

Main Street Neighborhood Planning Study.

Final Report. March 2009.

Completed by the Gulf Coast Community Design Studio

for the Biloxi Housing Authority &

the Gulf Coast Housing Resource Network

With generous support from the John S. & James L. Knight Foundation

GCCDS

Gulf Coast Community Design Studio

Mississippi State University College of Architecture Art + Design

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Main Street Neighborhood Study.

Introduction.

In the aftermath of Hurricane Katrina, the spirit of cooperation and a clear sense of purpose have fostered a number of unique collaborations on the Gulf Coast. Among these is the Gulf Coast Housing Resource Network, a group formed to share information, to avoid competition in procuring properties for affordable housing development, and to partner on these and other redevelopment efforts. The core members of the network working in East Biloxi are:

- Back Bay Mission,
- The Biloxi Housing Authority,
- The Gulf Coast Community Design Studio,
- Habitat for Humanity of the Mississippi Gulf Coast,
- The Hope Coordination Center (formerly EBCRRA), and
- Mercy Housing & Human Services.

In 2008, these organizations worked with the Local Initiatives Support Corporation (LISC) and the Knight Foundation to identify catalyst projects to spur redevelopment in the East Biloxi area. The Knight Foundation provided the group funds to pay for planning and pre-development work leading to revitalization activities in the Main Street Neighborhood Area of East Biloxi. (Figure 1.)

The purpose of this study is to develop an initial community plan for restored and rehabilitated housing, as well as new commercial spaces in the area. The phases of the study include:

1. BACKGROUND RESEARCH & ANALYSIS.

The first portion of the work focused on East-Biloxi-wide analyses of existing conditions on the ground since Hurricane Katrina. This phase

included the development of maps showing opportunities and challenges to redevelopment, based on review and analysis of the resources including the following:

- previous planning documents,
- maps and data generated through the GCCDS annual housing assessments from 2006-2008,
- topographic and ecological conditions and flood hazard over time,
- information regarding flood hazards, base flood elevations, building and insurance costs, and other factors affecting the feasibility and costs of reconstruction,
- relevant federal, state, and legal requirements, from FEMA's base flood elevations through the local zoning code, and
- existing programs supporting post-storm redevelopment activities, such as from hazard mitigation grants and elevation grants.

Based on this analysis, GCCDS developed proposals identifying target locations for various types of development, including infill housing, multi-unit housing, commercial development, and park space.

The work was presented to the Gulf Coast Housing Resource Network at several points during the Summer and Autumn of 2008 to garner feedback, and to identify the locations of all current and planned projects undertaken by each of the partner organizations. As a result of this analysis, the groups agreed to target their purchases to areas identified for redevelopment through the analysis stage of the project.

2. MARKET ANALYSES.

As part of this larger planning effort, the Housing Authority commis-

sioned a commercial real estate market analysis, and a citywide housing market study. These studies are summarized here. GCCDS has completed a preliminary literature review of other market studies as well, but the focus of the work in this document is on the opportunities and challenges surrounding issues of built form.

3. BUILDING-RELATED CHALLENGES & OPPORTUNITIES.

New building elevation requirements, questions about the feasibility of flood-proof construction, and the limitations of existing zoning requirements raise questions about the types of buildings, setbacks, and urban form appropriate to this new context. Through these investigations, GCCDS identified a number of new building challenges and opportunities facing the community as they attempt to rebuild East Biloxi. GCCDS staff developed sets of potential solutions to these issues, in an effort to help the community understand how they might better respond to the current set of constraints. In addition opportunities to address streetscapes and parking issues are included here.

4. PRELIMINARY PROPOSALS.

Proposals both for individual sites, as well as an analysis of existing and alternative zoning scenarios are included in several sections.

5. COMMUNITY RESPONSE.

The work developed in the previous two sections has been presented to the housing network and city officials for feedback. GCCDS will also host a summer workshop to invite public comment on the proposals.

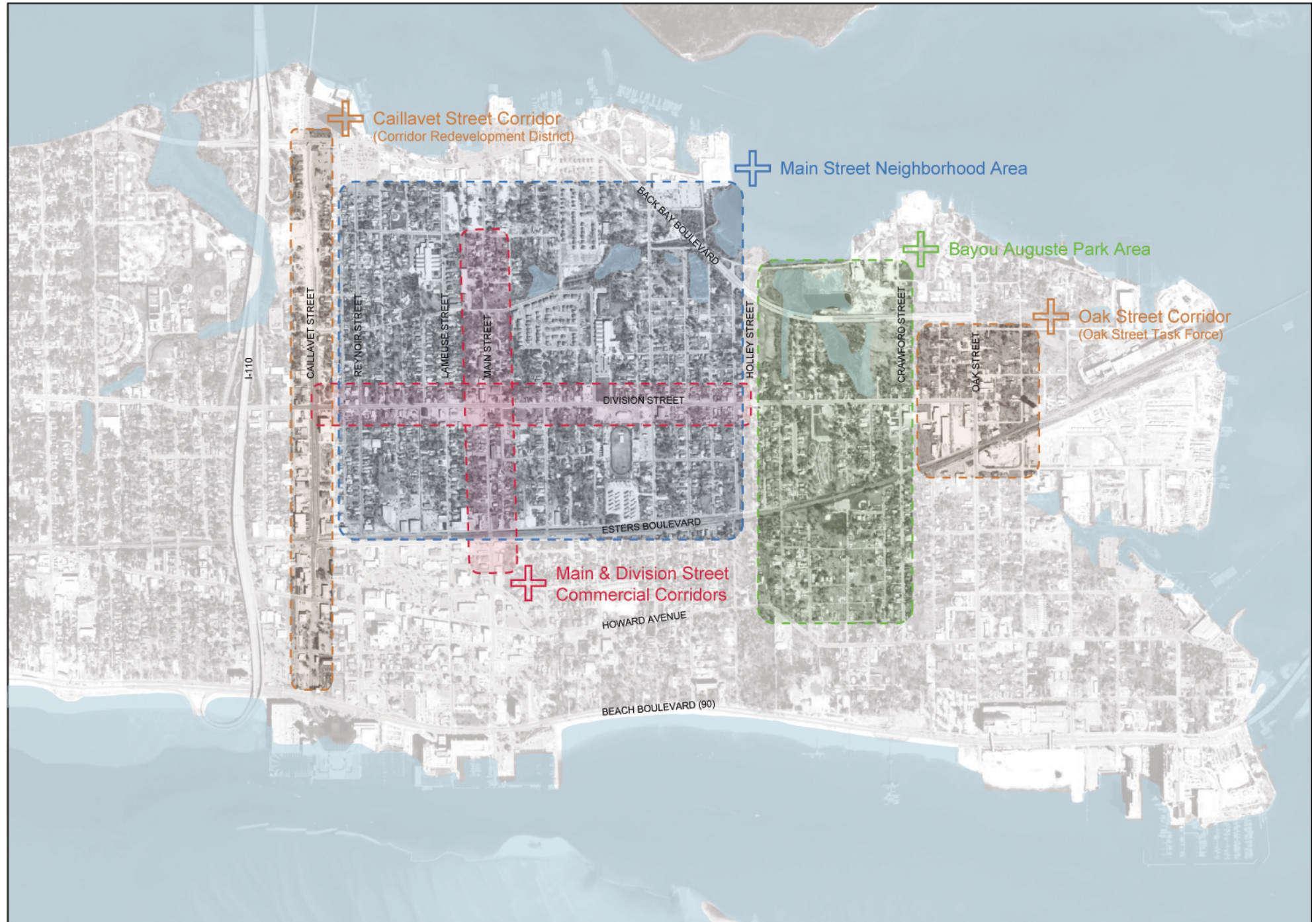
6. CONCLUSIONS.

This section contains recommendations, organized by time frame as short-term, medium-term, and long-term implementation items.

FIGURE 1.

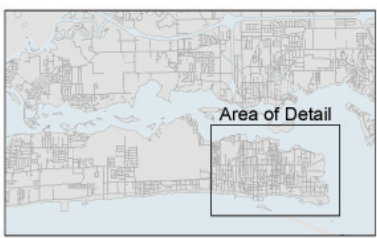
Main Street Neighborhood Study.

Primary Planning Areas.



Source: FEMA orthophoto, 2007.

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Context & Analysis.

The Primary Planning Areas.

East Biloxi is the historic core of the City of Biloxi. An area four miles wide by only one mile deep, it forms the tip of a peninsula, bounded to the North by the Back Bay, and to the South by the Gulf of Mexico. (Figure 2.) Due to its geography, East Biloxi was particularly hard hit by Hurricane Katrina, with over 90% of its land area inundated by the storm surge. (Figure 3.) Although the entire peninsula was severely damaged, the higher intensity commercial areas along the edges, most notably the casino-hotel developments, are recovering through private sector efforts. The neighborhoods at the center of East Biloxi have been somewhat insulated from the phenomena affecting redevelopment at its edges, however, and require different strategies to ensure that rebuilding occurs in a way that benefits its residents.

Unlike the perimeter of the peninsula, which is largely commercial (casinos and hotels alternate with beaches along the South edge, and are increasingly appearing among the declining docks and seafood processing plants along the North edge), the neighborhoods at the center of the peninsula are primarily residential, served by neighborhood-oriented commercial development along Main, Division, and Oak Streets.

These neighborhoods are predominantly African-American, with growing Vietnamese-American and Latino populations. According to the 2000 Census, the racial make-up of East Biloxi as a whole was 53% Caucasian; 32% African-American; 12% Asian; and 3% Latino. Income levels in East Biloxi are slightly lower than the city as a whole (average median household income in the 2000 Census showed East Biloxi at \$28,745, compared with the City of Biloxi at \$34,106), and 24% of households in East Biloxi were living at or below the poverty level.

The physical composition of these neighborhoods is dominated by sin-

gle-family detached houses. Average lot sizes are small, as are the bungalows they accommodate. Many houses were destroyed by Katrina, and in 2007, 53% of properties in East Biloxi stood vacant. (GC-CDS 2007 Housing Assessment) Prior to Katrina, 46% of the population were homeowners, and many individual houses were rental units, often owned by neighboring residents. (2000 US Census) The condition of the housing stock varied, but much of the area suffered from substandard housing even before Katrina.

Historically, Main Street, North of the railroad, formed the commercial heart of Biloxi's African-American community. As social divisions between blacks and whites eroded in the twentieth century, the vibrancy of Main Street faded. Division Street, in contrast, has become more commercial over time, with pockets of higher intensity industrial development at its Eastern end. Over time, development extended from the higher ground at the center of Division Street, to the lower-lying areas close to Oak Street. These areas, many of which were once bayous, are more prone to flooding and damage from even minor hurricanes and tropical storms.

The aftermath of Hurricane Katrina presents special challenges to the Main Street Neighborhoods. Already struggling with disinvestment, substandard housing, and a general lack of resources and political agency prior to the storm, these neighborhoods now must contend with the increased costs of rebuilding and insuring homes, the financial and urbanistic impacts of elevating buildings, and the mounting pressures of casino-oriented development along their peripheries.

This planning study focuses on the recovery of these neighborhoods at the heart of East Biloxi: the lower-income neighborhoods struggling to rebuild, the commercial corridors facing disinvestment well before

Katrina struck, and the bayous and lowlands that regularly experience flooding. Six distinct zones are addressed here:

- The Caillavet Street Commercial Corridor
- The Main Street Mixed-Use Corridor
- The Division Street Mixed-Use Corridor
- The Main Street Neighborhood
- The Bayou Auguste Park Area
- The Oak Street Commercial Corridor

Each area is described more fully in the following sections, with emphasis on the Main and Division Street corridors and the Main Street residential areas. (Figure 4.)

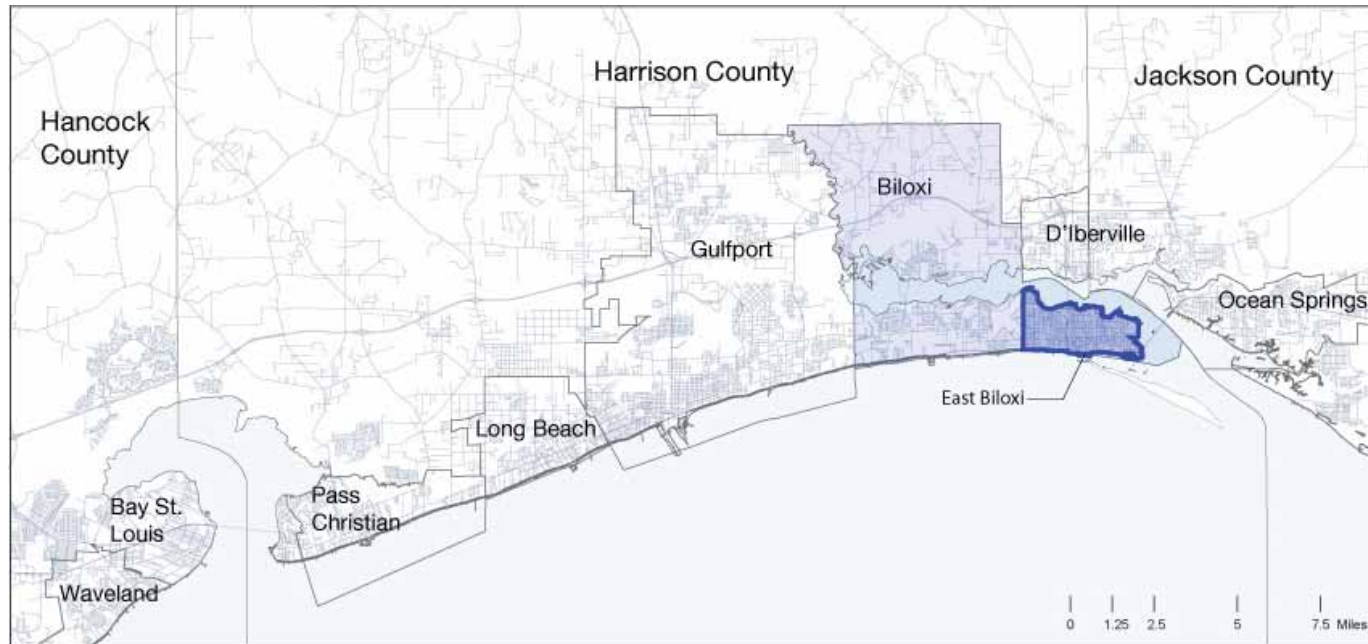


FIGURE 2. Location of East Biloxi on the Mississippi Gulf Coast.



FIGURE 3. Extent of Hurricane Katrina inundation in East Biloxi. Blue indicates areas submerged during the storm.

FIGURE 4.

City of Biloxi Zoning

October 2008

City of Biloxi Zoning Classification

B-1	RM-20
B-2	RM-25
B-3	RMH
B-4	RO
CBD	RR
CRD	RS-5
I-1	RS-7.5
I-2	S-B
RD	WF
RM-10	

Other Features

- Wetlands
- Areas recently rezoned

Sources: GCCDS Housing Assessment, May 2006. City of Biloxi.

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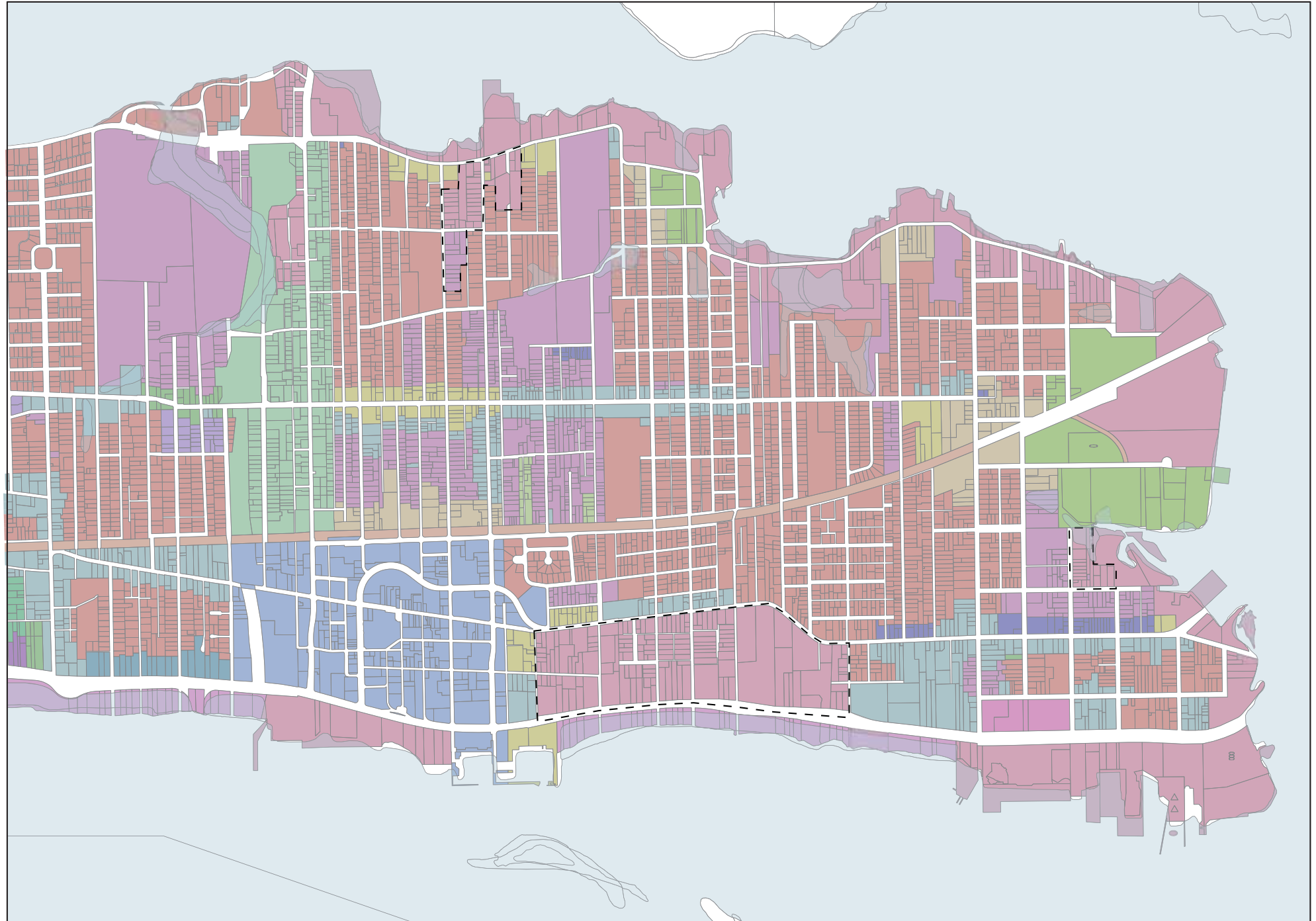
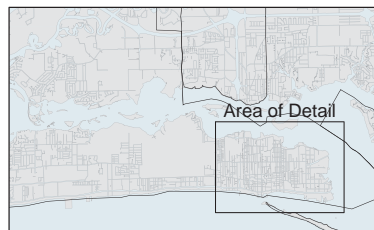


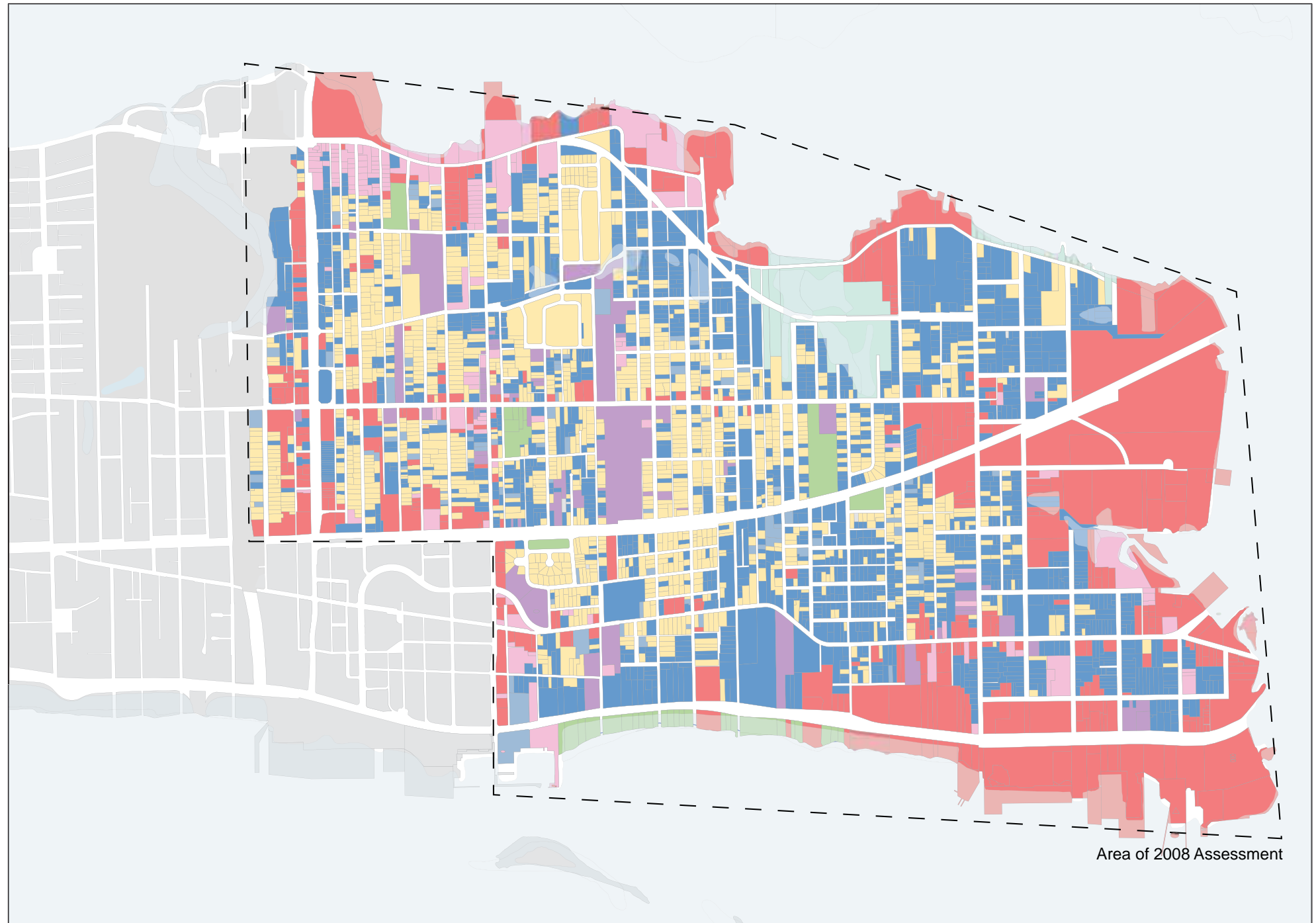
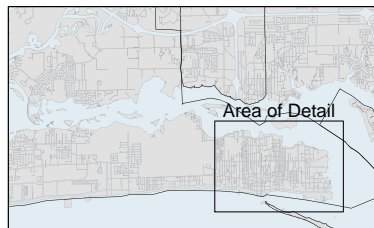
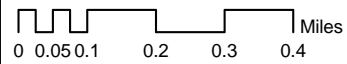
FIGURE 5.

Land Use of Properties in East Biloxi

August 2008



Sources: GCCDS Housing Assessment, Summer 2008. City of Biloxi.



