

The Densest Cities with the Largest User-Friendly Spaces

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ABSTRACT

It is evident that the newest trend of urban site design is to provide dense cities with the largest green, generous, and user-friendly public spaces, very necessary for any urban development. The quality of urban life benefits from opportunities to create and experience open public spaces. Their elements are situated to become main circulation routes and programmed with basic and mixed-use services, natural landscapes, walkways, fountains, and many other amenities. But this trend is directly faced with different difficult situations of redevelopment, community issues, different concepts of urban living patterns, and transportation impacts. All of these are among several demanding problems that require our consideration.

Our paper addresses the importance of different approaches to design practices and its' reflectance on the needs of both natural and human communities. A better balance of transportation means and user-friendly spaces would help urban sites to function interactively. Giving priority to public transportation to reduce congestion and pollution, facilitating access to basic services, creating shared spaces, and providing passive or active recreation opportunities including pocket parks, accessible green roofs, plazas, and courtyards, would invigorate and sustain naturally enriched spaces. The user would benefit from this balance, which provides him/her with a better quality of life, comfort, and security. The urban life would have more user-friendly spaces where all ways of transportation and activities find their own place. The environment would benefit greatly from a reduced number of cars, fewer toxins, more open space, and more pleasing landscaping complementing the architecture.

KEYWORDS: basic and mix-use services, transportation impacts, redevelopment, congestion, user-friendly spaces.

1 INTRODUCTION

Historically the city has brought together a wide variety of people and activities into limited areas. People come from everywhere to be a part of this mixture and the opportunities it provides. They create a close relationship with the urban environment and are constantly influenced by as well as influencing the prevailing urban conditions.

One of society's most important tasks is to create and maintain an environment which nurtures physical and social well-being. But the question is in what extend cities promote the development of a healthy environment. This question expresses the concern originated from the trend of modern society's constant separation from the natural environment and the resulting negative impacts on human health and well-being. Man may develop temporary tolerances for environmental pollution, severe crowding, excessive noise. But this tolerance has a harmful effect in the long run therefore it is very important to create an optimum environment for the widest range of human activity. Therefore, incorporating user-friendly public spaces in dense cities would be a sustainable approach that would purify the urban design process further towards the creation of a healthy relationship between the human beings and urban environments.

2 THE CONNECTION OF URBAN SITE DENSITY, OPEN PUBLIC SPACE, AND ITS USER-FRIENDLINESS.

2.1 Density of urban sites

In Albanian conditions compact developments are very necessary because it conserves land, promote community livability, transportation efficiency and walkability. One of the principle of sustainable urban site promoted by LEED Reference Guide for GBDC et al. (2009) is "Development Density and Community Connectivity" in Sustainable Sites category. It gives preference to areas within an existing urban site by following urban development plans to meet or exceed density goals defined by a certain jurisdiction. It increases the sustainability of urban sites because of the significant economic benefits of reduction or elimination of new infrastructure including roads, utility services, and other amenities already in place. Another benefit of in-fill development is making access of pedestrian to basic services, which in turn reduces the time they will spend driving between services and accessing parking. In addition, public health will benefit by increased levels of physical activity.

Dense urban sites are developed on transportation lines that serves a significant cost reduction by downsizing the project parking capacity. So, several benefits of in-fill developments that meet applicable density goals stimulate maximizing open public spaces and make them functional, sensitive to natural system, and user-friendly. Dense cities contribute also in managing stormwater runoff, because they make possible the reduction of paved surfaces including roads and sidewalks, so consequently they generate less runoffs and less impervious areas than low-density sites. Dense urban cities also contribute to neighborhood pattern and design by creating healthy walkable and mixed-use communities. Community Connectivity is another benefit of a dense city which makes possible connections between pedestrians with a variety of basic services within walking distances.

