

Urban Village :

Southwest 20th Avenue Transportation Design Proposal

School of Architecture, University of Florida

prepared for the

North Central Florida Regional Planning Council
Metropolitan Transportation Planning Organization

University of Florida

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Foreword

Urban Village Studio is an innovative, research-based design approach toward integrative land-use, transportation and surface hydrology as a collaborative effort to achieve healthy, efficient and livable communities. Engaging students and faculty in the School of Architecture and allied disciplines, including landscape architects, ecologists, transportation engineers, urban planners and municipal governing agencies in collaboration, a transdisciplinary model for community design is evolving. The highly recognized Alachua Countywide Bicycle Master Plan Addendum produced during the spring of 2004 was a product of this model studio conducted in the spring of 2004. This methodology, although not unique, is only in the emergent stages in the United States with growing momentum, as sustainability and livability are included in the criteria for successful communities.

Under the direction of Associate Professor, Martin Gold, graduate students worked individually and in groups to gather relevant background information, visit key precedent example villages or neighborhoods, review consultants' recommendations and reports, and identified components and protocols with viability in the local context. Findings have been explored, tested and reinterpreted through integrative vignettes involving speculative concepts and the integration of precedent strategies and best practices – schemes with high potential are developed further gaining more sophistication with multiple iterations. The issues at stake also include housing densities and typologies, social mix beyond the student component, land use mixes, public transport alternatives, and urban design for walkability, social interaction and environmental conservation. Based on these studies, the most robust options are developed further and integrated within a designed context to accommodate existing conditions yet emphasizing improved future redevelopment. This process produces two outcomes: (1) integrated design options and (2) a matrix of potential components to be integrated on a flexible timeline and by varied development agents. This dual approach provides latitude in terms of ownership, scheduling, phasing and budgeting of future projects while advancing a positive and integrative community vision.

As an evolving process, studio concepts and schemes are continually vetted, refined and reinvested through regular reviews by a steering committee of local government staff and community stakeholders. Academic reviews are also conducted through the normal studio process in the School of Architecture including local faculty experts, professionals and invited experts from around the country who critique the work and provide suggestions and alternatives for improvement and refinement. Furthermore, the general public was engaged in the project at a workshop allowing discussions, sketching and speculation on possible schemes and alternative strategies — honing key community desires and expectations. Political and community interaction legitimizes the proposals providing the substance needed for community leaders to focus assets and resources toward achieving the community vision.

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The Gainesville City Commission and the Alachua County Commission, in their role as the Metropolitan Transportation Planning Organization (MTPO), have been visionary in their support of these design studies to promote informed public debate and engage the local expertise of the University of Florida toward improving the community. The North Central Florida Regional Planning Council, as the administrative body of the MTPO, has also been highly supportive and a critical ally in facilitating the work of these initiatives, promoting the best possible transportation alternatives and integrating community design strategies for our community.

Urban Village Studio, in seeking to resolve critical transportation and community design questions, has developed trajectories to move toward. Of course, many questions have been raised for fomentation through further projects and public debate. Having tangible schemes, as feasible but not-yet-fixed concepts for the future, promotes debate and provides a basis for long-range funding strategies, while providing sound logics for important community choices that may have varied consequences for different constituents but will support, promote and enhance the quality of our community.

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Contributors

Joseph Corradino, Sr., of the Corradino Group. The Corradino Group, founded in 1970, is nationally recognized for major transportation projects, while also moving into fields of engineering, planning, architecture, and construction.

Bruce DeLaney, of the University of Florida Foundation, works as Assistant Vice President of Development and Alumni Affairs, including administration and real estate; providing communication between the University of Florida and the city of Gainesville.

Stephen Luoni, head of the Community Design Center at the University of Arkansas which promotes ideas of sustainability in terms of economic capacity, enhanced ecologies and improved public health, specifically in the urban environment.

Martha Kohen, the director of the School of Architecture at the University of Florida, has practiced architecture and urban planning in urban settings such as Montevideo, Uruguay, Santiago, Chile, and Cambridge, U.K.

Ruth L. Steiner, Ph.D., is an associate professor of the Department of Regional Planning at the University of Florida, and focuses interest on transportation policy and planning, multimodal transportation, and environmental impacts.

William Zegel, Ph.D., of Water and Air Research, Inc. in Gainesville, Florida, works as a consultant to provide environmental impact information regarding water supply and purification, air pollution control, soil preservation, and noise protection.

Cathy Pickering, of the San Francisco Redevelopment Agency, has been involved with the redevelopment of the Yerba Buena district including funding and planning issues.

Margaret H. "Peggy" Carr, associate professor of the Department of Landscape Architecture at the University of Florida, has directed energy towards natural systems in land use and resource planning development, global landscape planning with GIS and greenways planning, design and management.

Gary W. Siebein, professor at the School of Architecture at the University of Florida, focuses work on environmental technologies, with primary directives on acoustics and principal consultants, Seibein Associates, Inc.

Executive Summary

The Urban Village Studio was engaged by the Metropolitan Transportation Planning Organization to conduct a design study of the SW 20th Avenue area, in Gainesville, Florida to integrate multiple transportation modes, suggest village morphologies, promote appropriate linkages between residential and commercial areas, and to provide multi-modal transportation options to area destinations including the University of Florida.



The Urban Village Studio, consisting of graduate students enrolled in the School of Architecture under the direction of Associate Professor Martin Gold, has conducted extensive analysis, research and design scheming to generate strategic proposals for the redesign of SW 20th Avenue as a multi-modal transportation corridor. Redevelopment, land use and density studies were conducted to develop schematic visioning and recommendations for a vibrant, pedestrian-oriented urban village. Proposals include specific alternatives for a new SW 20th Avenue that optimizes auto, pedestrian, cycle and transit connectivity. Organization, urban form, density, use, ecology, infrastructure, sustainability, commerce and neighborhood quality strategies have been schemed as integrated systems to advance economic and social diversity in a pedestrian dominated village core.

Design strategies were developed and included in this report that are based on the “Concept M” automobile network established by the MTPO in the summer of 2005. Goals initiated through a community design charrette in 1997 provided the foundation for proposals put forward in this report. They focus on creating a walkable, dense, urban fabric that will support cycle, transit and automobile transportation modes with high connectivity and low congestion. Detailed field analysis including environmental studies, traffic projections and modeling, hydrological studies, building inventory assessments, land use reviews, near future project proposals and acoustic analysis were included in the study. Best practices, innovative community planning and transportation design alternatives were studied through literature reviews and visits to multiple case study communities including Winter Park, FL, City Place of West Palm Beach, FL and Yerba Buena Gardens, San Francisco, CA.

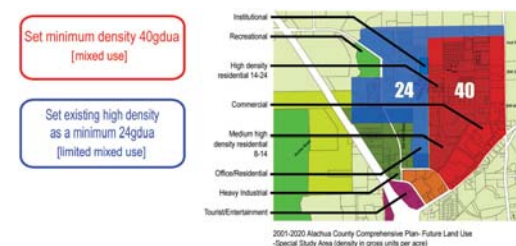
Three integrated transit alternatives were proposed for SW 20th Avenue including dedicated bus lanes, typical bus bays and an innovative auto-merge bus bay. In the latter, travel lanes shift as part of a traffic calming strategy to give the bus ‘spatial right-of-way’ in addition to the legal right-of-way — ignored by many motorists. This strategy received strong support from the different stakeholders reviewing the work. Dedicated bus lane and transit ‘loop’ strategies were also developed. Cycle infrastructure is included with a dedicated, separated path along SW 20th Avenue and integrated with the street in the grid network. This infrastructure is consistent with ‘nets’ and ‘braids’ design strategies outlined in the Alachua Countywide Bicycle Master Plan Addendum,

adopted in 2004.

Urban village design strategies for the SW 20th Avenue village area organize around civic park spaces studied in five different configurations — linear park, matrix park, thread park, central park and a composite of the four idealized schemes. The proposals provide an organizational infrastructure, with specific flexibility, to promote a variety of uses and development opportunities for individual properties, while protecting and enhancing land value and promoting a walkable urban village. The SoHo (South of Hogtown Creek) area (the SW 20th Avenue and Hull Road extension area) links significant medical facilities (existing and planned expansions to 2035); the UF arts district including museums, galleries and an expanding performing arts facility; UF research facilities and sensitive ecological classroom; commercial plazas and shopping; UF sports infrastructure; nearby cinema (Butler Plaza); and the Hilton Conference Center. This in-place infrastructure — more than many downtown districts could hope for — would catalyze the quality of a dense, walkable, mixed demographic residential infrastructure. Given these assets already in place, as of Spring 2006, University of Florida administration officials are considering designating this area as the “main” entry to campus.

Recommendations to foster this vision include annexation into the urban area (City of Gainesville) and the assignment of a community redevelopment agency (CRA) to implement best practices and to work with developers to move this vision forward. Minimum, rather than maximum, residential densities in mixed use zoning are recommended. Growth projections at those higher densities should be used to establish services such as schools — part of CRA advance planning and development management. Fine grained diversity of housing options is a critical component — subsidized, affordable, market rate and luxury housing need to be included. The CRA might even broker employee housing subsidies from commercial enterprises entering the area such as Wal-Mart or Publix to foster demographic diversity.

Ecological concerns were deeply engaged and the best practices of sustainable design were evaluated and incorporated to the extent feasible. The sensitive ecotone (edge condition) and complex hydrology of the adjacent Hogtown Creek wetland and the xeric uplands suggest fundamental organizational schemes utilizing park and storm water systems as core elements. Strategies proposed include decentralized water catchments; stormwater sequestering systems to retain wetlands during drought periods; green roof systems that retard run-off; suggestions for photovoltaic power generation; an alternative centralized chilling plant with a water loop through the high density area of the village; and suggestions for grey water integration in new development to reduce water consumption and sewage infrastructure requirements.



As a public health initiative, the proposed urban village integrates the latest recommendations from the Centers for Disease Control to routinize physical activity through community design. The finding that time spent in an automobile closely predicts excessive weight and obesity — a precursor to type two diabetes and cardiovascular disease, which are expected to be the number one cause of death, chronic debilitation and health care expenses in the next decade. As a public health initiative, SoHo provides the infrastructure, connectivity and proximity for residents to routinely walk and bike with the same accessibility to work, shopping and the community as those using automobiles.

Urban Village Studio has integrated these critical needs and community enhancement initiatives as design strategies that visualize the potential for innovative development while expanding the flexibility needed for multiple entities and stakeholders to carry the vision forward.





Introduction

The Urban Village: Southwest 20th Avenue Transportation Design Proposal advances, clarifies, rationalizes and expands transportation and planning initiatives proposed for this area over a nine-year period beginning in 1997. In late 2005, the Metropolitan Transportation and Planning Organization initiated ‘Concept M’ — developed through a study of 12 alternate schemes — which set the priorities and organizational strategy for arterial connectivity to and through the area. To optimize the MTPO concept, recommendations presented focus on three primary goals that have consistently emerged through the early charrette and later transportation studies: (1) develop transportation strategies that reduce automobile congestion, enhance multi-modal connectivity, local walkability, cycling and transit; (2) promote mixed use development, urban density morphologies and mixed demographic opportunities; and (3) advance design innovation, sustainability and economy through integrated design. Strategies have been developed to achieve these community goals that focus on redesigning SW 20th Avenue as a multi-modal corridor from SW 34th Street west to SW 43rd Street. It is important to note that the future plan calls for east-west commuting to run primarily on the proposed Hull Road extension connecting Hull Road to SW 20th at SW 43rd Street. North-south commuting will occur primarily on SW 43rd Street allowing the major portion of SW 20th Avenue to be reconstructed for low speed, high connectivity auto, transit, pedestrian and cycle transportation. Prioritized design alternatives for this ‘new’ SW 20th Avenue are provided based on design integration, walkability, cycling, transit integration, stormwater integration, sustainable neighborhood design and urban village quality.

The Urban Village Studio team studied the linkages between SW 20th Avenue and the immediate opportunities for economic growth, commerce, employment and entertainment. Although the project was originally envisioned as a “Student Village”, it became clear from local analysis and case study research that a healthy urban village could not rely solely on a student population. Mixed demographic groups are required to support the range and type of commerce needed for a vital and sustainable village economy — providing live, work and play possibilities. Capitalizing on the Arts Center just across SW 34th Street, the medical facilities expansion to the north, the transit station for UF commuters and proximity to the commerce available in Butler Plaza to the south, proposals look to provide a range of housing options with increased density and livability. Furthermore, regional draw components including the arts center, medical facilities and the Hilton conference center will additionally support retail and restaurant activities from beyond the village, local use and perhaps supplement the existing draw of these civic amenities.

Village organizational strategies were developed from the desire for high transportation connectivity (grid based), case study examples and an independent study of block size, orientation and proportion from urban districts in the US and Europe known for their excellent civic quality. From this research,

Primary Goals

- Develop transportation strategies that reduce automobile congestion, enhance multi-modal connectivity, local walkability, cycling and transit.
- Promote mixed use development, urban density morphologies and mixed demographic opportunities.
- Advance design innovation, sustainability, and economy through integrated design.

“Although the project was originally envisioned as a “Student Village”, it became clear from local analysis and case study research that a healthy urban village could not rely solely on a student population.”

**“Integration of density,
housing types, commercial
activities, civic functions,
green space, transit options”**

various models of density and housing types were revealed including mixed-use high-rise, townhouse, courtyard houses, combination luxury hotel/apartment and high-density low-rise compact housing. To provide the diverse demographic needed for success, multiple dwelling types must be incorporated in the village. Taking cues from the best practices found in our research, the Studio has organized the Village around civic greenspace (parks) to take advantage of early linear park concepts, the natural ecology of the area, the need for stormwater infrastructure and the need for green space in a dense urban environment.

SW 20th Avenue corridor studies were initiated to first look at the road transect — 80 foot right-of-way — with auto lanes, parking, turn lanes, bus stop, pedestrian, cycle and stormwater infrastructure. These studies then evolved linearly down the road to encompass intersections as well as horizontally to begin to inform and be informed by adjacent compact development. The report presents the corridor options organized into basic strategies with variations on the themes — center boulevard, dedicated bus lane, bus priority pull-out or bay.

A components matrix of uses has been developed to look at the various programs (building types) that would inhabit the village including suggestions for locations where they might best fit and/or modifications to the norm that would provide a ‘fit’ given the village circumstance. This includes parking garages, big-box and grocery spaces in addition to mixed-use functions and open space requirements.

Case studies were conducted on 15 cities with village districts noted for either the general character, integration of cycle-pedestrian activities, or innovation in development/redevelopment. Summaries of these studies are included in the Appendix of this report. Five cities were investigated through actual occupation and field observations including four in Florida and multiple locations in San Francisco, California. Critical strategies for the integration of density, housing types, commercial activities, civic functions, green space and the controlled relationships between civic space and transportation were uncovered — and related in the recommendations of this report.

Field analysis included ecological assessment, potential for redevelopment, contaminated or hazardous sites, historic locations and identification of champion trees. Primary ecological concerns are the sensitive ecotone (edge) condition between upland dry and low wetland areas and the hydrology of the uplands during intense rain events that occur seasonally. Water must be absorbed and carried to the wetlands. Significant portions of the area were originally constructed in the 1960’s and 1970’s with some intermediate development and some recent construction less than five years old. Undeveloped areas are also plentiful. Acoustical analysis of the natural

Urban Village : Southwest 20th Avenue Transportation Design Proposal

areas, developed lands and transportation components was conducted to evaluate the existing soundscape and to provide recommendations for appropriate acoustical design strategies for an urban village context.

Proposals developed by the Urban Village Studio have been vetted through reviews by local government officials and community stakeholders (Steering Committee), experts in community design and transportation, and the public through a public workshop. Our report includes the recommendations from these feedback groups noting the effects these important inputs have made on the project.

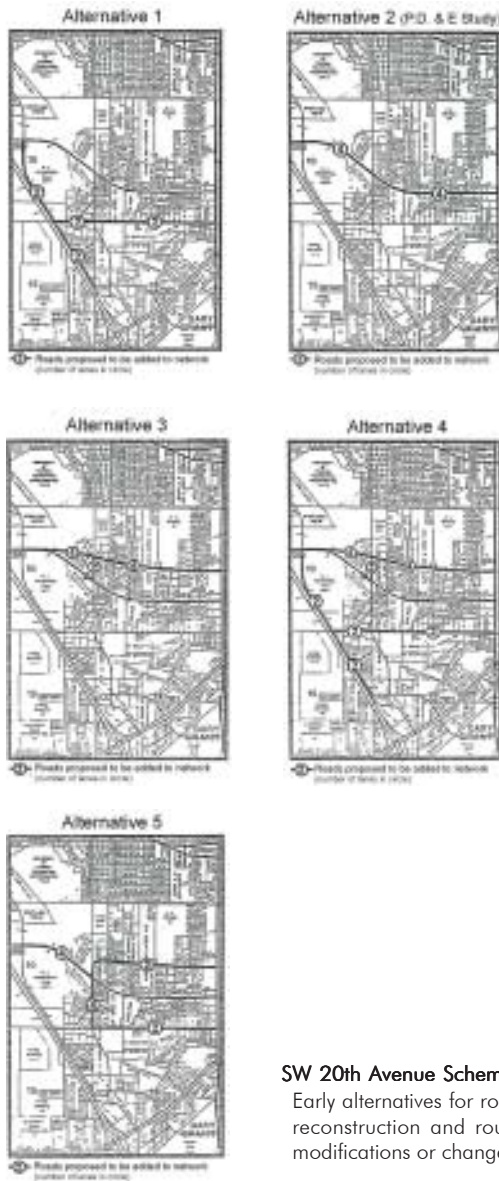


Looking west over the UF Arts Center toward the future village.



Looking northwest along SW 20th Avenue, at intersection of SW 43rd, near Forrest Park.

Background Information



SW 20th Avenue Schemes
Early alternatives for road reconstruction and route modifications or changes.

During the Summer of 1997, two alternatives were proposed to relieve traffic congestion by widening to a four-lane (five including the turn lane) transportation corridor consisting of raised medians, curb and gutter, sidewalks and provisions for bicyclists. The SW 20th & 24th Avenues/Hull Road Extension also known as State Project Number 26506-1603, Work Program Item Number 2120147, Federal Aid Project Number M-2156-[2] was initiated. The initial project was to extend from SW 75th Street (Tower Road) to SW 34th Street (State Road 121) including a new bridge over Hogtown Creek or a replacement of the two-lane bridge servicing SW 20th Avenue. Alternative 1 would widen the bridge on SW 20th Avenue (replacement likely required) and reconstruct the road as a four-lane arterial. Alternative 2 extends Hull Road to the west with four lanes constructing a new bridge over the creek — SW 20th Avenue would be disconnected from the network with a cul-de-sac at Forrest Park.

In December, 1997, as part of the Year 2020 Transportation Plan, a four-day planning session — later known as the Student Village Charrette — included a day of workgroup interactions among landowners, University officials, retail/business owners, neighborhood groups, environmentalists and concerned citizens. The team concluded that the transportation questions in this area needed to be addressed with a much larger concept for growth and livability in Gainesville. Supported by the Florida Department of Transportation, the concept of a Student Village was formed to provide infrastructure for multiple transportation modes, such as bus and cycle facilities integrated into a grid-connected network to relieve traffic congestion on the major arterials. It would also connect with a new parking and transit facility planned by UF as a modal interchange allowing people to drive to the hub and transfer to cycle or bus at that location or cycle to that location and transfer to the bus (inbound trip).

From the charrette, five alternatives were developed that optimized connectivity, ecology and economy in terms of environmental impacts, the cost of new construction, opportunities for improved commuting and grid connectivity. Expanded schemes include SW 43rd Street and SW 24th Avenue as important elements in the plan that might reduce traffic on Archer Road and SW 34th Street.

In June 2000, a composite transportation scheme was proposed to utilize the Hull Road Extension as a 150' wide linear park with a two-lane road (could widen to four) with in-street cycle lanes and a separated cycle-pedestrian path. North-south linkages were included at SW 38th Terrace, SW 40th Terrace and SW 43rd Street. In addition, a new north-south route from SW 62nd to Archer Road along the interstate was proposed. Five roundabout intersections were proposed. Effectively, this proposal provided the best grid connectivity to date with roundabouts that promote steady low-speed traffic to diffuse traffic through the area rather than concentrate it on a single arterial.

Between 2000 and 2004, minor changes to the plan were made eliminating the proposed roundabouts at SW 20th Avenue and SW 38th Street based on a transportation study by Alachua County. Funds for the roundabout were redirected toward additional design studies to improve transportation on the SW 20th Avenue Corridor.

SW 24th Avenue became a charged issue during this period with great public debate over the number of lanes suitable for the project — two or four. As late as 2004, this issue seems to be settled at two lanes, given the University of Florida's clearly stated position that it would not allow SW 24th Avenue to extend through its Natural Area Teaching Laboratory thus eliminating connectivity that might support four-lane capacity requirements. Furthermore, it was noted that this SW 24th Avenue extension element of the initial Student Village proposal was "not the centerpiece of the plan" and it was not included in UF's 2000 Master Plan Update.

Various transportation advisory groups studied the five initial proposals and expanded them with alternatives to address concerns including walkability, pedestrian safety, village character and the ecological impacts of bridges and roads through the wetlands. Key issues addressed through the schemes include reduction of trips on Archer Road and SW 34th Street; the ability to accommodate capacity in the long-term — to avoid rebuilding in the near future; and sensitively engaging the fragile recharge ecology of the Hogtown Creek wetlands area.

As the preparations for the Year 2025 Transportation Plan were getting underway, twelve schemes were independently studied by the Corradino Group based upon traffic volume and capacity using year 2025 traffic estimates. These schemes range from two-lane network strategies to four-lane arterial strategies with many variations including new bridges, roundabouts and signalized intersections. Option K (of A through L) as it was referred to, was altered by the MTPD removing proposed new roads through the Hogtown Creek wetlands and removing a roundabout at SW 20th Avenue and SW 43rd Street to become the most recent adopted scheme — referred to as 'Concept M' throughout the rest of this report.

The vetting process for Concept M has traversed eight years of public debate, workshops, ecological studies, engineering studies, engineering designs, engineering redesigns, right-of-way acquisition constraints and the constraints of actual and potential funding sources. The scheme is quite workable while allowing room for variation as the implementation plan moves into the future. Concept M, and the issues embodied in this composite scheme provide the basis for the proposals that follow.

"We don't want more cars, congestion and pollution if that's what four-laning and six-laning our roadways will bring. We want to move people, not just cars. We want a different solution."

-Unknown citizen

They were referring to the recent four-day planning forum (called a 'charette') to discuss the SW 20th Avenue/Hull Rd. extension.

During the charette, the concept of a "corridor" to campus and to the major destination points of downtown, the Medical Center on Archer Road, Butler Plaza and the Oaks Mall area became the focus.

Could we create a system to disperse the traffic and give more options to people of where they go and how they get there?

And could we begin to do something soon, rather than over the span of the traditional 8-10 year process normally required by a major road-building project?

But the bigger question was one that may set a new precedent for the way we look at urban growth. It has to do with "level-of-service" constraints in our comprehensive plan that prohibit growth (more building of apartments, homes, businesses, activity centers) along roadways that presently have or are predicted to have too much traffic without something being done to improve them.

Traditionally, that "something" has been to widen the roadways to four lanes or six lanes. Otherwise, the growth must go out (witness the urban sprawl west of I-75), and more roads have to be built that also eventually become clogged.

**Linda Crider, Urban Planner
The Gainesville Sun, 4 January 1998**

MTPO 'Concept M'

Concept M balances transportation modes providing feasible commuting corridors while promoting transit, cycle and pedestrian modes of transportation.

Concept M was adopted by the Metropolitan Transportation Planning Organization in June of 2005, organizing the transportation infrastructure for the Urban Village. Originally initiated as one of five alternatives from the Student Village Charrette, Concept M has been vetted through eight years of public debate, workshops, ecological studies, engineering studies, engineering designs, engineering redesigns, right-of-way acquisition constraints and the constraints of actual and potential funding sources.

The scheme balances transportation modes providing feasible commuting corridors while promoting transit, cycle and pedestrian modes of transportation. Automobile transit lanes will be added for both north-south (+2) and east-west (+4) automobile routes providing improved auto capacity and grid connectivity. As the Hull Road extension captures east-west commuter autos, it removes the short trip currently required on SW 34th Street potentially reducing the congestion at this busy intersection. North-south traffic is diverted to SW 43rd Street, reconstructed as a four-lane road to improve connectivity between the Butler Plaza commerce area and the Oaks Mall. This capacity expansion potentially reduces local trips on both SW 34th Street and on I-75.

The construction of SW 38th Terrace as a local north-south two-lane connector will help reduce local traffic from using SW 43rd Street and SW 34th Street. It may also reduce traffic at the intersection of SW 34th Street and Archer Road if connected through as shown.

Concept M advances the initiatives of the Alachua Countywide Bicycle Pedestrian Master Plan Addendum through the integration of the Archer Braid cycle commuter path and the Hull Road extension to provide an off-road cycle path between Hail Plantation and UF. Utilizing existing utility easements and the construction of a lightweight overpass at I-75 will allow many to easily commute by bicycle between major housing areas and the University of Florida.

The Concept M scheme provides priorities for this area's urban development. These transit alternatives and multimodal options allow for an Urban Village character in the SW 20th Avenue region and corridor.





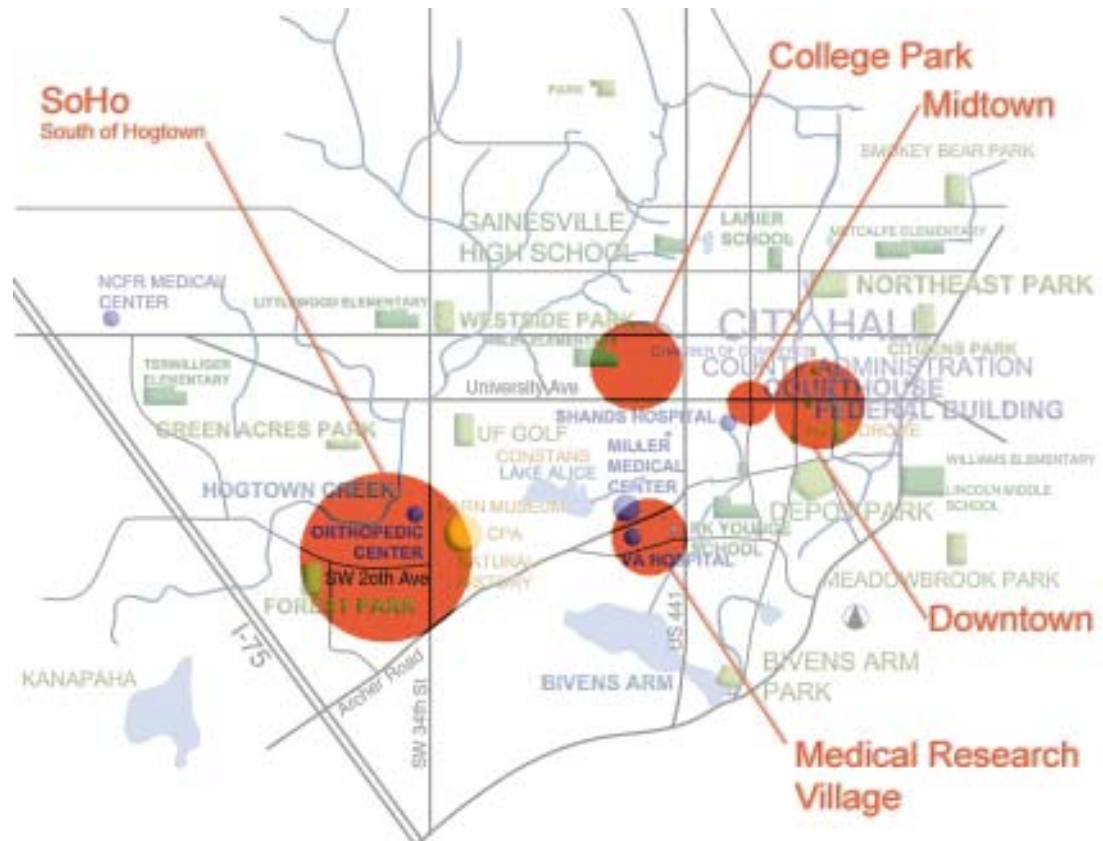
Urban Village Concept

Initiated as a transportation corridor design study, the Urban Village Studio studied development and redevelopment potentials to arrive at appropriate transportation strategies for the present build-out, transitional growth period and that would effectively serve a more densely populated village of year 2050 when Gainesville's population is expected to double. A rediscovered prewar (WWII) strategy that reduces expansive transportation infrastructure is to provide live, work and entertainment opportunities in the same compact urban area — no car required. Although counter to current zone-based planning policy, these village ideas are receiving great acceptance world-wide.

Smart growth, new urbanist, transit-oriented design (TOD) and walkable communities are rapidly becoming the norm rather than a cutting edge approach. Given the cost of auto transportation — 95% of the transporting energy moves the auto and only 5% moves the person — and the space it takes up — 20 times that of a person walking, it is clear that more efficient alternatives to automobiles will be needed. This is not to say all will shed their metal skins. Lightweight autos powered by electricity and/or hydrogen (or even cooking oil) will keep the auto transport mode in place far into the future. Based on urban densities, which will be discussed later in this report, and the area most potent for dense development. ***A community of approximately 20,000 people, at a density of approximately 120 per acre, who would not need an automobile, is proposed as a vibrant urban village.*** Acknowledging the need for a holistic, yet fine-grained strategy, the Urban Village initiates transportation infrastructure, vetted through a larger community vision, that reduces monolithic reliance on automobiles. In other words, a transportation system of greater choices, human scale and the least long-term cost.

Assessing the potential civic resources nearby, such as the Harn Museum of Art, Lepidoptera expansion at the Museum of Natural History and the proposed renovation of the popular Phillips Center for the Performing Arts, these facilities are part of an expanding and ever more utilized civic arts amenity — currently a commuter only attraction. The medical facilities expansions of Shands Hospitals will be ongoing into 2035 with multiple disciplines and clinics that provide both services and employment. The Hilton Conference Center which could be expanded, requires management and general hotel staff and brings in many visitors that could walk to businesses in this area. UF, the largest employer in the County could reduce commuting congestion greatly if a variety of housing for medical professionals, administration officials, faculty, visiting faculty, adjunct professors and staff were provided within this short bicycle or bus ride to campus. Perhaps there might even be a positive compensation incentive by UF not to drive to campus — less commuting, less infrastructure costs. Clearly, proximity to UF, the arts complex and the Butler Plaza theaters and commercial areas suggest that a robust community, requires demographic groups beyond just

Park Avenue, Winter Park, Florida
[opposite page]



The Urban Village moniker SoHo (South of Hogtown Creek) is proposed to convey into the arts district character of Soho in Manhattan, NY while also referencing the Hogtown Creek and nature area just to the north of the Village.

students. And, this mixed demography should be supported in the planning and infrastructure to achieve a viable, diverse and densely populated Urban Village.

An argument could be made that a polycentric Gainesville might diffuse development resources and cause more traffic congestion. However, in this case, given the potential character of an arts and creative community, with good employment options, close proximity to groceries and easy transit links to UF and retail areas, a non-auto lifestyle is quite feasible. Furthermore, if the population of Gainesville doubles, it will easily accommodate growth in the five key nodes of the metropolitan area: Downtown, Midtown, College Park, Medical Research Village (proposed) and the proposed Urban Village (SoHo). Allowing these areas to develop unique character and identity should be encouraged especially as different groups will naturally be attracted to the different areas.



Field Analysis

Studies of the SW 20th Avenue infrastructure, existing buildings and ecology were conducted by the Urban Village Studio and team consultants including Water and Air Research, Inc. and Associate Professor Peggy Carr of the Department of Landscape Architecture, Bruce Delaney of the University of Florida Foundation and Mr. Gerry Dedenbach, Planning Director with Causseaux & Ellington provided information on development history, near future projects, annexations and potentials for land-use changes in the area. Professor Gary Siebein and Graduate Students Pattra Smiththakorn and Youngmin Kwon conducted soundscape studies of the acoustical character of the neighborhood.

The MTPO's 'Concept M' affects approximately 733 acres of partially developed areas including parks and stormwater catchments. Of that, approximately 433 acres of real estate will be directly effected by transportation improvements — sites that border enhancements. Approximately 168 acres are in a prime location for high density redevelopment.

Right-of-Way along SW 20th Ave
[right]

Aerial photograph, looking northeast across SW 34th St
[opposite page]



SW 20th Avenue Infrastructure

Initial field studies note the location of the two-lane road in the center of a spacious right-of-way with large storm water swales on both sides of the roadway. A sidewalk is located on the south side of the road near the edge of the right-of-way. Right-of-way width varied from 80' wide at SW 34th Street continuing west to SW 38th Terrace where it expands to 100' feet wide continuing west to the I-75 overpass where it expands to 150 feet wide to accommodate the overpass rise.

Traffic is continuous and moving on the road throughout most of the day. Significant delays occur as buses stop to collect and discharge passengers. Autos attempting to make left turns into the apartment complexes also regularly stack traffic behind them. Traffic moves slowly and intermittently during peak times. Implementing the MTPO's 'Concept M' will be utilized at only 50% capacity or better to year 2025 leaving adequate capacity for additional westward development beyond the near future.

Build-out Inventory

Most of the buildings in the core area are residential apartments of one and two story construction with some quadruplex, duplex and single family homes ranging from 20 to 30 years of age. Based on market prices, these individual, older developments will likely be redeveloped in the very near future, a process that has already begun. Newer apartment complexes are typically of three story construction and have been built in the last five years, achieving densities between 12 and 20 units per acre. A fully populated mobile home park exists just north of Forest Park with densities of approximately five units per acre. There are many rural characteristics within the general area, including single family homes on an acre or more of land and significant undeveloped areas.

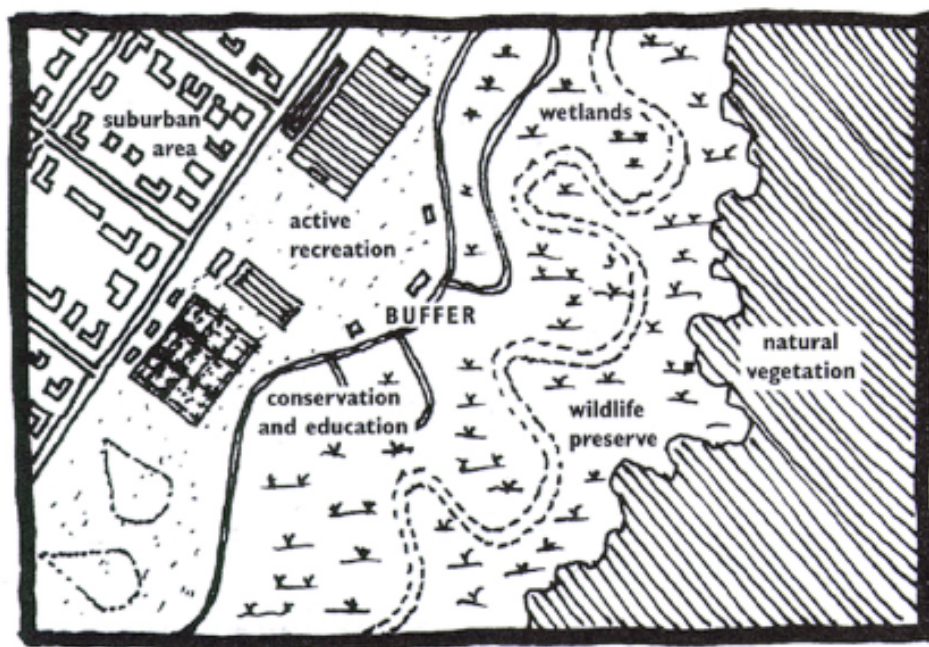
Commercial structures are located at SW 34th Street and Archer Road and are typically over 20 years old with the exception of the Hilton, Shands Orthopedic Center and some new elements in the Butler Plaza area. Four historic residential structures have been identified just south of SW 24th Avenue.

Parking is handled exclusively as a surface condition throughout the area, resulting in vast paved areas; even with lower density single-story apartments or mobile home developments the ratio of paving to living unit is quite high.

Ecology

A diverse ecotone (edge) ecology with natural wetlands to the north and west, with sandy well-drained uplands comprise most of the southern area. Sensitive wetlands have been given Conservation designation and will require mitigation if development is allowed within the designated areas. The Florida Natural Areas Inventory has also designated much of the wetlands as “areas of conservation interest”. Other important locations just across the wetland to the north and west contain Champion trees which are protected.

Multiple protected animal species are known to inhabit the area, including the gopher tortoise and sugarfoot mothfly. Protected endangered plant species include the poppy mallow and Godfrey’s privet. Any encroachment would require mitigation that might include on- or off-site relocation or the provision of buffers or preserve stands of natural vegetation.



Alternative ecotone (upland-wetland edge) sensitive development strategy, with civic space as a buffer.

“Retention areas should be designed and used as part of the greenspace/buffering system throughout the study area and should be treated as design elements and enhancements to the overall appearance of the study area.”

Alachua County Comprehensive Plan: 2001-2020

Hydrology

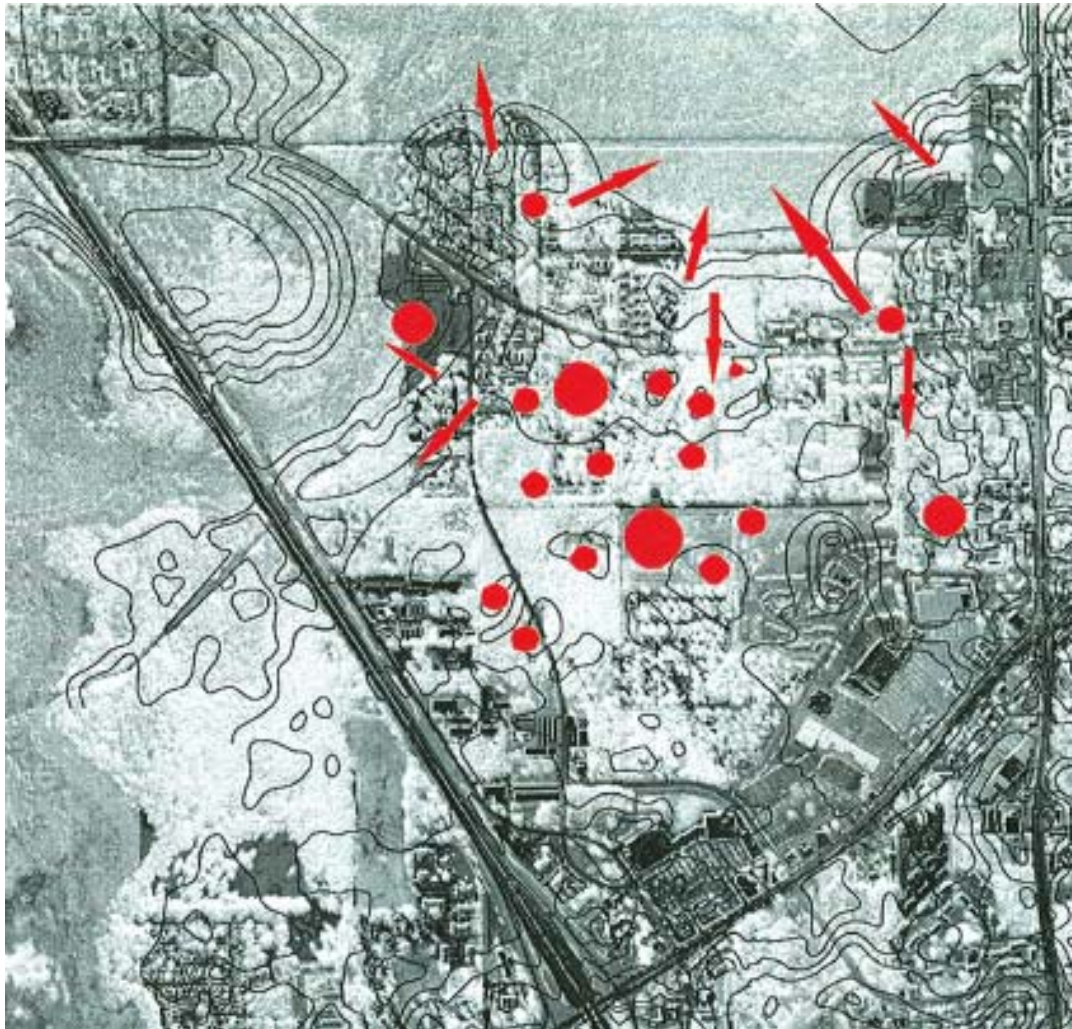
The Floridan Aquifer is about 20 to 30 feet below the surface. A limestone tray (substrate) with moderate to thin sand layer above providing good drainage in locations where there are ‘perforations’ in the limestone base and lack of clays — providing direct recharge to the Floridan Aquifer. Although generally clay free, some clay lenses do exist throughout the area. There also may be silts that gather at perforations retarding water flow. As a ‘perforated tray’ system, water flows vertically as it is absorbed through the perforations and horizontally as it moves along the surface and through the sand layer. Of course, the rates of flow vary greatly with the specific slope, surface and substrate qualities.

Storm events can drop as much as five inches of rain in a relatively short period of time requiring substantial stormwater infrastructure to maintain the transportation network and minimize flooding. To reduce the absorption of resources caused by these intermittent events, strategies for natural rain mitigation are recommended. These include limiting hard surface by providing permeable ‘filtered’ parking areas, limiting surface parking, giving tax benefits for green roof projects that capture and release rainfall slowly, and providing subsidies for cisterns that collect rainwater for irrigation or for grey water.

As per the Alachua County Comprehensive Plan: 2001-2020, Activity Center Plan/Special Area Study - Archer Road and 34th Street, Item 4 Urban Design states that *“retention areas should be designed and used as part of the greenspace/buffering system throughout the study area and should be treated as design elements and enhancements to the overall appearance of the study area”*. Urban Village Studio strategies implement this ecologically sensitive directive as a generative tool for organizing village greenspace, around which urban development might cluster — maximizing opportunities for stormwater, park and garden integration.

Air Quality

Alachua County and the specific village site has generally good air quality. Local traffic may create local concentrations of carbon monoxide that approach the National Ambient Air Quality Standard. Expected increases in local traffic, in addition to queuing for long periods (backed-up automobiles) in high concentrations may drive carbon monoxide levels over the standard.



Perforated Tray Hydrology :
Horizontal flows (arrows) to the Hogtown Basin and vertical
absorption (dots) that feed directly to Floridian Aquifer.

Acoustic Consultant's Review

Soundscape

Gary W. Siebein, professor at the School of Architecture at the University of Florida, focuses work on environmental technologies, with primary directives on acoustics and principal consultants, Seibein Associates, Inc.

The Floridan Aquifer is about 20 to 30 feet below the surface. A limestone tray (substrate) with



Hazards

There are a variety of hazards on the site that include soil irregularities, flood prone areas, land fills and contamination sites. Soil fill areas have been identified and illustrated on the diagram on the following page. Generally these disturbed soils may contain clays, contaminated soils and/or debris from construction sites or other dumping. Flood hazard areas are identified as locations that experience inundation greater than a 1% chance of flooding in a year and may have flood-related erosion hazards. Two University of Florida landfills are present where the Hull Road extension will connect to the existing road, located just west of SW 34th Street. The first site, at the northwestern portion of the property, contains construction debris, presently surfaced with a commuter parking lot. The second site, to the southeast of the property, contains medical and possible biohazard waste. Any transportation infrastructure through this area, such as the Hull Road extension, will have to mitigate these ground conditions. Other contamination sites near the property include leaking petroleum sites and known hazardous waste sites. Other than the landfills noted above, most sites are outside the boundaries of the proposed project.

CONTAMINATION SITES

- **Chemical Hazard**
 - 1- Archer Road Automotive-**
4515 SW 29th Avenue
 - 2- Ed's Cleaners/ Rip's 1 Hour Cleaners-**
2320 SW 34th Street
 - 3- Butler Plaza**
 - 4- Florida Dept. of Agriculture-**
1911 SW 34th Street
 - 5- Tuffy Auto Service-**
3820 SW Archer Road
 - 6- Wal-Mart-** 3570 Archer Road
 - 7- Dry Cleaning Site Clean-Up Program**
Suburban Cleaners-
2131 SW 34th Street
 - Ed's Cleaners/ Rip's 1 Hour Cleaners (#3)**
 - 8- Source of Groundwater Contamination**
per FDEP
ABC Research Corp.-
3437 SW 24th Avenue

- **Petroleum Hazard**
 - 9- Shell-** 3330 SW Archer Road
 - 10- Texaco-** 2605 SW 34th Street
 - 11- Amoco-** 3417 SW Archer Road
 - 12- Citgo-** 3310 SW 35th Boulevard
 - 13- Srpint #1302-**
3901 SW Archer Road
 - 14- U-Haul Archer Road Service Center-**
3810 SW Archer Road

- **Structural & Biohazard**
 - 15- Solid Waste Facility/ Landfill Site**
UF Landfill
 - A- Construction
 - B- Biohazard

SOILS & HYDROLOGY

- Areas of excavation and fills
- Wetlands (Hogtown Creek)
- Special Hazard Areas
 - Flood-related erosion hazard
 - More than 1% chance of inundation in any year



*Data for contamination sites gathered from-
 -(#1-7) Reported Hazardous Waste Activities (U.S. EPA)
 -(#8-15) Search of Available Environmental Records by
 Environmental Data Resources, Inc.

Street Ecology

Street ecology is inextricably linked to density, land use, spatial structure and scale of the village system. Successful urban areas are not necessarily dictated by spatial conditions of density or transportation infrastructure but rather the linkages among them. Moving toward this linkage concept, Urban Village Studio proposals define civic space to promote social interaction, commerce and multi-modal transportation within a spatial system. Conditions such as lane-width (cycle, pedestrian and auto), on-street parking (buffering edge), stormwater gardens, shade trees, speed/crossing shelves, crossing bump-outs, surface conditions (hard, soft, bumpy) and in-street indicators (lines and symbols) dictate comfortable travel speeds and activity for all modes. At points of negotiation, or points of conflict, spatial cues and symbols signal a slower speed, promote awareness and suggests the right-of-way.