Area of 2008 Assessment

FIGURE 6.
Vacant Lots and
Buildings in East Biloxi
 August 2008

Number of Vacant Properties in East Biloxi, 2006 - 2008			
Year	2006	2007	2008
Vacant Bldgs	330	169	280
Vacant Lots	1,174	1,642	1,698
TOTAL	1,504	1,811	1,978

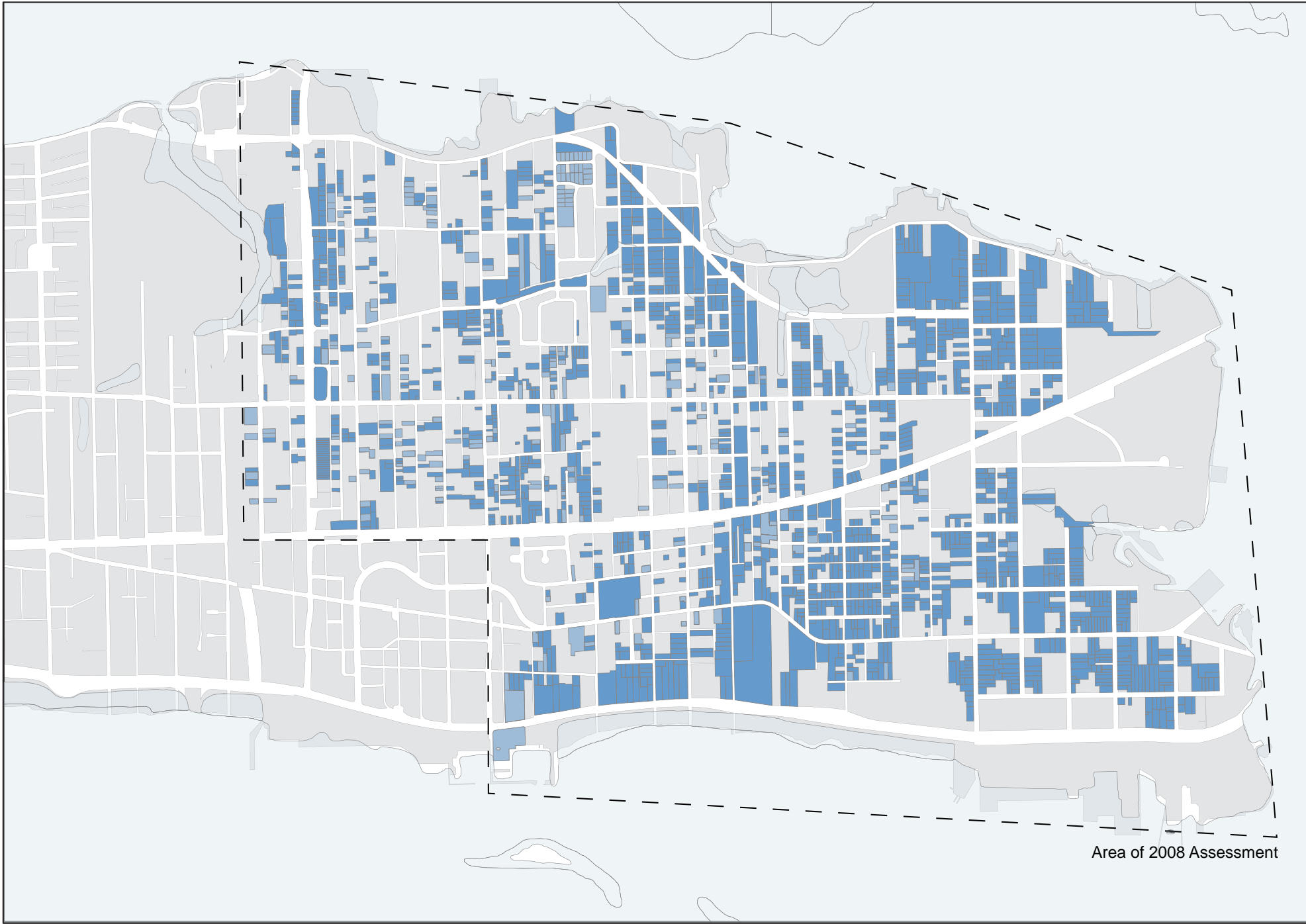
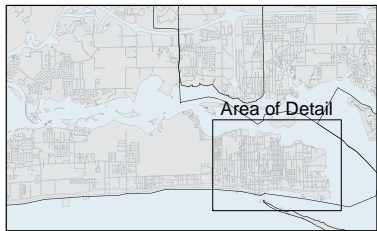
TOTAL VACANT PROPERTIES: 1,978

- Vacant lot - 1,698
- Vacant building - 280

Other Features

- Wetlands

Sources: GCCDS Housing Assessment, Summer 2008. City of Biloxi.



Area of 2008 Assessment

FIGURE 7.

Projects in East Biloxi by Members of Gulf Coast Housing Resource Network

September 2008

Projects include new builds and rehabs, in construction and completed.

Key to Partners

- Back Bay Mission
- Back Bay Mission & EBCRRA
- EBCRRA
- Biloxi Housing Authority
- Habitat for Humanity - MGC

Sources: Gulf Coast Housing Resource Network.

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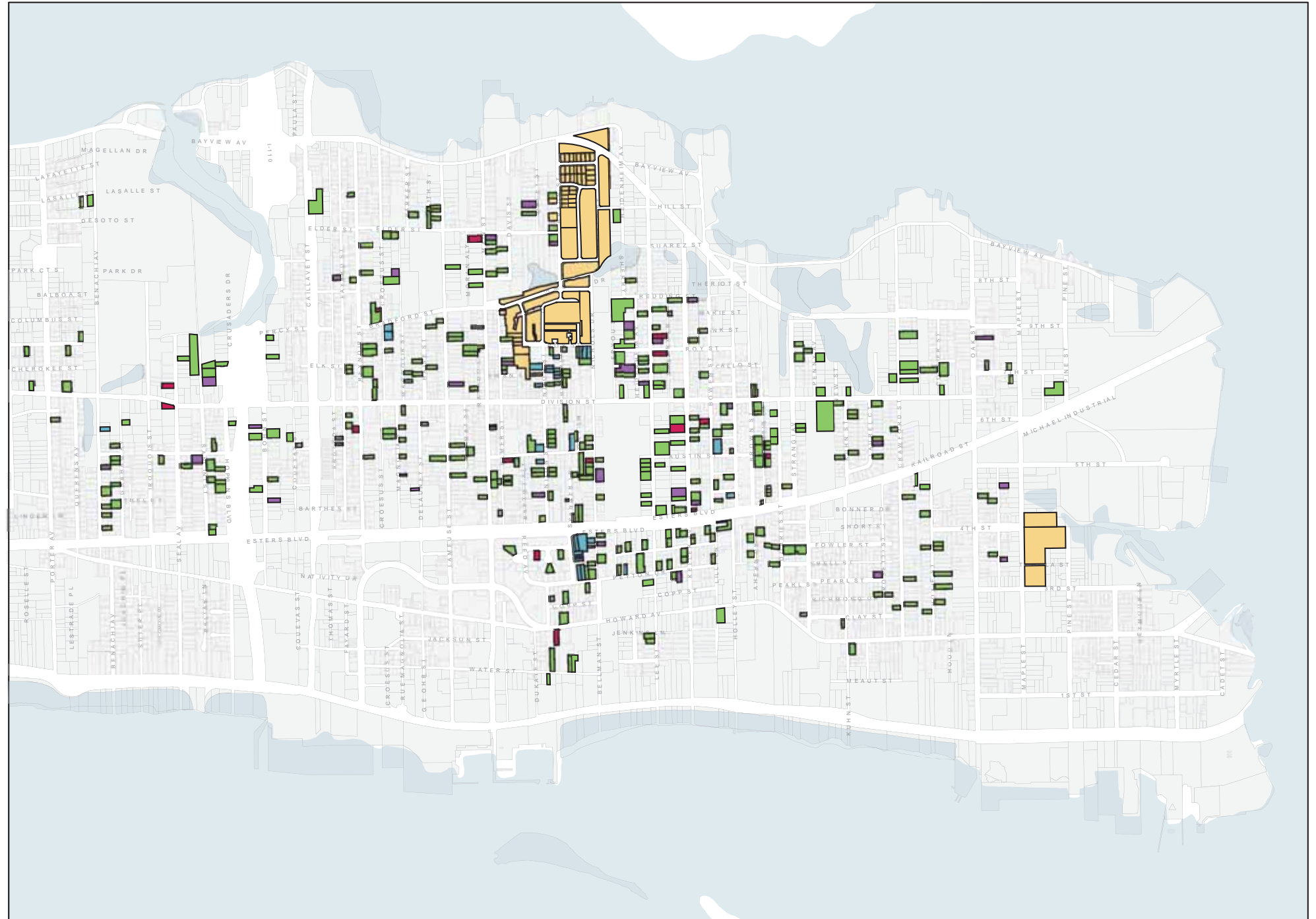
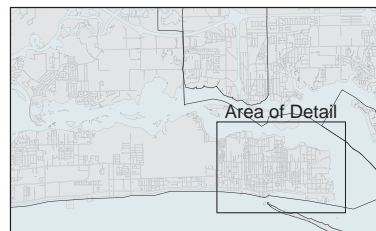
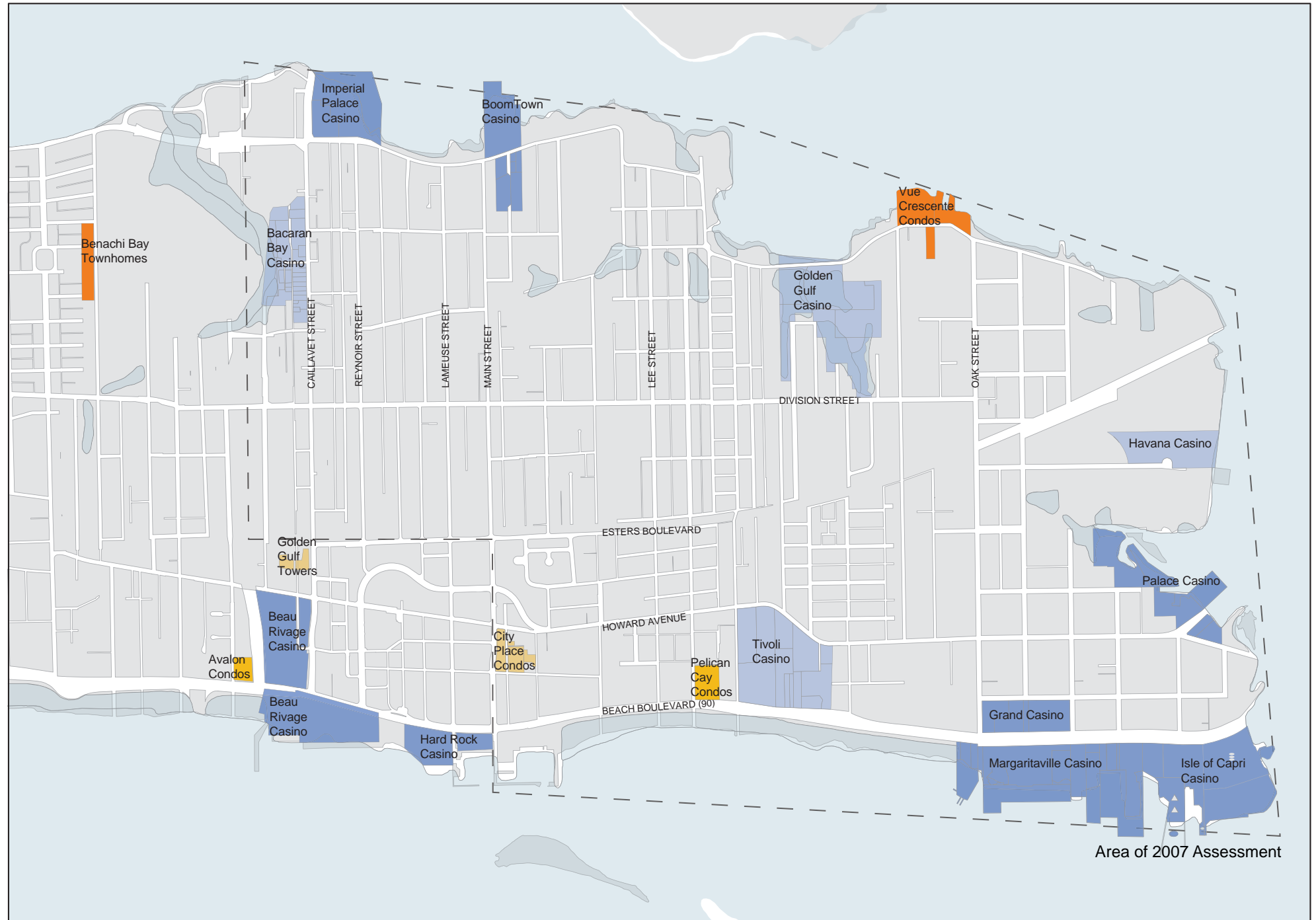
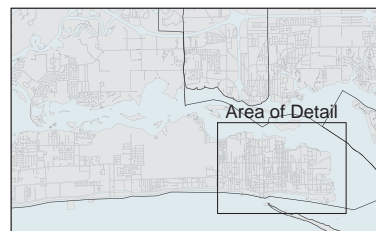
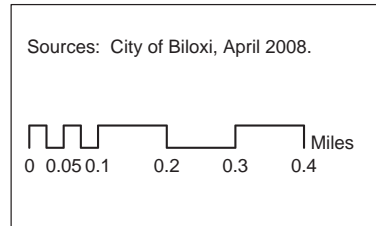
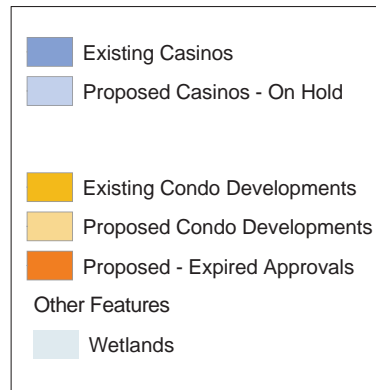


FIGURE 8.
Casino & Condo
Developments
in East Biloxi

April 2008



Area of 2007 Assessment

FIGURE 9.

Caillavet Street Corridor.

June 2008



Source: FEMA orthophoto, 2007.

0 0.125 0.25 Miles 0.5



Caillavet Street Corridor.

The character of Caillavet Street, one of the few North-South axes connecting Biloxi's front beach and back bay, has been reshaped by a city effort to define it as a boulevard. It is bookended by the Beau Rivage casino and hotel on the South and the Imperial Palace casino and hotel on the North, and parallels I-110, the major entry point into East Biloxi. Shortly before Hurricane Katrina, a streetscape improvement project was completed on Caillavet Street, including a widening of the road and sidewalks and provision of street plantings and pedestrian-oriented lighting. Although the general appearance of the road has improved, the expansion of the roadway created a number of vacant lots, particularly along the East edge of the roadway. Currently, there are no active proposals for the redevelopment of these lots. (Figure 4.)

The city's efforts also included a rezoning, from a mix of commercial land uses, to a uniform Corridor Redevelopment Zone (CRD). (Figure 13.) The CRD zone emphasizes the creation of mixed-use buildings with small setbacks, and outlines a series of architectural standards. Although the latter may be less relevant to the needs of Main and Division Streets, the creation of a more pedestrian-friendly, mixed-use zoning typology is a useful precedent for the surrounding commercial streets.

Like Oak Street at Division Street's eastern end, Caillavet's presence at the western edge of the study area will define both the boundaries of the area and its commercial possibilities. Proposed development on Caillavet includes a major casino-resort (Bacaran Bay), which is indicative of the city's expectations for this road as a major, regional commercial corridor. In concert with Highway 90, Back Bay Boulevard (which was also expanded recently), and a North-South corridor to be expanded at the eastern edge of the peninsula, Caillavet Street will form part of what the City views as a gaming ring road around the East

Biloxi perimeter. In contrast, Division and Main Streets are likely to attract more local-serving businesses.

The rezoning and reshaping of Caillavet Street is not likely to immediately alter the nature of commercial activity on the street. As with several other condominium and casino development proposals, the Bacaran Bay development is currently on hold, likely in response to the challenging real estate climate at this time. Prior to the rezoning, Caillavet Street comprised numerous small, local businesses. Those that remain include: two commercial print shops, three auto repair garages, a casino service building, a fabric store, a wholesale tobacco distributor, a bank, and a regional fish market.

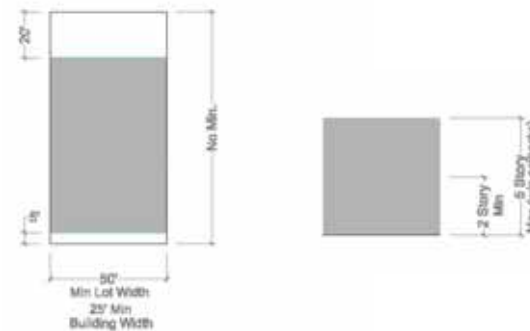


FIGURE 10. Setback and lot size (left) and building height (right) requirements in CRD zones.



FIGURE 11. Caillavet Street before (left) and after (right) street improvements.



FIGURE 12. Architect's rendering of proposed Bacaran Bay casino & hotel.

FIGURE 13.

Commerical & Industrial Zoning in East Biloxi

June 2008

Commercial Zones (1,116)

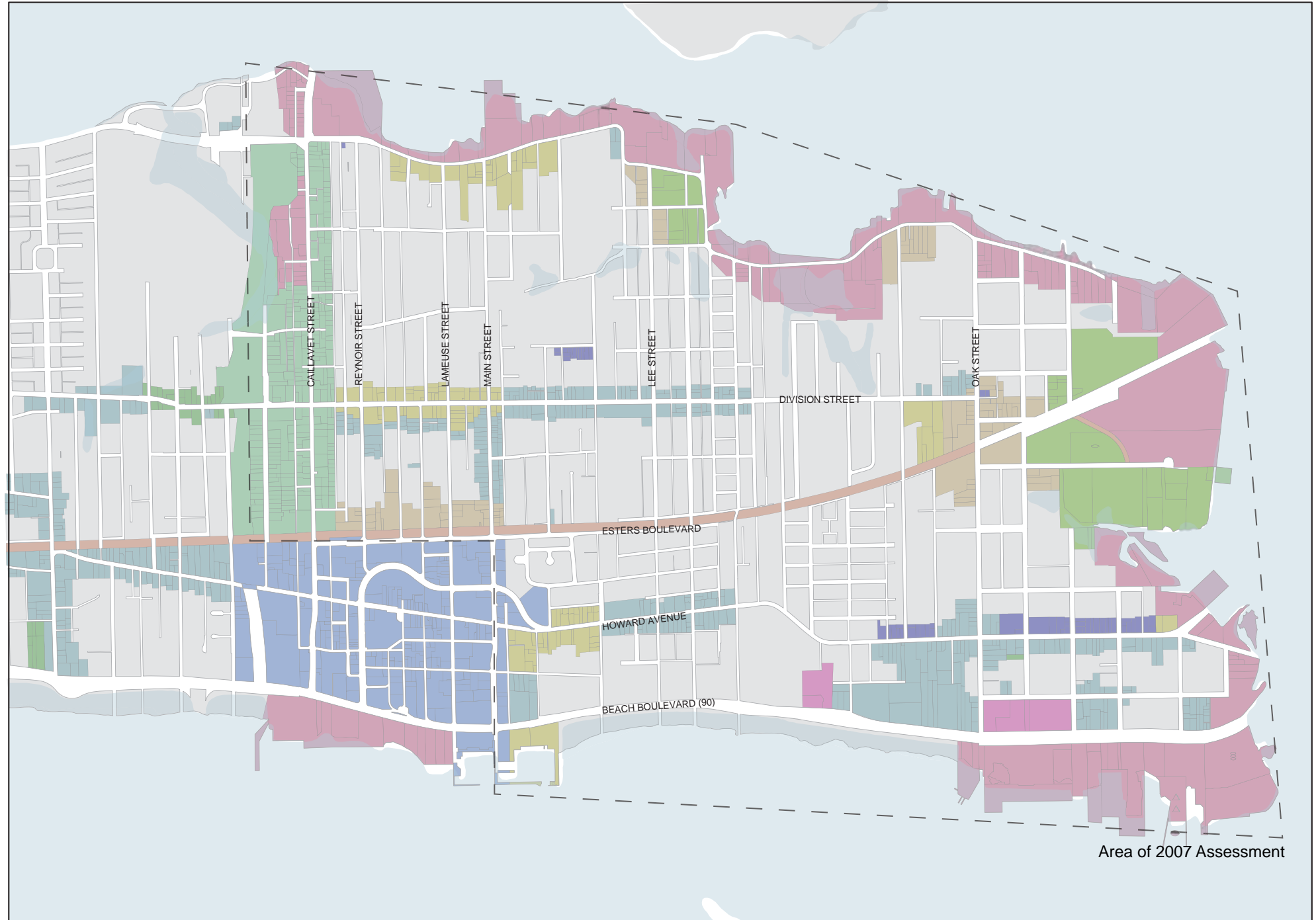
- B-1 Neighborhood Business
- B-2 Community Business
- B-3 Hospitality Business
- B-4 General Business
- RO Residential Office
- CBD Central Business District
- CRD Corridor Redevelopment
- WF Waterfront

Industrial Zones (173)

- I-1 Light Industry
- I-2 Heavy Industry
- RR Railroad

Other Features

- Wetlands



Area of 2007 Assessment

FIGURE 14.
Main & Division
Street Corridors.

June 2008



Source: FEMA orthophoto, 2007.

0 | 0.125 | 0.25 | Miles | 0.5



FIGURE 15.

Institutional Properties on Division Street

August 2007



GCCDS
Gulf Coast Community Design Studio

Division Street Corridor.

Division Street, like Highway 90 and Howard Avenue to the South and Back Bay Boulevard to the North, is one of the key East-West thoroughfares on the East Biloxi peninsula. Its character changes several times between its termini at Oak Street and Keesler Air Force Base. Its westernmost segment, extending from Keesler to I-110, is primarily residential, with a pharmacy, clinic, seafood market, and some small offices in refurbished houses along its length. According to several accounts, Keesler Air Force Base is likely to relocate its main entry from White Avenue to Division Street in the near future, which is likely to

alter the character of this portion of the street significantly. From 110 to Caillavet, Division Street is exclusively commercial and characterized by larger buildings fronted by parking lots, this area includes a grocery store, a large seafood market, an auto body shop, and a bar. From Caillavet to roughly Lee Street, Division is characterized by a range of uses, including some residences, several churches, a park, and a variety of small office and retail establishments. East of Lee, Division Street again becomes largely residential, with some commercial spaces, before shifting to large industrial lots close to Oak Street.

Division Street is the core of the East Biloxi community in many ways. It contains the majority of the community's many institutions (churches, schools, nonprofits like the Salvation Army, the future Kroc Community Center, and John Henry Beck Park). It is the parade route for the community's many festivals. It is the main transportation route, for cars, bicycles, and bus transit. It is also the only area with significant commercial zoning. (Figures 13 and 15.) Despite this, Division Street is hardly addressed in either the Living Cities and Reviving the Renaissance plans.

As of the Autumn of 2008, there were 21 active business along Division Street East of 1-110. (Figure 16.) There were also a number of vacant commercial spaces in various states of repair. These include newly renovated or constructed buildings and storefront spaces. (Figure 17.) More study is needed about whether the existing commercial spaces are sized and priced adequately for current market needs, or if other building types are required to fulfill them.

Based on our analysis of existing conditions, we have identified a gradient of land uses across Division Street, each characterized by a different type of land use. (See figure 18.) We suggest that future development build on the existing characteristics, with higher density and more commercial development in the area between Caillavet and Main

Streets. Density and building heights, which are higher here than in other parts of the street due to several Church-owned buildings, would form a natural progression from the higher density land-use expected to occur on Caillavet Street in the future.

Building heights would drop as one approaches Main Street. The intersection of Main and Division, extending East to include John Henry Beck Park, and Dr. Gilbert Mason's office, is an intersection of civic importance. We propose active, mixed-use and community-oriented development in this area. We also believe that the corner location that currently forms the parking lot for Miss Inez's Café and Lounge could be used for a building that sits closer to the street to mark this corner, with the parking lot potentially relocated to Main or Elmer Streets but

still adjacent to the building.

East of this zone are residential areas, interrupted by an institutional core formed by Nichols Elementary School, the future Kroc Community Center, the Salvation Army (relocating to the building at the Northwest corner of Lee Street), and St. John AME Church. Further East, the bayou area, addressed later in this report, requires special attention. Finally, the industrial area close to Oak Street is discussed in a later section.

In creating a renewed commercial zone on Division Street, a number of opportunities and challenges present themselves. These are discussed further in the sections on Housing and Commercial Opportunities and Challenges.

FIGURE 16.

Active Businesses on Division Street

August 2008



FIGURE 17. Top, vacant commercial buildings in need of repair. Bottom, vacant commercial spaces ready for occupancy.



