

# active place design exhibition

# 2005

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Environmental Design Research Association  
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Centre, Vancouver April 29, 2005

Harvard School of Public  
Health Harvard  
University May 16-20,  
2005

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The Active Place Design exhibition included 40 designs from North America and Asia covering bicycling among children, school playgrounds, swimming pools, streetscapes, green infrastructure, hotel zones, and retirement communities.

The competition aimed to increase awareness of important human activity that can occur as an incidental and pleasant lifestyle benefit of living, working and moving through spaces. Promotion of active living addresses issues of obesity and health while social activity contributes to the development of informal support networks. In combination, active place designs enable individuals and communities to build capacity for self-care. With ageing populations and decreasing health care expenditures, the importance of either activity cannot be underestimated by designers.

Environment & Gerontology  
Network  
Mark del Aguila, Anne Lusk  
& Susan Rodiek  
(Convenors)

Sherry Ahrentzen,  
Anne Lusk, Henry Sanoff,  
Nancy Wells  
(EDRA Judges)

John Atkín, Scot Hein,  
Gordon Price, MaryBeth  
Rondeau, Ralph Segal,  
Michael von Hausen, Joe Wai  
(City of Vancouver Judges)

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## 05101 Woodland Terrace Senior Living Community



K. Daryl Carrington RA, NCARB  
North Carolina State University  
carrxmyers@mindspring.com

Principal/Designer: K. Daryl Carrington,  
Architect: Edwards Carrington Associates  
Landscape Architect: Tom Hunter, ASLA  
Civil Engineer: Bass, Nixon & Kennedy,  
Inc.

This senior living community is designed for 75+ seniors. While it sits in the middle of a growing city, the community was designed to feel like an oasis of nature. The low density of the project and the man-made lake enhance the 'liveability' of the community, which has 160 units on 22 acres. In this project, aging is neither defined chronologically nor by level of acuity, but as a process whereby one's world gets smaller. The design focuses on health and well being by maximizing each senior's ability to counteract 'aging' by engaging the world physically and socially. Project design goals, applied to the buildings and site were *to provide affordances, to engender social inclusion and to de-institutionalize the living environment*. Affordances are provided through interior activities and common facilities, and outdoors through an active pedestrian environment with private and participatory spaces to engage the community and the natural world. Social inclusion is provided inside and outside through universal and prosthetic design allowing each resident, including those with health, mobility and other impairments, to engage at all appropriate levels. These goals contribute to de-institutionalisation, which is also manifest in the hospitality paradigm of services, and the architectural style and organization.

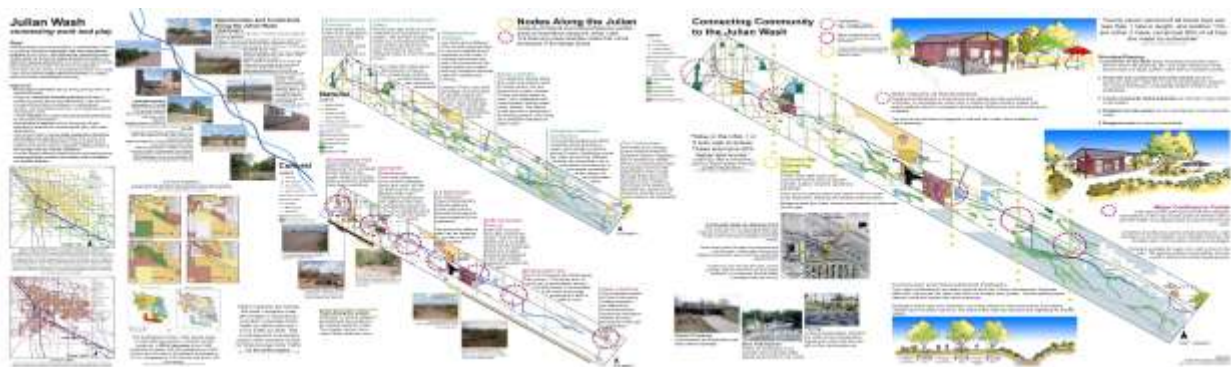
The continuum of care from active seniors through independent living, assisted living and Alzheimer's care was conceptualised as a set of inter-related interior and exterior nested systems. Housing types and corresponding site elements were developed to correspond to the needs and capabilities of each group. Duplex cottages were designed for active adults (late 70's); full apartments with common facilities were designed for independent living (early 80's); apartments with light cooking were designed for assisted living (late 80's) and private rooms in a group house configuration were designed for Alzheimer's care. The cottages and independent living apartments embrace the man-made pond, which has naturalized very well and attracts many migratory birds. Porches and patios are

provided on over 50% of the surrounding units to allow direct contact with the outdoors. The residents use these amenities to grow plants, and for bird feeding and watching. The Assisted Living and Alzheimer's care building was designed to be more inward looking, grouped around a series of active and view courtyards. Common rooms are generally of a smaller scale, and privacy for care functions, such as assisted bathing, has been provided. Alzheimer's Care group areas are limited to 12 residents and there are no corridors within the separate group areas. All group facilities including living, dining and exterior spaces are immediately visible when a resident leaves his or her room. Visual clues are provided with color, pattern and texture to prompt decision-making. The group areas are linked to each other and to a series of dedicated common spaces. Circulation through these areas creates safe, extended wander routes for the residents.

The successful integration of the interior spaces with a variety of exterior spaces allows this project to become a highly active place and achieve the goals of affordances, social inclusion and de-institutionalisation at a higher level than most projects for this age group. All living spaces are carefully linked to a ladder of exterior spaces that can be enjoyed by the residents. They range from an adjacent town greenway to the cottage neighborhood street with front porches, to the pond path, the Independent Living building sitting porch and croquet lawn, the formal garden in front of the Assisted Living building, to courtyard gardens to view courtyards within the Assisted Living building. Dining rooms and activity spaces open directly to outdoor spaces to encourage a walk after dinner or social activities. The Alzheimer's care is provided in a secure environment that includes a prosthetic courtyard garden, view courtyards and interior/exterior wandering paths. The courtyard includes sitting porches, wander paths, and sensory plantings. Thus, all levels of acuity are provided with their right to share the health and well-being benefits of nature.



## 05104 Julian Greenway: Connecting Work and Play



Jennifer Jones  
University of Arizona  
jjenniferr@gmail.com

The goal of the Julian Greenway is to encourage physical activity by creating options for both transportation and play. The greenway addresses the rapidly growing population in southeastern Tucson by creating a bicycle commuter link and recreational pathway to downtown. By linking the centrally-located Julian wash to Tucson's larger greenway system, as well as to nearby attractions, the Julian will demonstrate that a greenway corridor can serve as a dedicated commuter way as well as a recreational amenity.

### Objectives:

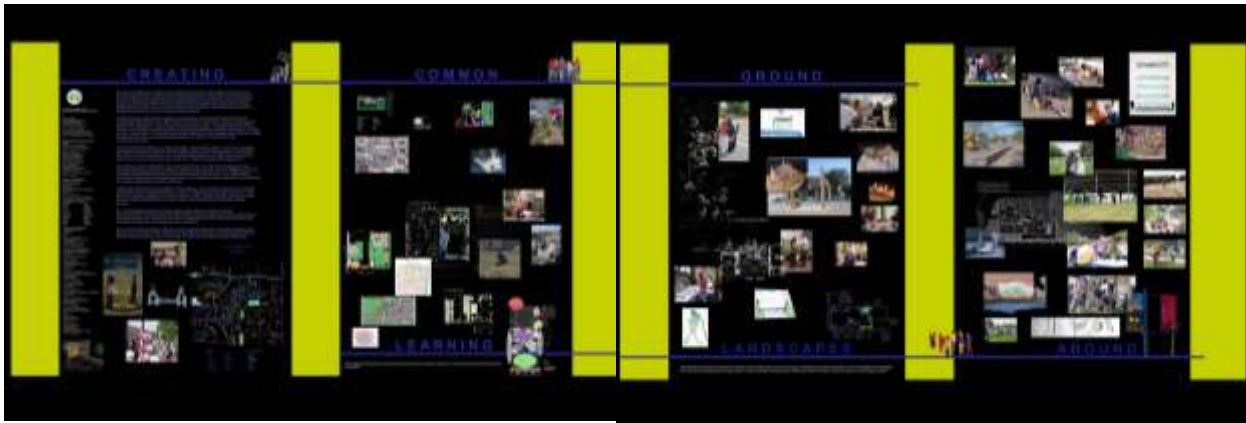
- Encourage commuter use by linking employment with residential areas.
- Design a commuter-friendly greenway that allows cyclists to get quickly to their destination. Key elements include efficient street crossings or underpasses, smooth, well-maintained pathway, and separate path for recreational users.
- Create linkages to current and proposed greenways to maximize connections.
- Link points of interest, parks, shopping centers, educational institutions, archeological sites, and other destinations.
- Use census data to locate high population densities and target user groups (the elderly, the young, low-income) that would benefit from nearby green space.
- Determine access points to adjacent neighborhoods to encourage use by nearby residents.
- Provide design ideas for pathways and connections that balance human comfort

and safety with suitability for wildlife habitat.

Three types of nodes have been designed along the wash, each to encourage use. The **Community Nodes** show how the linear greenway can expand. It encourages neighborhood use by incorporating an amphitheatre and plaza. Street trees reach through the neighborhood into the park. Crosswalks connect the adjacent elementary school and the residential neighborhood. A pathway runs through the park, across a bridge, and into the Pima Air and Space Museum. An underpass provides easy passage under the railway. **Bike Depots** at Destinations

provide everything the commuter, or recreationist, could want. A variety of food vendors, shade, and ample seating make for a pleasant resting place. Bathrooms and bike parking are available. The roof of the structure is designed to harvest rain water which sustains the native plantings. **Major Confluence Points** offer maps to orient users and provide trail mileages. Destinations on the map include points of interest within a one-mile buffer, encouraging users to explore out from the wash. Amenities include bathrooms, water fountains, air for tire inflation, and vending machines with tire patch kits. Food vendors would be encouraged.

