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Review article

The organization of visual system to enhance discernibility and vitality of anzali city (case study: imam khomains square and its surrounding spaces)

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ABSTRACT

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In civic designing and environment quality improvement process, the enhancement of physical-visual quality in public areas of a city is of utmost significance. Considering city as a living being, man requires vitality and vivacity. Clearly the necessary component to the vitality of civic spaces is the presence of people in city. By identifying and strengthening the factors influencing the vitality of civic spaces and establishing a relationship between visual elements, it is possible to revitalize city. By analyzing Imam Khomains Square in Anzali city and its surroundings as a case study, the current study presents some instructive points on the organization of visual elements to enhance the quality of environment and to remove the tired exterior façade of a city. The present study aims to investigate how it is possible to establish a good association between lost civic elements including visual system elements, vitality and discernibility using the issue of quality. The data collection tools in the present study include descriptive-analytic method and study of texts and sources in the context of library-based studies, visual and photographic documents, observation and interview in the context of field studies.

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1. Introduction

The role of civil spaces or the spaces in which citizens' social interactions takes place and community's culture enhances, is declining. It is clear that the necessary component to the vitality of civic spaces is the presence of people in city; for example, shopping and even watching shops while walking on a pavement is one of the most interesting and favorite civic activities and it is regarded as one vibrant and dynamic space throughout the world. The excessive dominance of cars on city and consequently disordered movement of pedestrians and cars significantly reduces the civic vivacity. If a street is able to provide people with a secure and appropriate ambience and people can do activities and their favorite pastimes in a systematic and organized civic way, then the active presence of people and consequently civic vitality and vivacity will be increased. Organization and systematization of visual-physical image of a city (physical empowerment) along with the revival of normal flow of life through economic and functional rehabilitation can strength residents' sense of belonging to their living environment and encourage them to have a high quality residence. The enhancement of environment quality depends entirely on the identification and understanding of its entire aspects. In this regard, complete understanding and analysis of visual system images in the process of intervention in civil decayed contexts is of the utmost significance. This highly significant role is due to the impact of visual system, as physical-visual aspect of civic image, on form, body, function, meaning and concept of such contexts and also on the mental image of residents and users of these contexts. In fact, it appears that legibility resulted from proper and purposeful design of visual system images is one important factor which generates vitality and further presence of people in environment and also encourages the residents of inefficient civil spaces to enhance sense of belonging to their place of living.

2. Study objectives and hypotheses

Although the efficiency of a context is not only dependent upon the systematization of its physical elements, the organization of visual system in neighborhoods with civil context significantly affects form, function and meaning of such areas and also enhances their effectiveness. The present study investigates and identifies visual civil system and its direct influence on function, meaning and form and then analyzes the identity of civil contexts and environment's potential to generate and convey the sense of place.

Two main objectives of the present study include:

The organization of visual system in an ineffective and decayed context using signs, the revitalization of wall and eroded facades, change of land uses and spatial opening surrounding valuable buildings, to achieve discernibility and sense of lost belonging and consequently more vivacity, enhancement of civil area and tired façade of city.

Systemization of visual system in walking hubs and pavements using the overflow of activities and creating sense of security to achieve vivacity, visual quality and then remove the tired manifestations of city.

1. In this regard, some questions are posed.
2. How different people enter the city or city center? Is this entrance is an enjoyable experience for them? How it is possible to enhance such experience?

How they usually enter this part of city?

Has the city focused more on pedestrians and walking people or passengers and riding people? How it is possible to create a balance between them?

Are there some places in city where people can easily gather and visit each other?

Are city context and its residence in a balancing cycle?

What are the factors which can increase vivacity of a city?

Do people regard their city as vibrant and safe?

3. The area of the city

Anzali Port as the second most populous city of Guilan province with a population of about 100.000 extends linearly in an area of 15 km and is limited to Caspian Sea from North and Anzali pond from south. A water passage which establishes a connection between the sea and the pond, divides the city into Eastern (Ghazian) and Western (Anzali) parts. The link between these two parts is facilitated through a path with a bridge mounted. (Bahraini, Moghadas Khorasani, 39, 2001)

Based on the field surveys conducted, the majority of the city problems are related to Imam Khomani Square. This area is located in the western part of Anzali city and has the highest population, because adjacency to Anzali port and commercial areas leads to the reduction in costs and transportation time and also receiving a more congested population. On the other hand, the traffic flows of the city end in this area which acts as a two-head funnel and becomes thinner from the middle parts.