FIGURE 18.
Division Street
Land Use Analysis
 October 2008

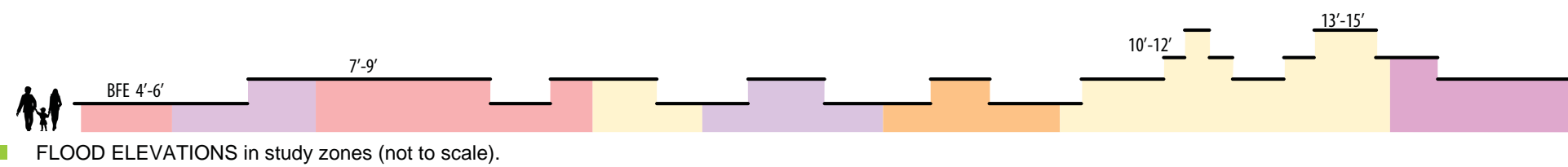
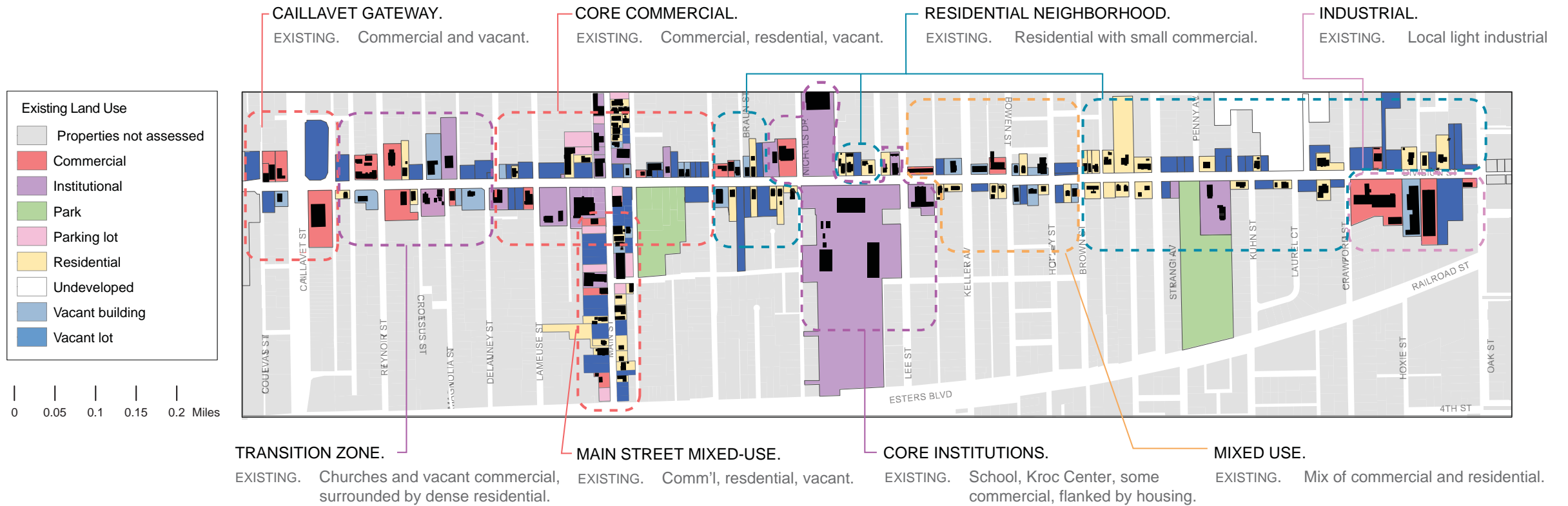
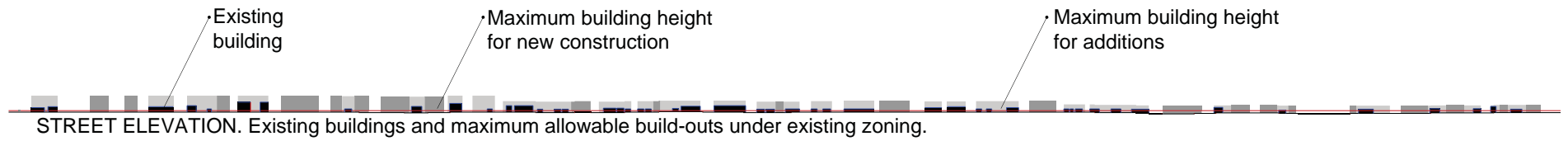
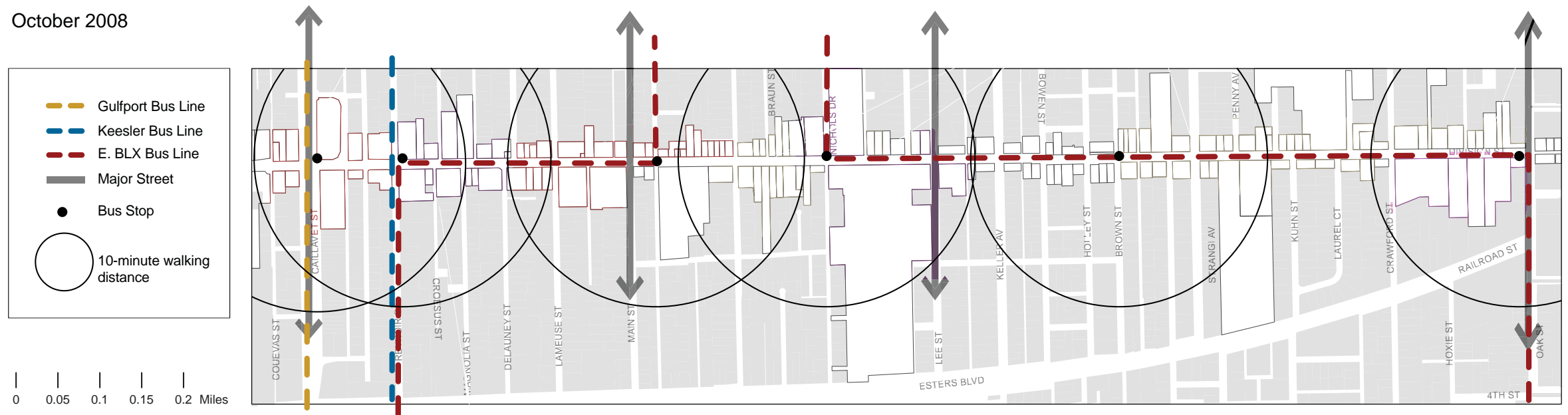


FIGURE 19.
Underutilized Properties
on Division Street



FIGURE 20.
Transportation Linkages
on Division Street

October 2008



Main Street Corridor.

Historically, Main Street was the central commercial thoroughfare of Biloxi's African-American community. It was an alternative to the downtown area that served the city's white community. Over time, the increasing integration of racial and ethnic groups led to the downfall of the Main Street commercial corridor. Perhaps more importantly, the rise of inexpensive, big-box retail at the periphery of the city undermined the viability of much neighborhood-serving retail throughout East Biloxi. Today, most residents, regardless of race, shop for groceries at the Wal-Mart or Winn-Dixie in D'Iberville. Hurricane Katrina dealt another blow to local retail and small commercial development in East Biloxi. Today, outside of the hospital and the area's six casinos, the only active commercial entities in East Biloxi are a handful of restaurants, several auto repair shops, small business offices, and the services that support them. In the Main Street Neighborhood, most of these are located at the periphery (Oak Street, for example) or on Division Street.

The character of Main Street in this neighborhood is markedly different than in the city's traditional Downtown core, South of the railroad. The area closest to the train tracks is primarily residential, mostly single-family homes. Some of these are historic buildings, repaired after the storm, and others are new homes built to replace those lost to Katrina. This area's zoning, however, is primarily industrial. (Figure 21.) The heart of Main Street, where one can imagine its heyday, is the area between Murray and Division Streets. Here, the corner is marked by the NAACP Building, which is historically significant, but badly in need of repair. Across the street is a church and a barber shop. To the North, is Miss Inez's lounge, a restaurant and nightclub that garners mixed reactions from neighbors. The newly constructed clinic and the Nance Temple Church of God begin to suggest an important civic location at the intersection of Division and Main. A vacant lot and the parking lot for Miss Inez's complete the intersection.

The lots on the eastern side of the Main Street, mostly through-lots to Elmer Street, link the street's civic buildings to John Henry Beck Park. This is particularly evident at Murray and Division Streets, and presents opportunities for greater connections to reinforce these prominent civic locations. The NAACP Building, like a handful of other sites throughout East Biloxi, though not architecturally significant, is an enduring reminder of the Civil Rights struggle. Conversations with current tenants (the NAACP, Loaves & Fishes, and a bailbondsmen) suggest that an informal agreement between the owner, who lives outside of Biloxi, allows them to use the space rent-free in exchange for not requesting any repairs or maintenance on the building. Visits to the building also suggest that the interior is badly in need of repair.

North of Division Street, Main Street houses several more churches (one temporarily) and their attendant parking lots, then reverts to single-family homes. Following a similar pattern throughout the northern edge of this community, the terminus of Main Street into Back Bay Boulevard is marked by a shift to vacant lots and parking lots, largely owned by casinos. The casinos have purchased land, which, with minimal intervention, they convert to surface parking. These may be holding areas until such time as the casinos choose to expand their facilities. In the mean time, these massive swaths of paved and unpaved land bordering single-family homes present more of a threat to the community's urban form than the taller, concentrated developments of the waterside casinos themselves.

For the most part, Main Street is on higher ground, and is less threatened by future storm risks than some other areas of the neighborhood. As a result, this is a good area to continue infilling and even in which to build more densely.

FIGURE 21.
Main Street
Existing Zoning

October 2008

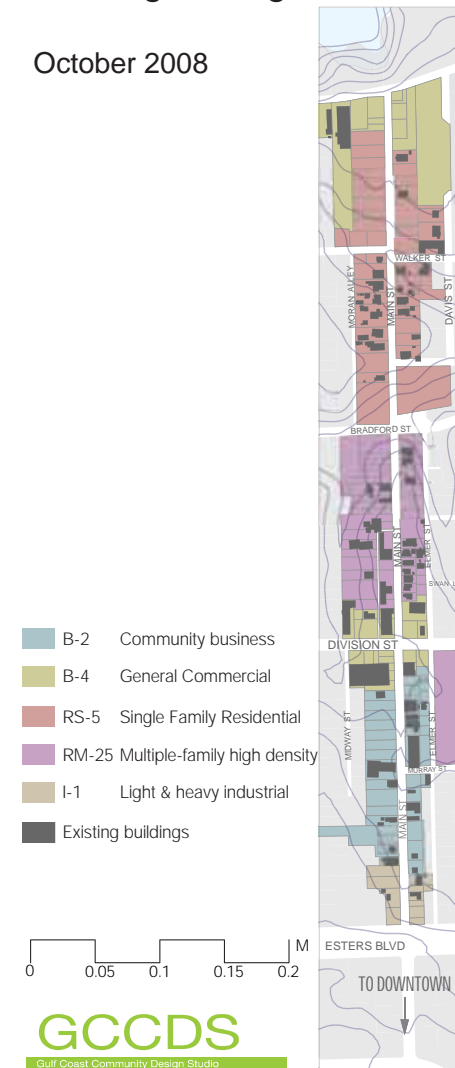


FIGURE 22.
Main Street
Existing Land Use

October 2008

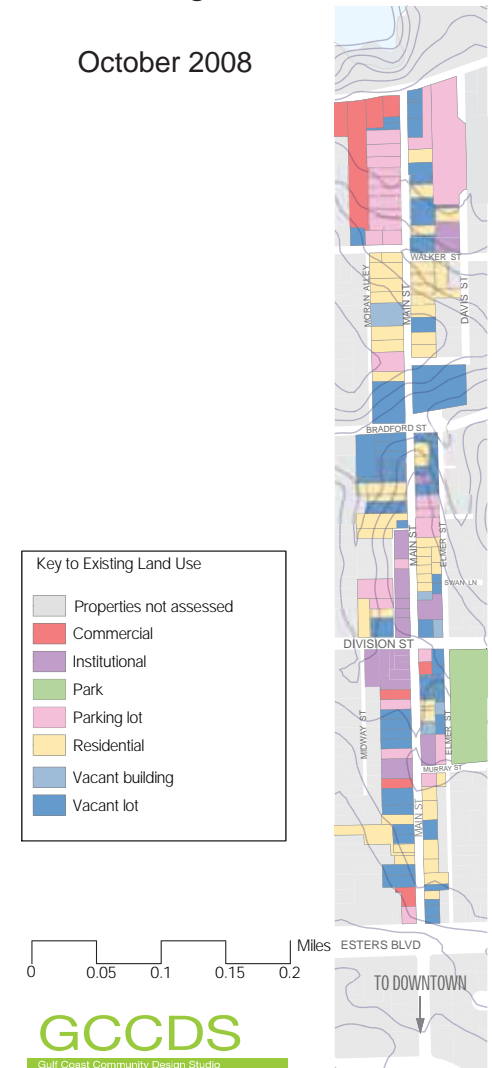


FIGURE 23. Buildings at the corner of Main and Division Streets. Top left, Nance Church. Top right, vacant lot. Bottom left, clinic. Bottom right, Miss Inez's Lounge.





FIGURE 24. Buildings on Main Street. Top this residence (left) and soul food stand (right) mark the threshold of the Main Street neighborhood as one enters from Downtown across the train tracks. Bottom left, the historic NAACP Building. Middle, the building backs onto John Henry Beck Park (right), another important site in the community.

FIGURE 25.

Main Street Neighborhood.

June 2008



Source: FEMA orthophoto, 2007.

0 | 0.125 | 0.25 | 0.5 Miles



Main Street Neighborhood.

The Main Street Neighborhood is made up of primarily small single-family homes, with the occasional church, school, or small business. Multi-unit homes and apartment clusters appear though infrequently.

The single-family homes range in age, size, and orientation from traditional shotgun and Cajun cottages to mid-century bungalows, to more recent slab-on-grade ranch homes more well-suited to other climates. Almost all of the houses have front porches, and many have other, often covered, rear outdoor spaces. Lot sizes vary but many are narrow and well under the city's minimum 50'-0" lot width. (Figure 26.)

Katrina's storm surge inundated over 90% of the East Biloxi peninsula, (Figure 3.) with all houses taking on some water and many being completely submerged or torn from their piers and pushed into roads or neighboring lots. It is common to hear families speak of coming back to assess the damage to their homes, only to realize that they must first find their homes, some having ended up as far as a block away.

Although Katrina destroyed countless buildings and created many vacant lots, the Main Street neighborhood struggled with disinvestment and substandard housing even before the storm. Yet it is a community with residents strongly committed to it and to each other. In a community survey completed in Spring of 2006 by Warnke Community Consulting and the Hope Coordination Center, residents identified the "sense of community" among their most valued aspects of life in East Biloxi. The areas' many churches and institutions (like the Salvation Army, Visions of Hope, the Biloxi Housing Authority, the Hope Coordination Center, and the Mississippi Center for Justice) are great supporters of the community and all active in its reconstruction. The Vietnamese community has been particularly quick to rebuild, and many of the first local businesses to be operational after the storm were Vietnamese-owned.

In the three years since Katrina, GCCDS has worked with volunteers to conduct an assessment of all the structures in East Biloxi, on an annual basis. The 2006 and 2008 results appear in Figures 27 and 28. The number of vacant lots has increased during this period, likely a result of damaged buildings being demolished, a sign of progress. The number of completed buildings has risen dramatically in two years, as well, from 6% of the residential lots to 31%. This number continues to grow. On the other hand, buildings under repair make up only 8% of residential lots now, as houses that could be rehabilitated have been. The maps suggest that the character of reconstruction is now likely to shift to infill and larger scale development that occur in a more targeted way, and that are more likely to take place without existing homeowners. This shift is also supported by the availability of state funds for such projects, and the expected depletion of volunteer labor in the coming years.

Working with the Housing Resource Network, GCCDS developed maps to assess the opportunities for continued reconstruction of the neighborhood. Each of the core groups is engaged in repairing and rebuilding homes in the community, with existing homeowners and, more recently, in a speculative manner through MDA-funded programs. GCCDS's goal was to help the network target sites that meet their parameters for construction and that can most contribute to the rapid redevelopment and stabilization of the community.

Through discussions with the network, it became clear that groups were interested in building infill single-family houses, however, there were some concerns about the new base flood elevation requirements FEMA passed after the storm. While traditional homes rest on piers up to 30" from the ground, most of the Main Street neighborhood would have to build much higher under the new guidelines. Elevated construction presents numerous challenges, both in terms of design as well as

the difficulty and costs of construction. (These are discussed further in the next section.)

The groups in the network decided to focus on infill housing elevated no more than 6'-0" above grade. Taking into account the base flood elevations, existing topography, and GCCDS's research on bayou-proximate areas at greatest risk for future flooding, we developed the map in Figure 29.

Looking more broadly at the challenges in East Biloxi, the group discussed the need for multi-unit housing. We determined that, because of the reduced costs of shared infrastructure such as elevators, stairs, and even piers, multi-unit developments could be located on intermediately low ground, in areas away from the bayous. We then identified clusters of vacant lots in areas requiring an elevation no more than 10'-0" above grade. (Figure 30.)

Finally, the group discussed the traditional pattern of single-family rental housing in the neighborhood. Often, a homeowner owned two houses, typically side by side. The owner might live in one and rent out the other. In this way, affordable rental housing has always been integrated into the neighborhood. Homeownership in East Biloxi before Katrina was under 50%, and almost no efforts have been made to restore rental housing in the area, largely due to a lack of MDA funding. One way to address this need, and to allow for more density on higher, safer ground, would be to create accessory dwelling units (ADUs), small cottages or secondary houses in the back or side lots of existing homes. (Figure 31) Several communities struggling with a lack of affordable housing for lower income professionals like teachers and nurses, have created successful ADU programs to fill that void. These are further discussed in the following section.



FIGURE 26. A range of typical homes in the Main Street neighborhood. At top left is a multi-unit building (with damage from Katrina). The rest are single-family units, though some double shotguns, like that at top right, still have two front doors.

FIGURE 27.

Condition of Residential Properties in East Biloxi

May 2006

Condition

- Vacant lot or building
- Being repaired
- Completed

Other Features

- Wetlands

Sources: GCCDS Housing Assessment, May 2006. City of Biloxi.

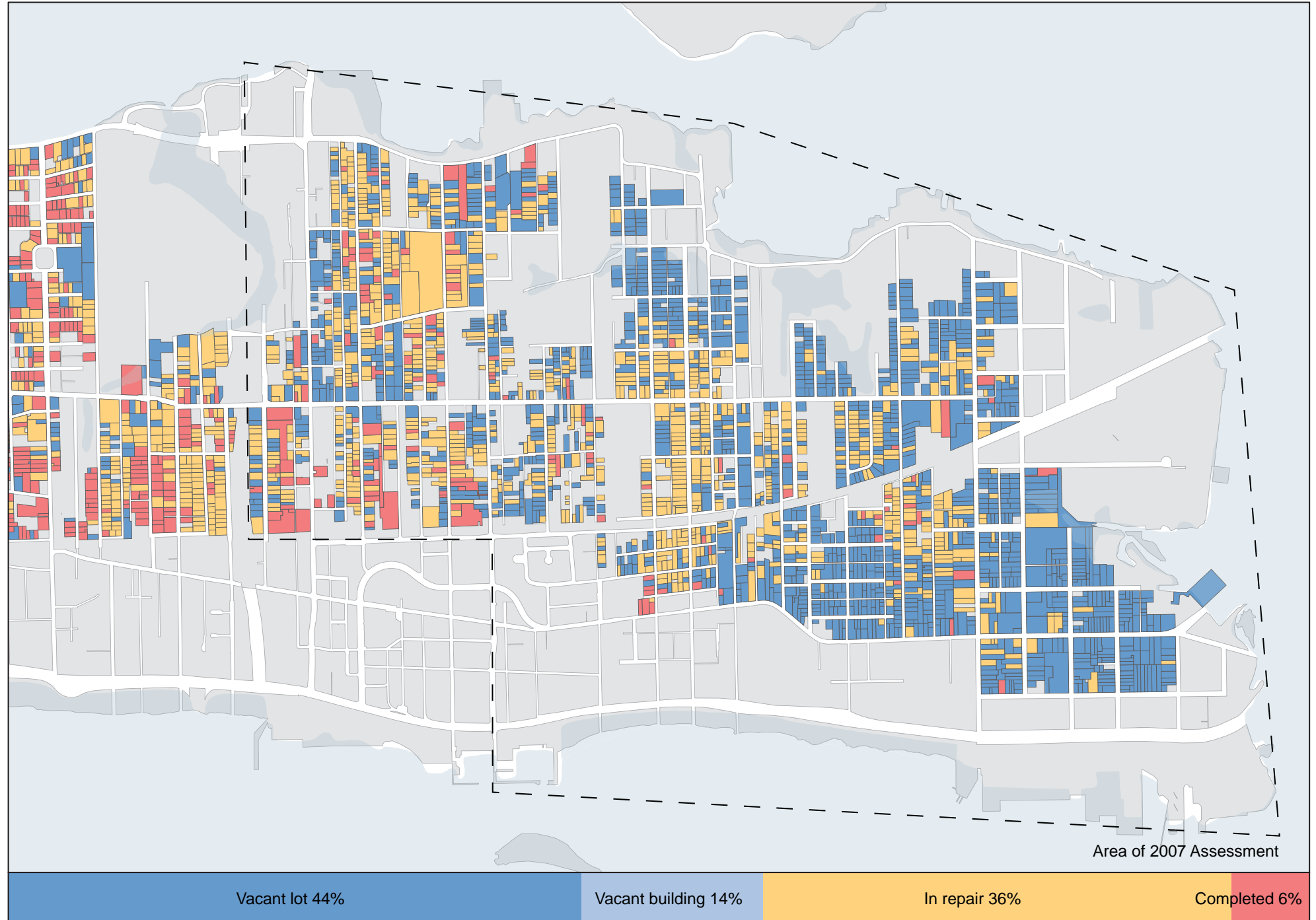
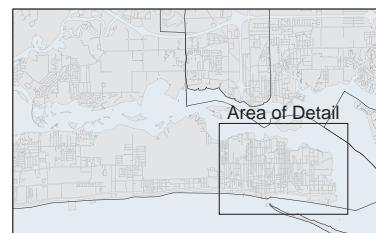







FIGURE 28.

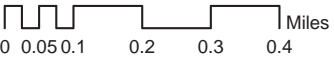
Condition of Residential Properties in East Biloxi

August 2008

Condition	
	Vacant lot 1698 (52%)
	Vacant building 280 (9%)
	Being repaired 272 (8%)
	Completed 1002 (31%)

Other Features	
	Wetlands

Sources: GCCDS Housing Assessment, Summer, 2008. City of Biloxi.



