

**FUNCTIONAL AND PHYSICAL ANALYSIS OF BULGURLU STREET IN  
BEŞİKTAŞ (ORTAKÖY)**

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A street can be defined as a systematic place where people socialize (to have fun, to take rest and to inform/be informed etc); develop mutual relationships; meet their daily needs and social needs; and take the first step from private space to public space.

Having served as one of the most important social spaces throughout history and, being bordered by relatively clear lines when compared to other social spaces, the street is a concept on which different disciplines such as urban planning and architecture achieve mutual agreement in terms of the physical harmony to be created between the buildings.

Turkey is a relatively rich country from an architectural cultural and historical perspective. Among Turkish cities, Istanbul has the highest historical, cultural and economic accumulation. An important settlement area, which served as the capital of the Byzantium and Ottoman Empires, Istanbul has a rich architectural accumulation. Istanbul has always been one of the most popular settlements throughout history, as it served as the capital for many the states founded in its region. As a city which has hosted notable figures of Turkey, Istanbul has always been an innovative city

Beşiktaş Bulgurlu Street, one of the historical districts of Istanbul, retains the buildings of a specific period of architectural heritage of Istanbul. Beşiktaş Bulgurlu Street was established for the palace officers. Therefore, this is an important space, as it transfers the architectural heritage of a specific society to today.

The row houses in this area, which were built in the 19th century as the residence of palace officers, also help to characterize the street environment.

Beşiktaş Bulgurlu Street was planned as a housing estate; however, its function has started to change due to changing social, cultural and economic factors. Residential houses are gradually being replaced by commercial structures.

This paper aims to present Istanbul Beşiktaş Bulgurlu Street, the street selected as the study area, with the help of survey studies and photographs. In light of the understanding that architectural spaces should be conserved together with the corresponding historical social group, this process will be analyzed from the outer space (street) to the inner space.

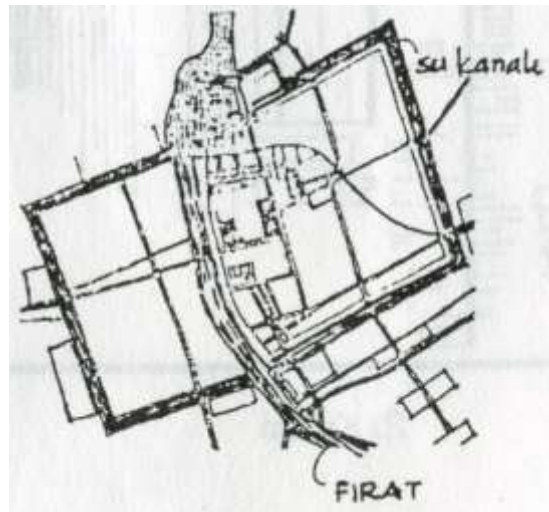
At the end of the study, based on analysis of the physical and social factors, suggestions will be made to help enable existing buildings and building groups in

Istanbul Beşiktaş Bulgurlu Street to survive not only within their physical limits but also together with their historical culture.

Previous researchers suggest that spaces that are incompatible with the needs of the users result in high rates of crime. The use and conservation of historical buildings is of great importance for protection of human mental health –i.e. on one hand human psychology and; on the other hand, for creation of healthier future generations by transferring our cultural history. to the future.

**The concept of the “Street” in architecture and its historical evolution:** Streets are the linear places, which are limited to buildings in human settlements, the width of which may vary, and which are used for transportation and other activities. (Moudon, 1987, p.81; İnce, 2007, p.1).

The dictionary of the Turkish Language Society defines a street as “a road with houses on both sides in settlement areas such as provinces and counties, which is narrower or shorter than a main street”. In Great Larousse, a street is defined as a road located in a settlement unit and surrounded by houses, shops, etc. on both sides and open for traffic. A street also refers to outside (Nadir, 1986,p.10633).



**Figure 1.** Babel City within the Borders of Mesopotamia (Özdeş, 1984, p.22).

The early Egyptian, Mesopotamian, Chinese, Roman, Byzantine and Indian civilizations established historic settlements on a certain system. At that period, streets were generally organized according to the climate and religious beliefs. It is seen that the design of these settlements is comprised of main axes where human movement is dense and narrower streets, which serve as links from these axes to residential houses. **(Figure 1)**

Human scale is of great importance in medieval cities. Streets and building groups have a visual, aesthetic value, which may still serve as a model for urban design today. As the common mode of transportation was walking, the sincerity brought by the organic texture of the buildings in the street is felt in medieval streets. The

understanding of harmony with nature and constantly changing road perspectives was taken as a principle in the construction of streets (Batkın, 1993, p.9).

