# Architecture Constructions Which Were Established Taraklı In Sakarya, Turkey

Ahmet C. APAY
Department of Construction, Sakarya University, Adapazari, Turkey, aapay@sakarya.edu.tr

Tahir AKGUL
Department of Construction, Sakarya University, Adapazari, Turkey, takgul@sakarya.edu.tr

Emine AYDIN
Department of Construction, Sakarya University, Adapazari, Turkey, emineb@sakarya.edu.tr

Abstract: Taraklı, although its history goes very back, is an Ottoman settlement place in which the Ottoman civilian architecture samples are abundant when its pattern that should be protected was taken into account. It is a fact that the mentioned architectural asset was unnoticed until the recently and the required studies should be carried out in order to reveal this our valuable heritage. It is an expected process for this 200-300-year architectural pattern to fray and extinct. It is only possible with the academic studies to stop or slow down this process. The value of the studies on this issue was stated in traditional architectural heritage regulation as follows. "Traditional architecture has a special place for the whole society and it is a reasonable source of proud. It is accepted as an attractive product that reflects the characteristics and differences of the society. It is utilitarian, attractive and pretty. It is both the focus of contemporary life and a document for the past of a society. It is an inappropriate behavior not to make an effort to maintain these traditional harmonies which create the core of the human being's existence on the world." There are approximately 400 historical structures, 90 of which are documented, in Taraklı that still protects its traditional pattern and features and has a rooted history. These structures are composed of inns, baths, schools, mosques and houses in great numbers with public buildings in a few numbers. In this study, the general architectural pattern and the features of this pattern of the current structures in Taraklı that witnessed to our architectural history with its architectural aesthetic and eyeful beauty was examined. Moreover, the studies to be carried out to protect our historical heritage were determined analyzing the current structures

**Keywords:** Taraklı, historical wooden structures, architectural pattern.

### 1. Introduction

Taraklı, a district located in the Marmara Region and in the borders of Sakarya city, is surrounded by Bolu city Göynük district in its east, Geyve district in its west, Bilecik city Gölpazarı district in its south and Akyazı district in its north. Taraklı is 70 km's far away from Sakarya that it is situated in, 250 km's from Ankara and 200 km's from Istanbul (Figure 1).



Figure 1: Location of Taraklı (Google Earth, 2008)

Taraklı which is located in a place that Sakarya interacts with the districts of Bolu and Bilecik was established in a woody area in a valley between the mountains and hills (Figure 2). The area of this district with an altitude sea level of 485 meters is 334 km<sup>2</sup>. According to the general census of population in 2008, the population is 7.693 The economy of the district is based on agriculture, animal husbandry and tourism. Within the borders of Taraklı, there are 4 quarters and 22 villages (Table 1).



Figure 2: A General View From Taraklı District

Years	Municipality	Quarters	Villages	Total
1990	1	4	24	10.906
1997	1	4	22	10.436
2000	1	4	22	9.220
2008*	1	4	22	7.693

<sup>\*</sup> According to TUIK (Turkish Statistical Institute)

**Table 1:** The Population in Taraklı between the Years 1990-2008

As mentioned in Travelbook of Evliye Çelebi, it was stated that it is named as Yenice Tarakçı as people in the district are busy with box wooden spoon and comb. This name changed as Taraklı in colloquial language.

In Evliye Çelebi's Travelbook, he summarized the architectural pattern of Taraklı stating that "Its castle is still ruined. However, it is a pretty town with vineyards and orchards in a streamed river and 500 thriving houses örtülü with wooden sticks and tiles. It includes 11 niches and 7 quarters. As all people are busy with spoon and comb making, they call the city as Taraklı..."

The facts that the settlement in this region is not located on a much used trade route, the development and the population increase rates are slow and people in this region migrate helped the architectural pattern in the region maintain up to now protecting its characteristics.

In the region that has an intense architectural pattern, among the structures that remain up to now are castle ruins on the hill of Hisar, reservoirs, Taraklı houses that form the Ottoman city pattern, the Ottoman streets, inns, baths, mosques, schools, handcraft workshops and the town square.

