Determination of Zoning Diameter With Length Vector Additional Technique In Religious Facility Zoning Islands

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Abstract

Zoning plans are the design work required for the correct use of space in terms of urbanization. While creating the zoning plans, together with various city and regional planning methods, zoning islands are created at the geometric area level. Zoning islands are also named as having legends such as housing, subject + commercial, commercial, social areas, religious facility areas called places of worship, green areas. The important part is the process of granting the construction permit to the parcels that will coincide within these islands. This process is the zoning diameter. Zoning diameters are the drawings made on the ground according to different methods. In our study of how to give the zoning diameter to religious facilities, it was aimed to add the lengths of the parcels, which we call length vector addition, to each other and to provide appropriate distances into them in a perpendicular or parallel manner. It was examined how the zoning island would be given a diameter in terms of length according to the precedent and the amount of height processed in the plan. The Lenght vector addition method is an effective method for the creation of the closed equilibrium surface, which is formed by adding the start and end points, especially in the process of creating closed areas in geometry. It is a method used especially in the construction of technical works such as maps, construction and architecture. From this point of view, it was used as a way to be followed for convenience in determining the zoning diameter of the parcels on the land defined as geometry. Thus, it was examined with examples how to give a diameter in religious establishment zoning islands with this method.

Keywords: Religious Facility Reconstruction Island, Length Method, Zoning Diameter.

Dini Tesis İmar Adalarında Length Vektör Ekleme Tekniğiyle İmar Çapı Belirlenmesi

Öz

İmar planları şehirleşme açısından doğru bir alan kullanımı için gerekli olan tasarlama işidir. İmar planları meydana getirilirken çeşitli şehir ve bölge planlama yöntemleri ile birlikte, geometrik alan düzeyde imar adaları oluşturulur. İmar adaları da konut, konu + ticari, ticari, sosyal alanlar, ibadethane denilen dini tesis alanları, yeşil alan gibi lejantlara sahip şekilde adlandırılır. Önemli olan kısım oluşturulan bu adaların içerisinde denk gelecek parsellere inşaat izninin nasıl verilmesi işlemidir. Bu işlem imar çapıdır. İmar çapları da farklı yöntemlere göre çekmelerin zeminde yapılmasıdır. Dini tesislere nasıl imar çapı verileceği çalışmamızda ise, length vektör ekleme adını verdiğimiz, parsellerin uzunluklarının birbirleri ile eklenerek dik ya da paralel şekilde içerisine doğru uygun mesafelerinin sağlanması amaçlandı. İmar adasının planda işlenmiş emsal ve yükseklik miktarına göre uzunluk bakımından nasıl çap verileceği incelendi. Lenght vektör ekleme yöntemi özellikle geometri de kapalı alanların oluşturulması işleminde başlangıç ve bitiş noktalarının eklenmesi suretiyle meydana getirilen kapalı denge yüzeyinin oluşturulmasında etkili bir metottur. Özellikle harita, inşaat ve mimari gibi teknik işlerin yapımında başvurulan bir yöntemdir. Buradan hareketle geometri şeklinde tanımlanan arazi üzerindeki parsellerin imar çapı çıkarılmasında kolaylık açısından izlenen bir yol olarak kullanıldı. Böylelikle bu yöntemle nasıl dini tesis imar adalarında çap verileceği örneklerle irdelendi.

Anahtar Kelimeler: Dini Tesis İmar Adası, Length Metodu, İmar Çapı.

