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Transportation Decisions and Practices in Trabzon City and Their Impacts on the City Identity

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Abstract

The transportation of Trabzon is mainly provided by road. The negative impact of the roads, which started with the construction of the Black Sea Coastal Road, then passed through the historical castle and continued with the Tangent Road, which destroyed important areas, on the city has reached an even more destructive level with the construction of new roads today. As a result of all these, serious deterioration was experienced in the historical texture of the city on the one hand and the urban skyline on the other, and the identity values of the city began to disappear. This study is important in terms of revealing the extent of the effects of transportation decisions on the city identity on the city of Trabzon. In addition, the study is an example for cities that have or may have similar problems. In the study, transportation decisions, practices and results are handled in a multifaceted way through the concept of "relationship", which defines spatial integrity. As a result, it has been revealed that the consequences of the transportation decisions to be taken in the city on the whole city and the urban life should be discussed.

Keywords: *Identity, planning, spatial change, Trabzon, transportation.*

Trabzon Kentinin Ulaşım Kararları ve Uygulamalarının Kent Kimliğine Etkisi

Öz

Trabzon'un ulaşımı, ağırlıklı olarak karayolu üzerinden sağlanmaktadır. Öncelikle Karadeniz Sahil Yolu'nun inşasıyla başlayan ardından tarihi kale içinden geçen ve önemli alanları tahrip eden Tanjant Yolu ile devam eden yolların kente olumsuz etkisi günümüzde yeni yolların yapımıyla daha da yıkıcı boyuta ulaşmıştır. Tüm bunların sonucunda bir taraftan kentin tarihi dokusunda diğer tarafta kent siluetinde ciddi bozulmalar yaşanmış, kentin kimlik değerleri kaybolmaya başlamıştır. Bu çalışma, alınan ulaşım kararlarının kent kimliğine olan etkilerinin boyutunu Trabzon kenti üzerinde ortaya koyması açısından önemlidir. Ayrıca, çalışma benzer sorunlar yaşayan ya da yaşayabilecek kentler için örnek teşkil etmektedir. Çalışmada, ulaştırma kararları, uygulamaları ve sonuçları, mekânsal bütünlüğü tanımlayan "ilişki" kavramı üzerinden çok yönlü olarak ele alınmıştır. Sonuç olarak kentte dair alınacak ulaşım kararlarının kentin bütününe ve kentli yaşamına olacak sonuçlarının tartışılması gerektiği ortaya konmuştur.

Anahtar kelimeler: *Kimlik, planlama, mekansal değişim, Trabzon, ulaşım.*

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1. Introduction

Roads are influential elements in the urban texture and appearance (silhouette). They also play a significant role in connecting the urban spaces that form the spatial structure of cities (Besim & Polat, 2020). Lynch (1960) stated that roads are the most effective tools for organizing the whole, and he defined roads not only as physical spaces but also as urban spaces where social life flows. He defined roads as the most effective means by which the whole is organized, and as urban spaces where not only physical spaces but also social life flow. Therefore, roads are not only a result of transportation needs but they are also a subject of various disciplines.

From the past to the present, it can be observed that roads have taken on various roles. Serving as significant tools for interactions among different communities, roads have also been among the most valuable power of governors. The roads, which are important tools for the interaction of peoples in different geographies, have also been the most valuable assets of the monarchies. During the Roman period, roads were constructed with varying dimensions and purposes, often for military objectives. The Romans designed roads almost as monumental structures. On the other hand, the Phrygians built roads specifically for their chariots.

The Persian Royal Highway, built in the 5th century, has been one of the most important and remarkable of the Anatolian roads. This highway was built by the Persian King Darius primarily for communication purposes, was used as a military highway network by the Romans, and was used for intercontinental transportation on Silk Highway trips that served commercial and military purposes during the Byzantine period. Therefore, roads have not only served military purposes but also facilitated commercial and intercontinental communication, significant economic and strategic centers.

Trabzon is one of the cities that have hosted various civilizations. It has places which have identity. Trabzon, which was originally a city, directly connected to the sea and resting against green hills, has gradually lost this characteristic over time. Rapid urbanization, unplanned construction, and certain planning decisions have led to significant changes in the city. Especially new highway constructions for transportation, landfills, and demolitions have altered the texture of the city. The city has experienced losses in its spaces which have identity or discontinuities in the continuity between these spaces. This spatial fragmentation has manifested itself in disruptions in the city silhouette and the emergence of less identity environments that have lost their connection with the surroundings.

It is aimed to reveal the originality of the study by explaining the issues related to the previous studies on roads in the literature. When looking at the studies about “the roads”, it is seen that there are some studies that examine “the relationship between highway and urban morphology”. These include Kızıltepe (2014), Yılmaz (2015), Adıgüzel, Toroğlu & Kaya (2015), Ünlü Yücesoy & Özüduru (2018), Sakar & Ünlü (2019), Baytekin & Özüduru (2022), and Tiryaki & Kürkçüoğlu (2023). In addition to these studies, there are also studies that examine “the highway and urban relationship”. Examples include Surat & Yaman (2015), and Eren, Hacıoğlu & Polatoğlu (2021). Furthermore, there are also studies focusing on the impact of roads on the Trabzon city. These include Sağlam (1995), Çevik et al. (2008, 2010), Zorlu et al. (2010), Başman (2011), Sağır (2012), Bogenç, Bekçi & Bekiryazıcı (2019), Tarakçı Eren et al. (2018), Özlü & Dedeoğlu (2021), and Bayram & Yılmaz Yıldırım (2022). The original subject of the study is about the impact of new roads on the urban identity of Trabzon city through the "relationships" that constitute the spatial integrity.

In summary, roads encompass the scope of various disciplines such as urban planning, architecture, environmental science, sociology, and transportation engineering. Roads have a wide-ranging impact that includes aspects such as transportation, sustainability, accessibility, aesthetics, safety, as well as social and economic dimensions. In the study, firstly, the roads that influence the identity of Trabzon, spaces, which have identity, affected by these roads, and the city's planning decisions have been addressed. Subsequently, the study highlights the spatial fragmentations, weakening, disconnections, demolitions, and other consequences that have emerged in the identity areas of the city because of the construction of these roads. Then, spatial fragmentation, weakening and destruction in the identity areas of the city resulting from the construction of these roads were revealed.

1.1. Effective Old and New Roads in Trabzon Urban Identity

In the study, the effective primary roads in Trabzon's urban morphology are addressed as follows: 1st and 2nd Black Sea Coastal Highway, 1st Tangent Highway (Yavuz Selim Boulevard), and 2nd Tangent Highway (Kanuni Boulevard).

