

**THE REPUBLIC OF TURKEY
BAHÇEŞEHİR UNIVERSITY**

**AN ANALYSIS OF SKYSCRAPERS IN ISTANBUL-
SABANCI CENTER, METROCITY MILLENIUM,
KANYON IN TERMS OF ZONING REGULATION
MECHANISMS**

Master's Thesis

SEDA NUR ALKAN

ISTANBUL, 2015

**THE REPUBLIC OF TURKEY
BAHÇEŞEHİR UNIVERSITY**

**THE GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
MASTER OF ARCHITECTURE**

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ABSTRACT

AN ANALYSIS OF SKYSCRAPERS IN ISTANBUL -SABANCI CENTER, METROCITY MILLENIUM, KANYON IN TERMS OF ZONING REGULATION MECHANISMS

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MASTER OF ARCHITECTURE

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In the end of 19th century, skyscrapers have arisen as the unique type of architecture especially in Chicago and New York. From the beginning until today, “how to build tall” has been one of the crucial questions during plan, design and construction phases. Even though the technological developments in materials and methods of constructions -elevator, steel, skeleton system- have provided opportunities to build taller, the desire of enacting the tallest skyscraper has constantly been a problem of height whether during design and construction processes or later with its influences on the city. However, skyscrapers have not only generated ‘the problem of height’ but also ‘the problematic of bigness’ in terms of their physical characteristics and interrelated relationships. As well as their dimensional bigness, the multiple correlations of designers, constructors, planners in city scale and approvers and their cooperation with each other have constituted the problematic of bigness. What is intended with bigness here is explained in accordance with Koolhaas’ expression in the Chapter 3. The aim of this dissertation is to investigate how the zoning regulation mechanisms -zoning laws, legislations and plans- as the scientific rationalities discuss and generate solutions for the skyscrapers in Istanbul while considering them as the problem of height and the problematic of bigness in scope of the filters: ‘design objectives’, ‘product of technology’, ‘sites of construction’ and ‘real estate developments’. In Istanbul, as a strategy, there is not a definition and limitation about skyscrapers in zoning laws, legislations and plans. In that case, zoning laws, legislations and plans determine zoning plans as the decision maker. Lacking of definition and limitation about skyscrapers in zoning plans has generated the tactic that creates legal loophole for the opportunity of skyscrapers erecting. The role of zoning laws, legislations and plans are evaluated here in the aspects of Certeau’s strategy and tactic definitions. Sabancı Center, Metrocity Millenium and Kanyon, which stand on Istanbul, Büyükdere Avenue, are selected as case studies. The scope of this study is to establish the fact that there are not specific zoning regulation mechanisms about skyscrapers and the current zoning laws, legislations and plans are not satisfactory, effective and applicable to discuss, define and restrict skyscrapers as the problem of height and the problematic of bigness.

Keywords: Skyscraper, Istanbul, Problem, Problematic, Strategy and Tactic, Zoning Regulation Mechanisms

ÖZET

İSTANBUL'DA - SABANCI CENTER, METROCITY MILLENIUM, KANYON GÖKDELENLERİN İMAR REGULASYON MEKANİZMALARI AÇISINDAN BİR İNCELEMESİ

Seda Nur Alkan

MİMARLIK

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Gökdelenler, Chicago ve New York başta olmak üzere mimarlığın özgün bir türü olarak 19. yy'ın sonunda ortaya çıkmıştır. Başlangıçtan günümüze kadar “nasıl daha yüksek inşa edilir” gökdelenlerin plan, tasarım ve inşa sürecinde en önemli sorulardan biri olmuştur. Teknolojik gelişmelerle birlikte, daha yüksek inşa edilmeleri için yapı malzemeleri ve yöntemlerindeki yenilikler -asansör, çelik, iskelet sistem- gibi pek çok olanak sağlamış olsa da daha yüksek inşa talebi tasarım, inşa sürecinde ve sonrasında kente olan etkileri göz önünde bulundurulduğunda daimi bir yükseklik problemi oluşturmaktadır. Ancak, gökdelenler sadece bir yükseklik problemi değil, hem fiziksel özellikleri hem de kurduğu ilişkiler göz önünde bulundurulduğunda aynı zamanda bir büyüklük problematiği de oluşturmaktadır. Gökdelenlerin boyutlarının büyüklüğünün yanı sıra; bu büyüklüğü tasarlayan, inşa eden, kent içindeki varlığını planlayan, onaylayan birçok otoritenin birbiriyle olan ilişkisi ve biraraya gelişi bir büyüklük problematiğidir. Burada kastedilen büyüklük, Koolhaas'ın tanımı ile üçüncü bölümde ele alınacaktır. Bu çalışmanın amacı, İstanbul'daki gökdelenleri “tasarım amacı”, “teknoloji ürünü”, “inşa alanı” ve “gayrimenkul gelişimi” filtreleri kapsamında yükseklik problemi ve büyüklük problematiği olarak değerlendirirken; imar regulasyon mekanizmalarının -imar yasa, yönetmelik ve planlarının- bilimsel bir gerçeklik olarak gökdelenleri nasıl tartışıp çözümler ürettiğini incelemektir. İstanbul'da, bir strateji olarak, imar yasa, yönetmelik ve planlarında gökdelenlerle ilgili doğrudan bir tanım ve kısıtlama yer almamaktadır. Bu durumda, imar yasa, yönetmelik ve planları, imar planlarını karar verici olarak belirler. İmar planlarında da gökdelenlerle ilgili bir tanım ve kısıtlama yer almaması gökdelenlerin inşa edilmesine olanak sağlayan yasal boşluğu oluşturan bir taktiktir. Bu noktada, imar yasa, yönetmelik ve planlarının rolü Certeau'un strateji ve taktik tanımı çerçevesinde değerlendirilecektir. Vaka çalışması olarak İstanbul, Büyükdere Caddesi üzerinde yer alan Sabancı Center, Metrocity Millenium ve Kanyon seçilmiştir. Bu çalışma kapsamında, İstanbul'da gökdelenler üzerine doğrudan yasal düzenleme olmadığı ve hali hazırdaki imar yasa, yönetmelik ve planlarının yasal regulasyon mekanizmaları olarak yükseklik problemi ve büyüklük problematiği olan gökdelenleri tartışma, tanımlama ve kısıtlamada yeterli, etkili ve uygulanabilir olmadığı ortaya konulmaktadır.

Anahtar kelimeler: Gökdelen, İstanbul, Problem, Problematik, Strateji ve Taktik, İmar Regulasyon Mekanizmaları

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ABBREVIATIONS

CBA	:	Central Business Area
KASK	:	Floors area of floors number
TASK	:	Total floors area of the floors
ÇED	:	Environmental Effects Evaluation
LEED	:	Leadership in Energy and Environmental Design
KPI	:	Key Performance Indicator

1. INTRODUCTION

Skyscrapers are one of the spectacular inventions of architecture in the end of 19th century. They have become a unique type of architecture throughout years. Skyscrapers as a new type in architecture differentiate from high-rise buildings with their formal and ideological representations (Pelli, 1988). Skyscrapers have been dominant constituents of cityscapes that have become distinct from their surroundings with their heights. Although design approaches of skyscrapers have altered according to formal, spatial and technological developments, 'how to build tall' has been a constant consideration as a vital issue for skyscrapers. Even though technological developments such as elevator, usage of skeleton system and steel as construction material have provided opportunities to build taller and taller, the demand of enacting the tallest skyscraper has been a problem of height since the beginning. Meanwhile, skyscrapers have not only constituted 'the problem of height' but also 'the problematic of bigness' in terms of their physical features and interrelated factors of design and construction processes. In other words, as Koolhaas (1995) defines bigness is not constructing 'big' depending on desires of architect; but it is also a matter of how architecture and its related disciplines consulting on erecting 'big'. In fact skyscrapers, as the problematic of bigness, point out physically the building as well as the multiple correlations of factors during design and construction phases.

There are many researches about skyscrapers, particularly in the skyscrapers capitals: Chicago and New York. These studies mostly focus on skyscrapers' historical background, land development processes, numeric figures and height competition. Some of those researches identify Chicago not only being the birthplace of skyscrapers, but also being the leading examples in the scope of land developments. The existence of skyscrapers in Chicago under the socio-economic influences is also investigated (Harwood, May & Sherman, 2009; Bozdoğan, 2008; Al Hürol, 1994). Furthermore, Manhattan is another significant district for skyscrapers in New York. The skyscrapers in Manhattan have been housing international companies (Nash, 2005; Dolkart, 2003). In the skyline, skyscrapers are seen as a demonstration of power for their capital

owners. In addition, a comprehensive body of literature has examined the competitive relationships between Chicago and New York in terms of design, height, architects and authorities (Shaw, 2010; Zukowsky, 1984).

In 1960's, the studies about skyscrapers have focused on the effects of globalization on skyscrapers in city scale. Under globalization, capital flows have transformed cities in terms of social, cultural and economic concerns. Cities have been reorganized as a strategic site for the new world order (Sassen, 2005). Skyscrapers have been a concern of strategy that serves the needs of this order all around the world. The interdependence and independence of skyscrapers within city are expressed as a strategic matter (Koolhaas and Mau, 1995). Certeau (1988) expresses strategy as a proper calculation of political, economic and scientific forces for subject of will and/or power. Regarding the problem of height and the problematic of bigness, legal limitations have affected progress of skyscrapers in cities (Pastier, 1988). The legal limitations have generated strategies for skyscrapers. 1916 Zoning Law in New York is the first skyscraper regulation. With this zoning law, the effects of skyscrapers on city have been discussed and then restrictions about skyscrapers imposed. Taking the relationship of skyscrapers with streets and lots into consideration; the setback rules were brought into attention. There was no limitation about height if the setback rules had been applied properly. The illustration of Hugh Ferriss, which is placed in the book of Rem Koolhaas: 'Delirious New York' (1994) generates an analysis of the first skyscraper regulation on skyscrapers. The illustration highlights the changes of skyscraper design especially in 3D by this regulation.

Istanbul is one of the distinguished cities to discuss skyscrapers as 'the problem of height and the problematic of bigness' and examine zoning laws, legislations and plans as legal limitations with regarding skyscrapers. The focal point of the previous researches about skyscrapers in Istanbul is emerging of skyscrapers under globalization. These studies search for the design phases of the skyscrapers as the factors of these processes partially. In this context, Maslak-Levent districts, where the skyscrapers have been housed intensively, are selected as case studies. Below, these researches and their contents are expressed in general.

As all around the world, Istanbul has transformed under globalization effects in terms of social, economic and spatial aspects. During this period, liberalism has started to be authority in the economy of Turkey and many international companies have encouraged. The old trade center of Istanbul in the Historical Peninsula did not response the space needs of companies sufficiently anymore. Through this phase, the CBD (Central Business District) of Istanbul as a new trade center has shifted to Büyükdere Avenue, Maslak-Levent that places in the North part of the city. In the book, “İstanbul Şehir Merkezi Transformasyonu ve Büro Binaları”, Dökmeci, Dülgeroğlu and Berköz Akkal, (1993) explain that Büyükdere Axis as the new CBD of Istanbul. Büyükdere Axis has been a district where offices of local and global companies have been housed in skyscrapers. These skyscrapers have taken place in the Istanbul’s silhouette not only as an economy center but also a representation of capital owners’ prestige.

Kahraman (2006) states Istanbul has been aimed to be reformed under the idea of ‘Global City Istanbul Vision’ within the years. To achieve this purpose, Istanbul has separated in different districts as new centers with different functions. Büyükdere Axis is one of the most important zones that have been designed for prestige projects such as skyscrapers depending on urban rent.

As the effect and result of globalization, local economies are opened to global capital and the CBD has been reorganized with skyscrapers. Skyscrapers have specific effects on Istanbul silhouette and urban spaces. Regarding this idea a unique policy is a necessity for Istanbul that considers its history, culture and texture (Sağlam, 2007). Skyscrapers are also important to discuss urban space under the titles of working, dwelling and shopping problems. In the 21st century, citizens have sought for a building complex that includes working, dwelling and shopping. Skyscrapers, which contain mixed-use program, have been the most preferred ones in global cities. These buildings promise working, dwelling and shopping in the same space at the same time. Moreover, skyscrapers are response to all needs of users as if cities. Durmuş (2010) emphasizes that ‘multifunctional high-rise building types’ are kinds of identity and prestige symbols for users, particularly higher income people, to express them. On the other hand, Altay (2011) points out that the settlements around the CBD, which have different social,

cultural and economic characteristics, have transformed under economic effects as it is observed in the case study, Levent-Maslak district. The concept of working and dwelling has started to be redesigned in the surroundings of the CBD.

This dissertation aims to examine how skyscrapers as the problem of height and the problematic of bigness are considered in zoning regulation mechanisms -zoning laws, legislations and plans-. The main goal here is not to analyze how zoning regulation mechanisms are applied in plan, design and construction phases or their effects on form and spatial organizations but to investigate the roles of them as scientific rationalities for skyscrapers by analyzing the selected examples in Büyükdere Avenue. For this purpose, the problem of height and historical background of skyscrapers are analyzed. Skyscrapers as ‘the problematic of bigness’ according to Koolhaas’ bigness definition and Certeau’s strategy and tactic expressions are used to explain the roles of zoning regulation mechanisms about skyscrapers particularly in Istanbul. The skyscrapers have not been defined in a legal document and there is no certain article about them. In the content of İstanbul zoning laws, legislations and plans, restrictions are determined by the zoning plans if there are not certain decisions about districts such as skyscraper projects. This situation has generated a legal loophole in zoning regulation mechanisms as a strategy to allow the skyscrapers construction. As a result the zoning plans, which also have not included specific definition and limitations about skyscrapers, have been authorities for the skyscraper projects. In that case, these plans have been a tactic to provide opportunities for skyscrapers construction. As Certeau’s says tactic means manipulating the circumstances. Since there is not a certain definition and restriction in zoning laws, legislations and plans that regard skyscrapers as the problem of height and the problematic of bigness, the current zoning plans are flouted by each skyscraper projects in Istanbul. The skyscrapers have been built unplanned and unregulated independently from the zoning plans: every skyscraper has determined its own limits that are not regulated by zoning laws, legislations and plans. The zoning laws, legislations and plans are not satisfactory, effective and applicable to discuss, define and limit skyscrapers as the problem of height and the problematic of bigness in Istanbul.

The motivation of the thesis is to emphasize significant importance of zoning regulation mechanisms about skyscrapers as strategy and tactic during plan, design and construction process. Below, the three incentive questions that this dissertation aims to address are:

1. What are the contents of height and bigness in relation to skyscrapers?
2. What do ‘the problem of height’ and ‘the problematic of bigness’ consist of in Istanbul?
3. What are the roles of the scientific rationalities –zoning laws, legislations and plans- as strategy and tactic during the plan, design and construction phases of skyscraper in Istanbul?

As it is mentioned in the Literature Review, there are numerous studies on skyscrapers in Istanbul that are commonly focused on the physical characteristics of the skyscrapers. However, this thesis considers the skyscrapers in Istanbul with respect to the problem of height, the problematic of bigness and the zoning regulation mechanisms. To regard the content of this dissertation, Sabancı Center, Metrocity Millenium and Kanyon are selected as case studies in the filters of ‘design objectives’, ‘product of technology’, ‘sites of construction’ and ‘real estate developments’. The thesis attempts to enlighten the gap in the debates on zoning regulation mechanisms about skyscrapers in Istanbul.

1.1 SCOPE OF STUDY

The thesis covers how zoning laws, regulations, legislations and plans deal with skyscrapers as ‘the problem of height’ and ‘the problematic of bigness’ through selected examples in Büyükdere Avenue, Istanbul. In order to be influential; filters, which are not applied in the previous researches, are determined to analyze the selected skyscrapers: ‘design objectives’, ‘product of technology’, ‘sites of construction’ and ‘real estate developments’. The contents of filters are explained in the methodology part extensively. The intent of analyzing the examples through the filters is not to ignore the other perspectives but to limit the study and concentrate on the intention. Within this scope, the dissertation is presented in five main chapters with three appendixes.

In the first chapter, the introduction briefly illustrates the scope and method of the study, the theoretical framework, objectives and discontents. This part delineates the problems and gives insight about the importance, highlights the motivations of the study, indicates the objectives and the questions for the thesis. In addition, the existing literature that bears on the topic is reviewed critically and the applied research methodologies for the thesis are described.

The second chapter aims to provide the analysis of the problem of height content for skyscrapers throughout years. Firstly, skyscraper definitions are explicated. Then, the first skyscrapers, economic, politic and technological influences are examined. The progress of skyscrapers in Chicago and New York and the competition between them are emphasized. Lastly, the first skyscrapers in Turkey, especially in Istanbul, their historical development processes and the content of the problem of height in Istanbul are investigated.

At the beginning of the third chapter, skyscrapers as the problematic of bigness are explained according to Rem Koolhaas' definition in the book, 'S, M, L, XL'. In this chapter, the attempt is to examine zoning laws, legislations and plans' proposals and solutions about skyscrapers in the scope of Certeau's strategy and tactic expressions. The third chapter contains the first zoning laws of skyscraper in New York that is one of the skyscraper's capitals. The effects of these regulations on skyscrapers design are analyzed. Then, the content of zoning regulation mechanisms in Istanbul and their intersection with skyscraper are explained.

In the fourth chapter, the land development phases of Büyükdere Avenue are expressed by the maps of 1982 and 2014 briefly. These maps are applied to discuss the land development process by comparing before and after skyscrapers construction in the district. The analysis on Büyükdere Axis transformation as the new CBD of Istanbul is investigated. In the content of the filters, Sabancı Center, Metrocity Millenium and Kanyon, which are the leading skyscrapers on Büyükdere Axis, are examined in terms of the problem of height, the problematic of bigness and the zoning regulation mechanisms. The evaluation of the case studies is included at the end of the chapter.

In the conclusion, skyscrapers as the problems of height and the problematic of bigness in relation to ‘design objectives’, ‘product of technology’, ‘sites of construction’ and ‘real estate developments’ are emphasized. The roles of zoning laws, legislations and plans are highlighted. The findings of the case studies are summarized. The necessity of specific zoning regulation mechanisms about skyscrapers in Istanbul is declared.

Appendix 1 provides some parts of 1916 Zoning Law that includes important articles. In appendix 2, the parts of 1961 Zoning Law concerning the problem of height and the problematic of bigness can be found. Appendix 3 presents 6785 Zoning Law’s articles that express the responsibilities of authorities.

1.2 LITERATURE REVIEW

The vast amount of literature on skyscrapers has developed particularly in U.S.A since the 20th century. As introduced briefly before, the definition of skyscraper, design approaches, problems related with skyscrapers and proposals for solving the problems have been the main topics of these studies.

In the article of Pelli (1988), ‘Skyscrapers’, the historical background of skyscraper is expressed in terms of formal, spatial and technological developments in a chronological order. Skyscraper is defined as a new type in architecture that is distinct from a high-rise building with its form and ideology. A respectable body of literature has also been generated investigating the land developments of Chicago by pioneer examples (Harwood, May & Sherman, 2009; Bozdoğan, 2008; Al Hürol, 1994). Moreover, the skyscrapers in Manhattan as the concentration point of international companies have analyzed in terms of their effects on city scale particularly in the skyline (Nash, 2005; Dolkart, 2003). In the skyline, skyscrapers have become the representation of power for capital owners. The competition of design approaches, height, architects and figures in Chicago and New York has been crucial (Shaw, 2010; Zukowsky, 1984).

While the literature on skyscrapers has diversified considerably in Chicago and New York, the recent works concentrated on the relationships between skyscrapers and globalization effects. As the effects of globalization, cities have been reorganized according to capital flows (Sassen, 2005). Skyscraper has been a space that responds the needs of these circumstances. During this process, the architectural program and spatial organization of skyscrapers have changed (Ockman, 2003). Initially, skyscrapers were designed as workplaces. However, today, skyscraper's architectural program includes offices, residences and shopping mall.

'S, M, L, XL' by Koolhaas (1995) and 'The Practice of Everyday Life' by Certeau (1988) are the two main reference books to investigate the problems, problematic, strategies and tactics for skyscrapers within the framework of this dissertation. The book, 'S, M, L, XL' Rem Koolhaas (1995) defines bigness and explains the content of bigness in architecture. The sizes and relationships of factors related with architecture are classified as bigness. The book of Certeau; 'The Practice of Everyday Life' is the major source to explain in which perspective zoning laws, legislations and plans are analyzed. In the scope of this thesis; zoning laws, legislations and plans are investigated as strategy and manipulation of zoning plans are regarded as tactic in Certeau's point of view.

The effects of legal limitations on skyscrapers revolution and evolution in city scale are explained (Pastier, 1988). 1916 Zoning Law, which had been valid in New York, is a threshold as the first legal document about skyscrapers. Even if this law did not include a restriction about heights, the setback rule was the major consideration for skyscrapers. The book of Rem Koolhaas, *Delirious New York* (1994), the illustration of Hugh Ferriss is placed as the analysis of the first skyscraper regulation on skyscraper designs. 1961 Zoning Law, which edited more comprehensive than the first one, regarded also the movements of automobile in city.

The researches about skyscrapers are focused mainly on Istanbul under the globalization effects and its land development phases in general. In the book, 'İstanbul Şehir Merkezi Transformasyonu ve Büro Binaları', Dökmeci, Dülgeroğlu and Berköz Akkal, (1993)

explain the district as the new CBD of Istanbul and examine the selected high-rise office building in the scope of location, spatial organization, design and construction. Kahraman (2006) emphasizes that Istanbul has re-organized in the scope of ‘Global City Istanbul Vision’ with zones and these zones have transformed with prestige projects.

A thesis about ‘skyscrapers and urban politics’ was written by Çağdaş Sağlam in 2007. In the scope of this thesis, Istanbul is compared with Rotterdam and Amsterdam in terms of skyscrapers effects on city scales. Sağlam (2007) highlights the compulsory of a zoning regulation about skyscraper in Istanbul that pays attention to historical, cultural, economic and social characteristics of the city.

In his thesis, Durmuş (2010) elucidates that skyscrapers have started to design as a building complex with mixed-use program. The purpose of this thesis is to search about the results of globalization with respect to its effects on residence preferences and changes of cities concepts through the case study: Büyükdere Avenue.

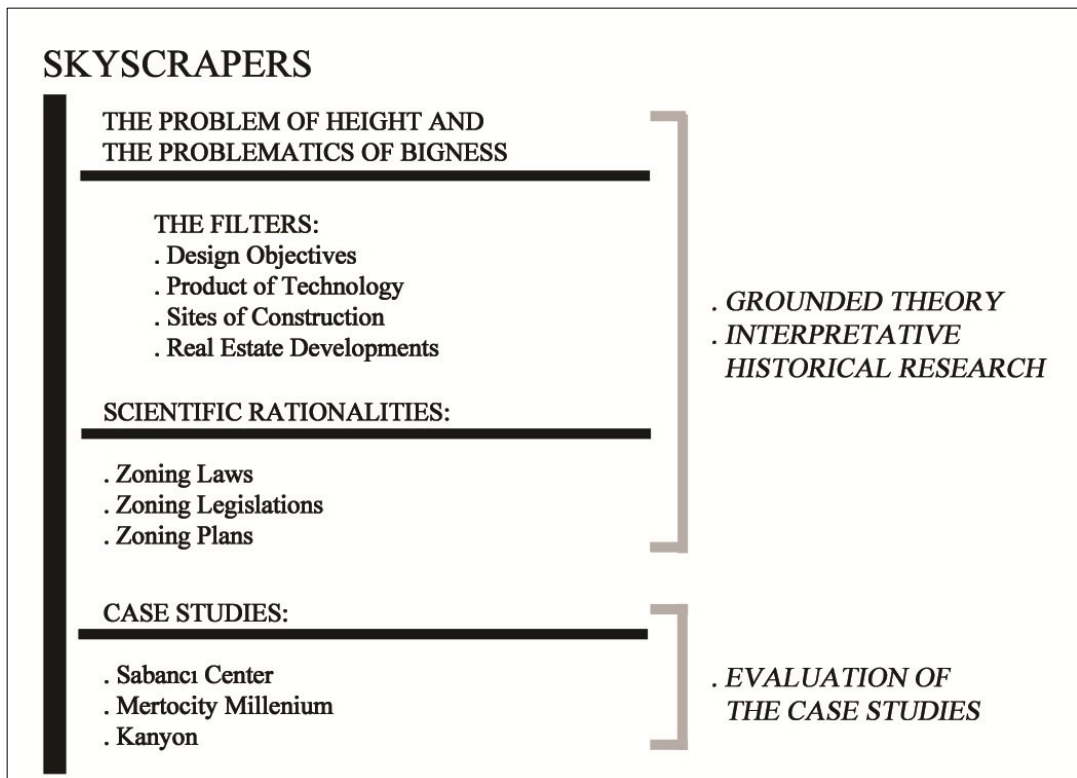
In her dissertation, Altay (2011) examines the transformation of cities under globalization and the socio-spatial influences of the process. Levent-Maslak districts as case studies are analyzed to explain that there are different social, economic and cultural groups that reformed under the economic influences.

This thesis considers the skyscrapers in Istanbul with regard to the problems, problematic, strategy and tactic. It shows the priority of debates on skyscrapers in between problems, problematic and zoning regulation mechanisms. To regard this dissertation, the necessities of zoning regulation mechanisms about skyscrapers in Istanbul are explicated. Code numbered 6785 Law, which was valid in 1956-1985, and code numbered 3194 law, which is the zoning law of 90’s, are selected as the two main zoning laws to analyze the process in Istanbul, Büyükdere Avenue through the selected skyscrapers. The other zoning laws, legislations and plan are appraised in accordance with their articles if they include any effect on construction of the skyscrapers in Istanbul.

1.3 METHODOLOGY

In this thesis, qualitative architectural research methods are employed. For an influential study; grounded theory, interpretative historical research and case studies are necessary to discuss the problems, problematic and scientific rationalities about skyscrapers in Istanbul. A comprehensive study of the literature has been carried out. Books, dissertations, periodicals, newspaper, zoning laws, legislations and plans concerning the subject have been scanned extensively. In the following chapters, the tables are applied for graphic representations of the content. The news related with the subject are used to indicate the progress of skyscrapers in Istanbul and evaluate the authorities approaches about skyscrapers as the problem of height and the problematic of bigness. Milliyet, which is one of the distinguished journals in Turkey, is selected to analyze the process chronologically.

