

*A Summary of the Strategic Urban Design Study
for the Urban Zone*

Prepared for:

Municipality of Caguas

by:

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architecture

city planning

urban design

CAGUAS 2020

Caguas 2020 is an urban design study that embodies key strategic growth initiatives. Together, the Study and its initiatives offer a vision for what Caguas should look like in the 21st Century and a framework for how the city will meet the challenges ahead.

STATEMENT OF THE PROBLEM

In many ways, Caguas is a city that is much like any other city in the western world. Centuries of growth by small increments were followed by an enormous surge in the population. In Caguas, the population boom coincided with the postwar trend toward suburban-style, low-density development. As a consequence, the built-up area of the city expanded in a deconcentrated fashion that exponentially compounded the provision of services and maintenance across the ecologically sensitive local environment.

In recent decades, the city has been plagued by a whole host of urban ills. The CBD is quickly losing its place as the center of economic, social, and cultural life in the city. The commercial life of the city is quickly being transplanted to a rag-tag collection of strip malls that line the major arterial roadways on the edge of the city. Rising traffic congestion is a daily nightmare on a system of roadways that lacks coherence. Public transit is limited in both scope and service. Decaying inner-ring neighborhoods are increasingly isolated from one another by poorly designed roadways and an overall scarcity of pedestrian accommodations. While the city has a small, but notable collection of neighborhood parks, many of them are in a poor state of repair. In addition, few such amenities exist in the CBD and the inner-ring neighborhoods. More importantly, the city's water, sewer, and electrical infrastructures are severely overburdened, making the delivery of public services and utilities inconsistent from time to time and from place to place across the city. Over the years, development encroached upon, but turned its back on the city's rivers. This results in repeated flooding of surrounding neighborhoods. In the last decade, most private investment was limited to the development of high-income, gated residential communities on the edge of the Urban Zone. Many such developments began to creep up the hills and mountainsides that surround the city resulting not only in a protracted state of social polarization, but also in mounting environmental problems related to erosion and deforestation.

GOALS

The primary goal of the Urban Zone Study is to develop a strategic growth scenario that accommodates expansion of the city's population in the next twenty-five years - from 140,000 people to 250,000 people - in a manner that enhances and preserves the special features of the existing city and its surrounding environment. Achieving the primary goal is not possible without addressing a series of supporting goals, which include:

- Redesign and improvement of the city's transportation, circulation, and infrastructure systems
- Restoration and enhancement of the amenities in the city's natural environment
- Densification of the urban core through residential and commercial revitalization
- Improvements to the public realm and overcoming the physical isolation of city neighborhoods

LOCATION AND SIZE

The Municipality of Caguas is located in the Turabo Valley in the Central-East Region of Puerto Rico. The presently-urbanized area of the Municipality is known as "The Urban Zone." The Urban Zone is 11-square miles in size and it lies in the central and northern sections of the Municipality. Downtown Caguas is the heart of the Urban Zone. It is approximately 15-miles (27-kilometers) south of downtown San Juan.

THE MANAGED GROWTH APPROACH

The Urban Zone Study calls for the establishment of a new growth model for Caguas; one that represents nothing short of a major paradigm shift for how issues and problems are handled in the city. This model is designed to capture opportunities through the establishment of a new way of thinking about what constitutes a development opportunity. For many years the pendulum of change has swung in the direction of decline: Physical, economic, and environmental deterioration of the natural and urban environments. By embracing the managed growth strategy, city leaders - in both the public and private sectors - have decided to help swing the pendulum back to the center; back towards a place where growth is marked by economic prosperity, by actions that reinforce the ecology of city's setting, by the equitable sharing of the benefits derived from new development, and by a renewed sense of civic pride.

By managing the manner in which growth occurs, it is possible to prepare the city for the predicted population increases and to forestall the reckless expansion that threatens to devastate the city's natural resources, visual character, and identity. The managed growth approach employs a series of strategic interventions which are intricately designed to encourage growth in a manner that is healthy for the city and its inhabitants.

The substance of the managed growth approach is its ability to condition property markets in such a way as to encourage development with the long-term in mind. At the same time, it protects against the tendency to squander the long-term resilience of property markets in order to reap fleeting rewards. The managed growth approach is by no means a model that calls for no growth. Instead, managed growth will enhance the character of the city, which in turn will inspire further growth.

A sustainable cycle of growth for Caguas will be accomplished in four ways:

- By directing where and how investment and re-investment in property markets occurs
- By coordinating development so that it includes infrastructure and public services and by expanding and upgrading infrastructure and public services so that they meet the needs of new development
- By recognizing the city's extraordinary natural setting and maximizing the use of its ecological systems.
- By redesigning the city's circulation systems and public realm in a way that allows neighborhoods to be reknit with one another

In this manner, the city will be able to accommodate the changes that are forecast while simultaneously maintaining and restoring the existing features that make Caguas a vital place to live, work, and play.

AN INTEGRATED REINVESTMENT STRATEGY

Carrying out a managed growth approach towards the future in Caguas demands a strategy that is both practical and flexible. This proposed strategy is rooted in the idea that in order for Caguas to meet the challenges it faces with aplomb, it is necessary to reinvest in the Urban Zone through a series of integrated actions and initiatives which have four principle objectives in common.

Densification: To attract up to 10- to 15-thousand residents back to downtown (and many more in the nearby neighborhoods) new prototypes for high-density residential and commercial development will need to be embraced as viable alternatives to sprawling development on the hills that surround the city.

Investments in infrastructure: The city's existing infrastructure first must be upgraded so that service within the currently built-up area of the Urban Zone is consistent and efficient. It must be expanded to fully accommodate each new project in the inner core. Limiting the outer extent of where urban infrastructure can be built within the Municipality will curb further development in the hills surrounding the city while simultaneously redirecting reinvestment in the inner core.

A good public realm: Actions and initiatives must help to create and maintain a good public realm: It is equally important that, on a daily basis, residents and visitors alike are able to conduct their lives in a setting that is both efficient and beautiful. Any action taken towards the betterment of Caguas must include provisions to enhance the environments – natural and manmade - in which members of the general public interact with one another.

Development of cultural and tourist facilities: Downtown and its surrounding neighborhoods should be a showcase that demonstrates the energy and optimism of city life. By creating cultural and tourist facilities, the city is investing in new segments of the population who – through their buying power – will further the economic revitalization of the city.

INITIATIVES AND ACTIONS

Reinvestment will not happen on its own. To capitalize on opportunities, it must be forged through creative new ways of thinking and working together. The Urban Zone Study proposes that each piece of the puzzle be thought of in the context of the whole, rather than as an isolated element. Most importantly, it must be accomplished by thinking about the city's problems holistically, by addressing them in a coordinated manner, and by ensuring that the integrity of each action will support – rather than undermine – the integrity of every other action.

The Transportation Initiative calls for dramatic improvements to the city's transportation system in order to accomplish two primary goals: To achieve a shift from an automobile-oriented system to a public transit-oriented system; and to separate regional and local traffic as a means to decongest city streets. There are four sets of actions in the initiative: Expansion of the public transit system; highway, roadway, and street improvements; new policies and design schemes for parking; and the creation of pedestrian friendly environments.

The River Parks Initiative recognizes that the long-term health of the city is tied to how well these rivers are revived and how effectively their potential is put to sound use. It calls for four sets of actions: Creation of a system of river parks that is integrally tied to a system of flood-control mechanisms; extension of established ecological preservation zones; development of recreation facilities along linear parks; packaging of 19 new sites for commercial, residential, and cultural development projects.

The Inner Core Initiative is designed to re-establish the downtown and surrounding neighborhoods as the heart of Caguas. It is aimed at the densification of downtown and the surrounding neighborhoods through revitalization, redevelopment, and new development projects. The Initiative has five central goals: Denser development to accommodate a substantial increase in population; a culturally rich environment; a renewed commercial environment; a beautified public realm; and better traffic circulation.

ENHANCING THE IMAGE OF CAGUAS

In order to recreate the image of Caguas through the Integrated Reinvestment Strategy, it is necessary to consider four principles which serve as the glue that binds together the key initiatives, programs, and actions of the strategy.

Political and civic leadership: In order for the managed-growth approach to be successful, it is necessary for political, economic, and civic leaders reaffirm their commitment to building a better Caguas. The ideas and principles outlined above must be lifted from the pages of this study and carried out in action.

Ecologically-sensitive action: Development of the river corridors is a dramatic step towards a new environmental philosophy for Caguas. It represents a revolutionary shift away from traditional engineering-based “control” solutions to one that restores the ecological value of the rivers while transforming the riverbanks from wasteland to park land. An ecologically-minded approach to housing development in Caguas will seek to preserve as much original vegetation as possible on construction sites. Likewise, curbing development on the hills surrounding the valley will also be a step towards reversing the negative impacts of erosion and local climate change.

Citywide urban design coherence: The overall public life of the city and the public good of its citizens is influenced by the shape and health of the surrounding environment. Given the very different character of different sections of the Urban Zone, a range of urban-design strategies would probably be appropriate. A coordinated program of beautification efforts and celebrations of civic pride should be implemented in each individual area of the Urban Zone, and even citywide.

Community building processes: While physical solutions cannot solve all of the problems faced by Caguas, dramatic improvements to the urban environment will go a long way towards improving the image of the city and the quality of day-to-day life within the Urban Zone. Therefore, it is of the utmost importance that each and every actions and initiatives undertaken in Caguas reinforces the health of the various communities within the Urban Zone particularly through expanded employment opportunities and community development.

