ANALYZING THE PRINCIPLES OF NEW URBANISM AND ITS CHARTER

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Abstract:

Fast and rough and tumble process of urban modernization (innovation) and its effects make it necessary to think and reconsider about forming urban sustainable environment. In this way, new approaches in urban designing occupation have been formed with distress of enhancing urban environment quality. It can be mentioned to new urbanism approach. Mentioned approach has been formed to criticized modern urbanism which have machinery, inhuman and scattered pattern and with emphasis on especial position of human in present era urban spaces. Nowadays, this approach is responsible for guiding and leadership of generation of postmodern designers and programmers. Primary principles of mentioned approach are based on using past humanistic traditional principles of urbanism in post modernism era. The goal of this paper is introductionof new urbanism approach in the course of creating appropriate urban environment in humanistic scale which is responsible for response to evolutions and urban and developmental modern improvements in framework of urban sustainable developmental goals. Ultimately, present paper tries to study the reality and condition of forming new urbanism approach with emphasis on using precious urban indexes before industry era in after industry era in the course of making sustainable urbanspaces.

Key words: New Urbanism, principles and concept of new urbanism, the charter of new urbanism, Urban Spaces, New Urbanism, Sustainability, Theories of urban planning, Profits of using new urbanism.

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1- Introduction

1.1 Introduction:

The recent movement known as 'New Urbanism' or 'NU' is attempting to reconcile competing ideas about urbanism that have been evolving in America for over a century. New Urbanism, an urban reform movement that gained prominence in the 1990s, seeks to promote qualities that urban reformers have always sought: vital, beautiful, just, environmentally benign human settlements. The significance of New Urbanism is that it is a combination of these past efforts: the culmination of a long, multi-faceted attempt to define what urbanism in America should be. This revelation only comes to light in view of the history that preceded it.

NU Founded in 1993 by a group of enthusiastic American architects, the organizing body for new urbanism is the Congress for the New Urbanism (CNU). CNU has gradually become an influential multi-disciplinary organization that supports the creation of sustainable, walkable, mixed-use neighborhoods that provide for better health and economic outcomes. Working against the conventional, mainly sprawl-oriented dogma of the post-WWII period, supporters of the new urban design movement advocate the restructuring of public policy and development practices to make cities and towns more engaging, vibrant and livable. In particular, as outlined in the preamble of CNU's Charter, the new urbanists support the restoration of existing urban centers and towns within coherent metropolitan regions and argue that community, economics, environment, health and design need to be addressed simultaneously through urban design and planning. In addition, "new urbanism stands for the reconfiguration of sprawling suburbs into communities of real neighborhoods and diverse districts, the conservation of natural environments, and the preservation of our built legacy.

1.2 ProblemStatement:

The antithesis of urbanism can also be defined. The tendency toward separation, segregation, planning by monolithic elements like express highways, and the neglect of equity, place, the public realm, historical structure and the human scale of urban form are all symptomatic of the opposite trend, which could be called 'anti-urbanism' the anti-urbanism society are neglecting the privilege of the new urbanism offer.

1.3 Aim of theresearch:

The aim of this research is introduction of new urbanism approach in the course of creating appropriate urban environment in humanistic scale which is responsible for response to evolutions and urban and developmental modern improvements in framework of urban sustainable developmental goals. Ultimately, this research tries to study the reality and condition of forming new urbanism approach with emphasis on using precious urban indexes the course of making sustainable urban spaces ,in order to prove that the design of the new urban is the essential strategy for the society is sophisticated and refute the claims of anti-urbanism.

1.4 Limitation:

The research is content information about new urbanism and its principles, approach the sustainability in new urban design and analyzing its charter.

1.5 Methodology:

This research will analysis the principles of new urbanism in their practical implementation as evidenced and their profit income of using new urbanism methods in designing the urban spaces.

As methodology used in the thesis, it has been used critical analysis of the information assembled. The purpose of the method is to analyses the social, economic, technical etc. of new urbanism principles.

1.6 Historicalbackground:

During the preindustrial era, most ordinary villages were normally built to adapt to the local social and environmental context, and their ingenious designs and diversity have become a treasure trove that inspires some contemporary architects. However, with a booming economy since the 20th century, the bond between new residential buildings and the environment is disappearing in villages. In the process of new development, there is a desire to abandon the past and purely seek for concrete blocks and multi-storey flats which usually have been mass-produced in the urban area. This generation makes most modern development divorce from specific places, so much of priceless value has been lost or destroyed. In addition, the new design is found as unattractive and dislike places where appearance and form are short of individual recognition and indistinguishable from similar environments elsewhere. The villages have become regional or national, even international, in their scope and effects (Owen, 1995).

Therefore, it is very important to look for an appropriate way to respect and maintain traditional settlement forms for new development to meet people's contemporary needs in ordinary villages, and also vital that lessons are learnt from exemplars. As HRH the Prince of Wales (1989, P15) said: "We can build new developments which echo the familiar, attractive features of our regional vernacular styles. There are architects who can design with sensitivity and imagination so that people can live in more pleasing surroundings. And not just in our towns and cities, it is possible in country areas to build straightforward, visually appealing houses in local materialsfor people on lowerincomes

2- NEWURBANISM

The most important planning movement in this century, and is about creating a better future for us all. It is an international movement to reform the design of the built environment, and is about raising our quality of life and standard of living by creating better places to live. New Urbanism is the revival of our lost art of place-making, and is essentially a re-ordering of the built environment into the form of complete cities, towns, villages, and neighborhoods - the way communities have been built for centuries around the world. New Urbanism involves fixing and infilling cities, as well as the creation of compact new towns and villages.

There are principles and foundation of this idea that make the new urbanism is the most preferable in the contemporary design for urban fabric Which have a preference for totality of anti-urbanization of all social, economic and social aspects.

Those aspects are created by hundreds of study case and new urban design through history and specially in the last century, which American settlement and European city have to came through before they architectural community to develop new master plane with new idea of human life and sense of place.

Such as the study that done by Lewis Mumford and Jane Jacobs (Precursors of New Urbanism: Residents' Reaction to Different Urban Visions) in 60th they found the human aspect are very important in the urban design such as sense of place, reducing car transportation, sustainable building etc.

This are the principles that are important to the design of urban fabric:

The Principles of New Urbanism

A Study case by Plas and Lewis (1996) interviewed residents of Seaside, Florida. And other study by Freeman (2001), Kuo et al. (1998), Brown and Cropper (2001), Nasar and Julian (1995) They found the are many factors or principles that are very essential to the resident, in this research those principles are taking to account and analyzed the answers of the resident of many urban areas in general perspective.

Lennard (1987) encapsulated theory on the design of urban residential space that supported social life. His summary compiles a list of seven basic design principles from urban design theory brought together from over one hundred presentations at the 17th International Making Cities Livable Conference in Freiburg, Germany, September 1995. Lennard's (1987) list includes the followingprinciples:

1. safe and comfortable pedestriannetworks
2. a central neighborhoodsquare
3. human scale for urbanspaces
4. visual enclosures to foster a sense ofbelonging
5. natural elements to increase sensualenjoyment
6. intricate and personal areas adjacent to significant structures to contribute meaningful outdoor experiences
7. spatial definitions with appropriate seating locations andarrangements.

In a similar study Hester (1975) examined characteristics that were appropriate for social interaction within urban neighborhoods. The study resulted in a checklist of user needs for neighborhood design that was derived from a questionnaire of users
rather than sociologists and designers. The concepts incorporate sociological findings
and are readily transferable into design programs. Hester's checklist includes:

1. Physical spaces that are adapted to the desired activities of people, such as walking,sitting, or active playareas.
2. Appropriate activity settings such as a hierarchy of public outdoor spaces from large common gathering areas at public squares to the neighborhood centers defined by shared social\activities, to the more intimate patio and porch layouts at individual buildingentries.
1. Relatedness through interaction with the naturalenvironment.

2. Safety that allows individuals to enjoy the outdoorexperience
3. Aesthetic appeal that adds interest andmeaning
4. Convenience that meets the needs of a fast pacedculture
5. Psychologicalcomfort
6. Physicalcomfort
7. Symbolic ownership (Hester1975).

The lists by Lennard (1987) and Hester (1975) are very similar. Both mention specifically, the importance of safety, aesthetics, and interaction with nature.

