Structured Network Public Spaces a Step Toward Integration of Urban

¹*Najmeh Ramezani Aghdash, ²Maryam Ostadi

^{1*} M.A. Student, Urbanism Department, Mashhad Branch, Islamic Azad University, Mashhad, Iran. ²Assistant Professor, Urbanism Department, Mashhad Branch, Islamic Azad University, Mashhad, Iran.

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ABStRACT: Network of public spaces composes of a network of interconnected land use and various elements of the city, such as synthetic and natural which shows the city as a whole. Network structure of public spaces is important because understanding this network as a structure presents us the formation of the city. This paper attempts to define the status of the network of public spaces in the city structure and to accomplish goals which leads to integration, interconnectedness and cohesion of public space network. For this purpose, a descriptive-analytic method was used and the standards and design principles were taken from the literature review. For collecting the data, Moalem Boulevard in Mashhad/Iran was investigated and analyzed with respect to the physical, functional, visual, social, and historical dimensions of public spaces. Finally, three conceptual options such as a linear pattern, a centralized pattern and a distribution pattern were presented. The results show the factors, criteria, characteristics, urban design framework, policies and strategies to integrate the structure of public spaces network in the area under investigation.

Keywords: Public Spaces, Structure, Integrating, Mashhad, Moalem Boulevard.

INTRODUCTION

the continuous flow of life. In fact, urban design is known as an activity that shapes the built environment and human habitation and gives cohesion to it. (Bahreyni & Bminzadeh, 2006) City is like an alive creature that its growth is an inevitable phenomenon as an uncontrollable trait in its nature. Therefore, it should be controlled and guided. Making policy in the field of urban growth is a great responsibility which should present a proper growth pattern with respect to the physical and formal dimensions of the city that is according to the real needs of citizens. The basic structure of a city is a set of main elements of the city and the relationship between them. Understanding this structure will be an important step to recognize the systematic framework of the city's main structure and the integrity of it. The idea of urban spaces network structure forms an integrated structure of the city texture where not only physical spaces conjunction is concerned; but also activities are related. This leads to readability, creation a sense of direction and integration of the city (unity of structure). This article attempts to discover the factors affecting the formation of the network and the

Man builds the city and city transcend the life style and moves

principles and criteria for integrating the structure network public spaces by investigating the concept and structure of public spaces network. Finally, it may strengthen the structure of public spaces network of Moalem Boulevard in Mashhad/Iran by using these principles.

Literature Review

Urban Texture and its Fundamental Elements

General studies in the field of urban design show that the majority of researchers have considered the urban form as the urban fabric form, while others considered the texture as a research to understand the form of the city. Also other researchers considered the urban fabric affected by the order and placement of streets and squares which is regarded more important than the arrangement of other elements of context. (Fig.1) (Behzadfar & Noormohamadzade, 2012)

The researches on the context can be summarized in three approaches: a) The environment and behavior b) place and its image c) Structure and Process. It seems that these three approaches are common in three fundamental principles. First, the city form can be analyzed by three physical elements such

^{*}Corresponding Author Email: mohsen.najmeh@yahoo.com

as, building & plot, street & block, and neighborhood & town. Second, the characteristics of the context can be divided and investigated into three categories: two-dimensional features (layout), height (Volumetric) and directly connected to the street grid.

And third, three field of study can be distinguished: the study of the physical features with an emphasis on quantitative indicators, historical study with emphasis on chronological dimension, the study of qualitative features with an emphasis on their impact on human perception. (Zakerhaghighi, Majedi, & Habib, 2010)

Edmund Bacon also considers walking routes and mass construction as two basic elements of the city skeleton that formed it with its composition. His connection theory insists on the necessity of connection roads which connects the main buildings to public spaces (Tavalayi, 2008). Rappaport asserts that urban structure consists of environment spatial organization, the concept organization (concepts that

understand through forms and feels and the components of the physical environment), and the environment connection Organization. Rob Carrier also believes that urban context is formed by the integration of all activities when it finds physical basis. Regarding the Iranian cities' structure, Nader Ardalan believes that the order of the city is similar to a crystal whose particles are polarized by a magnet. This magnet is the market in traditional cities and the its particles consist of the shops, inns, schools, mosques, and baths (Hamidi & al., 2007). By investigating the morphology of the city, Iranian researchers also have classified the effective indicators of the typology of the urban fabric in three component such as the shape, the height, and the connection to the surrounding fabric.