## 05106 Creating Common Ground - Learning Landscapes Abound



Lois Brink

Learning Landscape Initiative at the University of Colorado at Denver, USA

lbrink@carbon.cudenver.edu

The Learning Landscape Initiative at the University of Colorado at Denver seeks to identify how the transformation of inner-city school playgrounds into Learning Landscapes influences children's physical activity levels, and how neighborhood social processes may mediate the impact of these environmental interventions.

The social and built environment of minority and low socioeconomic status children living in poverty frequently fails to support their healthy development. They often have limited access to outdoor play spaces and to structured opportunities for involvement in sports and activity lessons, and are more likely to have low levels of physical activity and high rates of obesity. Designing safe outdoor play environments that support children's physical activity provides a potential mechanism for counteracting childhood obesity.

In 1993, parents, staff, faculty, neighbors, and students from Bromwell Elementary School collaborated with Professor Lois Brink and her University of Colorado students to redesign and rethink their playground. It was a long, slow process of six years, working with Denver Public Schools, and contractors, but Bromwell's community maintained momentum and faith in a project worthy of commitment. "We wanted to raise the standard of what a playground should be, to make it a place to learn and a community gathering place, to make it a focal point of the community," she says. Each landscape includes playfields, new play equipment, trees, a shade structure, gateway, gardens, art work, traditional facilities such as

four square, and educational elements for outdoor learning.

The collaborative community-based process of planning, building, and maintaining each playground is hypothesized to increase neighborhood collective efficacy. The revised playgrounds provide participatory landscapes for outdoor learning, improved outdoor recreation and play opportunities, improved appearance of the grounds and a reinvigorated sense of community. For Denver neighborhoods, this revitalization reclaims the school's historical role as a focal point in the community.

As a result of Professor Brink's efforts and the support of students, committed volunteers and generous donors, Denver Public Schools now has Campus Landscape Master Plans for all 75 elementary schools. From 1999 to 2003 an alliance of public and private interests raised 10.6 millions dollars to construct 22 learning landscapes. Overwhelming voter approval resulted in another 10 million dollars to construct 14 additional landscapes by the year 2006.

Professor Brink and the Center for Children, Youth and Environments have begun post-occupancy studies to evaluate changes in physical activity and behavior patterns through grants from Caring for Colorado and the Robert Wood Johnson Foundation

## 05202 Park Creek Community



Pahl Samson & Ana Castaneda  
 Department of Landscape Architecture and  
 Urban Planning  
 Texas A&M University, USA  
 analuciacd@hotmail.com

The concept of the design was the development of a compact pedestrian-oriented mixed-use community that provokes human physical activity by increasing opportunities for exercise and creates a more pleasant environment by implementing concepts that have been studied to create a pedestrian friendly community.

This community was developed on a watershed site with has many existing creeks. We propose this typology of zoning and uses be developed and expanded throughout the watershed, providing a good mix of uses and a sustainable relationship between them. The preservation of existing creeks and drainage network is also a priority from which we then developed a design in which the natural features are integrated and become an integral part of the design. Preserving this creek allows us to provide pedestrians with a positive and scenic walking experience.

In order to create a healthy community, attention to site detail was a key factor in the design. We have incorporated various concepts and elements. Such as the following:

- Walkways are aligned for convenience and reduction of travel distances of pedestrians.
- A variety of paving materials were applied to denote pedestrian scale and differentiate between pedestrian and vehicular settings.
- Covered walkways are implemented increase pedestrian comfort and provide protection from weather.
- Small scale installations by local artists will be incorporated into the site in order to make pedestrian experience more engaging and provide some seasonal variation.

- Pedestrian crossings are noted with a change in paving and hierarchy in the buildings. The crosswalks come directly from a pedestrian collector inside the development
- There are many places for people to assemble, play and associate with others within their neighborhood. The community has a welcoming public space within 1/8th mile of all homes
- Benches or seating areas, outdoors or in covered areas are placed to allow pedestrians to stop and rest, also for observing children and other passers by
- Pedestrian friendly environment is created by laying out buildings and other site elements in configurations that define spaces for people to walk and gather.
- The community design provides connectivity for the residents to other neighborhoods, commercial conveniences and destinations as well as ecological connectivity with the preservation of existing creeks and connection to the greenway and neighborhood parks
- The playground area is designed to provide a variety of options for children and also to motivate movement between activities.
- We provided accessible options in routes of travel to and from the site, as well as through the site.
- Cars were kept out of the interior of the sight within shared parking lots for building, encouraging people walk further from their car to their destination.
- Woendorfs were used in the residential sections to inspire vehicles to slow down and to give the users a plaza like feeling along their street.

## 05204 Exordium - The eyes must be washed. See in a different way



Mahsa Goodarzi  
Faculty of Fine Arts, Landscape Dept., Tehran  
University, Iran  
mahsagoodarzi2004@yahoo.com

Activity: People activities together depend on space characteristic and cultural - historical roots.

It's important that people can gather together with relaxing imaging and everybody is able to participate together.

In Iran, people are arbitrated by others every minute and worry about everything they do near each other.

This mentality lead people to not participate in activity and relax near each other, in town space, in park, in street...

**Statement:** North of Iran. This hotel was built about 30 years ago on the edge of the jungle fronting the Caspian Sea.

**Subject:** Design a recreation space around the hotel for people.

**Concept:** Design a space to create friendly sense for people.

- Create an unusual work for amusing people.
- Encourage people to gather.
- Possessing bad and good together.

**Unusual work:** Create an area like a desert in a part of jungle near the sea, around the hotel. A desert without any trees, inside, but is enclosed by jungle. Sand, ballast, cobblestone and big stones cover the desert for sitting on. They're a way that joins entrance area to hotel, after that lead to seaside.

**Gathering people:** Desert is a vast area for every activity, like folklore music and dance, seeing the nature, seaside fast-food, traditional food, hand - make things, ... People learn to stand each other and experience different activities.

**Bad and good:** In that desert, put 4 glass hemispheres with different statement. These afford life condition inside for 4 characters.

1-Scorpion 2-Fish 3-Flower 4-Heath

The reason of this select is apposite between them.

Good in mind: fish & flower

Bad in mind: scorpion & heath

When people enter the desert, they view the four hemispheres on the way to hotel. They experience these lives existence, but are protected. In desert is put near each other, good and bad in a situation to remember!

## 05206 Landscape Renovation of Hotel Khazar



Lida Eslami  
Faculty of Fine Arts, Landscape Dept., Tehran  
University, Iran  
ld\_Eslami@yahoo.com

An active place is called to those places in which life is more active than the others. If a place is to be active, it should be able grab the users' attentions and invite them in. And this is an Architect's art to create an atmosphere with the potential ability to invite. There are so many ways to change a place to an active one. For instance, designing different parts with a variety of functions in one place, or designing a place appropriate for people of any age.

Of course, a place with different parts and various functions may not be as vital as it should be, because in many cases a designed space is not suitable or enjoyable for different ages.

There are many effective solutions for making a designed space into an active and vital one. In landscape design, the solution may be in the use of landscape elements in some ways, for example, using plants in different shapes and colours, or displaying their growing process. Which is one reason to impress vitality in a natural park. Using contrary elements such as water, stone, plant, glass, etc exhibits the paradise presence. Glass as a transparent material makes it possible to transfer the nature from interior space of green house to the exterior and like wise in the contrary way. All those mentioned above are considerations in this project, to make the intended park active.

There are some important points, which have been considered in this project aiming for the revitalization of this park:

1) This park has been designed in a city-size scale, so that almost all people know it. It has been clearly located, easily accessible and people are made familiar with it because of the presence of Khazar International Hotel. And they can enjoy watching the sea through it.

2) In the concept, an attempt has been carried out to pay much attention to qualities of "water" as an important feature: movement, stillness, high waves, etc. The total design is flowing, snaking through the site, finding it's way round the plants and the rocks, and finally reaches the sea (movement, the main concept).

3) It's designed to be used all day long by people of different ages. For example, there are places for resting, over-night residence, nature ceremonies, children's playground, chatting forums, friendly family gatherings, love share solitudes, or elderly peace.

Attitude towards landscape elements:

- Using water in different shapes such as water features, water falls, channels, water jets, water shades, etc.
- Movement of water in vertical direction, impressing more feeling of movement.
- Deeper feeling of water nature by means of water surprise (sudden spray of water from a hidden supply lurking behind some thing).
- Waterside exercises along the beach.
- Feeling warmth and coldness, raining, lightning, getting muddy in the shoes, etc in the nature - ceremony zone.
- New way of attention of plant, just to introduce the plant it self, some times designing it in an individual tree, in the role of the column, or pruned form in the shape of a plant or an animal.
- Plant may be showing a path or be an impediment.

Main spots in choosing plants are blossoming season and growing process, creating a moving paradise of light or density of plant.

## 05208 Parkside Plaza at Peach Creek



Beth Larkin & Holly Dawson  
Texas A&M University, USA  
elizalarkin@tamu.edu

*Creating “environments that offer choices for Active Living, a way of life that integrates physical activity into daily routines” for people from various age groups with varying levels of physical ability (Active Living By Design).*

**Traffic Calming:** To minimize car use on this site, we provided small parking lots in the back of the commercial area and also integrated raised sidewalks. The raised sidewalks serve as traffic calming devices within the parking lot and the side streets. This provides a safer area for pedestrians to cross streets because the paving change and raised pavement will slow down cars. By minimizing car use, we have encouraged pedestrian movement throughout the site. Since the parking lot is shared parking between commercial and apartments we provided parking garages in nearby quadrants.