1. Introduction

Development Act, which is directly related to fundamental rights and freedoms, brings regulations in areas that are closely related to the society such as the right to property, the right to life and the freedom of settlement. If we look at it from a broad perspective, development act, restricts some fundamental rights and freedoms, but in practice, its scope includes issues that require more expertise. As can be understood from the definition, all public and private public works activities are included in the areas regulated by the development act [3]. When we look at the legislation within the scope of the zoning law, we encounter a wide variety of laws. The first of these is the Zoning Law No. 3194. In article 2 of the Zoning Law, the scope of the law is mentioned and it is stated that all buildings to be built within or outside the borders of the municipality and the adjacent area are subject to this law. The Municipal Law No. 5393 covers the municipalities according to article 1 and article 2, but also regulates their working procedures and principles, duties and authorities. Likewise, the Greater Municipality Act No. 5216 covers municipalities of the metropoleis and aims to provide planned and efficient services by regulating the legal status of metropolitan municipalities. Soil Conservation and Land Use Law No. 5403 article 2, covers the issues of arranging the land and soil resources in accordance with scientific principles and determining the measures for the protection of the land [8]. Although the main purpose of planning is livable cities and therefore public interest, the regulations to be made create some obligations and obligations not only for the institutions authorized to make this regulation, but also for the individuals [9]. Planning, as a concept, is a way of thinking that is thought ahead from a certain moment; It is the sum of the studies aimed at examining the possibilities, possibilities, comparison activities, and establishing regular relations between individuals and their communities and their environment [6]. It is aimed to transform the master development plans into implementation plans of 1000 scale by local governments, and to implement the development and urban activities in line with the principles of honesty and compliance in compliance withs acts and regulations [10]. Rapid urbanization has brought about unplanned development. This process has revealed an urban texture where social and technical equipment areas are insufficient, transportation planning cannot be made, and industrial facilities are intertwined with living and resting areas [11].

2. Material and Method

In the material and method section, vector space, affine space, Euclidean space, Euclidean frame, Euclidean coordinate system, line and plane equations, two lines relative to each other, two planes relative to each other, lines and planes relative to each other, basic principles about line and plane. concepts are given [4].

Description 2.1. (Vector Space): Let V be a non-empty set, on which we will call the vector addition and the product of the scalar (real numbers) is defined. Symbolically, vector addition and scalar multiplication operations [4],

Let x y V be defined as x y V $\partial \in$ for $\in$ and rx $V \in$ for r R x $V \in \in$; that is, let the set V be closed for vector addition and scalar multiplication. If the following conditions are met, the set V is called a vector space on R (set of real numbers) [15]. That is, by adding end-to-end from the length vector, it can be closed, parallel, perpendicular, etc. truth will be obtained.
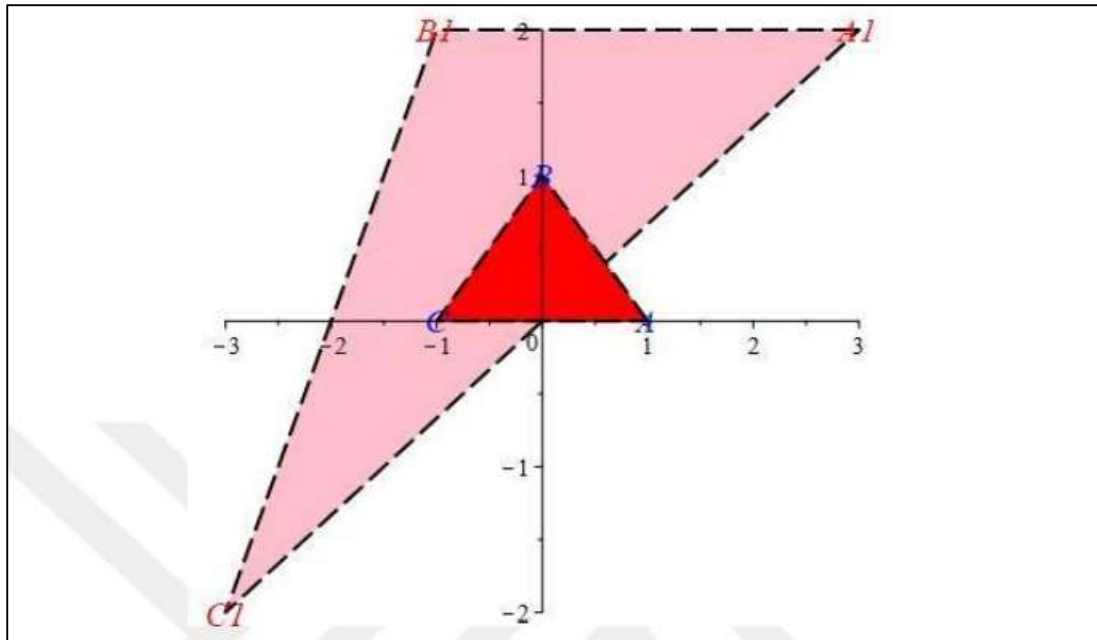

Figure 1. Area Scaling [4].