- 1st and 2nd Black Sea Coastal Roads: It is a section of 139 kilometers of the 542-kilometer highway that extends from Samsun to the Sarp Border Gate (Karataş, 2006). Firstly, the project was initially proposed in 1960 but was postponed due to various reasons. Secondly, it was planned as a two-lane highway in 1983, and its project was completed in 1987. However, due to the anticipation that the planned highway would not be able to accommodate the increasing traffic in a short time, it had to be transformed into a divided highway with 2 lanes in each direction (Yılmaz, 2015). In 1996, the Ministry of Transport and Infrastructure initiated the construction, and by 2006, a divided (dual) highway passing over land reclaimed from the sea, which runs through or immediately along the edges of cities, was opened for service (Turoğlu, 2005). However, the Black Sea Coast Highway, which was originally planned as a transit route for the city, has become one of the major influential arterial roads within the city. This situation has necessitated the construction of a 2nd Black Sea Coastal Highway. This project was expanded. It was designed as multilane rural Highways. The construction of the highway began in 2007 under the Ministry of Transport and Infrastructure, and the Trabzon section of highway was opened in 2018 (Republic of Turkey Ministry of Transport and Infrastructure, 2023).
- 1st Tangent Highway (Yavuz Selim Boulevard): Tangent Highway is an 11-kilometer highway extending from Uzunkum to Çömlekçi. It is heavily used by both vehicle traffic and pedestrians (Kadıoğlu, 2011). It was initially proposed in the Lambert Plan prepared by Jacques H. Lambert in 1938. This plan aimed to support the development of the city especially of the southern part. The plan includes the proposal to demolish some of the walls of the Zagnos Bridge and to cross the Tabakhane Valley with a second bridge. However, in the competition organized by İller Bank in 1968, unlike the Lambert Plan, another route passing through the south without damaging the historical structure/texture of the city was proposed (Sağlam, 1995). Nevertheless, due to high costs, the route was changed again in 1974. The first stage was completed in 1984. The second stage was started by the General Directorate of Highways in 2002 and opened in 2005 (Zorlu et al., 2010). The Tangent Highway is a two-lane and two way. and has a special importance because it passes through the city center and the urban protected area, which is the historical settlement area of the city.
- 2nd Tangent Highway (Kanuni Boulevard): Kanuni Boulevard is a 23-kilometer highway (JTAP, 2013). The sloping land structure of the city and the scarcity of settable land have led to the linear development of the city along the coast. This situation led to the inadequacy of the south connection roads and required the construction of Kanuni Boulevard (Sağır, 2012). The Kanuni Boulevard Project was initially included in plans as a corridor in 1989 and was proposed as an alternative transportation system in the east-west direction. It was revised in 2002 within the scope of the Southern Ring Highway Project (Beyazlı & Özlü, 2020), which would ease the burden of the coastal highway by shifting it to the south. Kanuni Boulevard is planned as an alternative to the Trabzon crossing of the Trabzon city center and the Black Sea Coastal Highway, and it is predicted that it will ensure the rapid flow of transit traffic (Yardımcı, 2021). The project was planned in 6 stages, and its construction that started in 2011 through a joint initiative of the General Directorate of Highways and the Municipality of Trabzon is ongoing (Özlü & Dedeoğlu Özkan, 2021). The highway is divided into 3 lanes in each direction (3+3 configuration) (İhlas Haber Ajansı, 2022).

Secondary vehicle and pedestrian paths/roads are Uzunsokak, Kahramanmaraş Street, Kunduracılar Street, and Erzurum Highway.

- Uzunsokak: Uzunsokak is an approximately 700-meter-long highway that starts from Atatürk Square, which is one of the most used squares of the city and extends to the historical core of Trabzon. There is Tangent Highway to the south and Kahramanmaraş Street to the north (Başman, 2011). One of the oldest streets in the city center of Trabzon (Albayrak, 1998; Gerçek 1990) is a commercial street. The street, which was used as a secondary vehicle highway until 2008, was later pedestrianized.

- Kahramanmaraş Street: Kahramanmaraş Street is a 2.5-kilometer-long street that starts from the Black Sea Coastal Highway and ends at Atatürk Square. It is bordered by Uzunsokak to the south and Kunduracılar Street to the north. It is one of the most significant and heavily used streets in Trabzon (Özkan, 2017). It was built by the Russians in 1916 as a second parallel street to Uzunsokak. The street was expanded with the Lambert Plan in 1938. Although the traffic flow direction of the street was changed in different periods until 2022, some of it was pedestrianized in 2022 (Bogenç, Bekçi & Bekiryazıcı, 2019; Tarakçı Eren, Düzenli & Akyol, 2018).

- Kunduracılar Street: Kunduracılar Street is a 450-meter-long street starting from Semerciler Street to today's port. It is connected to Iran transit highway by the Old Erzurum Highway to the south. This trade artery, which is in the center of Trabzon city, is a pedestrian-shopping area. This street is the Kemeraltı-Atatürk Area (Square Park) connection, which is a part of the historical and cultural heritage of Trabzon (Altınay & Bilgimöz, 2015). In 1985, the street was closed to traffic (Özkan, 2017). In the same year, an area of approximately 1,5 kilometers covering the main axle and the connection roads feeding the axle was designated as a protected area. In 2002, Protection-Renewal-Revitalization Study was conducted in cooperation with Trabzon Municipality and Karadeniz Technical University (Çevik et al., 2010; Çevik et al., 2008).

- Erzurum Street: Erzurum Street, which is part of the Iran Transit Highway, is a highway starting from Kunduracılar Street and extending to Rize in the east (Sipahi & Tavşan, 2019). The highway is bordered by Çömlekçi Neighborhood to the north and Fatih Park to the south. Erzurum Highway is one of the intermediate roads that come from the 'Silk Highway' route to the south of the Caspian Sea and extend to Tabriz and go to the coast of Trabzon through Erzurum. Thus, Erzurum Street has played a crucial role as a connection between land and sea, serving both military and commercial purposes (Aygün, 2005). Although the date of the first attempt at its construction is unknown, it is known that it was brought to the agenda by Sadullah Enveri Efendi in the 18th century, but it was not built in that period (Tozlu, 2002). Especially with the resurgence of Iranian trade in 1830, the construction of the highway gained importance (Issawi, 1971). Erzurum Street underwent a major change with the construction of the Tangent Highway, and many of the buildings on the highway were demolished (Zorlu, Aydıntan & Engin, 2010).

1.2. Urban Nodes and Districts Affected by Construction of New Roads

Trabzon has important urban nodes and districts affected by construction of new roads. Trabzon has important city focal points and regions that have been influenced by the construction of new roads. Particularly the areas of Kemerkaya, Güzelhisar, Çömlekçi, Moloz, Boztepe, Historical Castle, Tabakhane Valley, Zağnos Valley, Atatürk Square (Square Park), Atapark, and Fatih Park are significant areas that have undergone changes in terms of city identity due to the construction of new roads.

- Kemerkaya District: Kemerkaya District, one of the non-Muslim neighborhoods, was established in the Roman Period (Öztürk, 2016). It is bordered by İskender Pasha Neighborhood and Port district to the east, Çarşı Neighborhood and Kemeraltı district to the west, Black Sea to the north, and Cumhuriyet Neighborhood to the south. The district, which has formed the coastal character in the history of the city, has undergone a great change with the construction of the Black Sea Coastal Highway and coastal filling works.

- Güzelhisar District: The Güzelhisar district is in the İskender Pasha neighborhood of Trabzon. It is bordered to the east by the Port area, to the west by Çarşı District, to the north by the Black Sea, and to the south by the Black Sea Coastal Highway. In the 1930s and 40s, it hosted many events such as boat races, oil wrestling, and concerts (Doğan, 2016). Filling areas along the sea and 2nd Black Sea Coastal Highway, initiated in 2007, have changed its character seriously.

- Çömlekçi District: It is bordered by Sanayi Neighborhood in the east, İskender Paşa Neighborhood in the west, Black Sea in the north, and Tangent Highway in the south. The Çömlekçi district, one of the first Muslim neighborhoods of the city, is in the port area of Trabzon. It connects Trabzon to the east. Erzurum Street, once located in the region, used to cross the camel caravans coming from Iran and connect to the Black Sea in the past (Somel, 2011). Social life improved with the construction of the inter-district bus stop, coffee houses and the Coastal Cinema in this region in 1960s (Arslan, 2011). In the 1990s, with the establishment of the Eurasian (Russian) Market in the district, the area gained commercial function and operated as a commercial center until the 2000s (Aydın Öksüz, Seymen & Küçük Karakaş, 2018). With the relocation of the Eurasian (Russian) Market from here, the commercial function of the region has decreased. With the aim of creating a new physical and social image in cooperation with TOKİ and Trabzon Metropolitan Municipality, the Çömlekçi Urban Transformation Project was prepared. The project was initiated in the region as of 2009 (Anonymous, 2017).

- Moloz District: It is bordered to the east by Çarşı District, to the west by Pazarkapı District, and to the north by the Black Sea Coastal Highway. The Moloz experiences intense commercial activity. There are many commercial buildings, especially the Women's Market, which is an important commercial place of Trabzon. In the past, Moloz was located adjacent to the sea. Because of the filling area (Beyazlı & Aydemir, 2008) and the 2nd Black Sea Coastal Highway between 1967 and 2007, The Moloz area remains situated between the coastal roads. In 2020, the Moloz Recreation Area Project was developed and implemented in this area (Aydın, 2020).