We conclude that there are these principles that we can understand from those study cases such principles such as:

1. Accessibility
2. WalkAbility
3. Connectivity
4. Mixed Use &Diversity
5. MixedHousing
6. Quality Architecture & UrbanDesign
7. Traditional NeighborhoodStructure
8. TransectPlanning
9. IncreasedDensity
10. SmartGrowth
11. SmartTransportation
12. Smartlocation
13. Sustainability
14. Quality oflife

Accessibility:

a general measure of the availability of transportation. Providing accessibility is superior to providing mobility, as mobility is crudely equated to speed, accepting that it does not matter how long it takes to get to a destination so long as the drive is fast while getting there.

Buildings should be designed to be accessible and visitable while respecting the traditional urban fabric.

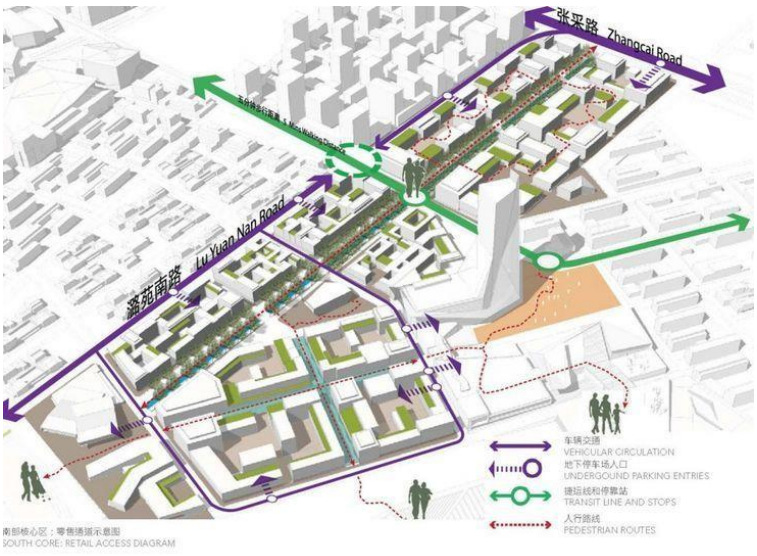

Figure 1 Accessibility in urban spaces

Walk Ability

1. Most things within a10-minute

2. walk of home and work. Pedestrian friendly street design (buildings close to street; porches, windows & Doors; tree-lined streets; on street parking; hidden parking lots; garages in rear Lane; narrow, slow speedstreets)

3. Pedestrian streets free of cars in specialcases.

Figure 2 Clear walkable area

Connectivity

1. Interconnected street grid network disperses traffic &easeswalking
2. A hierarchy of narrow streets, boulevards, andalleys
3. High quality pedestrian network and Public realm makes walkingpleasurable

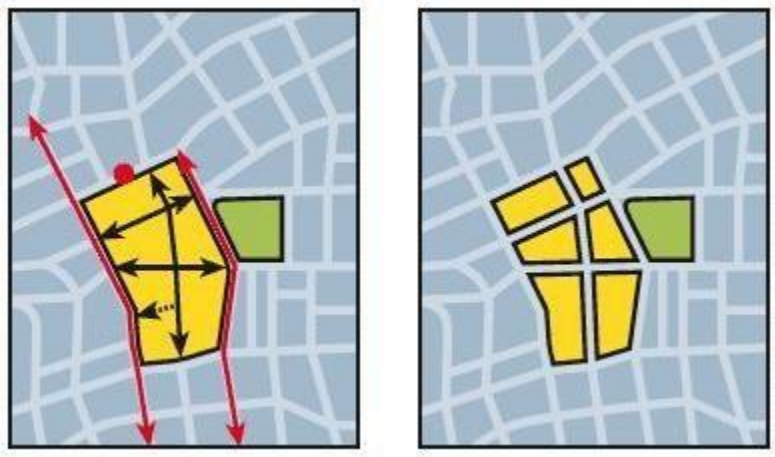

Figure 3 connectivity

Mixed Use & Diversity

1. A mix of shops, offices, apartments, and homes on site. Mixed-use within Neighborhoods, within blocks, and within buildings
2. Diversity of people - of ages, classes, cultures, andraces

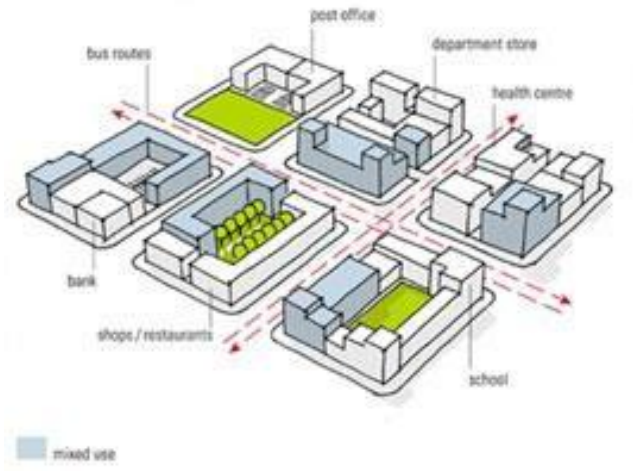

Figure 4 mixed use and diversity

Mixed Housing

A range of types, sizes and prices in closer proximity. Promote the creation of mixed use neighborhoods that support the functions of daily life: employment, recreation, retail, and civic and educational institutions.

Figure 5 mixes

Quality Architecture & Urban Design

Emphasis on beauty, aesthetics, human comfort, and creating a sense of place; Special placement of civic uses and sites within community. Human scale architecture &beautiful surroundings nourish the human spirit.

Figure 6 Quality of life

- Discernable center andedge
- Public space atcenter
- Importance of quality public realm; public open space designed as civicart
- Contains a range of uses and densities within 10-minutewalk
- Transect planning: Highest densities at town center; progressively less dense towards the edge.

The transect is an analytical system that conceptualizes mutually reinforcing elements, creating a series of specific natural habitats and/or urban lifestyle settings. The Transect integrates environmental methodology for habitat assessment with zoning methodology for community design. The professional boundary between the natural and man-made disappears, enabling environmentalists to assess the design of the human habitat and the urbanists to support the viability of nature. This urban-to-rural transect hierarchy has appropriate building and street types for each area along the continuum.

Figure 7 Green pedestrian

Transect Planning

Like other species, Human beings also thrive in different habitats. There are those who could never live in an urban center; and there are those who would wither in a rural hamlet. Humans need a system that preserves and creates meaningful choices in their habitats. Near the close of the 20th century, New Urbanist designers recognized that sprawl was eradicating the pre-war American transect of the built environment. They began to analyze it and extract its genetic material for replication. In this way, they extended the natural transect to include the built environment, thus establishing the basis for the SmartCode.

Figure 8 The transect area

Increased Density

- More buildings, residences, shops, and services closer together for ease of walking, to enable a more efficient use of services and resources, and to create a more convenient, enjoyable place to live.
- New Urbanism design principles are applied at the full range of densities from small towns, to large cities

Figure 9 high density urban design

Smart Growth

a set of priorities and policies generally supporting the New Urbanism. synthesis.: livable communities

An important ingredient of planning, equivalent of the evolutionary time of the biological sciences. A generation is necessary for the advantages of mixed use to be maximized, and urbanism molts periodically until it reaches a climax condition (this is analogous to biological succession.) Therefore, code zones should be re-considered on a generational time horizon.