One way of increasing the density development is Clustering developments, "a site planning approach that is an alternative to conventional subdivision development. It is a practice of Low Impact Development that groups residential properties in a proposed subdivision closer together in order to utilize the rest of the land for open space, recreation or common shared spaces". Typically, road frontage, lot size, setbacks, and other traditional subdivision regulations are redefined to permit the developer to spend much less on land. Advantages include more green/public space, closer community, and an optimal storm water mangement. [1] (Web-2)



Figure 1: A presentation 3D view of a Clustering development in New York, NY, that increase the green open space.

2.2 Open public spaces

An important factor in having a sustainable sites is to promote in-fill developments by encouraging the natural resources. The quality of urban life benefits from opportunities to create and experience open public spaces. A balance between the dense city and the open public spaces would reflect on the needs of both natural and human communities. Increasing green open spaces in development footprint where hardscape, access roads, and parking are included, important ecological services are provided.(Fig. 2) Reducing the footprint of the building by constructing vertical structure with the same square footage as a horizontal one may add a small percentage to first costs, but a structure with a smaller footprint is generally more efficient, resulting in reduced land coverage and consequently in bigger open space areas.



Figure1: Urban Site in Atlanta, GA where planted incorporation areas relieve hard surfaces (Web-1) (Web-1)



Figure 3: Site view in Atlanta, GA shows of green courtyard between the buildings

Open space can be provided at grade, or on the roof. Incorporation of a landscape courtyard and roof gardens within the building could contribute in creation of additional pieces of open spaces filled with

greenery features, which would improve exposure to nature, fresh air, and growing plants. Green-roofs help the environment by imitating the natural cycle of rainfall on the earth, while adding new outdoor spaces in dense urban sites. People living and working in mixed-use buildings with green-roofs have the advantage of a place of repose and fresh air amidst the busy urban developments.



Figure4:Green roofs incorporated in a Residential complex in Dubai merge nicely with surrounding landscape.(Web-1)



Fig.5: Skylight served for underground public space. (Web-1)



Fig.6: Skylight seen at ground level. (Web-1)

Open space can be provided at undergrade also. Skylights that bring some blue sky into the structure make another pleasant link with the outdoors. They can provide the warmth and brightness of the natural daylight and at night they can display the sovereignty of the stars and the moon. (Web-1)

Figures 5, and 6 show an underground retail center of an walking city in South Korea. Each neighborhood is linked to the commercial center by boulevards. The system is integrated with a people mover system that links the subway and regional transit systems. So, increasing density while optimizing open spaces, would enhance the environment through the incorporation of these elements into a successful design. (Web-1)

2.2.1 Lighting in urban site

Another important factor contributing in urban site's open space is Lighting. According to USGBC et al. (2009), "reduction of light pollution", either for the buildings or for landscaping, should not need to transgress the property and not shine into the atmosphere. Such practice is wasteful and irritating to the inhabitants of surrounding properties. All site lighting should be directed downward to avoid "light pollution". Requirements deal with light pollution through the control of: 1) interior building lighting, where "light spill through transparent surfaces to exterior areas need to be prevented"; 2) exterior lighting power density, where projects should consider "selecting efficient fixtures using productive sources to reduce lighting power and illumination intensity". The least amount of lighting equipment possible need to be used to achieve the goals of project, and a balance of the quantity of equipment used need to be provided for "glare control and uniform lighting"; and 3) exterior light distribution, where luminaire locations have to be selected carefully "to control glare and contain light within the design area". Projects should minimize the lighting of architectural and landscape features. "Where lighting is required for safety, security, egress or identification, utilize down-lighting techniques rather than up-lighting.



Figure 7: The ways of Reduction of Light pollution

2.3 User-friendliness of public spaces

Well designed open public space can significantly increase user-friendliness of the urban cities. Its accessibility facilitates the inhabitants' interactivity with the city through several links and connections, which are important elements that help the city to function through many levels. User-friendliness of the open space is associated with another concept developed to promote outdoor environments building components and features designed to be usable by all people. This principle that is one of several important principles of Universal Design developed by the Center for Universal Design in N.C. State University, offers designers "guidance to better integrate features that meet the needs of as many users to the greatest extent as possible, without the need for adaptation, specialized design, or significant additional cost." But what are these important elements that make the open public spaces user-friendly?