4. Organization of visual system

4.1. Definition of visual system

If a system is a systematic combination of different mutual inter-connected parts and components, then visual system is the relation and systematization of different parts and components of visual-physical areas. The buildings and the components of a city, passages, ways, civil spaces, man-made sceneries and panoramas, natural elements, city furniture, etc. are categorized in this class. (Zakavat, 2006, 26-37)

4.2. the elements of visual system

The visual elements are a series of components which representing identity and potentials in a particular area and results in the better discernibility and enhancement of a system and play particular and significant roles in the mental map of people to help them conduct navigation and path planning (Parhas Counselling Engineers, 2001, 1). The visual elements include signs and symbols, environmental qualities, visual qualities, gates, entrances and openings, public areas and spaces, limiting or connecting margins and paths.

5. The visual systematization of walking axes

5.1. Introduction

The area of cities and the distance between their different centers in old cities was in a form that they did not require making walking and riding connecting spaces separate from each other. This civil pattern not only established an interactive link, sense and emotion among citizens, but also conveyed a sense of cultural and social identity to civil passages and ways (Mehdi Zadeh, 1999, 19). In contemporary times, due to the development of cities and separation of work centers, education, pastime and neglect of systemization and planning for walking movements, walking people are gradually removed from cities.

The absence of walking people in neighborhood spaces and decreased opportunities to walk on foot in such neighborhoods give rise to reduced security, safety and social relations, loss of identity in neighborhood spaces, loss of belonging sense and gradual erosion and consequently loss of neighborhood quality. (Rezazadeh, Zebardast, Oskouei, 2011, 298). Therefore, understanding of the criteria influencing walking in a neighborhood are among the important issues which must be taken into account so as to identify existing potentials, strengths and weaknesses and to do a more knowledgeable planning for tackling problems and enhance the quality of walking in neighborhoods.

6. The concept of walking orientation

Walking orientation has no fixed meaning and it develops by each new suggestion. Nosal refers to it as "the walking-orientation potential, the suitability of an artificial environment for the presence of people, life, purchase, visit, passing time and enjoying in an area." He also claims that one of the best practices to measure walking-orientation in a neighborhood is to count the number of pedestrians which walk in a space, stop and enjoy it. The variety of people and specially the presence of children and old people indicate the quality and success of walking-orientated spaces (Nosal, 2009, 7). In such spaces, through walking, we are faced with possibility to see places, activities, emotion and excitement and discovery of values and the attractions hidden in city environment for citizens. This phenomenon is highly important in terms of perception of spatial identity, sense of belonging to environment and understanding beauty (Pakzad, 2005, 271). Walking paths or pavements are the directions with the most important social roles and they can be in the form of alley, bazar, a walking space inside the borders of a square, park or spaces surrounding an apartment. In the most of civil transports, in the case of the existence of

proper spaces, walking movement is an appropriate replacement for riding movements which can help reduction of city's traffic nodes (Kashanjou, 2010, 34-41).

7. Some examples of existing pavements

London road in London was the first street which was closed on riding traffic and it became walking-orientated in 1957. In 1971, the first public place in Sydney was constructed to walking people can take advantage of it (Cowan, 2005, 285). Sienna city in Italy is one of the most exciting and walking-orientated directions in the world. In the small city of Tuscan in Italy, the residents and shoppers unanimously contribute to the creation of a colorful and interesting pavement; for example they plant a considerable amount of vegetation in vases and hanging ivies.



Fig. 2. A view of Sienna city.



Fig. 1. An example of a pavement in Soho.

8. The components and indices selected to investigate the walking-orientation potential in a case study

It is a concept which Picora et al., have presented and include "neighborhood function, safety, environmental beauty and destination points (Pikora et al., 2002; Pikora et al., 2003). The following table shows the indices and components used in the relevant studies which are analyzed in the present study as well.

10. The overflow of activities and the people-attracting spaces

Satisfaction is the most important objective of residents to go walking, and walking could be divided into two categories including a) compulsory walking such as referring to a place for shopping, doing routine activities or transportation, and b) optional walking such as walking for sport and physical fitness or passing times. Those residents who tend to the first category, walking is more satisfactory for them. Walking satisfaction is influenced by some components such as the degree of penetrability, quality and sanitation of environment, safety and environmental beauty (Rezazadeh, Zebardast, Oskoue, 2011, 298).

Walking people often does not like to just walk mechanically. They like to go somewhere and do something (How you like to live? 1972). In streets, activities are divided into the following six groups 1) to stand for waiting 2) to stand for speaking 3) to stand for watching 4) to stand for eating 5) to seat for speaking 6) to seat for eating (Khatou, SaeidiRezvani, 2009, 67-68). Purchase and shopping is a key activity for the walking people and it could be properly combined with some porches (Ravagh) to create a preserved environment with a human scale. Porch is a suitable instrument to humanize civil areas, and some example of it could be observed in Melbourne Australia, Santafe in New Mexico, Soho and Coven Garden in London (Tibalds, 2007, 65). Such idea is observed also in Ghani Street. By this work, a good space is created for walking people and doing some activities such as purchase and social interactions and also it is possible to revitalize its old and tired view and provide citizens with further vivacity and excitement.