#### 2. The Place of Taraklı in the Ottoman-Turkish Architecture

There are many factors in the shaping of housing architecture and these can be ordered as the family structure, geographical situation and climate, the material that can be accessed, traditions and customs, environmental conditions, cultural and social life. There are three factors that are influential in the architecture of Taraklı houses. These are the family structure, climate and cultural richness.

Although the functionality seems more important than the decorative and shaping elements in the setting design tradition coming from the Ottoman culture, there a perfect harmony of functionality and aesthetic.

The household, especially women, in Turkish family structure spend the most of their time (the whole time in villages and towns) at home; therefore, houses are designed as working, entertainment and relaxation places. For example, in order a woman busy with handcraft to accomplish her job at home, the weaving looms are placed in the house. On the other hand, the entertainment groups of the woman come together in these houses as well. Moreover, as the families are patriarchal, all settings are connected to the hall. Despite all this functionality, in the architecture and design of Turkish houses, the purity, respectfulness, family unity and solidarity of the Turkish people is reflected on the housing architecture clearly.

The dominant house type in Taraklı is wide beginning from the west of Anatolia to Bosnia Herzegovina, Yugoslavia in the Balkans and to Crimean that is rooted in this area. Sakarya Taraklı basin houses in this wide setting are reflecting the characteristics of the Ottoman house architecture.

The architectural aesthetic and eyeful beauty of Taraklı which is a pretty district of Anatolia that emerged in a historical period with its current characteristics and the architectural structures of houses that witnessed to our history and most of which are still being used were investigated by the researchers and it was managed to document this historical heritage.

# 3. The Characteristics of Taraklı Traditional Settlement Pattern

In Tarakli, as in all towns of the Ottomans, in general, the settlement that is integrated with the nature and in accordance with the naturalness of the area was taken as the basis. Dominantly, the structures seem like as if they were climbing up the hills and the areas in the middle of the towns are straight and straight settlement appears here. In Tarakli, which has a structure that the structuring and the transportation is hardly accomplished due to their topography, the elements that form the town pattern have also the function of managing required works as in other Anatolian towns. When the distribution of functions within the town is taken into account, it can be seen that religious, trade, administrative, educational and accommodation structures are found in the town center and the houses are established around Ulu Mosque and on the hills. The center that determine the social life is placed nearly in the middle and on the straightest area and Yunus Paşa Mosque, Old Bath and traditional bazaar pattern which are among the old structures are in this area.

In investigations of the district center of Taraklı, it was determined how the area in the center had been used. Occupancy and emptiness analyses indicated that the areas beyond the settlement structures had been used ad greenery zone. This greenery is both the gardens that belong to the structures and the landscape arrangements in general. When taken from the structuring perspective, an abundant structuring can be seen in the "downtown" area and in the axle of Atatürk Avenue which is the main artery of Taraklı. The density of structuring in other areas can be said to be homogeneous. Almost each house has a big or small garden.

Again, the functionality analysis carried out in the district center of Taraklı indicated that a great part of the structures had been used as a house. The settlement of houses and trade areas showed that these two areas had been strictly separated from each other. All trade functions were groups around the "downtown". In addition to this, the axle of Bolu that was within the main route was the axle that most public structures were placed. Again some several public buildings (hospital, school, etc.) were placed around the upward quarter.

## 4. The General Architectural Characteristics of Taraklı

#### 4.1 Current Situation Analysis in Taraklı Traditional Architecture

In studies aimed at determining the Taraklı architectural pattern and presenting solutions for the determined problems, the structures in Hacı Murat Quarter, Ulu Mosque Quarter and Yusuf Bey Quarter were investigated. In these investigations;

