GREEN CITY

MIAMI-DADE

... A MASTER PLANNED COMMUNITY AND FUTURE INCUBATOR FOR JOBS IN THE FIELDS OF TECHNOLOGY, HEALTH & WELLNESS, AND HYDROPONICS & AQUAPONICS FARMING ...

CITY
ECO-URBANISM
TO CREATE PLACE

GREEN
BUILDINGS
TO CONSERVE

ENERGY
RENEWABLE
TO POWER

WATER
HARVESTING
TO RECYLE

FOOD
PRODUCTION
TO SUPPLY

INTENTIONALLY BLANK

Green City Miami Charrette

MIAMI-DADE COUNTY, FLORIDA

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Green City Miami Charrette

MIAMI-DADE COUNTY, FLORIDA

CITY

ECO-URBANISM

TO CREATE PLACE

The Vision

Main Participants and the Events That Influenced

Alfonso Cordoba, Maria Cecila Cordoba-Good,

Francisco Pines, Ken Metcalf, Steve Carney, Victor Rossinsky,

Owen Beitsch, Richard Levey, Mario Garcia-Serra, John Tello,

Timothy Plummer, Yukai Hisung, John Zanetta,

Estela Valle and Erick Valle

After participation in the West Kendall Charrette and the District 11 Economic Development study followed by meetings with county staff and the research team from Florida International University (FIU), the owners and consultants of Green City Miami took it upon themselves to spend several months at the offices of Valle Valle carefully integrating issues that were clearly voiced with their ideas and visions for the future for the entire tract of agricultural land located in the northeast corner of Kendall Drive and Krome Avenue. This report includes all the ideas, designs, illustrations, graphics, and proposed draft regulations that conveys a vision for this district.

aerial view of study area

aerial view from southwest (sw) corner

aerial view from northwest (nw) corner

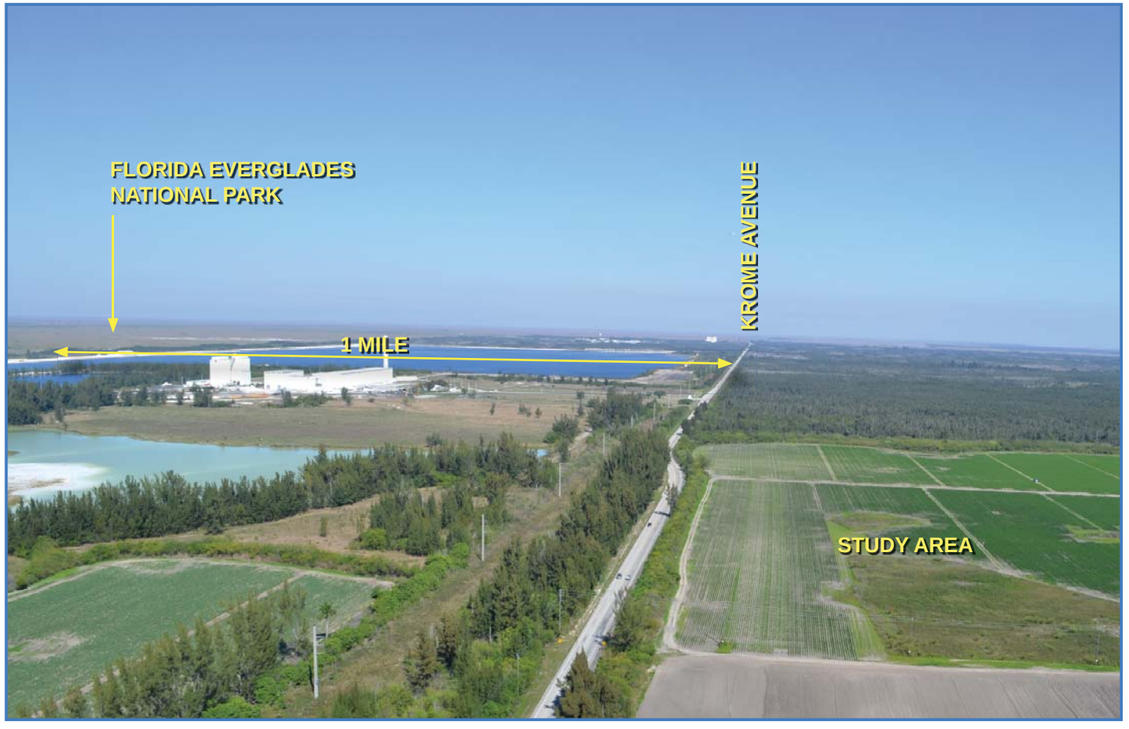
aerial view from northeast (ne) corner

aerial view from southesat (se) corner

The Project and Visioning Process

The **Green City Miami** charrette first took place on February 15th, 2011. After much input between 2013 and 2014, it was transformed into what is now a truly self-sustainable new proposed mixed use development for the West Dade area commonly referred to as the West End. With all the input that we heard from the various charrettes and workshops we have been able to integrate the vision of the several land owners within the area and other stakeholders into a potentially game changing project for this sector of the County. This new master planned community can become a model for how to protect, enhance, and celebrate the natural resources available in this region of South Florida. This new self-sustainable community can demonstrate how to integrate a variety of housing, working, health, wellness, medical and entertainment options, and how to utilize renewable energies, recycle rain-water, produce food all the while creating an environment for attracting significant work places in West Dade.

The study area stretches from 167th street on the East to Krome Avenue on the West and 64th Street on the North to Kendall Drive on the South. The team of professionals for Green City Miami includes Urban Planner/Architect - Valle Valle & Partners, Civil Engineer - Nicolas Martin-Hidalgo, Environmental Consulting - Carney Environmental, Geological & Environmental - CRB Geo & Envir., Traffic Engineering - David Plummer & Associates, Community Building - GAI Consultants, Land Planner - Ken Metcalf, Surveyor - BM Design Group, and Francisco Pines - Esquire.



The Study Area

The **Green City Miami** study area is a mile from the eastern edge of 1,000,000 acres of Protected Parks known as the Everglades National Park, it is subject to the AH - 100 year floodplain, has an averaging ponding between 1-3 ft., the soils consist of marl & very gravelly loam, it lies entirely in the west wellfield protection area, and nearly 95 percent of these lands are currently used for agricultural farming.

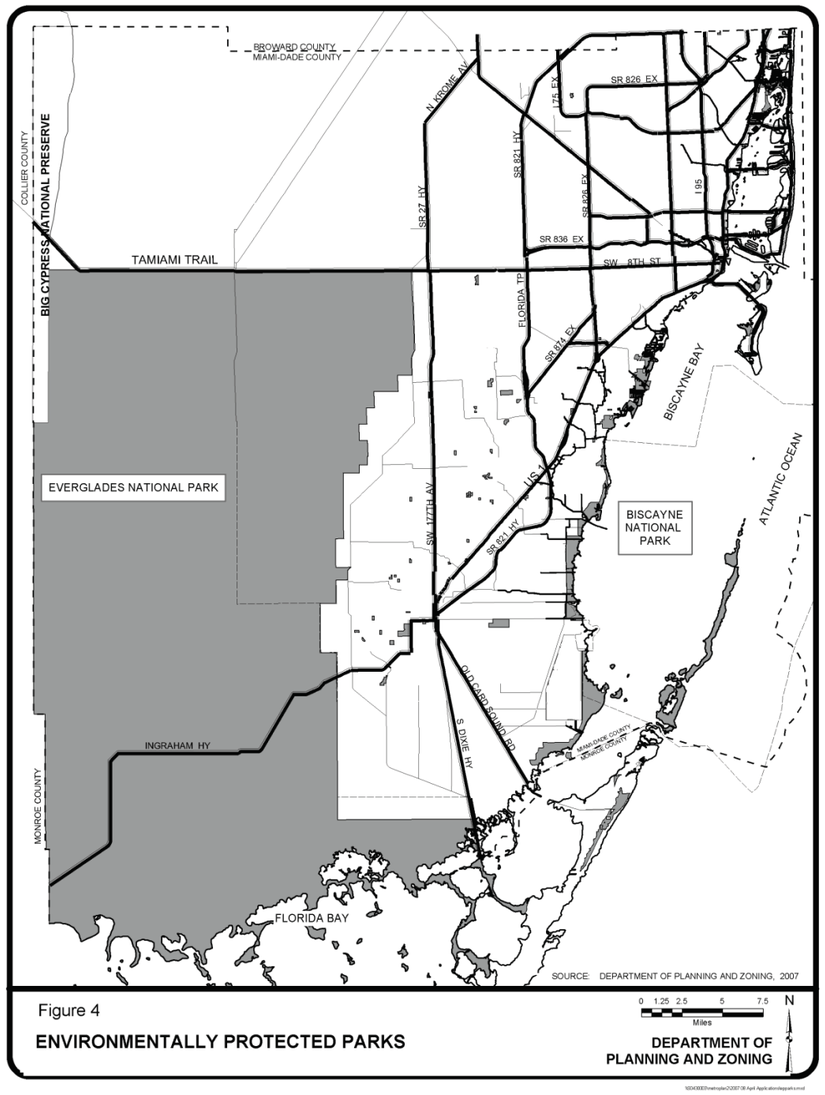


Figure 4

ENVIRONMENTALLY PROTECTED PARKS

DEPARTMENT OF PLANNING AND ZONING

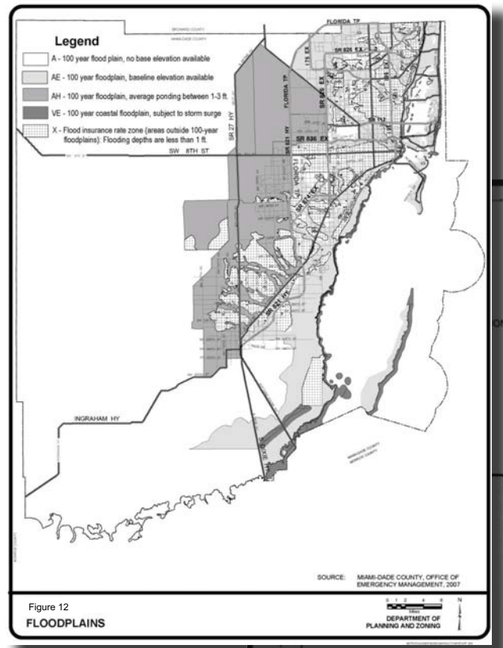


Figure 12

FLOODPLAINS

DEPARTMENT OF PLANNING AND ZONING

Figure 10

WELLFIELD PROTECTION AREAS

DEPARTMENT OF PLANNING AND ZONING

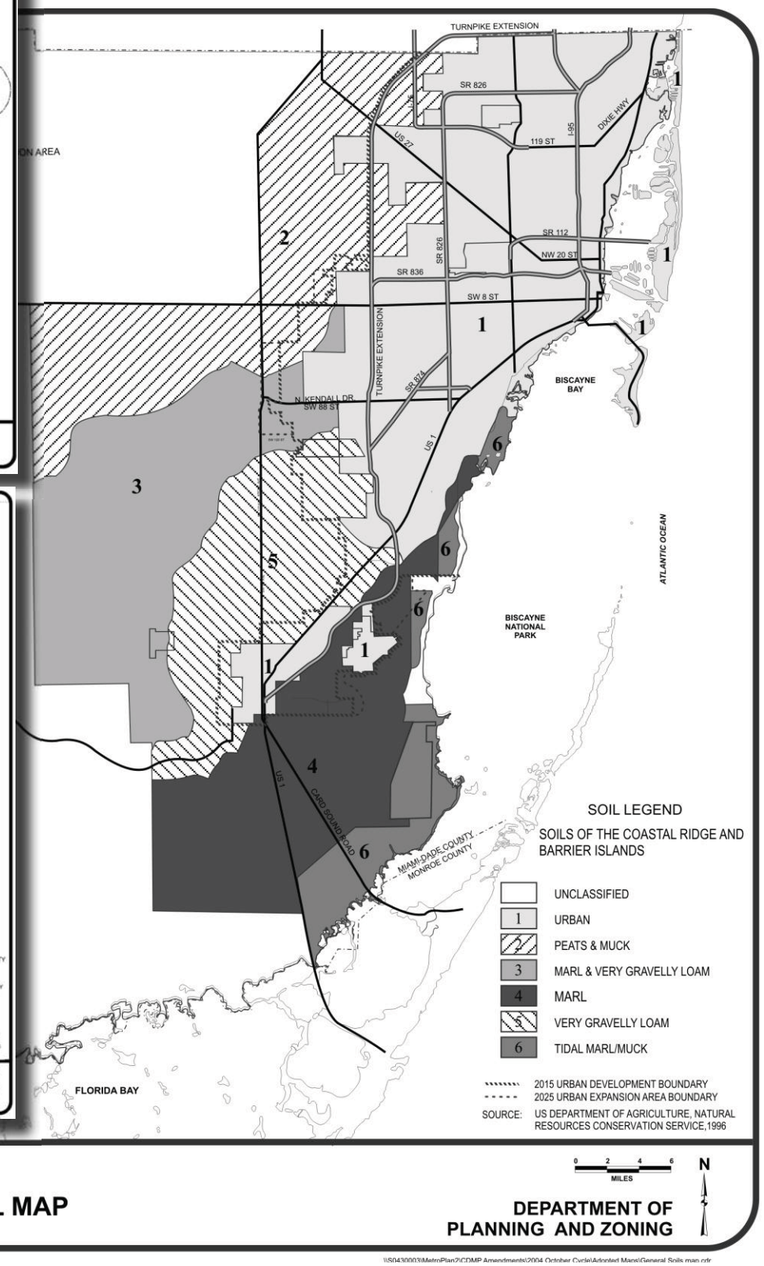


Figure 16

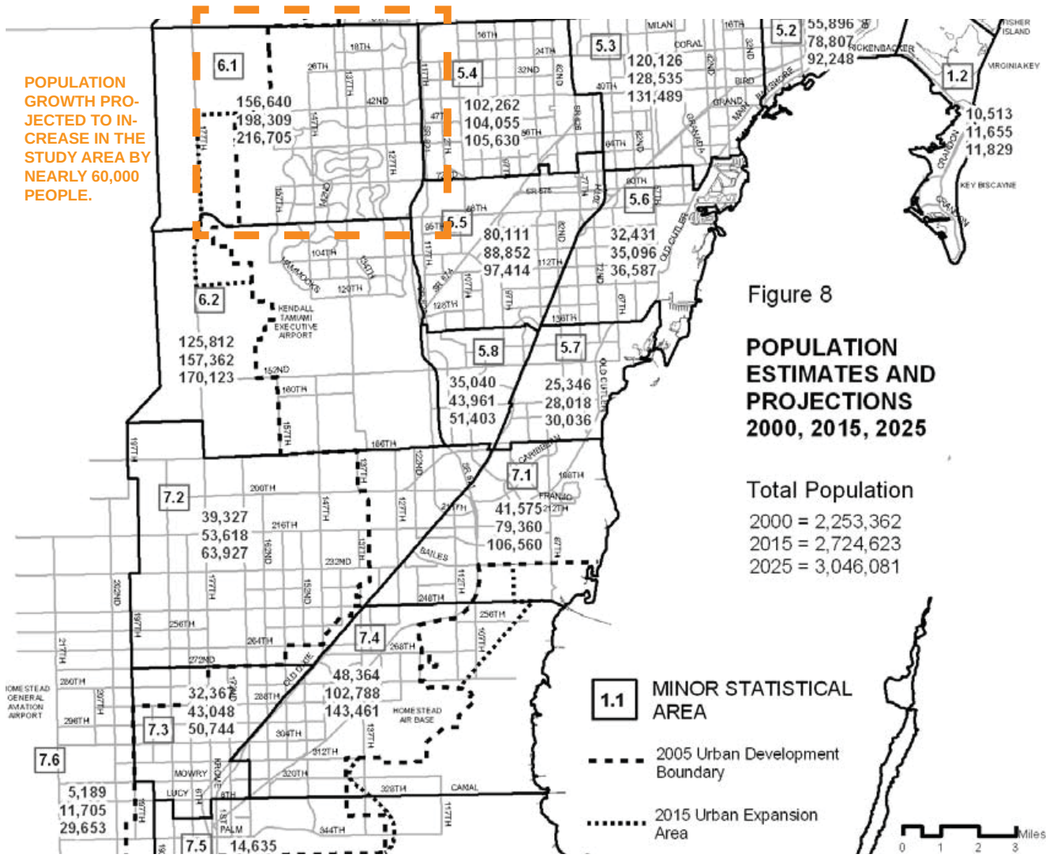
GENERAL SOIL MAP

DEPARTMENT OF PLANNING AND ZONING

The Urban Development Boundary (UDB)

The **Green City Miami** study area consists of approximately 859 acres currently used for agricultural farming and located outside of the Urban Development Boundary but within the Urban Expansion Area, the area officially designated for potential future UDB expansion. The Urban Development Boundary (UDB) Line was first created in 1975; and has expended by only 15% over the last 36 years. This has been Miami-Dade County's key tool for growth management. Now with less than 6% of undeveloped remaining inside the UDB, it is considered insufficient to accommodate the net 15 years population growth.

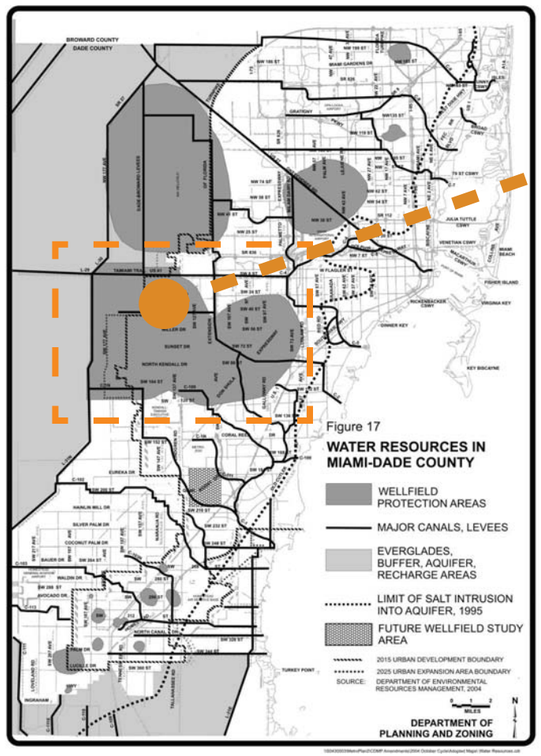
Looking forward, it is projected that Miami-Dade will gain 700,000 residents by 2030. Where will these people live, work, play, pray, and have a choice of schools. Furthermore, the impact on our roadways will mean a profound impact on how the county deals with transportation and with providing the necessary civil services. In the illustration below it is projected that between 2000-2025 our study area will be impact by nearly 60,000 new residents. The **Green City Miami** development is projected to absorb 35,000 new residents and proposes a self-sustainable solution addressing enviromental, economical, and social issues within a new master planned community. This proposal celebrate's the natural, cultural, and regional resources offering a high quality of life experience.