They also have achieved nine indicators in field of physical fabric such as: aggregation, occupancy level, building density, open space, number of floors, permeable ability, unchangeable land use ratio, skyline, and segmentation (Zakerhaghighi, Majedi, & Habib, 2010).

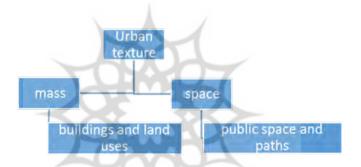


Fig 1. Urban texture element (Source: Ramezani Aghdash, 2015)

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Table 1: The Fundamental Elements of Context from Theorists Point of View (Source: Ramezani Aghdash, 2015)

Theorist	The Basic Elements of Context		
Kanzn	Land use, Construction of buildings, pattern of categorized segments, connecting network		
Lynch	density, composition, network access		
Bacon	paths of movement and the masses of buildings		
Rappaport	environment spatial Organization, concepts Organization, environment chronological Organization, environment connection Organization		
Kuroof	Texture, block, three-dimensional form, segmentation, massing (building structure)		
Erikson	Spaces (streets and squares) and elements (buildings and monuments)		
Behzadfar	Warp (passages), woof (mass, space, blocks, sections, and land uses), segment (staircase, entrance, square and four leads), network (linear, central, reticule and organic), Background matter		
Ellen	Plan, segmentation, connecting network		
Zaker Haghighi	aggregation, occupancy level, building density, open space, number of floors, permeable ability, unchangeable land use ratio, skyline, and segmentation		

Network of Public Spaces in the Urban Fabric

Public spaces are important elements of urban spatial structure that play a vital role in the quality of life and welfare of people living in the cities. Public spaces include all types of built and not built spaces and the natural environment in urban areas that are accessible to everyone (Mahmod poor, 2014). Using network system to organize public spaces forms a coherent structure of the city fabric, in which not only physical conjunction spaces are shaped correctly; but also activities find good relationship with each other which leads to readability, creation a sense of direction and integration of the city structure and the elements that develop the urban structure (urban spaces and connection joints) play a vital role as important places for activity and living of residents (Tavasoli, 2003). The emergence of the concept of network generates a stable pattern in which lines and nodes are connected To each other in urban fabric. Network of public spaces are composed of separate spaces that complementary relationships and intermediate spaces are between them. These complementary relationships and conjunctions affect people's experience of space and their movement in the city (Pinto et al., 2015).

What causes the coherence in the urban fabric are connection spaces that link Urban public spaces to each other which is referred to as places of all the efforts of civil society in the form of physical and spiritual heart of the city and social nodes and places for cultural activities. Rogers believes that in order to achieve a coherent city the issue of the theory of urban public spaces network shall be considered as a vital part of the urban landscape. The network that Rogers refers to is based on a mixture of urban nodes and connecting spaces that connect them to each other. During their movement, Components of this network have different hierarchy according to their performance scale (Esmaeeliyan & Pourjafar, 2012). Understanding the features of the public spaces network provide the possibility to improve the relationship and connections and Intermediate spaces. (Fig.2)

Features of public spaces network leads us to the key principles

of network public spaces planning and design, these principles are as follows:

Promote the formal continuity of the flows circulation (road network, pedestrian network, railroad network, cycling, etc.); Promote the continuity of important natural structures and ecologic corridors (waterlines, large green areas, etc.);

Create relations of functional complementarity through the existing land uses / activities;

Generate social dynamics that minimize phenomena of social exclusion and marginalization;

Generate socio economical dynamics capable of regenerate a degraded area of the city.

Determining of structure of main public spaces network done based on four main criteria:

The location and morphology;

Different land use;

Connect nodes;

Gravitational potential (Pinto et al., 2015).