Table 1

summing up of the components used in the studies related to the measurement of walking orientation capability.

Functional	surface of Pavement	Preservation of pavement The type of pavement
	Traffic Features	The facilities of traffic control Traffic culture Traffic volume
Safety and security	Penetration	The distances between intersections (density of intersections) The existence of alternative paths The number of blind paths
	Individual	Lighting Safety of crime The amount of being watched by pedestrians and walking people
Environmental Beauty	Traffic	The existence of some special places for passing of walking people from the width of path Lights and driving signs and signals The bridges specific to walking people Existence or non-existence of speed limitations in local streets
	Sceneries and Panoramas	The existence of interesting and varied views The existence of trees Taking care and maintenance Pollutions Parks The variety of architectural styles Sanitation
Destinations	The existence of facilities in neighborhood and easy access to them	The existence of facilities in the neighborhood (mixing of land use) Access to public transportation stations

(Rezazadeh, Zebardast, Oskouei, 2011, 298).

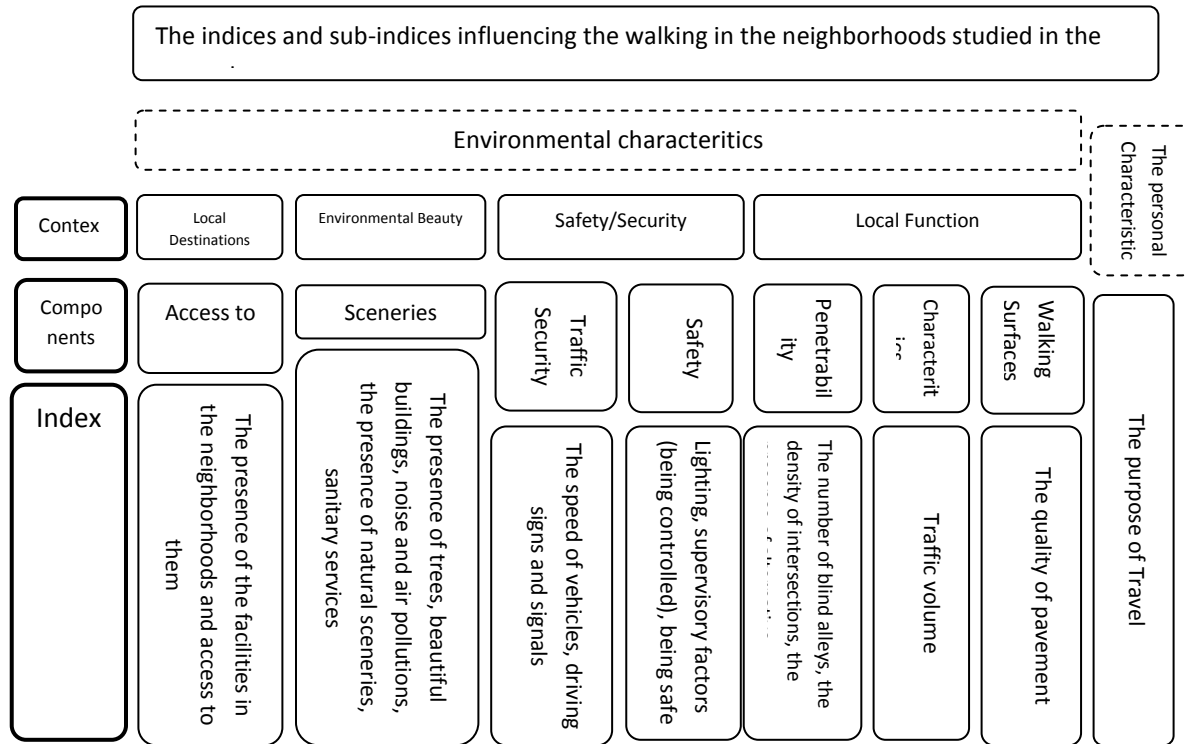


Fig. 3. the hypothetical model of the walking-orientation capability measurement in the area studied (Rezazadeh, Zebardast, Oskouei, 2011, 298).



Fig. 5. A View of Ghani Street.



Fig. 4. in LondonCovent Garden.

For pedestrian's easy movement and traffic, walking path could be divided into two parts including public and semi-public ones. In the former, pedestrian can easily continue his way and enjoy further of beautiful sceneries, without facing any obstacle. In the latter, the overflow of shops could be seen and it is possible to prepare seat and bench for people to take a rest there.