- Boztepe District: Starting approximately 210 meters from the northern coastline of Trabzon, it is bounded by the Kuzgun Stream to the west and the Değirmendere Valleys to the east. This hill rises just behind the city center and the port. Due to its central location, it is the most important and strategic point of the city (Emir, 2016). It is in the historical Silk Highway route (Özsait, 1998). Boztepe also lies on the ancient highway routes coming from Gümüşhane and Bayburt, reaching Trabzon (Çiğdem, 2007). It is known that Boztepe, which dates to ancient times, was a place where "pagans who worship the sun" gathered at that time and was accepted as a sacred place (Üstün Demirkaya & Kırcı, 2020). With the construction of the first highway after the Russian occupation between 1916 and1918, settlement started in the region (Tarakçıoğlu, 1986). With the zoning plan implemented in 1989, the region was designated as a new development area. Boztepe has become one of the most densely populated settlements in Trabzon today (Yılmaz Aslantürk, 2019).

- Historical Castle District (Upper Castle, Middle Castle, Lower Castle): The Historical Castle District, starting from the sea coast and extending to the back hills of the city, was built on the ruins of the Byzantine Period. The Castle Area has hosted various civilizations, including the Byzantine and Roman periods (Üstün Demirkaya & Kırcı, 2020). The historical castle area, which is in the highest part of the city, started to form with the construction of the first castle in 2000 BC. It consists of three sections: Upper Castle, Middle Castle, and Lower Castle. The Upper Castle served as the city's acropolis as the southernmost part of the castle. Lower Castle stretches from the western side of Zağanos Tower to the sea. Middle Castle is an extension of Upper and the Inner Castles (Pural, 1995; Sürmen, 2015).

- Tabakhane Valley: It was named after the Tabakhane Bridge built in the Roman period. The valley, situated quite close to the city center, is also very close to residential and commercial areas. In the 1938 Lambert plan, it is known that the valley was initially designated as one of

the north-south air corridors. However, the concentration of slums in this area has caused the closure of the planned air corridor over time. In 2010, the Trabzon Metropolitan Municipality initiated the Tabakhane Valley Recreation Area Transformation Project, and demolition works began in 2014 and are still ongoing.

- Zagnos Valley: It was named after the Zagnos Bridge on it. The valley has been used as a settlement area for many years. It hosts various historical buildings (Güneroğlu & Pulatkan, 2021). Like the Tabakhane Valley, it was planned as one of the north-south air corridors in the Lambert plan in 1938. However, due to unplanned construction in the valley, the Trabzon Metropolitan Municipality initiated the Zagnos Valley Recreation Area Transformation Project in 2005. The project was completed in 2017 (Demiral, 2017).
- Atatürk Area (Square Park): It is bordered by İskele Street to the north, Atatürk Street to the south and west, and Square Mosque Street to the east. The area is surrounded by numerous commercial buildings and significant historical buildings such as the Old Municipality Building and İskender Pasha Mosque, etc. In the past, the historical city center, in the city walls, developed towards the east over time, and today Atatürk Area and its surroundings have become the city center. The square, which was used as a resting area for caravans in the 1900s, became the center of many events such as cinema, theater, concerts, lantern regiment and festive ceremonies after the 1920s. The Atatürk Area is still heavily used by the city residents for social, cultural, and political purposes today (Sancar & Acar, 2016). While the surrounding of the Atatürk Area was once an area where there were taxis, minibuses and bus stops, the area was partially pedestrianized by the Municipality of Trabzon in 2011 with the Square Park Transformation Project (Bayramoğlu & Yurdakul, 2019).
- Atapark: It is surrounded by İnönü Street in the north, 1st Tangent Highway (Yavuz Selim Boulevard) in the south, Şenol Güneş Street in the east, and Soğukçeşme Street in the west. Around the Atapark, there are buildings with different functions such as residential buildings, educational institutions, a theater building, the municipality building, and a shopping mall. Furthermore, within the Atapark, there is a public library, a children's playground, and player building. Until the late 1930s, Atapark functioned as a part of the Hatuniye Complex. However, in 1937, it was transformed into a park area (Yılmaz Yıldırım & Bayram, 2023). During the 1940s, the park was heavily utilized by the employees of the nearby Tobacco Factory as a recreational space. In the 1950s, the area became the gathering and dispersal point of people with the construction of a bus stop opposite Zağanos Tower (Tuluk & Düzenli, 2010, Doğan, 2016). Today, Atapark still serves as a significant open public space of city.
- Fatih Park: In the 1926 and 1938 city maps, Fatih (Aşıklar) Park was indicated as a cemetery area. In the 1926 survey, the section of the cemetery area bordered by Erzurum Avenue to the east and Taksim Street to the west was transformed into Fatih Park. Today, the park is in an area with heavy vehicle use and opposite the dense minibus stops under the Tangent Highway viaduct. It is an important public area of the city center as a park surrounded by trees with tea gardens, sculptures, cascaded pool, and seating equipment(Figure 1).

Figure 1. Effective highways, districts, focal points/nodes in Trabzon urban identity (Prepared by the Authors on Yandex Maps, Bölükbaşı, 2016)

2. Material and Method

Although the exact foundation date of Trabzon is unknown, it is known that it has a history dating back to 2000 BC. During the historical process, Trabzon, which has hosted many civilizations such as Miletus, Persians, Romans, Byzantines, Commenos, Genoese, Ottomans, Russians, and Turks, has had commercial importance as an important port city. The first borders of the city are the Inner Castle that provides high protection between today's Tabakhane and Zağnos Valleys (Aksoy, 2009). In the 13th century, the city center, protected by castle walls, began to expand west. Trabzon, which came under Ottoman domination in 1461, experienced significant changes in terms of commercial and structural aspects during this period. The spatial patterns of Ottoman cities began to be implemented in Trabzon as well. Commercial buildings such as bazaars, inn, and religious buildings such as mosques, cemeteries, and tombs were built in Trabzon (Özkan, Dedeoğlu & Akyol, 2017). During this period, with the opening of İnönü Street, the city started to develop towards the southwest (Çiçek, 2001) (Figure 2).

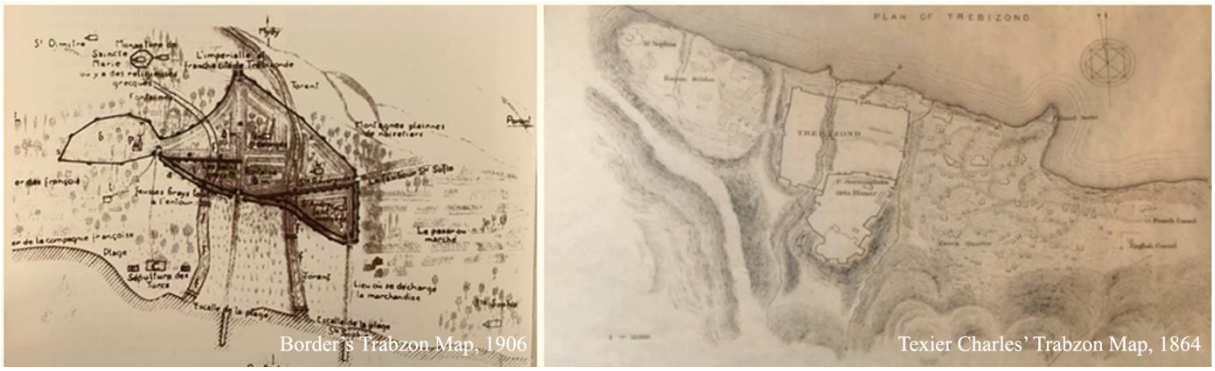

Figure 2. 1609 bordier Trabzon map (Bostan, 1997), 1864 Texier Charles Trabzon map (Texier, 2024)

The first initiatives regarding the mapping and cadaster of Trabzon emerged in 1909. However, these efforts were not realized. In 1924, a map of Trabzon was made during the Russian occupation (Başkaya, 2019). After the proclamation of the Republic, urban plans were made throughout Turkey within the scope of modernization efforts. Similar efforts were made for Trabzon, and in 1926, the municipality prepared a city map.

In 1930, the construction continued regardless of the city map (Başkaya, 2019). However, after the Municipal Law of 1930 and the Municipal Buildings and Roads Law of 1933 were enacted, it became mandatory for every city to have a map and a zoning plan.