There are some of priorities in smart growth:

- Create range ofhousing
- Create walkableneighborhoods
- Encourage community and stakeholdercollaboration
- Foster communities' sense ofplace
- Make development decisions predictable andfair

- Mix landuses
- Preserve open space, farmland, natural beauty, critical environmentalareas
- Provide transportationchoices
- Develop existing community'sfirst
- Encourage compact buildingdesign

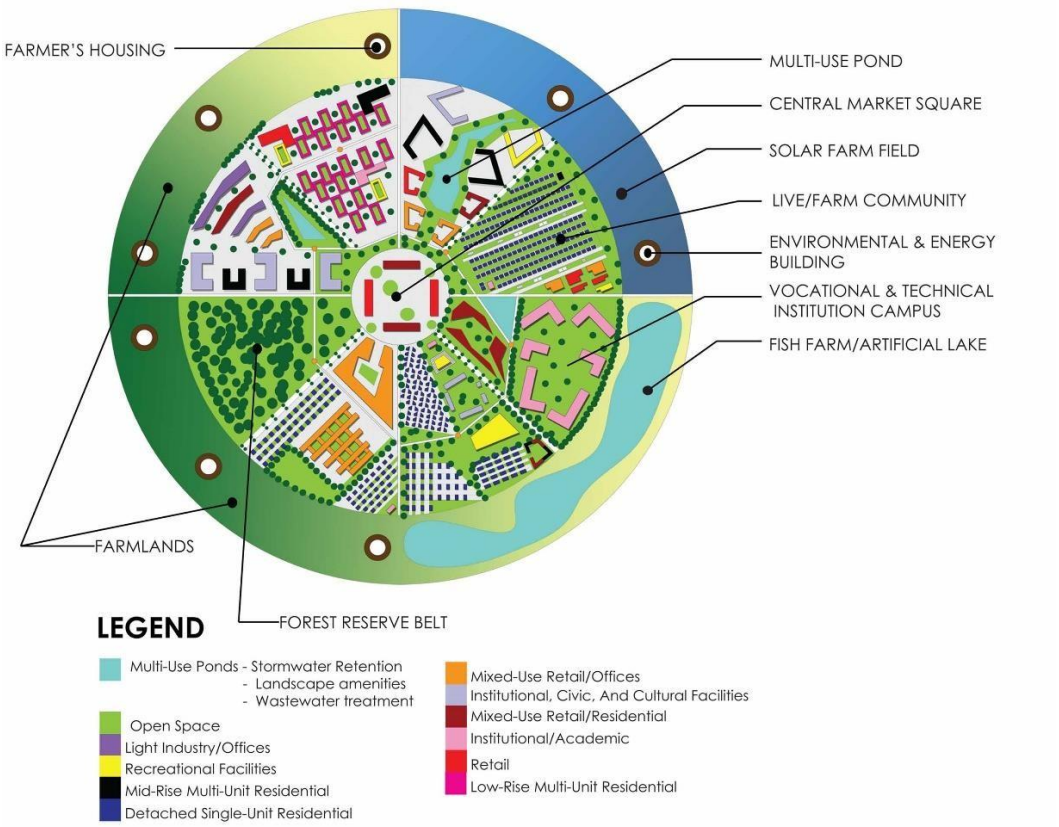

Figure 10 Smart Growth Masterplan

Smart Transportation

- A network of high-quality trains connecting cities, towns, and neighborhoodstogether
- Pedestrian-friendly design that encourages a greater use of bicycles, rollerblades, scooters, and walking as dailytransportation.

Figure 11 Smart Transportation

Smart location

Planning at the regional scale is the first critical step in creating livable communities. Locating development on underused. vacant. abandoned. or contaminated land in existing towns and cities reduces development pressure on rural or prime agricultural lands. These sites. typically infill sites or parcels adjacent to existing development, are often the cornerstones catalyzing further private investment in other underused properties nearby.

The benefits of this approach are many. For example, revitalizing neighborhoods and downtown districts strengthens the municipal tax base and prods communities to improve existing infrastructure. A regional analysis of development opportunities highlights new ways to increase accessibility to employment centers. reduce the time and energy residents spend commuting, and improve air and water quality. Complementary land preservation and conservation strategies at the regional scale identify vulnerable lands and help protect them from development, which focuses local and regional market forces on existing neighborhoods. Combining revitalization strategies with land preservation policies work together to strengthen the vitality and economic viability of mixed-use town centers and neighborhoods.

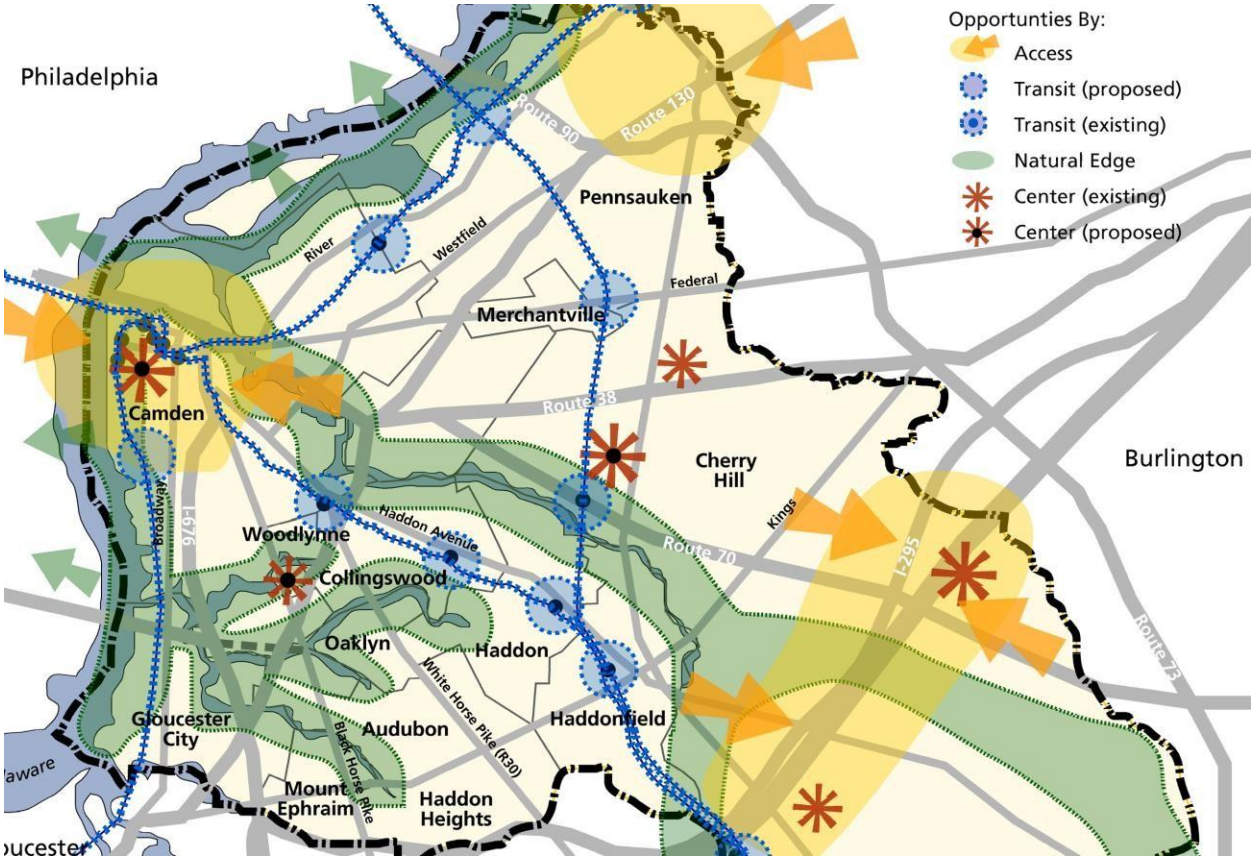

Figure 12 *example of analyzing urban planning*

Sustainability

The Building and Infrastructure:
Renewable energy sources shall be used to reduce carbon and the production of greenhouse gases

1. Minimal environmental impact of development and itsoperations
2. Eco-friendly technologies, respect for ecology and value of naturalsystems
3. Energyefficiency
4. Less use of finitefuels
5. More localproduction
6. More walking, lessdriving

Figure 13 Green buildings

Quality of life

Taken together these add up to a high quality of life well worth living, and create places that enrich, uplift, and inspire the human spirit.

Figure 14 Quality of life in urban fabric

3- CHARTER OF THE NEWURBANISM

Founded in 1993, the Congress for the New Urbanism (CNU) is a loosely formed group of architects, builders, developers, landscape architects, engineers, planners, real estate professions, and others who are committed to "New Urbanist" ideals.

According to CNU, smart growth, green building, and new urbanism each have produced advances in resource and energy efficiency. Yet, alone, they are insufficient and are sometimes even at odds with one another in tackling the global challenges of climate change, settlement patterns of sprawl, poverty, health issues, underdevelopment, and ecological concerns.

CNU created the Charter of the New Urbanism as a means of integrating the specific strategies of smart growth, green building, and new urbanism. The Charter is a set of 27 principles for creating sustainable neighborhoods, buildings, and regions.

they assert the following principles to guide public policy, development practice, urban planning, and design:

The region: metropolis, city, and town:

1. Metropolitan regions are finite places with geographic boundaries derived from topography, watersheds, coastlines, farmlands, regional parks, and river basins. The metropolis is made of multiple centers that are cities, towns, and villages, each with its own identifiable center andedges.

