

Residential High-Rises in Dubai: Typologies, Tendencies and Development Prospects



Elena M. Generalova



Viktor P. Generalov

Abstract

This study discusses the current typologies of high-rise housing prevalent in Dubai. The uniqueness, trends and prospects of Dubai tall, residential development are analyzed. The regional specifics of the typology in Dubai, at the site, building and individual dwelling scale, are identified.

Keywords: Complexes, High-Rise, Residential

Introduction

Today, there are more than 4,000 buildings of 150 meters or greater height (CTBUH Skyscraper Center 2018). For more than 100 years of high-rise construction prior to 2000, only 1,141 buildings of at least 150 meters had been built. Most of these were office buildings; residential accounted for only 13%. During the first 17 years of the 21st century, 3,104 buildings of at least 150 meters were completed. In this group, the percentage of residential buildings was 44%. From both a quantitative and qualitative perspective, it is clear that the relevance of high-rise housing has grown. Because of its incredibly high proportion of residential high-rises, Dubai in particular merits special consideration. It is a market formed from scratch in an extremely short time frame, under unique historical, socio-economic and climatic conditions.

the key centers of the urban framework and the basis of Dubai's urban development concept; each is comprehensive in its inclusion of residential functions in high-rise buildings (see Figure 1).

In the subsequent three years (2011–2013) the intensity of high-rise construction in Dubai decreased to some extent: 35 buildings of at least 150 meters were completed. At first glance, the 2014–2017 period recorded a decrease in high-rise construction in Dubai (20 completed buildings of 150 meters). However, during this period, a number of multi-functional complexes were built, keeping pace with global trends, if not the volume of superlative towers.

Typologies of High-Rise Housing in Dubai

This analysis of high-rise housing in Dubai is broken down into four typologies:

1. The "solo" (standalone) single-function residential tower;
2. The residential "block" incorporated into the structure of a "solo" mixed-use tower;
3. The single-function residential tower placed in a mixed-use complex;
4. The residential "block" within a mixed-use tower, which itself is located in a mixed-use complex.

The typological groups were devised based on the following quantitative and space-planning characteristics. In the history of high-rise construction development in Dubai from 1979 to mid-2018, 180 buildings of 150-plus meters were completed. The share of residential high-rise buildings is 52%. This is

Authors

Elena M. Generalova, Professor
Viktor P. Generalov, Professor/Head of Department
Samara State Technical University
Dept. of Architecture of Residential & Public Buildings
Kievskaya Street, 15, App. 55
Samara 443013
Russia
t: +7 927 695 0233; +7 905 018 9298
e: generalova-a@yandex.ru; vp_generalov@mail.ru /
www.samgtu.com

Elena M. Generalova is a member of the Union of Architects of Russia and a professor in the Architecture of Residential and Public Buildings Department at Samara State Technical University. Scientific interests focus on research of modern high-rise residential complexes. Generalova supervises undergraduate and postgraduate research students in architecture. She is the author of more than 70 scientific works, including monographs, educational and methodical editions. Apart from her scientific and academic career, she is also a practicing architect.

Viktor P. Generalov is Head of the Department of Architecture of Housing and Public Buildings at Samara State Technical University, a member of the Union of Architects of Russia, and an advisor to the Russian Academy of Architectural Sciences (RAASN). Scientific interests focus on the classification of modern high-rises and related issues. Within this framework, Generalov supervises post-graduate research students in Architecture. He is the author of more than 100 scientific publications, including monographs and educational editions. He is also a practicing architect and has more than 80 completed projects in Russia and Kazakhstan.



significantly above the average share of 150-meter-plus residential buildings worldwide (36%) built to date. Interestingly, all 91 residential high-rise buildings of 150 meters or more completed in Dubai at the time of this study have been built in just the past 17 years. A substantial element of this group is the single-function high-rise residential tower, which can be both “solo” or a part of a mixed-use complex. The analysis showed that 54% of residential towers (50 buildings) are “solo”, while 45% (41 residential high-rise buildings) were part of mixed-use complexes.