Fig. 7. A View of pavement design and the overflow of activities.

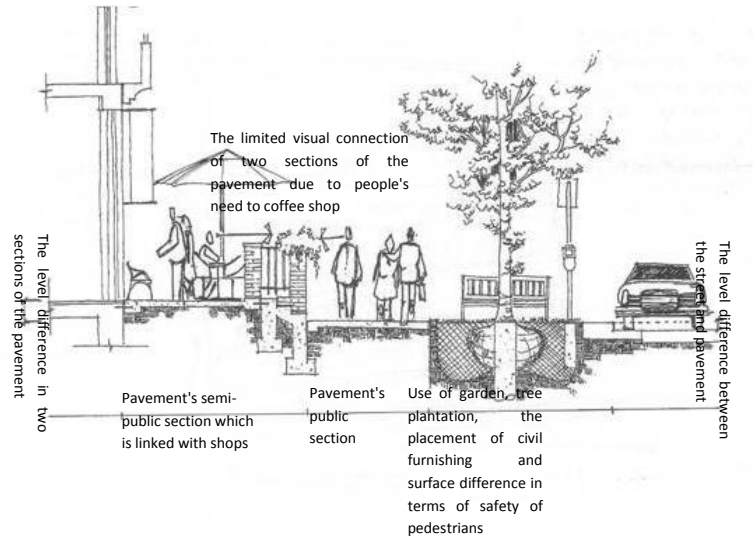


Fig. 6. across section of the pavement design

11. Vivacity

A vibrant civil space is a civil one in which there are a considerable number of people with various ages and genders in a long range of a day which their activities is mainly in an optional or social form. In the other words, this space must be in a way that motivates people to come and stay. To do this, the first necessity is the presence of the required attracting elements and factors. In addition, people must not have difficulty with staying in these spaces and completely feel satisfaction. Therefore, it is possible to consider attraction and satisfaction as two primary prerequisite of civil life, and each factor which can contribute to these two factors can be taken into account (Khastou, SaeidiRezvani, 2010, 71). Therefore, it is necessary to predict attracting activities such as some spaces for graffiti, skateboards, music and street theatre, sport, children paly, multi-objective spaces for holding ancient and religious celebrations (holidays and special ceremonies, tricking and magic works), newspaper stalls, sanitary services, creating semi-open purchasing spaces. In addition, one of the most activities which can act as a people-attracting and influential factor is fast food restaurants which they must be strengthened for enhancing vivacity of a city. In addition, the enhancement of the spaces' aesthetic quality as one of the most critical factors must be taken into account. In this regard, floors and walls must be revitalized, fountain must be established, some plants grown to clean the air pollution, a variety of seating options also must be considered and finally sufficient night lighting can be very attracting (Faizi, Rajabi, Hossieni, 73, 2011).

12. Security

The adjacency of this area to Caspian Sea and Anzali gives rise to the attraction of passengers and different domestic and foreign tourists. Therefore, the space should guarantee the safety of walking people and pedestrians, and there must be also sufficient spaces for parking vehicles. Intersection of walking and riding paths has led to the inefficiency of such paths along Motahary Street and has negatively affected the formal appearance of the surrounding neighborhoods. In addition, limited width, improper and rough layer of pavements, excessive congestion of walking and riding traffic capacity in critical times (holidays) have forced walking people to intrude into riding areas for avoiding existing obstacles and slow movements; in turn, the safety of pavement is completely threatened and the traffic in the rising side is increased (Faizi, Rajabi, Hosseini, 2011, 186). The paucity of such facilities has created some concerns for passengers and residents. Finally, what guarantees the presence of all citizens and constant life in pavements is their safety.

13. Improvement of physical form of cities

24-hours streets are more interesting and entertaining and also due to some advantages such as citizenship supervision and sufficient lighting are safer. The movement and transfer of the residents of residential units toward service, shops, cultural centers, parks and houses of friends and family during day and night, has the same function of walking after work hours. In addition, the number of administrative buildings along a street which is attractive for pedestrians could be controlled. This is because the offices are shut down after 17 pm, so that direction becomes dull and boring (Faizi, Rajabi, Hossaini, 2012, 186). In addition, the multiplicity of number of such offices (municipality, communications, post, department of education, former court, banks, etc.) around the square can cause traffic at critical times, particularly at the end-of-year holidays and weekends.

14. visual quality and social identity

As it was told earlier, the connection between two main sections of Anzali is created through a path which ends in a two bridges. Over these two bridges, there is a very beautiful view of Caspian Sea and Anzali Pond. However, riding people can only access to this view and so travelers and native people themselves have a very limited view and time to observe the beautiful scenery surrounding it. This bridge can act as a highly effective civil space for fishing, walking and jogging, seeing beautiful sceneries of Anzali Pond, limited recreational shows and people congregation to hold cultural celebrations.