0 0.05 0.1 0.2 0.3 0.4 Miles

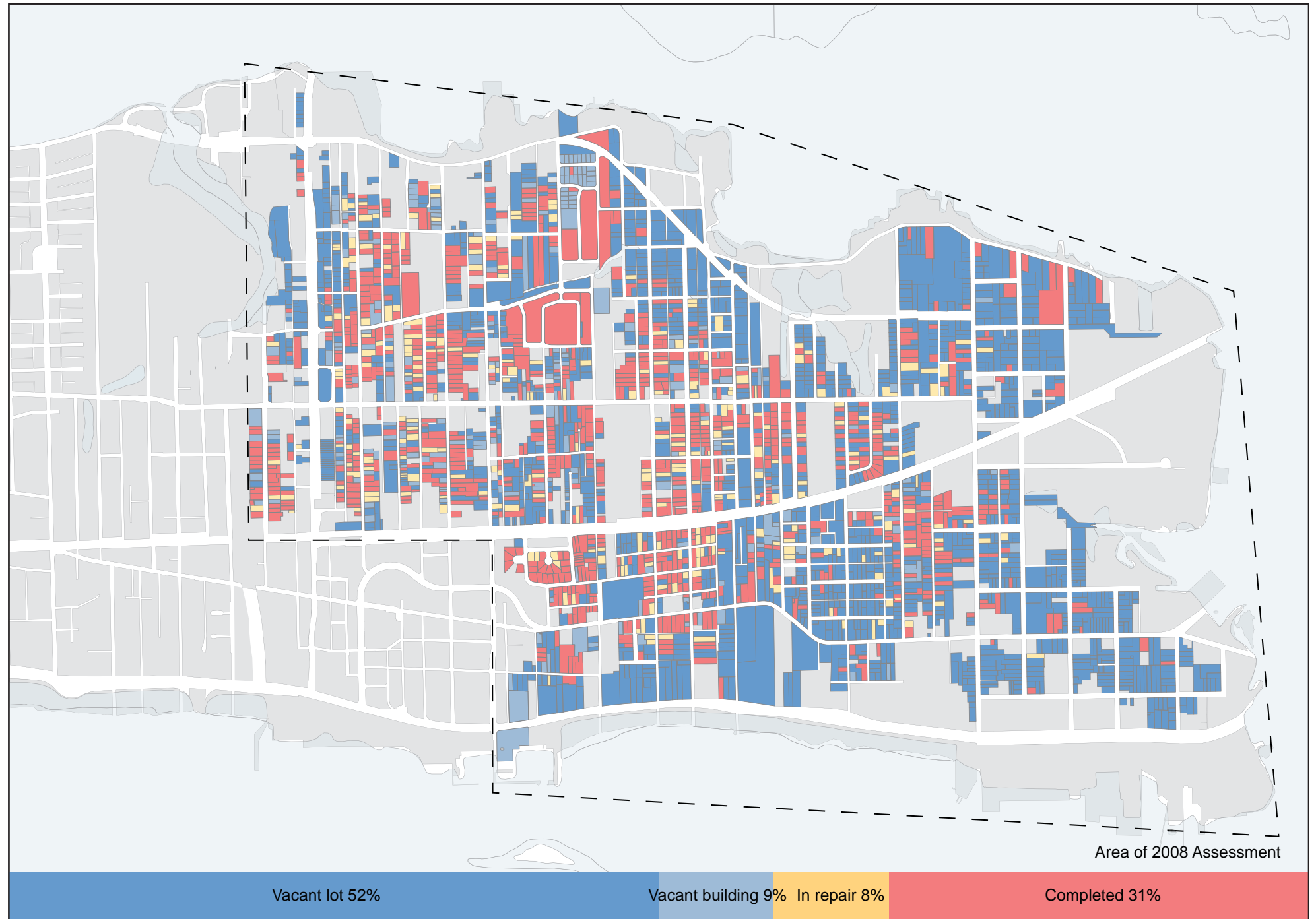
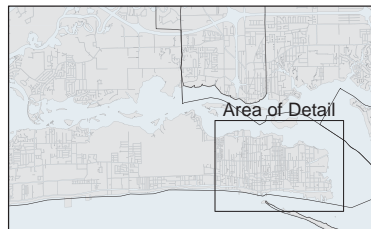


FIGURE 29.

Potential Infill Lots. Vacant Lots Requiring BFE of 6'-0" or Less.

September 2008

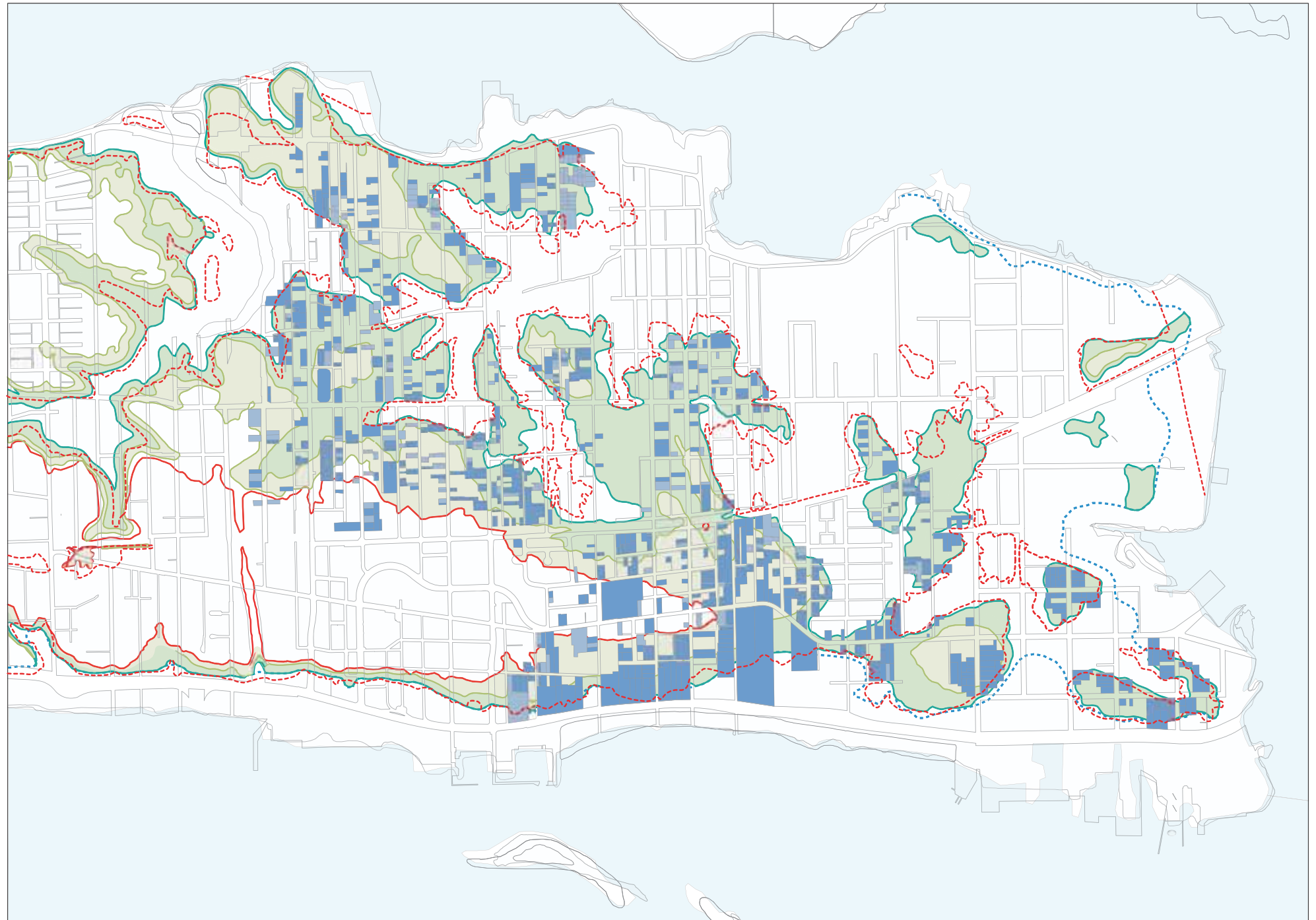
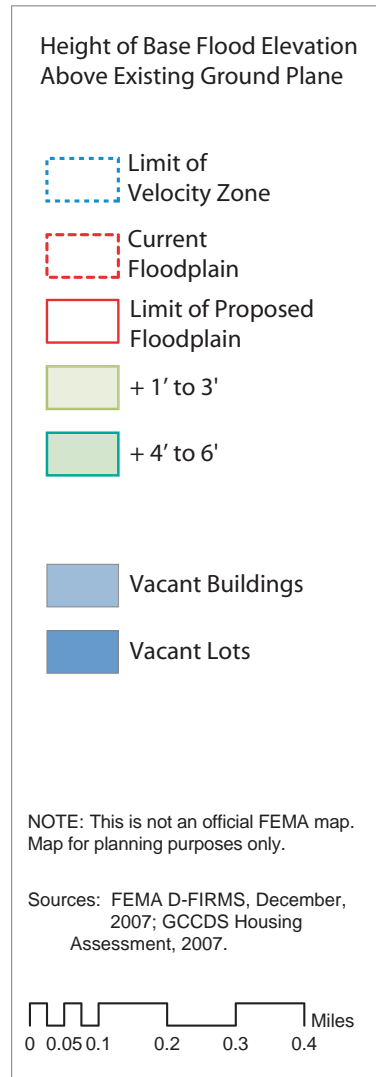


FIGURE 30.

Potential Multi-Unit Residential Sites.
 Clusters of Vacant Property in Main Street Plan Target Areas, With BFE Under 10'.
 September 2008

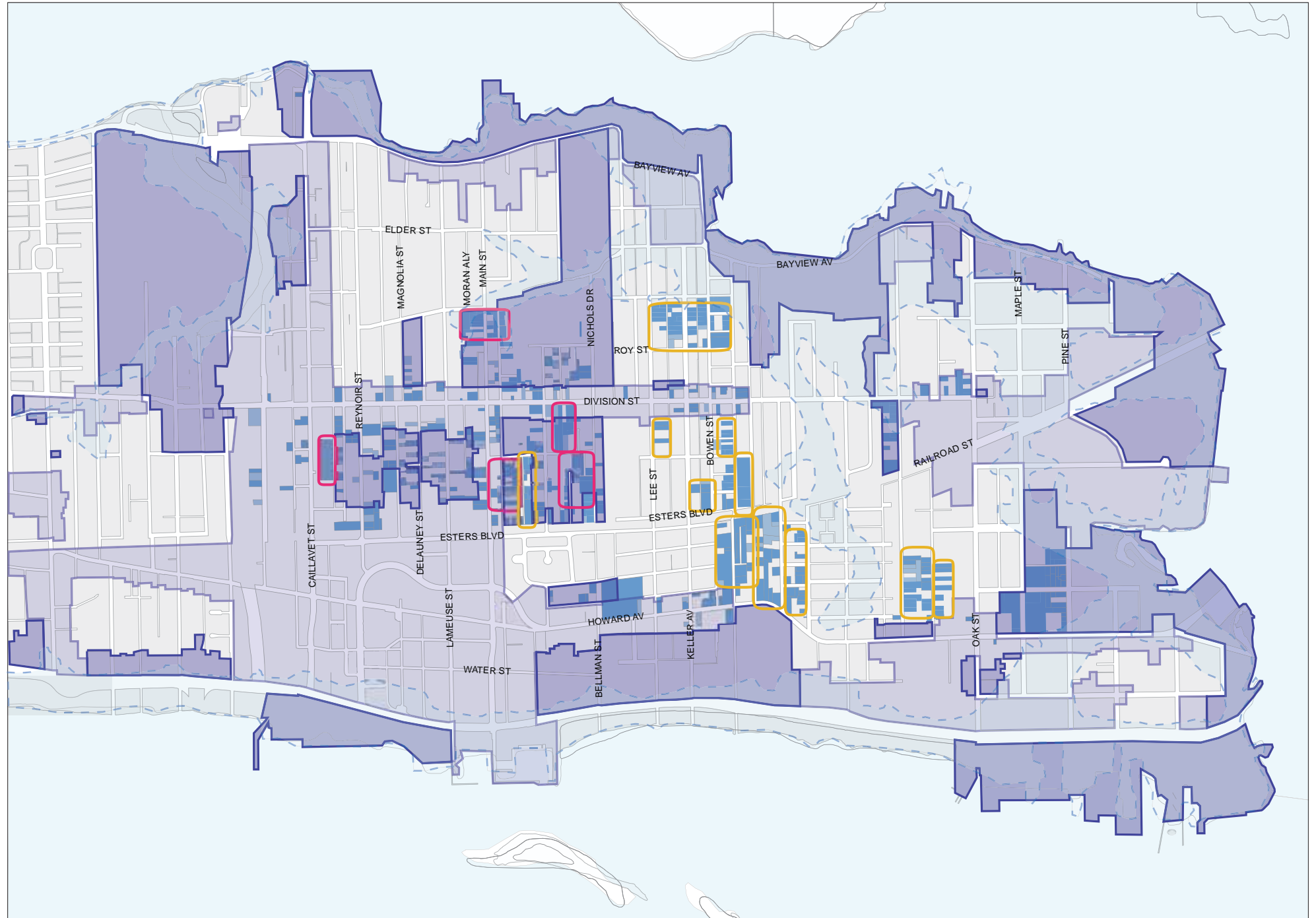
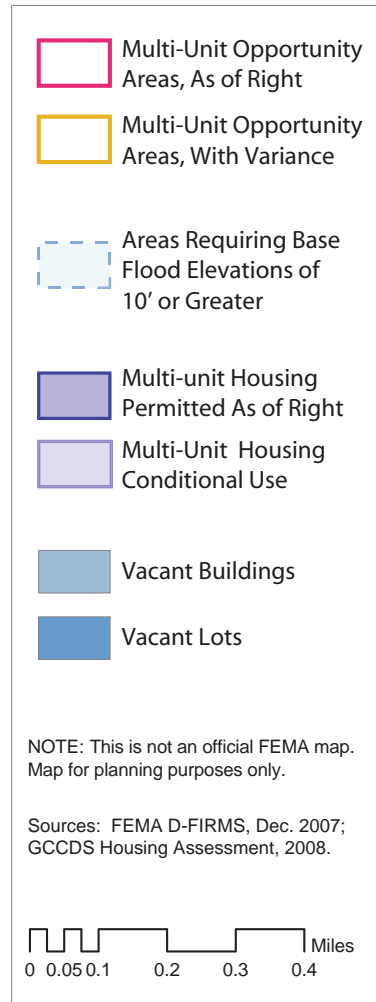















FIGURE 31.

Parcels Eligible for Accessory Dwelling Units


Based on Zoning & Lot Area

July 2008

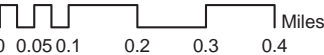
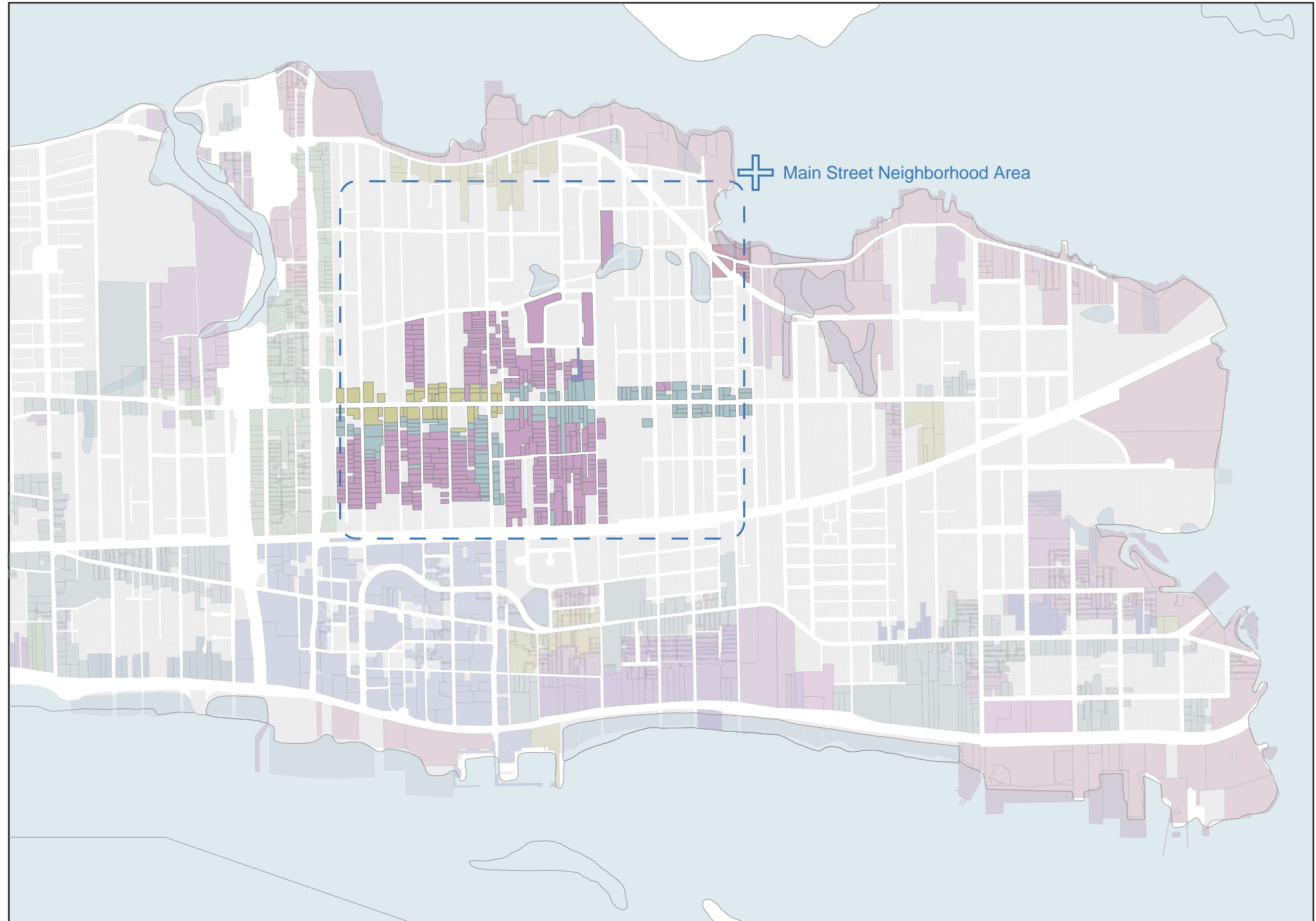
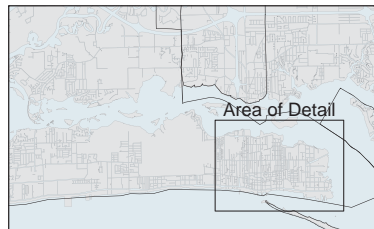
City of Biloxi Zoning Classification

 B-1	 RD
 B-2	 RM-10
 B-3	 RM-20
 B-4	 RM-25
 B-5	 RO
 CBD	 WF
 CRD	

Other Features

 Wetlands

Sources: City of Biloxi Zoning, 2007.

Bayou Auguste Park Area.

Bayou Auguste comprises two legs extending South into the Biloxi peninsula from the Back Bay. The western arm is largely channelized and forms the northern border to the Hope VI development; the eastern arm is less confined, though it is channeled under the bridges of Back Bay Boulevard, and extends due South to Division Street, at which point it is forced underground through culverts. The bayous exist at the lowest points of the peninsula, where water accumulates and water levels rise during seasonal storms. Historically, the bayous are a critical part of the coastal ecology. Over time, however, they have been filled in, channelized, dumped in, built upon, and otherwise neglected to the point where they are considered eyesores and detriments to surrounding neighborhoods. (Figure 33.)

As low lands, the bayou areas flood regularly. When in good health, one of their useful biological functions is to provide a space to absorb rising floodwaters during regular rain events. Buildings in these areas are at greater risk for storm damage in even minor storms. Investigating the location of greatest building damage resulting from Hurricane Katrina, GCCDS found that over 65% of buildings located less than 10 feet above sea level were destroyed, in contrast to the 25% of buildings above 10 feet. (Figures 34, 35.) Locating building in these vulnerable zones exacerbates damage, as the buildings become shrapnel in wind and water surges, wreaking havoc on buildings further inland.

Based on this research, GCCDS lead a group of Mississippi State University architecture students and MIT planning students in a research project to explore how development in East Biloxi might work with existing topography and bayou ecology to reduce risk from storms while creating amenities for the permanent and tourist communities. The restoration of Bayou Auguste formed a key component of this plan.

FIGURE 32.
Bayou Auguste
Park Area.

GCCDS hopes to continue working with the City of Biloxi, which is developing a grant for the bayou's restoration, and the Land Trust of the Mississippi Coastal Plain to develop these plans. The restoration would create habitat for birds and other migratory animals of interest to eco-tourists. At the same time, the project would include walking and bicycling trails linked to beaches, the bridge to Ocean Springs, and hotels, providing outdoor amenities to tourists and residents alike. The ecological restoration would also create opportunities for educational programs, particularly at nearby Gorenflo and Nichols Elementary Schools. O'Reilly Park, an underutilized public park located within this area, would form the basis of the park expansion, which would work with the topography's natural bowl shape; playing fields would be located in the bowl, which would contain flooding during storm events. (Figures 37 - 39.)

A key element of this proposal would entail working closely with homeowners trying to rebuild in East Biloxi. Already, through the work of the Hope Coordination Center, GCCDS has worked with one homeowner to facilitate a move from a low-lying property, where a new home would have been elevated 17 feet to meet FEMA's base flood elevation requirements, to higher ground. (Figure 36.) The resident benefits by decreasing the risk of losing her home again, as well as through reduced costs of construction and insurance. Residents further inland benefit from the creation of a buffer between their property and the water. A more formal program might be developed in concert with Army Corps of Engineers voluntary buy-out program and FEMA's Hazard Mitigation Grant Program.



FIGURE 33. Top, Images of the bayous in East Biloxi, showing the culverts and roadways that disrupt the flow of water, contributing to flooding and denigrating the wetlands' ecological functioning. Bottom, images of flooding during Hurricanes Gustav and Ike, the latter of which did not directly strike the coast, but caused flooding through abnormally high tides.



FIGURE 34.

Impact of Hurricane Katrina on Buildings in East Biloxi

October 2007

■ Buildings Remaining

■ Buildings Demolished During or Since Hurricane Katrina

Topographic Lines

— 2' Contour Lines

— 10' Above Sea Level

Buildings Demolished Below 10'-0" Contour Line:
65.2%
(915 BUILDINGS)

Buildings Demolished Above 10'-0" Contour Line:
24%
(1628 BUILDINGS)

Sources: GCCDS Housing Assessment, Summer 2007. City of Biloxi.

0 0.05 0.1 0.2 0.3 0.4 Miles



FIGURE 35.

Frequency of Flooding in East Biloxi

September 2008

Flooding Once a century

Flooding Once a year

1969 Camille Inundation (15.5')

2005 Katrina Inundation (21')

Existing FEMA Flood Plain

TYPICAL ANNUAL FLOOD LEVEL: 4'-0"

NOTABLE HIGH WATER MARKS, BY YEAR:

1906:	6'-0"
1909:	10'-0"
1915:	9'-0"
1923:	7'-0"
1947:	10'-9"
1965:	8'-6"
1985:	6'-0"
1988:	6'-4"
1998:	7'-6"
2002:	6'-10"
2008:	8'-6"

NOTE: This is not an official FEMA map. Map for planning purposes only. Approximate inundation levels based on high water marks and topographic data.

SOURCES: FEMA D-FIRMS, December 2007; National Weather Service Report on Hurricane Gustav, 2008; USGS 2002 Hurricane Georges Report: http://ms.water.usgs.gov/ms_proj/reports/georges/figure4.html

Miles

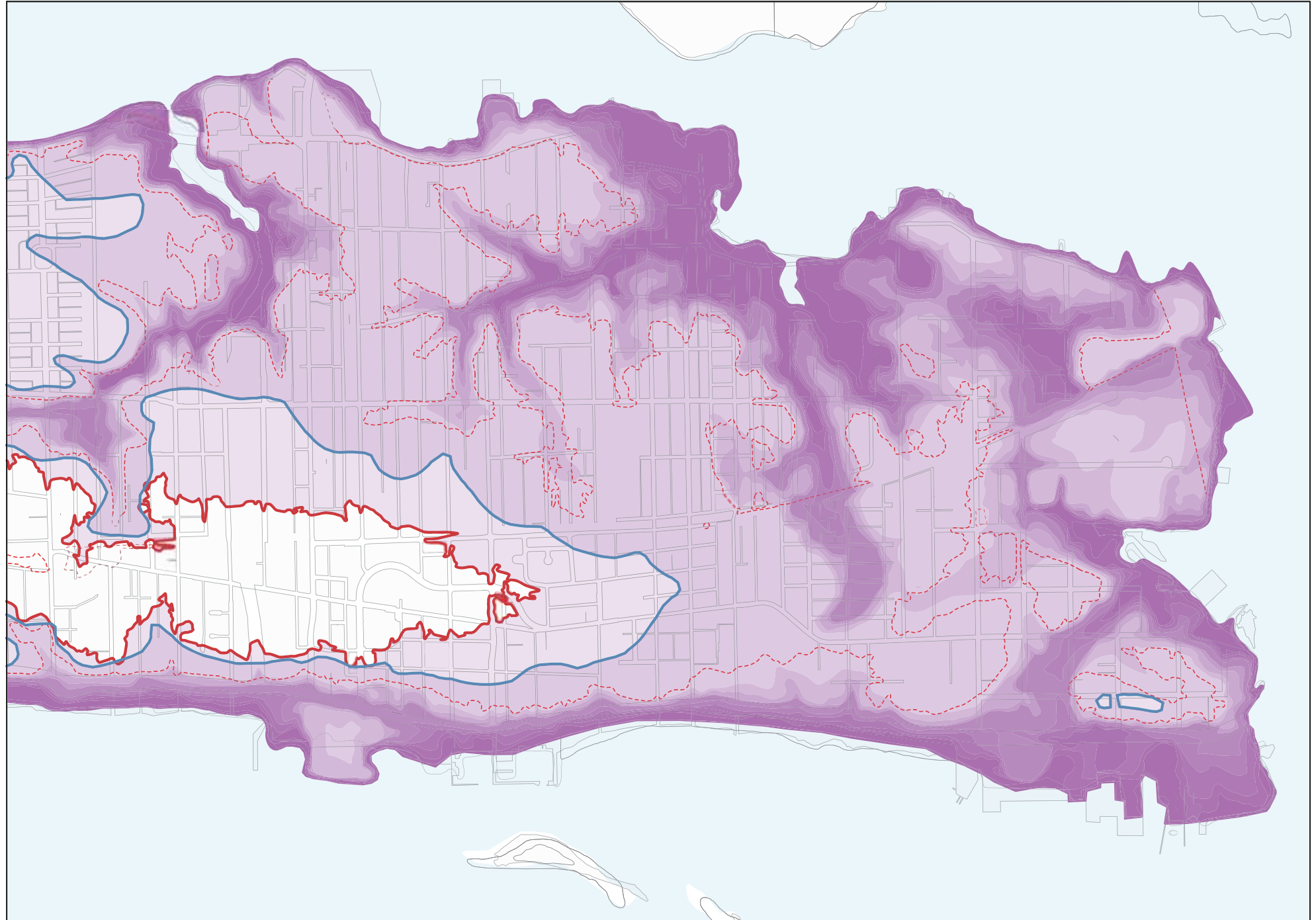


FIGURE 36.