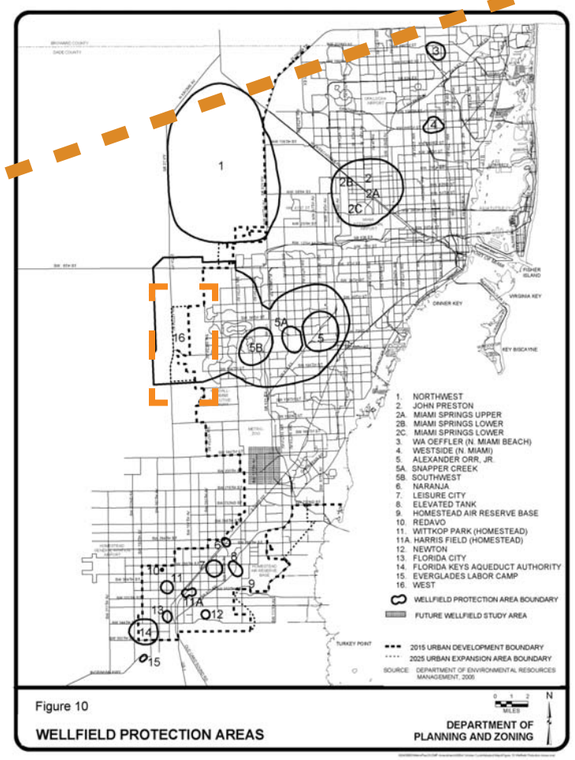


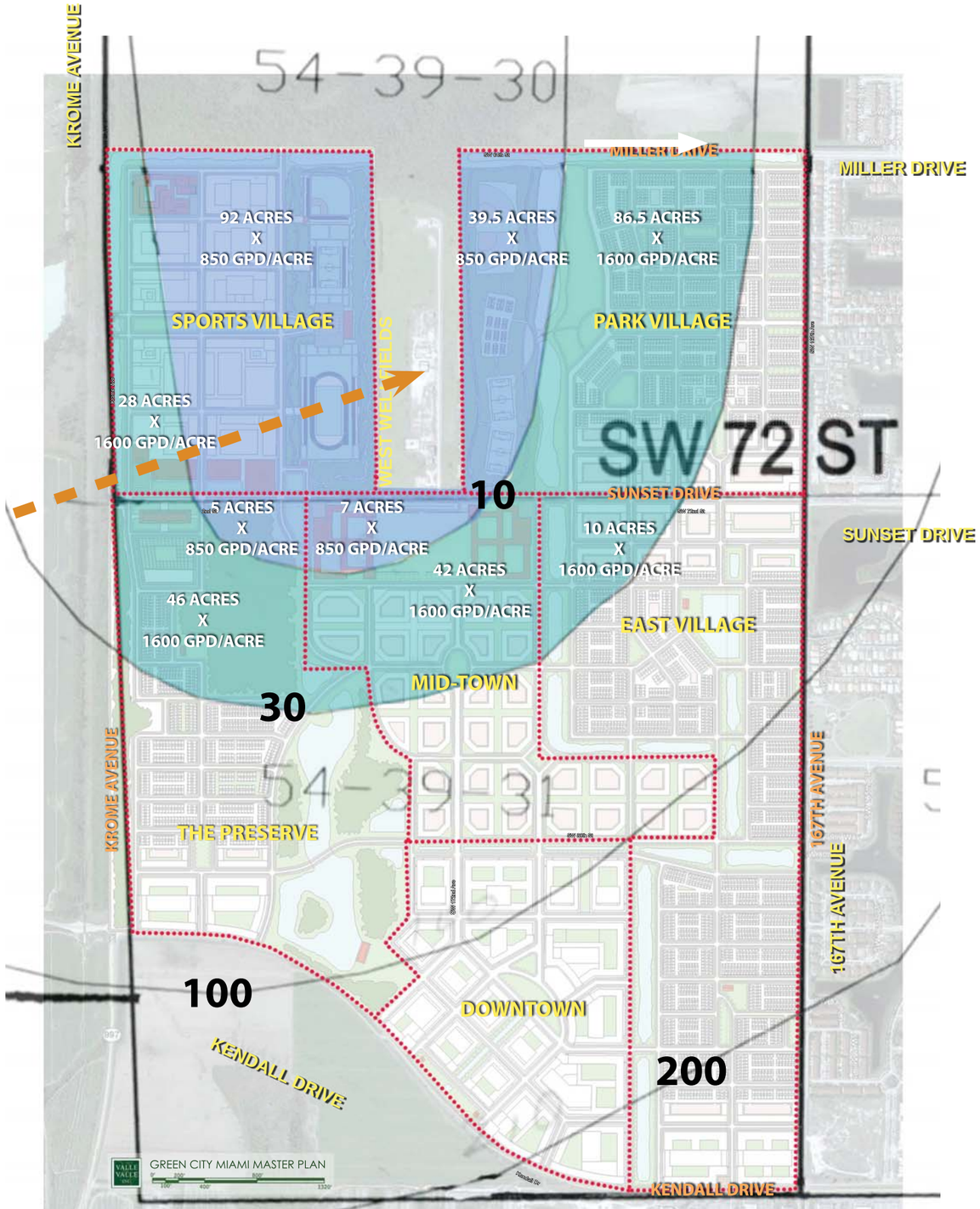
Wellfields Protection Area

The **Green City Miami** study area is situated entirely within the West Wellfield Interim protection area. This meant that more restrictive regulations would be applied to the study area. The restrictions are found in the Miami-Dade County Code section 24-43. - Protection of public potable water supply wells. The Water & Sewer Department projected that the West Wellfields were going to have three times the number of wells that have been actually built. Based on that earlier projection a series of circles were drawn that indicated the number of days it would take for water to travel through the west wellfields protection area. In the illustration to the far right, the circles were overlay over the study area and colored shaded to analyze the maximum allowable sewage loading capacity permited within each.

The maximum gallons per day per unsubmerged acre found in Table B-1, under section 24-43, were used to calculate the program that can be built within these travelling water circles. The calculations were then distributed between various landuses to deteremine the density and intensity of the land.







THE STUDY AREA FALLS WITHIN THE BOUNDARIES OF WEST WELLFIELDS PROTECTION AREA

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Wellfields Protection Area

The table below was created to calculate the maximum density and intensity that can be built within the land areas that fall within each of the travelling water circles. The distribution of program became a back-and-forth exercise between the master plan and the table until the appropriate balanced was achieved. The totals shown in the dark red row on the table below indicates the development program potential.

SEC. 24-43. PROTECTION OF PUBLIC PORTABLE WATER SUPPLY WELLS: The provisions of this section which impose upon land uses within the West Wellfield Interim protection area regulations which are more restrictive than those regulations applicable to the other public utility potable water supply wellfields in Miami-Dade County shall be deemed interim in nature. Said more restrictive regulations shall be reviewed by such technical review task force(s) or committee(s) as provided by the Board of County Commissioners or its designee upon recommendation of the Director. The Director shall submit to the Board of County Commissioners progress reports, as necessary, pertaining to said review, and recommendations necessary to protect the public health, safety and welfare arising out of said review shall be presented to the Board of County Commissioners. The Miami-Dade County Conflict of Interest and Code of Ethics Ordinance (Section 2-11.1 of this Code) shall not be applicable to task forces or committees provided for in this section.

LOCATION	MORE THAN 100 FEET BUT NOT EXCEEDING 10 DAYS	MORE THAN 10 DAYS BUT NOT EXCEEEDING 30 DAYS	ALLOWABLE GALLONS/DAY PER UNSUBMERGED ACRE	TOTAL GPD	CLASSIFICATION	Single Family - Detached gpd/unit	Single Family - Attached gpd/unit	Multifamily gpd/unit	Retail gpd/sf	Office gpd/sf	Industrial gpd/sf	Parks gpd/person	School gpd/stud	School gpd/staff	Community gpd/sf
					STANDARD	350	250	200	5/100	10/100	20/1000	5	20	15	10/100
					LEED	**280**	**200**	**160**	**4/100**	**8/100**	**16/1000**	**4**			**8/100**
Sports Village	92		850	78,200	**PROPOSED**	NA	NA	375	192,000	300,000	150,000	200	300	10	275,000
		28	1,600	44,800											
				123,000	LEED	**-**	**-**	**60,000**	**7,680**	**24,000**	**2,400**	**800**	**6,000**	**150**	**22,000**
Park Village	39.5		850	33,575	**PROPOSED**	NA	NA	1,600	75,000	56,000	-	120	-	-	5,000
		86.5	1,600	138,400											
				171,975	LEED	**-**	**-**	**165,855**	**3,000**	**2,240**		**480**	**-**	**-**	**400**
The Preserve	5		850	4,250	**PROPOSED**	NA	NA	280	60,000	54,000	200,000	500	-	-	200,000
		46	1,600	73,600											
				77,850	LEED	**-**	**-**	**44,800**	**2,400**	**2,160**		**2,000**	**-**	**-**	**16,000**
East Village	0		850	-	**PROPOSED**	NA	NA	600	155,000	65,000	-	120	-	-	5,000
		10	1,600	16,000											
				16,000	LEED	**-**	**-**	**6,800**	**6,200**	**2,600**		**-**	**-**	**-**	**400**
Mid-Town	7		850	5,950	**PROPOSED**	NA	NA	1,706	130,000	50,000	-	-	3,500	117	20,000
		42	1,600	67,200											
				73,150	LEED	**-**	**-**	**-**	**-**	**-**		**-**	**70,000**	**1,750**	**-**
Downtown	0		850	-	**PROPOSED**	NA	NA	4,500	750,000	400,000	-	-	-	-	20,000
		0	1,600	-											
				-	LEED	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	
	BUT NOT EXCEEDING 10 DAYS	**BUT NOT EXCEEEDING 30 DAYS**				**SF - Detached**	**SF - Attached**	**Multifamily Units**	**Retail sf**	**Office sf**	**Industrial sf**	**Parks Acres**	**Students**	**Staff**	**Community sf**
	99	70			**TOTALS**	**-**	**-**	**11,401**	**1,362,000**	**925,000**	**350,000**	**200**	**3,800**	**127**	**525,000**

TABLE B-1 Residential Property Served by Sanitary Sewers; Nonresidential Property Served by Sanitary Sewers and Not Using, Generating, Handling, Disposing, Discharging or Storing Hazardous Materials

Travel Time in Days or Distance in Feet from Property to Nearest Public Utility Potable Water Supply Well	*Maximum Allowable Sewage Loading for Property Not Having Indigenous Sandy Substrata (Gallons Per Day Per Unsubmerged Acre)*	*Maximum Allowable Sewage Loading for Property Having Indigenous Sandy Substrata (Gallons Per Day Per Unsubmerged Acre)*
More than 30 days	No additional restrictions	No additional restrictions
More than 10 days but not exceeding 30 days	**1600**	No additional restrictions
More than 100 feet but not exceeding 10 days	**850**	1600
100 feet or less	**0**	0

TABLE C-1 Allowable Storm Water Disposal Methods for Residential and Nonresidential Property

Travel Time in Days or Distance in Feet from Property to Nearest Public Utility Potable Water Supply Well	*Allowable Methods for Storm Water Disposal*
More than 30 days but not exceeding 210 days	Infiltration or seepage or overflow outfalls only
More than 10 days but not exceeding 30 days	Infiltration or seepage only
More than 100 feet but not exceeding 10 days	Infiltration only
100 feet or less	None

TABLE E-1: Allowable Land Uses Within the Northwest Wellfield Protection Area and Within the West Wellfield Interim Protection Area

SAMPLE OF PERMITTED LAND USES

Hotels, motels, Libraries (public), Office building, Plant sales (no propagation), Police station, Post office, Produce or fruit market, Professional and semiprofessional offices (no medical laboratory or clinic), Residential uses, Restaurants, including outdoor patios and service, Schools (no hazardous materials), Seafood stores, Storage warehouse (no hazardous materials), Vegetable stands, Warehouses (storage of food, fodder, apparel, and other nonhazardous materials), and Water tanks or towers

Case Studies I

These case studies show potential densities outside the 30 day travelling water circle.

Bay Meadow Park: The lessons we learn from this development demonstrate how a mixed-use program can function both vertically and horizontally. The intense mixed-use program is located along a well-defined public open space with ample access roads in the form of boulevards. The buildings frame the street edges with wide sidewalks and parallel parking. The majority of the parking is hidden behind the buildings in parking structures. The aerial view demonstrates how to scale down from the vertical mix to a compatible residential program using apartments and townhouses to buffer from the adjacent single family residential neighborhood.

Market Commons: The lessons are similar, however it is a more intensive vertical mix program. In this case study the townhouses are attached to mixed-use buildings to help buffer from the single family residential neighbor. The parking is sandwiched between buildings on three sides in an attempt to wrap program along all the street edges to celebrate the pedestrian experience.

Addison Circle: The lessons that we learn in this case study are how to preserve a human scale to the development while building a highly dense program, how to prioritize the road network so that access to the parking garages is kept to the secondary roads, the opportunities created when carving out public space, and various ways to hide parking garages.

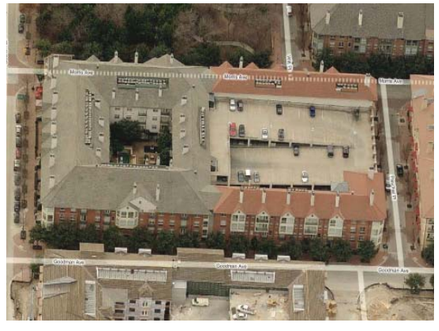
BAY MEADOW PARK

SITE DATA
Location:.....San Francisco, California
Municipality:.....SanMateo County.
Acres: 75acres
Zoning:.....Mixed-Use
Setting: .....Infill
Structured Parking:..... 5,000 Spaces
Transportation: .... Local Bus & Metro-Rail
Access to Bicycle/Pedestrian Paths: ..... 1/4 Mile

PROGRAM
F.A.R.:..... 2.0
Density Type (D.U./Acre):..... 30
Housing [Rental+Sale]:.....740 Units
Retail: .....300,000 Sq Ft
Hotel: .....None
Office: .....500,000 Sq Ft
Park/Landscaping:..... 20% Required

REGULATIONS
Landuse:.....Mixed-Use
Build-To-Line (BTL):.....At Setback
Bldg. Height: ..... 6 Stories Max.
Pedestal Height: ..... 6 Stories Max.
Tower Bldg. Height: ..... N.A.
Penthouse Bldg. Height:..... N.A.
Bldg. Frontage:..... Mini. 75 %
Bldg. Placement: .....Front 0 + Sides/Rear 0
Colonnade/Balcony: .....Encroachment over Sidewalk
Habitable Space: ..... N.A.
Expression Line:.....Top of 1nd Story Required
Vehicular Entries:..... N.A.
Open Space:..... 20 % Min. in the Form of Courtyard Gardens, Colonnades, Squares, & Plazas

ADDISON CIRCLE

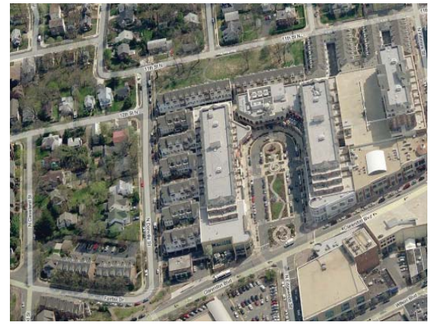


SITE DATA
Location:.....Addison, Texas
Municipality:.....N.A.
Acres: ..... 80 acres
Zoning:.....Mixed-Use
Setting: .....Infill
Structured Parking:..... 7,500 Spaces
Transportation: ..... Local Bus
Access to Bicycle/Pedestrian Paths: ..... 1/4 Mile

PROGRAM
F.A.R.:.....2.5
Density Type (D.U./Acre):.....50
Housing: ..... 2,700 Units
Retail: .....250,000 Sq Ft
Hotel: .....None
Office: .....1,000,000 Sq Ft
Park/Landscaping:..... 20% Required

REGULATIONS
Landuse:.....Mixed-Use
Build-To-Line (BTL):.....At Pedestal and Tower
Bldg. Height:..... 8 Stories Max.
Pedestal Height: ..... N.A.
Tower Bldg. Height: ..... N.A.
Penthouse Bldg. Height:..... N.A.
Bldg. Frontage:..... Minimum 75 %
Bldg. Placement: .....Front 0 + Sides/Rear 0
Colonnade/Balcony: ..Encroachment over Sidewalk
Habitable Space: ..... N.A.
Expression Line:..... N.A.
Vehicular Entries:..... N.A.
Open Space:..... 12 % Min. in the Form of Courtyard Gardens, Colonnades, Squares, & Plazas

MARKET COMMONS



SITE DATA
Location:.....Clarendon, Virginia
Municipality:.....Wahington D. C.
Acres: ..... 15 acres
Zoning:.....Core Sub-District
Setting: .....Infill
Structured Parking:..... 1,000 Spaces
Transportation: .... Local Bus & Metro-Rail
Access to Bicycle/Pedestrian Paths: ..... 1/4 Mile

PROGRAM
F.A.R.:..... 3.0
Density Type (D.U./Acre):..... 40
Housing [Rental+Sale]:.....300+87 Units
Retail: .....240,000 Sq Ft
Hotel: .....None
Office: .....100,000 Sq Ft
Park/Landscaping:..... 20% Required

REGULATIONS
Landuse:.....Mixed-Use
Build-To-Line (BTL):..... Pedestal
Bldg. Height:..... 8 Stories Max.
Pedestal Height: ..... 2 Stories Max.
Tower Bldg. Height: ..... 4 Stories Max.
Penthouse Bldg. Height:..... 2 Stories Max.
Bldg. Frontage:..... Mini. 75 %
Bldg. Placement: .....Front 0 + Sides/Rear 0
Colonnade/Balcony: .....Encroachment over Sidewalk
Habitable Space: ..... 20' Min. for 8 Stories
Expression Line:.....Top of 2nd Story Required
Vehicular Entries:..... N.A.
Open Space:..... 20 % Min. in the Form of Courtyard Gardens, Colonnades, Squares, & Plazas

MIZNER PARK

SITE DATA

Location: ..... Boca Raton, Florida
Municipality: ..... Palm Beach County
Acres: ..... 10 acres
Zoning: ..... Mixed-Use "Urban Village"
Setting: ..... Infill
Structured Parking: ..... 1,000 Spaces
Transportation: ..... Local Bus
Access to Bicycle/Pedestrian Paths: ..... 1/4 Mile

PROGRAM

F.A.R.: 2.5
Density Type (D.U./Acre): 50 and100
Housing: ..... 272 Units
Retail: ..... 200,000 Sq Ft
Hotel: ..... None
Office: ..... 170,000 Sq Ft
Park/Landscaping: ..... 20% Required

REGULATIONS

Landuse: ..... Mixed-Use "Urban Village"
Build-To-Line (BTL): ..... At Pedestal
Bldg. Height: ..... 12 Stories Max.
Pedestal Height: ..... 1 Stories Max.
Tower Bldg. Height: ..... 11 Stories Max.
Penthouse Bldg. Height: ..... N.A.
Bldg. Frontage: ..... Minimum 75 %
Bldg. Placement: ..... Front 0 + Sides/Rear 0
Colonnade/Balcony: ..... Encroachment over Sidewalk
Habitable Space: ..... N.A.
Expression Line: ..... Top of 1st Story Required
Vehicular Entries: ..... N.A.
Open Space: ..... 20 % Min. in the Form of Courtyard Gardens, Colonnades, Squares, & Plazas

BAY DOWNTOWN KENDALL

SITE DATA

Location: ..... Miami, Florida
Municipality: ..... Miami-Dade County
Acres: ..... 1.2 acres
Zoning: ..... Mixed-Use
Setting: ..... Infill
Structured Parking: ..... 200 Spaces
Transportation: ..... Local Bus & CalTrain Transit
Access to Bicycle/Pedestrian Paths: ..... 1/4 Mile

PROGRAM

F.A.R.: 3.0
Density Type (D.U./Acre): 75
Housing: ..... 74 Units
Retail: ..... 22,500 Sq Ft
Hotel: ..... None
Office: ..... None
Park/Landscaping: ..... 20% Required

REGULATIONS

Landuse: ..... Core Sub-District/Mixed-Use
Build-To-Line (BTL): ..... At Pedestal and Tower
Bldg. Height: ..... 7 Stories Max.
Pedestal Height: ..... 2 Stories Max.
Tower Bldg. Height: ..... 5 Stories Max.
Penthouse Bldg. Height: ..... N.A..
Bldg. Frontage: ..... Minimum 75 %
Bldg. Placement: ..... Front 0 + Sides/Rear 0
Colonnade/Balcony: ..... Encroachment over Setback
Habitable Space: ..... 20' Min. for First 7 Stories
Expression Line: ..... Top of 2nd Story Required
Vehicular Entries: ..... 33' feet Width Max..
Open Space: ..... 15 % Min. in the Form of Courtyard Gardens, Colonnades, Squares, & Plazas

CITY ECO-URBANISM TO CREATE PLACE

Case Studies II

These case studies show potential densities outside the 100 day travelling water circle.

Mizner Park: The lessons we learned from our research, as seen in these photographic views, are the importance of varying the building massing, the significance of carving out a linear park, the need to hide off-street parking, and the importance of attaching a single layer of program to a parking garage to hide it from a primary street.

Downtown Kendall: The lessons we learned from this project include the need to establish maximum building frontages, the need to restrict parking garage access to secondary streets, the importance of requiring 100% build-out of the retail along primary streets, and what happens when habitable space is required along the street frontage as a method to hide the parking.

City Place: The real lesson learned from this project is understood best in the site plan; it shows us how to spread density so that it can be kept to a human scale in the more public streets and more intense (higher floors) setback of the street edges.

CITY PLACE

SITE DATA

Location: ..... West Palm Beach, Florida
Municipality: ..... Palm Beach County
Acres: ..... 72 acres
Zoning: ..... Mixed-Use
Setting: ..... Infill
Structured Parking: ..... 3,300 Spaces
Transportation: ..... Local Bus & Metro-Rail
Access to Bicycle/Pedestrian Paths: ..... 1/4 Mile

PROGRAM

F.A.R.: 2.5
Density Type (D.U./Acre): ..... 25 and 120
Housing: ..... 600 Units
Retail: ..... 700,000 Sq Ft
Hotel: ..... 400 Rooms
Office: ..... 750,000 Sq Ft
Park/Landscaping: ..... 20% Required

REGULATIONS

Landuse: ..... Mixed-Use
Build-To-Line (BTL): ..... At Pedestal and Tower
Bldg. Height: ..... 25 Stories Max.
Pedestal Height: ..... 3 Stories Max.
Tower Bldg. Height: ..... 20 Stories Max.
Penthouse Bldg. Height: ..... 2 Stories Max.
Bldg. Frontage: ..... Minimum 75 %
Bldg. Placement: ..... Front 0 + Sides/Rear 0
Colonnade/Balcony: ..... Encroachment over Sidewalk
Habitable Space: ..... N.A.
Expression Line: ..... Top of 1st Story Required
Vehicular Entries: ..... N.A.
Open Space: ..... 10 % Min. in the Form of Courtyard Gardens, Colonnades, Squares, & Plazas

Charrette Master Plan I

This master plan shows the 859 acres within the study area. The master plan is divided into six distinct neighborhoods. The Downtown District located off Kendall Drive with high density mixed-use residential, the Central District located off Sunset Drive with Medium Density mixed-use residential, the Park District located off 64th Street with low density mixed-use residential, the Preserve with a mix of business and residential uses, the East Village with low-density residential and the Health and Wellness Village off Krome Avenue.

The diagrams in the next page show the landuses, the six distinct neighborhoods, the green network, the water network, the street network and the transportation network as well as how certain CDMP policies and goals are illustrated by this proposal.

Comprehensive Development Master Plan Goals (CDMP)

The proposed new town "GREEN CITY MIAMI," implements all the following **CDMP** guidelines:

• **CDMP Land Use Element Policy LU-8G(iii)(b)**...land is contiguous to the UDB.

• **CDMP Land Use Element Policy LU-8G(iii)(c)**...land located within one mile of extraordinary transit service.

• **CDMP Land Use Element Policy LU-8G(iii)(d)**...land having projected surplus service capacity where ecessary facilities and services can be readily extended.

• **CDMP Land Use Element Policy LU-1D**...the planning of residential areas as neighborhoods which include recreational, educational, and other public facilities, houses of worship, and safe and convenient circulation of automotive, pedestrian, and bicycle traffic.