2. The metropolitan region is a fundamental economic unit of the contemporary world. Governmental cooperation, public policy, physical planning, and economic strategies must reflect this newreality.

3. The metropolis has a necessary and fragile relationship to its agrarian hinterland and natural landscapes. The relationship is environmental, economic, and cultural. Farmland and nature areas important to the metropolis as the garden is to thehouse.

4. Development patterns should not blur or eradicate the edges of the metropolis. Infilldevelopment within existing urban areas conserves environmental resources, economic investment, and social fabric, while reclaiming marginal and abandoned areas. Metropolitan regions should develop strategies to encourage such infill development over peripheralexpansion.

5. Where appropriate, new development contiguous to urban boundaries should be organized as neighborhoods and districts, and be integrated with the existing urban pattern. Noncontiguous development should be organized as towns and villages with their own urban edges, and planned fora jobs/housing balance, not as bedroomsuburbs.

6. The development and redevelopment of towns and cities should respect historical patterns, precedents, andboundaries.

7. Cities and towns should bring into proximity a broad spectrum of public and private uses to supporta regional economy that benefits people of all incomes. Affordable housing should be distributed throughout the region to match job opportunities and to avoid concentrations ofpoverty.
8. The physical organization of the region should be supported by a framework oftransportation alternatives. Transit, pedestrian, and bicycle systems should maximize access and mobility throughout the region while reducing dependence upon theautomobile.
9. Revenues and resources can be shared more cooperatively among the municipalities and centers within regions to avoid destructive competition for tax base and to promote rational coordinationof transportation, recreation, public services, housing, and communityinstitutions.

The neighborhood, the district, and the corridor:

1. The neighborhood, the district, and the corridor are the essential elements of developmentand redevelopment in the metropolis. They form identifiable areas that encourage citizens to take responsibility for their maintenance andevolution.

2. Neighborhoods should be compact, pedestrian-friendly, and mixed-use. Districts generallyemphasize a special single use, and should follow the principles of neighborhood design when possible. Corridors are regional connectors of neighborhoods and districts; they range from boulevards and rail lines to rivers andparkways.

3. Many activities of daily living should occur within walking distance, allowing independence to those who do not drive, especially the elderly and the young. Interconnected networks of streets should be designed to encourage walking, reduce the number and length of automobile trips, and conserve energy.

4. Within neighborhoods, a broad range of housing types and price levels can bring people of diverse ages, races, and incomes into daily interaction, strengthening the personal and civic bonds essentialto an authenticcommunity.

5. Transit corridors, when properly planned and coordinated, can help organize metropolitanstructure and revitalize urban centers. In contrast, highway corridors should not displace investment from existingcenters.

6. Appropriate building densities and land uses should be within walking distance of transitstops, permitting public transit to become a viable alternative to theautomobile.

7. Concentrations of civic, institutional, and commercial activity should be embedded inneighborhoods and districts, not isolated in remote, single-use complexes. Schools should be sized and located to enable children to walk or bicycle tothem.

8. The economic health and harmonious evolution of neighborhoods, districts, and corridors canbe improved through graphic urban design codes that serve as predictable guides forchange.

9. A range of parks, from tot-lots and village greens to ball fields and community gardens, should be distributed within neighborhoods. Conservation areas and open lands should be used to defineand connect different neighborhoods anddistricts.

The block, the street, and the building:

1. A primary task of all urban architecture and landscape design is the physical definition of streetsand public spaces as places of shareduse.

2. Individual architectural projects should be seamlessly linked to their surroundings. Thisissue transcendsstyle.

3. The revitalization of urban places depends on safety and security. The design of streets andbuildings should reinforce safe environments, but not at the expense of accessibility andopenness.

4. In the contemporary metropolis, development must adequately accommodate automobiles. It shoulddo so in ways that respect the pedestrian and the form of publicspace.

5. Streets and squares should be safe, comfortable, and interesting to the pedestrian. Properlyconfigured, they encourage walking and enable neighbors to know each other and protect theircommunities.

6. Architecture and landscape design should grow from local climate, topography, history, andbuilding practice.

7. Civic buildings and public gathering places require important sites to reinforce community identityand the culture of democracy. They deserve distinctive form, because their role is different from that of other buildings and places that constitute the fabric of thecity.

8. All buildings should provide their inhabitants with a clear sense of location, weather and time.Natural methods of heating and cooling can be more resource-efficient than mechanicalsystems.

9. Preservation and renewal of historic buildings, districts, and landscapes affirm the continuityand evolution of urbansociety.

4- Case Study Seaside Florida

New Urbanism's design principles are to be applied to transform contemporary cities and to generate compact mixed-use places which should enhance the sense of community and wellbeing of its members. New settlements are supposed to be walkable, and able to generate community life.

New Urbanism rejects the zoning of modernist cities, which resulted in less accessibility for pedestrians and cars. New urbanists believe that the exclusive dedication to automobiles contributed to make the roads dangerous and deserted. Modernism generated insecurity and disorientation instead of fostering a sense of well-being.

Hence, New Urbanism advocates the adaptation of morphologic elements of well-succeeded traditional places (Ellis, 2002; Jacobs, 1961; Kunstler, 1993) to present urban
context with the intention of reestablishing urban life. Among other advocates of thetraditional city, New Urbanism is nuanced by Sitte1; Howard2; and Unwin3. It isdirectly related to North American cities generated till the Second World War, which combinesthe garden-city and the neighborhood concept of Clarence Perry (Rykwert,2000).