IMPLEMENTATION

Implementation of the plan is staged in three phases:

- Short-term initiatives will occur within the next 1-3 years
- Mid-term initiatives will occur within the next 4-7 years
- Long-term initiatives will occur in the next 8-10 years

Each phase has particular actions and projects attached to it. Six sets of criteria were used to evaluate which projects are possible in the short-term:

- The desire to avoid residential and commercial dislocation
- Ease of approval process within the current legal framework
- Reasonable cost and identifiable funding sources
- Promotional benefits for furthering the goals of the Study
- Ability to enhance quality of life in Caguas
- Catalyst for future initiatives

TOWARDS A BRIGHTER FUTURE

If the actions and initiatives in the Integrated Reinvestment Strategy are carried out in conjunction with the principles of the managed growth approach, city leaders will have achieved a high level of success in their efforts to steward Caguas through a period of enormous transformation. The city will have grown in a way that is socially, economically, and physically responsible. In addition, everywhere one turns, the fruits of this approach and this strategy will be evident:

- A beautiful central core with an easily recognizable central business district
- Vibrant commercial corridors
- Clear gateways to the Urban Zone, the inner core, and downtown
- Protected residential communities, each of which has its own special character
- A memorable public realm
- Equity of development approach

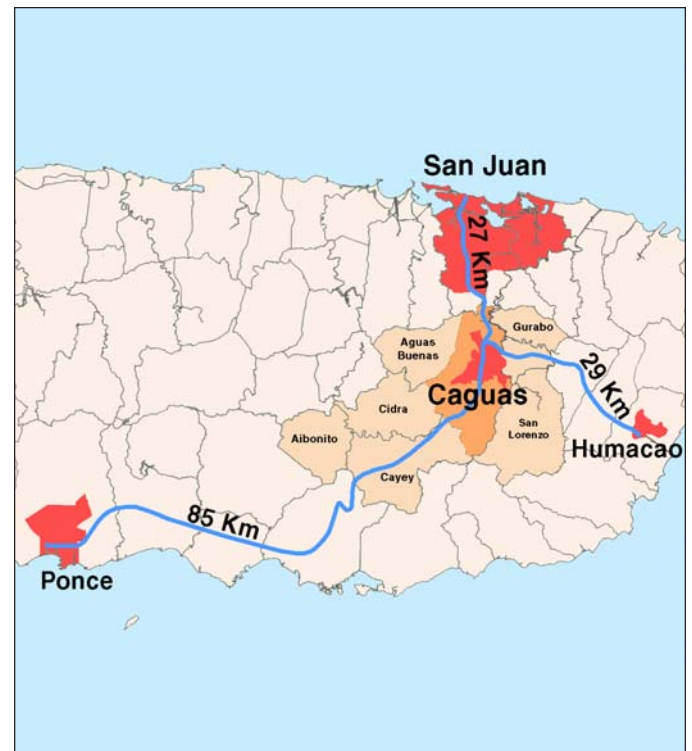
As a result of a coordinated strategy, downtown and its immediate surroundings will become a much denser environment with a renewed urban fabric and a new economic vitality. At the same time, the city’s ecological systems will be restored, its public face will be beautified, and its growth patterns will be rationalized.

Context and Issues

Caguas plays an important role in the transportation infrastructure of both Puerto Rico and the region. It lies at the main intersection between the island's primary north-south highway (PR-52) and region's main east-west highway (PR-30). Caguas also lies at the center of a network of regional and local roads that stretch from surrounding towns and municipalities into the heart of the city.

In the midst of current and projected demographic trends, Caguas finds itself hovering on the threshold between two different identities. In the past, the city served primarily as the self-sufficient economic hub of the surrounding region. However, waves of economic expansion coupled with advances in transportation and communications technology have begun to reshape Caguas as a satellite in the orbit of metropolitan San Juan. Because Caguas is the nexus of regional transportation routes, it is considered by many to be within easy commuting distance to San Juan and the localities that surround it. Caguas increasingly finds itself playing the role of a dormitory community for those who work in metropolitan San Juan but have the means to live outside of that teeming metropolis. As such, Caguas is increasingly pulled into that metropolis; a move that threatens to undermine the identity that became unique to the city as it has evolved over the centuries.

CAGUAS 2020 URBAN ZONE STUDY



SOUTHWEST VIEW

The chief asset of Caguas is its natural setting: The city spreads across the Valley of Turabo and is surrounded on all sides by hills and mountains. Despite the fact that a major urban center is located within the valley, wide skies and dramatic vistas are everywhere present. Several parcels of rural land remain along the river corridors or at the intersection of the major roadways where the most recent industrial and commercial development has taken place.





The pace of new development on the edge of the city is directly related to the pace of urban decay downtown.



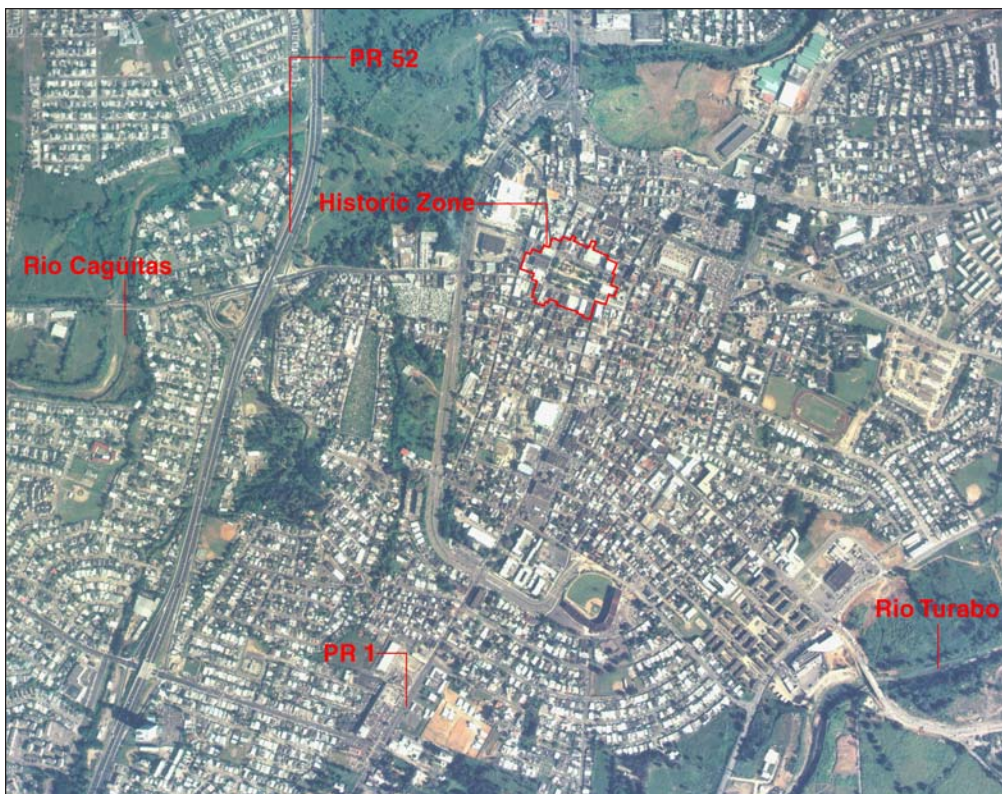
The city's roadways are congested with traffic and present an unsafe pedestrian environment.



The natural landscape around the city is one of its most important resources and must be protected.



Downtown and the Historic Zone are home to most of the city's chief civic and cultural institutions.



INNER CORE

The dense core of downtown and the inner-ring neighborhoods stands out among the sea of low density developments that surround it. The strict geometry of the orthogonal streets grid is broken only at the edges where urban renewal projects carved into that grid. These breaks are accentuated by the wide roads that plunge through the heart of downtown and sever it from surrounding neighborhoods. On the edges of the central core, the natural features of the river corridors have been disrupted by the spread of new development.

Analysis

The current population in the Urban Zone of Caguas is 140-thousand inhabitants. In less than twenty-five years - by the year 2020 - the population of Caguas is projected to surge to more than 250-thousand inhabitants. The existing physical environment of the city is not designed to handle rapid growth in a manner that can sustain economic, social, or environmental well-being.

Poverty is concentrated in downtown and in the inner-ring neighborhoods. As the built environment expands ever-outward, the residential and commercial component of downtown continues to erode and decay which compounds deterioration in the city's inner-ring neighborhoods.