- It was seen that in terms of construction system, 74% of the structures were constructed in wooden skeleton system with mud-brick and brick, 25% of them were armored concrete and 1% of them were structures. All of the stone structures were religious and monumental structures (Figure 4).
- In terms of the number of floors, 10% of the structures were one-floored, 72% of them were two-floored, 16% of them were three-floored and 2% of them were four-floored or more than four.
- When they were categorized according to the purpose of using, it was seen that 74% of them were houses, 14% of them were trading houses, 5% of them were home offices, 2% of them were public buildings, 1% of them were monumental and religious structures and 4% of them were the others (storage, etc.). Although the houses were available in all part of the district, trading houses were mostly found in Ulu Mosque Quarter (Figure 5)
- When they were categorized according to their original forms, it was determined that out of 400 houses that had the characteristics of traditional structure 60% of them were in their original forms, 30% of them lost their originality on its front insignificantly, 10% of them lost their originality in terms of their body, plan and front significantly. These rates are the indicators of the fact that Taraklı architecture has preserved its originality up to now. The structures which were preserved in their original forms were gathered around Ulu Mosque, on Hisar hills, in the north of Hacı Murat Quarter and Yusuf Bey Quarter.
- When it was examined according to the newly-built structures, it was seen that 17% of them were in accordance with their environment with their bodies and fronts, 60% of them were in accordance with their environment with their bodies but not in accordance with their fronts and 20% of them were not in accordance with their environment. When these rates were taken into consideration, it was determined that people behaved unconsciously and sloppy to preserve the architectural pattern.

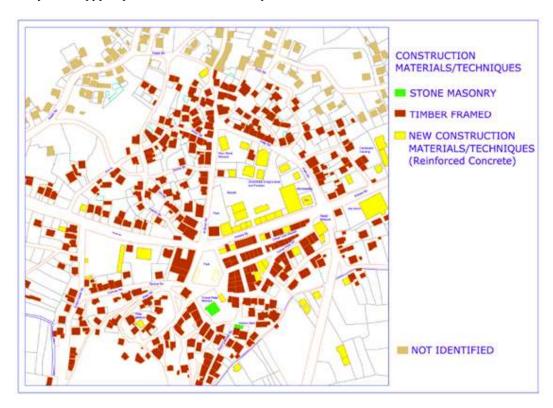


Figure 3: Construction Materials/Systems of Buildings in Taraklı Town Center

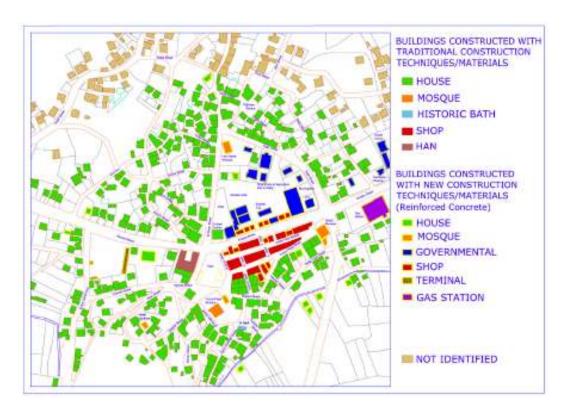
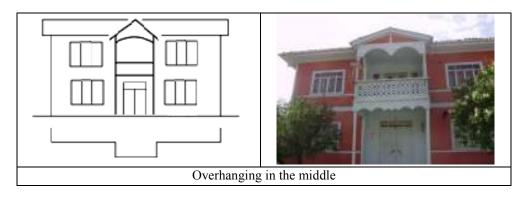