Figure 1.1 : Methodology of the thesis



Source: The figure is created by Seda Nur Alkan

The purpose of this thesis is to examine how scientific rationalities as strategy and tactic deal with skyscrapers as ‘the problem of height and the problematic of bigness’ with respect to ‘design objectives’, ‘product of technology’, ‘sites of construction’ and ‘real estate developments’. Regarding this purpose, this study is designed by analyzing skyscrapers as the problem of height and the problematic of bigness, the proposals of scientific rationalities –zoning laws, legislations and plans- for skyscrapers as strategy and tactic and evaluation of the results. First of all, “interpretative historical research” is applied for discovering the problem of height chronologically. The tables are created to analyze the changes about skyscrapers height limits in the U.S.A and also in Istanbul throughout years. The problematic of bigness is examined in Koolhaas’ point of view. Then the considerations of skyscrapers by scientific rationalities are discovered. The functions of zoning regulation mechanisms are explained in accordance with Certeau’s strategy and tactic expressions. The first skyscraper regulations and their effects on skyscrapers design are investigated theoretically in historical process. The zoning laws, legislations and plans and the alterations are searched and expressed by the tables. To discuss the main consideration of the thesis, Sabancı Center, Metrocity Millenium and Kanyon, which are the specific skyscrapers in Büyükdere Avenue, Istanbul, are assigned as case studies. These skyscrapers are announced to be the first examples with design approach. In case study chapter, reasons for selecting these buildings are explained in more detail. The examinations of these three buildings with certain filters are crucial to explore the skyscrapers as the problem of height and the problematic of bigness and clarify the roles of zoning laws, regulations, legislations and plans. The case studies are analyzed in the framework of four filters: 1. ‘Design Objectives’, 2. ‘Product of Technology’, 3. ‘Sites of Construction’ And 4. ‘Real Estate Developments’. The results of these case studies are evaluated in the content of how zoning laws, legislations and plans deal with skyscrapers.

2. THE HISTORICAL BACKGROUND OF SKYSCRAPER AND THE PROBLEM OF HEIGHT

2.1 THE DEFINITION OF SKYSCRAPER

Skyscraper is composed of two words: “sky” and “scraper”. As a meaning, “scraping the sky” contributed a new term to architecture. There are several definitions of skyscraper that commonly highlight the physical characteristics of it. The main consideration of these definitions is the height of skyscraper. Here, the conceptualization and/or comprehension of height have varied according to time, place, and technological developments through the years.

Beyond its definitions in dictionaries as a multi-floors building, Duru (2001, p. 333) states that skyscraper is used to describe the tallest mast in the 18th century. During 1840's, skyscraper also means tall people in U.S.A. Furthermore, America, where the first skyscraper had been built, is a necessity to explain the term: skyscraper in 1930's. When skyscrapers have started to rise up all around the world it has been an independent expression from America etymologically. While Gottmann (1966, p. 190) indicating skyscraper as, "a high building of many stories..." Emporis Standards Committee specifies skyscraper as multi-storey buildings with an architectural height of at least 100 meters (Emporis 2013).

Regarding the height, the slenderness ratio is the key element to mark a high-rise building as a skyscraper. The slenderness ratio of skyscraper is explained by its aspect ratio, meaning the comparison between width and height. An aspect ratio of greater than 1:10 is being considered to be very slender (<http://www.skyscraperdictionary.com>). The height and the ratio of height-width are crucial for skyscraper definition (Begeç 2008, p. 11). However, to compare the first skyscrapers with current examples it is observed that the minimum height and slenderness ratio have changed by the time. As a result, skyscraper is a high-rise building: its height exceeds its other sizes, it is higher than its surrounding, it provides much more space and it has effects on city because of its three

dimensions and perceptual surfaces (Eyüce 1995, p.50). Pelli (1982, p. 134) notes, “There were commonly recognized formal and ideological differentiation between skyscrapers and high-rise buildings... the skyscraper represents an important building type and that the high-rise building is a branch of this type.”

According to “Council on Tall Buildings and Urban Habitat”, “Home Insurance Building” is taken into account as the first skyscraper. The building was designed with skeleton system and elevator as the inseparable characteristics of a skyscraper. Home Insurance Building was constructed in 1884 by William Le Baron Jenney, who is called as the father of skyscraper by the architectural historians, in Chicago Illinois. The building had 10 stories but then 2 more stories added in 1890 and it is approximately 42m (138 feet) high.

Figure 2.1 : Home Insurance Building



Source: <http://www.chicagoarchitecture.info/Building/>
[accessed 04 May 2014]

The technological developments play roles as catalytic for skyscraper designs. Skeleton system and elevator are just two major items to allow skyscrapers rising up and up. Installing of the first safety passenger elevator in “E. W Haugwhat Company of Manhattan” in 1857 is a threshold for skyscrapers.

Figure 2.2 : W Haugwhat Company of Manhattan



Source: <http://ocw.mit.edu/> [accessed 21 September 2014]

Elevator is a useful vehicle that makes easy to transport inside a building vertically for passengers and goods. As Leslie (2006, p. 1922) says, “Elevator buildings had been constructed since the 1870 Equitable Life Assurance Company Building in New York. Burnham and Root’s Montauk Block of 1882 was the first tall elevator building in Chicago, preceding the Home Insurance Building by a good three years.” With the opportunities that have provided by elevators, new design ideas for skyscraper have aroused in terms of circulation inside and access to the highest level of the building.

“Equitable Building” is one of the first elevator office buildings that was built in 1870 by Richard Morris Hunt and his student George Browne Post. Before the escalation advantages of an elevator in this building, it was preferred to rent offices in lower levels. The costs of these flats were much more expensive than the upper floors. However, after Equitable Building, the upper levels have been much more popular. They provide a city scenery and also more daylight for users.

Figure 2.3 : Equitable Building



Source: <http://ocw.mit.edu/> [accessed 21 September 2014]

Steel skeleton system is another specific component of skyscraper that allows going up and up with large spans. The year 1889, is the first time when the word “steel skeleton frame” is used to mark a building structure: Lincoln Building. Bradford Gilbert, who is the designer of the building, had to persuade the New York City Building Department that a building can stand up with steel frame. Indeed, the building proves that load bearing thick walls are not compulsory for carrying loads. In this new system, loads are carried independently from thick walls.

2.2 THE EMERGENCE OF SKYSCRAPER IN CHICAGO AND NEW YORK

In the historical process, as the birthplace, Chicago has a distinctive meaning for skyscraper. The city is the pioneer in the design of skyscrapers. After the big fire in 1871, there was the need of commercial buildings that supply more spaces and could be built up quickly as much as possible. As a result, during this process Chicago became a stage for architects to perform with their designs. Chicago has gained its characteristics which is known skyscraper through this period. Moore (2006, p. 36) illustrates:

“Beginning with William LeBaron Jenney’s Home Insurance Building in 1885, Chicago was an experimental think tank of innovation and invention for how to build tall. The architects, engineers and contractors in Chicago at the time were developing new designs and implementation techniques as fast as the buildings were being demanded, higher and higher and higher still.”

Figure 2.4 : Chicago map, 1895



Source: <http://marquette.macfound.org/> [accessed 05 April 2014]

The phase, between 1880 and 1890 in Chicago, is marked “Chicago School” and Dankmar Adler and Louis Sullivan, Daniel Burnham and John Root, William Holabird and Martin Roche, and William Le Baron Jenney are the distinguished architects of the design approach that makes Chicago is one of the capitals of skyscrapers. This new design approach generates its own context: skyscraper that rises up as a tall building with skeleton system and covered by glass. Marquette Building, Tribune Building, Western Union Building, and Woolworth Building are one of the first significant

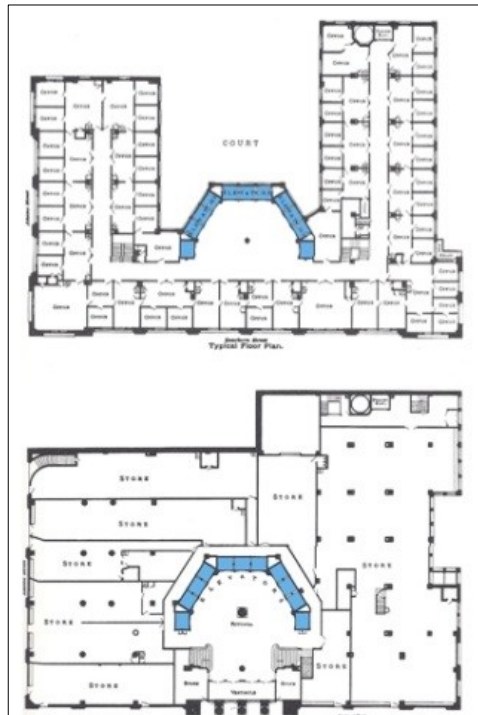
skyscrapers. The common features of these skyscrapers are skeleton system and elevator that let them rise up and up. Inside of these skyscrapers, there are cores that supply the vertical circulation with elevators and stairs, around the cores there are several office spaces. On the facades, Chicago windows, which is one of the major Chicago School's design, is a plate-glass window, cover the whole surface with repetitions as three parts: a fixed large centre panel flanked by two smaller double-hung sash windows.

Figure 2.5 : Marquette Building



Source: <http://marquette.macfound.org> [accessed 09 March 2014]

Figure 2.6 : The first floors plan and typical plan of Marquette Building



Source: <http://www.jbf.beauprojects.net/index>
[accessed 09 March 2014]

Bozdoğan (2008) indicates that Chicago has impressed people with its brand new, dateless and independency as a manmade mountain. In addition, architects have been actors that play significant roles. In terms of presentation the economic activity in intercept of politics, culture, they propose new economic and social structures for the city. In Chicago, skyscrapers are the considerable indicators of land development process in the intersection of architecture, politics and economy. Bozdoğan (2008) expounds that skyscrapers in Chicago should be discussed as not only the modern technology and programs but also it should be dealt with city dynamics in terms of architecture, politics and economy. Al Hürol (1994) points out that after the big fire, Chicago was rebuilt rapidly. The design of Chicago School became visible in the city as a source of pride. Harwood, May and Sherman explicate (2009, p. 538):

The Chicago School comprises an intellectually elite group of progressive architects in late-19th-century Chicago, Illinois. They introduce the skyscraper, a new building type for the new 20th century... the development of huge, national corporations; new technology such as the elevator and the typewriter; an inexpensive process for making steel; and an emerging American architectural theory.

Figure 2.7 : Chicago, 1930



Source: <http://www.friedmanfineart.net> [accessed 05 April 2014]

In order to comprehend skyscraper, Manhattan is another selected district for the skyscrapers. It may be more explanatory to continue with the word: Manhattan. The meaning of Manhattan originates from Manhatta which is the expression of island of hills in Algonquian term. Certainly, in the silhouette of the district, this definition has been known as a fact that skyscrapers have dominated the skyline of Manhattan as hills since the end of the 19th century (Figure 2.8). In other respects, what happened in this period can be observed from the map of Manhattan. Suárez (2002, p. 88) describes:

Manhatta shares in the strategies and aspirations of many of these discourses. Despite its brevity and apparent simplicity, this work is a complex cultural artifact. It is at once a documentary, a critical statement about modernity, an aestheticist exploration of patterns, shapes, movements, and rhythms, and a visual counterpart of the descriptions of metropolitan modernity produced by contemporary sociologists, architects, and planners.

Figure 2.8 : Lower Manhattan skyline, 1938



Source: <http://www.theatlantic.com/> [accessed 04 April 2014]

One of the major districts for skyscrapers in U.S.A: New York, particularly Manhattan, where the most of distinguished companies' headquarters buildings take place in, is the leading economy center both locally and globally. Dolkart (2003, p. 1) indicates the story of skyscrapers in the district as, "... first small buildings and then, as technology permitted, as land values rose, and as the demands of business increased, more and more tall buildings were built until New York becomes the skyscraper city."

In fact, skyscrapers are seen as the architectural discourses of power. The authority of skyscraper, which has been a symbol, has increased in economic aspects throughout the phases. Skyscrapers are labeled as brand value of companies. In the perspective of this idea, rising up in the city silhouette is defined the increasement of brand value. Skyscraper, as a mass, is regarded to symbolize the existence of the company in a physical way. The design approaches of skyscrapers in Manhattan are based on showing this idea. The skyline may give opportunity to highlight this occasion. In addition to the importance of visual composition of skyscrapers in Manhattan, the function of skyscrapers is also specific. In the district, skyscrapers are used mostly as an office building. Nash (2005, p.11) depicts Manhattan as, "Still, Manhattan Skyscrapers has an everyday quality, in the best sense of the word... These are the buildings, from masterpieces to mundane..."

Figure 2.9 : Manhattan map, 1873



Source: <http://wardmaps.com/> [accessed 04 April 2014]

Figure 2.10 : Manhattan map, 1931-1933



Source: <http://www.history.navy.mil/> [accessed 04 April 2014]

Within this process, skyscrapers have become dominant characters of a cities as symbols of capital. Each city creates its own sculpture in the context of city. Barr (2010, p.2) describes:

... the skyscraper is a unique good because of the grandness of its technological sophistication, its symbolic importance (as an aesthetic element, and for advertising and “positional” purposes) and because collectively skyscrapers generate an entirely new entity—the skyline. This skyline serves to advertise the economic might of a city, beyond the power of any one building contained within it... Each city was a testbed for innovation and each used height as a way to house rapidly growing populations and to advertise its growing wealth.

From the end of 19th century and even today, to build the highest skyscraper in the world has dominant effect on constructing cities as an issue of competition. This race starts in U.S.A between Chicago and New York, which emulate with each other to be the tallest from the beginning. Zukowsky (1984, p. 12) expresses:

Chicago and New York—these are often thought to be the two great superpowers of American architecture... Throughout the 19th and 20th centuries there has been, and still is, a considerable amount of competitive interactions between architects, contractors, and developers in both cities.

During this competition, with different aspects, proposals and concepts, which are determined by the economic, social and architectural concerns, numbers of skyscrapers have been enacted. Expedience, transcendence, ambition, and dominance: these are the principal reasons why tall buildings emerged and why they continue to be built (Shaw 2010). As the result of that, skyscrapers have had their own historiography, which has

shaped according to context and concerns of city. The pioneers of skyscrapers have composed a list as a memory. Since 1970's; Moore (2006, pp. 45-46) catalogues the skyscrapers construction date in chronological order to start with Home Insurance Building (Figure 2.11).

Figure 2.11 : The chronological order of skyscrapers

- 1885 – Home Insurance Building becomes the first skyscraper
- 1892 – Masonic Temple touted as first of world's tallest commercial buildings
- 1899 – Park Row Building shifts tallest building race from Chicago to New York
- 1902 – Flatiron Building demonstrates literal symbolic architecture
- 1908 – Singer Building constructed to take world's tallest title
- 1909 – Metropolitan Life Insurance Building takes world's tallest title
- 1913 – New York Times building competition
- 1913 – Woolworth Building built to world's tallest height
- 1922 – Chicago Tribune building competition
- 1924 – American Radiator takes literal symbolic architecture to new heights
- 1929 – Great Depression begins
- 1930 – Manhattan Company Building takes bronze medal in world's tallest race
- 1930 – Chrysler Building becomes the world's tallest building temporarily
- 1931 – City Bank Farmers Trust Building “giants of finance” constructed
- 1931 – Empire State Building begins 41 year world's tallest reign
- 1972 – One World Trade Center is completed as the world's tallest building
- 1974 – Sears Tower becomes the world's tallest building and restores the skyscraper crown to Chicago

Source: Moore, B. T., 2006. Pp. 45-46

In the list below, the competition of building taller between Chicago and New York in 1870-1974 is seen (Table 2.1). They have created their own contexts through the land developments process of each city and have linked with the city dynamics specifically. Kılıçer Yarangümelı, F. D. (2006, p. 28) compares Chicago and New York, “... New York differs from other places in the number, size, and typicality of its skyscrapers. Chicago may have been the place of birth for the skyscraper...”

Table 2.1: Skyscrapers in America 1870-1974;

#	BUILDING	DATE	LOCATION	HEIGHT	NUMBER OF FLOORS	ARCHITECT
1	HOME INSURANCE BUILDING	1885	CHICAGO	55m	12	WILLIAM LE BARON JENNEY
2	ROOKERY BUILDING	1888	CHICAGO	55m	12	BURNHAM & ROOT
3	TACOMA BUILDING	1889	CHICAGO	50m	13	HOLABIRD & ROCHE
4	THE WORLD BUILDING	1890	NEW YORK	106m	20	GEORGE B. POST
5	MASONIC TEMPLE	1892	CHICAGO	92m	22	BURNHAM & ROOT
6	MONADNOCK BUILDING	1893	CHICAGO	60m	17	BURNHAM & ROOT
7	THE PARK ROW BUILDING	1899	NEW YORK	119m	30	ROBERT HENDERSON ROBERTSON
8	FLATIRON BUILDING	1902	NEW YORK	93m	21	BURNHAM
9	SINGER BUILDING	1908	NEW YORK	186m	47	ERNEST FLAGG
10	METROPOLITAN LIFE INSURANCE BUILDING	1909	NEW YORK	213m	50	HARVEY W. CORBETT & D. EVERETT WAID
11	RAND MCNALLY BUILDING	1911	CHICAGO	65m	16	BURNHAM & ROOT
12	WOOLWORTH BUILDING	1913	NEW YORK	241m	57	CASS GILBERT
13	AMERICAN RADIATOR	1924	NEW YORK	103m	23	JOHN HOWELLS AND RAYMOND HOOD
14	CHICAGO TRIBUNE BUILDING	1925	CHICAGO	141m	34	RAYMOND HOOD, AND JOHN MEAD HOWELLS
15	MANHATTAN COMPANY BUILDING	1930	NEW YORK	282m	72	H. CRAIG SEVERANCE & YASUO MATSUI, SHREVE & LAMB
16	CHRYSLER BUILDING	1930	NEW YORK	282m	77	WILLIAM VAN ALEN
17	CITY BANK FARMERS TRUST BUILDING	1931	NEW YORK	232m	54	CROSS & CROSS
18	EMPIRE STATE BUILDING	1931	NEW YORK	381m	103	SHREVE, LAMB AND HARMON
19	ONE WORLD TRADE CENTER	1972	NEW YORK	417m	110	MINORU YAMASAKI
20	SEARS TOWER	1974	CHICAGO	442m	108	SKIDMORE, OWINGS AND MERRILL (FAZLUR KHAN & BRUCE GRAHAM)

Source: The table is created by Seda Nur Alkan

2.3 THE FIRST SKYSCRAPERS IN TURKEY

The first skyscraper of Turkey; Ankara Emek İşhanı, was built in Kızılay, Ankara. The building was constructed as the representation of the capital city: Ankara in 1959-1965 by Enver Tokyay. Tokyay is the one of the pioneer architects of 50's and 60's in Turkey. Unfortunately, there is no efficient published source about him and his project. Şevki Vanlı, a distinguished architect in Turkey, states that Enver Tokyay passed like comet.

Emekli Sandığı Genel Müdürlüğü was the employer of this project. The skyscraper has 24 floors and it is 76 m high. The building is the first example of curtain wall in Turkey. Emek İşhanı was designed as stores at the bottom and office spaces at the upper levels. There are 7 elevators, 3 of them are passenger elevators for office employees. For store circulation, there are 6 escalators that serve between the -1 - 2 floors.

Figure 2.12 : Ankara Emek İşhanı from the south



Source: <http://zaferakay.blogspot.com.tr> [accessed 26 November 2014]

The aim of the project was to provide income to Emekli Sandığı and more than that to change the appearance of Kızılay (<http://www.imo.org.tr>). It was aimed to create a new image for the city. Even today, the building is one of the specific symbols in the visual memory of the city (Figure 2.12). First of all, the first skyscraper of Turkey, Ankara Emek İşhanı was taken part in the first page of Milliyet in 5th November 1965 as the stunning news in the newspaper's headline "The first skyscraper of Turkey" (Figure 2.13).

Figure 2.13 : Ankara Emek İşhanı



Source: <http://www.mimdap.org>
[accessed 09 April 2014]

Figure 2.14 : Ankara Emek İşhanı



Source: *Milliyet*, 05 November 1965. P. 1.

In the news, it is written that especially in evening hours, along with nightfall, Ankara was illuminated by this building's lights. Moreover, the cost of Ankara Emek İşhanı, 50 million Turkish Liras, is another emphasized point in the news. For comparison of the cost, in 1965, the price of bread was 70 Turkish Kuruş (cents) and in 1966 the first national produced automobile's price was 26.800 Turkish Liras in Turkey (<http://blog.milliyet.com.tr>).

Another distinguished skyscraper in Ankara is the Ankara İş Bankası Headquarter Building that is designed by Ayhan Böke and Yılmaz Sargın in 1972-1976 (Figure 2.14). The building has 26 floors and it is 91 m high. The one of the specific point of Ankara İş Bankası Headquarter Building is its design decision: the orientation of building to benefit from the sun efficiently, HVAC and fire proof systems. These are one of the first computer based systems in such a building. Here, during the design phase technological requirements constituted the problematic of bigness that is discussed in the following chapter.

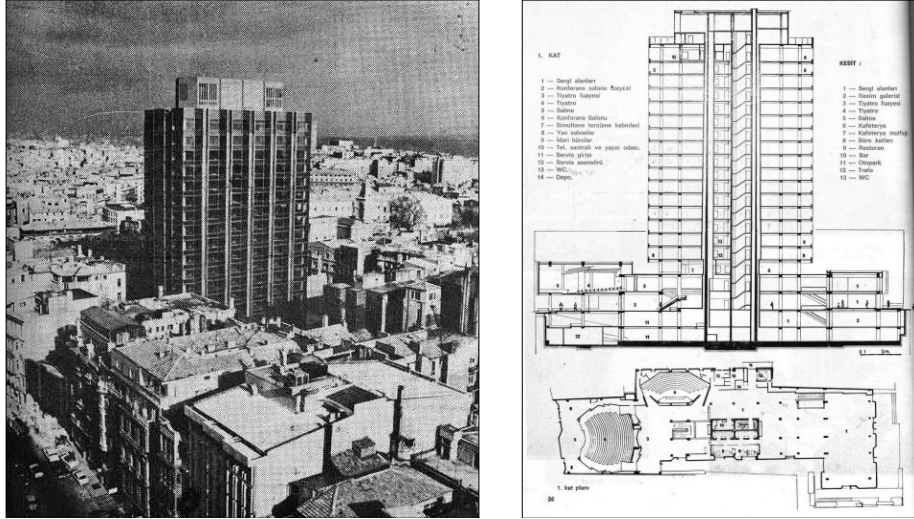
**Figure 2.15 : Ankara İş Bankası
Headquarter Building**



Source: <http://baronvonplastik.blogspot.com.tr/>
[accessed 09 April 2014]

In 1970, skyscrapers have started to be built in Istanbul and the city has become the home of skyscraper in Turkey. Odakule is signified as the first skyscraper in Istanbul, which is designed by Kaya Tecimen and Ali Kemal Taner, was constructed in 1970-1975 (Figure 2.15).

Figure 2.16 : Odakule



Source: Tecimen, K., 1976. Odakule iş merkezi binası İstanbul. *Mimarlık Dergisi*.

The location of the building as a kind of vital point, which is between İstiklal and Tepebaşı Avenue, takes part in Istanbul Sanayi Odası's site in Taksim, Istanbul. Odakule is 69 m high that contains 2 underground levels and 19 floors on the ground.

Under the effects of globalization, the CBD of Istanbul, which was in the Historical Peninsula, especially Eminönü and Sirkeci, has started to change its direction to the northern part of Istanbul, Maslak and Levent -Büyükdere Avenue-. The skyscrapers in this axis have started to respond the needs of national and international companies for meeting public and serving their products. The news of Milliyet in 15th January 1986 highlights the discussions about skyscrapers in Istanbul. The quote of Dalan (1986), who was the Municipality of Istanbul in 26th March 1984-28th March 1989, points out, "Istanbul would pass New York" (Figure 2.16). It is possible to comprehend the competition between Istanbul and New York skyscrapers from the expressions of Dalan.

Figure 2.17 : “Istanbul will pass New York”



Source: Milliyet, 15 January 1986. P. 8.

While the issues of skyscrapers have been debated, the visit of London Municipality, Sir Allan Davis, opened up a new perspective. A specified question for Istanbul: what the proper location for skyscrapers in Istanbul is inquired. The numbers of skyscrapers throughout Büyükdere Axis have increased dramatically and it has become a home of skyscrapers. In the content of the news, it emphasizes that there are so many question marks about the skyscrapers in Istanbul. In the news of Milliyet, Davis (1986) connotes that skyscraper is the necessity of the era. He adds skyscrapers were built in London, which is the most conservative city in England, but the important point is the location of skyscrapers in the city (Figure 2. 17). The building lot has been crucial for skyscrapers because of urban rant. On the other hand, to regard the historical, cultural and social texture of the city, concentration area of skyscrapers has been critical in city scale. That is also the concern of the problematic of bigness that is explained in the Chapter 3.

Figure 2.18 : “Skyscraper is a necessity of the era”



Source: Milliyet, 18 January 1986. P. 3.

Another discussion topic about skyscraper in Istanbul is their influences on Istanbul’s silhouette. The city has a unique skyline that historical buildings are placed. The height of skyscrapers is one of the considerable question marks about the presence of skyscrapers in Istanbul. In the news of Milliyet 20th June 1986, Dalan (1986) declares that they would not damage the silhouette (Figure 2.18). Thus, the mayor did not mention about how to deal with plan, design and construction process of skyscrapers in Istanbul.

Figure 2.19 : Discussion about the silhouette of Istanbul



Source: Milliyet, 20 June 1986. P. 14.

In years, skyscrapers have been dominant features in the skyline of Istanbul. In Milliyet 25th September 1990, the headline of the news is “Istanbul tapered” (Figure 2.19). In the news, the administration of the chamber of architects of Istanbul indicates that skyscrapers murdered the city. There has been rapid growth in the numbers of skyscraper in Istanbul. As a result, the structure of the city has started to change.

Figure 2.20 : “Istanbul tapered”



Source: Milliyet, 25 September 1990. P. 3.

This news introduces that skyscrapers have changed the characteristics of Istanbul’s silhouette; the peak point in the skyline of Istanbul has been exceeded. As a result, this situation has created its own context within the city scale. In this context, skyscrapers have been one of the crucial urban design subjects that have been operated not only in the perspective of architects but also capital owners and city authorities. The selected political party of the era, DYP, declares in the news of Milliyet 10th January 1991, “Skyscraper will recover Istanbul” (Figure 2.20). Skyscrapers are seen as a response for the urban concerns of Istanbul. It is thought that skyscrapers have created the new city center of Istanbul; the density of Istanbul would shift to this center.

Figure 2.21 : “Skyscraper will recover Istanbul”



Source: Demircioğlu, E., 1991. İstanbul'u gökdelen kurtarır. *Milliyet*, 10 December. P. 3.

Skyscrapers, which have their own contexts within their unique characteristics, are seen as architectural heroes for Istanbul in 90's. The skyscrapers were enacted in 90's Istanbul as office buildings for the distinguished companies. This circumstance in Istanbul was placed in *Milliyet* as the headline of “Domestic Manhattan waits for clients” in 09th August 1992. There is significant point attracts the attention: the skyscrapers in the Büyükdere Avenue are related with the skyscrapers in Manhattan in terms of visual and functional aspects. The district has housed skyscrapers as office buildings. In the news, the skyscrapers are marked through Büyükdere Axis that shows the density of these buildings in the district (Figure 2.21).

Figure 2.22 : “Domestic Manhattan waits for clients”



Source: *Milliyet*, 09 August 1992. P. 5.