In Figure 1, when shown graphically, triangle, square, rectangle etc. The method that occurs with the formation of convex fields is the length method in the form of a length vector.
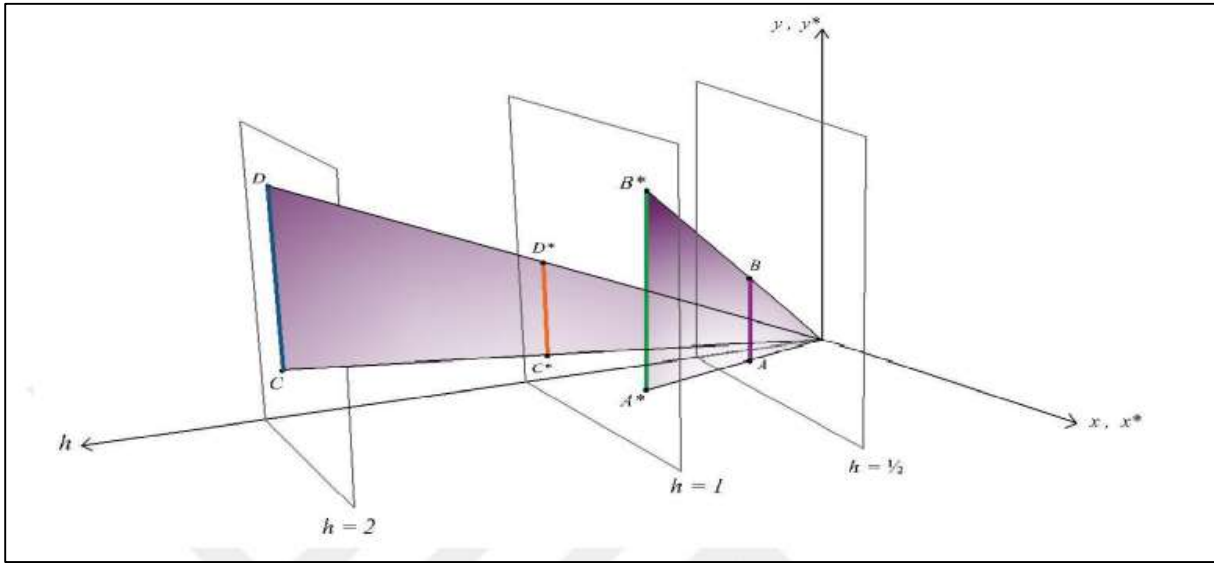
Figure 2. A geometric interpretation of general scaling [4].

Homogeneous coordinates provide a convenient and efficient technique for mapping a set of points from one coordinate system to a corresponding set in an alternative coordinate system. Frequently, an infinite range in one coordinate system is matched with a finite range in an alternative coordinate system [4]. Parallel lines may not match parallel lines unless pairings are carefully chosen. However, intersection points can be mapped to intersection points. This

characteristic is used to determine the homogeneous coordinate representation of a point at an infinite point [1;2;5]. In determining the length as a vector, if it is necessary to add in a positive or opposite direction along a certain direction, it provides a lot of practicality in bringing a closed surface into existence by adding lengths in a negative direction.

project phase is starts. It is the basic initial zoning diameter for construction in a place [13].

3.Findings

In order for citizens or public institutions to build on a land, they have to get permission from the municipalities within the boundaries of the municipality zoning and adjacent area, and from the special provincial administrations outside the boundaries of the municipality zoning and adjacent area [7;12]. If it is a cadastral parcel, the relevant immovable, that is, if the application of the 18th article and the unification of the land, its abandonment to the road or its creation from the road have not been made, the construction permit cannot be granted in its current form [7]. If the parcel is in the shape of the land within the normal development limits, and if it faces at least one road outside of the zoning limits, it is allowed for construction if it is unaccompanied or uncreated [7;12].