• **CDMP Land Use Element Policy LU-1E...**uses policies of the County's "Guidelines for Urban Form," in the development of a variety of residential types and densities within section of land and the use of activity nodes to concentrate commercial uses.

• **CDMP Land Use Element Policy LU-1F...**promotes the inclusion of a variety of housing types.

• **CDMP Land Use Element Policy LU-1G...**encourages the development of business developments in clusters or nodes at the intersections of major roadways.

• **CDMP Land Use Element Policy LU-1I...**considers urban design, water and energy conservation and wildlife habitat when designing sites.

• **CDMP Land Use Element Policy LU-1O...**an integrated project that will provide much of the daily infrastructure and service of its residents.

• **CDMP Land Use Element Policy TE-2A...**promotes the creation of a system of interconnected designated bicycle ways.

• **CDMP Transportation Element Policy TU-2G...**encouraging the creation of mechanisms to ensure the safe movement of pedestrian and bicycle traffic.

• **CDMP Land Use Element Policy LU-2B...**and third priority shall support the staged development of the Urban Expansion Area (UEA).

• **CDMP Land Use Element Policy LU-10...**energy efficient development shall be accomplished through metropolitan and use patterns, site planning, landscaping, building design, and development of multimodal transportation systems.

CITY
ECO-URBANISM
TO CREATE PLACE

NEIGHBORHOODS:

This diagram illustrates six neighborhoods each with their own neighborhood centers providing all the daily needs of each neighborhood. The circles represent five minute walking distance, demonstrating they are all walkable and interconnected;

1) Downtown (dark red);

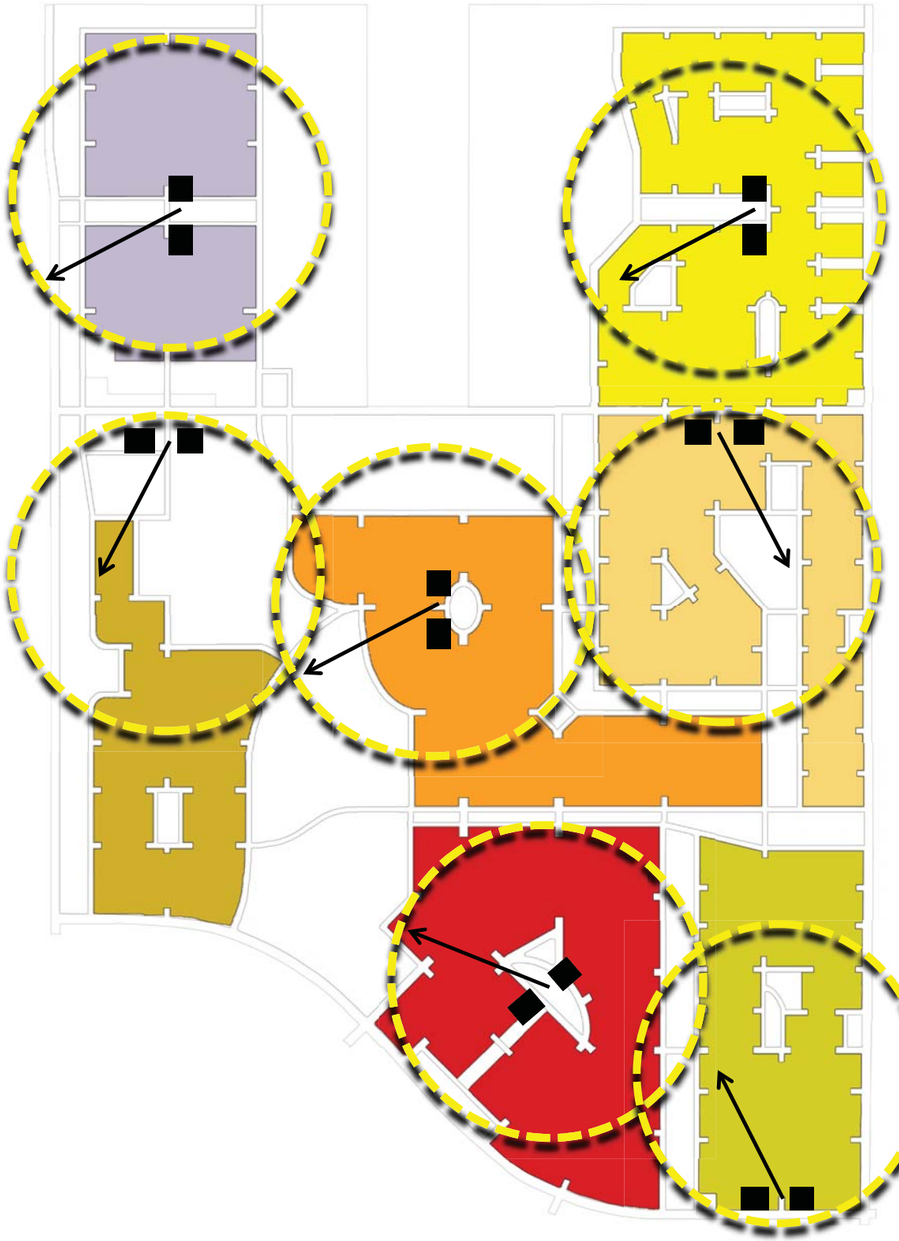
2) Mid-Town (orange);

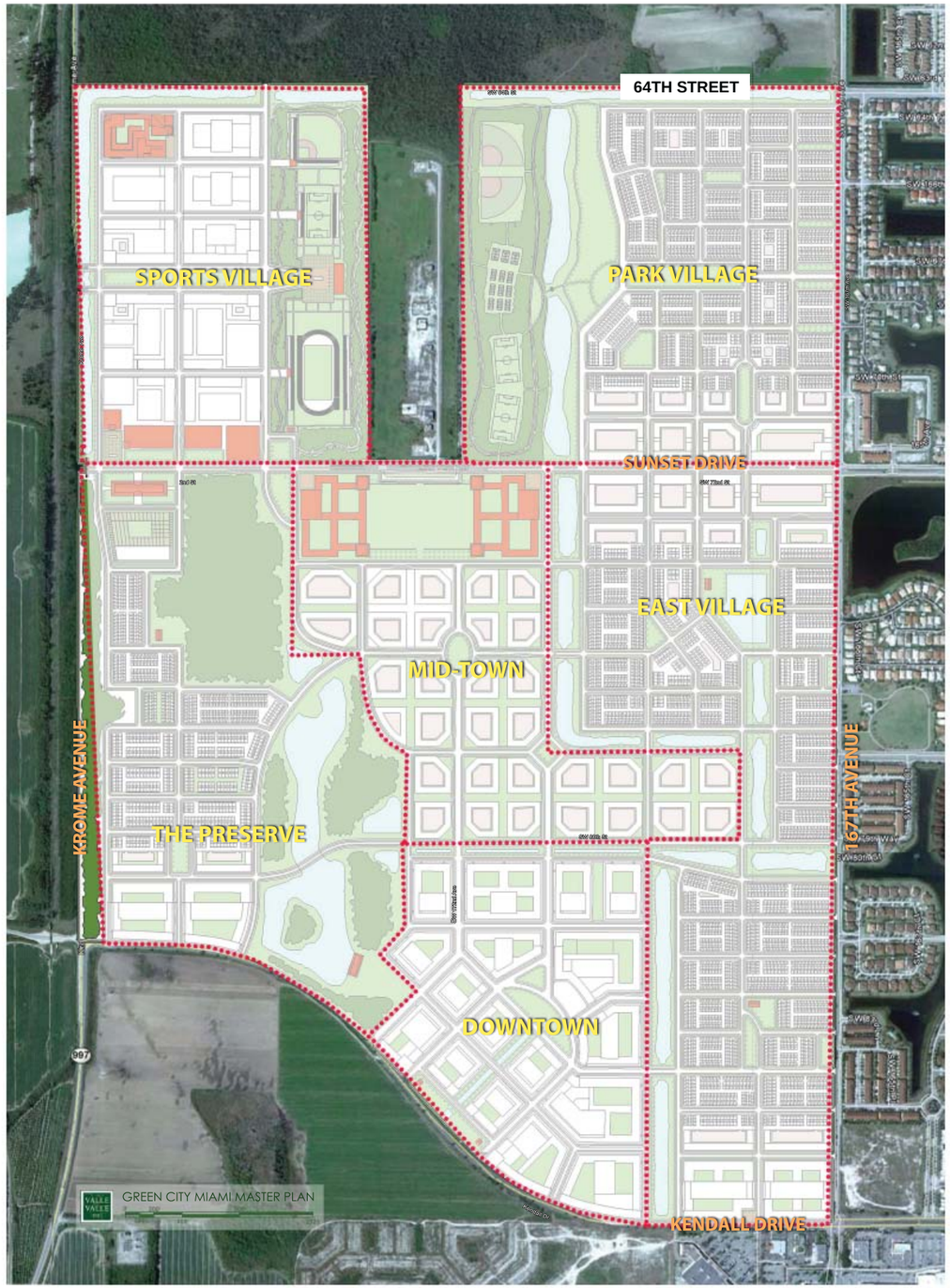
3) East Village (light green and light brown);

4) Park Village (yellow);

5) The Preserve (tan);

6) Sports Village (grey).





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ECO-URBANISM
TO CREATE PLACE

GREEN NETWORK:

This diagram illustrates a network of public greens interconnecting the four neighborhoods. This design encourages pedestrians to walk from paseo's to the pocket parks.

CIVIC BUILDINGS:

This diagram illustrates potential new civic buildings proposed throughout the six neighborhoods.

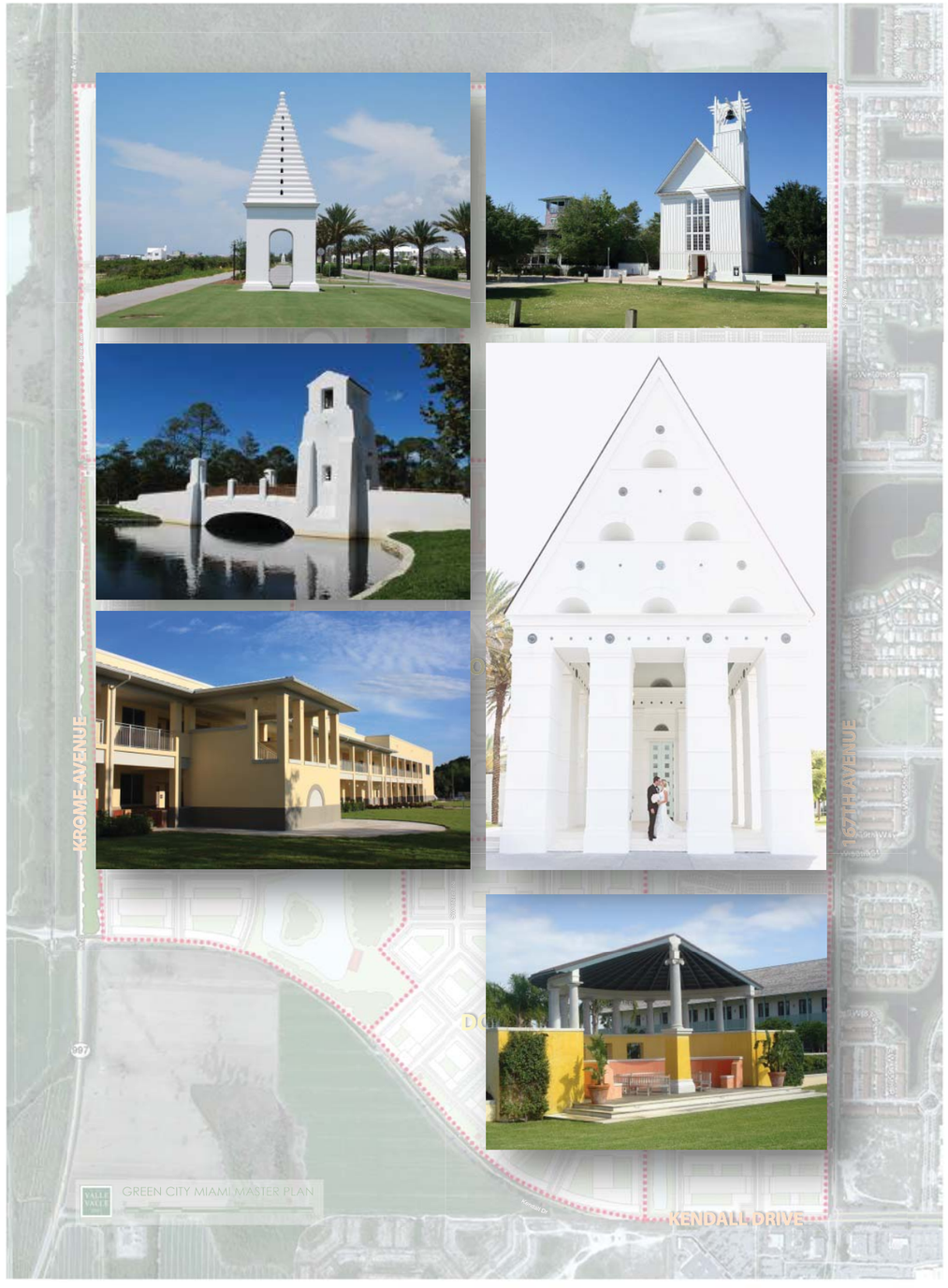
* Monuments

* Bridges

* Churches

* Schools

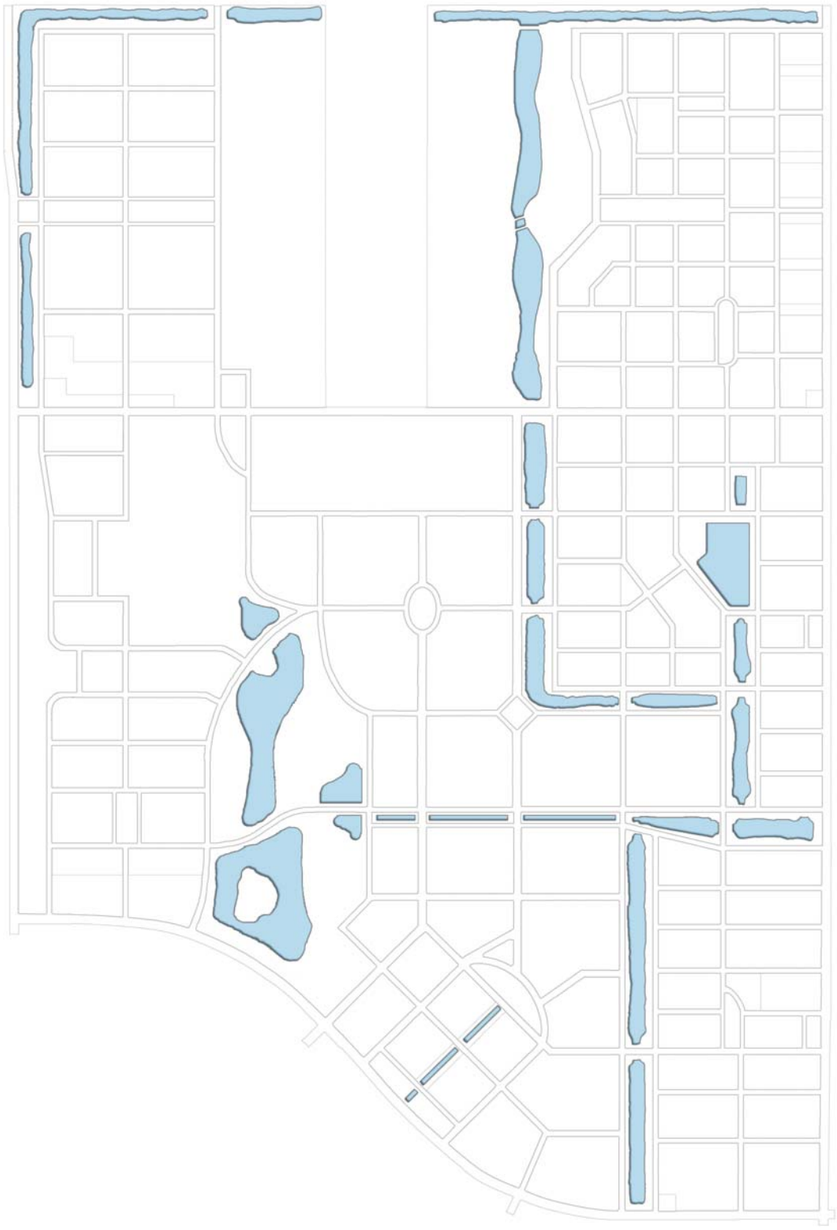
* Public Buildings

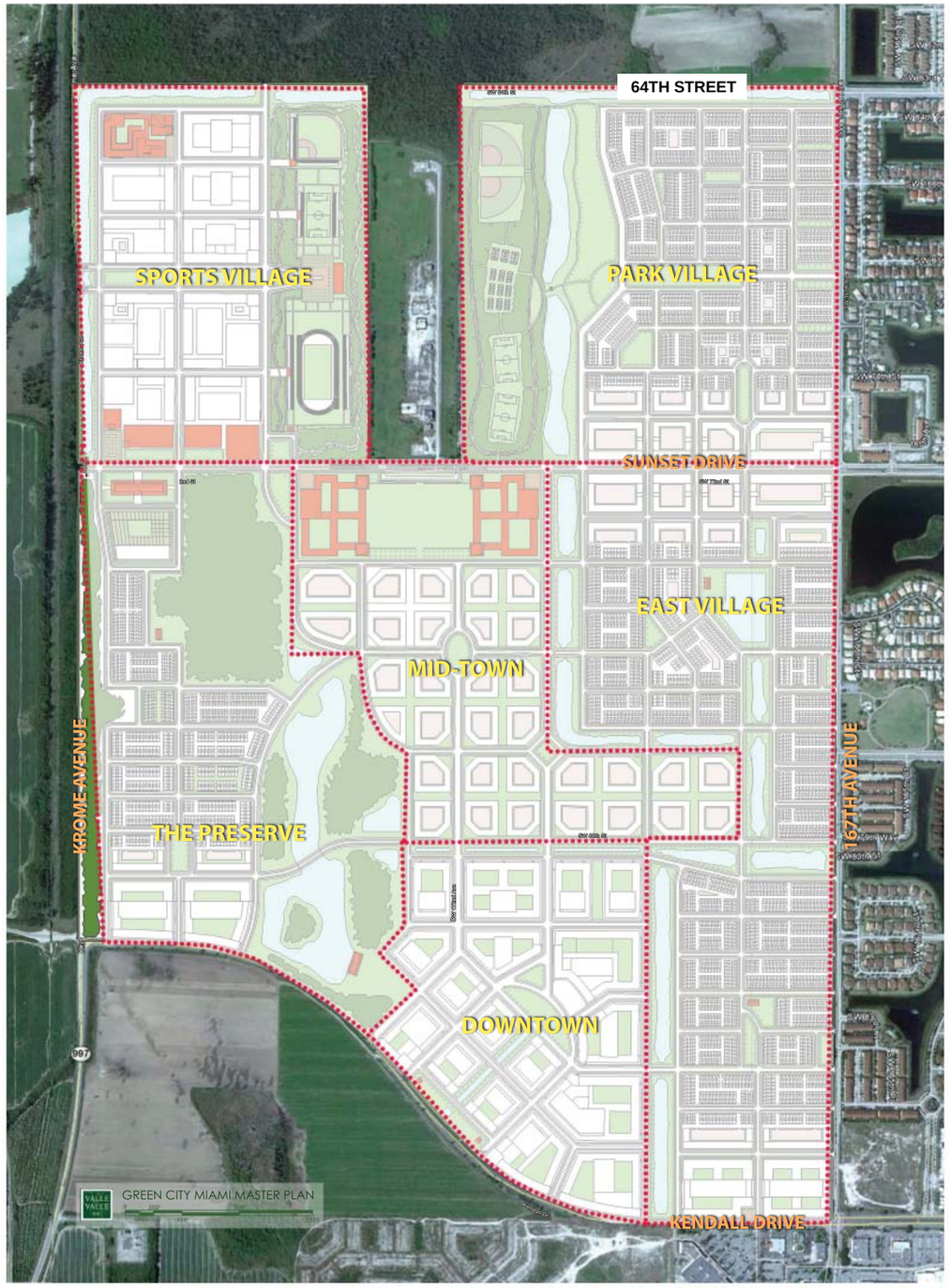


CITY
ECO-URBANISM
TO CREATE PLACE

WATER NETWORK:

This diagram illustrates how to allow a natural water flow run from Kendall Drive to the Bird Basin north off 64th Street. The layout inter-connects each of the neighborhoods, while also creating natural features in the land-scape.





