbul vividly illustrates the transformations that the city went through concerning its social, political and economic structure. This chapter focuses on the skyline's transformation from the capital of Orthodox-Christian Byzantine to Turkish-Islamic Ottoman Empire, the changes of the classical Ottoman image after the modernization period and it's neglected years in the Early Republican Era. The academic works focusing on Istanbul's urban history from Byzantine to Early Republican Era and notes and drawings of travellers depicted the Istanbul skyline were used to study the subject.

In the last chapter, the development of high-rises in Istanbul since the 1950s and the subsequent transformation of the skyline were studied. Both the changes in the politic, social and economic conditions of the city based on certain time intervals, and the areal distribution of the high-rises were taken into consideration in order to reveal the 70 years of transformation that gradually diffuse into the city. In order to reveal the historical development of the high-rises and their impacts on the skyline, tall buildings that were constructed in Istanbul since the 1950s was documented by a geographic information program called ArcGIS. Using the program, all the high-rises were mapped with the information of their construction dates, architects, usages, number of floors and heights. This map revealed the geographic distribution of the high-rises and the specific turning points that changed the certain characteristics such as usages, overall height, and density. The information were taken from an online database; www.emporis.com and checked via architectural magazines published the projects and official websites of their architectural firms.

The Istanbul Metropolitan Municipality defines tall buildings as buildings that exceed 60.5 meters in height (İstanbul Büyükşehir Belediyesi, 2017). Council on Tall Buildings and Urban Heritage (CTBUH), on the other hand, present three criteria; the context, proportions and the construction techniques. Since the height is relative to the context and Istanbul's unique topographic conditions could increase the visual prominence of the buildings, in the study high-rises were evaluated based on their physical context. Also their construction times were taken into consideration since a building could be noticeably tall in times of its construction but overshadowed today.

In the study, transformation of the skyline was examined under three main headings defined by geographical grouping of high-rises and also follows their chronological

development. The first group focuses on the historic city consisting of Üsküdar, Beyoğlu and Historic Peninsula where Istanbul first encountered with high-rises between 1950 and 1980. The second group focuses on the area between the north of Beyoğlu and TEM and high-rises in Maslak, developed with the northern expansion of the city since the 1980s. The area saw the most intense high-rise developments that dramatically altered the skyline. Therefore the second group divided into four sub-groups as; the area between Dolmabahçe and Maçka that reveals the impact of topography onto the visual prominence of high-rises; Barbaros Boulevard, Dikilitaş, Fulya; Zincirlikuyu-Maslak axis that included a corporate layer to the skyline and Şişli, Mecidiyeköy and Maslak that transformed the skyline not only observed over Bosporus but Golden Horn as well. The last group focuses on the Asian side where high-rises has arrived and transformed the skyline in post-2005.

In the study, skyline views observed from various vista points examined. The high-rises on the skyline identified via photographs taken from all publicly accessible vista points and presented with a corresponding map showing the geographical location and the construction time. Shorelines, higher points of the topography and transportation networks provided the vista points to observe the skyline. The shorelines are commonly used by public and offer a view of the counter side by using the advantages of distance provided by the water. Dominating hills provides an overall view of the city in a single glance. In its long course of history not only the skyline but also the vista points have changed. Istanbul was traditionally approached by the Sea of Marmara. Today, view from the major highways welcomes the newcomers. Considering the views that could be captured from these areas, city of Istanbul may have a countless number of skylines. In the study, only the ones that reveal the overall horizontality of the topography that is bounded between the sea and the sky and views that were dramatically transformed by the inclusion of numerous high-rises were considered.

Even though the number of vista points could be multiplied, the scope of this study is limited with the skyline views observed from Üsküdar, Kuzguncuk, Moda Shores and Çamlıca Hill on the Asian side, Cihangir Park on the European site, Unkapanı Shore and courtyard of Süleymaniye Mosque on the Historic Peninsula and Bosphorus, Fatih Sultan Mehmet Bridges crossing over Bosphorus, Haliç Railway Bridge crossing Golden Horn and Beşiktaş-Kadıköy ferry line were studied. Most of

the skyline views contain numerous high-rises that were studied under different groups. Therefore, the relevant sections of the skylines were focused under each heading. Since some of the vista points provide similar views, Üsküdar shore and Çamlıca Hill providing a view over the Bosphorus, Unkapanı Shore and the courtyard of Süleymaniye Mosque overlooking the Golden Horn and Haliç Railway Bridge and Cihangir Park revealing the impact of high-rises on the Asian site examined in the study while views from other vista points were given in the appendix.

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2. URBAN SKYLINE

2.1 What is a Skyline?

Rather than seeing it as a pure physical entity, Mumford (1937) defines the city as "a geographic plexus, an economic organization, an institutional process, a theatre of social action, and an aesthetic symbol of collective unity" (p.185). Since the city is a complex organism, it is hard to understand all of its components in detail at one glance. However, each city creates and image in mind (Lynch, 1960). Looking at a city from a distance provides a chance to observe wider scope of the city in a single glance. Therefore, it has the capacity to create a city image. The distant view of the city, also called urban skyline, is indicative about the inner workings of a city and carry aesthetic and symbolic values. Considering their ability to give profound messages about the city, in addition to their readability in terms of social, political and economic structure, the notion of urban skylines, as in Attoe's (1981) words "one of the most meaningful measures of human civilization" (p.xii), is worth exploring.

Even though it is a widely spoken phenomenon, the term skyline does not have a definitive meaning. Urban skylines give the first impression about a city. Therefore, since the early history humankind has made his mark on the urban skyline by erecting tall buildings representing the city authorities. This means that with every shift of power in the authority, intentionally or not, urban skylines transformed as well. However, physical transformations spread over a wide period of time, which causes the illusion that skylines are fixed images. On the contrary, they are representative of the continuing change in the city and because of that; it is hard to come up with a single definition that could be applicable for each city. Besides, urban skylines are visual entities, which mean that the way that people perceive and represent the skyline cannot be constrained. In most cases, skylines are represented in an abstract manner; reducing it to a few landmark buildings or the line between the city and the sky. This means that what does a specific skyline should include or exclude might depend on viewer's preference or message intended to be given

through the skyline. This representative quality of the skyline rise further questions such as; what message should the city's skyline convey, could there be one single image that reflects all the multiple components of a metropolis, if not, who holds the power to decide what message will be given through the skyline?

As seen from above, the notion of skyline is responsive to the changes in the social, economic and political structure of the city, which means that it is faced with constant change. Even though it is a widely spoken phenomenon, there is a considerable gap in the academic studies on the subject and the term is not well defined in the urban planning profession either. In order to understand the notion of skyline, in addition to its dictionary definitions, different meanings and values attached to the term, and its transformation from sacred to secular through history revealing the mutable character of the notion, will be examined.

2.1.1 Definitions and main attributes

Oxford English Dictionary (oxforddictionaries.com) defines the term skyline as "an outline of land and buildings as seen against the sky". Gasnner's (2009) review of the literary sources suggests that the word skyline has been used corresponding to its dictionary meaning since the beginning of the twentieth century. First use of the word sky-line, with a hyphen, on the other hand was dated back to first half of the nineteenth century and it was corresponding to the horizon. In the second half of the century, term skyline had started to be used in the context of built environment, but in this case, buildings were seen as elements that would break the skyline, their power to create it was not taken into consideration. It was only after the twentieth century onwards that the term skyline has started to refer natural and built environment seen against the sky.

In his study on London skyline, Gassner (2009) introduced a definition of skylines as "representations of the city from distant, low and publicly accessible viewpoints" and stated that this definition underlies two concepts: collective and competitive (p.76). Due to the distance skyline offers an overview of the city and low viewpoint reveals the height difference among the elements of the built environment. Spreiregen (1965) supports the same argument by referring the urban skyline as the "single visual phenomenon which embraces the maximum amount of urban form" (p.63). This form of representation is capable of sending profound messages about the competing

powers in the city. However, while approaching urban skyline as "macro image of the city" (Lukic, 2011, p.134), it should be kept in mind that observing the city from a distance produces highly reduced image, since the most of its built environment and the life on the street level is hidden (Gassner, 2013, p.12). This specific way of observation reduces the city to its most dominant features.

Considering the definitions given above, cities might have countless number of skylines observed from various vista points. However, some of these views usually considered more representative of the city than the others. These specific distant images are the ones that allow you to instantly recognize the city. For this reason, they are presented in television and movies, depicted in postcards, described in literature, even became souvenir objects and corporate logos. According to Kostof (1991), there are two ways of fixing such a skyline: "through extraordinary landscape features and preeminent buildings" (pp.288-90). Unique topographic features, such as Sugar Loaf at Rio de Janeiro (Figure 2.1), create memorable urban skylines. In some instances advantages of the unique topography is employed to enhance the visibility of buildings that carry symbolic meanings, such as Acropolis of Athens (Figure 2.2) or seven hills of Istanbul crowned with sultanic mosques.

Figure 2.1: Sugar Loaf Mountain in Rio de Janerio between 1909 and 1917: a skyline fixed by extraordinary landscape features. Library of Congress, Prints and Photographs Online Catalog (URL 1).

Figure 2.2: Acropolis in Athens, Greece: Extraordinary landscape features crowned with monumental buildings. Library of Congress, Prints and Photographs Online Cathalog (URL 2).

In addition to the landscape features, preeminent buildings are also able to form a skyline. The religious or the governmental authority, or corporate sector in the case of 20th century, commissioned buildings in monumental scale to glorify their power and send desired messages through the skyline. From the cathedrals of the middle ages to the skyscrapers of global cities, exceptionally tall buildings have formed distinctive urban skylines. In some cases, what fixes the urban skyline is not a single building but repetition of specific architectural features (Attoe, 1981; Kostof, 1991, p.288) such as church steeples, minarets, domes, industrial chimneys or boxed shaped skyscrapers (Figure 2.3).

Figure 2.3: Chicago skyline formed by the repetition of box-shaped skyscrapers. Library of Congress, Prints and Photographs Online Cathalog (URL 3).

Even though act of observing and representing distant views of cities dates back long before, the invention of the world skyline is relatively recent. Urban profile and urban panorama are the two words that had been used to correspond distant views. These words are still used as a substitute of urban skylines but they have slightly different meanings. Lukic (2011) introduce the differences by stating that urban profile is a vertical projection of the urban form, urban skyline on the other hand is a wider notion referring to natural and built environment, topography, architecture and the relationship between them. Difference between the urban skyline and urban panorama is that; urban panorama is a three dimensional representation due to high observation point, whereas urban skyline portrays the city as a two dimensional facade.

Gassner's (2009) analysis of the literary sources dates back the first use of the word skyline, referring to the outline of land and buildings seen against the sky, to the beginning of the twentieth century. Kostof (1991), Attoe (1981), and historians Burchard and Bush-Brown (1967) similarly dates the first invention of the word skyline to the end of the nineteenth century and associate it with another invention: skyscraper. Kostof (1991) states that the word skyline first used around 1876 and got common by the1890s and invention of the word is a result of dramatic reorganization of the urban morphology due to skyscrapers and symbolic messages attached to it (p.279). According to Attoe (1981), the use of the word skyline has started around 1890s when the aggressive verticality of the skyscrapers and their intrusion on the horizon necessitated a change in the language. Words like urban profile or silhouette, which were used satisfactorily before, became inadequate to express changes in the urban landscape due to the inclusion of skyscrapers (p.xi). Burchard and Bush-Brown (1967) give the date for the first use of the word skyline as 1897 and underline its simultaneity with the changes in the urban environment brought by replacement of the church steeples with skyscrapers symbolizing corporate identities (p.244). From these explanations, it can be concluded that both skyscraper's dramatic verticality and shift in the symbolic meaning of the dominant element on the urban skyline from religious or governmental authority to finance led to the invention of the word skyline.

As mentioned above, invention of the word skyline is simultaneous with the emergence of skyscrapers. However, this does not mean that the word only refers to

the tall buildings on the horizon. Since the act of observing the city from a distance dates longs before the invention of the word skyline, this newly invented word may refer all the components of natural and built environment. However due to their imposing scale, in some cases skyscrapers are considered as the only element that holds the power to create a skyline, and the other features of the urban environment are overlooked. Contradictorily, especially cities with historic background consider the view of the city before the arrival of skyscrapers more valued. Therefore, every intrusion of skyscrapers considered as damaging.

Urban skylines are not fixed images, but a cumulative product of the past and current values and negotiations in the decision making process (Attoe, 1981). Therefore, the question of what does the term skyline should refer does not have a definitive answer. Gassner's study (2009) on London planning documents points out this different and contradictory uses of the word skyline and detects three main conceptions; skylines as city-elevations, city-icons and city-lines. City-elevations provide an overall view of the city but neglect what lies behind the tallest elements. City-icons means reducing the city into a few landmark buildings considered as representatives of the entire city. The last of the three conceptions, city-lines, is an abstract representation of city's boundary with the sky. This form of representation disregards attributes like colour or material, but introduces abstract characteristics like rhythm, repetitiveness...etc. After this interpretation, Gassner (2009) emphasizes that this diverse ways of representing the urban environment has been used since the medieval times. Therefore, there cannot be a single representation corresponding all the complexities of the city; instead, each of the conceptions given above can be employed whenever necessary.

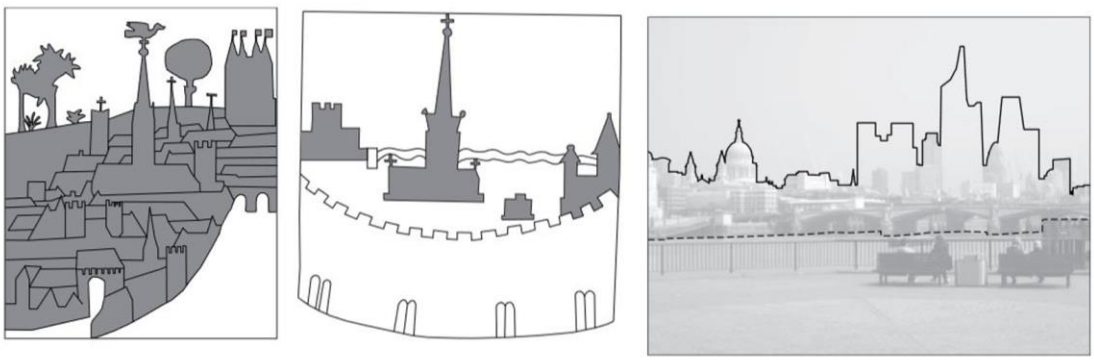

Figure 2.4: From left to right; city-elevations, city-icons and city-lines (Gassner, 2009).

"The silhouette of a city is not a thing out there, but parts of our patterns and rituals of daily living" (Attoe, 1981). Therefore, in addition to its definitions in dictionaries or official planning documents, the values attached to the urban skyline by citizens, tourists, governments… etc. are equally important to understand the notion. In his book on skylines, Attoe (1981) refers to the six attributes of skylines as; skyline as collective symbols, skylines as social indexes, utilitarian skylines, skyline aesthetics, skyline rituals and skyline as icons. In other studies, addressing the urban skylines, one of these attributes associated with skylines can also be found.

Urban skyline is valuable to the citizens both as a familiar icons representing home, and as their advertisement to the rest of the world (Kostof, 1991). Attoe (1981) states the reason for urban skyline's representative quality as 'It testifies that a group of people share a place and a time, as well as operate in close proximity and with a good deal of interdependence" (p.1). This quality creates cross-cultural rituals such as taking picture of skylines, depicting them in postcards and movies, turning them into souvenir objects, or designing and controlling the skylines (Attoe, 1981). Using urban skyline's symbolic meaning as a tourist attraction and advertising tool is also a common ritual. Architectural historian Tavernor (2007) argues that the reason behind the power of the skylines is coming from their ability to attract tourist and business to the cities. According to Lukic (2011), another attribute associated with skylines is their instant recognisability. Construction of landmark buildings give cities uniqueness to make their mark on the world map which is a desirable quality in today's global conditions that makes cities more and more alike. Another behaviour related with the urban skylines is that they can be abstracted as icons. Turning the skyline into icon-like objects might eliminate certain aspects of the urban environment and shows only desired features. Therefore, this form of representation is suitable for creating corporate logos out of skylines or used them as advertising tools.

Skylines carry both functional and aesthetic value. Functionally, they help orientation within the city. Aesthetically, due to the atmospheric conditions such as fog or snow, sunset, night-time lightning, skylines may offer a view of visually rich abstractions (Attoe, 1981). In addition to that, factors like repetitiveness or overall skyline shape could also affect the aesthetic perception of skylines formed by high-rises. Because of their aesthetic qualities, artists have captured skylines for a long

time. In Europe, Renaissance was the starting point of depicting urban skylines (Kostof, 1991). Since then they have become a common subject for painters, photographers, directors… etc.

Readability is another important attribute that increase the importance of the subject. Urban skylines can be read in terms of social, economic and political structure of the city (Attoe, 1981; Kostof, 1991; Ford, 1992; Gassner, 2013). They usually give the first impression about the city. Therefore, what stands out in that image is considered as the representative of the city. Larry Ford (1992), in his study deduces certain characteristics such as function, age, structure, image and site by analysing skylines of different American cities. However, it should also be kept in mind that due to the high level of abstraction, caused by the distancing, expecting to read all the diverse components of the city would be an oversimplification. In fact, reading the skylines of contemporary cities is a complex phenomenon. Spreiregen's (1967) comparison between colonial and contemporary city skylines points out that in colonial times, there was a direct relationship between the hierarchy of values and their representation on the urban environment with church steeples or governments seats as the main focus of the view. In the contemporary city, multiplicity of values and goals makes the reading of skylines more complicated. In today's global cities, there are multiple drivers of the economy, multiple cultural groups with their own values, even the politicians have multiple and contradictory goals for the city. So it is not likely to reach a consensus over what message should skyline convey. Gassner (2013) endorse the same idea by suggesting that instead of supposing that skylines represent one unified vision, they should be evaluated as a result of negotiations among politicians, planners, developers, architects, and historians (p.21).

2.1.2 Skyline in transition: from sacred to secular

Throughout the history preeminent buildings, holding the power to create a distinctive skyline, have transformed from sacred to secular. Therefore, not only skylines do not have a certain definition but also the power to create a skyline may change hands. The urge to build tall is as old as the birth of the cities. Even at the times when there were not functional excuses, tall buildings were constructed to glorify religious or governmental authority within the city. Until recently, sacred buildings representing the power of God were the dominant elements of skylines.

The distant view of a medieval city for example was dominated by the cathedral rising as a symbol of the civic pride (Girouard, 1985). However in many cases being tall among its surroundings was not enough, instead cities competed with each other for the fame of having built the tallest cathedral on earth. This competition took place in the limited territory of each religion, which means that, as opposed to the global world phenomenon today, the world of competition back then was continental (King, 2004). From the Middle Age to the end of 19th century, construction of churches at great heights as a manifestation of religious power had continued. Meanwhile, in the Muslim world, domes of mosques and minarets pointing the sky were making their mark on the skyline.

There are certain elements of religious buildings that would give a distinctive character to the skyline. For example in addition to their height and bulk, steeples, belfries, and domes of cathedrals mark urban skylines. The domes of Brunelleshi's Florance Cathedral , Wren's St. Paul in London, Michalangelo's St. Peter in Rome, creates memorable skylines (Figure 2.5). Dome was a distinctive feature of Eastern Orthodox city skylines as well. Spherical forms of the early Byzantine architecture such as Hagia Sophia at Constantinople, or scalloped, saucer, and onion domes of the churches of Greece, Sicily, Serbia, and Russia marks their city's skyline (Kostof, 1991). Similarly, domes and minarets of the mosques defined the distant image of Islamic cities. One of the most commonly known examples of an urban skyline marked by the features of Islamic architecture is the seven hills of Istanbul crowned with sultanic mosques, which will be explained in detail in the next chapter.

Figure 2.5: Dome of Florance, Tuscany, Italy (Tezer, 2012).

Industrial Revolution has marked the beginning of secularization of the society and the city image. The dramatic impact of the factories and smokestacks on the distant views transformed the city images. However, earlier examples of secular skyline features can be found in medieval cities. Until the Renaissance, city walls enclosed cities in order to protect from sieges. With their exceeding heights, monumental towers and gates, city walls dominated the urban image of medieval cities (Figure 2.6). Only the highest points of the natural and built environment, such as church steeples or fire watchtowers, exceeding the height of the walls were visible on the skyline.

Figure 2.6: City by the Sea by Ambrogio Lorenzetti, c.1340 (URL 4).

Another early secular skyline features were the baronial towers of medieval Italian cities. The numerous towers rising up to the sky with their exceptional height dominated the skylines of Florence, Bologna, and Sienna. There were evidence that there may be as much as 400 towers in Florance and 194 towers in Bologna (Girouard, 1985). The towers were reduced in numbers or completely destroyed today. Only remaining collection is at San Gimignano where thirteen towers are still standing (Figure 2.7). City nobles to represent welfare of their clans in addition to defensive reasons (Kostof, 1991) built these medieval family towers. It is known that there was competition among the noble families to built the highest tower (Girouard, 1985). Besides, considering noble family's use of symbolic meanings associated with height, construction of towers could also be interpreted as the evidence of their socio-political competition with the merchants (Attoe, 1981).

Figure 2.7: An early example of secular skyline: family towers of San Gimignano, Italy (Kruzie, 2008) (URL 5).

In many of the city's skyline today, buildings constructed in different times coexist. This phenomenon has accelerated mostly after the Industrial Revolution. Until then the focus of the skylines were religious or governmental buildings representing communal values. Arrival of the mechanized industry altered the traditional view of the city. The churches or town halls were no longer dominating the urban scene as it once did. The factory chimneys, smokestacks, water towers, challenged their visual dominance on the skyline. One of the most striking examples can be found in the paintings depicting the urban conditions of rapidly industrialized British cities (Figure 2.8).

Figure 2.8: Sheffield from Park Hill by William Ibbitt, 1885 (URL 6).

The changes in the urban environment after Industrial Revolution created controversies over skyline imagery (Kostof, 1991). Inclusion of skyline features representing the power of money and technology to the cities that already possessed

a distinctive skyline introduced a challenge over skyline priorities. One of the earlier examples of this concern can be found in A. W. N. Pugin's book called Contrasts, first published in 1836. In the book, Pugin compares an industrial city with medieval cityscape by revealing the visual impacts of industrialization, and suggests that this new urban image is the visual indicator of the loss of traditional values in the community (Figure 2.9).

Figure 2.9: Comparison betweem the catholic town in 1440 (above), and the same town in 1840 after industrialization (below) (Pugin, 1836).

The arrival of Industrial Revolution necessitated new building types such as train stations, hotels, post offices… etc. Even though they were built for brand new functions, generally embraced former architectural styles. Big Ben and Victorian Tower of London's neo-gothic House of Parliament for example are the two distinctive markers of the London skyline built in the 19th century (Kostof, 1991). In the late nineteenth and early twentieth century, mode of production has started to change from productive to non-productive services, which involved a brand new building type, skyscrapers, to the built environment. Considering their aggressive verticality, dramatic transformation in the overall image of the city heated up the skyline controversies even more.

2.2 A New Verticality: Emergence and Diffusion of Skyscrapers

Late nineteenth, early twentieth century has marked the beginning of a shift in labour force from productive to non-productive services. Importance of religious and industrial power gave way to finance. America emerged as a new world power and skyscrapers became the visual correlation of its financial supremacy. With the aid of technological breakthroughs, buildings rose to unprecedented heights. They were built in large numbers at the financial districts and formed an urban skyline associated with capitalist economic system. Tall buildings' capacity to give cities identity through skyline (McNeill, 2005), brought the notion of skylines into city's urban agenda. Even the invention of the word skyline, as mentioned in the previous heading, is associated with the emergence of skyscrapers (Burchard and Bush-Brown, 1967, p.244; Attoe, 1981, p.xi; Kostof, 1991, p.279). However, skyline confrontations got intense after diffusion of skyscrapers to historic European cities. The profit seeking motivations behind the construction of high rises erupted debates concerning the message those skylines convey. Relatively recent phenomenon, globalization of the world economy also heated up the discussions. In past few decades, skyscrapers has become a major component of Asian cities' urban transformation (Höweler, 2003). The Pacific Rim cities built monumental scale skylines with skyscrapers designed by star architects. The notion of skyline has started to be discussed in the context of neoliberal politics and city branding. All things considered, the subjects of skyscrapers and skylines are strongly interrelated.

2.2.1 Emergence of skyscrapers as an American phenomenon

America at the end of the 19th century employed the symbolism of height like its numerous predecessors did. The college from 1889, named Principal Tall Buildings of the Old World, compares 78 buildings around the world in terms of height (Figure 2.10). The Monument of Washington is placed right at the centre as the tallest structure of the world. This representation shows how did United States tried to compensate its late arrival to the world stage by using the symbolic meaning of height (King, 2004). Soon, skyscrapers emerged in the United States introduced a new kind of symbolism to the height in terms of financial power. Skylines of New York and Chicago turned out to be the worldwide representative of the American capitalism. W.A Starrett (1928), the architect of the Empire States Building, points

out the role of skyscrapers in the American city by stating that; “The skyscraper is the most distinctively American thing in the world. It is all American and all ours in its conception, all-important in our metropolitan life…(p.1)”

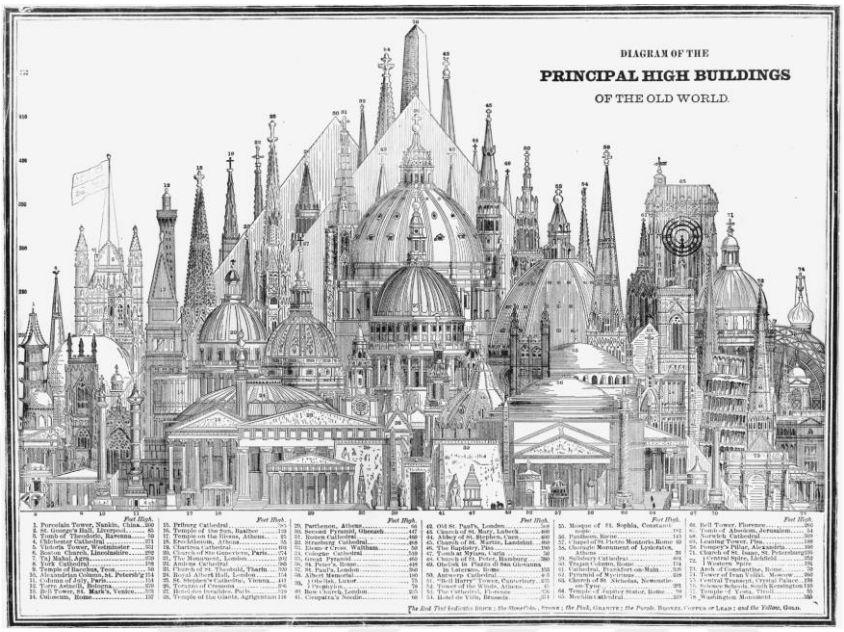

Figure 2.10: 'Principal High Buildings of the Old World’: The People's Illustrative and Descriptive Family Atlas of the World 1889 (King, 2004).

Ten stories tall Home Insurance Building in Chicago, designed by William LeBron and built in 1885, is commonly accepted as the first skyscraper. However, New York City soon turned out to be the skyscraper centre while competing with London for the status of the financial hub of the world (Ford, 1992). The end of 19th century marked a significant point in the urban history in terms of motives and drivers behind the powers shaping urban landscape. Kaika and Thielen (2006), explains the changes in the practise of constructing landmark buildings by pointing out that; the ancestors of the 20th century’s capital holders celebrated their power by commissioning cathedrals in the name of God, in contrast, the new tycoons were building skyscrapers only for the interests of an individual or a company. Kostof (1991) similarly points out that industrialization’s effects on urban environment were unavoidable due to the highly functional use of chimneys, water towers...etc. In the case of skyscrapers, on the other hand, the symbolisms they introduce to the urban landscape were enthusiastically welcomed.

In order to understand functional and symbolic associations related with skyscrapers the subject needs to be evaluated in the special social and economic context of

United States where they were emerged and developed. Reorganization of the economy resulted in the influx of numerous white collars to the city and skyscrapers provided a visual landmark around which the business could gather for American cities lacking traditional focal points like cathedrals or plazas of Western European counterparts (Ford, 1992). Therefore, skyscrapers became a symbol of financial supremacy of the United States.

There are both functional and symbolic motives behind the construction of skyscrapers. Technological breakthroughs such as passenger elevators that work with electricity, improvements in the plumbing and heating systems, skeleton frame construction and need to make profit from the valuable land are functional motivations behind the constructions of skyscrapers (Webster, 1959; Condit, 1960; Gottman, 1966). Besides, special needs of the new service industry necessitated invention of a new building type. Gottman (1966) draws attentions to the fact that the early high rise buildings were designed for insurance companies whose business is entirely on paper. Since the only required space for bureaucratic works was office area, instead of horizontal expansion cities have started to grow vertically. Skyscrapers also provided proximity for different kind of services that needs each other's assistance to function properly. This need for agglomeration according to Gottman (1966) is what creates skylines of American cities.

Since their emergence in the late nineteenth century, individuals or corporations employed skyscraper's symbolism as a signifier of their economic power. Supremacy of New York in the financial world for example became closely tied with its corporate skyline (Figure 2.11). Employing the symbolism of skyscrapers for advertisement of the corporate identities is still an on-going phenomenon around the world. Domosh (1988) states that the search of a new social class, emerged with New York's economic boom in mid nineteenth century, for a new way of expressing their wealth and power forms socio-economic conditions into which the symbolism of skyscrapers developed. In 1916, the newly erected Woolworth Building was named as the "Cathedral of Commerce" (Cadmen, 1921). This expression explains how the skyscrapers have taken over the role of religious edifices to legitimise and glorify their existence.

Figure 2.11: The corporate skyline of New York City, 1912. Library of Congress, Prints and Photographs Online Catalog (URL 7).

Domosh's (1988) study on the symbolism of New York's first tall buildings reveals the intense competition between the two leading sectors in commissioning skyscrapers; newspaper and life insurance. Tribune Building's use of its headquarter building, a skyscraper designed by Richard Morris Hunt and built in 1895, as an advertising tool urged other newspapers to build tall as well. Soon, Pulitzer's New York World building, six stories higher than any other building in New York, completed. Another height competition took place among the three companies of life insurance industry; Mutual Life, Equitable and New York Life. In 1909, the New York Life had built the tallest building on earth (Domosh, 1988). Competing for the fame of building the highest skyscraper is still an on-going phenomenon today, which indicates that the symbolic meaning associated with height is still one of the main motives behind the forces that shape our skylines.

2.2.2 Arrival of skyscrapers to Europe after WWII: juxtaposition of high-rises and historic skyline

Skyscrapers emerged in the United States at the end of the nineteenth century and became an icon of American capitalism. Following the World War II, form, function and geographical distribution of skyscrapers started to change. Since then skyscrapers has been built in Europe as not only office towers but residential and mixed used projects as well. Gottman (1966) draws attention to the fact that in the

1933 edition of the Oxford English dictionary the term skyscraper was described as a characteristic of American cities, in the 1962 edition on the other hand, this expression was removed.

Modern movement, in the beginning of the twentieth century, appreciated the functional use of skyscraper. Even though it was never implemented, Le Corbusier's Plan Voisin for Paris dated back to 1925 suggested number of identical skyscrapers to replace the historic fabric of the city. However actual impacts of the movement, , felt after WWII following the legacy of Le Corbusier and Mies van der Rohe (Short, 2012, p.11).

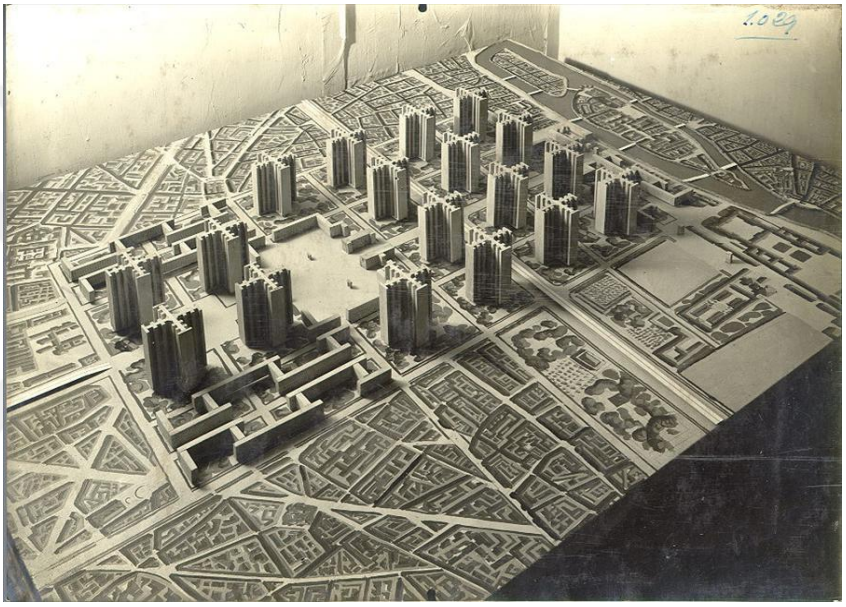

Figure 2.12: Skyscrapers replacing the historic fabric of Paris in Le Corbusier's Plan Voisin (URL 8).

European cities were familiar with the practice of constructing monumental scale buildings for cathedrals and governmental buildings but they were not enthusiastic about building skyscrapers as Americans. Since its emergence in the late nineteenth century up to 1950, United States built over 250 skyscrapers exceeding 100 meters and 10 over 200 meters in height. In European continent on the other hand, there was only one building, Torre Piacentini in Genova, exceeding 100 meters in the year 1950 (URL 9, 10). The number of high-rise developments boosted in Europe after WWII, when the reconstruction works for the heavily damaged cities began. Tall building typology was employed to accommodate needs for office and residential space and as an architectural component of a new urban model symbolizing the

restructuring of the economy and administrative power of the European cities (Kloft, 2002, p.17).

After 1950s both Eastern and Western Europe, even the Soviets despite their strong disapproval started to build skyscrapers (Gottmann, 1966). In 1952, the first of the Stalin's Seven Sisters, Kotelnicheskaya Naberezhnaya, was completed. The tallest building of the same project, MV Lomonosov State University (originally Moscow State University), was 239 meters in height and had been Europe's tallest building from 1953 to 1997 (Figure 2.13). The project consisting of seven high-rises could be interpreted as the visual evidence of Stalin's aim to compete with the skylines of capitalist cities (Hollister, 2013) which reveals the power of skyline to convey messages to the rest of the world.

Figure 2.13: Moscow State University in 1955: Europe's tallest building between 1953 and 1997. Library of Congress, Prints and Photographs Online Catalog (URL 11).

The motivation behind the construction of tall buildings in Eastern and Western Europe was different. Tall buildings in East, located primarily in Moscow, Warsaw, Riga and Bucharest, were governmental and cultural buildings. Contradictorily, in Italy for example, all of the six buildings constructed in the 1950s were office towers (Hollister, 2013). In the 20th century, most of the high rise office towers were built in Western Europe; United Kingdom, Belgium, The Netherlands, Germany, France, Northern Italy. In the new millennium, practice of building high-rise office structures has continued in Europe; 150 and 200 meters tall office towers were mostly located in Paris, Frankfurt, London, Madrid, Barcelona, Rotterdam and Moscow (Pietrzak, 2015). Consequently, skyline of these cities have transformed by the dominant verticality of the high-rises.

The impact of skyscrapers on historic European cities with complicated urban pattern was quite different from New York and Chicago. Two different methods concerning

the integration of tall buildings into historic areas emerged; La Défence development in Paris and tall building development in London (Hollister, 2013). The boom in the French economy in the 1960s necessitated a radical change in the building code. According to a new code, the city was divided in two zones; first was the central district where the permissible building height was slightly above the historical norms, second was the outer area where the construction of much taller buildings were allowed. By the 1970s, with the more relaxation in building codes, La Défence has developed as an area where exceedingly tall skyscrapers built in high density (Tung, 2001, p.331) (Figure 2.14). La Défence has become the business centre of France that could compete with London and Frankfurt (Short, 2010, p.15) and as a visual correlative, a new skyline was formed by densely agglomerated office towers.

Figure 2. 14: Cluster of high-rises in La Défence, Paris (Brandse, 2014) (URL 12).

Contrary to La Défence developed on the outskirts of Paris, since the 1960s high-rises building has erected right at the center of London dominating the visual prominence of the historic buildings (Kloft, 2002, p.18). Attoe (1981) explains the impact of tall buildings crowding around St. Paul's Cathedral by stating that "the collective symbol of the city of London was no longer 'cathedral on a hill', but 'commercial centre'". Numerous high-rise developments in the following decades have come to dominate the London skyline. The strong contrast between the high-rises and the historic buildings is still one of the distinctive characteristics defining the London skyline.