Structured and Coherent Urban Fabric

The structure can be defined as a system of interdependent elements in which mutual relationships or necessary and simultaneous cooperation among components is going on within a specific area subjectively and objectively and depending on the purpose (Tavalayi, 2008). An alive city is composed of a separate interactive network that each of them has different characteristics and Structurally are connected and integrated by competing with each other (Salingaros, 2011). In spatial system of our cities, creation of a motor and interacting system as a linking power according to the network structure is as difficult as creating a poem or musical instruments and it is really difficult to explain its status. Creating a network of coordinated and yet contradictory spaces provides a field for creation of the concepts such as confidentiality, hierarchy, scale, scope, simplicity, complexity, focus and etc. in the

fabric. The main structure of the fabric in its path convenes

a collection of various functions and shapes economic, social



Fig 2.: Criteria for Determining Network Structure (Source: Ramezani Aghdash, 2015)

and cultural life of the fabric. The relationship of this structure with the roadway and sidewalks can lead to physical-spatial and cultural-social integrity of neighborhood as well as strengthening of the pass. Presence of various activities nearby the main structure of the fabric and its main access increases social activity in the whole fabric and absorbs the population into the public sphere which leads to social interactions and turns the street to a street for people and therefore leaves the street full of activity and population with lasting memories (Habibi, 2003). Structuralisms believed that Urbanism should emphasize on the network space as a connecting element of city's physique in structural cohesion and avoid from sheer emphasis on construction mass and buildings' facades. If urban spatial structure is designed in large-scale, it can make a coherent city (Esmaeeliyan & Pour jafar, 2012). The designer have to be able to create a variety of spaces proper to specific activities and determine spatial characteristics by using architectural form, fabric, materials, light, shadow, color and creating the relationship between them. Then the designer should connect these distinctive spaces in such a way that their coherence over time and across the entire city be preserved. Coherence arise from the creation of interdependence among urban connection network. By situating each unit in a larger whole, a close spatial relationship will be created in order to maintain and strengthen the entire collection (Tavalayi, 2008). Also Salingaros explains the process of creating the network structure by emphasizing on three general characteristics, such as centers, connections and hierarchy: (Fig 3)

Centers: Network structure in the city is established in those centers that the network is created by the inner connection between them (Salingaros, 2011, 62)

Connections: The presence of multiple routes for connecting a center to another leads to competition for locating centers or networks related to the use of space and imposes a fluid geometry to the city.

Hierarchy: Network structures in the city proceed to selforganizing by creating a regular hierarchy of connection at various scale (Salingaros, 2011).

Finally, this can be concluded from theoretical framework of the literature that spatial construction of the cities has been always based on a mixture of two types of static and dynamic urban space. However, the important point is that the spaces are never functioning separate and apart from each other in the physical structure of the fabric and each section is defined in relation to the next element and strengthened the spatial structure of the urban fabric that whole of the spaces have demonstrated as network of urban spaces in the bone fabric. What have been proposed about the concepts of urban spaces network provides the necessary background for investigating and analysis of the case study. Surveys show that existence of elements and relationships between them leads to the formation of the structure, provided that these two components form a whole with each other. If the elements changed, the relationship between them would not change and become a part of a larger whole by placing in a hierarchy system. The structure is a way of organizing a set of interrelated and changeable elements



Fig 3 : The base network structure salingaros (Source: Ramezani Aghdash, 2015)

Table 2: Categories of Criteria and Principles of the Network Structure of Public Spaces (Source: Ramezani Aghdash, 2015)

Spatial	cohesion, hierarchy, determination, diversity	
Physical	hierarchy, diversity, integrity, Interconnectedness, connection	
Functional	hierarchy, scope, diversity, integrity	
Perceptual	unity, good shape, determination, continuity	
Access	connections, hierarchy, linking	

based on the fixed subjective- objective interaction which forms a whole. According to the ideas of different scholars, mass and space should be considered as two basic elements of urban fabric. These spaces include motion paths and public spaces that form a network in their composition and cut them into pieces and blocks by passing through the masses. Form of a coherent city is a set of interdependent elements in the city in which the mutual relationships between the components occur objectively and subjectively with the aim of creating a targeted, integrated, neat, legible and meaningful whole. Coherence makes the space units in the city to be linked together through

the force vectors. The common statements among all the presented ideas regarding the spatial coherence are:

Necessity of physical continuity between the elements of the city form to establish the city as a whole;

Continuous spaces as the main feature of network structures; The role of mass and space to complete each other;

Deep Impact of the perception of the citizens in the form of a coherent city;

Taking advantage of the available facilities in the future developments.