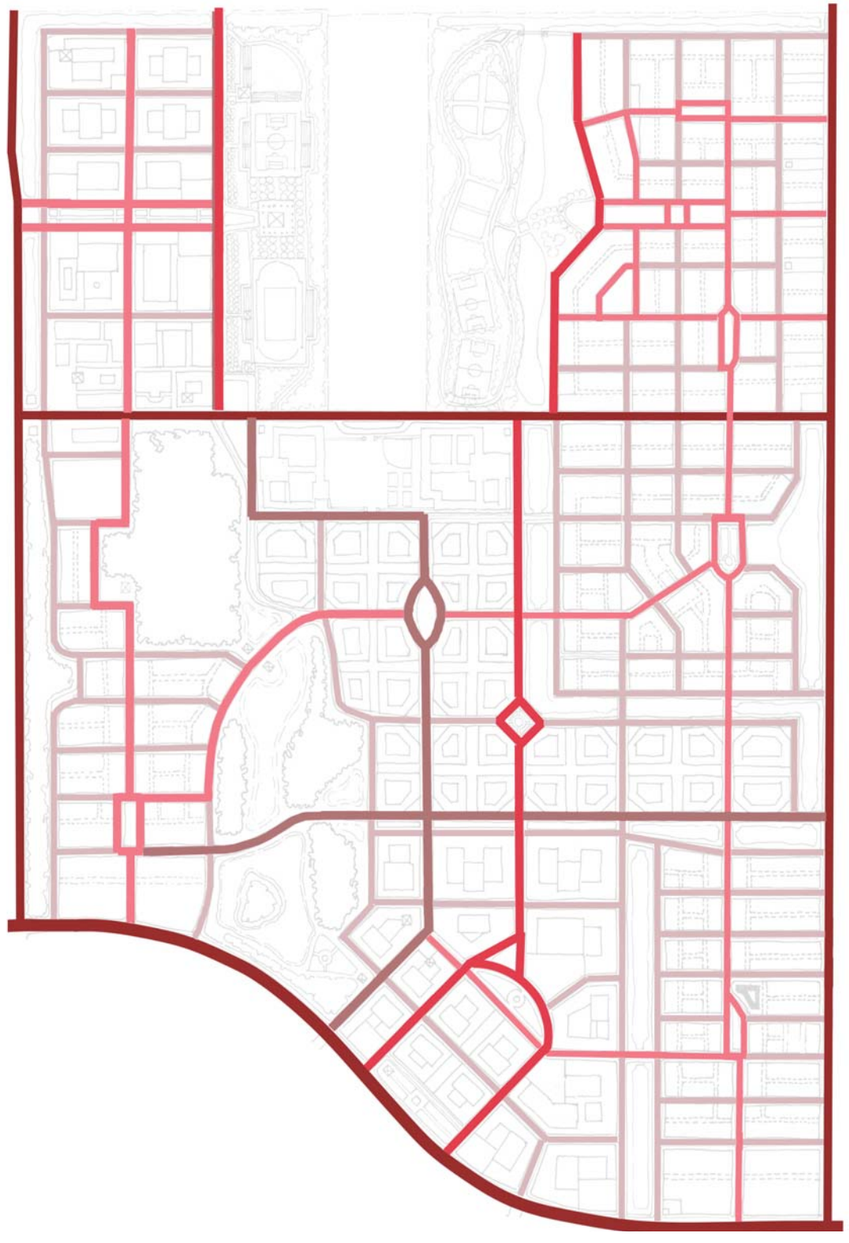
CITY
ECO-URBANISM
TO CREATE PLACE

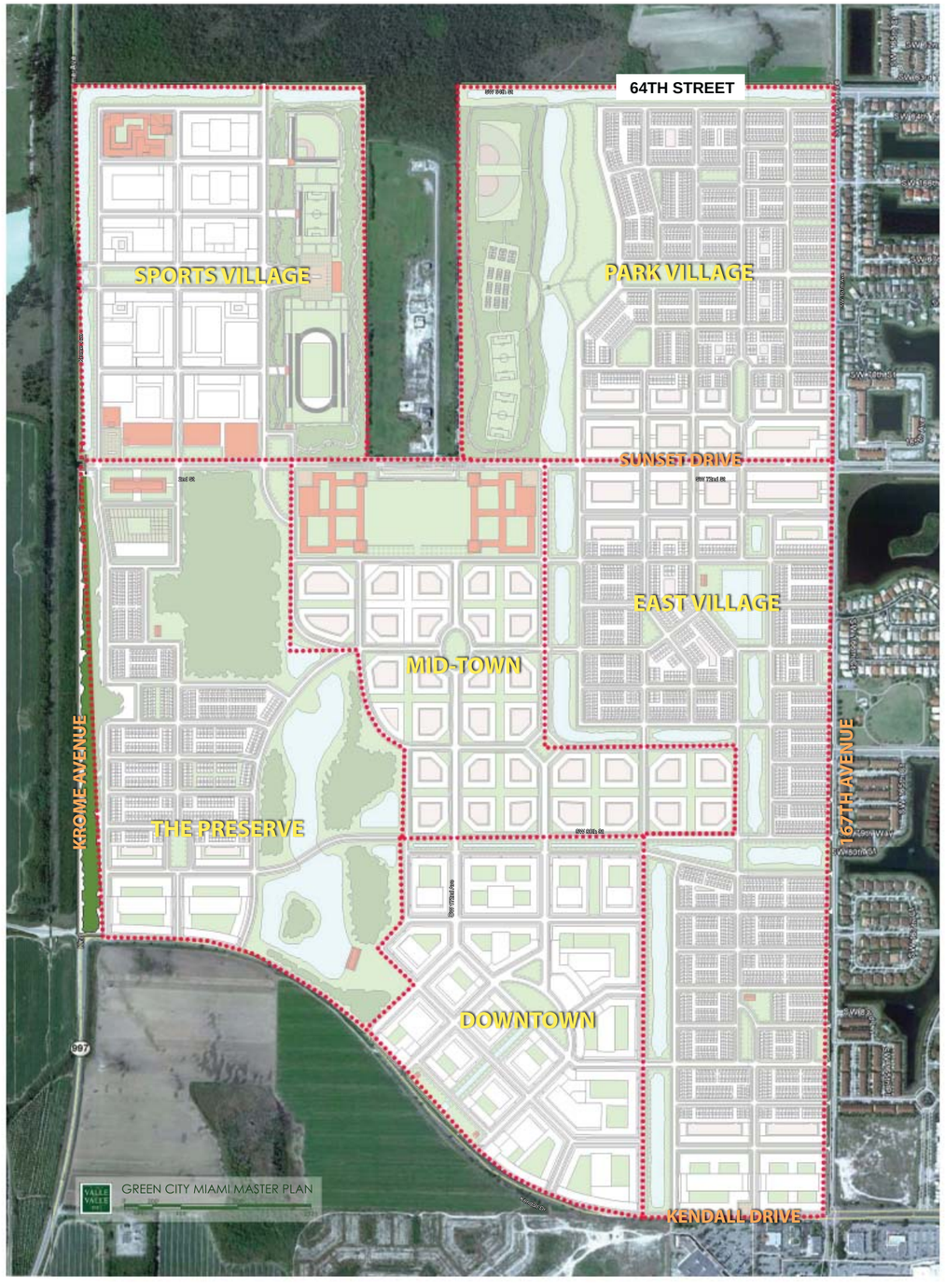
STREET NETWORK:

This diagram illustrates a hierarchy of roads ranging from the major collectors (dark colored) to the local neighborhood streets (light colored). The roadways and network permits multiple access routes within each neighborhood.

CDMP POLICY LU-1D:

The planning of residential areas as neighborhoods which include recreational, educational, and other public facilities, houses of worship, and **safe and convenient circulation of automotive, pedestrian, and bicycle traffic.**





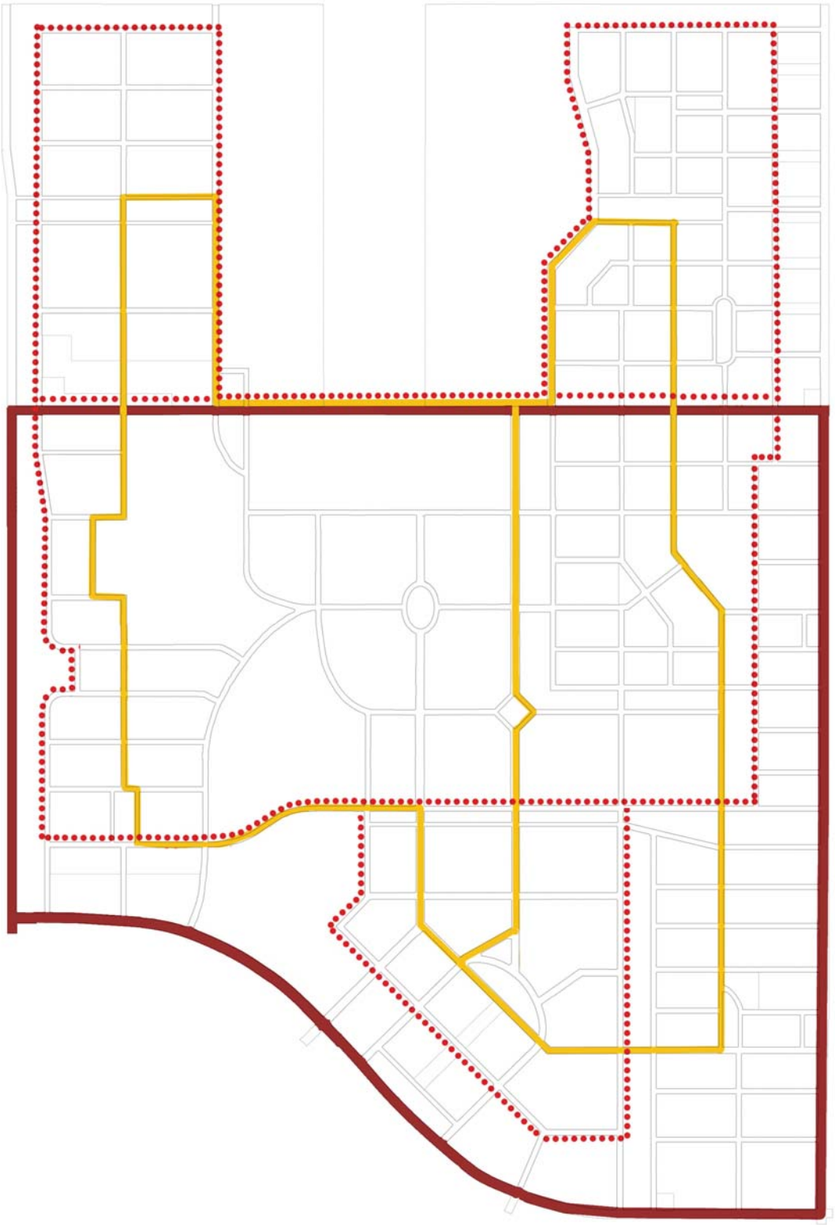
CITY
ECO-URBANISM
TO CREATE PLACE

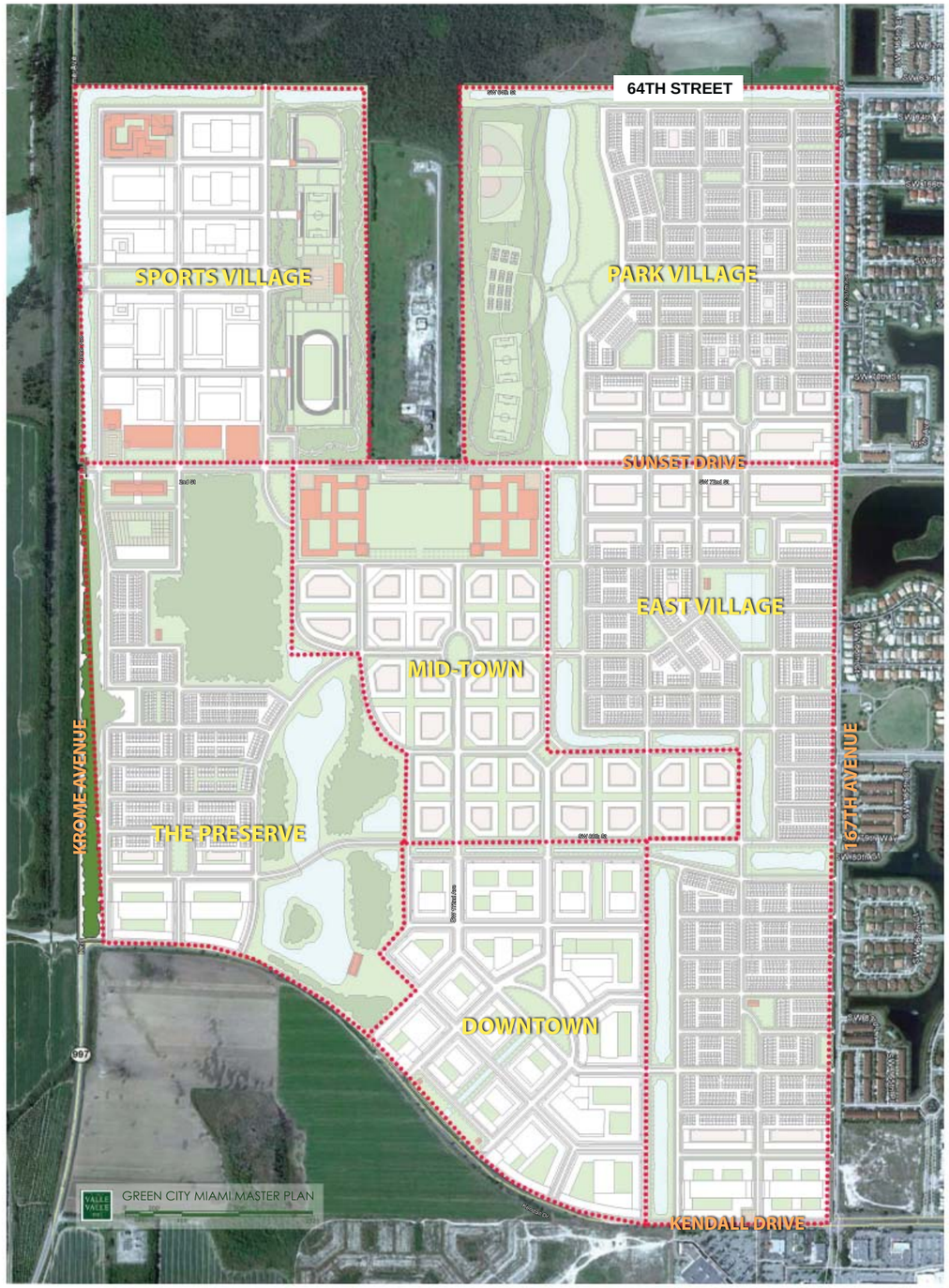
TRANSIT NETWORK:

This diagram illustrates dedicated routes to support three forms of public transportation; 1) expanded county bus route (dark red); 2) local trolly (light yellow) stopping at each neighborhood; and, 3) dedicated bicycle (red dots) lanes. Serviced by a Park & Ride along Kendall Drive.

CDMP POLICY LU-8G(iii)(c)

Land located within one mile of extraordinary transit service.





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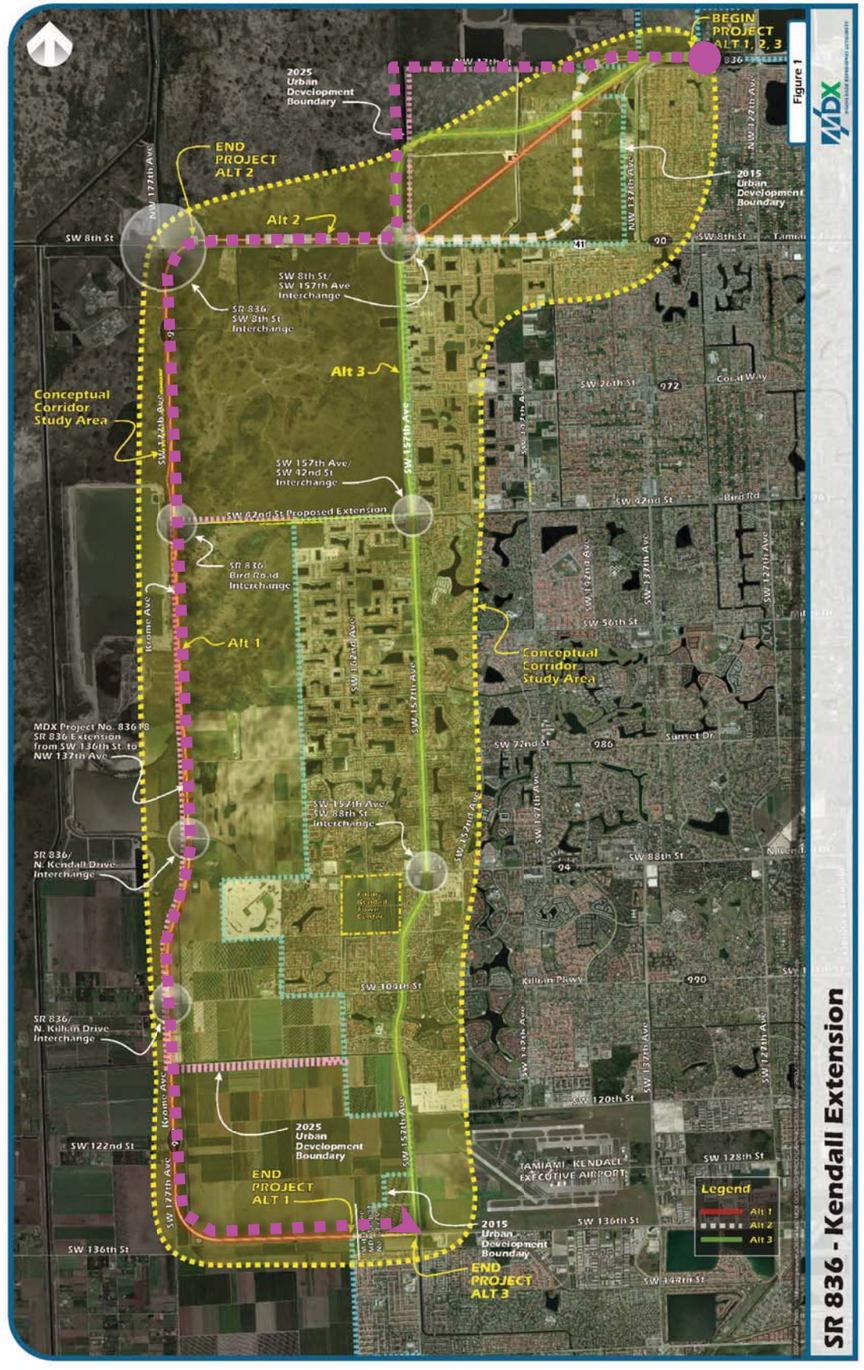
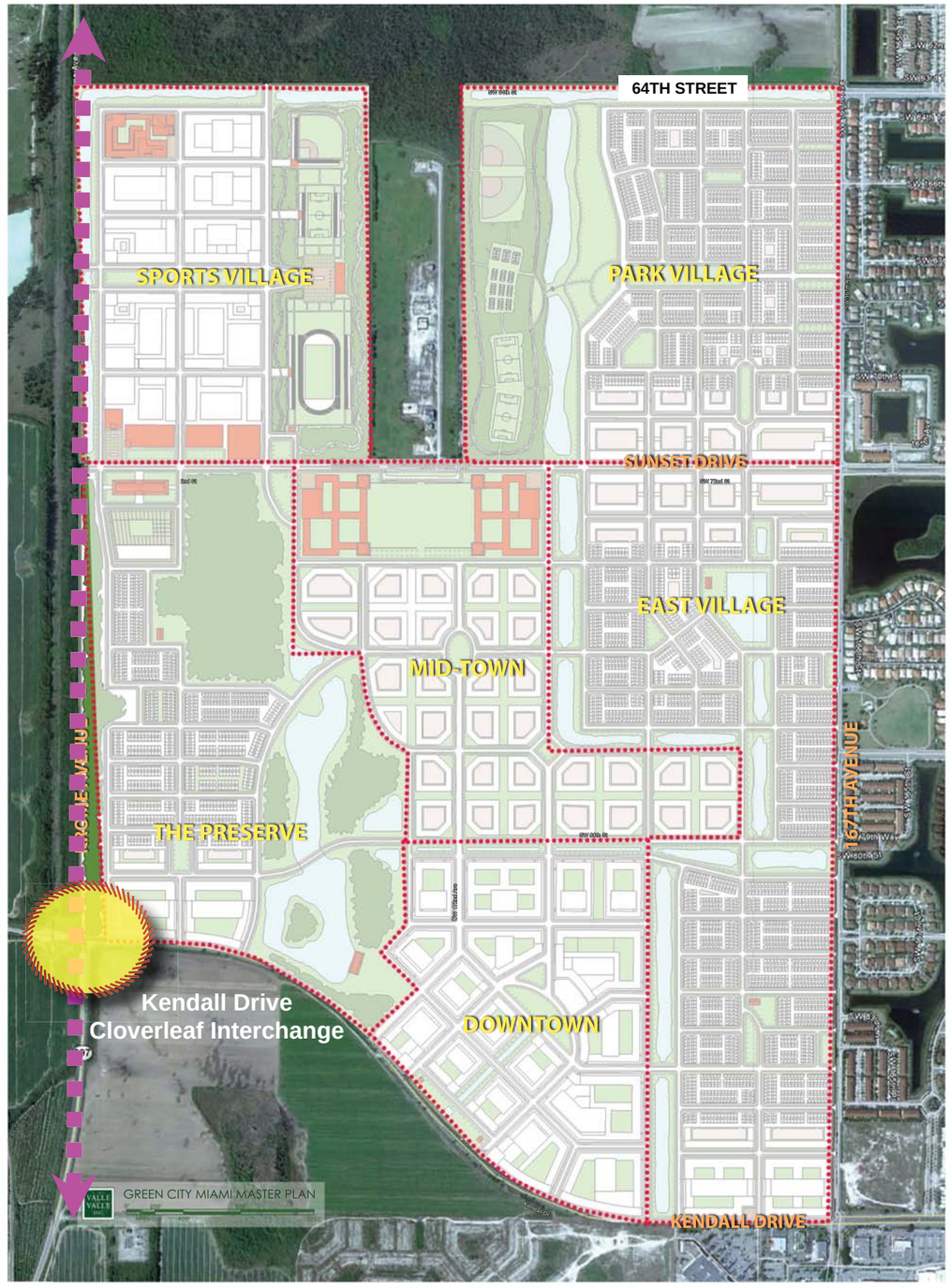
TO CREATE PLACE

MDX SR 836 EXTENSION:

These diagrams illustrate the alternative route the Miami-Dade Expressway (MDX) authority is proposing to extend State Road 836 beyond NW 12th Street to SW 136th Street, one route is along Krome Avenue. This route is to be built above ground with cloverleaf interchange at SW 8th Street, Miller Road, Kendall Drive, and Killian Drive.