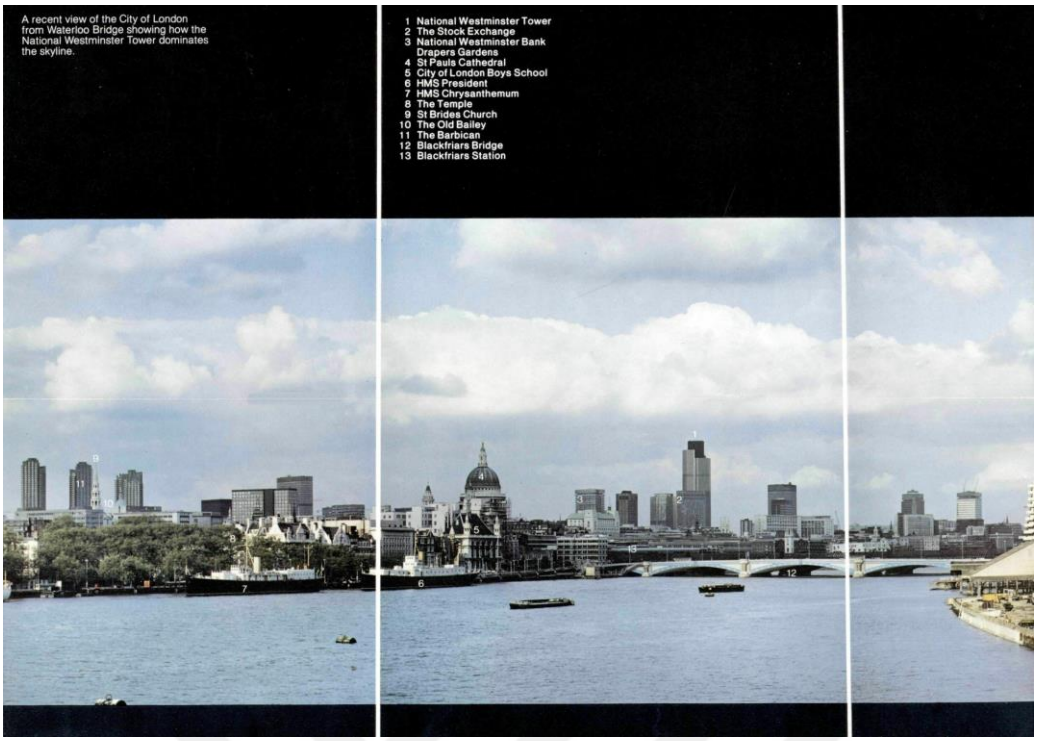

Figure 2.15: High-rises competing with the St. Paul's Cathedral on the London skyline c.1980s (URL 13).

On the outskirts of London, Docklands area has developed in similar lines with La Défense, in order to meet the needs of modern metropolis without jeopardizing the historic skyline. In 1984, the central tower of the project designed by Cesar Pelli erected, and after 1985, SOM revised the master plan for the area. Yet the development was not a success in terms of fulfilling the economic expectations and the city centre has remained as a popular choice for high-rise developments (Kloft, 2002, p.18). Frankfurt was another European city emerged as a skyscraper centre after WWII. The European skyscraper is considerably shorter than the North American version. Frankfurt, housing the tallest and second tallest building in Europe by 1999, was an exception (Hollister, 2013). In Frankfurt, exceptionally tall buildings are located right next to the city centre, which dramatically altered its skyline (Figure 2.16). Frankfurt, Paris and London are by far the largest skyscraper developers of Europe in the 21st century (Pietrzak, 2015).

Figure 2. 16: Skyscrapers rising near the historic centre of the Frankfurt, (Beltrame, 2012) (URL 14).

While considering the examples showing the impact of high rises on the skyline of European cities, it should be kept in mind that these views were taken from high vista points, which dramatize the effects of the high-rises by revealing the strong contrast with its immediate surroundings. The views observed from the eye level would be more effective to understand the actual transformation of the skylines of these cities'.

2.2.3 Skyscrapers in Asia: city branding with super-tall skyscrapers

With the exception of the Russian case, skyscrapers built in Europe do not reach extreme heights (Pietrzak, 2015). Therefore, United States had managed to hold the record of having built the tallest structure on earth until 1998. However, this statistic changed in favour of Asian cities when Petronas Towers in Kuala Lumpur outbid the Sears Towers in Chicago as the tallest building on earth. As of January 2016, among the ten tallest buildings of the world, there is only one building from America (emporis.com, URL 15). Majority of the towers were constructed in Asian cities, which indicates a new turning point in the history of skyscrapers. After being a sole symbol of American capitalism and an element of post-war reconstruction of Europe, skyscrapers have now become the symbol of Asian cities rising as the world powers of the 21st century.

There is a consensus that globalization of the world economy changed the production of urban space. The most profound effects of these changes can be found in Asian

cities. According to King (2004), “new skyscrapers mark the close of the old millennium and opening up the new so called ‘Asian Century’”. In the new era both the number and height of the high-rises has started to increase and dominant function started to shift from offices to residential and mixed used projects. In terms of drivers behind the high-rise developments, the land prices in the downtown areas, maximum return to investment, and symbolizing the corporate identity are still valid. Additionally tall buildings are now employed for city branding purposes as well, as can be observed from the skyscrapers named after their cities such as Shanghai Tower, Taipei 101…etc (Wood, 2013, p.8). Urban megaprojects, such as London’s Docklands and La Défence in Paris, have been built around the world especially concentrated on the Pacific Rim cities (Olds, 1994). The dimensions of these projects are multiple times greater than its European counterparts which results in dramatic transformation of the urban skylines.

City branding via exceedingly tall skyscrapers is a common practice in Asian cities emerging as new world powers. Even people, who have not heard the name Kuala Lumpur before 1990, became aware of the city after the completion of Petronas Towers (Ford, 1998). The towers, designed by Cesar Pelli, were completed in 1998 and exceeds 400 metres in height that is extremely higher than the European skyscraper. When it was completed, world’s tallest building record moved outside the North America for the first time since the end of nineteenth century. According to the editors of Progressive Architecture, it was a historical shift (Progressive Architecture, 1995: 44). Skyscrapers, either as stand-alone objects or as a cluster, have the power to create distinctive skylines. What Petronas Towers meant for Kuala Lumpur is an instance of creating a skyline via an exceptionally tall iconic structure that could give identity to a city and put it on the world map among other developed nations. Asian cities developing in a massive rate with the impacts of globalization have employed skyscrapers in a new manner in terms of height, number and function.

East and South East Pacific cities have experienced enormous economic growth in the past few decades and undergone major transformations concerning their built environment. From Tokyo to Jakarta, Pacific Rim cities are integrated by the driving forces of globalization such as; trade, finance investments, transportation, commerce, banking, services, government administration, manufacturing, production. (Lo and

Marcotullie, 2001, pp.39-60). Because of the density and the aggressive verticality of skyscrapers, skylines of Pacific Rim cities transformed dramatically. According to an article on archdaily.com, five among the ten of the most impactful skylines belong to Hong Kong, Singapore, Seoul, Shanghai and Bangkok (Kunkel, 2015, URL 16), even though the skyscrapers in these cities have only a few decades of history.

The Council on Tall Building and Urban Heritage defines the supertall structures as buildings over 300 meters in height (URL 17). Graphic from the database of CTBUH below (Figure 2.17), indicating the areal distribution of super tall buildings, points out the density in Pacific Rim cities. However, none of the buildings in Asia had exceeded 300 meters in height before 1980s. 368 meters Bank of China built in Hong Kong in 1989 was the first super tall skyscraper of Asia. Soon, Hong Kong was followed by Shenzhen, Guangzhou, Shanghai in China, Bangkok in Thailand, Kaohsiung in Taiwan, Kuala Lumpur in Malaysia (URL 18). The skyscrapers in Chinese cities emerged after the establishment of Special Economic Zones that allows the communist system to open up to the world economy since the 1980s (Kloft, 2002, p.122).

Figure 2. 17: The geographical distribution of the supertall skyscrapers (URL 19).

According to Lo and Marcotullie (2001), urban system of Asia Pacific Region is consisted of integrated cities diverting in form and function. Their inclusion in the system affects their physical environment in different ways. Four different types of patterns among cities of Pacific region could be identified as; Capital Exporters; the nerve centers of the system with several Central Business Districts (CBD) (Tokyo, Seoul, Taipei), Foreign Direct Investment (FDI) Recipients with manufacturing areas

located on the outside, commercial center at the inside of the city (Jakarta, Shanghai, Bangkok), Entrepots; metropolitan cities with borderless economy (Hong Kong, Singapore), Amenity Cities; using their natural environment to attract economic activity (Sydney and Vancouver) (pp.39-60). In the development process of the aforementioned cities, skyscrapers play a major role and their skylines are ranked among the most impressive today.

Skyline of Shanghai experienced one of the most dramatic transformations among the Pacific Rim cities (Figure 2.18). In Shanghai, one of the Special Economic Zones of China, Pudong was designated as a new development area. Richard Rogers Partnership in London was chosen for the consultation, which is according to Olds (1994) a marketing strategy aiming for the international clientele. In this area, a huge skyline was built by the construction of numerous skyscrapers exceeding 300 meters in height. In Pudong; 632 meters tall Shangai Tower and 492 meters tall Shangai World Financial Centre are ranked among the ten tallest towers in the world (URL 15). New skyline of Pudong caused controversies concerning the visibility of historical buildings in Bund area located at the opposite of the financial centre (Short, 2012, pp.20-21). According to Ford (1998), employing the symbolic meaning of skyscrapers, which emerged as an icon of American capitalism, to demonstrate the economic power of still technically communist China was ironic.

Figure 2. 18: Transformation of the Pudong skyline, Shangai, China (URL 20).

Skyscrapers play a major role in the development of Asian cities by representing their cities' entry to the world stage. Now with their immense scaled skylines, Asian cities are known as the skyscraper centre of the world, a phenomenon once only belonged to United States of America. The popularity of the subject of urban skylines got more intense after skyscrapers arrival to the Asia. Following the intense discussions among different circles and wide media coverage, numerous cities around the world focused their attention to the design and control of their skylines.

2.3 Design and Regulation of Urban Skylines

Skylines are not fixed images but reflective of the changes in social, economic and political structure of cities. From the height restrictions in medieval cities to the urban design guidelines of 21th century, urban skylines are regulated in different ways. Each city adopts different approaches towards the control and design of their skylines based on their city's individual character, goals and visions. In order to achieve that, various control and design mechanisms have been developed. Contrarily, some cities prefer not to interfere so that driving forces of the city's economy would shape their skyline. Another different approach is to compromise between the strict control mechanisms and laissez faire approach and to protect only selected views.

2.3.1 Control mechanisms v. laissez faire approach

The most common mechanism to control urban skylines is height limitation (Attoe, 1981, p.85). Even before the word 'skyline' invented, height restrictions had been implemented in order to protect the dominance of certain buildings representing the religious or governmental authority. There is enough evidence to show that communal governments of the medieval cities regulated the height of tower houses so that the visual supremacy of the town hall would not be overshadowed (Kostof, 1991, pp.280-1). Even though it is the birthplace of skyscrapers, American cities implemented height restrictions as well. Visual dominance of the Custom's Tower in Boston, Statue of William Penn on top of the City Hall in Philadelphia, City Hall of Los Angeles (until 1950), Washington Monument in Washington DC, for example, are protected (Ford, 1992). Additionally, visual prominence of Capitol Buildings are preserved in certain states, such as Madison and Wisconsin, by not allowing any

building to exceed the height of the Capitol dome (Lukic, 2011). In some cases, the restriction on height limits was removed in favour of a building that was agreed on to become the symbol of the city. In 1926, Los Angeles exempted the City Hall to exceed 46 meters height limit, so that it could create an identifiable skyline for the city (Attoe, 1981, pp.34-5; Kostof, 1991, p.282).

When cities do not have an identifiable skyline, a single structure, exceptionally tall in most cases, could be employed to give the city a worldwide recognisability. Tall structures built for world fairs using the latest advances in technology offers an example to the practice of promoting cities by creating a focal point on their skyline. Exceedingly tall structures such as Eiffel Tower in Paris built for Exposition Universelle in 1889 or Space Needle built for Seattle Fair in 1962 formed distinctive and memorable skylines (Figure 2.19). Skyscrapers, designed for various functions such as office, hotel, residential...etc. could also create a punctuation point in the skyline through their size or shape, especially for cities that seek uniqueness in the globalized world. Buildings such as Transamerica Pyramid in San Francisco, The Gherkin in London for example promote their cities by creating identifiable and memorable assets on the skyline.

Figure 2. 19: Space Needle for Seaatle Fair under construction, Washington, 1962 (URL 21).

Locating skyscrapers, especially into the cities with historic background, is another controversial aspect of skyline regulations. Clustering skyscrapers in specific nodes is one way of dealing with the problem that could prevent the development in the

historic centre, and still meet the city's need for global city image. In order to support clustering of tall buildings Short (2012) suggests that every intrusion from skyscrapers should not be seen as a destruction of the cityscape and skyscrapers' ability to create a skyline should be taken into account (p.39). La Défence in Paris, Pudong in Shanghai, are examples of cities with an identifiable history and has a skyline formed by skyscrapers as well. The results of this approach are still debatable in terms of whether it means the loss of character for the city or a sign of progress.

Not only historical cities but also skylines completely formed by skyscrapers have its own challenges regarding the aesthetic quality of the tall buildings and its effects on the skyline preferences. There are studies focusing on the relationship between the tall buildings and aesthetics of the skyline. Heath, Smith and Lim's (2000) study for example aims to find out the effects of silhouette complexity and facade articulation on the preference of skylines (Figure 2.20). Another study held by Stamps, Nasar and Hanyu (2005), investigates effects of overall skyline shape; convex, concave, or flat, number of turns in the roofline of individual buildings and level of variance in four attributes; height, width, depth and setback on preferences. The study focuses on the regulation of urban skylines via pre-construction validation. Another attribute of the skyline that could be subjected to regulation is colour. In Jerusalem, there is a law regulating that every modern object must be covered with Jerusalem stone, which gives the city its distinctive golden colour (Kostof, 1991, p.319).

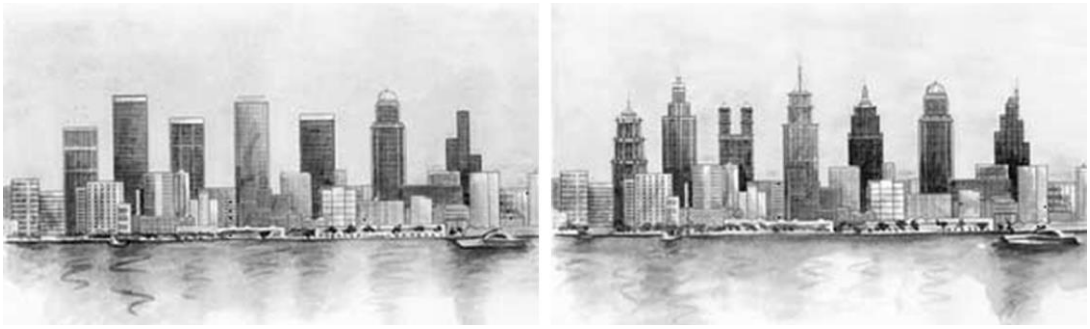

Figure 2.20: A skyline image with low silhouette complexity and low facade arcticulation (left), high silhouette complexity and high facade articulation (right) (Heath et al., 2000).

As oppose to the various regulation and design mechanisms, some cities follow a completely different approach and do not interfere with their skyline. Attoe (1991) states that these cities are proud of their ever changing skyline as a sign of progress and points out two arguments in favour of laissez faire policies; a skyline without

control better reflects the realities of the city and individual's right to make profit is more important than the concerns over the skyline imagery (p.116). New York and Chicago are the two well-known examples of cities that built huge skylines. After WWII, city of Houston has started to construct skyscrapers in a massive rate with laissez faire policy (Figure 2.21). Houston has no zoning laws, and implementing zoning laws is considered as "a violation of private property and personal liberty" (Qian, 2010, p.31). Skyline of Houston, with numerous skyscrapers built in various shapes and size, vividly illustrates the impacts of laissez faire policy.

Figure 2. 21: Houston skyline built without control mechanisms (Highsmith, 2014). Library of Congress, Prints and Photographs Online Catalog (URL 22).

2.3.2 View protection as a tool to keep historic vista

In addition to design and control mechanisms concerning the overall skyline imagery, several cities protect only selected views. These predetermined views generally include buildings that carry communal importance such as town halls, churches… etc. Natural features on the skyline could also be a subject of protection as well. Views of key structures such as Capitol Building and Washington Monument in Washington D.C, views along the key axes such as the Champs Elysées in Paris and the Forbidden City in Beijing, for example, are protected (Short, 2012, p.39).

London embraced policies that encourages the construction of tall buildings after the election of Kev Livingstone as mayor in 2000, and does not have a citywide land use plan; instead tall buildings are discussed case by case in terms of their impacts on the several predetermined views (Gassner, 2013, p.24). The London View Management Framework (Greater London Authority, 2012) provides guidance for the protection

of strategically important views. In the document, visibility of certain landmarks, St. Paul's Cathedral, Palace of Westminster and Tower of London, from specific vista points are stated as strategically important. 'Protected vistas' defines the geometric area to implement height restrictions so that the visibility of the aforementioned buildings would not be damaged (Figure 22, 23).

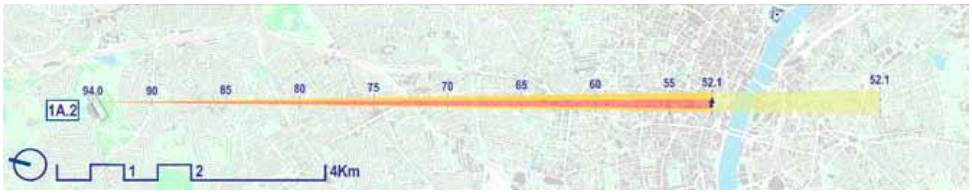

Figure 2. 22: Map of protected vista indicating threshold heights (GLA, 2012).

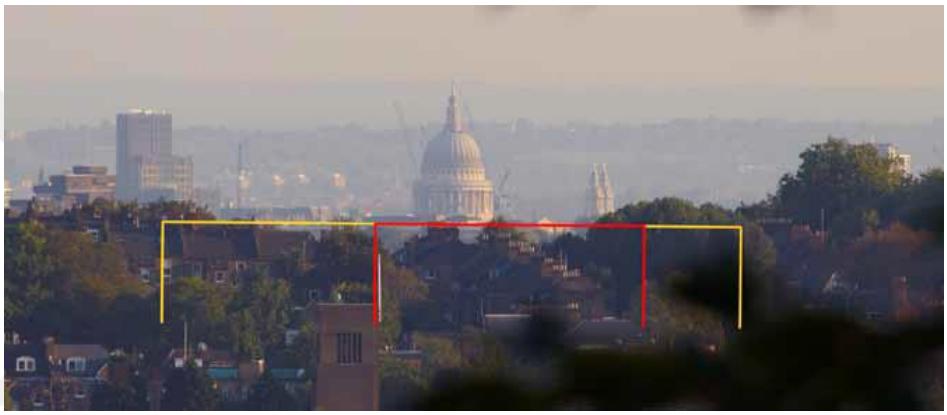

Figure 2. 23: Protected vista thresholds (GLA, 2012).

Even though protecting certain views while allowing the tall building development at the same time seems like a compromise that would satisfy both the preservationist groups and supporters of the tall buildings, it does not provide a definitive solution for the controversies over London skyline. Giving priority for the specific views over others is regularly criticized. Gassner (2013) argues that the dominance of St. Paul's Cathedral on the London skyline does not represent the power of the Church as it once did, instead it represent the power of politicians and developers who use the concerns of preservationist groups for their own interest. Additionally, overloading the cathedral with various kinds of symbolisms results in "hollowing out of meaning" (p.16, 261). According to another point of view presented by Appert and Montes (2015), aim behind the protection of views towards historic edifices is to create a decor for the skyscraper developments so that the city would have uniqueness in the globalizing world.

As it was discussed in the first chapter, extraordinary landscape features have power to create distinctive skylines. Therefore, views that include natural features could be assessed as valued for protection as well. For example, Montreal, Denver and Vancouver imply height restrictions so that the mountains in the background of their urban skyline can be protected (Lukic, 2011). In Honolulu, the visual prominence of two volcanoes; Diamond Head and Punchbowl are protected through legislation (Attoe, 1981, p.90). Similarly, Hong Kong, as a city that has been building exceptionally tall skyscrapers in massive rate, is threatened to lose the visual impact of the mountains at the backdrop of the city. Study by Ann Shuk-Han Mak, Ernest Kin-Man-Yip and Poh-Chin Lai (2005) suggests that ridgelines of the mountains are essential visual assets that gives a unique character to Hong Kong skyline and should be protected by creating a 20% building free zone (Figure 24).

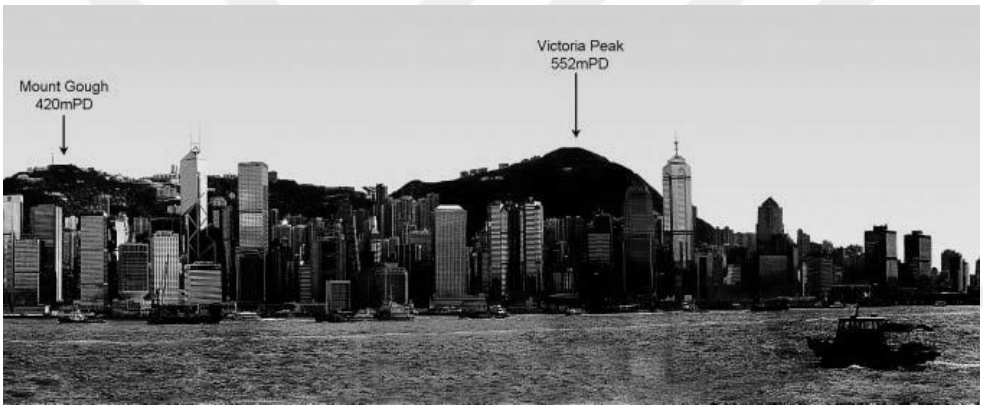

Figure 2. 24: Skyline of Hong Kong showing the impact of high-rises on the visual prominence of the mountains. Urban Design Guidelines for Hong Kong, 2002.

The subject of urban skyline does not have predetermined boundaries. It has become a widely discussed topic especially after the inclusion of the skyscrapers into the urban morphology. However, even before the word skyline invented, distant view of cities were subjected to transform. The changes brought by skyscrapers is further controversial for cities with a long history. Istanbul offers a vivid example of a city that has been identified with its distant view throughout its long history and faced with dramatic transformation due to the inclusion of high-rises after the 1950s. Throughout its long course of history as the capital city of Byzantine and Ottoman Empires and the key player of the Turkish Republic in the global arena, skyline of Istanbul has transformed. Today, the subject is widely discussed but in a narrow field concerning whether the skyline of Istanbul is broken or not? Unlike the common understanding, Istanbul skyline is not a fixed image and has always been under

constant transformation. The historic development of the Istanbul skyline, which will be discussed in the next chapter, is important to understand where the transformation of the skyline due to the inclusion of high-rises, stands in the wider panorama. It also reveals that the subject should not be discussed in the limited perspective of a broken image but as a visual indicator of changes in the social, political and economic structure of the city.

3. HISTORICAL DEVELOPMENT OF ISTANBUL SKYLINE

The city of Istanbul has been constantly inhabited and transformed since the days of its early settlement within the city walls to its current metropolitan status. Using the advantages of city's unique topography, skyline of Istanbul had transformed under Byzantine and Ottoman rulers aiming to strength their authority. The current status of the skyline today is a cumulative product of the physical developments that the city went through in its long history. Even though the word 'skyline' is an invention of late nineteenth century (Burchard and Bush-Brown, 1967, p.244; Attoe, 1981, p.xi; Kostof, 1991, p.279) the skyline of Istanbul, by means of city's distant view, has been a key identifier of the city for a long time and often depicted by travellers in notes and engravings.

In the case of Istanbul, both of the two elements that Kostof (1991, pp.288-90) defines as capable to fix a distinctive skyline, extraordinary landscape features and pre-eminent buildings, coexist and enhance each other's visual prominence. City's unique topography and natural assets create a distinctive image. Additionally, built environment formed by two powerful empires contributes the formation of the skyline. Following the World War II, high-rise developments in the city has started to add another layer to the skyline, which will be discussed in the next chapter.

Water surrounding the city from three sides, hilly topography, the natural fauna covering the hills and monumental buildings from Byzantine and Ottoman era could be named among the major components forming the Istanbul skyline. In its strategically located site, Sea of Marmara, Golden Horn and Bosphorus divide Istanbul into three parts. The water surrounding the city puts a distance among the divided lands, which creates a better chance to observe the panoramic view of the opposite site. When one is standing on the waterfronts of the Historic Peninsula or alongside the Bosphorus, he/she can get a distant view of the land across the water in a single glance. Engravings dating back to 18th and 19th centuries show that travellers used the potentials of the water for depicting the skyline view, which created an image of Istanbul as hills crowned with monumental buildings lying in

between the water and the sea. In his travelling notes dating back to early 20th century, Le Corbusier (1987) states that; "...thus we arrived by the sea to watch these things unfold" which emphasizes the impact of observing the skyline over the water. Corbusier also made several sketches of the city showing the key elements of the skyline such as domes and minarets of Historic Peninsula and Galata Tower of Pera (Figure 3.1).

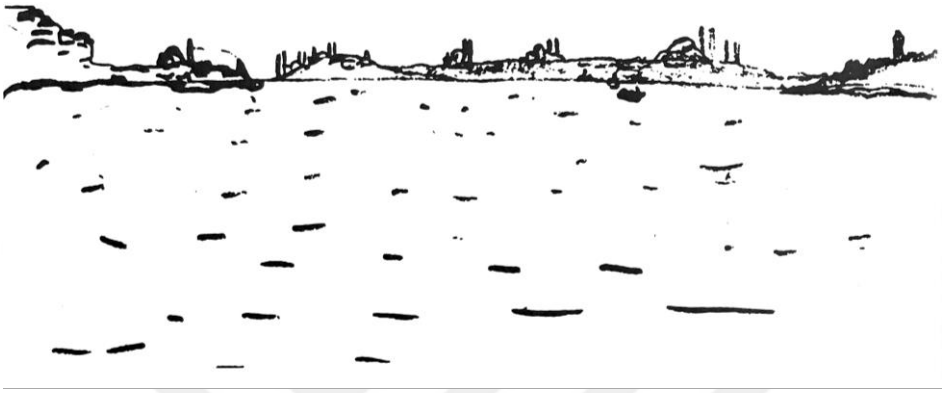

Figure 3. 1: Skyline of Istanbul as seen from the Bosphorus by Le Corbusier, 1911 (Le Corbusier, 1987).

As it was discussed in the first chapter, observing the city from a distance produce a highly reduced image due to the fact that most of the built environment and life on the street level is hidden (Gassner, 2013, p.12). This argument is viable for the Istanbul skyline as well, since most of the time only buildings in monumental scale or located on a strategically important sites dominate the skyline. Traveller Robert MacDonald's (1859) expressions about his encounter with the transformations of the urban morphology of Istanbul in the19th century, expressed by following words, suggests that skyline as a distant view is a highly reduced image.

> ...i would advise all strangers and travellers, who pay a visit to Stamboul, not to enter the town; at least not to enter it if they wish to carry away within them the fine effect produced on the mind when the city is viewed from a distance. (p.71)

Along with the water, Istanbul's unique topography provides multiple vista points and gives skyline a distinctive character. The hills enhance the visual prominence of the buildings crowning their top, which are monumental structures in most cases, also include the natural and built environment on their slopes and skirts into the skyline. Therefore, the term 'skyline' for Istanbul covers a wider area than its dictionary definition, which reduces it to the outline of land and buildings seen against the sky. Besides, since the topography could radically increase the visual

prominence of the buildings, interpretations of the city from two-dimensional representations turns out to be misleading.

The natural environment is another distinctive feature of the Istanbul skyline that has been pointed out in the written and visual descriptions of the city. Topkapı Palace, for example, is a distinctive element of the skyline of Historic Peninsula and its image was strongly connected with the verticality of cypress trees surrounding the horizontally laid out structure. In the traveling notes of the Thomas de Vere (1850) visual dominance of the natural environment on the Istanbul skyline was expressed as "... so immense are the gardens that the effect is less that of trees scattered amid a city than of a city built in forest but partially cleared" (p.108).

Istanbul's built environment, as a city that served as the capital of Orthodox-Christian and Turkish-Islamic empires, had an immense impact on the formation of its unique skyline. Both religious and secular building, as it will be discussed below, had shaped and altered the urban skyline over its long history. All things considered, it can be stated that Istanbul skyline is multi-layered structure formed by the continues development of the built environment combined with its unique physical features.

3.1 Byzantine Istanbul

The city of Constantinople, previously a Greek Colony located at the tip of the Historic Peninsula, became the centre of the Roman Empire during the reign of Constantine from whom the city named after. After the separation of Rome into East and West Empires in 395 AD, Constantinople became the capital of the Eastern Roman, later called Byzantine, Empire and had served as the capital of the Orthodox-Christian world until its conquest by Mehmet II in 1453. The little was remained today from the city's eleven centuries long history as the capital of the Christian world. However, fundamental approaches to the urban morphology of the city; use of seven hills to enforce the power of the authority, the main axes through which the monumental buildings located, has maintained its validity in later centuries. Thus urban panorama of the Byzantine Constantinople reveals how power of the topography, water surrounding the city, and natural environment combined with the urban visions of a powerful empire had shaped and transformed the skyline.

As in most medieval cities, walls encompassing the city from all directions are one of the most dominant features of the image of Byzantine Constantinople. Due to constant attacks, the city was remained within the fortifications during the Byzantine Era. Therefore, city walls had been a dominant feature of the urban image of Constantinople until its conquest by the Ottoman Empire. The construction of new set of fortifications, because of the city's physical expansion, had started during Constantine's reign (333-337 AD). These walls have disappeared today, but Theodosius's walls dated back to early fifth century, built 1.5 km far from the Constantine's wall due to the further expansion, remained (Müller-Wiener, 2002, pp.286-319). Since the walls surrounding the medieval city would only allow observing the highest points, drawings showing the built environment of the Byzantine Constantinople depict the city from bird-eye view. Schedel's drawing from the year 1493 for example reveals the dominance of the city walls on the overall urban image (Figure 3.2).

Figure 3. 2: Bird-eye view of Istanbul by H. Schedel published in Weltchronik, 1493 (Işın, 2010a).

Constantine's rebuilding of the Byzantine capital was based on the urban development principles of a Roman city. With its main arteries, arcades, porticos and forums public life was living at outdoor spaces arranged in relation with the topography. Mese was the main artery of the Byzantine city and maintained its significance in the later centuries, as an axis along which the monumental buildings located. Hippodrome, completed during the reign of Constantine, was at the centre of the public life, used for horse car races and ceremonial purposes (Mango, 1986). The visual impact of the exceedingly tall columns located at the centre of Hippodrome can be seen in another bird-eye view of the city drawn by Buondelmonti in the year

1422 (Figure 3.3). The construction of the imperial palace located at the end of the Historic Peninsula had also started in the Constantine era and extended in later years. In 11th century, the imperial residence moved to the Blachernae Palace, and nothing was remained from the old palace today (Müller-Wiener, pp.229-37). However, after the city's conquest by the Ottomans, the area protected its administrative role and Topkapı Palace, as one of the distinctive elements of the skyline of Ottoman Istanbul, was built at the tip of the peninsula on the first hill.

Figure 3. 3: Christoforo Buondelmonti, c. 1420-1430, original in Biblioteca Nazionale Marciana (Evans, 2004).

The authorities of the Byzantine city employed advantages offered by the city's unique topography by locating monumental buildings on specific locations. Constantine's Church of Holy Apostles on the fourth hill and Justinan's Hagia Sophia crowning the first hill marked the skyline of Byzantine Constantinople. The symbolic importance of these two hills had continued in the Ottoman era. Converting the Hagia Sophia into a mosque and commissioning his own *külliye* in the place of

Constantine's church were among the first actions of the Mehmet II after the conquest of Istanbul (İnalcık, 2001). Hagia Sophia was the representative image of the empire by symbolizing the emperor as the deputy of God, and the church (Kuban, 1996; p.104). Dominating role of the Hagia Sophia, due to its monumental scale and the topography it was built upon, can be found in the words of Procopius, a six century historian;

> ...So the church has become a spectacle of marvellous beauty, overwhelming to those who see it, but to those who know it by hearsay altogether incredible. For it soars to a height to match the sky, and as if surging up from amongst the other buildings it stands on high and looks down upon the remainder of the city, adorning it, because it is a part of it, but glorying in its own beauty, because, though a part of the city and dominating it, it at the same time towers above it to such a height that the whole city is viewed from there as from a watch-tower. (p.13)

From the middle of the fifth century to the seventh, the number of churches and monasteries in the city had increased which must have had a profound effect on the built environment that is difficult to visualize today (Mango, 1986). One of the most dramatic transformations of the urban scene took place between the seventh and ninth centuries when the city embraced a medieval look following the sharp decline of population. The society had become more introverts and in terms of the built environment Constantine's city, where public life lived at outdoor spaces, had turned into a series of villages encompassed by walls (Ousterhout, 1996). According to the writings of Ibn Battuta, inhabitants of Constantinople was living in thirteen separate villages (J.P.A Van Der Vin, 1980, p.254) which could be helpful to picture the rural image of the city in fourteenth century.

After 800 AD, renovation activities had started in order to return the city to its former glories. However, the practice of building monumental architecture as an expression of the imperial power, which is the characteristic of the Constantine's and Theodosius's reigns, did not emulate. After the 11th century, several monasteries covering vast areas had been built. The visual effect of these large complexes on the urban scene of Byzantine Constantinople is also not easy to visualize today (Mango, 1986, pp.130-1). Not the vast complexes that surrounded them but the churches, such as Lips Monastery, Myraleion Monastery, Pantepoptes Monastery, Pantocrator Monastery, that were turned into mosques during the Ottoman era, remained today as the distinctive features of the skyline of Historic Peninsula.

Even though there were settlements before, the north of the Golden Horn had gained importance after the 13th century with the arrival of Genoese. When the Byzantine Empire won back the city from the Crusades, Genoese had been given the right to be an independent city-state in return for their help. After the 14th century right to build city walls was given to the Genoese, and then the area between Azapkapı, Galata, Tophane and the shores of the Golden Horn had been surrounded by new set of fortifications and a tower marked the north of the walls (Kuban, 1996, pp.172-4). As can be observed from the Buondelmonti drawing above (Figure 3.3), dated back to 15th century, the urban image of the Constantinople was defined by two inner cities that were located on the each side of the Golden Horn, both enclosed by fortifications. The walls had disappeared today, but the tower is still one of the distinctive elements of the Istanbul skyline. Galata Tower was depicted in numerous paintings and engravings capturing the city. Le Corbusier's highly abstract drawing of the Pera skyline reveals the importance of the tower as a defining element of the Istanbul skyline.

Figure 3. 4: The contour of the Pera skyline marked by Galata Tower. Drawn by Le Corbusier in 1911 (Le Corbusier, 1987).

The hilly topography of Galata and Pera offers advantages to create a memorable skyline. Buildings located on the slopes of the hills, which would not be visible if the area was flat, are included in the skyline. Visibility of the buildings located on the higher points, such as Galata tower, further enhanced. The top of the hills also create vista points for observing a wider view of the city in a single glance. The advantages offered by the topography in relation with the urban skyline can be found in P. Gilles's (1729) words dated back to 18th century;

> ...Galata is of such a Steepness, that if all the houses were of an equal height, the upper rooms would have a full view of the sea, and of all the ships sailing up and down in it. ...this is the most pleasant part of the town from hence, and from the sides of the hill, you have a full view of the Bay of Ceras, the Bosporus, the Propontis, the seven hills of Constantinople, the Country of Bithynia, and the mountain Olympus always covered with snow. (p.274)

Constantinople was invaded by Crusaders in 1204 and the Latin occupation had lasted until 1261. The fire started during the siege devastated most of the city. In 1261, Byzantine Empire won back the Constantinople. When it was conquered by the Ottoman Empire in 1453, the physical environment was in state of ruin (Kuban, 1996). Under the Ottoman reign, the skyline of an Orthodox city embraced a new image formed by domes and minarets and had continued to be transformed in accordance with the changes in the inner working of the city.

3.2 Ottoman Istanbul

3.2.1 A skyline formed by domes and minarets

One of the major transformations that the city underwent after its conquest by the Ottoman Empire is that the image of an inner city defining Byzantine Constantinople had started to disappear. City walls surrounding the city no longer defined a physical boundary and the city had started to expend towards the north of the Golden Horn and alongside the Bosporus. 18th and 19th century drawings capturing Istanbul not only depicted the Historic Peninsula but also the panorama of the Bosporus as well.

As one of the first actions after the city's conquest, Sultan Mehmet II converted the Hagia Sophia, a landmark of the former Byzantine Empire located on the first hill, into a mosque, and built his own *külliye* replacing the Church of Holy Apostles on the fourth hill (İnalcık, 2001). Both of these first initiations, due to the strategically important location choice of the buildings, had an impact on the distant image of the city. Later, predecessor of Mehmet II had continued to build grand scaled mosques on slopes and top of the hills of the Historic Peninsula that would define the classical Ottoman image of the city characterized by domes and minarets.