Impact of FIRM Base Flood Elevations on East Biloxi

March 2008

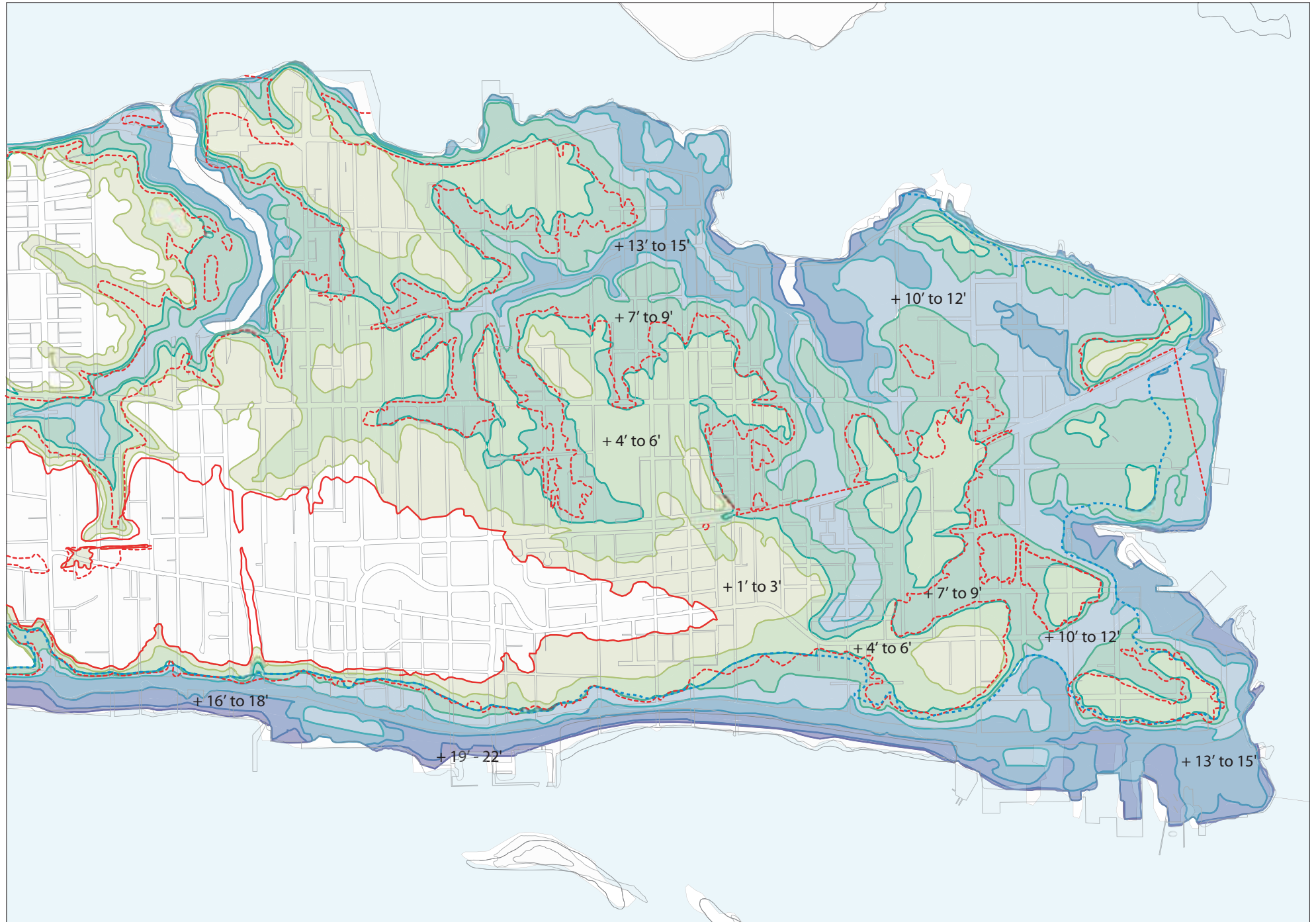
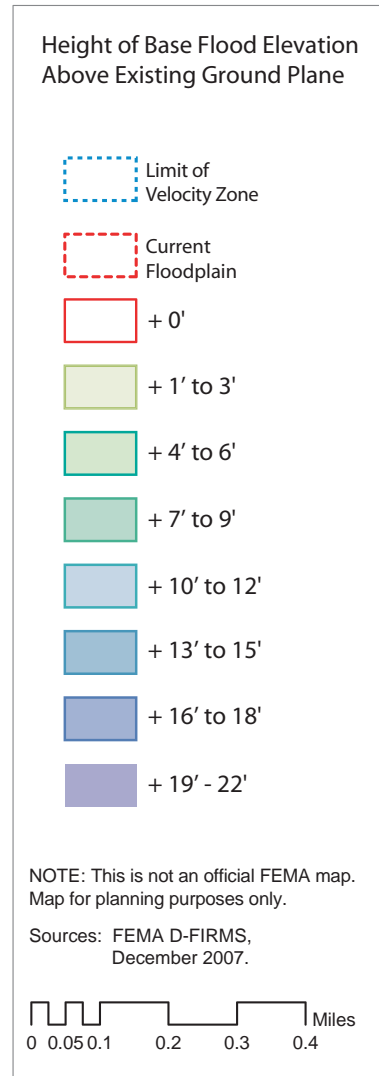




FIGURE 37. At left, an image of the bayou area in the Living Cities plan.



FIGURE 38. Bottom left, maps showing flooding frequency and building damage around the Bayou Auguste area.

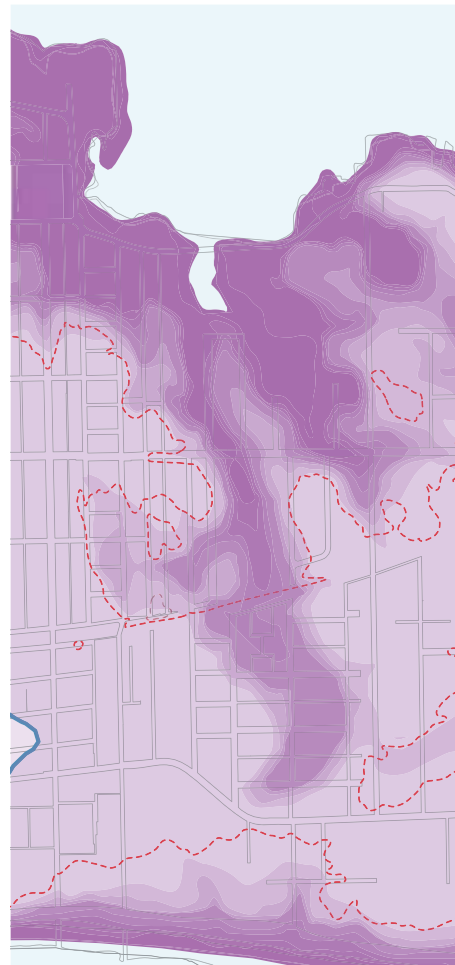


FIGURE 39. Right, a proposed plan showing restored wetlands and recreational park areas, as well as new infill housing, around the Bayou Auguste area.

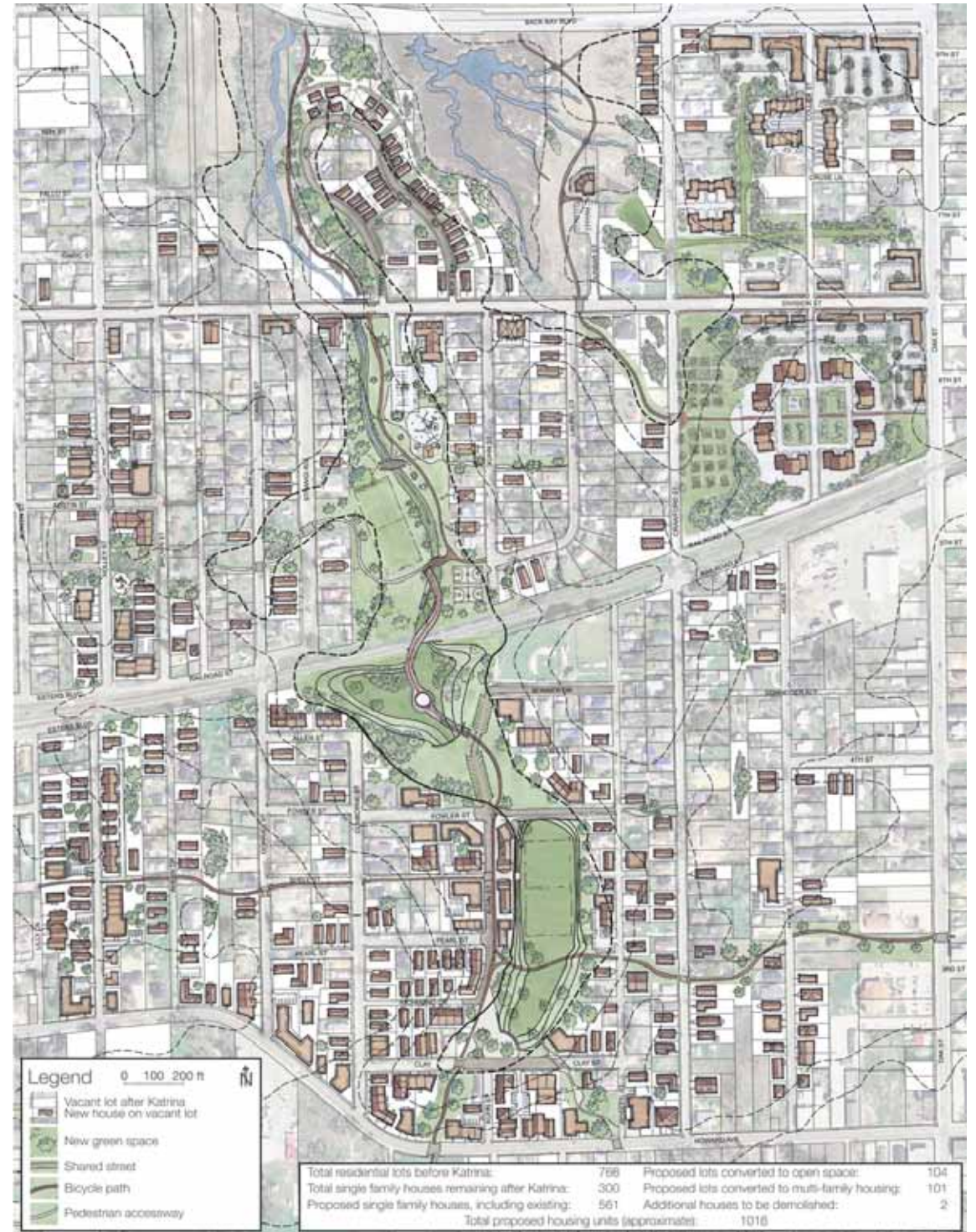
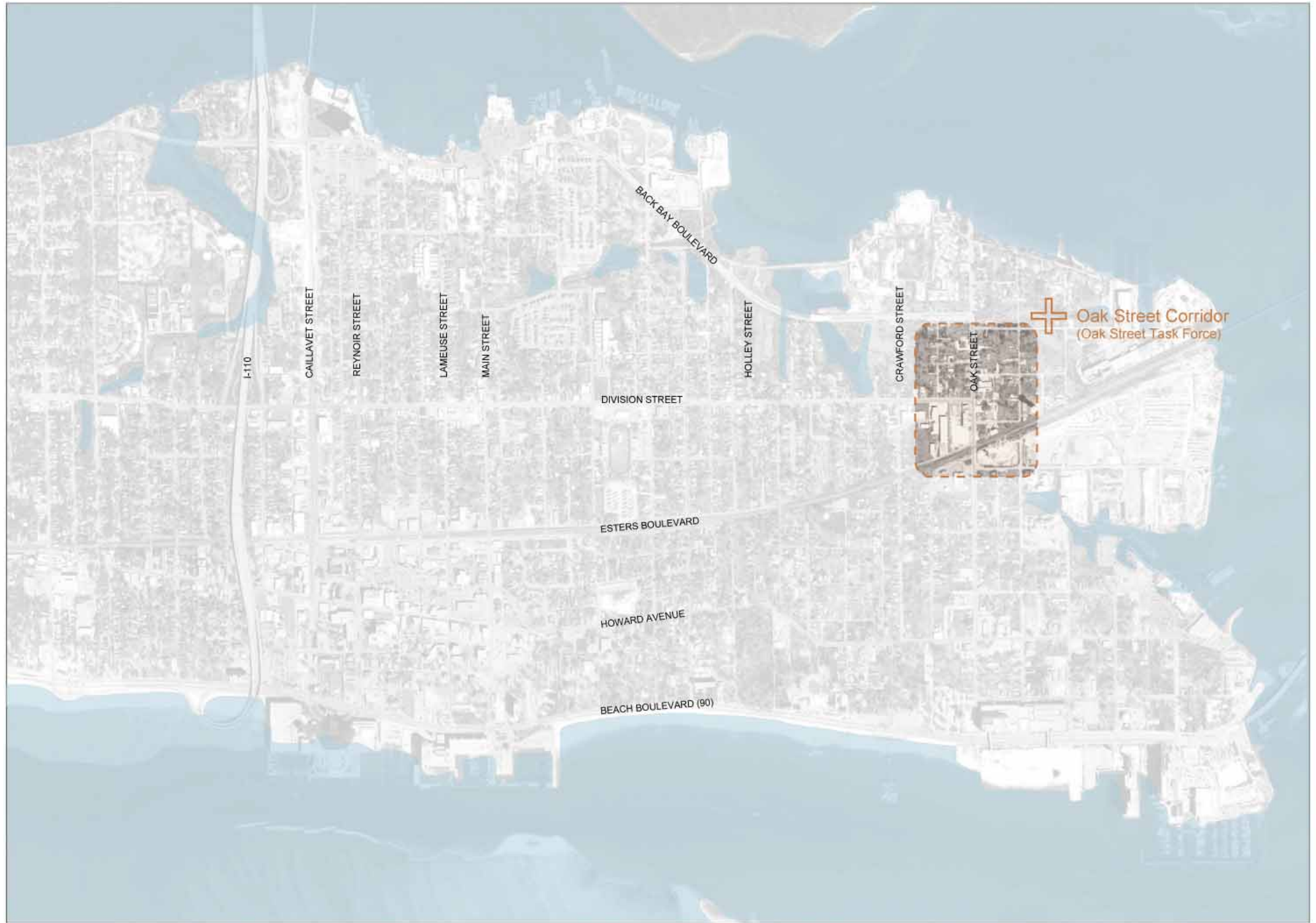


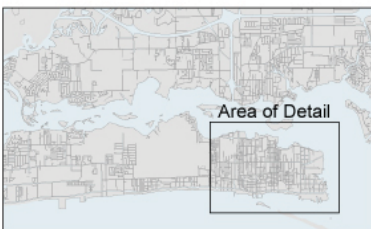
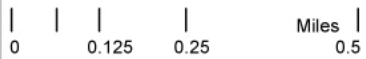
FIGURE 40.

Oak Street Corridor.

June 2008



Source: FEMA orthophoto, 2007.



Oak Street Corridor.

The Oak Street corridor, stretching between Back Bay and Beach Boulevards, is characterized by a mix of residential and commercial properties. Small businesses, such as restaurants (Le Bakery, Pho 777) and gas stations, are typical North of Howard Avenue, while South of this line, the larger scale of entertainment-oriented development (Harrah's Grand Casino, Margaritaville) dominates. The area surrounding the railroad tracks is characterized by larger industrial uses. Oak Street is an important hub for Biloxi's Vietnamese-American community, including a number of Vietnamese-owned businesses, as well as institutions such as the Buddhist Temple and the Church of the Vietnamese Martyrs. Located close to the Eastern tip of the Biloxi peninsula, this area suffered extensive damage from Hurricane Katrina, and the extent of vacant land leaves the area vulnerable to radical change. Key factors affecting the Oak Street corridor are the city's plans to complete a loop road and uncertainty related to the encroaching gaming zone.

The City of Biloxi is in the process of planning the final leg of an East Biloxi boulevard loop road. (See Figures 41 and 42.) As with the re-configuration of Caillavet Street into a commercial boulevard and major arterial roadway linking Beach Boulevard and Back Bay Boulevard, the last portion of the road would run North-South and link the two sides of the peninsula while serving larger-scale commercial uses, such as casinos and condominium developments. Currently, the city is favoring aligning this corridor along what is currently Pine Street. A proposal developed by a group of MIT urban planning students, in a joint studio with Mississippi State University, however explored the option of a waterfront alignment that would simultaneously create infrastructure for waterfront casino development, rather than bisecting the smaller scale residential and local business fabric of the neighborhood, as at Back Bay Boulevard. (See Figure 42.)

In response to published plans for this area and the lack of community input from Vietnamese residents, the National Alliance of Vietnamese American Service Agencies (NAVASA), Boat People SOS, the Hope Coordination Center, and the Gulf Coast Community Design Studio (GCCDS) have been working with residents and business owners along Oak Street to develop a vision for the future redevelopment of this corridor. These planning efforts take into account the city's roadway planning, which has the potential to radically alter the fabric of Oak Street, as well as other planning proposals. In the Living Cities plan, for example, the Point Cadet and Caddie Point areas, beginning at Oak Street, are targeted for high density casino development, a vision that would radically alter ownership and land-use patterns in the area. A significant portion of these neighborhoods are affected by the gaming zone (800' from the shore, excluding rights-of-way, see Figure 43), and land purchase by casino entities as well as land speculation are preventing landowners from moving forward with their rebuilding plans. This is further exacerbated by the City's decision in 2008 to approve a zoning change for a massive area along the beach-side of the peninsula to Waterfront Zoning (the only category that allows casino and related industries). The sense that existing Waterfront Zone boundaries are not fixed and could continue to erode only contributes to the fears and uncertainty in these areas.

Over the course of Spring and Summer 2008, a number of community meetings were held to garner input on what a community-defined vision of Oak Street would entail. In February, five development scenarios were presented to the public: a Vietnamese-themed business/restaurant district; a residential neighborhood; an international business/restaurant district; a mixed-use district; and a tourism-oriented business district, similar to the Living Cities plan. Over 30 people

FIGURE 41. Rendering from Living Cities plan, showing boulevard extension at Pine Street.



FIGURE 42. Pine Street boulevard extension as recommended in the Living Cities plan.



Schematic (left) and rendered (right) plans showing waterfront boulevard alignment, as developed by MIT planning students. The section at bottom shows how the road would rise to the base flood elevation to allow for active ground floor uses, as well as a sea wall with parking behind it.

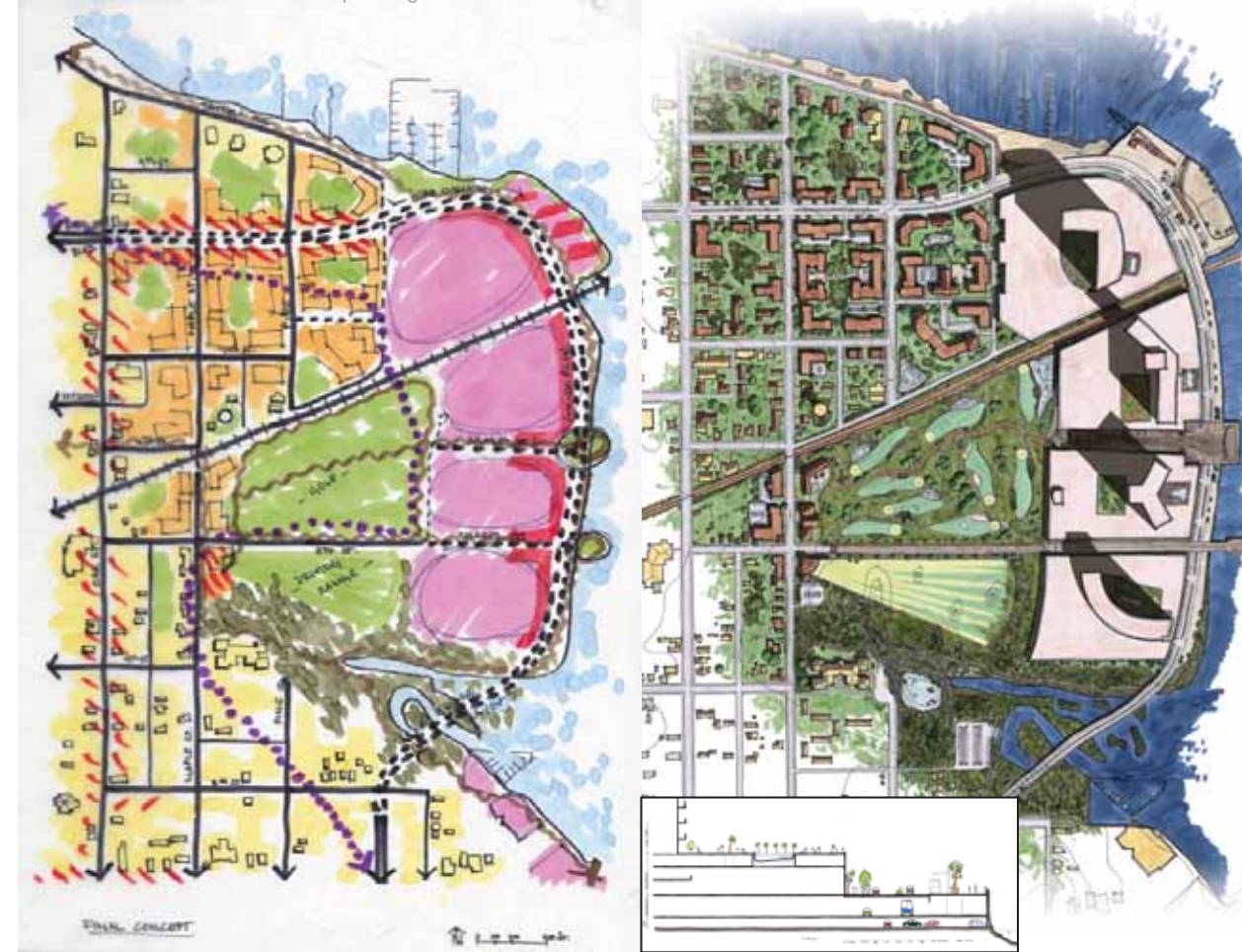
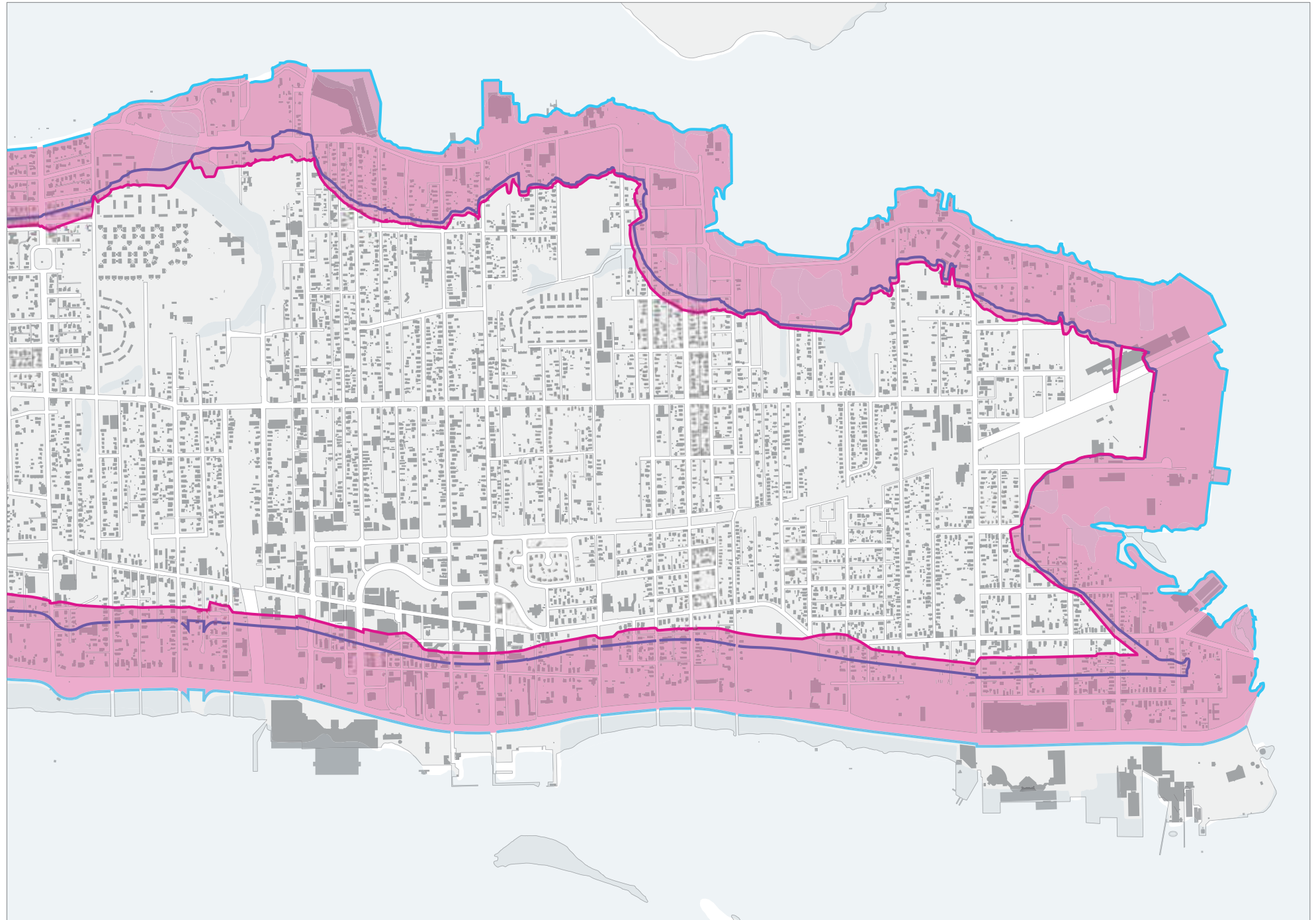
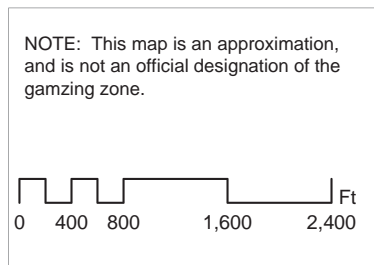
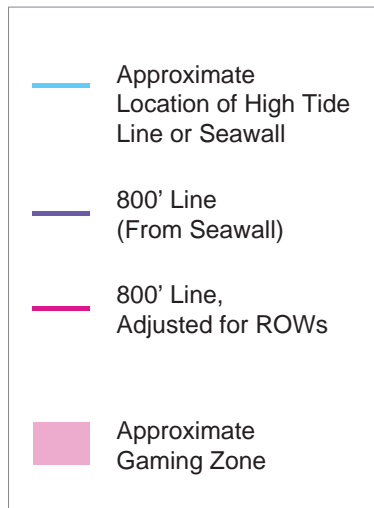