As can be seem in the diagram on the far right this MDX SR 836 extension would pass along the site and have one of the cloverleaf interchanges off Kendall Drive and Krome Avenue.



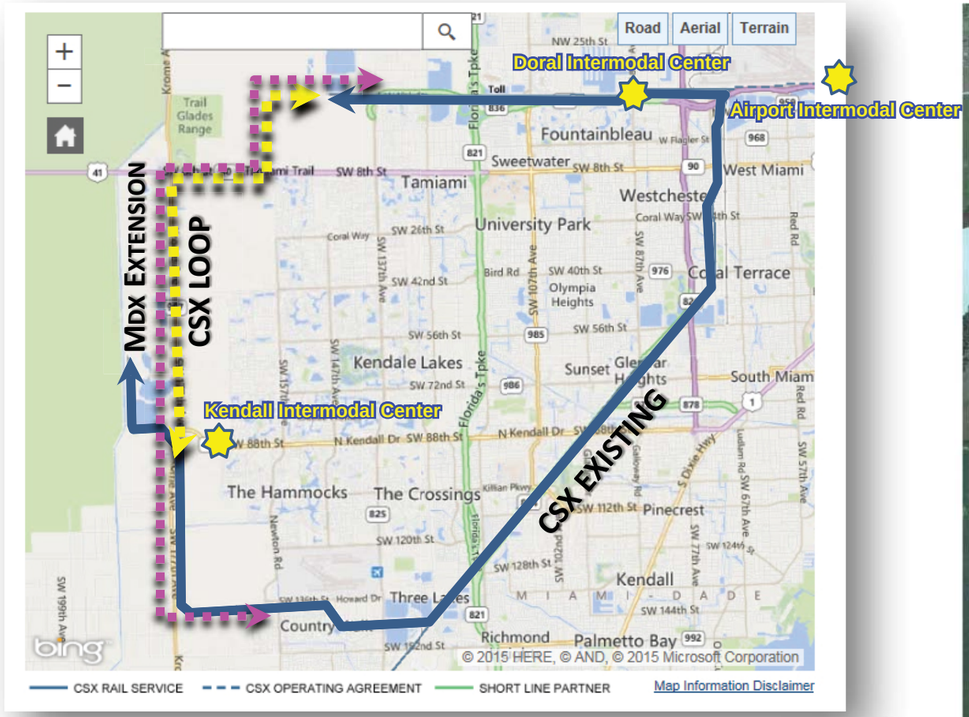


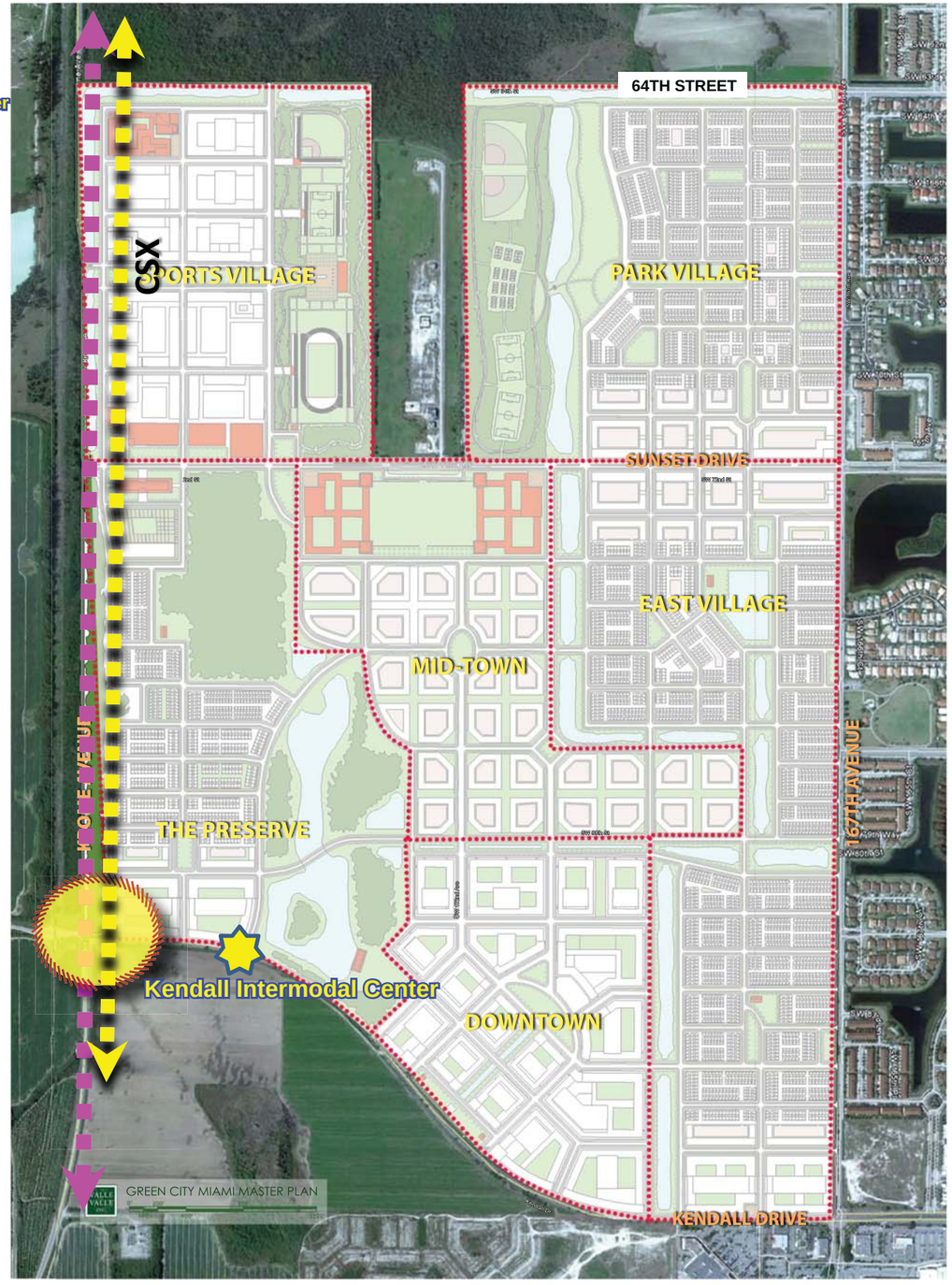
CSX NETWORK:

The CSX railroad line currently has two legs that extend from the north-south route along SR 826 one extends along SR 836 (NW 12th Street) to 137th Avenue. The other leg extends along SW 136th Street to Krome and up to Kendall Drive. These extensions of the CSX line are currently only used for cargo transportation.

The CSX line along the airport extends to the Airport Intermodal Center and is shared by Tri-Rail. The potential exist to complete the loop that will connect these legs of the CSX line. This could mean that the West End of Kendall would have an alternaive mode of transporation providing access to Miami Beach, the Dolphin Stadium and even the rest of the state of Florida.

The potential exist to link a West Kendall Intermodal Center to the Doral Intermodal Center and to the Airport Intermodal Center.





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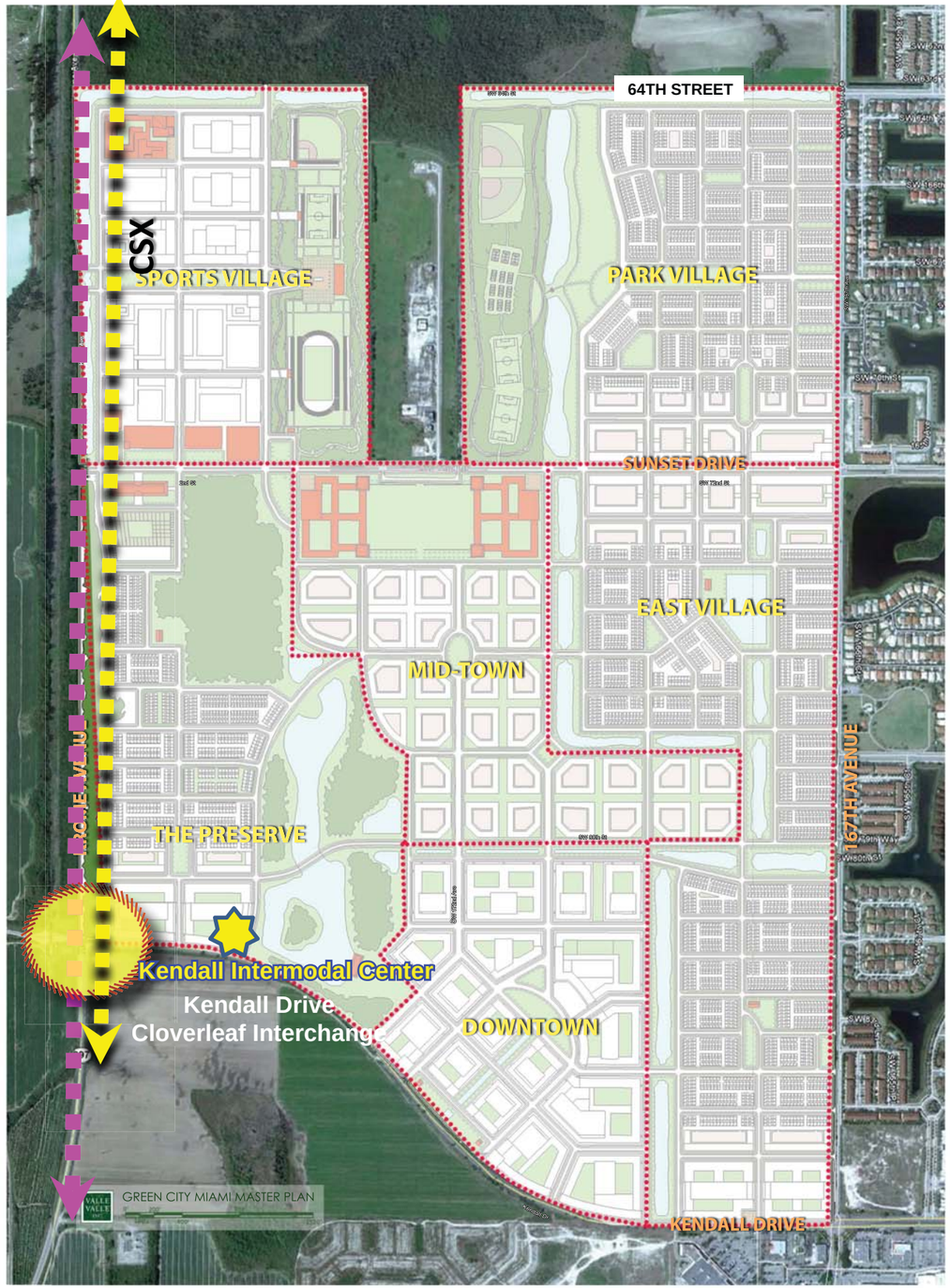
TO CREATE PLACE

METRO MAP 2025:

This map shows a complete picture of how the regional transit system for South Florida may look like for the residents of Miami-Dade County by the year 2025. In summary, with the proposed new MDX SR836 extension along Krome avenue and completing the CSX loop it would mean that West Kendall residents would have a significant alternative mode of transporation for the current 300,000 residents in this area so that they don't have to jump into their cars to go to Miami Beach or to watch a game at any of the county's stadium or performing arts centers.

Completing this missing gap would have significant economic impact for the rest of the county, allowing the West Kendall residents to easily travel around comfortabily.

Source: Transit Miami



CITY
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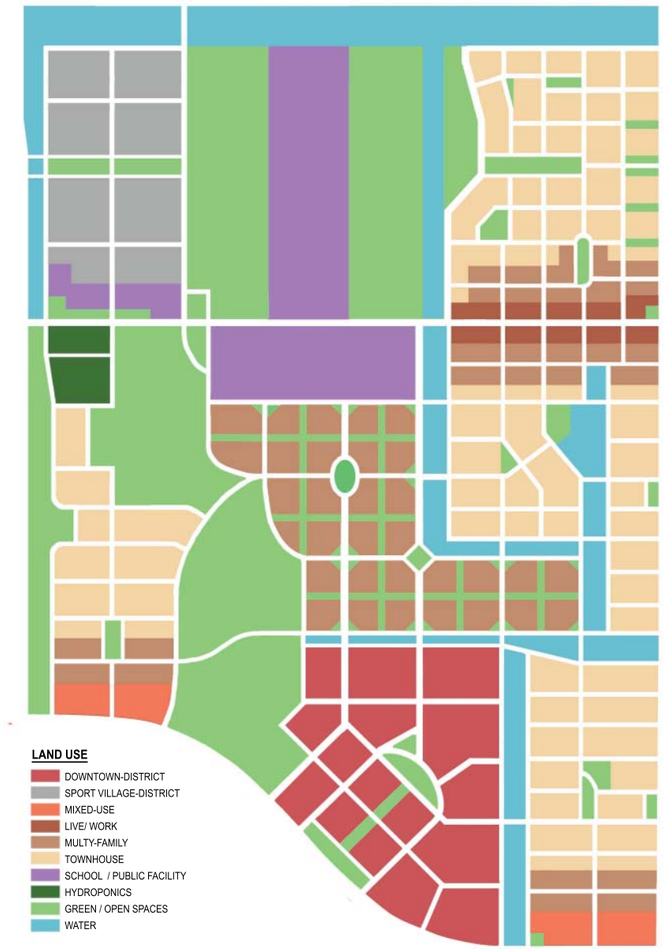
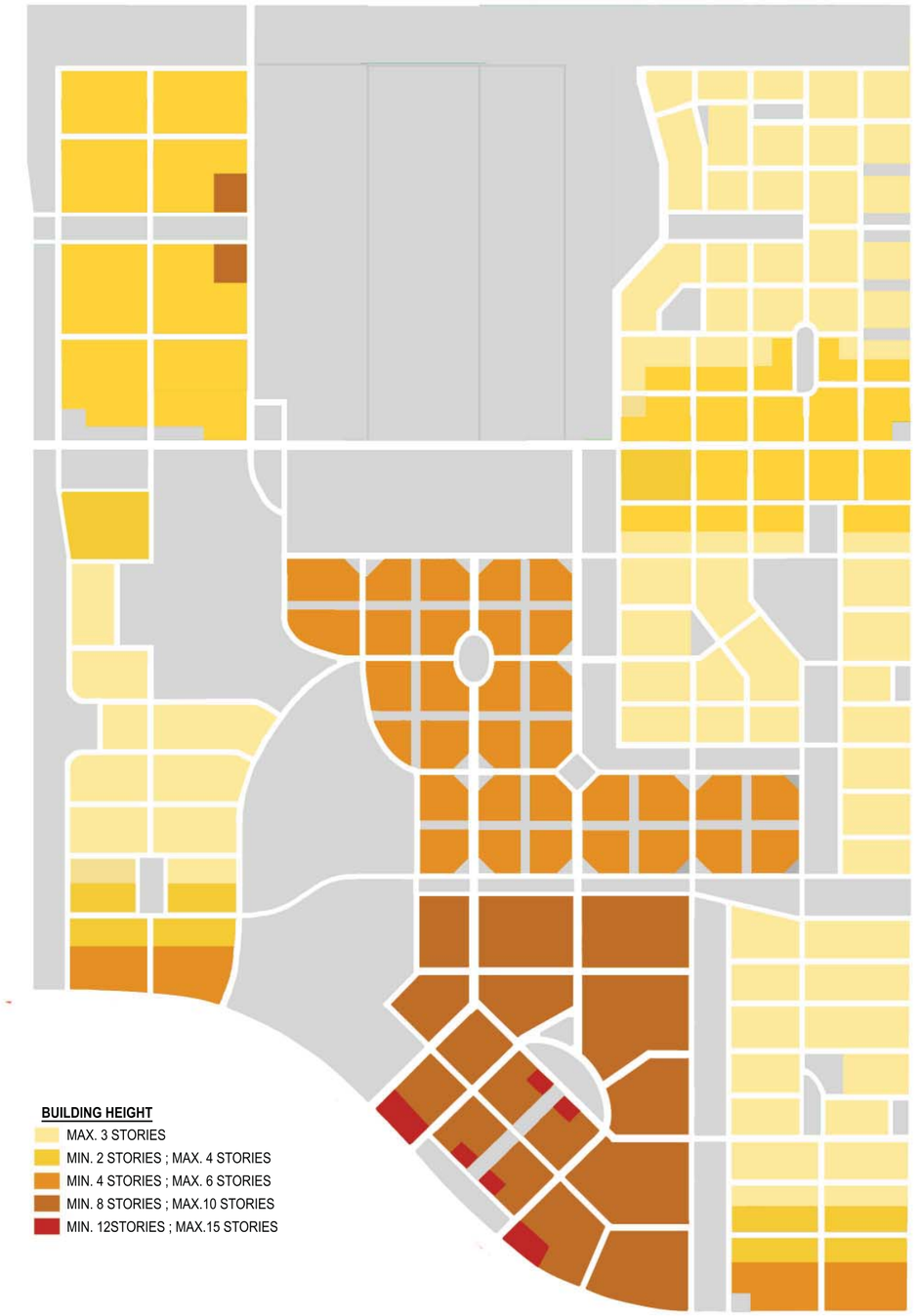
TO CREATE PLACE

COMPACT DEVELOPMENT

Green City Miami is promoting compact development in an effort to reduce VMT and green house gases. This smart form of development not only helps in reducing trip lengths but it also promotes walking and biking. Minimizing the infrastructure cost and providing for friendly streets is one of the goals of Green City Miami. These diagrams represent how the height of buildings and mix-of-land uses are planned within each of the six neighborhoods.





CITY
ECO-URBANISM
TO CREATE PLACE

BAPTIST

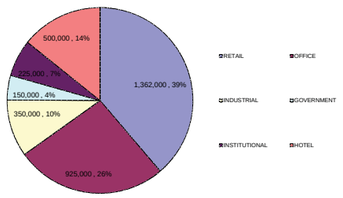
Green City Miami will have a diversity of residential areas designed as complete neighborhoods. A mix-of-uses will be easily accessable to its residents all within a five minute walking distance. The neighborhoods will be complemented with a diversity of employment opportunities. Some will even be incubators for specific industries such as technology, health and wellness, and vertical farming.

West Kendall Baptist is the major employer in the region. Currently, employing 1,500 people. After meeting with the West Kendall Baptist committee we were informed they have plans to double to over 3,000 employees in next ten years. That type of growth will generate various businesses that want to be near the hospital.

Master Plan - Program

The proposed Master Plan has a projected population growth of 25,849 residents of which 4,379 will be of school age for grades from Kindergarden to High School. These residents would be living in 11,401 residential units ranging from single family homes to mid-rise buildings and they would have the opportunity to work in the 7,593 new jobs created from the 3,512,000 sq. ft. of non-residential (government, commercial and office).