Figure 15 *Seaside Florida*

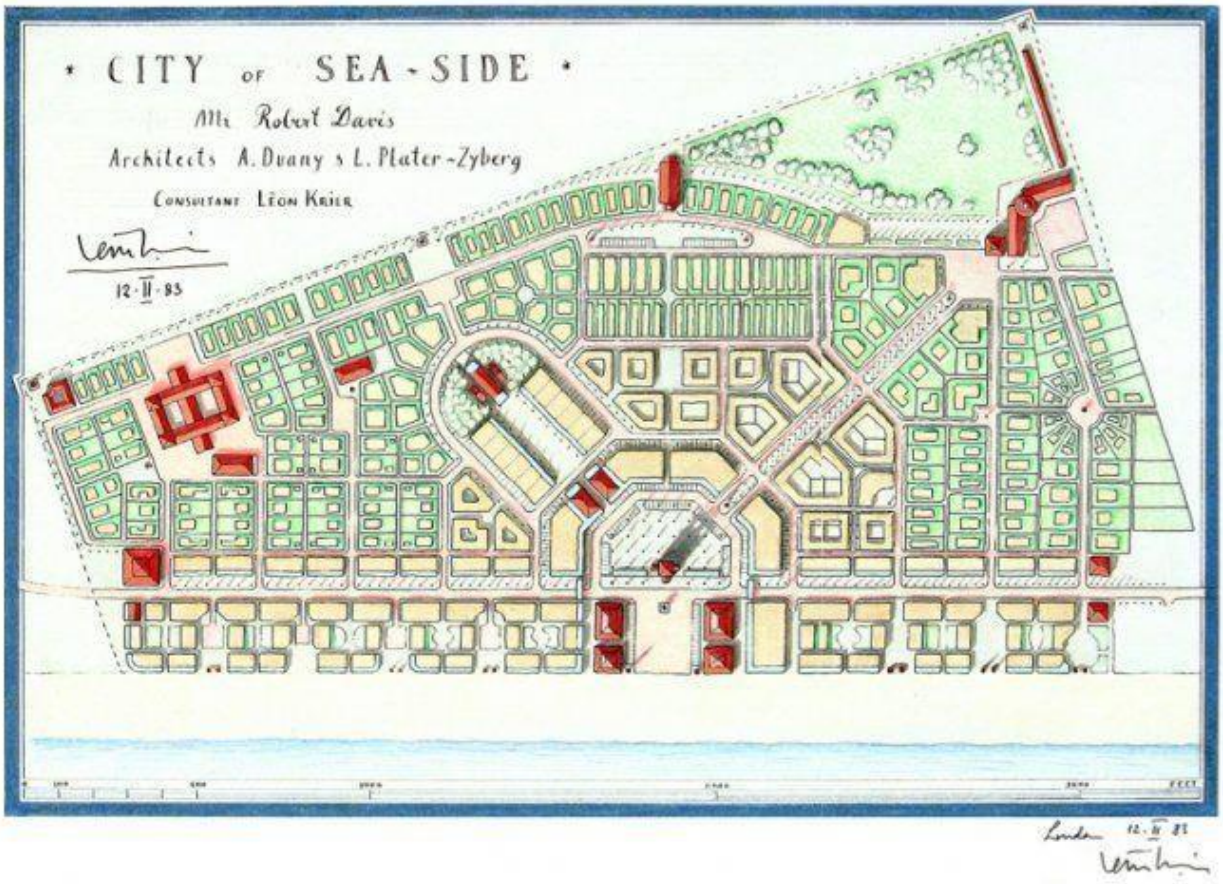

Figure 16 *Seaside Project of NewUrbanism*

According to Perry, the neighborhood corresponds to a population large enough to maintain an elementary school and commerce, limited by roads and public buildings (Rykwert, 2000). Besides the garden-city and the neighborhood, in the United States, modernism blended with a specic economic situation that engendered the sprawl. The decade after the crash of the stock market in 1929 marked a large investment in the construction of roads as opposed to railroads and mass public transportation. To promote the industry of construction after the Second World War, roads and homes were built. Suburbs grew throughout the USA (Rykwert, 2000; Duany; Plater-Zyberk, Speck, 2000). This growth of suburbs and suburban sprawl has many symptoms that are rejected by New Urbanism. Expressways connected to collectors, and cul-de-sacs were built to access the new suburbs and, eventually, the sprawl (Duany, Plater-Zyberk, Speck, 2000). Shopping malls, fastfood restaurants, and once parks were placed along collector roads. Roads, large blocks, andparking lots increased the number of barriers to pedestrians and automobiles and generated trace congestion. Residential areas became isolated from each other, articulated by excessively large streets, narrow sidewalks, huge front setbacks and fewtrees.

In addition to the problems quoted above, modernist roads encourage high speed and, therefore, accidents. The sprawl's physical structure contributes to eliminate the vitality of the public

spaces, and to enhance the isolation and the tedium of contemporary suburban life (Duany; Plater-Zyberk, Speck, 2000). Moreover, suburban sprawl depends on the use of agricultural land (Segre, 2002), therefore putting at risk the local economy, with high maintenance costs of automobiles and urban infrastructure.

4.1 Principles andrules

The design principles of New Urbanism are based on aesthetic, environmental and functional aspects. They are structured in three levels: (1) the region; (2) the neighborhood, the district and the corridor; (3) the street, the block and the building.

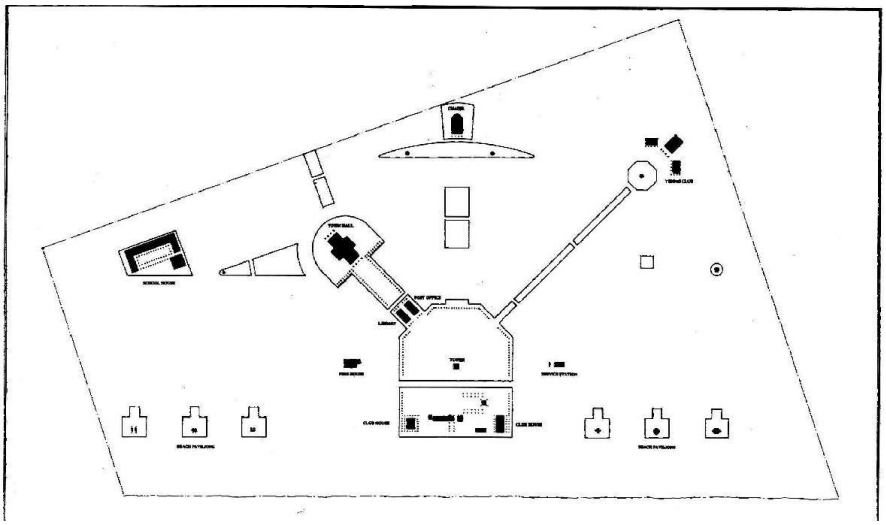

Figure 17 Seaside public building diagram. Higher density around centers and along main axes (source original plan: Duany Plater-Zyberk & Company, 1992).

4.1.1 TheRegion

The region has clear boundaries and encompasses cities and towns, which, in turn, are organized in neighborhoods and districts that are integrated by transportationcorridors. Additionally, the region includes the metropolis, the city, and the town. Each one hasa center and clear boundaries, establishing a relationship with the rural and natural environments. The system suburb/city focuses on pedestrian accessibility, density and regional mass transportation. The suburb is considered healthy and natural, but the revitalization of existing central areas merits prior attention (Duany, Plater-Zyberk e Speck, 2000).

4.1.2 Neighborhood, District andCorridor

The neighborhood is a limited area with a good balance of activities structured around a center, where squares, public buildings, major density, and urban life can be found (Katz, 1994; Duany & Plater-Zyberk, 1997; Barnett, 1996). A city is made of neighborhoods and districts articulated by corridors. It possesses a main center and the other centers of the neighborhoods and districts. A five-minute walking radius (1320 inches, or 402 meters) deferens the size of a neighborhood. Districts are sectors were one use predominates. The corridor is a continuous element, such as a great avenue or a park that integrates and articulates the metropolitan structure. Access by foot is of fundamental importance to
the neighborhood as it integrates housing, shops, workplaces, parks and civic facilities

into one community.

4.1.3 Street, block andbuilding

The street-layout must contribute to reduce the speed of the automobiles. The streets must be sided by front facades of buildings whose entrances connect directly with them. Blind facades are avoided as the arrangements seek for a major number of transitions between interior and exterior spaces. The front setback of the buildings must be the smallest possible and non-existent in commercial buildings (Duant, Plater-Zyberk, Speck, 2000). The interest is to use inhabitants' natural surveillance to enhance urban safety and street life, as recommended by Jacobs(1961).

Pedestrians must be able to choose between different options of routes to move from one place to another. Besides the streets, there must be alleys and pedestrian ways. Cul-de-sacs must be avoided. Back alleys are suitable, for example, to access garages and outbuildings.

In the residential areas there must be a minimum set of certain typologies - apartments over commercial space; apartment buildings; row-houses; live/work units - in order to guarantee diversity of space use through time. The upper floors of the commercial buildings must be used as homes and offices, thus characterizing mixed-use buildings (Duany; Plater-Zyberk; Speck, 2000). The parking lots must be located behind the buildings, but the garage buildings take people directly to the sidewalks, promoting vitality in the streets (Duany; Plater-Zyberk; Speck,2000).

4.1.4 The transect

The variation between rural and urban landscape is clearly represented in the transect (Duany, Plater-Zyberk & Company, 1997; Duany, 2002) system derived from the ecology, where all the urban elements fill in. The transect is a transversal section through a sequence of environments, which became the bases for the new urbanist codes. Duany proposes 5 typologies of neighborhoods adapted from the transect: rural; suburban, less dense and residential; general urban, with residences and diversity of uses; urban center, dense and mixed use; and main center, denser than the other sectors with a business area, services and institutional buildings shared by many neighborhoods (Duany,2002).

4.2 Thecritique

New Urbanism, based on Jacobs (1961), advocates clear boundaries between private and public spaces; diversity of people and activities; permeability; streets and sidewalks as key elements to urban life; and superposed patterns of movement. The feeling of safety in public spaces is proportional to the presence of people. However, like Jacobs, it does not explain how the superposed pattern of mixed and dense uses articulate in the global context.

To generate urban life, it is necessary, more so than density, mixed use, superposed patterns of movement, the sidewalk design, adequate typologies or terminating vistas. It is necessary to treat the configurational properties of the integrated cities in a global structure, without compromising the peculiarities of its parts (Peponis, 1989).

To recreate public life, the Kriers (Krier, 1991) recommend the rescue of traditional urbanism, of classical architecture, and of continuous construction as proposed by Sitte (1889), who explicitly focused on local and aesthetic relations. The Kriers emphasized local architectural properties and explored the relation between the morphology of the street and the uses installed on it, but failed to deal with the global experience. Leon Krier divides the city in ideal parts, each one of them containing diverse uses (Peponis, 1989). The size of each part is defined by a radius that corresponds to a 4-10-minute walk. This part corresponds to New Urbanism's plan for neighborhoods. In the classicism of the Kriers, urban axes end at public spaces, terminating vistas slightly o® the axis line. According to New Urbanism, terminating vistas strengthen the identity of the community.