During medieval times, Ottoman cities showed a parallel development to European cities. The factors of climate, topography and human relationships were of principal consideration in structuring and organizing buildings. It can be said that the most important factors for a successful city texture are respecting the houses of neighbors, who help people build their houses, not restricting their view and not blocking sunlight. Streets are generally narrow and have long shadows. However, the buildings do not obstruct one another from receiving sunlight. In dead ends and inner squares, only the houses around them are used where only the owners or residents use the adjacent houses, and which are not used by others (Denel, 1982, p.82).

In the period from the establishment of the Turkish Republic to the start of liberal implementations and migration from rural areas to cities, it is observed that the Henry PROST plan was dominant in Istanbul. In this period, the concept of adjacently planned buildings, roads with trees and geometrical planning became popular. After 1950, urban areas started to enlarge with rapid population growth, depending on rental prices.

The enlargement of urban areas in Europe, which started with industrialization, allowed for the generation of new models such as “garden cities” and “satellite cities”. New, alternative models appeared for the densely populated cities. These alternatives started to be implemented in Turkey after 1950. The street concept, which is surrounded by buildings in new settlements, was designed being integrated with green areas. This formed the foundations of the current concept of urban planning. In the planning approach at that time, the street was used efficiently. The most up-to-date example of this is the Garden City model. In this system, parks and rest areas, children’s play areas, houses and other functions were integrated with one another. Pedestrians and vehicles were clearly separated from each other in this period. However, in the following periods, the street concept was no longer used. In the subsequent settlement areas, attempts were made to create some alternatives to the street concept with block-based housing orders.

### **An Overview to the Settlement History and Traditional Architecture of Istanbul:**

Istanbul Province has the most significant historical, cultural and economic background in Turkey. Istanbul, which was the capital of the Byzantine and Ottoman Empires is rich in architecture and has historically been a very important settlement.

Istanbul has been one of the most popular settlements in each period as it was the capital of various empires. When state resources were restricted, investment was generally directed to the western regions in order to improve economic development and national industry. Over time, this interregional inequity increased the attractiveness of Istanbul. Istanbul therefore experienced excessive immigration, resulting in rapid, uncontrolled expansion of urban areas and the establishment of illegal housing, as the need for housing could not be fulfilled. In the early part of the 19<sup>th</sup> century, modern development had not yet influenced the capital of the Ottoman Empire. The city was not affected by city design and architectural developments in the West, and retained its Turkish-Muslim city character (Çelik, 1998, p.5). With the proclamation of the Rescript of Gülhane in 1839, the westernization movements in the field of economy, social and political life were reflected in the city. The German engineer, Helmuth Von Moltke was assigned to design the street structure of Istanbul. He charted the city and drew up a renovation project; however, these plans could not be realized. This project only became one of the main themes of the regulations after the Rescript of Gülhane (Çelik, 1998, pp.42-43).

The first regulation about city planning and construction activities was prepared in 1848. In addition to this regulation, five more regulations were issued in the period until 1882. The regulation issued in 1858 is related to streets. All the regulations stressed that dead ends should be removed; however, the street concept was protected (Çelik, 1998, pp.42-43).

The adoption of western approaches to urban planning, together with migration from rural to urban areas, resulted in physical changes within the urban area, including large boulevards, pedestrian roads surrounded by green areas and squares.

Istanbul which had been the capital of various empires for the majority of its two thousand year history, is unique in terms of the depth of its cultural history. The pluralist and open culture of the city, which had been the capital of empires, constitutes the source of the richness which was termed "Istanbul synthesis" (Batur and et al., 1979, p.190).

#### **Bulgurlu Street: Structural Analysis**

Onsekiz Akaretler discussed in the present study were constructed during the dissolution of the Ottoman Empire. The construction dates of the structures in the study area coincide with a period of economic recession.