**Destination:** To create an active space, destinations were available to residents on site and/or in nearby neighborhoods. The central plaza spaces include a dancing splash fountain, a life size chess set, a skate park and amphitheatre to promote active destinations. We considered all age groups for active destination centers: the fountain is for young children to play, the chess set is for all ages, the skate park is for teenagers, and the amphitheatre is young adults and adults. The shops in the multi use buildings provide services and groceries to residents in the nearby neighborhoods and apartments. Not only are there destinations within the development, there are connections within to the nearby parks that provide athletic recreation, playgrounds and walking/jogging trails. Pedestrian connections were provided to all destinations within the site and to all destinations outside of the site.

**Connections:** To encourage bicycle use to get to the site, designated bike lanes are separated from pedestrian paths by a curb-like divider. By incorporating the lane into the side walk and not on the street, cyclists have a safer environment to be active in without interfering with pedestrian movement. The cross walks provided for pedestrians incorporate a refuge island so that there is a point of safety when crossing the multiple lanes of vehicular traffic.

**Energy Efficiency:** All building footprints are arranged to get the most out of the natural progression of daylight. The west and east walls are short so they have the least exposure to the direct sunlight. The north and south walls are long to take advantage of pure light without the direct heat to reduce utility bills.

**Safety:** Extensive lighting was provided so that people would feel safe at night. The lighting has an ornamental characteristic that accents the site. All site furniture is human in scale to add to users comfort. This includes climbing vines on building walls, and canopies over entrances and balconies on the second floor. The moveable tables and chairs promote social interaction and can be moved to accommodate groups as large or small as needed.

**Amenities:** The site amenities include custom bike racks, custom trash cans, custom lighting fixtures, water fountains, freestanding umbrellas, free moving tables and chairs, benches with backs, chess/checkers and backgammon tables, a life size chess set, and uplights in all trees.



## 05211 Creekside Community

Wesley F Salazar & Tarel Chantal Piefer, Texas A&M University, USA < punkface707@yahoo.com >



Creekside Community is designed as a multiuse town center with a focus on the pedestrian. Active living is encouraged by offering opportunities to live, work and play without the need to commute. A variety of destinations, landmarks, and activities encourage individuals to explore their surroundings on a more personal scale. Creekside is planned as an integral part of the greenway pedestrian and bike trail system, and the regional mass transit system that connects the Peach Creek watershed neighborhood to the City of College Station, Texas.

Creekside's design is reminiscent of pre-automobile town squares, but updated to reflect the natural contours of the site, and protect the greenway's native vegetation and riparian habitat. Creekside de-emphasizes the use of automobiles by reducing parking spaces and using shared parking. A majority of the parking is also moved to rooftops, as well as underground parking. Creekside and two other multiuse nodes across the greenway comprise the entire Creekside Towncenter.

Creekside not only offers residential areas within its on-site buildings, but also is adjacent to high and low density multifamily and high density single family residential. A variety of building facades adds to the character of the towncenter. These multiuse buildings consist of commercial retail on the bottom floor, with residential and professional office space above.

Creekside meets residents' everyday needs by offering work places, retail shopping, groceries, banking, cinemas, a post office, municipal offices and professional services, as well as areas for entertainment and social interaction. Active and social activity is encouraged by the dog park, outdoor dining areas, fishing pier, paddle boats, four plazas, the Grand Pavilion, the Clocktower, waterfeatures, carousel, greenway trails and picnic areas, bus shelters, and residential community terraces. The Greenway Entry Plaza provides a central meeting place that links the passive recreation areas in the formal area of the site to the active recreation along the creek.

A continuous sight line is created from the circle drop-off to draw the pedestrians eye to the clock tower and beyond to the greenway. A unique paving treatment utilizes stone and tumbled, recycled glass imbedded into concrete to symbolize the creek and continue its presence within the towncenter. The Grand Pavilion serves as a place for large gatherings and as a focal point for the southwestern plaza. These design elements are a conscious effort to encourage the users to explore the entire area.

Plantings of deciduous, ornamental and evergreen trees provide summer shade, critical for active outdoor summer activities in Texas, as well as changing with the seasons. The placement of site furniture and lighting is also designed to encourage social activity.

Creekside will be the active towncenter for a pedestrian-oriented community of over 10,000 acres.



*Wesley F. Salazar & Tarel Chantal Piefer  
Texas A & M University*

## 05212 Millican Crossing: A Pedestrian-Friendly Community



Matthew Bryson & Janette Shellenbarger  
 Department Of Landscape Architecture &  
 Urban Planning, Texas A&M University  
 Janette\_007@tamu.edu

### Mission Statement

Increase and emphasize walkability throughout a community in which all ages can maximize and enhance physical activity in their everyday lives.

### Goals

- Provide and enhance a pedestrian-friendly atmosphere
- Emphasize the dominance of pedestrian access and circulation
- Maximize green spaces through the use of plantings, trees, parks, and green roofs
- Accommodate all user groups

### Pedestrian Emphasis And Accessibility

- The grid pattern creates easy access throughout the site with large, clear, direct pathways to enhance walkability.
- Crosswalks at mid-block and every intersection allow for easy pedestrian access and navigation.
- Traffic calming methods are used to emphasize pedestrian safety by creating raised crosswalks and intersections with variations in paving materials, texture, and color.



- A parking garage and on-street parking serves the needs of all vehicles and users, while still emphasizing the fact that you can drive there, but you must walk to your destination.
- A direct sightline through the park from northwest to southeast allows for major flow of pedestrians coming and going to the commercial town-center, south of this development.
- The roads are reduced to one-way, narrow, single lane streets to minimize the dominance of cars, unlike most urban areas today.

### Character & Amenities

- A ratio of one park plaza to every three to four blocks of multi-use commercial development
- Site furnishings that are at a human scale
- A pleasant atmosphere that reflects the old, agricultural town of Millican with a Texas theme
- Human scale lighting on building walls, as well as lighted bollards and up-lighting in all trees to create a beautiful, safe, and inviting night atmosphere
- One of the many activities of the park plaza concept is the amphitheater that we show in this design, which serves all types of functions, from musical concerts to educational symposiums, as well as accommodating all users and age groups.

## 05213 Landscape Renovation Caspian Enghelab Hotel, Namakabrood, Iran



atf\_ali\_76@yahoo.com

Atefeh Karbasi &  
Ali Soltani

Faculty of Fine  
Art, Najaf Abad  
Isfahan University,  
Tehran.

This scheme is to organize a hotels landscape near the sea, which tries to encourage people's presence and movement along the flight of steps and field slopes. By people we mean both the hotel guests - who view the hotel open scenery from the hotel and also the people who visit the intention of recreation and vacation.

Compelling people to move between two destinations such as A and B and to move along the flight of steps, provides the possibility of physical activity. Also as they move from one end of the route towards the other, they can enjoy the scenery, which surrounds the route and can also have direct encounter with nature - something which nowadays we have forgotten.

In addition, as these different individuals reach the same location their social spirits are raised and are encouraged towards social converse. The result of a common sense of achievement and common questions about the surroundings.

The idea of this design is obtained by the plantations - which are the special features of the region. The scenery is especially attractive to those who come to the hotel with the intention of vacation. They usually observe these scenes as they move along side the roads towards the hotel with high speed and from a distance as they would once perceiving a picture tableau in a few seconds converting passive architecture to presence architecture and persuades eagerness and interest to have presence in this region can be the first action towards encouraging others to walk and move along these routes (persuading people to walk and because of mental absorption).

Natural grounds, which are covered with grass and trees, if left undisturbed will be arranged into plantations. Sidewalks are irregular (some long and some short).

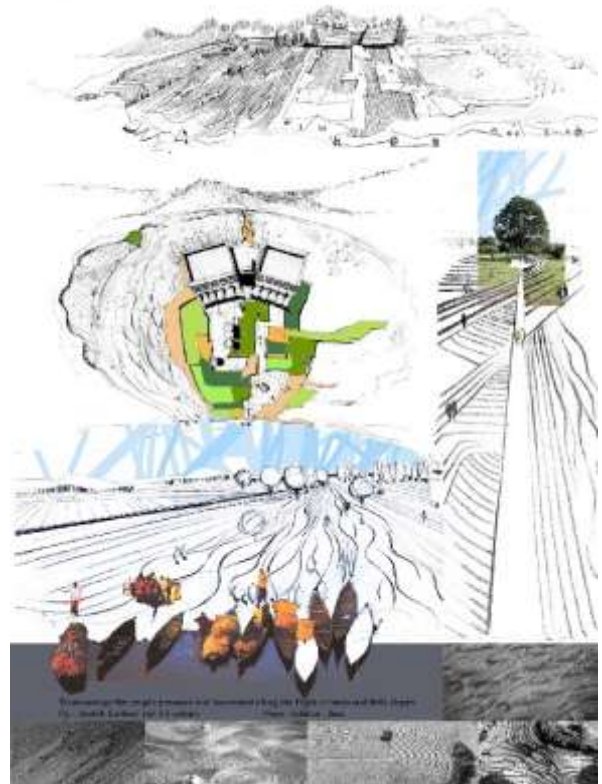
The sole acorn in the site could be a good reason to build a straight long path between the seashore and the plantation. This lengthy path has a steep slope with steps, after passing this route it will be possible to view the sea

from a high level, through the tree branches and leaves. This is the point for socializing.

After the weariness of walking through this path, they now see before them the possibility of a desirable conversation in front of the open sea. From the view in each of the hotel rooms bunches of flowers and plants can be seen.

The hotels coffee house activity is expanded out side of the hotel. And this encourages people's movement and this movement is accommodated with curiosity to explore the blocks with different colors and scents of the plants and flowers (a mixture of natures, fun, entertainment and movement).

Lines, which are built into the sand, seem to suggest the dragging of boots along the sand and putting a few boats near the seashore or even away from that encourages the movement of the people.