As noted above, high-rise housing in Dubai is represented not only by single-function residential towers, but also by housing blocks that are fully incorporated into mixed-use high-rise buildings. The residential blocks are in 30 mixed-use buildings of 150 meters or greater height; out of these 25 buildings were “solo” mixed-use towers, while the remaining five buildings were part of mixed-use complexes.

After analyzing the structure of these high-rise housing types, the most prevalent programmatic distributions of high-rise residential buildings in Dubai can be

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represented. Three groups of models are to be considered: Group A – solo towers; Group B – two-tower complexes; and Group C – multi-tower complexes (see Figure 2).

Group A – Solo towers can be single-use with service functions (sports, leisure, entertainment, commerce, food, etc.) or mixed-use with a residential “block” of floors. For space-planning characteristics, two main types of models can be picked out: A1, with a compact, integrated podium; and A2, with a detached parking garage. The same space-planning model is typical for mixed-use solo towers with an included residential block (A3 and A4). Additionally, a model with a developed podium, A5, can be distinguished.

Group B – Two-tower complexes are represented by four models: B1 – two

single-function towers (residential); B2 – two differentiated single-function towers (residential + hotel or residential + office); B3 – two single-function residential towers and a mixed-use tower with a residential block; B4 is a single-function tower (hotel or office) and a mixed-use tower with at least one portion consisting of a residential block.

Group C – Multi-tower complexes in Dubai have formed in the following way: C1 consists of only single-function residential towers; C2 is formed by single-function towers with different functions in each (such as residential, office or hotel). C3, in addition to residential towers, includes a mixed-use tower with a residential block. C4 is formed by a combination of single-function towers with different functions (a residential, office or hotel tower) and mixed-use towers. As a

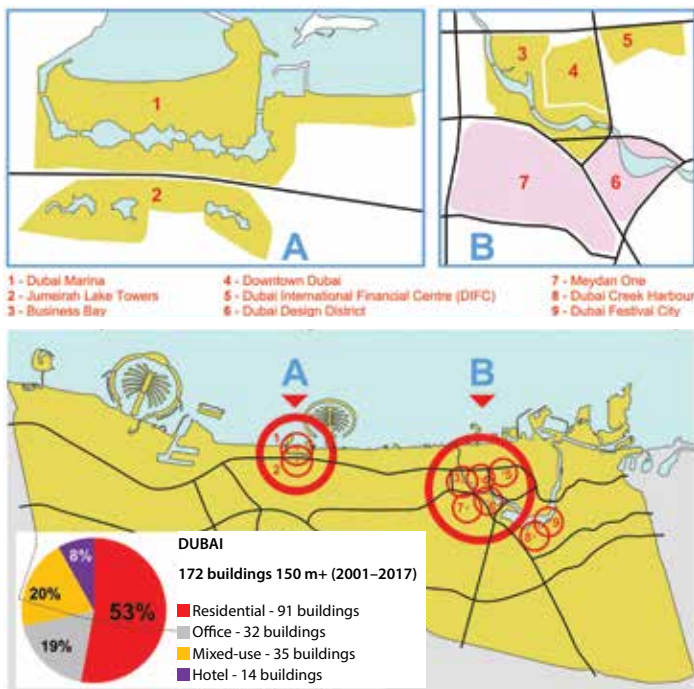


Figure 1. Zones of high-rise buildings in Dubai.