Topkapı Palace on the first hill that served as the imperial residence of the Ottoman Empire between 15th and 19th centuries was a significant addition to the urban scene after the conquest. Palace has become a distinctive element of the image repertoire of the Ottoman Istanbul. Main layout and major buildings of the palace were constructed under the reign of Sultan Mehmet II, and took its definitive form during the height of the empire in 16th century and depicted numerous times by the Westerners who were curious about the East (Necipoğlu, 1991, p.xi). The palace's introvert spatial layout organized around courtyards resulted in a different overall

image comparing to its Western counterparts. It was located in a vast green area at Seraglio and cypress trees surrounding the outer walls created a strong contrast with the overall horizontality of the palace. The relationship between the Topkapı Palace and the surrounding natural environment was emphasized in Grelot's panorama dated back to 17th century. It was the first time that Istanbul was depicted in relation with its natural settings (Işın, 2010a, p.28) (Figure 3.5). Along with its horizontal layout and surrounding greenery, architectural features of the palace; domes covering the spaces organized around courtyards, verticality of the chimneys and Tower of Justice (Adalet Kulesi) also contributed to the formation of overall image of the palace that gives a unique character to Istanbul skyline.

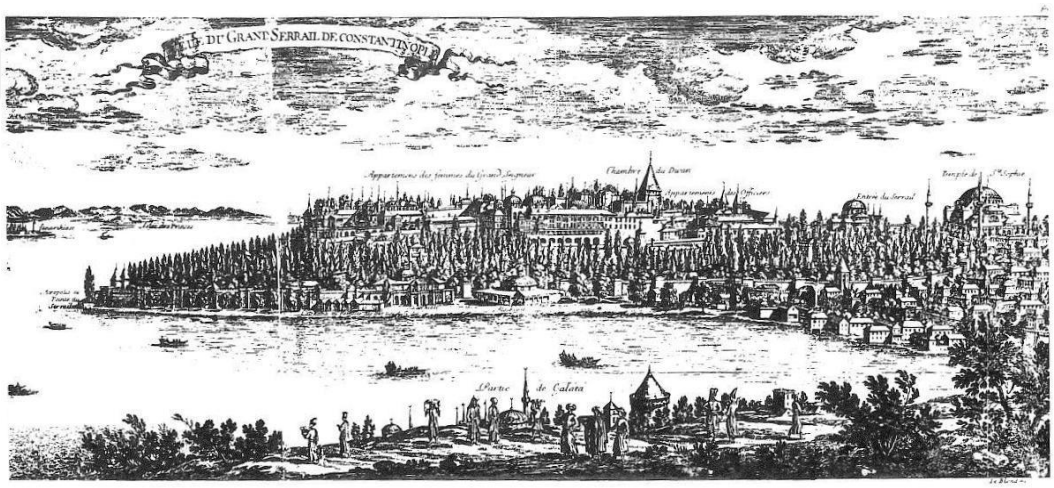

Figure 3. 5: Topkapı Palace at the tip of the Historic Peninsula depicted by Grelot Josephus in the 17th century (Grelot, 1998).

Political, social and economic structure of the Turkish-Islamic city was fundamentally different from the former Byzantine Empire. Therefore, physical environment of the city had been transformed over the remains of the Byzantine capital. Certain aspects of the physical layout of the city such as administrative, commercial districts, location of the harbour and main artery (under the name of Divanyolu) had remained their function after the conquest. However new set of buildings, around which the image of Ottoman Istanbul shaped, had been introduced to the urban scene as well. Main elements of the urban design of the Turkish- Islamic city were different from the Constantine's city organized around outdoor public spaces. Instead, physical development of Ottoman Istanbul was formed around *külliye*; an extensive urban complex built around a mosque commissioned by sultans or notables of the neighbourhood (Kuban, 1996, p.185, 199; İnalcık, pp.220-239).

Location choice of these large complexes on top of the dominating hills of the Historic Peninsula had ultimately altered the distant view of the city in a fundamentally different way. Ottoman Istanbul had broken the image of the former Byzantine city representing an out-dated world order, and put its own silhouette as a symbol of its political authority (Işın 2010b, pp.64-5).

During the 16th century, commonly accepted as the Ottoman Empire's highest point in terms of political and military power, skyline of the classical Istanbul was formed by domes and minarets of the monumental mosques. Only few additions were made in the next centuries to the traditional look. Hagia Sophia and Sultanahmet Mosque on the first hill, Nuruosmaniye Mosque dated back to the next century on the second, Süleymaniye, Şehzade and Beyazıt Mosques on the third, Fatih Mosque on the forth and Yavuz Sultan Selim Mosque on the fifth hill marked the skyline of Classical Ottoman Istanbul. Other mosques located on the slopes and skirts of the hills such as; Rüstem Paşa, Yeni Camii, Sokullu Mehmet Paşa were also included in the skyline due to the advantages of the topography. A drawing made by Lorichs Melchior in 1559 captured the new image of the city from Seraglio to Eyüp for the first time with a long panorama. The drawing displays the major alterations in the city's distant image following its transformation from Orthodox-Christian to Turkish-Islamic city (Figure 3.6).

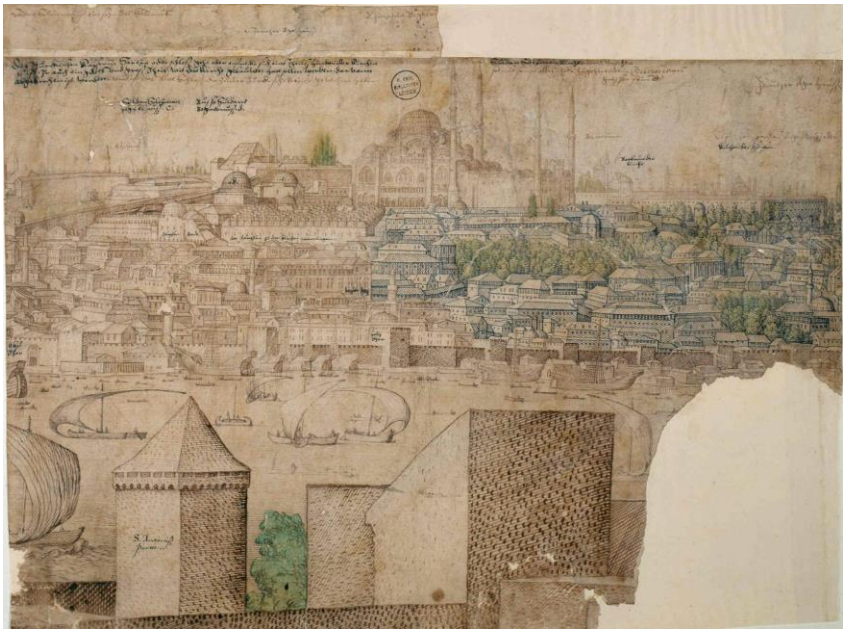

Figure 3. 6: Detail from Melchior Lorich's Istanbul Panorama showing Süleymaniye Mosque located on top of the third hill, overlooking Golden Horn (URL 23).

3.2.2 Modernization: secular buildings on the skyline

Early 18th century had marked the beginning of series of changes in the political, social and economic structure of the city due to increased contact with the West. The new relations established between France first and the other European countries later, observations of the first ambassador sent to France and later encounters with the European cities, introduced a new architectural language to the Istanbul (Arel, 1975). Visual indicator of these changes came with waterfront building exploitation towards the Golden Horn and Bosporus, which added a new layer to the Istanbul skyline. Even though Topkapı Palace and grand mosques still defined the skyline of Ottoman Istanbul, view of the Bosphorus, Golden Horn and Üsküdar shores were also started to be included in the urban panorama as well (Kuban,1996, p.312).

In the 105 years following the reign of Ahmet III, over three hundred palaces and residences were built along the shores of Golden Horn and Bosphorus that could be labelled as the second conquest of the city. Palace officials, queen mothers and daughters built residences in their own name on the previously unexplored waterfront areas such as; Kağıthane on the Golden Horn, the area between Tophane and Yeniköy, Beykoz and Üsküdar on the Bosphorus (Hamadeh, 2008, pp.17-48). From these waterfront wooden palaces and kiosks, which had been constructed in an immense momentum, almost nothing was remained today. Our knowledge is restricted with the travelling notes and engravings dating back to 18th and 19th centuries. Antoine Ignace Melling's drawings depicting Bosphorus shores as well as his own projects commissioned by Hatice Sultan, Sultan Selim III's sister, reveals the new layer added to Istanbul skyline as a visual correlation of the changes in the social and political structure of the city (Figure 3.7).

Figure 3. 7: Hatice Sultan Palace in Beşiktaş by A. I. Melling (Melling, 2012).

After several defeats by the West in the 18th century, Ottoman Empire initiated a reform in the military organization. The process of the modernization that began in military was soon followed by reforms in other fields in the 19th century, especially accelerated in the second half. Angolo-Ottoman Treaty signed in 1836 had marked the beginning of changes in the economic, social and physical structure of the city. Tanzimat Treaty signed in 1939, regularized the transformations based on Western ideology.

The increased foreign trade resulted in influx of foreigners to the city working as merchants, bankers, businessman etc. The new inhabitants of the city needed new building types such as hotels, banks, commercial buildings, shops and also demanded places for accommodation and entertainment which introduced a Western lifestyle to the urban panorama of Istanbul. Exposition to the Western culture increased after the Crimean War that took place between 1853 and 1856. French and British troops' arrival to the city as alliances against Russia pointed out deficiencies in the urban administration system, which necessitated a new set of reformations. (Gül, 2012 pp.23-72; Çelik, 1993 pp.31-104; Kuban, 1996, pp.346-63).

The modernization period caused several changes in the urban morphology of Istanbul such as introduction of new building types alien to their surrounding environment in terms of scale and architectural expression, establishment of regulatory mechanisms, improvements in the transportation. Visual correlative of these changes reflected in urban skyline especially of the Bosphorus, Galata and

Pera. The military barracks symbolizing the modernization of the army gave the initial signals of the transformation of the skyline due to the inclusion of visually dominant secular buildings (Figure 3.8).

Figure 3. 8: The Imperial Selimiye Barrack c.1880s. Library of Congress, Abdülhamit II Collection (URL 24).

Opening of the Turkish market to European goods following the Angolo-Ottoman Treaty led Ottoman Empire to take serious attempts to establish its own modern industry which turned out to be completely depending on Europe at the end. However, it significantly affected the urban morphology of Istanbul. New industrial areas emerged in Zeytinburnu, Bakırköy, Küçükçekmece and small villages around the Bosporus (Çelik, pp.34-35). Golden Horn was also severely infected by the industrialisation. The wooden kiosks of the previous century were replaced by the factories located primarily in Eminönü, Fatih and Eyüp. Uncontrolled industrialization process that had started in the middle of the 19th century significantly changed the overall image of the Golden Horn with chimneys racing the minarets in terms of height (Kuban, 1996, p.350).

Increasing encounters with Europe underlined serious deficiencies in the urban administration system as well as increased the need for better transformation networks. The following attempts to compensate these inadequacies altered the overall image of the city. In terms of regulatory mechanisms, first attempt came with the 1839 Development Plan. In 1948, first planning instrument called Ebniye

Nizamnamesi was published and later followed by other control mechanisms aiming to regulate the physical environment. After the second half of the 19th century, reforms in the administrative structure of the city had taken place. The first municipality, named as Şehremaneti, established in 1855 and Istanbul was divided into thirteen administrative districts in 1858. However, the newly established mechanism could not be implemented in all districts. Therefore, Sixth District, consisting of Galata, Pera, Taksim, Pangaltı, Kurtuluş, Kasımpaşa and Tophane which holded the majority of the European population was chosen as an exemplar. With the new implementations including improvement of roads, street widening, opening of public parks, the area undertook a more European outlook comparing to the rest of the city. Another noteworthy work of the Sixth District was the demolition of Genoese ramparts.

Several initiatives were also taken to improve the transportation system. Two sides of the Golden Horn was connected via two bridges; first one was located between Unkapanı and Azapkapı and the second between Karaköy and Eminönü (Figure 3.9). European and Asian sides of the Bosporus were connected with regular steam ferry services provided by Şirket-i Hayriye established in 1850. Another significant development was the completion of the international railway line connecting Istanbul to Europe which passed through the gardens of Topkapı by piercing the city walls. (Gül, 2012, pp. 26-54; Çelik, 42-8, 82-104).

Figure 3. 9: Galata Bridge over the Golden Horn c.1890s. Library of Congress, Prints and Photograps Online Catalog (URL 25).

Until the 19th century, transportation among the three parts of Istanbul divided by water had been carried out with boats. Developments concerning the water transportation such as bridges and steam ferries changed the overall perception of the city over the water. Bridges connecting the two sides of the Golden Horn had become a symbol of modern Istanbul with flow of people and carriages passing through. Steam ferries crossing over the Bosporus was also included in the overall view of Istanbul skyline observed over Bosporus shores (Figure 3.10).

Figure 3. 10: Impact of the new transportation systems on the perception of the skyline. Alexandre Promio, Constantinople: Panorama des rives du Bosphore, 1897 (URL 26)**.**

The railway passing through the gardens of Topkapı Palace interrupted its relationship with the sea. Sacrificing the visual coherence of the former Imperial residence for the construction of a new railway line was an indicator of the importance of having a modern transportation network during the railway age (Kuban, 1996, pp.359-60). Construction of railway lines also introduced terminus buildings as a new type to city's building repertoire. Both Sirkeci and Haydarpaşa Terminus Buildings dated back to end of the nineteenth and beginning of the twentieth centuries were designed by foreign architects and had a profound visual impact on the urban skyline of Istanbul due to their location adjacent to waterfront, grand scale and architectural expressions.

Masonary imperial palaces had been built on the both sides of the Bosphorus starting from the Tanzimat era. With their imposing scale, the new residences of the Ottoman sultans altered the previous century's picturesque look that was filled with wooden palaces and kiosks. Since the reign of Ahmet III (1703-30) ruling family had started to leave the Topkapı Palace for seasonal vacationing in the imperial residences constructed outside the city walls. However it was during the Abdülmecit's reign (1839-61) that permanent imperial residence was relocated from Topkapı Palace to the newly constructed Western style Dolmabahçe Palace in Beşiktaş (Figure 3.11). Several other palaces were built in the second half of the nineteenth century, Cemile ve Münire Sultan, Beylerbeyi and Çırağan, resembling its Western counterparts with their monolithic design. The palaces introduced a new concept in terms of perception of the imperial power and created a turning point in the urban morphology by relocating the traditional focal point of the city towards the northward (Batur, 1985). Designed with a different approach than the modest pavilions of the Topkapı Palace, the newly constructed palaces alongside the Bosphorus added a new layer to the skyline of Bosporus as a representative of the imperial power.

Figure 3. 11: Dolmbahaçe Palace over the Bosporus depicted on a postcard. Salt Online Archives (URL 29).

In addition to the imperial palaces, another secular building type added in the skyline of Bosporus in the 19th century was the summer houses of the embassies (Figure 3.12). French and English residences for example were located in Tarabya, whereas the embassy of Russia, Austria, Prussia, Spain and Belgium had spent summer in

Büyükdere (Akın, 1998, p.45). Kadıköy, which had been a small settlement until the Crimean War, also became a preferred area for Ottoman well-to-do, but managed to protect its suburban status until the 1950s. Even though they were outnumbered by its counterparts on the European site, waterfront residences built in Çengelköy, Anadoluhisarı, Kanlıca and Çubuklu shows that wealthy section of the society had started to prefer living on the Asian site of Istanbul as well (Kuban, 1996, p.366).

Figure 3. 12: German Embassy in Tarabya depicted by Abdullah Fréres c.1890s. Library of Congress, Abdülhamit II Archives (URL 28).

Since the economy of the Ottoman Empire had been gradually submitted to the dominance of the Western powers Galata, populated with non-muslims since the city's conquest, became the first place to aligned itself according to the needs of the European tradesman. Institutions associated with international trade were established in Karaköy. One of the most striking examples that dominated the skyline with its massive scale was the Ottaman Bank building designed by Vallaury in 1890 (Figure 3.13). 4th Vakıf Han by Kemalledin Bey was another noteworthy addition to the urban scene with its massive scale and location in the Historic Peninsula. New commercial buildings, custom houses and warehouses were also built along the shores between Karaköy and Tophane (Çelik pp.42, 126-9).

Figure 3. 13: The Ottoman Bank by Vallaury dominating the skyline over the Golden Horn with its imposing scale. Ottoman Bankası Arşiv ve Araştırma Merkezi (URL 29).

Pera, formerly covered with orchards and vineyards, developed as an area where embassies and consulate buildings of different European countries such as France, United Kingdom, United States, Russia, Sweden, Germany and their residences, hotels, entertainment venues and schools constructed in the 19th century. After the demolitions caused by the Great Fire of 1870 and due to the regulations brought by the 6th District new buildings in the area was constructed as masonry structures. Housing developments also took a different direction than the traditional Ottoman house and multi storey apartment buildings became a common housing typology in Galata and Pera which created an image of a dense neighbourhood (Akın, 1998 pp.93-101, 171, 200-5). One of the multi-story housing initiatives of the era was the Helbig Apartment buildings, later called Doğan Apartment, completed in 1894-5 and included in the skyline over the Bosphorus (Figure 3.14). Considering the changes in the social and physical structures of the city and the following initiatives concerning the built environment that took place in the 19th century, the skyline of Galata and Pera had embraced a completely different look than the Historic Peninsula, the traditional centre of the city.

Figure 3. 14: Doğan Apartment Building in Pera, IBB Atatürk Library.

Even though Galata, Pera and Bosphorus shores gained importance in the 19th century, Historical Peninsula was still the administrative centre of the reforms. Physical environment of the walled city encountered with several intrusions by the new secular buildings, which were alien to their surrounding environment in terms of scale and architectural expression. Buildings constructed in the Tanzimat Period such as; Babıali, Bab-ı Seraskeri, mansions of Ali Paşa, Fuad Paşa and Zeynep Kamil and Darülfünun altered the traditional skyline of the Historic Peninsula using the advantages of the topography that they were built upon (Çelik, 2010, p.247). Darülfünun, designed as the first university building of the Ottoman Empire, was a particularly controversial project due to its location choice between Hagia Sophia and Sultanahmet and the profound effect of its massive scale on the urban skyline (Batur, 1993) (Figure 3.15). The building's visibility on the skyline could also be interpreted as the monumental expression of the Tanzimat Period's demand towards the useful knowledge and central administration's effort to increase its visibility (Akyürek, 2011, p.72).

Figure 3. 15: Darülfünun building between Hagia Sophia and Sultanahmet Mosque over the Sea of Marmara. Salt Research, Ali Saim Ülgen Arhives (URL 30).

The Ottoman modernization in the 19th century took place in an harsh political and economic environment .The empire had entered to the First World War and Istanbul was occupied by the British, Italian and Greek troops. National Resistance Movement's struggle against the allies in the following years ended up with victory that leads to the establishment of a new republic. The new era in the country's history, marked with fundamental reforms and changes in the political, social and economic structure, has started. Ankara became the capital of the newly established Turkish Republic and underwent a major redevelopment programme as the visual indicator of the reforms. According to Lewis (1961), there was a symbolic meaning behind moving the capital; Ankara was symbolizing the new changes brought by the Republic, Istanbul on the other hand was strongly connected with the past (p.261). In the beginning of the 20th century, Istanbul had lost its privileged status and neglected by the new Republic (Gül, pp.72-91).

In the 1930s, after a new master plan was prepared for Ankara, the government decided to reshape Istanbul according to the modernist principles as well. The French planner Henri Prost was invited to prepare a master plan for the city and stayed in Istanbul between 1936 and 1950. Instead of preparing an inclusive plan for the whole city, Prost drafted a master plan for Historic Peninsula and Beyoğlu, and proposed other plans for different parts of the city (Gül, pp. 92-126). One of the six aims that Prost presented for the master plan of the city was preservation of Istanbul's

silhouette observed from the Sea of Marmara, Beyoğlu and Asian shores (Cumhuriyet Devrinde İstanbul, p.13). In order to preserve the historic silhouette of the Istanbul Peninsula, the buildings over 40 meters of the sea level were restricted to three storeys. This regulation is still valid today as the only legal implementation about silhouette preservation.

The neglected status of Istanbul in the early Republican era had significantly changed after the 1950s, when the period of single party government ended and Turkey re-located itself in the highly polarized Cold War era. The urban morphology of the city experienced a dramatic transformation, which paved the way to its current metropolitan status. Following the globalization discourse of the late 1980s, Istanbul regained its importance as the country's key player in the global world order. The geographical borders of the city expanded and population increased in an unprecedented rate. The two sides of the city were connected via suspended bridges over the Bosporus, new business districts, neighbourhoods emerged, and high rises were included in the urban scene symbolizing the city's integration with the world economy. The aggressive verticality of skyscrapers dramatically transformed the traditional look of the Bosporus and added a new layer to skyline symbolizing not religious or governmental authority but the financial power. In the next chapter, the transformation of Istanbul skyline after the 1950s, due to the intense high-rise developments in the city, will be discussed in detail.

4. HIGH-RISES IN POST-WAR ISTANBUL

Since the 1950s, Istanbul has been in the process of a transformation to a modern metropolis, which means constant change in its urban morphology and visual image. High-rise developments are one of the main components of this transformation. Skyline of Istanbul, similar to the previous turning points in its history, was significantly affected by the changes. The aggressive verticality of the high-rises changed the traditional outlook of the city. The high-rise developments in the city and subsequent transformations of the skyline were strongly connected with the changes in the political, social and economic structure of the city. Besides, Istanbul has expanded physically towards the north and to the Asian site, which create new vista points and skyline views. Therefore, in the study, both the certain time intervals that changed the physical environment of the city and the geographic distribution of the high-rises were taken into consideration. The time intervals were determined as; 1950-1960, 1961-1989, 1981-1990, 1991-2000, 2001-2005, 2006-2010 and post 2010. Also geographically, the city was divided into three areas. The first one is the historic city consisting of Historic Peninsula, Beyoğlu, Üsküdar; second is the the area between the north of Beyoğlu and TEM and Maslak and third is the Asian Side of Istanbul. Since the second area encountered the most intense high-rise developments, it was divided into four sub-groups.

In contrast with its neglected status in the early Republican era, Istanbul had faced with several radical development projects in the years following World War II. Significant transformations in the city's urban morphology, initiated around 1950s, have marked the beginning of a process that led the city to its current metropolitan status. The 1950 elections won by Democrat Party had ended the single party regime of the Early Republican era and introduced more liberalized economic policies. Due to rapid and uncontrolled boom in the economy and DP administration's specific economic aid was received from America and Western European countries (Züchrer, 1998). Intensified relations with America in the 1950s affected the architectural environment as well. Between 1950 and 1960 buildings designed in post-war

international style, erected in the historic city, introduced a new building type to Istanbul in terms of height and overall architectural expression.

Economic boom and positive political atmosphere in the early 1950s had left its place to a discontent in the second half of the decade. The military coup of 27 May 1960 overthrown the DP government and launched the beginning of a new era in the economic and social structure of the city. RPP won the elections of 1961 only with a small difference as oppose to two parties formed by the remnants of the DP. One of these two parties, Justice Party (Adalet Partisi) led by Süleyman Demirel, won the following elections held in 1965 (Züchrer 1998, pp.261-5). In this period, Turkey switched to a new economic model based on import substitution in order to protect domestic market and industry. As oppose to the industrialization of 1930s led by state enterprises, big family companies providing services for manufacturing, distribution, banking...etc. emerged in the post-war period (Pamuk, 2008). These big local firms commissioned the first high-rise office towers in 1980s.

The next decade between 1960 and 1970 marked with political instabilities, polarization of society and growing economic crisis of the late 1970s (Züchrer 1998, pp.276-82). In 1971, Demirel was forced to quit from the office and followed by many unsuccessful coalition governments. After a decade of harsh economic conditions and social and political tensions, military once again took over the government on 12 September 1980. During the two decades between 1960 and 1980, in between two military coups, Istanbul was quiet in terms of high-rise developments. However, in this period Istanbul encountered with first real skyscrapers, with a dominating verticality as oppose to prismatic post-war buildings, with hotel towers built in Beyoğlu-Harbiye axis.

Until the 1950s, Istanbul was a monocentric city where all the economic activities concentrated in the core area, Eminönü and Beykoz. In the early 1970s, first signs of change came when the inflexible historic city became inadequate in terms of satisfying the increasing demand for office space. After the construction of the first bridge over the Bosporus and its connecting highways in 1973, the business district of the city started to extend northward to Taksim, Şişli, Zincirlikuyu and Barbaros Boulevard (Dökmeci et al., 1993).

The major transformations in Istanbul's urban morphology took place after 1980s when the newly implemented neoliberal economic policies and consequent urban restructuring of Istanbul opened the way towards a global city. The term global city is generally discussed in a wider discourse of 'globalization' since 1980 (Steger, 2010). Economic globalization means that manufacturing has moved from its traditional location in developed countries to developing ones in order to reduce the cost, financial activities become global and related services are concentrated in a number of global/world cities (Castells, 1996). Many governments in Europe or in the Pacific Region have aimed to integrate their leading cities into the global economy. Transformations in the urban morphology and skyline of Istanbul following the 1980s is closely tied with Turkey's integration into the world financial system and its profound effects on the social, economic, politic and spatial structure of Istanbul as its leading city.

The political chaos of the 1970s ended with a military intervention on 12 September 1980. After three years of military administration Motherland Party (Anavatan Partisi), led by Turgut Özal, won the elections held on November 1983. MP government embraced liberal economic policies and made several economic reforms in order to integrate Turkey's economy with the world financial system. Due to the newly established political stability, international financial institutions, IMF (International Monetary Fund), World Bank, OECD (Organization for Economic Cooperation and Development) gave credits to Turkey that were denied to pre-1980 (Züchrer, 1998, pp. 315-24). Neoliberal economic policies and integration with the world economy in the 1980s profoundly affected Istanbul. The city became the prime location for foreign investors specialized in banking, financial activities, distributive and producer services and its economy has started to pull away from the rest of the country. First signs of a city entering in the global arena became visible in its built environment (Keyder, 2010).

The candidate of MP, Bedrettin Dalan, won the municipal elections and became the mayor of Istanbul in 1984. Since the DP government paved the way towards a global city, subsequent spatial transformation took place during the five years of Dalan administration. Urban morphology of Istanbul changed with removal of historic buildings along the Golden Horn and Tarlabaşı Boulevard, roads raised above the sea level altered the relationship between the city and the water, second bridge crossing

over Bosporus accelerated the northward expansion of the city, and new skyscrapers-included in the urban skyline of Istanbul (Gül, 2017, pp.158-167). The neoliberal economic policies, increase in the FDI (Foreign Direct Investment) and investment shift from manufacturing to service sector led to development of a new CBD along Büyükdere Street (Özdemir, 2002). High-rise developments on the axis further accelerated in the following decades, which profoundly affected the skyline.

One of the most notable acts of the 1980s regarding the overall image of the city was the Bosporus Law of 1983 aimed to protect and improve cultural, historic and natural assets of the area. The unique topography, villages scattered along, waterside mansions, monumental buildings and natural settings could be named among the identifying features of the Bosporus Area in pre-1950 period. In the post-war Istanbul, pressure caused by rural immigration due to the industrialization policies resulted in the emergence of unplanned residential areas near the industrial zones with lack of infrastructure and poor life qualities. These rapid changes in the built environment affected the traditional outlook of the Bosporus areas.

First actions for preserving the area were taken in 1970s when the Bosporus was defined as natural and historical protected area. In 1971, first plan aiming to preserve Bosporus Area was prepared. However, it only targeted the coastline and waterfront mansions along the Bosporus (Mimarlık, 1972). In 1977, 1/5000 scaled plan was prepared targeting the total area. The plan divided Bosporus into recreation, tourism and residential zones (1/5000 Ölçekli Boğaziçi Nazım Koruma Plan Raporu, 3 Haziran 1977). A new plan was prepared in 1982 and separated the Bosphorus area into four different zones; Waterside Zone (Boğaziçi Kıyı ve Sahil Şeridi), Front View Zone (Öngörünüm Bölgesi), Back View Zone (Geri Görünüm Bölgesi) and Effect Zone (Etkilenme Bölgesi). In order to secure the implementation, the Bosporus Law numbered 2960 was taken into force in 1983 as the first code of protection for a specific area (Official Gazette, 1983). The code aimed to protect natural, historic and cultural setting of the Bosporus by restricting the settlements and limit the population density.

Several conflicts and additional provisions prevented the proper implementation of the law. The two dimensional planning decisions turned out to be insufficient and developments in the Effect Area, such as Kuzguncuk, profoundly altered the traditional outlook of the Bosphorus. Also, the articles of 46, 47,48 and temporary

Article 7 of the Construction Code No: 3194 dated back to 1985, opened the Bosphorus Area to settlement. Following the Büyükşehir Yasası numbered 3030, entered in force in 1984, the planning and implementation system of the Bosphorus area were amended as well. The power was given to Istanbul Metropolitan Municipality for the Waterfront and Front View Areas and Local Municiapilites for Back View and Effected Areas, which opened the way of further constructions (Salman and Kuban, 2006).

Between 1990 and 2000, Turkey experienced an atmosphere marked by political uncertainties and a severe economic crisis. MP lost the elections held in 1991, many coalition governments with very short life spans put Turkey into a phase of political destabilization. Despite the economic reforms of the Özal government, the country entered into a severe economic crisis in 1994 (Züchrer, 1998). MP lost the municipal elections of 1989 and the candidate of SDPP, Nurettin Sözen, became the mayor of Istanbul. However due to the political and economic instabilities, the 1990s was quiet in terms of high-rise developments.

Partial demolition of the Park Sürmeli Hotel was a noteworthy act of Sözen administration. The building was originally constructed as the Italian Embassy and converted into a hotel in the 1930s following a devastating fire. After the hotel closed down a new project with a 69-meter-high hotel and 89-meter-high office blocks was proposed. The immense scale of the building was alien to its surrounding environment (Yapı, 1991) (Figure: 4.1). The devastating impact of the project on the skyline revealed as the construction progressed. Due to strong oppositions from different circles and after a series of lengthy court trials, the project was cancelled in 1992. The floors exceeding the height of the neighbouring Germen Consulate Building was demolished in 1993 with a ceremony launched by Sözen. The partial demolition of the Park Hotel largely covered by the media and intensified the popularity of the subject of Istanbul skyline.

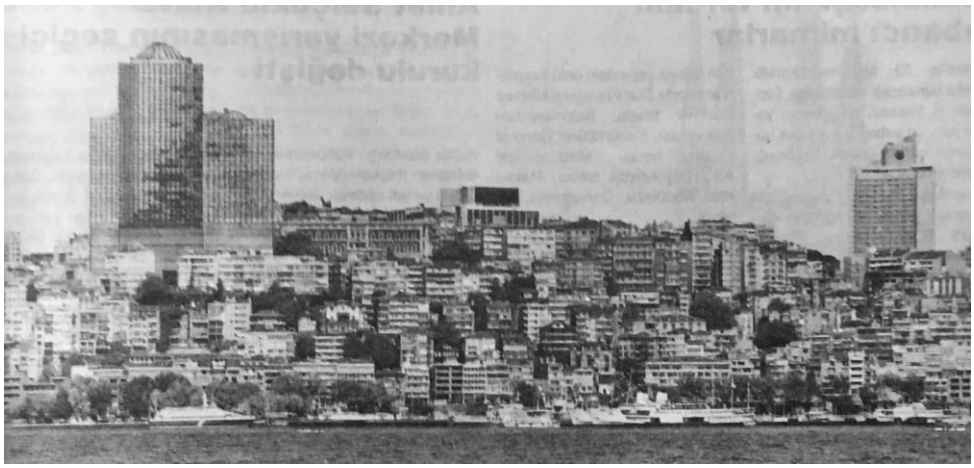

Figure 4.1: The proposed Park Hotel project (Yapı, 1991).

During the 1990s, coalition governments were reluctant in term of legislative reforms, therefore global links continued to grow in an informal way. This situation has started to change after the economic crisis of 2001, when the newly elected Adalet ve Kalkınma Partisi (Justice and Development Party) had brought the necessary chances for integrating the global economy (Keyder, 2010). After a decade of short-term coalition governments, newly established JDP won the elections held on November 2002. The new government implemented an economic reform program with liberal policies and won the following elections as a single party government as well. With new legislations, a series of reforms were implemented in order to integrate the economy with the world financial system. Istanbul has become the key player of Turkey in the global financial network. Due to increasing capital flows the built environment of the city restructured (Keyder, 2010).

The candidate of JDP, Kadir Topbaş, became the mayor of Istanbul in 2004. In the following years, Istanbul saw large-scale development projects in order to promote Istanbul as a global city. Urban regenerations and landfill projects reshaped the shoreline. In terms of transformation, a new rail bridge on the Golden Horn has become a controversial project in terms of its effect on the view of the Historic Peninsula. Further expansion of the city is expected due to the construction of a third suspension bridge over the Bosporus and the third airport project. The ninth development plan of Turkey aimed to promote Istanbul as an international finance centre. The Istanbul International Finance Centre Strategy and Action Plan published in 2009 declare its vision as; ‘‘Istanbul, at first, will be a regional and subsequently global financial centre’. For that purpose, a brand-new financial centre was created in

Ataşehir, where the agglomeration of high-rise towers created a new layer on the skyline of the Asian site of Istanbul.

After 2000, Turkey has made a quantum leap in the process of globalization. The high-rise developments have accelerated in an unprecedented rate and been built as not only office towers but mixed-use and residential projects as well. Besides they spread into the different parts of the city. In order to better understand these changes, the years following 2000 have been divided into three parts; 2001-2005, 2006-2010 and post 2010. Due to the effects of the 2001 economic crisis, high-rise developments in the city between 2001 and 2005 had continued but not in a massive rate comparing to the post 2005. In the second half of the new millennium, with more stable economy, a large number of new high-rise developments have been built in the the city including the Asian side. However, majority of the Asian and European side of the city had faced with intense high-rise developments in post 2010. The skyline of both the European and Asian side of Istanbul dramatically altered.

Since the height is relative to the context and Istanbul's unique topographic conditions could increase the visual prominence of the buildings, in the study high-rises were evaluated based on their physical context. Also their construction times were taken into consideration since a building could be noticeably tall in times of its construction but overshadowed today. The projects that were identified as tall were grouped under three headings. The first group focuses on the historic city consisting of Historic Peninsula, Beyoğlu and Üsküdar. The developments in this area should be considered in relation with the history. Besides, Istanbul first encountered with high-rises with projects built in the historic city between 1950 and 1980 which gave the initial signals of the transformation of the urban skyline. Between 1950 and 1960, the buildings designed in post-war international style introduced new a building type to the city. Between 1960 and 1980, first true skyscrapers erected in Beyoğlu-Harbiye axis and included in the skyline as the pioneers of the following developments that would significantly transform the skyline in following years.

Starting from the 1980s, Istanbul started to expand towards the north. The high-rise developments moved from the historic city to the northern parts of the European side. The high-rises that were erected in the area between the north of Beyoğlu and TEM and in Maslak, following the northern expansion of the city since the 1980s, was studied under the second zone. These high-rises are the major cause of

transformation of the skyline of the European side of Istanbul. In order to better understand the developments and their effects on the skyline, the high-rises built in the area was divided into four sub-groups considering the location of the high-rises, construction times, the effect of the topography onto their visual prominence, and their effects on the skyline observed from different vista points. The first sub-group covers the sloped area between Dolmabahçe Palace and Maçka. The topography of the area enhances the visual prominence of the buildings located on top. The early office towers built along Barbaros Boulevard and residential towers that was built in Dikilitaş in post-2005 were studied under the second sub-group. The high-rises built along Zincirlikuyu-Maslak axis since the 1980s, which created a corporate skyline, and high-rises built in Şişli, Mecidiyeköy and Bomonti that altered the skyline not only observed over Bosporus but Golden Horn as well was studied under the third and fourth sub-groups.

In post-2005, high-rises spread to the Asian side of the city as office towers, residential and mixed-use projects. The developments have accelerated in post-2010 and caused significant transformations on the skyline. In contrast to the European side, the history of high-rises on the Asian site is hard to follow since they have been constructed in quite short time for different functions in a vast area. Also in contrast with the number of projects, only a small portion of the towers are visible on the skyline which were not focused on a specific neighbourhood but scattered in different areas. Therefore, high-rise developments and the transformation of the Asian side of Istanbul were studied under single heading.

In the study, Istanbul skyline observed from various vista points was studied in order to reveal the transformation due to the inclusion of high-rises. Only publicly accessible vista points that are used commonly by the inhabitants were taken into consideration. While defining vista points, in addition to the geographical distribution of the high-rise developments, city's unique physical conditions were evaluated as well. The water dividing the city into three parts includes the panoramic view of the land across to the everyday life of its inhabitants. Therefore, vista points located along the waterfronts that are commonly used by the public was chosen. Skyline observed from the vista points of Üsküdar, Kuzguncuk and Moda shores along the Asian side, and Unkapanı shore on the Historic Peninsula were studied. Throughout its long course of history, not only the skyline views but also the vista

points have changed. Traditionally, the city was approached by the sea of Marmara. However, today the view observed from the major highways welcomes the newcomers. In the study, vista points selected from the transformation networks, on which inhabitants spend long hours while having a chance to look around, are Bosphorus Bridge, FSM Bridge, Beşiktaş-Kadıköy ferry line and Haliç Railway Bridge. City's unique topography consisting of several hills lying around the Bosphorus provides elevated points to observe the vast panorama of the city in a single glance. Therefore, skyline views observed from Çamlıca Hill on the Anotolian side and the Cihangir Park on the European side were included in the study (Figure 4.2).