In terms of urban planning, the "Trabzon's Artistic Works" report, prepared in 1937 by Sedat Çetintaş, a member of the Monuments Protection Society, marked a significant turning point, and a list of artifacts with historical and monumental value in Trabzon was created and their degree of protection was determined (Düzenli, 2010a; Düzenli, 2010b). Additionally, in 1937, the Lambert Plan, which aimed to preserve Trabzon's uniqueness and its connection to the sea, was put into effect. The Lambert Plan aimed to open parallel roads to existing ones to support the east-west development of the city and establish valleys as green corridors connecting settlements to the sea (Şen, 2000; Aysu, 1977; Gür, 2009). The plan also proposed the creation of a new city center (Atatürk Square) and connecting all roads to this center, making the Kahramanmaraş Street the city's main artery, organizing new roads to serve neighborhoods located to the south, establishing a new residential area in the west, creating cultural centers, preserving archaeological sites, and designing open spaces, parks, viewpoints, and terraces to allow the public to relate to the sea along the valleys (Aysu, 1981). Additionally, the plan suggested the establishment of a new harbor in Güzelhisar and the creation of an industrial zone that would be connected to Erzurum via the new port (Gerçek, 1987). However, the rapid urbanization and the focus on individual preservation of historical areas, instead of comprehensive protection, necessitated a revision of the Lambert Plan. The revised plan could not be finalized until 1941, and in 1951, it was decided to abolish the Lambert Plan (Zorlu et al., 2010) (Figure 3).

Figure 3. 1938 Lambert revised Trabzon plan (Aysu, 1981), 1967 Trabzon provincial analytical study (İller Bank, 1968)

In 1967-1968, a city planning competition for Trabzon was organized by the State Planning Organization (İller Bank), and a new zoning plan was created to be implemented in 1970 (Gür, 2009, Özen Turan, 2009). This plan was prepared in the collaboration with İrfan Bayhan, Hüseyin Kaptan, and Emre Aysu. In this plan, it was aimed to organize the "Tangent Highway" as the main artery, which would share the traffic load of the city, create a new development area in the south of the city, and pass without touching the ancient city (Şen, 2000, Aysu, 1977, Karadayı, 2000) (Figure 4).

Figure 4. 1970 Trabzon approved zoning plan (Aydemir, 1989)

Following the 1970 zoning plan, revision zoning plans were prepared in 1975, 1977, and 1984. The implementation process of the Tangent Highway project proposed in the 1970 zoning plan was suspended for various reasons (Sağlam, 1995).

In 1984, due to a court decision, the Tangent Highway project was revived, and construction began. However, unlike previous plans that aimed to pass the Tangent Highway without interfering with the ancient city, the highway in its current state intersects with the historical urban texture, with eight legs spanning over it, measuring 37.5 meters in width and 500 meters in length. Additionally, during the construction of the highway, the city walls and many historical buildings were demolished (Zorlu et al., 2010).

The Black Sea Coastal Highway, which started to be built in 1997 and completed in 2007, was implemented in an unplanned way and quickly to meet the transportation needs of the city. The Black Sea Coastal Highway was implemented by filling the sea along the narrow coastline with the idea that it was an economical and fast solution (Üçüncü, 2014). Especially the coastal districts of Trabzon such as Ganita, Kemerkaya, Rubble, Sotha, Faroz, Uzunkum beaches have undergone a significant transformation with the construction of the coastal highway (Uzunali & Acar, 2020). In subsequent years, due to the increased traffic density, there were discussions about expanding the existing coastal highway, and new landfill areas were created for this purpose.

In 1989, the existing plans were found to be inadequate, leading to the need for a revision of the zoning plan and the creation of additional zoning plans. Bülent Berksan prepared this zoning plan, in which the existing Tangent Highway was preserved as part of the transportation network, and a second Tangent Highway was proposed to establish a connection between the old city center, the port, and the new center. However, this proposal was not fully realized (Şen, 2000) (Figure 5).

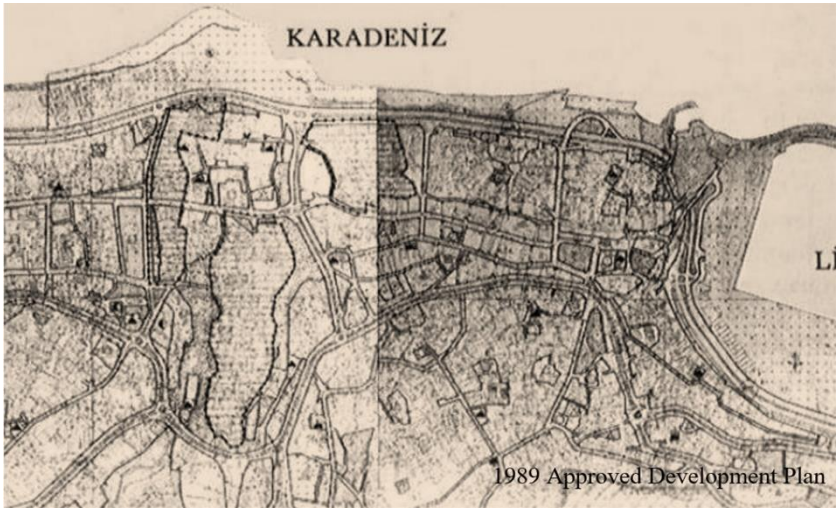

Figure 5. 1989 Trabzon approved zoning plan (Yeşiltepe, 2008)

In 2002, the zoning plan prepared by Rahmi Bıyık aimed to form the identity of the city center of Trabzon. Within the framework of this plan, it was aimed to plan the valley areas as natural recreation areas open to the public as a result of the natural structure of the city. For this purpose, Zagnos Valley Urban Transformation Project was implemented in 2005 and Tabakhane Valley Urban Transformation Project was implemented in 2007 (Akkaya, 2018). Furthermore, to revitalize the coastal area of the city and regulate the development along the coastline, a coastal plan for recreational purposes was developed as part of the New Coastal Highway Project. This plan involved decreasing building density as one moves southward from the coastal area. To facilitate the city's development to the south, the South Bypass Highway Project (Kanuni Boulevard) was integrated into this plan (Gür, 2016). In 2011, the Southern Ring Highway Project (Kanuni Boulevard), which is in question in the zoning plan, started to be built after the changes made in the proposed route and section (Beyazlı & Özlü, 2020). Today, while a significant portion has been completed, construction is still ongoing (Table 1), (Figure 6).

Figure 6. 2002 Trabzon revision zoning plan (Yeşiltepe, 2008)

Table 1. Decisions taken in the urban planning process of Trabzon

Decisions Taken in the Urban Planning Process of Trabzon	
Year	**Decisions**
1924-1926-1930	City Map Construction Tender-Completion-Shelving
1930-1933	Municipal Law-Municipal Building-Roads Law
1937	Sedat Çetintaş Detection and Reporting of Trabzon Artworks
1938	Lambert Plan: First Planning Experience
1975-1977-1984	Revised Zoning Plan
1987-1997-2007	Black Sea Coastal Highway Tender- Starting Construction Without Planning - Completion of the Construction of the Black Sea Coastal Highway
	Expanding the Coastal Highway, Increasing the Coastal Filling Areas
1989	Revision of the Zoning Plan by Bülent Berksan (Proposal for the 2nd Tangent Highway by Protecting the Tangent Highway)
2002	Zoning Plan Prepared by Rahmi Bıyık (Arrangement of Valley Areas and Coastal Plan for Recreational Purposes, Addition of Southern Ring Highway (Kanuni Boulevard)
2005	Zagnos Valley Urban Transformation Project
2007	Tabakhane Valley Urban Transformation Project
2011-2023	2nd Tangent Highway (Kanuni Boulevard) Construction

The study reveals the historical layering of the city from the past to the present through the city's planning decisions and practices. Roads that have contributed to changes in the city have been identified, and their effects on the city's identity. The city's identity indicators as texture, silhouette, and qualified areas have been discussed. These have been analyzed by visual analysis techniques. The visual analysis technique is to make the synthesis formed as a result of the analysis of the data visible and understandable (Aydınlı, 1986). The analysis of both historical and contemporary photographs in the study reveals the visual analysis technique in terms of making the photograph more understandable in the context of roads and spaces.

3. Findings and Discussion:

Spatial Fragmentations (Weakening and/or Severed Relationships)

The city of Trabzon has undergone significant changes due to both planned and unplanned highway constructions. It is possible to see these changes in the physical structure of the city as well as in the life of the city dweller. It is particularly observed that these changes have created spatial weaknesses, disconnections, and even demolitions in the identity-rich areas of the city. This transformation is discussed through the urban relationships, including the sea-city relationship, green-city relationship,

node-city relationship, district-city relationship, building-city relationship, and city- city dweller relationship.