Table 3: Main Principles and Criteria for Integrating the Network Structure of Public Spaces in the Urban Context (Source: Ramezani Aghdash, 2015)

Subject	Design Principle	(Source: Ramezani Aghdash, 2015) Criteria
		Existence of network spaces
	Continuity	Existence of a skeleton that links public spaces and buildings and landmarks together
		Creation of a visual unity through rhythm and harmony in context
		Continuity of elements in space
		spatial continuity of new plan with existing space set in context through the main passages or streets
		Mental-visual continuity and existence of strong corridors
		Creation of space contrast
		Performance order at different scales
		Existence of hierarchical order in connecting spaces
	Hierarchy	Access order in various scales
		Existence of physical order in various scales
SS		Creation of space and network sequence in the context
Integrating the network of public spaces		Creation of an access and functional hierarchy for interactive links between different parts of the context structure
ig		Creation of pause points and rhythm in the hierarchy of access
f p	Continued	Creation of symbols connected to each other
선 6		Creation of the connection between space components
[W 0]		Creation of a network of centers
ne		Strengthening and Continuity of main axis
the		Existence of geometric pattern
ting		The use of simple geometric forms
gra		Integration of mass and space through the connection of private and public spaces
Inte		The use of past activities in order to redefine the existing spatial organization
_	Integration	Integration of access network through explicating the links within the context by applying changes in the passages network
		Continuity of neighborhoods and city centers in the context through the main passages or streets
		The integrity of the access spaces of roadway and pedestrian
		Functional integration with the creation of a network of centers
	Interconnectedness	Linking of mass and space through the preservation and development of small blocks
	and Connection	Creation of a network of public spaces connected to each other by various routes
	Connection	Variations in access
		Development of the ability to walk and trails
		Making connections to facilitate the movement
		Making connection in order to increase the movement
		Using small blocks for high permeability

MATERIALS AND METHOD

Public spaces network is a vital element in the city that has essential functions and many opportunities for the citizens. Organizing and linking the axes and the main centers of the city is one of the undeniable necessities since it enables the stability and continuity of the entire city. Network of public spaces is important because it can create a common ground and a link between typical elements and can explicitly signify the functional, physical, visual relationships in the city and demonstrate an integrated whole of the city. Network structure of public spaces is important because understanding this network as a structure presents us the formation of the city. Therefore, it can be concluded that paying attention to strengthening the network of public spaces in the city can reinforce the functional, visual, and physical connection and create more mobility in urban areas. Also it can lead to reviving areas with positive potential in the city and urban spaces and lack of decadence in urban elements. Therefore, it can be used as a general structure model for future growth and development of the city. The purpose of this paper is to identify the key components and key factors affecting the reinforcement of public spaces network using structuralism approaches in the middle zone of Vakilabad Boulevard and Chehel Baze watercourse in Mashhad/Iran. In the present study, factors and criteria influencing the structure of the public spaces network were extracted by literature Review and the Content Analysis Method and according to these criteria and observations, mw make policy and goals then with Providing Conceptual Options In three different approaches, we have come up with a map of the design area structure. The method of analysis in the literature review section is qualitative content analysis and in the field of case study recognition is based on survey observation.

Case Study

The area under investigation which is located in middle zone of Vakilabad Boulevard and Chehel Baze watercourse in Mashhad/Iran is an attractive and centralized area with mostly residential texture due to the special position of the main access such as Vakilabad axis and Azadi Square as the main backbone and skeleton of the city and due to the different functions with a

combination of the main activities of the city each influencing the physical organization system and main formation of the city (Fig 4). Despite the potential and existing opportunities in the context including centers and pedestrian axis, responsive activity to the city, and etc., this area has problems in its public spaces network. The first problem is lack of space functional integration and inflexible and inefficient plaid pattern in the creation of public spaces with different space characters. The second problem is lack of public open spaces and suitable distribution in the fabric and lack of links between suitable & available spaces with the main centers of activity. The case study of this paper in this section presents the urban design framework for integrating the public spaces network by investigating the formation of a network of public spaces in the area and spatial structure and its network of public spaces. In order to recognize the structure of open spaces areas in this paper, all the main urban public spaces were identified. One of the reasons for improving the quality of public spaces and accounting it as a component of the network of public spaces is the existence of spaces in which is considerable civic life due to the accumulation of different urban uses. The gathering of marketing land use and service around Moalem, Vakil abad, Daneshjoo and Seyyed Razi axis has created an attractive and thriving network of open spaces that can be considered as a part of the area structure. As can be seen in the map, the majority of public spaces network in the area is composed of service axis and can be referred to as connecting joints between other spaces (Fig 6). Due to the specific land uses such as restaurants and places for youngsters to have some drinking or buying special products, some areas are created along the axis that have the potential to turn into equipped spaces and a strong part of the spatial backbone of the zone. A large part of the public spaces in the area belongs to the connecting network but just those roads are among backbone of public spaces and public spaces network that provide the possibility of the formation of pedestrian movement and social interaction and the behavioral resort due to the activities and physical characteristics and certain services in which located. Public spaces are in the form of recreational spaces and services as a scattered pattern in the area which have a linear pattern. This pattern is not appropriate