## 05215 Making an Active zone for Hotel Azadi Khazar



Mitra Vahdati  
Tehran University, Faculty of Fine Arts,  
Landscape Dept., Iran  
mt\_vt@yahoo.com

- Location: North of Iran, Caspian Seafront
- Area: 240000 m<sup>2</sup>
- Access: 2 private helicopter-landing spaces. Highway of Chalos - 20 km to Noshahr Airport - 65 km to Ramsar Airport -.
- South side: High way of "Chalos" - Forest - Active Touristy site of "Namak Abrood"
- East side: River- has ability for changing its direction to pass through the site
- West side: Private property

Landscape design of Hotel Khazar belongs to a period 30 years past, before the Islamic revolution in Iran. Activities have changed. Women had to stop participating in outdoor family activities in landscapes like Hotel Khazar because they weren't designed for including women after the Islamic revolution. Women have a key role in family, so this affected children's activities too.

**Zones-** All manmade, forest and beach zones are designed as the calm zones, there is nothing for young and singles to be active participants. Although a very beautiful beach, it includes many objects to stop and hide women.

**Hidden spaces** - Arrivals at the hotel travel along a curved road and discover a hidden hotel. Hidden spaces are present throughout the site. A good concept 30 years ago, but not now.

**Management** - Most parts of Hotel's surrounds are closed because managers can't supervise.

**Activities** - Framed and covered spaces reduce wind disturbance, but reduce activity for people. Although active zones can solve most safety and management problems, this site is so calm and hidden, that most people prefer not to pay money for nothing.

**Cars** - Cars everywhere, no regulated parking, service cars pass through the site.

### Activities:

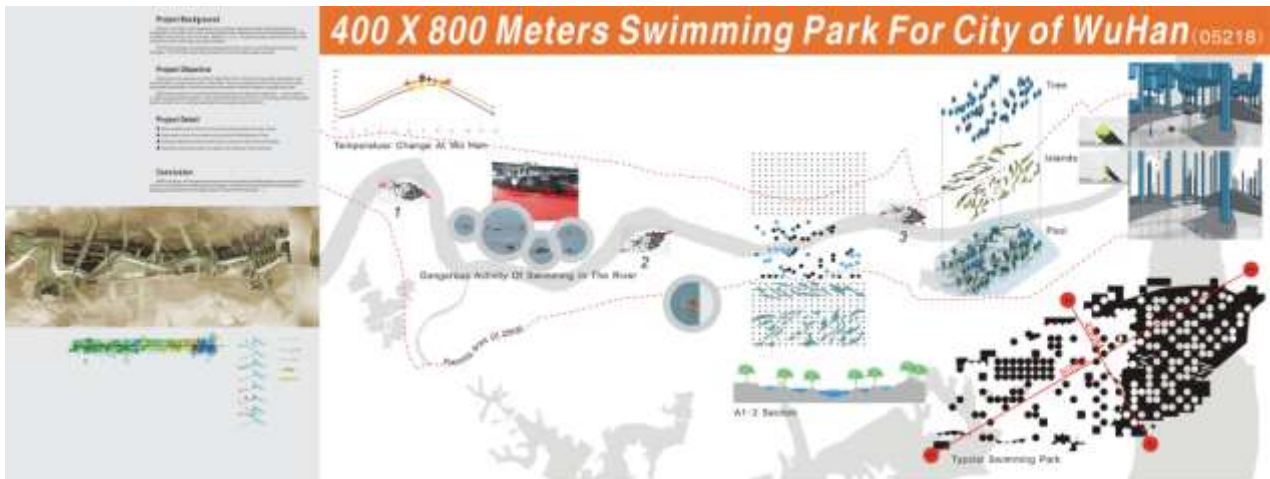
Active activities for all family members are - Walking, Biking, Skating, Fishing, Climbing, Boating and other forms of activity that don't need special clothing.

Activities that needs special clothing and have to be separate by gender - Swimming, Sun bathing and other water games

### Goals:

1. Making site active and let the people come inside and share with public activities.
2. Plan for "Active Place Design" by solving issues for women and children, making a covered space for women swimming and safe pools for kids and other formal exercises in designed open spaces.
3. Restrict service car access around the site.
4. Make a linear direction for beach zone to make more active.
5. Let hotel guest's cars pass through the site watching the zones of activities for cheering the people to assist. But have to stop them in designed spaces to don't make danger for other activities.
6. Connect the walking and biking and skating activities to share with the zone of Namak Abrood in other side of Highway by a bridge.

05218	400 X 800 Meter Swimming Park for City of WuHan, China
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Zheng, Xiaoping  
 BAZO Design International Ltd, Shanghai, China  
 zhxp@bazo.com

### Project Background

WuHan city of China, with a population over 6 millions, launched a major international planning competition in year 2003. Out of over 40 international firms, WuHan government had selected 3 firms, they are: **BAZO** (Hong Kong), **COX** (Australia), **WWCOT** (U.S.A). The planning area is 28 km<sup>2</sup> at both riverbank of Han River that runs through city center of WuHan.

**BAZO** had proposed a comprehensive development plan consist of over 30 systematic planning strategies. This 400 X 800 meters **Swimming Park** is one of the detail design proposal.

### Project Objective

WuHan has a nick name as one of the 3 “Steam Pot city” in China for it’s extremely hot weather, as a natural tendency, people love to swim in Han River. This is very dangerous with the rapid current and the busy water transportation, and this has been consistently creating numbers of casualty every year.

**BAZO** had proposed three unconventional **Swimming Parks** with distinctive objectives:

1. Safe to swim in,
2. Cater for large amount of people,
3. Fully utilize fresh water from the river,
4. Providing natural shading with trees in summer time,
5. Serving a water park in dry season during wintertime.

### Project Detail

- Select suitable location that can fully utilize pushing energy from water current
- Using water current to drive water into the pool and filtrating back to River
- Building multiple natural bank within the pool, and plant tree for summer shading
- Stop water outlet during winter dry season, and creating a winter water park

### Conclusion

**BAZO’s** proposal, with its genuine concern for the living quality of WuHan people, as well as creative solutions of a comprehensive development strategies, had won favourable commend from international judging panels and had won the prestige “Most Innovative Planning Award”

## 05219 Parsian Hotel Landscape Design



Morteza Behrooz  
 Tehran University, Faculty of Fine Arts,  
 Landscape Dept., Iran  
 mehraz68@hotmail.com

This project was designed as a course project at Tehran University Landscape Dept. The 50 acre site bearing a 30 yr. old former 5 star Hyatt hotel is located on the Caspian Sea coast north of Iran with a mild and moderate climate; a region frequently visited by various classes of people from across the country.

After the 1978 revolution, the landscape had never been fully developed and the hotel has been used as an isolate island where people merely stay over the night or have meals.

The design is aimed at multiple population target groups according to Iranian lifestyle and entertainment habits. Therefore, a social approach to design has been considered providing a media in which individuals as well as families or groups with various needs and interests can benefit a vibrant and energetic landscape, which can also work in a regional scale.

Main design aspects are as follows:

1. Establishing unity and continuity in form and material between the existing hotel building and landscape in a way that would generate dynamic and fluent space definitions.
2. Creating vast areas of potential energy for optional activities (i.e. camping, kiting, boating, jogging etc.).
3. Providing adequate parking and car approach spaces to increase pedestrian activity while hotel transportation needs are met.
4. Creating a formal immediate surrounding for the hotel building so the ground floor functions such as coffee shops, restaurants and galleries could extend outdoors in fair weather.
5. Appreciation of the sea as the main natural aspect and therefore implementing walkways, view ports and overall design, accordingly.

## 05220 Las Vegas Active Urban Living



Erik Bond  
University Of Nevada Las Vegas, USA  
bonderik79@yahoo.com

Research into urban and suburban environments that promote physical activity led towards understanding news bulletins about the increasing medical concerns towards obesity and inactive lifestyles. This also led to a greater understanding of educational opportunities to promote preventative measures against obesity in children and parents at the elementary and high school levels. Also how suburban sprawl, which requires extensive vehicular travel throughout everyday activities, promoted less physical activity and aided in increased obesity. In a series of articles in Time Magazine, June 2004 issue, examples illustrated on a map the fattest counties across the United States providing a visual tie linking sprawling counties with locations of the most overweight and obese cases. The National Health and Nutrition Examination Survey (NHANES) found, "64.5% of the US adult population is overweight and almost one in three, or 30.5%, is obese." These facts and many others influence further investigation into ways to promote more physical activity through planning and architectural design.

This research also highlighted numerous case study projects across the US that promotes physical activity including rail to trail projects, power easement corridors, and streetscape design. These case studies and several others helped to illustrate examples of how careful and effective planning can help promote physical activity in urban and suburban environments.

**Downtown Growth Explosion:** Currently in the City of Las Vegas Planning Department there are over 70 future projects planned to develop in the coming years, with half of the growth as residential projects. This current growth explosion is taking shape in the downtown office core and throughout the Art's District. As the area in and around the

Art's District develops with residential condo units, more individuals living in the area with limited parking will require more mass-transit options. The first option scheduled to arrive is the Max Bus Rapid-Transit along Casino Center. Another option is the Henderson Light Rail Connector along the Union Pacific Railroad. With the increasing social development of the Art's District's "First Friday" gatherings, there has already developed a need for more transit options with the limited on street parking available.

**Regional Trails:** Las Vegas and Clark County have begun to develop a city and countywide trail system to develop more active lifestyle amenities for residents of the Las Vegas valley. On and off road biking paths are to be provided along with walk, jog, hiking trails and equestrian trails where available. The intention behind this trail network is to provide the growing city of Las Vegas and surrounding community's places to safely bike or walk as a means of transit and recreation, and also to preserve nature and provide options to experience the great outdoors.