- The Sea-City Relationship: The Black Sea Coastal Highway is one of the significant axes in Trabzon, and its construction has brought about various changes in the city's morphology. The city's transportation problem has been solved with the Black Sea Coastal Highway, but the construction of this highway has had a negative impact on the coastal character of the city. With the first phase of the Black Sea Coastal Highway, coastal areas like Moloz and Kemerkaya moved away from the sea, and with the second phase, they were entirely disconnected from the sea (Figure 7).

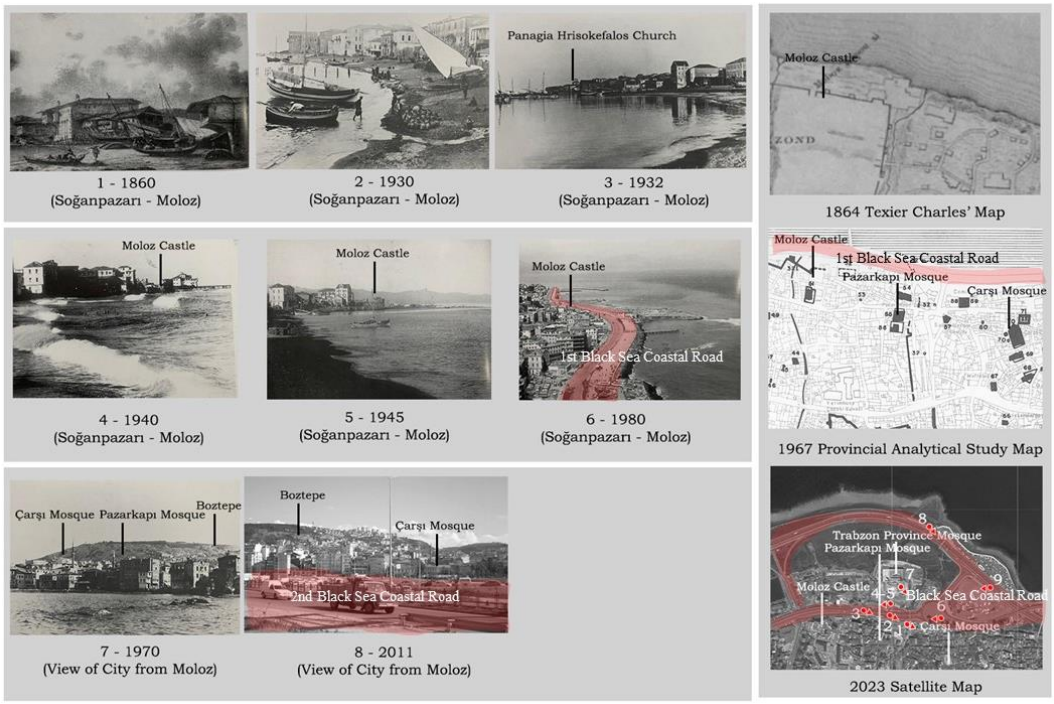

Figure 7. Moloz spatial change analysis (Bölükbaşı, 2006; Texier, 2024 ; İller Bank, 1968; GoogleMaps, 2023)

Although Ganita and Güzelhisar were not completely disconnected from the sea like other coastal areas, they have lost their original characters due to the landfill operations carried out during the construction of the Black Sea Coastal Highway. This transformation has also occurred in other coastal areas of the city, such as Çömlekçi and Ganita. The essential character of the city's quality areas, defined by their relationship with the sea, has been disrupted (Figure 8).

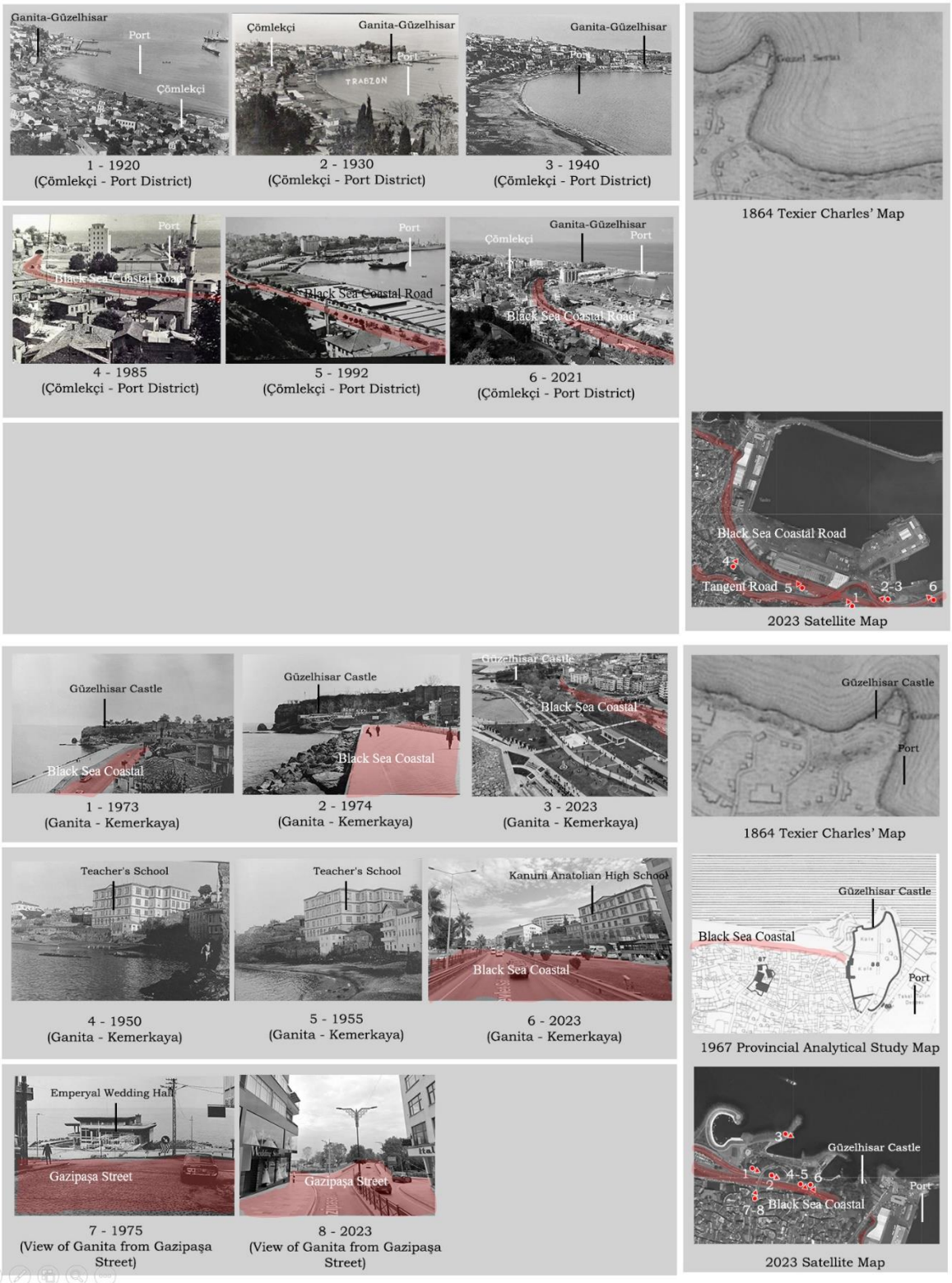

Figure 8. Çömlekçi – Port (Bölükbaşı, 2006; Texier, 2024 ; İller Bank, 1968; GoogleMaps, 2023) and Ganita – Kemerkaya (Bölükbaşı, 2006; Trabzon Büyükşehir Belediyesi, 2023; Texier, 2024 ; İller Bank, 1968; GoogleMaps, 2023) spatial change analysis

- Green-City Relationship: The significant green areas of the city, Atatürk Area and Atapark, have been isolated from the city and turned inward due to the construction of the Tangent Highway. Especially Atapark has surrounded roads and lost its active use by foot in some aspect. Although Zagnos and Tabakhane Valleys were planned as green corridors in the Lambert Plan, they have gradually been urbanized over time. The valley has been saved from the appearance of informal settlements through various regulations; however, today, the massive pillars of the

Tangent Highway pass through this area. As a result, there have been spatial fragmentations in the valley, and aesthetically, the valley has been disrupted. Boztepe, which had the characteristic of being a natural viewing terrace in the city, began to lose its green area quality as it became densely built-up, especially with the expansion of the highway network in the city. Subsequently, with the ongoing construction of the 2nd Tangent Highway (Kanuni Boulevard), there has been significant damage to the slopes covered with trees, where certain trees needed to be preserved, resulting in the loss of the green area appearance (Figure 9).