Though such maneuvers as this may generate aesthetic and well succeeded spaces, they may result, from the morphologic point of view, in being fragmented. According to Peponis (1989), the ideology of Kriers is as anti-urban as the ones that generated the garden-city and the modernist residential units. If New Urbanism follows the anti- urbanism of the Kriers (Peponis, 1989), then it is possible to establish a relationship between it and the modernism that it condemns.

New Urbanism links the traditional urbanism with peculiarities of the local space, suggesting an emphasis on the place based on the enclosure. This principle is also shared by modernist city design, promoting the identification of a certain group and social interaction through spaces such as squares, patios, and atriums (Hillier, 1988). New urbanists believe that this strategy makes the urban space friendly and safe (Duany, Plater-Zyberk, Speck, 2000). However, the indiscriminate use of the enclosure can cause fragmentation (Hillier, 1988). In the historical cities, these arrangements are comfortable because their design defines a continuous structure related with the global context. Without accessibility and intelligibility, in spite of diversity of uses, high density, attractors, and high maintenance costs, the urban space may generate insecurity and vandalism.

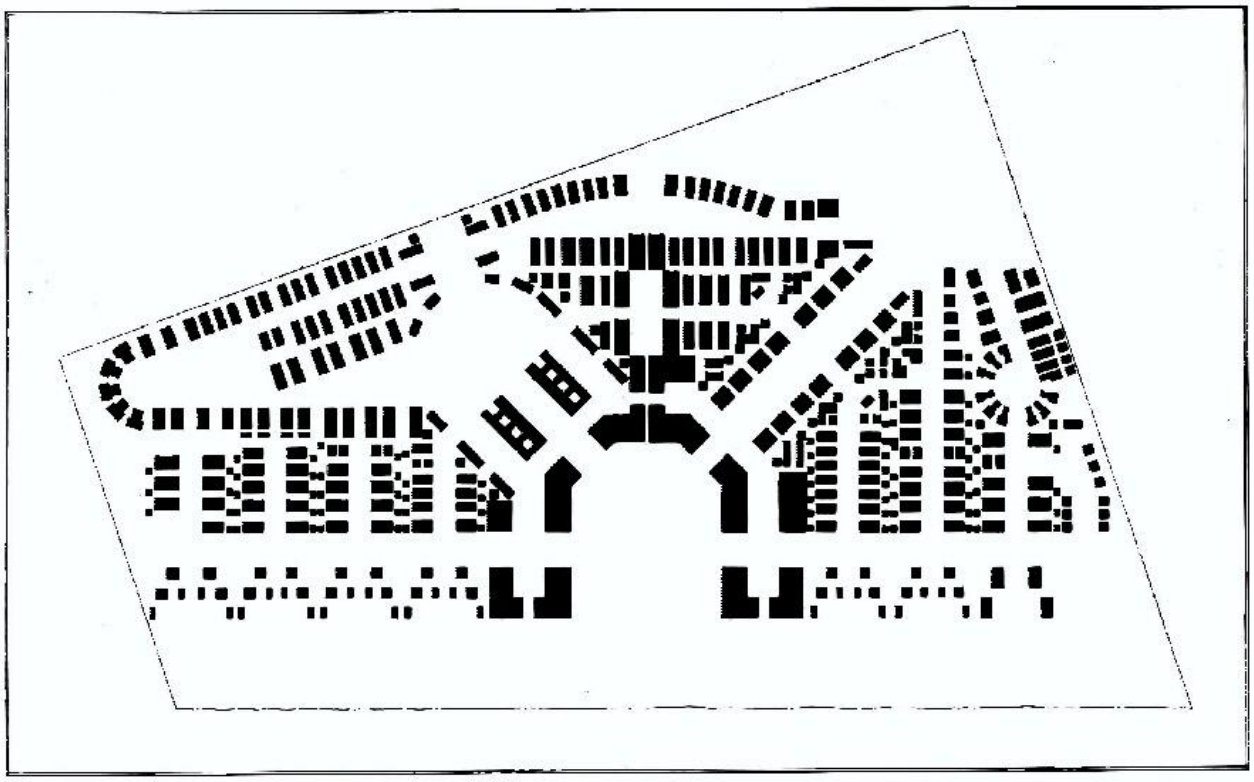

Figure 18 Seaside private building diagram. Higher Density around centers and along main axes (source original plan: Duany Plater-Zyberk & Company, 1992).

In short, this research explores the characteristics of the new urban plans which may influence the way its public spaces may be used. They result mainly in compositional manoeuvres which seek to promote certain aspects of the traditional urban life.

4.3 Towns andvillages

The syntactic analysis that follows looks at geometrical and topological properties on three New Urbanism greenfield master plans. The majority of New Urbanism projects are greenfield, or new settlements in rural areas, which are the best expressions of the principles of the movement. The master plans analyzed in this paper were designed by Duany Plater-Zyberk &Company. Windsor and Seaside are located in Florida, and Kentlands is located in Maryland.

As the first town ever built based on New Urbanism, Seaside represents a departure in terms of its principles (Katz, 1994) (Figures below). It is a compact resort town with a projected population of 2000 which equals the dimension of an American neighborhood of the 1920's. Its plan has three mixed-use centers, including retail, services, housing and open spaces. It optimizes the access to the beach with terminating vistas at its natural landscape. Pedestrian paths cross the blocks, providing access to the outbuildings. Route 30, a road that crosses the south of Seaside, connects it with the region (Katz, 1994; Krieger, 1991; Barnett, 1996).

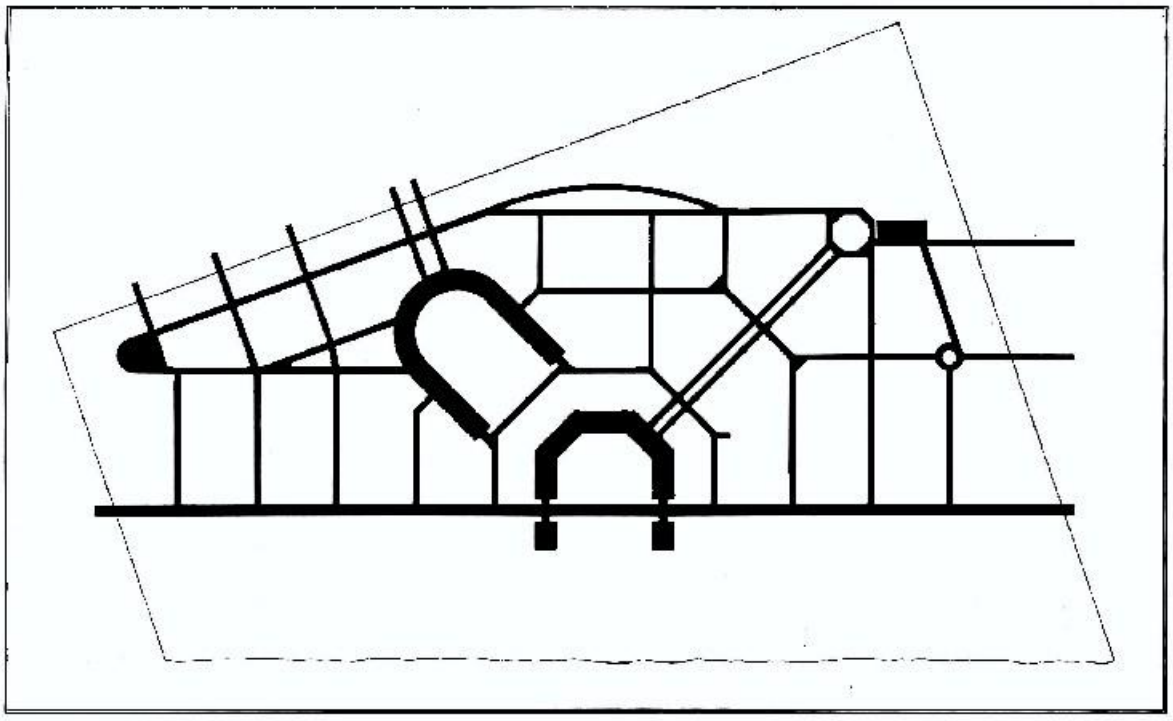

Figure 19 Seaside street diagram (source original plan: Duany Plater-Zyberk & Com- pany, 1992).