GREEN CITY
PROGRAM ANALYSIS



GREEN CITY SUMMARY

NEIGHBORHOOD DISTRICTS	DOWNTOWN	MID-TOWN	EASTSIDE VILLAGE	THE PRESERVE	PARK VILLAGE	SPORT VILLAGE	WELLFIELD
	93	111	179	156	159	121	40
TOTAL GROSS ACRES	859						

	RETAIL	OFFICE	INDUSTRIAL	GOVERNMENT	INSTITUTIONAL	HOTEL	
PROGRAM SQ. FT.	1,362,000	925,000	350,000	150,000	225,000	500,000	SQUARE FEET
TOTAL NON-RESIDENTIAL	3,512,000	SQ. FT.					
TOTAL RESIDENTIAL	11,401	UNITS					
POPULATION PROJECTIONS	25,849	RESIDENTS					
STUDENT GENERATION	4,379	ELEMENTARY THROUGH HIGH SCHOOL (K-12)					
EMPLOYMENT ASSUMPTIONS	7,593	NUMBER OF JOBS THAT WILL BE CREATED WITH THE PROPOSED PROGRAM					

GREEN CITY NEIGHBORHOODS PROGRAM ANALYSIS

NEIGHBORHOOD	UNITS	ACRES	HIGH	MEDIUM	LOW	SQUARE FEET RETAIL	OFFICE	INDUSTRIAL	GOVERNMENT	INSTITUTIONAL	HOTEL	ACRE(S) PARK/GREEN
DOWNTOWN	4,500	93.03	75	24	8	750,000	400,000	-	-	-	100,000	-
MID-TOWN	1,706	110.51	75	30	8	130,000	50,000	-	-	100,000	100,000	-
EASTSIDE VILLAGE	2,100	179.23	75	24	8	155,000	65,000	-	-	-	-	-
THE PRESERVE	1,120	155.90	75	24	8	60,000	54,000	200,000	-	-	-	-
PARK VILLAGE	1,600	159.23	75	24	8	75,000	56,000	-	-	-	-	-
SPORT VILLAGE	375	121.30	75	24	8	192,000	300,000	150,000	150,000	125,000	300,000	-
TOTAL	11,401	819.20				1,362,000	925,000	350,000	150,000	225,000	500,000	-

GREEN CITY PROJECTIONS

POPULATION PROJECTIONS

Program	Units	Ratio	Population
Ass't Living	0	0	-
Hotel	0	0	-
Mixed-Use	8,541	2.14	18,278
Multi-Family	1,080	2.23	2,408
Townhouse	1,780	2.9	5,162
Single Family	-	3.3	-
Total	11,401		**25,849**

STUDENT GENERATION

Program	Units	Ratio	Students
Ass't Living	0	0	-
Hotel	0	0	-
Mixed-Use	8,541	0.37	3,160
Multi-Family	1,080	0.37	400
Townhouse	1,780	0.46	819
Single Family	-	0.53	-
Total	11,401		**4,379**

NON-RESIDENTIAL NEEDS

Program	Units	Sq.Ft./D.U.	Sq.Ft.
Retail	11,401	60	684,075
Office	11,401	15	171,019
Institutional	11,401	30	342,038
Total			**1,197,131**

EMPLOYMENT ASSUMPTIONS

Program	SF/Employee	AREA	Range/Employee	Jobs
Retail - Neighborhood	450	1,212,000	450-650 sq.ft.	3,027
Office Class A	350	925,000	225-450 sq.ft.	2,643
Grocery	700	150,000	per sq.ft.	214
Cinema	1500	-	per sq.ft.	-
Restaurant (Sit)	450	-	per sq.ft.	-
Restaurant (Fast)	100	-	per sq.ft.	-
Government	500	150,000	per sq.ft.	300
Hotel	1800	500,000	0.5-1.0/room	278
ACLF/Nursing	1	200	1 per bed	200
Parks & Recreation	1	-	1 per acre	-
Institutional	300	225,000	225-1,000 sq.ft.	750
Warehouse	4250	175,000	1,000-7,500 sq.ft.	41
Industrial	2500	175,000	2,500-10,000 sq.ft.	140
Total				**7,593**

BY SCHOOL BOUNDARIES

School	Name	Students	Teachers	udent/Teacher Ratio	Populated	Available	Address
Elementary	Christina M. Eve Elementary	783	52	15.1	84%	16%	16251 SW 99th Street
Middle	Lamar Louise Curry Middle	1,502	57	26.4	120%	-20%	15750 SW 47th Street
High	John A. Ferguson Senior	2,595	114	22.8	95%	5%	15900 SW 56th Strret

Note: Miami-Dade County voters elected to limit the public school classroom size in each grade level as follows:

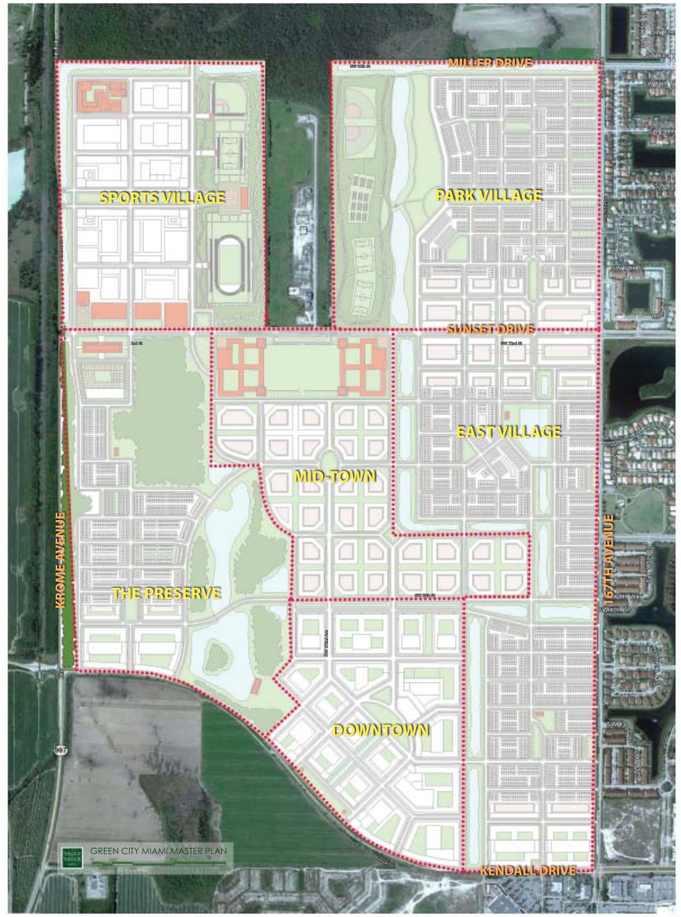
School	udent/Teacher Ratio
Elementary	18.0
Middle	22.0
High	24.0

Employment Assumptions	Project			Defaults	Ranges
Office 1-Story	300	sq. ft. per employee	(Local Estimate)	300	275-450 sq. ft. per employee
Office Class A	350	sq. ft. per employee	(Local Estimate)	350	275-450 sq. ft. per employee
Office Medical	250	sq. ft. per employee	(Local Estimate)	250	225-275 sq. ft. per employee
Retail - Neighborhood	450	sq. ft. per employee	(Local Estimate)	450	450-650 sq. ft. per employee
Retail - Community	450	sq. ft. per employee	(Local Estimate)	450	450-650 sq. ft. per employee
Retail - Regional	450	sq. ft. per employee	(Local Estimate)	450	450-650 sq. ft. per employee
Restaurant-Sit Down	450	sq. ft. per employee	(Local Estimate)	450	450 sq. ft. per employee
Restaurant-Fast Food	100	sq. ft. per employee	(Local Estimate)	100	100 sq. ft. per employee
Hotel	1	employees per room	(Local Estimate)	0.5	0.5-1.0 employees per room
Grocery	700	sq. ft. per employee	(Local Estimate)	700	600-800 sq. ft. per employee
Industrial	2,500	sq. ft. per employee	(Local Estimate)	2,500	10,000 sq. ft. per employee
Warehouse	5,000	sq. ft. per employee	(Local Estimate)	5,000	1,000-7,500 sq. ft. per employee
Golf Course	40	per 18-hole course	(Local Estimate)	40	35-45 per 18-hole course
Clubhouse	800	sq. ft. per employee	(Local Estimate)	800	800-1,000 sq. ft. per employee
Specialty Recreation	0	per unit	(Local Estimate)		per unit
ACLF/Nursing Home beds	1	per bed	(Local Estimate)	1	1 per bed
Institutional	300	sq. ft. per employee	(Local Estimate)	300	225-1,000 sq. ft. per employee
Government	500	sq. ft. per employee	(Local Estimate)	3	2-4
Agriculture/Forestry	10	per 1,000 acres	(Local Estimate)	10	25 per 1,000 acres
Parks & Recreation	1	per acre	(Local Estimate)		

Master Plan

Master Plan - Data Assumptions

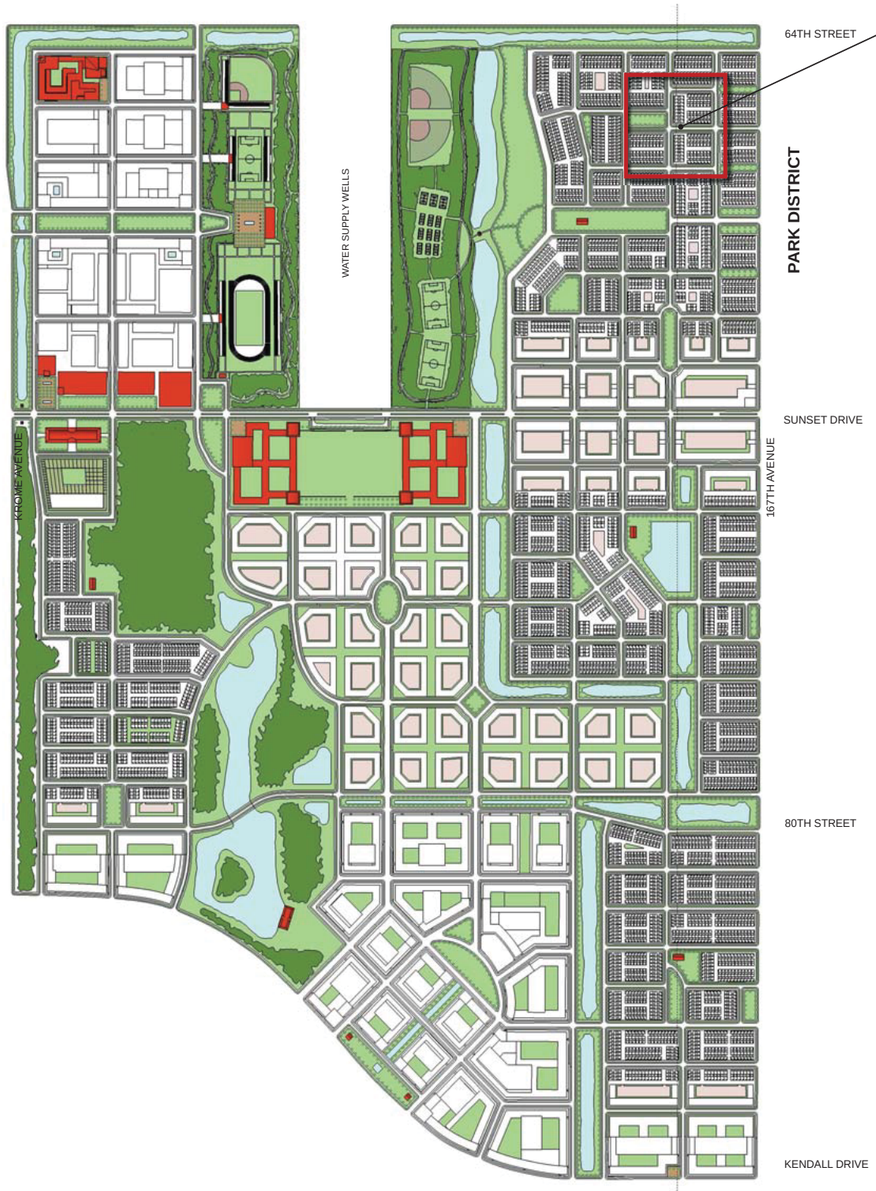
It was calculated, in the table below, the overall density of the project is going to be 13.41 dwelling units/acre distributed over six (6) distinctive villages. The detail program for each of the villages can be studied in the table below. What stands out in review of the table below is that each village is providing for all the daily needs of its citizens and in some cases for those of the region.

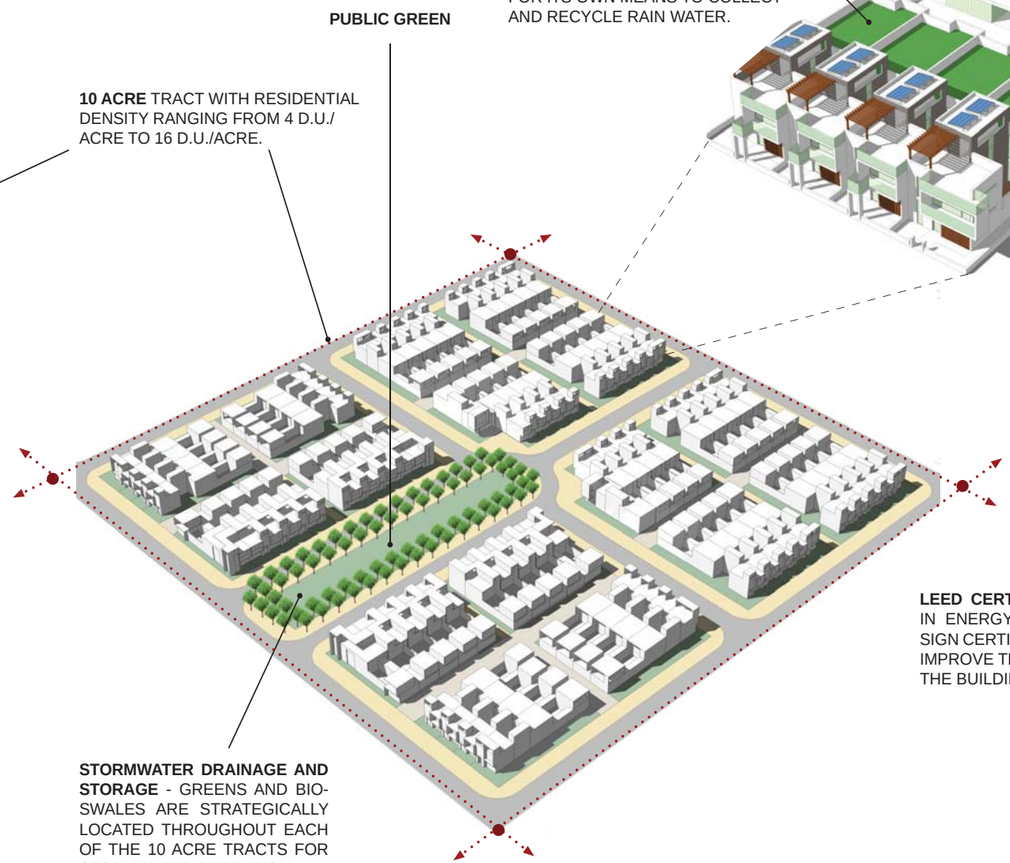


PLACE	RETENTION		GROSS DENSITY	UNITS	MIXED-USE	MUL-FAM	TOWNHOUSE INGLE FAMILY		GOVERNMENT	INSTITUTIONAL	RETAIL	OFFICE	INDUSTRIAL	HOTEL
SPORT VILLAGE	25%		6	375	195	180	-	-	150,000	125,000	192,000	300,000	150,000	300,000
PARK VILLAGE	25%		18	1,600	500	600	500	-	-	-	75,000	56,000	-	-
MID-TOWN	8%		18	1,706	1,406	300	-	-	-	100,000	130,000	50,000	-	100,000
DOWNTOWN	9%		45	4,500	4,500	-	-	-	-	-	750,000	400,000	-	100,000
	17%		**22**	**AVERAGE D.U.A.**										
THE PRESERVE	20%		14	1,120	700	-	420	-	-	-	60,000	54,000	200,000	-
EASTSIDE VILLAGE	15%		14	2,100	1,240	-	860	-	-		155,000	65,000	-	-
STUDY AREA	**17%**		**13.27**	**D.U.A**										

10 ACRE TRACTS - LOW DENSITY

MIAMI GREEN CITY IS COMPOSED OF SIX DISTINCT NEIGHBORHOODS; 1) DOWNTOWN; 2) MID-TOWN; 3) PARK VILLAGE; 4) SPORTS VILLAGE; 5) EAST VILLAGE; AND, 6) THE PRESERVE. THE LOW DENSITY IS LOCATED IN THE PARK VILLAGE. IT INCLUDES FROM SINGLE FAMILY HOMES TO TOWNHOMES. THE LOW DENSITY IS LOCATED ADJACENT TO THE SPORTS PARK GROUNDS.



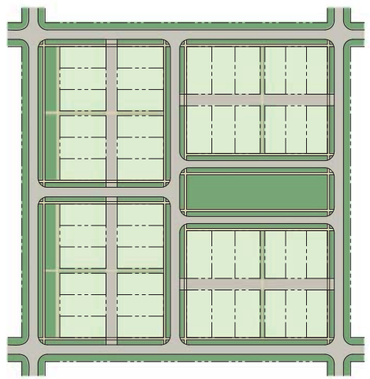


10 ACRE TRACT WITH RESIDENTIAL DENSITY RANGING FROM 4 D.U./ ACRE TO 16 D.U./ACRE.

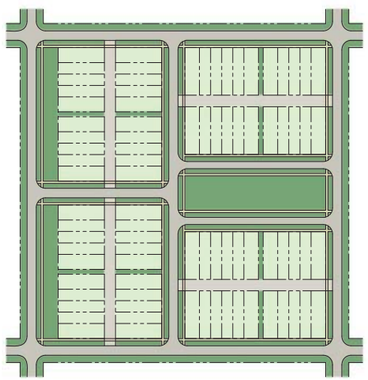
STORMWATER DRAINAGE AND STORAGE - GREENS AND BIO-SWALES ARE STRATEGICALLY LOCATED THROUGHOUT EACH OF THE 10 ACRE TRACTS FOR STORMWATER RETENTION.

WATER RECYCLING - ALL THE BUILDINGS ARE REQUIRED TO PROVIDE FOR ITS OWN MEANS TO COLLECT AND RECYCLE RAIN WATER.

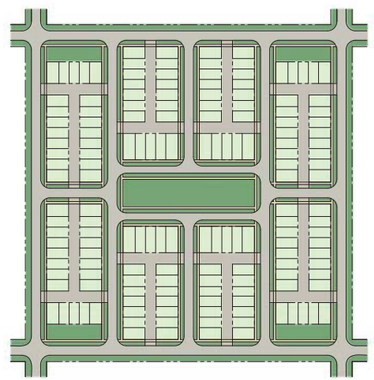
LEED CERTIFICATION - LEADERSHIP IN ENERGY & ENVIRONMENTAL DESIGN CERTIFICATION IS REQUIRED TO IMPROVE THE PERFORMANCE OF ALL THE BUILDINGS.



FOURTY & FIFTY (40'-50') FOOT WIDE LOTS - LAYOUT DEMONSTRATES A 10 ACRE TRACT WITH LOTS THAT ARE 40' TO 50' FOOT WIDE X 100'



TWENTY-FOUR (24') FOOT WIDE LOTS - LAYOUT DEMONSTRATES A 10 ACRE TRACT WITH 24' FOOT WIDE X 100' FOOT DEEP LOTS; PRODUCING A



TWENTY-FOUR (24') FOOT WIDE LOTS - THIS LAYOUT DEMONSTRATES A 10 ACRE TRACT WITH 24' FOOT WIDE X 46' FOOT DEEP LOTS; PRODUCING A GROSS DEN

CITY
ECO-URBANISM
TO CREATE PLACE

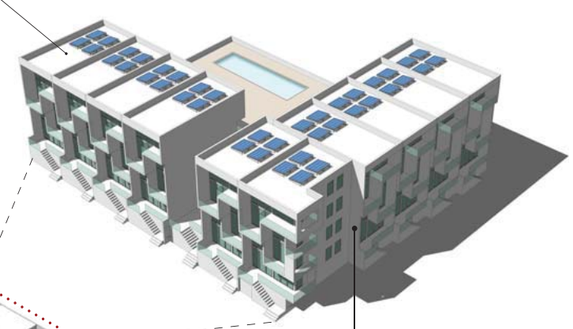
Park District

10 ACRE TRACTS - MEDIUM DENSITY

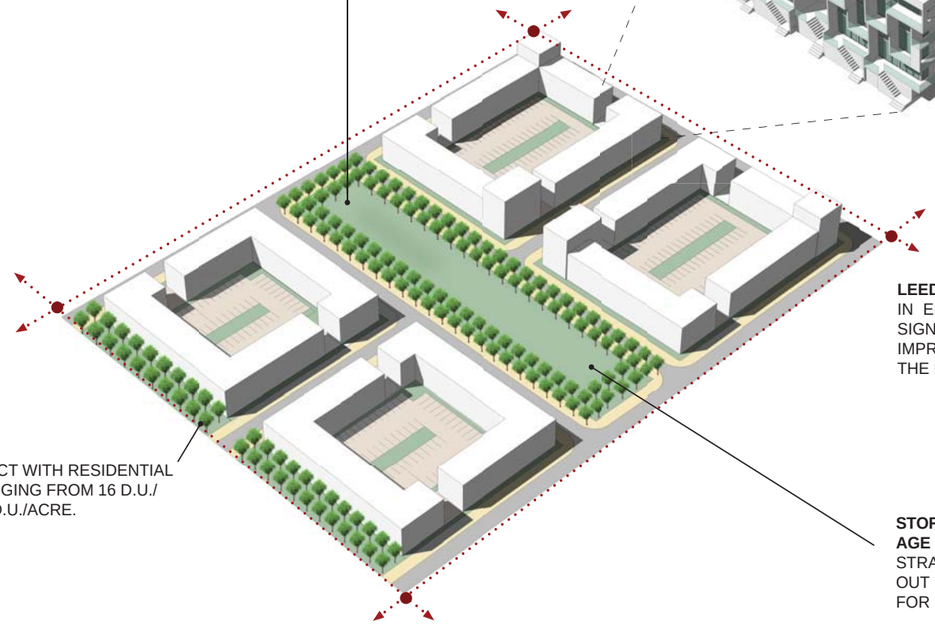
MIAMI GREEN CITY IS COMPOSED OF SIX DISTINCT NEIGHBORHOODS; 1) DOWN-TOWN; 2) MID-TOWN; 3) PARK VILLAGE; 4) SPORTS VILLAGE; 5) EAST VILLAGE; AND, 6) THE PRESERVE. THE MEDIUM DENSITY IS SITUATED IN MID-TOWN. THIS NEIGH-BORHOOD HAS A MIX-OF-LANDUSES WHICH INCLUDES APARTMENTS, RETAIL, K-12 SCHOOL WITHIN A NETWORK OF PARKS AND CANALS.

10 ACRE TRACT WITH RESIDENTIAL DENSITY RANGING FROM 16 D.U./ ACRE TO 24 D.U./ACRE.

WATER RECYCLING - ALL THE BUILD-INGS ARE REQUIRED TO PROVIDE FOR ITS OWN MEANS TO COLLECT AND RECYCLE RAIN WATER.

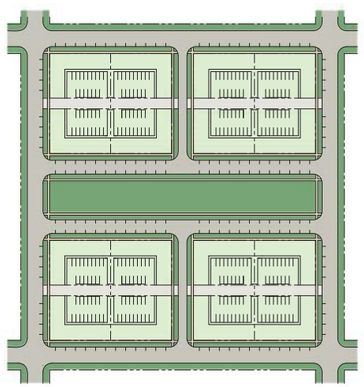


PUBLIC GREEN

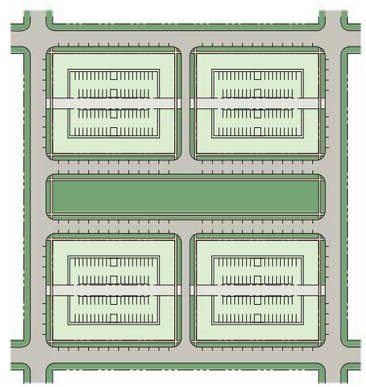


LEED CERTIFICATION - LEADERSHIP IN ENERGY & ENVIRONMENTAL DE-SIGN CERTIFICATION IS REQUIRED TO IMPROVE THE PERFORMANCE OF ALL THE BUILDINGS.