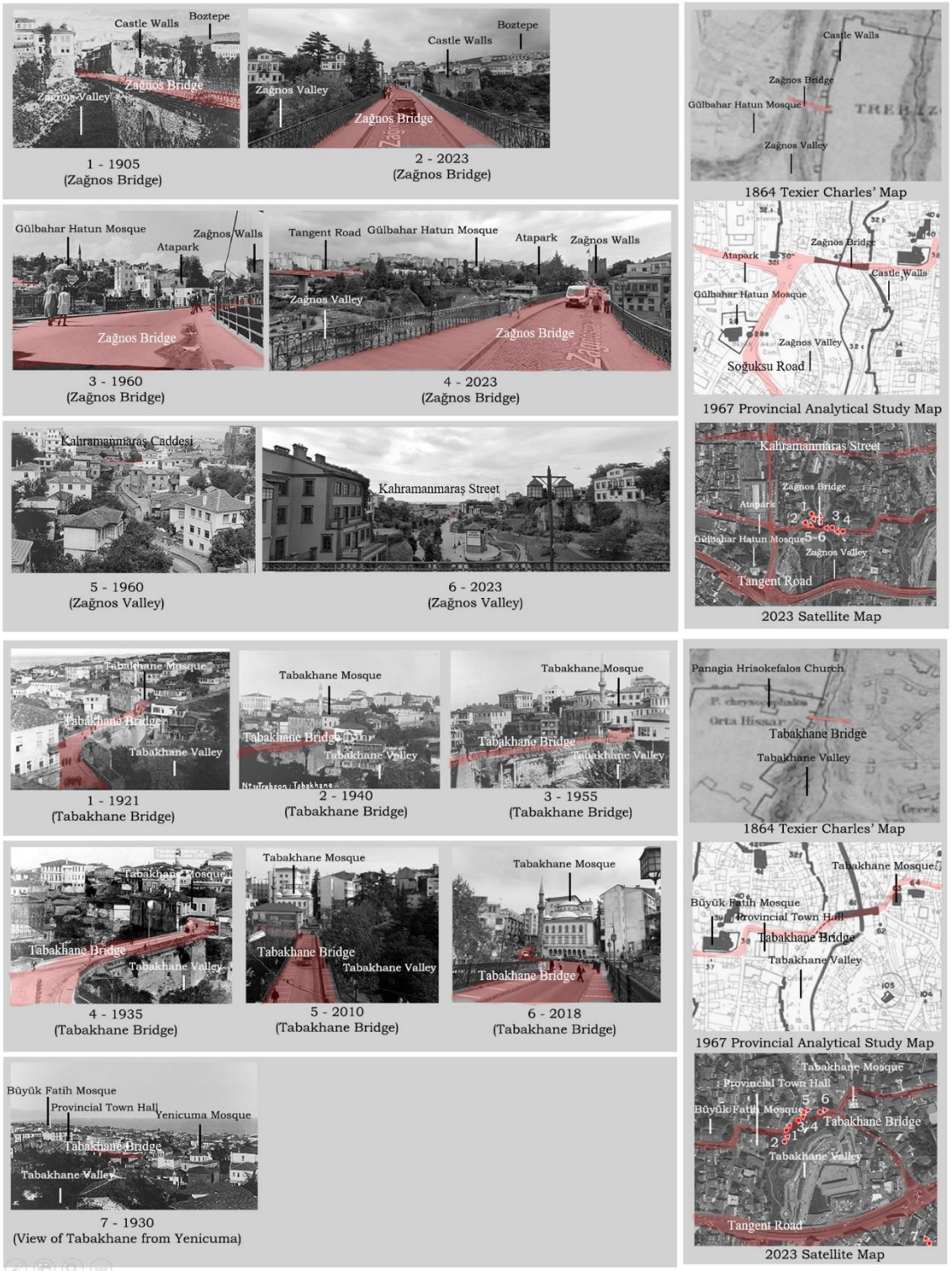

Figure 9. Zagnos valley (Bölükbaşı, 2006; Texier, 2024 ; İller Bank, 1968; GoogleMaps, 2023) and Tabakhane valley (Bölükbaşı, 2006; Bayram, 2018a; Texier, 2024 ; İller Bank, 1968; GoogleMaps, 2023) spatial change analysis

- Node-City Relationship: Atatürk Area, which has witnessed many important events in the city's history as the center of social life, has lost its connection with the southern part of the city due to the construction of the Tangent Highway. The holistic green texture and public space integrity that establishes the relationship between Fatih Park and Atatürk Area (Meydan Park), both significant public spaces in the city, have been eliminated. This has resulted in a decrease in the usage density of Fatih Park (Figure 10).

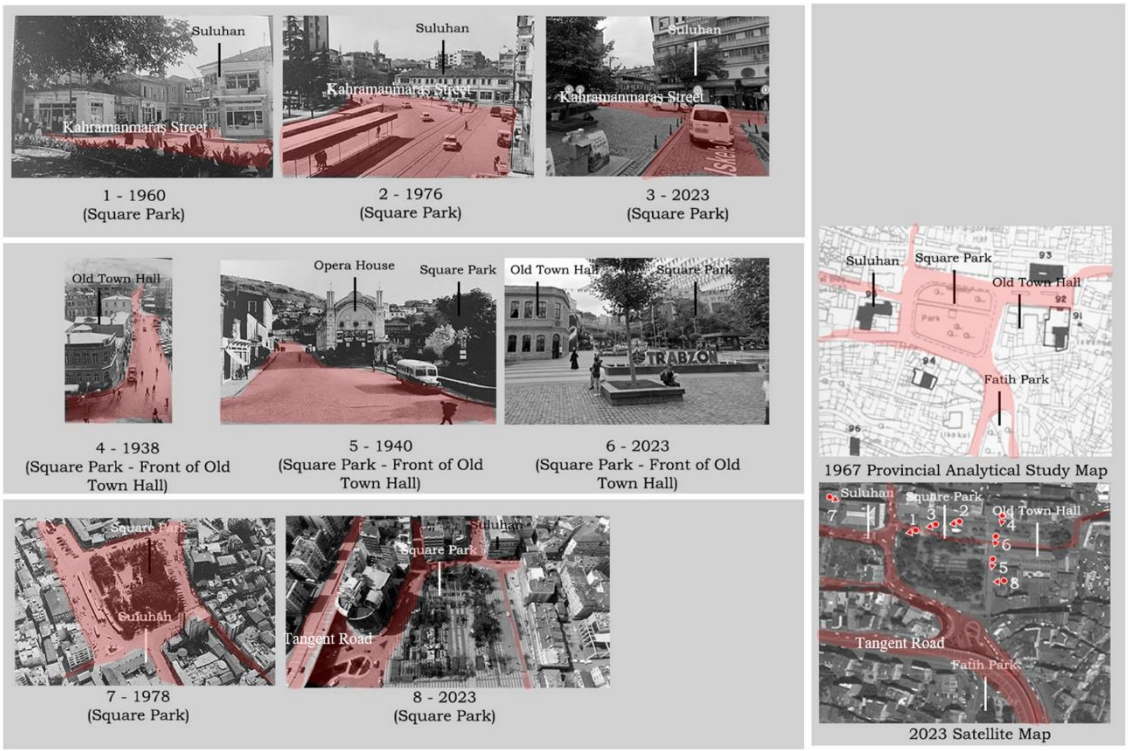

Figure 10. Atatürk area (Meydan Park) spatial change analysis (Bölükbaşı, 2006; İller Bank, 1968; GoogleMaps, 2023)

- District-City Relationship: The topography of the city, with hills rising from the seaside, has played a significant role in forming the urban morphology. However, with the construction of the roads, the city's topographical structure has become less legible both in city texture and city silhouette.