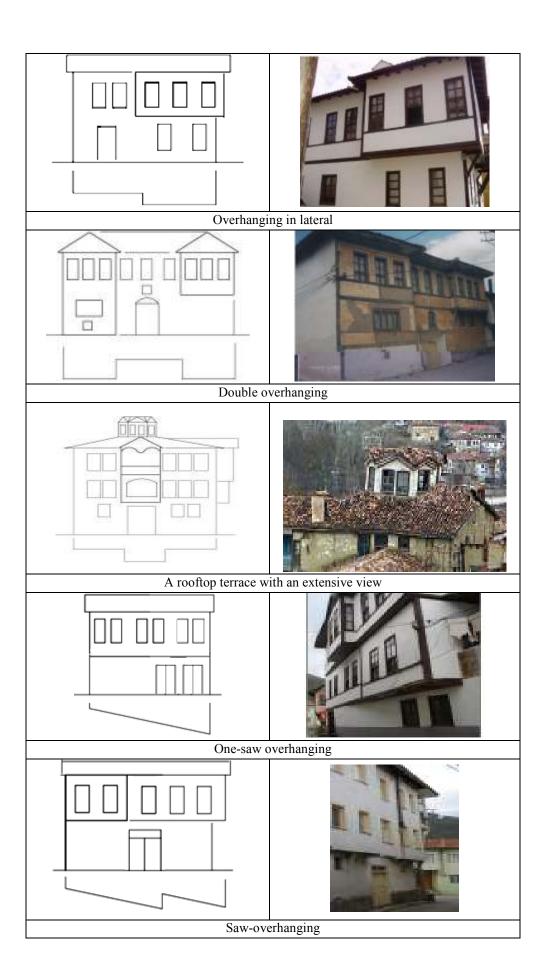
Figure 4: Current Building Category of Taraklı Town Center

When they are investigated in terms of their structures, it was seen that 75% of the traditional houses did not have any structural problems, 12% of them needs structural repair, 12% of them were restored and 1% of them were dangerous.

# 4.2 Front Appearances and Building Typologies

At the end of the typological research, the traditional architectural plan type was determined. At the end of this study, it was found that the buildings in Taraklı were with overhanging in the middle, overhanging in lateral, double overhanging, a rooftop terrace with an extensive view, one-saw overhanging, saw-overhanging, whole-floor overhanging and without overhanging. There are many buildings in Taraklı with the aforementioned typological characteristics and with different appearances. The structures below are examples of these typological characteristics. These examples are presented figuratively and visually below (Figure 5)





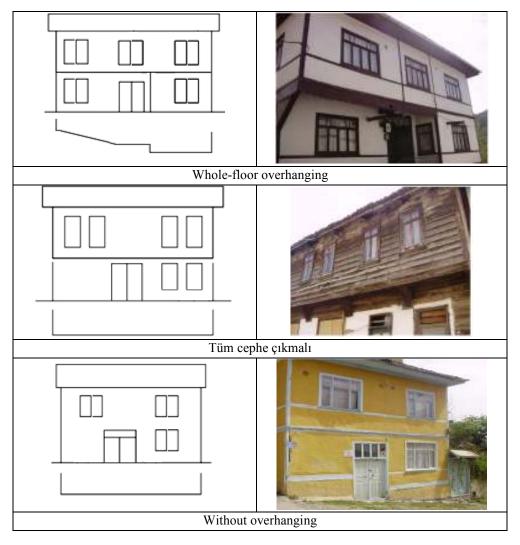


Figure 5: Front Views and Building Typologies

# 4.3. Plan Styles

In this part, the traditional architectural plan styles were determined at the end of the investigations on the houses. At the end of these investigations, it is possible to categorize the houses in general as with internal halls, with external halls, with halls in the middle.

## 4.3.1. Plan Style with External Halls

This plan style is composed of a sequence of rooms and a hall in front of them. Hall and Iwans are the elements that enrich this simple plan. Halls and iwans were built with a closed design. There is a stair at the one corner of the hall (Figure 6).

The houses with external halls were built as two-floored. It is composed of rooms sequenced towards the hall. It is the simplest and original type of the plan style with external halls. The rooms were oriented to the street while the hall was oriented to the yard. The size of the hall changes according to the number of rooms. The stair is designed at the one corner of the hall with one railing parallel to the wall. To the one edge of the hall, drum stove and two windows are placed. This part of the hall was changed into a kitchen separating with a wall or a wooden screen afterwards.

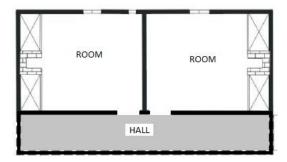


Figure 6: A Sample for the Plan Style with External Halls

### 4.3.2. Plan Style with Internal Halls

The hall is between the sequences of rooms placed in both sides of it (Figure 7). The hall is enriched with the elements like iwan, stair hall and overhanging. In some samples, hall is reflected on the front with different types of windows according to the rooms.