Regardless of the type of construction, residential, commercial, industrial, residential+trade or vineyard areas outside the zoning borders, or whatever will be done outside the zoning contiguous borders, the first step of the process is the zoning scale. Zoning diameter is the process of giving the drawing distances in accordance with the building regulation, in the national coordinate or local coordinate system, within the framework of the planned type or unplanned type areas regulation. After the zoning diameter is given to a plot, the

Zoning diameters are given in 3 main axes as separate, adjacent and in block order. If the front, depth and corner coordinates and the raw data obtained from the existing land correspond to where they correspond on the plan, the drawing distances are given according to the construction order of that plan (Taşkaya, 2019). According to the mechanical results among these, shape changes, knot and vector analyzes can be examined and compared [14]. The same structures with the same geometric shapes, different supports and geometric shapes, the same structures were compared and examined [11]. Especially in sectors with coordinate-axis work in zoning plans, length and angle should be used, and since the length is moved in the axis of the directions in the combination of the distance between the coordinates, it should be added as vector. Because it is a vector-oriented concept. Addition as a scalar is only done on a unit basis. When directional classification is included in the work, the distances are added vectorally, which is the most important difference in the use of various methods of other distances. Vectorial splicing technique is used as a method used in the field of architecture, both in the floor appliqué in the planning area, in the creation of the rooms of the floors in the

construction area, as well as in the architectural project drawing and site plan formation, and since it is effective in determining the direction from others.
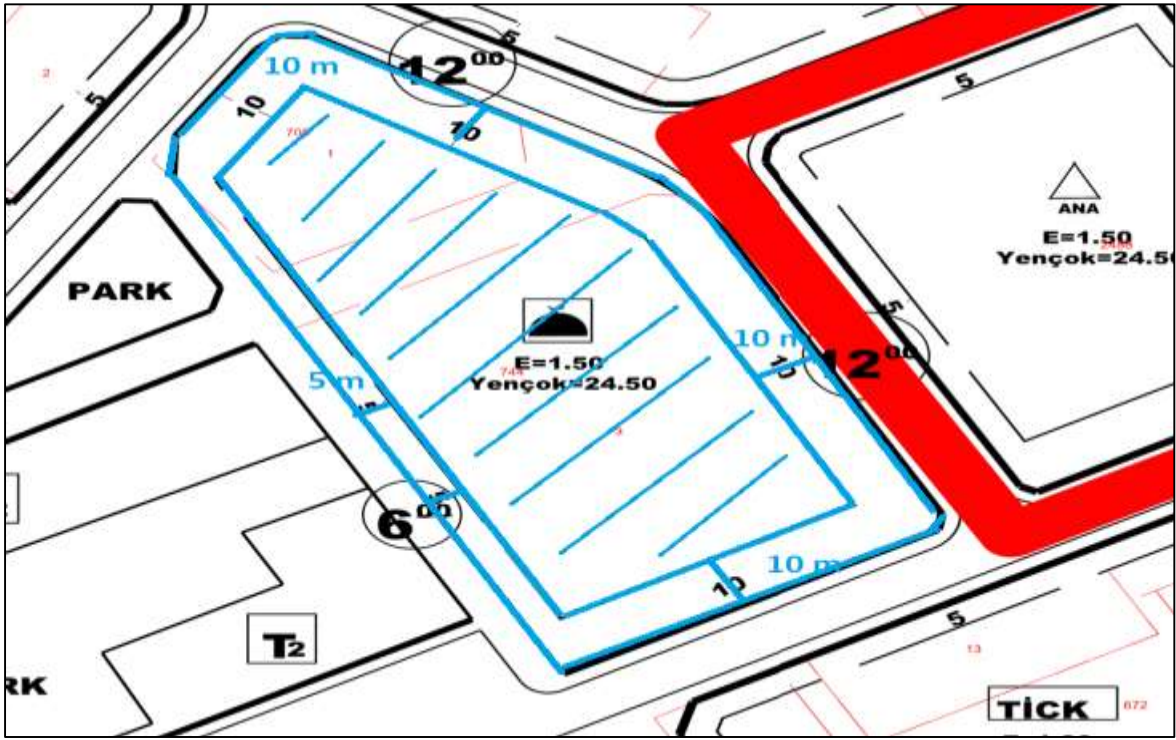

Figure 3. Zoning diameter view

In Figure 3, the relevant real estate appears to be a single parcel and a single zoning island. In the zoning plan, its precedent as the religious facility area of the relevant zoning island is 1.50, that is, it is understood that the total construction area will consist of the multiplication of the face measurement in the title deed by 1.50. The maximum height is a zoning island with permission up to 8 floors. Generally, distance approaches in religious facility areas are directly processed on the plans.