Onsekiz Akaretler and other registered buildings are located in Ortaköy neighborhood in Beşiktaş, Istanbul, and buildings which were built in 1960 and later on are generally used in this settlement area, and this settlement area generally includes buildings which were built in 1960 and later. The area may be regarded as a historical museum. **(Map 4)**

Ortaköy Onsekiz Akaretler, which is among the most important row houses in Istanbul, was built in the 19<sup>th</sup> century for the personnel of Ciragan and Yildiz Palaces, located around Besiktas. The row consists of 18 houses with the same characteristics. The design of these houses combined some frontal characteristics of the Turkish house and the row house type (Düzel,1993, p.50).

Both sides of the houses are closed and therefore they are very cost-effective in solving architectural problems such as insulation and installations and in reducing building expenses. They have two different fronts: garden and street. (Çiler KIRŞAN, 1996). When row house types in different countries are analyzed, it is seen that they are preferred for economic reasons and their reduced construction time, etc.

Row houses completely limit streets, as they are comprised of constantly repeating flat walls along the street. The living areas of the row houses facing to a street in human scale also face to a street.

All of the row houses constructed in the second half of the 19<sup>th</sup> century were the residence of middle class petite-bourgeoisie. Although this typology is not included in the traditional urban structure of an Ottoman city, row houses developed significantly in terms of the history and sociology of that time. They provide information about the social groups in the capital (Batur and et al., 1979, p.190). Today, they are generally used by low-income groups that have recently migrated from rural areas.

The most important characteristic of row houses as a whole is that they are included in the formation of an urban environment. This means that the characteristics of a single building are reflected on the group structure and street scale. Therefore, the characteristic of a row house also becomes the characteristic of an urban environment (Kırşan.Ç, p.102).

The novelty brought to the Turkish house by row houses not only affected street silhouettes but was also reflected on plan schemes of the row houses.

The central and internal scheme, which is the traditional architectural plan organization, was replaced by a plan scheme directed to a specific view (Kırşan.Ç, p.102).



**Figure 2: A Silhouette of Ortaköy and Onsekiz Akaretler (Batur *et al.*, 1979, p.203)**

When the formal characteristics of Onsekiz Akaretler are analyzed, it is seen that there is an oriel and a balcony in the street front. There is a doorway next to the entrance on the ground floor. This doorway opens onto a hallway, providing access to the kitchen, lavatory-WC and a room. The stairway connecting the hall to the upper storey emerges into another hallway, which opens onto two rooms and a bathroom. The room facing the street is used as a living room and there is an oriel extending from this room towards the street. The stairway ends with a hall on the roof storey. There are entrances to a room, a warehouse and a terrace in this hall.



**Figure 3: Plans of Ortaköy Onsekiz Akaretler**

**Photos 1-2: The Current Status of Onsekiz Akaretler in Bulgurlu Street**



The right trapezium quadrangular oriels of the buildings that face towards the street allow for lightning and integration with the street. They serve as a transition place between the street and the buildings, namely between public and private areas; they also obstruct the negative effects of the environment from the building (**Photographs 1-2**). Onsekiz Akaretler are found to be generally owned by foundations and persons.

#### **Bulgurlu Street: Analytical Survey Studies**

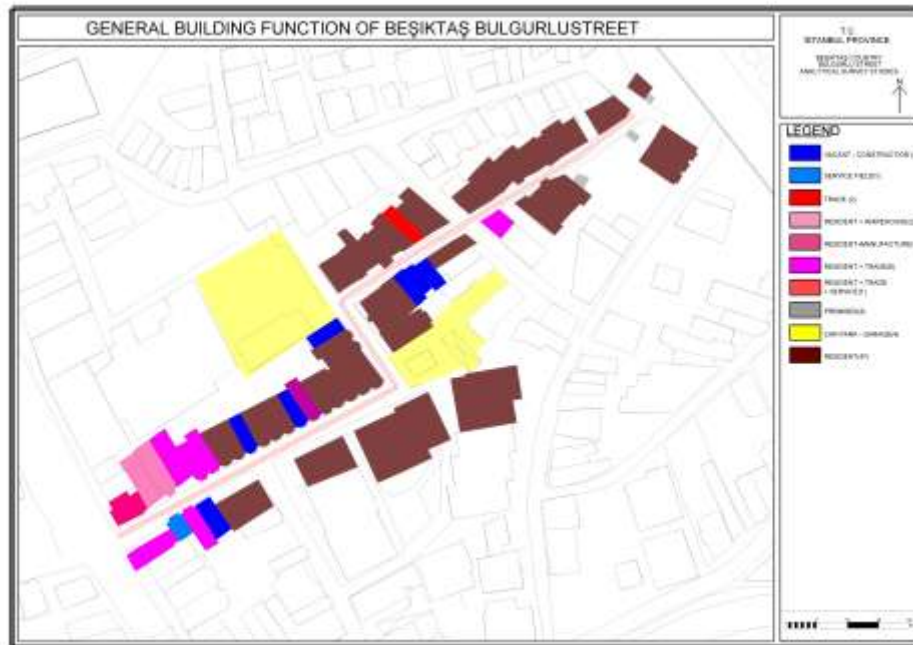
Although residential use is generally common in Bulgurlu Street, the area is located close to areas where service sector uses are common. The residential and commercial uses along the Dereboyu Main Street centers upon the part of Bulgurlu Street close to Dereboyu Avenue (**Map 1**).