Period	No. buildings 150m+	Residential		Office		Hotel		Mixed-use	
		No.	%	No.	%	No.	%	No.	%
1979–2000	4	-	-	2	50	2	50	-	-
2001–2017	172	92	53	32	19	13	8	35	20
1979–2017	176	92	52	34	19	15	9	36	20
2001	2	-	-	-	-	-	-	2	100
2002	2	1	50	-	-	1	50	1	-
2003	5	3	60	-	-	1	20	1	20
2004	1	1	100	-	-	-	-	-	-
2005	4	2	50	-	-	-	-	2	50
2006	13	10	77	2	15	1	8	-	-
2007	23	15	65	2	9	2	9	4	17
2008	24	13	53	4	17	2	8	3	13
2009	24	13	54	7	29	-	-	4	17
2010	19	7	37	3	16	1	5	8	42
2011	13	5	38	7	54	1	8	-	-
2012	11	8	73	1	9	1	9	1	9
2013	11	5	45	2	18	1	9	3	27
2014	4	-	-	1	25	-	-	3	75
2015	7	4	57	2	29	1	14	-	-
2016	4	2	50	1	25	-	-	1	25
2017	5	2	40	-	-	-	-	3	60

Table 1. The number of high-rise buildings 150 m+ built in Dubai over time, classified by function. A major development surge is indicated from 2007–2010.

rule, multi-tower complexes typically have a developed multi-story podium with a variety of service functions, both open to the public and limited to residents, guests and employees.

The proposed typologies are best considered via examples.

Model A1 – Emirates Crown, Dubai Marina (296 m). This project carries the generalized features of Model A1: the residential tower includes luxurious apartments with a varying number of rooms (from two to five), duplex apartments and penthouses on the upper floors (usually with private pools); service functions located mostly in the podium or on the podium roof, including retail space, business centers, staff housing, parking lots, pools and recreational spaces; and additional floors with recreational facilities (pool, gym, and spa) in the tower.

Model A2 – Millennium Tower, Downtown Dubai (285 m). A total of 301 three-bedroom apartments and 106 two-bedroom

apartments are provided on 55 typical floors; service spaces are located on Floors 10, 30, and 50. Parking for 471 cars is provided in a multi-story garage. The roof of this building has a 25-meter-long swimming pool, a gymnasium, squash courts and changing rooms. Typifying the general features of Model A2: Millennium Tower. It is a residential tower containing luxurious apartments with two to five rooms, duplex apartments and penthouses on the upper floors (usually with private pools); without a podium. The tower is linked to a detached multi-story parking building by a covered gallery-bridge. The use of the parking building's roof for recreational facilities (pool, gym, and spa); augmented by additional floors with recreational facilities (pool, gym, and spa) in the structure of the tower, is common.

Model A3 – The Index, Dubai International Finance Centre (326 m). This unique mixed-use high-rise building devotes its first four floors to trading, as well as various service functions and parking space for 2,442

cars; the next 25 floors (from the 5th to the 29th) are offices; the upper part of the building (40 floors from the 31st to the 77th) consists of standard apartments, while the top floors are represented by luxurious duplex and triplex penthouses. The office and residential blocks are separated by a double-height sky lobby with recreational facilities, such as a swimming pool and a gym. Generalized features of Model A3 are basically the same as of Model A1. The main difference is that the tower is divided vertically into functional blocks.

Model A4 – Al Rostamani Maze Tower, Dubai International Finance Centre (210 m). This tower consists of 25 floors of office space and 24 residential floors; a public garden space set into the two floors between office and residential blocks; gym and spa facilities on the 54th floor; on the 52nd and 53rd floors there are four penthouse layouts, including two with their own integrated pools. Generalized features of model A4 are basically the same as model A2. The main differences are that the tower is divided vertically into functional blocks, and that the residential block is located in the upper part of the building. Further, the tower has additional floors with recreational facilities (pool, gym, and spa) located between office and residential blocks, as well as on the top floor.