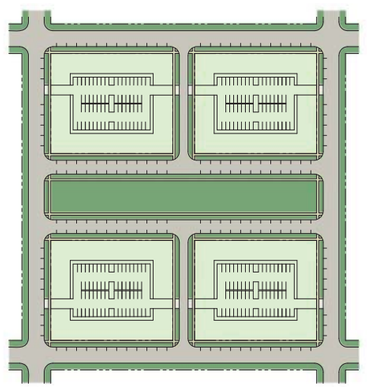
STORMWATER DRAINAGE AND STOR-AGE - GREENS AND BIO-SWALES ARE STRATEGICALLY LOCATED THROUGH-OUT EACH OF THE 10 ACRE TRACTS FOR STORMWATER RETENTION..



APARTMENT BLOCK TYPE I - THIS LAYOUT DEMONSTRATES A 10 ACRE TRACT WITH FOUR PARCELS PER BLOCK; PRODUCING A GROSS DEN-



APARTMENT BLOCK TYPE II - THIS LAYOUT DEMONSTRATES A 10 ACRE TRACT WITH TWO PARCELS PER BLOCK; PRODUCING A GROSS DEN-

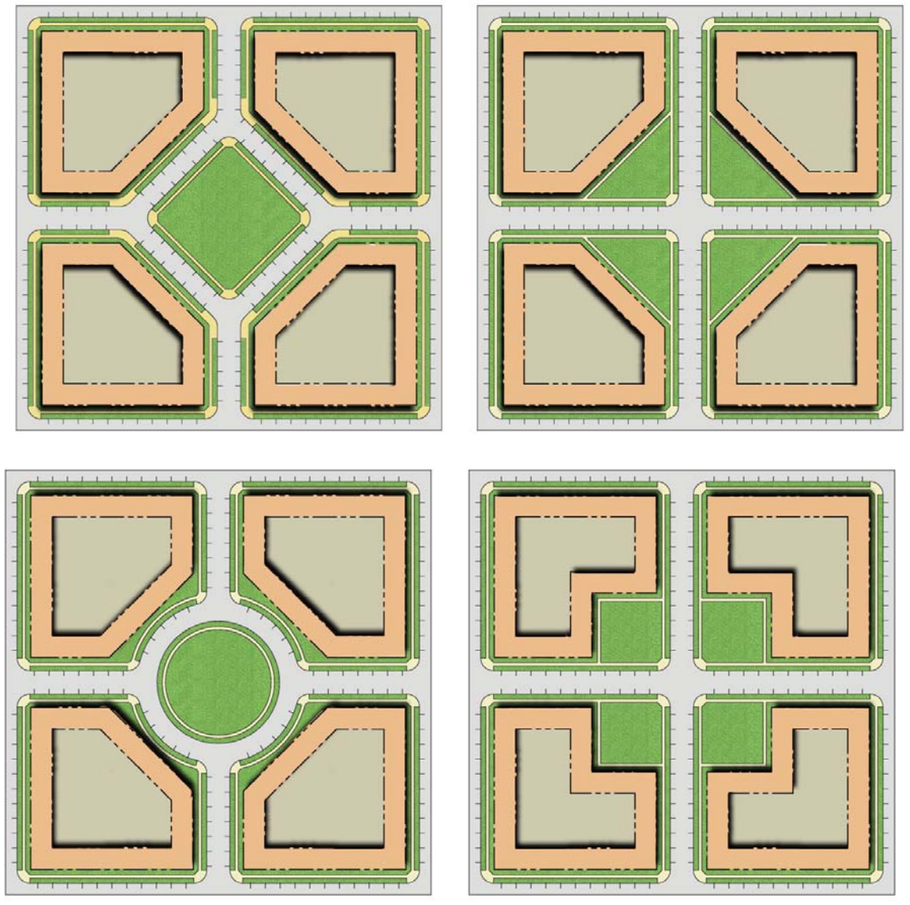


APARTMENT BLOCK TYPE III- THIS LAYOUT DEMONSTRATES A 10 ACRE TRACT WITH ONE PARCEL OVER AN ENTIRE BLOCK; PRODUCING A

MID-TOWN

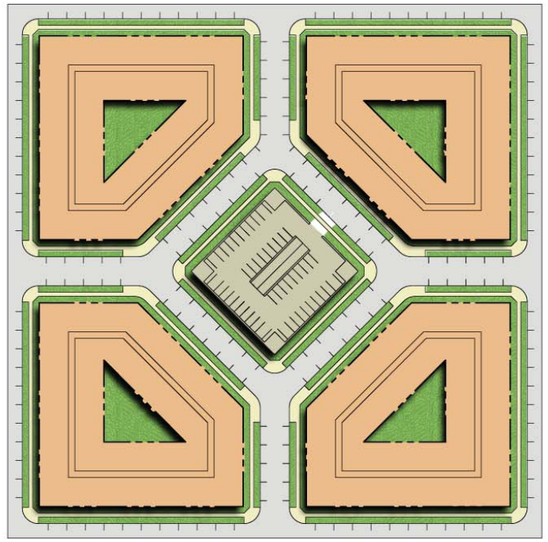
10 ACRE TRACT - PARKING STUDY

The entire study area within Green City Miami is subdivided into 10 acre parcels. This increment presents an opportunity to study alternative ways to handle off-site parking. Each of the diagrams, in these next two pages, represent a single 10 acre parcel that has been subdivided into four equal blocks with public greens and a single five-story parking garage surrounded by perimeter buildings that access the parking garage along pedestrian bridges.



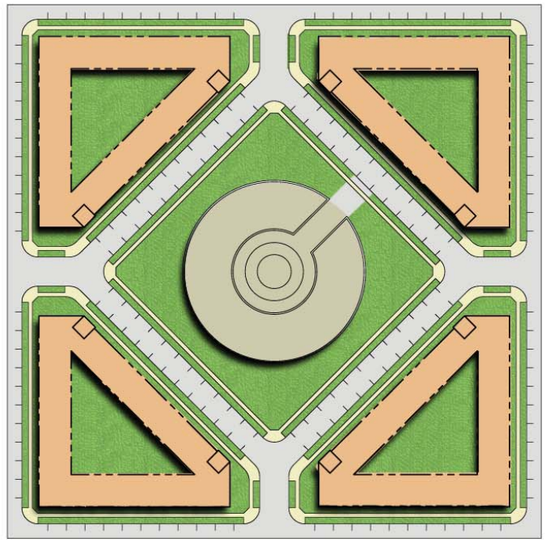
STANDARD TRACT - Each of these 10 acre tract studies have a common thread that makes then the same; they have a density of 18 d.u./acre and all the off-site parking (shown in light grey) is located in the rear of the buildings. What distinguishes each is how they crave the public and semi-public green space.

13 D.U./ACRE



TRACT STUDY 1 - All parking is located in a 46 p.s./floor parking garage. This scheme frees up land area in each block, creating more public space and a greater diversity of architecture.

20 D.U./ACRE



TRACT STUDY 2 - All parking is located in a circular 88 p.s./floor parking garage with program at ground level in a rectangular block. This scheme splits up the green areas of each block.

10 ACRE TRACTS - HIGH DENSITY

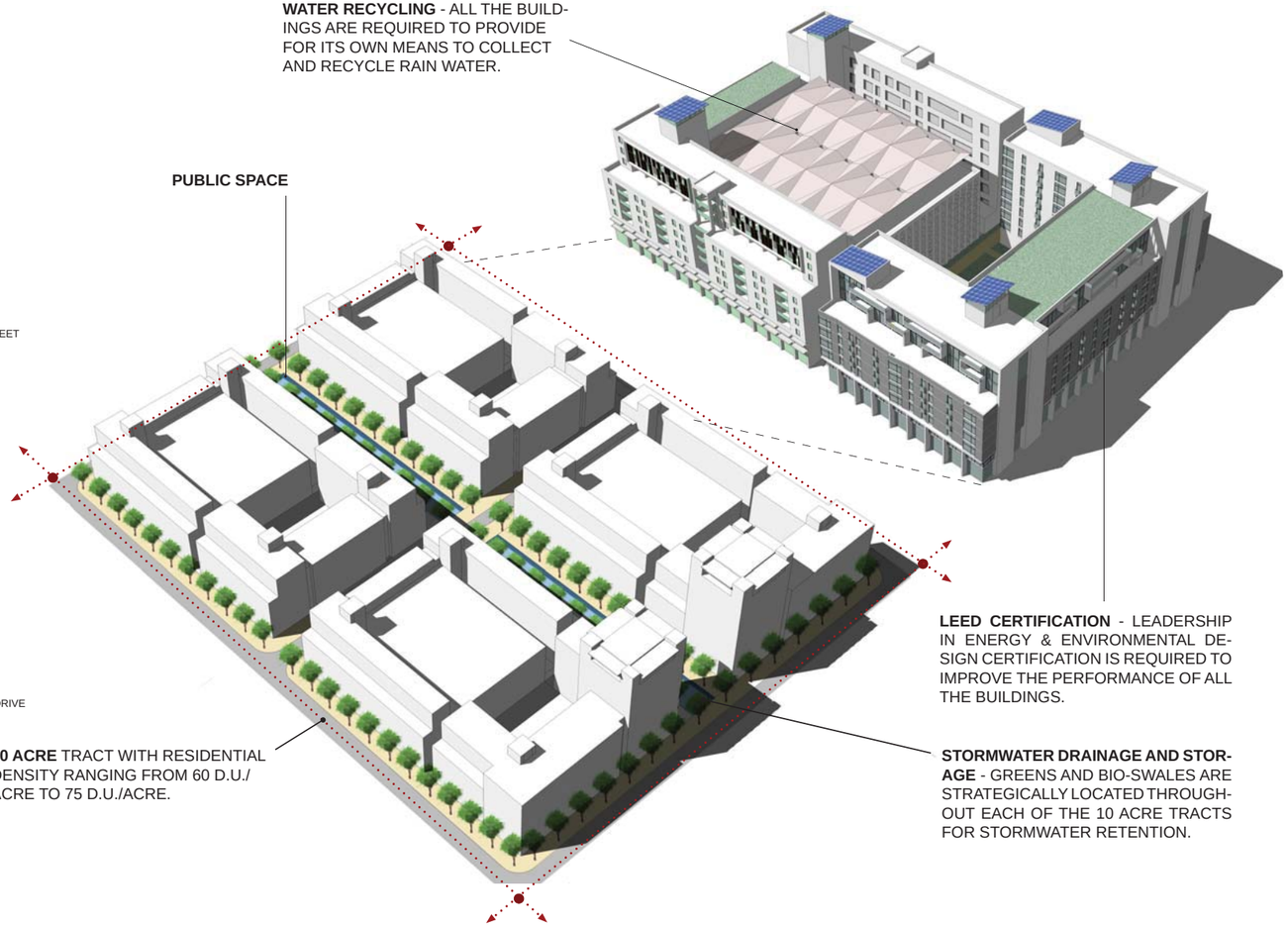
VALLE VALLE & PARTNERS

MIAMI GREEN CITY IS COMPOSED OF SIX DISTINCT NEIGHBORHOODS; 1) DOWNTOWN; 2) MID-TOWN; 3) PARK VILLAGE; 4) SPORTS VILLAGE; 5) EAST VILLAGE; AND, 6) THE PRESERVE. THE HIGHEST DENSITY AND INTENSITY IS FOUND IN THE DOWNTOWN DISTRICT; WHICH INCLUDES RETAIL, OFFICE, RESIDENTIAL, AND CIVIC LANDUSES. THE BLOCK IS SIZED TO ACCOMMODATE LARGER TENANTS, OFFERING ITS CITIZENS AND THOSE OF THE REGION MORE DIVERSITY.

10 ACRE TRACT WITH RESIDENTIAL DENSITY RANGING FROM 60 D.U./ ACRE TO 75 D.U./ACRE.

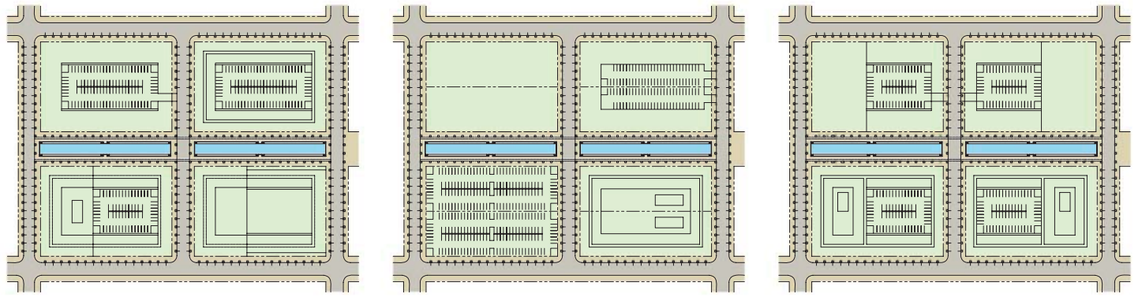
WATER RECYCLING - ALL THE BUILDINGS ARE REQUIRED TO PROVIDE FOR ITS OWN MEANS TO COLLECT AND RECYCLE RAIN WATER.

PUBLIC SPACE



LEED CERTIFICATION - LEADERSHIP IN ENERGY & ENVIRONMENTAL DESIGN CERTIFICATION IS REQUIRED TO IMPROVE THE PERFORMANCE OF ALL THE BUILDINGS.

STORMWATER DRAINAGE AND STORAGE - GREENS AND BIO-SWALES ARE STRATEGICALLY LOCATED THROUGHOUT EACH OF THE 10 ACRE TRACTS FOR STORMWATER RETENTION.



MIXED-USE BLOCK TYPE I - LAYOUT DEMONSTRATES A 10 ACRE TRACT WITH SINGLE PARCEL BLOCK; PRODUCING A GROSS DENSITY FROM 60 D.U./ACRE TO 75 D.U./ACRE AND UP TO 500,000 SQ. FT. OF NON-RESIDENTIAL.

MIXED-USE BLOCK TYPE II - LAYOUT DEMONSTRATES A 10 ACRE TRACT WITH MULTIPLE PARCELS DIVIDING THE BLOCK; PRODUCING A GROSS DENSITY FROM 60 D.U./ACRE TO 75 D.U./ACRE AND UP TO 500,000 SQ. FT. OF NON-RESIDENTIAL.

MIXED-USE BLOCK TYPE III - LAYOUT DEMONSTRATES A 10 ACRE TRACT WITH SINGLE PARCELS THAT CAN ACCOMMODATE LARGER COMMERICAL BIG BOX TENANTS; PRODUCING THE SAME RESIDENTIAL DENSITIES AS TYPE I & TYPE II .

CITY
ECO-URBANISM
TO CREATE PLACE

Downtown District

Downtown District

CITY
ECO-URBANISM
TO CREATE PLACE

Sports Village

GCM ACADEMY

The concept of the GCM Academy is to create a place dedicated to encouraging an active and healthy lifestyle for all ages. It is modelled after other Sports Villages getting built by major soccer sports teams in Spain. This Village resides on 120 acres (48.5 hectares) and it is adjacent to a 80 acre (32 hectares) linear park. Within this park are grounds dedicated to three Sport Types: 1) **Passive Sports** grounds for biking, running, and strolling; 2) **Active Sports** grounds for playing organized games such as basketball, tennis, baseball swimming, and soccer; and, 3) **Professional Sports** grounds design to meet all the International and national standards for professional teams to practice.

It is the intent of this Sports Village to become a new significant work place within Miami-Dade County. As part of its build-out plans it will be aggressively pursuing National and International sports teams and brands wanting a presence in Miami. The intent of this place is to become the epicenter of sports by providing all sports related convenience in one place. This means it will have a convention center for events, hotels for sports teams to stay, sports entertainment main street with nightly activity, covered arenas for professional teams to practice, and it will team up with a local university to provide a sports medicine school to address the physical fitness and treatment of sports related injuries.

HYDROPONICS FARMING

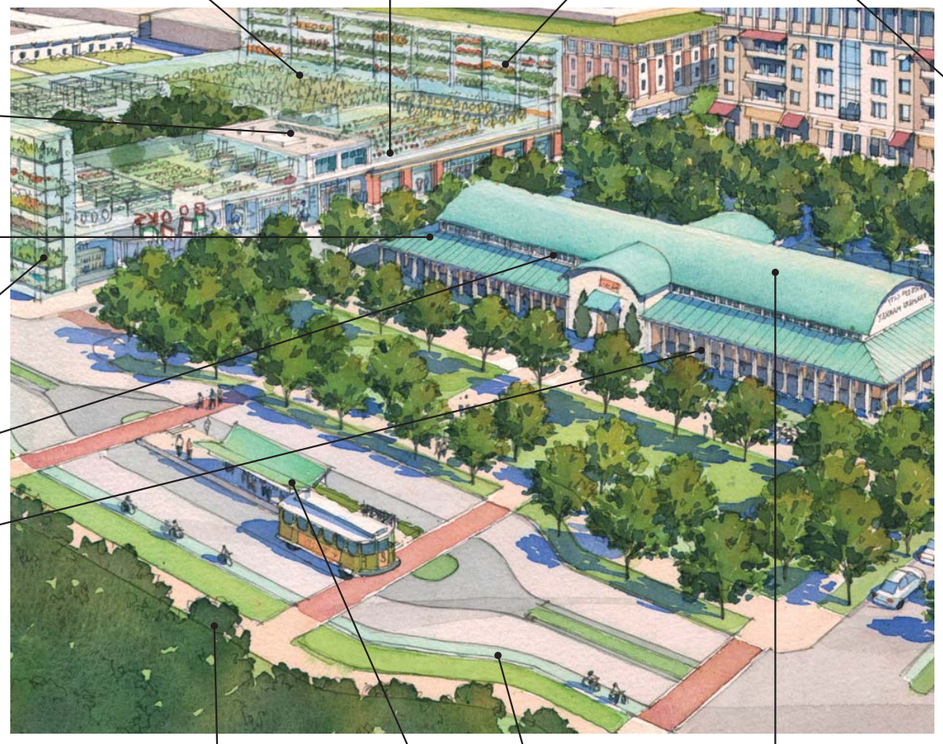
THE HYDROPONICS FACILITY GROWS PLANTS WITHOUT SOIL UTILIZING 1/3 THE WATER. THE VALUE OF HYDROPONICS GROWING IS TO PRODUCE HIGHER YIELDS, WITH LESS PESTICIDES AND LESS WATER WASTE. HYDROPONICS VEGETABLES TASTE BETTER THAN GARDEN ONES BECAUSE THEY GET ALL THE MICRONUTRIENTS MAKING THEN SUPERIOR IN TASTE, COLOR, SIZE, AND EVEN NUTRITIONAL VALUE.

HYDROPONICS FACADE

THE RAINWATER IS COLLECTED ON THE CATCHMENT AREA IN THE ROOF TOP. THE HARVESTED RAINWATER IS CONVEYED THROUGH THE ROOF DRAINS AND PIPING TO A SINGLE POINT OF DISCHARGE INTO STORAGE TANKS.

ZERO-ENERGY COMMERCIAL BUILDING (ZEB) IS DESIGNED TO CAPTURE AND STORE RAINWATER THROUGH ITS ROOF TOP AND PROVIDE FOR ITS OWN ENERGY NEEDS USING SOME FORM OF ON-SITE RENEWABLE ENERGY.

ONE ADVANTAGE OF HYDROPONICS AGRICULTURE IS THAT IT CAN BE GROWN VERTICALLY SO IT CAN BE **FIVE TO TWENTY TIMES** MORE PRODUCTIVE IN THE SAME AMOUNT OF LAND.



THE ROOFTOP **SOLAR PANELS** WILL PROVIDE KILOWATTS OF ELECTRICTY AND HOT WATER FOR USE BY THE BUILDING.

LEED - LEADERSHIP IN ENERGY & ENVIRONMENTAL DESIGN IS REQUIRED TO IMPROVE PERFORMANCE OF ALL BUILDINGS.

INTERIOR **HIGH INTENSITY DISCHARGE LIGHTS** ARE USED TO REPRODUCE THE BLUE END OF THE SPECTRUM FOR YOUNG PLANTS.

SECURELY **VENTILATED** SUNSPACE TO PROVIDE FOR COOLING OF THE BUILDING.

EXTERIOR **SUN SHADE SCREENS** ARE USED TO PROVIDE FOR COOLING OF THE BUILDING.

SECURED LONG TERM, **BIKE PARKING** IS PROVIDED ON-SITE AND WITHIN THE RESIDENTIAL HOME.

THE **WIND** IS CAPTURED AND REDIRECTED ALLOWING NATURAL VENTILATION OF THE BUILDING THROUGH LARGE VERTICAL OPENINGS ALONG THE FACADE AND THROUGH ITS ROOF TOP VENTS.

LARGE CANOPY STREET TREES PROVIDE FOR SHADING AND COOLING ALONG THE SIDEWALKS.

BUS STATION

DEDICATED BIKE LANE

METAL FRAME WALLS ARE DESIGNED TO ALLOW FOR OPTIMUM PLANT LIGHTING AND NATURAL VENTILATION.

OPEN AIR BIO-SWALE GARDENS

SOILESS CONTROLLED AGRICULTURE

COMMERICAL BUILDING SECTION

NET ZERO COMMERCIAL APPLICATIONS HAVE A HIGH PAY BACK BECAUSE THEY HAVE LARGE ROOF AND FACADE SURFACES TO CAPTURE WATER AND TO HARD-NEST THE SUN. IN WAREHOUSES, THE LARGE FACADES CAN ALSO BE USED TO CAPTURE NATURAL AIR FLOW TO COOL DOWN THE INTERIOR OF BUILDINGS AND WHEN DOUBLED WITH SOLAR PANELS PROVIDE PROTECTION FROM THE SUN.

ENERGY. THE LARGE ROOF SURFACES ARE USED TO CAPTURE THE SUN RAYS AND HARNEST INTO ENERGY FOR USED BY THE BUILDING AND EXCESS ENERGY IS PLACED BACK ON THE UTILITY GRID.