The socio-economical status of the study area is divided into two. The first area, which extends to Onsekiz Akaretler, has many middle-low income groups; the second area extends from the first area towards the Bosphorus Bridge, where low-income groups live.

In the first area, the people living in Onsekiz Akaretler have generally the same characteristics as the social group in the second group.

Most of the buildings in the study area have two, three or four storeys (**Map 2**). When the statuses of the buildings in the street are analyzed, it is seen that there are generally old and new buildings (**Map 3**).

**Map 1:** Functional Analysis of Bulgurlu Street in Besiktas County

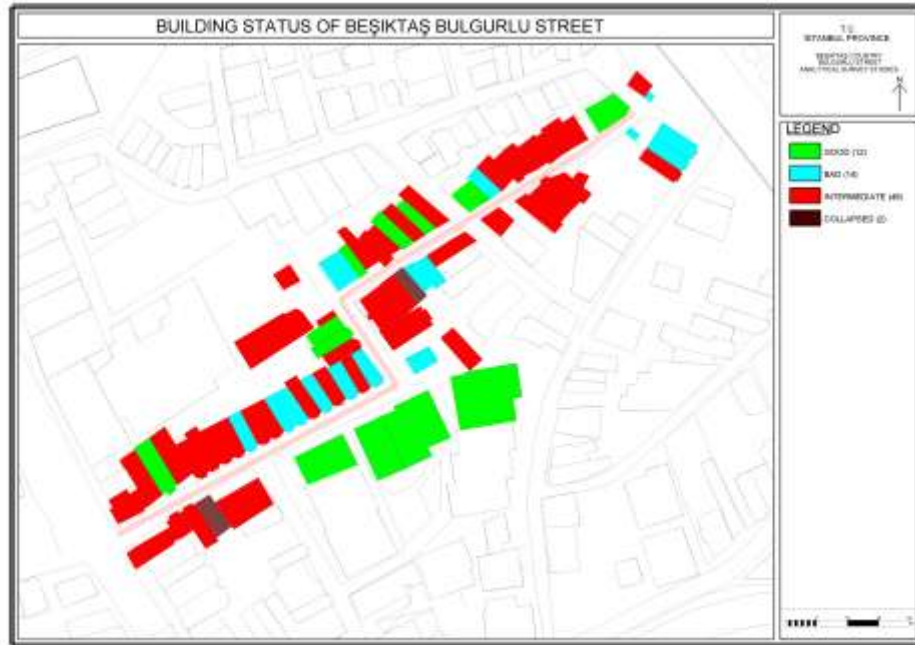


**Map 2:** Number of Storeys, Bulgurlu Street, Besiktas County



The ages of the buildings, obtained from land studies and Besiktas Municipality Directorate of Construction, indicate that the buildings for residential use are adjacent to one another as a result of the construction movement started in the street during the 1970s (**Map 4**). Especially in the street where Onsekiz Akaretler is located, the buildings are inconsistent with one another in terms of their frontages, as a result of the implementation adopted there. When the types of the buildings are analyzed, it is found that reinforced concrete and masonry buildings are common (**Map 6**). It is also found that the registered buildings are generally masonry and wood construction, while the buildings constructed after the 1970s are made from heavily reinforced concrete. Accordingly, it is understood that these buildings were constructed using the construction methods and materials of that time.