Or, it is in line with the plan notes taken by the relevant municipal council that there may be special withdrawals in these areas. It has been shown that the zoning diameter will be given with the distance drawing as 10 meters from the north and south directions, and 5 meters from the west direction, where the entrance and exit will be made, with the school located in the east.
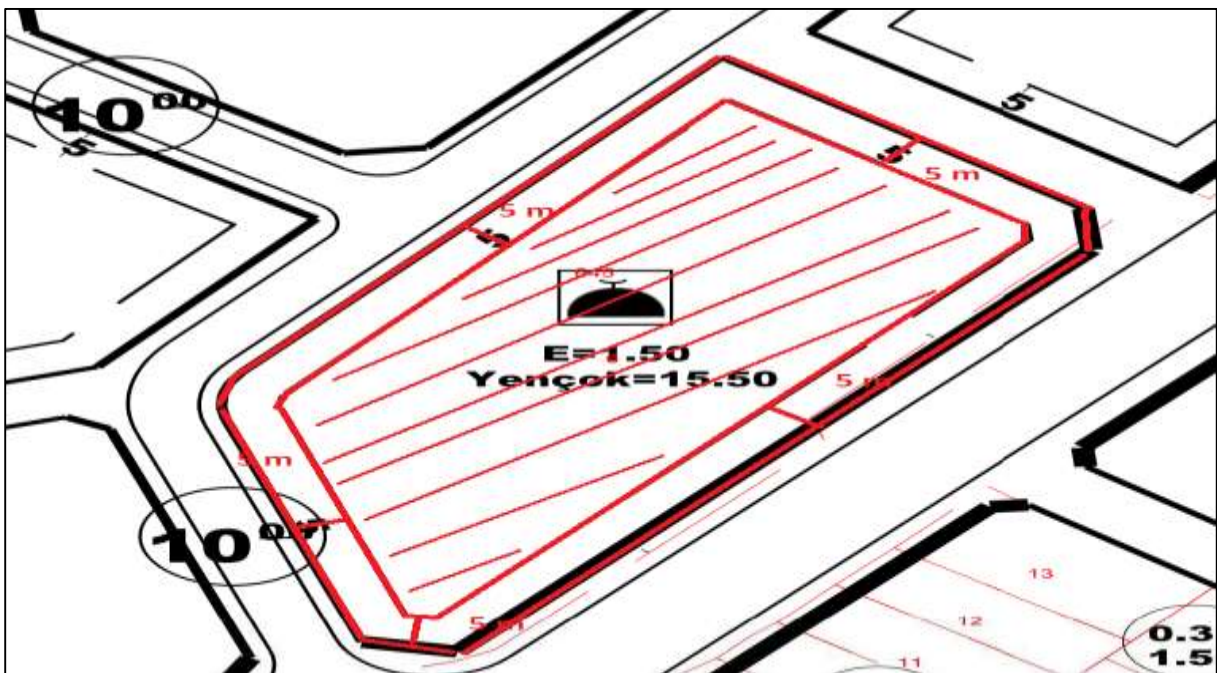
Figure 4. Zoning diameter view

In Figure 4., the zoning diameter of a religious facility area of which drawing distances are not processed on the plan is given by drawing the building setback distance 5 meters on the sides facing the road, according to the planned type zoning regulation, just like in residential zoning islands. It is understood that the average can be made by increasing the total height up to 1.50, and the maximum height up to 5 times of what?
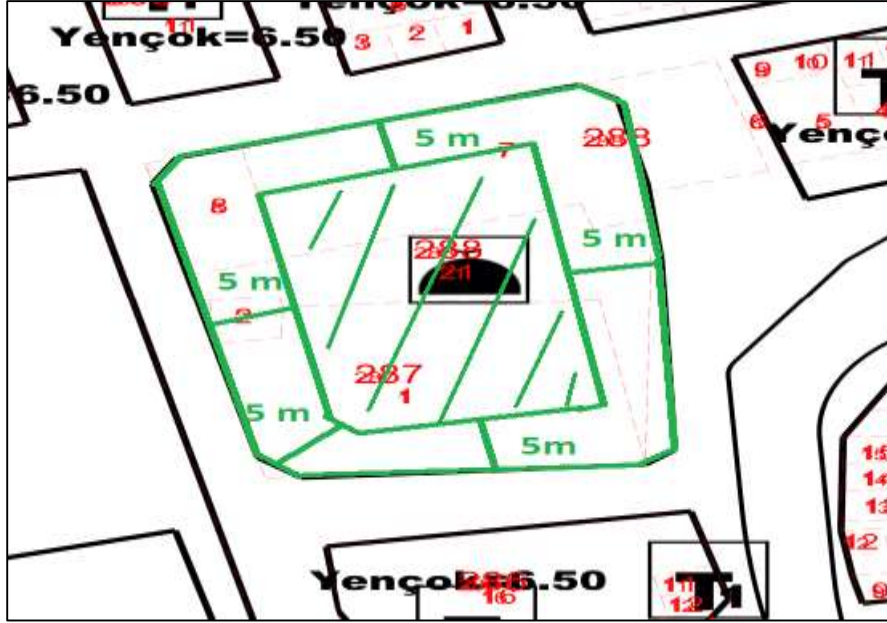