15. summing up

The overall result from the study hypotheses is that by the improvement of the indices influencing the satisfaction with walking and also increased opportunities which contribute to the optional activities of people in neighborhood, it is possible to convert neighborhood into an area for residents' vivacity and dynamicity. Obviously this issue not only contributes to the further presence of residences on foot, but also considerably reduces air and noise pollution caused by car traffic, enhances physical and mental health, increases citizenship participation and sense of belonging to environment. Therefore, the following points must be taken into account:

Providing required facilities surrounding pavements to prevent intervention in the movement of walking people

Maximizing the variety of applications on pavements by the observance of conformity principle

Maximizing use of plants, water and natural material in revitalization process and proposed furnishing

Preservation of historical valuable buildings in pavements or the development of walking spaces along such buildings

Paying attention to natural and artificial panoramas, particularly terminal view surrounding walking spaces

The design of walking way bodies consistent with adjacent buildings, sky line, climate and its variations

The observance of the viewpoints of majority of users through poll opinion and encouraging them to participate

16. The revitalization of the wall and decayed context

16.1. Introduction

Visual physical issues play significant roles in value orientation of civil contexts because they can fulfill a wide variety of human qualitative and quantitative requirements and help people interact better to each other. Therefore, it seems that providing permanent residents and users of civil areas with proper information and knowledge can prevent these areas from converting into inefficient bereft-of-identity contexts. In addition, it is necessary to provide visitors of these regions with preliminary information. In this regard, it seems that an evaluation of navigation and systematization processes of physical-visual elements and qualities as the factors influencing discernibility and enhancing navigation sense can fulfill the above two purposes. In fact, to the extent that physical context and identity are placed in an interacting cycle in a continuous way and based on time requirements, the civil context takes privilege of efficiency and productivity; otherwise the contexts recede into decay and erosion.

16.2. Sense of belonging to a place

The sense of belonging is one important sign and factor to evaluate the relationship between human and environment and creation of high quality human environments. This level of environmental meaning indicate a deep relationship between individual and environment and there is also an identification between self and place. Belonging sense has physical and social aspects which social belonging is superior to physical belonging in an environment. Physical example in environment emanates from three categories including man's perception, recognition and emotion. Based on this, the physical characteristics such as form (shape, color and size, context and scale) accompanied by a type of organization and relationships between elements become important. Regarding perception and recognition, physical elements play their roles through the definition of scope and area, the enclosure of space, the physical distinction between places, the relationship between interior and exterior space of a place, discernibility and adaption to behavioral patterns. Regarding emotional aspect, man depicts itself through physical manifestation of symbols, cultural symbols, memories and man's mental images (JavanForouzandhe, Matlabi, 2010, 34-35).

16.3. Historical context and buildings

In the places where all old buildings have been removed, people feel unsafe and continuity is lost forever. A society where there are some buildings under preservation and some areas are specifically designed for this critical goal, obviously shows its belief in objective standards (Lord St. John of Fawsley). Tibalds in his book has underlined the importance of historical places and the mystery of their longevity and constancy and he believes that modern new constructions must be done in a way that become eternal in the minds of people the same as past constructed buildings. Therefore, it is necessary to preserve some buildings which have architectural and historical values. It is possible to change their land use, as well. People can pass the best times of their life in these places (How you want to live? 1972). The body of Motahari Street which connects Imam Khomainsi Square to the Boulevard has several valuable historical buildings which require revitalization and repair such as the Department of Justice. In addition there is a building facing the square which can be repaired and revitalized to use as a hotel for tourists.



Fig. 8. the repair of historical building of Ministry of Justice in Anzali Port.



Fig. 9. a historical building in Anzali Port.

By entering the city and while passing the bridge, a row of buildings could be seen that their foundations are placed inside the water and are subject to gradual decay. So if a proper revitalization would do on their façade, they can elicit a highly pleasing visual view.

16.4. signs and symbols

The observable visual elements in a city could be regarded as signs or symbols of that city (Pour Jaefar, 2006, 36-49). However, the symbol is the result of a cognitive process through which a topic finds an implicit meaning (Lang, 2002, 231). In fact, symbolic elements are significant and influential. Signs in the form of physical elements

and symbols and elevated buildings could be seen from a distance and used as distant and final transient destinations (Parhas Counseling Engineers, 2010, 2).