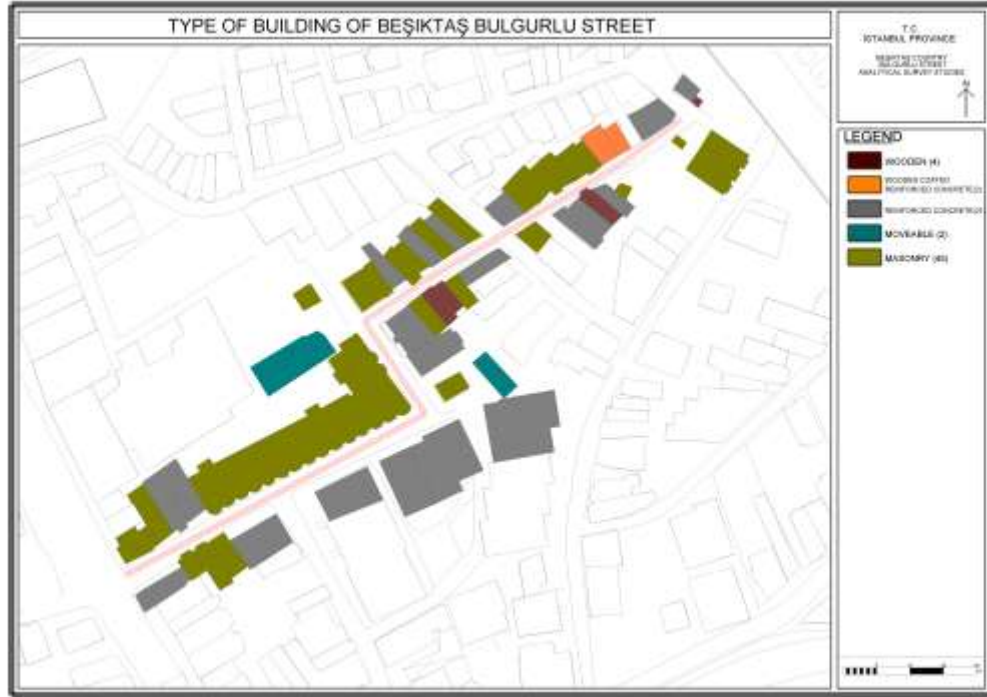
**Map 3:** Building Status in Bulgurlu Street, Besiktas County



**Map 4:** Age of Buildings in Bulgurlu Street, Besiktas County



**Map 5:** Building Types in Bulgurlu Street, Besiktas County



### Evaluation of Old and New Buildings in the Street in terms of Architectural Planning

We stated that the row houses are successful at characterizing the street environment; however, the buildings that were constructed in the street after the 1980s are inconsistent with the buildings constructed after that date. Building styles that are inconsistent with the previous character of the street are gradually being constructed as a result of the rent-based production in the urban area in order to fulfill the need for housing in the constantly growing metropolis. It is apparent that constructing systematic row houses is more advantageous in terms of meeting the demand for more buildings, rapid production, economic factors and protecting existing cultural values. This is ignored, due to uncontrolled production and the trend for multi-storey buildings (**Photo 3-4**).

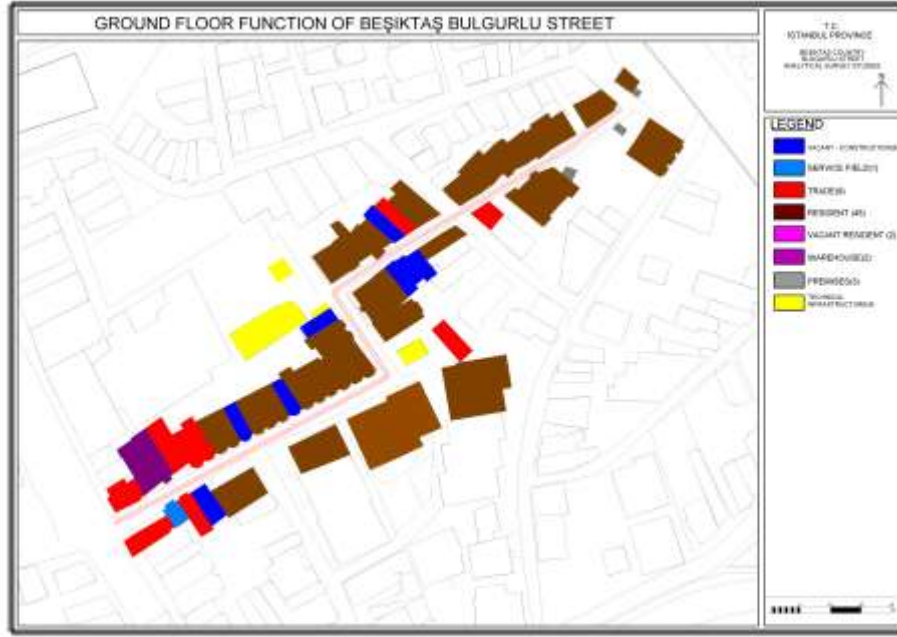
Streets have historically been one of the most important social environments and the borders of the street are more clearly defined compared to other social environments. Therefore, the buildings within a street, should be in harmony with one another in physical terms. Therefore, new buildings should be designed in harmony with the texture of the existing frontages. This design should not imitate the old but should create new alternatives, combining old and new. The buildings in the street should be individually examined within the scope of street gentrification and a choice should be made among the potential approaches, such as reinforcement, rehabilitation, restoration and renovation.