**Redevelopment Phase One and Two:** These phases of redevelopment downtown between the office core, and the arts district is intended to be a catalyst within the area to provide amenities that promote more physically active lifestyles. The first phase implements the installation, and retrofitting of trails to the urban fabric and creating more inviting streetscapes to walkers, the second phase continues that and also develops amenity rest stops along the Union Pacific Rail to Trail. By doing so, it also concentrates pedestrian traffic down streets between planned mass transit routes of the Max Bus Rapid transit route, the Las Vegas to Henderson light rail, and the existing citywide CAT bus transit.

Travel lanes, parking lanes, and sidewalks will be widened or narrowed depending on street and intersection to provide more pleasant walking environments including some street closures. At the intersections the sidewalks will push past the parking lanes to shorten the crossing distances to provide safer shorter cross walks. Amenity islands between parked cars and the trail or sidewalk move pedestrians further away from vehicular traffic. By implementing the trails and traffic strategies this urban area will become pedestrian friendly corridors to support the growing community.

## 05221 Designing for Physical and Social Activity at a Multi-Level Retirement Community



Chris Owens & Meagan Mueck  
Texas A&M University, Department of  
Architecture, USA  
chrisowens10@hotmail.com

The benefits of seniors being able to walk outdoors are numerous. Spending time outdoors improves the state of mind as well as the state of body for adults living in multi-level retirement communities. The walking paths provide opportunities for social interaction and physical wellness.

Longterm Benefits of Regular Physical Activity:

- Extended independent living, better physical and mental health,
- more energy, move with fewer aches and pains, better posture and balance, stronger muscles and bones

Immediate Benefits of Physical Activity:

- Meet new people, feel more relaxed, sleep better
- and develop a more positive outlook on life.

**Three Different Proposals For The Same Site**

*Crestview Retirement Community, Bryan, Texas*

**Site 1:** The levels of care in separate buildings promote walking when visiting other residents.

**Walking Paths** - Well maintained and staff monitored paths to encourage residents to walk outdoors

**Covered Walkway** - To accommodate walking from building to building, even in unfavorable weather.

**Site 2:** The landscaping & water features stimulate senses as well as provide an opportunity for nature watching.

**On-site Pond** - A destination for residents to go sit and relax while enjoying nature and socializing with other residents

**Fragrant Landscaping** - Scented flowers stimulate sense of smell and are aesthetically pleasing

**Site 3:** Varying widths of walkways with benches in the shade allow for places to stop and socialize.

**Bulges in Walkway** - Provides a place to stop and rest or socialize during walking exercises, instead of stopping in middle of pathway, blocking traffic

**Benches** - Placed under shade trees to get out of the hot sun

## 05222 Crestview Retirement Community - Enhancing Physical Activity in Elderly Residents through Active Place Design



Andrew Logan & Randy Bagley  
Texas A&M University, Department of  
Architecture, USA  
randybagley@gmail.com

**Crestview Retirement Community** is a not-for-profit, full service campus that is nestled on 32 acres in Bryan, Texas. This eight million dollar expansion project focuses on updating and improving the quality of life for the current and future residents of this facility. This studio developed a range of proposals based on design concepts that cultivate and encourage positive physical and social activities amongst elderly residents.

### Design Proposal:

In order to encourage outdoor activity, paved walkways connect points of interest throughout the site and allow for convenient social and environmental interaction. The covered walkway is an architectural mechanism which draws residents outdoors and urges them to linger thus, increasing potential for social contact and a therapeutic connection to nature.

### The Covered Walkway:

- Provides a sheltered connection to the natural environment and attenuation to the changing of the seasons.
- Empowers residents to venture out by eliminating hazards which often hinder older adults such as high thresholds, stairs, and steep gradients.
- Serves as an alternative vista where residents can relax and observe the daily activities of the facility.

*“Covered walkways at the edge of buildings, which are partly inside, partly outside - play a vital role in the way that people interact. . .”*

Christopher Alexander, et al.,  
A Pattern Language, 1977

### Health benefits of walking

- Reduce heart disease and stroke
- Lower blood pressure
- Reduce high cholesterol
- Enhance mental well being
- Reduce the risk of colon cancer

Davison & Grant 1993,  
US Dept of Health 1996,  
British Heart Foundation 2000

## 05223 Rockwater Towncenter: A Walkable/Livable Community



Herminio Griego & Taylor  
Texas A&M University, USA  
herminio\_griego@hotmail.com

The site we chose for the Rockwater Development is located in College Station, Texas. The site can be found approximately 10 miles southeast of Texas A&M University along the major corridor of Highway 6. The entire area is an undeveloped watershed situated in-between four vehicular traffic corridors. Our area of focus encompasses a dense family housing area, a mixed-use development featuring commercial and single-person housing, a greenbelt of trails, natural areas, and recreation facilities, as well as a major arterial for vehicular traffic.

Following the current movement of sustainability and healthy community design in the practice of landscape architecture, we decided to apply these design concepts to our project. After doing some research on what makes a sustainable/healthy community we came up with a simple and straight forward mission statement; to design a healthy, sustainable mixed-use development through the use of active living design techniques. Mixed-use development refers to the integration of residential, commercial, retail, employment, civic, recreational, and educational uses (Shewfelt, 2003). The mix land uses within a compact area not only supports and enhances each element within the development but also gives residents a rich and diverse environment in which to live, work, shop, play, and learn (Shewfelt, 2003). Also, active-living design techniques foster the creation of sustainable, livable communities and neighborhoods where people feel connected to each other, to their environment, and to the world in which they live (Shewfelt, 2003).

In designing our site we initiated techniques to allow for a pedestrian-friendly environment. Some of these techniques included: elimination of barriers to pedestrian travel, use of unit pavers or colored pavement bands in the

sidewalks prior to driveway entrances, and alignment of walkways that favor pedestrian flow. Additionally, we created a development with desirable on-site circulation. This was done by providing areas for drop-off and pick-up of people, having a clearly separate pedestrian and vehicular access to destinations, and only allowing one-way traffic flow of automobiles through parking lots. Heavy use of landscape design concepts also provides for the creation of a pedestrian-friendly place. In order to accomplish this, we designed planting buffers that separate the pedestrian from the moving vehicle. Trees and shrubs of appropriate dimension and pattern were incorporated into the site to create a human scale for spaces. Also, trees and shrubs were placed to avoid blocking walkways and interfering with visibility and security.

The Rockwater Development encourages healthy active-lifestyle behavior by making goods and services within close proximity, and recreation facilities and exercise opportunities a short distance from a person's home. An abundance of desirable destinations and well-designed paths encourages foot travel and allows people to abandon the heavy use of vehicles for travel. Design, such as this, provides residents with a sense of community, allows for diversity of people and income levels, and creates a nurturing environment for all age groups.

Source: Shewfelt, Kristin. *New Shape of Suburbia: Sustainable Development and Green Building*. New York: Urban Land Institute, 2003. pp. 102-117.

05224 Parkview Crossing: Developing a Sustainable Community
-------------------------------------------------------------



Amanda Reid & Lexie Iltis  
Texas A&M University  
amandareid@tamu.edu

#### Keep pedestrians active:

Clear bold pavers for all pedestrian crossings through vehicular areas

- Minimum vehicular parking on site
- Wide open pedestrian pathways dominating with many access points throughout

#### Keep the area livable & functional:

Upper levels of buildings are residential lofts of many sizes, many with large balconies

- Lower levels are spaces for local commercial
- There is additional areas of multi-use on two sides of the site, as well as park along one and apartment along another
- A parking garage is to be located near the site, particularly for the residents, to allow for parking, but still encourage walking to the plaza area
- A large plaza in the center provides spaces for much pedestrian interaction
- A local transit drop off provides an addition means of travel to and from the site

*The site is an area in which all people can be nicely accommodated while providing pleasant pedestrian environments by ways of plazas and gathering areas.*

This site is an 8-acre plot within a 14,000 acre watershed in College Station, Texas. This mixed use area consists of commercial stores and restaurants on the lower level of the buildings with apartments and lofts on the tops. Additionally, there are many pedestrian plazas to make the place an inviting area.

#### The Project Mission Statement

*Creating a space that is both livable and functional while maintaining and emphasizing the ideals of a sustainable community.*

We derived this mission statement and developed a design for the area to best fit the ideals it encompasses. The implementation of these design objectives are grouped into the following three categories of goals for the site development:

#### Keep the area sustainable:

Drainage control along roadways is accomplished through the implementation of swales lined with porous pavers

- Most rooftops will be utilized with either green roofs or rooftop gardens
- Modes of transportation other than vehicular are stressed, like walking, biking and utilization of public transit systems
- Drainage keep natural; it will flow south to the parkland across the street
- Traffic circle used to calm busy traffic and keep vehicular speeds low



## 05227 Landscape Renovation of Hotel Khazar



Sharareh Hariri  
 Tehran University, Faculty of Fine Arts,  
 Landscape Dept., Iran  
 sharareh\_hariri@yahoo.com

This is a project for people whom wish to enjoy the beauties of the nature and have an active place to work out.

It's located in Chaloos one of the most beautiful cities in the north of Iran. On its south you can see green jungles and on its north the world's most famous lake - the Caspian Sea.

At the first phase of design I tried to minimize car circulation in this area. And then I developed a variety of walking and cycling routes next to the seaside, jungle or the zones of various plants.

To attract different kinds of people with different opinions I have added a sea animal exhibition and daily or weekly bazaars to this site.

One of my main goals of this project was the use of natural materials to motivate people for having physical activities. So I designed a walking route to the deck and I used natural ways, which were located in the jungle.

As a conclusion I can say that I have worked with this idea that the best solution for activating people is by giving them a place in the heart of nature where they can feel its movements and they can follow it.