4.4 The analysis

1. Seaside is the smallest system with 100 axial lines and 136 islands as it shows in the figure below
2. It is organized around three mixed use centers and residential areas separated by Route30.
3. The houses north of Route 30 fill the spaces between squares and mainaxes.
4. Among the lines of the central core, Route 30 stands out with the highest global integration and, therefore, probability of engendering movement andco-presence.
5. Three diagonals coming from the civic center generate the main avenues andsquares.
6. Line 47, which is one lane of Seaside Avenue, is the second more integrated line, connecting the civic center to the tennis club. The uses in this line are apartments, houses, inns, garages and outbuildings.
7. Line 38, comes from the beach, passes by the civic center, Ruskin Square, whichis surrounded by mixed use row houses, and reaches thechapel.
8. Line 93 is diagonal to Route 30 and connects the civic center to the cityhall.
9. it is possible to say that these axes where prepared for high co-presence, which is confirmed by the integration core. Route 30, however, stands out, pulling the system toitself.
10. The plan of Seaside promotes high connectivity of Route 30, which connects the other lines of very low connectivity, particularly alleys and pedestrian paths, with thebeach...Although it does not bear uses that depend on high co-presence, Route 30 guides to the civic center which is highlyintegrated.

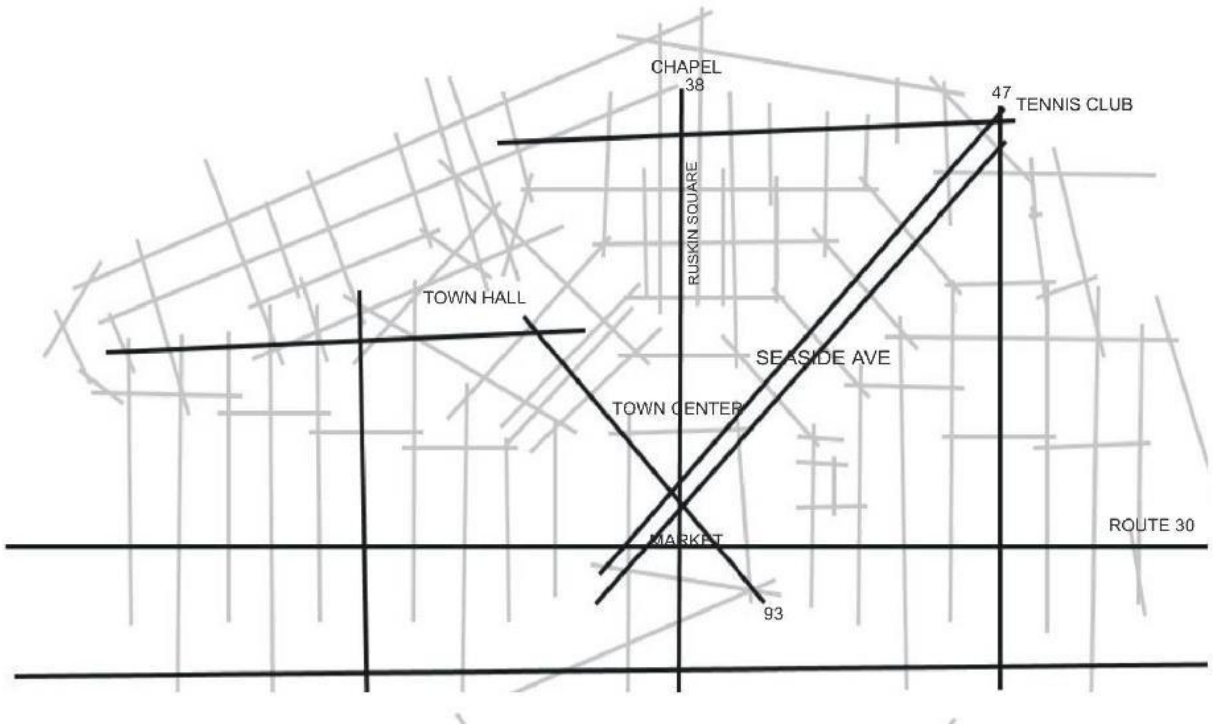

Figure 20 Analyzing of seaside Florida

	Mean Global Integration (RRAN)	Mean Connectivity	Mean Constitution	Number of Lines	Number of Islands	Grid Axiality	Dimension of the Core	Mean Integration of the Core	Strenght of the Core	Intelligibilty	Constitution\ Integration
Seaside	2,121	6,12	6,910	100	136	0,253	10	3,000	0,703	0,639	2,581

Figure 21 Results of the analysis

Figure 22 *Seaside, Florida center*

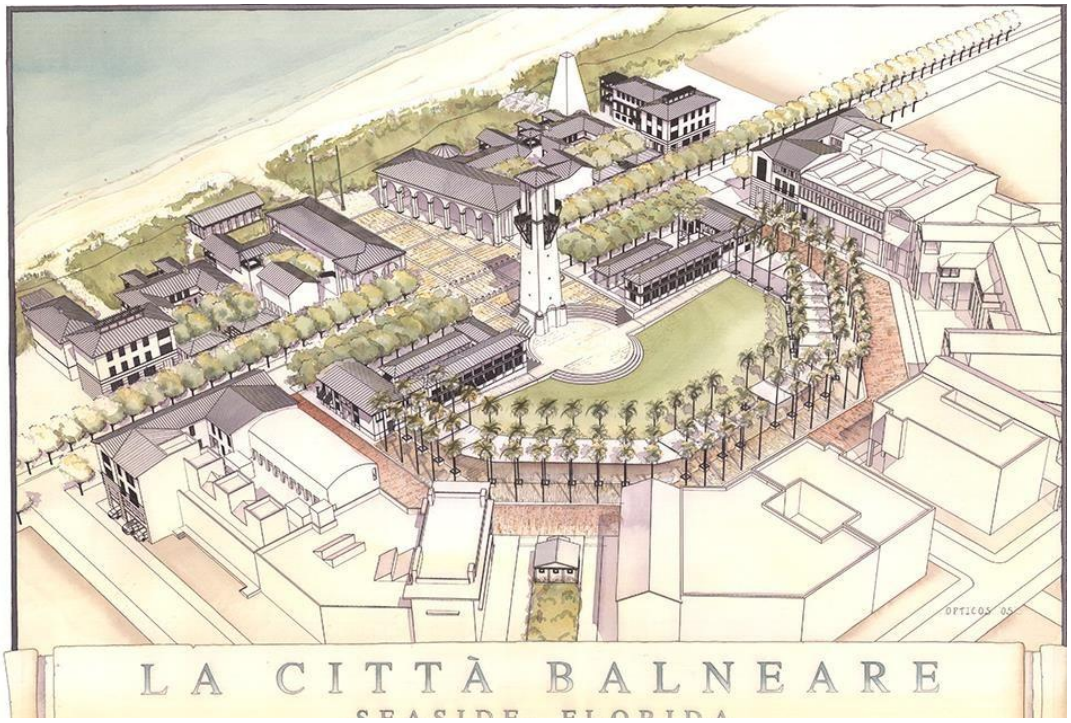

Figure 23 *Seaside, Florida |*

5- Theorists and important patterns in new urbanismapproach

Peter Caltorep is well-known characteristic of new urbanism movement who use new urbanism theories in regional scale. Research council for environmental design; introduce him as one of "the most significant innovator", Caltorep hasredefined patterns of urban and suburban growth in America. And define urbanization with "diversity, walking scale, public space and structure of quarters which bordering". The, he said that these principles should used in all scales of a metropolitan area and in all places. Suburban growth and development, new growth and re-creation of central areas of cities or region as a whole, all should reorganize according to urbanization features. Caltoper requests for general urbanization and portion urbanization. General urbanization related to new system for urban distribution as if city edges and biological complexes of suburbs gain fundamental qualities of real cities such as walking scale, distinguishable center and edge, practical and population coherent diversity and defined public spaces. In general urbanization, principles of design a neighborhood should use for whole of metropolitan. They should have defined edges, access network system should work for on foot movement, public space should be formative and complementary neither extra and remained space (it means that maintain wholesale open space networks), urban and private fields should make a complementary hierarchy (means cultural centers, commercial centers and residual connected neighbors).