Model A5 – The Address Boulevard, Downtown Dubai (370 m). This tower has 196 five-star-hotel rooms and 523 serviced

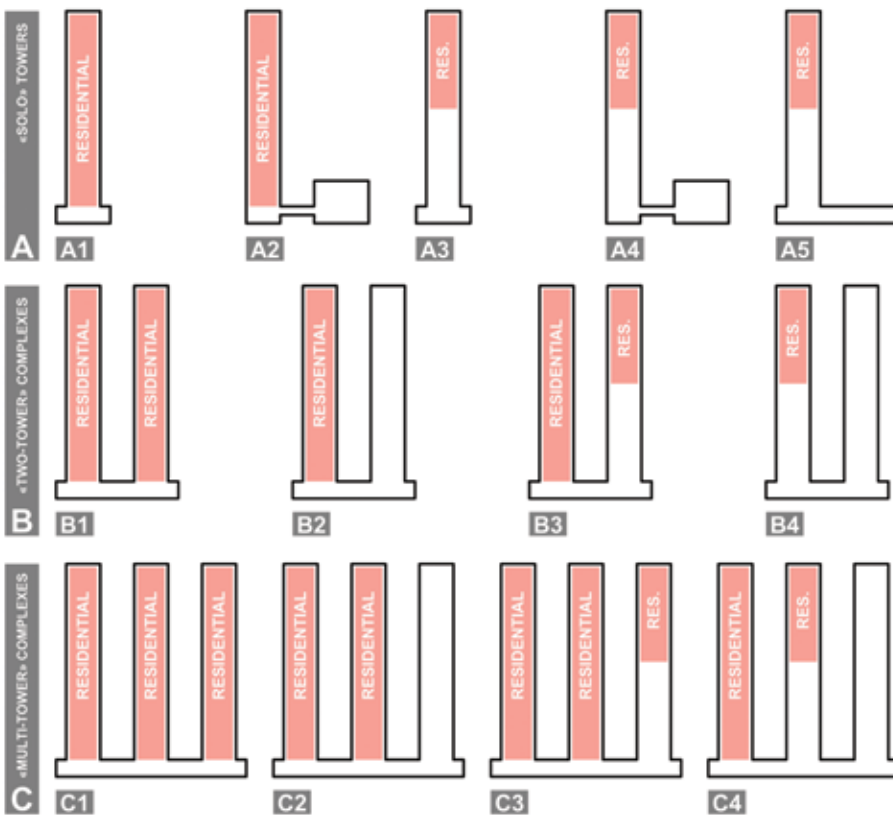


Figure 2. The most prevalent programmatic distributions of high-rise residential buildings in Dubai.



- 1. Marina 101
- 2. Princess Tower
- 3. 23 Marina
- 4. Elite Residence
- 5. The Torch
- 6. DAMAC Heights
- 7. Ocean Heights
- 8. Cayan Tower

Figure 3. Supertall residential buildings of 300 m+ in Dubai Marina.



Figure 4. Examples of supertall residential buildings in Dubai Marina in Group A: (from the left) Marina 101 (425 m), Princess Tower (414 m), 23 Marina (392 m), and Elite Residence (381 m).

Building Name	District	Height (m)	Floors	Completed	Function
1 Burj Khalifa	Downtown Dubai	828	163	2010	office/residential/hotel
2 Marina 101	Dubai Marina	425	101	2017	residential/hotel
3 Princess Tower	Dubai Marina	413	101	2012	residential
4 23 Marina	Dubai Marina	392	88	2012	residential
5 Elite Residence	Dubai Marina	380	87	2012	residential
6 The Address Boulevard	Downtown Dubai	370	73	2017	residential/hotel/retail
7 The Torch	Dubai Marina	352	86	2011	residential
8 DAMAC Heights	Dubai Marina	335	88	2018	residential
9 The Index	DIFC	326	80	2010	residential/office
10 Blue Tower	Al Satwa	318	72	2010	residential
11 Ocean Heights	Dubai Marina	310	83	2010	residential
12 Cayan Tower	Dubai Marina	306	73	2013	residential
13 The Address	Downtown Dubai	302	63	2008	residential/hotel

Table 2. Supertall buildings completed in Dubai, 2008–2018. All contain residential functions.



Figure 5. Examples of two-tower complexes in Group B: (from the left) 29 Boulevard Complex, Churchill Towers, Grosvenor House Complex, and the Sofitel Dubai Downtown & Burj Gate 48 Complex.

residences. A multi-level podium accommodates a parking lot, conference facilities, banqueting facilities, shopping mall, and other retail functions. Generalized features of model A5 are basically the same as model A1. The main difference is that the podium has a large variety of functions.