Multiple variations on three basic organizational themes have been developed by the Urban Village Studio to enhance the walkability, quality and efficiency of the SW 20th Avenue corridor. As part of the larger grid-connected Urban Village, thematic proposals vary the optimization of different transportation modes while ensuring viability of all. Many alternatives have been considered in an integrated context. Vehicle speed control, uninterrupted movement, cycle and pedestrian amenities, automobile parking and maximum efficiency of public transit guided the design process. Sustainable urban design strategies including stormwater stewardship, rainwater catchment for irrigation and grey water use, passive shading, photovoltaic energy harvesting and spatial density have been considered in the various schemes. Strategies developed by the United States Green Building Council (USGB) Leadership in Energy and Environmental Design for Neighborhood Design (LEED-ND), currently in its developmental phase, have been incorporated into the projects. A major criteria for potential certification by LEED is the transit infrastructure and compactness of neighborhood design. The Urban Village meets these framing criteria and is poised to achieve a very high rating.

Street Ecology principles and strategies have been developed through integrated design schemes that weigh priorities and establish proposals to unite the many issues related to the redevelopment of SW 20th Avenue.

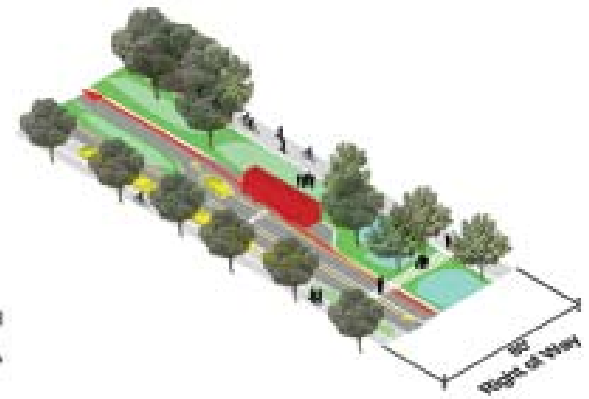
The schemes presented attempt to provide efficient auto movement at safe travel speeds (20 to 25 mph) for a multi-modal transit corridor that includes cyclists and pedestrians. Transit is a critical component as near future projections suggest that buses will arrive at a stop every seven minutes. Although cycles are accommodated with separated paths, low speeds are vital to allow the mixing of cycles and autos on the street to advance cycle commuting and pedestrian safety.

Of course, provisions for emergency vehicles, utility repair vehicles and other service providers that must negotiate the system are accommodated in the proposals, however excessive lane widths are avoided. It should be noted that transportation safety, given the magnitude of potential impacts — people are killed on SW 20th avenue at the rate of one per year recently — should carry the day. Far more fatalities occur in the US from driver error, driving under the influence, poor road design and excessive speed than are killed in fires. Additionally, in a mixed-use urban area, fires will be primarily suppressed by in-place sprinkler systems (already required by code) rather than fought by firefighting personnel. This is not to say emergency vehicles should not be accommodated, it does suggest that in the discretionary realm, designers should have objective views and information regarding where life safety should be focused.

SW 20th Avenue Corridor Strategies



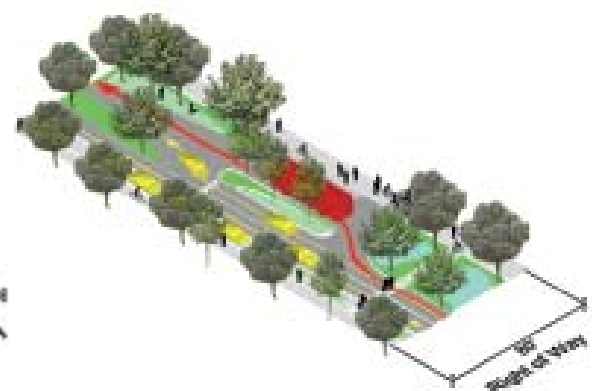
In-Lane Bus Stops (existing condition)



Bus Bay - Auto Merge



Bus Bay - Bus Merge



Bus Bay - Auto Merge



Central Bus Bay - Bus Merge



Dedicated Bus Lane

The adjacent diagrams illustrate options for multi-modal integration. Bus Bay - Auto Merge strategies are designed to naturally give priority to the bus when merging back into traffic - a common problem for traditional bus lanes.

SW 20th Avenue Street Strategies

Central Boulevard

- 54 Carla Harvey
- 60 Toni Duce (bus priority)

Bus Bay Priority

- 34 John Ellis
- 40 Matt Demers
- 48 Dongwan Nam
- 72 Armando Nazario
- 76 Maureen Milch
- 82 Bryan Green
- 88 Craig Ditman
- 94 Gabriel Auffant
- 98 Chadwick Anast

Dedicated Bus Lane

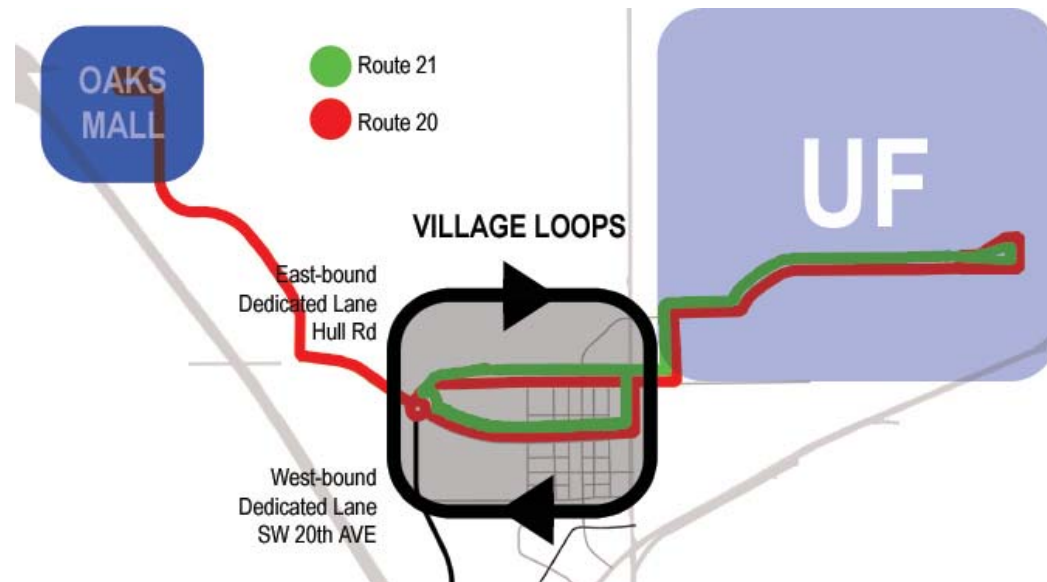
- 66 Derek Moy



Proposed schemes have been grouped thematically based on the negotiation between buses and autos as these modes take-up the largest transportation ride share and absorb the majority of implementation resources. Approximately one million bus riders per year use Regional Transit System's Routes 20 and 21 through the Urban Village to travel between home, UF and the Oaks Mall (2004 data). Buses travel down SW 20th Avenue at a rate of one bus every 7 minutes, in one direction. It was noted that on many occasions, riders are left at stops due to full-capacity buses, suggesting more buses or other alternatives are required. The following four bus-auto relationships provide thematic groupings for the existing condition and proposed schemes.

In-Lane Bus Stops (existing condition)

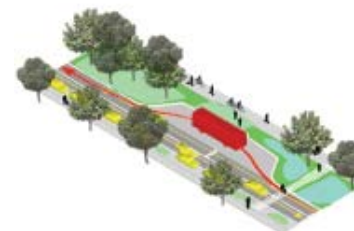
Presently, buses stop in the travel lanes at a rate of nine buses and four stops for a potential stop rate of 36 per hour. With an average stop of 1 minute, 36 minutes of delayed traffic could be expected every hour. As bicycles are loaded onto and off buses and given the number of riders boarding and disembarking, stop times greater than one minute are expected. This strategy, while it uses the least transportation infrastructure expenditures for development, it is not optimal or appropriate in terms of causing delays for bus riders or other motorists.



Proposed 'Loop' option for a dedicated bus lane through the Urban Village, using SW 20th Ave and the Hull Road extension.

Bus Bay - Bus Merge

Typical bus bays allow autos to pass during loading. Bays with pavilions protect and shade riders while waiting and provide a safety buffer between the riders and the auto travel lane. There is ample room in the right-of-way to accommodate bus bays if the corridor is redesigned as illustrated in the diagrams at the right. Variations on the basic bus bay option are presented later in this report. This approach is typically used in Gainesville. A sometimes prohibitive disadvantage is that on heavily traveled roads, motorists regularly do not let buses back into the travel lane. Although a violation of Florida Statute 316.0815, without an information campaign and regular enforcement, this trend will likely continue.



Bus Bay - Auto Merge

This innovative proposal creates a spatial system that gives buses natural merge priority, in addition to legal right-of-way. As the bus pulls away from the stop, it continues straight and the lane is shifted, requiring motorists to merge into the lane behind the bus. Additionally, signs and on-street graphics will indicate merge protocols to reinforce the spatial condition. Many variations of this theme are presented. It can also provide a better buffer between the normal travel lane and the pedestrians, creating crossing islands to facilitate pedestrian crossing of two lanes, one at a time.



Central Bus Bay - Bus Merge

This boulevard typology brings pedestrians, cyclists and the bus stops through a linear park in the central area of the 80 foot right-of-way. Travel lanes are separated by the park and are buffered by green space and on-street parking. The bus pulls into this central median space; passengers would board and disembark as normal on the right side of the bus at a designated pavilion. Buses would merge back into the lane (merging to the right). Signs, in-street graphics and a speed shelf with pedestrian crossing would alert motorist to the merge area and encourage them to lawfully allow the bus into the lane. Additionally, stops and pavilions do not encroach on any commercial enterprises, which can limit access or frontage visibility.



Bus Lane - Separated

This scheme proposes a dedicated separate bus travel lane through the Urban Village. Buses would be completely separated from the auto travel lanes. Beyond the obvious advantage of minimizing auto-bus interference, this would provide for future expansion of electric buses or perhaps a light rail option. Disadvantages include the addition of a travel lane that pedestrians must regularly cross and additional, complex infrastructure. Also, this only provides feasible transportation in one direction requiring a 'loop' route strategy. Given the proximity of UF, the Hull Road extension and opportunities to engage SW 24th Avenue as an alternate route, a hybrid lane and loop system could be developed to accommodate the two existing routes — #20 and #21.



Steering Committee Evaluations

Bus lane and bay strategies that evolved through Steering Committee reviews were evaluated by the agencies represented on the committee. Committee members returned comments from their colleagues with a prioritization ranking for the three basic strategies presented — summarized in the Steering Committee Agency Prioritization matrix.

A recommendation for in-street cycle lanes in addition to separated lanes was included with the ranking from the Alachua Bicycle Alliance. Alachua County Planning suggested signs and perhaps signals along with an education or enforcement strategy to supplement their preference for the auto-merge (bus priority) bay strategy. The Department of Transportation included concerns for the danger to pedestrians needing to cross two lanes of traffic. The potential/cause of accidents when buses are merging and the animosity and ‘road-rage’ when conflicts are created as buses try to merge with noncompliant drivers were also noted as important issues — leading to a preference for the center bus lane option. DOT also noted the desirability of a preemptive signal initiated by the bus. Regional Transit Systems preferred the dedicated bus lane with substantial modifications creating a point to point compete system with lanes in both directions (from campus to the Oaks Mall) and eliminating the proposed loop. RTS had concerns that even with the bus priority bay, drivers would continue to accelerate past merging buses and/or not allow a gap in traffic — even though by law drivers are required to yield (FS 316.0815). They also had concerns that the center bay would cause difficulties for bus drivers trying to merge back into traffic from the left.

Steering Committee Agency
Prioritization

	Bus Lane Separated	Bay Auto-Merge	Center Bay Bus-Merge
RTS	●*	◐	○
County Fire Rescue	●	◐	○
DOT	●	○	◐
City Planning	◐	●	○
County Planning	◐	●	○
Bicycle Alliance	○	◐	●

prioritization
● top ◐ second ○ third
* Only if lanes provided in both directions throughout route (not with loop)

Transit Design Priority Matrix

Ruth L. Steiner, Ph.D., is an associate professor of the Department of Regional Planning at the University of Florida, and focuses interest on transportation policy and planning, multimodal transportation, and environmental impacts.

Transportation Consultant's Review

Southwest 20th currently has several problems that need to be addressed as a part of redesigning the roadway. The roadway is currently a two-lane roadway with incomplete bicycle lanes and sidewalks and a rural section using swales for drainage. The roadway is served by two bus routes: 20 (between Oaks Mall and McCarty Hall on the University of Florida campus) and 21 (between SW 43rd St. and McCarty Hall). Buses use the roadway on a frequent basis, with nine buses per hour during the daytime. This results in delays for automobiles that get stuck behind buses, concerns about pedestrian safety due to the need for pedestrians to cross the roadway on either end of the transit trip between their residence and campus. Under a proposed redesign of the roadway, bus service would continue to be provided between Oaks Mall and the University of Florida campus but the Route 21 service might be redirected onto the Hull Road Extension for the return to campus. All options could incorporate the Hull Road extension into the transit service and in doing so provides greater flexibility for the transit scheduling. Additionally, all proposals would provide complete on-road bicycle facilities, off-road trails and, in the urban sections, complete sidewalks.

The transit route be completed in one of two ways: (1) with the loop in the middle of the route (westbound along SW 20th to the Mall and eastbound along the Hull Road extension); or (2) as a circulator route the only goes out along SW 20th Ave. to SW 43rd Street and returns on the Hull Road Extension. When the bus routes are running as a circulator, the route has the added advantage of allowing riders two options for where they get on the bus; they can walk to SW 20th Ave. and increase their chances of getting on the bus or they can take a later bus along the Hull Road extension. If they miss the bus along SW 20th they have the option of walking to Hull Road and catch the bus a few minutes later.

Four basic options were defined: (1) bus bays; (2) central boulevard; (3) bus-bay optimized; and (4) dedicated bus lane. In each of these options the bus would be removed from the lane of traffic during boarding and alighting, the speed of traffic would be reduced, bicycle lanes would be provided for movement both on and off-road along the corridor and, in most options, pedestrian safety would be improved between residences and the bus stop. Each of the options is described in greater detail below and the advantages and disadvantages are identified.

Option 1: Bus Bays

The bus bays would be provided at each of the stops; buses would pull out of the flow of traffic into a separated area for boarding and alighting. This would represent the most traditional approach to addressing the problem, but it would also have the major disadvantage that motorists may not allow buses back into the flow of traffic when automobile traffic is heaviest. This could have the most significant impact on the ability of buses to keep on schedule along the corridor. The safety of pedestrians attempting to access the bus would also not be addressed and the bus would cross the on-road bicycle lane when it re-enters the roadway.

Option 2: Central Boulevard

This option would move the buses into a center lane median for pick-up and drop-off. The roadway would be configured with a middle lane that would be used for buses to pull out from the travel lane with the pullouts alternating between pullouts for westbound and eastbound traffic. This option would require all transit users to cross only one lane of traffic to get to the bus stop. The bus would also have the difficulty getting back into the flow of traffic and would also have the potential for buses to be delayed and stacked along the corridor due to delays in getting buses back into the flow of traffic. This would have a negative impact on the reliability of traffic through the corridor. The bicycle and pedestrian facilities would be separated from the Central Boulevard so they would not interact with buses when they board or discharge passengers.

Option 3: Optimized bus bay

This option would move the bus into a separate lane and put a median into the middle of the roadway so that the buses would move directly back into the traffic flow. As automobiles move out of the bus zone, the traffic would be calmed to about 13 miles per hour to ensure that buses could easily move back into the flow of traffic. This would ensure greater reliability of transit service along the corridor. It would have the advantage of using less impervious surface than options 2 and 4 which require an additional lane along the roadway. On-road bicyclists would be afforded greater safety because the traffic would be slower near the bus bays and their facility would be parallel, but not cross the path of buses.

Option 4: Dedicated Bus Lane

This option would provide a separated lane for the bus that would be located along the north side of SW 20th Avenue from SW 34th Street to SW 43rd Street, the east side of the Hull Road extension and the south side of Hull Road. Like the circulator buses on campus, the dedicated bus way would provide service in a clockwise direction along the corridor. This option has the disadvantage of requiring the most impervious surface because an additional lane would be required along the entire corridor. On-road bicyclist would be safer because the bus would not cross into the bicycle lane to get back into the travel lane. Pedestrians could choose to exit at multiple locations depending upon where they live, however, they may need to cross an additional lane of traffic on one end of their trip.





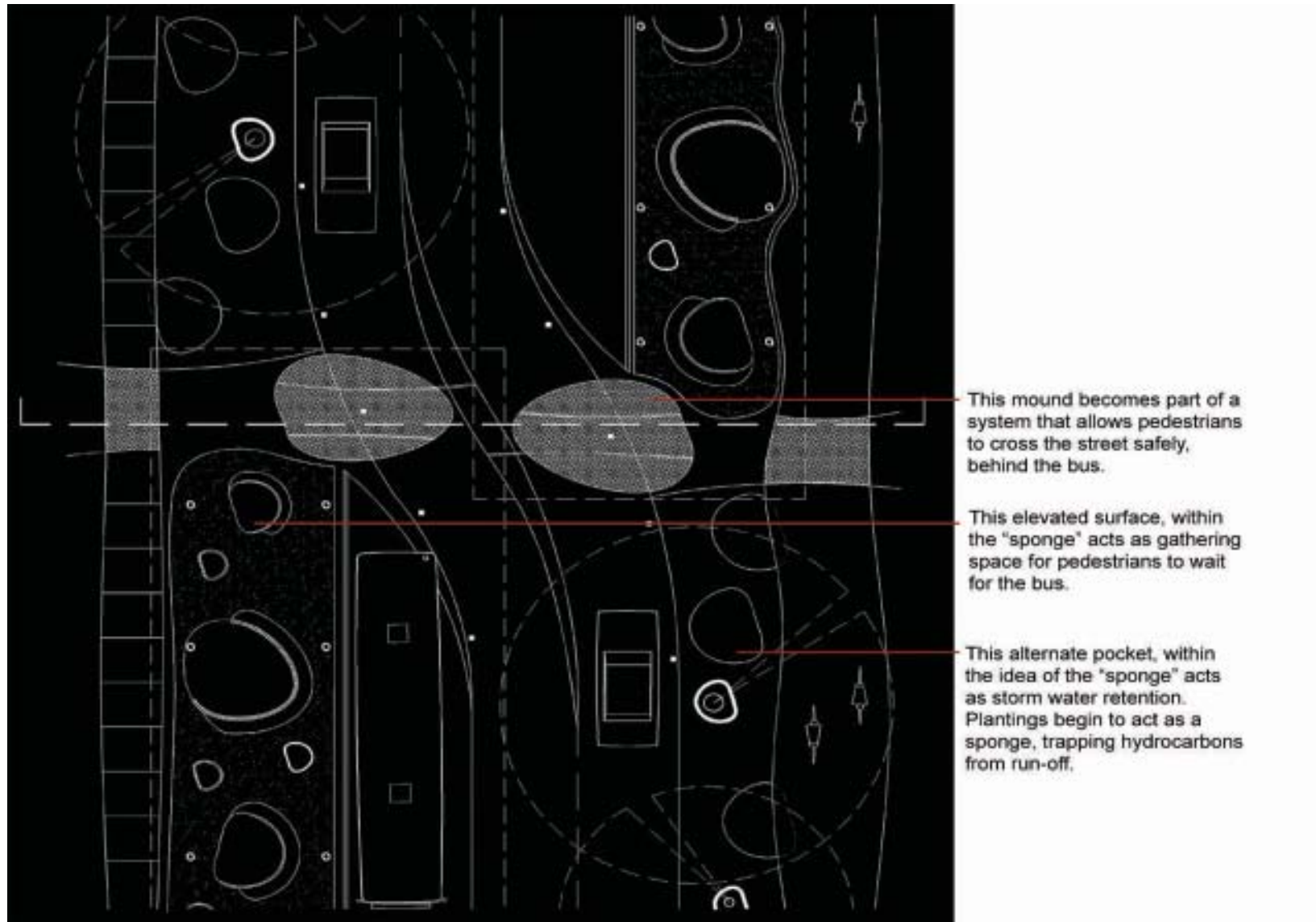
Modified Woonerf

The Dutch *Woonerf* translates closely to “residential yard” and suggests that the street become an extension of the ‘yard’ as an occupied public space, designed for pedestrians, cyclists, play and automobiles. The concept recalls historic streets that were the primary domain of the pedestrian. Of course, SW 20th avenue is not a residential street in the sense of a Woonerf. However, strategies developed by the Dutch to implement the Woonerf concept involve a great deal of innovative spatial design — traffic calming, stormwater mitigation and the integration of auto, cycle and pedestrian transit modes.

Design proposals grouped as ‘modified woonerf’ projects illustrate integrated solutions that incorporate and adapt the basic Dutch strategies. The 80-foot wide right-of-way is used entirely for all transportation modes — rather than lanes centered in the space with residual space on either side. This allows subtle movement of the roadway within the right-of way for traffic calming, stormwater gardens, bus bays, on-street parking and strategies that facilitate cycle and pedestrian crossings and movements, such as narrows and refuge islands. As the road meanders to allow larger program requirements on one side or the other, such as a stormwater recharge basin, turn lanes or bus bays, the travel lanes shift and promote low travel speeds by design.

This strategy also facilitates left turns and right turns as the on-street parking and movement of the main lanes can be designed to slow traffic while enhancing the flow at turning points — slower overall speeds with limited stops improves net flow and safety. Furthermore, this type of traffic flow is much more effective in terms of energy conservation, pollution reduction, and limited acceleration and braking, which improve gas mileage.

The planning morphology shown in these schemes suggests the conditions of transitional periods that will occur as the area transforms from low density, large setback to high density, zero setback development that will contain the street, promote commerce and achieve the ‘village’ concept desired.



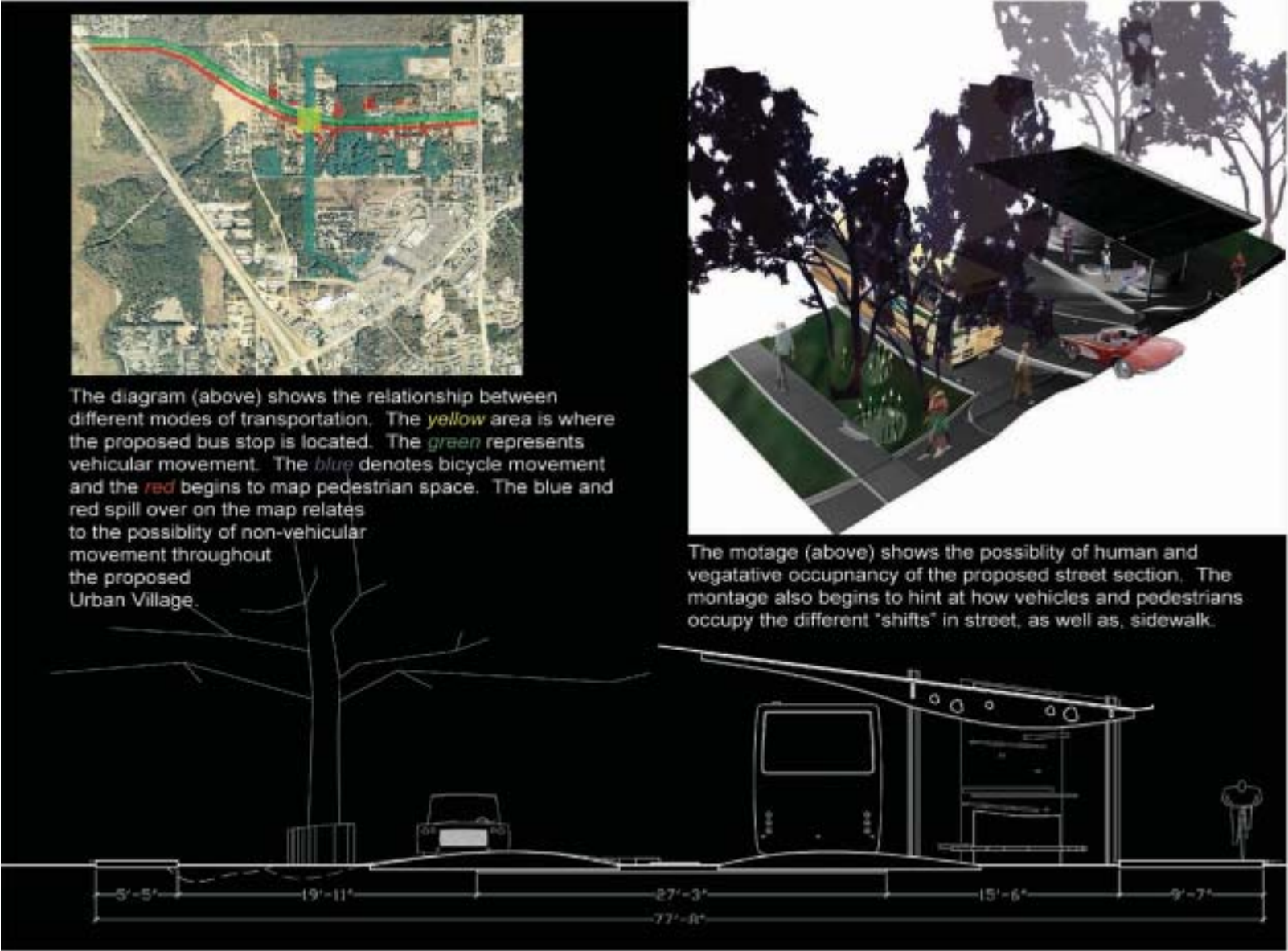
The proposed street section offers the idea of a "shift", both in perception and movement along the 20th Ave. corridor, breaking the monotony of the all-to-common uneventful street path. The shift happens primarily with the automobile and the path in which it travels. The street shift meanders between alternating bus stops that position themselves on opposite sides of the street. This allows the bus to become the primary means of travel through a design that gives itself to the scale of the bus. The "shift" creates alternating pockets of space for the bus to park without obstruction of vehicular traffic, allowing fluidity. The street shift also forces the slowing of traffic, lending itself to pedestrian crossing which is positioned behind the bus stops, allowing people to slip behind the bus. This street section proposal also moves cyclists and parallel pedestrian movement to the edge of the Right of Way, positioning them out of harms way and keeping them healthier due to their distance away from vehicular traffic and the pollution that it creates. In all, this proposal offers a safer, healthier,

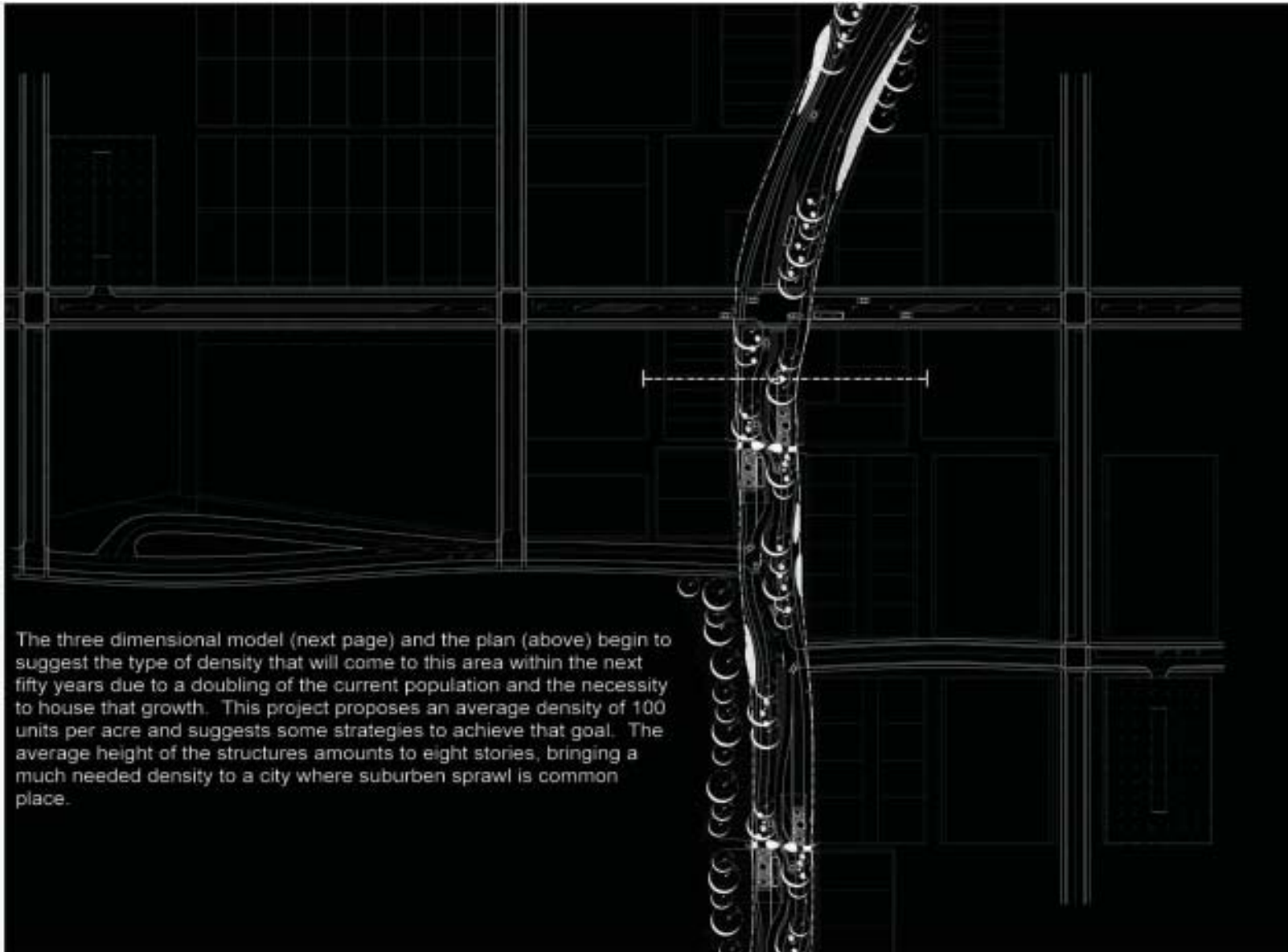
This diagram looks at the 20th Ave. Corridor as a "sponge", creating pockets of space that begin to absorb humans, vehicle's, water and vegetation.

The photographs (right) begin to show occupation of the pockets of space within the texture of the "sponge".

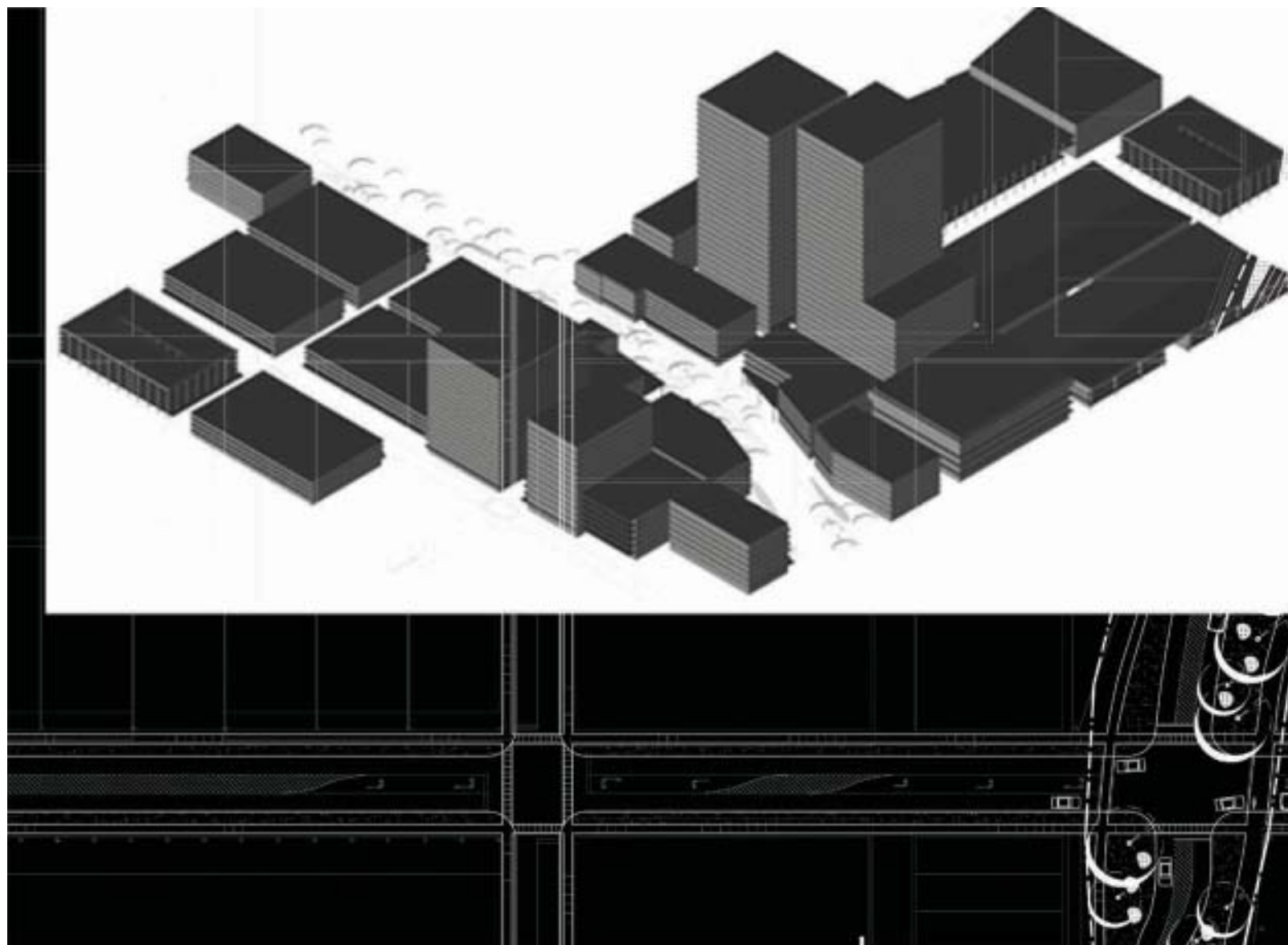
The montage (top right) proposes a possible strategy for occupying the space of the bus stop, suggesting how the bus stop might lend itself to the pedestrian.







The three dimensional model (next page) and the plan (above) begin to suggest the type of density that will come to this area within the next fifty years due to a doubling of the current population and the necessity to house that growth. This project proposes an average density of 100 units per acre and suggests some strategies to achieve that goal. The average height of the structures amounts to eight stories, bringing a much needed density to a city where suburban sprawl is common place.



GAINESVILLE VILLAGE DISTRICT

The city of Gainesville is here reconsidered as a conglomerate of diverse "districts", each with an individual character, provided by their diverse histories and redevelopment plans. The SW 20th Ave Corridor will become a part of the Gainesville Village District, the first area of Gainesville where residents will be able to live, work, shop and play without the use of automobile.

Located adjacent to the University of Florida campus, it is already a popular residential area for students. By increasing bus route capacity and making the commute to other areas of the city more efficient, students will no longer find a car necessary, and may be seen as a hindrance to their lifestyle.

The existing cultural complex, comprising the Ham Museum of Art, the Natural History Museum, and the Phillips Center for the Performing Arts will also become defined by The Village. By making housing affordable, providing opportunities for gallery space and popular public spaces to exist in a dense environment, The Village would become a cultural haven for the city, a place where artists could live, work and display their crafts.

Professionals working at the Medical Complex could also be provided with a variety of amenities within The Village- shopping, recreation, a residence and entertainment all within walking distance.

For all parties, Butler Plaza will be a short bike-ride away from home school and work. The BIGBox mentality of the suburban shopping mall could also become a defining characteristic of The Village. Utilizing a new BIGBox typology, the URBAN Box, large retail spaces can be provided within a walk-able, bike-able environment. Instead of being an obstacle to pedestrians and cyclists, the dense URBAN Box could become a cornerstone of successful densification.



MASTER PLAN

key concepts, simple diagrams



Natural Shading

Pedestrian/Cycle Net

- autonomous walkable, bikable infrastructure

Urban BIGBox

- garaged parking provided for multiple buildings, typologies,
- dense block morphology,
- multi-story BIGBox design for higher density



Natural Filtration

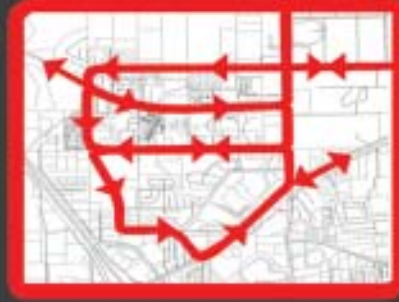
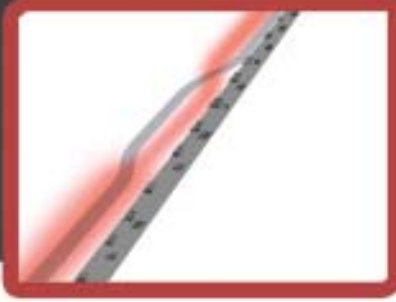
- provides ecosystem continuity,
- flora, fauna corridor

Bus Loops

- facilitates implementation of dedicated bus lanes

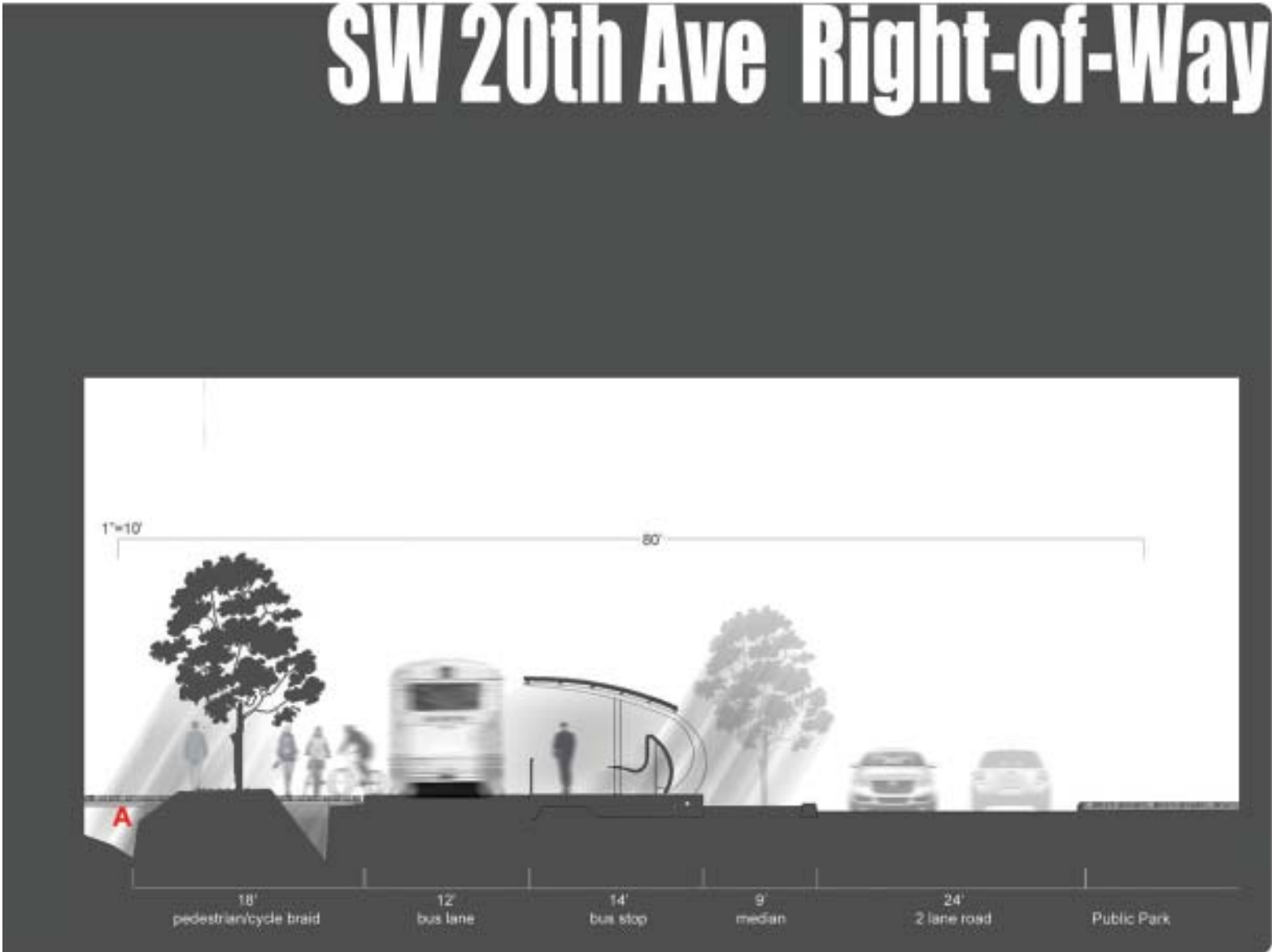
Laminated System

- selective lamination/delamination of modes of transportation allows for integration of a variety of spaces that will later receive program

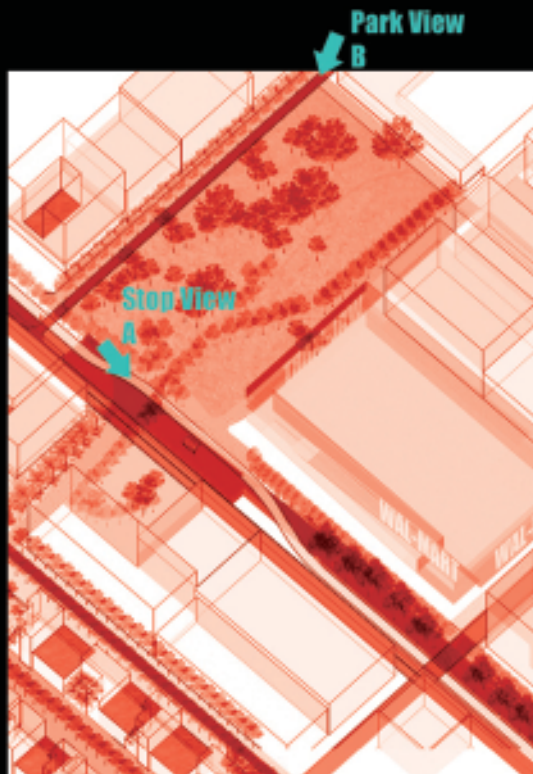




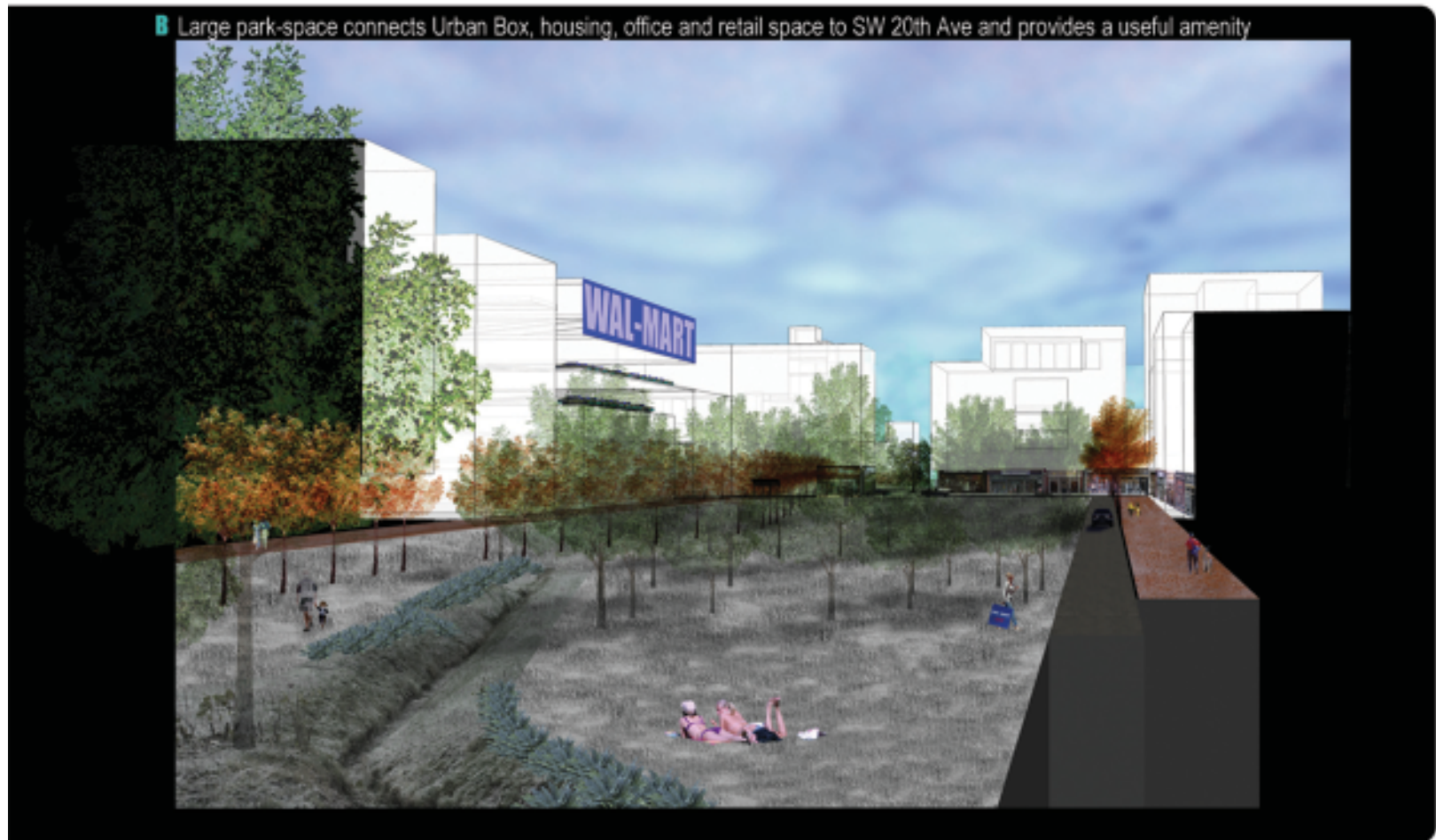




PROJECT VISION



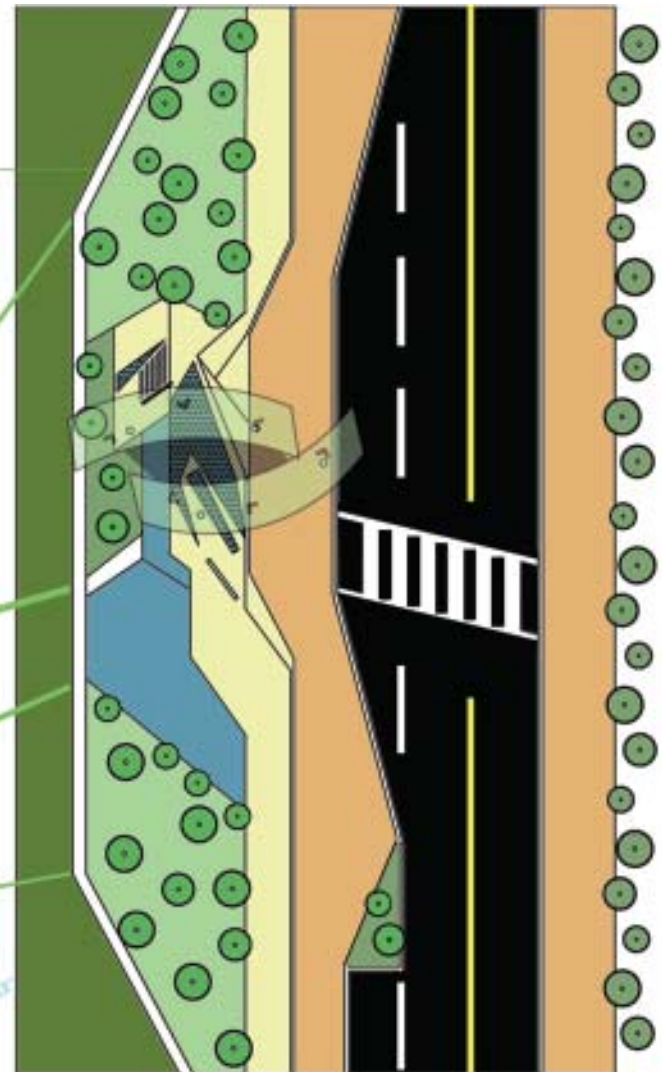
A Integrated Bus stop calms traffic across separated modal lanes

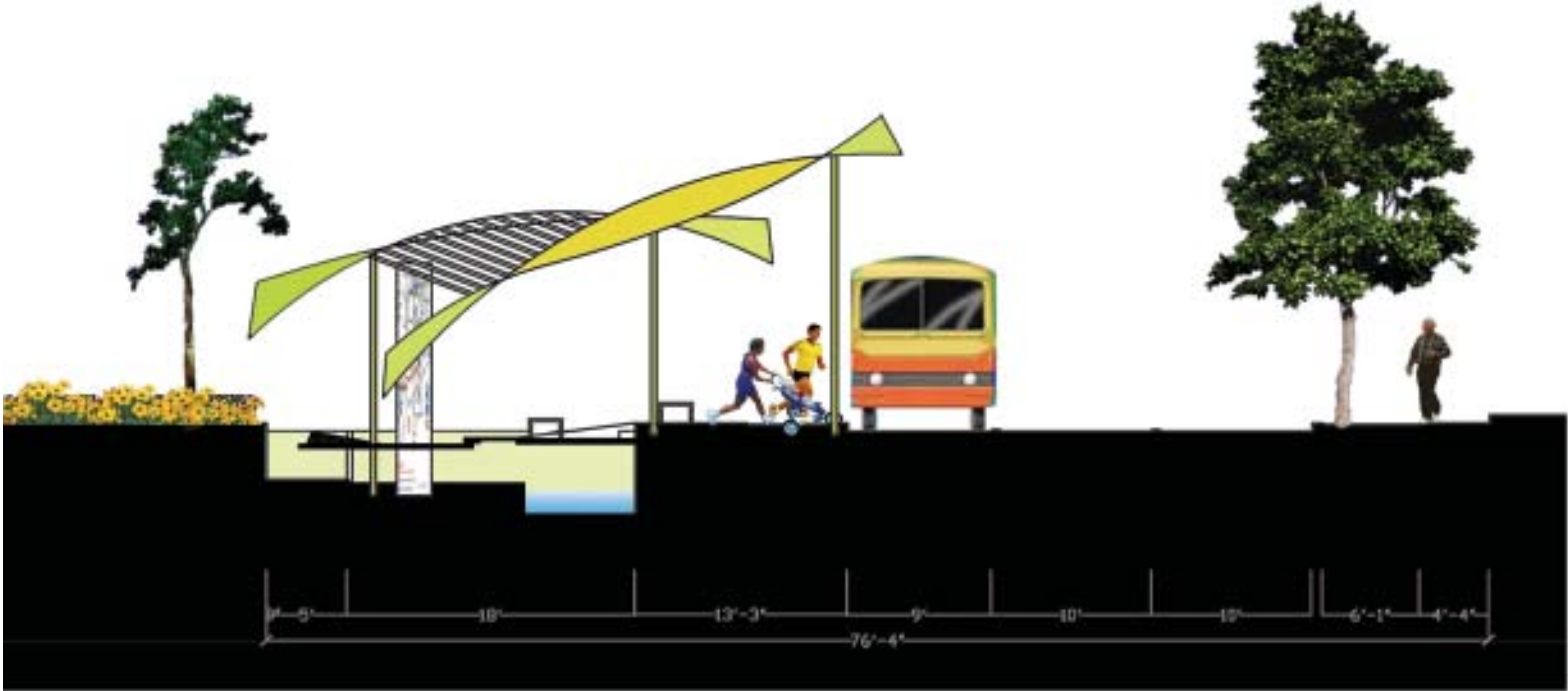


Pedestrian Stop

Drivers stop by rest area to fill up the gas and take a coffee break refreshing body and mind. Student village area along side of SW 20th Ave is mainly occupied by collage students. Design a place to stroll through the sidewalk, romp, rest, and reflect is initial point of this project.