Same as the U.S.A, the skyscrapers have been seen as a prestige in Istanbul. The companies have wanted to represent their authorities in economy with skyscrapers. By the time, the distinctive skyscrapers have started to be placed in the Büyükdere Axis; Sabancı Center, İş Towers, Metrocity Millenium, Kanyon, Sapphire are one of the specific examples. Their dominant effects are devastating because of their heights and bigness in Istanbul (Figure 2.22). They have differentiated from the surroundings with their height.

Figure 2.23 : Büyükdere Avenue in 2010's



Source: www.panoramio.com [accessed 5 June 2014]

The skyscrapers in Istanbul, which have enacted with different design approaches, have created its own memory since 1955. In the list below, there are significant skyscrapers that were built between 1955 and 2014 in Istanbul (Table 2.2). It is seen that the height and location have been changed in time. The significant point here is there is not a competition of height between the buildings in Istanbul.

Table 2.2: Skyscrapers in Istanbul 1955-2014;

#	BUILDING	DATE	LOCATION	HEIGHT	NUMBER OF FLOORS	ARCHITECT
1	ODAKULE	1975	ISTANBUL/BEYOĞLU	69m	21	KAYA TECİMEN & ALİ KEMAL TANER
2	ETAP MARMARA HOTEL	1976	ISTANBUL/BEYOĞLU	90m	28	FATİN URAN & RUKNETTİN GÜNEY
3	HARBIYE ORDUEVİ	1977	ISTANBUL/ŞİŞLİ	88m	28	METİN HEPGÜLER
4	TÜRK TELEKOM HEADQUARTERS	1983	ISTANBUL/ŞİŞLİ	70.53	18	LEVENT AKSÜT YASAR
5	YAPIKREDİ PLAZA	1990	ISTANBUL/LEVENT	82m	20	HALUK TUMAY, AYHAN BOKE
6	AKMERKEZ	1992	ISTANBUL/LEVENT	100m	28	FATİN URAN
7	MAYA TOWER	1992	ISTANBUL/LEVENT	110.05m	30	LEVENT AKSÜT & YASAR MARULYALI
8	SABANCI CENTER	1993	ISTANBUL/MASLAK	157m	34-39	HALUK TUMAY, AYHAN BOKE
10	SPRING GİZ PLAZA	1994	ISTANBUL/MASLAK	105.80m	27	GİZ DEVELOPMENT & CONSTRUCTION
11	PLAZA HOTEL	1994	ISTANBUL/BEŞİKTAŞ	101.88m	26	DİNCER TUNALI OKAN ÜLBAY
12	BEYBİ GİZ PLAZA	1996	ISTANBUL/MASLAK	136	34	GİZ DEVELOPMENT & CONSTRUCTION
13	GİZ 2000 PLAZA	1998	ISTANBUL/MASLAK	90.12m	23	GİZ DEVELOPMENT & CONSTRUCTION
14	GÖKKAFES	1998	ISTANBUL /DOLMABAĞÇE	153.65	34	DORUK PAMİR
15	İŞ BANK TOWERS	2000	ISTANBUL/LEVENT	194.57m	52	SWANKE HAYDEN CONNELL ARCHITECTS TEKELİ & SİSA
16	TEKSTİL KENT PLAZA	2000	ISTANBUL/ŞİŞLİ	168m	44	OVA DESIGN
17	ŞİŞLİ ELİT RESİDENCE	2000	ISTANBUL/ŞİŞLİ	140m	35	BSB LONDON ARCHITECTS
18	METROCITY MILLENIUM	2000	ISTANBUL/LEVENT	142.96m	31	ANTHONY BELLUSCHI/OWP & P, TEKELİ&SİSA
19	POLAT TOWER RESİDENCE	2001	ISTANBUL/ŞİŞLİ	152.50m	40	POLAT İNŞAAT
20	İZ GİZ PLAZA	2002	ISTANBUL/MASLAK	91m	24	GİZ DEVELOPMENT & CONSTRUCTION
21	GARANTİ BANK HEADQUARTERS	2002	ISTANBUL/LEVENT	121.56m	22	GERNER, KRONICK & VALCARCEL, ARCHITECTS, PC
22	TEKFEN TOWER	2003	ISTANBUL/LEVENT	135m	28	SWANKE HAYDEN CONNELL ARCHITECTS
23	KANYON	2006	ISTANBUL/LEVENT	118m	30	THE JERDE PARTNERSHIP & TABANLIOĞLU ARCHITECTS
24	ŞİŞLİ TAT CENTER	2007	ISTANBUL/ŞİŞLİ	130m	26	PROJE LİMİTED
25	MASHATTAN	2008	ISTANBUL/MASLAK	129.31m	33	ALIMAK HEK GROUP AB
26	SELENIUM TWINS	2009	ISTANBUL/ŞİŞLİ	164m	35	TEKELİ & SİSA
27	RIXOS RESIENDE BOMONTY	2009	ISTANBUL/ŞİŞLİ	159m	43	İPEK İNŞAAT VE ÇAKIRKAYA YAPI

28	SAPPHIRE TOWER	2010	ISTANBUL/LEVENT	261m	54	TABANLIOĞLU ARCHITECTS
29	ANTHILL RESIDENCE	2010	ISTANBUL/ŞİŞLİ	210m	55	MM PROJE
30	TRUMP TOWERS	2011	ISTANBUL/ŞİŞLİ	156.30m	39	BRIGITTE WEBER ARCHITECTS
31	UPRISE ELITE	2011	ISTANBUL/KARTAL	154m	42	TEKNİK YAPI
32	VARYAP MERIDIAN	2012	ISTANBUL/ATAŞEHİR	188.40m	52	RMJM
33	SKY TOWER	2012	ISTANBUL/ATAŞEHİR	160m	42	AĞAOĞLU
34	DUMANKAYA IKON	2012	ISTANBUL/ATAŞEHİR	149m	41	DUMANKAYA İNŞAAT
35	NIDA KULE GÖZTEPE	2012	ISTANBUL/GÖZTEPE	140m	33	ENDER ERGÜN
36	MY TOWERLAND	2013	ISTANBUL/ATAŞEHİR	181m	52	AĞAOĞLU
37	ZORLU CENTER	2013	ISTANBUL/LEVENT	107m	32	EMRE AROLAT ARCHITECTS & TABANLIOĞLU ARCHITECTS
38	ORJIN MASLAK	2013	ISTANBUL/MASLAK	60m	13	SOP ARCHİTEKTEN
39	FOUR WINDS RESIDENCE TOWERS	2014	ISTANBUL/KADIKÖY	145m	45	TAŞ YAPI
40	SOYAK TOWER	2014	ISTANBUL/LEVENT	168m	37	PEI COBB FREED & PARTNERS & HAS MİMARLIK
41	ZORLU LEVENT 199	2014	ISTANBUL/LEVENT	170m	42	TABANLIOĞLU ARCHITECTS

Source: The table is created by Seda Nur Alkan

As it is expressed, every high-rise building may not be classified as a skyscraper. There are specific criteria for a building to be named as skyscraper such as height, slenderness ratio, to be taller than others in local and global contexts and utilizing the technological developments. However, depending on context, time, technology and demands, the height criterion for the skyscraper definition has changed. Accordingly, to build taller and taller has been changed the height limits for skyscrapers. On the other hand, to build taller means also the demonstration of power in skyline as it is observed in Chicago and Manhattan. As a result, the desire of enacting the tallest one has been a competition between them as the problem of height in city scale. For Istanbul, the debates on the problem of height have concentrated on skyscraper's effects on the silhouette and historical texture of the city. Indeed, there is not a specific competition of erecting the tallest skyscraper that is different from U.S.A. On the other side, the local and central governments have agreed that skyscrapers have been compulsory for Istanbul and they have encouraged the investments on skyscraper projects.

3. SKYSCRAPER AND THE PROBLEMATIC OF BIGNESS

In this chapter, skyscrapers as the problematic of bigness is examined in the scope of Koolhaas's definition in the book, 'S, M, L, XL' that was printed in 1995. Then, the zoning laws, legislations and plans' proposals and solutions about skyscrapers as the problem of height and the problematic of bigness, which are explained in introduction, are analyzed. In this respect, the role of zoning laws, legislations and plans as scientific rationalities are discussed from the point of Certeau's strategy and tactic descriptions in "The Practice of Everyday Life" dated 1988.

Koolhaas (1995) describes bigness as degrading existing tissue, a concern that is managed in terms of structure by itself and within city context: architects, city governments and capital owners as a whole. In other words, bigness is constituted by the multiple relationships within building's sizes through plan, design and construction phases. Accordingly, skyscrapers have generated problematic of bigness in building scale and also the relations of several elements and actors that come together. During this process, numbers of components, design elements, figures and authorities come together. Hereby, architects are not ultimate decision makers. The skyscrapers as the problematic of bigness require organizing these interrelated relationships of these authorities separately but also synchronically. This organization is association of technology, engineer, contractor, firms and political authorities with architects. The disciplines that architecture connects directly or indirectly have been integrated. Even if skyscrapers have been the unique type of architecture, they have not been only the issue of architecture but also those disciplines. Technology and the related opportunities by supplied firms, demands, expectations and desires of capital owners, contractors and political authorities have been the actors of the progress individually and all together. Koolhaas (1995) explains this re-organization of the relationships as the generation of a new kind of city, "... it is itself urban. Bigness no longer needs the city; it competes with the city; it represents the city; or better still, it is the city." Indeed, bigness creates city within a city because of its characteristics and its relationships with city. In that sense, skyscrapers as problematic of bigness makes some questions critical to discuss. Koolhaas (1995) inquires these questions, "... we don't know what to do it, we don't

know where to put it, we don't know when to use it, we don't know how to plan it." In that case, location, architectural program, design and construction process, authorities and figures, their relations and organizations have constituted the problematic of bigness. Additionally, the Koolhaas' questions: what, where, when and how require to debate and reply during the plan, design and construction phases one by one and simultaneously. As a result, all these concerns, relations and plurality need to organize and regulate. Thus, zoning laws, legislations and plans have been the scientific rationalities that operate them. These explained relations and questions are also the reasons to apply the four filters for the examinations of case studies.

3.1 STRATEGY AND TACTIC: ZONING LAWS, LEGISLATIONS AND PLANS

The skyscrapers as the problem of height and the problematic of bigness are expressed in the previous sections. In this part, the integrated proposals of zoning laws, legislations and plans, their satisfactoriness, effectiveness and applicability are investigated. The roles of zoning laws, legislations and plans are examined with Certeau's strategy and tactic expressions.

Zoning is approached as a professional manner in Europe. There are certain rules about zoning that have been developed through years. Garvin (2009, p. 115) explicates the process of zoning in Europe as the origin, "In 1212, London banned the construction of straw-roofed houses; in 1707 it required that roofs be built behind parapets. Paris instituted cornice height regulations in 1784. The earliest American land use regulations were scattered ordinances preventing property owners from harming other citizens or damaging their property." Feldstein (2007, p. 91) defines zoning as:

Simply stated, zoning divides a community into districts, and determines what can and cannot be built on the parcels of land within those districts. Zoning regulations typically address two issues contained within the question of "what" can be built: (1) the height, bulk, and sometimes design of buildings (i.e., how big they are and how they look), and (2) to what use the buildings may be put (i.e., what activities can take place).

In the oxford dictionaries; law is indicated as a system of rules that a country recognizes as operating the actions of its members and which it may enforce by the imposition of penalties, legislation is explained as set of laws made by a government and plan is expressed as a detail map of an area that shows intentions or decisions about what one is going to do (<http://www.oxforddictionaries.com>).

As Koolhaas (1994) points out skyscrapers are the concerns of strategy because of its independence and interdependence within city. Regarding this idea, Sassen (2005, p. 28) indicates that cities have been strategic sites for whole economic, political and cultural components. Hence, skyscrapers have become issues of strategies in strategic sites, cities. Certeau (1988, p.19) asserts:

I call a "strategy" the calculus of force-relationships which becomes possible when a subject of will and power (a proprietor, an enterprise, a city, a scientific institution) can be isolated from an "environment." Political, economic, and scientific rationality has been constructed on this strategic model.

Within Istanbul context, it seems that zoning laws, legislations and plans have attempted to regulate and control the plan, design and construction phases without considering the environment. The characteristics of Istanbul have not been regarded during the regulations of scientific rationalities in Istanbul. The zoning laws, legislations and plans, as isolation of current conditions have been operated by ideal standards with regard to the authorities' approaches. That circumstance is exemplified in "1/50.000 Metropolitan Master Plan" dated 1995 as it is explained in the following.

Furthermore, there is not a specific regulation about skyscrapers in Istanbul. Therefore, it requires analyzing zoning laws, legislations and plans concurrently. Because of the content of these zoning regulations have not included definition and restriction about skyscraper, there is a legal loophole in zoning regulation mechanisms that provides opportunity for skyscrapers erecting. In that case, this situation has been a strategy that allows skyscrapers construction at the first phase. Even if there is not a significant expression and limitation in the zoning regulation mechanisms, zoning plans have been authorized skyscraper projects according to the content of zoning laws, legislations and plans. However, zoning plans have not also included information and restrictions for skyscrapers construction. In that sense, this has been a tactic that creates opportunity to

manipulate zoning plans for skyscrapers enacting. Herein, tactic as Certeau (1988, p.19) connotes:

On the contrary, because it does not have a place, a tactic depends on time-it is always on the watch for opportunities that must be seized "on the wing."...It must constantly manipulate events in order to turn them into "opportunities".

The skyscrapers have been enacted and approved as manipulation of zoning plans. For each skyscraper project, the current rules on zoning plans are broken and new rules on zoning plans becomes valid.

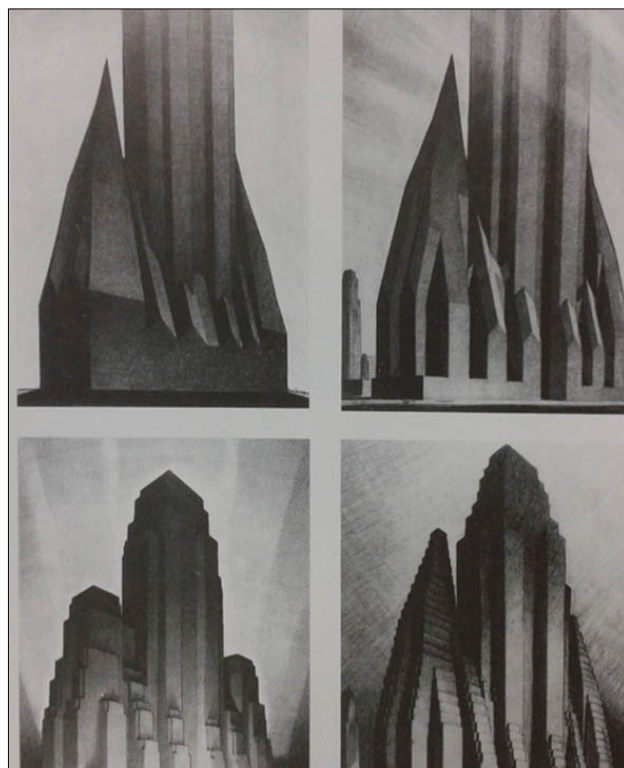
In the following, the first zoning regulations about skyscrapers and their causes and effects are taken place in the frame work of strategy. Then, the progress in Istanbul; zoning laws, legislations and plans as strategy and tactic are investigated and they are examined in the case studies how these regulations are applied.

3.2 FIRST LAWS ABOUT SKYSCRAPER IN NEW YORK

New York is the pioneer in zoning regulation of skyscraper where the first reaction to skyscraper is elicited in. 1916 and 1961 Zoning Laws, which are the first examples of the skyscraper zoning laws, have become valid in New York. Pastier (1988, p. 14) states, “While epitomizing the entrepreneurial process, skyscrapers have had a long history of governmental regulation as well.” The most conspicuous effects of skyscrapers on the city scale are to block sunlight and fresh air that circulates into New York. This new circumstance in the city showed the needs of sanctions for regulating skyscrapers’ construction. As a result, the first skyscraper ordinance: “New York City Zoning Law” was enured in 1916. The New York City Zoning Law of 1916 includes basic rules for skyscraper such as height, bulk, and footprint of the building, especially street relations. The interesting point about the ordinance is; there is not a specific limitation for the height of skyscraper if the rules of setback are applied correctly. As it is mentioned in Chapter 2, the skyscrapers are seen as the source of pride. In that case, the height was not restricted but it was arranged according to its effects on the city. The rules of setback are determined by width of streets and height of floors before setback. For this law, the aim is not to limit the height of skyscrapers but elevate them with the

considerations of land developments of New York “see. Appendix-1” It is also noteworthy to underscore how zoning regulations interact with architects during design process in the limits of zoning. The illustration of Hugh Ferriss (1922) is a significant resource to analyze this process. The skyscraper is illustrated the transformation according to the process of zoning regulations and its effects on design: the effects of technology, design proposal and city context are also expressed by Koolhaas (Figure 3.1).

Figure 3.1 : Drawings by Hugh Ferriss



Source: Koolhaas, R., 1994. Delirious New York.

This transformation of skyscraper as a figure or a model is represented in four steps. The first step represents the maximum mass that 1916 Zoning Law allowed without any design attempt. The second step: architect designs the mass according to using daylight and divide it into parts without thinking of the final product. Thirdly, architect attempts to the mass for designing useful interior spaces. Finally, in the fourth step, Ferriss’s image represents the individual design of architect that is not considered in terms of completed and habitable building. In the book of Rem Koolhaas, *Delirious New York*,

Rem Koolhaas cites the illustration of Hugh Ferriss and Koolhaas (1994, p. 112) indicate that 1916 Zoning Law has affected the design of skyscrapers in city context but on the other hand it creates a new approach with its setback rules. Skyscraper has decomposed and became a 3D space in the skyline of city. The regulation determined rules for skyscrapers as the problem of height and the problematic of bigness in size.

The Insurance Center Building, which was designed by Ely Jacques Kahn in 1927, is one of the leading skyscrapers that were enacted after 1916 Zoning Ordinance of New York. The building is called “wedding cake” that is a kind of visual representation of setback rule. Indeed, The Insurance Center Building is a pioneer example how a legal document interconnected with skyscraper.

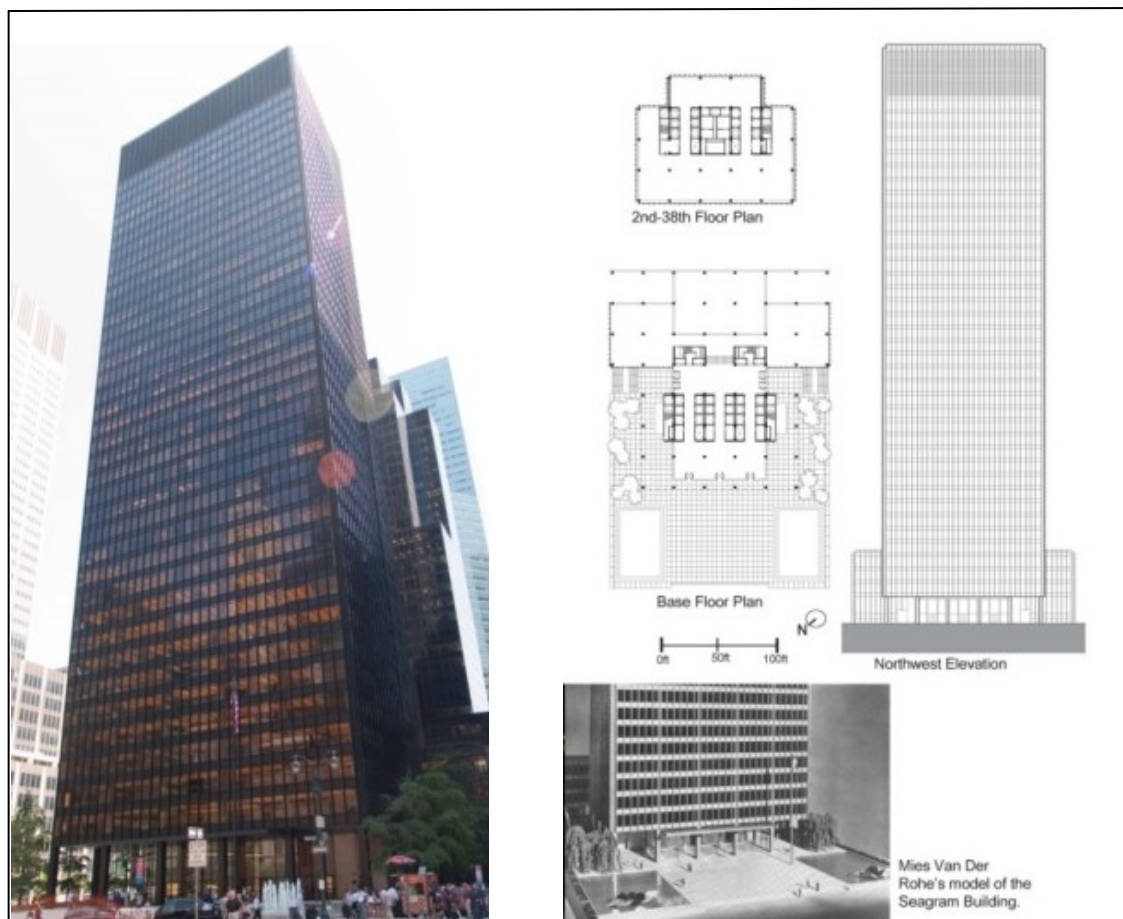
Figure 3.2 : The Insurance Center Building



Source: <http://www.traditional-building.com>
[accessed 5 May 2014]

The second important zoning regulation in New York is; 1961 Zoning Law. It was enacted according to automobile: the king of the era “see. Appendix-2” The skyscrapers are designed by the aim of fewer places for parking lot and more space for public use in the city. According to this focal point, plaza has become one of the main concepts as a skyscraper design. For example, Seagram Building is one of the specific constructions that is designed by Mies van der Rohe and Philip Johnson in New York. The design idea of the building reflects the plaza concept with its footprint. Herein, the main consideration is about the problematic of bigness in dimensions: the regulation limited the sizes of footprints depending on construction site.

Figure 3.3 : Seagram Building



Source: arch220.wordpress.com [accessed 09 May 2014].

Initially, the concerns of skyscrapers in terms of zoning issue are taken into consideration in New York. Both 1916 and 1961 Zoning Laws are the thresholds for zoning regulations about skyscrapers. New York gives opportunities to examine the interrelations of skyscraper and zoning ordinances in terms of the problem of height and the problematic of bigness. 1916 and 1961 Zoning Laws were regulated as strategies that regarded the certain questions: 'how skyscrapers are integrated city' and 'how the negative effects of skyscrapers on city are decreased?'. 1916 Zoning Law was a kind of reply to the negative effects of skyscraper on city such as blocking flows of sunlight and fresh air into city. 1961 Zoning Law included more detailed articles and restrictions that also considered automobile movements in city. These two zoning ordinances have started discussions about skyscraper zoning regulation.

3.3 ZONING LAWS, LEGISLATIONS AND PLANS IN ISTANBUL

In this section, the zoning laws, legislations and plans are classified as three periods in terms of zoning regulation in Istanbul: 1) before 1956, 2) 1956-1980 and 3) 1980-2014. Before 1956, the Ottoman Empire zoning regulations were valid. In 1956-1980, the first zoning regulations of the Turkish Republic came into force. 1980-to date is the time when liberalism has been dominant and zoning laws, legislations and plans have been regulated in the content of this idea. In the table, the zoning regulations of these periods are presented (Figure 3.4).

Figure 3.4 : Timeline of zoning process in Turkey

1882	1936	1955	1957	1980	1982	1985	1985	1993	1995	2004	2006	2007
EBNİYE LAW	ISTANBUL MASTER PLAN BY HENRI PROST	THE MASTER PLAN OF ISTANBUL FOR FIVE YEARS WAS APPROVED BY NAFİA VEKALETİ	6785 ZONING LAW	1/50.000 ISTANBUL METROPOLITAN MASTER PLAN	2634 TURİZM TEŞVİK LAW	3194 ZONING LAW	PLANNED AREA TYPE ZONING LEGISLATION	ÇED (ENVIRONMENTAL EFFECTS EVALUATION) LEGISLATION	1/50.000 ISTANBUL METROPOLITAN MASTER PLAN	5216 BÜYÜKŞEHİR BELEDİYESİ LAW	1/100.000 ISTANBUL ENVIRONMENTAL PLAN	ISTANBUL ZONING LEGISLATION

Source: The figure is created by Seda Nur Alkan

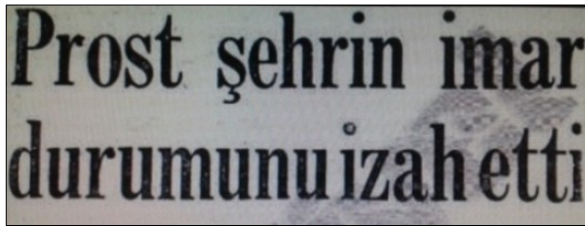
In general, these ordinances have been regulated when the previous ones had been inefficient. It is obvious that there is an increasement of zoning regulations when the numbers of skyscrapers have started to increase: 1980-to date. As it is observed in the following parts, they have contradicted with each other because of insufficient context and uncertainty of authorities and their roles (Aysu, Akın and Berkmen Yakar, 1993). Furthermore, these regulations have not included the skyscraper definition and restrictions as a strategy. In this manner, this legal loophole in the zoning regulation mechanisms provides opportunity to break zoning plans for skyscrapers construction as a tactic. In the following, this situation is investigated extensively.

3.3.1 Before 1956

In 1882, the first zoning law of the Ottoman Empire; Ebniye Kanunu was gone into effect with 87 articles. Ebniye Kanunu was revised in 1891-92 and the version has all articles of Ebniye Kanunu in a detailed perspective (Duymaz 2003, pp. 59-60). Ebniye Kanunu has detailed articles about streets, buildings, fire places and public spaces. With the law, municipalities were responsible for drawing plans of streets and their surroundings and fire places.

In 1936, Henri Prost was invited to Istanbul and assigned to work on Istanbul Master Plan. Prost had active roles on urban design of the city from 1936 to 1951. In *Milliyet* (1950, p. 1) news the study of Prost in Istanbul is expressed in the headline of “Prost elucidates zoning of the city” (Figure 3.5).

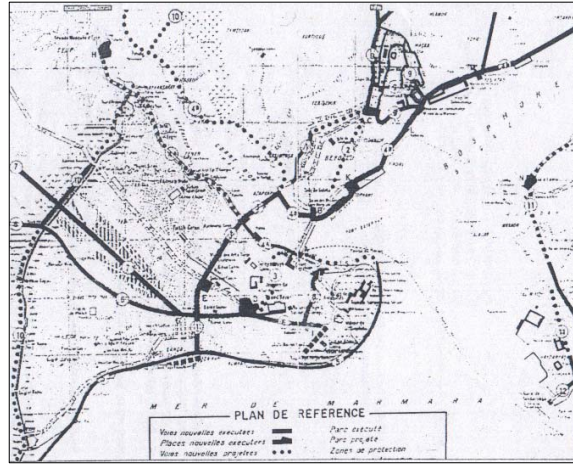
Figure 3.5 : Prost had studied on Istanbul



Source: Milliyet, 19 December 1950. P.1.