It should be mentioned that a high number of solo towers in Dubai are supertall buildings of at least 300 meters' height. There are 13 buildings of this kind (eight of which are residential single-use and five mixed-use), one of which is the megatall (600-meter-plus) Burj Khalifa (see Table 2).

Of particular interest is the Dubai Marina, where eight skyscrapers of 300 meters or greater height, all of which contain residential or hotel functions, have clustered together in what is commonly referred to as "The Tallest Block in the World." (see Figure 4). Of these, Princess Tower, 23 Marina, Elite Residence, The Torch, DAMAC Heights, Ocean Heights and Cayan Tower can be classified as Model A1, while Marina 101 represents Model A3.

The following high-rise projects represent Group B (see Figure 5).

Model B1 – 29 Boulevard, Downtown Dubai, is a complex of two residential towers linked by a podium.

Model B2 – Churchill Towers, Business Bay is a complex of two towers with different functions. Churchill Residency is a 235-meter residential tower and Churchill Executive is a 172-meter office tower; they share a podium.

Model B3 – The Grosvenor House complex, located in Dubai Marina, includes a single-function residential tower Grosvenor House The Residence and a mixed-use residential/hotel tower Grosvenor House West Marina Beach, both of 210 meters' height. The podium of these towers are linked by a gallery-bridge on the second-floor level.

Model B4 – Sofitel Dubai Downtown & 48 Burj Gate consists of two towers: 48 Burj Gate, (203 meters, residential/office), which

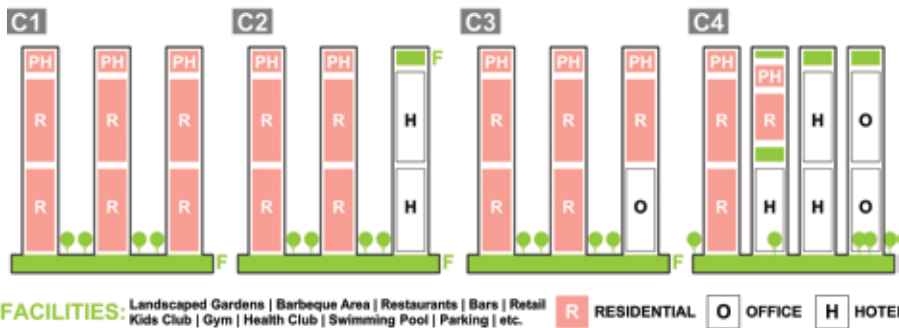


Figure 6. Examples of multi-tower complexes in Group C: (from the left) The Residences at Marina Gate Complex, Bay Central Complex, Seef Towers Complex, and Aykon City Complex.

has a residential “block,” while the 133-meter Sofitel Dubai Downtown is a hotel.

In general, all group B models, despite different functional uses of their constituent towers, all have a large multi-story, multi-use podium, and an extended roof, actively integrated into the urban space.

The following construction projects represent Group C (see Figure 6).

Model C1 – The Residences at Marina Gate complex, located in Dubai Marina, consists of three residential towers on a multi-story podium: Marina Gate Residential Tower 1 (206 meters), Marina Gate Residential Tower 2 (256 meters), and Jumeirah Living Marina Gate (224 meters).

Model C2 – The Bay Central complex, also in Dubai Marina, contains the residential towers Bay Central 1 (155 meters) and Bay Central 2 (180 meters), as well as the InterContinental Dubai Marina Hotel in the Bay Central 3 tower (163 meters).

Model C3 – The Seef Towers complex in Jumeirah Lakes contains the residential

towers: Al Seef Tower II (179 meters), Al Seef Tower III (160 meters) and the mixed residential/office building Tamweel Tower (160 meters).

Model C4 – A prime example is the under-construction Aykon City complex at Business Bay. This project consists of four towers on a giant podium. All the towers will have different functions: Tower A (295 meters) will contain a hotel and serviced apartments; Tower B (231 meters), a hotel; Tower C (221 meters), residential; and Tower D (267 meters), offices.