05228 Renovation and design open space of residential and entertainment of Namakabrood Hight hotel



Ensieh Ghavam Poor  
Tehran University, Faculty of Fine Arts,  
Landscape Dept., Iran  
ghavampoor\_architect@yahoo.com

The societies are going toward industrialization .It is not faraway that machines do everything for us. We will be the designer of machines and c0mputers. Machines do every thing so there is no need to be active and use physical activity.

As a consequence social interaction will reduce, slowly the relation of people to the nature will change not only they are going to be stranger to nature but also to themselves.

Namakabrood Hight hotel has a great amount of potential. In spite of this fact, it is a dry boring place. The situation of this site is a special one. The site is placed in the coastline of Khazar Sea in a tour area of Namakabrood.

Furthermore the sea and jungle are in neighborhood but the nature dos not play any role in the design of this site not only the nature is omitted in the design but also invisible walls separated the beauty of sea, jungle and the hotel. This separation lead to a creation of a boring non-lively place.

There is some solution in order to refresh the site. In a design of this project, there is an attempt to reduce this separation and to remove invisible boundaries.

The following steps were undertaken:

1. Studies

- At step one the potential of the site were distinguished.
- The possibility and limitation of the site were identified.
- Some research where done to identify places and situation for multifunctional purposes (this identification were based on the present situation and the behaviour of tourists).

2. The following problems were identified.

- The main problem is the separation of hotel, sea and jungle.
- Absence of design of attractive activity for people.
- Paying no attention to natural potential of the site (jungle and sea coast)
- Absence of public spaces which make social interaction possible and lead to lively circumstance.
- Paying no attention to day and night view.

3. Representing some solution

- The gardens of north of Iran brought together to make attractive space.
- Make walking in seashore and jungle possible.
- Large multifunctional spaces were designed which make the group activity possible.
- Walking route became important and where constructed through valuable elements.

4. Representing concept and design: Sea waves reach the shore and bring hotel and jungle together.

## 05238 Conflicting Tracks: railroads & communities



Chris Saleeba  
University of Washington  
csaleeba@u.washington.edu

Geographic and cultural patterns contribute to physical activity and implicitly affect public health (Lavizzo-Mourey & McGinnis 2003). It is important to address the implications of industrial and transportation infrastructure within this relationship. For instance, railroads have an adverse affect on public safety and community activity. They create physical barriers and disturbances within local communities; and associated industries dictate land-use patterns as cities and towns grow. These, along with other factors such as urban sprawl, have pushed communities away from their town centers and contribute to less physical activity.

Addressing the conflict between railroads and communities can help promote walkability, improve public safety, and reinvigorate struggling small town centers. *Conflicting Tracks* applies a solution for this problem to a small American town: Burlington, Washington. A town that grew from crossroads, where train tracks intersect the town center, economic pressures are converting farmland into residential developments, and where the urban core remains under-utilized and under-developed. This project utilizes the following design strategies:

### Community Development.

Dense affordable housing is sited within walking distance of public amenities, active and passive open spaces, parking, community gardens, and recreational facilities.

### Open Space.

A centrally located open space mitigates the impact of the railroad on the community. Living walls constructed on either side of the train tracks help increase pedestrian safety and mitigate train noise. A 100-foot buffer offers community amenities such as recreational parkland, a community center, and community

gardens. Community pocket parks also support recreational and environmental functions.

### Circulation.

The existing street grid extends into the new community to strengthen the town identity and legibility. Public right-of-ways provide pedestrian-friendly corridors throughout the community. Street designs include traffic calming features. Alleyways and paths through parkland are used to expand the pedestrian path network. Railroad crossings clearly guide pedestrian movement and control vehicular traffic.



05241 Promoting Bicycling among Children

Gwen Fitzgerald, Mike Wilhelm & Suzanne Snowdon  
 Wash. State University, 14714 N. Gleneden St., Spokane WA 99208  
 ssnowdon@comcast.net

**Promoting Bicycling among Children**

**History**

- Urban sprawl has plagued Americans with a dramatic shift away from daily physical activity.
- Busy roads prevent children from riding their bikes.
- In 1999 only 6% of kids rode bikes to school.
- In 2003 15-20% of all kids ages 16-18 exceed the upper range of healthy weight.
- 140,000 children are treated for bicycle-related head injuries each year.
- Only 1/4 of children ages 5-14 wear helmets while bicycling.

**Benefits**

- Physical activity may help increase children capacity for learning.
- Helps control weight.
- May reduce anxiety and depression.

**Conclusion**

"One of the most beneficial elements of Safe Routes to School is that it forms a partnership between parents, schools, city and private engineers, police, and elected officials. Problems, constraints and solutions cut through the usual layers of communications. Everyone quickly realizes they have work to do and can successfully do it together."

**bicyclists**

**Education**

**Reduce**

**Traffic Signs:** No Left Turn, Right Turn, Bicycle Lane Ahead, One Way, Two Way, Bicycle Lane, Route 33, Bike Route.

05301 Interdisciplinary Educational Tool to Improve Active Outdoor Places for Long Term Care Residents



Dr Susan Rodiek  
Center for Health Systems and Design  
Texas A&M University  
rodiek@tamu.edu

**Responding to** research showing that older adults are more susceptible to having sedentary lifestyles, and that access to green outdoor spaces encourages physical activity, an innovative environmental design tool is being developed by an interdisciplinary team of architects, landscape architects, gerontologists, and educational psychologists.

**This CD-based** mini-course will translate existing research into easily-applied design guidelines for improving outdoor activity settings at residential care facilities, using relatively inexpensive environmental interventions. Case studies and graphic examples will be followed by brief exercises to ensure comprehension, and links will be provided to research and design resources. The first session, "Entry Garden" describes how to create an active outdoor place near the front entry; other sessions will address elements such as walkways, transition zones, plant materials.

**Targeting** a broad range of professionals in the long term care industry, this product is aimed at helping key decision-makers understand the evidence-based principles that may be important in the planning and design of outdoor access at residential care facilities. These interventions are expected to significantly benefit the health and well being of residents by increasing physical and social activity levels, while at the same time improving the quality of the facility environment.

**Diagram and plan views:**

(diagram) **Locating an outdoor area** near the main entry allows residents to watch "front-door activities" from an attractive outdoor setting.

(1<sup>st</sup> plan view) **Paved walkways** provide access for residents at all levels of functional ability, and connected paths encourage movement.

(2<sup>nd</sup> plan view) **Landscape elements** define enclosed space with greenery, and provide screening and security as needed for different settings.

(3<sup>rd</sup> plan view) **Seating elements** allow residents to rest while walking, while adjacent benches promote social interaction.

(4<sup>th</sup> plan view) **Shade, greenery,** and a sparkling fountain create a pleasurable setting where residents can linger outdoors.



**Perspective of completed entry garden,** showing relation to main drive and passenger drop off. Partial screening allows residents to watch front-door activities without being the focus of attention. Side doors opening into lobby and main corridor allow access without going through the front door. Windows from common areas allow visual surveillance while residents are outdoors.

## 05303 Gatzert Elementary School Playground



Kristin Kildall  
SvR Design Company, 815 Western Avenue,  
Suite 400, Seattle WA 98104  
kristink@svrdesign.com

### Concept for the Bailey Gatzert Playground Improvement Project

Bailey Gatzert Elementary School is located in one of the most diverse areas of Seattle and is at a meeting point for several urban neighborhoods. Reflecting the surrounding neighborhood, Gatzert Elementary has a diverse school population, where the majority of students are immigrants or first generation Americans and several languages are spoken. The City of Seattle has classified this area as having a deficiency in open space. The school with 3.3 acres of open space is by far the greatest opportunity for the community.

The current site conditions do not reflect the strong sense of community and cultural diversity that permeates the school and surrounding neighborhoods. Only 15% of the 3.3 acres of open space is currently being used to its full capacity or at all. Play structures are dilapidated and unsafe, the play field is wet throughout most of the year and the lack of off-hours access prevents neighborhood use.

The goal of this improvement project includes providing accessible community entries, increasing the amount of usable space, increasing outdoor education opportunities, and building community pride in the site so that it can become a true community space used for events, recreation, and celebrations.

Through the concept of global living, multiple spaces that serve as active and passive play areas, outdoor classrooms and community gathering spaces will be created. A walking trail around the perimeter of the site takes people on a global tour, encouraging exploration and entry into the site and creating

a more pleasant experience for children walking to school. Two large entry gates welcome people throughout the neighborhood into the site during non-school hours to play in one of the active areas or to sit under the trees and enjoy the day. Improved fields and courts provide the neighborhood with a place for basketball, soccer, and ultimate Frisbee.

With a strong design, Gatzert Elementary can become a destination for the local and greater community to experience the outdoors and strengthen their ties to the school, the outdoors, and one another. As a destination and community asset, this place can provide the community a place and a reason to be active.



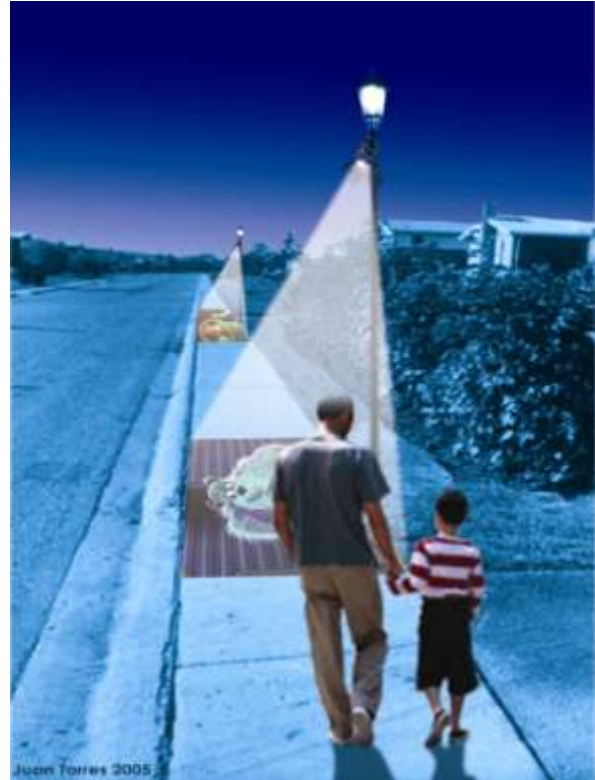
## 05304 Walking Stories

Juan José Torres Michel  
Faculté de l'aménagement, Université de Montréal, Canada  
jj.torres.michel@umontreal.ca

Reading a story before going to sleep is an activity shared by parents and children all over the world. It implies not only a beautiful act of intergenerational communication, but also an opportunity to initiate youngsters into reading. The project transforms this activity into a "walking tradition", associating it with the pleasures of physical activity, environmental discovery, and public space use.