The works of Prost contains the master plan of European side, Anatolian side, new parks, squares, boulevards, pedestrian roads and details of them. The Prost Plan offers geometrical street wire, boulevards with trees. The first plan of Prost proposes to regulate the streets in Galata and Pera and preserve the unique silhouette of the city (Göktürk, Soysal and Türeli 2010, p. 26). It is one of the most important works that deals with the Istanbul’s silhouette on master plans.

Figure 3.6 : The plan of Istanbul by Henri Prost



Source: <http://www.yildiz.edu.tr> [accessed 28 February 20014].

Even if some parts are valid in today, the plan of Prost had applied till 1950. In 1950-1960 the decision of Adnan Menderes, who was the prime minister of Turkey in that era, is to design Barbaros Avenue that connects Levent to Beşiktaş, is the major effects of land development progress. In 1950's governor is the chairman of province commission that had the authority of all issue about zoning (Figure 3.7).

Figure 3.7 : Zoning congress



Source: *Milliyet*, 15 April 1955. P.1.

In 1955, the master plan of Istanbul was approved by Nafia Vekaleti for five years. According to this plan, Istanbul was divided into certain districts such as dwelling, commercial, industrial, green areas, public space, registered and education. Eminönü and Unkapanı were determined for commercial area in this plan for 50 years. However, it seems that the land development of the city was not considered in detail. To conflict with this decision on plan, in 1990's that district shifted to Maslak and Levent (Figure 3.8).

Figure 3.8 : Istanbul after 50 years later



Source: Milliyet, 09 December 1955. P.3.

3.3.2 1956-1980

In these years, the substructures of zoning authorities have been established and defined. The political transformations had dominated this process in terms of city governments. To deal with the political issues, architects did not have chance to have active role. The political authorities had been the actors in architectural decisions. 6785 Zoning Law is the vital legal document for consideration of zoning regulation in that period.

3.3.2.1 6785 Zoning Law

1956 is a specific date; code numbered 6785 Zoning Law is adopted. Before 1956, zoning activities were regulated according to the laws and legislations that contain the zoning approach of the Ottoman Empire. 6785 Zoning Law enured in 1957 “see. Appendix-3” The law includes the scope of zoning, authorized organizations, construction permit, building use permit, parceling of land and its relation with streets. In the news of Milliyet in 17th January, it is explained that because of “Nafia Vekaleti” had not approved the “Directive of Zoning”, which was prepared by the City Council, the implementation of the directive would start after the approval (Figure 3.9). Herein,

the tensional relationship between authorities in terms of zoning is seen obviously. There was plurality in zoning regulation mechanisms in terms of decision maker. Their roles conflicted with each other. On the other side, in the law, there is not a certain article that explains zoning in the city scale according to the specific rules. The regulation was a kind of base for the followings that draws main limits for zoning.

Figure 3.9 : “6785 Zoning Law enured”



Source: Milliyet, 17 January 1957. P.5.

3.3.3 1980-to date

In the beginning of 1980, under globalization, the authorities of central and local governments have dominated urban design legally. Through these years, liberalism has been the dominant factor of the economy of Turkey. It gives opportunities to capital owners for active roles in economy and that makes them as effective as government. In that sense, capital owners have tried to prove themselves with their works for being powerful in economy: skyscrapers have been considered as one of the strong images to show their authorities. Istanbul is the significant city that is selected as one of the economy center because of its geographical, cultural and economic facilities.

As a political concern, most of the architectural projects have been considered in the scope of “prestige”. To construct these prestige projects, laws, legislations and plans are regulated in accordance with the main procedure of zoning approval. They are regarded as a certain frame that is formed by the authorities. In this case, to promote prestige projects, numerous regulations are enured since 1980. These have articles that authorize several ministries and local governments at the same time. As it is seen in the table, there are numbers of zoning ordinances and authorities. In that case, the tasks of authorities have been in conflict with each other. In the table, the regulations and authorities are figured out for approximately 30 years (Figure 3.10).

Figure 3.10 : Zoning Process and authority in Istanbul in 1980-2014

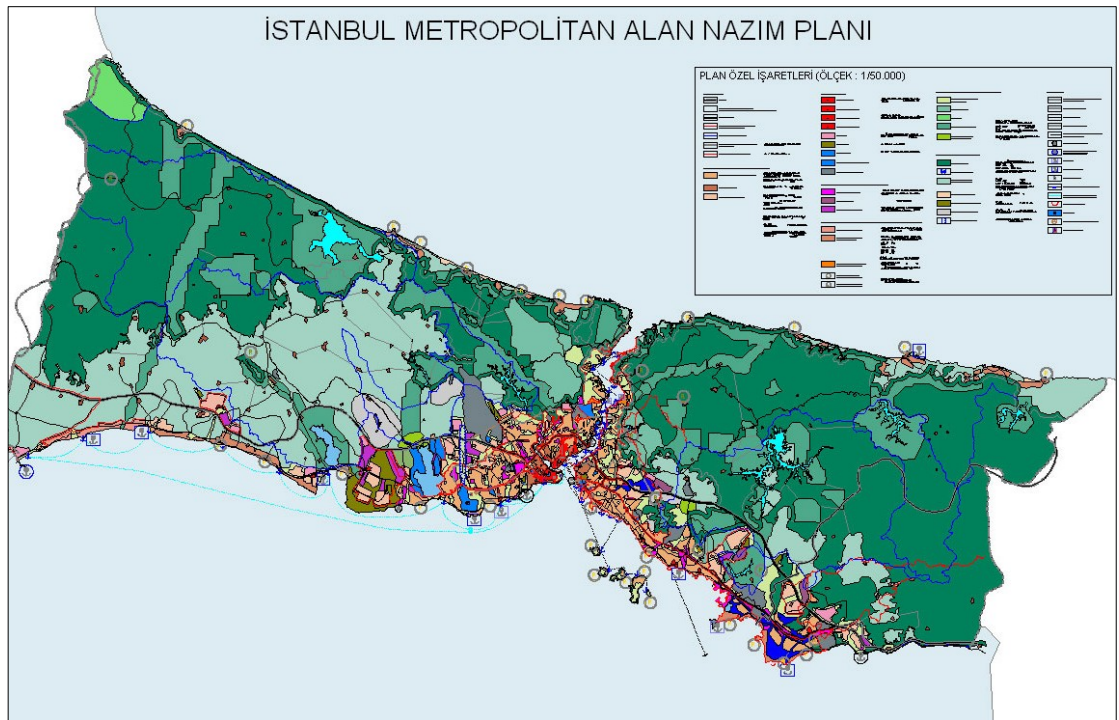
1/50.000 ISTANBUL METROPOLITAN MASTER PLAN	1980	. İmar ve İskan Ministry Büyük İstanbul Nazım Plan Department . İmar ve İskan Ministry
2634 TURİZM TEŞVİK LAW	1982	. The Ministry of Culture and Tourism
3194 ZONING LAW	1985	. Municipalities . Municipal Councils . Ministry of Public and Settlement
PLANNED AREA TYPE ZONING LEGISLATION	1985	. Municipalities . Municipal Councils
ÇED (ENVIRONMENTAL EFFECTS EVALUATION) LEGISLATION	1993	. Environment and Urban Ministry . Provincial Directorates of the Ministry
1/50.000 ISTANBUL METROPOLITAN MASTER PLAN	1995	. İstanbul Metropolitan Municipality . The Municipal Councils
5216 BÜYÜKŞEHİR BELEDİYESİ LAW	2004	. Metropolitan Municipalities
1/100.000 ISTANBUL ENVIRONMENTAL PLAN	2006	. Ministry of Environment and Forests . İstanbul Metropolitan Municipality
ISTANBUL ZONING LEGISLATION	2007	. İstanbul Metropolitan Municipality

Source: The figure is created by Seda Nur Alkan

Thus, none of them has definition and restrictions for skyscrapers. In that case, the type of zoning plans such as master, environmental and implementation plans have been authority as decision maker. Hereby, the legal loopholes in zoning laws, legislations and plans provide opportunities to manipulating zoning plans as tactics. The decisions in these plans have not included definition of skyscrapers as well as limits for them. In that case, they have encouraged skyscrapers projects to break the rules. This shows a known fact that there is the lack of zoning regulation mechanisms about skyscrapers in Istanbul.

Before dealing with the laws and legislations, 1/50.000 Istanbul Metropolitan Master Plan, which is confirmed in 29th July 1980, is crucial. The aim of the plan, which is drawn by “Ministry of Public Works and Housing Great Istanbul Master Planning Department” and approved by Ministry of Public Works and Housing, is to propose functions and services (1/50.000 Istanbul Metropolitan Master Plan Notes). During the process of developments of the country, the plan was taken into consideration to preserve its cultural and historical characteristics of Istanbul as a Metropolitan city.

Figure 3.11 : Istanbul, 1980



Source: www.mimdap.org [accessed 11 October 2014].

3.3.3.1 Tourism Promotion Law

Code numbered 2634 Tourism promotion Law, which is enured in 16th March 1982, is crucial law about analyzing skyscraper in Istanbul. In the scope of the law, “tourism district and tourism center” are defined and the Ministry of Culture and Tourism is the authority to determine and declare these districts. Moreover, the ministry is the authority to draw, vote and alter plans in the border of these districts in every scale. This law revived as a new term “tourism center” that has been a tool for zoning rights in cities. That’s why; it has caused much more problematics and negative effects on zoning regulations in Turkey (Günay 2000, p. 209).

The ministry declared 142 “tourism center” that 37 of them are in Istanbul. In the scope of the law, there are opportunities for national and international capital owners, who investigate in these districts, about land allocation, financing fund, tax deferral, tourism credits. Beşiktaş-Levent Tourism Center, which is determined by Ministry of Culture and Tourism and approved by Council of Ministers, is enured in “Official Gazette” dated back to 3rd March 1990. As a result of these decisions, the numbers of skyscrapers have increased day by day in the district rapidly.

Figure 3.12 : Beşiktaş-Levent Tourism Center



Source: TMMOB

“Tourism Master Plan” is a type of zoning plan in the border of “Tourism District” and “Tourism Center”. The plan is confirmed by both “Ministry of Culture and Tourism” and “Ministry of Development and Housing”. The Council of State 6th Department stopped the execution of this declaration but the premiership approved this judgment. Then, the declaration of “Beşiktaş-Levent Tourism Center” started to apply.

3.3.3.2 3194 Zoning law

There are numerous zoning laws, regulations and legislations that are enacted in this period but 3194 Zoning Law is the certain zoning regulation mechanisms of these years. Code numbered 3194 Zoning Law is enacted in 1985. The aim of the law is defined as to supply the construction of building in settlements according to the condition of plan, science, health and environment (3194 Zoning Law 1985, Article 1). All public and private buildings, which are erected inside and outside of the border of municipalities and adjacent area, are subjected to 3194 Zoning Law. It means local governments are in charge of regulating the zoning activities in these districts.

Figure 3.13 : “Zoning Law was enacted”



Source: *Milliyet*, 03 May 1985. P.1.

To compare with the 6875 Zoning Law, the law is more comprehensive. In the articles of 3194 Zoning Law; the definitions of building such as height, location and street relations are obvious. In addition to this, the authorities of zoning are explained much more detailed. The process of zoning has been evaluated according to the authorities that are municipalities, municipal councils and Ministry of Public and Settlement. With this law, the responsibility and mission of municipalities are determined clearly. 3194 Zoning Law defines some basic terminology of zoning; such as settlement lot, building, construction, zoning lot and master plan in a detailed way.

The type of plans, which are explained in 3194 Zoning Law, is one of the most specific points. Planning means; providing qualified life standards, determining the compulsory use, settlement and preservation decisions after the evaluation process of the limited natural and cultural sources of a country. In the scope of 3194 Zoning Law, there are three basic types of plans: District Plan, Environmental Plan and Master Plan:

- a) **District Plan:** District plan is drawn for expressing the socio-economic developments, the potential of settlements, sectorial goals and the distribution of infrastructure if the plan is determined as a necessity. State Planning Organization is responsible for district plans.
- b) **Environmental Plan:** Environmental plan includes settlement and use decisions such as dwelling, industry, agriculture, tourism and transportation that are relevant for country and district plans. The environmental plan are drawn in scale of 1/25.000, 1/50.000, 1/100.000, 1/200.000. It is prepared with a report that gives information about all analysis, source etc. In addition, environmental plan is a template for 1/5000 master plans, 1/1000 Implementary development plans. In the scope of Provincial Special Administration Law Article 6 (17 March 2001, addition article), environmental plan is drawn by metropolitan municipalities, municipalities and Provincial Special Administration. Within the borders of city, environmental plan is drawn by metropolitan municipalities and voted by city council directly. Ministry is responsible for coordinating the planning process. However, there has not been a certain explanation about which ministry is the authority. “Ministry of Public Works and Settlement” and/or “Ministry of Environment and Forests” had been authorized at the same time because of the insufficient content of the zoning

laws and regulations since 2003. In 2003, “Ministry of Environment and Forests and related to its duties 4856 numbered Law” declares that Ministry of Environment and Forests is responsible for environmental plan. On the other hand, there is not a certain expression about scale, authority and scope of plan type. The problems of planning have not been solved. In 4th July 2011, in the scope of “644 numbered Ministry Of Environment and Urbanization and related to its duties Decree”, article 7, Ministry of Environment and Forests have responsibility to draw, approve and implement environmental plan.

c) Zoning Plan:

i. Master Plan: The plan is the template for implementary development plan that includes information about plots, lots, parcels, general use type, type of districts, estimated future population density of the districts, transportation systems/problems/solutions. Master plan is a plan that is presented with a detailed report about the research, opinions and proposals. In the borders of municipalities, master plans are approved by city councils (if city council suggests any changes on plan, plan is approved after implementation of changes.) then mayor stamps and signs. Outside of the municipalities’ borders, County Administrative Board works on zoning plans and governorship approves.

ii. Implementary Development Plan: The plan is drawn by the principles of master plan. It consists of the information about lots and their densities and layouts, roads and also the programs and process of implementations. The plan is drawn by municipalities inside the borders of municipalities and governorships outside of the borders. Municipalities have right to draw implementary development plan in their planning departments and also have right to tender. The approval steps are the same with master plan.

There are complementary plans that are not expressed in the zoning laws: additional development plan, revision of the zoning plan and locality development plan are drawn if the current plans do not response the needs (<http://www.csb.gov.tr>).

Metropolitan District Plan is another significant plan type between district plan and environmental plan that is not defined but mentioned in the article 9 of the zoning law. The plan, which is template for zoning plans, includes information about estimated future population density of the districts, functions of districts and their development process, main transportation systems and solutions of socio-economic problems. The plans are presented with detailed reports.

Table 3.1: Plan & authorities;

PLAN NAME	LAND OF PLAN	SCALE	AUTHORITY OF PLANNING	AUTHORITY OF APPROVAL
<i>Country Spatial Strategy Plan</i>	Country	1/1.000.000 and up	State Planning Organization	Ministers Board
<i>Regional Strategy plan</i>	Region	1/200.000 and up	Regional Development agencies	State Planning Organization
<i>Sub-Regional Strategy Plan</i>	Basin and sub-regions	1/50.000 and up	Public Works and Department of Housing	Public Works and Department of Housing
<i>Metropolitan Regional Strategy plan</i>	Metropolitan Municipal Boundaries	1/50.000 and up	Metropolitan Municipality	Metropolitan Municipality
<i>Master Plan</i>	Municipality and Urban Area	1/5.000 1/2.000	All Municipalities	Related Municipality
<i>Implementary Development Plan</i>	Municipality and Urban Area	1/1.000	All Municipalities except Metropolitan Municipality	Related Municipality

Source: The table, which is created by Melih Ersoy in *İmar Mevzuatımızda Planlama Kademeleri ve Üst Ölçek Planlama Sorunu*, is edited by Seda Nur Alkan

In general, the requirements, format and design process of current plans and zoning plans are explained and the task of drawing them is given to municipalities and governorships. The approval of these drawings is the responsibility of Ministry of Public Works and Settlement. In that point, it is significant to highlight that the ministry has authority to change the zoning plan for “the benefit of public” as a political discourse, if it is a necessity. The spaces and other issues about cultural facilities are determined by regulations of the ministry. Changes in plans are done by the metropolitan municipalities then these changes become absolute after the approval of city councils and mayors. There are revisions in “Boğaziçi Alanı” such as preview-back view after the approval of mayor. These revisions are approved by “Boğaziçi İmar Yüksek Koordinasyon Kurulu”.

On the other hand, there are many laws that has affected the authority of 3194 Zoning Law, for instance code numbered 2634 Tourism Promotion Law, code numbered 2863 Cultural and Natural Heritage Preservation Law, code numbered 2960 Istanbul Bosphorus Law and code numbered 3030 Metropolitan Municipalities and related to Administration Law articles are prior while applying the law in the process of zoning (Article 4). However; while analyzing these laws, it is seen that they have articles that have contraries to each other. In that case, they have not been efficient and applicable for solving problems of zoning.

3.3.3.3 Planned Area Type Zoning Legislation

Planned Area Type Zoning Legislation, which came into force in 2nd December 1985, is implemented in the planned areas inside the municipalities' borders. However, if there is any approval or decision about the district by the council of ministries, the articles of this regulation are not valid. Moreover, if there is any decision about the districts that contrast to the regulation again this regulation is not valid. In the scope of the regulation, building type, program such as commercial, mixed-use such as commercial+dwelling, tourism+commercial+dwelling, before/during/after construction and zoning process are explained in detail:

CBD: It is the center of the city that is reserved in the master plans for administrative, tourism, social, cultural and commercial program.

TASK (Total floors area of the floors): It is the proportion of “floors area” to “zoning parcel area”.

KASK (Floors area of floors number): It is the proportion of “total area of all floors area” to “area of zoning parcel”.

High-rise building: it is a building that has 10 stories or more.

In addition to that, there are articles about how a building should be based on a parcel according to its size and heights and also how a building should related to its surroundings. There are determinations about how many stories are allowed according to the streets width. To consider skyscraper, there is not a specific definition about it but high-rise building is described briefly.

In the beginning of the 90's, the declaration by the minister of Ministry of Development and Housing, Cengiz Altinkaya, is a kind of permission for skyscraper construction. The declaration indicates that there is not an obligation to permit extra certification for skyscrapers construction . In the construction process, buildings were only controlled by municipalities (Figure 3.14).

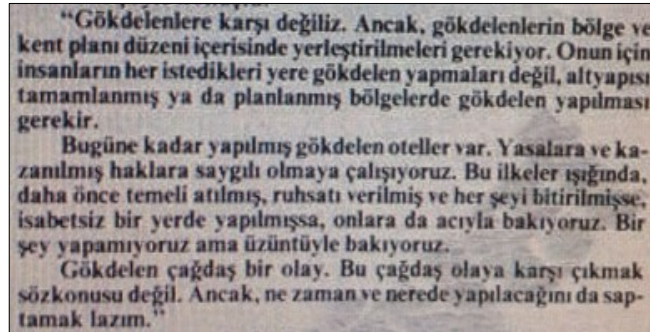
Figure 3.14 : “Visa for skyscrapers”



Source: *Milliyet*, 08 May 1990. Gökdelenlere vize, p.3.

The mayor of Istanbul, Nurettin Sözen (1991) explains that they are not against skyscraper because they are contemporary. However, it is significant when and where skyscraper was enacted. Because of this reason, it is important to build skyscrapers in planned areas instead of erecting them according to desires of people. The skyscrapers, which were constructed without considering the locations, we just look at them in pain but we cannot do anything about them (Figure 3.15).

Figure 3.15 : The discussions about skyscrapers

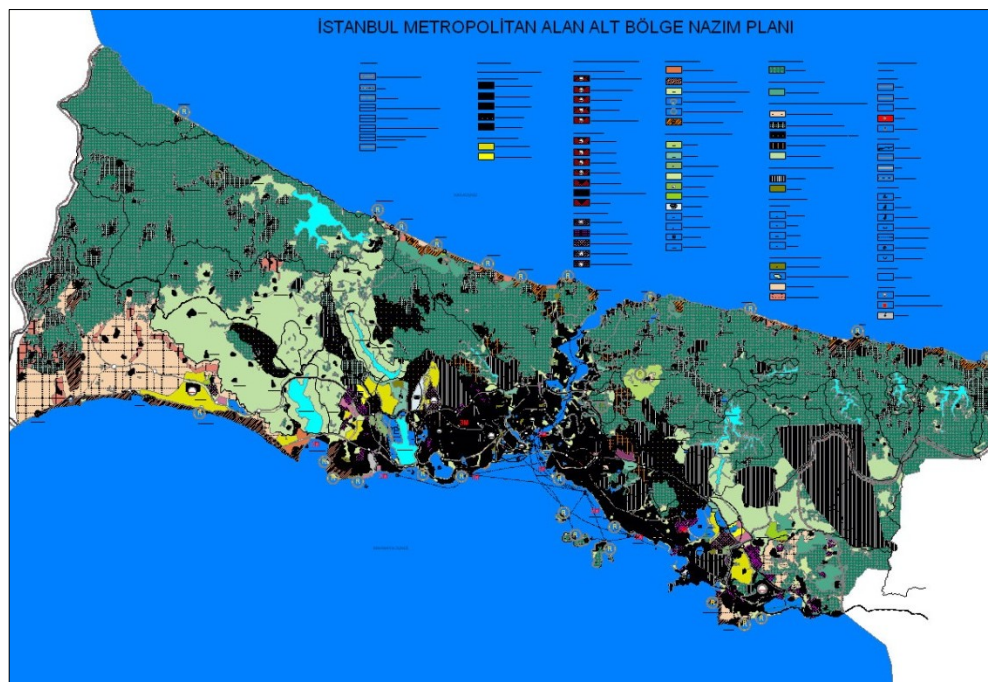


Source: *Milliyet*, 25 September. p.14.

Furthermore, these local decisions about zoning at the beginnings of 1990's, "1980 Metropolitan Master Plan" had not responded to the land developments of Istanbul. For this reason, the studies on a new "1/50.000 Metropolitan Master Plan" had been started by the authorized departments of Istanbul Metropolitan Municipality in 1991. These studies were completed and came into operation in 1995. In the report of this plan, it is emphasized that Büyükdere Avenue should be frozen and the construction of high-rise building should be banned. Hereby, as Certeau (1988) expressed before as 'isolation

from environment’, this zoning plan is determined according to the ideal standards. However, this decision about Büyükdere Avenue had not been applicable because of the function of the axis: CBD. In those years, the districts have started to be economy center where skyscrapers have been housed. In that case, the decision on plan, which did not regard to the current circumstance, could not be proper for the district. As a result, in 1995, a new master plan is designed for Istanbul and it is banned to enact a building that is three times larger than the lot. In this vein, it has been impossible to build up a skyscraper in the city (Figure 3.16). However, the result of numerous lawsuits for repair of the plan, the 6th Agency of State Council (Danıştay 6. Dairesi) had cancelled “1/50.000 Metropolitan Master Plan” that was enured in 1995.

Figure 3.16 : Istanbul, 1995



Source: www.mimdap.org [accessed 11 October 2014].

In the news, it is declared that “Skyscraper is banned in Istanbul.” It seems that this attempt is a kind of isolation from current situation and economic considerations. The regulation regarded the ideal standards for Istanbul. This zoning regulation had been tried to reform according to height limits, while the debates height limits were continuing. However, these regulations were not valid.

Figure 3.17 : “Skyscraper is banned in Istanbul”



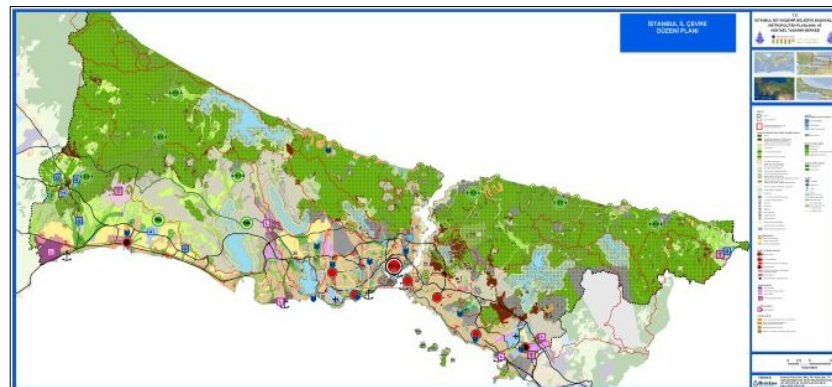
Source: Milliyet, 21 October. p.14.

3.3.3.4 Metropolitan Municipality Law

Code numbered 5216 Metropolitan Municipality Law, which is enured in 23rd July 2004, is determined the authority and responsibility of metropolitan municipalities. In Article 7 b, it is declared that metropolitan municipalities are responsible for draw, make, vote and confirm master plans in each scale between 1/5.000 and 1/25.000, the changes in these plans are done by metropolitan municipalities.

The cancellation of the master plan and the authority, responsibility that are given by the zoning law. 5216 Metropolitan Municipality Law, Ministry of Environment and Forests and Istanbul Metropolitan Municipality signed a protocol to work on 1/100.000 Istanbul Environmental Plan. Istanbul Metropolitan Municipality adjudicated the plan to BİMTAŞ A.Ş that worked on 1/100.000 Istanbul Environmental Plan and the report.

Figure 3.18 : 1/100.000 Istanbul Environmental Plan, 2006



Source: <http://www.bimtas.com.tr> [accessed 15 October 2014].

The plan is enured in 14th July 2006 with the scope of 1370 numbered Council Decision but during the declaration process, there were many objections about the plan. Istanbul 2nd Administrative Court (Istanbul 2.İdare Mahkemesi) cancelled the plan with 2008/516 numbered decision. Against this decision, there was an objection in the Council of State and the result of this court 2008/516 numbered decision was repealed with 2008/8176 numbered decision in 24th November 2008.

The main goal of the plan is to reorganize Istanbul which is the focal point of Turkey in terms of economic, industrial, social and cultural center to disburden of its demography and function (1/100.000 Istanbul Environmental Plan Note). On the other hand, the concentration purpose is to design Istanbul as a global city. For this aim, Istanbul has been considered with its surroundings and also in the scope of Turkey and some functions are organized in neighborhood cities.

According to the plan decisions, Büyükdere Avenue is a business center that has developed as a continuum existence of the Historical Peninsula. However, the report points out that the district as a prestige center needs to be rehabilitated because of the planned and unplanned developments. It shows that the uncontrolled skyscrapers construction has started to be obvious in Istanbul.

Figure 3.19 : CBD and the integration district



Source: <http://v3.arkitera.com> [accessed 15 October 2014].