Civil environments must be easily understood and they must also take privilege of discernibility. In this regard, civil signs can play significant roles. A monumental building or a special form of a building can act as a sign to result in the discernibility of a civil space, and citizens find their own way through that. Therefore, civil designers must pay special attention to their visual characteristics and signs especially in the nodes and main streets of the city. Blending of rich applications include a variety of recreational buildings, longevity, the buildings' architecture and the famous Hour Tower as the background of them could be regarded as a fixed and distinguished sign for tourists and passengers (Tibalds, 2007, 107). Hour Tower in Anzali could be seen even from a very long distance. The height of its minaret is 28 and it is 20m to its veranda. According to historical books, this tower was established as a lighthouse in 1815. Following its repair in 1928 a four-corner hour was installed over it. The existence of such tower with this longevity can act as an opportunity for attracting tourists and as a civil sign for the better discernibility.

17. vThe connection of imam square to pasdaran street (as a proposed plan)

In the past, Imam Square was used as place for people congregation, but today it has been converted into a square for movement of cars. Obviously, it is not possible to remove cars and the solution is to define walking and riding directions, because they are only existing accessibility passages.

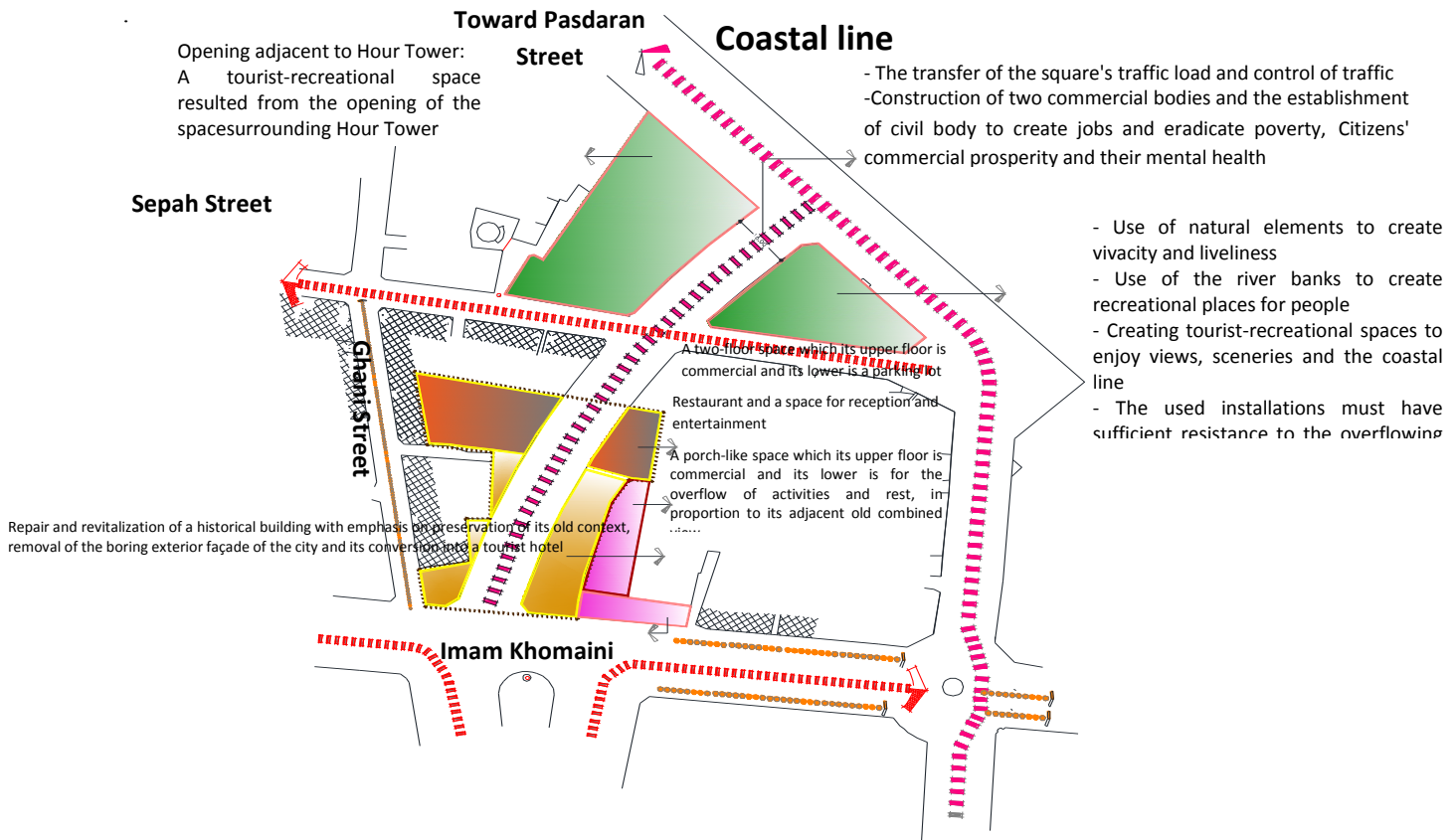


Fig. 10. the proposed plan design.