FIGURE 43.

800' Gaming Zone

October 2007



attended this meeting, and responses focused on the historical diversity of Biloxi. Attendees emphasized the importance of developing a variety of businesses, serving both the local community and visitors. They saw the location of Oak Street as well-situated to attract tourists while preserving and indeed enhancing its identity and roots. They pointed out the need to serve existing residents, by providing good transportation and affordable housing, while allowing for growth and encouraging displaced residents to return.

A second townhall meeting in April revealed a general interest in allowing a diversity of uses, including a mix of businesses and homes. At-

tendees identified particular areas of Oak Street that would be suitable for development of businesses, housing, and parks.

In addition, the Oak Street Task Force, comprising residents, business owners, and other stakeholders, was formed to develop and help carry out the community's vision for the neighborhood. The task force has prepared a proposal for zoning changes along Oak Street that would allow property owners to do more with their land. The proposal is currently awaiting City Council review. (See Figure 44.)

The proposal calls for the creation of an Oak Street International

Mixed-Use District, which would contain a wide variety of restaurants and shops serving tourists and locals. Based on the Caillavet Corridor Redevelopment District, the task force proposed an Oak Street Corridor Redevelopment District zoning, based on mixed-uses, typically ground-floor businesses with upper-level office and residential spaces; active street-front uses including outdoor seating; buildings close to the street; and a pedestrian-friendly environment. Unlike the Caillavet CRD, however, the Oak Street CRD emphasizes architectural variability, to reflect the international theme, and to allow maximum flexibility for residents and businesses.



Vietnamese District



Residential District



International District



Neighborhood Mixed-Use District



Hotel Mixed-Use District

FIGURE 44. Perspectives showing different scenarios reviewed by the community in the Oak Street planning process, including the preferred choice, above, an international food-oriented mixed-use district.

Market Analysis.

Literature Review.

Shortly after the storm, two studies were conducted to assess the potential for commercial development in Biloxi. The Congress for the New Urbanism commissioned the Gibbs Planning Group to conduct a retail study for the entire coast in the Fall of 2005, and Economics Research Associates (ERA) completed a broader commercial assessment for East Biloxi alone in 2006. In February of 2008, Professor Karl Seidman of the Department of Urban Studies and Planning at MIT worked with the National Alliance of Vietnamese-American Service Agencies (NAVASA) to conduct a more localized assessment for the local Vietnamese community. More recently, in April of 2009, as part of the overall project of which this report is a part, ERA completed an additional retail and housing market study. This section summarizes the findings of these studies and contextualizes them within current market trends.

The real estate markets in East Biloxi have vacillated wildly over the past ten years. Prior to Hurricane Katrina, the Gulf Coast in general, and Biloxi and Gulfport in particular, were experiencing massive growth, surpassing even the real estate growth seen elsewhere in the country at the time. The population was growing, the casino industry was expanding rapidly, and the condo market was burgeoning. The need for affordable housing, too, was on the rise and well documented, even before Katrina destroyed a significant portion of the housing stock. After Katrina, the market paused, then continued to rise, as massive land speculation took place, particularly in East Biloxi, where casinos were newly allowed to build on land. In theory, casino development can occur in areas within 800 feet of the shore (mean high tide mark, which in Biloxi is mostly fixed at the seawalls), with Waterfront zoning, and with approval from the State Gaming Commission. In East Biloxi, the land speculation has been fueled by the city's indiscriminate approval of requests for changes of zoning to a Waterfront classification.

That reclassification is largely fueled by the city's fears that development has stagnated. The crashes of the real estate and financial markets in the last several months have affected East Biloxi in various ways. A number of planned condo and casino developments (Bacaran Bay, Vue Crescente, Golden Gulf, Havana, and Tivoli, among others) have been cancelled or put on hold. The Margaritaville development, well underway, has stopped construction. The 2006 ERA study showed 871 condo units to be in process in East Biloxi; none of these projects have moved forward since that time. In the longer term, however, the ERA report assumed build-out of these units in a 25-30 year time frame.

Prices of property on the market continue to be unrealistically high throughout East Biloxi, but there is little movement in the market. Critically, as elsewhere, banks are skittish and it is difficult to obtain mortgages and construction loans. The nonprofit development sector is facing a shortage of funds as the tax-credit market shrinks in value and availability, and foundations tighten their purse strings in response to massive losses in their stock holdings. As in the rest of the nation, the market crash has led to layoffs. Although the casino industry, particularly in the Gulf Coast after Katrina, had been thriving, the market appears to have reached this sector as well. In mid-December, the Associated Press reported surprising layoffs in the casino industry throughout the US, including in Mississippi. The state's Gulf Coast casinos have "laid off workers amid a 3 percent decline in revenue this year."

(Wayne Perry, "Casino industry's luck has run out," at Associated Press on line on December 17, 2008 <http://www.google.com/hostednews/ap/article/ALeqM5ilJQmtjAgy2p02nPb7laYXT7m9UAD954KATG1>)

This forms at least the short term context for development. In the longer term, many of the pre-Katrina trends are likely to continue, in terms

of casino development and population growth. This period may present an extraordinary opportunity for the city, and certainly for the community, to determine how it would like to grow before the forces of the market overwhelm them. A near-term factor that is likely to surpass larger market trends and affect East Biloxi significantly is the proposed reorientation of Keesler Air Force Base's main gate to Division Street. Historically, Keesler has warned its residents to avoid East Biloxi; if Keesler reorients itself, presumably for better access to I-110, East Biloxi is likely to gain a new share of captive market for goods and services.

Summary of Reports.

Both of the 2006 reports summarize the existing quantities of commercial and retail space in the area prior to Hurricane Katrina. The Gibbs report, based on a seven-day stay during the CNU charrettes, is broader and its recommendations focus on typical CNU downtown reinvestment strategies, including the development of significant high-end retail. The ERA report is more targeted to East Biloxi.

The Gibbs report documents a long-term trend of retail moving North towards I-10, and though it recommends efforts to recapture some downtown retail, states that "historic downtowns are likely never to regain their dominance as the primary locations for regional destination shopping." (Gibbs, p. 4) The report goes on to note that even before the storm, the region was underserved by retail, and "lacking many leading major retailers." (Gibbs, p. 1) The report highlights the importance of the casino industry as a national destination, with an estimated 10 million annual visitors, and that most of these visitors shop in the historic, arts-oriented downtowns of Bay St. Louis, Pass Christian, and Ocean Springs. Identifying the need for more capacity in "many retail categories, including warehouse goods, better home furnishings, electronics,

home improvement, and both upscale and discount apparel [as well as]...a significant number of casual and themed restaurants and life-style tenants," the report goes on to recommend target square foot-ages of additional retail types for the City of Biloxi. (Gibbs, p. 4)

GIBBS PLANNING STUDY.	
Suggested quantities for additional retail development.	
City of Biloxi , overall	175,000 –300,000 SF
Restaurants	30,000 - 50,000 SF
Fashion and core merchandise:	80,000 – 120,000 SF
Books, music, dept store, sporting goods	50,000-60,000 SF
Neighborhood services	50 ,000 – 70,000 SF

The ERA report showed a more quantitative assessment of East Biloxi's commercial development. Based on pre-Katrina employment figures, which show the area with 17,900 jobs, more than 50% of the city's job share, ERA estimated the following amounts of commercial space:

Type of Space	Assumption	Estimated SF
Professional office	191 SF/employee	333,400 SF
General Industrial	488 SF/employee	600,000 SF
Retail & Restaurants	15 SF/hotel room + 400 SF/retail employee	260,000 SF

Based on this assessment, ERA went on to develop projections for the period 2006 – 2015, assuming some continuation of pre-Katrina mar-ket trends, and a 90% recovery of jobs and full recovery of population in Harrison County over the next ten years.

ERA. Expected Development Scenarios. (2006 Study)		
	Fair Share	Aggressive
New market-rate housing units (1200 SF unit; owned or rented)	260	1,500
Office Space	590,000 SF	709,000 SF
General Industrial	984,000 SF	1,058,000 SF
General Retail & Restaurants	147,000 SF	300,000 SF
Non-casino Hotel/Lodging (based on 650 SF rooms)	128 Rooms	179 Rooms
New employees	5,500	6,700

ERA documented demand for new retail development coming from both existing and new residents, new employees, new casino visitors, and other Biloxi households. The report also addresses location, sug-gesting the need for "careful consideration". "Planning parameters including '100% corner' locations providing strong street visibility and frontage, such as along Beach Boulevard, proximity to key demand generators such as the casinos, adjacent and adequate parking, and

clustering retailers such that synergy is created between them as well as on-site and nearby workplace employees and residents." (ERA, p. 17)

Within the Main Street neighborhood, this would suggest locations close to Caillavet Street, Oak Street, and potentially, along Back Bay Boulevard. This could also mean Main and Lameuse Streets, which are located in very close proximity to the government and medical labor forces of Downtown Biloxi.

The character of the Main Street neighborhood is significantly differ-ent from the rest of the peninsula in ways that may affect how much and what kind of this new development might be captured there. The more affluent (though varied) neighborhoods West of 110 house some commercial development along Howard Avenue and western Division Street. Howard includes significant service-sector development in small-scale spaces, such as lawyers' and doctors' offices, pharmacies, and dry cleaners. South of the railroad, Main Street in Downtown holds much commercial potential. Finally, the casinos ringing the peninsula are the main economic engines in East Biloxi. Retail development, particularly at the higher end, is likely to first occur in downtown and along Howard Avenue before extending to eastern Division Street. The potential for development along Division and Main Streets seems to be more neighborhood-oriented goods and services, as well as some ser-vice commercial development, and finally a small amount of regional or citywide oriented retail, most likely in the form of restaurants.

The NAVASA-MIT study addressed opportunities for new and expanded Vietnamese-owned retail and small businesses in East Biloxi. Based on the existing local population (7,000 residents in East Biloxi) and re-gional Vietnamese population (1,793 households in the three coastal

counties), the study assessed demand and supply of various types of stores. Currently 14 Vietnamese-owned businesses in East Biloxi, occupying 28,000 square feet.

The assessment determines that, based on competition and other factors such as rent in the area, restaurants are the strongest opportunity, with demand exceeding supply by \$3.2 million and a strong perception of this area as a food destination. The other opportunities identified are grocery stores (with the new Lee supermarket perhaps filling some of this demand). Comparison retail, like clothing and furniture, was seen as less likely, given strong competition from larger retail chains.

MIT - NAVASA Study.				
Store Type	Demand	Supply	Gap	Supportable SF
Grocery	\$4,168,000	\$2,714,000	\$1,454,000	4,700 SF
Restaurants	\$4,737,000	\$1,460,000	\$3,278,000	16,400 SF
Clothing	\$205,000	\$0	\$205,000	1,300 SF
Home Furn.	\$337,000	\$0	\$337,000	2,000 SF
Pharmacy	\$635,000	\$621,000	\$14,100	50 SF

Though this is targeted to the Vietnamese community, this could be a useful estimate for the Main Street community, and the Division Street corridor as a whole.

ERA's 2009 study similarly found dining to be the market area with the greatest potential for growth. The study cites the realignment of Keesler's entrance to Division Street as a source of demand for fast

food and services, as well as needs identified during interviews with area stakeholders. In addition, ERA predicts that spending levels in the region are still rebounding from Hurricane Katrina, and that "food and beverage and recreation spending will increase on a per person basis in the future," stabilizing around pre-Katrina levels. (ERA, *Biloxi Main Street District Retail Market Assessment*, April 2009.)

The report also discusses the potential to capture casino visitors, whose spending has been "largely concentrated within the area casinos." (*Ibid*, p 23) The city's plan to develop a loop road around the peninsula could concentrate visitors away from East Biloxi, however, unless designed to allow for greater access to the community and to businesses along its length. Of the two completed portions of this "semi-walkable casino/entertainment traffic loop," the renovation of Caillavet Street seems in line with these goals, yet the limited access, harsh boundaries, lack of pedestrian access and crossings, and high speed of the Bayview/Back Bay Boulevard stretch discourage stopping along its length. This would make it difficult to access businesses along the road, both for cars and pedestrians. If the final portion of the loop road is similarly constructed, the loop road is likely to further isolate East Biloxi residents and businesses, rather than encourage their use by visitors. In addition, retail development in East Biloxi faces competition from three planned retail projects in the CBD, as well as the new shopping plaza located near I-10 in D'Iberville.

ERA's recommendations focus on taking advantage of the existing vacant building stock in the Main Street area. They estimate an inventory of 85,000 to 110,000 square feet of existing retail/commercial space in the study zone, of which 40,000 to 50,000 square feet is vacant. Of the existing businesses, the tenants are primarily neighborhood-serving, and ERA estimates that any unmet demand would similarly be for local customers. Based on regionally-adjusted figures, ERA estimated

a market demand for retail of 20-25 square foot per person in the area. Assuming a population of 2,722 persons, they estimate a demand of 54,400 to 68,000 square feet of retail, which could grow to 66,000 to 84,000 square feet by 2013 with an estimated population of 3,324.

Based on a retail gaps analysis, ERA recommends a focus on small-scale clothing or apparel stores; recreation/hobby-related retail outlets; discount retailers to complement, not compete, with the Family Dollar on Division Street; and fast food/lunch locations. They also noted a need for more space at the newly-completed clinic. Finally, the report emphasizes the need to absorb existing building stock rather than developing new commercial buildings. The report also notes the obstacles of insurance costs, and suggests a community- or city-wide strategy to help negotiate these agreements.

ERA also conducted a housing market study, which reflected the results of a similar study conducted by the state earlier this year. The document notes the "oversupply" of market rate units, particularly in the rental market. The two areas of demand identified include senior housing, and affordable housing, particularly for the lowest income levels. They note, as well, "reported waiting lists for affordable units and housing vouchers, further emphasizing this market opportunity." (*Ibid*, p 26)

The overall conclusions of these reports are fairly consistent. In the short-term, there is a need in East Biloxi for affordable rental and senior housing, and there is limited demand for commercial development, which should be directed towards absorbing existing building stock. Commercial demand is likely to grow in the future, as additional housing development brings more people into the area, and as the larger economy improves. The following section addresses the potential to create buildings that can adapt to changing market conditions.

Opportunities & Challenges.

Introduction.

The damage and aftermath of Hurricane Katrina, the global economic climate, and the specific socio-economic conditions of the Gulf Coast all present challenges and opportunities to the redevelopment of the Main Street Study Area. A number of those are addressed in this section. They are divided into issues related to residential development and issues related to commercial and mixed-use development, followed by a discussion of zoning, parking, and streetscape improvements.

Each section begins with a summary of the typical existing conditions in East Biloxi, then develops a set of proposals for how these situations might be addressed in built form. The proposed projects are not necessarily intended for actual construction, but rather to generate ideas for how certain challenges could be addressed. In some cases, examples of successful projects in other communities are also provided.

Residential Opportunities & Challenges.

Figure 45 summarizes the various conditions for housing in East Biloxi at this time. The diagram at top shows a continuous pattern of small residential development that was disrupted by the storm. The landscape that is now emerging is one of repaired homes built at or just above grade; and elevated infill houses ranging from 3'-0" to as much as 17'-0" above grade. In addition, there are opportunities for elevated multi-unit housing and accessory dwelling units, as well as the possibility of developing a no-build zone in very low lying areas.

REPAIRED HOUSES. Repaired houses are common and form the core of the recovering East Biloxi community. The number of repaired homes has stabilized as most of those that could be recovered have been by now.

INFILL HOUSES. Infill houses continue to be built, and, as identified in Figure 28 (page 29), many vacant lots remain. The Gulf Coast Housing Resource Network, in concert with the research developed for this report, largely decided to focus their efforts on infill sites that required less than 6'-0" of lofting above grade. Figure 29 (page 30) shows the available lots, a total of 868 parcels of land. Even removing those parcels within the 800' casino zone yields roughly 700 parcels for infill.

Infill parcels present an excellent opportunity to further stabilize the core recovered areas of the community, particularly those on higher, safer ground. Lofting less than 6'-0" is fairly easy to integrate into existing neighborhood fabric, as indicated in the first two rows of images in Figure 46.

ACCESSORY DWELLING UNITS. Another way to increase density on the safer, high ground is to allow for the creation of accessory dwelling units (ADUs) on infill lots. Often referred to as granny flats or mother-in-law apartments, these are smaller secondary units located behind or next to the main house on a lot. They may be rented out to an individual or smaller family, providing a rental unit that is maintained and monitored by the landlord in the front house, while creating a source of income for a homeowner family in the community. Some existing East Biloxi residences already have rear cottages, and they work well with the urban form of historic neighborhood development. ADUs are further discussed on pages 50 - 51.

FIGURE 45. Housing Opportunities & Challenges.

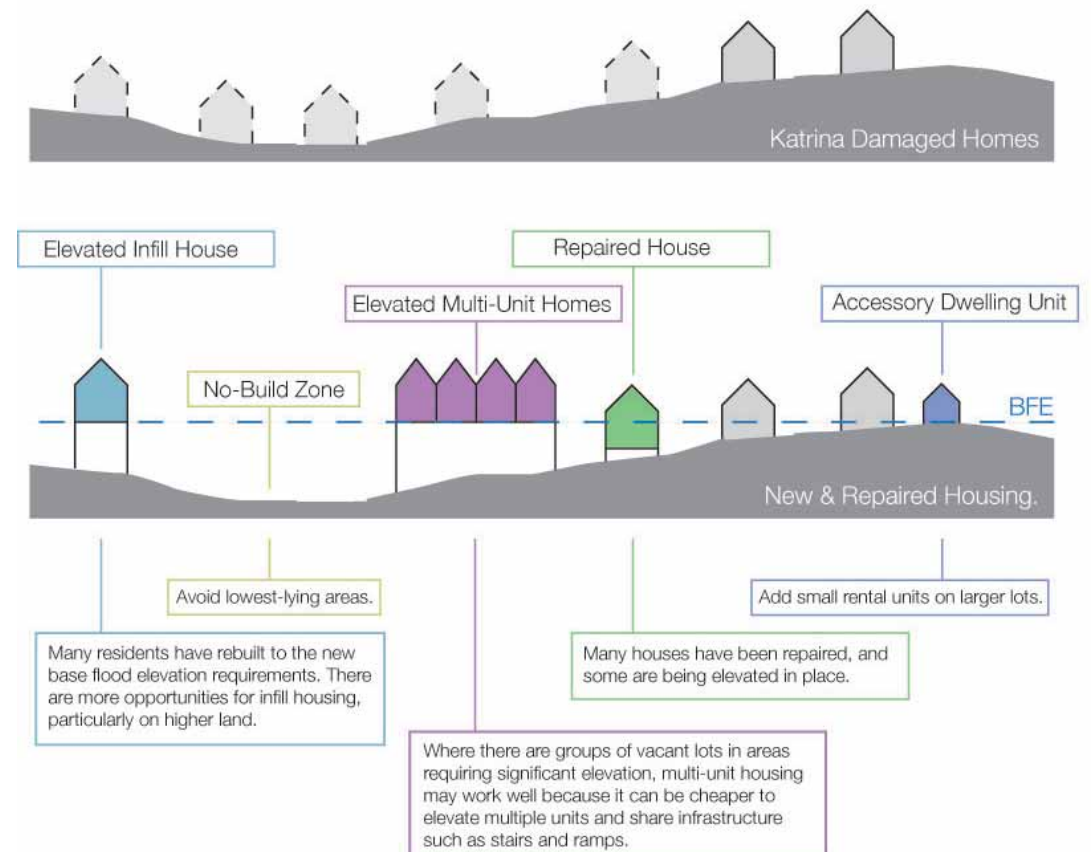




FIGURE 46. New houses in the neighborhood, constructed to meet revised base flood elevations at a range of heights. Image credits: from top left to bottom right: Top, GCCDS, Jonah Reeves, Leslie Schwarz. Middle, Leslie Schwarz, Jonah Reeves, Leslie Schwarz. Bottom, Alan Karchmer.

FIGURE 47. Accessory Dwelling Units.

Traditional neighborhoods, like East Biloxi, often contain “granny flats” or accessory dwelling units (ADUs). These are small apartments located in the rear or side yard of a residential property. They may be detached units or attached to the primary residence on the lot, and they are typically one-bedroom or efficiency apartments under 850 square feet. In some communities, they are located above a shed or garage. Zoning codes developed in the last 30 years have tended to exclude these types of units, but many communities attempting to restore affordability and allow for a variety of housing types, have begun to encourage them. In Santa Cruz, California and Austin, Texas special programs have been created to foster the development of accessory dwelling units. These cities promote them as housing well suited to nurses, teachers, and policemen, for example, individuals whose presence is highly valued in the community but who were being priced out of the existing housing markets.