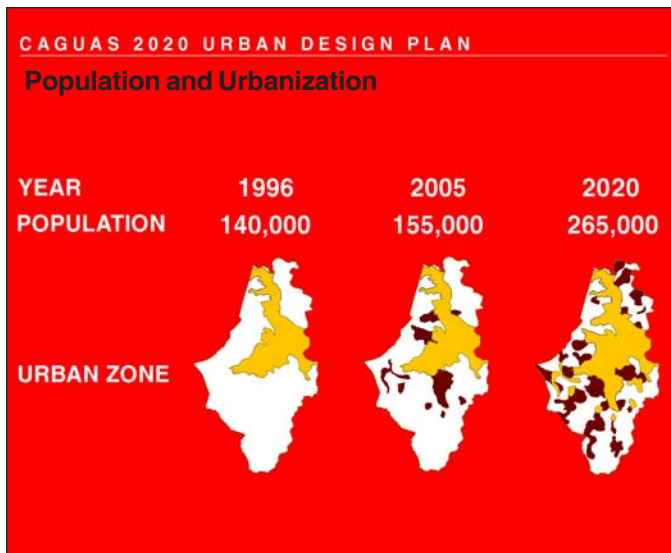
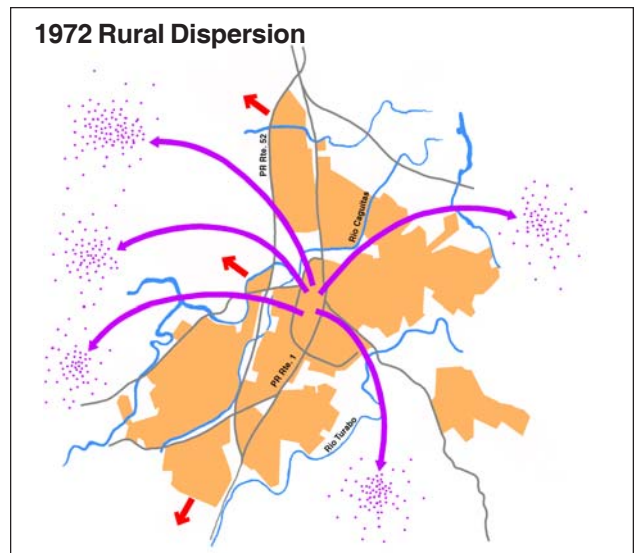
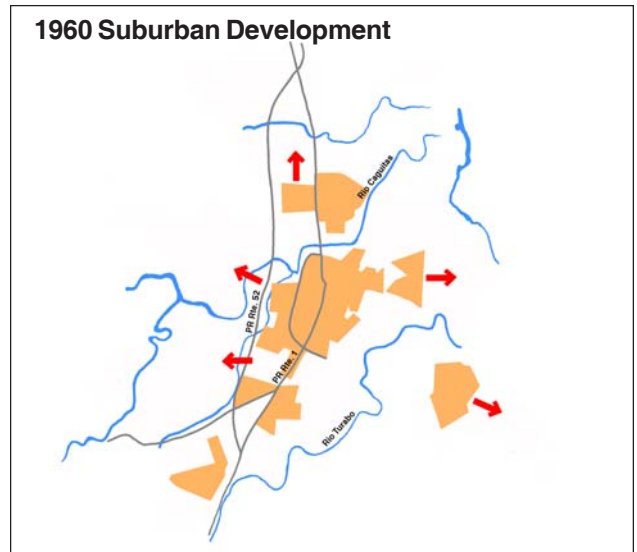
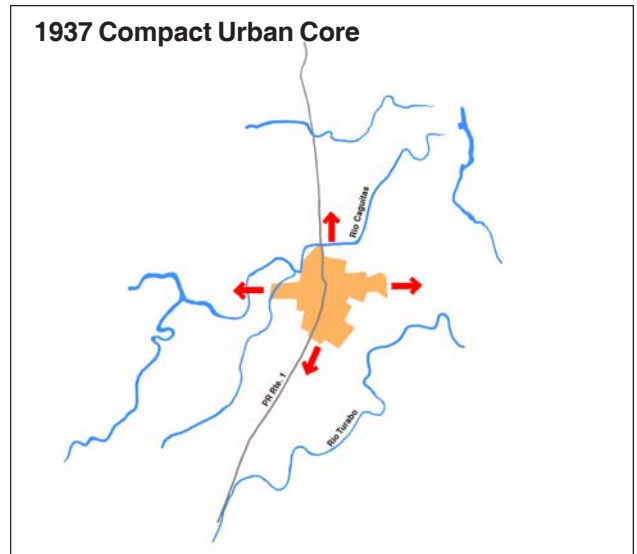
The existing mismatch between the supply of affordable housing and the demand for it is expected to grow more attenuated as the population continues to grow.

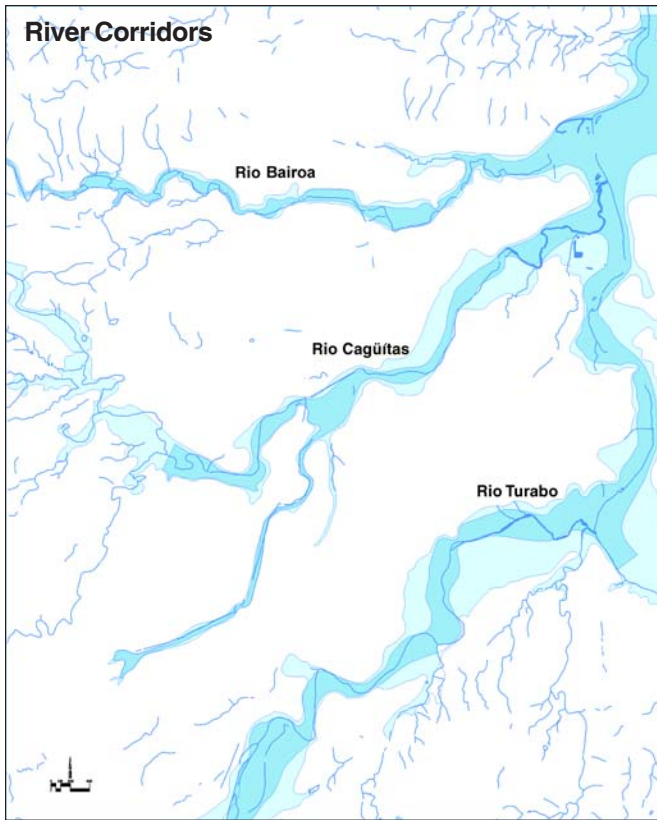
Existing infrastructure and utilities are overloaded and in a state of rapid deterioration. The city's power grid is vulnerable to frequent interruptions in service. Water overflows and raw sewage often are visible on city streets.

The lack of proper permitting makes it difficult to define how many structures are actually being built and what sort of impact they have on local infrastructure and public services.

The combination of regional and local traffic is choking the city's poorly designed roadways and narrow downtown streets, both of which are characterized by poor visibility and few traffic signals.

Environmental pollution is growing at an alarming rate. Ecological degradation - such as erosion, deforestation, and flooding - has become commonplace.





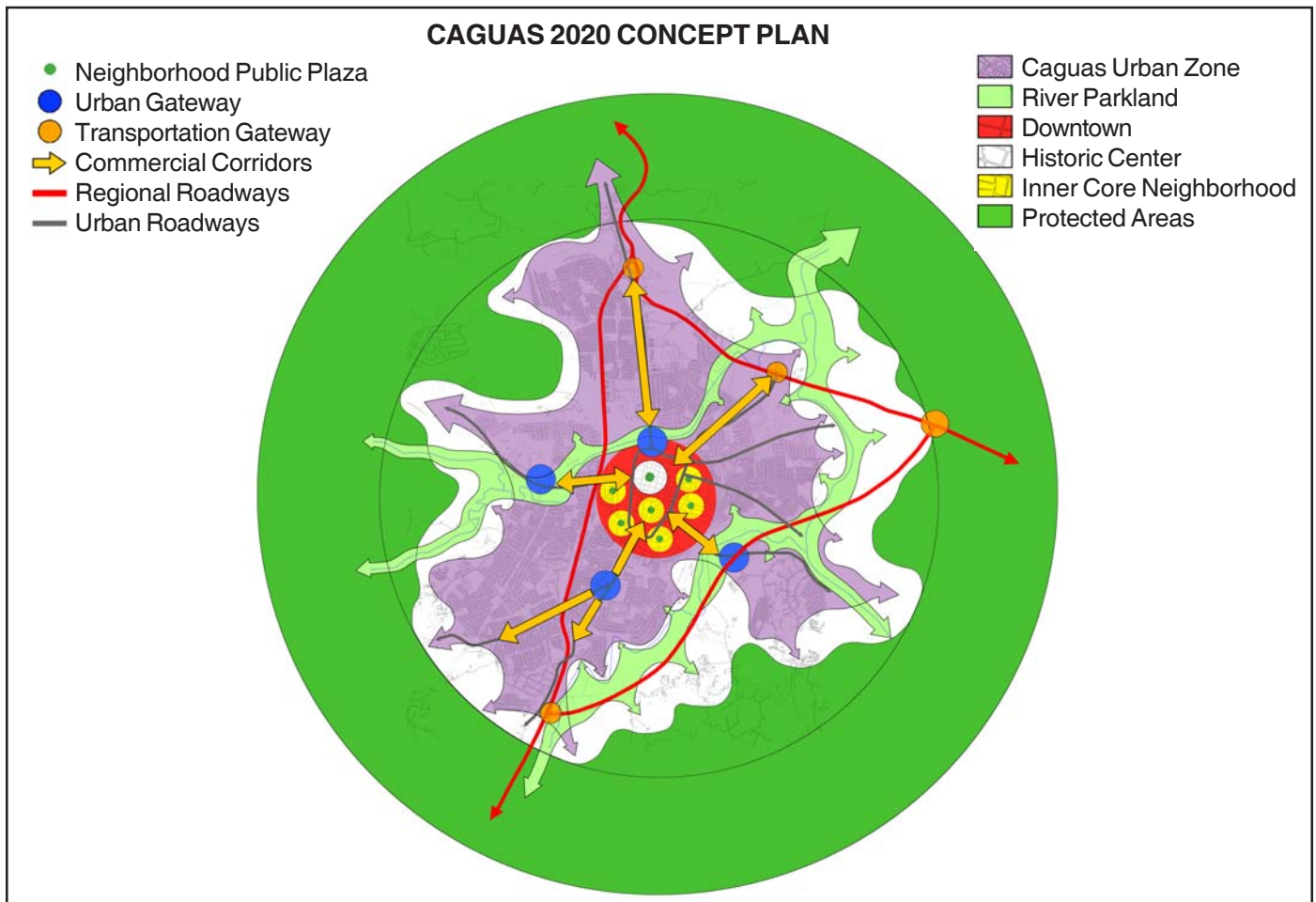
MANAGED GROWTH: AN INTEGRATED REINVESTMENT STRATEGY

Caguas is blessed with a dramatic natural environment, a prosperous economy, a rich cultural life, and a mosaic of many different neighborhoods. In the coming decades, the pace of growth in Caguas will continue to accelerate. Continued outward growth will only put further stress on those features that make Caguas special. For this reason, the challenge of accommodating a growing population in a sustainable environment is one that can only be met by reinvesting in what already exists; by capitalizing on what is inherently best about Caguas.

Traditional growth models tend to separate the components of the urban system - particularly by land use classifications - as a means to sort out what kind of action needs to be taken. But they often fail to re-integrate the components of the urban system in any substantive way. Such an approach is problematic because while it recognizes the important characteristics of each different piece of the urban puzzle, it fails to recognize that the puzzle only has meaning when its pieces fit together.

For this reason, an integrated approach towards managed growth was devised so that each issue would be considered and dealt with in the context of the whole, rather than as an isolated element. This approach allows for a series of strategic interventions which are intricately designed in such a way as to encourage growth that is healthy for Caguas and its inhabitants. In short, the present situation in the Urban Zone demands that new development goes hand-in-hand with an improved urban environment accomplished through a high set of standards.