The proposed typologies and the considered examples allow the formulation of some conclusions about the specific characteristics of high-rise housing in Dubai that distinguish it from any other city in the world. First and foremost, it should be noted that nearly all high-rise housing in Dubai falls into the category of luxury commercial properties. This can be partly explained by the strategic direction taken by the UAE government in terms of economic development. It aims to make the country the biggest international services hub in the world, primarily through the avenues of

finance, culture and tourism. In just a few decades, what was open desert has been transformed into a major tourist center with a developed infrastructure that attracts thousands of foreigners to reside there, and millions of tourists per year. The high-rise market is squarely aimed at foreigners at the high end of the income spectrum, though certainly some native residents have taken up apartments in the high-rises as well. Due to the interest in targeting the international business set, a high level of comfort is provided in residential buildings and complexes in general, and in residential apartments in particular.

Typologies of Residential Apartments

As noted above, high-rise housing in Dubai, including both rental units and condominiums, is predominantly in the luxury property category, designed for high earners. Based on international trends, the functional space-planning of apartments in high-end housing should meet a number of requirements:

- Each bedroom has its own private bathroom.
- There is a well-organized service area with a private entrance to the apartment for the service staff, maid’s room, a laundry, wet and dry kitchen areas.
- A larger group of amenities is provided for a master bedroom – including a study room, a “mini”-living room, a dressing room, a walk-in closet, and a large bathroom.
- The main entrance to the apartment is via a private elevator lobby.

The analysis of apartments in high-rise buildings and complexes in Dubai shows that the buildings in this study meet most of these requirements. The typology of accommodation units includes apartments with different numbers of rooms (from one to four), duplex apartments and penthouses on the upper floors. Studio flats are not common. A maid’s room is included mostly in apartments with three or more bedrooms. A separate entrance for the service staff is

typically provided only in duplex apartments and penthouses. To a large extent, the private elevator lobbies are reserved only for penthouses. Generally speaking, the higher the apartments are located, the larger and more luxurious they are. This trend can be seen in 23 Marina (see Figure 7).

Dubai does have a unique set of high-rise residential typologies, remarkable for the sheer volume of towers and configurations as much as anything. If “uniqueness” is defined as “originality based on historical, ethnic, climatic and other particular features of a specific place,” of course, the apartments in residential skyscrapers of Dubai cannot be called “unique”. From this point of view, high-rise housing in Dubai is rather stereotypical, as such solutions can be found in other cities all over the world (see Figure 9). However, this very polyglot “internationality” and the extent to which developers cater to a global audience is what makes the Dubai high-rise residential

environment unique; its seemingly instantaneous appearance reinforces this in a way that contrasts with other, more established global cities that have grown their housing stock over centuries.

Future Development

Despite the fact that the range of high-rise housing in Dubai is extremely diverse and rapidly changing, some trends of its near-future development are identifiable. As of August 2018, 72 high-rise residential buildings of 150 m+ in Dubai are architecturally topped out, structurally topped out, under construction, or proposed. Thirty-six of these (about 50%) are single-function residential towers, while only seven high-rise buildings are “solo”; the other 29 are parts of complexes. Residential blocks are incorporated in 15 mixed-use towers, eight of which are standalone, while seven are integrated into complexes.

The growing interest in the design and construction of high-rise complexes should be noted as an important trend, and as a particularly salient development in Dubai, where developments are conceived almost as independent cities, with self-contained arrays of services and discernible gaps between developments (see “Tall, Polycentric Cities,” p. XX). Among completed buildings, complex-linked buildings account for only 20% of the total, but 50% of the projects

under construction and development are complexes of one or more buildings. Based on this data, 70% of all planned high-rise towers in Dubai will be in complexes.