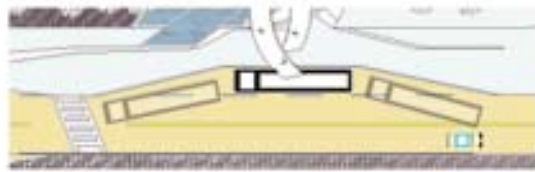
Program : bus and pedestrian stop, stormwater system, refreshing space





Proposed Bus Route





Bus Bay



Designated Right turn Lane and Parallel Parking

SW 20th Ave. is notorious for commuting to the school. Major problem of this Ave. is stopping traffic when the bus stops to pick up the passenger. The traffic grows rapidly when the commuters drive to work. To resolve these problems bus bay was designed and dedicated right-turn lane keeps the speed of vehicle.





Transit Boulevard

Utilizing the boulevard precedent, this strategy expands beyond the typical aesthetic to provide a viable model infrastructure. Recreational pedestrian, cyclist, rollerblader, skateboarder, jogger, wheelchair operator and others utilize a central corridor with stormwater gardens, shade trees, respite areas and other amenities. This central space, or linear park, is bounded by the main travel lanes of SW 20th Avenue. The boulevard utilizes shifts, narrows and bus bays to accommodate auto turn lanes, pedestrian crossings and transit stops. On-street parking is deployed to buffer between the travel lanes and sidewalks which provide pedestrian access to businesses with longer-term auto parking at rear, and allow the sidewalks to promote commerce and retail as part of the street condition. The scheme provides for two scales of pedestrian activity, commerce scale near the shops and recreational scale in the boulevard. Of course, typically, these scales of activity would overlap as people move between them daily.

This approach promotes a variety of cycle and pedestrian activity and movement between modes — supporting commuting as well as easy access to businesses. The on-street parking, also provides great potential for commerce and revenue generation with metered spaces needed to maintain short-term parking. Bus bays, perhaps doubling as delivery bays, promote high pedestrian density while optimizing through movement of automobiles at low speed.

Transit Boulevard schemes show the type of morphology that would be expected in 10 to 25 years with zero setbacks, mixed uses, multiple transit alternatives, a contained street and a bustling active community.

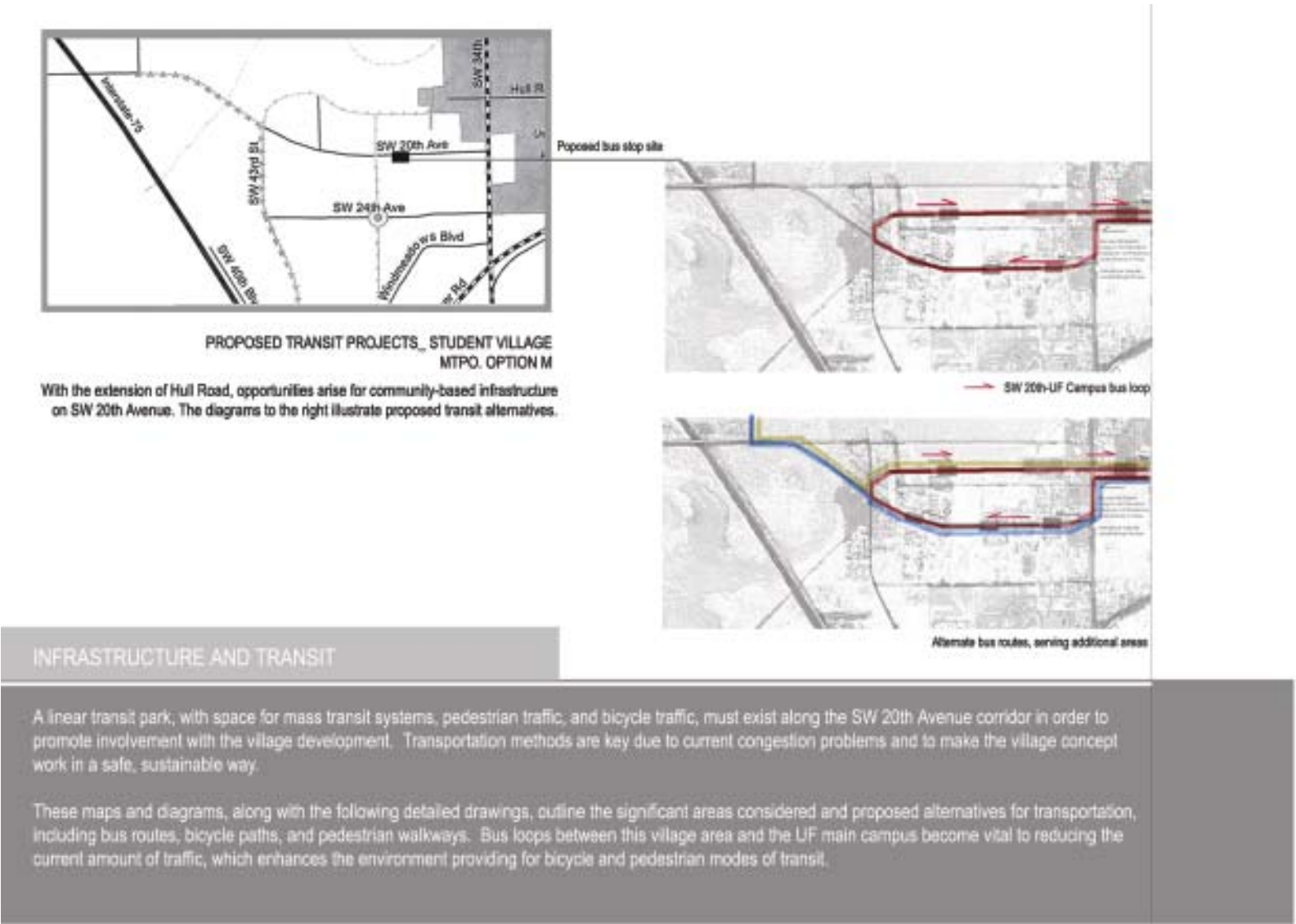
SITE LOCATION

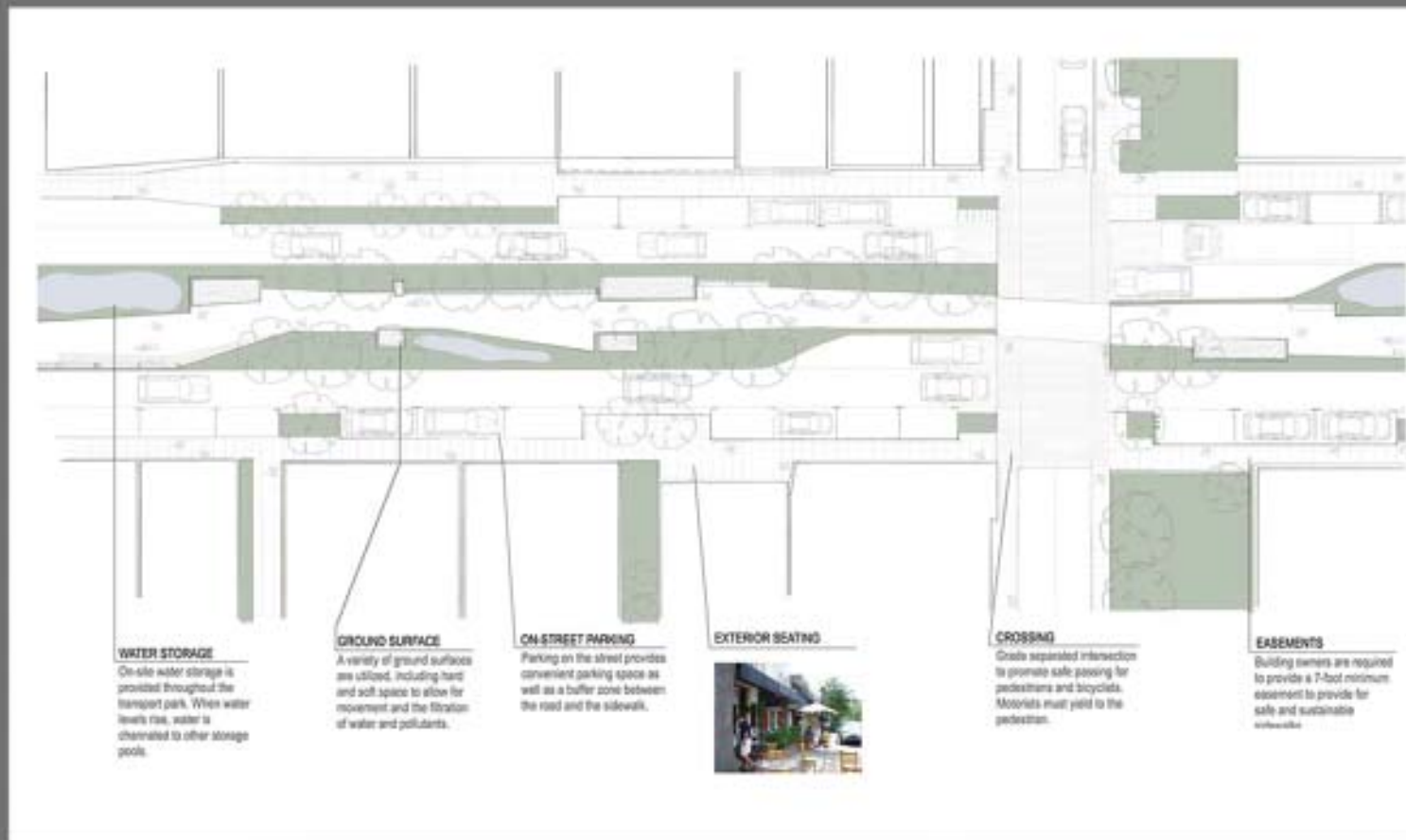


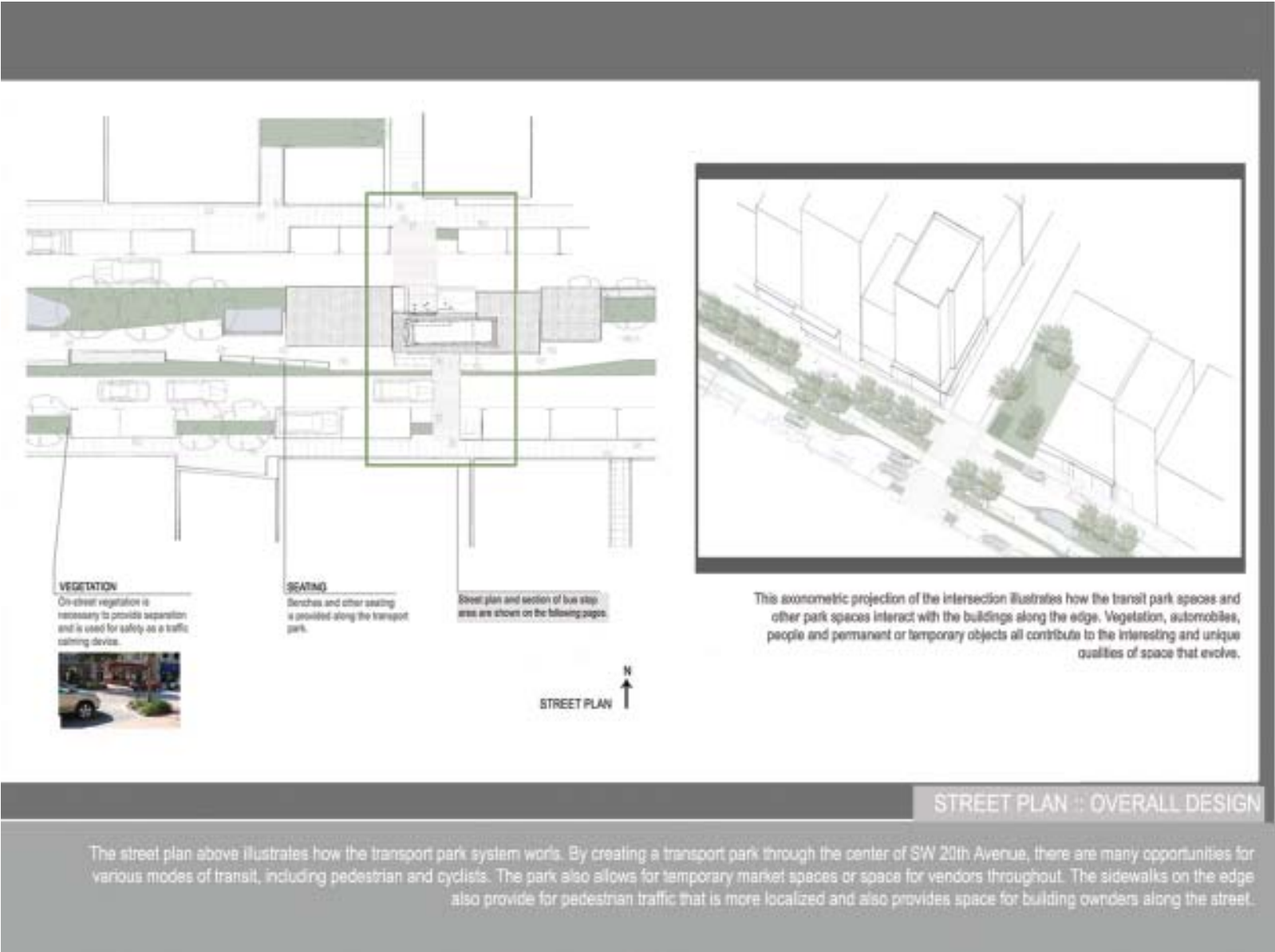
TRANSPORT PARK _ SW 20th AVENUE

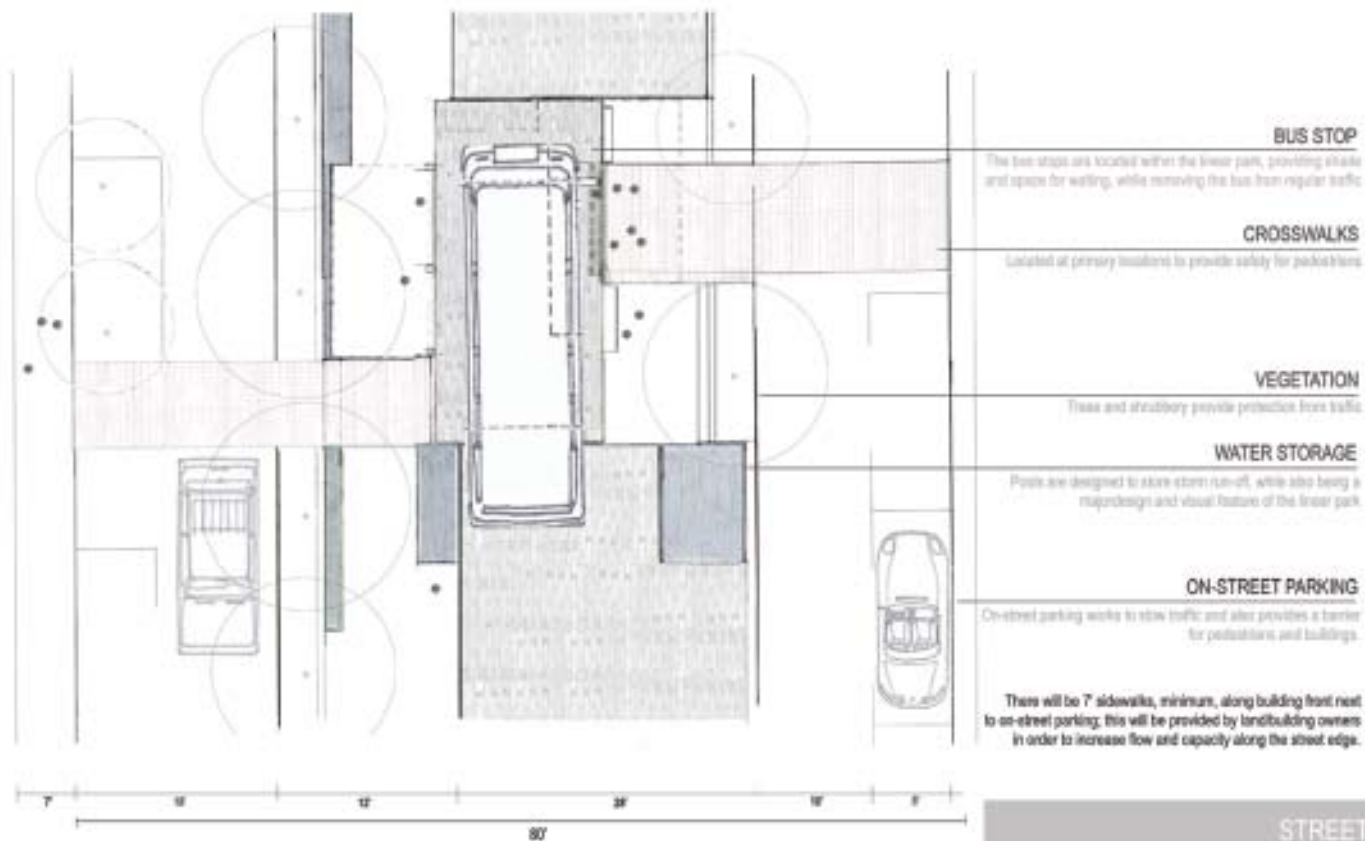
The space west of the University of Florida, near the arts, sports and medical facilities, carries a responsibility to become the foundation for community life beyond the existing conditions. Currently, there exists a mental separation between the university and the community; these prevailing barriers must be eliminated to create a mutually beneficial, symbiotic relationship between the two. Due to its location near a museum, other arts facilities, sports complexes and a medical research center, the evolution of this space into a live-work-play philosophy is natural. Many opportunities to create a sustainable, cohesive community arise out of prime location.

Creating an identity for this space becomes vital to its conception and survival. The area must be established uniquely as a community space. It must evolve with multi-functional spaces, with a variety of programs for many demographic groups. This area should become self-sufficient - residents live-work-play in the same area. The arts and sports arenas provide a starting point for sustainable development focusing on spiritual and physical wellness.



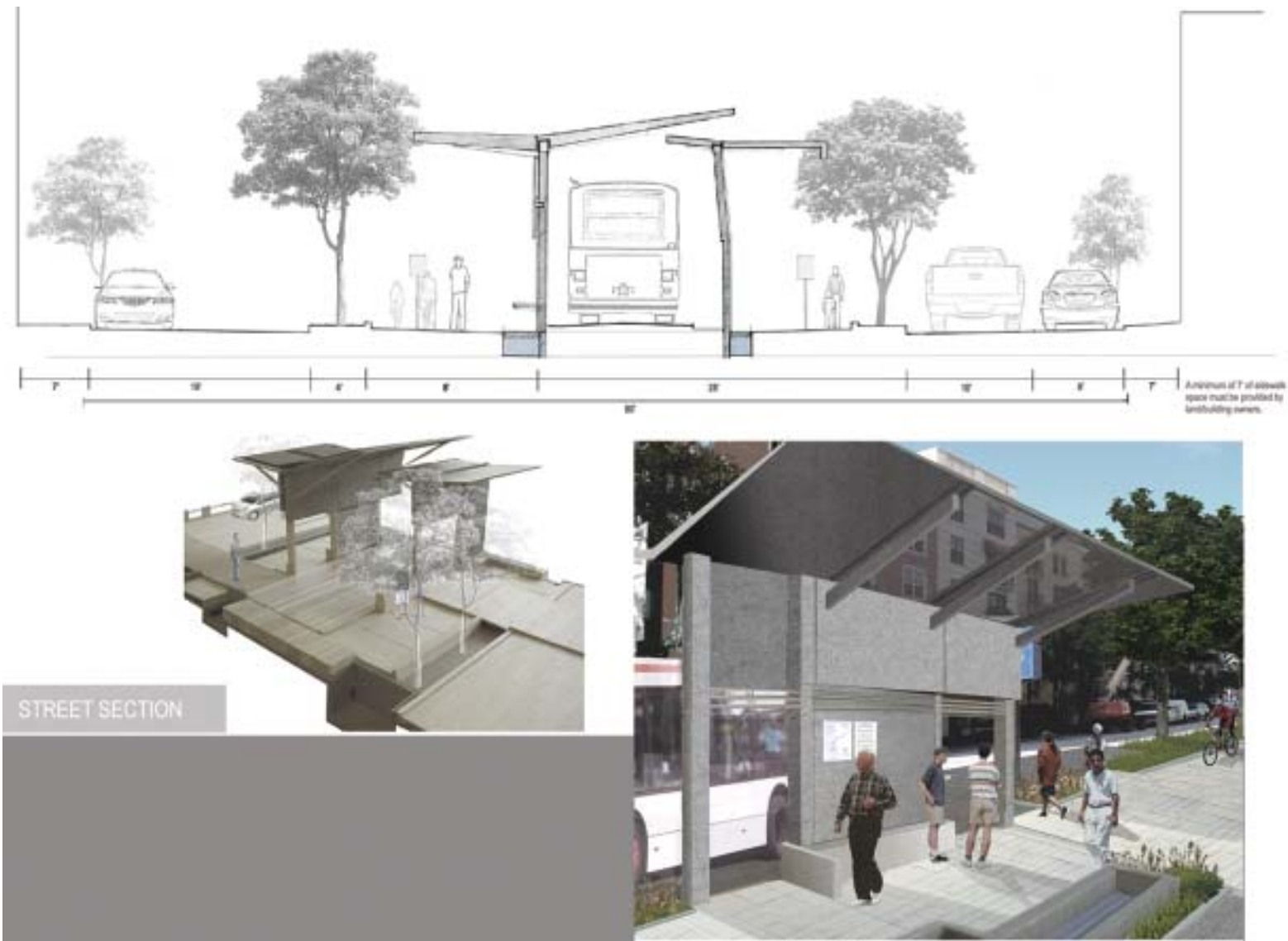






STREET PLAN

The redevelopment zone must begin transformation through infrastructural changes. This proposal suggests transportation options through the development of an integrated road form. On-street parking, single-lane traffic integrated as a linear park, and supplies pathways for pedestrians and bicycles, contributing to create this safe and efficient space for community. Bus routes also serve the area; as high priority vehicles with special stops to provide fast and effective transportation linkages, with specific loops to the UF campus. This sustainable environment is self-promoting and completely support the idea that the built environment can encourage wellness. While creating sustainable design for the street infrastructure, it is also important to introduce design methods to integrate sustainable construction. Storm runoff systems and water storage are integrated into the linear park concept; shading and vegetation strategies are also implemented for comfort and safety; photovoltaic panels are designed into the roofing strategies providing shade, shelter and electric power. All of these methods are advanced through community design.





WEAVING OF MODES

For the integration of the bike, car, pedestrian and environment towards an inhabited corridor

Strategy: Flexible Middle Lane





Block Plan

To encourage an inhabited corridor within the Student Village, the flexible middle lane is a strategy that promotes walking, bicycling, and efficient bus transit. Consideration in the design of the stormwater retention system will allow development to happen in the area without altering the present flows into the Hogtown Creek. Along with concern for stormwater in this flood area, SW 20th Avenue is in close proximity to a large area of wetlands. Focusing density on and adjacent to SW 20th Avenue will create an urban environment that shouldn't need to encroach upon and threaten the wetlands.

The organization of this design integrates the transportation modes, stormwater runoff and vegetation by weaving these elements together along the stretch from SW 34th Street to SW 43rd Street. The flexible middle lane allows for this weaving process to be successful.



Perspective View of Bus Stop

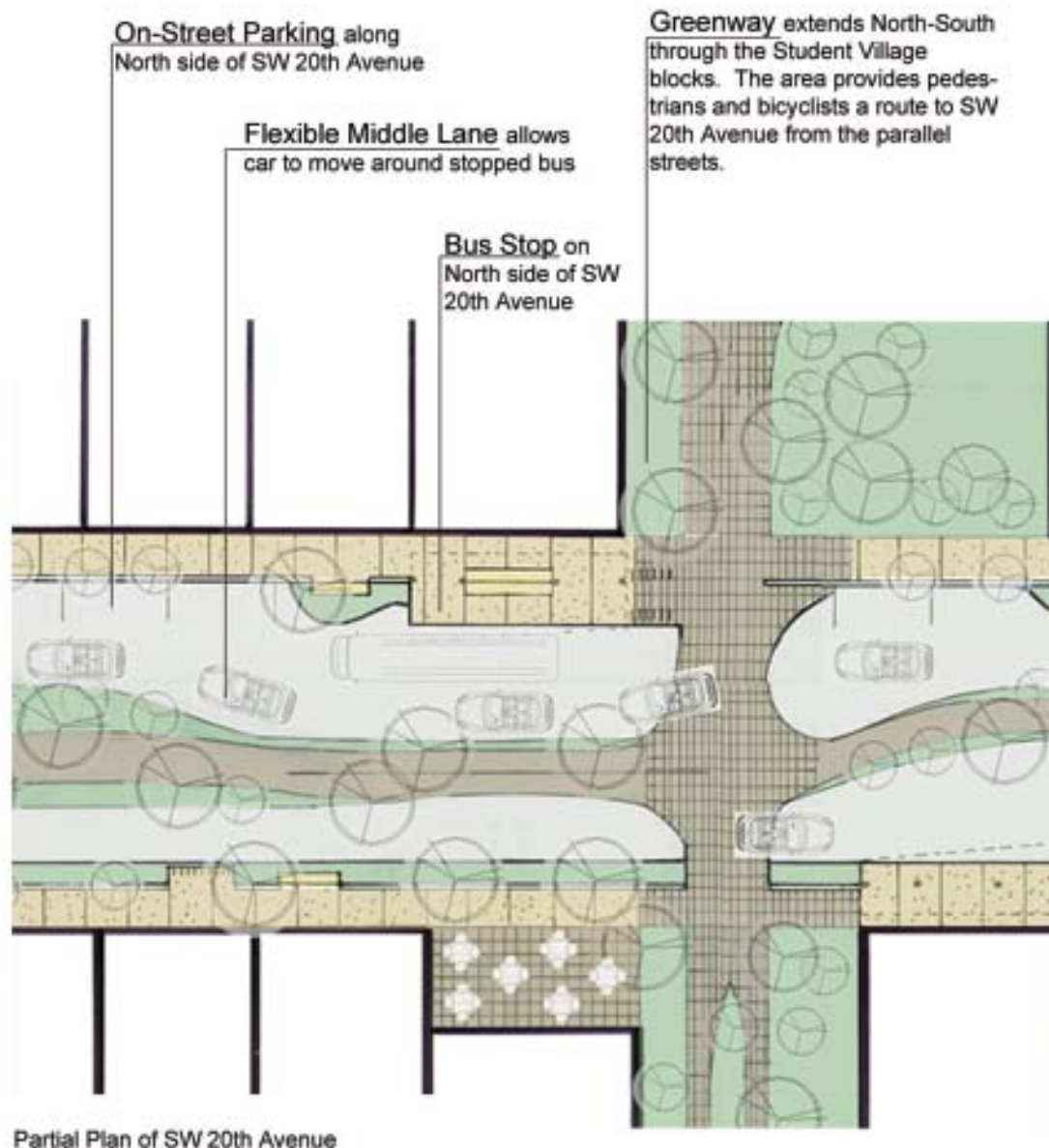
For an efficient bus system, the bus is given priority over the car. The bus stops in the lane it is moving in order to load and unload passengers. The flexible middle lane allows the street to expand at bus stops for cars to move around. The bus stop provides shade and seating for bus riders and pedestrians moving along the sidewalk. To accommodate bicyclists, covered bike parking is provided at the bus stop.

The middle lane includes bike paths allowing bicyclists the ability to move quickly to their destination. Vegetation is used as a buffer between the path and the street. Bicyclists and pedestrians are given priority with crosswalks at the level of their paths and sidewalks. This aids in slowing automobiles as they come to these raised crossings at intersections and bus stop crosswalks.

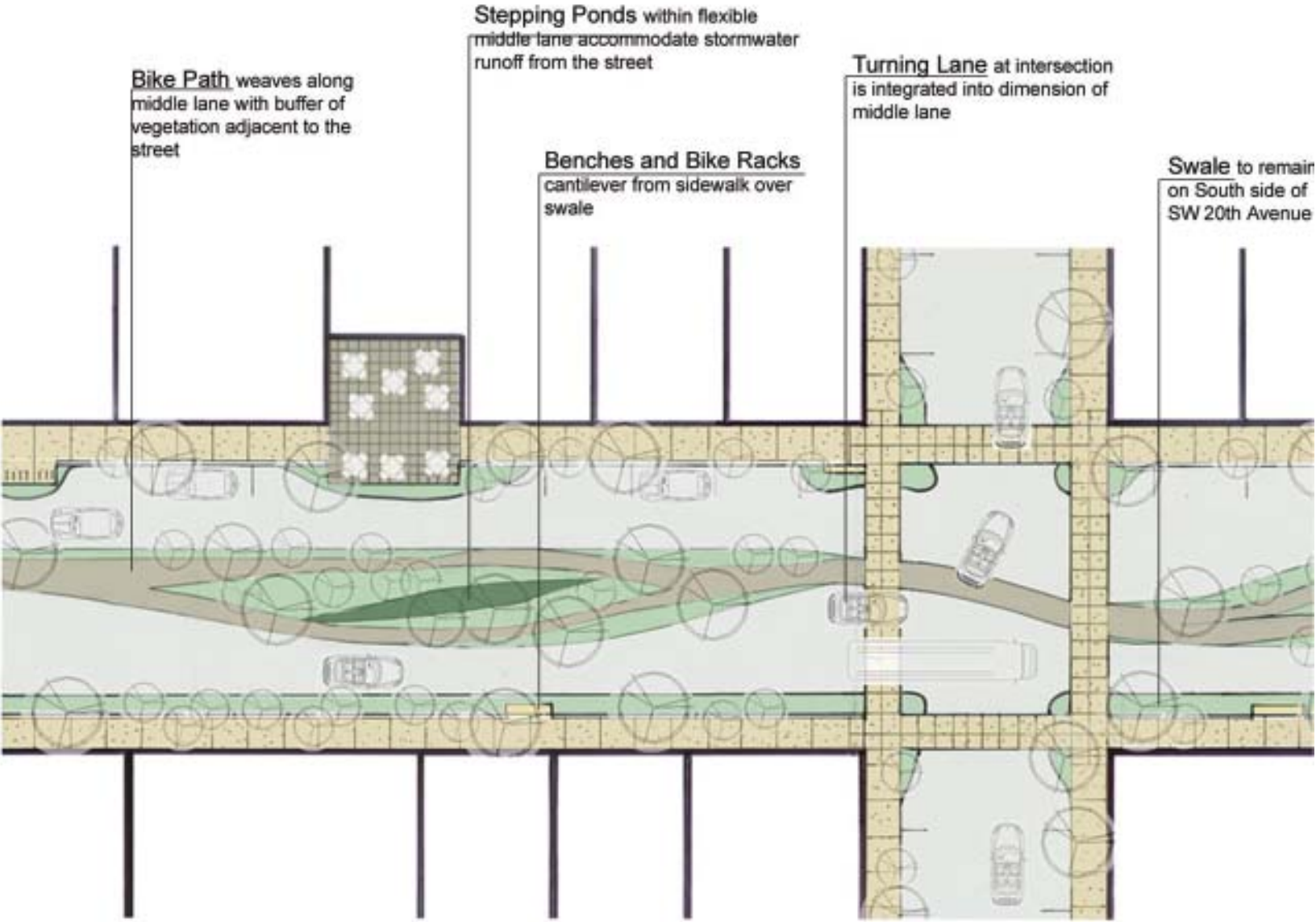
Stormwater retention steps are formed in the middle lane. These work with the topography of the street to collect runoff and direct it into the stepping system of ponds. These steps are formed to move the water slowly towards the deepest pond allowing much of the water to move into the ground along the way.

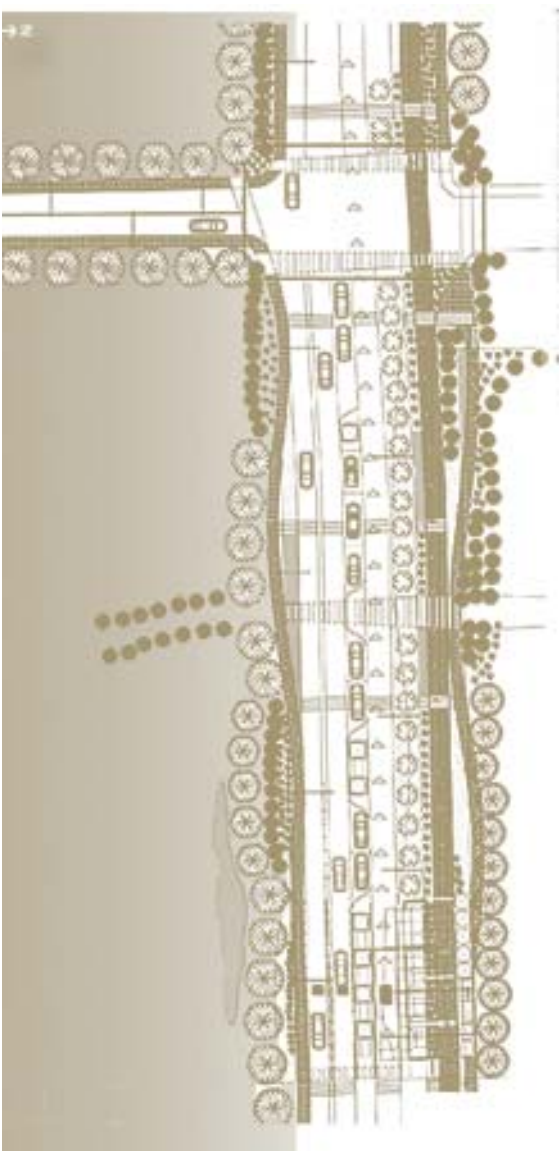
To encourage a walk friendly corridor, buildings are adjacent to the sidewalk with awnings, transparent first floor facades, lights, signage, and outdoor seating. In areas along SW 20th Avenue where there is a density of retail encouraging people to drive to the area, on-street parking can be accommodated with the flexible middle lane.

The implementation of this expanding and contracting middle lane allows for the integration of transportation modes and environmental needs for a successful corridor within the Student Village.



Partial Plan of SW 20th Avenue





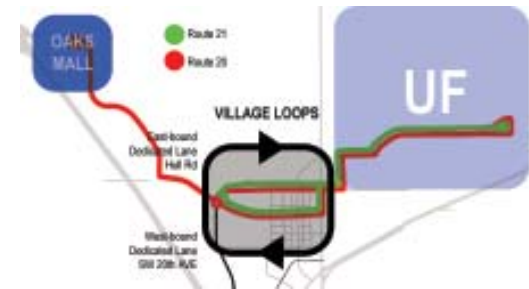
Transit Lanes

Transit potentials are optimized in these schemes through the creation of a dedicated bus lane or, in one case, a reversible auto lane. Rather than absorb a large proportion of the available corridor by allocating dedicated bus lanes in both directions, it was clear through analysis that a transit loop approach would be more feasible. Therefore, the dedicated bus lane would work with another road such as SW 24th Avenue or the new Hull Road extension to complete a circuit through the area. Longer bus routes that run through the area, would get onto and off of the loop. Based on the high use in this area, a campus-village loop and an Oaks Mall-Campus loop as recommended in the Regional Transit System 2025 plan is consistent with the schemes proposed.

The benefits of minimizing auto-bus conflicts and motorist waiting at bus stops is clear, given the volume of transit existing and proposed on SW 20th Avenue. Additionally, this infrastructure, once in place, could be easily converted to light rail, thus reducing pollution and noise while increasing capacity. Another loop benefit is that if one misses the first pass of the bus, it is feasible to catch the second pass a few blocks away. Providing this kind of redundancy will enhance use and user flexibility. Alternatively, these approaches do limit opportunities for spatial variation along the corridor and add conflict points at intersections. Additionally, on-street access to buildings at the ground level may be inhibited by the bus-only lane.

Transit Lanes schemes proposed accommodate the cycle and pedestrian with separated paths, sidewalks and on-street parking that promote commerce through pedestrian-auto-transit connectivity. The schemes limit speed and integrate ecologically sensitive strategies through design. With lower speeds, auto-cycle mixing in lanes is appropriate for high-speed cycle commuters.

The reversing auto commuter lane proposal provides enhanced auto commuting with a central lane that 'reverses' allowing more lane infrastructure in the direction of commute. An in-road lighting system with signage would be used to transmit the flow direction to drivers. Intersections become difficult to integrate with this scheme limiting crossings to "T" conditions without traffic signal lights. The reversing lane also limits options for narrows and islands that promote pedestrian connectivity.



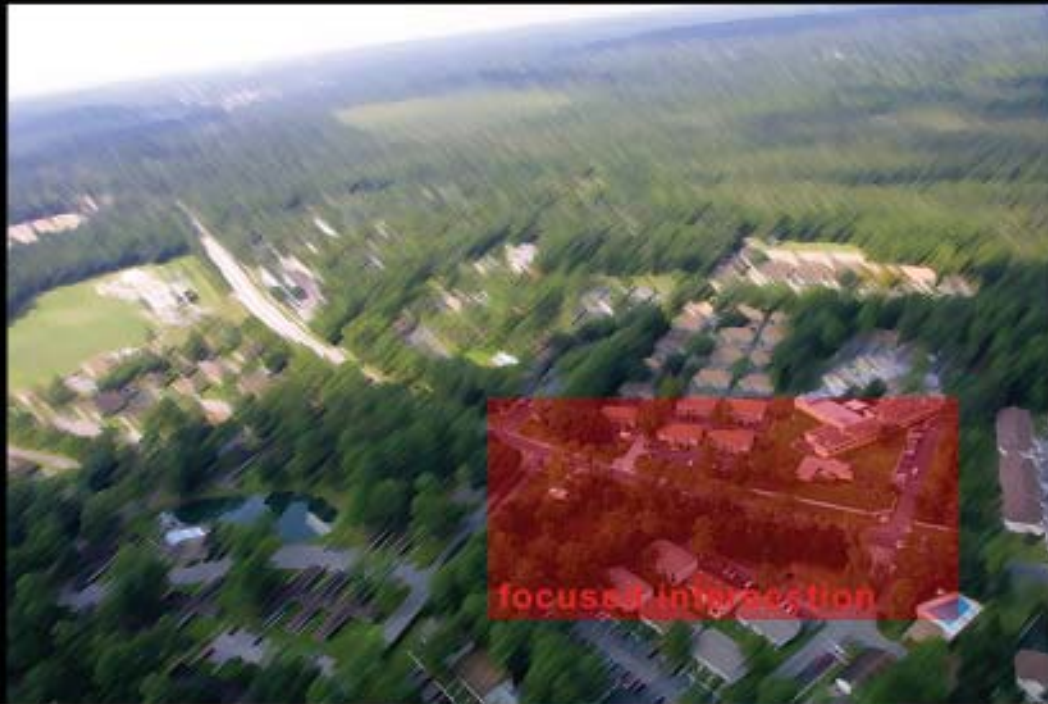
Proposed transit loop option, utilizing Hull Road and SW 20th Avenue as one-way sections of the larger routes (20 and 21).