Three key initiatives are proposed: The Transportation Initiative, the River Parks Initiative, and the Inner Core Initiative. Under the rubric of these three initiatives a full course of actions is proposed for the inner core of the Urban Zone. These actions range from large-scale redevelopment projects along the commercial corridors and within newly established gateway areas to small-scale, fine-grain projects that take place within the already built-up areas of downtown and its surrounding neighborhoods. The combination of these actions and initiatives make-up the vision for Caguas in the year 2020.

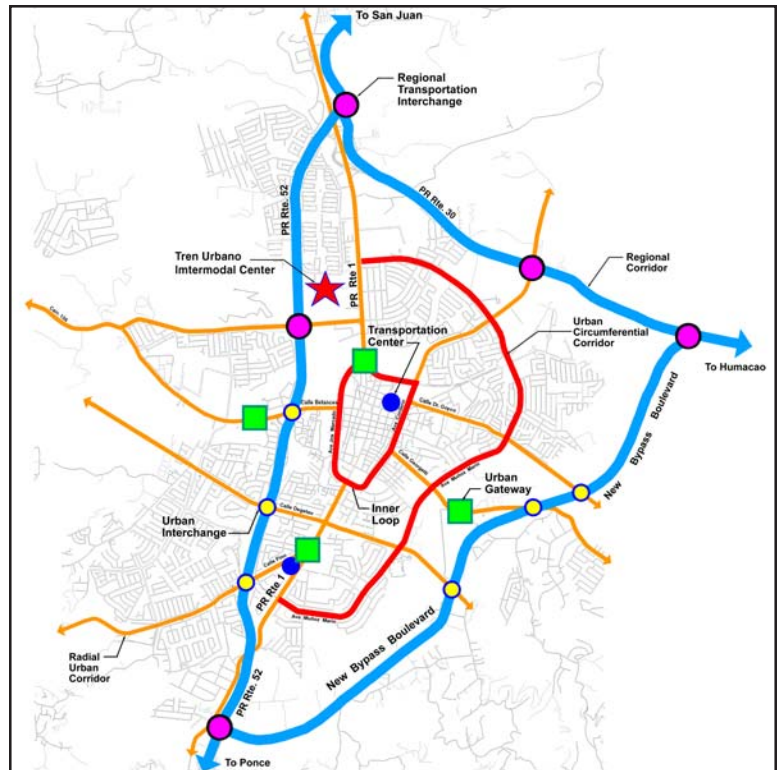


TRANSPORTATION INITIATIVE

An integrated transportation strategy balances investments in public and private transportation while separating regional and local traffic patterns. By redesigning major streets and intersections, the city can use transportation improvements not only to manage traffic and reduce congestion but also to reknit the urban fabric of central neighborhoods, to establish recognizable gateways, to renew the natural landscape, and to return city streets to pedestrians.

Sustainable growth will not be possible if the current state of the city’s transportation system is not dramatically improved in the following areas:

- Highway, roadway, and street improvements
- New parking strategies and policies
- Improvements to the pedestrian environment
- Expansion of the public transit system

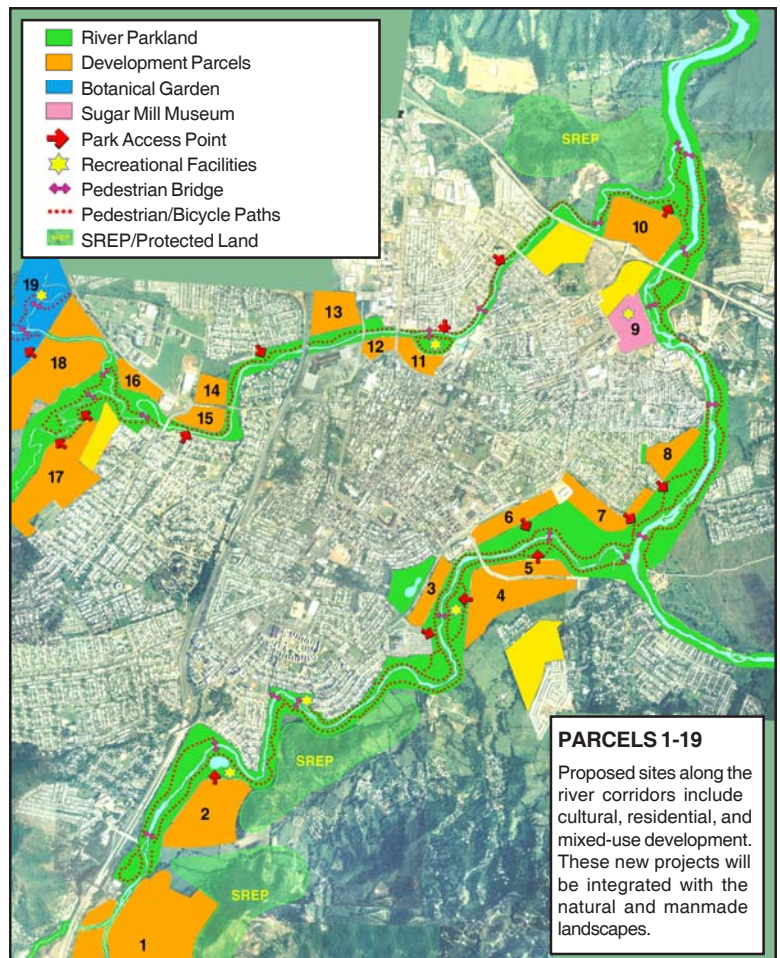


RIVERS PARKS INITIATIVE

The foundation of the River Parks Initiative is the idea that to restore the river system’s ecological functions and to take full advantage of its development opportunities are not mutually exclusive but compatible and complementary goals. To set the threshold for development, a continuous setback along the banks of both rivers will be preserved or reclaimed for a combination of ecological preservation, public access, recreational facilities, and linkages to the urban fabric. No private development can occur within this zone, and all public infrastructure and improvements must be guided by a thorough assessment of the ecological function of each river.

The rivers and the corridors of land that stretch along their banks are one of the city’s key assets. The long-term health of the city is tied to how well these rivers are revived and how effectively their potential is put to sound use. The River Parks Initiative calls for:

- A continuous linear park system
- Integrated system of flood control mechanisms
- Recreational facilities and cultural/ecological amenities
- Delineation of 19 parcels for major development opportunities



INNER CORE INITIATIVE

The center of Caguas is losing its economic energy and its population. At the same time, residential neighborhoods in the downtown and nearby communities continue to deteriorate. The downtown retail sector faces substantial competition from malls and commercial strips outside the core. Though the city serves as a government and service center for the region, night-time activity has dwindled. Traffic is congested in the downtown and at key bottlenecks on the ring roads and other urban arterials. Although structured and off-street parking is available, parked cars also crowd downtown streets. In addition, the quality of the pedestrian experience is reduced by narrow sidewalks, deteriorated façades, little street vegetation, and few open spaces (with the exception of Palmer Plaza).

A full course of proposed programs and actions is proposed for Caguas. They include a host of large-scale housing, commercial, recreation, and transportation development opportunities in key locations. They also range from large-scale redevelopment projects along the commercial corridors and within newly established gateway areas to small-scale, fine-grain projects that take place within the already built-up areas of downtown and its surrounding neighborhoods. Each action will emphasize high-density development that concentrates the overall population while increasing population in downtown and the surrounding neighborhoods.

Dramatic transformation of the urban environment in the inner core will be achieved through a coordinated set of five programs:

Historic District Revitalization Program

The Historic District Revitalization Program calls for doubling the area of the existing district to include buildings, streets, and neighborhoods that are essential to the historic fabric of the city but are not currently protected. It also calls for architectural restoration projects, reorganization of traffic and parking; streetscape and pedestrian improvements, infrastructure repairs and improvements. The plan also promotes commercial and residential infill on vacant land, signage controls, and burying overhead electrical wires.

Neighborhood Revitalization Program

The Neighborhood Revitalization Program features infrastructure improvements; reknitting and densifying the urban fabric; selective demolition, infill, and redevelopment; restored pedestrian landscape and creation of neighborhood plazas; new parking policies; incentives for storefront and building improvements.

Public Housing Modernization Program

The Public Housing Modernization Program calls for building redesign and modernization; landscape and site improvements; re-integration of public housing sites with the surrounding urban fabric; upgraded community facilities and services; and the institution of creative management and maintenance policies

Commercial Corridor Revitalization Program

The Commercial Corridor Revitalization Program calls for the integration of urban design improvements with development and redevelopment initiatives, land use reorganization and urban densification, land takings, and development incentives. This programs also includes the establishment of four large “gateway” development sites that will be integrated with the river parks system and transportation improvements. They also will provide significant opportunities for public/private investment partnerships.

Gateway Development

In four locations around the Urban Zone, large tracts of land will be assembled for the development of a series of new “gateways.” Each Gateway will open up new opportunities to develop a cluster of landmark projects that will expand the residential, commercial, and recreation space available in the Urban Zone while simultaneously supporting downtown revitalization. New development will be coordinated with the creation of the river parks system and with the proposed transportation improvements.