Fig 4.: The strategic and intervention rang (Source: Ramezani Aghdash, 2015)

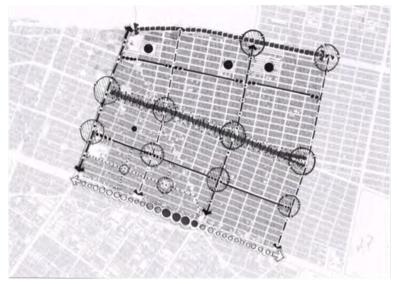


Fig 5: Space skeleton map (Source: Ramezani Aghdash, 2015)



Fig 6 : The main structure map (Source: Ramezani Aghdash, 2015)

for such activities and should be extended in different areas of the zone and be expanded in a sequence and hierarchical form in potential parts of the area. To identify the network of public spaces, the first step is to recognize the areas with central role and anchorage activities. As can be seen in the map, the spatial organization of the zone is mostly formed in the vicinity of the network of the main access of the area under investigation and it can be split into neighborhoods and the texture behind the main axis. Also there are some areas in the field which compose an apprehensible and memorable mass due to the existence of diverse land uses and are linked by connecting routes of the zone and they create continuous conception of public space organization and spatial backbone for the citizens. Spatial skeleton and coherence and integrity of the structure of public spaces network in the area is comprised of: (Fig 5) A set of anchorage spaces (central or axis of the city) such as

established through Vakil Abad, Moalem, Daneshamooz and Seyyed Razi axis. According to the characteristics of the intermediate fabric of Vakilabad and Chehelbaze watercourse and the investigation of the area based on the principles derived from the theoretical

framework, the most important internal and external elements of the zone affecting the structure changes is presented in Table 4 according to the facilities and limitations of spatial organization and structure of public spaces:

axis of Moalem, Vakil Abad, Golha Park and specific activity centers in the area.

The main connections between public spaces which is provided by connecting ways.

The initial connections between the internal network of

public spaces in the area and external network that is mostly

Table 4: Integrated Analysis of Spatial Organization and Structure of Public Spaces by SWOT (Source: Aghdash, 2015)

Design Principles	Strengths	Weaknesses	Opportunities	Threats
Continuity	- Moalem and Vakil Abad streets are two major ele- ments of the neighborhood skeleton and connecting all the components of neigh- borhoods fabric together	- lack of public spaces in the area	Possibility of the creation of interconnected walking paths, connected to the main urban centers such as Mellat park and urban railway track and shopping centers	- disruption of public spaces network due to lack of proper connec- tion between elements of space organization (crossing streets)
Hierarchy	- the existence of spatial hierarchy linked to the streets as the main element of public spaces in the context	Lack of suitable composition of static and dynamic spaces	Vacant and barren lands as an opportunity to cre- ate a space contrast in texture and the produc- tion of urban space	
Specific area	- existence of activity scope and behavioral resort of functions	the lack of space contrast in grid texture		
Diversity	- existence of various land uses with different scales to meet the needs of residents in the area	the absence of a hierarchy in nodes connectionuniformity and inflexible texture	- Chehel baze water- cours is a suitable place for creating dynamic public spaces	
	- existence of various activity centers	69207		
Continuity	- Moalem axis as directing agent for movements along the Mellat park	Lack of continuity in public spaces and disorder of the hierarchy	The landscape of southern mountains is a chance to make a pretty corridor	- physical interven- tions as a threat to obstruct the visual cor- ridors towards some elements such as the southern mountains and Mellat park
Integration	- physical discipline which leads to convenient distri- bution of facilities network	-Spatial separation between the edge of the main axis and the internal fab- ric - failure to identify a coherent and in-	Wasteland in the zone as an opportunity to create public spaces	
Interconnectedness and connection	- the appropriate link and connection with the main routs of the city	tegrated whole - lack of proper connection between the main structure of the fabric with sub passages and public spaces in the fabric	- Chehelbaze water- course as an appropriate opportunity to strength- en the skeleton of the area	- Ignoring of links with the neighborhood sur- rounding areas
Readability		Inappropriate distribution of the floors towards urban centers	- the opportunity to cre- ate visual land mark along the main routes as the major urban centers	- lack of formation of a set of centers and land- mark pointS
Accessibility	- streets and nodes as the main public spaces of net- work structure		- possibility of the creation of interconnected walking paths connected to the main urban centers such as Mellat park	