Sidewalks become pages of an open book as children and parents share a moment of their evening through a walk that leads them to an always-new story. Stories are provided by means of images projected on the ground; these images are changed on a regular basis. Thus, pedestrians always have a reason to go out and discover a dynamic landscape.

This active place design proposal aims to encourage families living in urban and suburban areas to spend together a few minutes a day on an evening promenade. The project supports both, physical and social activity by putting forward a new and renewable reason to explore the environment.



*In a few years, children will ask their parents not only to read them a story,  
but also to walk with them on it!*

## 05401 Bicycle System for a 96 Km2 New Town Planning



Zheng, Xiaoping  
 BAZO Design International Ltd, Shanghai, China  
 zhxp@bazo.com

### Project Background

In year 2004, Municipal government of Hai Kou city at China launched a major new town planning consulting work. Out of 59 international candidates, 4 firms were selected, they are: **BAZO** (Hong Kong), **Architectural Studio** (France), **SASAKI** (U.S.A), **SDAD** (Canada).

BAZO had proposed a complete 50 years development plan, this **Bicycle System** form part of the proposal.

### Project Objective:

China cities, for the past 15 years, have been destroying their tradition of using bicycle as the main means of transportation for citizen, as a result, health problems associate with lack of exercise has been rising to alarming high. Major city like Beijing and Shanghai has created irreversible infrastructure that has made it impossible to implement sensible bicycle system even when they want to do so.

This **Comprehensive Bicycle System**, conceived at the inception of a new town development, is determent to incorporate a well designed bicycle system that can be merged with subsequent development of road, infrastructure, activity area, park, and other public transportation system, so as to encourage safe and healthy city living.

### Project Detail

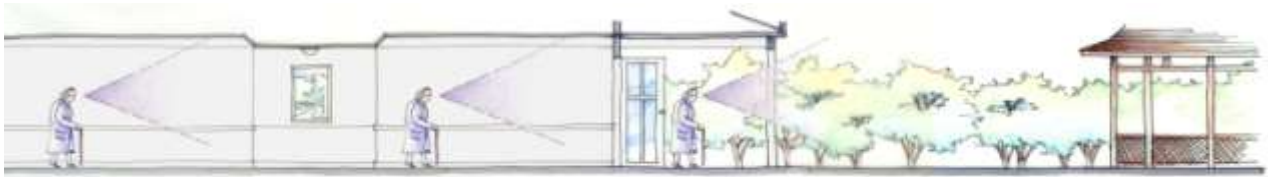
- All roads, except enclosed super high way, are incorporated with bicycle lanes

- Dedicated bicycle lane for scenic area, university town, and research center
- Parking at interchange junction with rail and bus transportation
- Detail design for tree shading to suit Hai Kou's tropical weather
- Consideration for West-East and North-South oriented bicycle lane

### Conclusion

This is one of the few extremely large planning proposals in China that has detail suggestions for a grand development plan of bicycle system, with focus of providing a healthy living style. It has received favourable commend from the judging panels.

## 05402 Increasing Physical Activity in Long Term Care Facilities by Applying Research to the Design of Outdoor Places



Dr Susan Rodiek  
Center for Health Systems and Design  
Texas A&M University  
rodiek@tamu.edu

### Introduction

Walking is considered a feasible and beneficial form of physical activity for older adults, and is known to have multiple health benefits.<sup>1</sup> Because having walkable green outdoor places has been found to correlate with physical activity levels,<sup>2</sup> there is increased interest in the value of outdoor space at long term care facilities. Although usable outdoor space is typically provided at facilities, it is often reported as underutilized.<sup>3, 4</sup> The study reported here assessed patterns of usage, resident preferences, and existing facility layouts, to learn how outdoor places may be designed to better meet the needs of frail elderly residents.

### Methods

A multi-stage cluster sampling strategy was used, in which *fourteen assisted living* facilities were randomly selected from all eligible facilities<sup>5</sup> in a *twelve-county* region in south-central Texas that included the city of Houston. Only large facilities with 50+ residents were surveyed, and dementia-specific facilities and units were not included. Residents (N=108) were randomly selected from all those considered by facility administrators as cognitively able to participate in this study.

Data was collected through written surveys, focus group discussions, and photo-comparison surveys; staff were interviewed to corroborate resident responses. This study assessed: 1) *interest in using outdoor areas*, 2) prevalent

*types of usage* and the *outdoor settings* in which they occurred, and 3) specific *environmental features* that attracted or deterred elderly residents. Facility site layouts were measured and analyzed for behavioral implications of existing outdoor places.

### Results

The qualitative responses from open-ended questions helped confirm and interpret the quantifiable survey responses. Residents were found to highly value outdoor access, and to associate it strongly with physical activity, most commonly walking. Figure A shows that 54% of residents preferred to walk or exercise *outdoors*, in spite of physical frailty and functional disabilities. Figure B shows that the majority of residents (75%) reported feeling better after being outdoors, while Table 1 shows the numerous benefits they described.

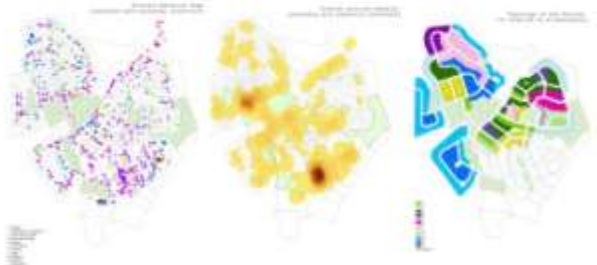
About 25% of residents reported that the facility environment made it difficult to be outdoors, and several mentioned problems with paving, doors, distance, and the location of outdoor areas<sup>6</sup>. Table 2 shows that walking was the most common outdoor activity, slightly more prevalent than sitting. Although outdoor activities were reported rather than observed, other participants often confirmed these reports. For example, several residents at one facility described a 104-year-old woman (Figure C) who walked outdoors after every meal, even in the rain.

### Discussion and Further Research

This study supports the existing literature by finding substantial interest in the outdoors by elderly residents, and preference for many outdoor features previously found to be important, such as safety and comfort issues.<sup>7, 8</sup> However, in spite of published research and "best practice" design guidelines, even the relatively new and upscale facilities in this study often neglected behavioral principles known to be important for outdoor usage by older adults.

This suggests the need for translational research to make existing information more accessible and easy to apply in practical situations. This topic warrants further observational and intervention research to determine how specific facility design features influence outdoor usage and physical activity. Because higher levels of physical activity are known to be associated with numerous health benefits, frail elderly residents may benefit significantly from improved environmental design of outdoor places.

## 05404 Where People Walk and Why in a Neo-traditional Neighborhood



Evrin Demir  
North Carolina State University, College of Design  
edemir@ncsu.edu

Robin Moore  
North Carolina State University, College of Design

Diaan Van Der Westhuizen  
Ph.D. in Architecture student, University of Michigan Ann Arbor

**Background:** Architects and urban planners promoting “new urbanism” assert many lifestyle benefits but present little valid evidence. This paper reports an investigation of assertions related to pedestrian activity and social interaction in a neo-traditional neighborhood context. A case study was conducted in Southern Village, a neo-traditional development in Chapel Hill, North Carolina, considered to be a showcase of pedestrian-friendly development. Located on a rolling piedmont landscape, Southern Village is formed by a central commercial area and surrounding residential areas. Developed around the main village green, the commercial area accommodates office spaces, restaurants and retail stores. Three residential sub-areas with different housing types and spatial layouts surround this central area.

**Objectives:** Objectives of the study were to a) develop feasible field methods for investigating pedestrian activity in urban neighborhoods, b) develop objective measures of physical design attributes that afford pedestrian activity, c) investigate associations between spatial

characteristics and pedestrian behavior, and d) propose directions for further investigation of neighborhood pedestrian activity.

**Methods:** The dependent variables, pedestrian activity and social interaction, were measured using a multi-method approach utilizing both objective and subjective methods. Objective data were collected through direct observation of activity using behavior mapping and indirect measures of activity using behavior trace mapping. Subjective data were collected through a community survey, which incorporated a standardized questionnaire section on user evaluations, perceptions and use of space; and a mapping section on favorite routes and reasons of choice. Independent variables, spatial attributes, were analyzed objectively. Spatial attributes incorporated syntactical measures (Space Syntax<sup>1</sup> method connectivity and integration values), proximity (metric distance), topographical level change, land use patterns, and street-space typologies (housing type and fronting street spatial relationships). Both spatial and aspatial data collected were combined and analyzed by the use of Geographic Information Systems (GIS)<sup>2</sup> Software. Statistical analyses were done by the use of Statistical Analysis Software (SAS)<sup>3</sup>.

**Results:** Findings of the study indicated that pedestrian activity was not evenly spread all around the neighborhood. Four sub-areas are detected within the neighborhood in terms of pedestrian behavior characteristics. Variation in spatial character (such as street space configurations) and housing type in these areas were used to explain the differences in pedestrian activity and social interaction levels and types. The results of the study add to the small but growing knowledge base in the effect of design on pedestrian activity; and increase an understanding of how urban design can contribute to addressing the issue of sedentary lifestyles.