Since some of the vista points provide similar views, Üsküdar shore and Çamlıca Hill providing a view over the Bosphorus, Unkapanı Shore and the courtyard of Süleymaniye Mosque overlooking the Golden Horn and Haliç Railway Bridge and Cihangir Park revealing the impact of high-rises on the Asian site examined in the study while views from other vista points were given in the appendix. Besides, two maps for each group representing construction dates and usages were given in the appendix with a list corresponding the numbers on the maps revealing information about the name, construction date, architect, usage, number of floors and height of the buildings. High-rises on the skyline views were also numbered so that they can be identified using the list given in the appendix. Transformations of the selected skyline views based on predetermined time intervals were also given in the appendix.

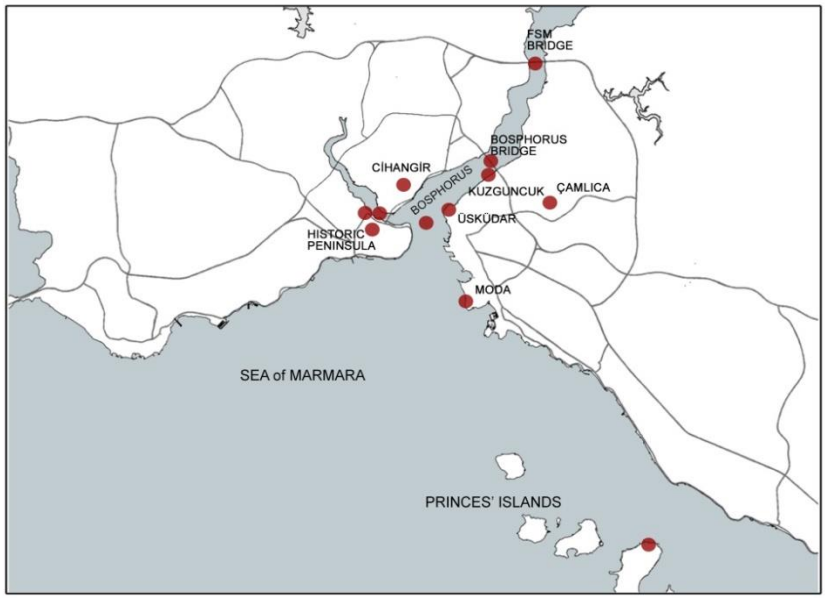

Figure 4. 2: Vista points evaluated in the study (Şevkin, 2016)

4.1 Between 1950 and 1980: Istanbul Encounters High-rises

In its long course of history, Historic Peninsula, Beyoğlu and Üsküdar, the three lands divided by the water, constituted the image of Istanbul. First high-rises were built in the area between 1950 and 1980, when it was still the focal point of the city (Figure 4.3). The first group of the study focuses on the early high-rises and their impact on the skyline. The context of the built environment into which the first high-rises were built was quite different from today's Istanbul. Therefore, instead of Municipality's 60,5 meters height standard to define the tall buildings in the area, the special conditions of the post-war Istanbul was taken into consideration. Hilton Hotel and Istanbul Municipal Building, the early high-rises built in post-war International Style, were included in the study. Istanbul Municipal Building is not included in the skyline observed from selected viewpoints and the verticality of the Hilton Hotel was overshadowed by its successors today. However, the two buildings are noteworthy since they introduced a new building type to Istanbul.

The hotel towers built on the Beyoğlu-Harbiye axis between 1960 and 1980 stands out from their immediate surroundings with their dominant verticality. These towers gave the initial signals of transformation of the skyline. The area also hosts one of the most controversial high-rise development in Istanbul. Süzer Plaza, exceeding 150 meters in height, heated up the skyline discussions in the city. The impact of the early high-rises on the skyline is studied from the vista points of Üsküdar shore providing a view over Bosporus, Moda shore over the Marmara entrance of the Bosporus and from Unkapanı Shore, and courtyard of Süleymaniye Mosque over the Golden Horn.

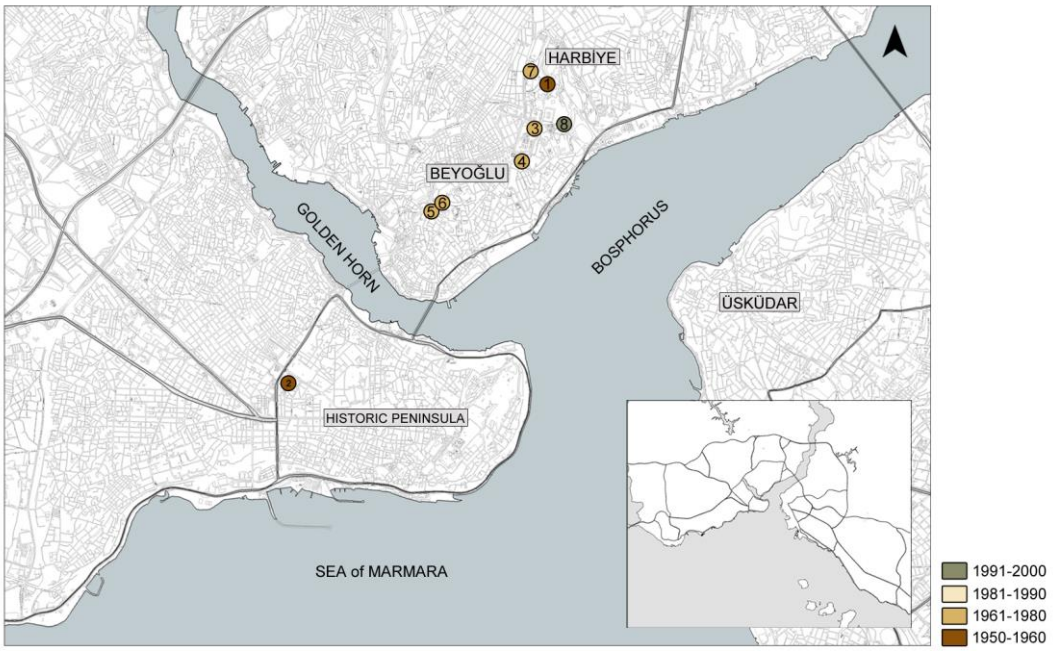

Figure 4. 3: High-rises constructed in the historic core of the city between 1950 and 1980 (Şevkin, 2016).

In the decade between 1950 and 1960, Turkey experimented with multi-party system for the first time and followed more liberalized economic policies. In the highly polarized atmosphere of the Cold War Era, Turkey's relationship with America intensified. The architectural environment aligned itself with the changing economic and political conditions as well. Between 1950 and 1960, Istanbul encountered with first high-rises that were built in the post-war International Style. Hilton Hotel constructed between 1951 and 1955 was the primary example of the American influence in Istanbul's urban scene.

In 1951, Turkish government and international hotel chain Hilton agreed on constructing a new hotel in Istanbul. Building was designed by Gordon Bunshaft of Skidmore, Owings & Merrill (SOM), working collaboratively with local architect Sedat Hakkı Eldem, and opened its doors in 1955. In terms of architectural expression Hilton Hotel introduced the language of post-war International Style to the city with its overall mass designed as a rectangular prism, modular facade arrangement and flat rooftop. At the time of its construction, the hotel was announced as the highest building in the city. The specific site location of the hotel, on top a hill on Elmadağ overlooking Bosphorus, further enhanced the visibility of the building symbolizing the American-Turkish alliance. With its lawns, swimming pools and tennis courts, Hilton Hotel offered an experience of America within the

building. Besides, there was a political ideology behind the project. The hotel's dominating presence on a country that is geographically close to the Soviet Union and other communist regimes was used to visualize American power to the rest of the world (Wharton, 2001, pp.13-38). Like numerous times before, skyline of Istanbul reflected the shifts in the political and economic structure of the city. Hilton Hotel's presence on the skyline conveyed intended messages to the rest of the world.

The construction of Hilton Hotel profoundly impacted the architectural practice in the city. Tarabya Hotel located on the north of the Bosphorus and Çınar Hotel constructed in Yeşilköy along the Marmara shores are two noteworthy examples following the architectural language of Istanbul Hilton Hotel. The post-war International Style in Istanbul was employed for governmental buildings as well. The second high-rise building constructed in the historic city was Istanbul Municipal Building constructed in the Historic Peninsula, on the opposite of the 16th century Şehzade Mosque. The design for the project was chosen via a national competition opened in 1953. Nevzat Erol's design comprise of two buildings arranged in L shape organization was awarded with the first prize (Arkitekt, 1953). The project has an eight story tall office building sitting on pilotis, modular facade arrangement and a flat roof, all characteristics of the international style. Both Hilton Hotel located on an elevated topography overseeing Bosphorus and Istanbul Municipal Building had profound effects on the urban scene of Istanbul. These two buildings are the pioneers of the high-rise developments in the city. The Municipality Building does not appear on the skyline observed from selected vista points. Hilton Hotel, on the other hand, is included in the view over the Bosporus.

In the two decades between 1960 and 1980, within the political and economic conditions of an era between two military coups, first true skyscrapers has erected along Beyoğlu-Harbiye axis. Due to the verticality of their total mass, overall effect of these new buildings was quite different from the post-war international style high-rises. As it was mentioned in the first chapter, most cities had encountered with high-rises with projects that were built as office towers. Even one of the main drivers behind the emergence of the skyscrapers was to satisfy the needs of service industry whose work is completely on paper (Gottman, 1966). First skyscrapers of Istanbul, on the other hand, were built as hotel projects. Four hotel towers that were constructed in 1960s and 1970s, located in the area between Beyoğlu and Harbiye,

challenged the overall horizontality of the distant image of Istanbul. The projects introduced a new verticality to the İstanbul skyline with their exceptional heights, which turned out to be a phenomenon that gets more aggressive in time.

Sheraton Hotel, now named as Ceylan Intercontinental, located at Harbiye in close proximity to the Hilton Hotel, was the first of the four hotel towers built in the area. An international competition was opened in 1959 for the design and won by a local architectural firm AHE (Kemal Ahmet Aru, Hande Suher, Mehmet Ali Handan, Yalçın Emiroğlu, Tekin Aydın, Altay Erol). The building opened its doors in 1975. In the project report published in Arkitekt (1959), it was stated that in order to protect the visual integrity of the Taksim area, building was designed as 40 meters in width as opposite to 90 meters Hilton Hotel. This approach was resulted in the vertical expansion of the building. Due to the height of the 17 story tall building sitting on a podium in addition to the effects of the elevated topography, the project profoundly impacted the skyline viewed over Bosphorus which was displayed on the competition drawings published in Arkitekt (1959) (Figure 4.4).

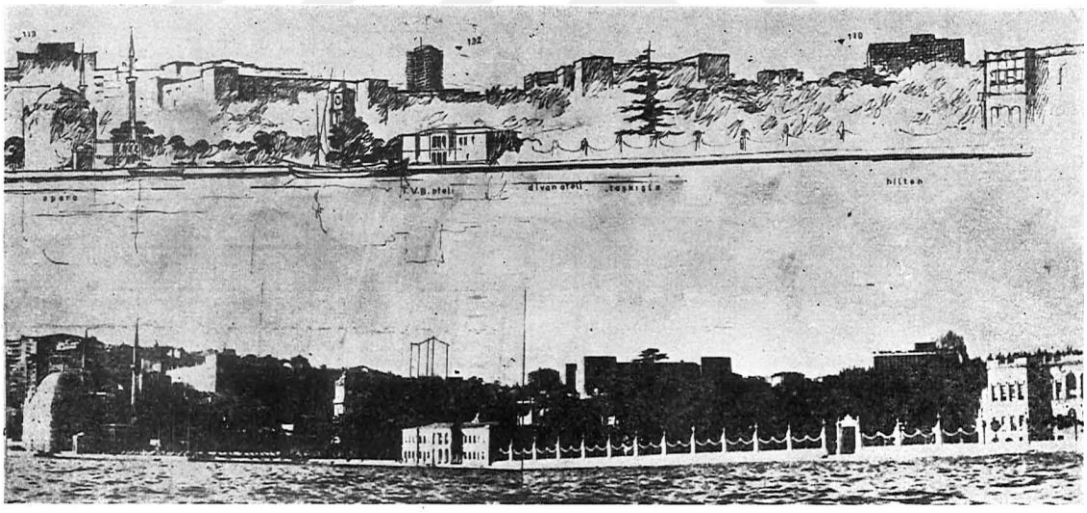

Figure 4. 4: Competition drawings of former Sheraton hotel by AHE showing the impact on the skyline over the Bosphorus (Arkitekt, 1959).

Second high-rise building erected in the historic city was Harbiye Orduevi; a hotel project built for the accommodation of military officials. In 1967, a design competition was opened for the project and Metin Hepgüler's design won the first prize (Arkitekt, 1967). The building that was completed in 1974 provides 18 stories of accommodation rising over two story tall entrance. Intercontinental Hotel, now named as The Marmara that commenced in 1971 and opened in 1975 was

constructed at Taksim Square. The design of the building bears the signature of Rükneddin Güney and Fatih Uran (Arkitekt, 1972). The project standing on a podium and comprising 18 floors of accommodation and a rooftop restaurant, joined Sheraton Hotel and Harbiye Orduevi as the third high-rise hotel dominating the skyline observed over the Bosphorus. The last hotel tower dated back to 1970s was Etap Hotel at Tepebaşı, designed by Yüksek Okan. The project was commenced in 1968 and constructed between 1970 and 1975. It has 16 floors of accommodation, two technical and two reception floors (Arkitekt, 1980). Etap Hotel in Beyoğlu included high-rises to the Istanbul skyline not only viewed over Bosphorus but also Golden Horn as well. Odakule was another high-rise project, located in close proximity to Etap Hotel. The building was commissioned in early 1970s and completed in 1976. The tower was designed by Kaya Tecimen and Ali Taner and raised as 17 floors over a podium (Arkitekt, 1976). Different from the previously mentioned buildings, Odakule was the first high-rise office tower of Istanbul. Together with the Etap Hotel, Odakule is included in the urban skyline of Istanbul observed over both the Bosphorus and Golden Horn.

Since the central business district of Istanbul moved northward in the following years, the high-rise developments in the historic city ended. Only exception was Süzer Plaza, also known as Gökkafes (meaning skycage) that was designed by Doruk Pamir in the 1980s but completed in 2000 due to legal conflicts. The 34 storey tall project was the last high-rise development in the area and has the most dramatic effect on the skyline observed over the Bosporus. The construction on the site of Süzer Plaza was prohibited due to its adjacency to historic buildings. However, in 1983, restriction on the land was removed for the construction of Süzer Group's eight-storey tall hotel project. In the following years, the height permit for the site was significantly increased and construction for a skyscraper was commenced in 1987. Then, a long legal process for the cancellation of the project had started. In 1992, Beyoğlu Municipality again reduced the height limit, but central government moved the site from the administration of Beyoğlu to Şişli Municipality. 153 meters tall building was completed in the new millennium as one of the most visually dominating projects on the skyline of Istanbul.

Hilton Hotel dated back to the 1950s, as the first high-rise built in the post-war International Style, and the skyscrapers of the 1960s and 1970s that have the

verticality of true skyscrapers are included in the urban skyline of İstanbul. Hilton hotel, Sheraton Hotel (now named as The Intercontinental Hotel), Harbiye Orduevi and Intercontinental Hotel (now named as The Marmara) located in the area between Taksim and Harbiye are included in the urban skyline observed over Bosphorus from the viewpoint of Üsküdar shore (Figure 4.5). From the vista point of Moda, the Hilton Hotel, former Sheraton Hotel, Harbiye Orduevi and former Intercontinental Hotel and Etap Hotel and Odakule located in Beyoğlu are visible on the skyline (Figure 4.6). On the skyline over the Golden, from the low viewpoint of Unkapanı Shore, only Etap Hotel and Odakule, both located in Beyoğlu area are visible (Figure 4.7). From the higher viewpoint of the courtyard of Süleymaniye Mosque, in addition to Etap Hotel and Odakule, former Intercontinental Hotel and Süzer Plaza are also included (Figure 4.8). After the inclusion of the first high-rises of 1970s, the skyline of Istanbul as viewed over Golden Horn had remained the same for almost 30 years, until the Şişli, Mecidiyeköy and Bomonti have become a popular location for high-rises in post 2005 (Appendix C3). The buildings constructed between the beginning of 1950s until the end of 1970s have included the verticality of the early high-rises into the urban skyline of Istanbul observed from various vista points. This phenomenon has continued in an accelerated rate in the following decades which will be discussed in the next heading.

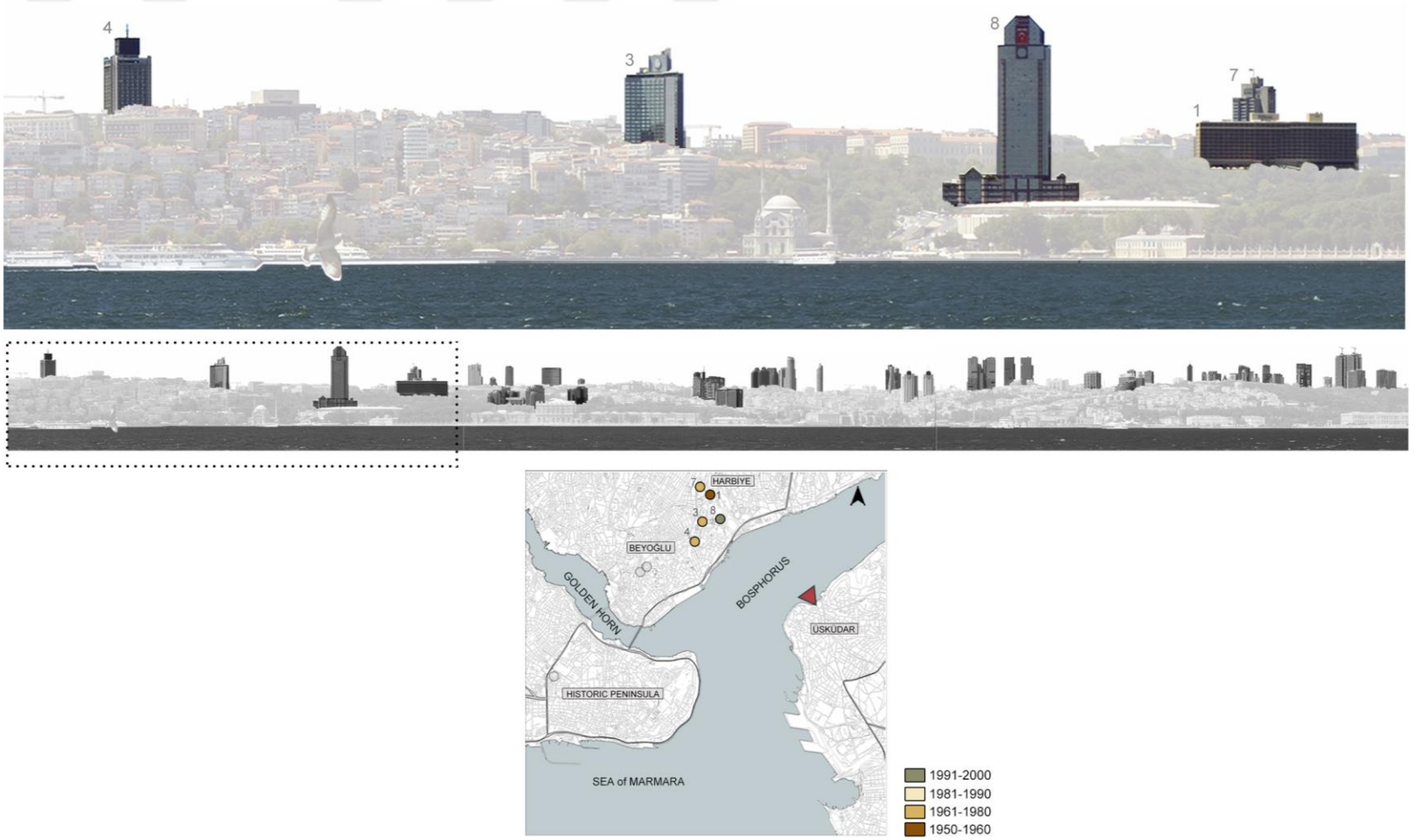

Figure 4. 5: The impact of high-rises built in the historic city on the skyline observed from Üsküdar shore, over the Bosporus (Şevkin, 2016).

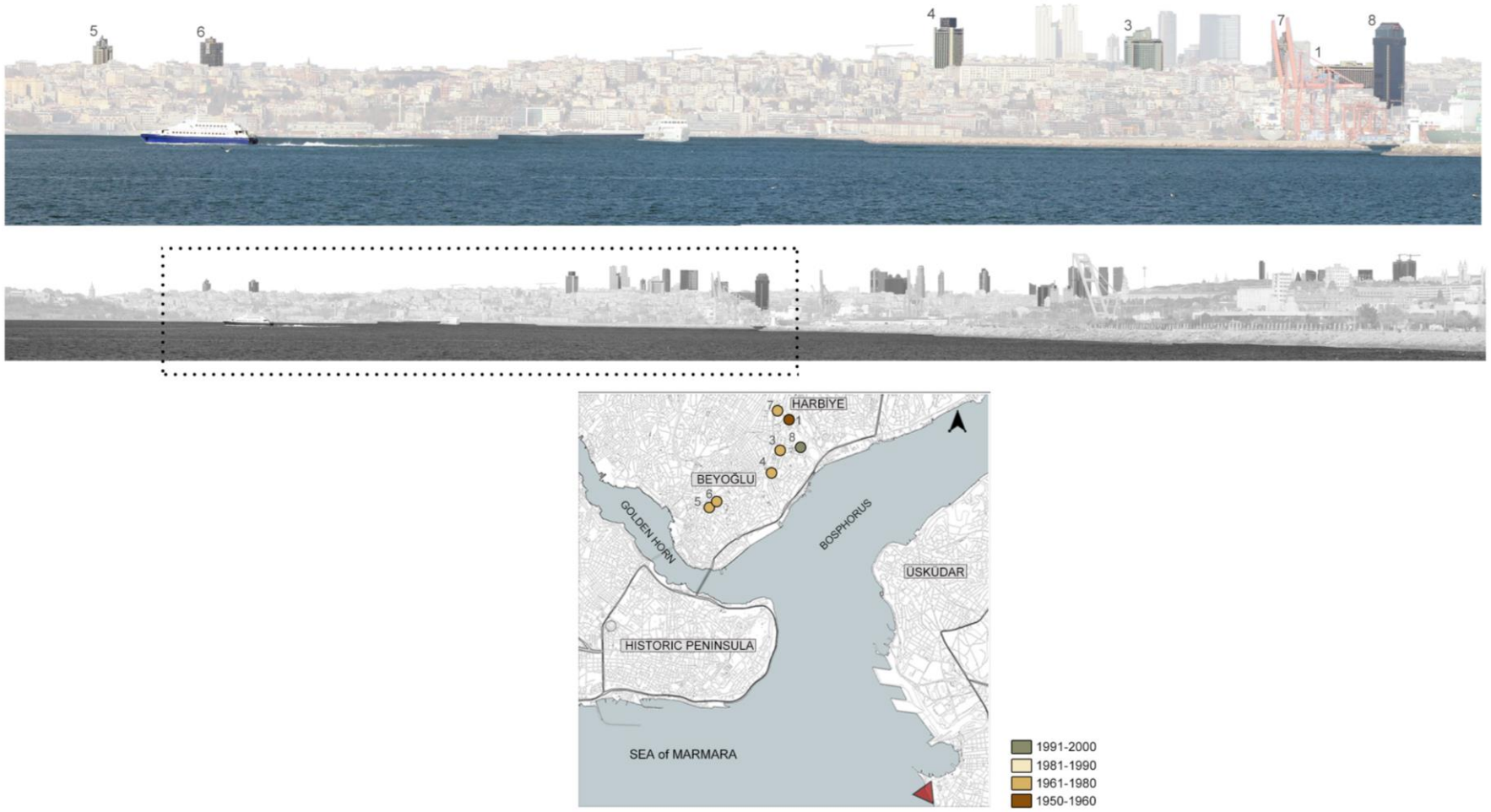

Figure 4. 6: The impact of high-rises built in the historic city on the skyline observed from Moda shore, over the Marmara entrance of the Bosporus (Şevkin, 2016).

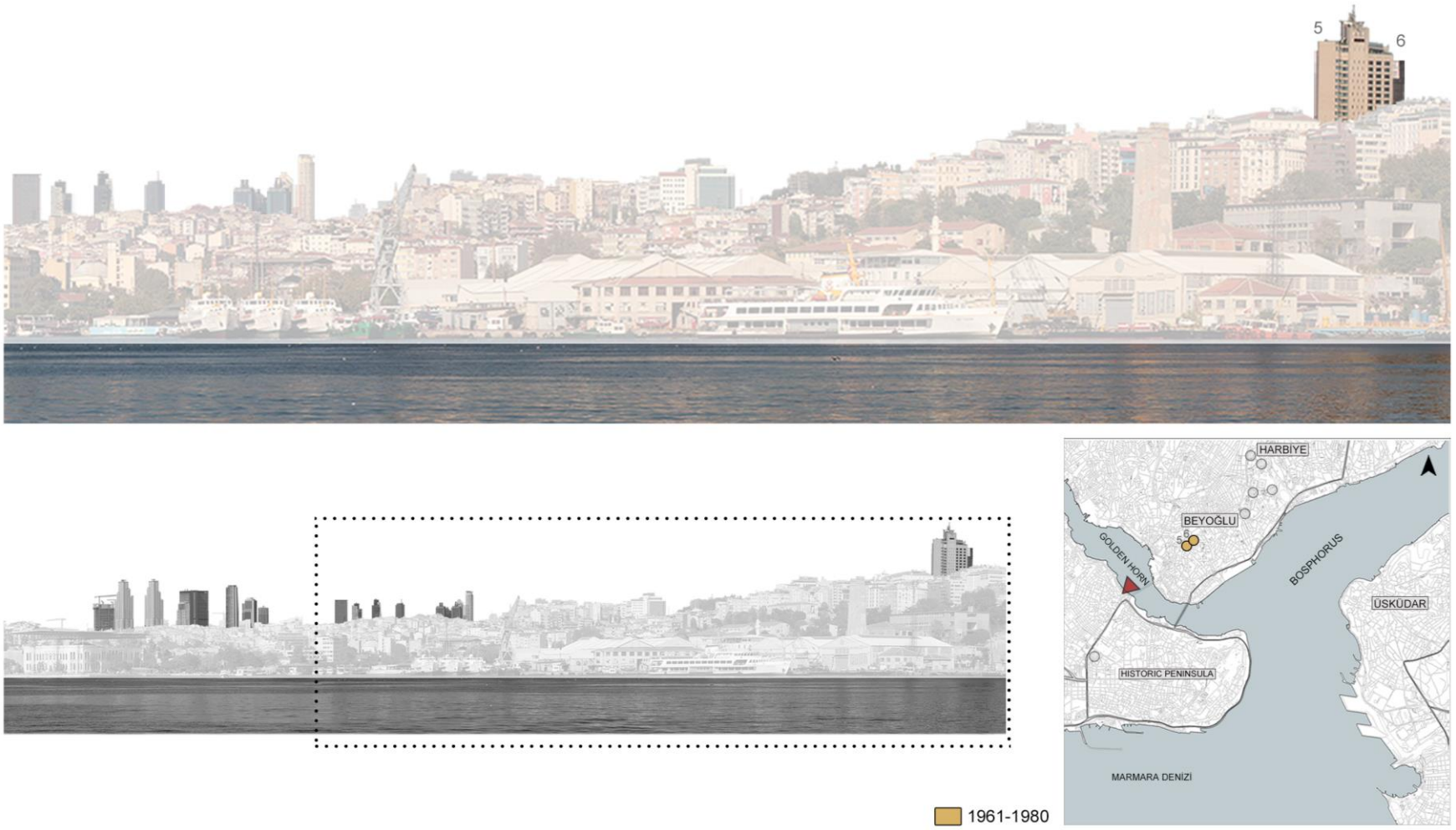

Figure 4. 7: The impact of high-rises built in the historic city on the skyline observed from Unkapanı shore, over the Golden Horn (Şevkin, 2016).

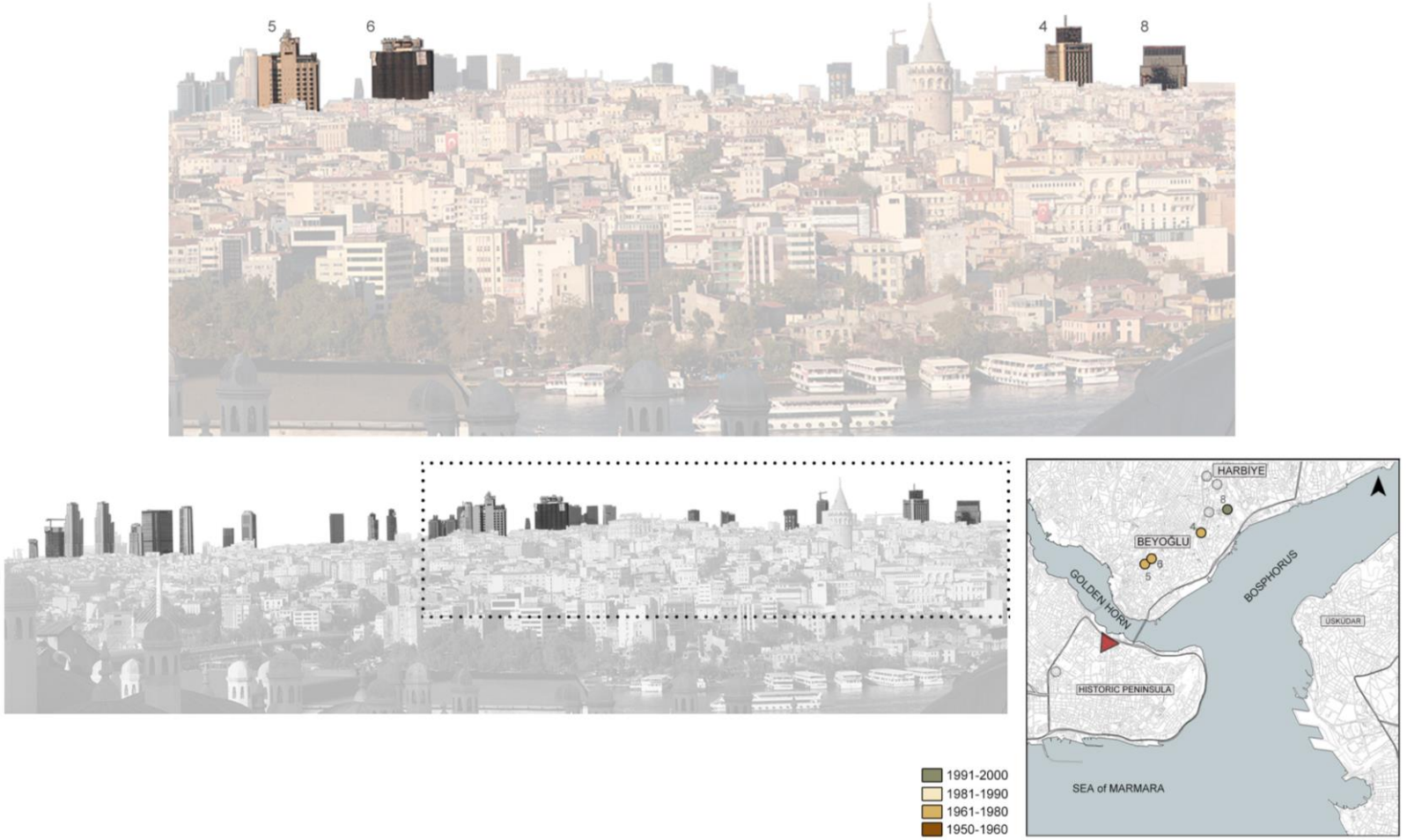

Figure 4. 8: The impact of high-rises built in the historic city on the skyline observed from courtyard of Süleymaniye Mosque, over the Golden Horn (Şevkin, 2016).

4.2 Expansion Towards the North After 1980: A New Layer on the Skyline

Following the hotel towers of the 1960s and 1970s built in Beyoğlu-Harbiye axis, high-rise developments extended towards the north. The high-rises built in the area between the north of Beyoğlu and TEM and in Maslak, starting from the 1980s, are the major cause of the transformation of Istanbul skyline (Figure 4.9) (Şevkin and Gül, 2017). Numerous towers have been built in the area in the past four decades as offices, residences and mixed use projects; all contributed the formation of a new layer on the skyline. In order to better understand the development of high-rises and their effects on the skyline the area was studied under four sub-groups. First group focuses on the high-rises built in the sloped area between Dolmabahçe Palace and Maçka, second on the Barbaros Boulevard and Dikilitaş, third on the Zincirlikuyu-Maslak axis and fourth on the Şişli, Mecidiyeköy and Bomonti. While grouping the high-rises, the geographic location, time of construction, the impacts of the topography and their perception from different vista points was taken into consideration. The skyline views from the vista points of Üsküdar, Moda and, Çamlica Hill on the Asian side; courtyard of Süleymaniye Mosque and Unkapanı Shore on the Historic Peninsula were evaluated by focusing on the certain parts under each heading.

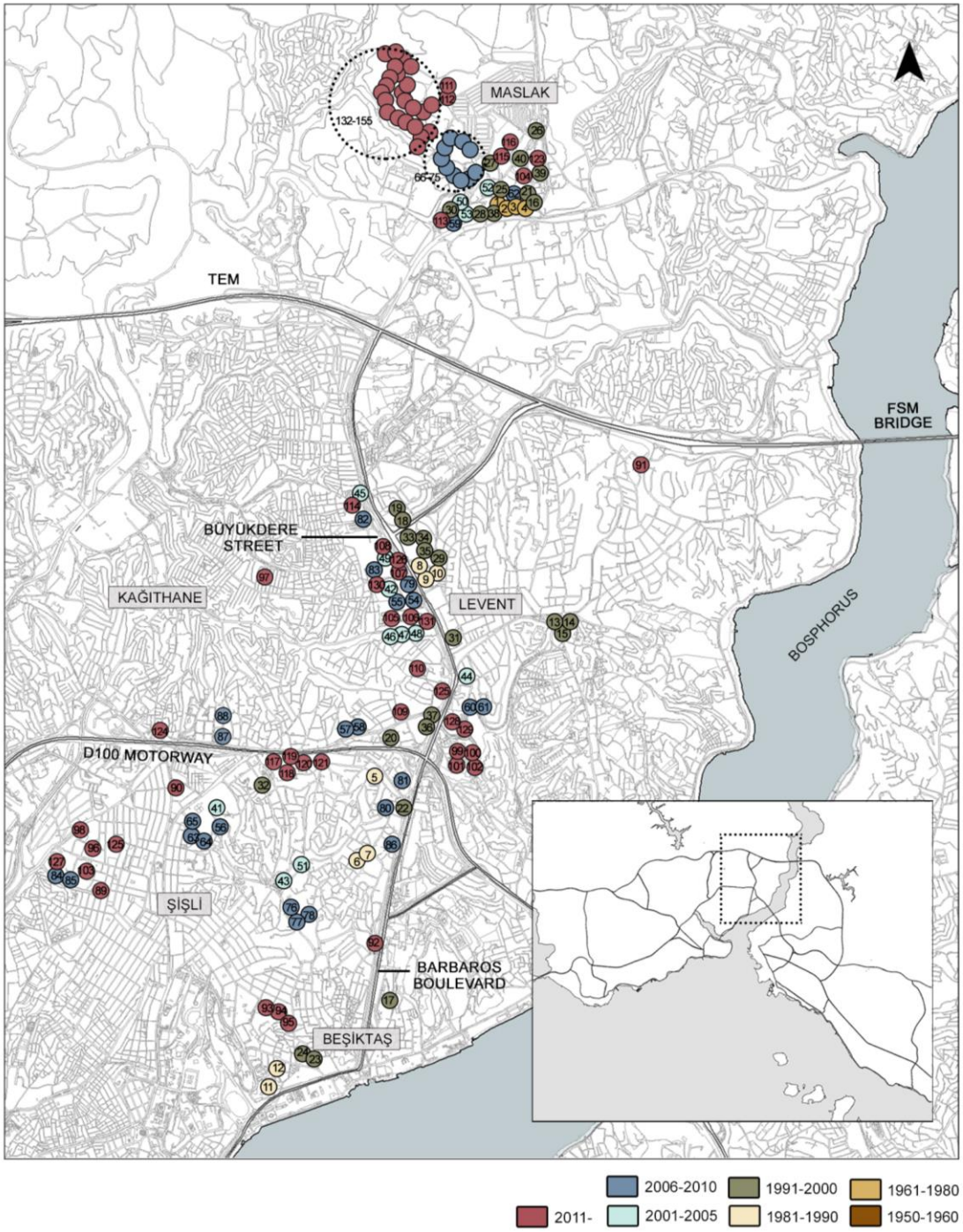

Figure 4. 9: High-rises' expansion towards the north after 1980 (Şevkin, 2016).