RESULTS AND DISCUSSION

Study Area of Urban Design Framework

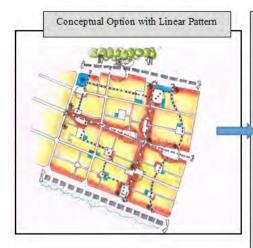
The area under investigation in the overview of this design in 2036 will be identified as a connecting joint which has an integration with the surrounding area and a lively and safe place with coherence in its spatial public spaces network and full of spatial unity. This context provides a proper base for citizen's presence at all times of the day by having various functional centers and presenting a diverse mixture of activities such as, shopping, sports, leisure time and residential desired pattern. The area under investigation has a sensational richness and a

unique Space character by using principles of structuralism and an integrated network of public spaces and functional centers which become a place in compliance with the mental structure of the citizens. Also this area is identified as the main arena of social interaction and residents' civic life. This area is guided into the intended overview by presenting the related strategies and policies and three different conceptual options are presented in order to integrating the structure of public spaces network.

Then urban design projects have been defined in three fields such as centers, axes and zones by presenting a map of the

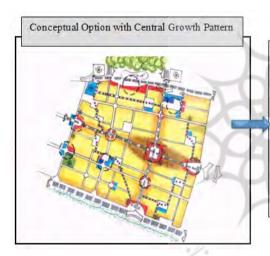
Table 5: goals, strategies and policies for integrating the network of public spaces (Source: Ramezani Aghdash, 2015)

	Table 5: goals, strategies and policies for integrating the network of public spaces (Source: Ramezani Aghdash, 2015)				
The macro purpose: internal integrity, external links	Continuity in Spatial Network	Interconnectedness of Physical-spatial elements Accessibility of public spaces network in the area with higher hierarchy Continuity and connectivity in public spaces network to define a whole unit	1. The establishment of interfaces and joint spaces at the beginning and the end of the main axis 2. Defining the input and gateway centers for the site 3. Connecting the disjoint areas by landscaping the routes which have a joint role. 1. Strengthening the basic structure through the links between the elements 2. Creation of local squares in neighborhoods without positive spaces 3. The combination of static and dynamic spaces 1. Creating an interface between the discrete points of the public spaces 2. Using the potential lands for creating a connection in public spaces network 3. Creating functional centers for continuity in the spatial structure 4. Creating trails and linear green routes to connect the spaces between the existing green routes together in order to understand a whole by pedestrians. 5. Continuous extension of the main elements of the field and replicating some of the visual elements such as gates, towers and similar symbols		
	Strengthening of mental and symbolic base of the site	Creation of a proper physical form and strengthening the sensa- tional richness	 Paying attention to the scale and character of the site in future developments of public spaces networks Creating spatial obstruction Visual richness on the sidewalk Creating visual effects for some buildings in specific functional areas 		
		Creation of a unique conceptual area	 The establishment of new land marks beside the existing land marks as a network of views Strengthening mental land marks Defining corner of the intersection as land mark Defining entrance gates to the site Paying attention to the number and intervals of special points in order to speed up the perception of public spaces network Defining the specific points at the beginning and the end of the main axes of the site structure 		
	Creation of Functional coherence	Revision of the functional and activity order by establishing new functional activity centers	Creating a walking network for connecting the functional activity centers Proper distribution of the functional activity centers in site Existence of diverse routes for connecting centers to each other based on a short connection		