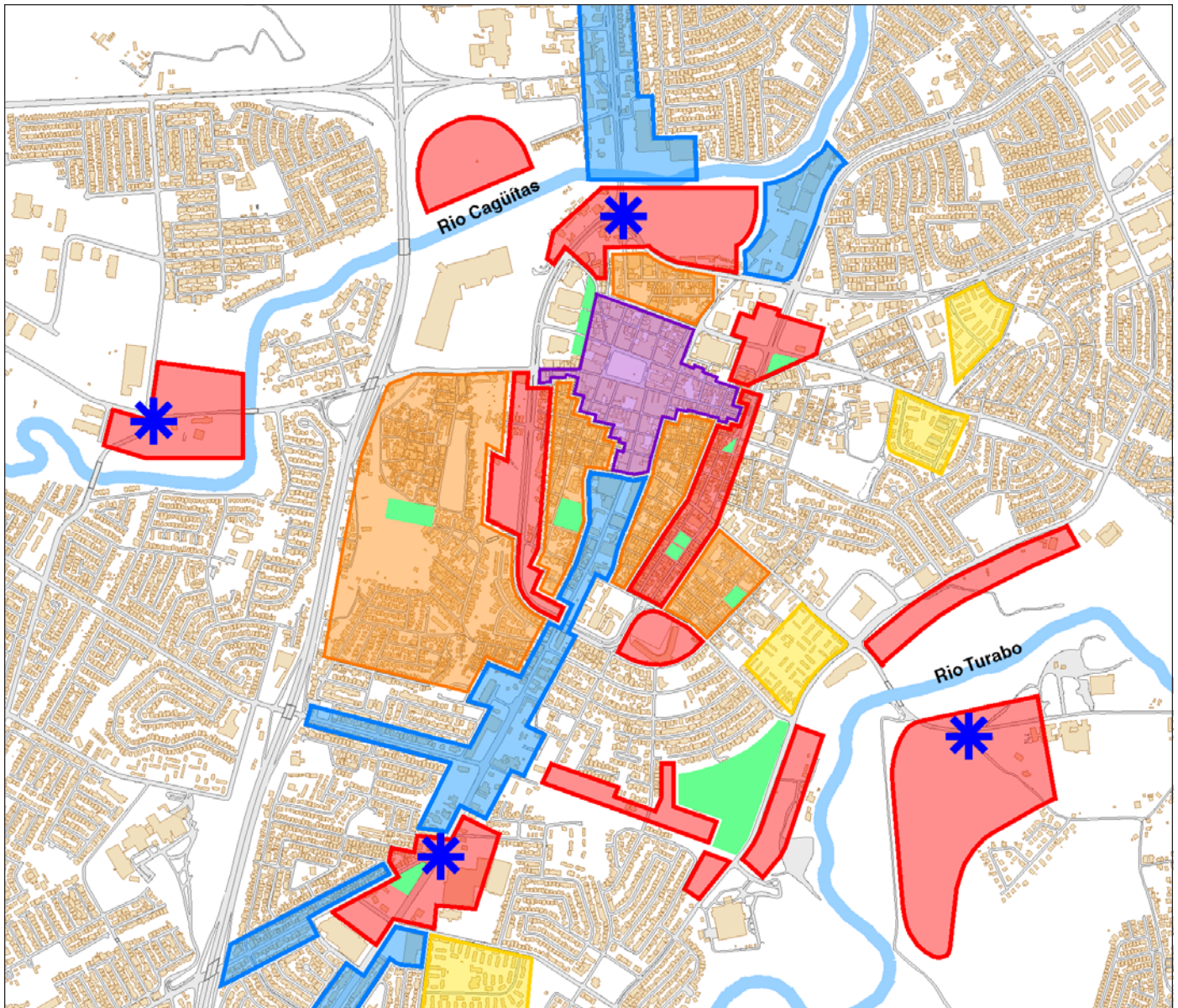
Four gateways are proposed:

- The North Gateway - along Route 1 North, just north of the Rio Cagüitas
- The East Gateway - along the Rio Turabo Park and along the Avenida Degetau Extension
- The South Gateway - along Route 1 South near the intersection of Calle Pino and Avenida Degetau
- The East Gateway - Along the Rio Cagüitas Park near PR-156 and Avenida Degetau

INNER CORE INITIATIVE

- Historic District Revitalization Program
- Neighborhood Revitalization Program
- Public Housing Modernization Program
- Commercial Corridor Revitalization Program
- Redevelopment and New Development
- Proposed Focal Plazas
- * Urban Gateways

Downtown Caguas and the neighborhoods that surround it have eroded over time. Although new efforts to restore and revive the city center recently got underway, much of the area was subjected to years of insensitive development. Through the Inner Core Initiative, downtown and its surrounding neighborhoods will become a showcase for a combination of programs and actions. The ultimate goal is to attract up to 15-thousand residents back to the downtown and many more residents in the nearby neighborhoods. Simultaneously, other transformations will make the center of Caguas a magnet for culture, tourism, shopping, and services. This growth is a reciprocal process: increased density in residential neighborhoods will support the downtown retail base, but the infrastructure and facilities to support this densification must be in place.



An integrated reinvestment strategy will accommodate a growing residential population while reconnecting communities, re-organizing circulation and reducing traffic, broadening the local retail base, and rejuvenating street life in an historically-rich architectural environment. The barriers created by the ring roads will be overcome and the urban fabric will be reknit where it was previously interrupted by urban-renewal and other large-scale projects. The river corridors will be restored as the vital flood-control, recreational, and development resource they are – the city’s proud front yard rather than its neglected back alley.

The following examples are especially noteworthy:

Intermodal Transportation Center: The existing intermodal transportation center - which serves as a bus, público, and taxi station - will be upgraded in conjunction with new mixed-use development that replaces surface parking lots on adjacent corners of the intersection. The façades of two new office buildings reinforce the street edges and shield nearby off-street parking. A triangular plaza is located on the fourth corner of the intersection.

Avenida José Mercado Redevelopment: This now barren stretch of roadway will be narrowed to four lanes with widened sidewalks and parallel parking. In conjunction with the redesigned roadway, the west side of the downtown boulevard loop will be lined with new, high-density mixed-use development on sites that are currently vacant or underutilized.

Baseball Stadium Redevelopment Site: The existing Ydelfonso Sola Morales Baseball Stadium is a major recreational facility which was originally built at the edge of the urban area. Today, it sits in a critical downtown location where inappropriately large streets and surface parking create an underutilized site that is disruptive to the urban context. The current site of the stadium will be broken into three or four developable parcels so that new residential and mixed-use development can take place.

Avenida Degetau Extension: Dense new residential development with related services will be built on this site. The extension of Avenida Degetau will become a major access route into the new Río Turabo Park. An additional recreational park with a prominent water feature will serve the surrounding neighborhoods.

East Gateway Development: The East Gateway area offers an opportunity for new mixed-use development along the edges of the Río Turabo Park. Residential and commercial buildings will be built along on the west side of the river along Avenida Luis Muñoz Marín and the Avenida Degetau Extension. A major new recreational complex

on the east side of the river includes the relocated baseball stadium, a soccer field, and a spectator bicycle-racing track.

Proposed By-Pass Road: The by-pass roadway on the eastern edge of the Urban Zone ties together two of Puerto Rico’s major highways and diverts regional traffic away from congested city streets. It will be built as a landscaped boulevard with dedicated right-of-ways that will be preserved as buffer zones.

West Gateway: The West Gateway area offers an opportunity for new mixed-use development along the edges of the new Río Caguas Park. Residential and commercial buildings will be built along PR-156. A major new recreational complex and a new botanical garden complete this gateway project.

Avenida Luis Muñoz Marín Redevelopment: Both sides of this currently underdeveloped circumferential road will be redeveloped as major housing and mixed-use development sites, with immediate access to Río Turabo Park. Rather than allowing commercial strips or low-rise office parks, a new typology for new mixed-use development in Caguas will feature a series of multi-story “courtyard” buildings with interior open spaces and easy-access to surrounding parks.

A series of proposed actions were explored in greater detail to illustrate how the fundamental principles of the Study can be applied to a particular place or set of places within the Urban Zone. These scenarios and visions - which are illustrated in the following pages - demonstrate how the managed growth approach will accommodate an expanding population while simultaneously promoting economic development in an environmentally responsible and socially equitable way. Together, they show how it is possible to restore neighborhoods and natural systems while creating a flexible structure for future development that does not strangle the city with traffic and visual clutter.

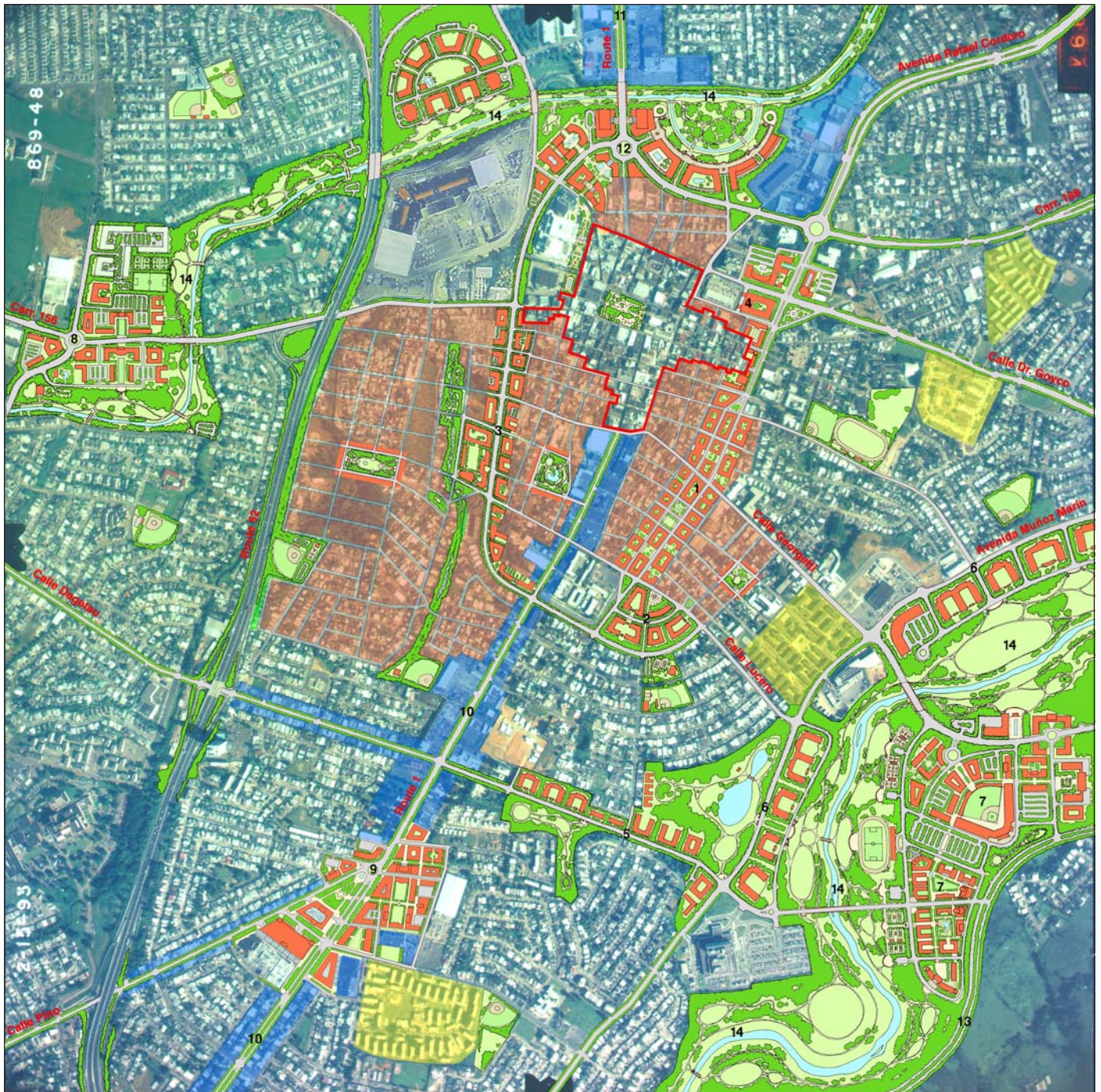
The following areas of the Urban Zone were identified as key places where the integrated reinvestment strategy warranted more detailed exploration:

- The River Parks System
- Muñoz Marín Plaza
- The Route 1 Corridor, north of the CBD
- North Gateway
- South Gateway
- Avenida Rafael Cordero
- Downtown and its surrounding neighborhoods
- The Route 1 Corridor, south of the CBD
- Commercial corners along Avenida Luis Muñoz Marín

ILLUSTRATIVE SITE PLAN

- Historic District Revitalization / *Símbolo (símbolo) (símbolo)*
 - Neighborhood Revitalization / *Símbolo (símbolo) (símbolo)*
 - Public Housing Modernization / *Símbolo (símbolo) (símbolo)*
 - Commercial Corridor Revitalization / *Símbolo (símbolo) (símbolo)*
1. Avenida Cordero Redevelopment / *Símbolo (símbolo) (símbolo)*
 2. Sola Morales Stadium Redevelopment / *Símbolo (símbolo) (símbolo)*
 3. Avenida José Mercado Redevelopment / *Símbolo (símbolo) (símbolo)*
 4. Intermodal Transportation Center / *Símbolo (símbolo) (símbolo)*
 5. Development on Avenida Degetau Extension / *Símbolo (símbolo) (símbolo)*

6. Avenida Muñoz Marín Redevelopment / *Símbolo (símbolo) (símbolo)*
7. East Gateway Development with New Baseball Stadium / *Símbolo (símbolo) (símbolo)*
8. West Gateway Development / *Símbolo (símbolo) (símbolo)*
9. South Gateway Development / *Símbolo (símbolo) (símbolo)*
10. Route 1 Corridor South Redesign / *Símbolo (símbolo) (símbolo)*
11. Route 1 Corridor North Redesign / *Símbolo (símbolo) (símbolo)*
12. North Gateway Development / *Símbolo (símbolo) (símbolo)*
13. Proposed Bypass Road / *Símbolo (símbolo) (símbolo)*
14. River Parkland / *Símbolo (símbolo) (símbolo)*



RIO TURABO PARK

The site for the new Rio Turabo Park is located on the south-east edge of the Urban Zone. The Avenida Degetau Extension will serve as the major entrance to the park from downtown and the surrounding neighborhoods. The River Parks Initiative calls for the following:

- Creation of a linear system of open green spaces along the banks of the river
- Six land parcels - along the edges of the park - will be made available for residential and mixed-use development opportunities
- The new Sola Morales Baseball Stadium - home to the Caguas Criollos professional baseball team - will be re-located from the southeastern corner of downtown
- New soccer fields, tennis courts, and a bicycle racing track (with spectator facilities) will be built
- A new flood-control pond and surrounding parkland will be located along the Avenida Degetau Extension





MUÑOZ MARÍN PLAZA

A memorial plaza that celebrates the life and accomplishments of Puerto Rican hero, Luis Muñoz Marín, will be located on the west bank of the Rio Turabo Park. The site offers panoramic views of the mountain landscapes on the southern and eastern edges of the Urban Zone. It also acts as a natural link between the city's inner core neighborhoods and the Rio Turabo Park.



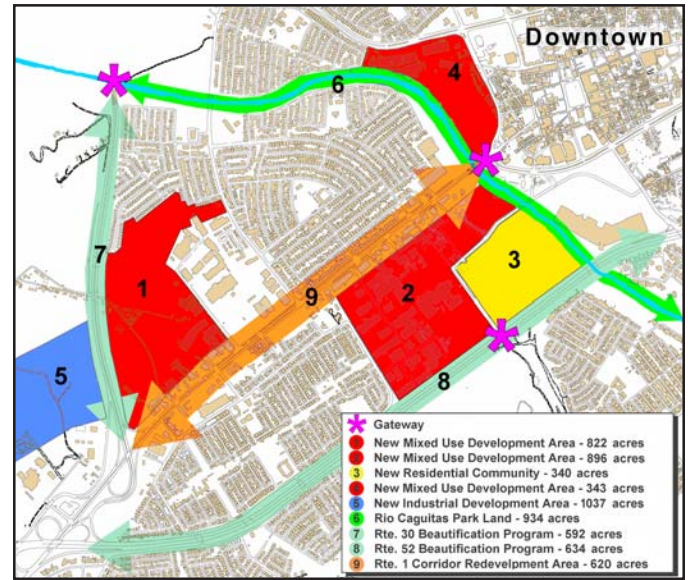
RIVER LANDSCAPES

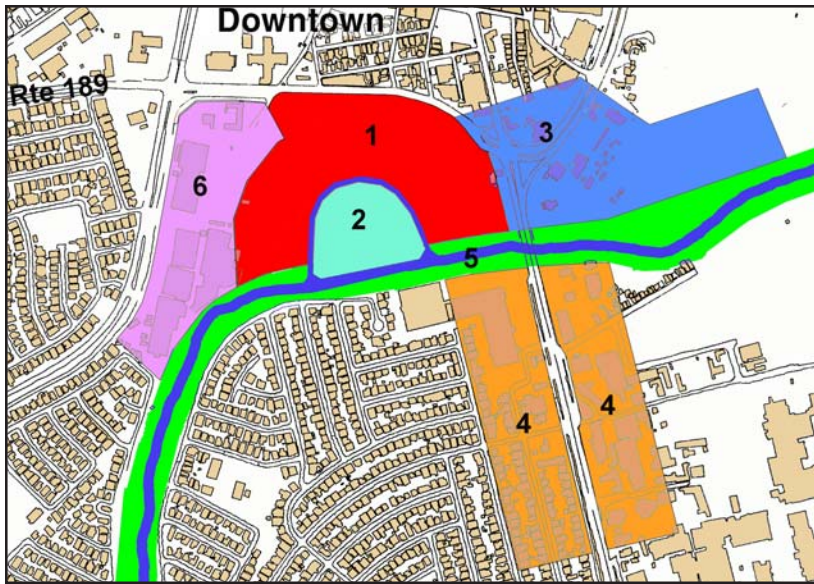
The river banks provide natural corridors for a river-based linear park system. Residents and visitors alike will be drawn to the parks for their lush vegetation and their sweeping views of city skyline. A new park system will allow the general population to get close to the water and to enjoy its natural beauty. A series of distinct places along each river will be linked to one another by a system of trails, paths, and bridges.

ROUTE 1 NORTH CORRIDOR

Redevelopment of the northern section of PR-1 is a major public investment opportunity. The roadway will be totally re-designed and landscaped, creating a boulevard rather than a highway environment. This includes:

- Denser commercial development with off-street parking and pedestrian improvements
- Residential development along the Cagüitas River
- Creation of the North Gateway at the head of Avenida José Mercado
- Mixed-use development south of PR-30
- Modernization of an existing industrial district and the development a new industrial district
- Landscaped buffer along highways PR-52 and PR-30
- Highway interchanges marked with special landscaping and sculptural elements





NORTH GATEWAY PARCELIZATION

1. Mixed Use Development
2. New Canal & Ecological Area
3. North Gateway
4. Rt. 1 Corridor Revitalization Program
5. Rio Caguaitas Park
6. Future Development Parcel

NORTH GATEWAY

Two parcels of currently underutilized land are located along the banks of the Rio Caguaitas directly north of the Central Business District. Development of these parcels will form the North Gateway to the inner core of Caguas. Both parcels are easily accessible to PR-1, PR-52, and PR-189. Development of this site calls for the following:

- Creation of a linear system of open green spaces along the banks of the Rio Caguaitas
- Two land parcels - along the edges of the park - will be made available for residential and mixed-use development opportunities
- A new tourist hotel
- A new island park will be possible through the creation of a crescent-shaped canal. The island park will be laced with walkways that lead visitors through an oasis of flora and fauna that are native to the local area. The canal will also serve as a key feature of the river flood-control system
- A new interpretive center for the river park system



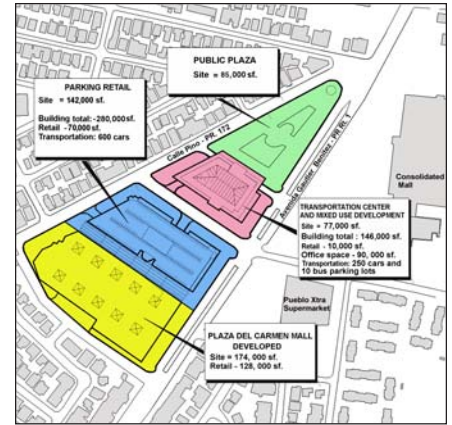


URBAN CONTEXT

SOUTH GATEWAY

The site at the intersection of PR-1 South and Calle Pino is a key commercial node in the southern part of the inner core. A new development project will integrate new and existing activities as follows:

- Refurbishment of the Plaza del Carmen Mall
- A public plaza at the intersection
- A new parking structure with retail space at the street level
- A new intermodal transportation center



DEVELOPMENT DIAGRAM



AVENIDA CORDERO REDEVELOPMENT

This narrow street is perpetually congested with more traffic than it was built to accommodate, and the existing auto-dominated environment severs the surrounding neighborhoods from one another. The design solution reknits adjacent neighborhoods back together through re-parcelization of the existing blocks, the creation of a new street grid, and the separation of north-bound and south-bound traffic onto

two separate one-way avenues. Re-parcelized blocks will be developed with unified three- to four-story residential structures that have continuous streetwalls and porticos at the ground floor. This allows denser development on the edge of the block so that open space and courtyards can be provided on the interior of the block. Off-street parking is built underground





CORDERO PLAZA

In keeping with the city's rich tradition of building neighborhood parks, a new "jewel" plaza will be built where vehicular traffic splits at the north end of the redevelopment site.