TRANSIT TRANQUILITY ZONE

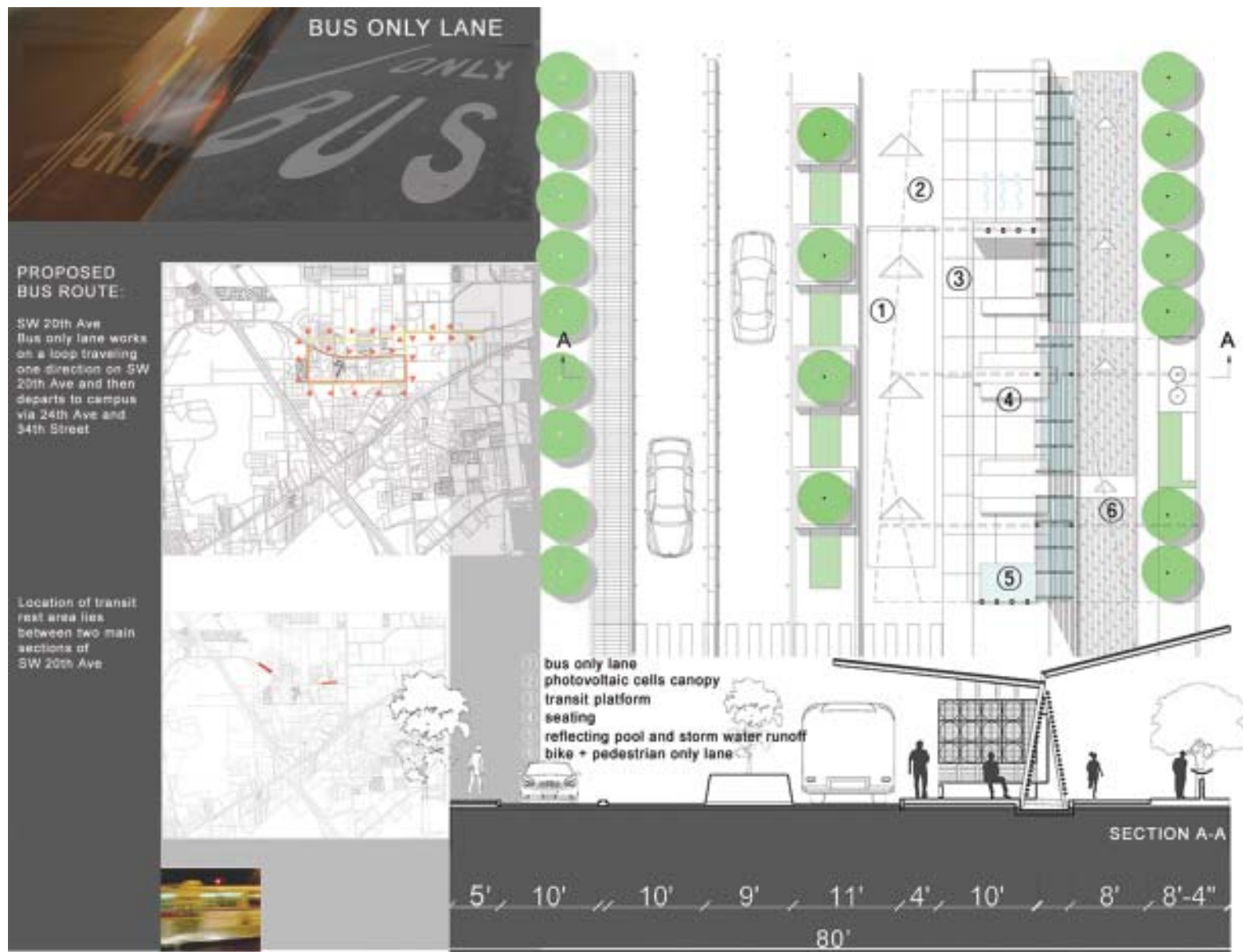
:calm and serene within movement



A redesign of SW 20th Avenue introduces a pedestrian friendly environment with connectivity to conveniences in the area. There is a mixed use of buildings that consist of high income to low income housing. The location does not pertain to one income to allow a higher density area to occur.









alleviate traffic and promote health and safety
improvement of the environment through promotion of public transit
increased bike riding and smaller scale pedestrian movements.

rendering of transit rest area in daily operation

TRANSIT TRANQUILITY ZONE

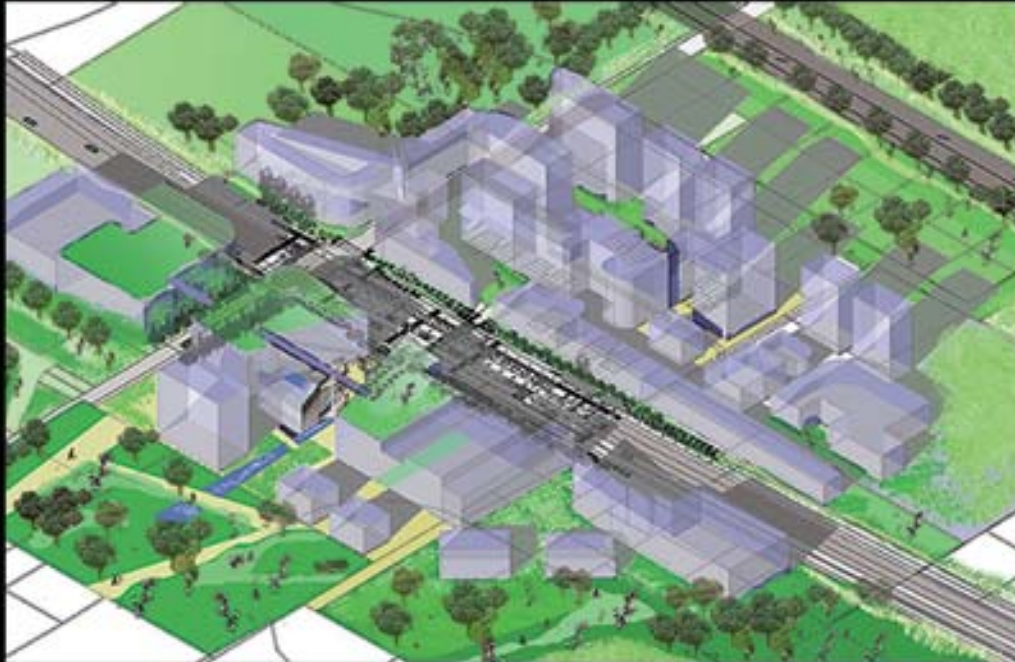
The proposal for the Gainesville, FL transit rest area is due to the growing population of traffic from increased University of Florida population and local and non local residents finding new opportunities for employment. This growth has lead to other roads meeting max capacity and SW 20th Ave is an example of a road that needs to accomodate a higher local density through a redesign of the right of way.



The design for the right of way consist of having a two car traffic lane with appropriate turn offs and allow for the bus to have its own lane so there is no fight making its way back into traffic. A bike path is purposely placed far from the bus and car lanes to create a safety corridor as well as to promote the use of the lane and lesser motor vehicle utilization. The design creates a community friendly and pedestrian environment so there is safe and efficient means of travel. Destination is achieved by the local bus, foot or bike. The design solicits the use of pedestrian movement so as to reduce the use of motor vehicles.



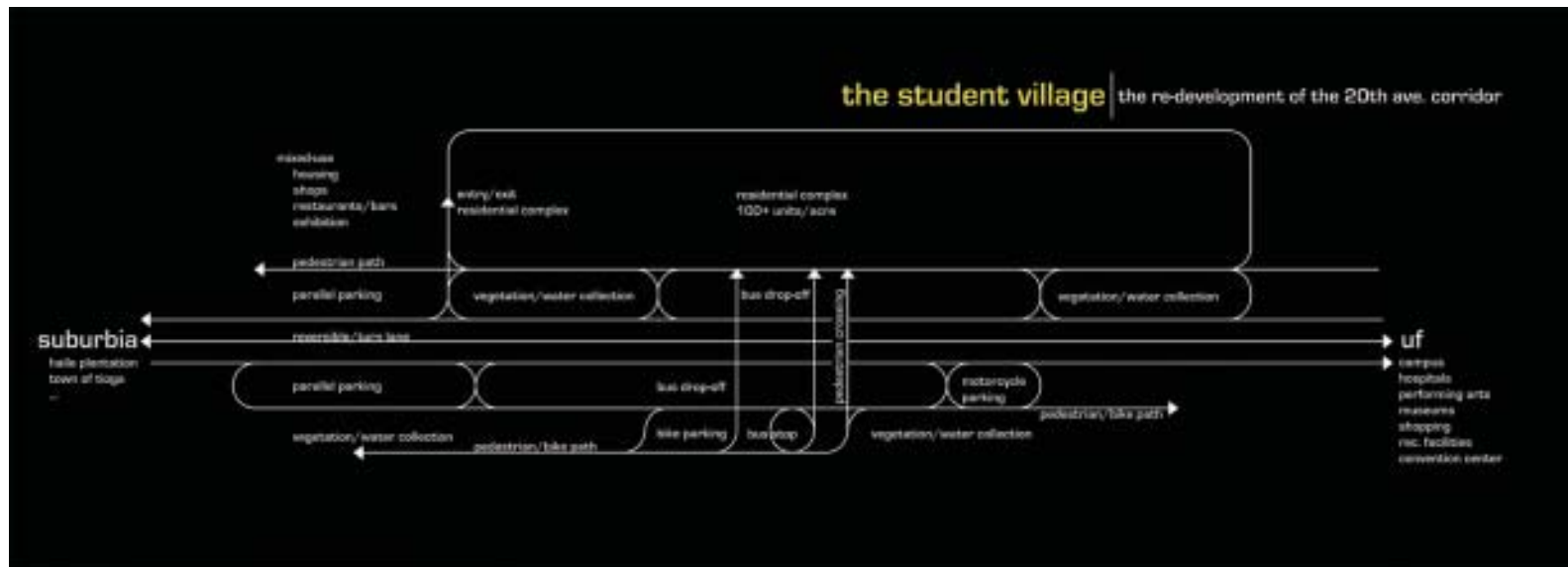
HIGH DENSITY MASTERPLAN



Shows dense vegetation and use of private and public courtyards that link to other smaller and larger scale green spaces. These courtyards provide natural light and view to residential housing as well as commercial office space. Mixed-use buildings offer residents of the area amenities and conveniences for a limited amount of vehicular traffic. Water is introduced as a way to contain water onsite but also offers visual impact to the green spaces. The hard scape slices through the man made topography to provide connectivity to the adjacent green sites.



Gainesville, Florida in the next 50 years



"Field conditions moves from the one toward the many, from individuals to collectives, from objects to fields. A Field Condition can be defined as any formal or spatial matrix capable of unifying diverse elements while respecting the identity of each. Field configurations are loosely bound aggregates characterized by porosity and local interconnectivity. The overall shape and extent are highly fluid and less important than the internal relationship of parts, which determine the behavior of the field. Interval, repetition, and seriality are key concepts. Form matters, but not so much the forms of the things as the form between the things."

Stan Allen



0.2 BUS STOP

The increased density in the area demands for new public transportation strategies and infrastructure changes. The project proposes to increase the number of bus stops along 20th avenue encouraging the residents to use public transportation.

By introducing a third (reversible) lane into 20th ave., traffic can now maintain a constant speed all the way to their final destination, instead of stopping everytime the bus stops. This lane would follow the traffic patterns, going east in the daytime and west at nighttime. Also, this lane will serve a turn-lane.

Parallel parking will also be introduced in the scheme. Multiple parking spaces will be located along the 20th ave. corridor to supply the parking needs for the commercial facilities. Parking Garages will be provided for residents and visitors of the area.





Living in a world dominated by the visual allows for new technology such as the incorporation of dynamic signage & sophisticated LED lighting for transportation control. This method will be used to inform the driver the traffic direction on the reversible lane, and also on the pedestrian crossing bump. This bump will change from green [go] to yellow [slow down] when the bus is loading/unloading passengers in the bus stop.

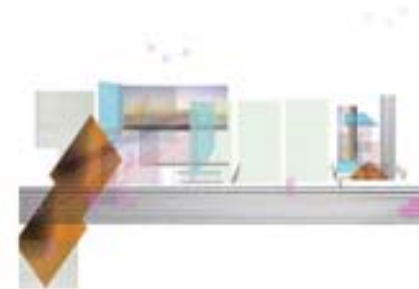
In order to light the space while keeping the heat out, the bus stop will be constructed out of translucent concrete [Ultracon.com]. An integrated bike rack will be embedded in the design to support and promote multi-modal commuting. Residents, and bus users, won't have to deal with the hassle of getting their bikes in the bus, or randomly parking them, now they can safely lock them in the bus stop.





PROPOSAL

Gainesville, FL is a growing city and will continue to grow through the following decades. This increase in density demands a concentration of space and the prevention of further urban sprawl. Ideas of multi-use buildings, serving multiple demographics becomes a part of the new streetscape. Designing a streetscape to promote these attitudes will lead to a city of art, culture, healthy community and an urban typology.



Advanced Studio 3
University of Florida
School of Architecture

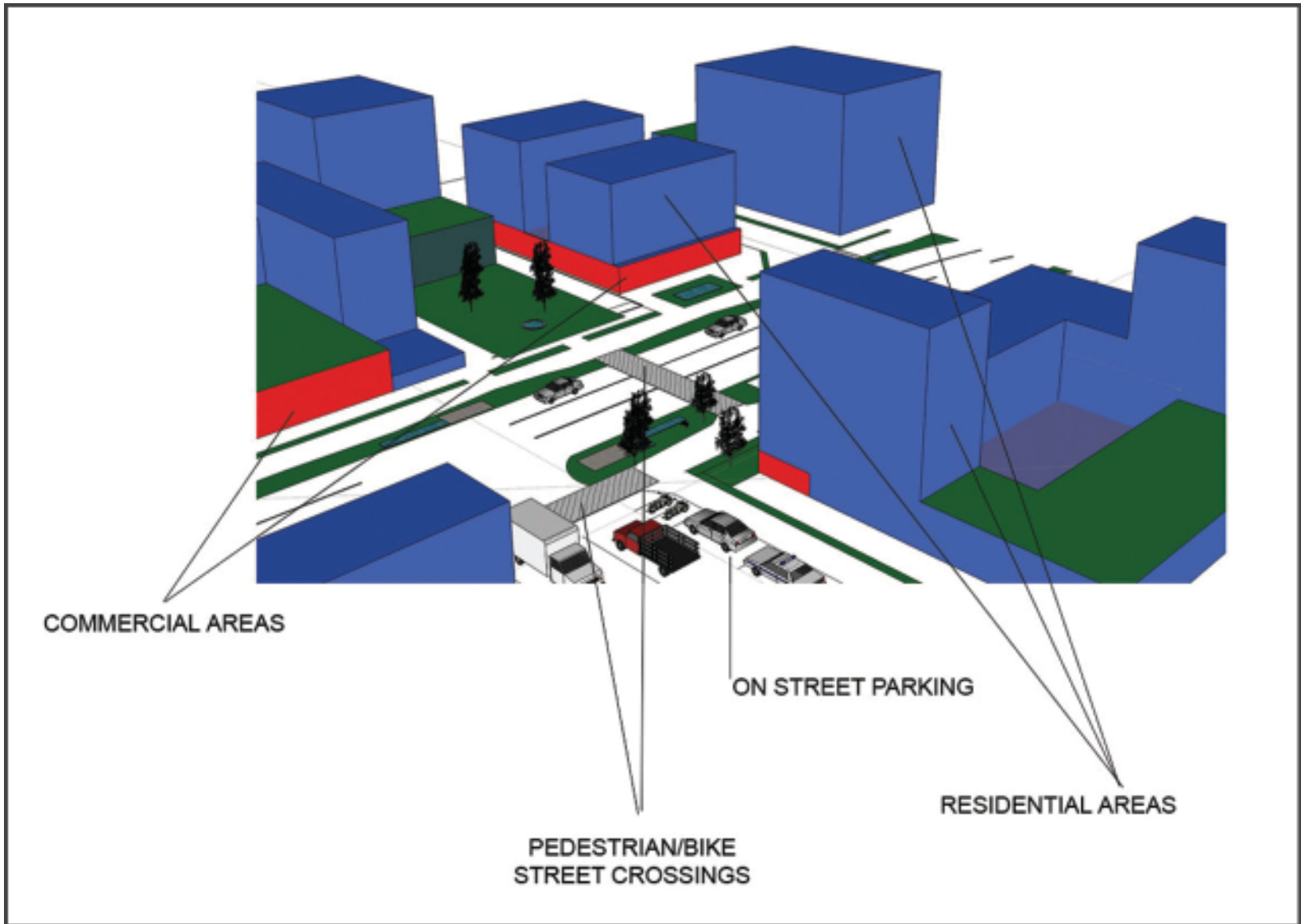
Professor
Martin Gold

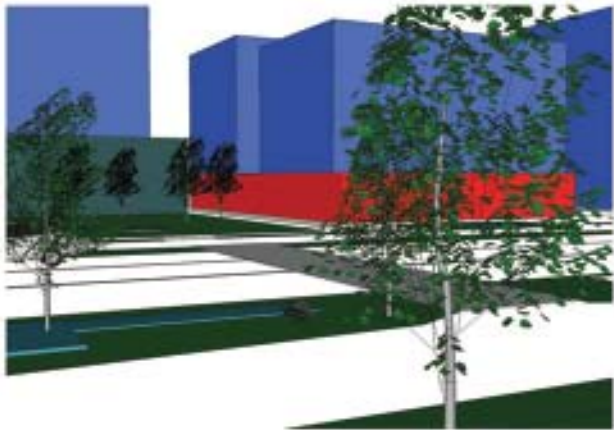
Graduate Student
Maureen Mich



© The RTD Bus Stop Station located on SR 200 West. Station will continue only the Cedar Hill area or lead to the University of Florida. The bus stop will also serve the North Side of SR 200 West leading Westward.



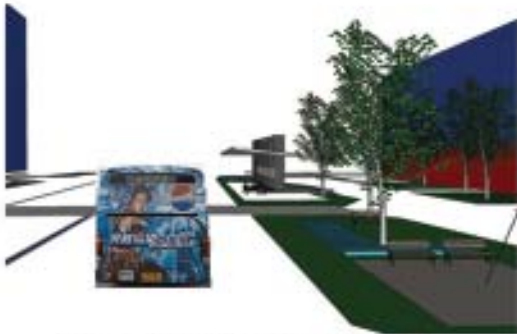




The Views to urban areas and line of sight provides visual contact that allows for comfort in a city, connections, and social atmosphere.



Pathways that invite you to circulate and explore the surrounding area of SW 20th Ave. The trees and the water features provide an area to sit along the paths.

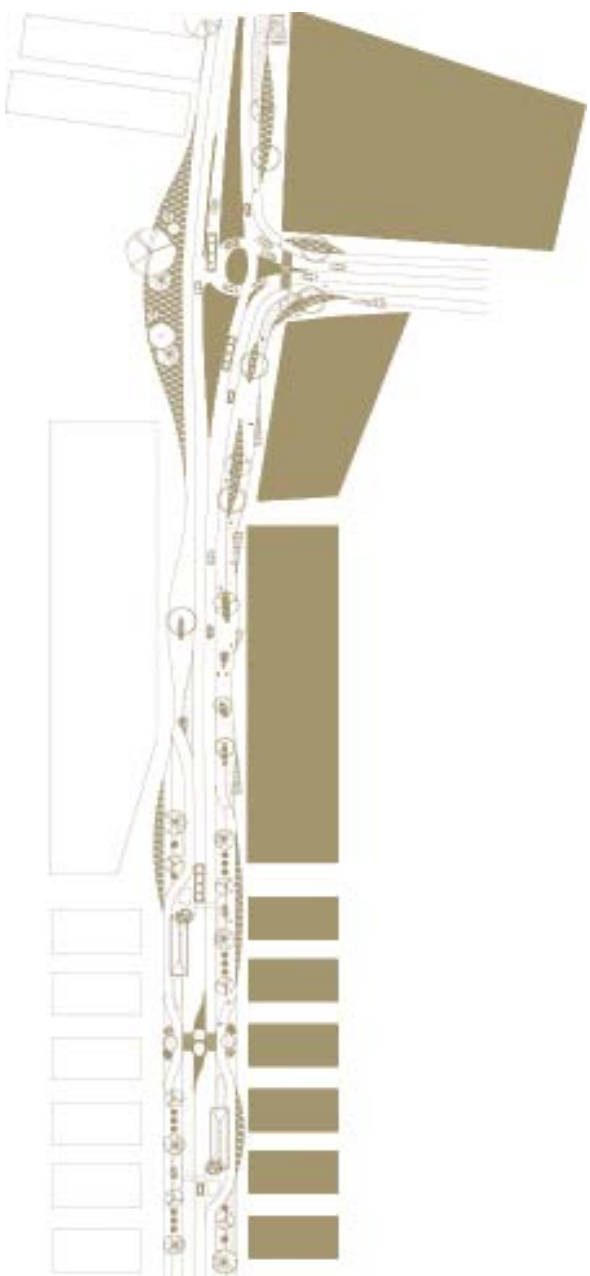


Local artists could sell art, present art, and or have their art on permanent display. The art will invite you to learn more about Gainesville and be a peaceful addition to sit along the pathways.

ART AREAS



Better community land usage, providing more units per acre, better transportation circulation, and more pedestrian and bike paths



Shifts and Shelves

Utilizing some of the concepts outlined in the Modified Woonerf section previously discussed, Shifts and Shelves schemes incorporate innovative bus bay designs to allow the bus spatial priority when merging back into traffic. Actually, the travel lane is 'shifted' requiring traffic to slow and merge back into the lane with the bus. Traffic shelves are also strategically incorporated here to enhance the bus advantage and to calm traffic at pedestrian crossings.

Conceptually generated from the traffic calming logics above, the 'shifts' are extrapolated at the larger scale of the right-of-way to organize other modes — pedestrians and cyclists — and the urban form associated with the street. One scheme studies a traffic circle at a "T" intersection that would promote slow, relatively continuous movement of traffic. Another scheme looks at the shift and bus bay as the generator of a campus style village node anchored by a Publix or Whole Foods supermarket and perhaps another big box type retailer. These schemes suggest the integration of public space, commerce and the street, and the transportation element as a complex, interacting set of layers.

The main traffic benefits of the 'auto-merge bus bay' is that autos can pass while busses are embarking and disembarking passengers while also giving the busses priority for reentering the traffic lane. This could alleviate the common problem with traditional bus bays of drivers not allowing buses back into the lanes, which has been cited by the FDOT as a cause of accidents and road rage at conventional bus bays.



SW 20th Avenue Urban Village Reconstruction Study



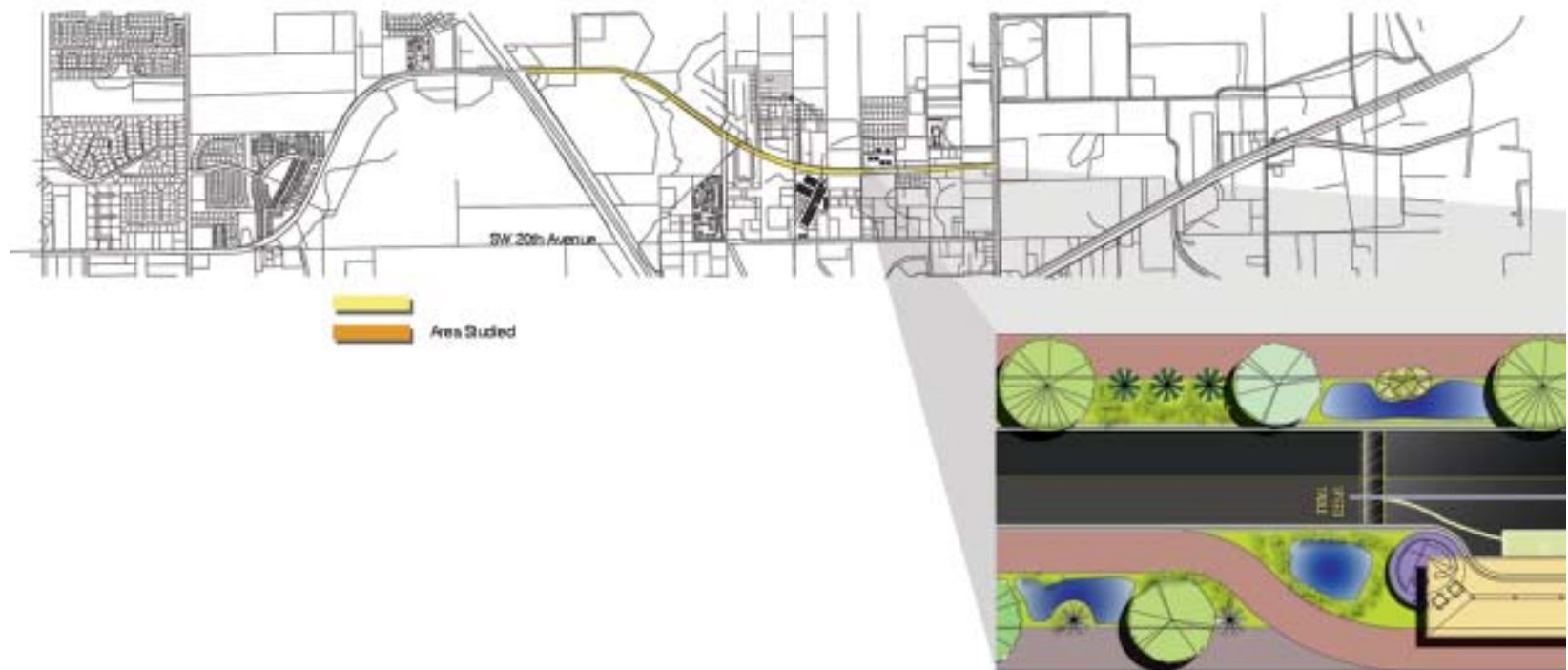
Platform & Kiosk Model
Basswood (24x18)

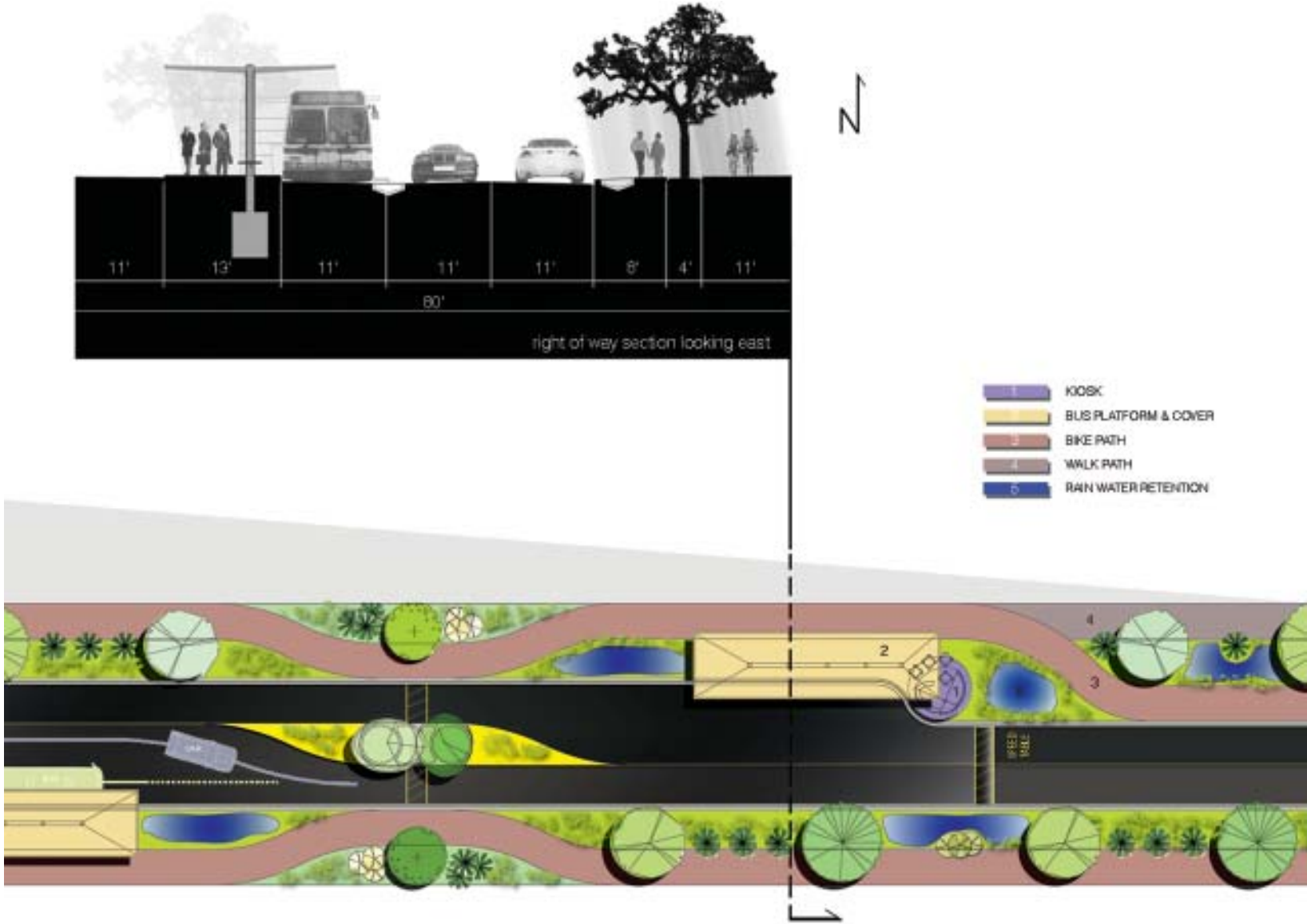


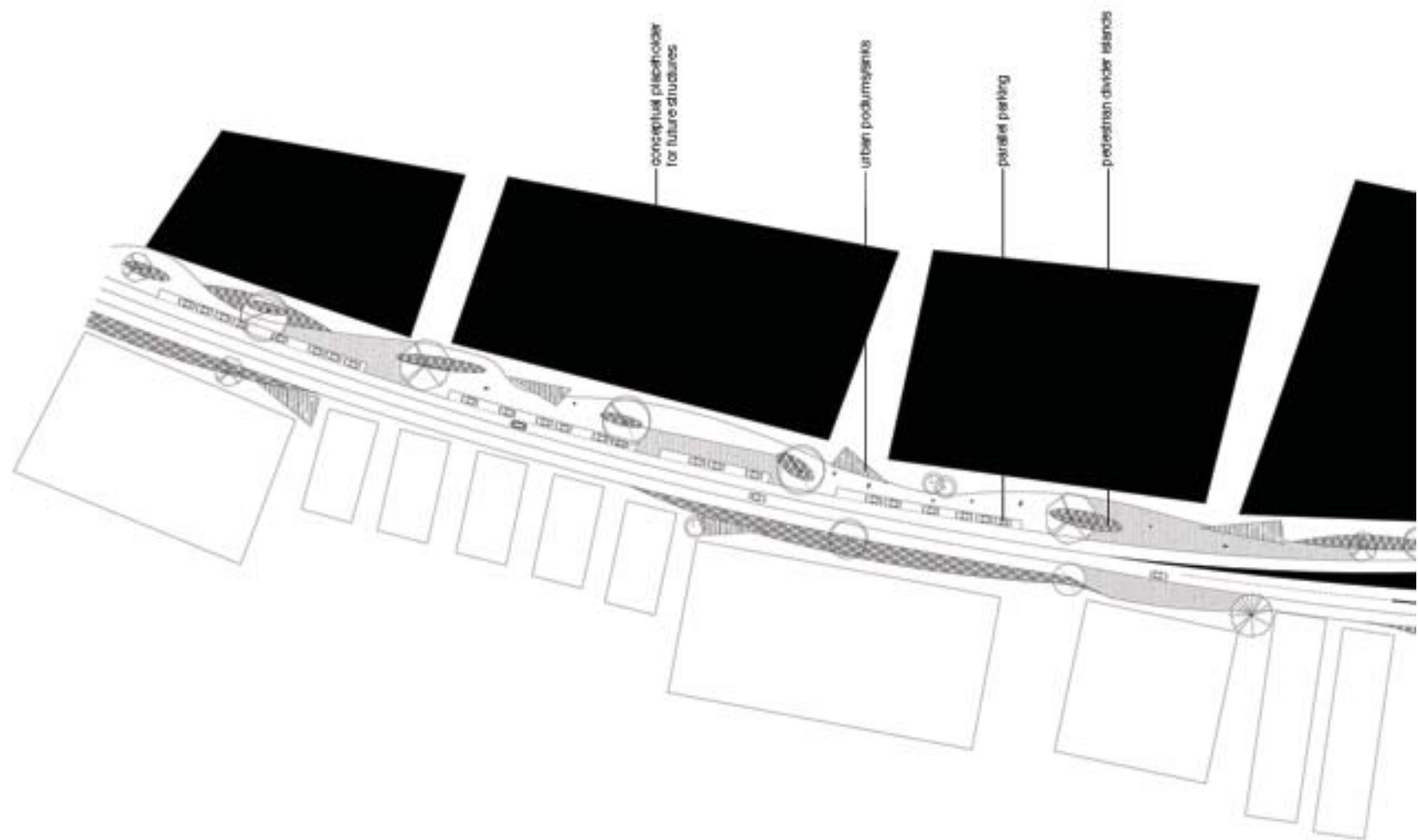
TRANSPORT KIOSK BUSS PULLOUT

The idea is to create a negotiable, safe environment that can occupy and plug into a designed urban corridor that utilizes the idea of the kiosk and platform to facilitate smaller pauses along the pathway within an urban village. These moments provide bracketed spaces that operate at different scales which create unique after-destinational experiences. This notion of the kiosk and the platform considers the process of motion significant within an urban village and incorporates thoughtful relationships that stimulate and facilitate the negotiation of walking, biking, and motorring. Kiosk is defined as a cylindrical structure where advertisements may be posted and is possibly open on one or more sides. The kiosk also creates a capture point for rain water retention as it collects rain water runoff from the covered platform and then stores the water in underground cisterns for a sustainable solution for irrigating landscape. In the urban village, the kiosk and platform have much more potential than just a place to buy a newspaper or get a coffee. This is now where community starts their morning, finishes their day, and where discussion and relationships can begin. The kiosk and platform allow for happenstance 'meetings' to occur within a defined space that not only serves one purpose of marking the landscape for bus location, but now creates space that is multi-functional through designed program. The platform now takes the place of the conventional concrete bench allowing for air to flow around pockets of conversation with room for many to stand, sit, or kneel.

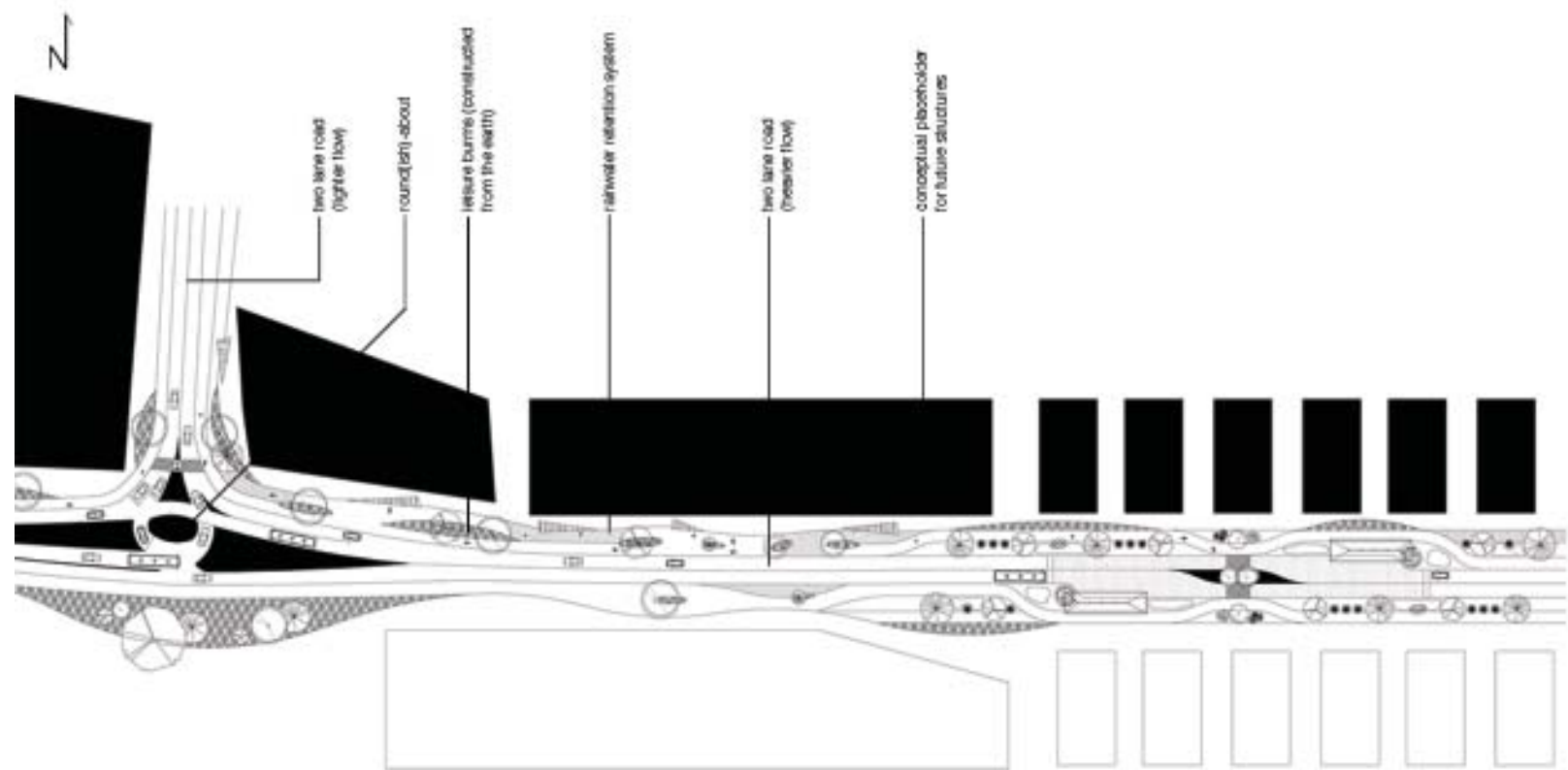








SW 20th Avenue
1/4 mile streetscape



URBAN VILLAGE PROPOSAL: COEXISTENCE OF SYSTEMS

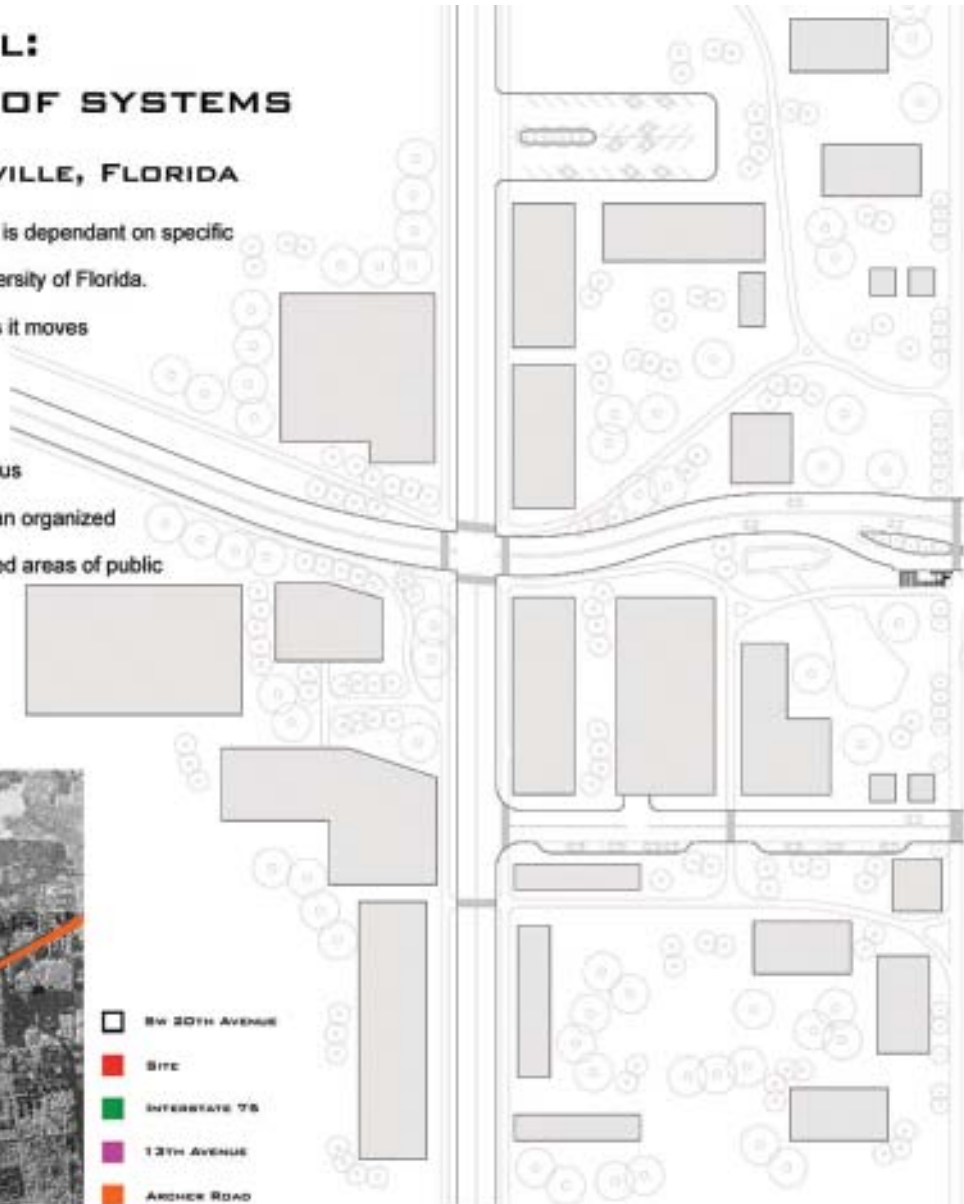
SOUTHWEST 20TH AVENUE, GAINESVILLE, FLORIDA

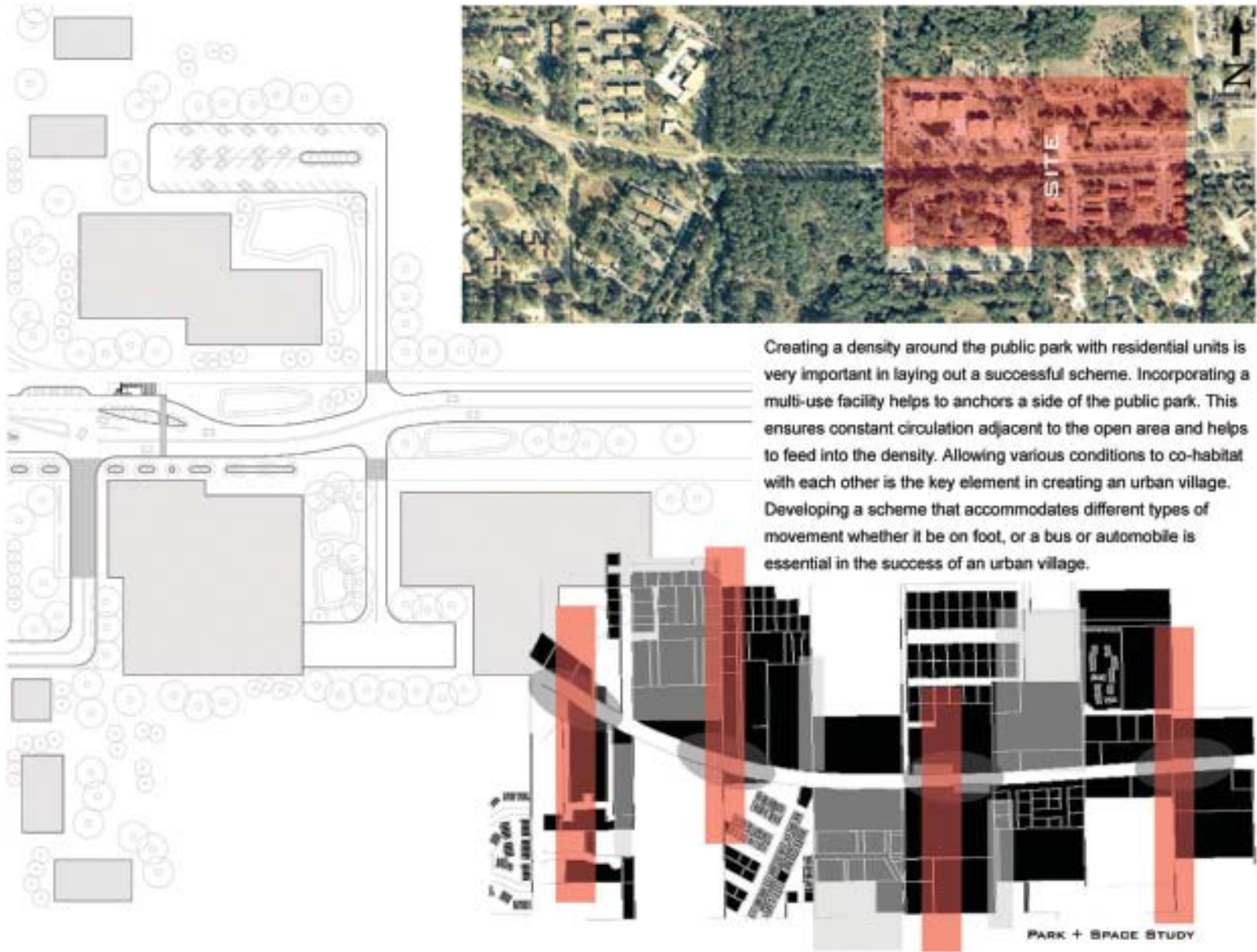
The Development of an Urban Village on Southwest 20th Avenue is dependant on specific transportation systems that tie itself to Interstate 75 and the University of Florida.