<sup>1</sup> Space Syntax Axwoman extension for ArcGIS 3.0, last modified at 1999.

<sup>2</sup> ArcView 8.0, copyright by ESRI.

<sup>3</sup> SAS 8.2 copyright by SAS 1997.

Other Participants Included in the Exhibition	
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- |       |                                                                                                                                                  |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 05201 | Peach Creek Conservation District: A Walkable Community<br>Sarai Akin, Texas A&M University, USA<br><saraiakin@hotmail.com>                      |
| 05205 | Greenside Living at Peach Creek<br>Trey Jones, Texas A&M University, USA<br><treyjones@aggienetwork.com>                                         |
| 05216 | Healthy by Design: A sustainable Community<br>Jennifer Wilson, Texas A&M University, USA<br><jwilson@neo.tamu.edu>                               |
| 05230 | Green Infrastructure, Jacksonville, MCcoy Creek<br>Erin Sudman, University of Florida<br><schbach@ufl.edu>                                       |
| 05231 | Green Infrastructure, Jacksonville, Upper Hogan creek<br>Nelson Perez, University of Florida<br><schbach@ufl.edu>                                |
| 05232 | Green Infrastructure, Jacksonville, Lower Hogan Creek<br>Natalia Barranco, University of Florida<br><schbach@ufl.edu>                            |
| 05233 | Green Infrastructure, Jacksonville, Deer Creek<br>Steven Summerford, University of Florida<br><schbach@ufl.edu>                                  |
| 05234 | Green Infrastructure, Jacksonville, Long Branch Creek<br>Brian Wood, University of Florida<br><schbach@ufl.edu>                                  |
| 05235 | Green Infrastructure, Jacksonville, Moncreif Creek<br>Nick Lehman, University of Florida<br><schbach@ufl.edu>                                    |
| 05236 | Green Infrastructure, Jacksonville, Ribault Creek<br>Jack Wensel, University of Florida<br><schbach@ufl.edu>                                     |
| 05237 | Green Infrastructure, Jacksonville,, Master Plan.<br>R. Terry Schnadelbach, University of Florida<br>schbach@ufl.edu                             |
| 05240 | Design for Active Living: Interdisciplinary Graduate Design Studio<br>Robin Moore, NC State University College of Design<br>robin_moore@ncsu.edu |
| 05242 | Long Term Care Facility Design to Promote Physical Activity<br>Tara Fitzpatrick & Charles Schneider, Texas A&M University,<br>rodiek@tamu.edu    |

Active Place Design Competition Awards
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**Project**

1<sup>st</sup> Place Vancouver City Officials, EDRA leaders, EDRA members

#104 “Julian Greenway: Connecting Work and Play” Jennifer Jones (University of Arizona, recreation and transportation greenway link to downtown - destinations even have vending machines with tire patch kits) <jjenniferr@gmail.com>

**Product**

1<sup>st</sup> Place Vancouver City Officials, EDRA leaders, EDRA members

#301 “Interdisciplinary Educational Tool to Improve Outdoor Activity for Long Term Care Residents (Dr. Susan Rodiek - Texas A&M - CD- based mini course provides design guidelines for outdoor activity settings at residential care facilities) <rodiek@tamu.edu>

**Research**

1<sup>st</sup> Place Vancouver City Officials, EDRA leaders, EDRA members

#404 “Where and Why People Walk in a Neo-traditional neighborhood” (Evrin Demir + Robin Moore - North Carolina State University and Dianne Van Der Weshuizen - University of Michigan) neo-traditional neighborhoods and pedestrianism <edemir@ncsu.edu>

**Proposals**

1<sup>st</sup> Place Cumulative, #241 “Promoting Bicycling Among Children” Gwen Fitzgerald, Mike Wilhelm & Suzanne Snowdon - Washington State University - Safe Routes to School solutions <ssnowdon@comcast.net>

2<sup>nd</sup> Place Cumulative, #208 “Parkside Plaza at Peach Creek” Beth Larkin and Holly Dawson, Texas A&M, Traffic calming, destinations, connections, energy efficiency, safety, and amenities <elizalarkin@tamu.edu>

3<sup>rd</sup> Place Cumulative, #202 “Park Creek Community” Pahl Samson & Ana Castaneda, Texas A&M, compact pedestrian-oriented mixed-use community <analuciacd@hotmail.com>

**Vancouver City Officials**

1<sup>st</sup> Place Vancouver City Officials #236 “Green Infrastructure, Jacksonville, Ribault Creek,” Jack Wensel, tubing run, paintball course, hard surface speed track for bicyclists, mountain bike trails, and a boardwalk for running, rollerblading, or walking <c/- Professor Terry Schnadelbach - schbach@ufl.edu>

2<sup>nd</sup> Place, Vancouver City Officials #218 “400 X 800 Meter Swimming Park for City of WaHan, China, Xiaoping Zheng, safe naturally-appearing pools with adjacent trees that uses water from the adjacent river <zhxp@bazo.com>

3<sup>rd</sup> Place Vancouver City Officials, #241 “Promoting Bicycling Among Children” Gwen Fitzgerald, Mike Wilhelm & Suzanne Snowdon - Washington State University - Safe Routes to School solutions <ssnowdon@comcast.net >

4<sup>th</sup> Place, Vancouver City Officials #232 “Green Infrastructure, Jacksonville, Lower Hogan Creek,” Natalia Barranco - University of Florida - trails, canoe launch, dog park, housing, basketball, tennis, and volleyball courts and fields, bio-remediation water features, par courses, and public pool <c/- Professor Terry Schnadelbach - schbach@ufl.edu>

5<sup>th</sup> Place, Vancouver City Officials (tie) #211 “Creeside Community,” Texas A & M University, Wesley F. Salazar and Tarel Chantal Piefer, multiuse town center with focus on pedestrians <punkface707@yahoo.co>

5<sup>th</sup> Place, Vancouver City Officials (tie) #215 “Making an Active Zone of Hotel Khazar” Tehran University, Mitra Vahdati, walking, bicycling, skating, fishing, climbing, boating, swimming, water games with special design issues for women and children (covered and safe space)  
<mt\_vt@yahoo.com>

### **Environmental Design Research Association Leaders**

1<sup>st</sup> Place (tie), EDRA Leaders, #241 “Promoting Bicycling Among Children” Gwen Fitzgerald, Mike Wilhelm & Suzanne Snowdon - Washington State University - Safe Routes to School solutions  
<ssnowdon@comcast.net >

1<sup>st</sup> Place (tie), EDRA Leaders, #208 Parkside Plaza at Peach Creek, Beth Larkin and Holly Dawson - Texas A&M, Traffic calming, destinations, connections, energy efficiency, safety, and amenities  
<elizalarkin@tamu.edu>

2<sup>nd</sup> Place, EDRA Leaders, #211 “Creeside Community,” Texas A&M, Wesley F. Salazar and Tarel Cantal Piefer, pedestrian oriented community <punkface707@yahoo.com>

3<sup>rd</sup> Place, EDRA Leaders, #240 “Design for Active Living, Interdisciplinary Graduate Design Studio,” Robin Moore - NC State University College of Design <robin\_moore@ncsu.edu>

4<sup>th</sup> Place (tie), EDRA Leaders, #202 “Park Creek Community” Pahl Samson & Ana Castaneda, Texas A&M, compact pedestrian-oriented mixed-use community <analuciacd@hotmail.com>

4<sup>th</sup> Place (tie), EDRA Leaders, #220 “Las Vegas Active Urban Living,” University of Nevada, Erik Bond, regional trails, retrofitting trails to the urban fabric, pedestrian facilities, mass transit incorporation.  
<bonderik79@yahoo.com>

5<sup>th</sup> Place, EDRA Leaders, #205 “Greenside Living at Peach Creek,” Trey Jones - Texas A&M  
<treyjones@aggienetwork.com>

### **Environmental Design Research Association Members**

1<sup>st</sup> Place EDRA members, #241 “Promoting Bicycling Among Children” Gwen Fitzgerald, Mike Wilhelm & Suzanne Snowdon - Washington State University - Safe Routes to School solutions  
<ssnowdon@comcast.net >

2<sup>nd</sup> Place (tie), EDRA members, #208 “Parkside Plaza at Peach Creek” Beth Larkin and Holly Dawson, Texas A&M, Traffic calming, destinations, connections, energy efficiency, safety, and amenities  
<elizalarkin@tamu.edu>

2<sup>nd</sup> Place (tie), EDRA members, #202 “Park Creek Community” Pahl Samson & Ana Castaneda, Texas A&M, compact pedestrian-oriented mixed-use community <analuciacd@hotmail.com>

3<sup>rd</sup> Place, EDRA members, #242 “Long Term Care Facility Design to Promote Physical Activity” Tara Fitzpatrick and Charles Schneider - Texas A&M University <c/- Dr Susan Rodiek rodiek@tamu.edu>

4<sup>th</sup> Place, EDRA members, #233 “Green Infrastructure, Jacksonville, Deer Creek,” Steven Summerford - University of Florida <c/- Professor Terry Schnadelbach - schbach@ufl.edu>

5<sup>th</sup> Place (tie), EDRA members, #227 “Landscape Renovation of Hotel Khazar,” Tehran University, Sharareh Hariri, walking and cycling routes next to the seaside with plants and a sea animal exhibit  
<sharareh\_hariri@yahoo.com>

5<sup>th</sup> Place (tie), EDRA members, #212 “Millican Crossing, - A Pedestrian-Friendly Community,” Texas A&M, Matthew Bryson and Janette Shellenbarger, pedestrian community <janette\_007@tamu.edu>

5<sup>th</sup> Place (tie), EDRA members, #205 “Greenside Living at Peach Creek,” Trey Jones - Texas A&M  
<treyjones@aggienetwork.com>