In both of these programs, the city has pre-approved architectural drawings for units that meet their requirements. These units are provided with an expedited review process. Typically, these programs also identify areas of the city where ADUs are encouraged, and provide guidelines regarding their siting on lots and their relationships to the primary residences.

In Biloxi’s Land Development Ordinance, “guest cottages” are “permitted accessory uses” in A, RER, RE, RS-10, RS-7.5, RS-5, RD, RM-10, RM-20, RM-25, RO, and B-1 zones subject to the standards listed in Section 23-11-15(a)(1) of the ordinance. The area also allowed as conditional uses, subject to the same standards in B-3, WF, CRD, and I-1 zones. This section of the code requires that guest cottages be sited on lots with a minimum area of 20,000 square feet, that their utilities

Santa Cruz, California. Accessory Dwelling Unit Development Program.

The Santa Cruz program is intended to increase the number and quality of small rental units in the community, while encouraging infill, preventing sprawl, and providing homeowners a source of assistance with mortgage payments. The program encourages “development of small-scale, neighborhood compatible housing” in an effort to supplant the “proliferation of poorly-constructed, illegal ADUs.”

ADUs are defined by the program as attached or detached living units with a kitchen, sleeping area, and bathroom, located on a single-family lot. The units are allowed on lots with an area of at least 5,000 square feet.

The program includes a technical assistance component, which helps with design selection and siting. This includes a manual with step-by-step instructions from design through permitting and construction, as well as access to design drawings for seven pre-approved prototype units. (The plan sets book is available to the public for \$33, but plans must be purchased from the architects directly.) In addition, an ADU loan program offers homeowners loans of up to \$100,000 through a local credit union, for the construction of affordable ADUs, serving residents at or below 80% of area median income.

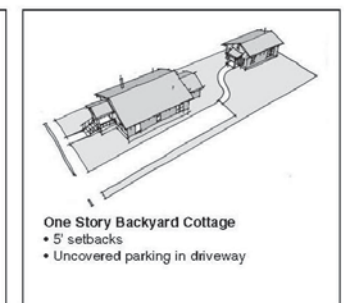
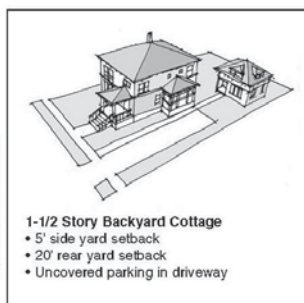
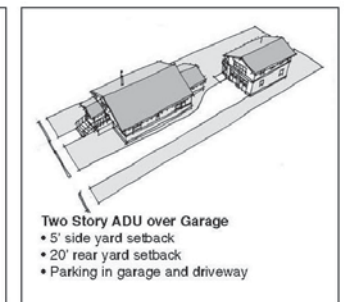
For more information, visit:
<http://www.ci.santa-cruz.ca.us/pl/hcd/ADU/adu.html>



Detached ADUs

How can detached ADUs be in scale with the neighborhood and architecturally compatible with the existing house?

- In what ways is the ADU architecturally compatible with the primary structure and other houses in the neighborhood?
- Is the ADU subordinate in scale and size to the primary house?
- How is the ADU designed to reduce the impact on privacy of neighbors?
- Does the lowest side of the ADU roof face adjacent properties to reduce the visibility of the ADU from the adjacent property?
- Are ADU entries oriented towards rear alleys, the main house, or yard rather than the neighboring house or yard?
- Are ADU windows either oriented or glazed to ensure privacy for neighbors?



not be metered separately from the primary residence, they not exceed 750 square feet of conditioned space; and that the primary residence and guest cottage together not exceed 50 percent lot coverage.

Based on these guidelines, GCCDS developed the map in Figure 31, identifying properties that meet the minimum area criteria and with zoning that permits guest cottages. In the Main Street neighborhood area, 508 lots meet these criteria.

Accessory dwelling units can play an important part in the Katrina reconstruction effort. For some residents, it may be provide a way to rebuild a smaller initial unit until enough money is saved to build a primary residence. The smaller unit may then be rented out for additional income and to provide housing for another family or individual. In addition, accessory dwelling units may help communities like East Biloxi to recover some of the individually owned rental units lost to Katrina. Prior to the storm, over half of East Biloxi's housing was in the form of single-family detached rental units. Often these units were owned by another resident in the neighborhood. Because few resources have been available for small rental units, and because residents have been focused on restoring their own primary residences, few of these rental units have been rebuilt. As the recent housing data show, affordable rental units are the housing type in greatest demand on the Gulf Coast at this time.

Recent studies also show a marked need for elderly housing units. Accessory dwelling units can also help families bring elderly relatives closer to them, while still allowing for significant independence.

Two successful programs from other regions are described further on these pages.

Austin, Texas. Alley Flats Initiative.

The alley flats initiative takes advantage of the many areas of that city served by rear alleyways. These alleys provide an ideal access point for accessory units, which may be located in the rear or side yards of qualifying lots. The program is a partnership between the city and a nonprofit called the Austin Community Design and Development Center (ACDDC). The city allows for expedited review of two prototype houses developed by the ACDDC to meet city requirements. Individuals whose lots qualify for alley flats may purchase construction drawings from ACDDC (\$275 for a basic set; \$500 for a set with additional services from ACDDC; or \$700 for a full service package); financial assistance is available for the city in exchange for meeting housing standards under a separate city program, which requires that rental units be affordable to households with income under 80% of AMI for a minimum of five years after completion.

Basic requirements of the program are that the unit have its own entrance, bathroom, kitchen, sleeping area, and off-street parking space that is not located in front of the primary residence. The minimum lot size is 5,750 square feet (significantly smaller than the Biloxi requirement), and the units may not exceed 850 square feet in area and 30 feet or two stories in height. The minimum distance between the main house and the accessory unit is 15 feet, and building may not cover more than 40% of the rear yard. The prototype houses are designed to address urban form and privacy issues, and to incorporate passive heating and cooling techniques to the extent possible.

For more information, visit:
<http://thealleyflatinitiative.org/index.html>

Prototype #2

600 SQFT

This home will not only be energy efficient, but it will be fully accessible to those with mobility impalments.



ELEVATED INFILL HOUSES. Elevated infill units, that is those lofted over 6'-0", are more challenging. It can be difficult to restore the sense of neighborhood character exemplified by traditional homes with front porches. A clear sense of entry and circulation from the street to the front door of the house can mitigate the sharp change in elevation. Front porches, intermediate porches, and usable spaces below the elevated home can be used to soften the transition and create a series of semi-public spaces akin to the front yard and porch. (Figure 48.)

Regardless of these factors, it is critical that elevated buildings meet building code requirements for construction, as well as federal and local code requirements governing elevation levels, including any necessary freeboard. These rules are intended to protect against the loss of human life and physical property, as well as to help communities qualify for lower insurance rates.

In East Biloxi, large portions of the peninsula call for elevating over 6'-0". (Figure 36 on page 37.) Of the vacant lots that fall into this category, GCCDS advises focusing on elevated infill homes that are located in close proximity to neighborhood streets that contain a critical mass of existing buildings. Infill houses built in these areas will benefit from repaired infrastructure, as well as the safety of living in an active, populated area. Finally, these areas are also those less susceptible to storm damage. The lowest areas along the coast and around the bayous, in particular, should be avoided, as discussed in the next section.

NO BUILD ZONE. On the East Biloxi peninsula, the lowest ground would require lofting over 20'-0". However, the Army Corps of Engineers warns against elevating more than 15'-0" due to concerns about the ability of piles to withstand scour during major hurricanes. In addition, as identified in Figures 34 and 35, the lowlands are subject to regular flooding,

not just major storm events. Even small storms can present significant dangers to residents and their physical property. Finally, the protection of the bayou system, which performs important ecological functions, in addition to protecting the built environment from storm impacts, is a factor in determining where to rebuild. These issues, and the cost of elevated construction and insurance, should discourage residents and developers from rebuilding on the lowest ground. Based on GCCDS's analysis of past storms and Katrina damage, building on ground less than 12'-0" above sea level should be avoided.

The lowlands could be reclaimed for community benefit in other ways. As proposed by the MSU and MIT students, the lands immediately adjacent to the perennially submerged areas of the bayou can be restored to provide additional water filtration, stormwater absorption, and renewed habitat for flora and fauna. The Land Trust for the Mississippi Coastal Plain has spearheaded similar reclamation efforts along the Tchoutacabouffa River and Old Fort Bayou. These areas can include nature trails, boardwalks, and limited construction like education or observation areas. Ringing these areas could be public parks that contain more active uses, including playing fields. These efforts could be part of the city's hazard mitigation strategy, potentially further lowering the cost of insurance for the city as a whole. Mecklenburg County, North Carolina developed a similar program, which is described in Figure 49.

ELEVATED MULTI-UNIT HOMES. In areas that require elevation, multi-unit housing can work well for several reasons. Typically, the cost of elevating is fairly high due to the need for additional materials, as well as stairs, ramps, and other elements. In addition, the cost of using elevators in single-family housing is prohibitively expensive. Despite the number of elderly and mobility-impaired residents in East Biloxi, only a

FIGURE 48. Elevated infill houses.



FIGURE 49. Bayou Reclamation.

The benefits of green infrastructure like greenways, restored wetlands, or even bio-swales and rain gardens are numerous.

Reduced and delayed stormwater runoff volumes, as a result of the natural ability of plants and soil to absorb and retain water.

Heat impact reduction, as vegetation minimizes the build up of heat caused by paved surfaces. Water in particular helps to cool the surrounding area.

Reduced sewer overflow events due to greater capacity for the landscape to absorb and retain water from even severe storms.

Improved air quality, as vegetation helps to filter pollutants out of the air.

Wildlife habitat and recreational space.

(From "Managing Stormwater Runoff: A Green Infrastructure Approach," by Lynn Richards. *Planning Commissioners Journal*. Number 73, Winter 2009.)

Mecklenburg County, North Carolina. Little Sugar Creek.

After massive flooding in 1997, a comprehensive planning effort around the Little Sugar Creek waterway began in Mecklenburg County, North Carolina. The creek, with passes through numerous neighborhoods in Charlotte, had been channelized and buried, experienced encroachment from development in the floodplain, and was severely polluted. County officials dealing with stormwater management, environmental protection, and parks and recreation worked to develop a comprehensive proposal to restore the waterways ecological functions over the next several years, using federal flood hazard mitigation funds, as well as state and local funds. In the long term, the program sought to improve water quality through stormwater management and stream, wetland, and wildlife restoration. Development along the park would include parks, nature trails, and economic development in the more populated areas.

The flood hazard mitigation program was put into place to prevent "loss of life and property due to flooding, while enhancing the natural and beneficial functions of the floodplain." The county identified high risk properties along the waterway and began to purchase them using a combination of federal and local funds. Due to damage caused by the flooding, many of the targeted properties were vacant.

Over the course of 2000 – 2007, 160 buildings were removed from the floodplain, creating 80 acres of public open space. Portions of the creek that had been buried were reconfigured to allow for greater flood absorption capacity, as well as opportunities for outdoor recreation. When complete, the greenway will feature 15 miles of paths, habitats and flowing water.

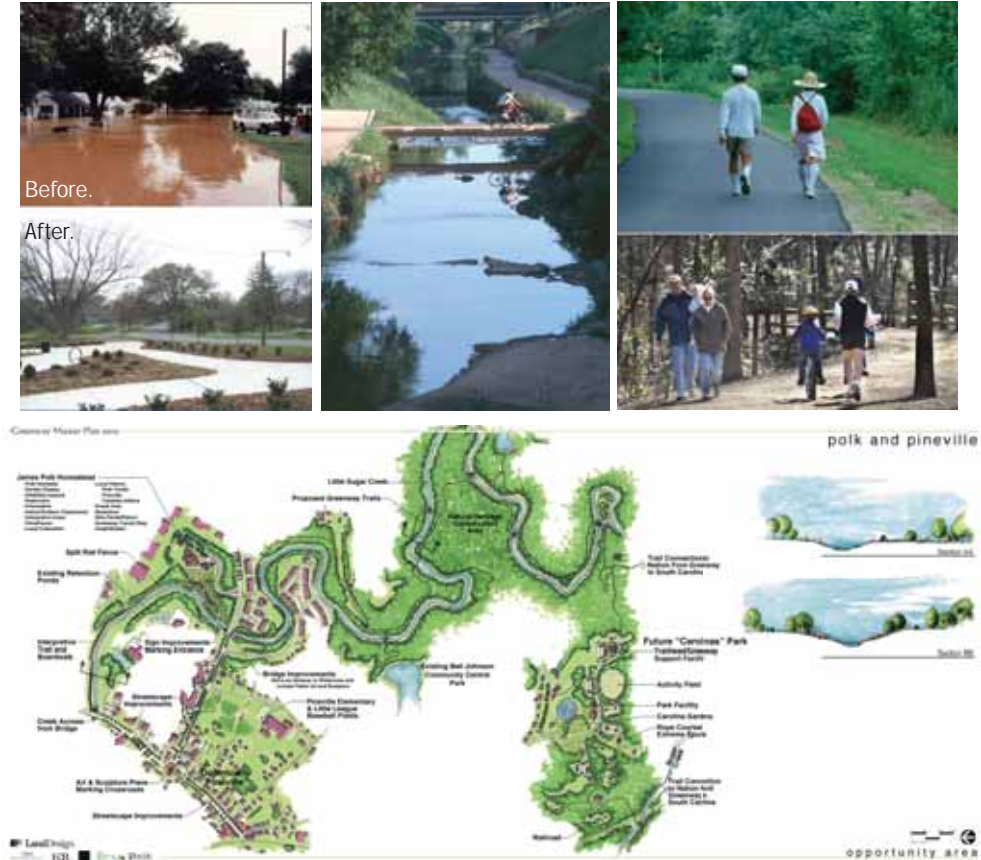


FIGURE 50. Elevated Multi-Unit Housing.

handful of elevated homes incorporate elevators because of their cost. By developing small groups of units together on these sites, the cost of infrastructure can be shared among them, reducing the cost per unit of housing produced. Elevated structures also provide ample room for parking, which is often a challenge in developing multi-unit housing in areas with small lots, like East Biloxi.

As part of this study, GCCDS identified locations with small clusters of vacant lots in zones allowing multi-unit residential development either as-of-right or as a conditional use; and where buildings would need to be elevated between 6'-0" and 12'-0". These are shown in Figure 30.

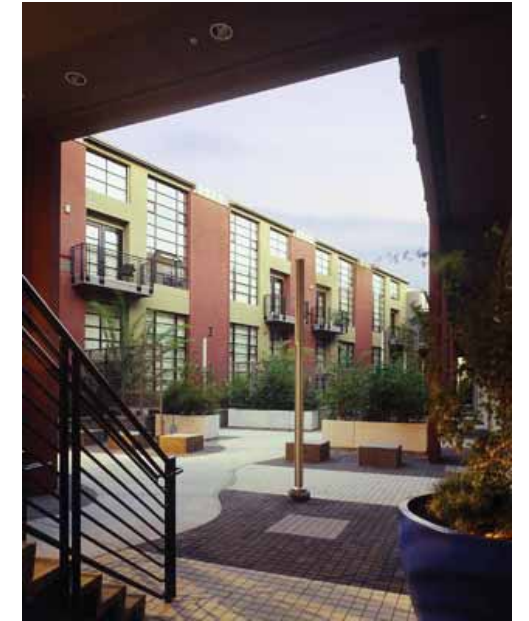
Market analyses suggest that there is still a need for affordable rental housing for families and the elderly in East Biloxi. Grouping units together allows developers to provide a range of units to fit existing housing needs. They also help foster a diverse community.

GCCDS has not developed proposals for multi-unit housing in Biloxi, but several examples of existing housing in other locations are shown in Figure 50. These examples are typically elevated (or else they show housing above another use, which acts similar to an elevated base floor), and show how stairs, circulation, shared and private outdoor spaces, and parking can all be integrated into attractive, high-quality multi-unit construction. In addition, mixed-use buildings, which incorporate ground-floor commercial space with upper-story residential units, are further explored in the following section on commercial development.

Shared Circulation.

The housing developments shown here incorporate shared outdoor circulation, including stairs and elevated walkways, as well as other usable outdoor spaces.

The open air circulation, which is visible from many of the housing units, allows residents to keep an eye on these spaces, creating a safer environment. Many of the units also feature balconies or other individual outdoor spaces attached to the housing units, creating both private and shared spaces.





Shared Stairways, Private Balconies.

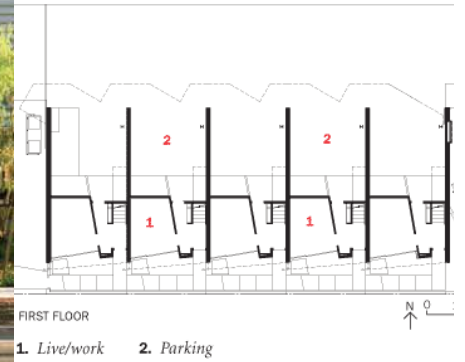
The buildings shown here show housing units located above an elevated level. At bottom left, stairs to interior and exterior entries form part of the elevated plinth. At top right, individual units have their own outdoor spaces, but share stairs to get into the building, as well as outdoor space between buildings. At top right, a building elevated on piles allows parking below the units while providing shared stairs, and a shared upper story outdoor space (right).

(All images on these pages are from *Architectural Record* online building types study web site.)



Parking and Outdoor Spaces.

These developments both have parking beneath the residential units, as well as shared outdoor spaces between these areas. At right, townhomes sit on a base that contains parking and small interior space for each unit. At bottom right and below, a similar arrangement is shown, but large openings on the ground floor also create sheltered outdoor spaces for each unit, as well as shared spaces between buildings.



Commercial Opportunities & Challenges.

As with residential development, commercial development in East Biloxi faces a number of challenges. In particular, the flood elevation requirements are challenging for businesses that must rely on visibility and street access to attract customers. Existing local models of commercial buildings do not address these factors; as a result the emphasis of this section is on presenting speculative projects that propose new building typologies. These typologies are particularly oriented to the needs of East Biloxi, where small building setbacks and a historic street layout are the norm. The projects shown here all address existing buildings and properties along Division and Main Streets, the two core commercial streets in the study area.

We explore the options for designing elevated buildings and their relationship to the street in two categories, one for those under 5'-0" and one for those above. A number of existing, vacant buildings on Division and Main Streets provide an opportunity to take advantage of at-grade construction. We show how they might be adapted and added on to in order to house new or additional programs. Finally, federal and local regulations allow for some building below the base flood elevations, when the construction meets flood-proof guidelines. Although costly, this type of construction could be warranted in some circumstances. Because there are few local examples, GCCDS has begun to explore how they might work in East Biloxi. Each of these is discussed further below.

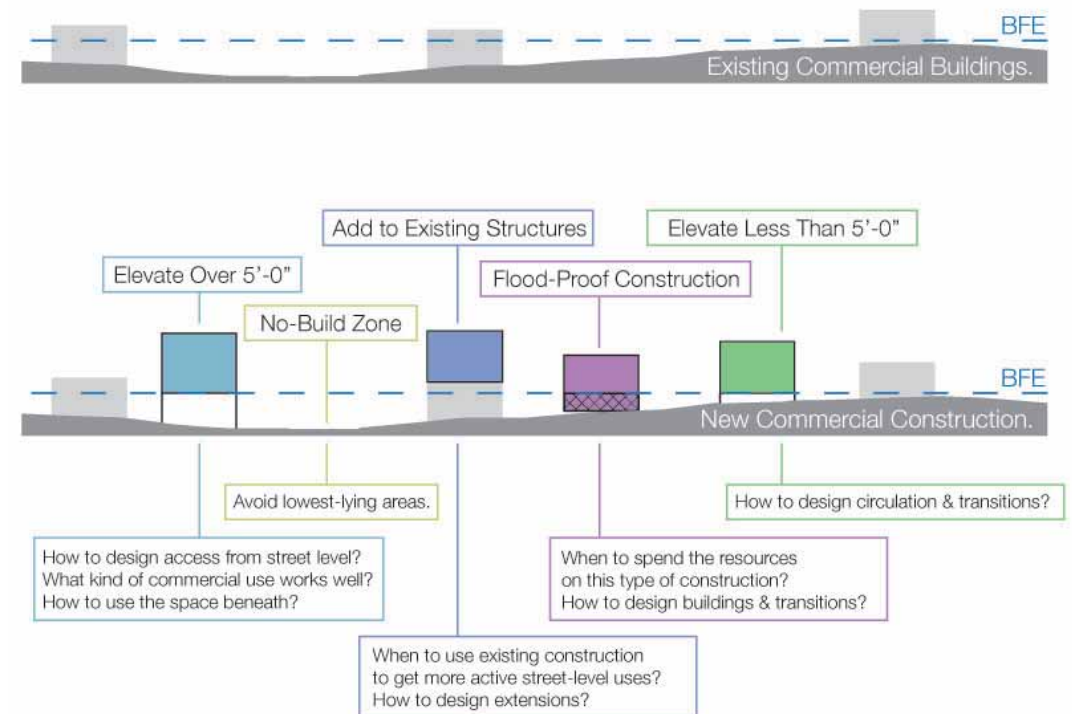
ELEVATED COMMERCIAL UNDER 5'-0". As the diagram at the bottom of Figure 18 shows, required elevation heights along Division Street vary considerably. About 1/3 of the street East of Caillavet would require elevating 5'-0" or less. These buildings are perhaps the easi-

est to address, and provide opportunities to improve the streetscape, while addressing circulation into the building. Several existing buildings are already elevated to these levels. Although handicap-accessible ramps can take up a fair amount of space (at a typical 1:12 slope, a rise of 5'-0" would require a length of 60'-0" minimum), they are still relatively easy to incorporate at this height.

On small buildings, stairs can lead directly to an entry porch or platform near the front door, as in the Salvation Army-owned building on the corner of Division and Lee Streets, shown in Figure 52. They can also be wider and provide seating, as is often the case in cities where buildings with stoops are common. On larger buildings, or where buildings are located close to one another in a way that allows for shared infrastructure, a secondary sidewalk or platform along the front of the building can be developed. This platform can include stairs at the ends and intermediately, as needed, as well as ramps, exterior elevators, and even benches or planters. (Figure 52.) In addition, a raised sidewalk, which would run parallel to the existing, public sidewalk, could make an excellent viewing platform for the many parades that run along Division Street.

A grade change of even 5'-0" can make a commercial space less visible to the street. Inhabitable intermediate spaces, as suggested above and shown in Figure 52, can soften the transition and create a secondary set of amenities for the public street. The size and location of signage in windows, or the use of signage along the sidewalk can address this issue.

FIGURE 51. Commercial Opportunities & Challenges.



ELEVATED COMMERCIAL OVER 5'-0". The challenges of commercial buildings that must be elevated over 5'-0" are similar to those discussed above. However, they are more difficult to address because the visibility of these buildings is much lower as their ground floors are well above eye-level, and the circulation required for both ramps and stairs takes up considerably more space. (For example a 10'-0" ramp would be 120'-0" long.)

GCCDS developed two typologies for significantly elevated construction. The first, shown in Figure 53, is a mixed-use building with both commercial and residential uses. The second, in Figure 54, is a commercial building with ground floor parking.

The first example was developed by a group of students from the University of Minnesota in a graduate architecture studio they completed in Biloxi under GCCDS supervision in the Spring of 2009. During the completion of this study, GCCDS found that the current economic climate called for a flexible building typology that could meet the short term need for housing, but provide long term opportunities for commercial development along important corridors like Division and Main Streets. The students explored that typology during their studio.

Their proposal shows a building, potentially located at the corner of Division and Nixon Streets, that would provide two-story live/work units that could be converted over time to function as residential only, live/work, or commercial separated from residential above. A critical aspect of their

FIGURE 52. Elevated Commercial Development (Less than 5'-0").



Photos at top left and top right are courtesy of flickr users under Creative Commons licenses.

Stoops, Porches, and Raised Sidewalks.

Some examples of commercial buildings raised less than 5'-0" already exist in East Biloxi. One is the building at the corner of Division and Lee Streets, now owned by the Salvation Army (bottom left).