REDEVELOPMENT AXONOMETRIC VIEW

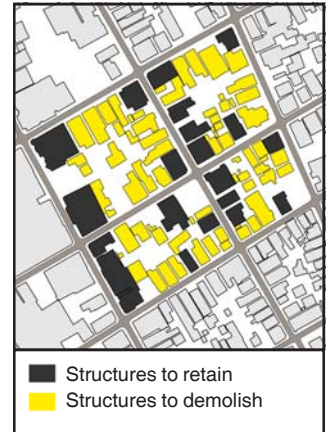
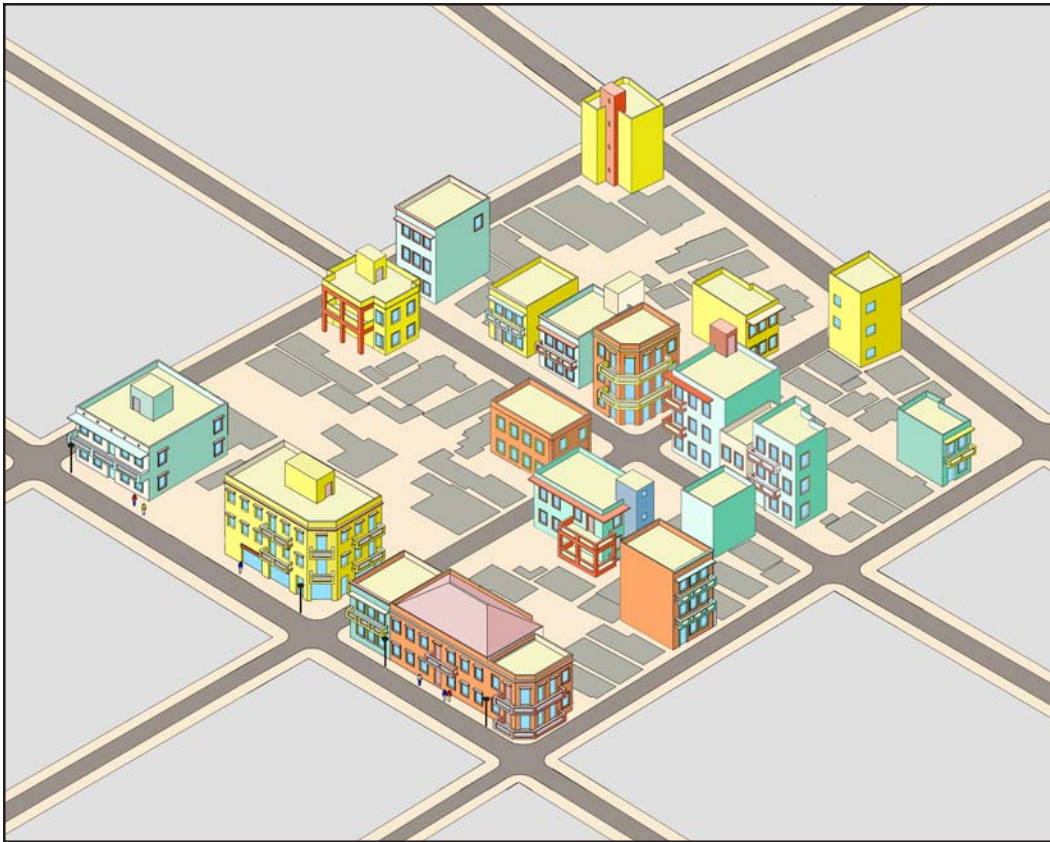
The redevelopment approach for Avenida Cordero will serve as a model for revitalization of other decayed areas of the city.



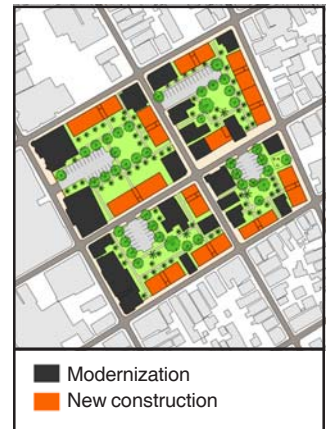
INNER CORE MODERNIZATION & INFILL

Many structures in and around the CBD are vacant or in a dilapidated state of repair. Some are beyond hope, though many are worth maintaining. Each block of the inner core will be surveyed to determine which buildings are structurally sound or historically significant. Within each block, those buildings will be upgraded through modernization; that is by preserving the scale and character of the existing building while bringing it up to current building and safety codes. Abandoned and decayed buildings that are neither structurally sound nor historically significant will be demolished. New buildings will be developed on those sites. New construction should conform to the existing context in terms of scale, building edge, and general building design. The public realm will be completely overhauled to allow widened sidewalks, green space, and off-street parking. The benefit of this approach is that it can be carried out incrementally - one block at a time. One example of where this approach will be used is Calle Celis Aguilera, shown here.





Selective demolition of decayed or abandoned buildings opens up new opportunities to redevelop and densify many blocks throughout downtown and the surrounding neighborhoods.



Modernization of existing buildings that are structurally sound is combined with infill redevelopment to create a new block pattern that features a coordinated mix of old and new housing, an improved streetscape, landscaping, and off-street parking.

HIGHWAY, ROAD, AND STREET IMPROVEMENTS

Resolving the traffic conflicts in the Urban Zone requires a series of integrated actions that rebalance the investments in public and private transportation, reduce congestion, and remove the multi-lane barriers that cut the downtown off from its surrounding neighborhoods. The crucial first step toward any successful intervention is to separate regional traffic from urban-bound traffic. By redesigning major streets and intersections to accomplish this objective, the city can use transportation improvements not only to manage traffic but also to reknit the urban fabric, to establish recognizable gateways, to renew the natural landscape, and to return city streets to pedestrians.

Highway improvements: The purpose of the proposed highway improvements is twofold: to separate regional highway traffic from local roadway traffic; and to create buffer zones between highways and neighborhoods that beautify the local landscape while blocking-out noise and air pollution. Construction of the Eastern By-Pass Road will reroute traffic now using city streets to move between the southern section of PR-52 and the eastern section of PR-30. In addition, improvements to confusing and congested highway interchanges such as the northern junctions of PR-52, PR-30, and PR-1 will minimize involvement of local streets in these traffic moves.

Circumferential, Inner-Loop, and Radial Road Improvements: Once the pressure on the urban arterials is relieved through the completion of highway improvements, the city's "hub-and-spoke" system of roadways can be redesigned as major urban boulevards. Roadways will be redesigned so that they incorporate improvements to the public realm - including a well-designed pedestrian environment and new landscaping. They can be narrowed in some key locations to remove the multi-lane barriers that currently cut the downtown off from its surrounding neighborhoods. In addition, improvements will be made in order to allow for new development opportunities that could take place along the edges of these roads.

Downtown and neighborhood street improvements: Although the emphasis is on down-scaling the outsized sections of the ring roads and commercial corridors, new streets and new block patterns are envisioned in the downtown and inner-ring neighborhoods. However, unlike previous road-widenings such as those along Avenida José Mercado, new improvements will be more respectful of the existing fabric of the city. With appropriate sidewalk treatments and other streetscape improvements, they will generate stronger connections between neighborhoods and across the city center.

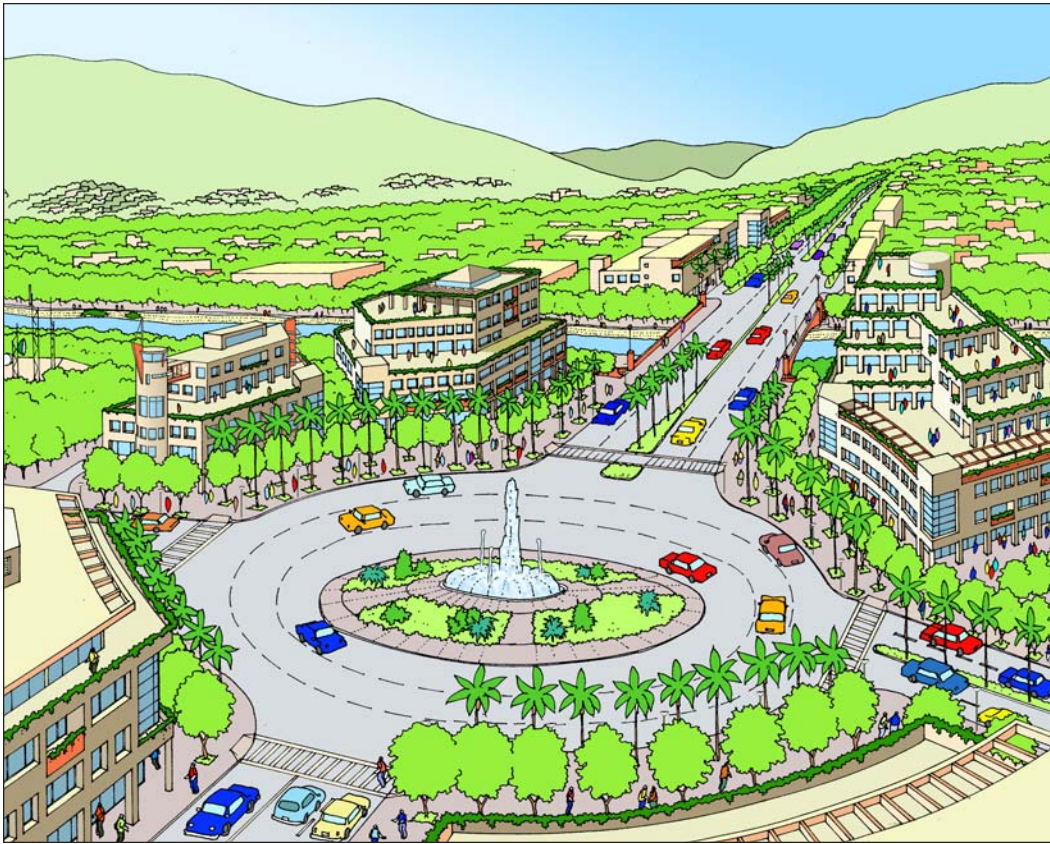


ROUTE 1 SOUTH

The roadway redesign for the strip of PR-1 that stretches out from the southern end of the inner core calls for the following:

- Roadway redesigned as boulevard with landscaped medians
- Parallel parking and off-street parking
- Building design features uniform setbacks and articulated streetwalls
- Wide sidewalks are integrated with building por-ticos





NORTH GATEWAY

In addition to new residential and mixed-use development along the Rio Cagüitas Park, the North Gateway is marked by a new traffic rotary that will be built at the intersection of Route 1 North, José Mercado Avenue, and PR-189. Pedestrian improvements along redesigned roadways will complement the system of paths and trails within the river parks system.