3.3.3.5 ÇED (Environmental Effects Evaluation) Legislation

ÇED Legislation has been enured in 7th February 1993. The basic principle of the legislation is to arrange administrative and technical procedures that decrease the negative effects of public and private buildings on environment before, during and after construction. ÇED Legislation had been revised in 23rd June 1997, 6th June 2002, 16th December 2003, 17th July 2008, 3rd October 2013 and 10th September 2014. The scope of the code numbered 2872 Environment Law, which came into force in 9th August 1983, is taken as a template for this regulation. According to the last version legislation, the buildings that are listed have to have permission by “Environment and Urban Ministry” and “Provincial Directorates of the Ministry” before any permission for the building such as zoning. The governorships evaluate the report and decide to which building have to prepare a file for permission that is given by the ministry and its provincial directories. Unfortunately, in the content of the legislation, there is not any specific necessity of permission for skyscraper. Today, skyscrapers are not in the scope of ÇED Legislation anymore.

3.3.3.6 Istanbul Zoning Legislation

Istanbul Zoning Legislation, which is enured in 23rd June 2007, had been revised four times in 2011 and 2012. The aim of the legislation is to control zoning process that considers health, science and environmental conditions in the scope of zoning law, legislations, and master plans. The articles of legislation are not valid if the areas that are determined by master plans and private laws. The content of the legislation, the permission of zoning for construction is started with a letter of application that contains architectural and technical drawings to the relevant district municipality. Istanbul Metropolitan Municipality is the authority that controls the zoning decisions of the municipalities. In the legislation high-rise building is defined as at least 60.50m high building that affects its close and distant surroundings physical environment, silhouette, urban texture and infrastructure. Furthermore, in high-rise chapter there are standards about fire precautions, elevator system, static and reinforced concrete calculations,

mechanic installation project and electric installation project. There is an explanation about zoning decision of high-rise buildings: if there is a determination in the master plans “the building is applied in the scope of the preliminary project that is approved by Istanbul Metropolitan Municipality”, the legislation cannot be valid. The approval of the preliminary project; land register, zoning condition, röperl sketch, level-section document and ÇED Report have to be attached. The buildings more than 60.50m are not constructed before the confirmation of Istanbul Metropolitan Municipality on architectural preliminary project, static, mechanics, electric, geological, geotechnical engineering reports, layout sketches and silhouette drawings. In Istanbul Zoning Legislation the considerations of the preliminary project is listed:

1. There should not be any negative effect on historical and natural environment, city scale and city silhouette,
2. There should not be any risk about geological structure,
3. There should not be any negative effects on general and fire transportation,
4. The project should not need any extra capacity increasement of urban infrastructure.
5. The floors area ratio to usable parcel area should not be more than $E=3$

In the scope of the regulation, the documents have to be submitted for zoning application:

1. Ground report that includes required information,
2. Ground studies, meteorological winds and outside temperature reports, material study reports and fire-fighting report,
3. Drawings and reports that are worked by architects, urban planner, civil engineer, electrical engineer, geology engineer, geophysical engineer, map engineer who are the experts,
4. ÇED Report for more than 51.00m high buildings,
5. Architectural and construction drawings,
6. Static calculation and reinforced concrete project,
7. Mechanic installation project
 - a. Sanitary system
 - b. Fire precaution system
 - c. Cooling and heating system

- d. Ventilation system
 - e. Kitchen and laundry
 - f. Cooling and heating operator
 - g. Automatic control system
8. Electric installation project
 - a. Heavy current
 - b. Weak current
 - c. Electrical ground
 - d. Lightning protection
 9. The project and report that shows how sanitary system connects with city water supply and sewage,
 10. The installation projects that are approved by telecommunication corporations.

As it is clarified, in the content of this regulation the problem of height and the problematic of bigness are considered. This regulation includes articles that deal with the height, dimensions and the organization of several disciplines related with architecture. However, the article about high-rise building makes the legislation requirements invalid for skyscrapers projects because of the decisions on zoning plans.

In all plans, Levent, one of the concentration points of skyscrapers in Büyükdere Avenue, is placed in “Bosphorus Back View Preservation” but it is called “prestige district” in the legend of the plans. However, in the beginning of 2008, Levent is registered as “Urban Conservation Area” that gives right to Monuments Council to control the zoning of the district with the municipalities. As it is explained before, all these regulations had been reformed when the previous one was inappropriate. However, the content and the actors have been in contradiction with each other. There are numerous authorities that have participated in the process of zoning approval that makes the issue more confusing (Ersoy, 2006). In that case, the applicability and effectiveness of the zoning regulation mechanisms become impossible. The inadequacies of zoning laws, legislations and plans have created opportunities to enact skyscraper in Istanbul without any restrictions.

It is obvious that there is not any definition and limits about skyscrapers in zoning regulations of Istanbul. Zoning laws, legislations and plans in Istanbul have not included any restrictions. As a result, they have been strategy that creates a legal loophole in the zoning regulation mechanisms. Hence, zoning plans have been the authorities that are applied during plan, design and construction processes. In that sense, they have been a tactic that allows flouting in zoning plans because of insufficient content. Therefore, it is almost impossible to examine who and how approves the buildings in Istanbul (Türeli 2010, p. 212). To sum up, 3194 Zoning Law, current legislations and plans have determined the general scope of the zoning regulation as strategy. However, the most dominant authorities are the zoning plans -master and implementary development plans- that provide opportunity for skyscraper projects as tactic. Because of the lack of information and restriction about skyscrapers on zoning plans, each skyscraper project is able to break the zoning plan decisions. During that time, numerous skyscrapers have built up in an uncontrolled way in Istanbul. Moreover, it shows that there are not a certain zoning regulation mechanisms for skyscrapers.

4. CASE STUDIES: SABANCI CENTER, METROCITY MILLENIUM AND KANYON

During the 1980's, Neoliberalism, which supplies corporatization and private property, became the dominant factor in Turkey, same as most of the countries in the world. Locke (1969) points out one of the basic principles of liberalism as, "everyone is the judge of their selves." Turgut Özal is the representer of neoliberalism in 80's Turkey: corporatization and institutionalization have started to dominate the economy. In that period, 1980's and 1990's, liberalism has not only impacts on the economy but also it has had effects on social life, culture, architecture and all other structure of the country. During the process in Turkey, the faces of the cities have been shifted and architecture became one of the powerful factors, Erem and Gür (2007, p. 122) denote, "Architectural and urban scale decisions have social, cognitive and even cultural consequences to form an interaction platform between man and built environment." Especially, Istanbul is the pioneer that has been reconstructed in the vision of "global city". The vision of global city includes spatial differentiations that have defined with the economic, social and cultural influences (Kahraman, 2006). Sassen (2001, p. 347) states that:

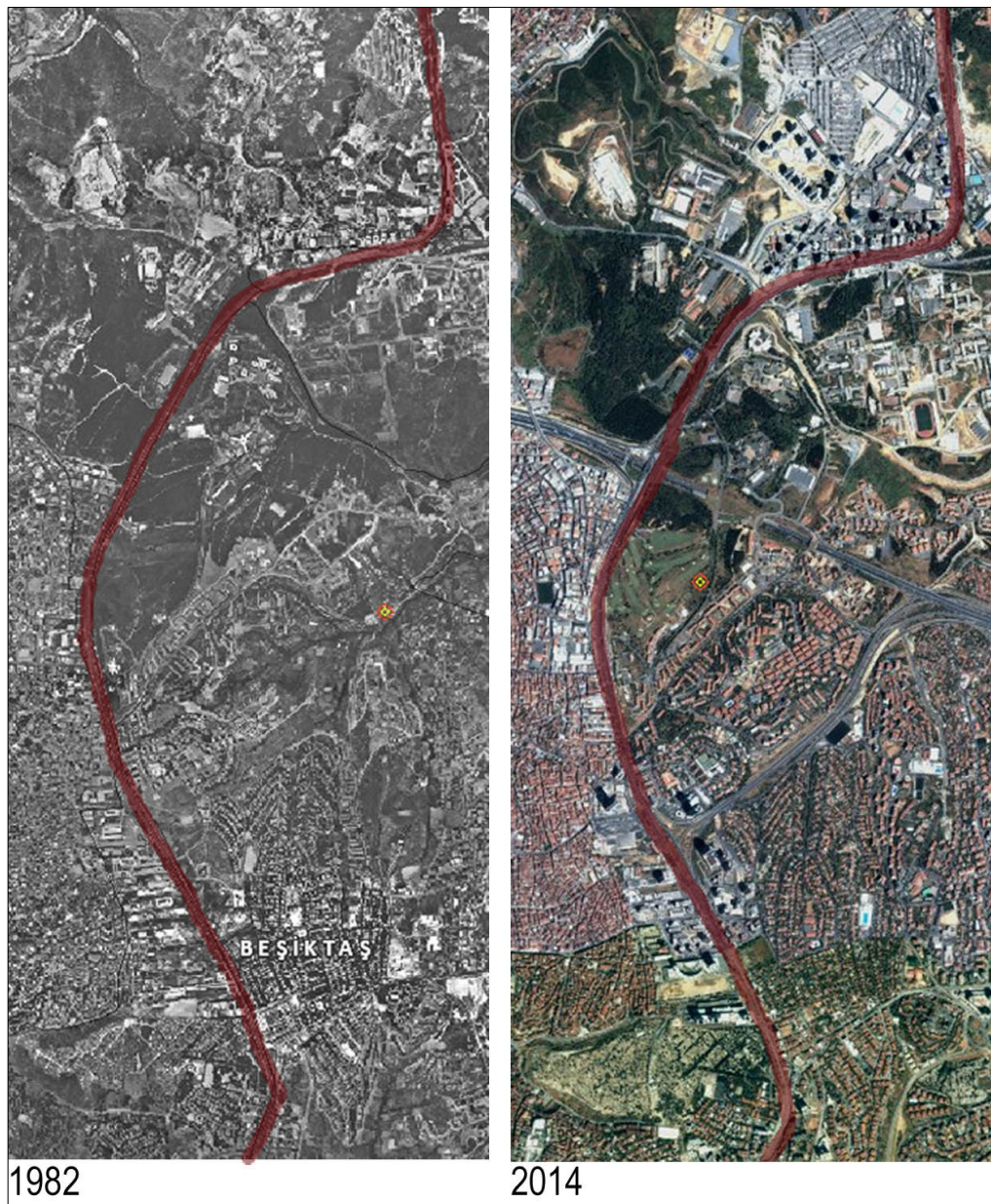
The global city represents a strategic space where global processes materialize in national territories and global dynamics run through national institutional arrangements... A key purpose of the model is to conceive of economic globalization not just as capital flows, but as the work of coordinating, managing and servicing these flows and the work of servicing the multiple activities of firms and markets operating in more than one country.

To experience this interaction in cities, skyscrapers are one of the unique types of architecture in most of the world cities as well as Istanbul. Particularly, Sabancı Center is a leading one in Istanbul that was constructed within the global city idea. It offers a work space in skyscraper where capital flows are coordinated, managed and serviced.

In this study, Büyükdere Avenue is selected for case study. It is the most intense axis of skyscraper in Turkey. The district has become one of the specific features of Istanbul. Büyükdere Avenue is placed in European Side of Istanbul. The avenue, which is a 13.5 km, connects Beşiktaş District to Sarıyer District. It creates an axis between Bosphorus to the north of Istanbul. In the figure, it is seen that the axis has started to be formed: Beşiktaş as a beginning point in the Bosphorus and the line has continued through the

north, Levent. Levent, which is one of the specific locations of skyscraper in Büyükdere Axis, has started to be reorganized since the opening of Bosphorus Bridge in 1972 (Figure 4.1). Local and global markets have taken place in Büyükdere Axis as the spine of commercial establishments. As it is seen from the images below, the numbers of skyscrapers have increased through the north. The highways are connected to the districts. As a result, Büyükdere Avenue became the main artery of economy.

Figure 4.1 : Büyükdere Axis 1982 & 2014



Source: The figure is created by Seda Nur Alkan

Figure 4.2 : Büyükdere Avenue view from Beşiktaş, 1958's



Source: <http://www.arkitera.com> [accessed 19 October 2014].

The development of the district has started in 1947 with the application of Beyoğlu Master Plan that allows the industrial and residential building within the border of area. In 1950's, Levent is designed with the idea of modern settlements: the two or three floors buildings constructed within gardens. Levent became one of the specific districts of representing and presenting modern life in Istanbul (Figure 4.3).

Figure 4.3 : Levent before 1990's



Source: <http://www.degisti.com> [accessed 15 April 2014]

Levent was designed as a district that was served as residential space through the one side of Büyükdere Avenue. The axis was supplied the connection between Bosphorus district and the city centre but after this time Büyükdere Avenue has become one of the important and dense economic arteries in Istanbul (Figure 4. 4).

Figure 4.4 : Levent in 1990's



Source: Dünden Bugüne İstanbul Ansiklopedisi.

In the beginning of 1970's Levent became the nodal point in Istanbul that roads are connected with Bosphorus Bridge. In that case, the district has been a distinguished part of Istanbul that local and central governments and companies have invested on. In other words, the land value of Levent has started to increase rapidly. Both the national and international business authorities have taken place in the skyscrapers through Büyükdere Axis. These skyscrapers have begun to create the new centre trough this axis when the historical centre of Istanbul became insufficient because of the structural obsolescence (Dökmeci and Berköz Akkal 1993, p. 9). Then, the centre of economy has shifted through Büyükdere Avenue.

The Metropolitan Master Plan in 1980 and Tourism Promotion Law are the first attempts of the authorities that gave opportunities to capital owners for constructing skyscraper. However, the breakpoint of this process is the declaration of Beşiktaş-Levent Tourism Center in 1990 when Büyükdere Avenue has gained status of being tourism district in the scope of prestige projects such as skyscrapers. In 2000's, the skyline of Istanbul has been dominated by numerous skyscrapers.

To analyze the skyscrapers as the problem of height and the problematic of bigness in Istanbul and the zoning regulation mechanisms about skyscrapers, through the determined filters, three buildings Sabancı Center, Metrocity Millenium and Kanyon are selected. Sabancı Center, Metrocity Millenium and Kanyon are declared as the first examples with their design proposals.

Figure 4.5 : The location of case studies in Büyükdere Axis



Source: The figure is created by Seda Nur Alkan

These buildings are the leading ones according to their pivotal characteristics. Sabancı Center is the first skyscraper as office building that was enacted in the axis; the current CBD of Istanbul. The architectural program of Sabancı Center is a new proposal for multi-storey workspace building in Istanbul compared to existing office spaces. Metrocity Millennium is the first skyscraper in the axis that is designed in the scope of mixed-use program. Mixed-use program includes three or more significant uses- residential, manufacturing, entertainment, community/cultural, office, hotel, retail and parking- in a real estate project to increase intensity and diversity of land uses (Grant, 2002). Metrocity Millennium proposes a new center in Büyükdere Avenue with “the

announcement of a new lifestyle” that is investigated in Chapter 4.2. Kanyon is the first skyscraper in the avenue that suggests “exclusive neighborhood for selected users”. The building is designed in the concept of mixed-use program that serves residence, office and shopping mall for high-income individuals. It creates a building complex where some “high income groups” gather.

In the following parts, the case studies are analyzed in the determined filters: ‘object of design’, ‘product of technology’, ‘sites of construction’ and ‘investment in real estate’. ‘Design objectives’ filter examines the architectural program, design ideas and conceptual attempts of architects, capital owners, local and central governments. ‘Product of technology’ filter focuses on the roles of technological developments used during plan, design and construction processes. The organization of construction and the actors of these processes are the main issues of ‘sites of construction’ filter. In ‘investment in real estate’ filter, construction site’s planning information, zoning regulation mechanisms and proposals of zoning plans are inquired.

4.1 SABANCI CENTER

Location: Beşiktaş, Levent, Büyükdere Avenue

Construction Year: 1988-1993

Opening Date: 08 November 1993

Architect: Haluk Tümay, Ayhan Böke and Swanke-Hayden-Connell Architects

Engineer: Koray İnşaat and Tokar

Height of the Building: First Tower 158 m, Second Tower 140 m

Numbers of the Floors: First Tower 39, Second Tower 34

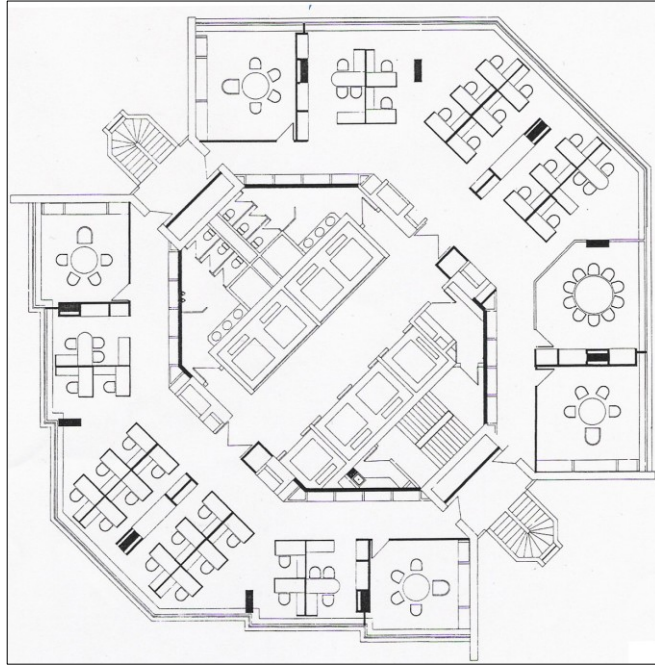
Figure 4.6 : Sabancı Center in Istanbul's silhouette



Source: www.yapidergisi.com [accessed 26 December 2014]

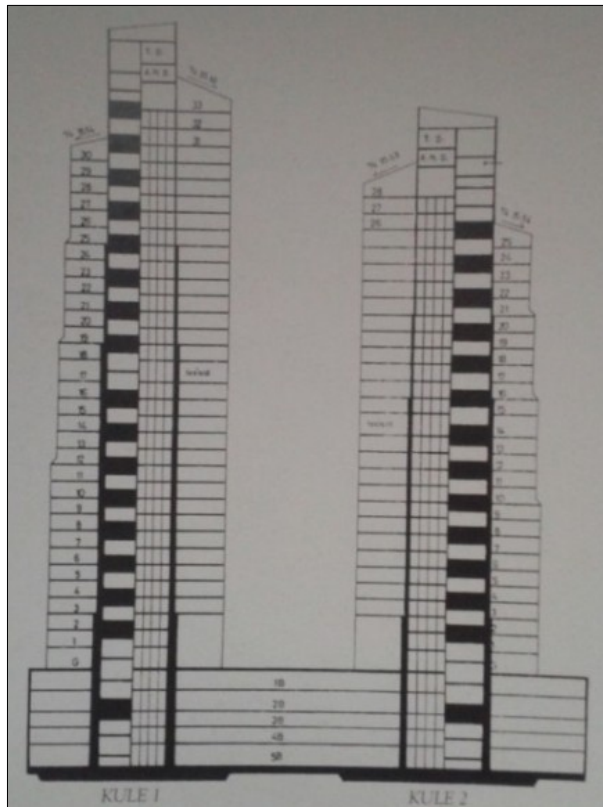
Sabancı Center is a leading skyscraper that proposes a new place of work through Büyükdere Axis: office spaces in a high-rise building. Sabancı Center is composed of two low blocks and two high blocks which are 39 floors high and 34 floors high. These two towers have same plan layouts and are connected with a canopy in between. The towers are shifted to south part of the site. It creates an open space that serves as car parking and green area for the employees. On the ground floor level, the complex is not accessed from Büyükdere Avenue by pedestrian (Figure 4.7). Both inside and outside, there is no open public space.

Figure 4.9 : The typical floor plan of Sabancı Center



Source: Şener, D., 2006. Understanding facade between design and manufacturing: a case study on high-rise office buildings in Istanbul. P. 55.

Figure 4.10 : The section of Sabancı Center



Source: Yapı'dan seçmeler 3: iş-alışveriş merkezleri. Yem Yayın. P. 97.

One of the designers of the building, Haluk Tümay denotes that the mayor of that period Istanbul Metropolitan Municipality, Bedrettin Dalan, assigned architects of Sabancı Center to analyze Trump Tower in U.S.A (Öktem 2005, p.48). This decision has crucial effects on design of Sabancı Center. Trump Tower, which was enacted in 1983 in New York, is designed by Der Scutt and Swanke, Hayden & Connell Architects. Regarding the attention of Dalan, it should be underlined that one of the design team of this project; Swanke, Hayden & Connell Architects is the foreign partner of Haluk Tümay and Ayhan Böke for Sabancı Center design.

Figure 4.11 : Trump Tower



Source: <http://www.thecityreview.com> [accessed 01 December 2014]

The fundamental object of design, which is emphasized by capital owners, is to enact a symbol for the prestige of the institution. One of the architects of Sabancı Center Tümay (1994) asserts that to build two towers, one of them is for Akbank Headquarters and the other for Sabancı Holding, is the most specific demand of the client in the design process. With these two towers, the dominant effects of verticality in design are aimed to be highlighted. The facades of buildings that are covered with reflected blue glass as a whole smooth surface is the second important design considerations to emphasize.

Figure 4.12 : Sabancı Center



Source: <http://proplan-pmc.com/> [accessed 15 April 2014]

During the design process, Haluk Tümay and Ayhan Böke had foreign partner; Swanke-Hayden-Connell Architects. However, in construction period, national firms had taken part in as the contractor; Koray İnşaat and engineers. There are two main issues in construction period; construction system and facade. Reinforced concrete is preferred for the construction system of Sabancı Center because of its cheap coast and ease of application. Through the design process of curtain wall system, IFFT-Frankfurt- as a professional counselor and Çuhadaroğlu Aluminum, as the national responsible manufacture firm had worked together in technical calculations, tests and application. In the facades of the complex, curtain wall system with glass, steel and aluminum are used. The curtain wall system is covered with film that prevents disintegration; block noise.

Regarding the role of technology, Sabancı Center is the first smart building in Turkey that provides advanced functionality for monitoring and controlling the mechanical, electrical, lighting and other systems in a building by computerized, intelligent network of electronic devices. This system allows many functions for high complex that provides heating, cooling, ventilation, fire alarm and firefighting system, power supply, lighting control, communications and lift. Furthermore, during an earthquake, the system announces in Turkish and English, cuts off electricity and natural gas and also

elevators are stopped on the closer floors. In addition, for the sustainability of the building, the works on energy efficiency have been focused since 1999. In 2002, the complex became the first cooling tower with frequency convector that supplies energy saving (<http://www.ekoyapidergisi.org>).

Figure 4.13: Sabancı Center Cooling Tower



Source: <http://www.ekoyapidergisi.org>
[accessed 12 October 2014]

As the result of energy considerations of Sabancı Center, the complex has completed the application for LEED (Leadership in Energy and Environmental Design) Certification and has aimed to complete the KPI (Key Performance Indicator) in energy efficiency and water usage in 2012. The complex has been one of the eco-friendly constructions in Turkey that considers minimum energy consumption.

For considering investment in real estate, it is a specific factor that the complex belongs one of the leading businessman, Sakıp Sabancı, who made the skyscraper center of attraction. Sabancı Center had been added to both political and economic agenda of Istanbul. Political authorities, such as the president Süleyman Demirel, also have paid attention to Sabancı Center and it was placed in Milliyet in the headlines of “Demirel will open Sabancı Center” (Figure 4.14).

Figure 4.14 : Inauguration of Sabancı Center



Source: Milliyet, 06 November 1993. P. 3.

During design and construction years, 3194 Zoning Law and Planned Area Type Zoning Legislation, which have related articles with skyscrapers, were valid. However, there are not significant definition and restrictions about skyscrapers. In that case, “1/1.000 Beşiktaş Back View within Striking Distance Implementary Development Plan” has been the authority of description and limits for Sabancı Center. The restrictions for Sabancı Center were explained in “1/1.000 Beşiktaş Back View within Striking Distance Implementary Development Plan” (Figure 4.15).

Figure 4.15: Sabancı Center in “1/1.000 Beşiktaş Back View within Striking Distance Implementary Development Plan”



Source: <http://keos.besiktas.bel.tr/imardurumu/index.aspx> [accessed 06 November 2014]

Sabancı Center is approved in the scope of “1/1.000 Beşiktaş Back View within Striking Distance Implementary Development Plan” that enured in 10th of December 1993 (<http://keos.besiktas.bel.tr>). The site of the building is declared as urban business area that means avan (preliminary) project is applied in the approval process. According to the decisions of “1/1.000 Beşiktaş Back View within Striking Distance Implementary Development Plan”, the plan function of parcel is certified as management center district. According to this plan, the sizes and heights of blocks are determined by the Cultural and Natural Heritage Conservation Council and Istanbul Metropolitan Municipality. In the scope of this regulation, for the zoning permission Directorate of Zoning Works and Planning Directorate of Istanbul Metropolitan Municipality examined the application of zoning and then the Municipal Council of Istanbul Metropolitan Municipality decreed the appropriation. At the end of this process, KASK (E=3) is determined and the height of the building is not informed (<http://keos.besiktas.bel.tr>). However, Turkish Air Force is another authority that evaluates and approves the height of the building with the flight routes (Hava Mani Hattı). Turkish Air Force is also authority for Metrocity Millenium and Kanyon. In the table, the results are placed according to the given information. It shows what is informed in plan and what is constructed (Table 4.1). It is observed that the rules in the plan was broken and new limits were determined by the project.

Table 4.1: TASK & KASK calculations of Sabancı Center;

		CALCULATION ACCORDING TO THE INFORMATION IN PLAN	CONSTRUCTED
Land Area	18.175, 62 m ²	-	18.175, 62 m ²
Ground Floors Area	10.000 m ²	-	10.000 m ²
Construction Area	107.000 m ²	-	107.000 m ²
TASK (Ground Floors Area / Land Area)	-	10.000/18.175,62=0.55	0.55
KASK (Land Area x E)	-	18.175, 62 x 3=54.525 m ²	107.000 m ²

Source: The table is created by Seda Nur Alkan

4.2 METROCITY MILLENIUM

Location: Şişli, Levent, Büyükdere Avenue

Construction Year: 1997 - 2003

Opening Date: 30 April 2003

Architect: Doğan Tekeli and Sami Sisa

Engineer: Balkar Mühendislik, Birikim Mühendislik, Sasel Mühendislik

Height of the Building: Office tower: 131.25 m, 2 Residence Towers: 128.40 m

Numbers of the Floors: First Tower 26, Second Tower 24

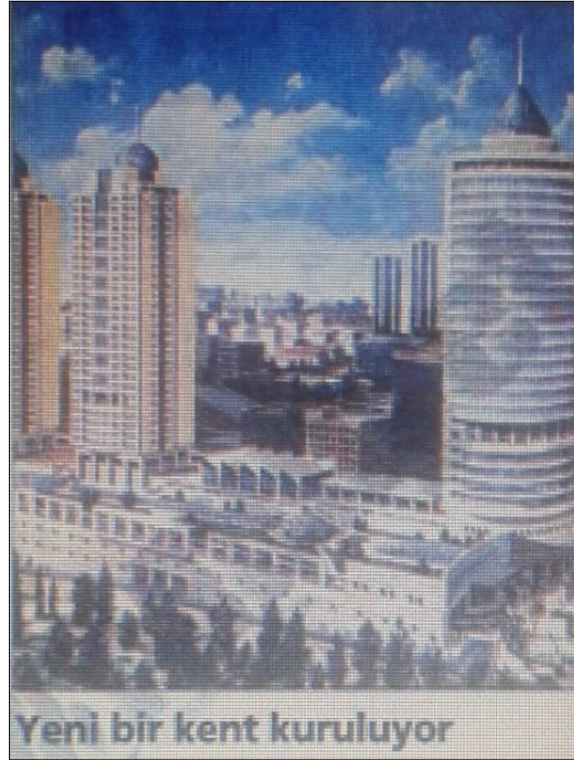
Figure 4.16 : Metrocity Millenium



Source: <http://v3.arkitera.com> [accessed 27 November 2014]

Metrocity is one of the distinguished skyscrapers in Büyükdere Avenue. The design announces a new life style in the district. The architectural program of the building: office, residence, shopping mall, presents a new life for the users. Metrocity Millenium serves as dwelling unit, work and shopping area all together. It is also emphasized that Metrocity Millenium is able to response all needs of the users. In Milliyet news, it is indicated that a new city was constructed (Figure 4.17). Metrocity Millenium is designed as a complex that functions as if a city.