**Photo 3-4:** Street Texture and Buildings Constructed in Bulgurlu Street without considering the Street Texture



The residential character of Bulgurlu Street is under pressure from Besiktas commercial areas. The section opening onto the Dereboyu Main Street is affected by the main street's intense commercial functions. Over time, the ground storeys of the row houses there have been turned into commercial shops.

**Map 6:** Ground Floor Functional Analysis in Bulgurlu Street, Besiktas County



Commercial uses are increasing in many protection areas and new uses, from souvenir shops to luxurious restaurants, are increasing daily. Such examples of historical protection, in which tourism-related uses gain importance are the efforts where the change is related to the value of seeing the past as nostalgia; this can become a driving force, directed to consuming the past, insulated from the original use and emerging as a result of commoditization by ignoring the value of the original mix of uses. The customers of these new uses play the role of the people approaching the values of the past in a more selective manner, obtaining what they want and ignoring what they do not want, having been alienated to the past and consuming it as an object or decoration material. Therefore the Akaretler should not be functionally transformed. As they were constructed with the purpose of housing, the same purpose should be maintained. Their main disadvantage is that they are very close to the focal points of the city. As the Akaretler remains within the intensive commercial regions of the city, this makes it difficult for the area to exactly maintain its previous functionality. Therefore, the policies adopted in higher-level plans are of great importance. When these areas in commerce and services sector are included in the hinterland of the plan-related decisions which aim at cultural industries, this will help the functional and physical protection of such urban textures.

There are two parking areas in Bulgurlu Street and the street generally serves the commercial functions in Dereboyu Main Street. These factors pose some problems, such as safety in traffic, privacy, noise and environmental pollution. The street should be cleaned up from the pressure arising from the functional problems of the commercial functions and of the parking area. The need for a car park is fulfilled in the areas suitable for commercial buildings within the upper-level plans and the

parcels currently used as parking areas in the street can be used for the parking need of the street.

The two-storey building located on the parcel suggested as a green area in the proposed plan can be used as the place where people in the street meet, enjoy, organize and share information with one another. The traffic in the street should be restricted to one-way and the pavements should be enlarged to improve pedestrian safety. After achieving this target, the street should be organized as a one-way shared road (Woonerf), where pedestrians have priority.

Those who use this heritage have the most important role in the protection of historical textures. The social group residing in Onsekiz Akaretler cannot afford the expenses of the buildings; therefore some challenges occur in protecting the buildings. As a result of protection of the buildings, the following scenarios may arise;

-the local people are excluded as a result of the increased demand for the properties in the protected area and they have to relocate;

-they are excluded and they have to relocate due to the impossibility of repairing these buildings,