- creating a link and strengthening the visual connection among the watercourse and natural edge of Vakil Abad Blvd as the main elements of structure of the zone by strengthening the Seyyed Razi Blvd
- -strengthening Amozegar street through the use of multifunctional spaces in city and regional scale and creating linear
- Creating interconnected network of live centers which are connected to each other by contrasting ways
- Connection and links between nodes and main centers of activity and centers from which the landscape can be seen by contrasting routes and creating sequences of the landscape
- -Creating pedestrian path to connect two natural elements of the
- -Creating a geometric structure to connect centers to each other
- -Hierarchical link of the axis
- -Creating joints along the movement routes
- strengthening Moalem Blvd as the main market street linking two green zones. Golha Park and Mellat park
- Development through the longitudinal direction of the main

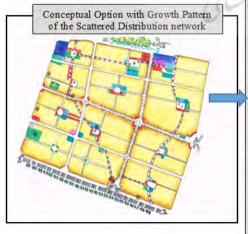
Fig 7: Conceptual Option with Linear Pattern (Source: Ramezani Aghdash, 2015)



existence of great variety of centers and their internal connections to create a network structure

- The combination of nodes and linking spaces which connect them and functional scales in the component hierarchy
- -Using natural elements to create visual continuity between the basic structural elements of the site
- strengthening the joint spaces at the beginning and the end of Moalem Blvd and Syed Razi to create external links with the surrounding context
- Centralizing and using the core elements for interconnectedness and creating an integrated whole
- Visual continuity in linking of the soft elements of space
- Integration through centralization

Fig 8: Conceptual Option with Central Growth Pattern (Source: Ramezani Aghdash, 2015)



-Existence scattered centers in the fabric and their internal relationships to create a network structure

- Hierarchical connection among activity centers
- strengthening the joint spaces at the beginning and the end of Moalem Blvd and Syed Razi street to create external links with the surrounding fabric
- Determining the important points at the beginning and the end of the main axis of the skeleton
- Creating footpath for continuity between centers
- -Creating joint spaces in long routes to pause and create lively
- Dispersal and suitable distribution of the functions in different scales and creating a network of functions in the context of the site -Strengthening the existing centers and neighborhood centers by strengthening and performing functions in appropriate scale
- Continuity based on short connection
- Opening of the space at the entrance of the watercourse in order to overcome natural element to the artifact element
- breaking the existing steady order in the site field

Fig 9: Conceptual Option with Pattern of the Scattered Distribution network (Source: Ramezani Aghdash, 2015)



Fig 10: structure of the scattered distribution pattern (Source: Ramezani Aghdash, 2015)

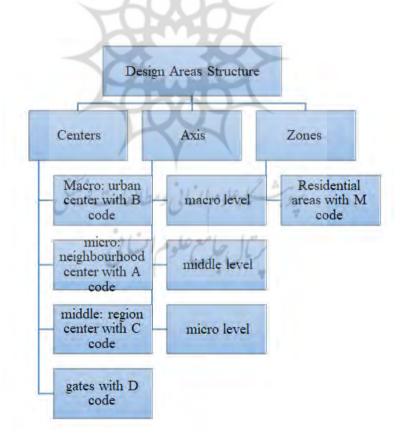


Fig 11: components of the Map of Design Area Structure (Source: Ramezani Aghdash, 2015)



Fig 12: The Map of Design Area Structure (Source: Ramezani Aghdash, 2015)

structure of design areas that each of them plays a role in three scale, small, medium and large, in terms of performance measures and the effectiveness to the site. Each area of the design follows a specific purpose in integrating the public spaces structure in the site.

CONCLUSION

An urban community must be considered as the spatial organization that its backbone is a purposive combination of different components with different scales and functions. As discussed in this paper, this regular structure of spaces is not random, but it obtains its entirety by certain characteristics and principles. Therefore, if some necessary decisions are not adopted for the protection of its integrity, it will die and disappear. Public spaces create a set of various functions in addition to shaping the structure of urban fabric in their movements. Also paying attention to the composition of each of the spaces can lead to changing a node to a sign at different levels. In addition to increasing the social activity as an element of identity and sense of place, it can also be identified as an element of formation of positive image of the fabric. In this case study, the concepts and components of urban spaces network are provided in a logical process and the overview of the area will lead to the integrity of the public spaces network structure in the fabric. Physical structure of the network of public spaces pays attention to the effective factors in type and quality of the link between static and dynamic spaces along the network. Factors which cause the formation of a suitable composition as a continuous and consecutive spaces follow some principles such as continuity in the composition of public spaces, observing the spatial hierarchy, the unity principle, the use of contrast and creating spatial

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