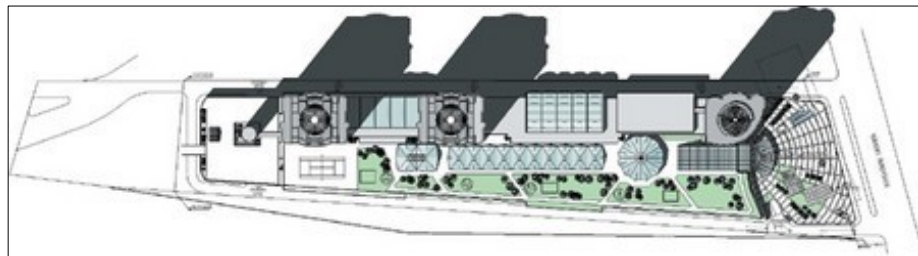
Figure 4.17 : “A new city is being constructed”



Source: Milliyet Vitrin, 31 July 1999. P. 4.

As it is seen on site plan, an open public space is designed in the front of Metrocity Millennium that is accessed from Büyükdere Avenue (Figure 4.18). With this design decision, people are welcomed through this facade. There is also a subway entrance that emphasizes the publicity.

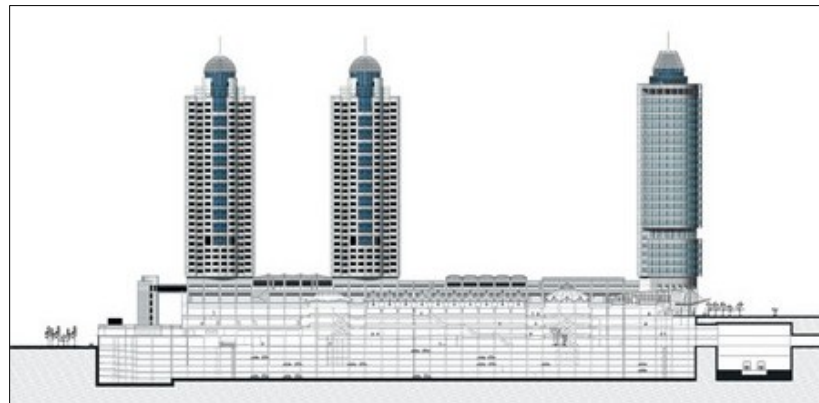
Figure 4.18: Metrocity Millennium site plan



Source: <http://www.yapi.com.tr> [accessed 27 November 2014]

As it is seen in the section, there is a continuity between Metrocity Millenium and Büyükdere Axis on ground floor level that functions as shopping mall (Figure 4.19). There are 8 underground floors that are designed as a template for towers. 3 underground levels for shopping spaces. 5 underground levels are for car parking. The capacity is 3000 cars. The complex is connected to metro as a subway station in the underground level: Metrocity Millenium is the first building in Turkey that is connected with subway. That also attracts the public attention to come Metrocity because of its easy access. However, the office tower and two residence towers are enacted independently. They are designed introverted towers that are separated each other. The building is mixed in terms of architectural program. On the other hand, these functions have served as isolated structures physically.

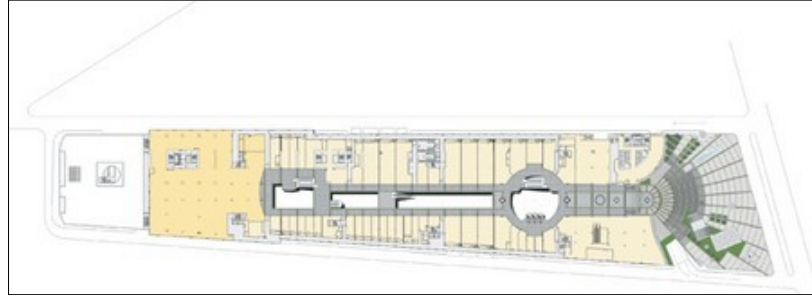
Figure 4.19 : Metrocity Millenium longitudinal section



Source: <http://www.yapi.com.tr> [accessed 27 November 2014]

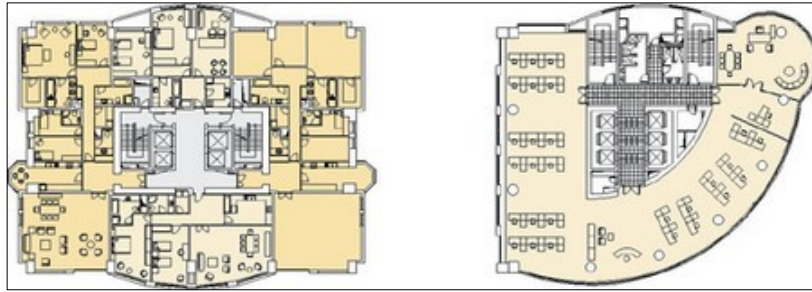
The two towers, which are totally 49.400 m², are designed for place of residence. One of these towers has 26 floors and they are 881 m². There are 205 dwelling units that are placed around the core. The core includes 4 elevators for 13 persons. The third tower, which has 24 levels, is for office that is 16.560 m². One office floors is approximately 720 m². In the tower, there are 6 elevators for circulation that is surrounded by place of work. The shopping area, which is located in under the towers as a whole space, is 32.638 m².

Figure 4.20: Metrocity Millenium floor plan



Source: <http://www.yapi.com.tr> [accessed 27 November 2014]

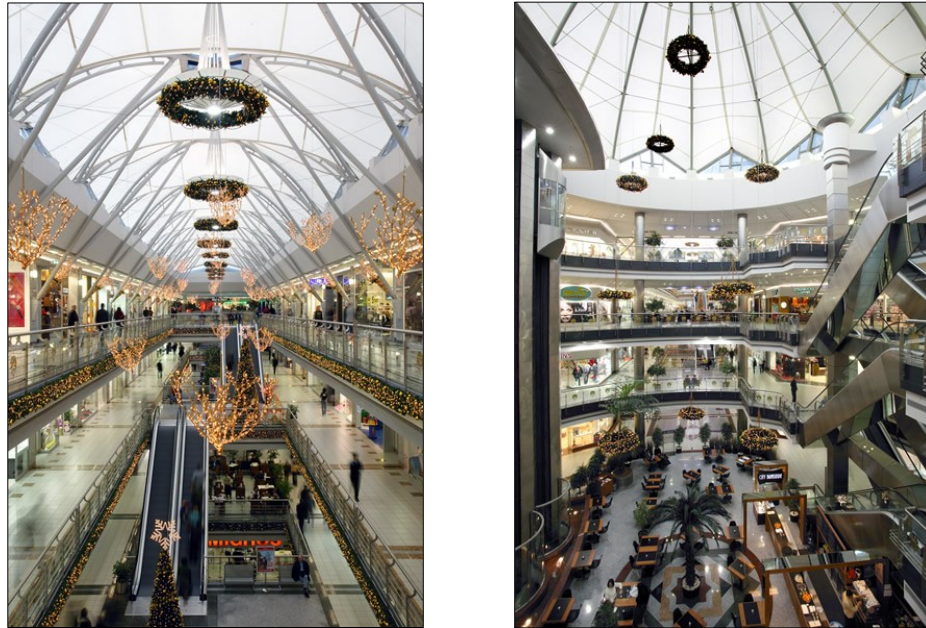
Figure 4.21 : Metrocity Millenium residence and office plans



Source: <http://www.yapi.com.tr> [accessed 27 November 2014]

One of the capital owners, Necmettin Öztemir (2003), says that the concept of the project is “shopping in sunlight”: it is aimed to create çarşı effect. For this reason, Tabanlıoğlu Architect’s design was applied out of central space cover. The shopping space is covered with teflon surface that lets sunlight to come in (Figure 4.22). The surface is designed by Anthony Belluschi and applied by a German firm Cenotec.

Figure 4.22 : Interior of the mall



Source: <http://www.tekelisisa.com/tr> [accessed 23 September 2014]

There are three steps in the design process. In the first step, the owner were asked to design a project, then they invited Turkish Architects for the projects; our design was decided to build but for that time the owner wanted to invite foreign architects for the design of Metrocity Millenium as a competition (Tekeli, 2010). The design of Tekeli and Sisa competed with these designs: their design was the winner again. Swanke Hayden Connel, Kohn Pedersen Fox, Skidmore and Owings & Merrill are one of the significant architects that took part in the competition. However, their design proposal are not available because of the evaluation was held in closed session.

Milliyet, in 28th October 2000, the news states that Metrocity Millenium is the new twin of Istanbul (Figure 4.23). In the headline of the news, the building is compared with Sabancı Center in terms of the standing on the silhouette of Istanbul. According to the news, Sabancı Center is marked the first twin of Istanbul. After Metrocity Millenium construction, there is a new twin in Istanbul's skyline. The news is focused on that Metrocity Millenium was constructed as a smart building. The program of the building, a new life style, is also expressed in the news.

Figure 4.23 : “The new twin of Istanbul”



Source: Milliyet Konut ve Ev Yaşamı 2000, 28 October 2000. P. 2.

Tekeli (2003) states that the relationship between Istanbul and Metrocity Millennium is considered as a whole in the city scale. The main purpose of the design is to create a “friendly” construction. In other words, Istanbul’s historical silhouette was regarded during design phase. The mosque and their minarets were the major issues for Metrocity Millennium. The architects attempted to create relationship between this historical silhouette and the towers. Tekeli adds that these towers have nonfunctional concrete domes at the top as a citation to mosques and minarets in the silhouette of Istanbul (Figure 4.24). However, the dominance of towers on Istanbul’s skyline creates a new situation that is unfamiliar for Istanbul. In addition to dominant effects on the silhouette, the construction area of the complex is not a friendly approach. The project sets on a linear site near to Büyükdere Axis. The basement and underground levels is placed on 50% of the area. The three towers are located on this basement independently from each other. The towers for residence are differentiated from the office tower with its facade design. The circular office building is covered by glass but residence buildings are designed with window and wall that gives information about the numbers of floors and emphasize concrete (Tekeli, 2003).

Figure 4.24 : Metrocity in the silhouette



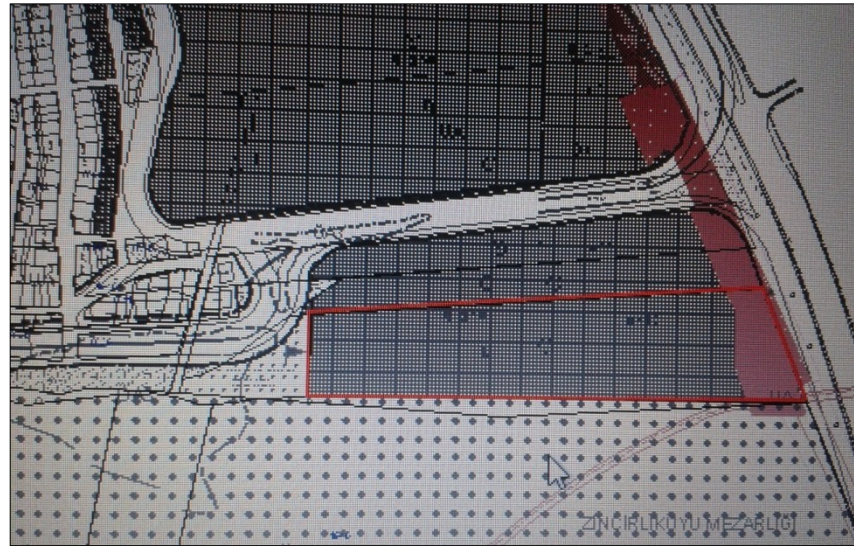
Source: Milliyet, 9 August 2000. P. 8.

Regarding the construction process, the architects Tekeli and Sisa had taken part in all steps since the beginning of design process. Metrocity Millenium was constructed with reinforced concrete and steel in the principle of skeleton system because of cheap cost and ease of application. Tekeli (2003) highlights that building construction technology has not been professionally evolved in Turkey thus architects have a great role and responsibility to solve the issues related to construction technology.

In the design process of Metrocity Millenium, İrfan Balioğlu, an experienced civil engineer draw the static projects. Balioğlu (1999) expresses that during the skyscraper construction projects concrete is preferred. It can be controlled from mixture design to application in place. Balioğlu adds that for static calculations, the standards are considered according to the most risky earthquake district in the world. For ventilation, heating and cooling systems in the building energy efficient systems are preferred for minimum energy consumption. All the systems are operated by a computer-aided automation system. The automatic fire and smoke control system is used for the first time in Metrocity Millenium. The fire exits are designed with the automatic fresh air pressure system.

The capital owner of the project is Metrosite İnşaat Müşavirlik Hizmetleri Tic. A.Ş and the contractor is Ay-sel İnşaat. Although there are numerous zoning plans of the area in different scales, the content is insufficient because all are dated back to 1955. Because of this reason, with the judgment of related institution dated in 21st October 1997 a study on “1/5.000 Şişli Center and Environment Revision Master Plan” started. The site of Metrocity Millenium is placed in scope of this plan that is enured in 14th November 2003 (TMMOB). Through design and construction years, 3194 Zoning Law, Planned Area Type Zoning Legislation and ÇED, which have related articles with skyscrapers, were valid. However, there are not specific definition and limitations about skyscrapers. The restrictions for Metrocity Millenium were expressed in “1/5.000 Şişli Center and Environment Revision Master Plan” (Figure 4.25).

Figure 4.25 : Metrocity Millenium in “1/5.000 Şişli Center and Environment Revision Master Plan”



Source: <http://gis.sisliblediyesi.com/imardurum/> [accessed 06 November 2014]

In the scope of the plan, KASK (E=3) is determined and the height and function of the building is not informed. In the table, the results are placed according to the given information. It shows what is informed in plan and what is constructed (Table 4.2). It is clear that the rules on the plan were broken.

Table 4.2: TASK & KASK calculations of Metrocity Millenium;

		CALCULATION ACCORDING TO THE INFORMATION IN PLAN	CONSTRUCTED
Land Area	24.277 m ²	-	24.277 m ²
Ground Floors Area	12.759 m ²	-	12.759 m ²
Construction Area	210.200 m ²	-	210.200 m ²
TASK (Ground Floors Area / Land Area)	-	12.759 /24.277 =0.52	0.52
KASK (Land Area x E)	-	24.277 x 3=72.831 m ²	210.200 m ²

Source: The table is created by Seda Nur Alkan

4.3 KANYON

Location: Şişli, Levent, Büyükdere Avenue

Construction Year: 2001-2006

Opening Date: 30 May 2006

Architect: Tabanlıoğlu & Jerde Partnership

Engineer: ARUP & Ove Arup Englad & Los Angeles

Height of the Building: 130 m

Numbers of the Floors: Tower 25

Figure 4.26 : Kanyon



Source: www.sehrehaber.com [accessed 26 December 2014]

Kanyon is a distinct skyscraper that offers an exclusive publicity in Büyükdere Avenue. One of the architect of Kanyon, Murat Tabanlıoğlu (2007) states that there are numerous projects in this district, Tabanlıoğlu adds his design process starts with writing a scenario that describes inhabitants and their expectations. A canyon is designed and the functions of shopping and dwelling were built up around this open space. In dwelling part, the main goal is to construct “an exclusive neighborhood” that looks at the canyon. The preservation of private space of each dwelling unit is also considered in design process. With this design approach, a neighborhood is created for “selected” groups: it proposes a complex in the city center for high income people. The design serves both private space and public space for the users.

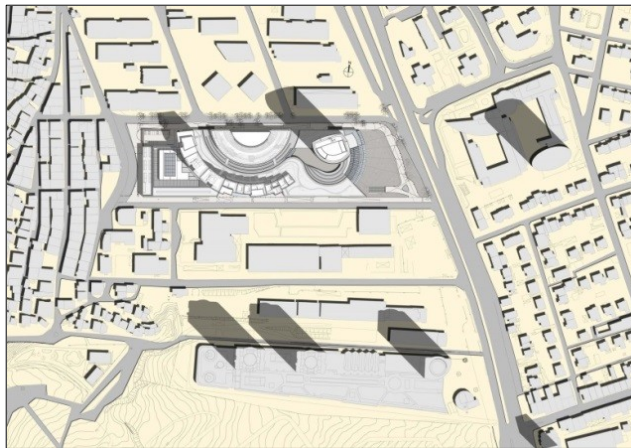
Figure 4.27 : Kanyon



Source: <http://www.arkiv.com.tr>
[accessed 23 September 2014]

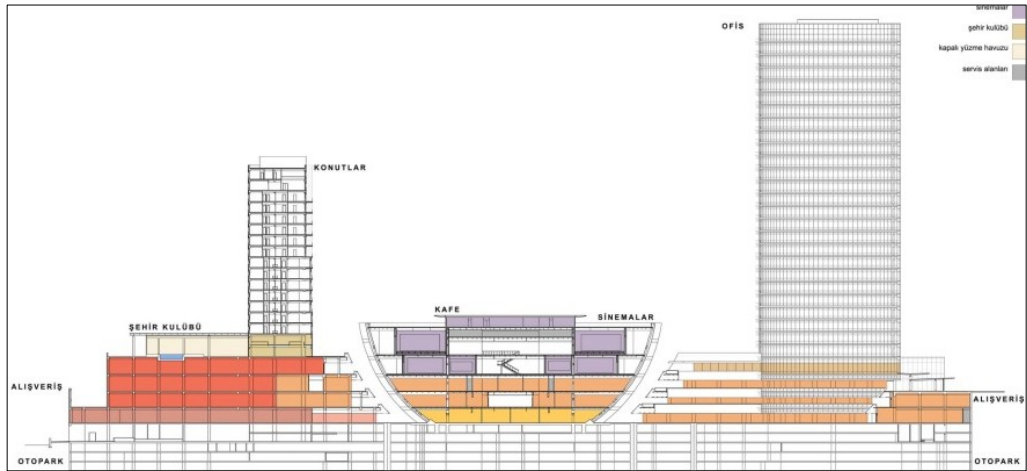
The building connects with Büyükdere Axis with an open public space. It creates a continuum for pedestrian while walking through the avenue. However, the architectural program of the building was designed for the selected people. In that case, the attempt of creating an open public space was not considered inside of Kanyon. To look closer at the site plan, it is seen that the complex is surrounded by walls on ground floor level. The relationships between the existing buildings are not considered.

Figure 4.28 : Kanyon Site Plan



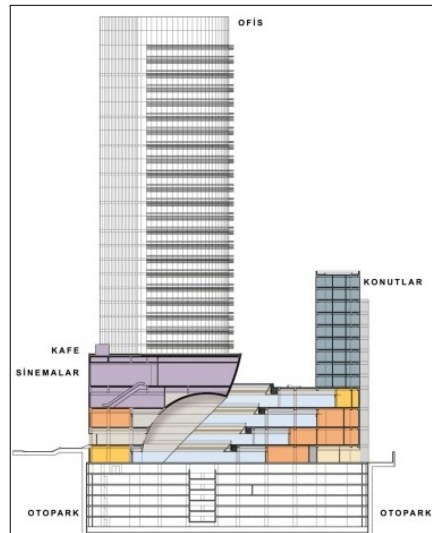
Source: <http://www.arkiv.com.tr> [accessed 23 September 2014]

Figure 4.29 : Kanyon longitudinal section



Source: <http://www.arkiv.com.tr> [accessed 23 September 2014]

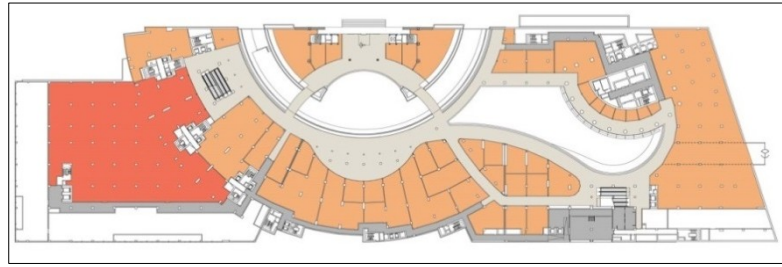
Figure 4.30 : Kanyon cross section



Source: <http://www.arkiv.com.tr> [accessed 23 September 2014]

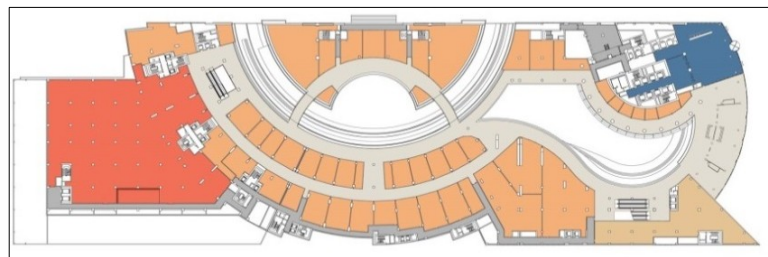
In the sections of Kanyon, the separated volumes are seen clearly. These structures are designed for different functions; residence, office and shopping mall. There are 5 underground floors; 3 of them are designed for car parking. The capacity is 2300 cars. 179 dwelling units, 38.500 m², are designed for residence. The tower, which is designed for office spaces, is 36.000 m². There are 8 elevators in the core. The shopping area is designed as an open space that is 37.500 m². In the scope of the design approach, there is also 3500 m² green area.

Figure 4.31 : Kanyon underground floor



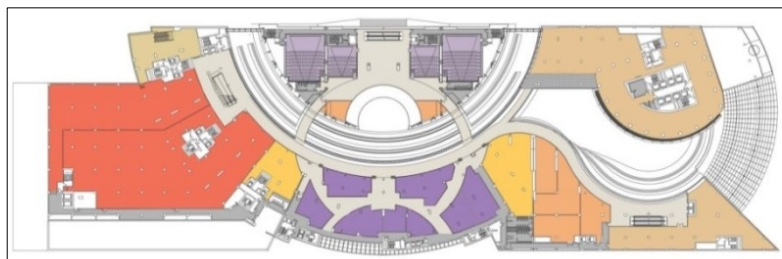
Source: <http://www.arkiv.com.tr> [accessed 23 September 2014]

Figure 4.32 : Kanyon ground floor level



Source: <http://www.arkiv.com.tr> [accessed 23 September 2014]

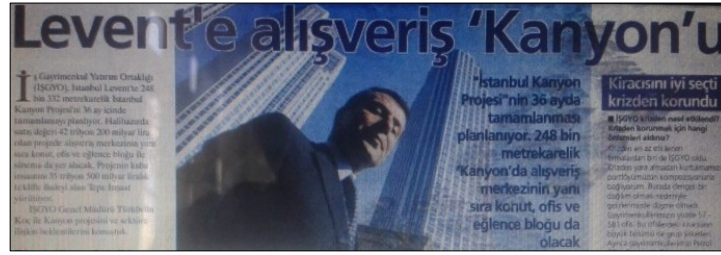
Figure 4.33 : Kanyon first floor



Source: <http://www.arkiv.com.tr> [accessed 23 September 2014]

The connections between circulation paths and the spaces are created by the flows of the structure's organic form as a whole. The basic design aim of this attempt is to take natural lights and the city scenery into the building. In addition, Kanyon is the first example in Turkey that proposes to design the effects of "street shopping" with its open space design. This design approach is emphasized in the news of Milliyet and it says, "A shopping "Kanyon" in Levent" (Figure 4.34).

Figure 4.34 : “A shopping “Kanyon” in Levent”

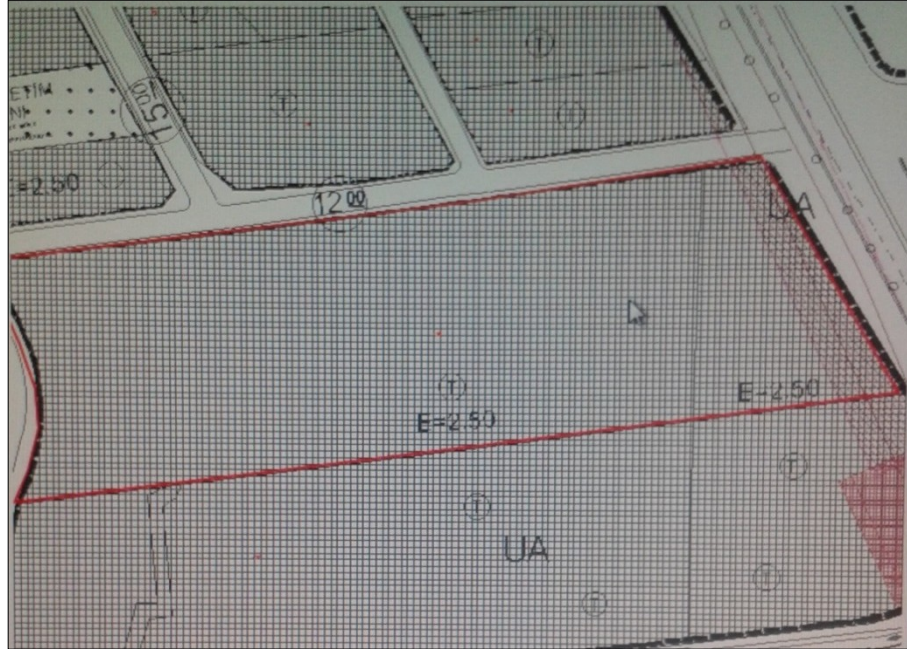


Source: Milliyet Gayrimenkul, 28 February 2003. P. 2.

To consider the design and construction process of Kanyon, in 2001, national and international five competition groups were invited and an international competition was organized. The project of Tabanlıoğlu & Jerde Partnership won the 1st prize. Kanyon was constructed with reinforced concrete in the principle of skeleton system. Regarding the issue of earthquake in Istanbul, the static calculations of the building computed the earthquake acceleration by 25% more than the projected earthquake. Because of the canyon concept, wind force has been tested and precautions were taken in the design process of open shopping mall and residence terraces. However, these calculations were not effective for wind circulation in the shopping center and some parts were closed. For the design of the facade, the technological developments such as materials are applied to deal with traffic noise, fire and acoustic comfort by the engineers.