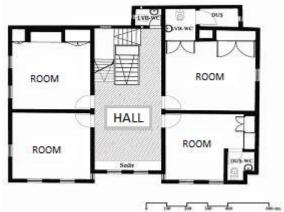


Figure 7: A Sample for Plan Style with Internal Halls

### 4.3.3. Plan Style with Halls in the Middle

In the light of the principles of the plan style with halls in the middle schema, a plan type that is composed of a hall in the middle and rooms in both sides and known also as split aubergine model can be seen (Figure 8). Although the external hall is unprotected against the harsh climate, the hall in this type of plan is protected due to the rooms. The middle hall that organizes this schema is service settings like rooms, kitchen and toilet that opened into the hall. The basement floor is connected through the entrance door and it is composed of barn, haybarn and storage places that are opened to it.



Figure 8: A Sample for the Plan Style with Halls in the Middle

The hall is an organizer in both floors. With a bay-windohbyuwed room attached to the hall upstairs, it enables the social interaction with the environment and the integration with the nature being oriented to the garden and yard. In the samples in Taraklı, the ceiling of the hall is higher compared to the room and big iwan's and the

embroidery is done to the horizontal strip occurred as a result of the rise. In the four-iwanned styles, the entrance of the rooms is made as chamfered and this gives an octagon appearance to the hall which is not ordered. The hall is reflected on the front with different types of windows and overhanging.

### 5. Conclusion and Recommendations

At the end of the investigation, if we are to divide the houses into three groups according their architectures and built dates which affect the architectural pattern significantly and to determine the follow-up studies according to these groups separately;

- a) The armored concrete structures which is against the traditional town architecture; since the beginning of 80s, armored concrete structures which are not associated with the architectural pattern of the town has started to be built in municipally protected areas as a result of both negligence of historical heritage and aesthetic and economical developments. In addition to the fact that this structuring is threatening the historical pattern of the town, it is quite far away from the traditional structure. An immediate municipally recycling project should be developed that includes these structures and these structures that threaten the historical patterns should be removed.
- b) The structures built between the Independence War years and 1970s; these structures were built in accordance with the traditional pattern in terms of system and architecture; however, front handworks and door and window forms were changed. As they are the structures that include original pattern on the basis, it is possible for these mentioned structures to be made a part of historical pattern by making delicate workmanship. The domestic administration should prepare a study including the cooperation with the house owners for this purpose.
- c) Structures that were built in the later 18<sup>th</sup> and 19<sup>th</sup> centuries and in the scope of the "Traditional Ottoman House"; these structures are the 200-year old houses that managed to maintain up to now and that create the original architectural pattern of Taraklı. These houses are composed of approximately 400 houses, 90 of which were documented by now. The precautions that should be taken in order to preserve these houses in the scope of the cultural heritage can be listed as below:
- Taraklı, which looks like a miniature Ottoman town, should preserve its original form both with its civilian architecture and other works and the city development situation should be reorganized if it is required.
- When the current city development plan is examined, religious, administrative, trade, accommodation, educational structures are in the town center. The houses are found mostly on the hills. Therefore, the structures to be built should be built taking this feature of the town into account.
- The structures frayed in a natural process should be repaired preserving their architectural situations that are in accordance with their original and real forms. Before starting the repair, the required projects should be prepared according to their original forms and the application should be accomplished according to this project.
- There are still many historical houses still being used. However, some houses are abandoned. The precautions should be taken to prevent the extinction of these abandoned houses. In this concept, life in traditional houses should be encouraged and supported by means of aids and helps; thus both these wasted structures will be reappraised and the deforming of the historical and municipal pattern will be prevented.

Taraklı has a housing pattern that should be preserved; therefore, the structures that have been built recently and deforming the historical pattern of the town should be arranged according to the historical pattern if possible, if not, radical precautions should be taken by the people in charge to make this structures rebuilt. Moreover, the newly-built houses should be designed taking the plan typologies of the historical houses into consideration and the building should be appropriate to the plans.