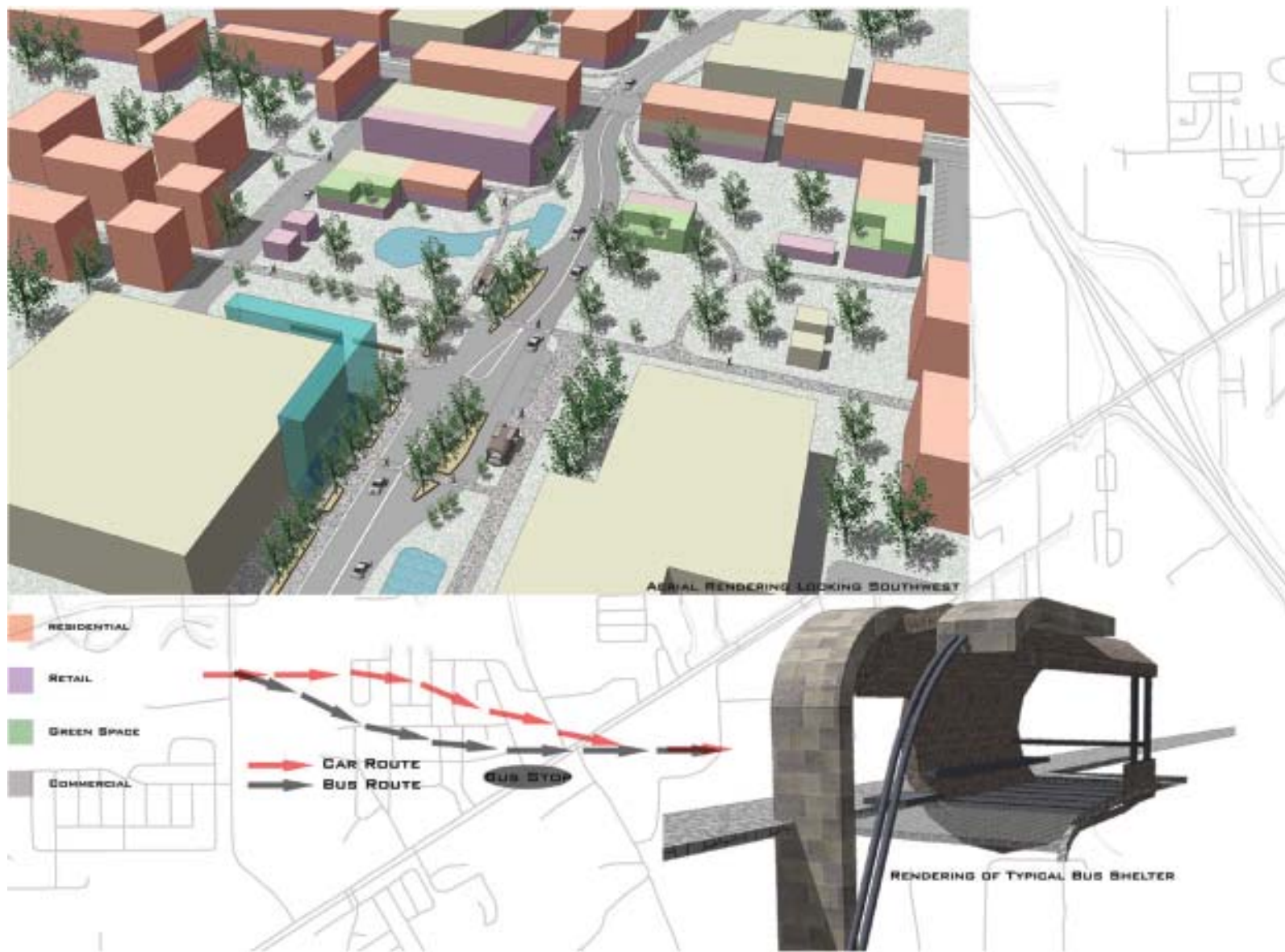
Within this system, various loops occur that morph and change as it moves through. Bus circulation, pedestrian movement, bicycle traffic and the automobile each have their dedicated system so that they may co-exist efficiently. A central park that ties these numerous circulations allows for various random movement to occur, yet in an organized fashion. Attached to these movements are specifically programmed areas of public park, retail, commercial, roof gardens and residential units. The notion of one being able to Live, eat, work and play in an area that is able to satisfy all of these needs can occur.



- SW 20TH AVENUE
- SITE
- INTERSTATE 75
- 13TH AVENUE
- ARCHER ROAD









RENDERING LOOKING SOUTHEAST TOWARDS PUBLIX



Ducts and Arroyos

Overpass (ducts) and underpass (arroyos) schemes were studied to look at alternatives integrating technology, stormwater and the spatial conditions of the local geography. Both of these proposals are located in the 100 foot right-of-way area to the west of SW 38th Terrace. They utilize traditional bus bay strategies and separated cycle/pedestrian paths that support the wetlands and Forest Park. Anticipating increased cycle commuting through this area with the completion of the Archer Braid — a connected cycle path across the interstate linking Haile Plantation with UF — a high volume strategy would include a crossing either over or under SW 20th Avenue.

An overpass duct, angled with the road provides a low incline approach for cycles to cross over SW 20th Avenue. The simple, elegant form suggests cycle movements while incorporating photovoltaic panels that generate electricity, provide shade and provide a safety barrier at the bridge. Visually, the bridge would act as a gateway to the arts village (SoHo).

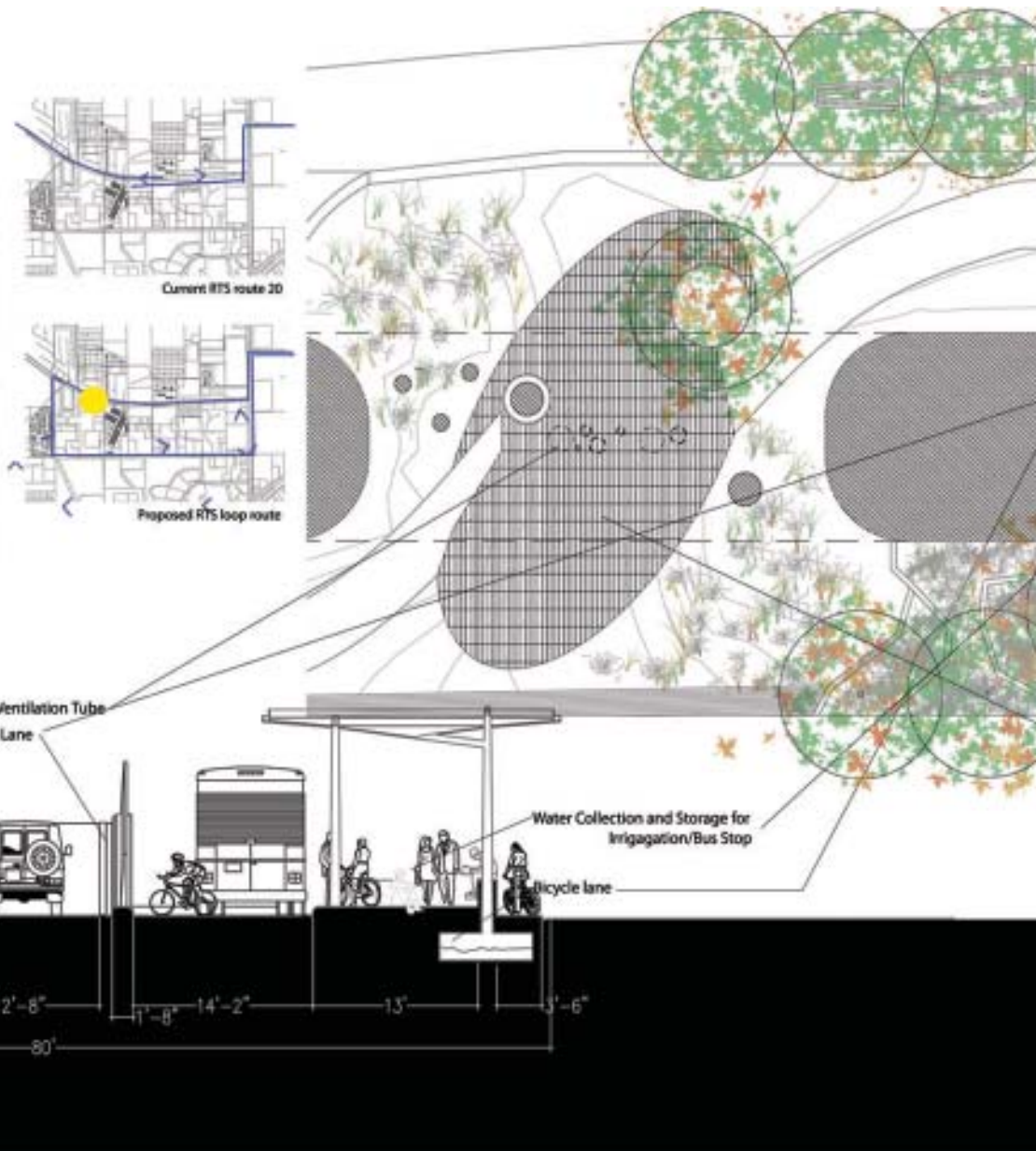
The Arroyo scheme integrates a stormwater swale to carry water to the Hogtown Creek during storm events with a cycle underpass near the Forest Park. The cycle path would 'float' over a wetland garden utilizing a metal grate platform allowing light and nutrients to pass through to the wetland. Likely washing-out during major storm events, the cycle path would be passable again in a short time after the storm event, while alternate at-grade crossings would be available. The scheme optimizes efficiency by partially raising the road (approximately +5') and forming the arroyo (about -5') to provide a more open swale with light and view and to balance the cut and fill required. The scheme becomes an educational and community enhancement location as people come in contact with the natural hydrological cycles and the flora and fauna that thrive in these ecotone conditions.

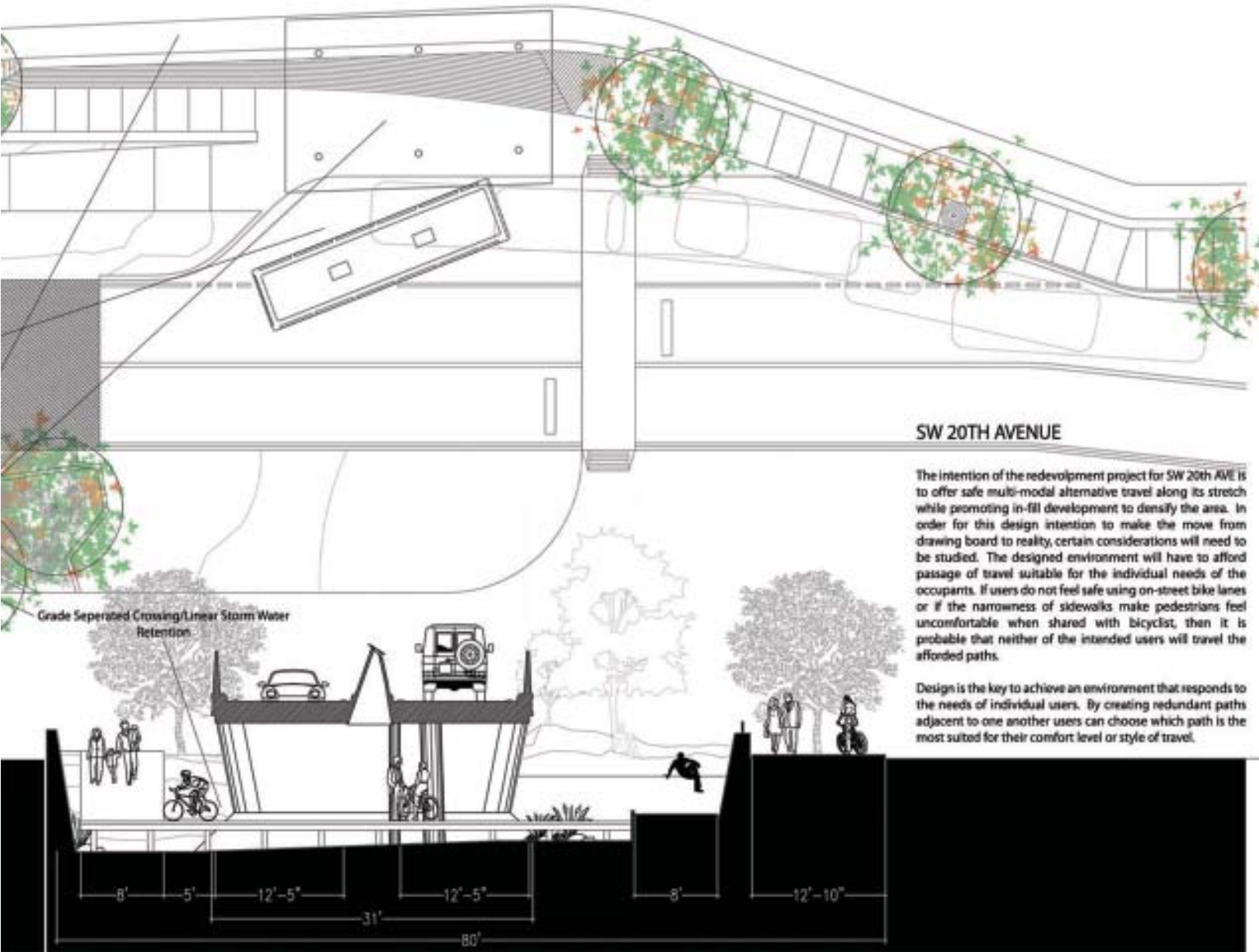
OVER / UNDER STORM WATER ENHANCEMENT GARDEN

GAINESVILLE, FL
UNIVERSITY OF FLORIDA COLLEGE OF ARCHITECTURE

The project calls for a rethinking of the relationship between cars, bicycles, and pedestrian travel. This is a highly important issue along the SW 20TH Ave corridor because it is such a highly traveled route. The idea of the project is to alleviate traffic congestion and create a friendlier thoroughfare for those who opt to travel by non vehicular modes. By offering grade separated crossings and bus pull off points conflict between motorized vehicles and pedestrians will be eased while giving bicyclist the option of engaging the right away or retreating to safer separated paths.

In order to accomplish this proposal, the buses are restricted to one way travel along SW 20TH Ave. For brevity of traffic flow both to and away from the University of Florida, a bus loop should be employed that would travel west on SW 24TH Ave and east along SW 20th Ave originating from the university and rapidly making its way back while making the least amount of left turns possible along its route. The advantages of this bus loop are two fold, car traffic can move more efficiently to and from the university and RTS can create a route that will pick up riders more frequently with shorter faster trips and fewer buses.





The loss of infiltration capacity due to development is one of the single most serious barriers to sustainability. Developments that do not afford permeable surfaces create too much runoff that does not percolate into the ground; instead, it moves horizontally transporting pollutants and sediment far from their point of origin contaminating streams and ponds. Increased runoff is equivalent to increased pollution. Also, waters that travel long distances along impermeable surfaces tend to gain speed and have erosive power. For these reasons it is important to control runoff near its source.

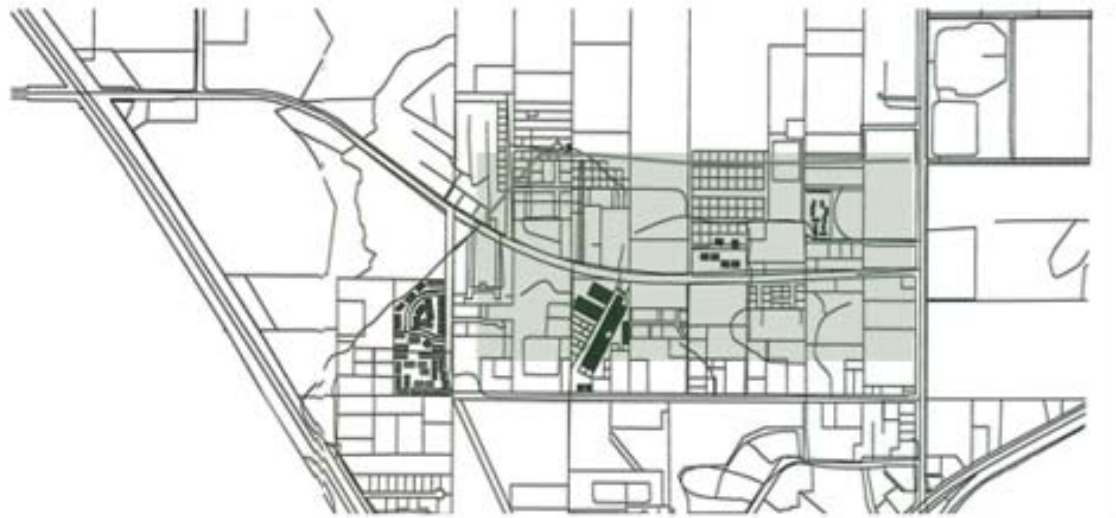






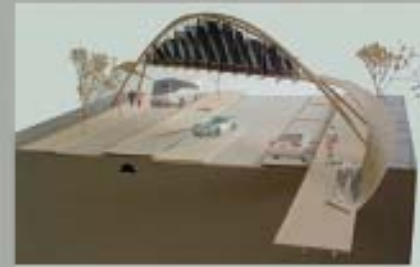
Gateway to Campus

Urban Village
Bus Stop Project





This project takes the form of a gateway to campus. This structure will be the first defining object seen connecting western Gainesville to the Urban Arts Village. This pedestrian bridge allows for people and bikes to move safely across 20th Ave. without interfering with traffic, located just West of the proposed Hull rd. extension. This bridge ties in with the braid proposal, the cycle connecting route between Hale Plantation and campus, increasing the walkability and non auto connectivity between west Gainesville and campus.



The Photovoltaic cells will provide power for the bus stop lighting as well as a surplus of energy to dispersed back into the grid. The Photovoltaic cells also provide a pleasing astetic when aranged in an overlapping pattern to produce a moray effect.

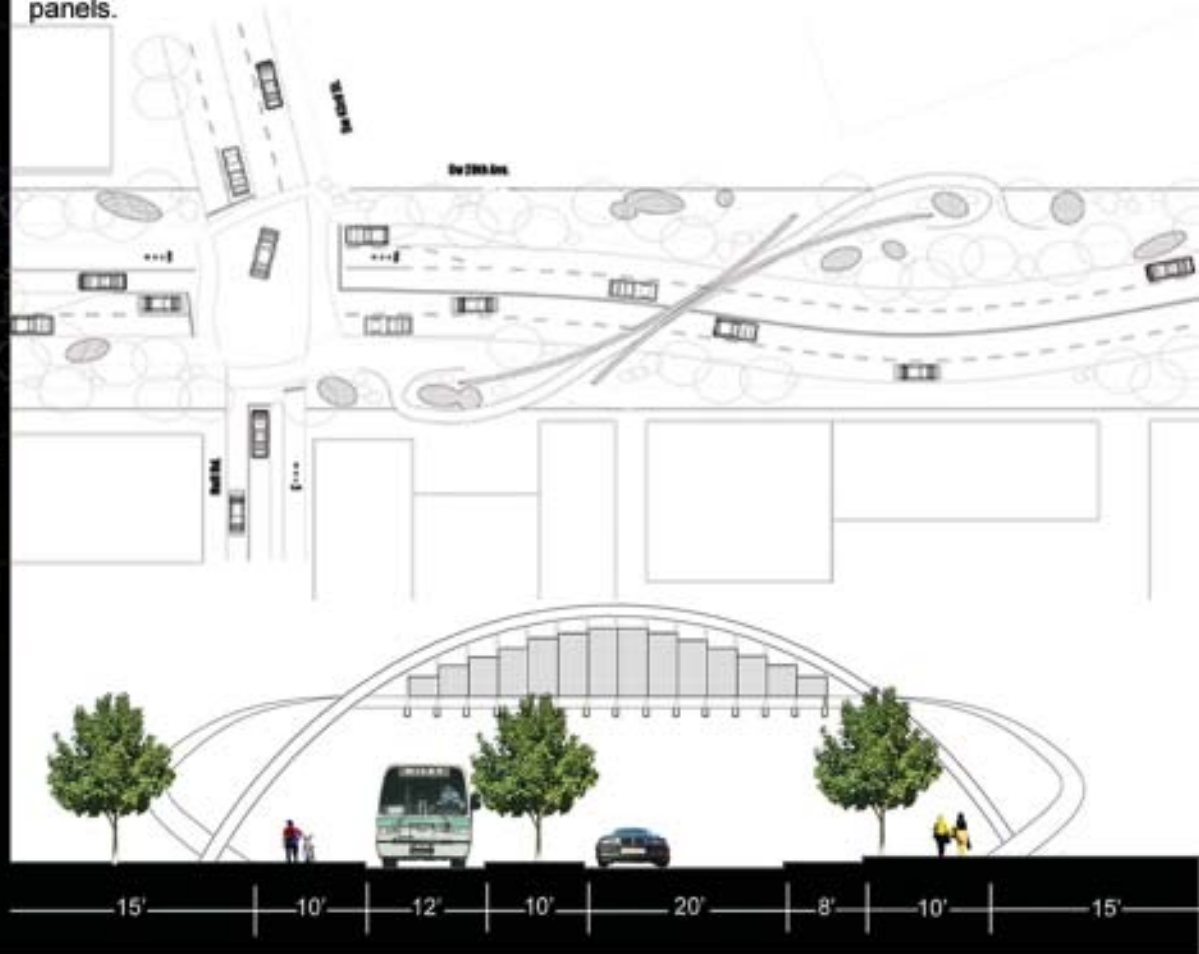


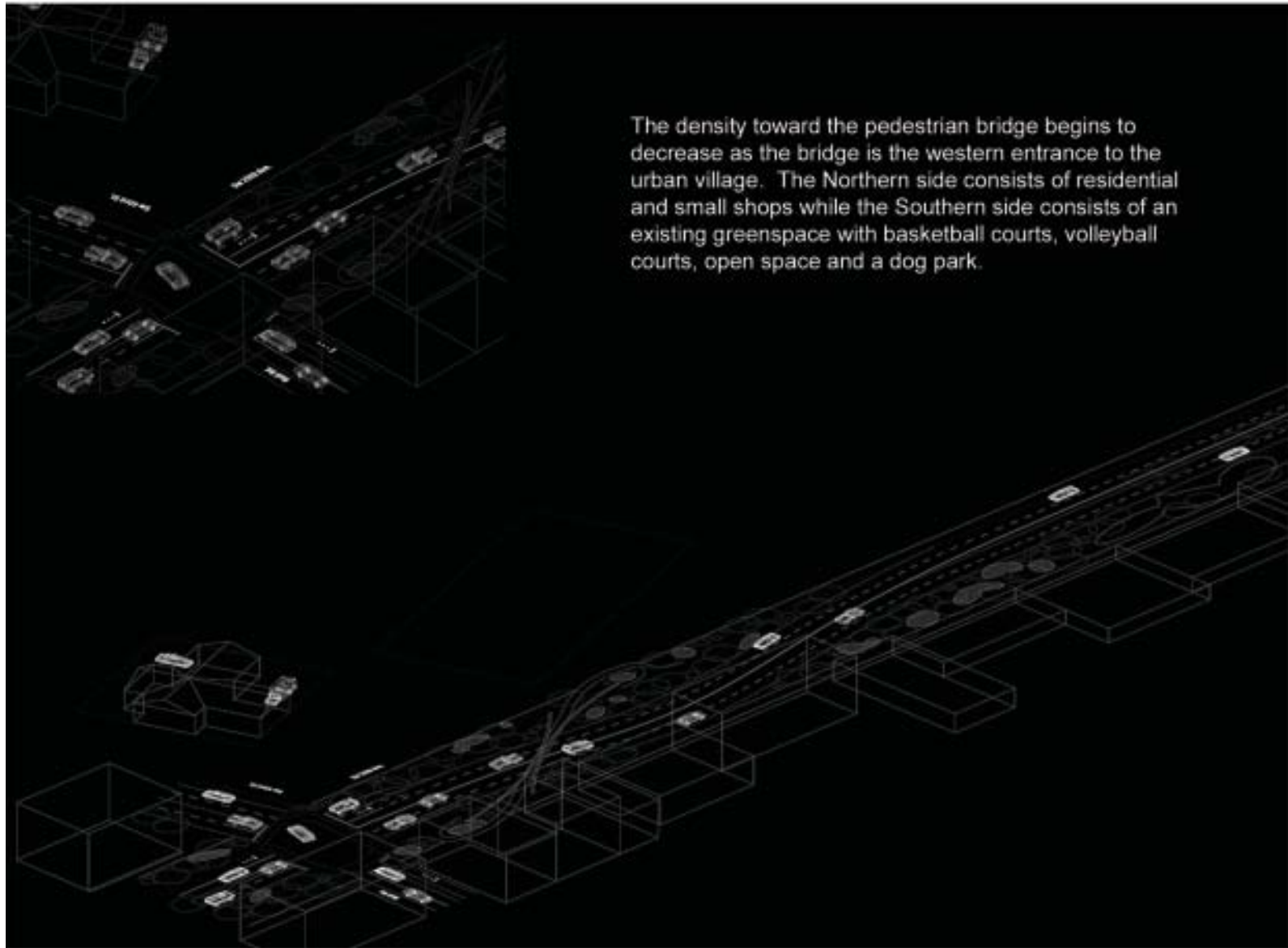


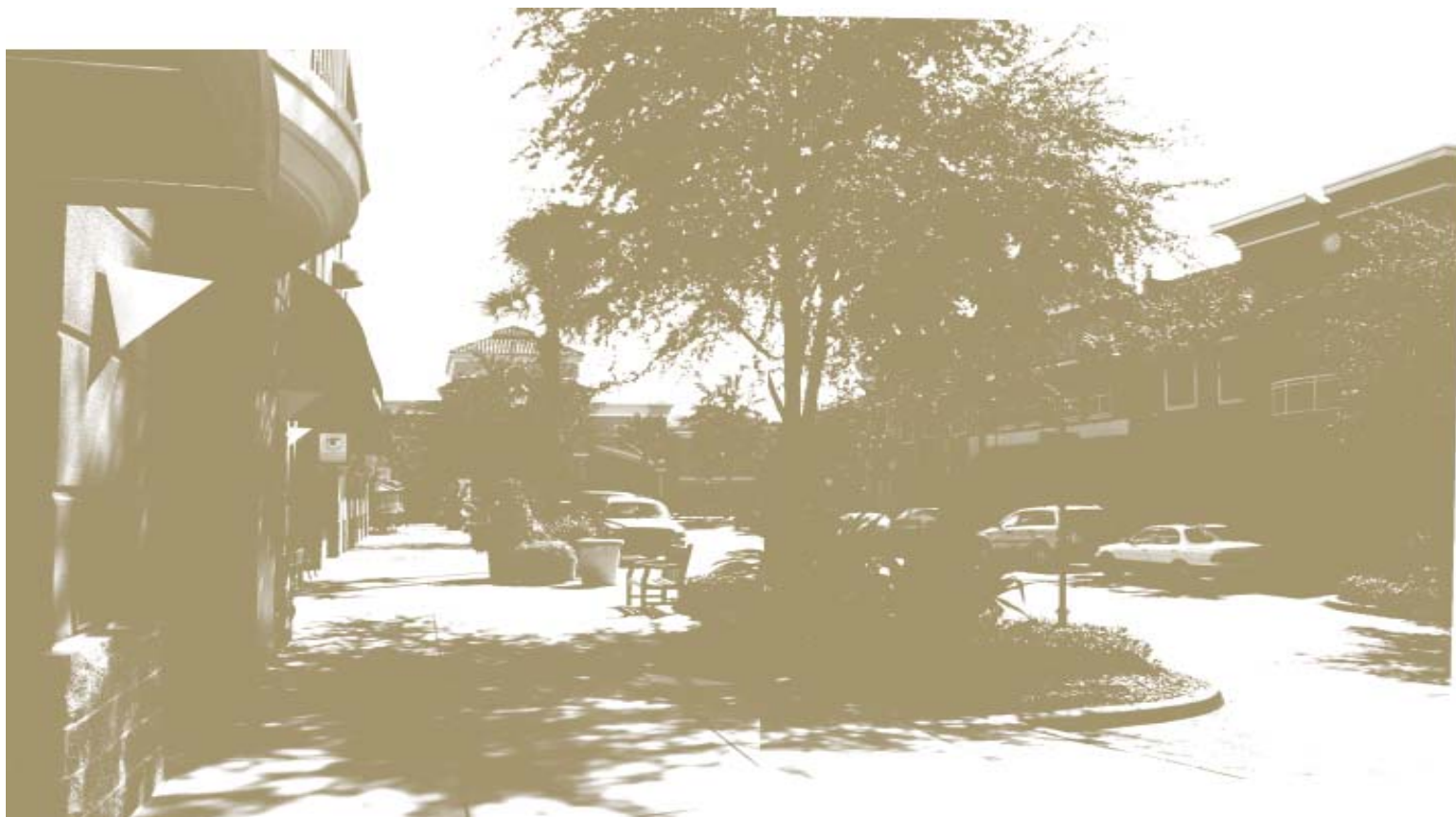
Moray Effect



The bus stop is located underneath the bridge along the dedicated bus lane for expedited commutes. There is on street parking that provides a buffer to the sidewalk increasing the pedestrian's sense of safety. Bicyclists and pedestrians share a 10' sidewalk on both sides of the road. Trees provide shading along the south side of the sidewalks. The bridge itself is highlighted with photovoltaic cells. The partial transparency of the cells give a moray effect due to the parallaxing of the cells, this is from doppled light moving though the panels.







Case Studies and Public Workshop

A serious challenge for projects that propose innovative infrastructure for multi-layered complex urban systems not presently in place, is to make the case for substantial resource allocation toward something that is not readily tangible. Urban Village Studio vision addresses this difficulty not only through design studies of potential outcomes for a variety of integrative strategies but also through case studies of the success and shortfalls of other municipalities. Case studies allow the design team to evaluate the results of communities that have been down the path of redevelopment. Analysis includes archival studies where the project documentation available is evaluated, analyzed and filtered to identify potent strategies for integration. Additionally, field study visits to high potential progressive communities were conducted beyond the basic archival research.

Case study summaries of the twelve city districts analyzed by the Urban Village Studio are included in the Case Study Appendix of this report. These districts include:

Yerba Buena, San Francisco, CA
Winter Park, FL
Oakland, FL
City Place, West Palm Beach, FL
Pinellas County, FL
Davis, CA
Atlanta, GA
Barcelona, Spain
Graz, Austria
Hong Kong, China
Rotterdam, Netherlands
Utrecht, Netherlands



Focused Case Study : Yerba Buena, San Francisco, CA

Detailed case study analyses of the twelve cities/villages studied are included in the Appendix of this report.

Field studies to cities, urban centers and villages are a critical part of the work of the Urban Village Studio. In addition to archival studies, the studio has traveled to five cities of interest evaluating the relationships among planning, commerce, housing and transportation infrastructure (the street). Four of the cities were in Florida as noted on the opposite page. The fifth city, San Francisco was likely the most valuable study in the group. The studio conceptualized San Francisco as a collection of villages, any of which might have clues to how Gainesville’s SoHo Village could evolve. Beyond the obvious ethnic richness of China Town and the reliance on tourism, it was clear that economic and urban viability was alive in mixed use, dense urban conditions even at a low-rise scale — four to five stories. The calmer south park area , also with four story townhouses gathered around a park, was quite residential in character while including architects offices and corner cafe’s. A resident could watch their children play in the park while relaxing at the sidewalk café — say a block or two from their townhouse — all without getting into a car. Yerba Buena however held the most valuable information. This 40-year, 87 acre initiative brings together arts infrastructure including museums, a theater, ice rink, convention center, cinema, retail, café, preschool, playgrounds civic gardens and a variety of housing typologies including luxury condo/hotel, market rate and affordable housing, and subsidized retirement living. A person could live-out their life in this village without inconvenience. The original 1960s vision of a sports complex dramatically morphed over time through legal battles and the adoption of leading edge urban design strategies into the noted arts and commerce center it is today. The strategy for redevelopment however remained the same since the 1970s — create a community redevelopment agency (CRA); acquire funds and property through tax increments, grants and donations; leverage private developers through land leases and tax incentives; promote a wide range of employment, housing and entertainment activities of the highest possible quality; include the widest variety of demographic groups; and promote major projects through international architectural competitions. In its closing years, at the time of this report, Yerba Buena provides an excellent strategic, economic and urban design model for district urban village development.

Yerba Buena Gardens : Center of a 40-year, highly successful “village” redevelopment initiative. [Opposite page]

MTPO SW 20th Avenue Design Project Public Workshop

Public Workshop
Doyle Connor Center
November 9, 2005
7-9:30pm

The Public Workshop was conducted to obtain comments and input from stakeholders and members of the community potentially affected by the development along the SW 20th Avenue corridor and urban village area. The workshop focus was directed toward developing schemes that will drive and point development toward dense, mixed-use projects. Organizational schemes, based on maintaining green space, include the linear park, the central park, the matrix park and the thread park. The Public Workshop provoked discussion regarding the central park and thread park schemes; these comments and reactions are presented on the following page.

Public Workshop

Gainesville residents, public officials and UF students work together to discuss ideas and possibilities for the Urban Village redevelopment project. Creating environments for ideas and discussion promotes a cohesive strategy for ensuring positive outcomes for all involved.



Urban Village : Southwest 20th Avenue Transportation Design Proposal

Central Park Scheme

Leader: Craig Ditman

Participants: Marlie Sanderson, Bruce Delaney, Martha Kohen

- To encourage a walkable urban area, concentrate high density near the parking/transit area. His comments express his knowledge of the area as far as vacant land – what's reasonably achievable.
- Exit out your front door to go to school, the back door to park and play. Don't make people walk out of their house through a 500' park to the transit center.
- Locate the park west of where the study locates it – connect it to the wetlands which act as a passive park.
- To connect park towards Archer, need to condemn and tear down some developed land south of 20th.
- Tear down some of the existing apartments on Windmeadows, north of Butler Plaza (where Carla lives) and turn them into high density.
- Kash-n-Karry site is prime for redevelopment as commercial/retail area
- Find and plot threads – trail roads, 2 lane dirt roads. Use this study to consider development of the grid layout.
- Look at campus master plan – it shows recreation and large scale development NW of the 34th, Hull Road intersection.
- Consider a local bus that serves just the immediate, high density, student village area. Express bus – if the bus was heading to the mall, the last stop would have to be the transit center.
- Keep in mind the increase in feeder roads to this area... Radio Road, Hull Road.
- Parking garages – can be placed in the middle of the block and surrounded with liner buildings to determine the block size. Parking garages lose money – 40-50% less if all the elements are standard.
- The landfill near the transit center is construction debris, it is constructable with pilings.
- The condos near the transit center will be difficult to replace because they're made up of 100+ owners as opposed to apartment complexes that have 1 owner.
- Affordable housing in a multi-income housing area is dependent on subsidies – "New construction has never provided affordable housing in our district."
- Feels that if park doesn't extend towards Butler Plaza, it becomes a square, nature park rather than an urban park.
- Recommends getting a (1) property ownership map and (2) plan of age of construction to know what's old and can be torn down.

Thread Park Scheme

Leaders: Derek Moy and Gabriel Auffant

Participants: Michael Fay, Sharon Hawkee, Martin Gold, Dr. Ruth Steiner

- SW 24th Ave will be curb and gutter two lane divided from SW 34th St to SW 43rd St with two storm water retention basins. One basin will be located on the northwest corner of the intersection of SW 24th Ave and SW 38th Terrace and the other will be located on the west side of the intersection between SW 24th Ave and SW 43rd St.
- The city/county will secure and purchase 150 feet of right of way for the Hull Rd extension. In order for any change of purchase to occur, such as the purchase of a variable width right of way for an undulating linear park, a quarter study will have to be performed on park space impacts.
- Sharon H. - Proposed the density that is being suggested for the Urban Village should be concentrated at University Corners or/and the Depot Ave area, where the area lends itself to a more walk-able community.
- Michael F. - Preferred the density to be located along SW 20th Ave with improved transportation/transit and road networks.
- Michael F. – Suggested the implementation of horizontal speed reducing devices rather than vertical speed reducing devices. Mid-walk islands are points of refuge for pedestrians and visual obstacles for motorists. Obstructed line of sight for motorists. If you can break a long distance view on the road, traffic will travel slower.
- Change road hierarchy so that the majority of personal vehicle travel moves along the new Hull Rd extension and widened lanes of SW 43rd ST. This will allow SW 20th Ave to be a more residential type street with slower speeds and fewer through traffic.





Urban Ecology

One principle emerges so ubiquitously, and in so many and such complex different forms... ...a part which becomes the heart of my argument. This ubiquitous principle is the need of cities for a most intricate and close-grained diversity of uses that give each other constant mutual support, both economically and socially.

Jane Jacobs, The Death and Life of Great American Cities

Contents

Density and Form
Block Sizes
Linear Park
Central Park
Matrix Park
Thread Park
Composite Park
Components Matrix

Urban Ecology

A relatively new area of study, urban ecology considers the systemic nature of relationships between natural, human and constructed systems in an urban environment. The proposed increases in density, transportation modes, parks and hybrids of uses is part of an organized urban ecology — a system of interrelationships. Furthermore, the Hogtown Basin wetland-upland ecotone, a sensitive ecological border, is already surrounded by urban development of low density. Low-density land use does not necessarily mitigate urban encroachment and may be more disturbing to the natural ecology than well organized higher density occupation — fencing, suburban compartmentalization, invasive landscape elements, and domestic animals negatively effect natural wildlife flows and balances. Commerce and efficient transportation are required, in addition to high residential density, for a healthy, sustainable village. Accommodation of the natural, ecological flows, while integrating pressing urbanization is the basis for this proposal for a viable and robust urban village ecology.

Urban Village Studio studies have incorporated analysis of the local natural ecology, models for village land use, and examples of urban forms that have been successful in terms of both pedestrian support and economic viability. The common thread is diversity. Much like a natural ecology is most resistant to collapse when there is a great diversity of flora and fauna, urban systems also should be layered and diverse — socially, economically and programmatically.

Jane Jacobs may have been the first to identify diversity of use as a key to successful cities, city neighborhoods and villages. Subsequently, it has been adopted by new urbanists, smart growth proponents and transit-oriented design advocates across the US - diversity is common in Europe. For our village to succeed, parsed-use zoning must be eliminated. Furthermore, economic zoning, by targeting narrow income groups with price zoned development must also be avoided. Housing for low, median and upper income groups must be provided within close proximity. The area already has a somewhat diverse economic demographic, including students with varied resources, and this asset should be nurtured and expanded rather than eradicated. Policy requirements to expand this diversity will need to be developed and placed on new development and redevelopment applications, suggesting the need for a community redevelopment agency (CRA).

The urban planning schemes proposed in the following section implement these issues through design to provide a healthy, urban ecology by incorporating opportunity for diversity, connectivity, economic activity and the integration of infrastructure and public space. Emerging from the natural ecology, primarily the hydrological condition (stormwater management playing a critical role), the schemes are organized around green spaces or parks that are conceptually studied through four logical organizational schemes — Linear Park, Central Park, Matrix Park and Thread Park. The advantages and difficulties with each of the schemes is discussed and a composite scheme that incorporates the best ideas from each concept scheme is presented as a possible outcome.

Organizing the village around the parks is an important recognition of the role green space plays in Gainesville. In dense urban villages, this space becomes the public yard for children to play, people to exercise, dogs to walk and most importantly to make social connections with neighbors. It also allows businesses such as restaurants and cafes to expand service beyond the capacity of the building — lunching in the park. Within a dense, built environment, natural places of relief are necessary and desired by inhabitants. The park spaces must be designed, planned spaces or outdoor rooms, within an area. They must not evolve or emerge from leftover space. Park design is important as too much park can diffuse activity and become lost space. Furthermore, careful integration of the park design and proposed adjacent uses is critical to match the scale and park amenity with the built environment.

University of Florida Task Force on Sustainability,
2002 recommendations:

In collaboration with the City of Gainesville, increase the Regional Transit System (RTS) system to accommodate more locations and service times to move faculty and staff to and from the UF campus.

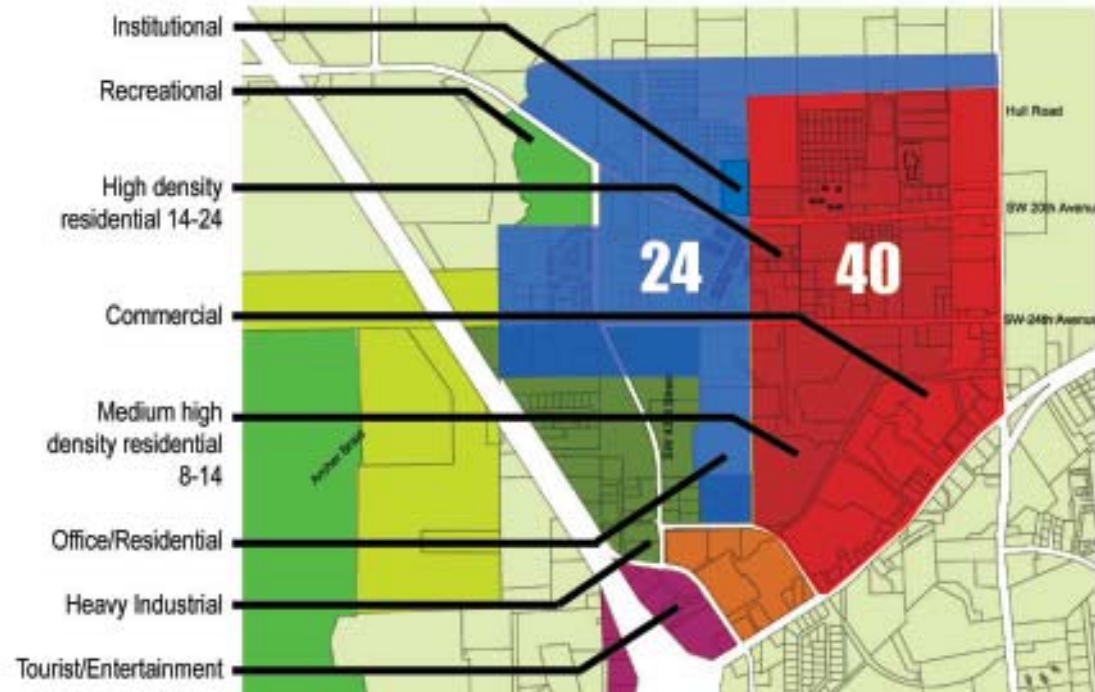
Increase the number and quality of bikeways around the campus and improve the bicycling infrastructure, to include bicycle parking and building facilities for bicyclists.

In cooperation with the City of Gainesville, increase the area of car-free and pedestrian friendly zones on campus and near campus.

Density and Form

Set minimum density 40gdua
[mixed use]

Set existing high density
as a minimum 24gdua
[limited mixed use]

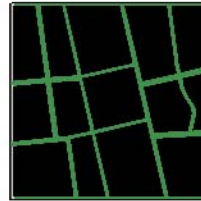


2001-2020 Alachua County Comprehensive Plan- Future Land Use
-Special Study Area (density in gross units per acre)

The Alachua County Comprehensive Plan - Future Land Use - Special Study Area (2001-2020) designates zoned uses as noted in the diagram on the facing page. Interestingly, there area a great variety of uses within the general area that if mixed, rather than parsed, would support a more vibrant and rich urban context. Urban Village Studio proposes two basic land use designations for the redevelopment area. (1) Mixed use with a minimum density of 40 residential units per acre. This would include restaurant, office, retail, lounge, service, café, gallery, grocery, discount store, assisted living, elementary school, institutional, etc. It is important that a variety of programs are available to serve all demographics throughout the day and evening. (2) Limited mixed use with 24 residential units per acre minimum. This might include home office, office, some service, elementary school and café. Late night and intense commercial establishments would not be permitted in this lower density zone.

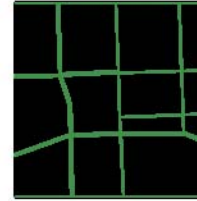
This land use change could be effected through Alachua County's land use policy. However, it may be more appropriate for the area to be annexed into the City of Gainesville which is better suited for urban governance and has existing land use designations that would support the needs and requirements of an urban village. In either case, some form of redevelopment agency should be established to coordinate with developers, local government and residents to steer resources and focus projects toward an appropriate diversity of uses. Additionally, this agency could coordinate development and infrastructure to capture federal and state grants that support sustainable design.