One solution to reduce the city's traffic is the connection of the square to Pasdaran Street from the northern part of Anzali. So a high volume of the transferred traffic creates an opportunity to construct tourist-recreational-commercial spaces and so a dynamic view is created and the boring face of the city is removed.

The first corner of the street could be assigned to trading spaces at the upper floor and its lower floor could be used as a place for passengers' rest and the overflow of activities. In the next corner, it is possible to design commercial application at upper and parking at lower semi-floor. As we know one important problem of passengers and people of the city is the lack of parking in this part of city which there must be some solution to tackle this.



Fig. 11. A view of the proposed street and the overflow of activities.

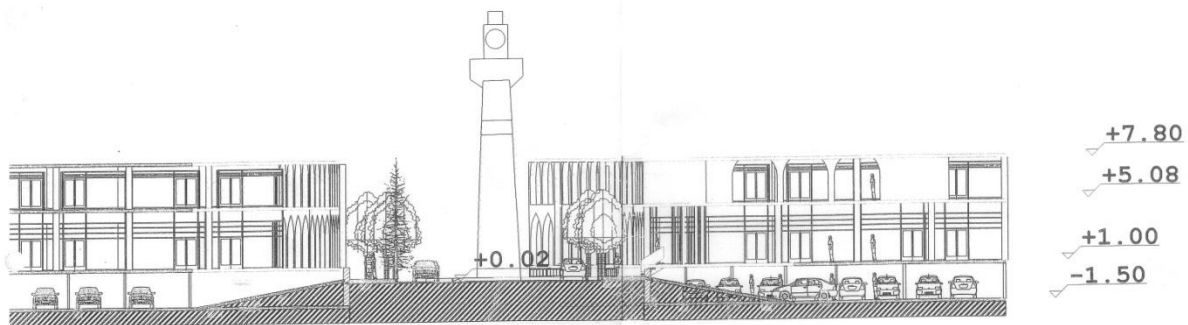


Fig. 12. a cross section of the parking lot in a semi-floor form.

It must be noted that while revitalizing bodies and structure, new facades must be coordinated with background. In addition, combination and blending of applications in civil environments and creation of multi-purpose environments must be taken into account to achieve a higher dynamicity in civil spaces, and the best civil spaces must be regarded as those utilize blended applications and form a wide variety of specialties and activities (Tibalds, 2006). At the end of this proposed street, a space is created around Hour Tower which can act as a place for people congregation and their equilibrium and comfort.

18. Analysis by using SWOT model

Table 2
Strengths (S) (author).

Local	The existence of barren and open spaces for being developed into green spaces
Economic	Income generation in commercial application of the area due to the centrality of shopping
Social	The existence of coastal line as a center of social congregations A proper place for establishing social and cultural interactions
Physical	The coverage of the area with main passages network Adjacency of educational and administrative centers to residential areas

Table 3
Weaknesses (W) (author).

Environmental	High congestion Excessive traffic of riding people
Social	Increase of false businesses (dealers, retailers, etc.) The lack of cultural infrastructures The less participation of people in neighborhood critical decisions
Physical	Improper pavement and lack of congruity between the width of lanes with a high volume of traffic Insecure traffic for citizens Chaos of visual image and incongruity of modern constructions and old context Inefficiency of the hierarchy of access to the existing lanes

Table 4
opportunities (O) (author).

Environmental	Development of public transportation and replacement of riding people with walking and cycling More tendency toward the investment in private sector by implementation of pavement plan
Economic	Monitor and control false jobs and attraction of job groups with higher education The high potential of society active class for creating employment in trading centers
Social	Increased social interactions and blossoming of cultural interactions between citizens through a completely proper space for dialogue and visiting walking people Making the residents more involved in decisions making
Physical	Possibility to create commercial pavements, cycling lane and children play space Possibility to convert the area into an environment with priority of walking people and eliciting the sense of identity and vivacity

Table 5

Threats (T) (author).