4.2.1 The area between Dolmabahçe and Maçka: the impact of topography on the visual prominence of high-rises

The first sub-group covers the sloped area rising behind the Dolmabahçe Palace, between the shores of Beşiktaş and Maçka (Figure 4.10). The area was analysed under a separate heading due to the effects of the hilly topography on the visual prominence of the high-rises located on top. Both the number of buildings and their

height are not high comparing to the other groups and the high-rise developments in the area do not cover a specific time zone. However, the increased visual prominence of the buildings that do not exceed 60 meters in height due to the topography challenges the historical dominance of the Dolmabahçe Palace on the skyline. The skyline observed from the vista point of Üsküdar shore vividly illustrates this impact (Figure 4.11).

Figure 4. 10: The high-rises built in the area between Dolmabahçe and Maçka (Şevkin, 2016).

First high-rise built in the area was a hotel project dating back to 1980s. Swiss Hotel the Bosphorus was designed by Turgut Alton in consultation with the Kanka Kikaku Sekkeisha and completed in 1989. The building does not exceed 60 metres in height. However the location choice for the building on a slope rising behind the historical Dolmabahçe Palace was highly controversial. Besides, in order to build the hotel, Taşlık Coffee House designed by Sedat Hakkı Eldem was demolished in addition to the removal of greenery covering the hills (Yapı, 1998). The hotel consisting of two blocks dramatically altered the skyline of Istanbul observed over the Bosporus due to the hilly topography of the site and its adjacency to the historic Dolmabahçe Palace. BJK Plazas constructed between 1992 and 1995 were another high-rise developments constructed in the area. The two office towers consist of 13 floors, which is quite slow comparing to its counterparts built along Büyükdere Boulevard

in the same year. However, their visibility was increased due to the special conditions of the topography. The last of the high-rise projects were Maçka Residences constructed between 2010 and 2012. In accordance with the rising trend of post-2010, the project was a residential development consisting of three towers 12, 13, and 14 floors tall.

Swiss Hotel the Bosporus, BJK Plazas and Maçka Residences which are located on the sloped area rising behind the Dolmabahçe Palace add seven high-rises to the skyline observed over Bosporus from the vista point of Üsküdar shore, also significantly alter the vista of the historical palace (Figure 4.11). The visual dominance of the high-rises, which do not exceed 15 floors, increased by the topography of the site indicates that planning decisions based on two-dimensional plans would not suffice. In order to assess the visual impact of the buildings on the skyline, the city should be evaluated as a three dimensional entity and the topography of the site should be taken into consideration.

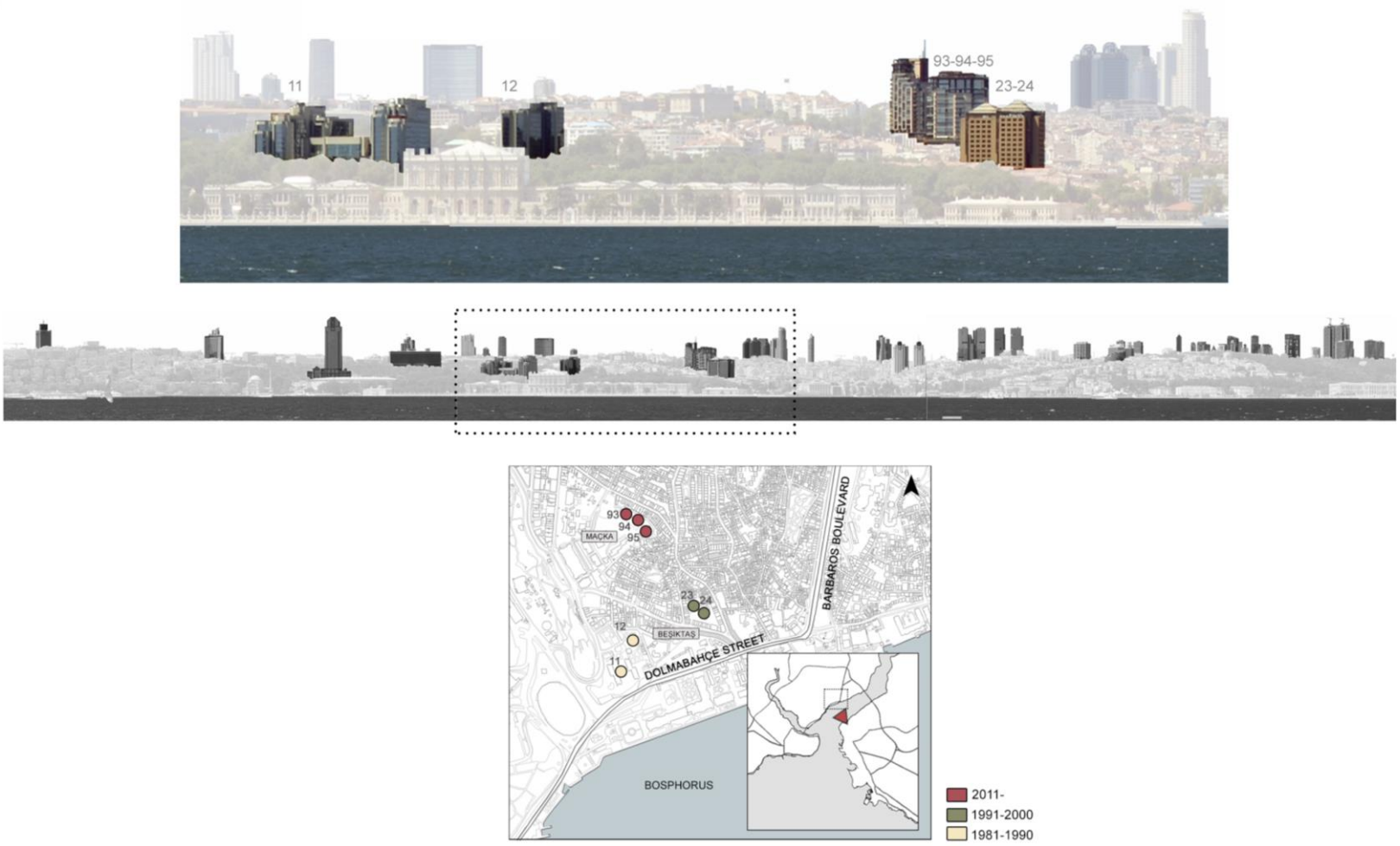

Figure 4. 11: The impact of the high-rises built in the sloped area between Dolmabahçe and Maçka on the skyline observed from Üsküdar shore, over the Bosporus (Şevkin, 2016).

4.2.2 Barbaros Boulevard, Fulya and Dikilitaş

The second sub-section includes the high-rise developments built along Barbaros Boulevard and in Dikilitaş and Fulya neighbourhoods. The high-rises built in the area cover a time period starting from the 1980s and reaching post-2010 (Figure 4.12). Barbaros Boulevard linking Beşiktaş to Levent, opened in the second half of the 1950s as part of Menderes' intense redevelopment programme and became one of the earliest locations for the construction of high-rise towers in the 1980s. In the following years, high-rises has continued to been built along the axis. Between 2000 and 2010, exceedingly high residential towers were erected in Dikilitaş. In the study, skyline observed from the vista point of Üsküdar shore was evaluated in order to reveal their visual impact on the skyline.

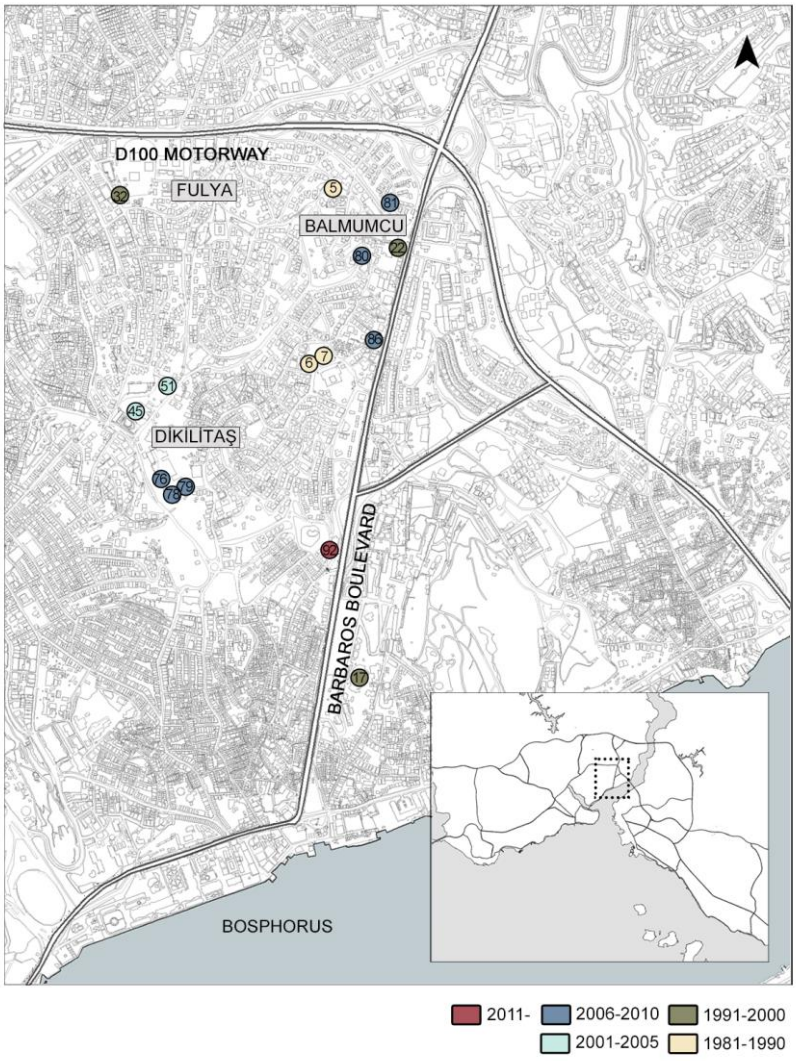

Figure 4. 12: High-rises built along the Barbaros Boulevard, in Dikilitaş and Fulya neighbourhoods since 1980 (Şevkin, 2016).

Türk Telekom Headquarters and the twin towers of Barbaros Plaza were built in the north of the Boulevard during the 1980s. On the skyline, high-rises located on the upper parts of the boulevard, which is running uphill towards the north, appear behind the line separating the hills from the sky. This transformation of the skyline further dramatized by the construction of high-rises along the Büyükdere Street in the following years. High-rise hotel projects, as a sign of advancing towards becoming a global city that would act as a hub for the global network, has started to be constructed alongside the Barbaros Boulevard in the 1990s. In 1992, Conrad Hotel located along the Barbaros Boulevard was completed. Similar to the Swissotel the Bosporus, location choice for the hotel was controversial in terms of its adjacency to the historical Yıldız Palace, the removal of a large greenery for the construction and its impact on the skyline (Yapı, 1991). The hotel was designed collaboratively by Erol Aksoy, Ergin Akman, Mehmet Beset and William B. Tabler as an S shaped building. In terms of height, it cannot be compared with its counterparts built along the Büyükdere Street. However due to the location choice, the Conrad Hotel became a dominant element of the Istanbul skyline observed over the Bosporus. Since the 1990s, Barbaros Boulevard has become a prime location for the high-rise hotels overlooking the Bosporus. 23-story-tall Plaza Hotel was another hotel project of the 1990s built alongside the Boulevard. In terms of office buildings, on the other hand, last development in the area was Toprak Holding Headquarters constructed in Fulya. Since then the office towers has spread to the different parts of the city.

After 2000, as parallel with the developments in the rest of the city, high-rise residential towers has erected in the area, mostly concentrated on Dikilitaş. First half of the new millennium was scarce in terms of high-rise developments. Only two towers were built in the area, Polat Tower Residence and Selenium Residence, both residential projects located in Dikilitaş. Out of the fifteen projects constructed in the area since the 1980s, six of them date back to the second half of the 2000s. Three residential towers, a mixed used development and two hotel projects were built between 2006-2010. Two of the residential projects are the identical towers of Selenium Twins, located in Dikilitaş. The towers exceed 150 meters in height, which is alien to its surrounding environment and profoundly affects the skyline observed over the Bosporus. Selenium Plaza located just behind the Selenium Twins is a

mixed-use development consisting of office and residential use. Selenium Residence was the third residential project that was built in the northern part of the Barbaros Boulevard. Construction of high-rise hotel towers continued in the second half of the 2000s with two projects: Point Hotel Barbaros and Büyükhanlı Barbaros. Post-2010 has been a period of intense high-rise development for most parts of the city. However, in this area only one residential tower, Büyükhanlı Barbaros, located along the Barbaros Boulevard was built.

The high-rises built along Barbaros Boulevard and in Dikilitaş and Fulya neighbourhoods since the 1980s, transformed the skyline of Istanbul observed over the Bosporus. First high-rises of the area that were included in the skyline were office towers the 1980s built along Barbaros Boulevard. Starting from the 1990s, the area has become a prime location for high-rise hotels overlooking the Bosporus. In 2000s, especially in the second half, residential towers were built in Dikilitaş and along the Barbaros Boulevard. In the skyline observed from Üsküdar shore, starting from the left; Selenium Twins, Büyükhanlı Barbaros and Conrad Hotel presents a strong contrast with their surrounding environment. Toprak Holding, Büyükhanlı Barbaros, Barbaros Plazas, Türk Telekom Headquarters, Selenium Panorama, Renaissance Polat Bosphorus, Point Hotel, The Plaza Hotel, located in the northern parts of the Boulevard, seems less dominant in terms of height but alters the relation between the outline of the topography and the sky (Figure 4.13). From Kuzguncuk, another vista point on the north of Üsküdar, Conrad Hotel's increased visibility due to the topographic conditions became more visible. Besides, the high-rises located on the northern part of the Barbaros Boulevard became more dominant on the skyline in terms of height (Appendix B3) which indicates that even from vista points that are close to each other such as Üsküdar and Kuzguncuk, the visual effect of the high-rises could differ.

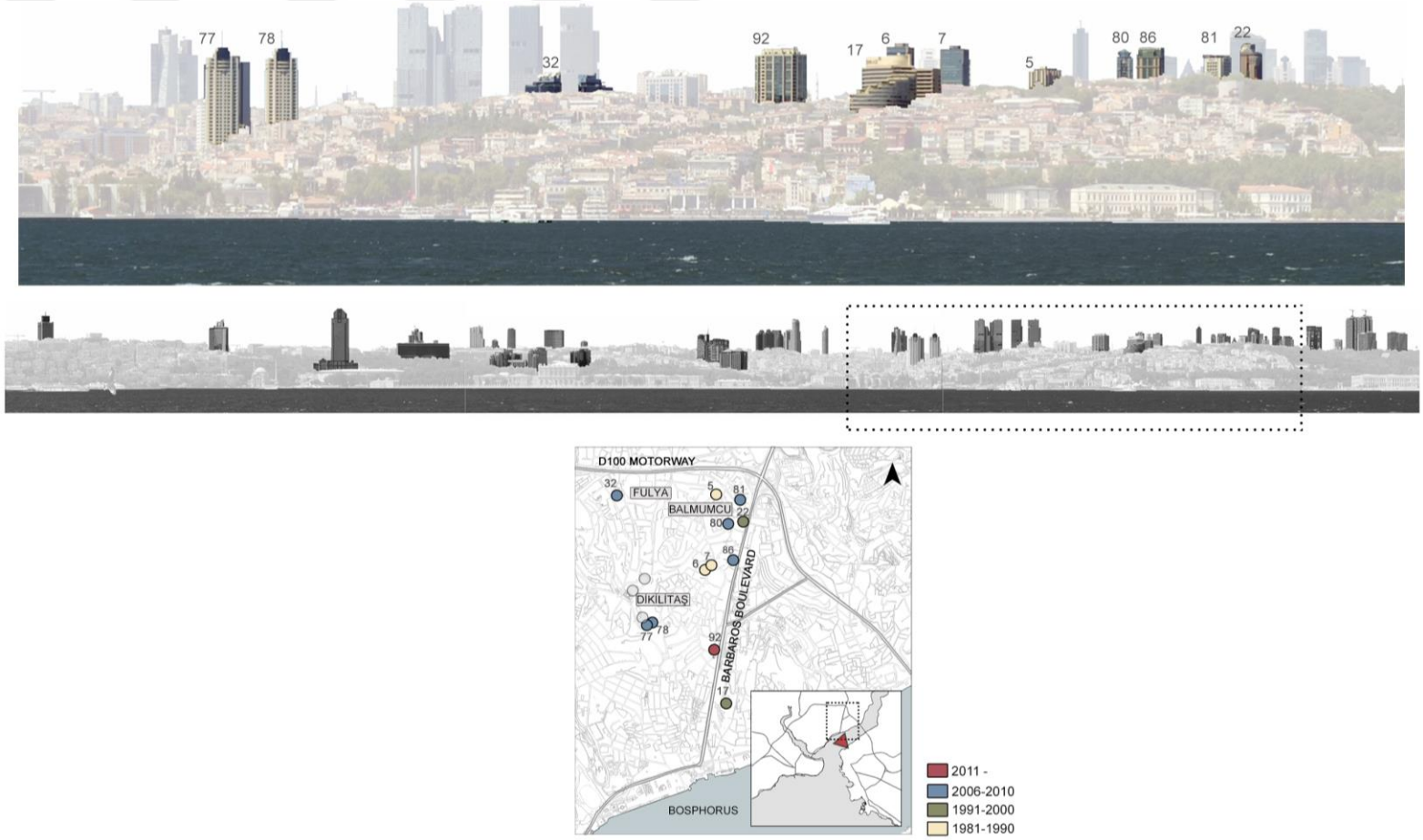

Figure 4. 13: The impact of high-rises built along Barbaros Boulevard and in Dikilitaş and Fulya neighbourhoods on the skyline observed from Üsküdar shore, over the Bosporus (Şevkin, 2016).

4.2.3 Zincirlikuyu-Maslak axis: a corporate skyline

Zincirlikuyu - Maslak axis is administratively shared by four different districts; Sarıyer, Şişli, Beşiktaş and Kağıthane. However, on the skyline over the Bosporus high-rises built along the street are perceived together as a whole. High-rise developments in the area covers a wide period of time starting from the end of 1970s reaching up to today (Figure 4.14). In the study, buildings taller than 60 meters were taken into consideration since they present a strong contrast with their surrounding environment and add a strong verticality to the skyline. Only former Alorko Holding Headquarter buildings constructed in late 1970s, that were below the 60 meters limit, were included in the study as the pioneer of the high-rise office buildings along the axis.

Since the end of the 1980s, Zincirlikuyu-Maslak axis has become the financial heart of the city. A corporate skyline was formed by exceedingly tall towers creating a contrast with the overall horizontality of the hills lying along the Bosporus. A new layer in the skyline has been rising as a sign of Istanbul's entrance to the global arena while transforming the city's historic outlook. In terms of height and density, developments along Zincirlikuyu-Maslak axis have the most profound impact on the skyline over the Bosporus. In order to visualize this dramatic transformation, the skyline observed from the vista points of Üsküdar revealing the intense development along Zincirlikuyu-4th Levent axis, and from Çamlıca Hill that includes high-rises in Maslak to the skyline were studied.

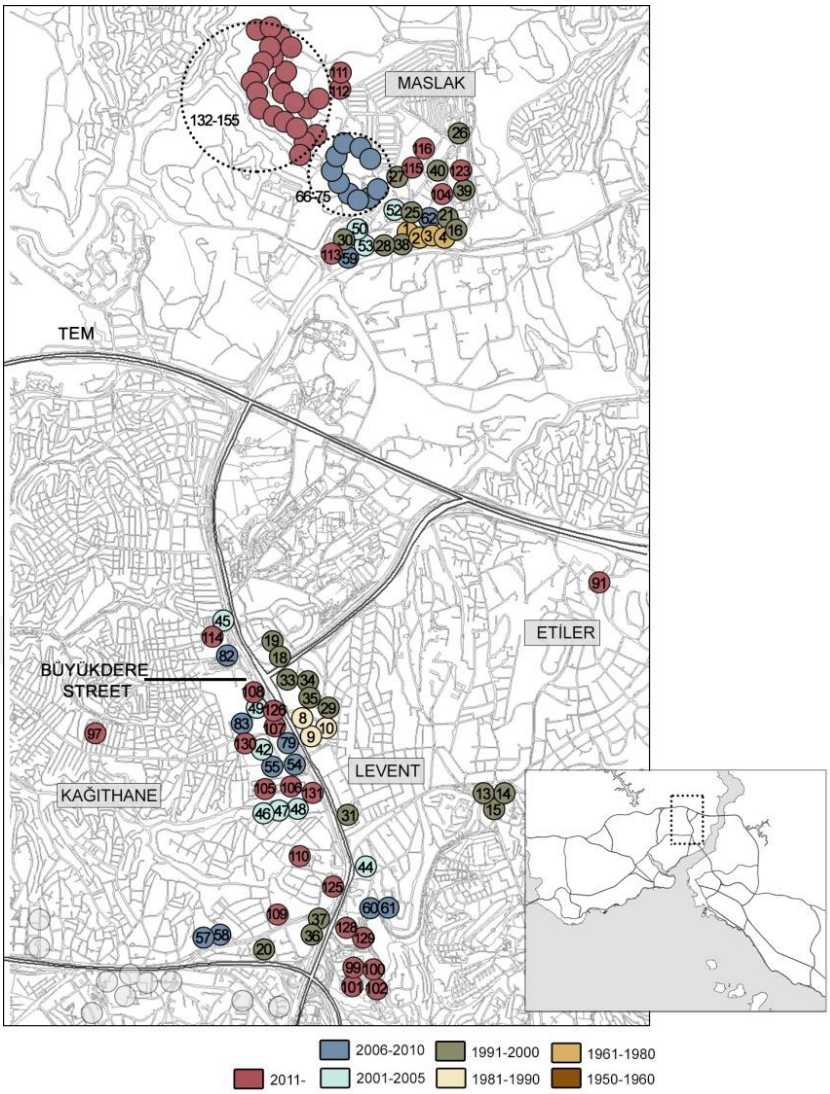

Figure 4. 14: High-rises built along Zincirlikuyu-Maslak axis (Şevkin, 2016).

With the completion of bridges over the Bosporus and its connecting highways, the area between Zincirlikuyu and Maslak has turned out to be the new financial heart of the city. At the end of 1980s and in the early 1990s, exceedingly tall office towers were commissioned by Turkish companies and built in Fourth Levent. First of these projects was Yapı Kredi Plaza designed by Haluk Tümay and Ayhan Böke. The three 20-storey-tall towers were completed in 1989. Sabancı Holding commissioned the second project and it was constructed between 1988 and 1993. Design of the project bears the signature of the same architects; Haluk Tümay and Ayhan Böke. The two towers of the project was remarkably high comparing to the other developments of the 1980s. Sabancı Holding occupied the 34-story-tall tower and the 39-story-tall tower was used as the headquarters of Akbank. İş Bank Towers, also known as İş Kuleleri, constructed between 1993 and 2000. The design of the project belongs to

Doğan Tekeli, Sami Sisa and New York based Swanke Hayden Connell Architects. One of the three towers of the project has 54 stories and rises to 181 meters in height, which was unprecedented at the time of its construction. The other two towers rose to 117 meters in height. Another office tower commissioned in the 1980s was Maya Akar Centre. The construction of the tower was started in late 1980s and completed in the beginning of the 1990s. The 110 meters tall tower was designed by Levent Aksüt and Yaşar Marulyalı. These exceedingly tall towers which were commissioned mostly in late 1980s and early 1990s gave the initial signals of the transformation of the skyline.

Because of the economic crisis and political instabilities of the 1990s, especially the second half of the decade was quite in terms of high-rise developments along Zincirlikuyu-Forth Levent axis. However, mixed-use projects became a new trend in the high-rise developments in the 1990s. Akmerkez in Etiler, designed by Fatih Uran and completed in 1992, was the first example. The project constitutes one residential and two office towers that are connected via a podium containing a shopping mall. These types of development have come to dominate the skyline in an accelerated rate after the 2000s with projects constructed on the Zincirlikuyu- Forth Levent axis (Appendix A5). Metrocity Levent was also one of the earliest examples of mixed used developments. The project was designed by Doğan Tekeli, Sami Sisa and Anthony Belluschi and constructed between 1995 and 2003. Metrocity Levent has three towers that are 143 meters in height and connected via a shopping mall. 143-meters-tall two identical buildings of Tat Towers completed in 2000 and Garanti Bank Headquarters designed by Gerner Kronick & Valcarcel Architects and constructed between 1997-2002 were the two office towers built along Zincirlikuyu-Levent axis in the second half of the 1990s.

The construction of the second suspended bridge over the Bosphorus, completed in 1988, made Maslak easily accessible which triggered the construction of high-rise office towers especially after the1990s. However, Alorko Holding Headquarters constructed in the late 1970s was the the first corporate office tower of Maslak. One ten story, two eight story towers were designed by Sedat Hakkı Eldem and followed by numerous high-rise developments in the following decade that overshadowed the visibility of the first towers. At the end of 1980s, Steingerberger Maslak, a hotel project designed by Ertem Ertunga, constructed in Maslak. During the 1990s, several

office towers; Spring Giz, Beybi Giz, Polaris Park, Giz 2000, Nurol and Harmanci Giz Plazas, Windowist Tower, USO Centre, HSBC Bank Headquarters, that give Istanbul a corporate skyline, were erected in Maslak.

First half of the new millennium was quite in terms of high-rise developments built along Zincirlikuyu-Fourth Levent axis comparing with the projects that will come to transform the skyline in the following years. In addition to 24-story-tall Mövenpick Hotel in Fourth Levent designed by Turgut Alton and Oya Ökmen, another significant development constructed between 2003 and 2006 was Kanyon. Tabanlıoğlu Architects working in collaboration with California based Jerde Partnership designed the project as a mixed-use development consisting of 26-storey-tall office tower and 18-storey-tall residential block.

In the second half of the 2000s, mixed-use developments that were intensified along Zincirlikuyu-Fourth Levent axis had profoundly altered the skyline over the Bosporus. Astoria towers designed by Ali Bahadır Erdin was constructed in Zincirlikuyu as a mixed used development. The twin towers of the project were completed and included in skyline in 2007. Another mixed used project with two identical towers was Kempinski Bellevue located on the east of the Büyükdere Street. The project was designed by Ertem Ertunga and completed in 2007. Istanbul Sapphire located in Fourth Levent was constructed between 2006 and 2010 and added in the skyline as the tallest building of Turkey. It was also the tallest building of Europe for a certain time. Tabanlıoğlu Architects designed the 261-meters-tall tower as a mixed used development containing a shopping mall, cinema, restaurants and luxurious apartments. Another mixed used development of the period that dominates the skyline with its immense scale was Zorlu Center. The construction of the project was started in 2009, but completed in the next decade in 2013. Zorlu Center was located on a prime site on the east of the junction between D100 Motorway and Büyükdere Street. The site of the project, previously occupied by Directorate of Highways, offers a vast panorama of Istanbul over the Bosporus while enhancing the visual impact of the building on the skyline. The design for the project was chosen via an international competition. The project bearing the signature of the two leading architectural firms in Turkey; Tabanloğlu Architects and Emre Arolat Architects won the first prise. The winning design contains four 32-story-tall

identical towers connected via a podium and houses different functions as luxury apartments, hotel, offices, shopping mall and performance centre.

In the new millennium, Maslak continued to grow as a financial district. During the first half of the 2000s Tekfen Tower designed by Swanke Hayden Connell Architects, İz Giz, Sun and Güney Plazas erected. The construction of Abdi İbrahim Tower and and Veko Giz plaza also started in the first half of the 2000s but completed in the second half. Apa Giz Plaza included in the corporate skyline of Maslak in 2009. Unparallel with the Maslak's continues growth as a financial district marked by high-rise office and hotel projects, between 2005 and 2008 Ağaoğlu Group, one of the biggest players of the Istanbul's real estate market, constructed a large scale residential project in Maslak that contains 10 towers rising 131 meters in height.

In post-2010, parallel with Istanbul's increased role in the global economy, the construction of high-rise developments have been accelerated along Zincirlikuyu-4th Levent axis. The towers built in post-2010 are designed by leading Turkish and International architectural firms and most of them exceed 150 meters in height. The increased density and height of the towers significantly transformed the skyline over the Bosporus. The two towers of River Plaza designed by B+H Architects were included in the skyline in 2014. 32-story-tall hotel tower and 37-story-tall residential tower of the project are linked via a podium that houses shopping mall. 150-meters-tall Istanbloom was another mixed used project that designed by DB Architects and completed in 2014. The 180-meters-tall two identical high-rises of Çiftçi Towers, that is about to complete, rises in close proximity to Zorlu Centre. John McAslan and Partners designed the project that houses residences, offices and shopping centre.

Different from the previous projects, Le Meridien Etiler designed by Emre Arolat Architects, is located in Etiler. However, when observed over the Bosporus the tower is included in skyline among with the high-rises built along Zincirlikuyu-Fourth Levent axis. Similarly, NEF 163, a residential tower completed in 2013 is located in Kağıthane but appears in the skyline together with the towers of Büyükdere axis. Zorlu 199 and Nidakule Levent by Tabanlıoğlu Architects, Kristal Kule by Pei Cobb Freed and Partners, Torun Tower by Arquitectonica, Ferko Signature by Foster and Partners and Istanbul Tower by Skidmore, Owings and Merrill are the office towers

of the post-2010 that include exceedingly tall high-rises designed by leading architectural firms into the skyline of Istanbul.

Maslak No:1 by Emre Arolat Architects, Promesa Seba Tower by Loft Architects, Doğuş Maslak Tower by Murat Aksu and Umut İyigün are the post-2010 office towers that are located in Maslak. 200-meters-tall Spine Tower designed by 2 Design Group, 42 Maslak Towers by Chapman Taylor and Turgut Toydemir are included in the skyline as mixed used developments built in Maslak. After Mashattan, Ağaoğlu Group constructed another mega-scale residential project in Maslak named Maslak 1453. The project constitutes of 24 high-rises, 9 of which exceeds 150 meters in height, that profoundly affects the skyline of Maslak which had only been shaped by corporate office towers until 2005.

Intense high-rise developments along Zincirlikuyu-Maslak axis starting from the late 1980s have dramatically transformed the skyline of Istanbul observed over the Bosporus. In terms of height and density, buildings that were studied under this group have the most profound impact on the skyline. From the vista point of Üsküdar, high-rises that are located between Zincirlikuyu-Fourth Levent axis dramatically contradict with the overall horizontality of the hills lying alongside the Bosporus (Figure 4.15). Numerous high-rises built in the area transformed the skyline as a vivid indicator of the increased construction activity in the city, especially after 2005 (Appendix C1). The towers included another layer in the skyline via their dramatic intrusion to the relationship between the outline of topography and the sky. Since they are located in close proximity to each other, the high-rises may be included or excluded from the skyline over the Bosporus as the observer moves. However, it could be stated that majority of the towers built along Zincirlikuyu-Maslak axis contributed to the transformation of skyline. The high-rises built in Maslak are not visible from the vista point of Üsküdar. They are included in the skyline observed from the higher points. From the vista point of Çamlıca Hill, for example, the cluster of high-rises built in Maslak; the office towers built since the 1970s on the front and post-2005 residential towers behind, are included in the skyline observed over the Bosporus (Figure 4.16). The skyline observed from Fatih Sultan Mehmet Bridge crossing over the Bosporus also reveals the impact of densely agglomerated high-rises built in Maslak (Appendix B5).

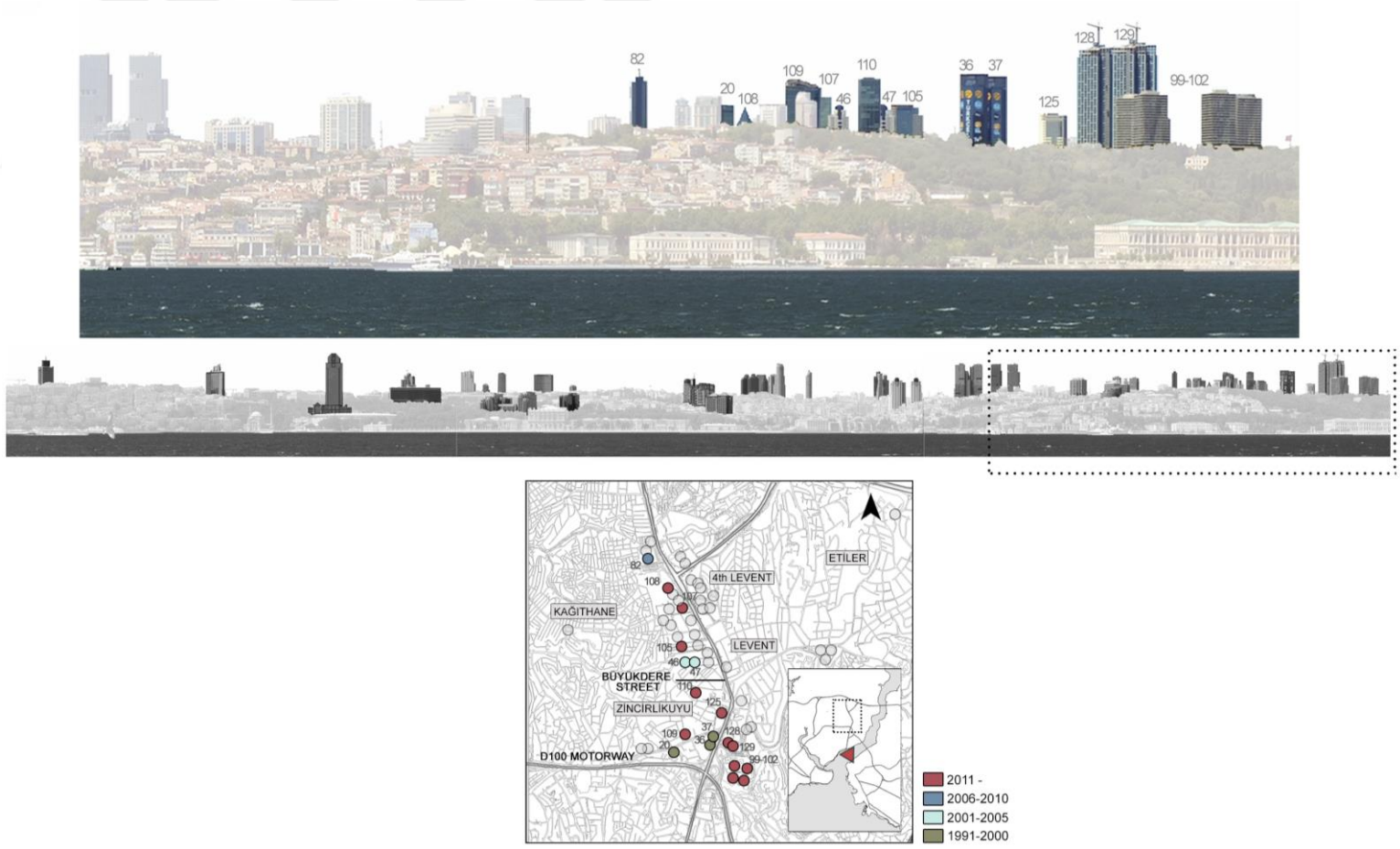

Figure 4. 15: The impact of high-rises built along Zincirlikuyu-Fourth Levent axis on the skyline observed from Üsküdar shore, over the Bosporus (Şevkin, 2016).