Block Form



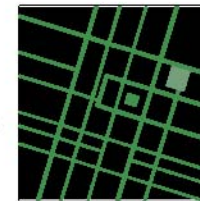
Blocks:
+/- 400'x400'

St. Augustine, Florida



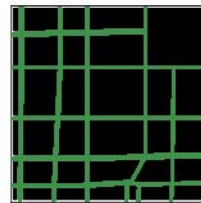
Blocks:
NS EW
310' x 450'
265' x 450'
418' x 450' super block

Orlando, Florida



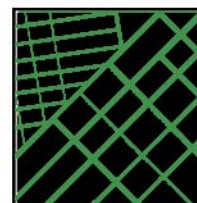
Blocks:
NS EW
206' x 321'
72' x 212'
213' x 317'

Savannah, Georgia



Blocks:
NS EW
350' x 400'

Gainesville, Florida
(downtown)



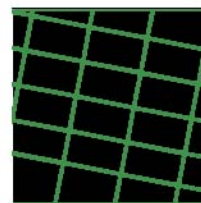
Blocks:
NS EW
132' x 436'
279' x 421'
846' x 161'
(Yerba Buena)

San Francisco, California



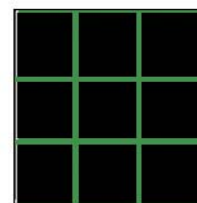
Blocks:
NS EW
630' x 430'

San Francisco, California
(South Park)



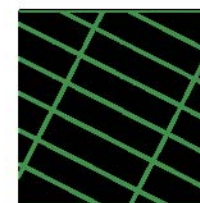
Blocks:
NS EW
400' x 400'
237' x 407' urban area

Philadelphia, Pennsylvania



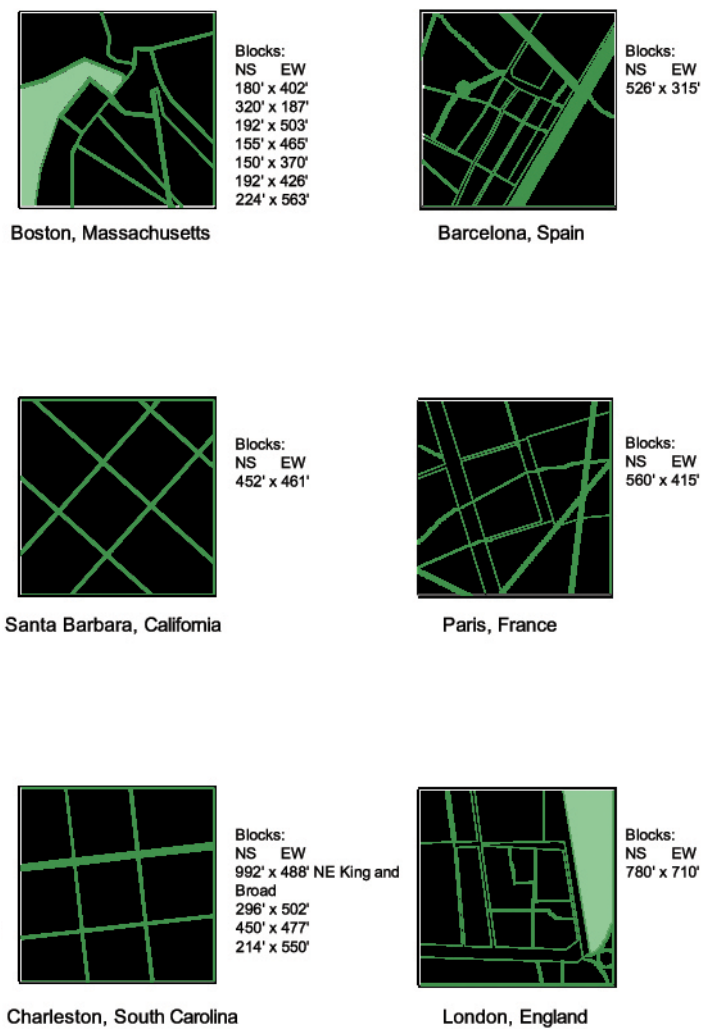
Blocks:
NS EW
420' x 430'

Chicago, Illinois



Blocks:
NS EW
205' x 800' midtown
221' x 833'
235' x 833' west side
231' x 435' WTC fabric

Manhattan, New York



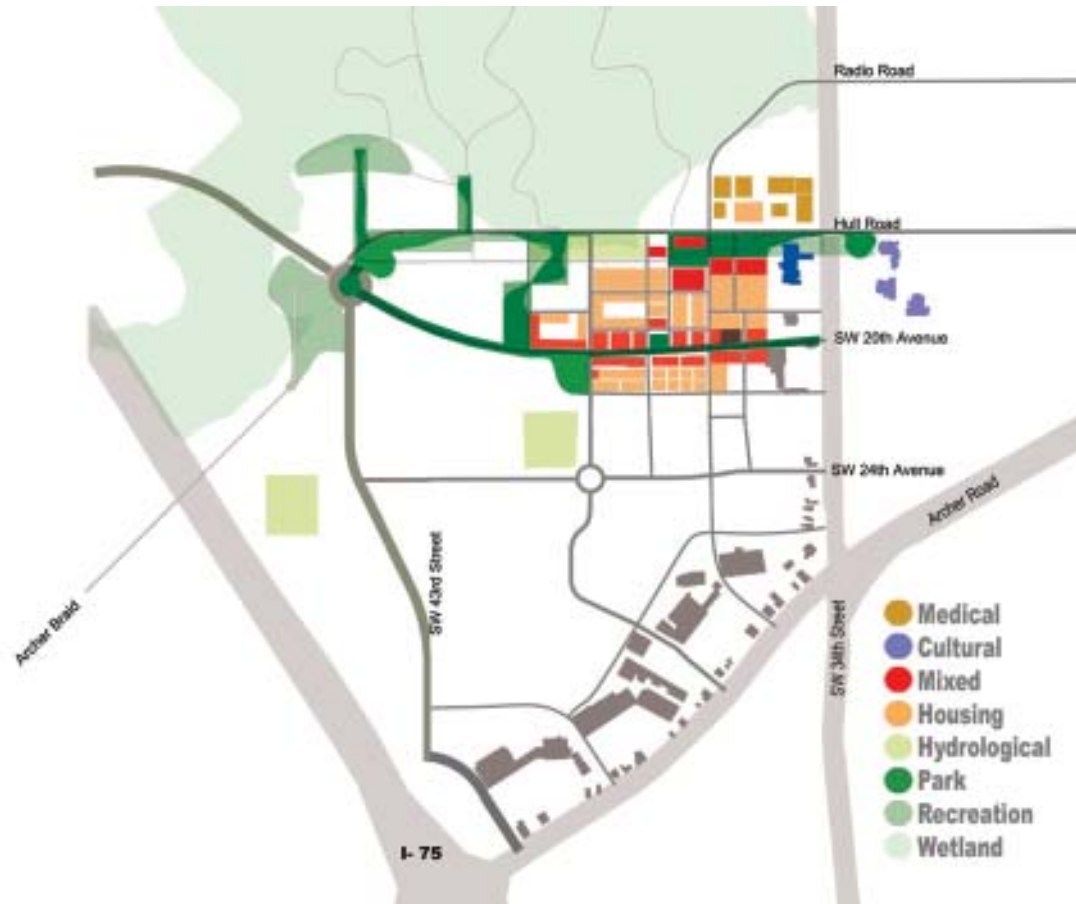
A survey of 15 different urban districts in cities around the United States and Europe was conducted to evaluate the form and size of a typical urban block. Based on this study and associated research, blocks that do not exceed 400' x 400' are recommended. In Manhattan, blocks are approximately 200' x 800' encompassing the same area (just over 3.5 acres), but are less supportive socially, less supportive of alternate transit routes and give fewer corner conditions which are the best commercial locations. Of course, the smaller the grid, the more opportunity for alternate auto routes which can reduce congestion at any single location. More intersections also promote slower auto speeds. With this fine grid, 'nets' bicycle strategies (as defined in the Alachua Countywide Bicycle Master Plan Addendum) that mix autos and cycles on the streets would be appropriate.

Considering the existing general parcel grid of 650' wide large parcels (dimension running east-west), blocks of 270' x 270' or blocks of 650' x 270' would work with roads centered on the property borders (60' row) and/or centers (40' row) generally. These dimensions are consistent with supporting a rich urban village character. Super blocks of 650' x 650' or larger should be avoided.

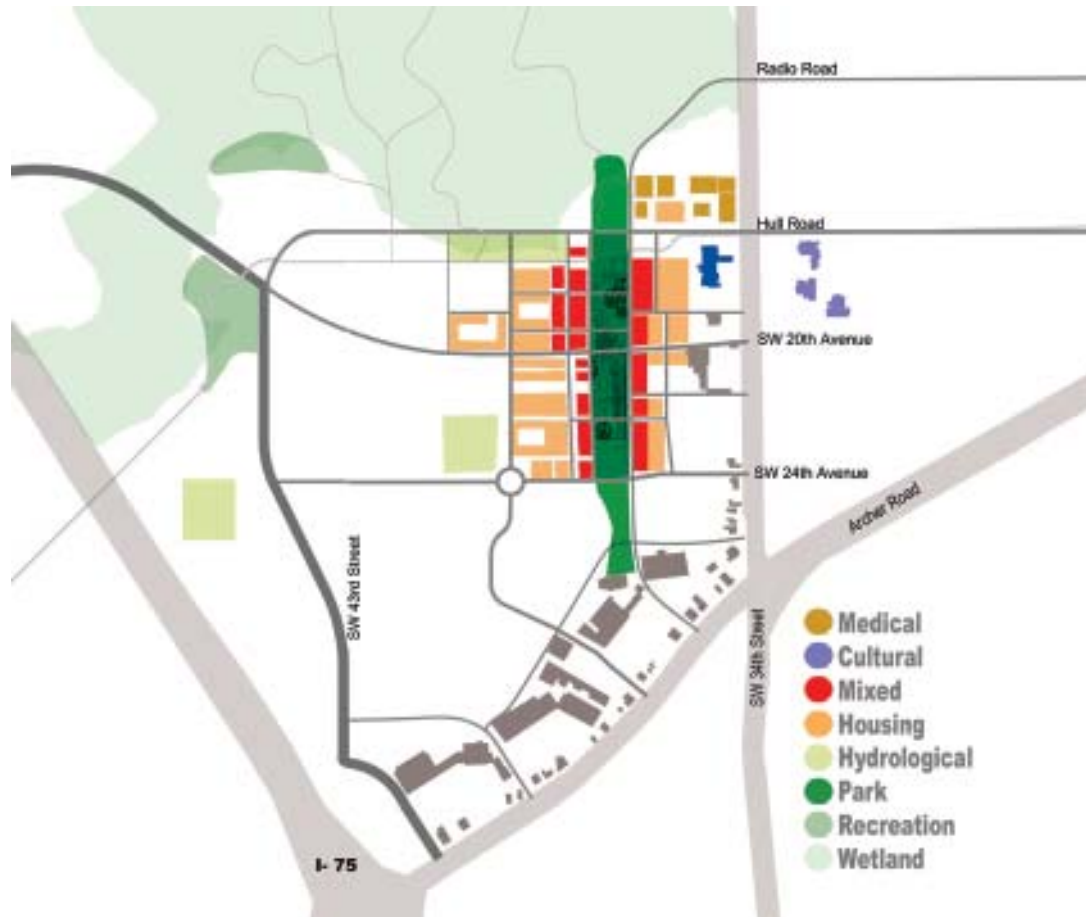
Linear Park

The linear park concept, adapted from the original Hull Road extension proposal, acts as a buffer between the urban village development and the Hogtown Wetlands in critical locations. Although the path of the proposed Hull Road has been revised to avoid adding a bridge across Hogtown Creek, the linear park concept remains with adaptations and modifications to allow more flexibility in terms of land purchase and interfacing with adjacent properties. Additionally, a smaller scale boulevard, as a linear park, is included as one strategy for the redesign of SW 20th Avenue, as illustrated in the previous section *Transit Boulevard*.

Rather than a continuous 150' wide linear park running the length of the Hull Road extension, Urban Village Studio proposes a more strategic deployment of varied park modules that are linked by the Hull Road extension infrastructure — like a string of emeralds. This allows for donations of land for park areas (perhaps larger tracts) and smaller purchases of right-of-way on lands with higher development potential (and thus higher costs). This can accommodate parks that buffer the wetland and small 'pocket parks' that might be playgrounds or dog-walks for nearby residents. Cycle and pedestrian infrastructure, as part of the Archer Braid, would extend through the system and link to paths in the wetland area connecting to Green Acre Park to the north. Enough right-of-way width would be maintained for a future road or transit lane expansion. The linear park would link SW 34th Street to the intersection at SW 43rd Street and SW 20th Avenue across from the existing Forest Park providing strong ecological linkages.



Central Park



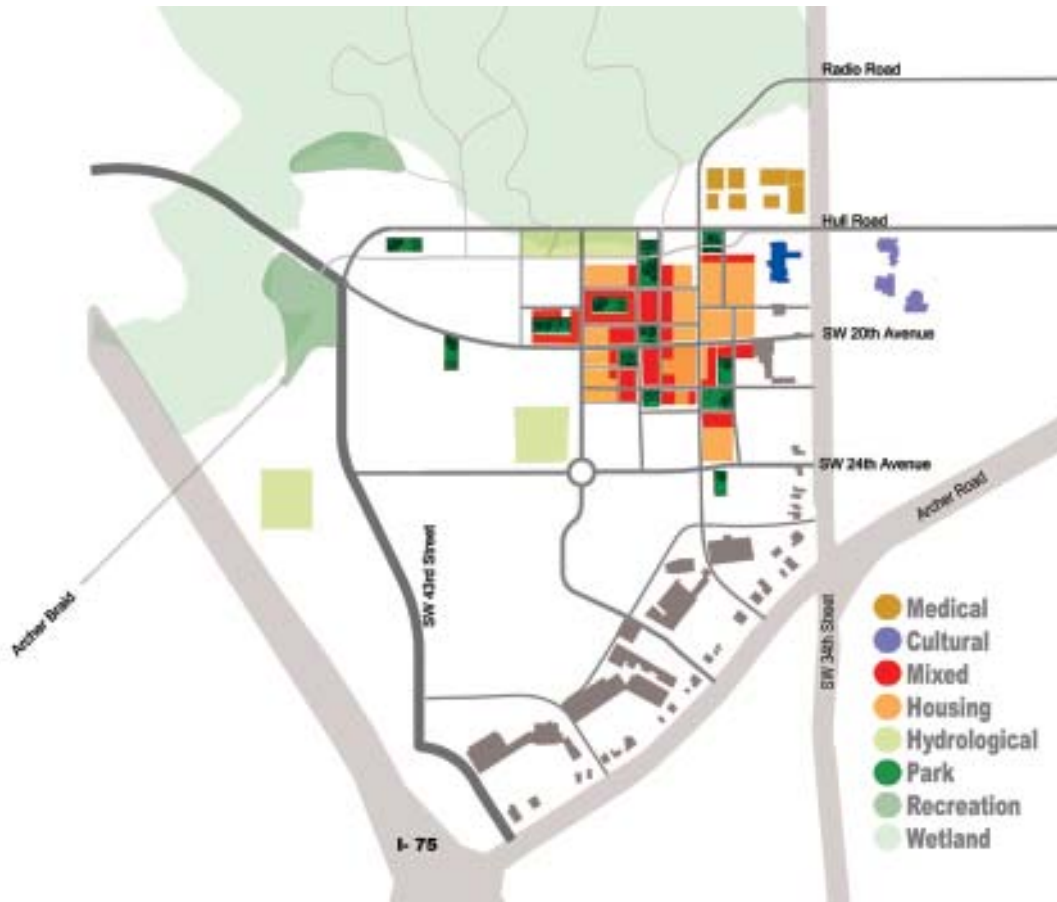
Central park, although requiring public reclamation of developed land, would provide a strong organizational spine linking the new village to the existing Butler Plaza infrastructure through the cinema that currently exists. As an arts district, central park provides a spatial, pedestrian scale civic linkage between the UF, arts and medical facilities and the commercial areas to the south. High density housing (up to 100 units per acre) and mixed uses would be located along the park with lower density housing blocks and offices further from the park. The north end of the park would connect to the Hogtown Creek nature preserve as a potential trail head for cycling and hiking. A 'green' parking structure could be located there for weekend recreation and commuting from the transit hub (UF infrastructure) during the week. Program elements would be included in the park. Careful study of the size and design of the park is required to ensure active relationships within the park and between the park and surroundings.

The Radio Road extension concept is another important transportation component of the park schemes. As a border to the central park, it becomes a major transportation linkage between campus and Butler Plaza (students to shopping) while supporting a pedestrian scale commercial street, with on-street parking. Linked to Archer Road, Hull Road and SW 24th Ave, this component would provide a substantial increase in grid connectivity, reduce a significant amount of local auto traffic on SW 34th Street, which is currently over capacity, and will support more commercial activity in the area.

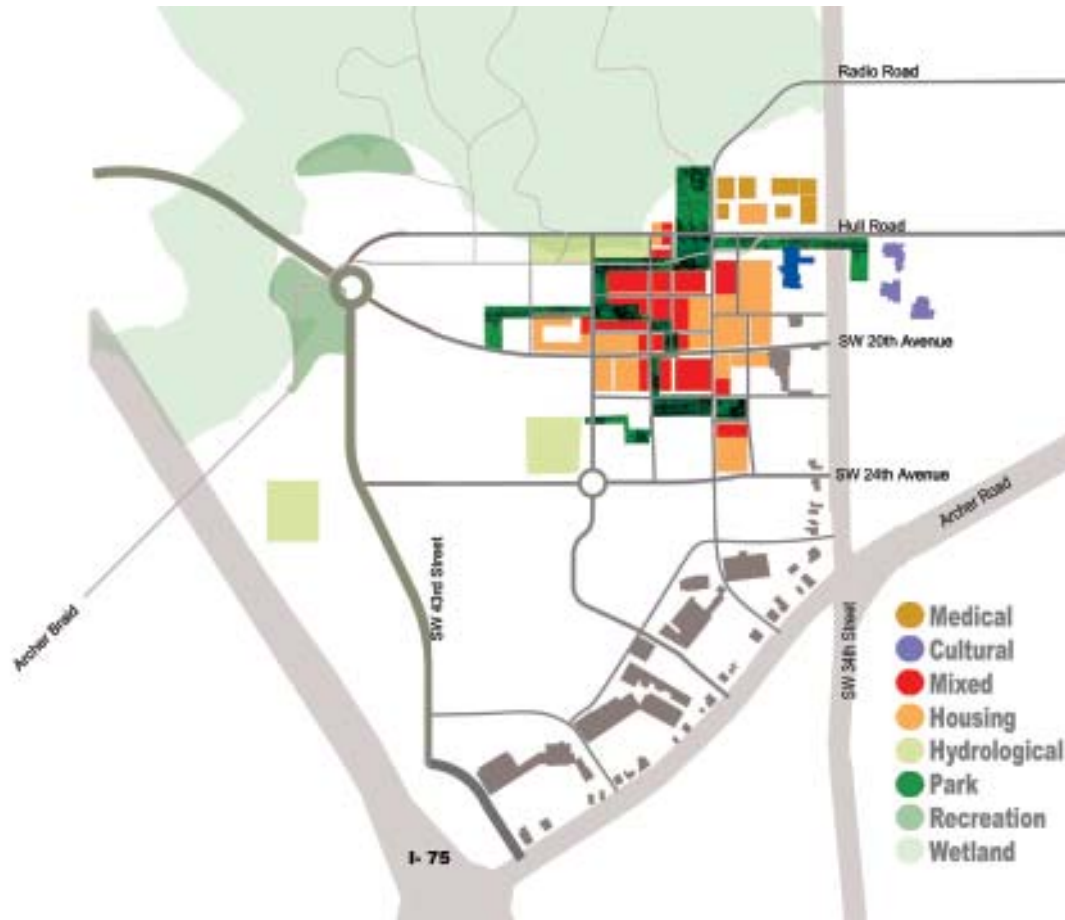
Matrix Park

Multiple small and medium size parks designed specifically to support the adjacent land use and storm water requirements, as decentralized retention and detention systems, is another feasible approach to organizing the village. In this case, the topography and hydrology suggest where the parks would be located and then land use is mixed and concentrated around a core group of parks. Other parks might be specialized for residential/office areas, act as fitness parks or might be linked to an elementary school. Parks could house major transit stops with pavilions that include refreshments, news stand, cycle parking/repair. Matrix parks would likely develop individual social character and will become important points of reference, as amenities within the larger village. A key organizational benefit is that these parks can emerge as needed, working as a system, and do not necessarily have to be geographically organized.

Some of the connectivity of the natural areas is limited, but an ecological benefit of this compartmentalized approach is to limit the potential for domesticated animals to encroach upon the natural areas. As a nonhierarchical organizational system, it allows a natural expansion and adaptation while maintaining the organizational logic. Therefore, growth can occur without the limits of a predetermined form, occurring when and where the market necessitates. This provides a more polycentric pedestrian system.



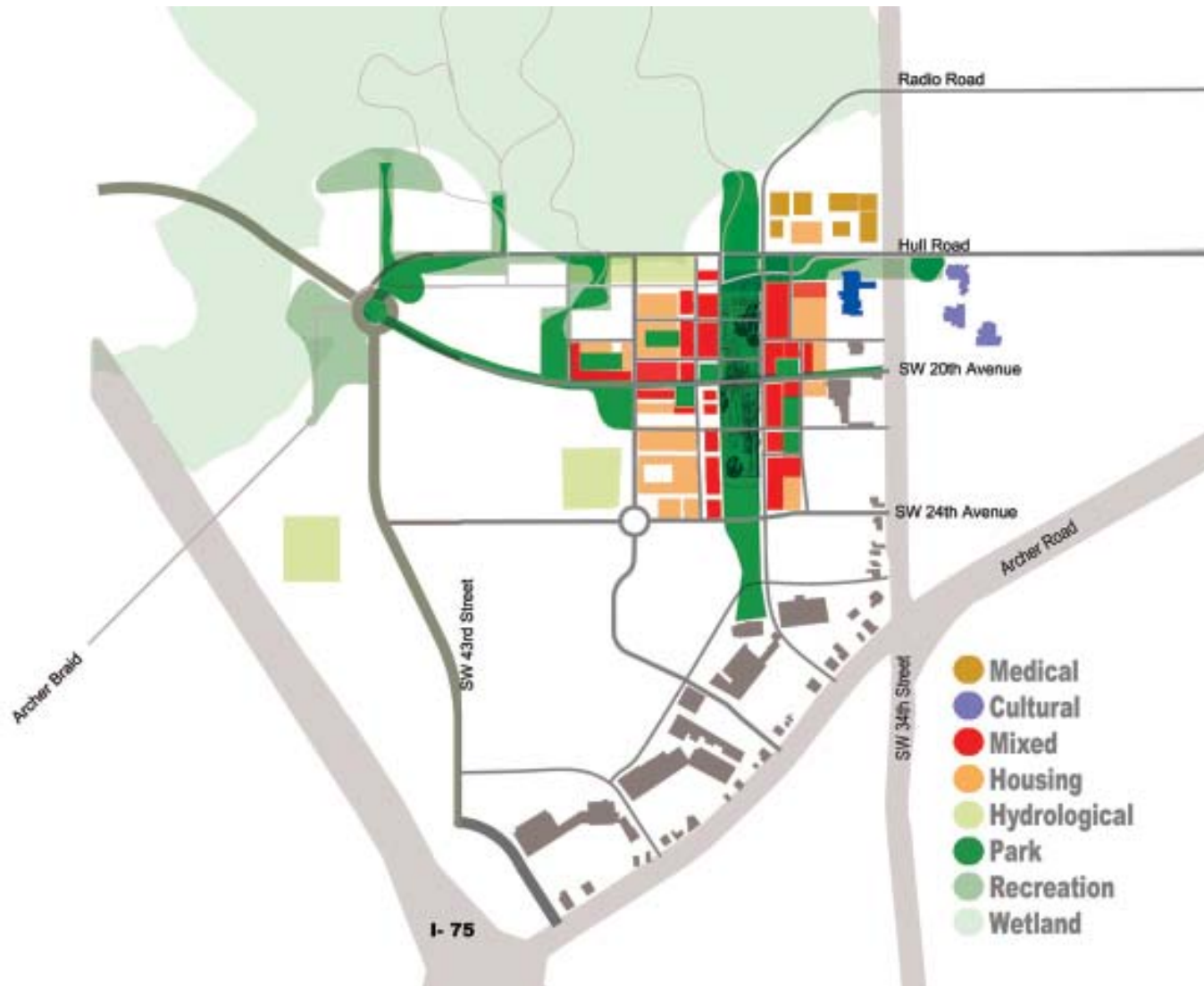
Thread Park



Thread park can be understood as a hybrid between the Matrix Park and the Linear Park. It has the advantages of both with ecological connectivity, promoting natural flora and fauna flows, while providing a nonhierarchical expandable organization. The location and connections are suggested by the hydrological flows and natural recharge areas, through the perforated tray concept. Although not as flexible as the Matrix Park due to the connectivity requirements, there is room for variation of location and scale of the parks. It is vital that organizational connectivity is maintained.

A great benefit of this scheme is the potential for a layered transportation network. In addition to the street grid, a civic promenade with commerce, there could be a secondary nature, recreation and fitness system of paths for cyclists, joggers, roller-bladers, elderly and children. Linked to the Archer Braid and the future Hogtown Greenway, this organizational strategy provides off-road linkages to much of Gainesville.

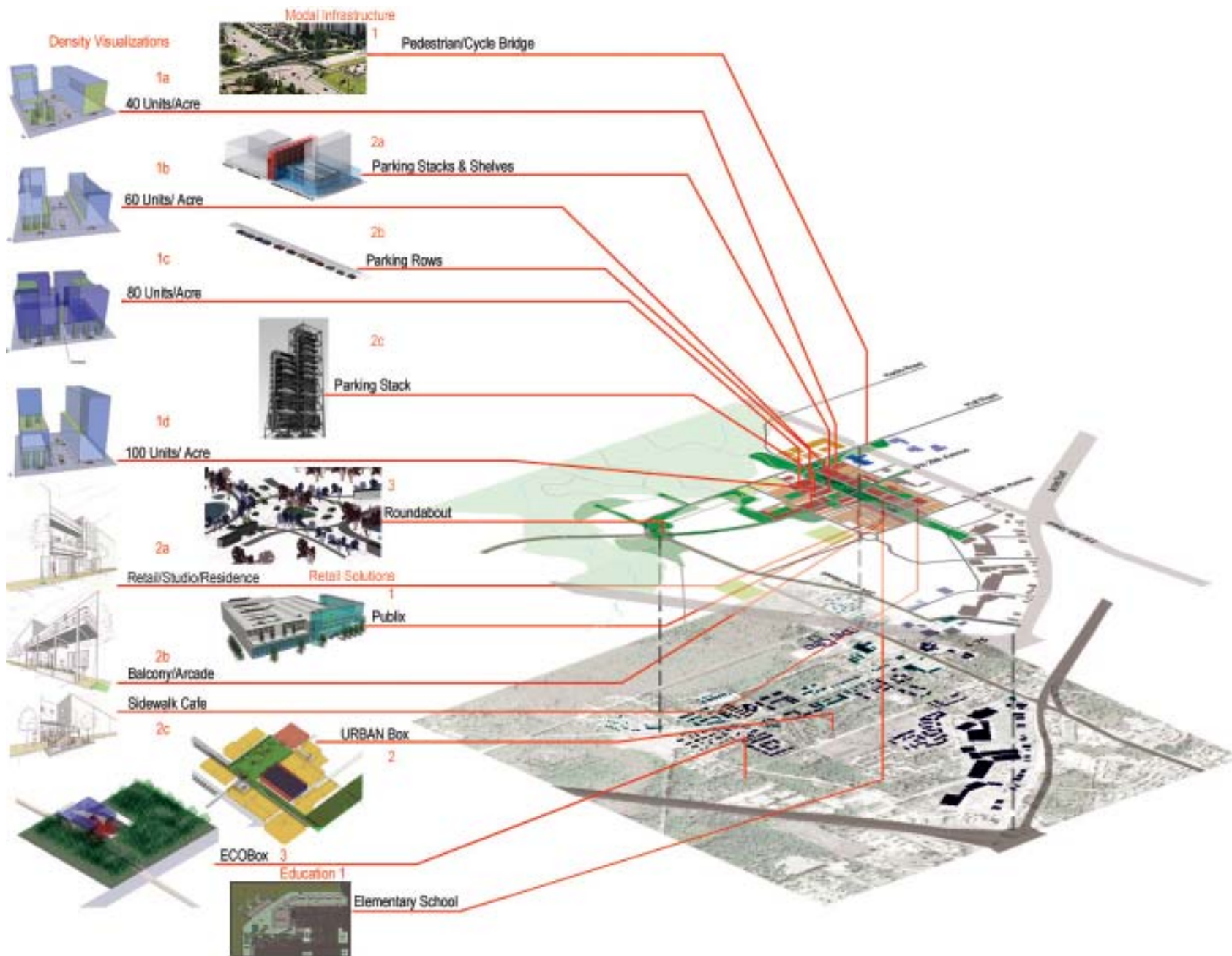
Composite Park



The Urban Village (SoHo - South of Hogtown Creek) will be a coordinated effort between the community's citizens, various government agencies, commercial enterprises and private developers. A composite outcome that adopts the best advantages of the park schemes presented would provide the greatest flexibility in terms of land use needs, market trends, development opportunities and civic amenities. The composite scheme developed here demonstrates an interwoven organizational system. If one or two threads were to be removed from the system, the weft and warp of the fabric would still be rich and varied holding the system together. Mixing the organizational strategies allows a core area to develop supporting commerce, while providing an adaptable strategy for future expansion, which will be needed as the population increases and the village grows.

The composite scheme illustrated meets important strategic principles identified by the Urban Village Studio. Pedestrian and civic connectivity are established between the Urban Village and regional attractions — arts infrastructure, medical center, existing commercial area (Butler Plaza and cinema). A concentration of high density, mixed-use activities are provided at key transportation nodes — where SW 20th Avenue, SW 24th Avenue and the new Radio Road extension meet. Integrating park typologies in parallel with mixed-use and mixed demographic housing, provides a depth of diversity to be resistant to economic fluctuations. Transit stops and a transit hub are linked with expanded parking (garages), green space and regional destinations (medical center, arts complex, conference center and big-box retail). Existing and planned stormwater areas are incorporated as important public green space in addition to its infrastructural benefits. Careful consideration of park scale and location is required to avoid diffusion of civic activity and the expansion of distances beyond pedestrian comfort. Cycle paths and pedestrian infrastructure are incorporated as integral to the transportation design and as both on- and off-road paths that connect through the Urban Village and to the natural ecological areas for commuting, recreation and 'eyes on the ecology'.

Urban Village Studio proposes the Composite Park as a guide for both community debate and for developmental planning. Flexibility for stakeholder refinement, developer modification and project evolution through market forces are necessary elements of proposal utilization. Specific detail will evolve through the process of implementing and vetting individual development proposals for parcels in the Urban Village that incorporate (or do not) the strategies included in this report — a process requiring the cooperation of municipal government, neighborhood citizens and developers. Based on the MTPo's transportation 'Concept M', this scheme expands grid connectivity, provides alternate routes to SW 20th Avenue, SW 34th Street and Archer Road, provides transit infrastructure and advances bicycle and pedestrian commuting as an automobile alternative through community design and safe infrastructure.



Urban Village Components Matrix : Transportation, Land Use and Growth

As of early 2006, nine years after the initiation of the ‘Student Village Concept’, new housing projects are under construction based on the low density (14 to 24 units per acre), door-to-auto-to-door model with expansive parking lots, little pedestrian incentive and no spatial connection between housing and the street. Given present land values, expected growth, and UF expansion into the area, this is a significant underutilization of this prime land. When touring the area, especially with the newer residential construction, it may be difficult to imagine a completely different vibrant pedestrian dominated urban context. Urban Village Studio has developed a Components Matrix to aide in that vision and to illustrate the flexibility in which key components are organized to form a cohesive village.

The Components Matrix presents vignette possibilities for change that integrate transportation elements, housing typologies, commercial enterprises, sustainable strategies and alternative cycle-pedestrian infrastructure to promote physical activity, reduce automobile use and increase economic diversity. Rather than define a future ‘scheme’ that would surely change through the many processes, market and development forces involved, Urban Village Studio proposes a set of conditions, that may accrue over time, engaged by many different land owners and developers leading to a coherent neighborhood character and vitality. The Components Matrix includes key components with design strategies that will support a dense urban village with a design sensibility toward pedestrians, grid connectivity and sustainability.

Offering opportunities for commercial anchors such as Publix and Wal-Mart integrated with residential units may seem controversial — as they are usually encountered through an expansive parking lot at a strip-mall scale. However, residents need goods and services; flexible jobs at managerial and staff levels; and economic opportunities for secondary businesses that support yet do not directly compete with chain stores. An important part of the latter is that it is more convenient to walk between business rather than to drive.

The following vignettes illustrate, in more detail, the components that are ‘plugged in’ to the composite village infrastructure and the benefits of their adjacency.

- Components**
- Housing Typologies
 - Pedestrian-Cycle Connections
 - Parking Typologies
 - Traffic Ovoid
 - Grocery
 - Urban Big Box
 - LEED - Neighborhood Design

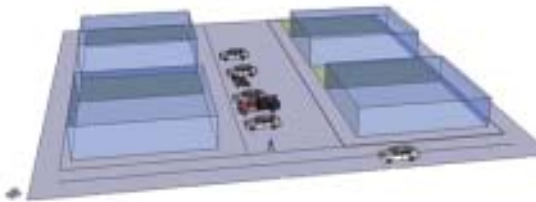
Housing Typologies

The Urban Village will rely on greatly increased residential density. Transit strategies will be more effective, businesses will have greater potential for success and automobile use will be unnecessary. Over 75,000 auto trips per day were generated by the University of Florida according to a University of Florida Sustainability Task Force Final Report (April, 2002). These recommendations followed:

- *Conserve areas by designing the University's built environment into a denser urbanized center.*
- *In cooperation with the City of Gainesville, increase the area of car-free and pedestrian friendly zones on campus and near campus.*

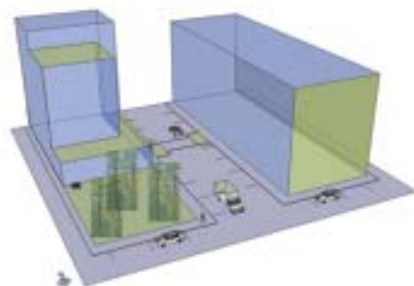
A minimum of 40 units per acre is recommended for the Urban Village core mixed-use areas. With a height limit of approximately 100' (up to 8-story buildings), densities of 100 units per acre could be achieved and would be appropriate for designated sites.

Density by itself will not support a successful village. For example, a monoculture of students would only support a limited range of businesses, would dramatically decrease its population during summers and breaks, and would not have a long-term interest in the community. Mixing student populations with a variety of other demographics is needed. Housing for young professionals, medical interns, artists, shop owners, retail staff, medical staff, municipal employees, UF faculty and administrators and retirees would provide a rich diversity that could support multiple business and service types. Families, couples and singles should have appropriate housing opportunities in the village — allowing them to 'live' at various life stages in the same neighborhood if they chose to do so. According a US Census study, projected growth in housing demand to 2010 will be primarily for families with no children (16%) and non-family households (14%) with a demand reduction for families with children under age 18 (-3%). An active and regenerative housing mix would avoid the degradation of 'student' areas that has historically occurred both on SW 20th Avenue, SW 16th Avenue and other narrow demographic neighborhoods around the country. Mixed demographic groups promote social health through community connections, layers economic opportunities, is resistant to market fluctuations and reduces crime through civic engagement.

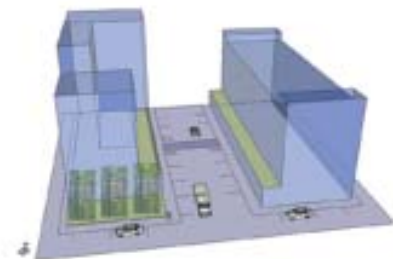


Current SW 20th Ave area densities:
10-25 units per acre

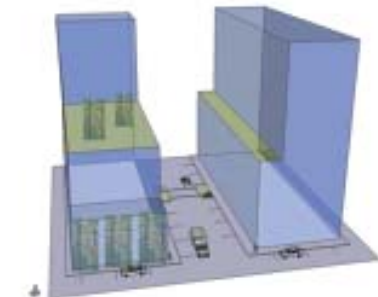
Prototypes include zero lot line row house homes (single family), apartment housing, courtyard homes, and live-work mixed-use units. Hotel-apartment uses could be developed to expand the capacity of the conference center while providing turn-key temporary housing for visiting professors, visiting artists, Fulbright scholars and others. Cluster and co-housing models could also be developed in lower density areas (30 units per acre) around the village to support a range of income groups and provide family housing alternatives.



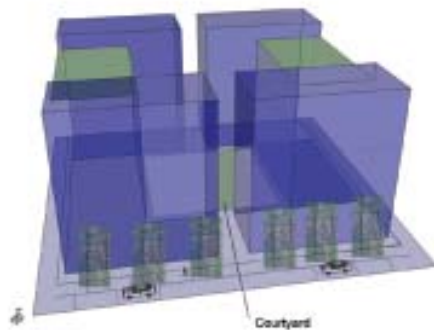
50 units per acre



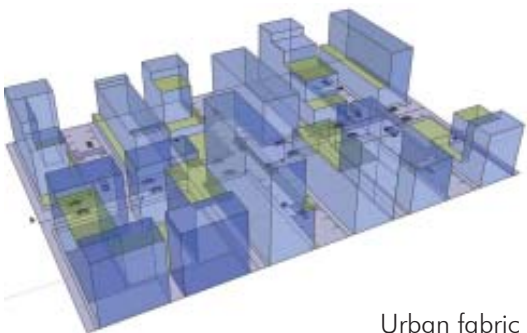
75 units per acre



90 units per acre



120 units per acre



Urban fabric
Multi-block development
75 units/acre



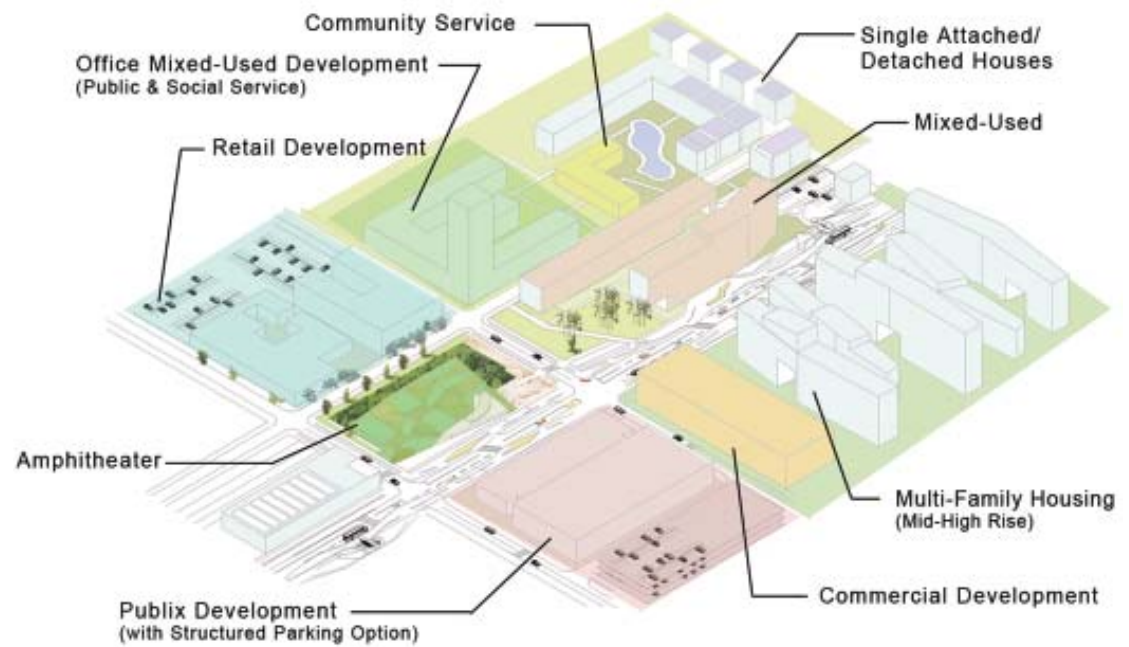
Stepped back residential above retail



Restaurant/Cafe interrupting sidewalk



Residential/Office balcony serving as arcade for sidewalk



Diagrammatic masterplan which illustrates mixed-use development and dynamic relationships between different building types.

This Masterplan illustrates issues of connectivity vital to the successful implementation of an urban village. The use of green space, in large and small scales, allows public and private spaces to connect and create multi-use spaces. Mixed-use buildings offer residents of the area amenities and conveniences for a limited amount of vehicular traffic. Water becomes a feature, containing water onsite while also offering opportunities for design elements. The hardscape slices through the man-made topography to provide connectivity to the adjacent green sites.

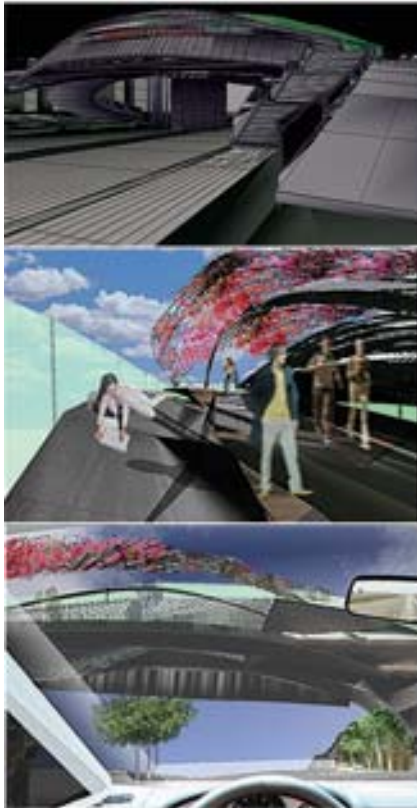
UF Graduate Student
Derek Moy



This development of a masterplan of the SW 20th village area illustrates the densities and possibilities for growth and expansion.



Pedestrian-Cycle Bridge over SW 20th Avenue



Pedestrian-Cycle Connections

Providing the linkages needed for seamless pedestrian and cycle connection to nearby amenities and to provide legitimate cycle commuting routes will require grade separated crossings at key locations — SW 34th Street and Hull Road, I-75 past Forest Park, and perhaps SW 20th Avenue at Forest Park. Good design is the key to success. Many examples of excellent, highly utilized grade separated crossings exist in the US and Europe. However, the poorly designed are much more abundant and under-used (our underpass at SW 13th Street and Norman Hall for example).

The visioning proposals shown here show potentials of integrating program and transit to layer uses and tap multiple funding sources. The SW 34th Street overpass proposal provides connectivity between the medical center and the arts district over the soon-to-be busy Hull Road extension. Integrated with the already in-place park-like corners, the overpass itself becomes an interesting destination — rather than something to be tolerated as a means to cross the road. The project extends the garden up and over the auto lanes, which enhances the street condition, as well. The spatial compression at the street may even subliminally slow traffic as it approaches the intersection (a needed component as many drivers accelerate through yellow lights here).

A photovoltaic paneled overpass is proposed to span SW 20th Avenue near Forest Park to provide connectivity and electric power (approximately 20,000 watts on a sunny day). As part of a network of under/overpasses, including a bridge over I-75, cyclists could have an uninterrupted commute — not only from the Urban Village but from Haile Plantation to the UF campus (5 miles center to center). At this outside distance, it would be a 20 minute ride averaging 15 mph on the bike. Automobiles, when including stops, usually only average about 13 to 17 miles per hour in this context. A network that privileges cycles, by providing short-cut and uninterrupted dedicated paths will promote the most cycle use and the highest level of cyclist safety.

Pedestrian-Cycle Bridge proposal over SW 34th Street at the Hull Road extension



A vital component of the Gainesville, Florida high density matrix masterplan is to design a connection between two main districts: the fine arts district consisting of an art gallery and performance center and the convention district consisting of a hotel and meeting spaces. This connectivity between the two districts is strongly enforced to promote the use of healthy modes of transportation and simultaneously provide places of rest that focus on the surrounding environment.

UF Graduate Student
Derek Moy



Interstate 75 Bridge Proposal

Parking Typologies : Stack, Shelf and Row



Existing asphalt parking lots are typically oversized, exacerbating rapid stormwater run-off.

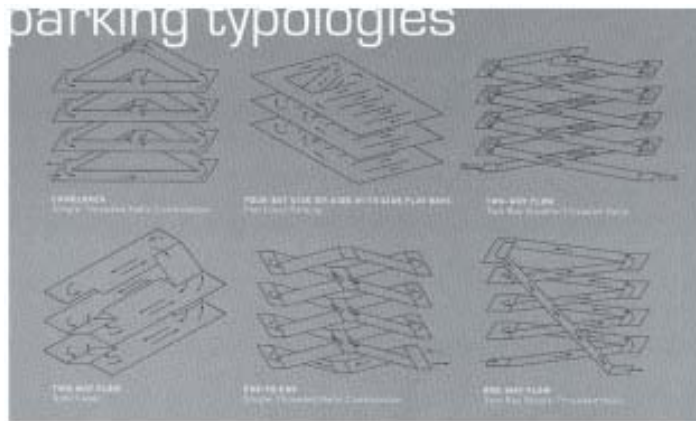


Commercial lots often are underutilized. (Fall - 5:00pm)

In consideration of the strong links between housing density, parking supply, location, car use and the impacts on residential quality, parking strategies require a design based rather than standards-led approach. With an emphasis on flexibility — within reasonable limits — to support density, low speeds and a pedestrian street, a range of parking strategies are proposed. Given complete and diverse neighborhood services, with a reasonably good public transportation network and cycling options, automobile reliance can be eliminated — giving citizens the *choice of*, rather than the *need for* auto ownership.

To support Urban Village density recommendations, automobile parking allocations should be approximately 1 to 1.5 spaces per dwelling unit, based on housing type. Auto parking should, in most cases, be financially decoupled from the residential unit. In other words, residents would purchase (or rent) parking independently of the purchase or rent of a unit in the Village. This provides a financial incentive, in addition to the neighborhood design to be a car free inhabitant. It also promotes commuter leasing of spaces — drive to the village, park, shop, drop of children, etcetera and then use transit to get to the 'office'. This also frees the space in the evenings. These market strategies would advance limited auto use while optimizing occupancy of the spaces provided. This later need may seem counter-intuitive but the current parking lots in the area are only minimally used during most of the day and year.

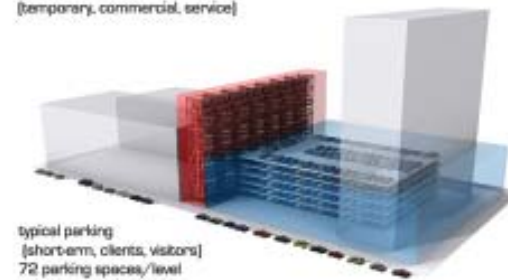
Stack, shelf and row strategies are presented as user specific parking alternatives. *Stack* parking, in high space-efficient mechanical garages could be provided for residents requiring limited auto access. Most students, faculty and staff of the University of Florida that use their autos on a limited basis are effectively warehousing them most of the time. Automatic retrieval by telephone code could have the car ready upon arrival. *Shelf* parking utilizes standard multi-level garages in mid-block locations for a mix of residents (high auto use) and short to medium term retail or event parking. Shelves provide the flexibility of responding to changes or trends in parking use over time as it may fluctuate between more residential and commercial use over time and could be allocated to time periods as needed. *Row* parking is a core village strategy to populate the street, act as a buffer between travel lanes and commercial walks and provide easy auto access to retail and other commercial enterprises. Operating at the micro to short term (15 min to 1 hour), during business hours, the change of autos would keep speeds down and provide a viable option for quick purchases or lunches. Restrictions could be modified throughout the day and week to optimize use for different business activity concentrations through the day.



parking wall (long term, residents, workers)
56 parking spaces/tower
7 towers @ 600 sq. ft.
382 parking spaces @ 4,200 sq. ft.



on-street parking
(temporary, commercial, service)



typical parking
(short-term, clients, visitors)
72 parking spaces/level
6 levels @ 26,000 sq. ft.

The typology of the parking garage is interesting and challenging. The number of possibilities for linkage between multiple programs is great. By allowing new programs such as housing, retail & recreation, the definition of the parking typology is transformed and redefined. How can a parking garage become part of the field condition? How can it shape, complement, and maintain the new urban fabric?

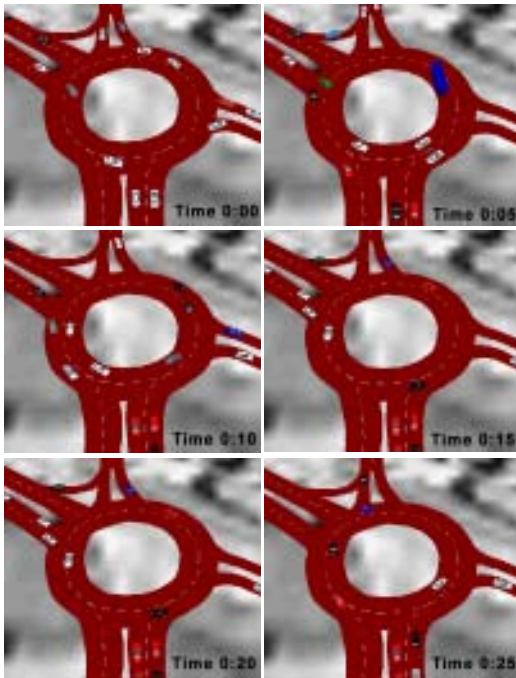
By introducing the concept of the parking wall or integrated garages, residents of the area can leave their car in a parking tower system that reduces the necessary area while increasing the number of parking spaces. This system is also ideal for people that do not frequently use their cars (students, people that live/work in the area). By incorporating this parking wall in the block, the land area can be maximized for other types of development (office, commercial, residential).