In addition, it should be noted that the interest in supertall and megatall high-rise housing is not weakening. At least 15 buildings are under construction or project development (see Table 3), while the ratio of single-function to mixed-use high-rise buildings is stable at 50% each. There is still an active proposal to construct Dubai One, a megatall residential building of 711 meters’ height. This unique building would be part of a new grand district, Meydan One. With this evidence at hand, it is therefore reasonable to assume that Dubai will see more supertall solo and complex-based high-rise residential development in the near future.

High-rise towers and complexes shown in this paper demonstrate that, in a short time, the prevailing typologies of buildings and complexes in Dubai will soon see new additions. These may consist of two-tower and multi-tower complexes having not only multi-story podia, but also actively developed horizontal links at different levels.

Conclusions

The past, present and future of high-rise construction in Dubai demonstrates that the

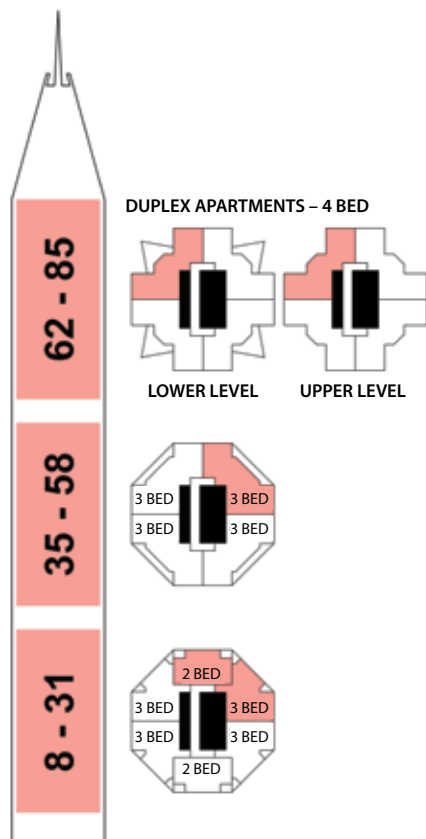


Figure 7. Locations of different types of apartments in 23 Marina.



Figure 8. The comparison of space-planning approaches in two-bedroom apartments at Emirates Crown, Dubai; 432 Park Avenue, New York; and Capital City Moscow Tower, Moscow.

residential function is dominant. The emergent characteristics of high-rise housing in Dubai are: the ambitiousness of design solutions, including the height of buildings; their international character, such that the specifics of traditional Arabian housing, national and religious traditions are largely omitted; the focus on the elite luxury real-estate property market; and the great diversity of space-planning models for high-rise buildings and complexes. ■

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References

CTBUH SKYSCRAPER CENTER. 2018. "Dubai Building List 150 m+." Accessed August 3, 2018. http://www.skyscrapercenter.com/pdf/buildings_2018-08-20-03-03-24.pdf.

GENERALOVA, E. M., GENERALOV, V. P., KUZNETSOVA, A. A. & BOBKOVA, O. N. 2017. "Mixed-Use Development in a High-Rise Context." Paper presented at High-Rise Construction 2017 Conference, Samara, Russia, September 4–7, 2017. Accessed August 23, 2018. <https://www.e3s-conferences.org/articles/e3sconf/abs/2018/08/contents/contents.html>.