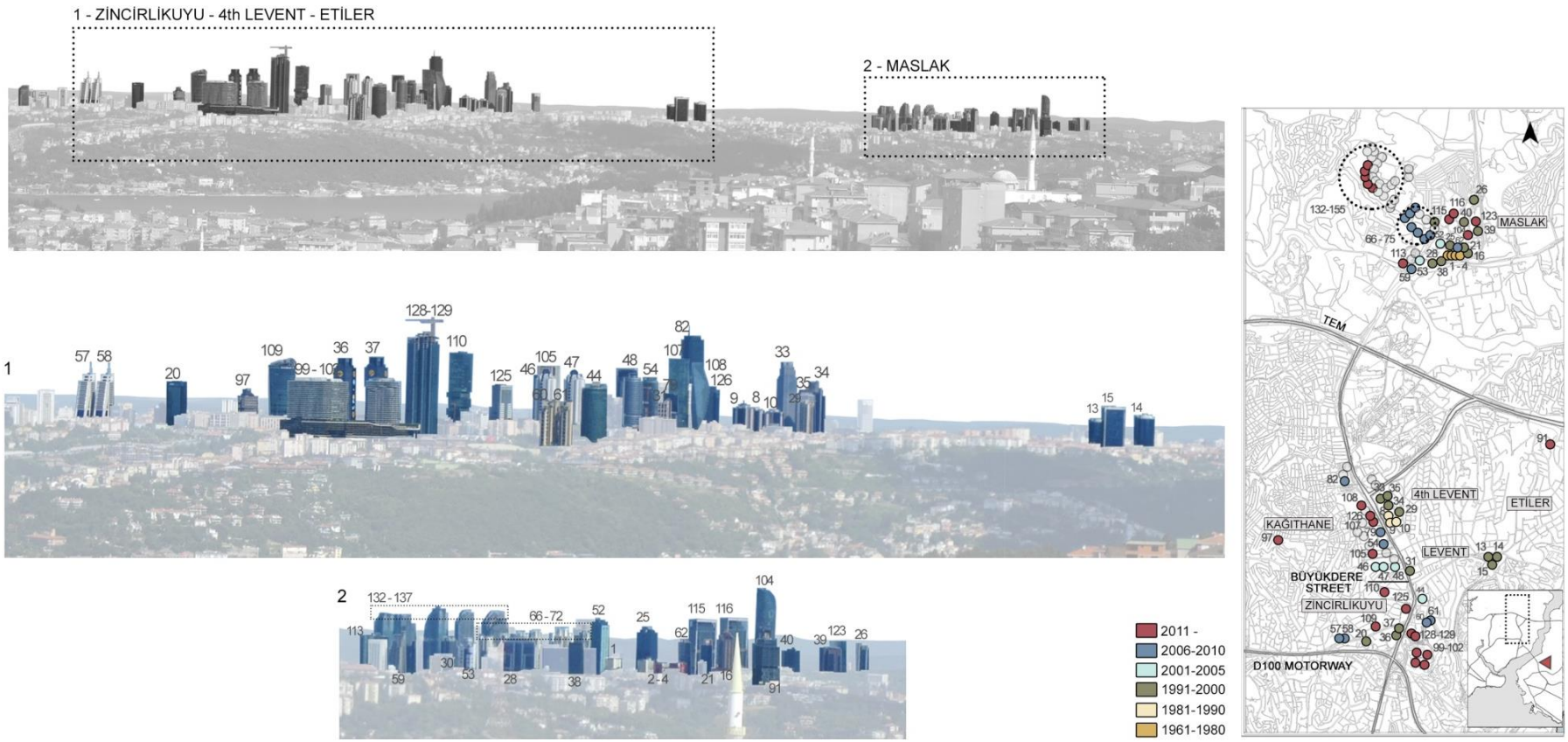

Figure 4. 16: The impact of high-rises built along Zincirlikuyu-Maslak axis on the skyline observed from Çamlıca Hill, over the Bosporus (Şevkin, 2016).

4.2.4 Şişli, Mecidiyeköy and Bomonti: transformation of the skyline over the Golden Horn

The last sub-group covers the high-rises built in Şişli, Mecidiyeköy and Bomonti which have become a popular location for high-rise developments in post-2005 (Figure 4.17).. More than half of the towers that were built in the area dates back to post-2010. Since development of high-rises in the area is relatively recent, only the buildings that exceed 60 meters in height are included in the study. High-rises built in Şişli, Mecidiyeköy and Bomonti transformed the skyline over not only Bosphorus but Golden Horn as well. As parallel with the trends of their construction times, mixed use, residential and office projects have almost equal share in the total number of high-rises (Appendix A5). In terms of height, all of the towers exceed 100 meters, and more than half exceed 150 meters in height, which explain their visual dominance on the skyline. In the study, impact of the high-rises built in Şişli, Mecidiyeköy and Maslak on the skyline was studied from vista points of Üsküdar shore over the Bosporus, Moda shore over the Marmara entrance of the Bosporus Unkapanı Shore and the courtyard of Süleymaniye Mosque over the Golden Horn .

Figure 4. 17: High-rises built in Şişli, Mecidiyeköy, Bomonti (Şevkin, 2016).

The first high-rise development built in the area was Şişli Elit Residence designed by BSB London Architects. The construction of the 140-meters-tall tower was started in 1998. Şişli Elit Residence included in the skyline with its completion in 2001 and soon followed by other high-rise developments built in its close vicinity between 2006 and 2010. 170-meter-tall Şişli Plaza was another remarkably high residential project constructed between 2000 and 2007 in Şişli. With the completion of three other towers that belongs to Şişli Tat Center and Tat Hotel in 2007, the initial transformation on the skyline observed over the Golden Horn has started. The towers, densely located in Şişli are also included in the skyline observed over the Bosporus as well. Another exceedingly tall high-rise residential project from the second half of the 2000s was Anthill Residences designed by MM Proje. 195-meters-tall two identical towers were constructed between 2008 and 2010 in Bomonti as the pioneer of the high-rise developments in the area that will come to transform the skyline. Trump Towers erected as the forerunner of the upcoming developments along the D100 Motorway between 2006 and 2010. The project is a mixed used development designed by Bridgette Weber Architects. A 39-story-tall residential tower and 37-story-tall office tower are connected via a podium that contains shopping mall. The Anthill Residences and Trump Towers were included in the skyline in second half of the 2000s.

In post-2010, construction of high-rises has continued along D100 Motorway. On the south of the motorway, Şişli Key Plaza was completed in 2012. The 135-meters-tall project was designed by Piramit Mimarlık. Another development along D100 Motorway, that has profound impacts on the skyline, bears the signature of Emre Arolat Architects. Three towers of Torun Centre; two residential and one office block and two mixed-use high-rises of Quasar towers exceed 150 meters in height. The five towers that were located on the south of the D100 Motorway impose their remarkable height on the skyline both observed over the Bosporus and Golden Horn. The last post-2010 development on the D100 axis was Nurol Tower located on the east of the Trump Towers. The project is a mixed used development designed by Piramit Mimarlık and constructed between 2012 and 2016.

Bomonti has become a popular location for high-rises in the years following 2010. Several towers, both residential and commercial, were built in the area and transformed the skyline in a remarkably short time. 160-meters-tall Divan Residence

by Tago Mimarlık constructed between 2009-2012, Elysium Art Şişli built between 2013 and 2016 and Queen Central Park Bomonti by TAGO Mimarlık that is still under construction and expected to be 195-meters-tall when finished, are post-2010 residential high-rise developments in Bomonti. Not only residential but also commercial towers have been constructed in Bomonti as well. Hilton Bomonti Hotel and Conference Centre designed by Tusavul Mimarlık and constructed between 2010-2013, Arista Bomonti Tower by Murat Kader built between 2011-2013 and iTower Bomonti by TAGO Architects completed in 2013 profoundly affected the skyline of Istanbul observed over the Bosporus and Golden Horn.

From the vista point of Üsküdar, high-rises built in Şişli, Mecidiyeköy and Bomonti appears behind the outline between the topography and the sky. In the skyline post-2005 high-rises built in Bomonti; Anthill Residences, Arista Bomonti Tower, Divan Residence and Hilton Bomonti Hotel and Conference Centre appears on the left. The high-rises closely built in Şişli between 2001-2010; Şişli Elit Residence, Şişli Plaza, Şişli Tat Centre and Tat Hotel, are visible in the middle part of the skyline view. Post-2010 high-rises built along D100 Motorway; Trump Towers, Torun Centre and Quasar Tower appears on the right side of the skyline with their dramatic verticality (Figure 4.18)

Another noteworthy impact of these high-rises was on the skyline observed over the Golden Horn. Until the construction of the towers in Şişli, Mecidiyeköy and Bomonti, only high-rises observed over the Golden Horn was hotel towers of 1970s. However, in past 17 years, especially after 2010, the skyline has been significantly transformed (Appendix C3, C4). On the skyline observed from Unkapanı shore, Anthill Residences constructed between 2006 and 2010 and post-2010 towers; Queen Central Park Bomonti, Arista Bomonti, Hilton Bomonti Hotel and Conference Centre, Divan Residence and Elysium Art Şişli located in Bomonti and Nurol Plaza located along the D100 Motorway are visible on the left side of the skyline. The other three towers along D100 axis, Key Plaza and Trump Towers appears in the middle part. On the right side of the view, high-rises located in Şişli constructed mostly between 2006 and 2010 are visible (Figure 4.19). The skyline observed from the courtyard of Süleymaniye Mosque reveals a similar view to the Unkapanı shore, only the Torun and Quasar towers, located in the south of the D100 Motorway, are included in the view as well (Figure 4.20). The new layer on skyline of Istanbul

observed over Golden Horn vividly reveals the increased construction activity in the city and their impact on the skyline with its rapid transformation in a short time.

Another vista point that reveals the impact of the high-rises built in Şişli, Mecidiyeköy and Bomonti is Moda shore, providing a over the Marmara entrance of the Bosporus. On the skyline observed from Moda, between the Marmara Hotel and Süzer Plaza post-2000 high-rises built in Bomonti; Anthill Residences, Arista Bomonti, Divan Residence, Hilton Bomonti Hotel and Conference Centre, appears. In the middle part of the view, high-rises built along D100 Motorway; Nurol Plaza, Key, Plaza and early high-rises built in Şişli; Şişli Tat Centre and Hotel, Şişli Elit Resdence and Şişli Plaza are visible. On the right; Trump Towers, Torun Centre and Quasar towers are included in the skyline (Figure 4.21)

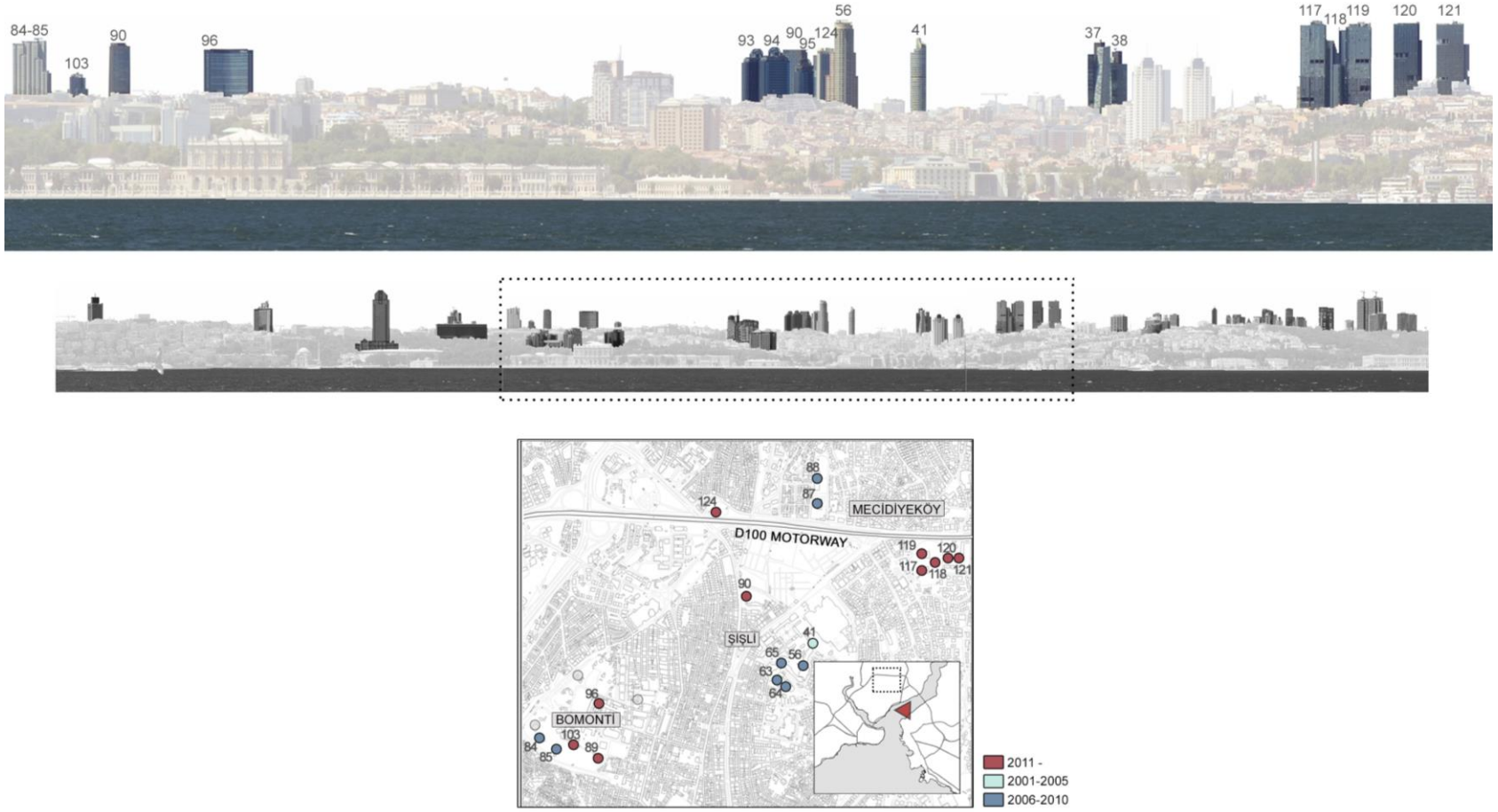

Figure 4. 18: The impact of high-rises built in Şişli, Mecidiyeköy and Bomonti on the skyline observed from Üsküdar shore, over the Bosporus (Şevkin, 2016).

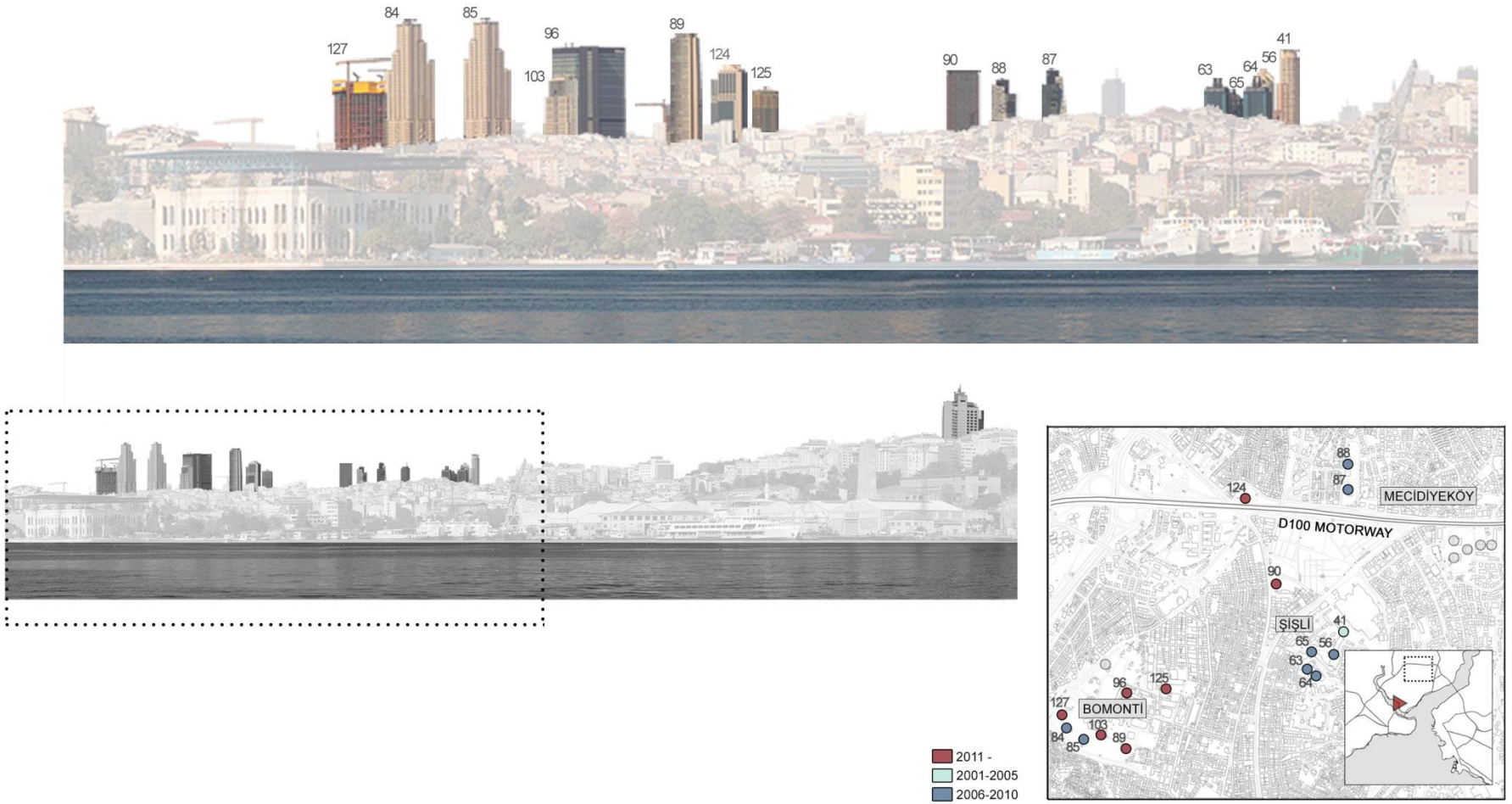

Figure 4. 19: The impact of high-rises built in Şişli, Mecidiyeköy and Bomonti on the skyline observed from Unkapanı shore, over the Golden Horn (Şevkin, 2016).

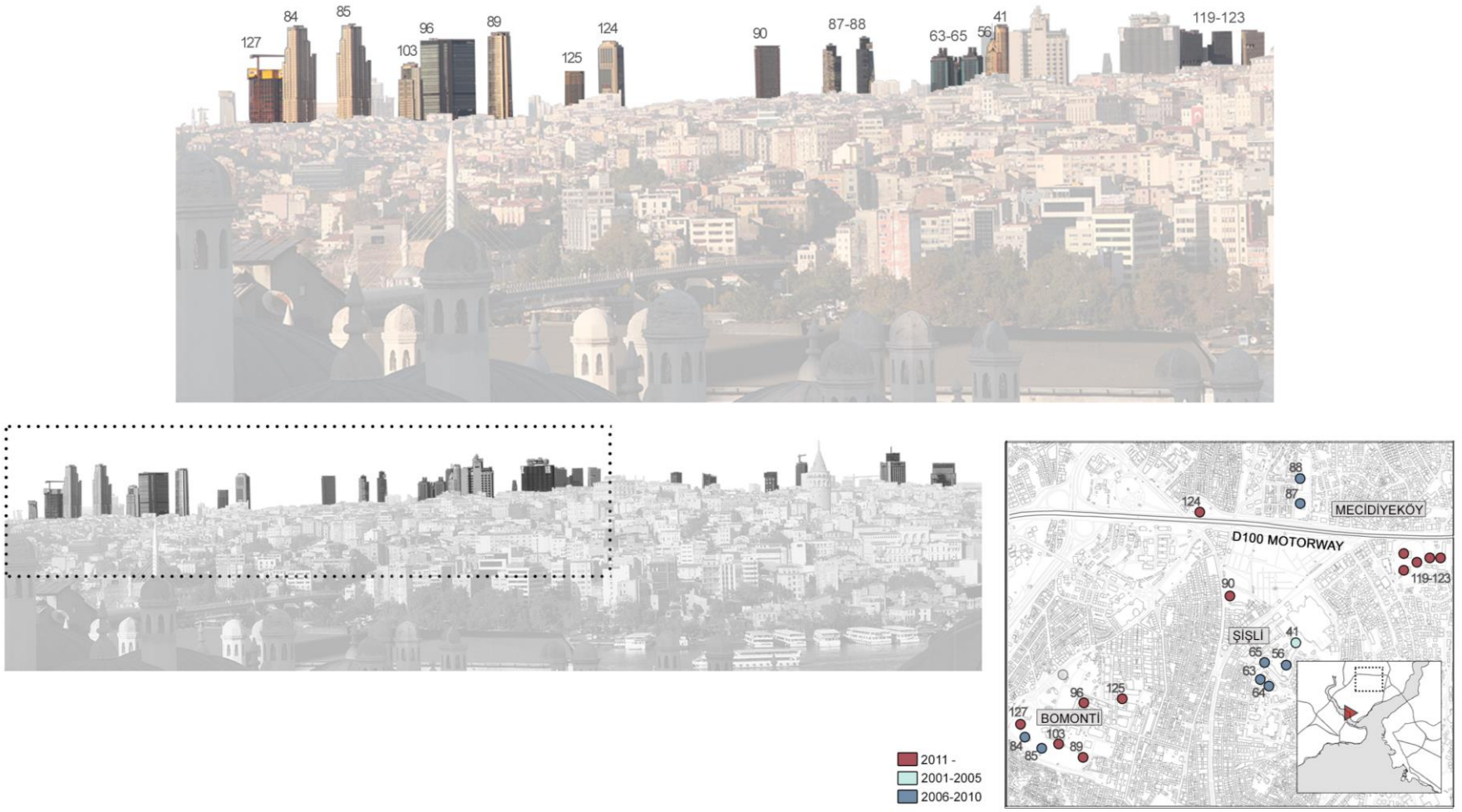

Figure 4. 20: The impact of high-rises built in Şişli, Mecidiyeköy and Bomonti on the skyline observed from the courtyard of Süleymaniye Mosque, over the Golden Horn (Şevkin, 2016).

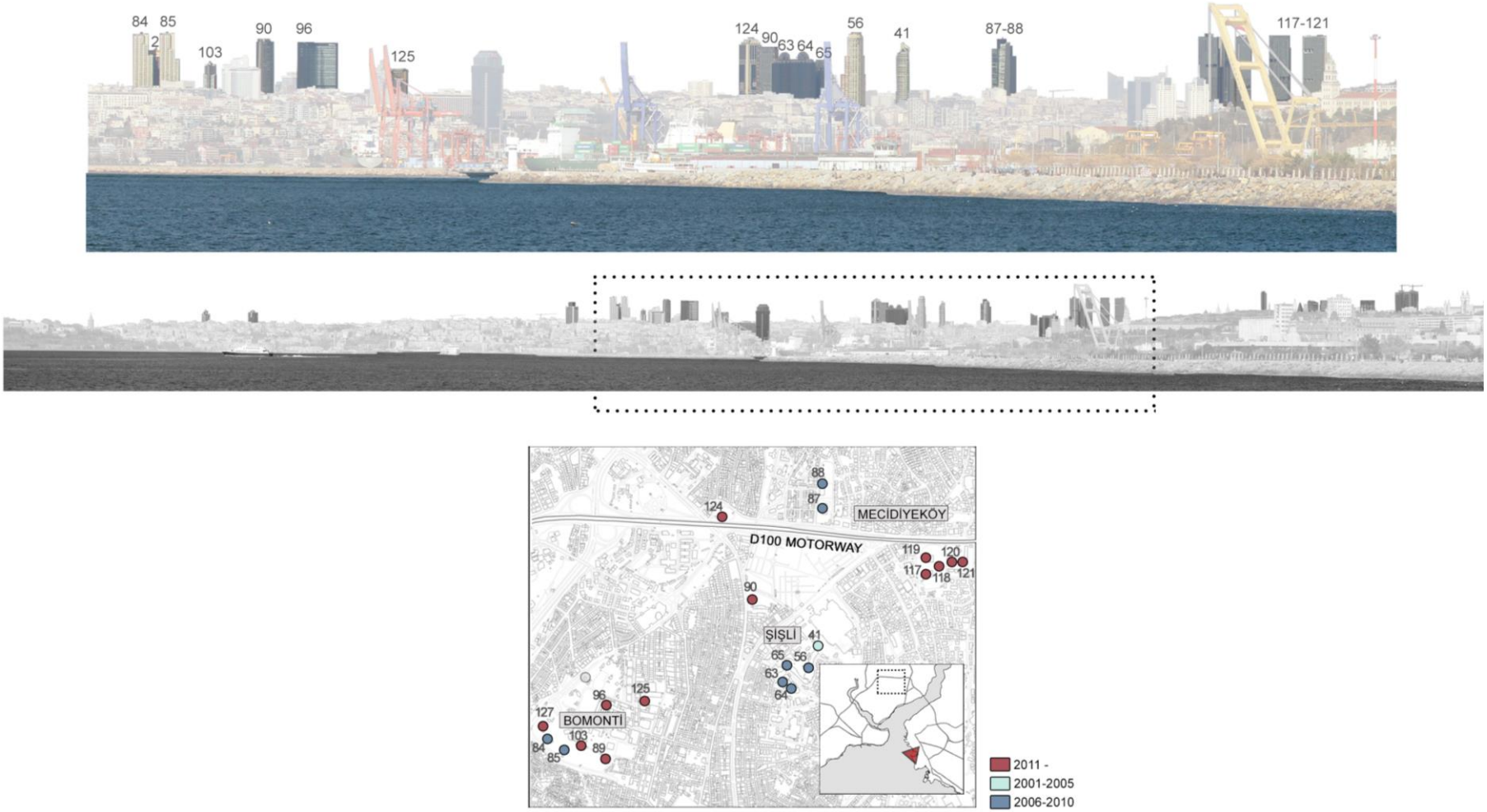

Figure 4. 21: The impact of high-rises built in Şişli, Mecidiyeköy and Bomonti on the skyline observed from Moda shore, over the Marmara entrance of the Bosporus (Şevkin, 2016)

4.3 Expansion to the Asian Side in Post-2005

Until the new millennium, high-rise developments and the transformation of the skyline only concerned the European side of the city. In post-2005, high-rises have started to develop in a massive rate in the Asian side as well. Considering the built environment of the Asian side, dominated by multi-storey residential projects, buildings that exceed 90 meters in height which stands out on the skyline were included in the study. Only exceptions were Double Tree by Hilton and Siyami Ersek Hospital that do not exceed the height limit but considered as tall due to their relatively low surrounding environment alongside the waterfront.

Göztepe, Kozyatağı, Acıbadem, Ataşehir, Ümraniye, Maltepe and Kartal have become popular locations for high-rise developments (Figure 4.22). The high-rises have been built in an accelerated rate in a short time and spread to the different parts of the Asian side. That is why, it is hard to group the high-rise developments on the Asian site based on their construction times or geographic locations like it was done for the European side. Therefore, post-2005 high-rises built and transformed the skyline of the Asian Istanbul were studied under single heading.

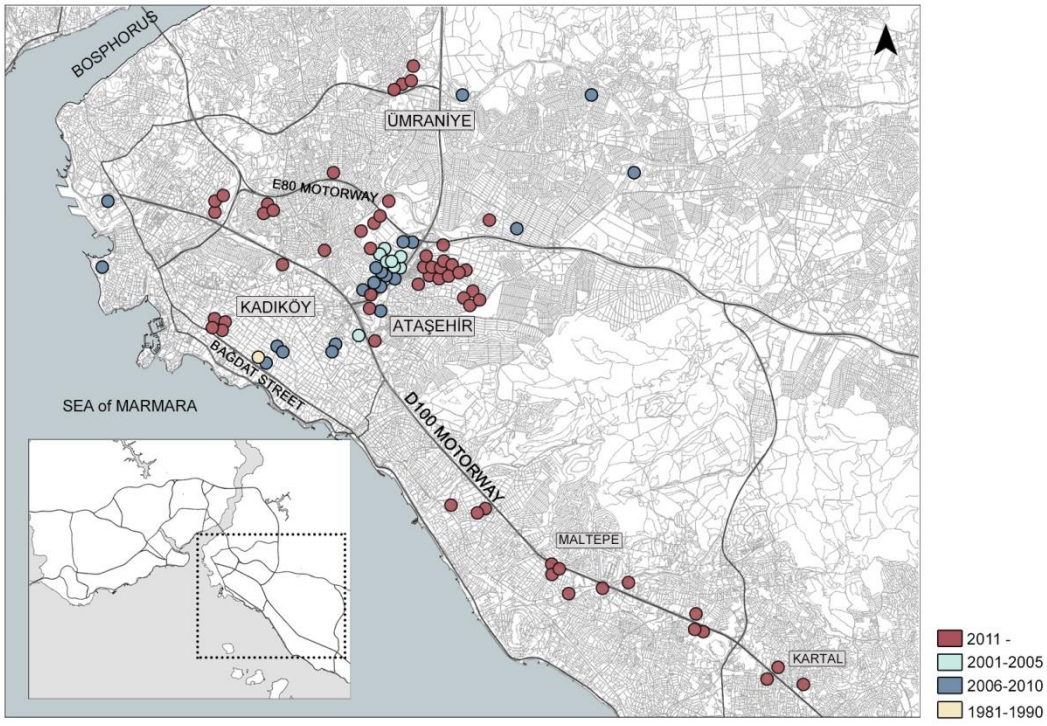

Figure 4. 22: High-rises built on the Asian side of Istanbul (Şevkin, 2016).

Until 2010, high rises on the Asian side mostly concentrated on Kozyatağı and Ataşehir. In post 2010, high-rise developments have spread to the other areas as well. Ataşehir became the new financial centre of the city, which triggered the construction of high-rise developments. Besides, in Maltepe and Kartal, new towers have been erected along the north and south of the D100 Motorway connecting to Sabiha Gökçen Airport (Figure 4.22). In terms of height, parallel with the counterparts in their times of construction, high-rises on the Asian side are exceedingly tall. Asian site of Istanbul encountered with high-rise developments through intense residential development activity (Appendix A8). Different from the singular towers of the European site, these residences mostly built as part of a larger gated community compound. Large scale mixed-use developments with remarkably high towers have also became popular on the Asian site. Design of these mega-scale projects mostly belongs to more than one local or international architectural firm.

Considering the density of the high-rise developments on the Asian site, a large portion of the towers are not included in the skyline. However due to their immense scale, the high-rises that appear on the skyline cause significant transformations. Haliç Metro Bridge, a railway bridge crossing over the Golden Horn, and Cihangir Park, a public green area located on the European site of Istanbul, are chosen as vista points to observe the inclusion of high-rises onto the skyline of Asian Istanbul.

Mostly the same towers are visible on the skyline from both of the vista points. Siyami Ersek Hospital located in close proximity to the waterfront, behind the historic Mekteb-i Tıbbiye-i Şahane building, that is constructed between 1998 and 2000 was the first high-rise building included in the skyline observed from selected vista points. All the other high-rises that transformed the skyline are post-2010 developments. Among these, mixed-used residential projects are the major cause of transformation of the skyline. One of the noteworthy examples of a large-scale mixed used development on the Asian side was Varyap Meridian located in Ataşehir, close to E80 Motorway. Varyap Meridian, constructed between 2009 and 2012, was designed by New York based RMJM Architects. The projects comprise five towers housing various functions; residential, hotel, conference centre, office and shopping centre. One of these towers is visible on the skyline observed from the selected vista points.

The other two large scale post-2010 mixed used developments that transformed the skyline of Asian Istanbul was AkAsya Acıbadem and Emaar Square. All the three towers of each project, that are remarkably high, impose their immense scale on the skyline. AkAsya Acıbadem was located on the northwest of the junction of D100 Motorway coming from Sabiha Gökçen Airport and O1 Motorway that is leading to Bosphorus Bridge. The project, designed collaboratively by Mimarlar Workshop, Design Development Group and Ömerler, sits on a vast area and comprise of three towers that all exceeds 150 meters in height. Emaar Square, the other mixed used development that profoundly affects the skyline, was located in Ünalan, on the southwest of the junction between Libadiye Street and E80 Motorway. The project consisting of three towers is still under construction. Both international and local architectural firms were involved in the design of the project. The master plan belongs to Arquitectonica. Foster and Partners, KTGY Architects and Swanke Hayden Connell Architects designed the towers and retail building. The local architect involved in the project was 2 Design Group.

Palladium Tower and Renaissance Tower that are located in Kozyatağı add two post-2010 office towers to the skyline of Asian Istanbul. Both of the towers were designed by foreign architectural firms and exceeds 150 meters in height. The design of the 186-meters-tall Renaissance Tower that was constructed between 2011 and 2014 belongs to Fxfowle Architects. Palladium Tower was designed by Swanke Hayden Connell Architects and constructed between 2012 and 2014. Four Winds by Taşyapı is another noteworthy residential project located in Göztepe. The location of the project, in close vicinity to Marmara Shore, enhances the visual impact of the four 145-meters-tall towers on the skyline. The towers are visible on the right of the skyline view observed from Cihangir Park. In Kartal and Maltepe, high-rises have been built along the north and south side of the D100 Motorway since 2010 as residential and mixed used projects. However, due to their location, these high-rises are only included in the skyline observed over the Prince's Islands. Because of the distance and the number of identical box-shaped high-rises that covers the Marmara Shores of the Asian side of Istanbul, impact of these developments on the skyline is not readable.

In the skyline observed from the Haliç Railway Bridge (figure 4.23), first high-rise on the left belongs to Varyap Meridian. The next high rises appearing on the same

line with Varyap Meridian are the three towers of Emaar Square. Behind the Emaar Square, Metropol Tower is visible. On the front, the three towers of Akasya Acıbadem appears separately with a considerable distance among them. The three towers located on the right side of the view are (from left to right); Palladium Tower, Renaissance Tower and Siyami Ersek Hospital. From the vista point of Cihangir Park (Figure 4.24), the first five towers starting from the left are; Varyap Meridian, Metropol Tower and the three towers of Emaar Square. Next two towers belong to Akasya Acıbadem which is followed by Palladium Tower and the last tower of Akasya Acıbadem. Right next to it the Reneissance Tower is visible. On the right side of the view, from left to right, Siyami Ersek Hospital and Four Winds appear. The rapid transformation of the skyline of the Asian side of Istanbul since 2010 (Appendix C5, C6) vividly illustrates the reflective character of the skyline to the changes in the economic structure of the city. It also indicates that the transformation of the sk1yline do not necessarily cover a wide period of time as it once did. Instead, dramatic changes may occur in a short period as the visual correlative of the increased construction activity in the city.

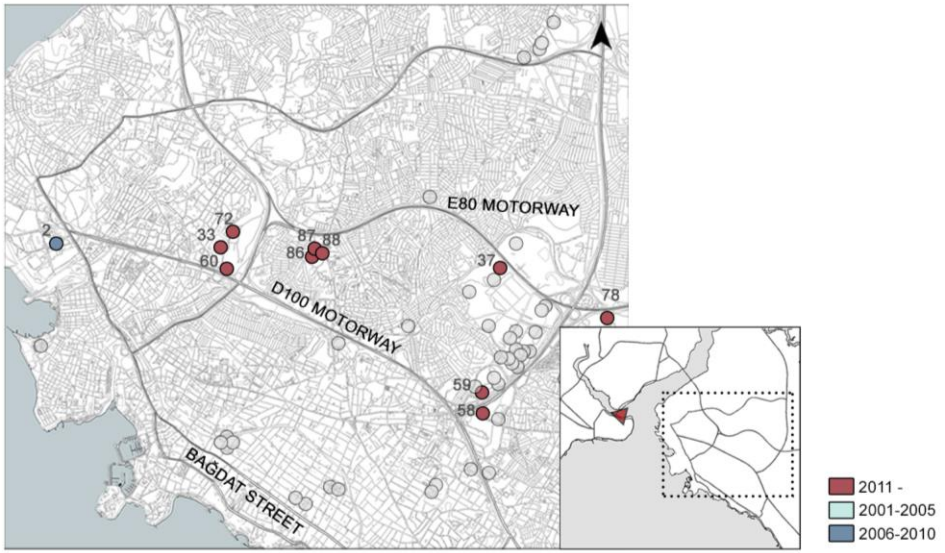

Figure 4. 23: The impact of high-rises on the skyline of the Asian side of Istanbul, observed from Haliç Railway Bridge (Şevkin, 2016).

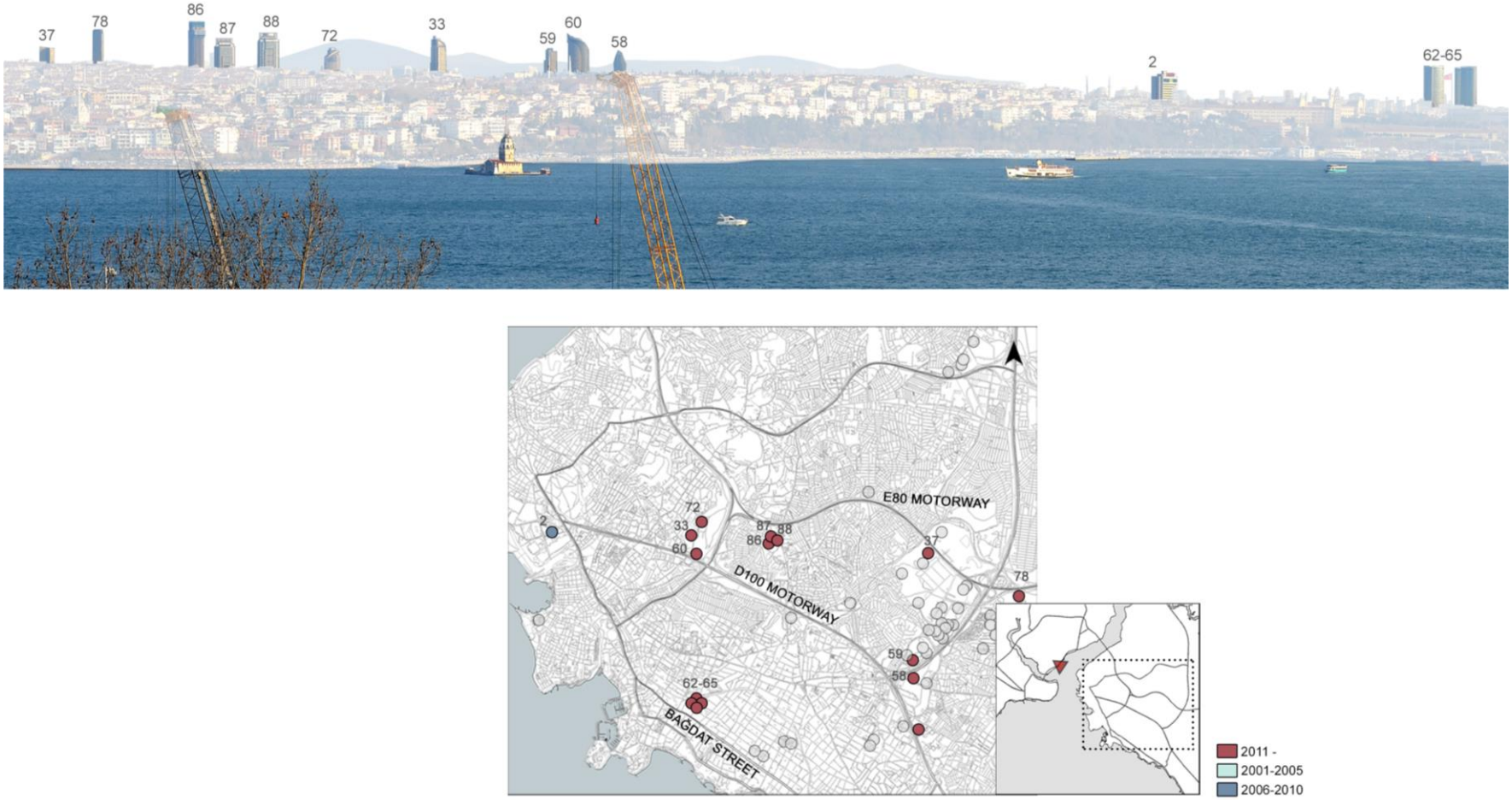

Figure 4. 24: The impact of high-rises on the skyline of the Asian side of Istanbul, observed from Cihangir Park (Şevkin, 2016).