UF Graduate Student
Armando Nazario

Traffic Ovoid : SW 20th Avenue & SW 43rd Street Intersection



Roundabouts as solutions to the congestion of signalized intersections have a long and successful history in Europe and are gaining acceptance in the U.S. with more installations and public education on their use and strict emergency protocols being widely disseminated. Through design, 75% fewer conflict points exist in a roundabout compared to a typical signalized intersection. In a detailed study of roundabouts replacing signalized intersections by US Department of Transportation, they found a 90% reduction in accident fatalities, 76% reduction in injury crashes, and a 30% - 40% reduction in pedestrian crashes. The vehicular mortality rate is highest for 18 to 24 year-olds — the largest single population group in Gainesville — suggesting that any improvement in vehicular mortality could have significant live-saving implications locally.



Urban Village Studio, in conjunction with the Corradino Group, studied options for a traffic circle at this important intersection as an alternative to the proposed signalized intersection. The design focuses on the integration of cycle and pedestrians, stormwater ecology and utilizing the spatial form to optimize motorist entry, pedestrian-cycle interface and exit through the most likely intersection connectors — favoring the most traveled routes in a vascular fashion. Hence, a traffic 'ovoid' rather than a traffic circle.

The Corradino Group utilized state-of-the-art micro-simulation traffic modeling Vissim software to analyze the interaction of motorists at the 'ovoid' based on the best traffic estimates available. Utilizing year 2025 traffic projections (available from detailed studies of 13 different village arterial option studies), in year 2025 the traffic ovoid would provide a level of service (LOS) A — the highest rating possible. At peak periods, such as afternoon rush hour, with the highest estimated traffic volume, queing of approximately 12 seconds occasionally occurred — basically only a slowing of traffic. This is significantly less than on typical traffic signal cycle. Not only does the ovoid provide much better flow than a signalized intersection, it naturally calms traffic by design — providing added pedestrian/cyclist safety.

Real-Time Roundabout Study

Vision traffic study of the intersection at SW 20th Avenue and SW 43rd St, analyzing the effects of a roundabout on traffic flow.

[Corradino Group, 2005]



These studies suggest the implementation of a roundabout at the intersection of 43rd Street and SW 20th Avenue. The advantages of this method are a better flow of traffic and pedestrian-friendly intersection. The storm water system is derived of clusters of "sponges" that are positioned on either side of the street, allowing for the collection of water run-off. The foliage mimics the design through strategic positioning and use of scale, giving a sense of hierarchy to the project.

UF Graduate Student
John Ellis



Introducing roundabouts within the Urban Village along SW 20th Avenue allows for a scale shift to occur within the space of the street. This helps to pronounce the change of program from merely moving in the car down a street to moving through a space while occupying the temporal place of the car. The roundabout facilitates this movement by calming traffic thus providing a more subtle experience throughout the village as either a passenger in a vehicle or passerby on the street.

UF Graduate Student
Bryan Green

Grocery

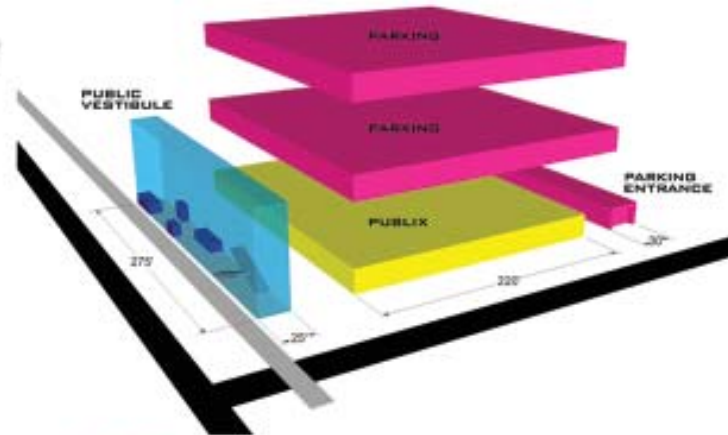
A viable neighborhood requires a quality market or grocery. Optimizing consumer lifestyles, newer stores now mix 'super market' scale with the fresh foods associated with smaller groceries — the market wrapping the aisles prototype. The only thing typically missing is the pedestrian proximity and connectivity to a neighborhood. Even when this proximity is available, it is usually in a back-to-back situation and pedestrians are relegated to longer than needed walks to get into the store. The current Kash-n-Karry super market at SW 20th Avenue suffers from this lack of pedestrian connectivity.

Neighborhood groceries consisting of small scale enterprises of approximately 5000 square feet would be ideal allowing specific demographic targeting — discount, health food and gourmet — and supporting a scale that could plug in to a pedestrian street. Smaller groceries, distributed throughout the village, also optimizes pedestrian access to these services. A neighborhood development agency, could lobby chains such as Publix, Albertsons, Wards or Whole Foods to enter the market at a small scale, or even local owners could take this role.

Alternatively, an auto-pedestrian mix prototype, that has been successful in Palm Beach and Dade Counties, supports an urban scale, pedestrian street accommodating motorist parking in a stacked or hidden condition away from the street. By deploying colonnade, loggia and patio elements at the street edge and entry, the scale of the super market box is broken down and social space is created as people are concentrated on the street.

The scheme shown has two parking levels over the main grocery space with moving ramps and an elevator for vertical circulation. Auto entry is in the rear and pedestrians enter the front from a public park with a transit stop nearby. The connection to the park is a well designed system for pedestrian and cycle connectivity with the rest of the village. The public can utilize the space and, in turn, the grocery becomes further integrated within the village context. Photovoltaic panels are used to shade the upper parking deck and provide electricity to the store. The open air parking deck and PV systems also act as a shading device minimizing the solar heat gain in the grocery below.

Grocery Strategy



The proposed design solution for incorporating various conditions within a publix supermarket can result in the success of many different operations. Numerous parts come together to allow for a mixed use building that appeals to an urban village.

UF Graduate Student
Craig Ditman



- Elevated parking above the publix supermarket
- Photovoltaic cells above roof to aid in the consumption of energy
- A public vestibule to allow for the continuous flow of pedestrian movement
- Rubberized escalators to provide smooth movement of carts to and from parking within the building
- Elevated cafe to provide for private relaxation and views to the street
- Conductive design to allow for a supermarket and other entities to co-exist in an urban village

Urban Big Box

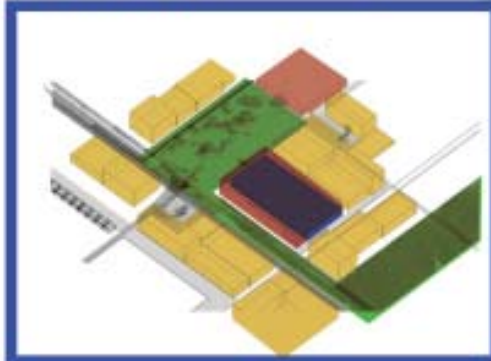
Big-box corporate retailers should be expected to operate their stores as a part of the community, rather than as a colonial satellite. Gainesville must not be at the trailing end of a national trend where these enterprises are actually gaining efficiency and profitability by incorporating community and sustainable design principles. From Coral Gables where Home Depot is incorporating a 2 level parking deck overhead, a colonnade with a pharmacy, grocery and garden center to Portland, Oregon where *maximum* parking ratios are implemented to reduce parking lot size. Cities all over the country are reevaluating their Big Box, community and environment relationships. Citing stores in Atlanta, Cleveland and New Orleans, Bill Correll, head of Architecture for Wal-Mart, commented "participating with local communities in the design of Wal-Marts certainly plays an important role in our being accepted in new areas" (Architectural Record, August 2005). This article goes on to note that many of the design improvements, while initially more expensive, have brought long-term gains. Wal-Mart even has experimental stores utilizing photovoltaic panels, wind turbines, innovative heating methods including used motor-oil and cooking oil, and pervious pavement parking lots to reduce run-off. A demanding community can actually improve the corporate bottom line.

Urban Village Studio proposes that these innovative strategies be further developed and incorporated while offering the opportunity for a big-box retailer to have pedestrian and commuter arterial access in the prime location of the Urban Village. Housing for employees would be provided in the neighborhood, a large pedestrian customer base and local transit access will reduce parking costs and congestion. The proposals shown allow for locations in central urban or fringe ecological conditions. Alternatively, this function could be an excellent transitional element between the existing auto-oriented strip development and the pedestrian Urban Village core.



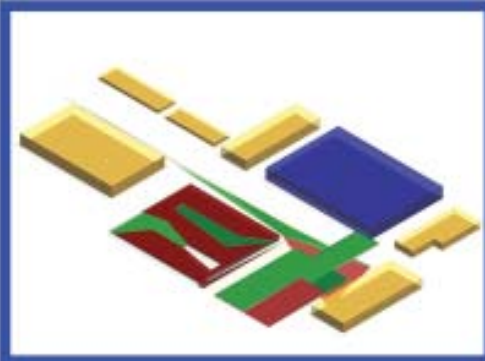
Urban big box at park

BIGBox Solutions



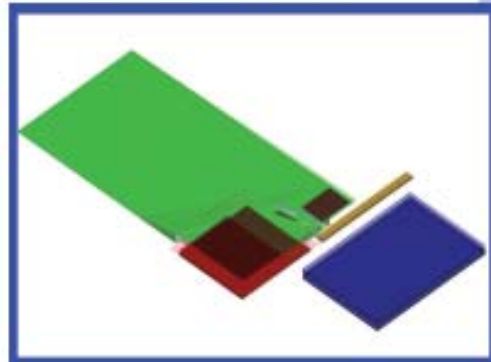
URBANBox

- Built into dense surrounding block morphologies.
- Multi-story, integrated and shared parking structures for the entire area.
- Close proximity to large public spaces and public transportation access.
- Closest possible proximity to residential development.



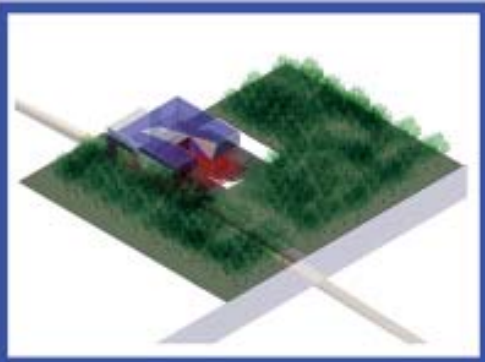
Park(ing) Shards

- Accommodates typical BIGBox construction standards for interior spaces.
- Park "shards" link public spaces together across parking structures, and provide ecosystem continuity.
- "Shards" also provide continuity of public, walkable, bikable space.



Carpet Park

- Continues space of large public park development.
- Areas of the park are "lifted" and parking structures are provided beneath the other public functions.
- Other development typologies can also be integrated beneath the surface of the park.



ECOBox

- All interior, service, and parking space stacked and provided within the smallest possible footprint.
- Frees the most land for possible ecosystem redevelopment.

Sustainable Design : LEED-ND

Following the University's 'LEED', the MTPO (both municipal commissions) might consider adopting these ND strategies as part of their recommendations and/or requirements for development of lands near the urban core.
<www.usgbc.org>

Applicable LEED Criteria

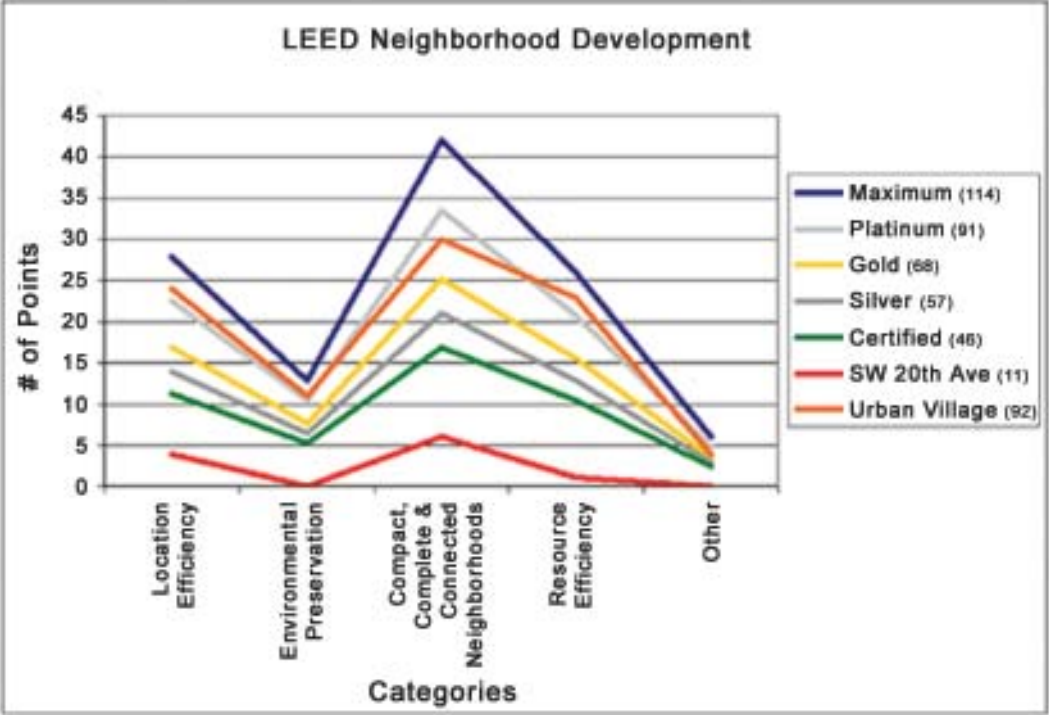
- Location Efficiency
 - Prerequisite: Transportation Efficiency
 - Prerequisite: Water and Stormwater Infrastructure Efficiency
 - Credit: Adjacent, Infill or Previously Developed Sites
 - Credit: Reduced Automobile Dependence
 - Credit: Contribution to Jobs-Housing Balance
 - Credit: School Proximity
 - Credit: Access to Public Spaces
- Environmental Preservation
 - Prerequisite: Imperiled Species and Ecological Communities
 - Prerequisite: Parkland Preservation
 - Prerequisite: Wetland & Water Body Protection
 - Prerequisite: Erosion & Sedimentation Control
 - Credit: Site Design for Habitat or Wetland Conservation
 - Credit: Conservation Management of Habitat or Wetlands
 - Credit: Minimize Site Disturbance During Construction
 - Credit: Minimize Site Disturbance Through Site Design
 - Credit: Reduce Stormwater Runoff Rates
 - Credit: Stormwater Treatment
 - Credit: Outdoor Hazardous Waste Pollution Prevention
 - Compact, Complete & Connected Neighborhoods
 - Prerequisite: Open Community
 - Prerequisite: Compact Development
 - Prerequisite: Diversity of Uses
 - Credit: Compact Development
 - Credit: Transit-Oriented Compactness

Paul Ray, author of "The Culture Creatives" substantiates the presence of a significant population endeavoring to live more ecologically and create a better way of life for the country. He notes the President's Council on Sustainable Development (1999) indicating that 77% of Americans want a sustainable world.

As of early 2006, the United States Green Building Council (USGBC), developers of the LEED building certification system for sustainable design, has established a Neighborhood Development component (LEED-ND) — nationally reviewed and in the final stages of revision at the time of this report. The LEED rating establishes a point based system for implementation of recognized sustainable strategies and sets target goals of certified, silver, gold and platinum levels (based on total points achieved). The University of Florida has LEED certified, silver and gold level buildings and has adopted LEED strategies as best practices for campus building design.

LEED-ND principles are grouped in four categories: Location Efficiency, Environmental Preservation, Compact Complete and Connected Neighborhoods and Resource Efficiency. Urban Village Studio has implemented LEED-ND as a guide for development and a source of innovative design proposals including our transportation recommendations, diversity of land use, diversity of housing types, storm water, parks and compact urban densities (greater than 40 units per acre). The graph on the opposite page illustrates our analysis of the existing neighborhood condition, the Urban Village proposal and the target certification levels established by the US Green Building Council.

Important sustainable infrastructure that requires municipal planning and coordination with development include district grey water systems (standards and requirements), rainwater collection for irrigation incentives, and provisions for a district cooling system. The latter could provide high efficiency, variable load centralized refrigeration distributed to the Urban Village buildings eliminating the need for a multitude of outside condenser/fan units that further heat the air and generate noise. This strategy has been successfully implemented throughout UF's campus and newer communities.



(LEED-ND Criteria continued)

- Credit: Diversity of Uses
 - Credit: Housing Diversity
 - Credit: Affordable Rental Housing
 - Credit: Affordable For-Sale Housing
 - Credit: Reduced Parking Footprint
 - Credit: Community Outreach and Involvement
 - Credit: Block Perimeter
 - Credit: Locating Buildings to Shape Walkable Streets
 - Credit: Designing Building Access to Shape Walkable Streets
 - Credit: Designing Buildings to Shape Walkable Streets
 - Credit: Comprehensively Designed Walkable Streets
 - Credit: Street Network
 - Credit: Pedestrian Network
 - Credit: Maximize Pedestrian Safety and Comfort
 - Credit: Superior Pedestrian Experience
 - Credit: Applying Regional Precedents in Urbanism and Architecture
 - Credit: Transit Subsidy
 - Credit: Transit Amenities
 - Credit: Access to Nearby Communities
- Resource Efficiency
- Credit: Certified Green Building
 - Credit: Energy Efficiency in Buildings
 - Credit: Water Efficiency in Buildings
 - Credit: Heat Island Reduction
 - Credit: Infrastructure Energy Efficiency
 - Credit: On-Site Power Generation
 - Credit: On-Site Renewable Energy Sources
 - Credit: Efficient Irrigation
 - Credit: Greywater & Stormwater Reuse
 - Credit: Wastewater Management
 - Credit: Recycled Content p.94
 - Credit: Regionally Provided Materials
 - Credit: Construction Waste Management
 - Credit: Comprehensive Waste Management
 - Credit: Light Pollution Reduction



Conclusions and Recommendations for Action

Recommendations for Action

Urban Village Studio, consisting of graduate students enrolled in the School of Architecture under the direction of Associate Professor Martin Gold, have conducted extensive analysis, research and design scheming to generate strategic proposals for the redesign of SW 20th Avenue as a multi-modal transportation corridor. Redevelopment, land use and density studies were conducted to develop schematic visioning and recommendations for a vibrant pedestrian-oriented urban village. Proposals include specific alternatives for a new SW 20th Avenue that optimizes auto, pedestrian, cycle and transit connectivity. Organization, urban form, density, use, ecology, infrastructure, sustainability, commerce and neighborhood quality strategies have been schemed as integrated systems that support economic and social diversity in a pedestrian dominated village core.

The recommendations included in this section summarize the findings of detailed field analysis including environmental studies, traffic projections and modeling, hydrological studies, building inventory assessments, land use reviews, near future project proposals and acoustic analysis. Best practices, innovative community planning and transportation design was studied through literature and visits to multiple case study examples including Winter Park, FL; City Place of West Palm Beach, FL; and Yerba Buena Gardens, San Francisco, CA. Summaries of the cases are included in the appendix of this report. Information gathered was integrated into design proposals for a multi-modal transportation network, urban form and organization, and specific component alternatives for integrating housing, commerce, arts, education and civic space.

Transit and Transportation Recommendation Summary

Southwest 20th Avenue transportation strategies focus on multi-modal alternatives to integrate transit, auto, cycle, pedestrian and stormwater into a civic space that promotes commerce, supports increased density and reduces auto congestion through a diffuse network of streets. Strategies rely on a grid network of transportation including the extension of Hull Road, the addition/redesign of SW 38th Street and an extension of Radio Road that diverts southerly ultimately connecting with Butler Plaza. Southwest 43rd Street and a section of SW 20th Avenue (west of SW 43rd Street) would be redesigned from two-lane to four-lane roads with separated cycle and pedestrian facilities. The Archer Braid, a separated cycle pedestrian trail proposed in the Alachua Countywide Bicycle Pedestrian Master Plan Addendum, is integrated into the proposal as part of the Hull Road extension.

Three transit alternatives were proposed for SW 20th Avenue including dedicated bus lanes, typical bus bays and an innovative auto-merge bus bay. In the latter, travel lanes shift as part of a traffic calming strategy to give the bus ‘spatial right-of-way’ in addition to the legal right-of-way that seems to be ignored by motorists. This strategy received strong support from the different stakeholders reviewing the work. Dedicated bus lanes in both directions — a suggested alternative may be excessive infrastructure for the 80' wide right-of-way considering the needs of pedestrians, cyclists and motorists. A transit ‘loop’ strategy was developed with a single dedicated bus lane (one-way on each portion of the loop) that would optimize alternatives for transit use and separate the buses from the autos — desirable given the volume of buses and use already in place. Of course, this also bookmarks the space for a future light rail system in the village.

1. Through the community technical committees and commission vetting, one of the transportation schematic alternatives presented on pages 27 to 31 should be selected for implementation. Various street scheme visioning studies based on the schematic alternatives are included beginning on page 35.
2. A phasing study of the Concept M and SW 20th Avenue reconstruction should be engaged that combines design experts, civil engineers and cost consultants to prioritize the implementation of the transportation segments that will be reconstructed.
3. Bicycle infrastructure should be separated from the auto way when posted speeds are greater than 25 mph. In addition, in-street cycle lanes should be provided for advanced cycle commuters when posted speeds are 25 mph to 35 mph. This layered (yet not redundant) strategy promotes use by new riders, provides safe transportation for youth and senior cyclists, while also fulfilling the needs of advanced cyclists for recreation and commuting.
4. The SW 20th Avenue reconstruction could be implemented through the usual RFQ process, in conjunction with an advisory contract between the municipal agency and the Florida Community Design Center to help guide the design initiatives through the engineering and implementation process.
5. Set neighborhood speed limits at 20 mph including SW 20th Avenue between SW 43rd Street and SW 34th Street. Hull Road, SW 43rd Street and SW 20th Avenue west of SW 43rd Street should be limited to 35 mph.
6. A traffic ‘ovoid’ is proposed as an alternative to a signalized intersection at SW 20th Avenue, SW 43rd Street and the Hull Road extension. The ovoid form optimizes the heavier use linkages while virtually eliminating the need to stop at the intersection. Vissim traffic modeling studies by the Corradino Group show the roundabout alternative to operate at level of service ‘A’ through year 2025.
7. Coordination with land use and right-of-way sequestering for a neighborhood street network should parallel the initiatives noted in the Urban Village Form recommendations below.
8. Automobile storage should be directly related to use. Options include *stacked* (limited auto use) for residents of the village who do not commute often; *shelved* (regular auto use) for commuting workers, shoppers and dining; and rows (micro-term on-street parallel parking) for quick shopping stops, pick-up and drop-off .

Urban Village Form Recommendations

Urban strategies for the SW 20th Avenue village area are organized around civic park space of five configurations — linear park, matrix park, thread park, central park and a composite of the four idealized schemes. The proposals included provide an organizational infrastructure, with specific flexibility, to promote a variety of uses and development opportunities for individual properties, while protecting and enhancing the land value and promoting a viable urban village. Specific recommendations are as follows:

1. Annex the entire area into the City of Gainesville. This will allow existing mixed-use designations compatible with the village to be readily applied. Additionally the City is better suited to govern an urban rather than rural area. Working with Alachua County, in regard to supporting their efforts for services and parks, should play a major role in this transition.
2. Establish a Community Redevelopment Agency (CRA) charged with managing development and implementation of the strategies contained in this report. Tax increments and other CRA strategies should be developed to purchase, retain and lease land for development.
3. The CRA, or development managing agency, should have a strong partnership with the University of Florida as an important development stakeholder. This could also come in the form of initiating projects such as UF housing, land purchase and development leases, capital to support municipal investment and sharing of infrastructure costs that reduce auto trips to campus.
4. The CRA should qualify developer proposals for sites in the area based on the criteria set forth in this document and the LEED-ND initiatives published nationally. A committee of professionals and stakeholders should be charged with this review.
5. Based on the visioning studies to date, a detailed analysis of land ownership and right-of-way estimates should be conducted for a cost-benefit analysis of fine, grain street alternatives. This requires a grid of streets with small blocks.
6. The CRA should develop a ‘best practices’ presentation and publication, based on this study, to convey the vision to developers, land owners, stakeholders and residents in the area.

7. Incentives for steering projects that promote a range of uses extending throughout the day and evening should be developed. The CRA is needed to focus development on the most critical needs at any stage of redevelopment.
8. The CRA must design protocol for developers to streamline the initiation of development concepts for the area, acting as a liaison or advocate between the developer and municipal government.
9. Develop a process, or promote existing policies, for accepting private land donations for parks and new roads, in addition to seeking grant funding for new road land purchase.
10. Establish minimum, rather than maximum, residential density for the area. Recommendation at 40 units per acre.
11. Establish preschools, private and/or public, and an elementary school in the village, with dedicated pedestrian/cycle connectivity to all housing.
12. Provide on-street parking as a traffic calming, commerce supporting and revenue generating system. This should be supplemental to 'stack' and 'shelf' parking for longer term and residents' parking in the village.

Diversity of Land Use & Housing Recommendations

1. A fine grain diversity of uses in overlapping proximity, mixed-use, is critical. Annexation into the City of Gainesville would facilitate this need. Alternatively, a special mixed-use, high-density designation could be developed and vetted by Alachua County to allow for high-density, mixed-use for this area.
2. The development agency (CRA) should establish expectations for a range of housing types including subsidized, affordable, market rate and luxury. Incentive based alternatives for developers might be done in partnership with UF for land purchase and subsequent long-term leases to developers with projects that advance these recommendations while reducing development initial costs (no immediate land cost).
3. Partnerships with the Schimberg Center for affordable housing could be developed to capture government and state funding in support of diverse housing options.
4. Housing alternatives should be provided with decoupled parking facilities. In other words, the living units may be purchased, or leased at a savings, without parking facilities, thus reducing living expenses and promoting pedestrian activities.
5. In conjunction with housing development, requirements for play areas appropriate for a range of age and housing density should be required. Off-site investment in public parks could be an alternative to on-site facilities. Pedestrian proximity must be maintained.

Ecology and Sustainable Practice Recommendations

The Hogtown Creek wetland and adjacent village xeric uplands create a sensitive environmental ecotone (edge) condition with diverse species of flora and fauna. The hydrological cycle of intense rain, and alternate drought periods require strategies able to capture, retard release, filter and retain water during different periods of the year to reduce spot flooding, avoid stagnant standing water and to provide water for vegetation, while reducing wild fire hazards during dry periods. Strategies put forward by the Urban Village Studio enhance the natural hydrology, promote water capture and decentralize water recharge.

1. Whenever possible, utilize decentralized water catchments and retention, rather than channeling run-off. This is the basis for utilizing green spaces as the organizational anchor of the village.
2. Provide stormwater systems that will retain water for extended periods to allow wetlands grasses and reeds to flourish. [They naturally capture and fix hydrocarbons from petroleum products in run-off.]
3. Promote green roof systems as alternatives to stormwater catchment requirements. Green roofs slowly absorb rain and delay run-off peak and reduce run-off intensity. This relieves the pressure caused by local downpours. The combination supports Item 2 above, and water flows slowly from the green roof to the proposed stormwater garden.
4. Incentives for photovoltaic power generation should be enacted in the form of direct rebates or tax incentives. Reducing reliance on coal power will reduce air pollution locally and globally - an important step in weaning from fossil fuels. With recent energy cost increases, PV is now on the very of short-term payback and long-term payoff.
5. Provisions for a centralized chilling plant with a water loops through the high density area of the village should be strongly considered. Firstly, these high efficiency systems would save significant amounts of energy over a multitude of moderately efficient units. Secondly, it would eliminate a multitude of groaning and blowing condensing units from the landscape that expel hot air and noise, degrading the quality of the environment. Lastly, with ice storage infrastructure, cooling can be generated at night and used during the day. This is an effective strategy for reducing peak energy use which puts a strain on local power plants. This has been utilized in Orange and Sarasota counties to avoid new power generating infrastructure.
6. Cistern water collection should be promoted through incentives. This infrastructure would capture rainwater for irrigation, which does much better without a chlorinated water source, and perhaps integrate with a grey-water system for toilet flushing.
7. Grey water initiatives should be implemented for a secondary use of water for toilet flushing. At-large, this could have a great impact on reducing the capacity needed to carry and process waste, as most of the energy goes into separating the water from the waste. Not only does it save water, but it saves waste treatment infrastructure and energy.

The recommendations provided summarize the strategies revealed through the project research, analysis, consultant reviews and public comments that are discussed in detail in the body of this report. They are intended to be used in concert rather than as solo solutions. The Urban Village Studio has presented strategies of small, medium and large bearing, orchestrated with a cohesive, community vision. Guided and nurtured by a dedicated development agency and supportive municipal government, this vision, initiated in 1997 as a small, grass roots effort, can be achieved.

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Appendix : Case Studies

The following pages are dedicated to examining urban conditions comparable to Gainesville’s current condition and its possibilities for positive urban growth and development. While many cities studied are of a different scale, the neighborhoods and strategies revealed convey meaningful information from contexts that Gainesville will be like in 25-50 years.

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Yerba Buena Gardens
San Francisco, California

In the 1960s, Yerba Buena Gardens was an area of dilapidated hotels, deteriorating commercial and industrial buildings and open parking lots, on the wrong side of San Francisco's diagonal divide, Market Street. Now, this is a thriving neighbourhood occupied by a diverse community of residents, visitors to cultural facilities and events, guests at the high-quality branded hotels, conventioners, shoppers, movie-goers, and office workers on a lunch break in the park. The district's vibrant heart is its public open space: a eight-acre network of landscaped gardens which are centrally maintained and managed. In 2001, over 220 free events were programmed in Yerba Buena's public spaces by Yerba Buena Arts & Events, an independent non-profit organisation funded in part by the San Francisco Redevelopment Agency.

This is an ongoing urban development success story, in a city not known for its modesty, and San Francisco has embraced the project and the facilities it is home to. Credit for Yerba Buena's success and continued growth goes first to the San Francisco Redevelopment Agency team led by Deputy Director Helen Sause and Senior Project Manager William Carney. But as Anita Hill, Executive Director of the Yerba Buena Alliance, explains, 'Everyone has pride in the area. It is the most diverse urban development project in the world, and we all work together happily.'

An example in practice: when a company is planning a special event for attendees of a conference based at the Moscone Convention Center, they are directed by Convention Center staff to a central directory of event spaces in the area maintained by the Yerba Buena Alliance. And if their requirements don't match availability at Yerba Buena Center for the Arts, for example, they will be referred on to another cultural or commercial space within the Yerba Buena area. Members of the Yerba Buena Alliance attend monthly meetings where they learn about issues and developments important to their neighbourhood. Member organisations cooperate and communicate through shared events, literature and signage encouraging visitors to see the multi-faceted destination, not just the hotel or cinema or art museum. Yerba Buena Gardens is definitely 'more than the sum of its parts'.

Development history

Yerba Buena Gardens - the destination - is the result of an 87-acre mixed-use project (technically called Yerba Buena Center) kicked off by the San Francisco Redevelopment Agency in 1966. Construction is scheduled for completion in 2005, by which time \$2.5 billion will have been invested.

Development was halted for several years in the 1970s by a series of lawsuits by community activists, which reshaped both process and Master Plan. The agency's response resulted in a new approach to community involvement, and, ultimately, the creation of more than 1,750 high-quality affordable housing units (and approximately 750 market-rate units to date, with more under construction) to replace the sub-standard residential accommodation which the city was committed to clearing.

The challenges which faced the Redevelopment Agency also helped to spur imaginative spatial and financial planning. The project developed from a monumental 1960s vision of boxes, containing nine million square feet of office space and a set of civic amenities (convention centre, sports facility, etc), into the model of physical permeability, community engagement, and public/private partnership it now represents.

First and foremost among the creative solutions was the innovative approach of placing the convention facilities underground, in spite of the added expense caused by a high water table. This accomplished two goals: 1) elimination of the blight of the large, blocky, windowless buildings; and 2) the ability to provide double use of expensive and scarce urban land for community benefit in the central district of a geographically small peninsular city.

There are three 'Central Blocks' within Yerba Buena Gardens, which comprise 33 acres. The uses for these blocks now include major hotels, the gardens, retail, recreational, amusement, entertainment, parking, cultural facilities and a five-acre children's centre. These uses were endorsed by decision-makers and set forth



Mario Botta's San Francisco MoMA with plaza fountain in the foreground



Looking across the main plaza toward San Francisco MoMA from the Metreon

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North side of Howard Street entrance to the Moscone Convention Center with the esplanade and terrace above and to the left of the photo.



Metreon plaza entrance with the Marriott Hotel in the background

in a Master Plan and an agreement in 1984 with the master developer, Olympia & York, Marriott & Beverly Willis (YBG, LTD). The first phase of the plan, the 1,500-room Marriott Hotel, was completed in 1989.

In November 1986, voters approved bond funding for the expansion of the Moscone Convention Center to add 330,000 square feet of exhibition space under Central Block 2 and meeting rooms on top of Central Block 3. This expansion was completed in 1992, and in accordance with the Master Plan the Agency constructed six acres of gardens and two cultural buildings on Central Block 2 (the Yerba Buena Center for the Arts, which opened in 1993).

Another challenge turned to good effect for Yerba Buena came in 1993, when the original private developer's option was terminated due to financial difficulties elsewhere in their portfolio. This left the Redevelopment Agency with 'forfeited' funds which they were able to transform into a significant contribution towards the \$40 million capital cost of the Yerba Buena Center for the Arts.

The San Francisco Museum of Modern Art moved into its striking new building adjacent to CB-2 in 1994 (the cultural organisation was responsible for the capital cost of the building, but purchased the land parcel for \$1 from the Redevelopment Agency), and soon after galleries and smaller arts organisations began to cluster around the magnet created by SF MOMA and YBCA. The Redevelopment Agency's commitment to develop public amenities was borne out by the creation of the children's centre on CB-3.

Meanwhile, a new private sector developer partner had been found to develop what is now the Sony Metreon, on CB-2. The Agency later sold to the same developer, Millennium Partners/WDG Companies, the land parcel facing onto Market Street on CB-1 for the Four Seasons Tower (commercial, hotel and residential), which was completed last year. Millennium Partners will also create a public walkway from Market through to Mission Street ('Yerba Buena Lane') which will showcase speciality retail units. The Agency retains lands ownership in the case of both Sony Metreon and Yerba Buena Lane projects (as with the Marriott Hotel).

The Yerba Buena Effect

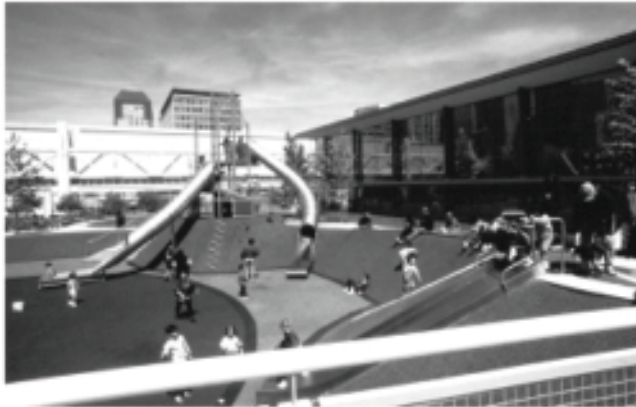
The San Francisco Redevelopment Agency continues to pursue both economic development and 'quality of life' agendas, through work with a number of citizen committees on the ongoing development of Yerba Buena Gardens. These include the Yerba Buena Alliance and the Boards of three cultural facilities, as well as the oversight committee for the entire project, the YBG Policy Advisory Committee. The Agency also funds the security, operation and maintenance of the public spaces of Yerba Buena Gardens and - crucially - of Zeum and the Yerba Buena Center for the Arts.

In essence, the Agency's continuing role allows the cultural and community programmes of the area's non-profit organisations to flourish. For example, YBCA raises, through donations and earned income, the \$4-4.5 million it needs to support its annual programme. Not much less is spent on YBCA's 'overheads' by the Redevelopment Agency. John R. Killacky, Executive Director of YBCA, says simply, 'It allows us to focus on the art'. The Yerba Buena Center for the Arts opened eight years ago promising 'to include, respect and celebrate the people and ideas that energize our myriad communities; to present exciting local artists in context with their national and international peers; and to provide the Bay Area with an eclectic and wide-ranging slate of exciting exhibitions, performances, films and educational programs'.

This vision continues to be fulfilled, largely thanks to the physical and financial structure provided by the wider development.

Unusually for a contemporary arts centre, the YBCA is central to the feel of the Yerba Buena 'campus', sitting comfortably next to a commercial entertainment / retail destination (Sony Metreon), other arts institutions (most notably SF MOMA) and a growing retail quarter. John Killacky knows the mix of uses found in Yerba Buena Gardens reflects the mix of activities in his visitors' lives - and that bringing people back to the district for different reasons on different days will benefit everyone. His market, like his neighbours', will sometimes go to a film, sometimes to a gallery, sometimes to a restaurant or public outdoor event. As John Killacky put it, 'We are only as strong as our neighbours - it's not a competition.'

YBCA's 250,000 annual visits are surely supported by



The roof top play area on top of the Moscone Convention Center



The historic carousel relocated from San Francisco's Playland-at-the-Beach

At a glance, it is clear what a cultural institution, for instance the Mexican Museum, is getting from the Redevelopment Agency and the Yerba Buena Gardens project as a whole: a location in a thriving 'cultural quarter' with increasing name recognition, an iconic building set in an architecturally exciting context, attractive and active public spaces, proximity to several successful hotels and the ever-expanding convention centre (with the corporate hire income that may bring), and so on. But what is the City getting back? Without a doubt, there is a strong impetus throughout the history of Yerba Buena Gardens towards 'public good' projects, and extensive commitments to cultural and community groups have been honoured, but what is most striking now (as the redevelopment nears completion) is that the return benefits are not all intangible.

A 1999 Economic and Fiscal Impact Study undertaken by Sedway Group looked at the impact of activities within an area extending beyond the boundaries of the redevelopment project to include surrounding blocks. The study findings demonstrate that Yerba Buena's cultural facilities are strong economic generators in themselves, and that they collectively anchor a district which continues to attract substantial private investment and generate increasing economic benefits for the City.

- In the study year, the Yerba Buena impact area supported 1,143 establishments, responsible for generating direct and indirect annual employment of 23,000. (This excludes the area's largest employer, Pacific Bell, which located here prior to any arts or cultural developments.)
- The direct and indirect annual sales of these establishments totalled \$1.8 billion.
- Annual spending in San Francisco from the visitors staying at the area's five major hotels was estimated at \$118.5 million. (When the St Regis Tower is complete there will be an additional five hotels opened in the few years since the study, and we can assume that this visitor spending figure has increased correspondingly.)

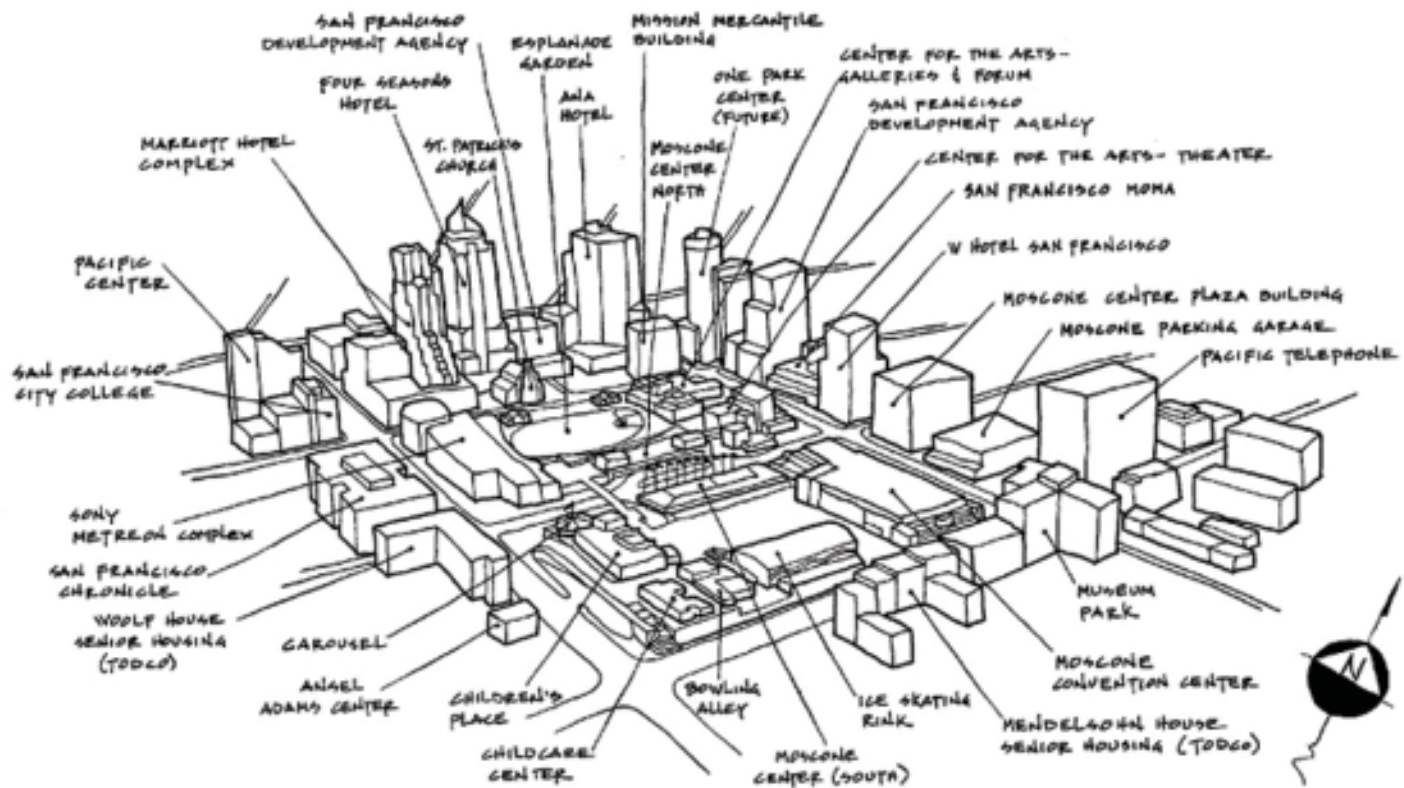
- Annual retail sales to local residents were estimated at \$16.2 million, projected to increase to \$46.1 million with the completion of current residential developments.

- In 1998 the Yerba Buena area generated an estimated \$57.9 million in annual tax revenues to the City. Again, this can be expected to have increased significantly in only four years, given likely growth in hotel tax, sales tax and property tax revenues.

The study quantified the share of each of these impacts attributable directly to cultural organisations. The estimated total (direct and indirect) economic impact of the area's arts institutions (including the growing number of commercial galleries) was \$95 million in the study year.

The Redevelopment Agency's investment, commitment and strong leadership continue to support the rise of Yerba Buena Gardens. Tangible economic benefits attest to the growth of a new San Francisco destination for tourists and businesses.

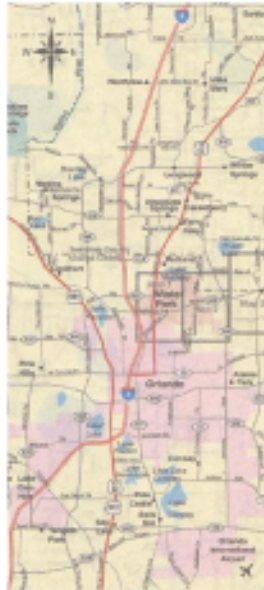
This project also demonstrates the long-term effectiveness of strong partnerships with the private sector and with community groups. Innovative financing tools have been central to building those partnerships, and will continue to support the Agency's ongoing (and very different) work elsewhere in San Francisco. In the next piece, James Alexander considers the future in the UK, where the history of Redevelopment Agencies is quite different but the opportunities for public/private partnerships to create or regenerate culturally-anchored destinations are just as great.



The diverse mix of land uses adds to the richness of the current Yerba Buena Complex.

FINANCES TABLE

PROJECT	SIZE	Units	COST (\$ MIL)	% PUBLIC	LDA	EXACTION	AMOUNT	USE
MOSCONE CONVENTION CENTER (WITH EXPANSIONS)	1.3 MILLION SQ. FT.	N/A	330	100%	PURCHASE	20 YEARS OF RENT PAYMENTS	\$836,000 ANNUALLY	
MARRIOTT HOTEL	1.9 MILLION SQ. FT.	1500 rooms	300	0	LEASE	LEASE PAYMENTS TIED TO PROFIT		RENT USED FOR CTA MAINTENANCE AND GARDENS OPERATIONS
ESPLANADE GARDEN	5.5 ACRES	N/A	40	100%				
CENTER FOR THE ARTS	100,000 SQ. FT.—THREE GALLERIES, VIDEO SCREENING ROOM, MULTIPURPOSE FORUM, 775-SEAT THEATER	N/A	40	100%				
CHILDREN'S FACILITIES	34,000 SQ. FT. ZEUM 32,000 SQ. FT. ICE SKATING/BOWLING 10,000 SQ. FT. CHILD CARE CTR 130,000 SQ. FT. OUTDOOR SPACE	N/A	58	100%				
METREON	350,000 SQ. FT.	N/A	100	0	PURCHASE	WELFARE-TO-WORK FIRST SOURCE AGREEMENT		
SFMOVA	225,000 SQ. FT.	N/A	65	0	PURCHASE			
W HOTEL	305,450 SQ. FT.	423 rooms	73	0	PURCHASE	WELFARE-TO-WORK FIRST SOURCE AGREEMENT HUNT LANE OPEN SPACE	\$700,000	HALF THE COST FOR PEDESTRIAN WALKWAY
FOUR SEASONS HOTEL & TOWER	750,000 SQ. FT.	250 hotel rooms 270,000 sq. ft. condos.	350		PURCHASE	ONE-TIME PAYMENT WELFARE-TO-WORK FIRST SOURCE AGREEMENT CHILDCARE FEE AFFORDABLE HOUSING FEE CONTRIBUTION TO SECURITY, OPERATION, AND MAINTENANCE OF CB-2	\$2 MILLION \$750,000 \$2 MILLION 150,000 ANNUALLY	
THIRD AND MISSION STREET PROJECT NE CORNER	432,000 SQ. FT.	500 Units	129	BOND FINANCING	PURCHASE	AFFORDABLE HOUSING FEE, CHILDCARE FEE	\$2.6 MILLION, \$432,000	20% UNITS FOR LOW INCOME
TODCO HOUSING								
WOOLF HOUSES I, II, III	150,000 SQ. FT.	212	14	100%				
CEBRICE POULTE AP'TS	73,445 SQ. FT.	91	8	100%				
MENDLSOHN HOUSE	151,000 SQ. FT.	189	15	100%				
TOTAL	11.4 MIL. SQ. FT.	2995	15.2 BILLION				9.6 MILLION	



Winter Park, FL is located in Central Florida. The urban village has commercial, residential, cultural, and civic areas within a walkable environment. The traditional charm of the shops, residents living above the shops, the view of the park, the park itself, and the small streets before cars took over as the main transportation have remained in the city. The traditional spaces have invited growth to accommodate the bike paths, on street parking, pedestrian park paths, and mixed use buildings.