This legalization and theorization of Peter Caltorpe leads to a theory well known as "development in the course of public transportation, Transit-oriented development (T.O.D). The pattern resulted from this theory is a dense and completely grid quarter combine all shops, houses and offices as a compressed regional scale and with walkable distances and around a transportation stop. Thus, it makes a direct relation between public transportation pattern and land use. The main idea was that: more start and destination places locate in walk able distances from transportation station and more people use station.

The most important advantage of TOD model is the fact that in spite of high infrastructure costs, railway transportation is the best traffic. This kind of public transportation covers high density of population (at least 14 residual units in each acre). Another advantage of TOD is the fact that institutes and also commercial uses locate adjacent to passing center. These set cover malls by sufficient number of walking and driving passages. Therefore, it attracts more attention to car and passenger traffic. However, regional feature of these passing centers guarantee forming neighborhood local places same as TOD model. The potential problem of this model is spatial decrease which is due to traffic and need to parking lots in passing stations of center. Of course, with traffic reduction by making one way oaths in this space, mentioned problem can be controlled somehow. As other disadvantages of TOD, is that supportive population density for this system may not adopted in central markets. Low pure ratio in regions which located in a 5 minutes walking distance from passing places, criticized condition: considering one quarter as comprehensive matrix of this system devoted to pedestrian paths, contain only 7 percent of impure development areas. A confident study had done that states the advantages of railway transportation causes to increase pedestrians to 10 minutes/ half mile radius. This issue increase district to 40 percent of developed region (Lexicon, 2002:19).

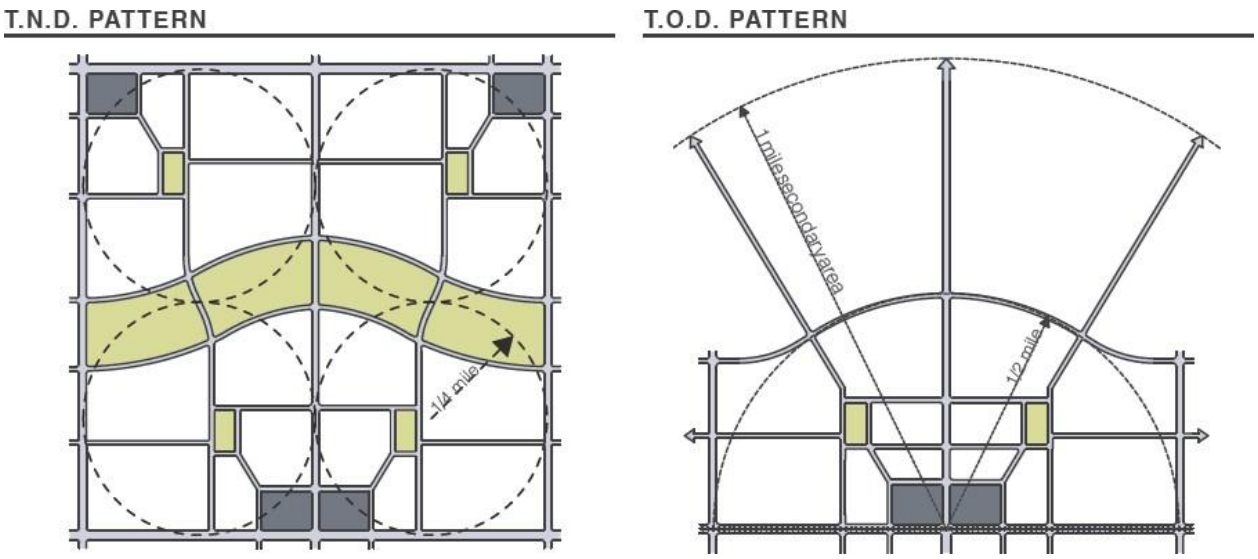

Figure 24 TND & TOD Pattern

6- Implementation of NewUrbanism

The most effective way to implement New Urbanism is to plan for it, and write it into zoning and development codes. This directs all future development into this form. New Urbanism is best planned at all levels of development:

1. The singlebuilding
2. Groups of buildings
3. The urbanblock
4. The neighborhood
5. Networks ofneighborhoods
6. Towns
7. Cities
8. Regions

Increasingly, regional planning techniques are being used to control and shape growth into compact, high-density, mixed-use neighborhoods, villages, towns, and cities. Planning new train systems (instead of more roads) delivers the best results when designed in harmony with regional land planning - known as Transit Oriented Development (TOD). At the same time, the revitalization of urban areas directs and encourages infill development back into city centers. Planning for compact growth, rather than letting it sprawl out, has the potential to greatly increase the quality of the environment. It also prevents congestion problems and the environmental degradation normally associated with growth.

Figure 25 Creating livable City

7- State newurbanism

Using new urbanism principles in urbanization shows as profits for residents, employees, surveyors and municipalities, these profits in fact caused to provide mutual public gains by performing new urbanism projects

7.1 Profits of using new urbanism principles for residentsinclude

Better quality of life, work and play, more value of properties and their sustainability, traffic and less driving, healthy life with more walking and less stress, less distance with main streets which service and retail shops, closer distance to bicycling paths, parks and nature, make local communities that support pedestrians which makes more possibility to know other people in society in quarter and city, more freedom and independency for children, elderly, provide job fortunes for different income classes, recreations and services without need to automobile, financial profits for schools and residents in relation to decrease going and coming of students to school because they can go to school by bicycle or on foot, various, smaller and unique shops and service units that their owners are local people and they themselves are partner in social community, financial savings due to not driving and less ownership of cars, better scene of place and social identity besides unique architecture, more open spaces for use, efficient and reasonable use of taxes with lower cost due to not scattered development of facilities and roads.

7-2 Profits of using new urbanism principles for employeesinclude

More sale because of on foot passing, low expense of car and fuel for people, more profit due to low costs for advertisement and big boards, better way of life by living on upper floor of shops in live- work units that avoid stressful and expensive passing to office, smaller spaces cause complement and growth of smaller local jobs, less hires due to smaller spaces and parking, healthier life style due to more walking, social cooperation because of belonging to society and know residents.

7-3 Profits of using new urbanism principles for surveysinclude

More potential income from mix use projects and high density and higher value of properties and sale price, faster acceptance of designs in societies follow principles of smart sale leads to decrease financial and time expenses, reduce parking facility expenses in mix use properties because of mutual costs during day and night, reduce amount of destruction to build parking lots, less side effects on roads and traffic which can reduce side costs, lower costs of facilities due to compressed identity of new urbanism design, more acceptance by people, faster sale due to more acceptance by customers who face higher variety of products that this matter caused to gain more share of market.

7-4 Profits of using new urbanism principles for municipalitiesinclude

Sustainable tax basics, lower per capita costs for infrastructures and urban facilities in comparison with suburban developments due to compressed identity and high density of projects, increase tax basics due to the fact that more buildings locate in a small area, less traffic density due to walk ability oriented design, less crime and cruelty and less expenses for safety and police security due to peoples presence during day and night, better public picture of society and better spatial sense, less tendency to scattered city development when internal city environment have more attractions, ease of making public transportation systemin places where there is this system and its easier enhance if present and finally better and more civil cooperation which caused to better civic governance.

Conclusion

Current tendency to urbanism in West in the course of criticize current time that is the result of modernism thoughts after World War II, in order to make coherent, adjoining, humanistic and sustainable. Completion of mentioned approach in scale of new urbanism approach to be responsible for guiding and leading postmodern era designers and planners. The primary principles of this approach had been based on using traditional bases of sustainable urbanization in past humanitarian urbanization. This approach has been used in most of new urbanization projects in American and European countries and some cities of developing countries andgained positive results. All of these studies in urban design we conclude from it that all modern designs are tended towards the design of the social, health and psychological environment that are comfortable for people which no doubts that the Anit-urbanism claim of designing urban fabric is not an appropriate choice for moderndesigns.

The practical modes of New Urbanism reflect more clearly of the community construction theory. TND mode proposed the specific planning and design ideas on several aspects, which including: community scale, public space, community structure and function, building density, traffic network and respect the historical resources. TOD mode put forward the planning ideas including: regional transport links, community scale, diversified building functions, the pedestrian oriented street network and different price of dwellings

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