5. CONCLUSION

The unique topography of Istanbul combined with the urban visions of two powerful empires turned the skyline one of the key identifiers of the city. From the Byzantine Constantinople to the Ottoman Istanbul, skyline of the city subjected to a constant transformation. Churches crowning the hills of the Historic Peninsula defined the distant view of the capital of the Orthodox-Christian world. Grand scaled mosques replaced the churches after Ottoman conquest. The classical Ottoman image was formed by the repetition of domes and minarets symbolizing the Turkish-Islamic Empire. Following the modernization period, secular buildings had started to dominate the skyline. A brand new buildings hosting various functions such as Darülfünun, Vakıf Hans, military barracks undermined the sole dominance of the sultanic mosques on the city image.

The neglected status of the Istanbul in the early Republican Period changed with a rapid redevelopment process after the 1950s. The country relocated itself in the highly polarized Cold War era, which marked the beginning of series of changes in the social, political and economic structure of the city. Soon, built environment aligned itself with the changes and Istanbul encountered with the first high-rises. The number of high-rise developments in the city increased after the late 1980s due to the integration with the global economy. A new layer on the skyline was formed by the aggressive verticality of skyscrapers. A number of controversial cases, Park Otel, Süzer Plaza, 16-9, caused public discomfort and intensified the popularity of the subject with wide media coverage. Even though the projects went through lengthy trials, only Park Otel could be partially demolished. Despite the intense discussions, 16-9 developments still rises in close vicinity of the historic centre. These projects vividly illustrates that standard regulations overlooking the specific site conditions are inadequate in terms of assessing the impact of the buildings on the skyline. Yet, instead of dealing with the issue from a deeper perspective, discussions about the Istanbul skyline only revolve around the question of whether it is broken or not.

Even though it is a widely spoken phenomenon in Turkey and around the world, there is a sizable gap in the academic studies focusing on the subject. Besides, the term skyline does not have a single definition and its quality cannot be accessed via a predefined mechanism. Considering their representative quality, humankind has made its mark on the urban skyline by erecting tall buildings since the early history. This means that with the every shift of power in the city, skylines transformed as well. However, it was the emergence of skyscrapers that heated up the discussions.

Skyscrapers, as a new building type representing the corporate identities, were born as an American phenomenon. The arrival of the high-rises to the historic European cities after WWII and to the Asian cities following the globalization intensified the popularity of the subject. Most of the Asian cities questing for a world city status strongly appreciated the ability of skyscrapers to form a skyline and employed them to symbolize their financial supremacy. Contradictorily, cities with historic background tend to consider the overall view of the city before the arrival of skyscrapers more valued, therefore every intrusion from high-rises assessed as damaging. However, each city responded to the challenge of integrating skyscrapers into the skyline in its own way considering the city's primary visions and goals. Istanbul however still lacks an overall plan for the design and control of its skyline that evaluates the city as a three dimensional entity.

The inclusion of high-rises to the Istanbul skyline is result of a cumulative process. As widely discussed in the earlier parts of the thesis, and unlike the common public understanding, Istanbul's skyline has always been under constant transformation since its establishment. Following a detailed survey of the earlier periods this thesis has focused on the subject from the lenses of the urban history discipline and documented the transformation occurred in the last 70 years as the visual indicator of the changes in the social, political and economic structure of the city. Today, distant image of the city convey a different message from the pre-1950's Istanbul. With the early high-rises emerged in the historic city between 1950 and 1980, the intense developments following the northern expansion of the city since the 1980s and arrival of the high-rises to the Asian site in post-2005, a new layer included in the Istanbul skyline. After the 1950s, the dominant element of the skyline no longer symbolizes the religious or governmental authority as it once did, but embodies the financial power. The study covered a time period started from the 1950s when

Istanbul first encountered with high-rises and reached up to today. In this regard, this thesis, as indicated in the introduction, contributes to the existing literature on the modern architectural and urban history of Istanbul. However, the development of high-rises and transformation of the skyline, as always be, is still an on-going phenomenon and what is happening today will certainly continue to be assessed by future architectural historians.

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APPENDICIES

APPENDIX A: Maps and Lists
APPENDIX B: Skyline Views from Selected Vista Points
APPENDIX C: Transformation of the Skyline over the Years

APPENDIX A

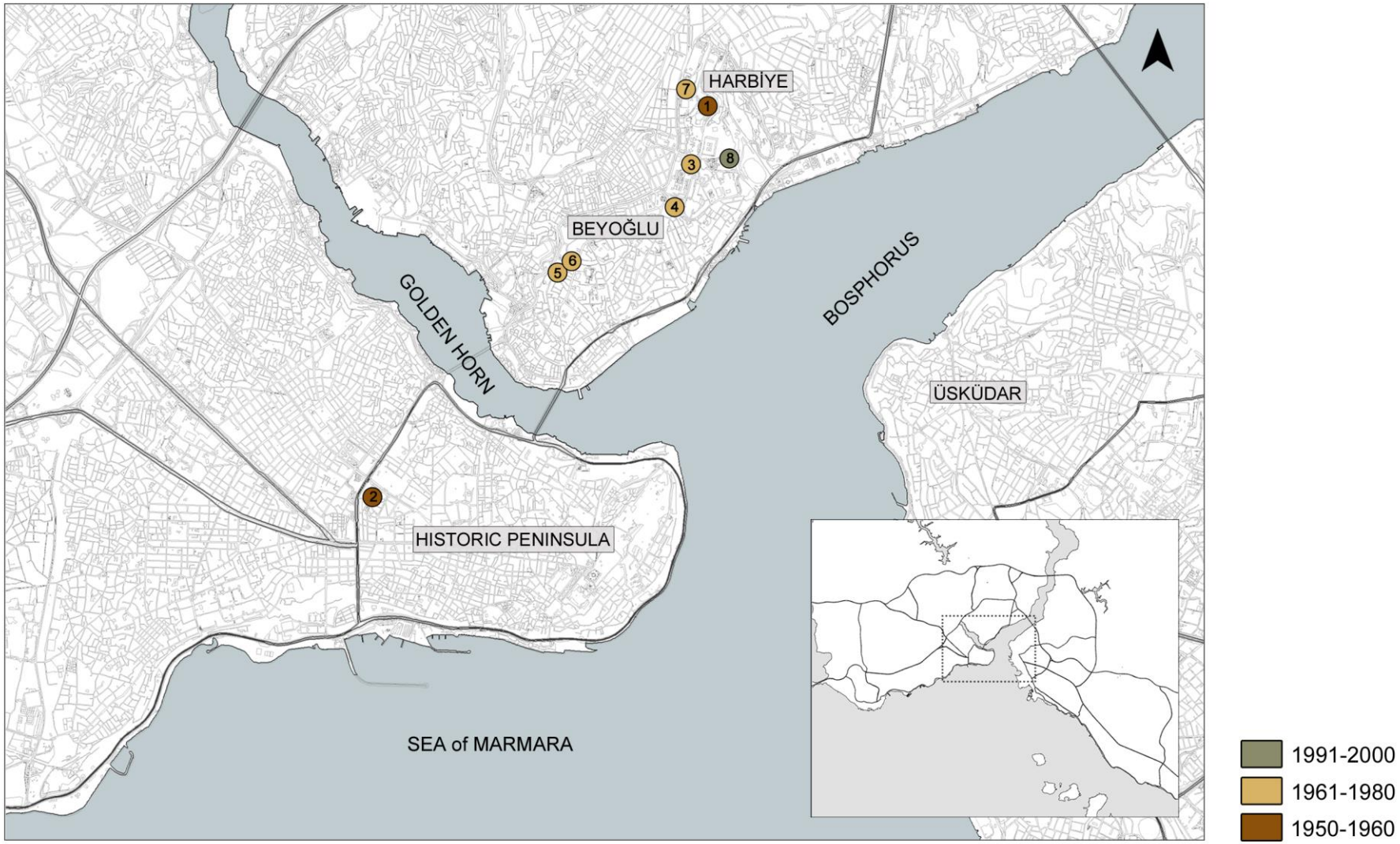

Figure A. 1: Map indicating the construction dates of the high-rises in the historic city (Şevkin, 2016).

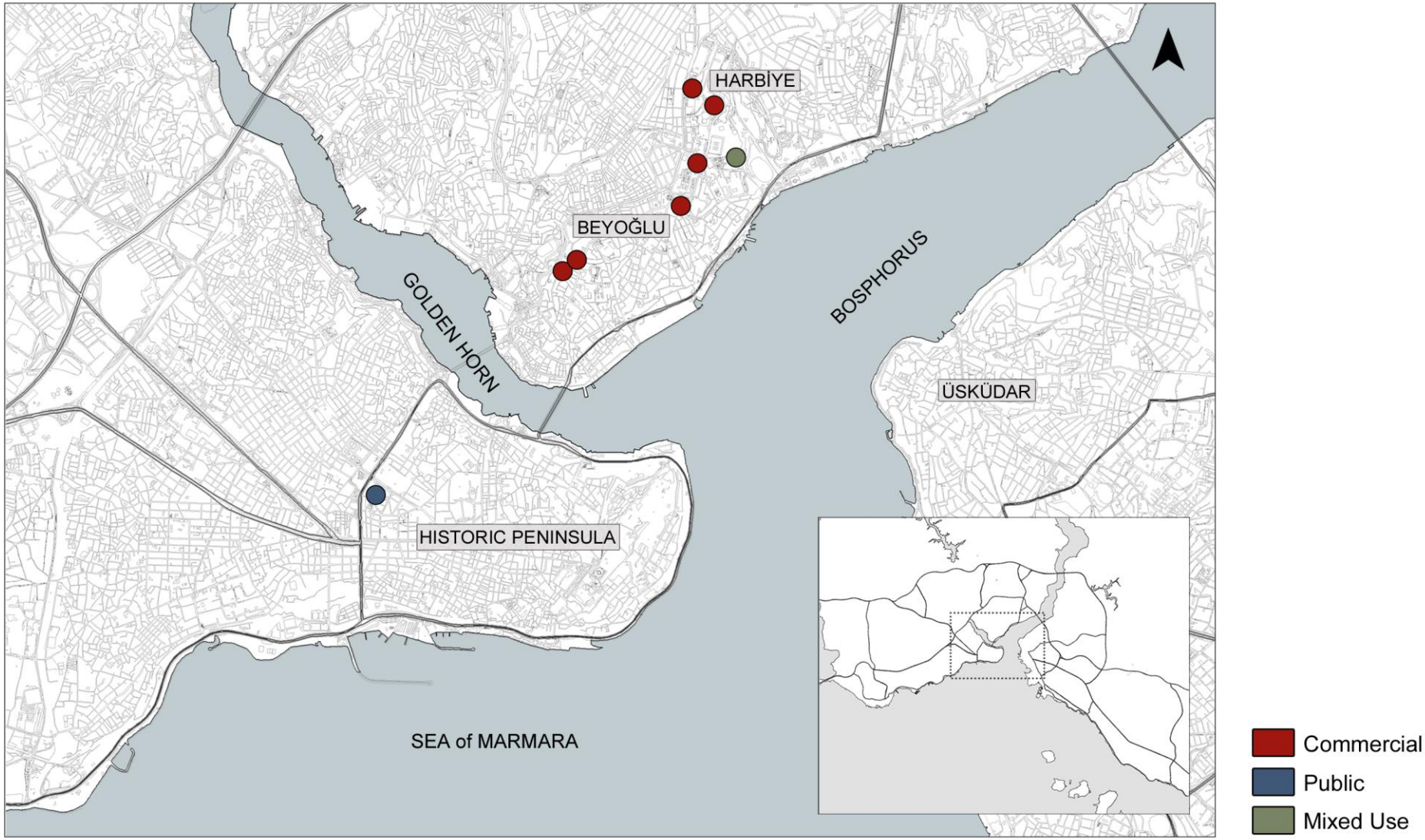

Figure A. 2: Map indicating the usages of the high-rises in the historic city (Şevkin, 2016).

	Building	Construction Start	Construction End	Architect	Usage	Floors	Height (m)
1	**Hilton Istanbul Bosphorus**	1951	1955	Skidmore, Owings & Merrill - Sedat Hakkı Eldem	Commercial	11	58,79
2	**Istanbul Municipal Building**	1953	1960	Nevzat Erol	Public	8	
3	**InterContinental Hotel (Former Sheraton Hotel)**	1959	1975	AHE Mimarlık	Commercial	18	94,06
4	**The Marmara Hotel (Former InterContinental Hotel)**	1971	1975	Fatin Uran & Rükneddin Güney	Commercial	20	95,86
5	**The Marmara Pera Hotel (Former Etap Hotel)**	1970	1975	Yüksel Okan	Commercial	20	82,30
6	**Odakule**	1970	1975	Kaya Tecimen & Ali Kemal Taner	Commercial	21	86,22
7	**Harbiye Orduevi**	1971	1974	Metin Hepgüler	Commercial	20	90
8	**Süzer Plaza**	1987	2000	Doruk Pamir	Commercial	34	153,65

Figure A. 3: List of the high-rises in the historic city.

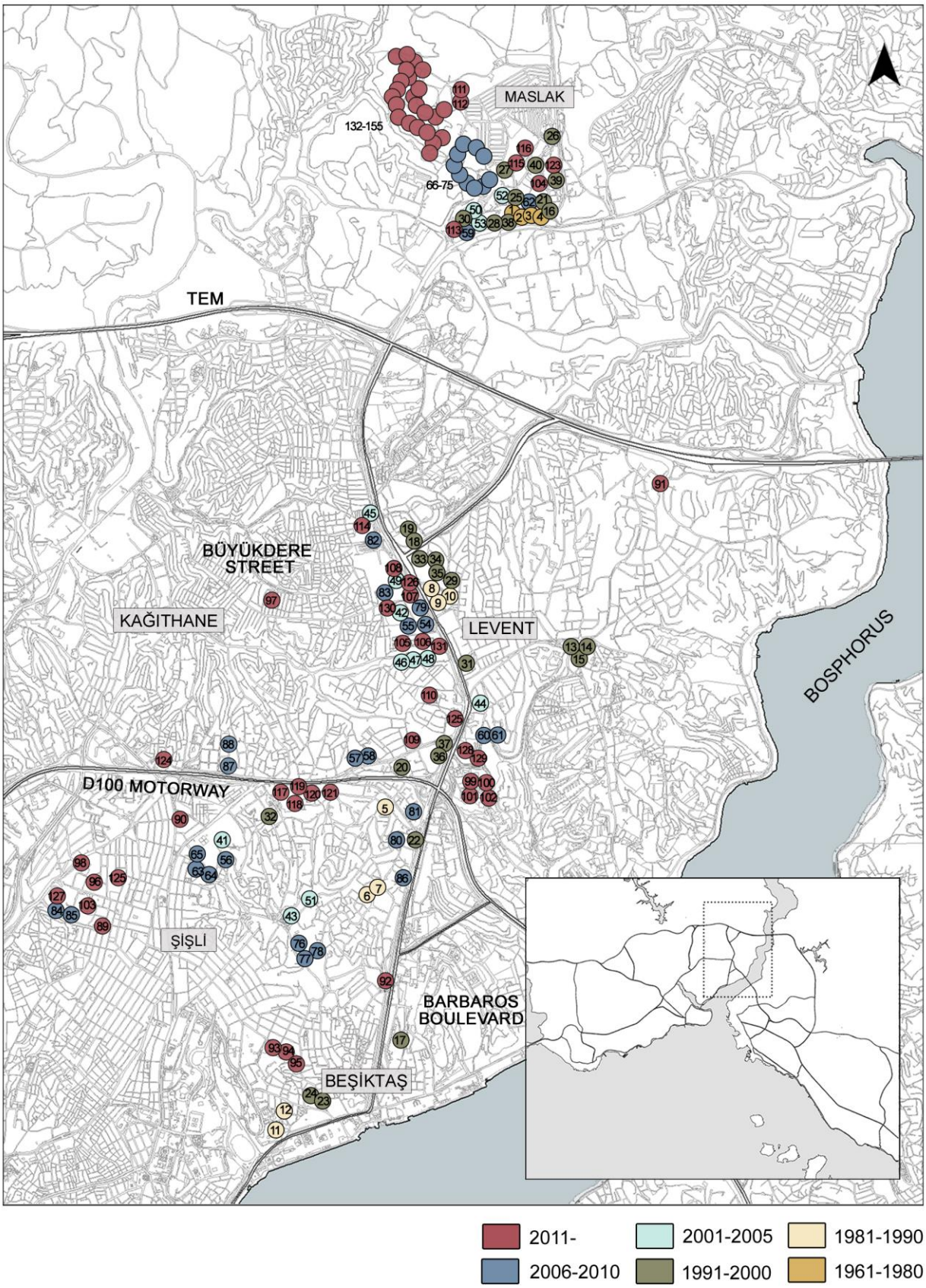

Figure A. 4: Map indicating the construction dates of the high-rises on the Zincirlikuyu-Maslak axis (Şevkin, 2016).

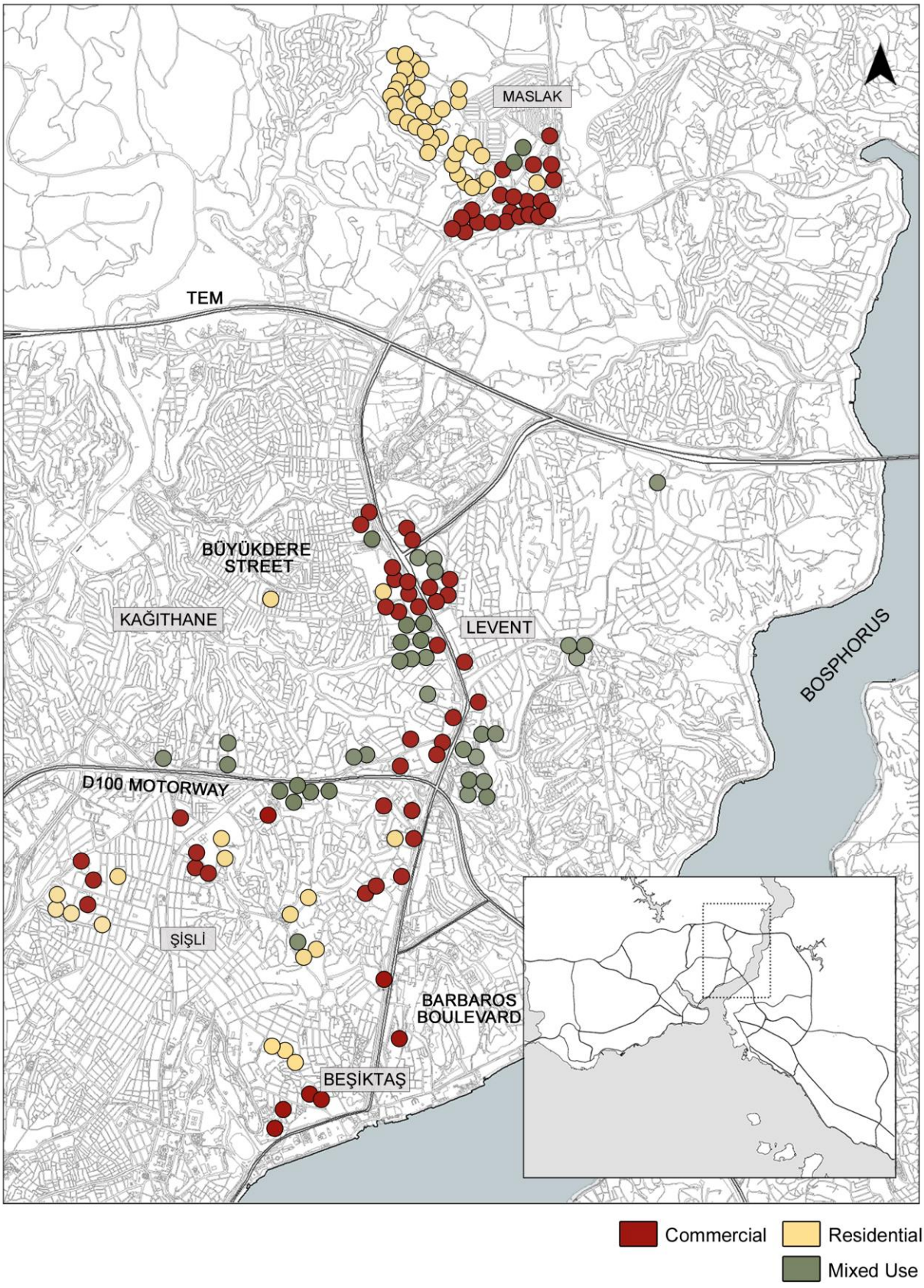

Figure A. 5: Map indicating the usages of the high-rises on the Zincirlikuyu-Maslak axis (Şevkin, 2016)..

	Building	Construction Start	Construction End	Architect	Usage	Floors	Height(m)
1	**Petrol Ofisi Headquarters**		1976	Sedat Hakkı Eldem	Commercial	15	58,79
2	**Ziraat Bank Headquarters 1 (Former Alarko Holding)**	1976	1979	Sedat Hakkı Eldem	Commercial	8	
3	**Ziraat Bank Headquarters 2 (Former Alarko Holding)**	1976	1979	Sedat Hakkı Eldem	Commercial	8	
4	**Ziraat Bank Headquarters 3 (Former Alarko Holding)**	1976	1979	Sedat Hakkı Eldem	Commercial	10	
5	**Türk Telekom Headquarters**	1981	1983	Levent Aksüt & Yaşar Marulyalı UMO Mimarlık	Commercial	18	70,54
6	**Barbaros Plaza 1**		1987		Commercial	24	90
7	**Barbaros Plaza 2**		1987		Commercial	24	90
8	**Yapı Kredi Plaza 1**		1989	Ayhan Böke & Haluk Tümay / Tümay Mimarlık	Commercial	20	78,38
9	**Yapı Kredi Plaza 2**		1989	Ayhan Böke & Haluk Tümay / Tümay Mimarlık	Commercial	20	78,38
10	**Yapı Kredi Plaza 3**		1989	Ayhan Böke & Haluk Tümay / Tümay Mimarlık	Commercial	20	78,38
11	**Swissotel The Bosphorus 1**		1989	Turgut Alton & Kanka Kikaku Sekkeisha	Commercial	15	58,79
12	**Swissotel The Bosphorus 2**		1989	Turgut Alton & Kanka Kikaku Sekkeisha	Commercial	15	58,79
13	**Akmerkez 1**		1992	Fatih Uran	Mixed use	28	100
14	**Akmerkez 2**		1992	Fatih Uran	Mixed use	21	82,30
15	**Akmerkez 3**		1992	Fatih Uran	Mixed use	18	70,54
16	**Steigenberger Istanbul Maslak**	1989	1992	Ertem Ertunga	Commercial	27	99
17	**Conrad Istanbul Bosphorus**	1990	1992	Erol Aksoy & Ergin Akman & Mehmet Beset & William B. Tabler	Commercial	20	78,38
18	**Akbank Tower (Sabancı Center 1)**	1988	1993	Ayhan Böke & Haluk Tümay / Tümay Mimarlık	Commercial	39	158
19	**Sabancı Center 2**	1988	1993	Ayhan Böke & Haluk Tümay / Tümay Mimarlık	Commercial	34	140
20	**Maya Akar Center**	1987	1993	Levent Aksüt & Yaşar Marulyalı / UMO Mimarlık	Commercial	30	110,05
21	**Spring Giz Plaza**	1992	1994	Giz İnşaat	Commercial	27	105,81
22	**The Plaza Hotel**	1990	1995	Okan Ülbay & Dinçer Tunalı	Commercial	23	90,14
23	**BJK Plaza 1**	1992	1995		Commercial	15	58,79
24	**BJK Plaza 2**	1992	1995		Commercial	15	58,79
25	**Beybi Giz Plaza**	1994	1996	Giz İnşaat	Commercial	34	136
26	**Nurol Plaza**		1997	Tugay Toydemir	Commercial	20	78,38
27	**Polaris Plaza**		1998	Mimtur İnşaat	Commercial	28	120
28	**Park Plaza**		1998	İbrahim Öztürk / MM Proje	Commercial	24	94,06
29	**Yapı Kredi Bank Headquarters**		1999	Tümay Mimarlık / Haluk Tümay	Commercial	25	120
30	**Giz 2000 Plaza**	1996	1999	Giz İnşaat	Commercial	23	90,14
31	**Edition Hotel Istanbul (Former Demirbank (HSBC) Headquarters)**	1994	1999	Haluk Tümay / Tümay Mimarlık	Commercial	15	58,79
32	**Toprak Holding Headquarters**		1999	Ertunga Mimarlık	Commercial		

	Building	Construction Start	Construction End	Architect	Usage	Floors	Height(m)
33	İş Kuleleri 1	1993	2000	Swanke Hayden Connell Architects & Tekeli & Sisa Mimarlık Ortaklığı	Mixed use	52	181,20
34	İş Kuleleri 2	1993	2000	Swanke Hayden Connell Architects & Tekeli & Sisa Mimarlık Ortaklığı	Mixed use	36	117,61
35	İş Kuleleri 3	1993	2000	Swanke Hayden Connell Architects & Tekeli & Sisa Mimarlık Ortaklığı	Mixed use	36	117,61
36	Tat Towers 1		2000	Proje Limited Mimarlık	Commercial	34	143
37	Tat Towers 2		2000	Proje Limited Mimarlık	Commercial	34	143
38	Windowist Tower (Dim Plaza)		2000	Nezihi Tekinel	Commercial	20	78,38
39	USO Center	1995	2000		Commercial	20	78,38
40	HSBC Bank Headquarters		2000	Çınar Şahenk	Commercial	18	70,54
41	Şişli Elit Residence	1998	2001	BSB London Architects	Residential	35	140
42	Harmanci Giz Plaza	1999	2001	Giz İnşaat	Commercial	24	90
43	Polat Tower Residence	1999	2002	Polat inşaat	Residential	40	152,50
44	Garanti Bank Headquarters	1997	2002	Gerner Kronick & Valcarcel Architects	Commercial	22	121,56
45	Mövenpick Hotel Istanbul	2000	2002	Turgut Alton & Oya Ökmen & aynur Otağ / TAM Mimarlık	Commercial	24	105
46	Metrocity 1	1995	2003	Doğan Tekeli & Sami Sisa & Anthony Belluschi	Mixed use	35	143
47	Metrocity 2	1995	2003	Doğan Tekeli & Sami Sisa & Anthony Belluschi	Mixed use	35	143
48	Metrocity 3	1995	2003	Doğan Tekeli & Sami Sisa & Anthony Belluschi	Mixed use	31	143
49	Tekfen Tower	2000	2003	Swanke Hayden Connell Architects	Commercial	28	117,50
50	İz Giz Plaza	2001	2003	Giz İnşaat	Commercial	24	91
51	Selenium Residence	2002	2004	Aşçıoğlu İnşaat	Residential	30	120
52	Sun Plaza	2002	2005	Tanju Edige	Residential	38	147
53	Güney Plaza	2001	2005		Residential	21	82,30
54	Kanyon 1	2003	2006	The Jerde Partnership & Tabanlıoğlu Architects	Mixed use	30	118
55	Kanyon 2	2003	2006	The Jerde Partnership & Tabanlıoğlu Architects	Mixed use	22	86,22
56	Şişli Plaza	2000	2007	Yapı Merkezi Gayrimenkul Grubu	Residential	46	170
57	Kempinski Residence Astoria 1		2007	Ali Bahadır Erdin	Mixed use	28	127
58	Kempinski Residence Astoria 2		2007	Ali Bahadır Erdin	Mixed use	28	127
59	Abdi İbrahim Tower	2003	2007		Commercial	23	120
60	Kempinski Bellevue Residences 1		2007	Ertem Ertunga	Mixed use	28	109,73
61	Kempinski Bellevue Residences 2		2007	Ertem Erdun	Mixed use	28	109,73
62	Veko Giz Plaza	2003	2007	Giz İnşaat	Commercial	27	105,81

	Building	Construction Start	Construction End	Architect	Usage	Floors	Height(m)
103	**Arista Bomonti Tower (Bomonti Business Center)**	2011	2013	Murat Kader	Commercial	24	102
104	**Spine Tower**	2010	2014	İki Design Group	Mixed use	51	201
105	**River Plaza 1**	2012	2014	B+H Architects & Piramit Mimarlık	Mixed use	32	170
106	**River Plaza 2**	2012	2014	B+H Architects & Piramit Mimarlık	Mixed use	37	148
107	**Zorlu Levent 199**	2011	2014	Tabanlıoğlu Architects	Commercial	42	170
108	**Soyak Kristal Kule**	2011	2014	Pei Cobb Freed & Partners & Has Mimarlık	Commercial	35	169
109	**Torun Tower (Denizbank Genel Müdürlük)**	2011	2014	Arquitectonica & Piramit Mimarlık	Commercial	35	153
110	**Istanbloom**	2011	2014	DBArchitects	Mixed use	46	150
111	**Eclipse 1**	2012	2014	İki Design Group	Residential	36	141,09
112	**Eclipse 2**	2012	2014	İki Design Group	Residential	36	141,09
113	**Maslak no/1**		2014	Emre Arolat Architects	Commercial	28	112
114	**Promesa Seba Tower**	2012	2014	Loft Architects	Commercial	29	110
115	**42 Maslak 1**	2011	2015	Chapman Taylor & Turgut Toydemir / Piramit Mimarlık	Mixed use	42	148
116	**42 Maslak 2**	2011	2015	Chapman Taylor & Turgut Toydemir / Piramit Mimarlık	Mixed use	42	148
117	**Torun Center 1**	2012	2016	Emre Arolat Architects	Mixed use	43	160
118	**Torun Center 2**	2012	2016	Emre Arolat Architects	Mixed use	43	160
119	**Torun Center 3**	2012	2016	Emre Arolat Architects	Mixed use	39	154
120	**Quasar Tower 1**		2016	Emre Arolat Architects	Mixed use	41	156
121	**Quasar Tower 2**		2016	Emre Arolat Architects	Mixed use	41	156
122	**Nurol Tower**	2012	2016	Piramit Mimarlık	Mixed use	32	142
123	**Doğuş Maslak Tower**	2013	2016	Murat Aksu & Umut İyigün / MuuM	Commercial	21	82,30
124	**Elysium Art Şişli**	2013	2016	Piramit Mimarlık	Residential	26	
125	**GAP İnşaat Office Tower**						
126	**İstanbul Tower 205**		Under Construction	Skidmore, Owings & Merrill LLP	Commercial	61	228
127	**Queen Central Park Bomonti**	2014	Under Construction	TAGO Mimarlık	Residential	52	195
128	**Çiftçi Towers 1**	2011	Under Construction	John McAslan + Partners	Mixed use	45	180
129	**Çiftçi Towers 2**	2011	Under Construction	John McAslan + Partners	Mixed use	45	180
130	**Nidakule Levent**	2013	Under Construction	Tabanlıoğlu Architects	Commercial	31	121,49
131	**Ferko Signature**	2014	Under Construction	Foster + Partners	Commercial	31	121,49
132	**Maslak 1453 A1**	2013	Under Construction	Atölye T Mimarlık	Residential	44	176,5
133	**Maslak 1453 A2**	2013	Under Construction	Atölye T Mimarlık	Residential	44	176,5
134	**Maslak 1453 A3**	2013	Under Construction	Atölye T Mimarlık	Residential	44	176,5
135	**Maslak 1453 A4**	2013	Under Construction	Atölye T Mimarlık	Residential	44	176,5

	Building	Construction Start	Construction End	Architect	Usage	Floors	Height(m)
63	Şişli Tat Center 1		2007		Commercial	26	130
64	Şişli Tat Center 2		2007		Commercial	26	130
65	Şişli Tat Hotel		2007		Commercial	22	109
66	Mashattan 1	2005	2008	MM Proje	Residential	33	129,33
67	Mashattan 2	2005	2008	MM Proje	Residential	33	129,33
68	Mashattan 3	2005	2008	MM Proje	Residential	33	129,33
69	Mashattan 4	2005	2008	MM Proje	Residential	33	129,33
70	Mashattan 5	2005	2008	MM Proje	Residential	33	129,33
71	Mashattan 6	2005	2008	MM Proje	Residential	33	129,33
72	Mashattan 7	2005	2008	MM Proje	Residential	33	129,33
73	Mashattan 8	2005	2008	MM Proje	Residential	33	129,33
74	Mashattan 9	2005	2008	MM Proje	Residential	33	129,33
75	Mashattan 10	2005	2008	MM Proje	Residential	33	129,33
76	Selenium Plaza		2008	Aşçıoğlu İnşaat	Mixed use	22	86,22
77	Selenium Twins 1	2006	2009	Aşçıoğlu İnşaat	Residential	35	164
78	Selenium Twins 2	2006	2009	Aşçıoğlu İnşaat	Residential	35	164
79	Apa Giz Plaza	2007	2009	Giz İnşaat	Commercial	32	125,41
80	Selenium Panorama	2007	2009	Ömer Çamoğlu / Aşçıoğlu İnşaat	Residential	26	101,25
81	Point Hotel Barbaros		2009	Tugay Toydemir	Commercial	20	78,38
82	Istanbul Sapphire	2006	2010	Tabanlıoğlu Architects	Mixed use	54	261
83	Loft Gardens	2007	2010	Tabanlıoğlu Architects	Residential	23	
84	Anthill Residence 1	2008	2010	MM Proje	Residential	55	195
85	Anthill Residence 2	2008	2010	MM Proje	Residential	55	195
86	Reneissance Istanbul Polat Bosphorus Hotel		2010		Commercial		
87	Trump Towers 1	2006	2011	Brigitte Weber Architects	Mixed use	39	156,30
88	Trump Towers 2	2006	2011	Brigitte Weber Architects	Mixed use	37	147,20
89	Divan Residence at Bomonti	2009	2012	TAGO Mimarlık	Residential	43	159
90	Şişli Key Plaza (Marriott Hotel Şişli)	2009	2012	Piramit Mimarlık	Commercial	32	135
91	Le Meridien Istanbul Etiler		2012	Emre Arolat Architects	Mixed use	30	110
92	Büyükhanlı Barbaros	2009	2012	Barbaros Sağdıç / Proje Limited Mimarlık	Commercial	24	94,06
93	Maçka Residence 1	2010	2012	Mixity Design	Residential	14	54,87
94	Maçka Residence 2	2010	2012	Mixity Design	Residential	13	50,95
95	Maçka Residence 3	2010	2012	Mixity Design	Residential	12	47,03
96	Hilton İstanbul Bomonti Hotel & Conference Center	2010	2013	Erdal Tusavul / Tusavul Mimarlık	Commercial	48	143,10
97	NEF 163		2013		Residential	30	131
98	iTower Bomonti		2013	TAGO Architects	Commercial	30	110
99	Zorlu Center 1	2009	2013	Tabanlıoğlu Architects & Emre Arolat Architects	Mixed use	32	107
100	Zorlu Center 2	2009	2013	Tabanlıoğlu Architects & Emre Arolat Architects	Mixed use	32	107
101	Zorlu Center 3	2009	2013	Tabanlıoğlu Architects & Emre Arolat Architects	Mixed use	32	107
102	Zorlu Center 4	2009	2013	Tabanlıoğlu Architects & Emre Arolat Architects	Mixed use	32	107