The capital owner is Eczacıbaşı & İş GYO and the contractor is Tepe İnşaat. Construction cost is approximately 200 million \$. In design and construction years, 3194 Zoning Law, 5216 Metropolitan Municipality Law, Planned Area Type Zoning Legislation and ÇED were valid. However, skyscrapers are not defined and restricted significantly. The restrictions for Kanyon were explained in “1/1.000 Şişli Center and Environment Implementary Development Plan” (Figure 4.35). Kanyon is approved in the scope of “1/1.000 Şişli Center and Environment Implementary Development Plan” that enured in 24th of June 2006 (TMMOB). With this regulation, KASK (E=2.5) is determined and the height and function of the building is free in the border of commercial district.

**Figure 4.35 : Kanyon in “1/1.000 Şişli Center and Environment
Implementary Development Plan”**



Source: <http://gis.sisliblediyesi.com/imardurum/> [accessed 06 November 2014]

In the table, the results are placed according to the given information. It shows what is informed in plan and what is constructed (Table 4.3). The rule about E=2.5 is broken and 255.000 m² was constructed.

Table 4.3: TASK & KASK calculations of of Kanyon;

		CALCULATION ACCORDING TO THE INFORMATION IN PLAN	CONSTRUCTED
Land Area	30.000 m ²	-	24.277 m ²
Ground Floors Area	7.400 m ²	-	12.759 m ²
Construction Area	255.000 m ²	-	210.200 m ²
TASK (Ground Floors Area / Land Area)	-	7.400 /30.000 =0.25	0.25
KASK (Land Area x E)	-	30.000 x 2,5=75.000m ²	255.000 m ²

Source: The table is created by Seda Nur Alkan

4.4 EVALUATION OF THE CASE STUDIES

Sabancı Center, Metrocity Millenium and Kanyon are examined as case studies that set on Büyükdere Avenue. These three examples are analyzed in the four filters: “design objectives”, “product of technology”, “sites of constriction”, “real estate developments” to investigate the problem of height, the problematic of bigness and the scientific rationalities about skyscrapers in Istanbul. In the framework of these filters, architect, construction years, location, architectural program, construction type, technological developments, organization of construction and actors, zoning plan, land area, construction area, ground floor area, height, TASK and KASK are debated with regard to the problem of height and the problematic of bigness.

During the plan, design and construction process of Sabancı Center, Metrocity Millenium and Kanyon; international actors had participated. As the indicator of this, foreign architects and designers had been involved in the phases. Haluk Tümay, Ayhan Böke had worked together with Swanke-Hayden-Cornell Architects for Sabancı Center architectural project. Metrocity Millenium is designed by Doğan Tekeli and Sami Sisa. However, the teflon surface of interior space is designed by Belluschi and applied by German firm Cenotec. Furthermore, for the architectural project of Metrocity Millenium, a competition was organized that several foreign architects took part in. Kanyon was designed by Murat Tabanlıoğlu and Jerde Partnership.

With the transformations of Istanbul under the effects of capital flows, the architectural programs of the skyscrapers have changed. The architectural program of Sabancı Center includes office spaces. On the other hand, Metrocity Millenium and Kanyon have functioned as mixed-use. To compare Sabancı Center with Metrocity Millenium and Kanyon, Metrocity Millenium and Kanyon have not served only during the work hours but also they have functioned as offices, residences and shopping spaces for 7 days 24 hours.

Even if technological advancements have provided opportunities to new material and methods of contractions, reinforced concrete and curtain walls were used for the each selected example because of cheap cost and easy to apply. On the other hand, to construct a smart skyscraper as a prestige matter is one of the main considerations for these selected examples. Regarding this, all the systems in the skyscrapers are operated by computer-aided automation systems.

As it is observed in the selected skyscrapers, the architects are not the ultimate decision makers. Besides, capital owners, engineers and constructors are also the authorities through the plan, design and construction phases of the selected skyscrapers. In addition, the major of that period Bedrettin Dalan had been one of the significant authorities for Sabancı Center.

Because of there is not a specific zoning laws, legislations and plans for skyscrapers in Istanbul, the selected skyscrapers are in the scope of different zoning plans: Sabancı center; 1/1.000 Beşiktaş Back View within Striking Distance Implementary Development Plan, Metrocity Millenium; 1/5.000 Şişli Center and Environment Revision Master Plan, Kanyon; 1/1.000 Şişli Center and Environment Implementary Development Plan. Within this content, for Sabancı Center and Metrocity $E=3$ and Kanyon $E=2.5$ is determined. Moreover, there is not a height restriction in these zoning plans. Despite this, there is not a competition of height between these skyscrapers and the height of the selected skyscrapers has been decreased. The calculations of KASK assert that the major point is to construct maximum space in minimum area for the selected examples. Hereby, there is not a problem of height in terms of erecting the highest. However, to construct a large skyscraper has been an important consideration.

Below, the table implicates in the analysis of three case studies in the scope of the determined filters (Table 4.4).

Table 4.4: The findings of case studies;

		SABANCI CENTER	METROCITY MILLENIUM	KANYON
OBJECT OF DESIGN	ARCHITECT	Haluk Tümay, Ayhan Böke and Swanke-Hayden-Connell Architects	Doğan Tekeli and Sami Sisa Teflon surface: Anthony Belluschi	Tabanlıoğlu and Jerde Partnership
	CONSTRUCTION YEARS	1988-1993	1997-2003	2001-2006
	LOCATION	Levent, Büyükdere Avenue	Levent, Büyükdere Avenue	Levent, Büyükdere Avenue
	ARCHITECTURAL PROGRAM	Office	Mixed-use	Mixed-use
PRODUCT OF TECHNOLOGY	CONSTRUCTION TYPE	Reinforced Concrete	Reinforced Concrete	Reinforced Concrete
	TECHNOLOGICAL DEVELOPMENTS	<ul style="list-style-type: none"> • Smart Building • LEED Certificate 	<ul style="list-style-type: none"> • Computer-Aided Automation System • Automatic Fire & Smoke System 	<ul style="list-style-type: none"> • Wind Tests • Acoustic Comfort • Computer-Aided
SITES OF CONSTRUCTION	ORGANIZATION OF CONSTRUCTION & ACTORS	<ul style="list-style-type: none"> • Haluk Tümay, Ayhan Böke and Swanke-Hayden-Connell Architects Metrosite İnşaat • Sabancı Holding A.Ş. • Koray A.Ş. & Tokar • IEFET & Çuhadaroğlu • Istanbul Metropolitan Municipality, Bedrettin Dalan 	<ul style="list-style-type: none"> • Doğan Tekeli and Sami Sisa • Anthony Belluschi • Metrosite İnşaat Müşavirlik Hizmetleri • Ay-sel İnşaat • Balkar Mühendislik • Birikim Mühendislik • Sasel Mühendislik • Cenotect 	<ul style="list-style-type: none"> • Tabanlıoğlu & Jerde Partnership • Eczacıbaşı • İş GYO • ARUP & Ove Arup England, Los Angeles
INVESTMENT IN REAL ESTATE	ZONING PLAN	1/1.000 Beşiktaş Back View within Striking Distance Implementary Development Plan ; E=3	1/5.000 Şişli Center and Environment Revision Master Plan; E=3	1/1.000 Şişli Center and Environment Implementary Development Plan; E=2.5
	LAND AREA	18.175,62 m ²	24.277 m ²	30.000 m ²
	CONSTRUCTION AREA	107.000 m ²	210.200 m ²	255.000 m ²
	GROUND FLOOR AREA	10.000 m ²	12.759 m ²	7.400 m ²
	HEIGHT (The highest tower is chosen for calculation if there are towers more than one)	158 m	131.25 m	130 m
	TASK	0.55	0.52	0.24
	KASK	54.525 m ²	72.831 m ²	75.000 m ²

Source: The table is created by Seda Nur Alkan

5. CONCLUSION

The purpose of this thesis were to analyze the discussions, definitions and limitations of zoning laws, legislations and plans as strategy and tactic, while appraising skyscrapers as the problem of height and the problematic of bigness in determined filters: ‘design objectives’, ‘product of technology’, ‘sites of constriction’ and ‘real estate developments’. To regard this purpose, Sabancı Center, Metrocity Millenium and Kanyon as case studies were examined in the four filters. The dissertation presented here aimed to answer the following questions:

1. What are the contents of height and bigness in relation to skyscrapers?
2. What do ‘the problem of height’ and ‘the problematic of bigness’ consist of in Istanbul?
3. What are the roles of the scientific rationalities -zoning laws, legislations and plans- as strategy and tactic during the plan, design and construction phases of skyscraper in Istanbul?

As the meaning of skyscraper “skyscraping the sky” has indicated, the issue of “to construct taller and taller” has been one of the substantial problems for skyscrapers from the beginning. In this case, technology links with skyscrapers to touch the sky. In addition to that, the dominance of skyscrapers in skylines is another concern of the problem of height. In that case, how to build tall and the placements of skyscrapers in city silhouettes have become the certain matters of the problem of height. However, the height has been not the only the issue, but also the bigness is another significant consideration for skyscrapers. Bigness is examined by the expression of Koolhaas (1995). Indeed, bigness involves sizes of skyscrapers, figures and factors who take parts throughout design and construction phases of skyscrapers. In that case, skyscrapers have been the problem of height and the problematic of bigness. As scientific rationalities, zoning laws, legislations and plans have been the authorities that discuss, describe and limit skyscrapers as the problem of height and the problematic of bigness in zoning regulation mechanisms. Legal forces here are one of the main factors that drive skyscrapers. They define and restrict height, floor area, street relations, location within city etc. Hereby, they have played as the role of strategy that considers economic, political, social and architectural concerns as Certeau (1988) indicated. The 1916

Zoning Ordinance is the first zoning law about skyscrapers that was enacted in New York. This legal document did not limit the height of skyscrapers if the setback rules were applied properly. As a strategy 1916 Zoning Ordinance was a limitation for negative effects of skyscrapers such as blocking the light and air within the city. 1961 Zoning Law contained more detailed articles and limits that also considered automobile movements in city.

Istanbul is one of the important cities to discuss the skyscrapers as the problem of height and the problematic of bigness in the scope of scientific rationalities: zoning laws, legislations and plans. In Istanbul, skyscrapers have not been restricted by a legal document. Skyscrapers in Istanbul are not directly described or limited in zoning laws, legislations and plans. Additionally, they have articles that contradict with each other and they have authorized several authorities at the same time. In that sense, they have constituted plurality in the zoning regulation mechanisms. Hereby, zoning laws, legislations and plans play role as strategy that create loopholes in the zoning regulation mechanisms. The decisions and approvals of skyscrapers are determined according to zoning plans information. However, the zoning plans do not also included definition and restriction about skyscrapers. In that case, it is not appropriate to attempt to examine legal authorities as strategies. Here, zoning plans have played role of tactic that operate incidents as Certeau (1988) expressed. They have provided opportunities for skyscraper projects.

The case studies: Sabancı Center, Metrocity Millenium and Kanyon are the leading ones that are placed in Büyükdere Avenue. The district has become the new CBD of Istanbul under liberalism effects since the end of the 1980's. Sabancı Center is one of the first skyscrapers that offer an office program through this axis. In the district, Metrocity Millenium is the foremost skyscraper that functions as mixed-use program. Kanyon is the pioneer skyscraper that was designed as a building complex for high income people. In the following, the findings of analysis according to the filters are stressed as:

1. Besides Turkish architects, there are attempts to involve foreign architects during the plan, design and construction phases. They aimed to construct internationally projected skyscrapers that foreign architects also take part in.

2. In years, the architectural program has includes not only office spaces but also residences and shopping malls except Sabancı Center. They have served as a total space through 24 hours. As a result, they have been built as if a city that response all needs of users..
3. Even if the technological developments have opportunities, reinforced concrete is mostly preferred as construction method because of it is cheap and easy to apply in Istanbul.
4. For each skyscraper, to design a smart building has been crucial to deal according to their different design approaches. To construct a smart skyscraper is regarded as a kind of power demonstration.
5. Architects are not the major actors during plan, design and construction processes. Besides; engineers, manufacturing firms, contractors, capital owners, central and local authorities several factors that play roles in these phases have been the authorities and the issue of coming together. All these figures and components are constituted the problematic of bigness in relationship and their organization.
6. These skyscrapers have been dependent on different zoning legislations and plans, even if they approved in the scope of 3194 Zoning Law. Skyscrapers in Istanbul are not defined and restricted in a legal document specifically. However, they are informed by zoning plans. The case studies are housed in the same district and different zoning plans. These zoning plans contain different limitations about TASK but there is not a height restriction. The heights of skyscrapers have not competed with each other. On the other hand, to maximize benefits from the plot has been a privileged matter. Herein, zoning laws and legislations have been strategies that indicate the general legal procedure. Zoning plans have been tactics that determine construction decisions according to the project under existing circumstances.

To conclude, skyscrapers are one of the significant structures in Istanbul. The dominant characteristics of skyscrapers and their effects on cities are crucial to deal. Because of the lack of specific skyscraper definition and restriction in zoning law, legislation and plans, particularly in Istanbul, the projects decisions are organized case by case. The skyscrapers have been multiplied as uncontrolled constructions in city scale. With every skyscraper project, the current zoning plan is broken and new descriptions and limitations are determined by it. In Istanbul; zoning laws, legislations and plans are not satisfactory, effective and applicable to discuss, define and limit skyscrapers as the problem of height and the problematic of bigness. Regarding this, it is crucial to highlight the current situations and work on the problem and the problematic of skyscrapers and the solutions in Istanbul. This circumstance emphasizes the compulsory scientific rationalities for skyscrapers in terms of zoning laws, legislations and plans immediately. The content of these regulations in zoning laws, legislations and plans, how they are applied and what are the roles of actors can give clues for further studies. This thesis aims to enlighten the gap in the discussions on zoning regulation mechanisms -zoning laws, legislations and plans- about skyscrapers in Istanbul.

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APPENDICES

APPENDIX-1

CITY OF NEW YORK
BOARD OF ESTIMATE AND APPORTIONMENT

BUILDING ZONE RESOLUTION

(Adopted July 25, 1916)

A RESOLUTION regulating and limiting the height and bulk of buildings hereafter erected and regulating and determining the area of yards, courts and other open spaces, and regulating and restricting the location of trades and industries and the location of buildings designed for specified uses and establishing the boundaries of districts for the said purposes.

Be it resolved by the Board of Estimate and Apportionment of The City of New York;

ARTICLE I—DEFINITIONS

§ 1. Definitions. Certain words in this resolution are defined for the purposes thereof as follows:

(a) Words used in the present tense include the future; the singular number includes the plural and the plural the singular; the word "lot" includes the word "plot"; the word "building" includes the word "structure."

(b) The "street line" is the dividing line between the street and the lot.

(c) The "width of the street" is the mean of the distances between the sides thereof within a block. Where a street borders a public place, public park or navigable body of water the width of the street is the mean width of such street plus the width, measured at right angles to the street line, of such public place, public park or body of water.

(d) The "curb level" for the purpose of measuring the height of any portion of a building, is the mean level of the curb in front of such portion of the building. But where a building is on a corner lot the curb level is the mean level of the curb on the street of greatest width. If such greatest width occurs on more than one street the curb level is the mean level of the curb on that street of greatest width which has the highest curb elevation. The "curb level" for the purpose of regulating and determining the area of yards, courts and open spaces is the mean level of the curb at that front of the building where there is the highest curb elevation. Where no curb elevation has been established or the building does not adjoin the street the average ground level of the lot shall be considered the curb level.

(e) A "street wall" of a building, at any level, is the wall or part of the building nearest to the street line.

(f) The "height of a building" is the vertical distance measured in the case of flat roofs from the curb level to the level of the highest point of the roof beams adjacent to the street wall, and in the case of pitched roofs from the curb level to the mean height level of the gable. Where no roof beams exist or there are structures wholly or partly above the roof the height shall be measured from the curb level to the level of the highest point of the building. Where a building is a tenement house as defined in the Tenement House Law the height of the building on the street line shall be measured as prescribed in said law for the measurement of the height of a tenement house and such measurement shall be from the curb level as that term is used in said law.

(g) The "depth of a lot" is the mean distance from the street line of the lot to its rear line measured in the general direction of the side lines of the lot.

(h) A "rear yard" is an open unoccupied space on the same lot with a building between the rear line of the building and the rear line of the lot.

(i) The "depth of a rear yard" is the mean distance between the rear line of the building and the rear line of the lot.

* J. H. Phelps Stokes
2 June 1952

(d) Permit in a residence district a central telephone exchange or any building or use in keeping with the uses expressly enumerated in section 3 as the purposes for which buildings or premises may be erected or used in a residence district;

(e) Permit in a business district the erection of a garage or stable in any portion of a street between two intersecting streets in which portion or block there exists a public garage or public stable at the time of the passage of this resolution;

(f) Grant in undeveloped sections of the city temporary and conditional permits for not more than two years for structures and uses in contravention of the requirements of this article.

ARTICLE III--HEIGHT DISTRICTS

§ 8. Height Districts. For the purpose of regulating and limiting the height and bulk of buildings hereafter erected, the City of New York is hereby divided into five classes of districts: (a) one times districts, (b) one and one-quarter times districts, (c) one and one-half times districts, (d) two times districts, (e) two and one-half times districts; as shown on the height district map which accompanies this resolution and is hereby declared to be part hereof. The height districts designated on said map are hereby established. The height district map designations and map designation rules which accompany said height district map are hereby declared to be part thereof. No building or part of a building shall be erected except in conformity with the regulations herein prescribed for the height district in which such building is located.

(a) In a one times district no building shall be erected to a height in excess of the width of the street, but for each one foot that the building or a portion of it sets back from the street line two feet shall be added to the height limit of such building or such portion thereof.

(b) In a one and one-quarter times district no building shall be erected to a height in excess of one and one-quarter times the width of the street, but for each one foot that the building or a portion of it sets back from the street line two and one-half feet shall be added to the height limit of such building or such portion thereof.

(c) In a one and one-half times district no building shall be erected to a height in excess of one and one-half times the width of the street, but for each one foot that the building or a portion of it sets back from the street line three feet shall be added to the height limit of such building or such portion thereof.

(d) In a two times district no building shall be erected to a height in excess of twice the width of the street, but for each one foot that the building or a portion of it sets back from the street line four feet shall be added to the height limit of such building or such portion thereof.

(e) In a two and one-half times district no building shall be erected to a height in excess of two and one-half times the width of the street, but for each one foot that the building or a portion of it sets back from the street line five feet shall be added to the height limit of such building or such portion thereof.

§ 9. Height District Exceptions. (a) On streets less than 50 feet in width the same height regulations shall be applied as on streets 50 feet in width and, except for the purposes of paragraph d of this section, on streets more than 100 feet in width the same height regulations shall be applied as on streets 100 feet in width.

(b) Along a narrower street near its intersection with a wider street, any building or any part of any building fronting on the narrower street within 100 feet, measured at right angles to the side of the wider street, shall be governed by the height regulations provided for the wider street. A corner building on such intersecting streets shall be governed by the height regulations provided for the

wider street for 150 feet from the side of such wider street, measured along such narrower street.

(c) Above the height limit at any level for any part of a building a dormer, elevator bulkhead or other structure may be erected provided its frontage length on any given street be not greater than 60 per cent of the length of such street frontage of such part of the building. Such frontage length of such structure at any given level shall be decreased by an amount equal to one per cent of such street frontage of such part of the building for every foot such level is above such height limit. If there are more than one such structures, their aggregate frontage shall not exceed the frontage length above permitted at any given level.

(d) If the area of the building is reduced so that above a given level it covers in the aggregate not more than 25 per cent of the area of the lot, the building above such level shall be excepted from the foregoing provisions of this article. Such portion of the building may be erected to any height, provided that the distance which it sets back from the street line on each street on which it faces, plus half of the width of the street, equals at least 75 feet. But for each one per cent of the width of the lot on the street line that such street wall is less in length than such width of the lot, such wall may be erected four inches nearer to the street line.

(e) When at the time plans are filed for the erection of a building there are buildings in excess of the height limits herein provided within 50 feet of either end of the street frontage of the proposed building or directly opposite such building across the street, the height to which the street wall of the proposed building may rise shall be increased by an amount not greater than the average excess height of the walls on the street line within 50 feet of either end of the street frontage of the proposed building and at right angles to the street frontage of the proposed building on the opposite side of the street. The average amount of such excess height shall be computed by adding together the excess heights above the prescribed height limit for the street frontage in question of all of the walls on the street line of the buildings and parts of buildings within the above defined frontage and dividing the sum by the total number of buildings and vacant plots within such frontage.

(f) Nothing in this article shall prevent the projection of a cornice beyond the street wall to an extent not exceeding five per cent of the width of the street nor more than five feet in any case. Nothing in this article shall prevent the erection above the height limit of a parapet wall or cornice solely for ornament and without windows extending above such height limit not more than five per cent of such height limit, but such parapet wall or cornice may in any case be at least five and one-half feet high above such height limit.

(g) The provisions of this article shall not apply to the erection of church spires, belfries, chimneys, flues or gas holders.

(h) Where not more than 50 feet of a street frontage would otherwise be subjected to a height limit lower than that allowed immediately beyond both ends of such frontage, the height limit on such frontage shall be equal to the lesser of such greater height limits.

(i) If an additional story or stories are added to a building existing at the time of the passage of this resolution, the existing walls of which are in excess of the height limits prescribed in this article, the height limits for such additional story or stories shall be computed from the top of the existing walls as though the latter were not in excess of the prescribed height limits and the carrying up of existing elevator and stair enclosures shall be exempted from the provisions of this article.

ARTICLE IV.—AREA DISTRICTS

§ 10. Area Districts. For the purpose of regulating and determining the area of yards, courts and other open spaces for buildings hereafter erected, the City of

Chapter 3 Bulk Regulations for Commercial or Community Facility Buildings in Commercial Districts

33-00 APPLICABILITY, DEFINITIONS, AND GENERAL PROVISIONS

33-01

Applicability of this Chapter

The bulk regulations of this Chapter apply to *commercial buildings, community facility buildings, or buildings used partly for commercial use and partly for community facility use*, on any *zoning lot* or portion of a *zoning lot* located in any *Commercial District*, including all new *development or enlargements*. As used in this Chapter, the term "any building" shall therefore not include a *residential building* or a *mixed building*, the bulk regulations for which are set forth in Article III, Chapter 4, and Article III, Chapter 5, respectively. In addition, the bulk regulations of this Chapter or of specified Sections thereof also apply in other provisions of this resolution where they are incorporated by cross reference.

Existing *buildings or other structures* which do not comply with one or more of the applicable bulk regulations are *non-complying buildings or other structures* and are subject to the regulations set forth in Article V, Chapter 4.

Special regulations applying to *large-scale residential developments, community facility uses in large-scale residential developments, or large-scale community facility developments* are set forth in Article VII, Chapter 8.

33-02

Definitions (repeated from Section 12-10)

Building, commercial

A "commercial building" is a *building* used only for a *commercial use*.

Building, community facility

A "community facility building" is a *building* used only for a *community facility use*.

33-10 FLOOR AREA REGULATIONS

Definitions

33-11

Definitions (repeated from Section 12-10)

Arcade

An "arcade" is a continuous area open to a *street* or to a *plaza*, which is open and unobstructed to a height of not less than 12 feet, is accessible to the public at all times, and either:

(a) Adjoins a *front lot line* or a *plaza boundary*, is not less than 10 feet or more than 30 feet in depth (measured perpendicular to the *front lot line* or *plaza boundary* which it adjoins), and extends for the full length of, or at least 50 feet along, such *front lot line* or *plaza boundary*, whichever is the lesser distance; or

(b) On a *corner lot*, is bounded on two sides by the two intersecting *street lines*, and has an area of not less than 500 square feet and a minimum dimension of 10 feet.

Such an *arcade* shall not at any point be above the level of the *street* or *plaza* which it adjoins, whichever is higher. Any portion of an *arcade* occupied by *building columns* shall be considered to be part of the area of the *arcade* for the purpose of computing a *floor area bonus*.

Floor area ratio

"Floor area ratio" is the total *floor area* on a *zoning lot*, divided by the *lot area* of that *zoning lot*. (For example, a *building* containing 20,000 square feet of *floor area* on a *zoning lot* of 10,000 square feet has a *floor area ratio* of 2.0).

Plaza

A "plaza" is an open area accessible to the public at all times, which is either:

(a) A continuous open area along a *front lot line*, not less than 10 feet deep (measured perpendicular to the *front lot line*), with an area of not less than 750 square feet, and extending for its entire depth along the full length of such *front lot line* or for a distance of at least 50 feet thereof, whichever is the lesser distance; or

(b) A continuous open area on a *through lot*, extending from *street* to *street* and not less than 40 feet in width, measured perpendicular to the nearest *side lot line*; or

(c) On a *corner lot*, an open area of not less than 500 square feet, which is bounded on two sides by the two intersecting *street lines* and which has a minimum dimension of 10 feet; or

(d) An open area of not less than 8,000 square feet, with a minimum dimension of 80 feet and which is bounded on one side by a *front lot line* or which is connected to the *street* by means of an *arcade* or by an open area not less than 40 feet wide.

Except for an open area as set forth in (d) above, no portion of such an open area which is bounded on all sides except for one opening, by either *building walls*, or *building walls* and a *side lot line*, shall be considered part of the *plaza*, unless the opening of such portion is at least 50 feet in width.

A *plaza* shall not at any point be more than five feet above the *curb level* of the nearest adjoining *street*, and shall be unobstructed from its lowest level to the sky, except that those obstructions permitted in Sections 23-44, 24-33, 33-23, or 43-23 (Permitted Obstructions in Required Yards or Rear Yard Equivalents) shall also be considered permitted obstructions in *plazas*.

Zoning lot

A "zoning lot" is either:

(a) A lot of record existing on the effective date of this resolution or any applicable subsequent amendment thereto, or

(b) A tract of land, either unsubdivided or consisting of two or more contiguous lots of record, located within a single *block*, which, on the effective date of this resolution or any applicable subsequent amendment thereto, was in single ownership, or

33-11 (Continued)

(c) A tract of land, located within a single block, which at the time of filing for a building permit (or, if no building permit is required, at the time of filing for a certificate of occupancy), is designated by its owner or developer as a tract all of which is to be used, developed, or built upon as a unit under single ownership.

A zoning lot therefore may or may not coincide with a lot as shown on the official tax maps of the City of New York, or on any recorded subdivision plat or deed.

For the purposes of this definition, ownership of

a zoning lot shall be deemed to include a lease of not less than 50 years duration, with an option to renew such lease so as to provide a total lease of not less than 75 years duration.

A zoning lot may be subdivided into two or more zoning lots, provided that all resulting zoning lots and all buildings thereon shall comply with all of the applicable provisions of this resolution. If such zoning lot, however, is occupied by a non-complying building, such zoning lot may be subdivided provided such subdivision does not create a new non-compliance or increase the degree of non-compliance of such building.