Environmental	Threats of citizens' mental and physical health
	The lack of a formulated plan on the enhancement of citizens' social and cultural levels
Social	The lack of necessary security in public environments and civil defenseless places The increasing growth of riding people and reduction in social relations and interactions in the neighborhood
Physical	Tendency of retailers to congregation surrounding main lanes lack of sufficient lighting in walking and riding lanes

19. Conclusion

The sense of place and belonging to civil contexts and living area prevent the inefficiency, loss of identity and character and consequently the erosion and decay of such contexts. The studies on civil view and panorama and recognition of visual system and its organization in a systematic way in civil contexts are of the utmost significance. This significance is due to the effectiveness of such studies on the proper discernibility of such contexts and enhancement of citizens' navigation sense and consequently enhanced sense of belonging of residents in these contexts to their living area. Meanwhile, it appears that the recognition of visual system images which include visual elements and the nature and quality of relations between them plays significant roles in the organization, order and characterization of civil contexts. We are hopeful that through accurate measured images of visual system in organization, revitalization and renovation process of civil old contexts and serious attention of architects, civil planners and designers to the significant role of such images in the improvement of environment quality, living quality in civil old contexts is enhanced through improvement of visual-physical quality and also other influential components such as social and economic ones.

Table 6

a study of design based on strengths and weaknesses (author).

Classification	Criterion and Objectives	Accessibility Strategies and Alternatives
Environmental	The suitability of environment based on sustainable development	The development of green space and use of natural elements in environment to separate walking lanes from riding ones
Economic	Flexibility and economic development	Development of shopping centers Control of social damages and increased public supervision
Social	Vivacity, civic life and increased interactions	Increased spatial belonging and participation culture of the residents The development of social interactions area
Physical and Civil Furnishing	Visual proportions, discernibility, raising the quality of civil life, increased residents' welfare and satisfaction	The systemization of civil image and view with the priority of artificial and synthetic sceneries Revitalization of decayed contexts and preservation of valuable buildings Design of proper pavement

		Navigation and the proper establishment of civil furnishing and facilities
		Distinguished civil signs
		The hierarchy in the rhythm while movement
		Control of traffic in the nodes and critical points
Lanes		The transfer of riding traffic and design of pavements and cycling lane
Networking and Transportation	The safety of traffic and ease of access	The creation of parking due to the frequency of vehicles
		Use of bicycles

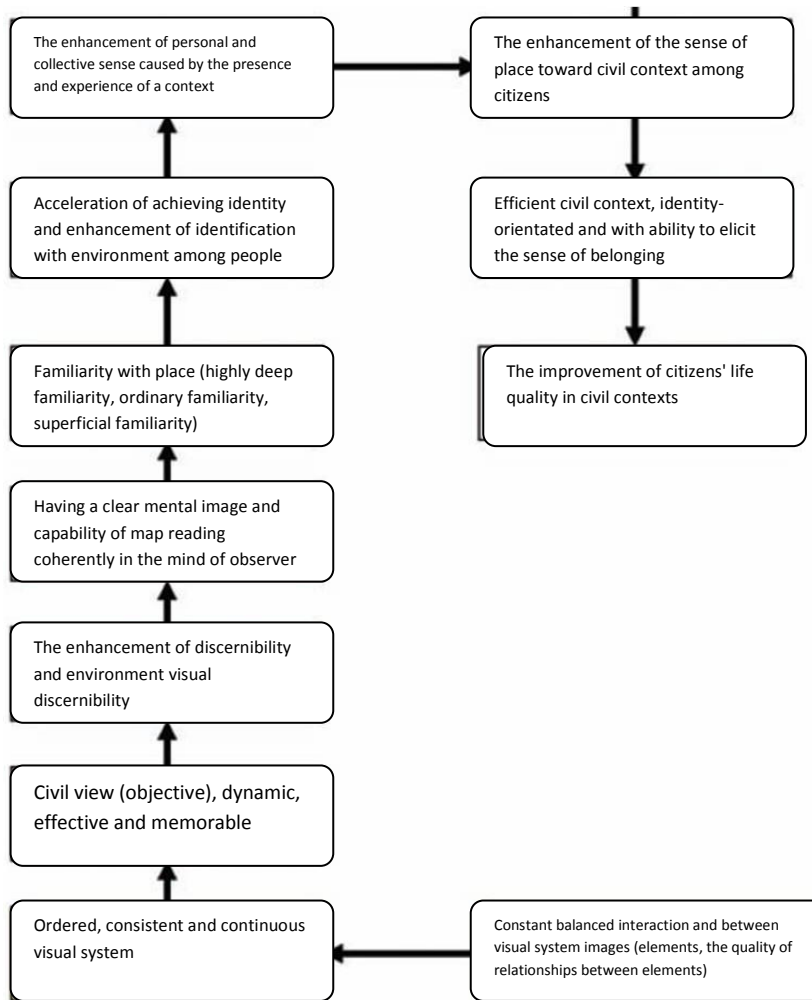


Fig. 13. the status of visual system in the enhancement of life quality (Ansari, Pourjaefar, Sadeghi, Haghightabin).

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