The land was purchased by Loring Chase who was a Chicago businessman who came to Florida in 1881 to recover from chronic bronchitis. The establishment of Rollins College in 1885 was a major boost for the city to have further growth. The commercial center extended along Park Avenue, while the Rollins campus developed along the shore of Lake Virginia to the south. In 1887, the Winter Park Railroad began its construction, later referred to as the Dinky Line. Residential areas began to grow by the lake side streets and lake shores.

Throughout the years, many cultural advantages have evolved in Winter Park. Rollins College was founded in 1885 by a committee of Congregational ministers as the first institution of higher learning in the state. A tradition of academic excellence and high regard for the arts in all forms has resulted in the nationally recognized Spring Art Festival, the Bach Festival, a strong drama community with many fine presentations each year, as well as an almost continuous round of recitals, exhibitions and other manifestations of culture and arts. The Charles Hosmer Morse Museum of American Art, which houses the most comprehensive collection of Tiffany art in the world, opened in 1995. As a result of these cultural activities, Winter Park has drawn a wide range of visitors and residents.

As of 2005, the top three areas that Winter Park residents feel are important to include in the budget project list are; upgrading street conditions for parking/ cyclists/ pedestrians, maintaining city parks and street medians, and to increasing the bike paths. The projects will contribute to the cultural activities to draw visitors, college students, and residents to the area.



Winter Park, FL is fortunate to have more parks per capita than any other city in Florida. There are 70 parks which range from one-half acre mini-parks to the large athletic complex at Showalter Field.



The Farmer's Market, base of Winter Park's beloved Saturday morning market festivities, is a 2800-square-foot facility that can be used for numerous special events. This old freight depot stands tall with its brick walls and also provides a small outdoor area for an intimate setting. The Farmer's Market is perfect for a small party or ceremony in an ideal location.

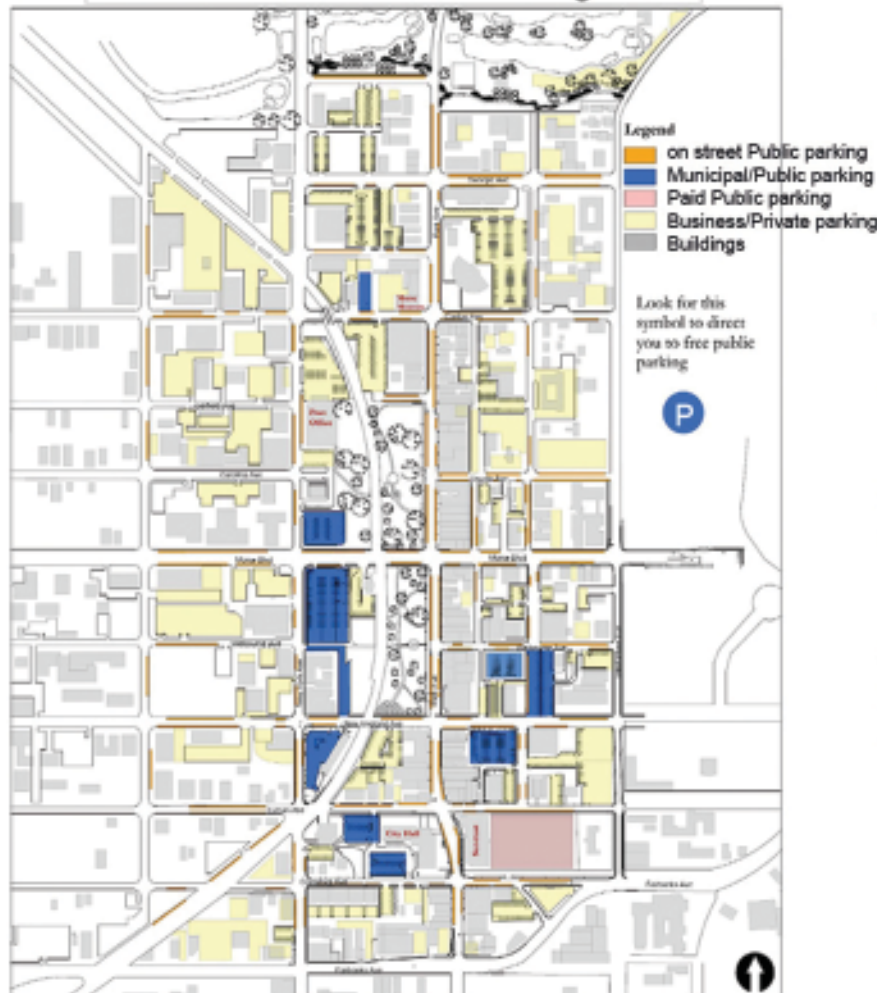


The Central Park is an 11-acre heart of the City of Winter Park's downtown. It is home to many events and thousands of visitors each year. A gift of Charles Hosmer Morse, it is dedicated much of the year to play and relaxation. Towering oaks, fountains, a spectacular rose garden, squirrels and birds provide respite from the bustle of the adjacent Park Avenue shopping street.



Activities filling this beautiful park throughout the year include the Winter Park Sidewalk Art Festival presented each March, an annual exotic car show in October, an old-fashioned Juy Fourth celebration, classic outdoor movies on the third Thursday night of each month, numerous music festivals, month-long Christmas holiday happenings, and school activities. Free and open to the public everyday, all year.

Downtown Winter Park Parking Guide



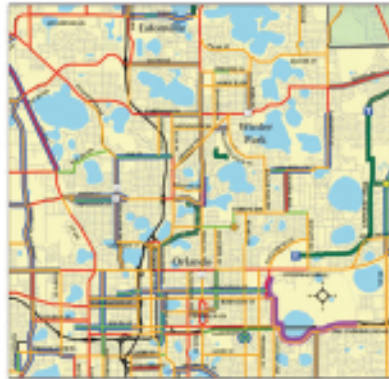
Winter Park, FL parking surveys have found that short term parking is needed more to help the economy of an urban village.

The parking can be on the street, or surface parking, or garage parking. These parking spots can be timed, paid, or both. The on-street parking should be considered short term.

The long-term parking can be given to residential residents and employees of commercial businesses. The City survey and Orange County Tax Assessor's Office graph shows that employee and residential parking is needed more due to their greater percentage of Land Use.



The cyclists paths range from on street riding, to private cyclist trails, to cyclist/pedestrian trails that can be found throughout the city of Winter Park, FL. These paths also extend into the city of Orlando, FL.



Winter Park, FL is dedicated to move into the future by accommodating pedestrians, cyclists, and automobiles.

These are some of the ideas that they are being implemented for Winter Park, FL and the surrounding areas.

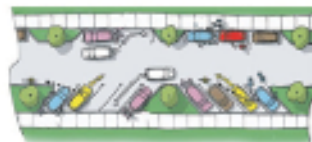
The additional cyclist paths and new parking systems are part of the keeping winter Park beautiful. The circulation of Central Florida is very important for the economy, tourism, and local community health.

The back-in angle parking can provide:

Better visibility

Easier access in and out of parking spots

Safer for loading your trunk and for seeing bicycles



Oakland, Florida

Population: 936
Housing Units: 379
Water Area: 0.00 miles²
Land Area: 1.63 miles²
Total Area: 1.63 miles²
Population Density: 574.15*
Housing Density: 232.48*



Oakland, which is located due west of Winter Garden, is a relatively young community that has begun to embrace the idea of an Urban Village through its acceptance of a rail trail that cuts through the heart of the town. This, West Orange Trail, consists of nineteen miles of meandering pavement that runs from southern Apopka through Clarcona and Winter Garden and terminates in Oakland.

Oakland Census statistics begin to relate to the characteristics of Gainesville through similarities involving commuting data, income, and poverty levels. At such a small scale, Oakland offers itself as a model for the Urban Village, becoming a strategy to build from. Although the proposed Urban Village will most likely have a much higher density, the thought of centralizing walking and bicycling as the main modes of transportation will be beneficial to the concept of the Urban Village and its vitality.

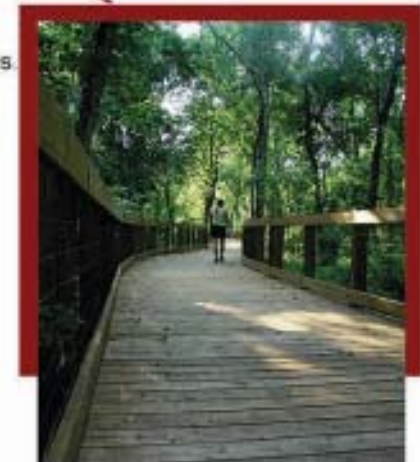
According to Census data 94.6 percent of the working class used their personal vehicles to commute to work. Although 8.4 percent of this was carpool, walkability and urban density can combat this through its commercial diversity, offering local job and shopping opportunities to its citizens.



Restored railroad bridge over Florida Turnpike



Oakland trail section



Nature Preserve boardwalk

West Orange Trail

The West Orange Trail has transformed the downtowns of neighboring communities such as Winter Garden and Ocoee, creating a Louisiana Street mentality as far as the street-scape is concerned. Winter Garden took the West Orange Trail as an opportunity to revitalize its downtown, lending itself to the pedestrian with its walkable streets and amenities that parallel the trail such as commercial space on the bottom level along the entire street edge. These two strategies along with on-street parking may be appropriate for the scale of the Urban Village. These actions proved beneficial to the town of Winter Garden and are becoming the model for downtown Oakland.

The West Orange Trail runs through both suburban and urban areas and is used by 40,000 to 50,000 people per month. A group of seniors regularly engages in bicycle riding activities, while a teenage group has formed a speed-skating club. Several schools have organized field trips along the trail. Uniquely designed signs at the entrance to each community give trail users a sense that they have entered a new community and a new place. Some trail heads are fairly large facilities incorporating full parking, picnic areas, concessions with wrap around porches, air and water stations and playgrounds. Others function more as local neighborhood parks, with picnic and playground facilities, and as a place to hold children's birthday parties.

Trail Length: Surface: 19 miles, paved (asphalt 14' wide)
Fee: None
County: Orange
Nearby Towns: Apopka, Winter Garden, Orlando



Ingram outpost at mile twelve offers parking services



Trail and street section



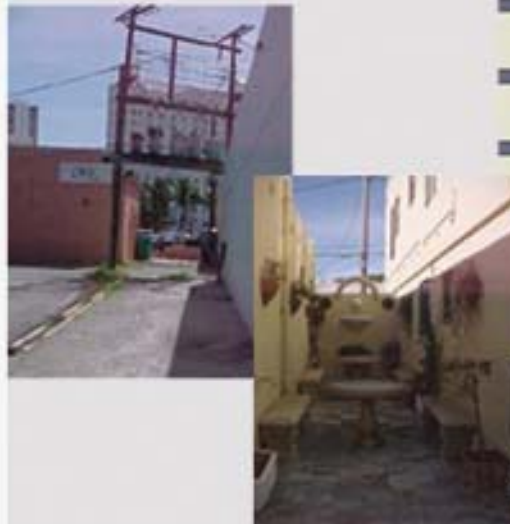
Fountain and rest facilities

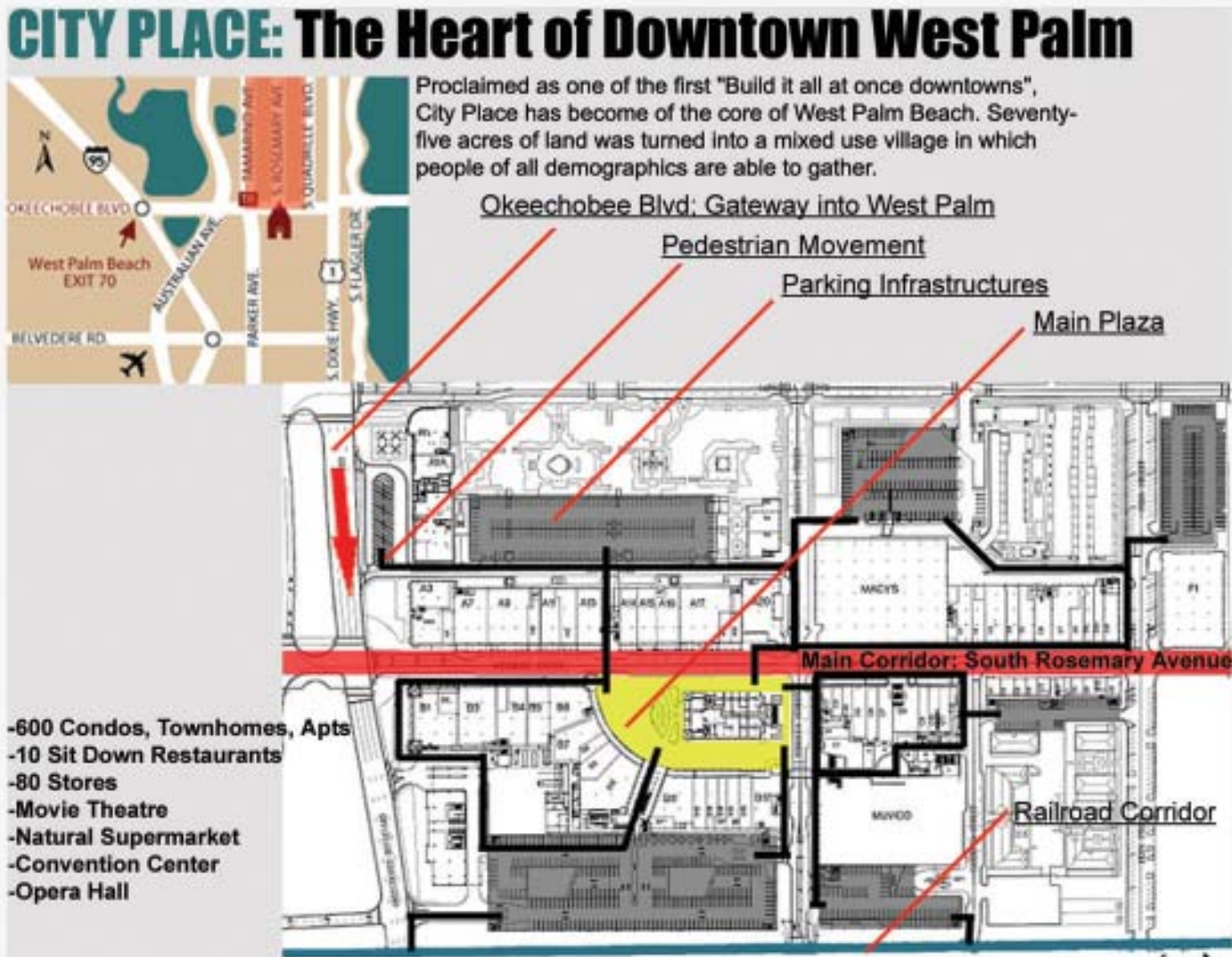
Case Study: City Place

West Palm Beach, Florida



City Place, located in the heart of downtown West Palm Beach, Florida has rejuvenated and brought back to life a city once stricken with high poverty, crime and an area in which 60% of storefronts were empty.





CITY PLACE

The design of City Place was based upon the study of 16 European Cities. Pedestrian movement was a primary focus, along with creating a scheme that had "traffic calming" areas. At crosswalks, sidewalks bulb out to give pedestrians better views of incoming traffic and provide a shorter crossing distance. There are lateral shifts in the road that slow incoming cars.



The Public Square Fountain is a key element in the design of City Place. It allows for a focal point for music and food. Block parties occur once a week, which bring the community together. Human scale was very important. The height of the surrounding buildings were to remain within a 2 to 5 story range. This allowed for a certain sense of intimacy to occur.



"Human scale must prevail over the needs of motor vehicles"

-Mayor Nancy M. Graham

CITY PLACE

\$550 Million Dollar Project

Condos are \$300,000 +

Apartments average \$600 to \$1200/mo.



Property values rose from an average of \$10-40 per square foot in 1993 to \$50-100 per square foot in 1997

Occupancy rates are up to 90% along the Clematis corridor



Creating a sense of community, and rejuvenating a city were key elements in the success of City Place.



West Palm Beach, Florida




In 1983, the Pinellas County Metropolitan Planning Organizations (MPO) Bicycle Advisory Committee, working with the Pedestrian Safety Committee, encouraged the County Planning Department to create a safe place for recreation in the community. In 1990, the first five-mile section of the Pinellas Trail was opened to the public.

High community support and participation, coupled with available land - a 34-mile abandoned CSX railroad right-of-way - paved the way for this formation. Pinellas County residents passed a resolution to implement a new tax, Penny-for-Pinellas, which provides funding for the Trail and parks development. In addition, CSX Railroad Company has worked cooperatively with the County to permit the purchase of land sections over time. The national non-profit group, Trust for Public Land, buys property for quality-of-life purposes, and has worked with local government to purchase corridors from CSX and hold it until the city finds money to buy it back. These cooperative relationships implement various funding methods in order to continuously develop essential greenways vital to the health and sustainability of these communities. The continuous trail, a unique greenway corridor which links parks, coastal areas, residential neighborhoods and commercial areas, runs the length of the county from Tarpon Springs to St. Petersburg - a total of 47 miles.

The Pinellas County MPO supports the development of livable communities and of greenways and trail systems throughout Pinellas County and regionwide. The Trail's success has come from community involvement and local government support. The trail is sometimes removed from the urban cores of the county, while at other times runs along them providing a wide range of sights and destinations for users. By connecting downtowns and areas of interest, small cores of development can emerge and thrive from the influx of visitors and passersby.

FRED E. MARQUIS PINELLAS TRAIL


Pinellas County, Florida



3 _ Tarpon Springs	15 _ Downtown Dunedin	27 _ Gulf Beaches
5 _ Howard Park	17 _ Edgewater Trail	29 _ Lake Seminole
7 _ Crystal Beach	19 _ Downtown Clearwater	31 _ Pinellas Park
9 _ Deena	21 _ Belleair	33 _ St. Petersburg
11 _ Dunedin	23 _ Largo	35 _ Gulfport
13 _ Honeymoon Island	25 _ Seminole	37 _ Downtown St. Petersburg



TARPON SPRINGS

The Pinellas Trail runs straight through the heart of Tarpon Springs' downtown area, providing scenic areas and places of commerce and interest.





DUNEDIN

Downtown Dunedin has emerged as a vibrant place along the coast of Pinellas County; much of its recent success has come from the high use of the Pinellas Trail through its core. This historical place has become a popular tourist destination while continuing to maintain its history and past, putting the community first. Dunedin residents live close to the Trail, and downtown area, many of these residents work in the area and have created their own business ventures sustaining the area.



CLEARWATER / ST. PETERSBURG

Clearwater is a highly dense area in the center of Pinellas County. The Trail connects the northern and southern parts of the county, while also providing alternate modes of transportation around the busy downtown. In more dense areas, such as Seminole and St. Petersburg, bridge systems are used to transport bicycles and pedestrians over busy crossings.



The communities surrounding the Pinellas Trail support the trail's success by providing services for the users. Local neighborhoods have supported the Trail's development by passing taxes for development, such as the Penny for Pinellas. In return, the communities receive an influx of visitors to the area which provides opportunities for new services and development. Many new local stores and shops have emerged following the construction of the Trail, most notably in downtown areas, such as in Dunedin.

Furthermore, alternate modes of transit promote a healthy method of living for residents. Initial creation of the Pinellas Trail and concurrent park areas were developed to provide safe places for recreation activities and perhaps may evolve to provide alternate modes of transportation for commuters. Continuing growth along and off of the trail corridor will only increase the trail's use, therefore evolving into a self-sustaining environment and community.



Overpass at Interstate 80



City bike path undercrossing



City bike path

DAVIS, CALIFORNIA

Visionary urban planning over the past 40 years has helped Davis, CA to become known as the most bike-friendly community in the United States.

Located 15 miles west of Sacramento, Davis has grown from 5,000 residents in 1960 to a population of 60,000 today. Many are attracted by the University of California, Davis, while others are drawn to Davis by its reputation as an environmentally conscious community.

Careful planning from the beginning has prevented the expense of retrofitting in order to meet their urban planning goals. In the 1960's they incorporated bike lanes into the streets and have continued making the bike a priority in their development since. The city has nearly 50 miles of bike lanes along with 50 miles of bike paths. Davis has 27 grade separated cycle crossings. To encourage bike use, the University of California, Davis central roadways on the campus are closed to most vehicular traffic. There is an extensive system of bike lanes and paths throughout the city. New developments take into consideration how to become a part of this system. The Davis Greenway is a "coordinated system of open space that links existing natural and cultural facilities using city streets, railroad right-of-ways, utility easements and natural features such as stream corridors and drainage channels." (*Growing Pains: Thirty Years in the History of Davis* by Mike Fitch).

Village homes is an innovative residential development that set the standard in 1975 and has yet to be surpassed. The developments of Village Homes and Covell Village feature many ecological elements including a wildlife pond, open drainages, and a greenbelt and bikeway system. The success of these subdivisions is the result of a collaboration between the developers, city officials, and environmental groups.



Davis has carefully considered the development of their downtown as a foundation for the development of the city as a whole. In doing so, they have developed extensive and concise guidelines that have proven successful when implemented. The *City of Davis Final Design Guidelines* (www.city.davis.ca.us/pb/design) include principles for the decisions made regarding their urban design framework. They identify appropriate creation of retail places, a streetscape system, opportune sites for mixed-use development, along with an integration of public and private projects.

Davis, California has been a pioneer in many planning principles. Their strict energy conservation ordinance has now been adopted by the state. Beginning in 1970, the Recycling Committee of Davis jumped many hurdles to get the support of the city council and Davis Waste Removal. Davis has been awarded by the National Recycling Coalition for having the top curbside program in the nation.

As a result of the open space campaign, an open-space buffer surrounds the city. To prevent urban sprawl, agricultural land and open space maintain the borders. A 1500 foot transition zone allows space for rural developments, orchards, gardens, and recreation fields. This is to encourage a harmonious co-existence between the residents and the farms.



Case study for downtown development



Image of downtown



Curbside recycling program



Border of open space

VILLAGE HOMES

1975 Completion
Mike and Judy Corbett - principal developers
70 acres
208 residences
less than 3 units per acre

Bicyclists and pedestrians move along the front of the homes.

There is a bicycle/pedestrian path that loops around the park

Cars move behind the homes.



Aerial view of Village Homes



Village Homes is a 70 acre development completed in 1975. Its innovative strategies have made it a source of admiration by many. The approach to Village Homes was to create a residential neighborhood that made ecological features a priority. These strategies include:

- integration of small-scale agriculture
- houses oriented north/south to allow for energy efficient design
- system of pedestrian and bike paths
- avoid impact on city drain system by creating small stream beds to handle stormwater
- clustering homes close together with minimal front yards to allow room for common areas which house pools, fields, gardens, and orchards
- the houses are a mix of apartments and single family homes



Area for stormwater collection



Community garden



Village Center



Bike Undercrossing

COVELL VILLAGE

This is a new urbanist community in the planning phase. According to the June 21, 2005 report, *Covell Village General Plan Amendment and Baseline Project* features:

- 383 acres
- 1864 diverse, mixed-use residential dwellings
 - single family homes
 - senior living facilities
 - low-income units
 - multi-family units
 - hospice facility
- A central 11-acre park
- 12 acres dispersed into mini parks
- 16 acres of greenbelts
- Linear greens of 4 acres
- Bike and pedestrian circulation that is connected to the city wide system in order to discourage use of cars.
- Pedestrian oriented village center of multi-story design with professional, public and semi-public facilities







Gateway to Campus

Atlanta is full of good urban strategies that can be adapted for use in Gainesville. There is a good system of greenways and high tech multi use urban centers that relate to a college campus atmosphere. The areas being explored are Georgia Institute of Technology's Olympic Village and Technology Square and The Path Foundation's greenway system.



Technology Square



Technology Square is located in the midtown business district of Atlanta. It is an extension of Georgia Institute of Technology and acts as a new gateway for Campus. The five building complex has revitalized a three-block area or parking lots to a new urban community. Technology Square is a multi use building focused on combining high technology with education. Technology Square houses the Advanced Technology Development Center, College of Management, Georgia Electronic Design Center and the Center for Quality Growth and Regional Development; this is a good mixture of educational facilities and Technology. Gainesville could have a similar urban strategy but perhaps focused on the arts and education because of the close proximity to the Harn Museum and the Phillips Center for the Performing Arts. Also included in the center is a hotel and conference center and retail which would integrate well with the goals of the Urban Village.



Olympic Village



The Olympic Village opened August 1996 to house Olympians, coaches, officials, employees and media with a daily population of 30,000 people; it was the center of the Olympic games. It was a well-planned highly successful and integrated multi-purpose center. The Olympic Village included the new Aquatic Center, the Homer Rice Center for Sports Performance, Georgia Tech Plaza, apartments, student housing, and the Alexander Memorial Coliseum. This highly charged area opens up into a plaza with an outdoor amphitheater, which helps to connect and sustain this urban center. Located on the campus of the Georgia Institute of Technology, it was the first Olympic games to have a college so intensely involved. Georgia Tech designed the Olympic torch and graduates from Georgia Tech designed many buildings including the new aquatic center designed by architecture graduates.



Greenways

The Path Foundation (People of Atlanta for Trails Here) has been developing a metrowide trail system in Atlanta for over 14 years. There are many trails and more to come totaling well over 200 miles. Some of the goals of Path were to reduce congestion and parking problems during the Olympics, and enable visitors to walk and bike to the various Olympic sites. Equally important, joggers, commuters, cyclists, skaters, walkers, the elderly and physically challenged persons, and families and children will be able to use the trail year round. Path connects the Olympic Village and Technology Square and other parts of Atlanta. This greenway system enhances community spirit and brings together neighborhoods, schools, parks, cities, counties and states. The trails have such destinations as Stone Mountain Park, Panola Mountain State Park and Alabama. This idea of a greenway system can be interwoven into the Urban Village plan connecting western Gainesville to the University of Florida.



Case Study:

Barcelona's Urban Re-Development

Barcelona's urban re-development is in proportion to its growing real estate and tourism demand. Many studies have shown that rising traffic congestions, longer commutes and growing single person housing are renewing demand for downtown living in many cities. These changes demand a more urban regeneration and mixed-use developments that incorporate residential, retail, office and commercial uses.

Barcelona has largely benefited from a real estate boom caused by the rising of employment and income levels, and falling interest rates. Also, it can be said that the real estate has been growing exponentially since receiving the capital funding for the 1992 Olympic Games. This Olympic renaissance allowed Barcelona to redevelop its port and the abandoned neighboring beach strip, transforming it into a state of the art urban district with housing, office buildings and shopping centers.

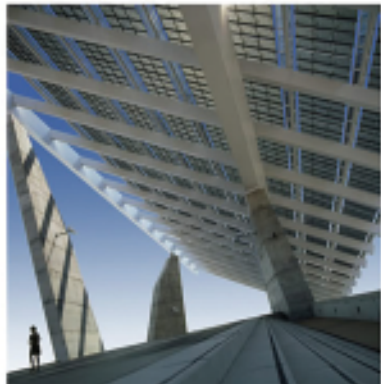


"Fish" 2002
Frank Gehry



FORUM barcelona 2004

Solar Pergola



Solar Pergola (2004)
Martinez Lapena and Elias Torres

- Monument to solar energy
- Supports a 3.410m photovoltaic generator
- Energy production: 1.250 kWh/kWp

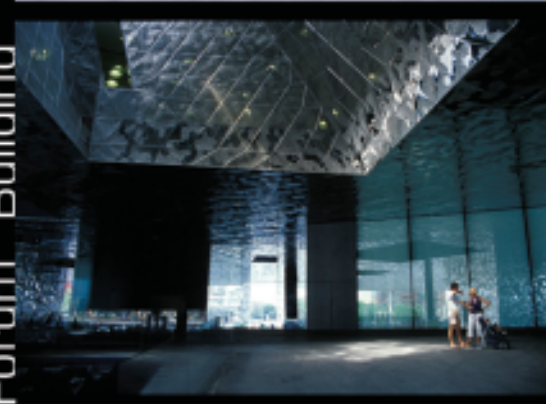


Forum (2004)
Herzog & Demeuron

- "Blue Lagoon"
- Exhibition Space
- Water cooled roof



Forum Building



FORUM barcelona 2004

Recently, the city continued its beachfront expansion eastwards by adding a 30 hectare project, The Forum. The dimensions of the structures built for the forum are impressive: a triangular forum building with a water covered roof, convention center, central plaza, a marina, 700 meters of beachfront, tram service, energy recovery plant, rainwater reservoir, and many multifunctional parks.

The Forum and the massive urban renewal projects in Barcelona have been very successful attracting public and private capital to finance the development, allowing more freedom of creativity and world known architects to take part in their projects.



Aerial Photograph

Legend

- ① "Footbridge"
- ② "Solar Pagoda"
- ③ "Auditorium Park"
- ④ Beachfront
- ⑤ Convention Center
- ⑥ Forum Building
- ⑦ Diagonal Ave.



GRAZ

CIVITAS city

With 240,000 inhabitants, Graz is the second largest city in Austria. It is the capital and the cultural, economic and university centre of the Styria province. These characteristics make Graz very similar to Gainesville in terms of student/total population ratio, and cultural imminence for surrounding areas. The city's concept of "Sanfte Mobilität" - gentle mobility- can serve as a clear and extensive example of methods to improve pedestrian and bicycle activity and reduce dependency on automobile transport in our own city.



Universities and professional schools

Graz is the location of four universities: The Karl Franzens, with approximately 21,000 students, a technical university with 8,500 students, the university for music with nearly 2,000 and at the new medicine university more than 5,300 students. (www.graz.at) Altogether nearly 39,000 students from approximately 100 countries make Graz similar to Gainesville in terms of student population and diversity.



Bio-diesel

After a series of tests and trials and an economic and ecological analysis, the city decided to substitute the use of fossil fuels for biodiesel operation. This was introduced step by step, the target being a conversion of the whole bus fleet – which was achieved in 2005. (www.civitas-initiative.org)

The initiative includes development of the logistics for collecting used cooking oil from restaurants free of charge, which is then sold as a raw material to a company which turns the oil into bio-diesel fuel.

Awareness for speed reduction and less car use

The city of Graz aims at a higher traffic safety for people using non-motorized modes of transport. The strategy focuses on the speed reduction of passenger cars, as they are the main risk for pedestrians and bikers. Car drivers actually receive feedback on their driving behavior by various means. A second focus of the awareness raising activities of the city of Graz lies on the reduction of car use in favor of more sustainable modes.

Graz has already been awarded a prize for the best awareness activities during the Car Free Day 2000, competing against other European cities of its size. The original goal of the city was to surpass these achievements, but policies have turned away from being restrictive for car users in favor of promoting sustainable modes in a "softer" way such as:

- car free day
- tempo 30 (an official regulation that limits automobile travel to 30km/hour for all city areas, excepting major thoroughfares [Graz was the first city in Europe to implement such a strategy]) (www.civitas-initiative.org)

New strolling zones in Graz

Implementation of four "strolling zones" in central Graz improved the quality of living and attractiveness of the city by promoting walking and biking in the city center as sustainable alternatives to automobile transport and reducing emissions and noise. It was a goal for Graz to provide other cities with examples of successful implementation of such strolling zones.



Graz has introduced an innovative "onion skin model" for strolling zones. In the outer "skin" of the onion are zones where cars are limited but not prohibited, and the space reserved for pedestrians and bicyclists as well as for cafés and restaurants is increased.

In the inner city of Graz, large areas are reserved for pedestrians. Outside these areas, however, the traffic used to be heavy and the walk to reach the pedestrian areas was sometime unsafe and unattractive. The pedestrian area is now the core of this onion, while the inner skin also permits bicyclists. Shop owners within the new strolling zones have been a special target group for the project. They have been actively involved in project planning and evaluation. The results are presented in a way specially tailored to other shop owners and retailers in Graz and other cities. The reason is that they are very important stakeholders in the long term implementation of clean urban transport all over Europe. (www.graz.at)

Site level mobility management

The city implementation of mobility management measures for companies, schools and large-scale events in order to reduce usage of single car transport in favor of other modes, reduces energy consumption and environmental impact. The citywide approach planned for big schools in Graz is new and has never been realized in Austria before. (www.civitas-initiative.org)

Evaluation of these measures include tracking the number of companies/schools participating, number of employees/students participating, effects on participant attitudes towards sustainable modes and on their home-to-work trips. The city also conducts regular surveys of pedestrians to gauge public opinion of their efforts.



Advanced traffic management system

As in most cities, it has been difficult for the general public in Graz to get reliable information about the current traffic situation. In this measure, data from various sources have been collected, processed and presented in ways useful to the population.

Some examples of traffic information data are:

- Traffic flow data at crossings measured by detector loops or digital cameras
- Traffic parking data measured at the entrance to parking garages or at automats
- Construction site data reported to the traffic control station and the roads database
- Public transport flow data
- The dynamic roads database, continuously updated with data provided from the existing GPS-equipped car
- Environmental data (monitored regularly by air and noise monitoring stations and periodically by monitoring teams within local projects).

Currently these data are not processed in a systematic way and are only collated to a limited extent. Many organizations would benefit from access to combined data, especially the traffic control station, which manages police, ambulance, fire brigade traffic as well as variable message signs and traffic light programming. (civitas-initiative.org)

Guidance Systems (Roadside message boards with real-time information) will inform the public about a variety of conditions that affect road travel, including emergencies such as tunnel or bridge closures, special events, construction sites, and congestion.

- Traffic lights: crossings could be optimized for smooth traffic flow and public transport priority.
- Internet: traffic information accessible from home, on PDAs and mobile telephones, or in the car (using car computer systems)
- An internal interface: the floating car database could for example be used to predict the actual time needed for a journey through the city in every circumstance and using various transportation means.
- An open media interface: information about congestion levels or the environmental situation could be distributed through media channels such as TV and radio networks, web platforms, and UMTS.

It is expected that dynamic traffic management will:

- increase the number of passengers using environmentally friendly transportation alternatives for all or part of a trip.
- reduce "parking traffic"; people cruising, looking for parking spaces
- reduce congestion by encouraging travelers to change their usual route or postpone their trip substantially reducing fuel consumption and environmental impact (www.civitas-initiative.org)

Mobility management for various stakeholders

For many companies, especially in service industries, travel constitutes the most significant environmental impact, especially if staff commute trips are included. Therefore, making travel more sustainable can substantially improve a company's overall environmental profile and getting commercial stakeholders on board for city mobility initiatives greatly improves chances for funding and success of a city's efforts.

Small and medium sized enterprises in Graz were offered individual mobility management consulting focusing on existing employee commuting patterns and possible alternatives, resulting in a set of suggested measures and incentives. Participating companies will be identified through other environmental projects within the City of Graz wherein companies

cooperate with the City to find profitable ways of becoming more environmentally adapted.

Large events like concerts and fairs generate a large number of trips to the same spot at the same time, inducing massive traffic difficulties within our city (Game Day being only one example). Handling this travel load requires good public transport planning, sufficient parking spaces, correct and easily accessible travel information and extra public transport service. One important initiative is to ensure that event arrangers include information about how to access the event using public transport, where to rent bikes etc. Such information should be included in pre-event marketing materials and at on-site information desks. In addition, sufficient extra public transport service should be provided on event days. (www.civitas-initiative.org)

All of these strategies were utilized by Graz for its responsibilities as cultural capital of Europe 2003. Again serving as a model for other constituencies, Graz showed how a structured mobility management consulting service is a key component of planning larger events.



Integrated pricing strategy for parking zones – differentiation between polluting and non-polluting vehicles

The Graz Parking Department implemented the idea of a special parking tariff intended to raise rates for all ordinary vehicles and decrease rates for low emission vehicles. Hence, the new scheme gives real benefits to low emission vehicles and provides a popular selling point of the new city wide parking system. Everybody can benefit, from the visitor to the city to the citizens themselves. Graz introduced special coins (Umweltjeton) to drivers of vehicles achieving the highly restrictive Euro IV standards for emissions reduction. The coins could then be used as currency at public events, as well as at participating businesses. The city, which had tried many other strategies for promoting green cars in the past, found that the Umweltjeton was the cheapest and most effective way to raise awareness and provide incentive to the populace. (www.graz.at)

Thematic co-ordination - Public Transport:

The traffic information at public transit stops has been improved with the addition of dynamic real-time information. The information has been adapted to the visually handicapped, for instance by providing sound and maps in Braille. The stops themselves have been constructed with surfaces ensuring accessibility to the mobility impaired and with shelters against bad weather. The results are improved customer satisfaction with public transport and a more modern image resulting from the use of innovative displays.

Seamless linkage of modes

Thematic co-ordination -

Soft measures:

Almost 360,000 people live in the greater Graz area, which is roughly one third of the total population of Styria. About 80 000 daily commuters are commuting to the city. These figures show striking similarities to the role played by Gainesville within the larger context of North Central Florida.

As public transport system in Graz is based on tram and bus system, the importance of interchanges between these transit systems is a core issue.

Tram lines are mainly operational between the city center and the outskirts, whereas busses complement the public transport network. The city is currently restructuring and enhancing interchange stations, to increase "attractiveness" (increasing commuters' feelings of safety as well as making the stations more accessible and efficient in physical movement and information availability, legibility and facilitating communication). Accessibility between bus and tram stations has been improved and physical obstacles especially for the disabled have been removed. The city has already completed the redesign of two such interchanges. (www.graz.at)



As seen in the picture (right), the city is extremely creative in developing ways to enhance the population's opinions about public transportation. One of the busses servicing the city center has scheduled live music performances on certain days of the week. In tandem with the businesses utilizing the strolling zones, the bus performances extend the perceived public space of leisure onto the buses, fusing public transport with public space.

Other creative strategies include the magician tramway and the flirt tramway, supported by information and public awareness campaigns; and target group oriented offers, such as free day-tickets for new residents. Also, a web-based door-to-door travel planner for the public was established, making it much easier to find complete real-time travel information, including tips on the best walking route from the door to the bus stop. (www.graz.at)

HONG KONG CASE STUDY:

GREEN SPACE + CONNECTIVITY USAGE

HONG KONG

The growing density in HONG KONG has led to many ideas of how to increase the vegetation within the city center. The place to create these vegetation areas are difficult to manage because of real estate cost rising. Many newer buildings are promoting the idea of a green community utilizing sustainable design features.

High rises in the city center were designed to protect many of these green areas from becoming overtaken with construction. Through the green areas there are points of connectivity between areas within the buildings.

The terrain and topography of the potential land use areas actually adds more difficulty to building on the site but provides more features for developing improved spaces of rest and circulation for people to escape from every day urban environments.



CONNECTIVITY

usage



CASE STUDY

green + space



- Building integrated photovoltaic cells are fused to the building as a secondary energy resource.
- A decrease in the motor vehicle activity and an increase in pedestrian activity above the parking keeps a strong sense of green space and community.



A science community case study in Hong Kong takes advantage of developing reclaimed land from a harbour and utilizes sustainable ideas that work in harmony with a community while being located close to interstate traffic. The first phase includes: "office area and ancillary facilities, including exhibition spaces, conference facilities, retail units, restaurants, hotel and fitness & recreation facilities."



"The design approach is to create a central focal space which encourages the interaction of people within a humane and environmental backdrop. Sustainability design is a key element; the buildings make use of double-skin facade to reduce the heat and noise transmission from the road and photovoltaic panels to provide renewable energy."

- There is an abundant use of green space as the connectivity between research buildings and other facilities.
- Density is created between buildings and vegetation
- meandering walkways connect to green space inside and outside the facility
- Density is created by vicinity to the water front and the industrial areas



ROTTERDAM Historic Metamorphosis



Dynamics of the Delta

The important element in defining urban structure of Rotterdam is its location. The delta of the Rhine which flows into the North Sea and its topography give the clues to contemporary design process. More over, the rise and fall of sea level trace in the delta landscape.



Urban Region of Rotterdam

Parceling of the Hinterland

The parceling of the hinterland is characterized by the pattern of drainage ditch has laid out when the land was cultivated. The dike worked as backbone of the parceling.

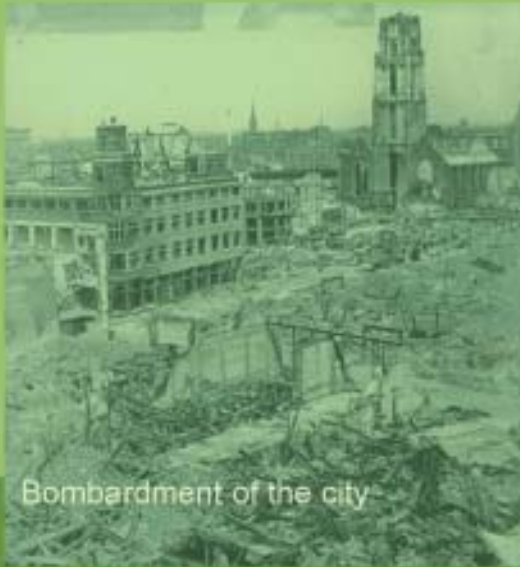
The road system lost function of long distance transport. The road system forms a continuous connection with landscape outside of the city. The result of development of Rotterdam was paradoxical. The development enables the city agglomerating and disintegrating at the same time.



Transportation System

Rotterdam has world's the largest sea port and it connects with major commercial center. Railways do not conform to the underlying landscape pattern because the new lines directly connect from town to town.

ROTTERDAM Historic Metamorphosis



Bombardment of the city

In May 1940, German airborne destroyed almost all of city triangle and created new boundary of the city. After the war, a master plan for reconstructing destroyed empty city was made- so called 'basis 20' movement which pursues elimination of historical reference. The plan was actually an attempt to make Rotterdam a homogeneous city and reconnecting incorporated parts of the city.

Garden city and living among greenery



Plan of the Green Matrix

The basic pattern of many older neighborhoods and green spaces in Rotterdam can be traced back to the natural genesis of a river landscape and the history of its settlement. The development from closed building block to the semi-open and self-contained building block with public garden clarify major Dutch cities. Access, admission of sunlight and common garden were influenced on the plans for larger garden cities.

Planning process has led to clearly traced routes from the flats to gardens with special attention paid to young children and their playgrounds. Every garden must have a playground and a sandbox and climbing rails to meet the requirement of The Public Works Department.

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Park Triangle, Centrumniet, City Triangle and Kop van Zuid, Inner City Plan



The Creation of Inner City Open Space

50 years after reconstructing city of Rotterdam, the inner city radiates a natural vitality again. Places to recreate, to shop, to stroll are accommodated in easily recognized areas. This is a result of the fusion between special functions and surrounding areas of open space.

City center provided space for office building, retail and cultural accommodations. Such functions were embedded within a precisely defined system of open space, which include inner-city courtyards, shopping streets, delivery roads, weekly markets, and a theater square.

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Netherlands Architecture Institute



NAI

Forecourt

Stage



NAI

Romantic Garden



Museum Boijmans Van Beuningen



Museum Boijmans Van Beuningen

Museum Area



Kunsthall museum





UTRECHT, NETHERLANDS

CASE STUDY
UNIVERSITY OF FLORIDA COLLEGE OF ARCHITECTURE



Is it possible to have walkable cities?

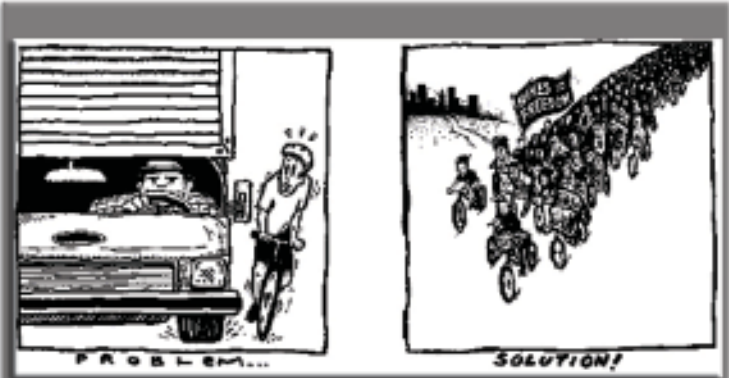


"Sprawl," a condition that affects many American cities is not an isolated urban condition that only occurs in the United States of America. It is true however, that European cities are typically more compact and dense than American cities. So, what can we learn from European cities specifically the city of Utrecht in the Netherlands? The Netherlands battles uncontrolled urban growth with adjustments in city planning and urban development criteria. They promote in-fill development and intensify building density with more efficient use of underutilized or abandoned land within the urban core. The city puts to rest the idea that high density can only be achieved through the design of stark high-rise buildings. High-density, low-rise is something we can learn from the Dutch. Density can be achieved at the same time that attractive and highly desirable living environments can be created. This city clearly places an importance on public spaces and the civic realm.



Attempting to maintain larger volume traffic at the periphery of the center core.

Can we commute via bicycle and leave our cars at home?



They also promote the use of mass transit and self propelled commuting such as walking or cycling. By replacing surface parking in the center core of the city with bicycle parking and parks, they limit a percentage of vehicular trips through the densest parts of the city. Instead of eliminating parking altogether new underground car park structures are built at the edge of the center. In no way has the city infringed on the use of personal vehicles, it is just easier to commute via alternative transportation.



Force cars to negotiate tight thoroughfares for increased traffic calming strategies.