DISTRICTS							
C1	C2	C3	C4	C5	C6	C7	C8

Basic Regulations

33-12

Maximum Floor Area Ratio

In all districts, as indicated, for any building on any zoning lot, the maximum floor area ratio shall not exceed the floor area ratio set forth in this Section, except as otherwise provided in the following Sections:

- Section 33-13 (Floor Area Bonus for a Plaza)
- Section 33-14 (Floor Area Bonus for a Plaza-Connected Open Area)
- Section 33-15 (Floor Area Bonus for Arcades)
- Section 33-16 (Floor Area Bonus for Front Yards)
- Section 33-17 (Special Provisions for Zoning Lots Divided by District Boundaries).

Any given lot area shall be counted only once in determining the floor area ratio.

Notwithstanding any other provision of this resolution, the maximum floor area ratio shall not exceed this amount by more than 20 percent.

C1	C2	C3	C4	C5	C6	C7	C8
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33-121

In districts with bulk governed by Residence District bulk regulations

In the districts indicated, the maximum floor area ratio for a commercial or community facility building is determined by the Residence District within which such Commercial District is mapped and shall not exceed the maximum floor area ratio set forth in the following table:

C1-1	C2-1
C1-2	C2-2
C1-3	C2-3
C1-4	C2-4
C1-5	C2-5

MAXIMUM FLOOR AREA RATIO

District	For commercial buildings	For community facility buildings	For buildings used for both commercial and community facility uses
R1	1.00	1.00	1.00
R2	1.00	1.00	1.00
R3	1.00	1.00	1.00
R4	1.00	2.00	2.00
R5	1.00	2.00	2.00
R6	2.00	4.80	4.80
R7-1	2.00	4.80	4.80
R7-2	2.00	6.50	6.50
R8	2.00	6.50	6.50
R9	2.00	10.00	10.00
R10	2.00	10.00	10.00

In buildings used for both commercial uses and community facility uses, the total floor area used for commercial use shall not exceed the amount permitted for commercial buildings.

COMMERCIAL DISTRICTS

Bulk Regulations

DISTRICTS							
C1	C2	C3	C4	C5	C6	C7	C8

33-122

Commercial buildings in all other Commercial Districts

C1-6	C1-7	C2-6	C1-8	C2-7	C1-9	C2-8	C3	C4	C5	C6	C7	C8
------	------	------	------	------	------	------	----	----	----	----	----	----

In the districts indicated, the maximum floor area ratio for a commercial building shall not exceed the floor area ratio set forth in the following table:

MAXIMUM FLOOR AREA RATIO

0.50							C3					
1.00								C4-1				C8-1
2.00							C1-6 C1-7 C1-8 C1-9	C2-6 C2-7 C2-8			C7	C8-2 C8-3
3.40									C4-2 C4-3 C4-4 C4-5 C4-6			
4.00										C5-1		
5.00												C8-4
6.00											C6-1 C6-2 C6-3	
10.00								C4-7		C5-2 C5-4	C6-4 C6-5	
15.00											C6-6 C6-7	

33-123

Community facility buildings or buildings used for both community facility and commercial uses in all other Commercial Districts

C1-6	C1-7	C2-6	C1-8	C2-7	C1-9	C2-8	C3	C4	C5	C6	C7	C8
------	------	------	------	------	------	------	----	----	----	----	----	----

In the districts indicated, the maximum floor area ratio for a community facility building or for a building used for both commercial and community facility uses shall not exceed the floor area ratio set forth in the following table:

MAXIMUM FLOOR AREA RATIO

1.00								C3				
2.00								C4-1			C7	
2.40												C8-1
4.80									C4-2 C4-3			C8-2
6.50							C1-6 C1-7	C2-6	C4-4 C4-5		C6-1 C6-2	C8-3 C8-4
10.00							C1-8 C1-9	C2-7 C2-8	C4-6 C4-7	C5-1 C5-4	C6-3 C6-4 C6-5	
15.00											C6-6 C6-7	

In buildings used for both commercial uses and community facility uses, the total floor area used for commercial use shall not exceed the amount permitted for commercial buildings in Section 33-122.

COMMERCIAL DISTRICTS

Bulk Regulations

DISTRICTS							
C1	C2	C3	C4	C5	C6	C7	C8

33-30

Other Special Provisions for Rear Yards

In all districts, as indicated, the *rear yard* requirements set forth in Section 33-26 (Minimum Required Rear Yards) shall be modified as set forth in this Section.

C1	C2	C3	C4	C5	C6	C7	C8
----	----	----	----	----	----	----	----

33-301

Within one hundred feet of corners

In all districts, as indicated, no *rear yard* shall be required within 100 feet of the point of intersection of two *street lines* intersecting at an angle of 135 degrees or less.

C1	C2	C3	C4	C5	C6	C7	C8
----	----	----	----	----	----	----	----

33-302

Along short dimension of block

In all districts, as indicated, whenever a *front lot line* of a *zoning lot* coincides with all or part of a *street line* measuring less than 220 feet in length between two intersecting *streets*, no *rear yard* shall be required within 100 feet of such *front lot line*.

C1	C2	C3	C4	C5	C6	C7	C8
----	----	----	----	----	----	----	----

33-303

For portions of through lots

In all districts, as indicated, along any *rear lot line* of a portion of a *through lot* which coincides with a *rear lot line* of an adjoining *zoning lot*, a *rear yard* shall be required as if such portion were an *interior lot*.

C1	C2	C3	C4	C5	C6	C7	C8
----	----	----	----	----	----	----	----

All Yards

33-31

Special Provisions for Zoning Lots Divided by District Boundaries

In all districts, as indicated, whenever a *zoning lot* is divided by a boundary between districts with different *yard regulations*, the provisions set forth in Article VII, Chapter 7, shall apply.

C1	C2	C3	C4	C5	C6	C7	C8
----	----	----	----	----	----	----	----

33-40 HEIGHT AND SETBACK REGULATIONS

Definitions and General Provisions

33-41

Definitions (repeated from Section 12-10)

Initial setback distance

An "initial setback distance" is a horizontal distance measured from a *street line* into a *zoning lot* for a depth as set forth in the district regulations.

Public park

A "public park" is any publicly-owned park, playground, beach, parkway, or roadway within the jurisdiction and control of the Commissioner of Parks, except for park strips or malls in a *street* the roadways of which are not within his jurisdiction and control.

Sky exposure plane

A "sky exposure plane" is an imaginary inclined plane:

- (a) Beginning above the *street line* (or, where

so indicated, above the *front yard line*) at a height set forth in the district regulations, and

- (b) Rising over a *zoning lot* at a ratio of vertical distance to horizontal distance set forth in the district regulations.

Street, narrow

A "narrow street" is any *street* less than 75 feet wide.

Street, wide

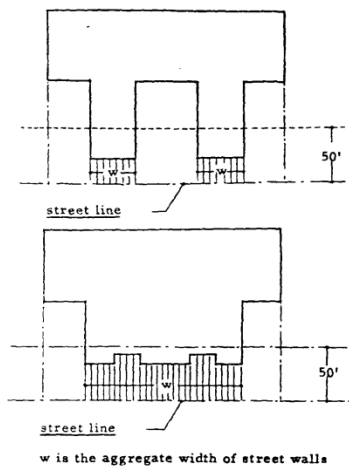
A "wide street" is any *street* 75 feet or more in width.

Street walls, aggregate width of

The "aggregate width of street walls" at any given level is the sum of the maximum widths of all *street walls* of a *building* within 50 feet of a *street line*.

The width of a *street wall* is the length of the *street line* from which, when viewed directly from above, lines perpendicular to the *street line* may be drawn to such *street wall*.

33-41 (Continued)



ILLUSTRATIONS OF AGGREGATE WIDTH OF STREET WALLS SECTION 33-41

33-42

Permitted Obstructions

In all *Commercial Districts*, the following shall not be considered obstructions and may thus penetrate a maximum height limit or a *sky exposure plane* set forth in Section 33-43 (Maximum Height of Front Wall and Required Front Setbacks) or Section 33-44 (Alternate Front Setbacks).

- (a) Chimneys or flues, with a total width not exceeding 10 percent of the *aggregate width of street walls* of a building at any given level
- (b) Elevator or stair bulkheads, roof water tanks, or cooling towers (including enclosures), each having an *aggregate width of street walls* equal to not more than 30 feet. However, the product, in square feet, of the *aggregate width of street walls* of such obstructions facing each *street frontage*, times their average height, in feet, shall not exceed a figure equal to four times the width, in feet, of the *street wall* of the building facing such frontage.
- (c) Flagpoles or aerials
- (d) Ornamental church towers having no *floor area* in portion of tower penetrating such height limit or *sky exposure plane*
- (e) Parapet walls not more than four feet high
- (f) Spires or belfries
- (g) Wire, chain link, or other transparent fences
- (h) Unenclosed balconies, subject to the provisions of Section 24-175 (Balconies).

Building columns having an aggregate width equal to not more than 20 percent of the *aggregate width of street walls* of a building are a permitted obstruction, to a depth not exceeding 12 inches, in an *initial setback distance*, optional front open area, or any other required setback distance or open area set forth in Section 33-43, Section 33-44, or Section 33-45 (Tower Regulations).

DISTRICTS							
C1	C2	C3	C4	C5	C6	C7	C8

Basic Regulations

33-43

Maximum Height of Front Wall and Required Front Setbacks

In all districts, as indicated, if the front wall or other portion of a building or other structure is located at the *street line* or within the *initial setback distance* set forth in this Section, the height of such front wall or other portion of a building or other structure shall not exceed the maximum height above *curb level* set forth in this Section. Above such specified maximum height and beyond the *initial setback distance*, the building or other structure shall not penetrate the *sky exposure plane* set forth in this Section. The regulations of this Section shall apply except as otherwise provided in Section 33-42 (Permitted Obstructions), Section 33-44 (Alternate Front Setbacks), or Section 33-45 (Tower Regulations).

C1	C2	C3	C4	C5	C6	C7	C8
----	----	----	----	----	----	----	----

COMMERCIAL DISTRICTS

Bulk Regulations

DISTRICTS							
C1	C2	C3	C4	C5	C6	C7	C8

33-431

In C1 or C2 Districts with bulk governed by surrounding Residence District

C1-1 C2-1
C1-2 C2-2
C1-3 C2-3
C1-4 C2-4
C1-5 C2-5

In the districts indicated, the maximum height of a front wall and the required front setback of a building or other structure shall be determined by the Residence District within which such Commercial District is mapped, and, except as otherwise set forth in this Section, shall be as set forth in the following table:

MAXIMUM HEIGHT OF FRONT WALL AND REQUIRED FRONT SETBACKS

Initial setback distance (in feet)		Maximum height of a front wall or other portion of a building within the initial setback distance	Height above street line (in feet)	Sky exposure plane			
				Slope over zoning lot (expressed as a ratio of vertical distance to horizontal distance)			
On narrow street	On wide street		Height above street line (in feet)	On narrow street Verti- cal dis- tance	On wide street Hori- zontal dis- tance		
When mapped within R1, R2, R3, R4, or R5 Districts							
20	15	30 feet or two stories, whichever is less	30	1 to 1	1 to 1	C1-1 C1-2 C1-3 C1-4 C1-5	C2-1 C2-2 C2-3 C2-4 C2-5
When mapped within R6 or R7 Districts							
20	15	60 feet or four stories, whichever is less	60	2.7 to 1	5.6 to 1	C1-1 C1-2 C1-3 C1-4 C1-5	C2-1 C2-2 C2-3 C2-4 C2-5
When mapped within R8, R9, or R10 Districts							
20	15	85 feet or six stories, whichever is less	85	2.7 to 1	5.6 to 1	C1-1 C1-2 C1-3 C1-4 C1-5	C2-1 C2-2 C2-3 C2-4 C2-5

However, in accordance with the provisions of Section 32-42 (Location within Buildings), no commercial building or portion thereof occupied by non-residential uses listed in Use Group 6A, 6B, 6C, 6F, 7, 8, 9, or 14 shall exceed in height 30 feet or two stories, whichever is less.

For community facility buildings or buildings used for both community facility use and commercial use, when mapped within R4 or R5 Districts, the maximum height of a front wall shall be 35 feet or three stories, whichever is less, and the height above street line shall be 35 feet, and when mapped within R7-2 Districts, the maximum height of a front wall shall be 60 feet or six stories, whichever is less.

COMMERCIAL DISTRICTS

Bulk Regulations

DISTRICTS							
C1	C2	C3	C4	C5	C6	C7	C8

33-432

In other Commercial Districts

C1-6	C2-6						
C1-7	C2-6						
C1-8	C2-7						
C1-9	C2-8	C3	C4	C5	C6	C7	C8

In the districts indicated, the maximum height of a front wall and the required front setback of a building or other structure, except as otherwise set forth in this Section, shall be as set forth in the following table:

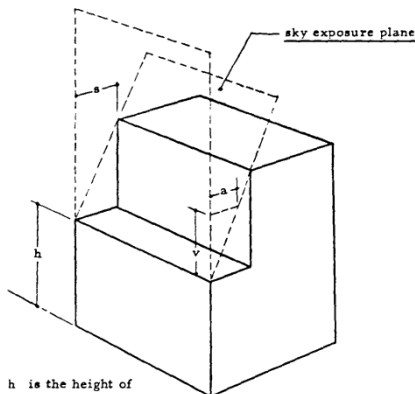
MAXIMUM HEIGHT OF FRONT WALL AND REQUIRED FRONT SETBACKS

Initial setback distance (in feet)	On narrow street	On wide street	Maximum height of a front wall or other portion of a building within the initial setback distance	Height above street line (in feet)	Sky exposure plane							
					Slope over zoning lot (expressed as a ratio of vertical distance to horizontal distance)							
					On narrow street		On wide street					
	Vertical distance	Horizontal distance	Vertical distance	Horizontal distance								
20	15		30 feet or two stories, whichever is less	30	1 to 1	1 to 1			C3	C4-1	C8-1	
20	15		60 feet or four stories, whichever is less	60	2.7 to 1	5.6 to 1			C1-6	C2-6	C4-2 C4-3 C4-4 C4-5	C7 C8-2 C8-3
20	15		85 feet or six stories, whichever is less	85	2.7 to 1	5.6 to 1			C1-7 C1-8 C1-9	C2-6 C2-7 C2-8	C4-6 C4-7	C5 C6 C8-4

However, in accordance with the provisions of Section 32-42 (Location within Buildings), in C1, C2, or C3 Districts, no commercial building or portion thereof occupied by non-residential uses listed in Use Group 6A, 6B, 6C, 6F, 7, 8, 9, or 14 shall exceed in height 30 feet or two stories, whichever is less.

In C4-1 or C8-1 Districts, for community facility buildings or buildings used for both community facility and commercial use, the maximum height of a front wall shall be 35 feet or three stories, whichever is less, and the height above street line shall be 35 feet.

In C1-6, C2-6, C4-4, or C4-5 Districts, for community facility buildings or buildings used for both community facility and commercial use, the maximum height of a front wall shall be 60 feet or six stories, whichever is less.



h is the height of sky exposure plane above street line
 v is the vertical distance
 s is the initial setback distance
 a is the horizontal distance

ILLUSTRATION OF SKY EXPOSURE PLANE SECTION 33-432

DISTRICTS							
C1	C2	C3	C4	C5	C6	C7	C8

33-44

Alternate Front Setbacks

In all districts, as indicated, if an open area is provided along the full length of the *front lot line* with the minimum depth set forth in this Section, the provisions of Section 33-43 (Maximum Height of Front Wall and Required Front Setbacks) shall not apply. The minimum depth of such open area shall be measured perpendicular to the *front lot line*. However, in such instances, except as otherwise provided in Section 33-42 (Permitted Obstructions) or Section 33-45 (Tower Regulations), no *building or other structure* shall penetrate the alternate *sky exposure plane* set forth in this Section, and the *sky exposure plane* shall be measured from a point above the *street line*.

If the open area provided under the terms of this Section is a *plaza*, such open area may be counted for the bonus provided for a *plaza* in the districts indicated in Section 33-13 (Floor Area Bonus for a Plaza).

C1	C2	C3	C4	C5	C6	C7	C8
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33-441

In C1 or C2 Districts with bulk governed by surrounding Residence District

C1-1	C2-1
C1-2	C2-2
C1-3	C2-3
C1-4	C2-4
C1-5	C2-5

In the districts indicated, the alternate front setback regulations applicable to a *building or other structure* shall be determined by the *Residence District* in which such *Commercial District* is mapped and, except as otherwise set forth in this Section, shall be as set forth in the following table:

ALTERNATE REQUIRED FRONT SETBACKS

Length of optional front open area (in feet)	Alternate sky exposure plane						
	Height above street (in feet)	On narrow street		On wide street			
		Vertical distance	Horizontal distance	Vertical distance	Horizontal distance		
When mapped within R1, R2, R3, R4, or R5 Districts							
15	10	30	1.4	to 1	1.4	to 1	C1-1 C2-1 C1-2 C2-2 C1-3 C2-3 C1-4 C2-4 C1-5 C2-5
When mapped within R6 or R7 Districts							
15	10	60	3.7	to 1	7.6	to 1	C1-1 C2-1 C1-2 C2-2 C1-3 C2-3 C1-4 C2-4 C1-5 C2-5
When mapped within R8, R9, or R10 Districts							
15	10	85	3.7	to 1	7.6	to 1	C1-1 C2-1 C1-2 C2-2 C1-3 C2-3 C1-4 C2-4 C1-5 C2-5

However, in accordance with the provisions of Section 32-42 (Location within Buildings), no *commercial building* or portion thereof occupied by non-residential uses listed in Use Group 6A, 6B, 6C, 6F, 7, 8, 9, or 14 shall exceed in height 30 feet or two *stories*, whichever is less.

For *community facility buildings* or *buildings* used for both *community facility use* and *commercial use*, when mapped within R4 or R5 Districts, the height above *street line* shall be 35 feet.

COMMERCIAL DISTRICTS

Bulk Regulations

DISTRICTS							
C1	C2	C3	C4	C5	C6	C7	C8

33-442

In other Commercial Districts

C1-6 C2-6
 C1-7 C2-6
 C1-8 C2-7
 C1-9 C2-8 C3 C4 C5 C6 C7 C8

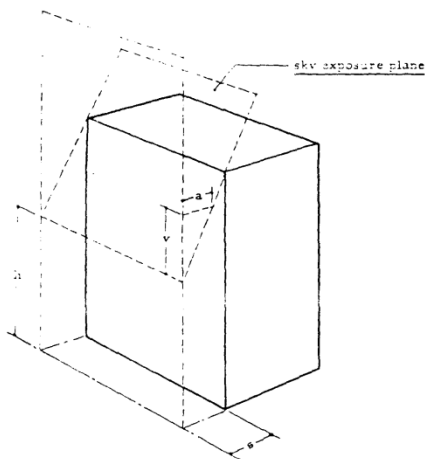
In the districts indicated, the alternate front setback regulations applicable to a building or other structure shall be as set forth in the following table:

ALTERNATE REQUIRED FRONT SETBACKS

Depth of optional front open area (in feet)	Alternate sky exposure plane						C3	C4-1	C8-1
	Height above street line (in feet)		Slope over zoning lot (expressed as a ratio of vertical distance to horizontal distance)		Slope over zoning lot (expressed as a ratio of vertical distance to horizontal distance)				
	On narrow street	On wide street	Vertical distance	Horizontal distance	Vertical distance	Horizontal distance			
15	10	30	1.4 to 1	1.4 to 1	1.4 to 1				
15	10	60	3.7 to 1	3.7 to 1	7.6 to 1	C1-6 C2-6	C4-2 C4-3 C4-4 C4-5	C7 C8-2 C8-3	
15	10	85	3.7 to 1	3.7 to 1	7.6 to 1	C1-7 C1-8 C2-7 C1-9 C2-8	C4-6 C4-7	C5 C6 C8-4	

However, in accordance with the provisions of Section 32-42 (Location within Buildings), no commercial building or portion thereof occupied by non-residential uses listed in Use Group 6A, 6B, 6C, 6F, 7, 8, 9, or 14 shall exceed in height 30 feet or two stories, whichever is less.

In C4-1 or C8-1 Districts, for community facility buildings or buildings used for both community facility use and commercial use, the maximum height above street line shall be 35 feet or three stories, whichever is less.



- h is the height of sky exposure plane above street line
- s is the depth of the optional front open area
- v is the vertical distance
- a is the horizontal distance

ILLUSTRATION OF ALTERNATE SKY EXPOSURE PLANE
 SECTION 33-442

DISTRICTS							
C1	C2	C3	C4	C5	C6	C7	C8

Supplementary Regulations

33-45

Tower Regulations

33-451

In certain specified Commercial Districts

C5-2
C5-3
C4-7 C5-4 C6

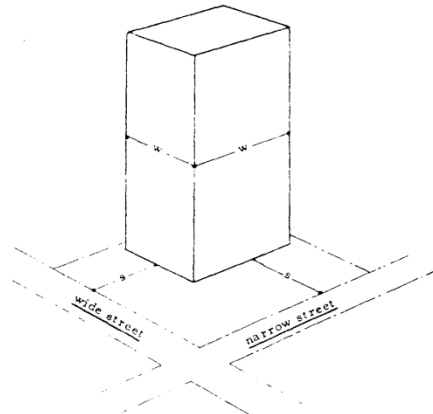
In the districts indicated, any *building* or *buildings* or portion thereof which in the aggregate occupy not more than 40 percent of the *lot area* of a *zoning lot* or, for *zoning lots* of less than 20,000 square feet, the percent set forth in Section 33-454 (Towers on small lots), may penetrate an established *sky exposure plane*. (Such *building* or portion thereof is hereinafter referred to as a tower.) However, at any given level, except as otherwise set forth in Section 33-455 (Alternate regulations for towers on lots bounded by two or more streets) or Section 33-456 (Alternate setback regulations on lots bounded by two or more streets), such tower shall be set back from a *street line* as follows:

(a) On *narrow streets*, by a distance at least one-third the *aggregate width of street walls* of the tower at such level, provided that such setback need not exceed 50 feet.

(b) On *wide streets*, by a distance one-fourth the *aggregate width of street walls* of the tower at such level, provide that such setback need not exceed 40 feet.

If the *building* of which such tower is a portion does not occupy at any level more than the maximum percent of the *lot area* set forth in this Section or Section 33-454 for towers, each required setback as set forth in (a) and (b) of this Section may be reduced by five feet, provided that no such reduced setback shall be less than 20 feet in depth.

Unenclosed balconies, subject to the provisions of Section 24-175 (Balconies), are permitted to project into or over open areas not occupied by towers.



s is the required setback from streets

w is the aggregate width of street walls

ILLUSTRATION OF TOWER
SECTION 33-451

COMMERCIAL DISTRICTS

Bulk Regulations

DISTRICTS							
C1	C2	C3	C4	C5	C6	C7	C8

33-452

Community facility buildings in C1 or C2 Districts when mapped within R7-2, R8, R9, or R10 Districts

C1-1	C2-1
C1-2	C2-2
C1-3	C2-3
C1-4	C2-4
C1-5	C2-5

In the districts indicated, when mapped within an R7-2, R8, R9, or R10 District, the provisions set forth in Section 33-451 (In certain specified Commercial Districts) shall apply to any community facility building or building used for both community facility and commercial uses.

33-453

Community facility buildings in certain specified Commercial Districts

C1-6	C2-6	C4-4					
C1-7	C2-7	C4-5					C8-3
C1-8	C2-8	C4-6	C5-1				C8-4

In the districts indicated, the provisions set forth in Section 33-451 (In certain specified Commercial Districts) shall apply to any community facility building or building used for both community facility and commercial uses.

33-454

Towers on small lots

			C4-4				
			C4-5				
			C4-6				
			C4-7	C5	C6		C8-3
							C8-4

In the districts indicated, a tower permitted under the provisions of Section 33-451, 33-452, or 33-453 may occupy the percent of the lot area of a zoning lot set forth in the following table:

LOT COVERAGE OF TOWERS ON SMALL ZONING LOTS

Area of zoning lot (in square feet)	Maximum percent of lot coverage
10,500 or less	50
10,501 to 11,500	49
11,501 to 12,500	48
12,501 to 13,500	47
13,501 to 14,500	46
14,501 to 15,500	45
15,501 to 16,500	44
16,501 to 17,500	43
17,501 to 18,500	42
18,501 to 19,999	41

33-455

Alternate regulations for towers on lots bounded by two or more streets

C6-6
C5-3 C6-7

In the districts indicated, if a zoning lot is bounded by at least two street lines, a tower may occupy the percent of the lot area of a zoning lot set forth in this Section, provided that all portions of any building or buildings on such zoning lot, including such tower, are set back from street lines as required in this Section.

(a) The maximum percent of lot area which may be occupied by such tower, shall be the sum of 40 percent plus one-half of one percent for every .1 by which the floor area ratio of such building is less than the floor area ratio permitted under the provisions of Section 33-12 (Maximum Floor Area Ratio), Section 33-13 (Floor Area Bonus for a Plaza), Section 33-14 (Floor Area Bonus for a

APPENDIX-3

The Nafia Vekaleti ((Ministry of Public Works), municipalities and municipality councils are the three major authorized organizations for the law but the municipalities have crucial roles in terms of zoning. The certain authority and responsibility of municipalities are defined in the law as:

- a. Every building, which places in the border of a municipality, have to have the construction permit by the municipality (6785 Zoning Law 1956, Article 2).
- b. Municipal council decides the requirements for building construction if there is not a zoning program (6785 Zoning Law 1956, Article 11).
- c. At the end of the construction process, there have to be building use permit by the municipality for settlement (6785 Zoning Law 1956, Article 16).
- d. The municipalities have to draw the current plans. If the population of municipality is more than 5.000, the municipality has to draw zoning and sewage plan too. If the population is not more than 5.000, the municipality has to draw the certain direction plan of the roads that are identified by the municipal council (6785 Zoning Law 1956, Article 26).
- e. The zoning and road direction plan has two types: “Nazım Plan (Master Plan)” and “Tatbikat Plan (Application Plan)”. These plans have to be drawn by the municipality then the Nafia Vekaleti gives approval or not in three months. After the Nafia Vekaleti gave approval, the municipality has to make the zoning program for four years according to the financial status (6785 Zoning Law 1956, Article 27, 28, 29, 30).
- f. The municipal council and the Nafia Vekaleti give approval for parcelling of a land, which is placed out of zoning border, according to the zoning plan and report (6785 Zoning Law 1956, Article 38).
- g. The municipalities have authorities for parcelling of lands according to zoning plans and article 40, 41, 42 and 43 explain the procedures that are applied by the municipalities. And also the municipalities are the authority for parcelling of land for public space such as park, street, green space.
- h. The municipalities have authority expropriation according to zoning and roads direction plans and to achieve this goal İller Bank establish credits with the municipalities (6785 Zoning Law 1956, Article 52, 53, 54, 55, 56).

The article 25 of the law has importance to deal with the design of the building and its relations with the surrounding for zoning. In this article, the materials and characteristics of building, floors units, height of floors, width of building, construction area of ground floors, sizes and elevations of parcels, afforestation and design of garden, size of garden walls, relations with neighborhood parcels and streets, and distances with historical buildings and archaeological sites are determined by the plans that are drawn by the municipalities then Nafia Vekaleti approves the plans according to the results of conversation with authorities such as architects, engineers.