Status	Building Name	Height (m)	Completion	Function
■	1 Dubai One	711	2022	residential
■	2 The Jumeirah Business Bay	485	-	res./serviced apart./hotel
■	3 SRG Tower	471	2022	residential
■	4 Uptown Dubai Tower 1	459	-	office
■	5 La Maison by HDS	387	2021	residential
■	6 Business Bay Tower 1	365	-	serviced apart./hotel
■	6 Business Bay Tower 2	365	-	residential
■	8 Sama Gardens	360	-	serviced apart./res.
■	9 Il Primo Tower 1	356	2021	residential
■	10 S Residence by Immo	356	2020	residential
■	11 Aykon (Tower D)	351	-	office
■	12 Flame Towers	350	-	residential/hotel/office
■	13 Uptown Dubai Tower 2	340	-	residential/hotel/office
■	14 WOW Hotel & Hotel Apartments	336	2020	serviced apart./hotel
■	15 A Tower	333	-	residential
■	16 The Address Residence - Fountain Views III	331	2019	serviced apart./hotel
■	17 Dubawi	330	-	residential/hotel
■	18 One Za'abeel Tower 1	330	2021	office
■	19 Adventz Tower	328	-	residential
■	20 Aykon (Tower A)	315	-	residential
■	21 FIVE Jumeirah Village Dubai	314	2019	residential/hotel
■	22 Al Habtoor City - Amna Tower	307	2018	residential
■	23 Al Habtoor City - Noora Tower	307	2018	residential
■	23 Al Wasl Tower	302	2020	residential/hotel/office
■	25 Jumeirah Gate	301	2020	serviced apart./res./hotel
■	26 Il Primo Tower 2	300	2021	residential
■	27 Seanic Tower	300	-	residential/hotel/retail
■	28 Aykon City Tower A	295	2021	hotel/serviced apart.
■	29 Tubular Tower	285	2020	residential
■	30 The Address Residence - Fountain Views I	283	2018	serviced apartments
■	31 The Address Residence - Fountain Views II	283	2018	serviced apartments
■	32 ICD Brookfield Place	282	2019	office/retail
■	33 Boulevard Point	280	2019	residential
■	34 DAMAC Maison-Paramount Tower 1	279	2018	residential
■	35 DAMAC Maison-Paramount Tower 2	279	2018	residential
■	35 DAMAC Maison-Paramount Tower 3	279	2018	residential
■	35 DAMAC Paramount Hotel & Residences	279	2018	residential/hotel
■	35 Kempinski Residences Business Bay	276	2019	serviced apartments
■	39 Aykon City Tower D	267	2021	office
■	40 The Address Residence - Sky View Tower 1	261	2018	residential
■	41 Palm 360 Tower 1	260	2020	serviced apart./hotel
■	42 Downtown Views II, Tower 1	259	-	residential
■	43 Meydan Beach Hotel	258	-	hotel
■	44 Marina Gate II	258	2018	residential
■	45 Paramount Tower Hotel & Residences	250	2020	serviced apart./hotel
■	46 Downtown Views II, Tower 2	246	-	residential
■	47 The Address Residence - Sky View Tower 2	238	2018	residential/hotel
■	48 One Za'abeel Tower 2	235	2021	residential/hotel
■	49 Palm Tower	232	2019	residential/hotel
■	50 Aykon City Tower B	231	2021	serviced apartments
■	51 Vida Hotel and Residences - Dubai Marina Yacht Club	230	2021	hotel/res./retail
■	52 Jumeirah Living Marina Gate	224	2019	residential
■	53 Aykon City Tower C	221	2021	residential
■	54 Downtown Views II, Tower 3	214	-	residential
■	55 Al Habtoor City - Meera Tower	213	2018	residential
■	56 Central Tower	211	2020	residential
■	57 Stella Maris	209	2020	residential
■	58 Harbour Views Tower 1	207	2019	residential
■	59 Harbour Views Tower 2	207	2019	residential
■	59 Beach Tower	205	2020	residential
■	61 RP Heights	204	2019	residential
■	62 Saba Tower 4	195	2020	residential
■	63 Tiara United Tower 1	193	2018	office
■	64 Tiara United Tower 2	193	2018	hotel
■	64 Royal Atlantis	193	2019	hotel/residential
■	66 Preatoni Tower	191	2018	residential/office
■	67 Cayan Cantara Branded Residences	175	2019	residential
■	68 The One at Jumeirah Village Circle	172	2018	hotel
■	69 Mashreq Bank Headquarters	151	2019	office
■	70 Cayan Cantara Hotel Apartments	151	2019	hotel/residential

■ Architecturally topped out ■ Structurally topped out ■ Under construction ■ Proposed

Table 3. Future high-rise residential buildings in Dubai (150 m+) (as of August 20, 2018).