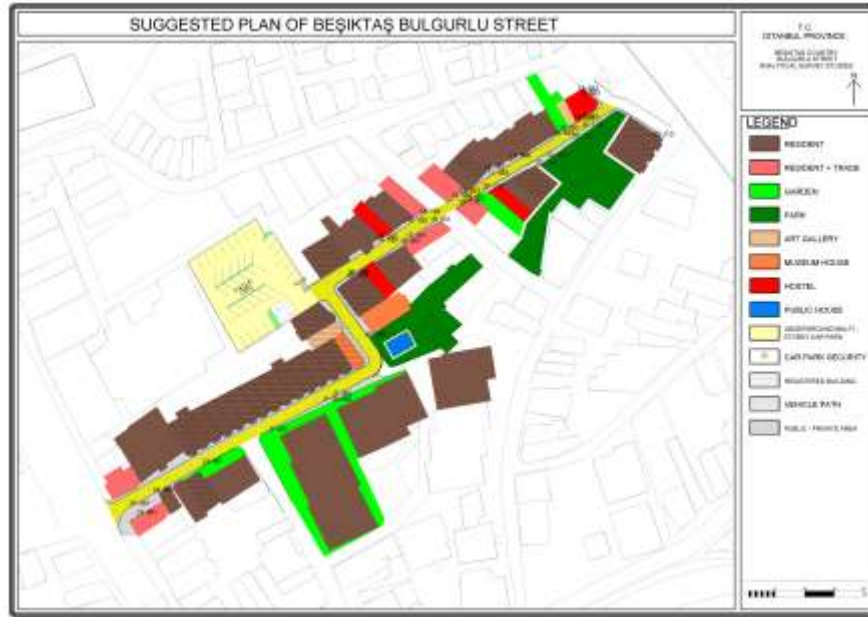
-they have to reside in the neglected buildings due to the impossibility of repairing these buildings,

-arrival of new user groups,

- these scenarios and the emergence of new uses, appear, at first sight, not to be successful. However, the street was constructed for the personnel of Ciragan and Yildiz Palaces. Historically, the concept of protection was understood as protecting the street together with the social group. Therefore, the current group should be accommodated in a different area.

It should be primarily ensured that the street regains its prestige.

**Figure 4:** Functional Suggestions in Bulgurlu Street, Besiktas County



With the minimum functional change as we mentioned before, two art galleries should be opened in the street and the personnel of these galleries should be accommodated in the street. **(Figure 4)** In addition, a museum may be designed to exhibit the household appliances and furniture from the period when the akaretler characterizing the street were constructed; and a museum house exhibiting daily materials such as clothes, bijoux and perfumes and make-up materials. These will inform visitors of the lifestyles during the periods when these buildings were constructed. It is considered that, while the housing function of the akaretler, a group of registered buildings, should continue, visitors will therefore be no longer consumers and these houses will be subjected to a gentrification process in terms of their users (residents).

Within this process, it is planned that, in socio-economic terms, the buildings, except for Onsekiz Akaretler, reflect their historic function of serving the upper middle class, petit-bourgeois groups.

Given the potential of Besiktas County in terms of higher education students, where the internal architecture is appropriate, the buildings constructed after 1970 and located in the north end of the street will contribute to the nightlife of the street, together with a limited number of pensions (4) **(Figure 4)**.

The planning proposal being publicized by the municipality will include museums, pensions and public buildings. The effect of Besiktas commerce centre is of great importance in terms of history and architectural products of recent periods. In these areas, the social groups that can be regarded as having a tendency for crime should be decentralized to more appropriate areas, according to their social and economic

statuses. In addition, it should be ensured that the higher socio-economic groups reside in Bulgurlu Street.

Therefore, it is aimed to eliminate or minimize the crime areas around the centers where rent is high.

It is thought that the transformation process will start in the effect area together with the social change and physical transformation of Bulgurlu Street. It is proposed that other urban values, regarded as lost treasures in other settlements with the same qualities as Bulgurlu Street, are identified, and successful projects are implemented in these areas with the process of social, economical, cultural and physical transformation.

The building frontages, which help integrate the street environment, building and street elements, can be constructed with transitions suitable for historic building frontages, using the appropriate construction materials colors and style of that time.

We mentioned that the internal architecture of Onsekiz Akaretler differs from the traditional housing of Istanbul. It would be correct to assess other registered buildings in the same context. Indoor architectural design may vary in terms of the types and sizes of the functions such as technological facilities, and living habits. Therefore, it is difficult to ensure an architectural harmony between the elements supplementing the street and building fronts.

When it is considered that the main aim is to design a place in a way to meet the users' optimum comfort and needs, it would be better understood that the indoor areas should be designed according to current needs. This situation can be explained in the context of new buildings constructed in the street and evaluated in the context of modern restoration techniques.

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The Method of Calculating an Approximate Cost, Gentrification Project for the Streets required to be Protected