ROUTE 1 NORTH

Low-density strip mall development will be replaced with high-density mixed-use development. Redevelopment of the corridor calls for the following:

- Landscaped boulevard with frontage road and medians
- Parallel parking and off-street parking
- Building design features uniform setbacks and articulated streetwalls
- Wide sidewalks integrated with porticos



COMMERCIAL CORNERS

Major intersections along Avenida Luis Muñoz Marín will be developed as commercial corners that cater to nearby residents. The Study calls for the following:

- Taller buildings with ground-floor retail
- Wide sidewalks integrated with building por-ticos
- Pedestrian-friendly envi-ronment with wide side-walks and sight lines to the surrounding hills



CALLE G. BENITEZ

The existing downtown pe-destrian mall on Calle Gautier Benitez is one of the last active commercial areas in the central busi-ness district. Refurbish-ment of the pedestrian mall calls for the following:

- Construction of an ar-cade to provide shelter from sun and rain
- Improved storefronts and standardization of signage and lighting
- New landscaping and street furniture



WHAT IS NEEDED TO IMPLEMENT THE URBAN ZONE STUDY

The Urban Zone Study is a far-reaching, highly-ambitious vision for what Caguas will look like and how it will function over the next several decades. It calls for nothing less than a dramatic shift in the way the city's growth and development occur. Implementation of the actions and proposals that are part of this vision are well within the realm of possibility. But implementation of the Study will require adherence to a set of key ingredients:

- Leadership
- Consensus
- Time
- Financial resources
- Integrated decision making

IMPLEMENTATION

The Urban Zone Study is put together in such a way as to ensure that it is possible to carry out the entire vision through series of implementation phases. Implementation of each action in the Urban Zone Study is organized according to (1) cycle of development and (2) the initiative or program of which that action is a part.

Implementation of the Urban Zone Study can be achieved through three cycles of development:

- Short-term actions will be completed in 1 to 3 years
- Mid-term actions will be completed in 4 to 7 years
- Long-term actions will be completed in 8 to 10 years

Each cycle has particular actions and goals attached to it. Six sets of criteria were used to evaluate which projects could be accomplished in the short-term:

- The desire to avoid residential and commercial dislocation
- Ease of approval process within the current legal framework
- Reasonable cost and identifiable funding sources
- Promotional benefits for furthering the goals of the Study
- Ability to enhance the quality of life in Caguas
- Catalyst for future initiatives

It should be noted that there are three important reasons why the proposed short-term actions can be effectively completed within one to three years time. First, all of the proposed actions can occur within the existing legal framework of the 1998 *Plan Territorial*. Second, the cost for these projects is within the Municipality's current borrowing power. Third, these projects can be easily undertaken because they will not require a lengthy approval process. (Some of the short-term actions are already in the design stage by either the Municipality or the Commonwealth.)

Mid-term and long-term actions are those that require a longer lead time in terms of securing funding, assembling development sites, and conducting a full-scale design review process.

The phased implementation schedule is a preliminary set of proposals. It is a changing target that must continually be reassessed in light of new research and new circumstances that may arise. The implementation schedule may need to be revised from time to time based on the following conditions:

- Availability of funds
- Interest in the private sector
- Market conditions

FUNDING AND SUPPORT

The initiatives and actions in this Study will be funded through a variety of sources. Over the next three years the Municipality will make \$100-million in investments to transportation, restoration of the rivers, and several improvement projects in the inner core. These funds will be supplemented by another \$100- to \$150-million based on the Municipality's bonding capacity.

Additional funds will be sought from the Commonwealth of Puerto Rico for the following:

- Construction of a new by-pass road on the eastern edge of the Urban Zone
- Improvements for highway interchanges, buffer zones, and beautification projects
- Improvements for the North Intermodal Transportation Center, construction of the South Intermodal Transportation Center, and programming for the eventual construction of an intermodal center to accommodate expansion of San Juan's *Tren Urbano*
- Improvements to the local transit system

Funds will also be sought from the U.S. Federal Government, particularly for bio-tech restoration and creation of a park system along the river corridors.

In addition, several areas – particularly the Gateways – are targeted for development through private investments.

IMPLEMENTATION SCHEDULE

	SHORT-TERM ACTION (1 - 3 years)	MID-TERM ACTION (4 - 7 years)	LONG-TERM ACTION (8 - 10 years)
TRANSPORTATION INITIATIVE	<ul style="list-style-type: none"> • Route 1 North • Route 1 South • Avenida Degetau Extension • Calle Georgetti 	<ul style="list-style-type: none"> • Calle Pino • Avenida Cordero • Eastern By-Pass Road • Avenida José Mercado 	<ul style="list-style-type: none"> • Avenida Luis Muñoz Marín
	<ul style="list-style-type: none"> • North Intermodal Center • City Bus Improvements • Parking Programs 	<ul style="list-style-type: none"> • South Intermodal Center • CBD Circulator Bus • Parking Programs 	<ul style="list-style-type: none"> • Público Improvements • CBD Peripheral Parking
RIVER PARKS INITIATIVE	<ul style="list-style-type: none"> • Rio Cagüitas Park between PR-1 & PR-30 	<ul style="list-style-type: none"> • Rio Cagüitas Park between PR-1 & Botanical Garden 	<ul style="list-style-type: none"> • Rio Cagüitas Park between PR-30 & Rio Grande de Loíza
	<ul style="list-style-type: none"> • Rio Turabo Park between PR-52 & Calle Luxemborgo • Muñoz Marín Plaza 	<ul style="list-style-type: none"> • Rio Turabo Park between Calle Luxemborgo & Rio Grande de Loíza • East Gateway Botanical Garden 	<ul style="list-style-type: none"> • East Gateway Recreation Facilities • West Gateway Recreation Facilities
	<ul style="list-style-type: none"> • Park at Muñoz Marín and Avenida Degetau Extension 		<ul style="list-style-type: none"> • Rio Grande de Loíza Park between Rio Cagüitas & Rio Turabo • Sugar Museum
INNER CORE INITIATIVE			
HISTORIC DISTRICT	<ul style="list-style-type: none"> • Streetscape, storefront, and signage improvements • Infrastructure improvements 	<ul style="list-style-type: none"> • Infill and Modernization • Avenida G. Benitez Arcade • City Museum 	<ul style="list-style-type: none"> • Infill and Modernization
NEIGHBORHOOD REVITALIZATION PROGRAM	<ul style="list-style-type: none"> • Barriada Morales, Brooklyn, Bunker, Myrlena, Santo Domingo 	<ul style="list-style-type: none"> • Campo Alegre • Savarona 	<ul style="list-style-type: none"> • Nazario • Paradis
		<ul style="list-style-type: none"> • Sola Morales Residential Redevelopment • Cordero Residential Redevelopment 	<ul style="list-style-type: none"> • Cordero Residential Redevelopment • Mercado Residential Redevelopment
	<ul style="list-style-type: none"> • Downtown High School • Cordero Plaza 	<ul style="list-style-type: none"> • Children’s Museum 	
PUBLIC HOUSING MODERNIZATION PROG.		<ul style="list-style-type: none"> • Public Housing Modernization* 	<ul style="list-style-type: none"> • Public Housing Modernization*
COMMERCIAL CORRIDOR REVITALIZATION PROGRAM		<ul style="list-style-type: none"> • Route 1 North Commercial Revitalization • Route 1 South Commercial Revitalization 	<ul style="list-style-type: none"> • Avenida Degetau Commercial Revitalization • Calle Pino Commercial Revitalization
		<ul style="list-style-type: none"> • Route 30 Industrial and Mixed Use Development 	<ul style="list-style-type: none"> • Route 1 North Industrial Zone Redevelopment
	<ul style="list-style-type: none"> • Las Catalinas II 		<ul style="list-style-type: none"> • Government Cntr. Expansion
GATEWAY DEVELOPMENT	<ul style="list-style-type: none"> • North Gateway Plaza • North Gateway Com. Devt. 	<ul style="list-style-type: none"> • North Gateway Residential Development 	
	<ul style="list-style-type: none"> • East Gateway New Baseball Stadium 	<ul style="list-style-type: none"> • East Gateway Residential and Commercial Devt. 	<ul style="list-style-type: none"> • East Gateway Plaza
		<ul style="list-style-type: none"> • South Gateway Plaza • South Gateway Com. Devt. 	
	<ul style="list-style-type: none"> • West Gateway Res. Devt. 	<ul style="list-style-type: none"> • West Gateway Com. Devt. 	<ul style="list-style-type: none"> • West Gateway Plaza

* NOTE: Public Housing Modernization is not the responsibility of the Municipal government.

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