Figure 5. Zoning diameter view

In Figure 5., the zoning status of the relevant real estate is recorded as a religious facility area, but no information is given about its height and precedent. In this type of symbology, the sitting area of the building to be built is determined by giving

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only 5 meters of front facade setback distance only on the parts facing the road. The rest is left to the developer. The zoning diameter is shown with the distance approximation
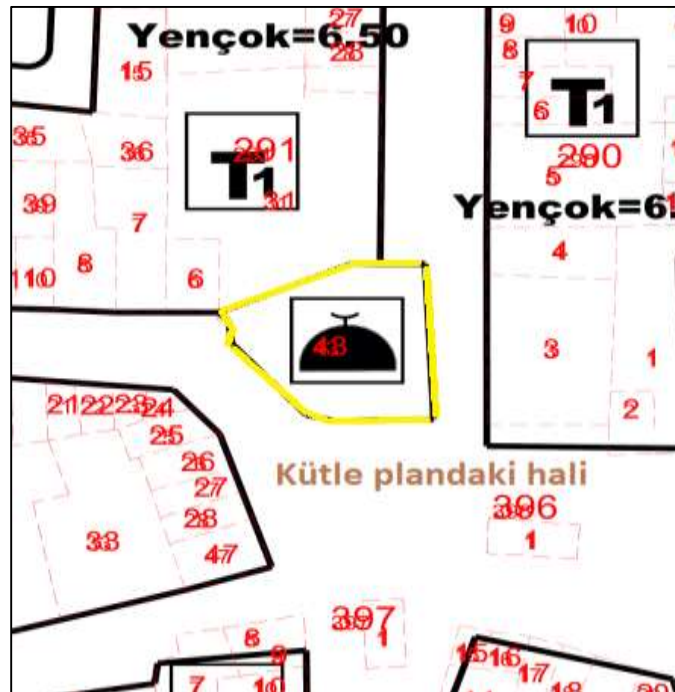

Figure 6. Zoning diameter view

In Figure 6, if the relevant religious facility area is processed with the phrase that it will be used as a mass in the zoning plan, the entire parcel can be used directly as a residential area without setback distance.
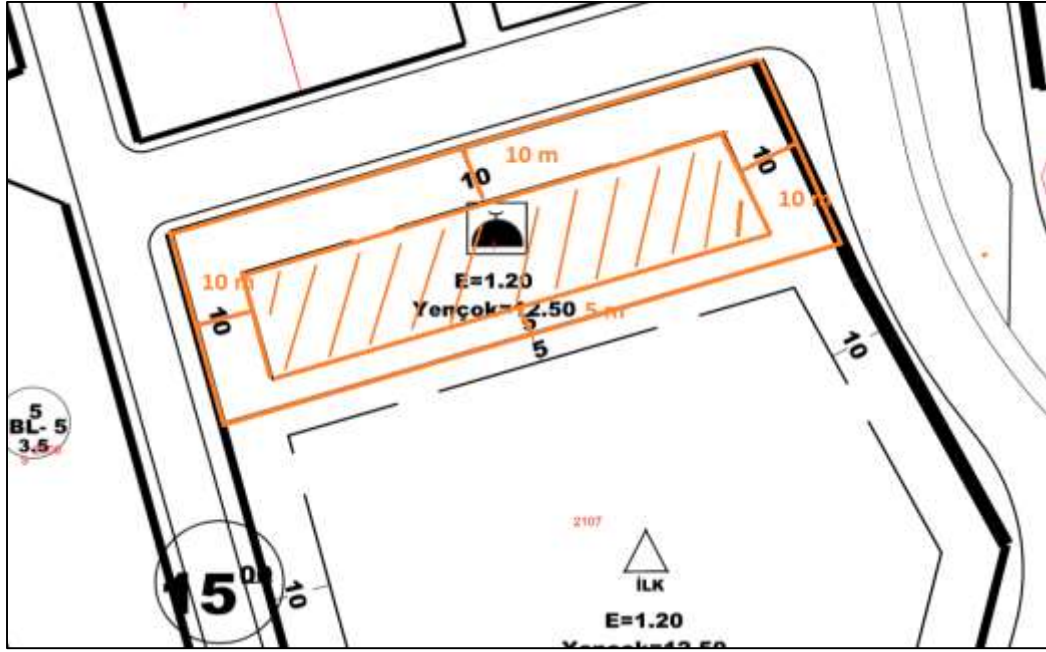