Recently, Taraklı, a topic for different urban restoration projects and scientific studies, developed dramatically in terms of preservation and restoration. However, the physical structures found in Taraklı, which is an important settlement place in which our cultural heritage is available with samples from the Ottoman architecture and has remained up to now, should be examined with their historical architectural values and appropriateness to the environment and the restoration should be accomplished taking these features into consideration. It should not be forgotten that Taraklı could become a lively Ottoman town only after these attentive studies.

### References

[1] Akgul T., Apay A. C., Aydın E., "Investigation Of Civilian Architectural Structures In Taraklı" Uluslararası Sürdürülebilir Yapılar Sempozyumu (ISBS), 26 - 28 Mayıs 2010, Ankara, Turkey

[2] Apay A., "Tarihi Taraklı Evlerinin Restorasyon Ve Güçlendirme Teknikleri" Bapk Proj., Proje no: 2005-1, Sakarya Universty, 2008

[3]Öztaş E.B., "Sakarya'nın Taraklı İlçesinde Bulunan Tarihi Evlerin Tespiti Ve İlçenin Sosyo-Kültürel Yapısındaki Değişimin İncelenmesi" Maltepe University Institute of Science, 2006

[4]Seymen F., "Taraklı'da Geleneksel Sivil Mimaride Kullanılan Yapım Teknikleri Ve Sadık Özen Evi Restorasyon Önerisi", Yıldız Technical University, Institute of Science, İstanbul 2008

[5]Özyer H B., "Construction Process And Techniques Of Traditional Houses In Taraklı / Sakarya: An Introductory Model For Web-Based Gıs Applications", Middle East Technical University, November 2008

[6]Özkan Ö., "Taraklı'daki Anıtsal ve Sivil Yapılar İle Ali Pektaş Evi'nin Restorasyonu Ve Koruma Önerileri" Sakarya University Institute of Science, Ekim 2009

[7]Özkan S., "Taraklı'nın Fiziksel Ve Tarihsel Dokusu, Sivil Ve Anıtsal Mimarlık Örnekleri Hacı Rıfatlar Konağı Restorasyonu" Yıldız Teknik University, Institute of Science, İstanbul 2008

[8] Köse, A., "Turkey'de Geleneksel Kırsal Konut Planlarında Göçebe Türk Kültürü İzleri", Afyon Kocatepe University. Sosyal Bilimler Dergisi, Cilt VII, Sayı 2, Afyon, s.165-200, 2005

[9]Özköse, A. "Ahşap Kültürü-Anadolu'nun Ahşap Evleri" T.C. Kültür Bakanlığı, ISBN 975-17-2616-6 Ankara, Turkey, 1998

[10]Günay, R. "Safran Bolu Evleri" Yapı Yayın, ISBN 975-8599-33-X, İstanbul, Turkey, 2003

[11]Günay, R., "Geleneksel Ahşap Yapılar-Sorunları ve Çözüm Yolları" Birsen Yayınları, ISBN – 9755112863, Mart 2007 [12]ARI, A., Irmak Dergisi, Taraklı Evleri–1,2, Sayı 26-27-28, 2003

[13] Taraklı Kaymakamlığı, Tarihin Doğayla Buluştuğu Yer TARAKLI, Çizgi Ofset, Ağustos 2003

[14] Evliya Çelebi Seyahatnamesi, Cilt 3, Üçdal Neşriyat, İstanbul 2005

[15] http://www.kenthaber.com/marmara/sakarya/Taraklı/Rehber/genel-bilgi/Taraklı-genel-bilgi, Website all the properties of the properti

[16]Turan, M., "Tarihi Taraklı Evlerinin Taşıyıcı Sistemi Ve Yapım Tekniklerinin Belirlenmesi", Sakarya University, Sakarya/Turkey, 2004

[17]ICOMOS Traditional Architectural Heritage Regulation, p 1, 1999.