2.3.1 Natural landscapes

The first is natural landscapes. As it is written by Schinz et al. (1998) : "To create a garden is to search for a better world". Whether the result of this expression is just a minimal impact on the natural network or a green masterpiece, it is based on the expectation of a promising future where this "garden" is an important element of the whole package of the user-friendly public spaces in urban areas. This garden helps the buildings "breathe" and provides planted areas to relieve the hard surfaces of not just buildings but also sidewalks and streets. They are important site design elements and provide beauty and vitality to the outdoor environment and have traditionally served for inhabitants as sources of respite and inspiration. In addition to their aesthetic value, planted areas serve a variety of other functions in the outdoor environment, including defining spaces, controlling erosion, destructive runoff, and flooding, absorbing sounds, blocking the sun and winds, and cleaning the air from pollution. Figures 1 and 2 show a couple examples of the effect that green surfaces have in urban spaces.

2.3.2 Water features of the urban sites

Water is more than a physical necessity, it is a vital part of the landscape both aesthetically and spiritually. Water always has had a tremendous appeal for people. Whatever its form is, pool, river, fountain, or waterfall, water can be one of the most fascinating of all natural design element. Water falling freely through space because of a sudden change in elevation, creates the most dramatic of all water displays and is used very often in urban site as a user friendly attractive element. Fountains are another dramatic display of that power of water. Where it is utilized in site design, a large fountain is often the center of attraction with multicolored lights and even musical accompaniment. Regardless of its size or shape, a fountain is always perceived as a cool element making it particularly attractive in warm and dry climate. Figures 8 and 9 show examples of how water can enrich the open space.



Figure 8: Utilizing an waterfall to display the attractive power of the water in retail center of Guri City, S.Korea. (Web-1)



Figure 9: View from a Master Plan in Shanghai that shows the Water as vital part of the landscape (Web-1)

2.3.3 The links between natural areas and the city.

Streets, pedestrians, paths, and bike paths contribute to a system of fully connected and interesting routes to all destinations. Because of their intimate design being small and spatially defined by buildings, trees and lighting, pathways encourage pedestrian and bicycle use while discouraging traffic of higher speeds. As shown by John Tillman Lyle and Joan Woodward et al. (1999), utilizing green spaces by creating a series of interconnected public squares and community parks for citizens, they also complete and harmonize the connections between buildings, open spaces, natural features, and inhabitants, providing calm environments filled with greenery and water features. These links make possible the creation of a walkable city with pedestrian pathways and integrated transportation systems that reduce automobile traffic.

Many other amenities in the site add quantifiable value to the environment. Ample seating areas throughout the whole development, both indoor and outdoor spaces cleverly articulated with art work, planter boxes with seats, weather protected public spaces, interesting lighting patterns, etc. are key elements that provide unique and stimulating user-friendliness of the urban site.

Figure 10 displays the ways in which building defined pedestrian pathways complemented by greenery and art work have the power to create interaction.



Figure 9: Outdoor spaces articulated with art work in San Diego Plaza, USA(Web-1)

3 CONCLUSION

This paper explains the importance of the connectivity of three important concepts very necessary for any urban development: density of urban site, open public spaces, and their user-friendliness. This connectivity has to be committed to designing user-friendly urban environments with an emphasis on sustainability, function, simplicity, and beauty. A new approach that understands and reflects the needs of human and natural communities will make possible the connection among them. Architects and other team members should work to accommodate the connection in right proportions. State and local governments, and communities have to be much more environmentally sensitive than ever before in order for architecture, landscaping, vehicular, and pedestrian circulation, utility systems, lighting and natural resources, to be evaluated according to their functions, code, legal regulations, economic value, and their vitality of the community. This is the way by which we can get utilized green public open spaces in the cities with increasing density.

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