	Building	Construction Start	Construction End	Architect	Usage	Floors	Height(m)
136	**Maslak 1453 A5**	2013	Under Construction	Atölye T Mimarlık	Residential	44	176,5
137	**Maslak 1453 B1**	2013	Under Construction	Atölye T Mimarlık	Residential	42	170,5
138	**Maslak 1453 B2**	2013	Under Construction	Atölye T Mimarlık	Residential	42	170,5
139	**Maslak 1453 B3**	2013	Under Construction	Atölye T Mimarlık	Residential	42	170,5
140	**Maslak 1453 B4**	2013	Under Construction	Atölye T Mimarlık	Residential	42	170,5
141	**Maslak 1453 C1**	2013	Under Construction	Atölye T Mimarlık	Residential	22	102,5
142	**Maslak 1453 C2**	2013	Under Construction	Atölye T Mimarlık	Residential	22	102,5
143	**Maslak 1453 C3**	2013	Under Construction	Atölye T Mimarlık	Residential	22	102,5
144	**Maslak 1453 C4**	2013	Under Construction	Atölye T Mimarlık	Residential	22	102,5
145	**Maslak 1453 C5**	2013	Under Construction	Atölye T Mimarlık	Residential	22	102,5
146	**Maslak 1453 C6**	2013	Under Construction	Atölye T Mimarlık	Residential	22	102,5
147	**Maslak 1453 C7**	2013	Under Construction	Atölye T Mimarlık	Residential	22	102,5
148	**Maslak 1453 C8**	2013	Under Construction	Atölye T Mimarlık	Residential	22	102,5
149	**Maslak 1453 C9**	2013	Under Construction	Atölye T Mimarlık	Residential	22	102,5
150	**Maslak 1453 C10**	2013	Under Construction	Atölye T Mimarlık	Residential	22	102,5
151	**Maslak 1453 C11**	2013	Under Construction	Atölye T Mimarlık	Residential	22	102,5
152	**Maslak 1453 C12**	2013	Under Construction	Atölye T Mimarlık	Residential	22	102,5
153	**Maslak 1453 C13**	2013	Under Construction	Atölye T Mimarlık	Residential	22	102,5
154	**Maslak 1453 C14**	2013	Under Construction	Atölye T Mimarlık	Residential	22	102,5
155	**Maslak 1453 C15**	2013	Under Construction	Atölye T Mimarlık	Residential	22	102,5

	Bina Adı	Construction Start	Construction End	Architect	Usage	Floors	Height (m)
1	Mertkule Residence		1985		Residential	24	94,06
2	Siyami Ersek Hospital	1998	2000		Public Institution		
3	Kozyatagi Business Center	2000	2003	Ergün Mimarlık	Commercial	30	119,29
4	Andromeda 1		2005	Ağaoğlu Mimarlık Grubu	Residential	34	133,25
6	Starland 1		2005	Ağaoğlu Mimarlık Grubu	Residential	30	117,57
7	Southside 1		2005	Ağaoğlu Mimarlık Grubu	Residential	27	105,81
5	Andromeda 2		2005	Ağaoğlu Mimarlık Grubu	Residential	26	101,90
8	Highpark 1		2005		Residential	25	97,98
9	Highpark 2		2005		Residential	25	97,98
10	Highpark 3		2005		Residential	25	97,98
11	Avangarden Residence	2004	2006	Evrenol Architects	Residential	27	105,81
12	Incity B1	2005	2007	TAGO Architects	Residential	30	117,57
13	Incity B2	2005	2007	TAGO Architects	Residential	30	117,57
14	Suncity 1	2005	2007	Ağaoğlu Mimarlık Grubu	Residential	29	113,65
15	Suncity 2	2005	2007	Ağaoğlu Mimarlık Grubu	Residential	29	113,65
16	Suncity 3	2005	2007	Ağaoğlu Mimarlık Grubu	Residential	29	113,65
17	Suncity 4	2005	2007	Ağaoğlu Mimarlık Grubu	Residential	29	113,65
18	Baytur Kozyatagi Konutlari 1		2007		Residential	26	101,90
20	Yesil Vadi Konaklari 4	2004	2007	Adnan Kazmaoğlu Mimarlık Araştırma Merkezi	Residential	26	101,90
19	Baytur Kozyatagi Konutlari 2		2007		Mixed Use	25	97,98
21	Regnum Sky Residence	2005	2007		Residential	23	90,14
22	Uphill Court Residence 1	2006	2008	Teknik Yapı	Residential	34	133,25
23	Uphill Court Residence 2	2006	2008	Teknik Yapı	Residential	34	133,25
24	Palladium Residence	2006	2008	Ergün Mimarlık	Mixed Use	33	125
25	Eltes Gold Residence	2007	2008	Ağaoğlu Mimarlık Grubu	Residential	27	105,81
26	Canan Residence 1	2008	2010	Adnan Kazmaoğlu Mimarlık Araştırma Merkezi	Residential	32	125,41
27	Flora Residence	2005	2010	Incon İnşaat	Residential	34	120
28	Dilman Tower 1	2007	2010	Teknik Yapı	Residential	28	90
29	Dilman Tower 2	2007	2010	Teknik Yapı	Residential	28	90
30	DoubleTree by Hilton Hotel		2010		Commercial	12	47,03
31	Sky Tower 1	2009	2011	Ağaoğlu Mimarlık Grubu	Residential	42	160
33	Ak-Asya Göl	2009	2011	Mimarlar Workshop	Residential	40	156,76
34	Uprise Elite	2007	2011	Teknik Yapı	Residential	42	154
32	Sky Tower 2	2009	2011	Ağaoğlu Mimarlık Grubu	Residential	32	130
35	Dumankaya Vizyon 1	2008	2011	TAGO Architects	Mixed Use	33	105

Figure A. 6: List of the high-rises on Zincirlikuyu-Maslak axis.

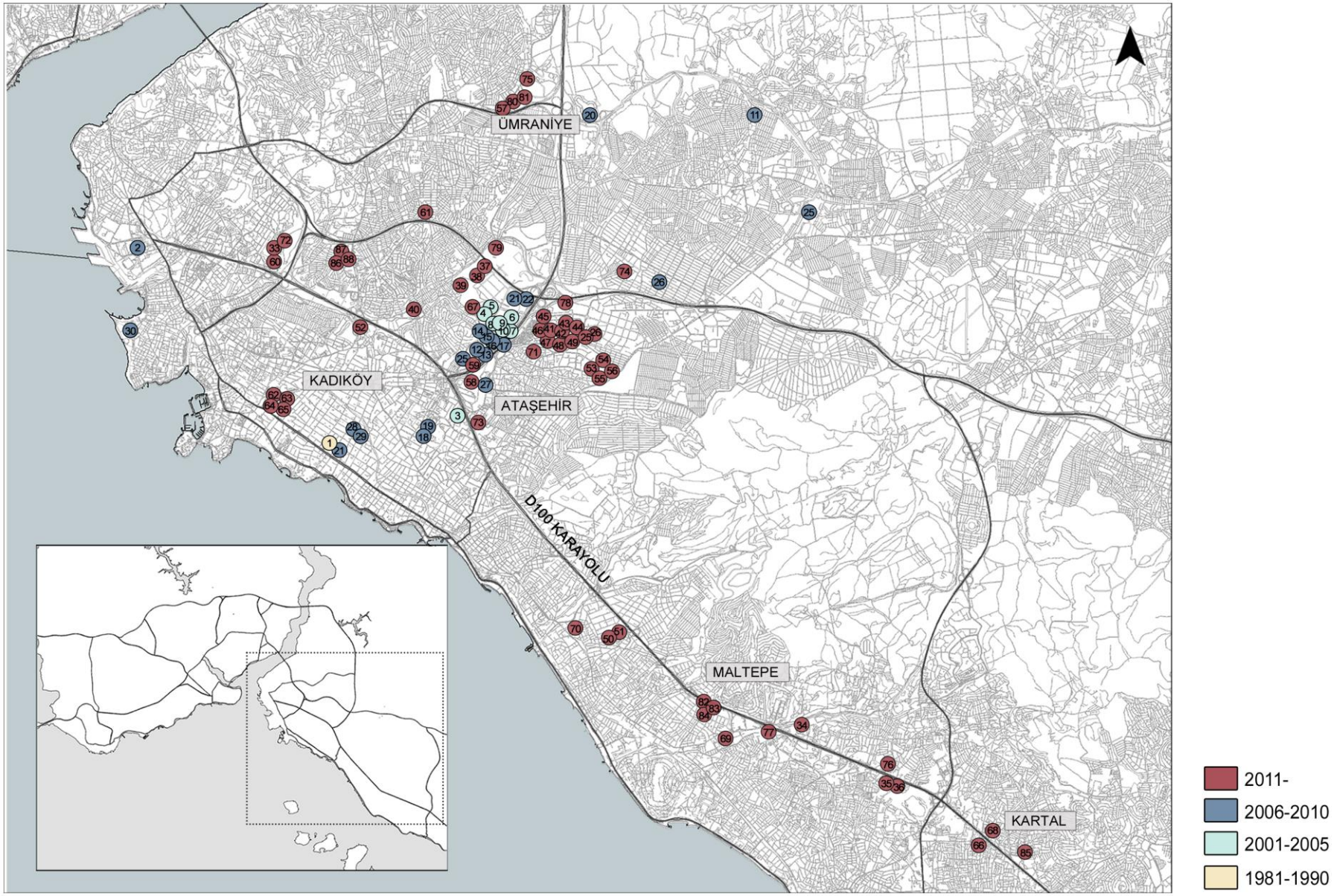

Figure A. 7: Map indicating the construction dates of the high-rises on the Asian side (Şevkin, 2016)..

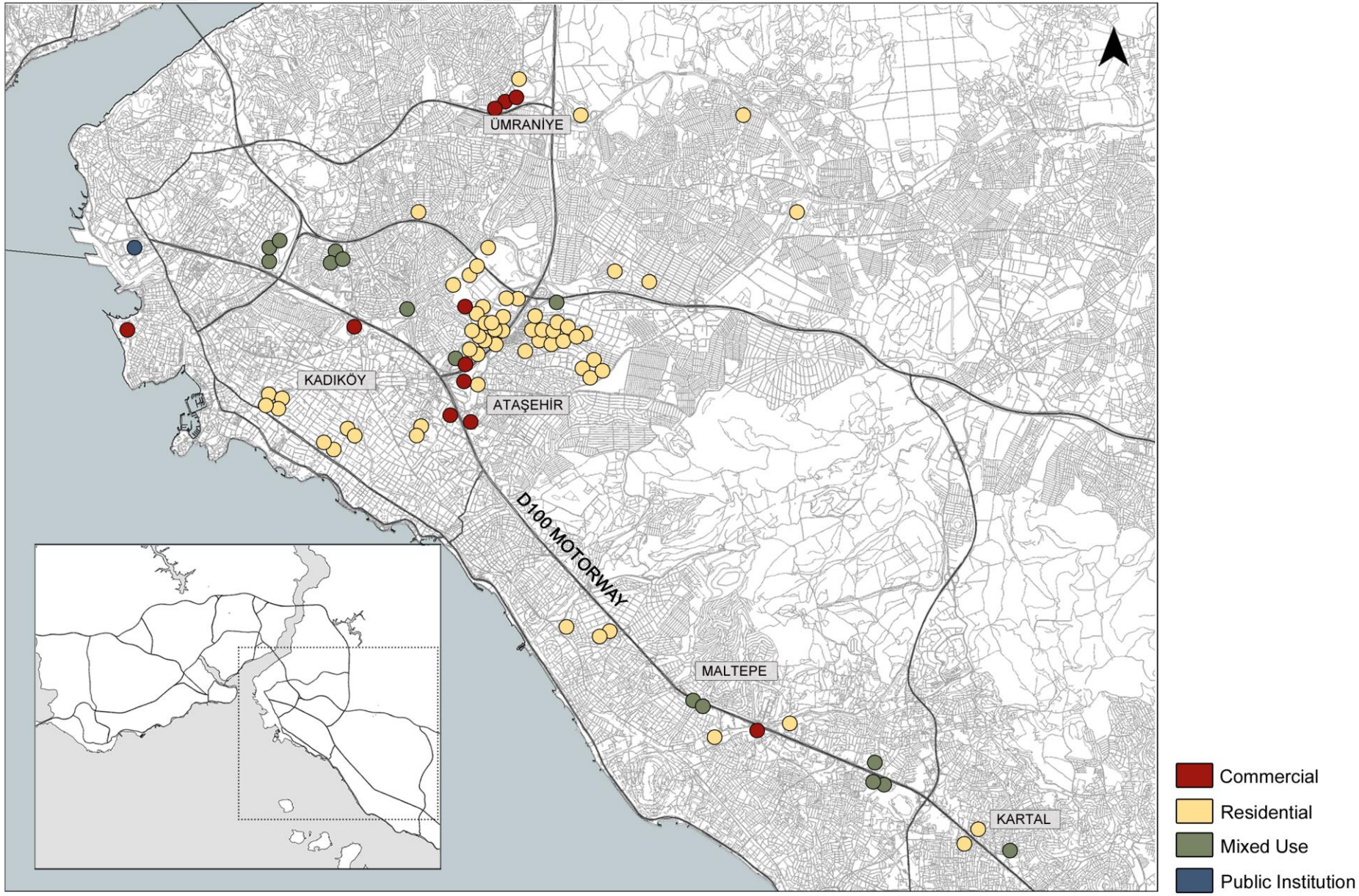

Figure A. 8: Map indicating the usages of the high-rises on the Asian side (Şevkin, 2016)..

	Bina Adı	Construction Start	Construction End	Architect	Usage	Floors	Height (m)
1	**Mertkule Residence**		1985		Residential	24	94,06
2	**Siyami Ersek Hospital**	1998	2000		Public Institution		
3	**Kozyatagi Business Center**	2000	2003	Ergün Mimarlık	Commercial	30	119,29
4	**Andromeda 1**		2005	Ağaoğlu Mimarlık Grubu	Residential	34	133,25
6	**Starland 1**		2005	Ağaoğlu Mimarlık Grubu	Residential	30	117,57
7	**Southside 1**		2005	Ağaoğlu Mimarlık Grubu	Residential	27	105,81
5	**Andromeda 2**		2005	Ağaoğlu Mimarlık Grubu	Residential	26	101,90
8	**Highpark 1**		2005		Residential	25	97,98
9	**Highpark 2**		2005		Residential	25	97,98
10	**Highpark 3**		2005		Residential	25	97,98
11	**Avangarden Residence**	2004	2006	Evrenol Architects	Residential	27	105,81
12	**Incity B1**	2005	2007	TAGO Architects	Residential	30	117,57
13	**Incity B2**	2005	2007	TAGO Architects	Residential	30	117,57
14	**Suncity 1**	2005	2007	Ağaoğlu Mimarlık Grubu	Residential	29	113,65
15	**Suncity 2**	2005	2007	Ağaoğlu Mimarlık Grubu	Residential	29	113,65
16	**Suncity 3**	2005	2007	Ağaoğlu Mimarlık Grubu	Residential	29	113,65
17	**Suncity 4**	2005	2007	Ağaoğlu Mimarlık Grubu	Residential	29	113,65
18	**Baytur Kozyatagi Konutlari 1**		2007		Residential	26	101,90
20	**Yesil Vadi Konaklari 4**	2004	2007	Adnan Kazmaoğlu Mimarlık Araştırma Merkezi	Residential	26	101,90
19	**Baytur Kozyatagi Konutlari 2**		2007		Mixed Use	25	97,98
21	**Regnum Sky Residence**	2005	2007		Residential	23	90,14
22	**Uphill Court Residence 1**	2006	2008	Teknik Yapı	Residential	34	133,25
23	**Uphill Court Residence 2**	2006	2008	Teknik Yapı	Residential	34	133,25
24	**Palladium Residence**	2006	2008	Ergün Mimarlık	Mixed Use	33	125
25	**Eltes Gold Residence**	2007	2008	Ağaoğlu Mimarlık Grubu	Residential	27	105,81
26	**Canan Residence 1**	2008	2010	Adnan Kazmaoğlu Mimarlık Araştırma Merkezi	Residential	32	125,41
27	**Flora Residence**	2005	2010	Incon İnşaat	Residential	34	120
28	**Dilman Tower 1**	2007	2010	Teknik Yapı	Residential	28	90
29	**Dilman Tower 2**	2007	2010	Teknik Yapı	Residential	28	90
30	**DoubleTree by Hilton Hotel**		2010		Commercial	12	47,03
31	**Sky Tower 1**	2009	2011	Ağaoğlu Mimarlık Grubu	Residential	42	160
33	**Ak-Asya Göl**	2009	2011	Mimarlar Workshop	Residential	40	156,76
34	**Uprise Elite**	2007	2011	Teknik Yapı	Residential	42	154
32	**Sky Tower 2**	2009	2011	Ağaoğlu Mimarlık Grubu	Residential	32	130
35	**Dumankaya Vizyon 1**	2008	2011	TAGO Architects	Mixed Use	33	105

	Bina Adı	Construction Start	Construction End	Architect	Usage	Floors	Height (m)
36	Dumankaya Vizyon 2	2008	2011	TAGO Architects	Mixed Use	25	97,98
37	Varyap Meridian Block 1	2009	2012	RMJM & Dome + Partners	Mixed Use	52	188,40
38	Varyap Meridian Block 2	2009	2012	RMJM & Dome + Partners	Mixed Use	45	180
39	Varyap Meridian Block 3	2009	2012	RMJM & Dome + Partners	Mixed Use	41	164
40	Dumankaya IKON	2009	2012	TAGO Architects	Mixed Use	41	149
41	My Towerland 1		2012	Ağaoğlu Mimarlık Grubu	Residential	34	133,25
42	My Towerland 2		2012	Ağaoğlu Mimarlık Grubu	Residential	34	133,25
43	My Towerland 3		2012	Ağaoğlu Mimarlık Grubu	Residential	34	133,25
44	My Towerland 4		2012	Ağaoğlu Mimarlık Grubu	Residential	34	133,25
45	My Towerland 5	2010	2013	Ağaoğlu Mimarlık Grubu	Residential	52	181
50	DAP Royal Center Tower 1	2010	2013	Proje Limited	Residential	30	140
52	Nidakule Göztepe	2010	2013	Ergün Mimarlık	Commercial	33	140
46	My Towerland 6		2013		Residential	34	133,25
47	My Towerland 7		2013	Ağaoğlu Mimarlık Grubu	Residential	33	129,33
53	Brandium Atasehir Tower 1		2013	Emay İnşaat	Residential	33	129,33
54	Brandium Atasehir Tower 2		2013	Emay İnşaat	Residential	32	125,41
55	Brandium Atasehir Tower 3		2013	Emay İnşaat	Residential	32	125,41
56	Brandium Atasehir Tower 4		2013	Emay İnşaat	Residential	32	125,41
48	My Towerland 8		2013		Residential	31	121,49
49	My Towerland 9		2013		Residential	31	121,49
51	DAP Royal Center Tower 2	2010	2013		Residential	27	120
57	Crowne Plaza Tower 1	2011	2013	Öner Özyar Mimarlik	Commercial	34	112
58	Renaissance Tower	2011	2014	Fxfowle Architects	Commercial	40	186
59	Palladium Tower	2012	2014		Commercial	43	180
60	Ak-Asya Kule	2010	2014	Mimarlar Workshop	Mixed Use	55	172,60
61	Exen İstanbul		2014	DB Mimarlık	Residential	44	160
62	Four Winds Residence 1	2010	2014	Taşyapı	Residential	45	145
63	Four Winds Residence 2	2010	2014	Taşyapı	Residential	45	145
64	Four Winds Residence 3	2010	2014	Taşyapı	Residential	45	145
65	Four Winds Residence 4	2010	2014	Taşyapı	Residential	45	145
66	Çukurova Tower		2014	TAGO Architects	Residential	36	141,09
67	Meridian Office and Hotel Tower		2014		Commercial	29	113,65
68	Kartall Mesa		2014	TAGO Architects	Residential	33	110
69	Nuvo Dragos 1		2014		Residential	27	105,81
70	Newada 1		2014	GAD Architecture	Residential	32	104
71	Buz Residence		2014		Residential	25	97,98
72	Ak-Asya Koru	2009	2015	Mimarlar Workshop	Mixed Use	43	173
73	AND Plaza	2014	2015	HPP Architects	Commercial	26	116
74	Kule Park		2015		Residential	25	97,98

	Bina Adı	Construction Start	Construction End	Architect	Usage	Floors	Height (m)
75	Antasya Residence		2016	L35 Architecture & As/OS Mimarlık	Residential	43	168,52
76	Pega Kartal 1	2013	2016	DB Mimarlık	Mixed Use	32	118
77	Kuris Kule		2016	Civaoğlu Mimarlık	Commercial	29	113,65
78	asya	2014	Devam Etmekte	RMJM London & Dome + Partners	Mixed Use	58	250
79	Leopardus (Sarphan Finans Park Residences)	2015	Devam Etmekte	Camoglu Mimarlik	Residential	48	178
80	Orya Park Tower 1	2012	Devam Etmekte	Nayman Mimarlık	Commercial	37	145
81	Orya Park Tower 2	2012	Devam Etmekte	Nayman Mimarlık	Commercial	37	145
82	Ritim Istanbul 1		Devam Etmekte	DB Mimarlık	Mixed Use	37	145
85	Metsan Nexus		Devam Etmekte	Studio Libeskind	Mixed Use	36	141,09
83	Ritim Istanbul 2		Devam Etmekte	DB Mimarlık	Mixed Use	34	133,25
84	Ritim Istanbul 3		Devam Etmekte	DB Mimarlık	Mixed Use	32	125,41
86	Emaar Square 1	2013	Devam Etmekte	Ktgy Group, Arquitectonica, Foster + Partners, SWA Group	Mixed Use	50	
87	Emaar Square 2	2013	Devam Etmekte	Ktgy Group, Arquitectonica, Foster + Partners, SWA Group	Mixed Use	34	
88	Emaar Square 3	2013	Devam Etmekte	Ktgy Group, Arquitectonica, Foster + Partners, SWA Group	Mixed Use	31	

Figure A. 9: List of the high-rises on the Asian side.

APPENDIX B

Figure B. 1: Skyline observed from Üsküdar shore, over the Bosphorus (Şevkin, 2016).

Figure B. 2: Skyline observed from Kuzguncuk shore, over the Bosphorus (Şevkin, 2016).

Figure B. 3: Skyline observed from Çamlıca hill, over the Bosphorus (Şevkin, 2016).

Figure B. 4: Skyline observed from Beşiktaş-Kadıköy ferry line (Şevkin, 2016).

Figure B. 5: Skyline observed from the Bosporus Bridge (on the left) and FSM Bridge (on the right) (Şevkin, 2017).

Figure B. 6: Skyline observed from Moda shore, over the Marmara entrance of the Bosphorus (Şevkin, 2016).

Figure B. 7: Skyline observed from Unkapanı shore, over the Golden Horn (Şevkin, 2016).

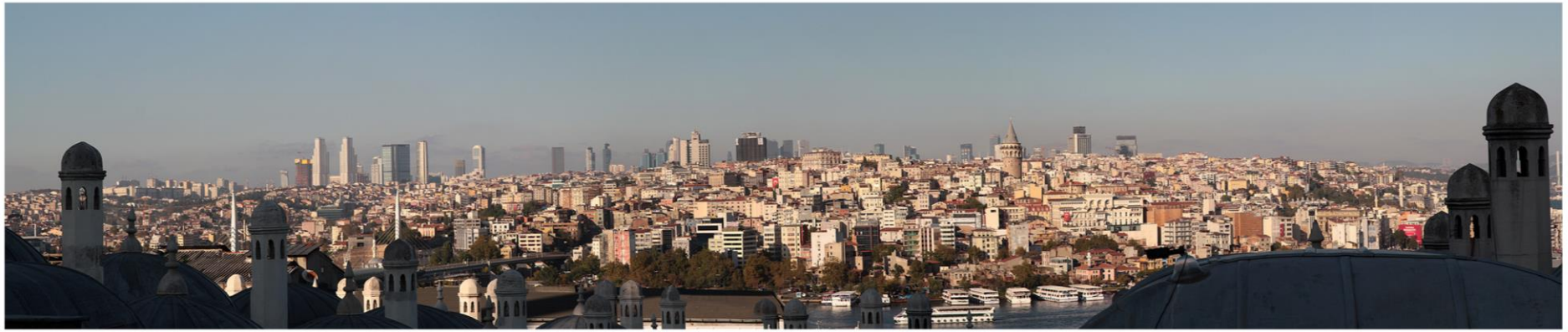

Figure B. 8: Skyline observed from the courtyard of Süleymaniye Mosque, over the Golden Horn (Şevkin, 2016).

Figure B. 9: Skyline of Asian side observed from the Haliç Railway Bridge (Şevkin, 2016).

Figure B. 10: Skyline of the Asian side observed from the Cihangir Park (Şevkin, 2016).

Figure B. 11: Skyline of the Asian side observed from Büyükada (Şevkin, 2016).

APPENDIX C

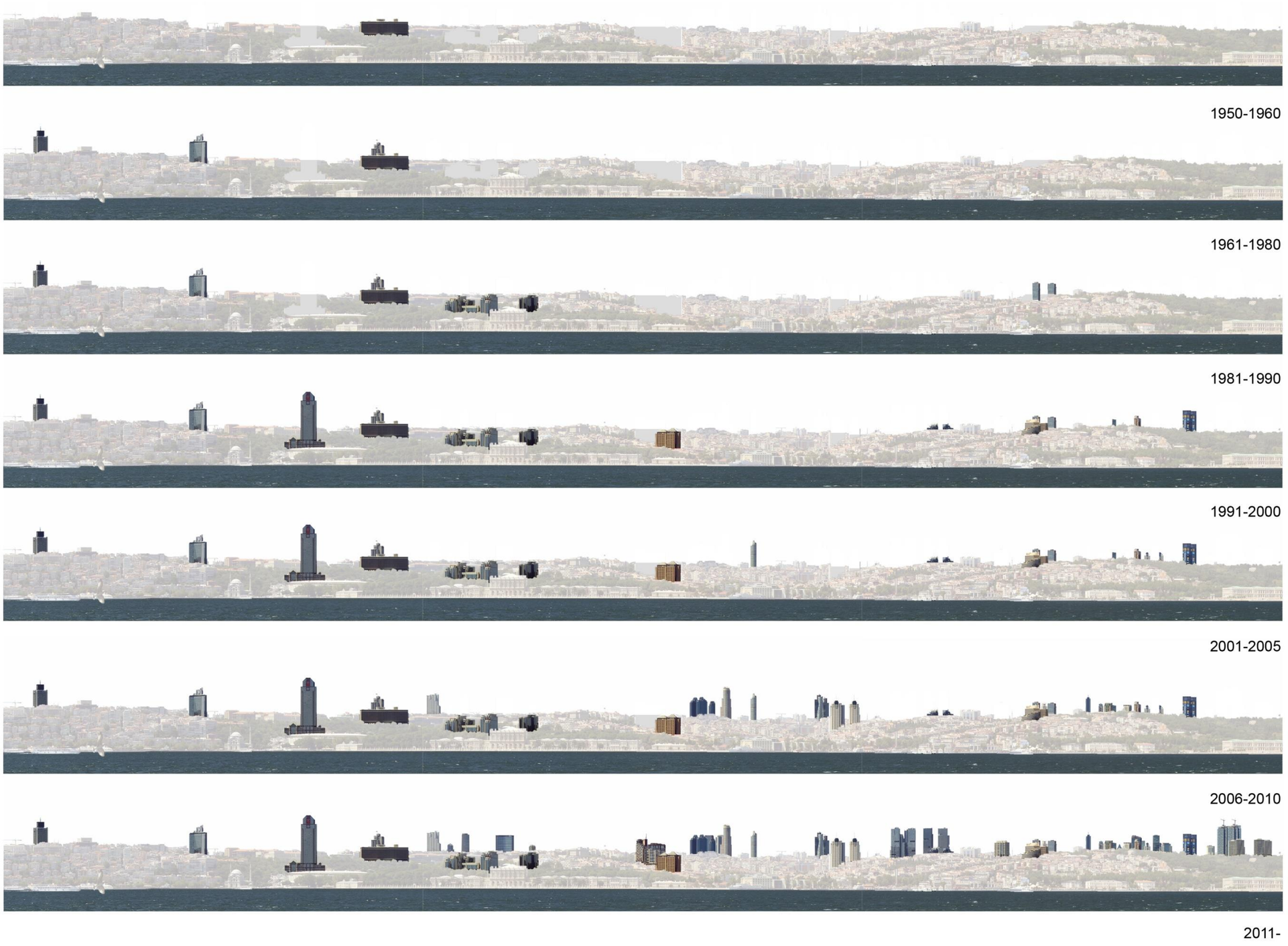

Figure C. 1: Tranformation of the skyline observed from Üsküdar shore (Şevkin, 2016).

1950-1960

1961-1980

1991-2000

2001-2005

2006-2010

2011-

Figure C. 2: Tranformation of the skyline observed from Moda shore (Şevkin, 2016).

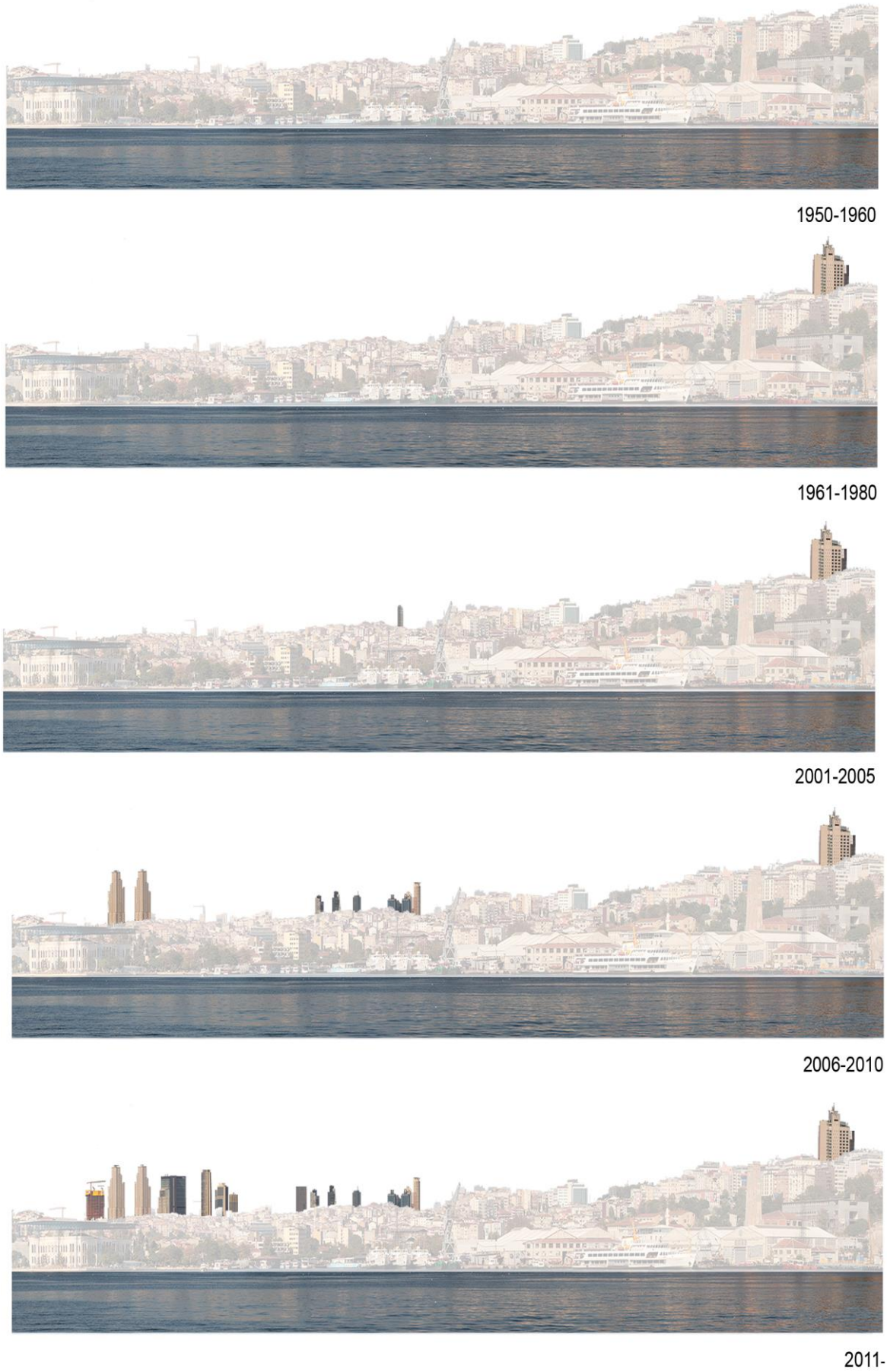

Figure C. 3: Tranformation of the skyline observed from Unkapanı shore (Şevkin, 2016).

Figure C. 4: Tranformation of the skyline observed from the courtyard of Süleymaniye Mosque (Şevkin, 2016)..

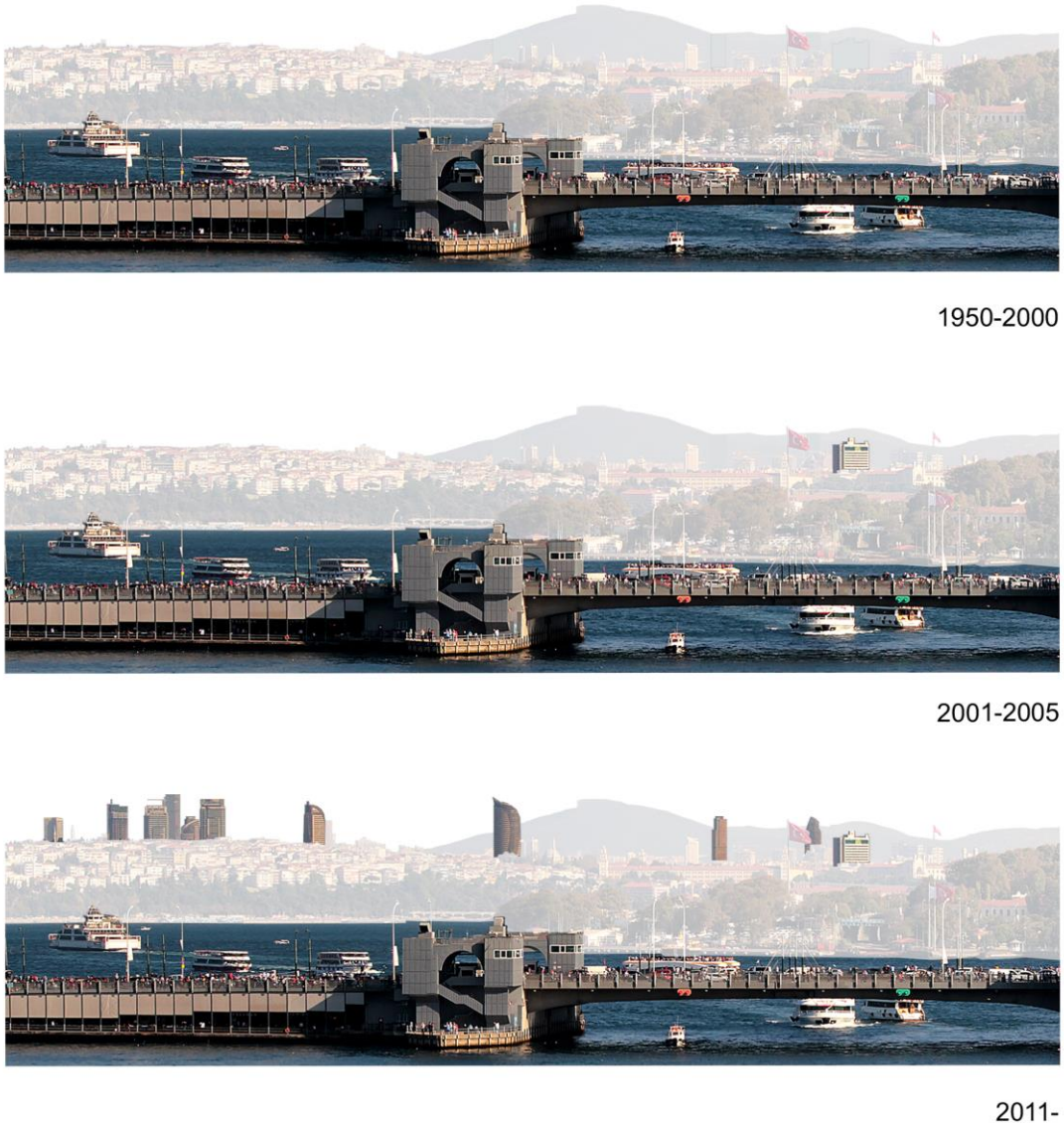

Figure C. 5: Tranformation of the skyline observed from Haliç Railway Bridge (Şevkin, 2016).

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Figure C. 6: Tranformation of the skyline observed from Cihangir Park (Şevkin, 2016).

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- **Şevkin E. and Gül, M. (2017).** İstanbul Silüetindeki Değişim. *tasarım+kuram, 13* (23), 1-14.