  These highway decisions that do not align with the topography also lead to spatial fragmentation. The permeability between regions has been interrupted by rigid highway boundaries. With the construction of the Tangent Highway, the Çömlekçi District has remained at a lower elevation under the highway. This situation has weakened the connection of the region with the southern areas of the city. A similar situation has occurred with the construction of the 2nd Tangent Highway (Kanuni Boulevard). In terms of vehicle connection, there are many intersections that provide north and south connection before the construction in the regions where the highway route passes, while only three huge intersections were built on the route with the construction of the 2nd Tangent Highway (Kanuni Boulevard). The decrease in the number of intersections weakened the connections of the sub-regions with each other. While there were many intersections that provided both north and south connections in the areas where the highway route passed, with the construction of the 2nd Tangent Highway (Kanuni Boulevard), only three massive intersections were built along the route. In terms of pedestrian connection, the upper level of the pedestrian from the lower level can only be reached by a step ranked one after the other such as stairs, pedestrian crossings, and overpasses. Although this situation is difficult in terms of pedestrian access, the highway constitutes an important threshold. In addition to vehicle access, stairs and overpasses have been built for pedestrians. In this case, it restricts the access of the districts

in the north and south of the highway to each other and negatively affects the relationship of the districts with the city (Figure 11).

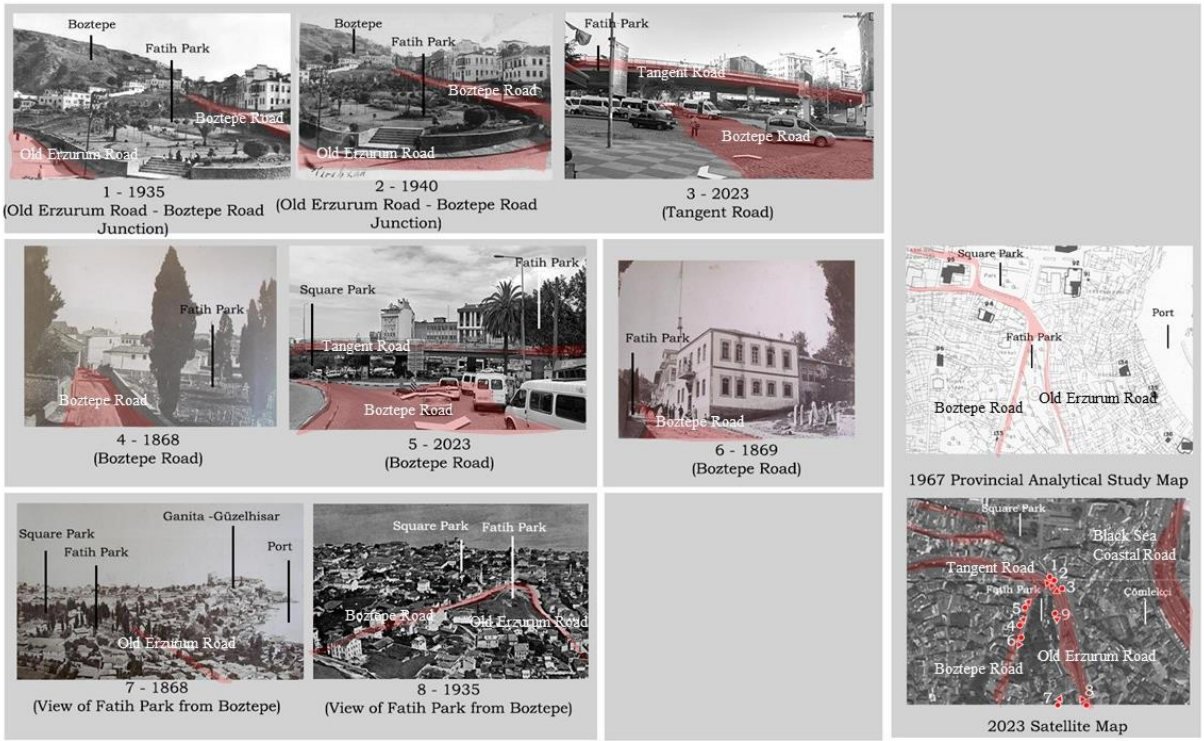

Figure 11. Fatih Park spatial change analysis (Bölükbaşı, 2006 ; İller Bank, 1968; GoogleMaps, 2023)

- Building-City Relationship: The construction of the Tangent Highway and the Black Sea Coastal Highway has also affected many historical buildings. Among these buildings, there are unique and significant building groups in terms of form, size, location, meaning, and symbolism. Among these buildings, Gülbahar Hatun Mosque, being located between the roads, has weakened its connection with the city center, especially to the east (Figure 12).

Figure 12. The weakening of the building-city relationship of Gülbahar Hatun Mosque (Bölükbaşı, 2006; Bayram, 2022)

Furthermore, historical buildings like Hamza Pasha Mosque and Musa Pasha Mosque were positioned below the highway level with the construction of the Tangent Highway, reducing their perceptibility from the highway (Figure 13).

Figure 13. On the Left Hamza Pasha Mosque (Bayram, 2018b) and on the Right Musa Pasha Mosque (Bayram, 2018b)

Many buildings, including the ongoing construction of Trabzon City Mosque in the Moloz region, which were built on the landfill areas created during the construction of the Black Sea Coastal Highway, have significantly altered the city's silhouette. Along with the city's topography, many religious structures like Çarşı Mosque and Müftü Mosque, which used to rise with their minarets, are no longer perceptible/legible in the city's silhouette.

Particularly, the Tangent Highway has cut through the historic city center, which is a conservation area, along with the Tabakhane and Zagnos Valleys. Historical buildings that coincided with the areas where the viaduct pillars in the valleys sit have been demolished. In addition, the historical buildings in the adjacent order on the Old Erzurum Highway route in the eastern part of the Tangent Highway were destroyed with the new highway, and only three of these buildings were left in the middle of the highway and tried to be protected. With the construction of the Tangent Highway, one of the city's oldest educational buildings, Gülbahar Hatun Primary School, was also demolished. With the filling works carried out during the construction of the Black Sea Coastal Highway, the last remains of the second oldest ancient port in the Moloz District were also destroyed (Üçüncü, 2014; Gerçek, 1987). The construction of the roads not only damaged the historical building-city relationship, but also weakened the relationship between the new constructions and the city. With the construction of the 2nd Tangent Highway (Kanuni Boulevard), elevation differences, high walls and viaducts have overshadowed the existing buildings (Figure 14).

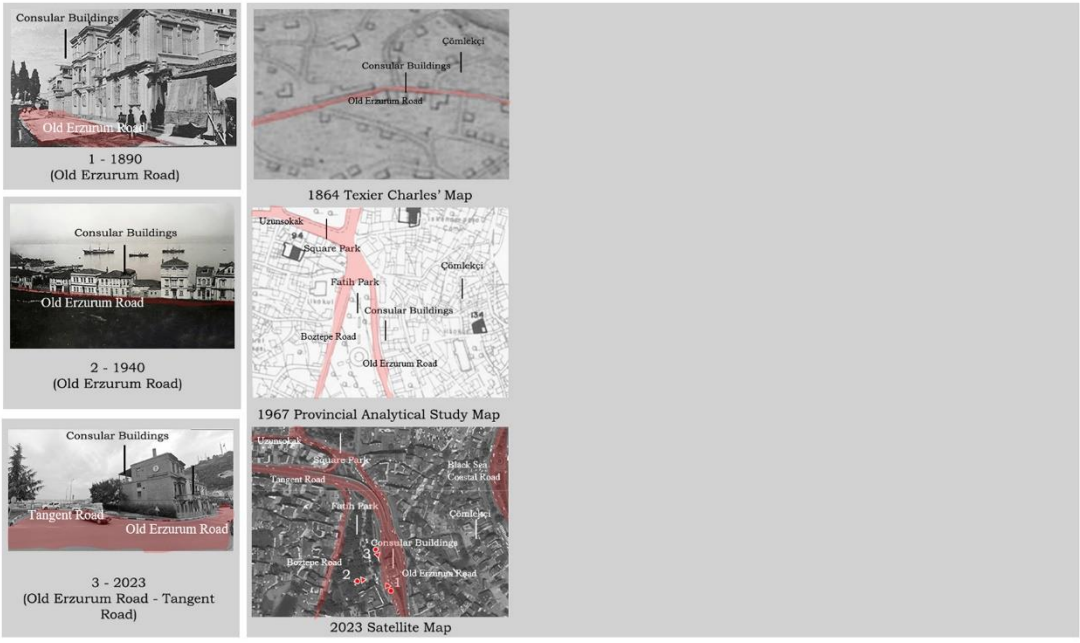

Figure 14. Erzurum highway (Bölükbaşı, 2006; Texier, 2024 ; İller Bank, 1968; GoogleMaps, 2023) and Atapark (Bölükbaşı, 2006; Tuluk, 2010; Bayram, 2020; Texier, 2024 ; İller Bank, 1968; GoogleMaps, 2023) spatial change analysis