WATER. THE COLLECTED RAINWATER CAN BE USED FOR NON-PORTABLE USES SUCH AS IRRIGATION, TOILETS AND URINALS, LAUNDRIES, MECHANICAL SYSTEMS, FOUNTAINS, CAR WASHING, AND RECHARGE.

WIND. NATURAL AIR FLOW CAN BE HARD-NEST TO COOL DOWN THE INTERIOR OF BUILDINGS OR ADJACENT PUBLIC SPACES. VENTILATED DOUBLE FACADE PANELS AND WIND TUNNELS PROVIDE OPTIONAL CHOICES.

A HIGH PERFORNACE ROOFING SYSTEM, HIGH-EFFICIENCY ROOF INSULATION, AND ROOF TOP MOUNTED SOLAR TUBES THAT SUPPLY HALF OF THE BUILDING DAYTIME LIGHTING NEEDS.

PHOTOVOLTAIC PANELS - ROOF-MOUNTED SOLAR PANELS FOR SUPPLEMENTAL POWER.

VENTILATED DOUBLE FACADE ALSO FUNCTIONING AS SOLAR PROTECTION PANELS.

STORMWATER DRAINAGE AND STORAGE. THE BUILDINGS RUNOFF WILL BE DRAINING TO AND DRAWING FROM THIS RESOURCE FOR ITS GREYWATER NEEDS. THESE BIO-SWALES STORE RAINWATER FOR RE-USE AFTER THE RAIN SUBSIDES.

THE **WIND TUNNELS** WILL PROVIDE NATURAL AIR FLOW INTO THE BUILDING COOLING THE INTERIOR AND ALLOW THE HOT AIR TO FLOW OUT.

WIND TUNNEL

HOT AIR FLOW

COOL AIR FLOW

CONTINUOUS GUTTERS TO CAPTURE RAINWATER

LED LIGHTING

HOT AIR FLOW

HOT AIR FLOW

COOL AIR FLOW

COOL AIR FLOW

STREET TREES - PROVIDE NATURAL CANOPY AND COOL DOWN THE SIDEWALK FOR PEDESTRIANS.

CONTINUOUS **BIKE PATHS** PROVIDE FOR ALTERNATIVE MODE OF TRANSPORTATION

PARALLEL PARKING SLOWS DOWN STREET TRAFFIC

TOILET FLUSHING WITH RAINWATER

IRRIGATION WITH RAINWATER

PUMP

RAINWATER STORAGE

WATER QUALITY CAN BE MAINTAINED BY REMOVING ORGANIC MATTER AND BY THE ACTION OF FLOWING WATER.

OVERFLOW

NATURAL EDGE BIO-SWALE

PLANTER WALL RAISED 4" ABOVE SIDEWALK

SAND SET CONCRETE PAVERS

HARD EDGE BIO-SWALE

COMMERCIAL ZERO ENERGY+WATER+WIND

ZERO-ENERGY COMMERCIAL BUILDING UTILIZES RENEWABLE ENERGY SOURCES WITHIN THE BUILDING FOOTPRINT AND AT THE SITE AND IT ALSO HARVESTS RAINWATER. IT IS KNOWN THAT THE LARGER THE ROOF SURFACE AREA THE GREATER KILOWATTS ATTAINABLE THROUGH SOLAR ARRAYS AND THE HIGHER GATHERING CAPACITY OF WATER. THE WIND IS REDIRECTED TO COOL THE BLD'GS INTERIOR.

ROOF TOP SOLAR PANEL ARRAY

THE RAINWATER IS COLLECTED ON THE CATCHMENT AREA IN THE ROOF TOP. THE HARVESTED REAINWATER IS CONVEYED THROUGH THE ROOF DRAINS AND PIPING TO A SINGLE POINT OF DISCHARGE INTO THE STORAGE TANK.

ZERO-ENERGY COMMERCIAL BUILDING (ZEB) IS DESIGNED TO CAPTURE AND STORE RAINWATER THROUGH ITS ROOF TOP AND PROVIDE FOR ITS OWN ENERGY NEEDS USING SOME FORM OF ON-SITE RENEWABLE ENERGY.

EXTRACTED RAINWATER USED FOR **COOLING** OF AIR CONDITIONING UNITS.

EXTRACTED RAINWATER USED FOR LOW FLOW **TOILETS** PROVIDING WATER FOR FLUSHING.

BELOW GRADE **CISTERN/STORAGE TANK**. HARVESTED WATER FOR USE IN THE BUILDING IS EXTRACTED FROM THE CLEANEST PART OF THE TANK, JUST BELOW THE SURFACE OF THE WATER. WATER QUALITY IS MANTAINED BY REMOVING THE ORGANIC MATTER AND BY ACTION OF INCOMING WATER WHICH INTRODUCES OXYGEN AND AVOIDS MALODOROUSNESS.

ON-SITE **BIO-MASS** POWER PLANT THAT RUNS ON BIOLOGICAL MATERIAL SUCH AS WOOD, WASTE, GAS, AND ALCOHOL FUELS THAT CAN BE IMPORTED FROM OFF-SITE, OR WASTE STREAMS FROM ON-SITE PROCESSES THAT CAN BE USED ON-SITE TO GENERATE ELECTRICITY AND HEAT.

NOTE: LOCAL CITY OR COUNTY UTILITIES SHOULD BE SECURED IN CASE OF LOW RAINFALL SEASON TO REPLENISH THE STORAGE TANK. CONNECTION TO THE POWER GRID SHOULD BE MADE IN CASE OF POWER OUTRIDGE AND TO OPTIONALLY SELL EXCESS POWER BACK TO THE GRID.

NATURAL LIGHTING

THE ROOFTOP **SOLAR PANELS** WILL PROVIDE KILOWATTS OF ELECTRICTY AND HOT WATER FOR USE BY THE BUILDING.

LEED - LEADERSHIP IN ENERGY & ENVIRONMENTAL DESIGN IS REQUIRED TO IMPROVE PERFORMANCE OF ALL BUILDINGS.

EXTERIOR AND INTERIOR **LED LIGHTING** IS USED TO CONSUME LOW ELECTRICITY.

EXTERIOR **SUN SHADE SCREENS** ARE USED TO PROVIDE FOR COOLING OF THE BUILDING.

STORMWATER DRAINAGE AND STORAGE. THE SURROUNDING BUILDINGS WILL BE DRAINING TO AND DRAWING FROM THIS RESOURCE FOR ITS GREYWATER NEEDS. THESE BIO-SWALES STORE RAINWATER FOR RE-USE AFTER THE RAIN SUBSIDES.

SECURED LONG TERM, **BIKE PARKING** IS PROVIDED ON-SITE FOR WORKERS.

THE **WIND** IS CAPTURED AND REDIRECTED ALLOWING NATURAL VENTILATION OF THE BUILDING THROUGH LARGE VERTICAL OPENINGS ALONG THE FACADE AND THROUGH ITS ROOF TOP VENTS.

OPEN AIR GARDEN WELL

LARGE CANOPY STREET TREES PROVIDE FOR SHADING AND COOLING ALONG THE SIDEWALKS.

DEDICATED BIKE LANE

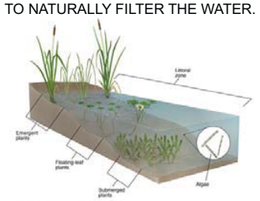
OPEN AIR GARDEN WELLS

EXTRACTED RAINWATER USED FOR **CAR WASHING** TO CLEAN VEHICLES.

EXTRACTED RAINWATER USED FOR **IRRIGATION** PROVIDING WATER FOR LAWNS AND GREEN AREAS.

EXTRACTED RAINWATER USED FOR **FOUNTAINS** PROVIDING WATER FOR FOUNTAINS AND WATER FEATURES.

THE WATER STORAGE AREAS WILL BE PLANTED WITH **LITTORAL ZONES** TO NATURALLY FILTER THE WATER.



LITTORAL ZONES

CITY
ECO-URBANISM
TO CREATE PLACE

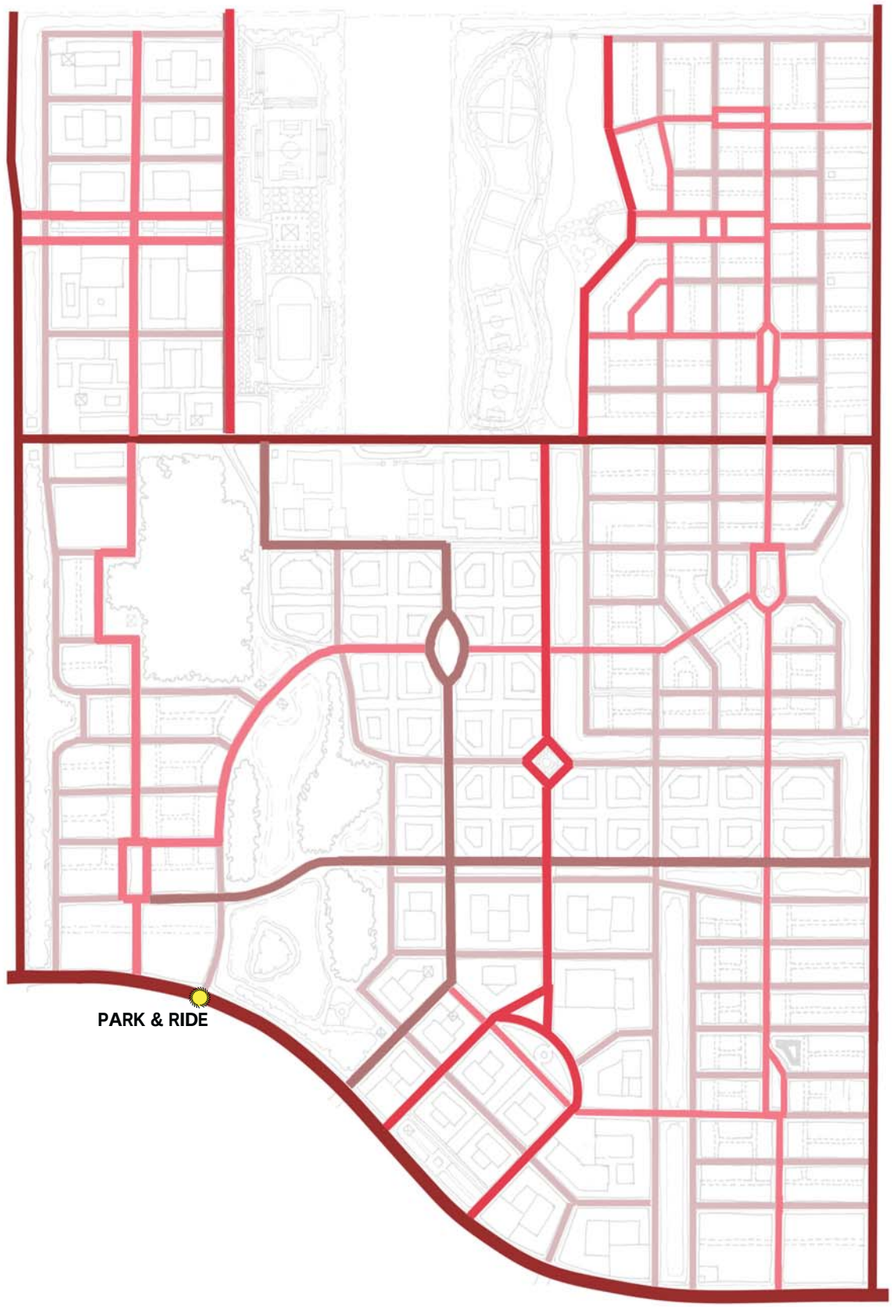
PUBLIC STREETSCAPE

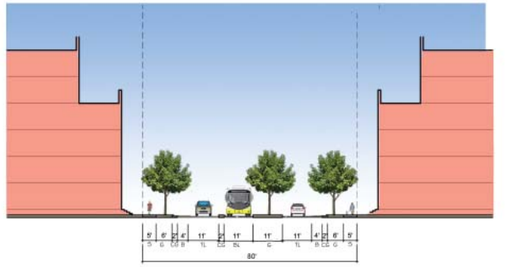
The public streetscape is that public realm that exist in-between building edges and it starts where the building meets the street. It embraces all the spaces between building facades, not just across the street from each other. The crucial ingredients to make it memorable is to balance how vehicles, transit, pedestrains, and bicyclist will interact.

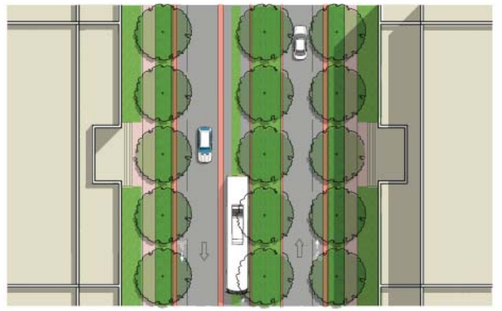
The public streetscale must provide vehicles with flexability for parking and loading while also maintaining an easy flow of traffic. It must encourage public transit as an alternative mode of transporation. For the pedestrian it must feel safe, comfortable and provide protection from the sun and rain. To the bicyclist it needs to be safe with a dedicated lane and bicycle street crossing at intersections.

To complete the public streetscape the architecture needs to be culturally unique. Through architecture it is possible to gauge many things about the lifestyle, artistic sensibilities, social structure of a region. When all these urban ingredients are properly understood and combined the end results can bring economic viability and continued success.

The street sections illustrated here were identified as the most important neighborhood throughfares. Diagram 1 - (top right) shows the street section that provides for a dedicated transit lane that connects to the rest of the county; Diagram 2 - (bottom right) shows one-way throughfare in the heart of the Downtown district; the rest of the diagrams in the next page show a variety of ways to move traffic based on a hierarchy of streets sections.

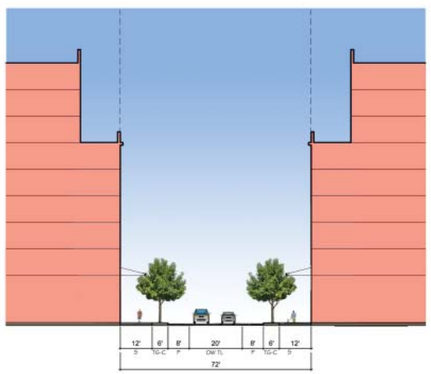


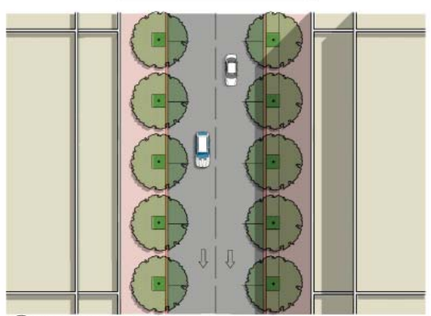




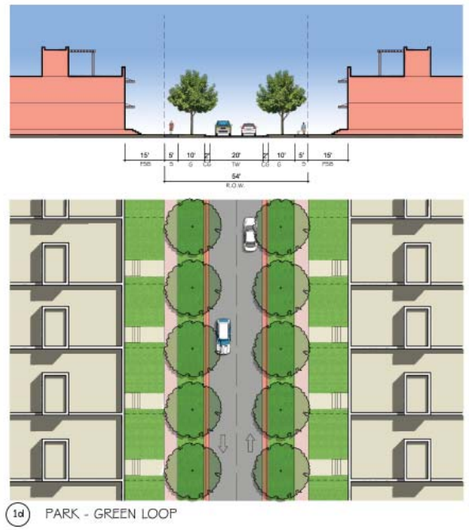
1 SUNSET DR

COLLECTOR ROAD - A road that moves traffic from local streets to arterial roads. A low to moderate-capacity road.



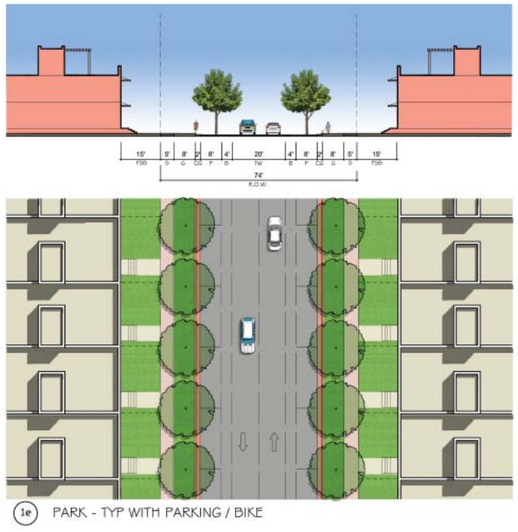


3c DOWNTOWN - MAIN WITH TREES



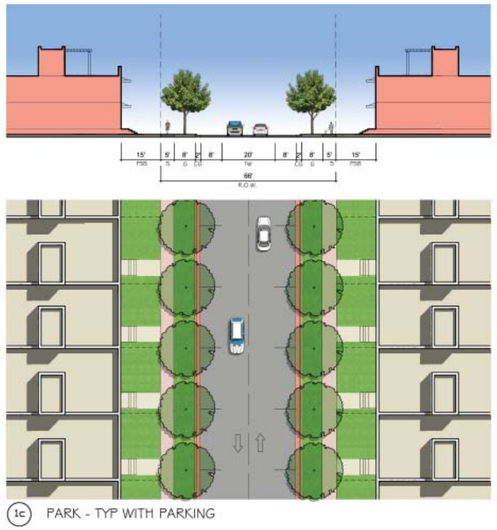
1d PARK - GREEN LOOP

COMMERCIAL STREET - A road that front's retail, therefore it is designed to accommodate the pedestrian and the car.



1e PARK - TYP WITH PARKING / BIKE

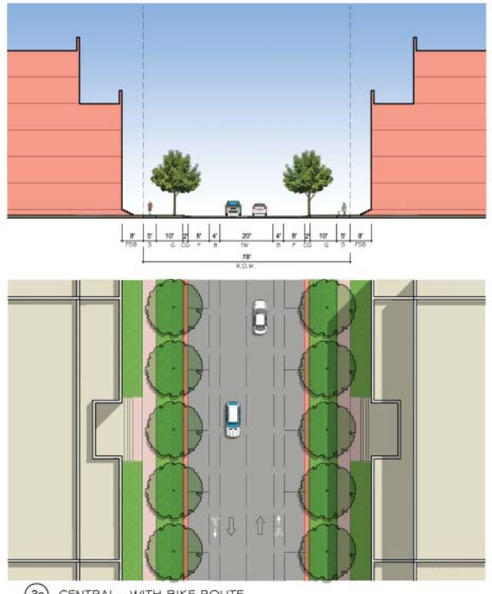
AVENUE - A road that moves traffic at faster speeds while providing for other modes of transporation such as dedicated bike lane.



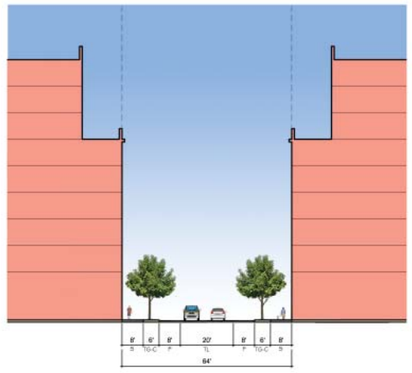
1c PARK - TYP WITH PARKING

RESIDENTIAL STREET - A road utilizing parallel parking and narrow travel lanes to slow traffic and front's residential homes.

3d DOWNTOWN - WITH BIKE ROUTE



2e CENTRAL - WITH BIKE ROUTE



3d DOWNTOWN - TYP WITH PARKING

DOWNTOWN
General Use Program

DOWNTOWN PERFECTLY SEASONED

SPORTS VILLAGE

General Use Program

SPORTS MUSEUM
Exhibits
Education
Events

FARMERS MARKET
Locally Grown Produce
Fish and Meats
Coffee/News/Flowers

LIVE/WORK/TRANSIT
Professional Services
Convenience Goods
Coffee/News/Sundries

SPECIAL EMPLOYMENT DISTRICT
Professional Services
Health and Wellness Care
Health and Wellness Tourism

SPORTS MEDICINE
University/Technical
Medical Specialists
In and Out Patient Care

CONVENTION CENTER

TRANSIT STATION

CONVENTION HOTEL

MAIN STREET SHOPS

PROFESSIONAL TRAINING STADIUM

INDOOR SPORTS ARENA

PASSIVE SPORTS

PROFESSIONAL TRAINING FIELD

HEALTH AND WELLNESS VILLAGE

The economic and employment focus of the Health and Wellness Village is founded in the aspiration of creating a new source of economic activity for the West End. The Green City Miami project provides an ideal location to build a new collaboration between existing community institutions, to grow a new 'niche' sector of the economy, and to provide employment opportunities throughout the economic spectrum for the residents of the West End. The Health and Wellness Village will be the organizing place that will foster a new economic cluster founded in the life sciences: clinical medicine, medical education, research, and commercialization.

The Health and Wellness Village represents an opportunity to establish a new thrust of economic activity in West Kendall, building on the existing foundation already established by West Kendall Baptist Hospital and Florida International University. The fundamental pieces are in place to set this course. Miami-Dade County can recognize and accelerate this strategy by implementing recommendation #6 of the West End Strategy Action Agenda – Rethink New and Future Development Patterns.

HEALTH AND WELLNESS VILLAGE

The Health and Wellness Village will provide a unique laboratory for the Healthy West Kendall Coalition and its research partners to directly study the overall factors in lifestyle that affect human wellness. Residents and employees of the Village will be able to participate in various research initiatives involving their own lifestyle, which can assess the effects of living and/or working in a community designed for health and wellness.

Our vision for the Health and Wellness Village is to create a memorable place in the Miami landscape that will become another important destination for tourism and that can equally be enjoyed by its residents.