Figure 7. Zoning diameter view

Figure 7. shows that the immovable can be a religious facility that can be built up to 4 floors at the maximum. The height is maximum 12.50 meters. In the relevant zoning parcel facing the road on 3 sides, the front garden distance is generally drawn convexly parallel to the parcel of 10 meters each. In order to save the sitting area at the base, the zoning diameter was given by drawing 5 meters in the south part.
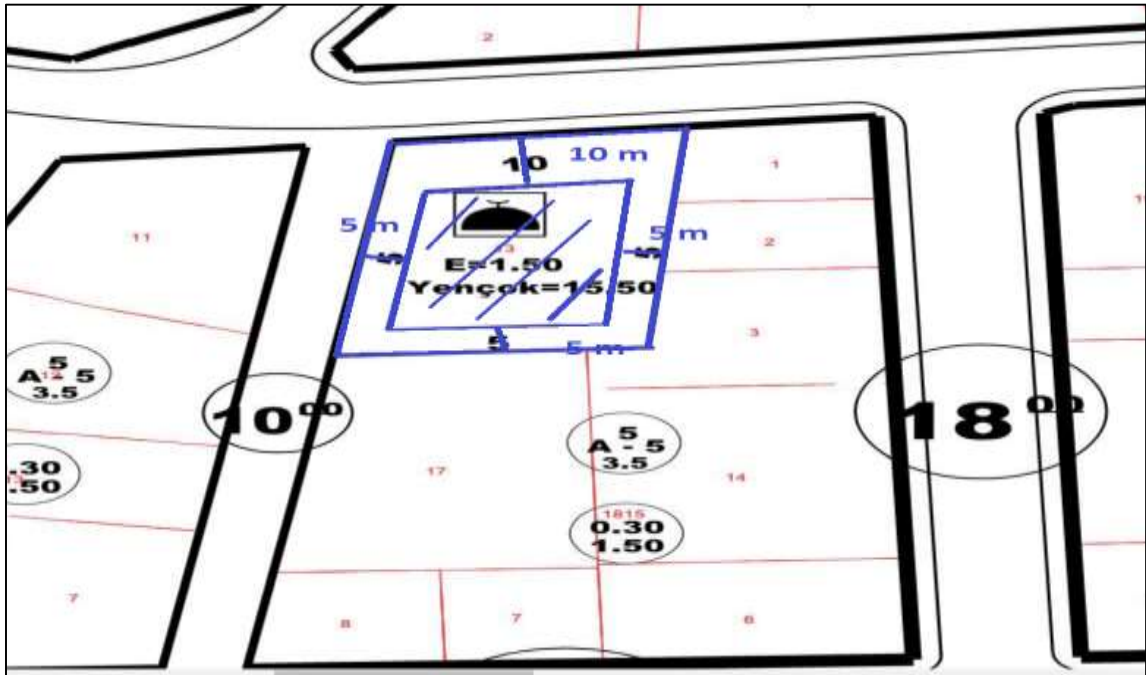