- Sea-Dweller Relationship: The Black Sea Coastal Highway is mostly built on new filling areas. These areas are used for both transportation and recreational purposes. The use of these areas can only be made by crossing the highway. In fact, today, it is almost impossible for pedestrians to reach the sea without crossing the Black Sea Coastal Highway, which has become a significant urban threshold for pedestrians (Figure 15).

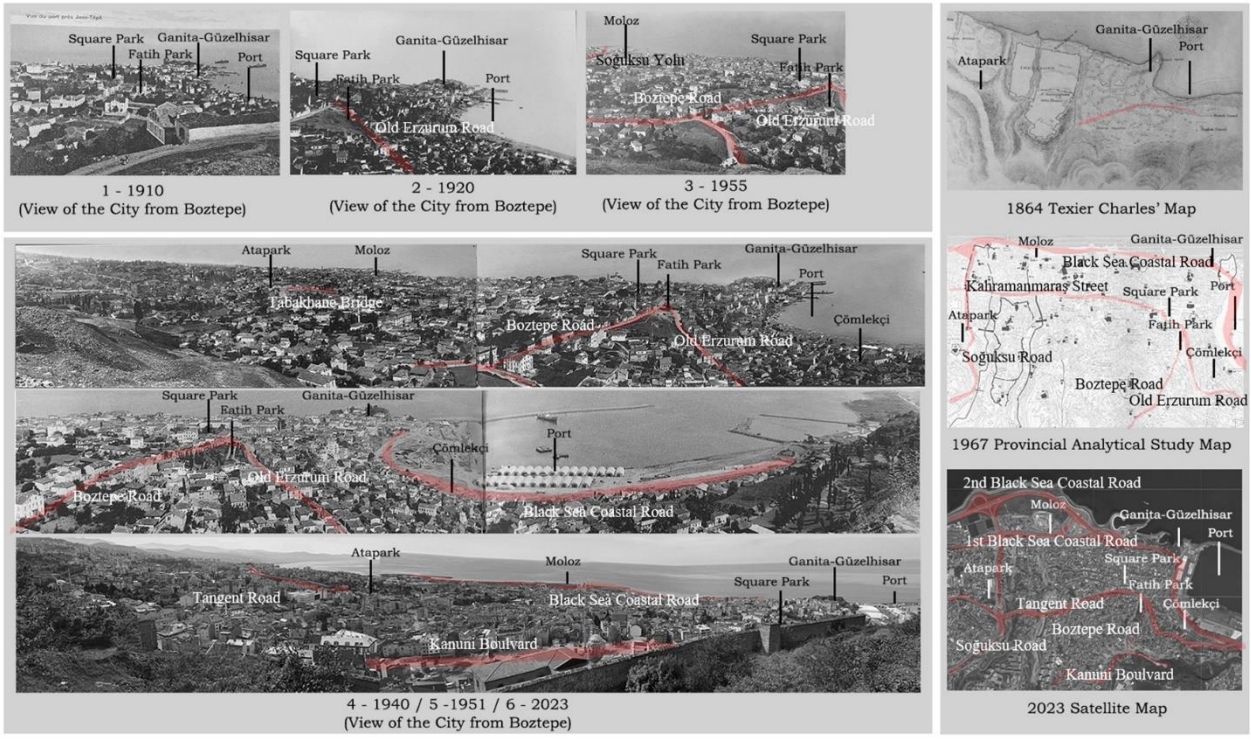

Figure 15. Trabzon spatial change analysis (Bölükbaşı, 2006; Texier, 2024 ; İller Bank, 1968; GoogleMaps, 2023)

4. Conclusion and Suggestions

Roads play a significant role in the formation of cities' physical structures and quality of life. It supports the growth of cities and the economic development of cities by enabling people and vehicles to move within and between cities. It supports the growth of cities and the economic development of urban areas by facilitating the movement of people and vehicles within and between cities. It is also an indicator of power for the government. For a design, roads not only determine the movement of vehicles and pedestrians within the city but also shape the overall flow of movement throughout the city. It also supports the social interaction of urban residents by creating important open public spaces of cities. As the main determinants of the city texture and silhouette, it is one of the important image elements of the city.

For all these reasons, roads have been an important tool of civilizations from past to present. Roads are a strong urban element that affects the physical, social, cultural structure and identity value of the city and it is an important field of study for architects, urban planners, and urban designers. However, today, new roads are planned and implemented only for the purpose of automobile-oriented transportation without considering their effects on the city identity and its citizens. In the current system, where vehicle-priority decisions are made in urban arrangements, it is tried to make area for pedestrians. In the current system, where vehicle-priority decisions are made in urban arrangements, it is tried to make room for pedestrians. Without considering the transportation alternatives provided by the topography of the cities, it is tried to give the city a form that it is not suitable for the city topography with planning decisions. As a result of these decisions, the construction of roads has led to demolitions in cities, and the relationship between the quality spaces of cities and the whole has started to weaken or be disconnected. In addition to spatial integrity, urban texture, and urban skyline that have begun to be deteriorated; green areas, historical buildings, and memory of city were also destroyed.

According to Lefebvre (2012), roads should be built in a certain order and new regulations should be able to integrate with the existing one without disturbing the space. Unfortunately, today, new transportation decisions ignore the existing system of cities. Alexander (1965) stated that the combination of city parts could not form the city because the connection of the parts with each other could not be established. Especially the inability to connect new roads to the existing system, in addition to fragmenting the city, has disrupted the relationship between spaces. Habraken (2000) emphasize that designers are not aware of the qualities that constitute the essence and content of the urban built environment. All these also reveal the reasons for the problem experienced with roads in the city of Trabzon. The main problem is not to take into consideration “relationship network/system of city” which composes the whole city or city identity.

As in many cities, in Trabzon, transportation stands out as an alternative. The port, which is one of the unique features of the city, is mainly used for maritime transportation. Unfortunately, new roads have started to become more destructive in Trabzon city. It carries the "historical coastal city" image of Trabzon, green rising slopes, and steep slopes even in its name, but these unique features of Trabzon City are rapidly disappeared. Both the construction of the Black Sea Coastal Highway with filling areas and the Tangent Highway and its connections, which pass through the historical castle, destroy important city identity-rich areas, ignore the historical texture and silhouette of the city. Viaducts have become the new image elements of the city. Unfortunately, the natural, structural, and social and cultural structure, that constitutes the identity of the city, is disappearing fast.

However, while many cities in the world are planned with the aim of making them safer and healthier with redesigned roads and living spaces, the city of Trabzon is crushed under the roads today. In the study, the destructions, divisions, and incompatibilities created by the roads in the city are clearly revealed. It was tried to emphasize the importance of the intervention to be made in terms of planning and design of the city and the importance of the urban identity and its impact on urban life. For this reason, Trabzon should give priority to creating human-oriented, natural environment and sustainable cities that are sensitive to the built environment in transportation decisions, which are an important determinant of cities and urban life in the planning processes of all cities. In addition, today, many

technological possibilities can be used in both construction and design. As a result, evaluating alternative transportation options and making arrangements that are sensitive to the natural, structural, and historical identities of the cities and that are suitable for the needs of the society will enable the cities to have a more livable, sustainable, and future-oriented structure.

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Ethics Committee approval was not required for the study.

Author Contribution and Conflict of Interest Declaration Information

All authors contributed equally to the article. There is no conflict of interest.

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