Figure 8. Zoning diameter view

In the example presented in Figure 8., since there is a wide zoning road in the northern direction of the religious facility area, it has been processed 10 meters according to the plan legend, while the other facade setback distance are drawn as 5 meters, the front drawing distance is shown as 5 meters.
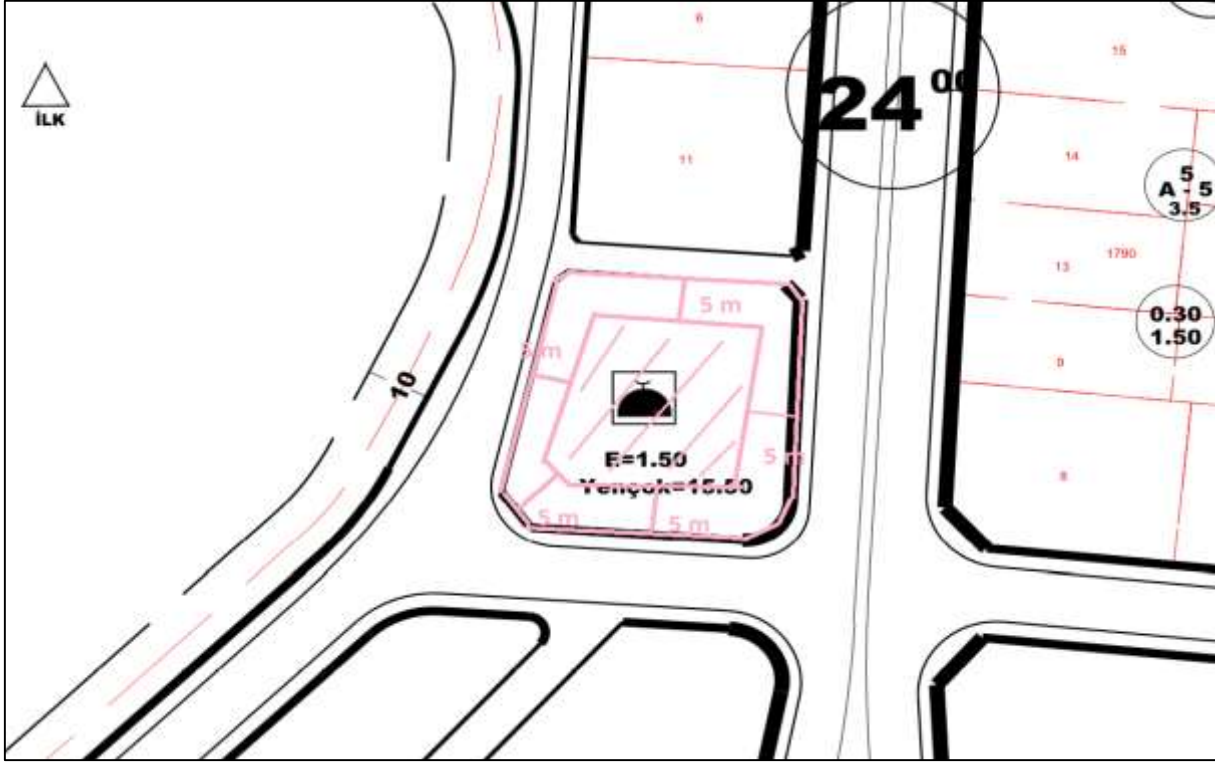
Figure 9. Zoning diameter view

In Figure 9., it is thought that the average floor area coefficient of 1.50 similar islands with an average height of 15.50 in classical religious facility areas will be 0.30. Since the total precedent = taxi * number of building floors and there are roads on one each side 4, the front towing distance has been drawn 5 meters each, and the zoning diameter has been given.

4. Conclusion and Recommendations

In the zoning plans, the zoning boundaries should be determined and the islands should be designed in a way that can meet the needs of all people from housing to commercial or social areas or else. One of these areas is the determination of the areas where places of worship will be placed on a building basis. This area determination job depends on the amount of population living in residential areas, and the correct provision of distance in commercial areas. The precedent of religious facility areas created in line with the amount of population and the floor areas to be used depend on this. In the findings section, the necessity of giving the construction diameters visually indicated in terms of convex geometry in terms of length has been examined. In line with the planned type zoning regulation and plan notes, the application forms of the pulling distances are shown. Our suggestion, regardless of the area of the zoning diameter, whether the distance approach or the length addition technique, is to be formed in a way that will respond to the need by preventing the concrete from being concretized correctly.

It can be preferred as a method that can be used in various disciplines with the concept of direction, in the determination of a region to be determined in the field of geology, in the determination of mine site reserve, in the determination of the region to be announced for landslide areas, in the creation of filling areas with geographic information systems, in determining land consolidation and regular patterned parcels.

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