Other examples come from cities where brownstones are common. Those in Montreal (left) and along Boston's Newbury Street (right) are two examples. Although these buildings contain a level that is slightly below street grade, the relevant aspect is how stairs, entryways, windows, and signage are used to draw visitors to the elevated entries.



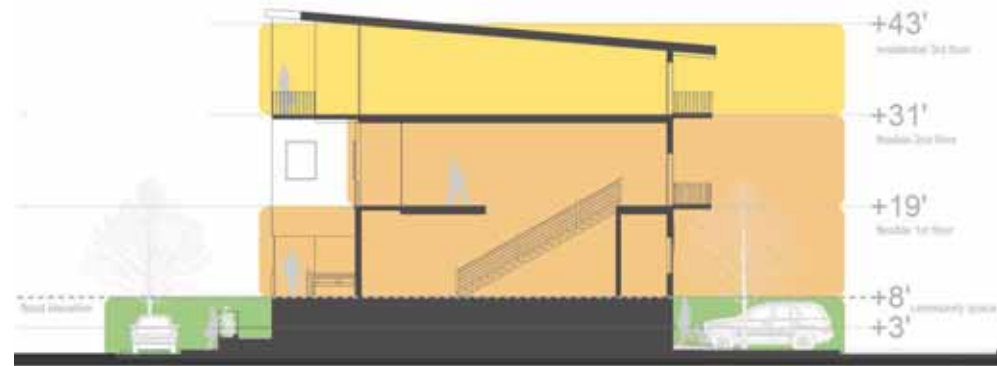
Another example comes from the Tribeca neighborhood of New York City (bottom right). This formerly industrial area features many buildings with fabricated steel platforms that were originally used to allow for easy loading and unloading from trucks. Today, they are an important architectural feature of the neighborhood. They form a secondary sidewalk along the public one, and they include shared stairs (bottom right and left), exterior elevators (bottom center), planters (bottom right), and other features. Though not visible here, some also have canopies that provide weather protection and shade. In another New York neighborhood, the Meatpacking District, the platforms are often used as patios for outdoor dining.



As in the examples shown here, various materials and construction methods may be employed to create effective transitions from street to building.



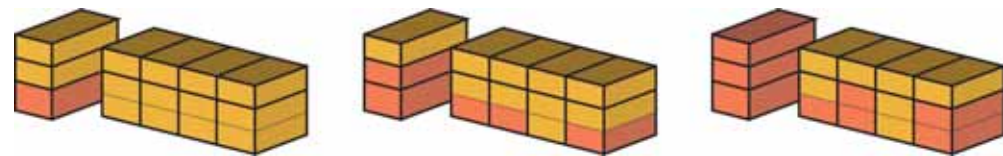
FIGURE 53. Elevated Commercial Development (Over 5'-0").



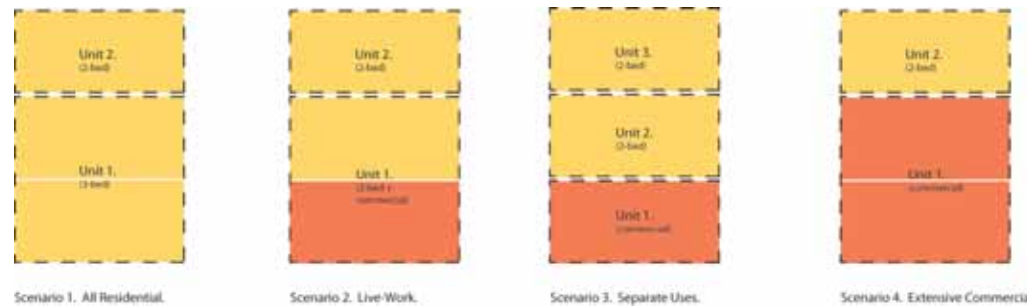
A section diagram shows the transition from street to ground floor.



The Division Street elevation.



These diagrams (above and below) show how, over time, the units could shift between residential (yellow) and commercial (red), with a number of different possible scenarios.



A perspective rendering of the building at the corner of Nixon and Division Streets, next to John Henry Beck Park.





Right, plans show the building's different unit types.

Left, top, the outdoor public space at the center of the building.

Middle, a view of the commercial space at the corner, with the sidewalk and circulation beyond.

Bottom, the circulation space includes ramps and stairs, and creates seating areas and planters along the sidewalk, while creating a visible transition to the elevated first floor level.



work was creating an effective way to bring people from the sidewalk to the entrances 8'-0" above grade. They created a series of terraces that incorporate stairs and ramps, while providing benches, planters, and other amenities along the sidewalk. In addition, they created an outdoor public space where the different elements of the circulation come together, allowing access to all parts of the program while keeping much of it visible to the street in order to foster security.

The second typology addressed in this section (Figure 54) is one that builds on existing buildings in downtown Biloxi and the larger region. A number of small commercial buildings use outdoor circulation and porches to provide shade along the front of the building, while creating a location for signage. This building, similarly, lines the core of commercial spaces, which are located on four upper stories, with continuous porches and a central, open-air atrium that includes stairs and elevators. At the ground floor, parking is provided under the building, and the street facade is lined with a bus stop shelter and entrances to the atrium.

This is a larger building, and would not likely be built in the current economic climate. However, it shows how such a building might work. This type of structure would be well-suited to small offices as well as retail development. As with the elevated sidewalks discussed earlier, the balconies would make good parade viewing platforms. Although this building could be constructed with fewer floors, the cost of elevated construction could make a larger building, with more potential for income, a better value. In addition, this example was developed to show how higher density buildings might be developed along the portion of Division Street closest to Caillavet, where taller structures are more appropriate.

ADDITIONS TO EXISTING STRUCTURES. Because the cost and complexity of elevated construction are relatively high, East Biloxi should take advantage of the many existing, vacant buildings on Division and Main Streets. Simple renovations are possible in many cases, but in others, the buildings would benefit from additions that create opportunity for more revenue-generation while supplying programs that are needed in the community. The map in Figure 55 identified potential candidates for additions along Division Street.

GCCDS developed examples of building additions as an exploration of how mixed-use buildings might be incorporated into the community. During several community meetings on the redevelopment of East Biloxi, we have received very positive feedback from residents on the potential for mixed-use buildings. With the flood elevation requirements, mixed-use buildings also provide a way to use existing structures while adding residential uses above. Not only are rental units, in particular, needed in East Biloxi, but their presence would create a greater level of security along the street.

The two examples shown here explore possible additions to the commercial building on Main Street (commonly referred to as the NAACP building) and a small commercial building at the corner of Division and Haise Streets. These are shown in Figure 56.

FLOOD-PROOF CONSTRUCTION. For commercial uses, building codes allow a portion of the building to be located below the base flood elevation if certain construction standards are met. Typically, only 4'-0" of the assembly may be built in this zone. This means that, in areas where the base flood elevations call for a 7'-0" loft, flood proofing could be used for 4'-0" of those 7'-0", allowing the building to sit only 3'-0" off the ground. Because of the higher construction standards, flood-

FIGURE 54. A commercial building typology for East Biloxi.



FIGURE 55.

Potential Sites for Building Additions

November 2008

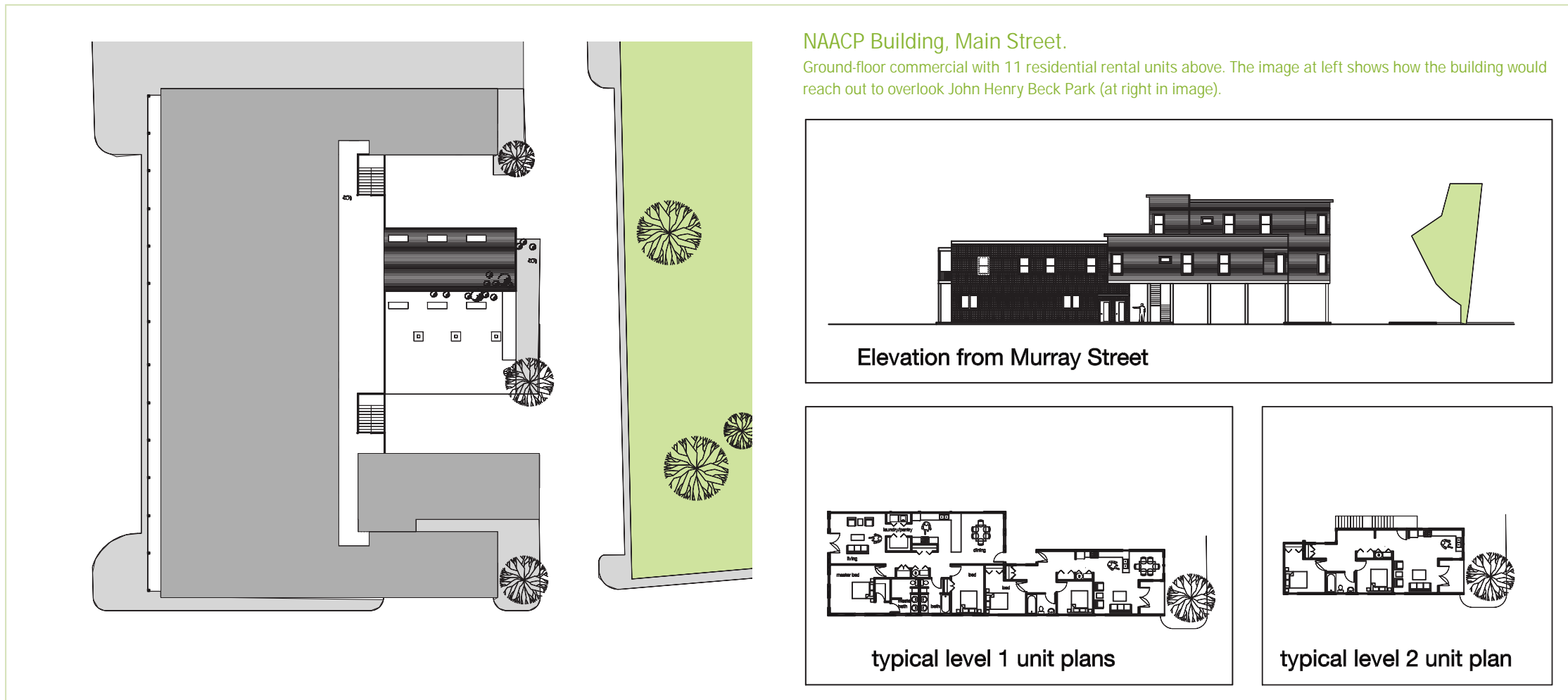
■ Potential Add-On Site
■ Active Commercial Property

Sources: GCCDS Housing Assessment, Summer, 2007. City of Biloxi.

0 0.05 0.1 0.15 0.2 Miles



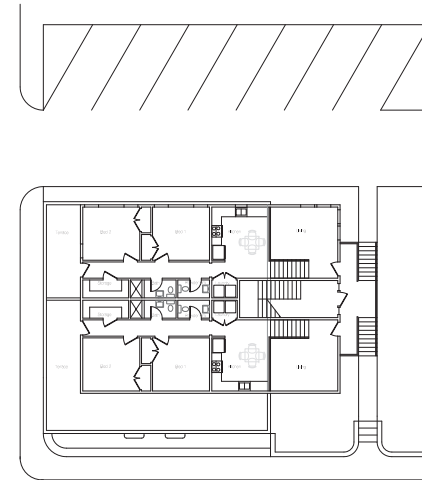
FIGURE 56. Additions to Existing Buildings.



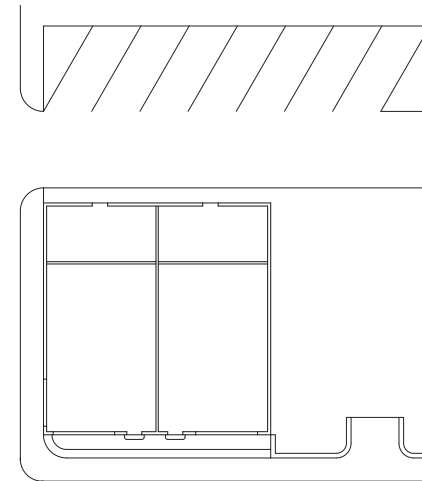


Haise & Division Streets.

Ground-floor commercial with 4 residential rental units above.



Typical upper floor plan, showing residential entry from side yard.



Ground floor plan, showing two commercial spaces with parking at rear.

proof construction is more costly than conventional building. There may be instances, however, where the benefit outweighs the costs. The diagram at right (Figure 57) shows the different ways in which flood-proof commercial construction might be integrated into different types of buildings. These examples show how the building might be elevated, the ground plane built up under it, and the walkways or circulation built up to meet it. A more complicated option, in item 5, is the idea of creating a building that comes to grade, but that includes an interior ground floor with limited program (as is often seen in casino structures in Biloxi). This area would include interior circulation to get to the elevated, flood-proofed zone above.

To study how this might be integrated into the urban context of East Biloxi, GCCDS developed a proposal for a hypothetical Housing Authority campus to be located on Division Street between Elmer and Nixon Streets. Figure 58 includes a section showing how the transition from street and sidewalk to first floor might work. It also includes a larger site plan showing how the campus might integrate new and existing buildings (Dr. Mason's office) with permeable parking areas and public green space linking the Hope VI development to the campus and to John Henry Beck Park. This area is fairly low-lying and often floods from the nearby bayou. This plan addresses that through the daylighting of a portion of the bayou and the creation of raingardens and other plantings along the low ground.

Conclusions.

The current economic climate limits what type of development will occur in the near term. However, there are still some unmet needs, particularly in regards to housing in the community. In addition, historic pat-

terns show that small businesses often emerge in difficult economies when unemployed individuals strike out on their own. This suggests that there may be potential for spaces for small businesses. In any case, the longer term prospects, and the still-depressed retail market in Biloxi suggest that some commercial growth is likely to occur within the next five to ten years. Although the projects presented in this section are only speculative, they may provide some ideas of how that future development in East Biloxi can address new building requirements and the realities of the post-Katrina environment, while still working well within the context of a historic neighborhood fabric.

In the following section, additional factors that affect the overall development and urban form of the community are addressed. These include zoning, parking, and streetscapes.

FIGURE 57. FLOOD-PROOF COMMERCIAL CONSTRUCTION.

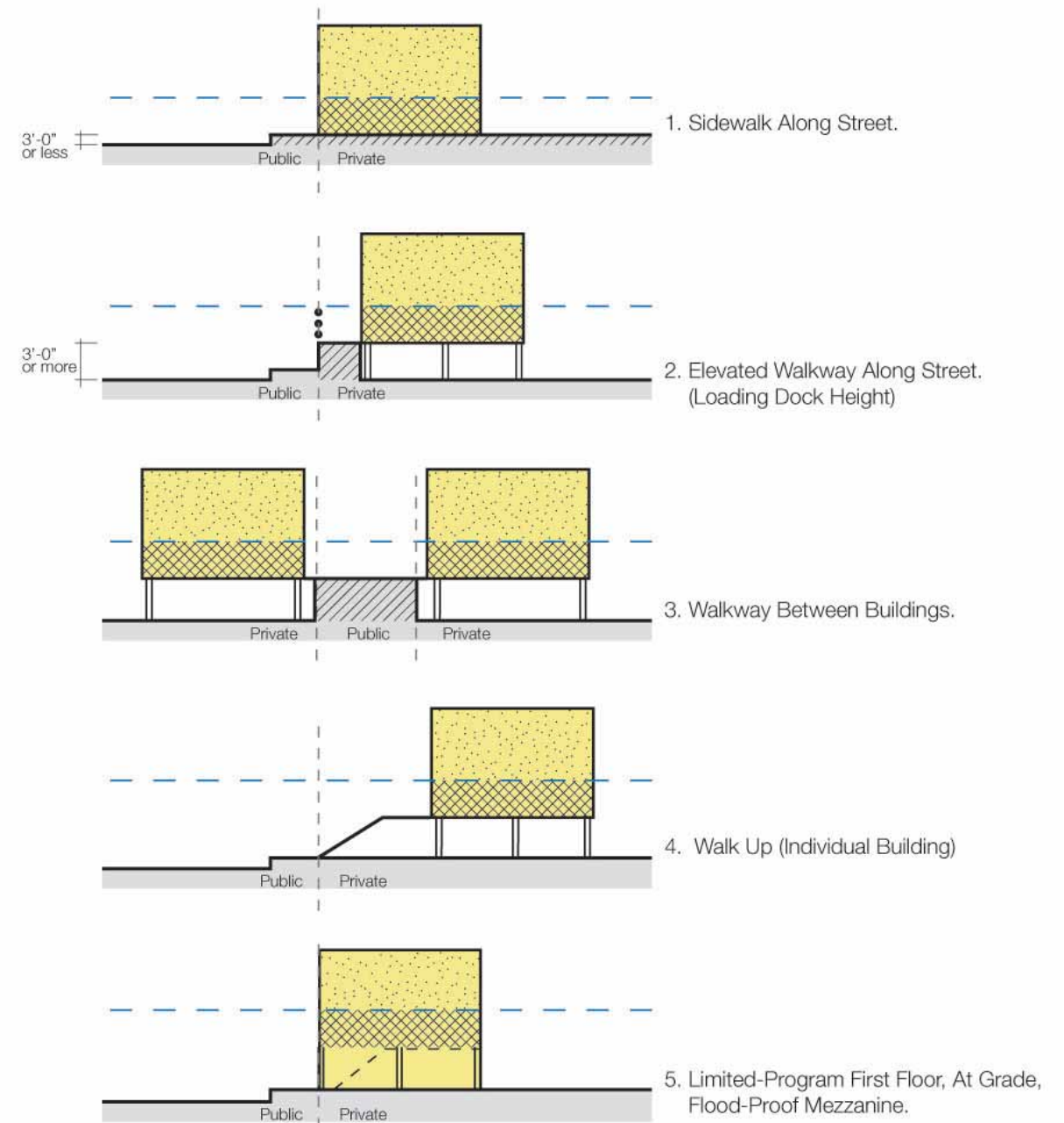
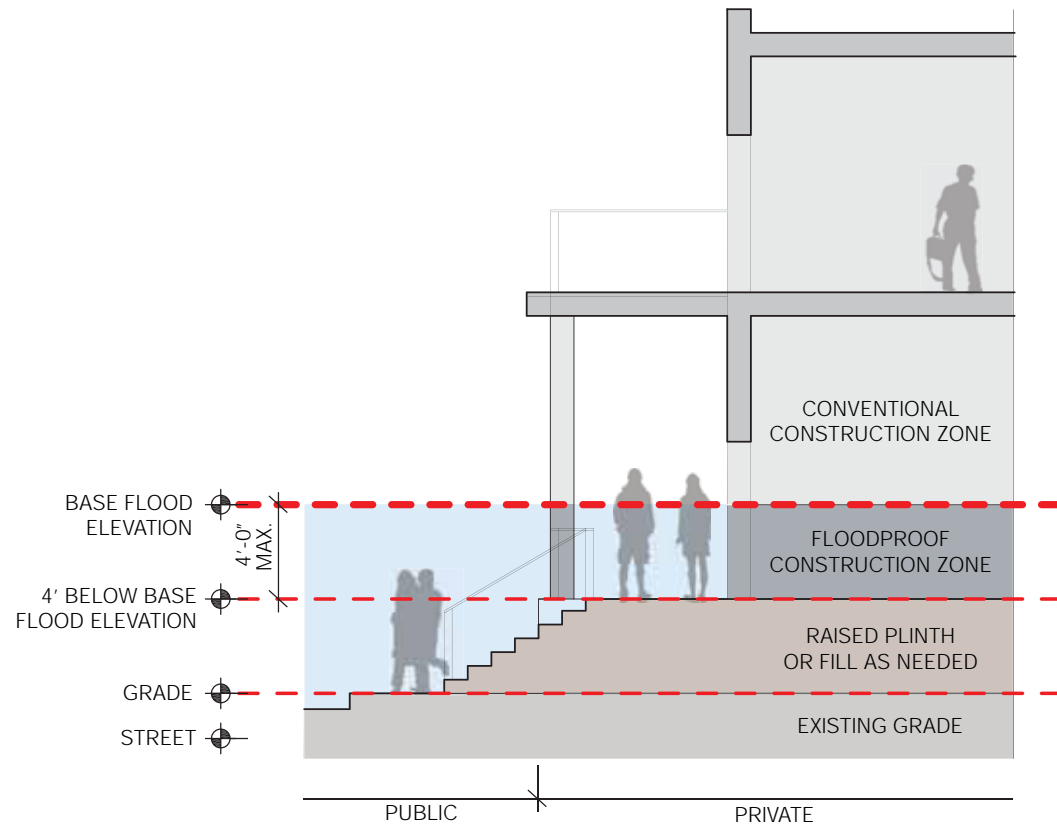


FIGURE 58. Flood-Proof Commercial Construction.

Hypothetical BHA Campus.

Below, a section at the street elevation shows how stairs and a shaded secondary sidewalk system form the transition from street to first floor, as well as where flood-proof construction would be used to allow the building to be closer to grade.

Right, a site plan showing how the buildings would sit close to the street, while allowing for a water-permeable parking area to link to a newly created linear park with a daylighted portion of Bayou Auguste at its heart.



Zoning, Parking, & Streetscapes.

Introduction.

Individual buildings on single lots make up the core of any neighborhood, and they are manifestations of the rules that govern their locations, sizes, and forms. Zoning requirements, as well as parking requirements and city-defined standards for the sizes and configurations of streets all contribute significantly to what a place looks and feels like. Too often these rules are written for an entire city, allowing little variation from neighborhood to neighborhood. In Biloxi, the same single-family residential lot requirements apply to the newly annexed rural lots North of 10 as to those in centuries-old East Biloxi. Much of Division Street, which still contains significant residential development, is zoned the same as the bulk of Pass Road. The focus on efficiency can destroy the very character that makes a community desirable.

This section explores the existing character of East Biloxi relative to the city's current requirements for zoning and parking. In addition, the current configurations of street, curb, drainage, sidewalk, and plantings are analyzed and recommendations made for how the soon-to-be-made improvements can best serve the community.

Zoning.

Zoning classifications determine what land uses are allowed where, as well as the size, placement, and massing of buildings in each of those zones. The current zoning map for East Biloxi is shown in Figure 4 on page 8. Most of the study area is zoned residential (RS-5, RS-7.5, RMH, RM-10, RM-20, and RM-25), and the zones that allow for commercial development are largely confined to Division Street west of Holley and East of Crawford, and Main Street. These two groups are addressed separately here.

COMMERCIAL LAND USES. The predominant commercial zoning clas-

sifications along Division Street are B-2 and B-4, and along Main Street, B-2 and I-1. These are shown in Figure 59. In a review of the existing buildings on these two streets, GCCDS found that fewer than a third comply with current zoning setback requirements. These buildings were completed before the existing zoning code was adopted, as was much of the East Biloxi neighborhood. These areas were built at a time when smaller setbacks, particularly for commercial buildings, were common. This is what gives historic neighborhoods much of their unique character. In contrast, newer developments tend to create a more suburban character, with large setbacks and property dimensions. For commercial development, current zoning codes favor a type of development that yields large parking lots between the building and roadway, as witnessed along strip mall areas like Pass Road. The codes are intended to create greater efficiency and to accommodate the automobile. However, these dimensions are not appropriate for all commercial streets. Just as Biloxi's downtown allows for buildings to sit close to the street, Division Street and Main Street should be allowed to maintain their existing historic character.

The City of Biloxi recently developed a special zoning district for Cailavet Street (CRD) that allows for small building setbacks in an effort to create a walkable street with a character more in line with the existing buildings in East Biloxi. Similar changes would be useful along Division and Main Streets. These could take the form of a special zoning classification, as with the CRD, or as an overlay district that allows for the existing zoning categories to follow alternative dimensional requirements within an identified geographical area.

In particular, the aspects of the existing zoning that should be reconsidered include front setback dimensions and minimum parking requirements. As mentioned above, few existing buildings on Division Street

meet current zoning requirements. Figure 59 shows the zones along Division Street that GCCDS identified earlier in this report, along with average setbacks within each zone and current required setbacks. 68% of the existing buildings are non-compliant with the setbacks. Some buildings complying (Figure 60) and not complying (Figure 61) with the code are shown on the following pages. Even though it would be out of character with most the existing buildings, any new construction must comply with the zoning codes. These images show how drastically different the character of the street would be if built out in this manner.

The large setbacks in front of commercial buildings are often used for parking. In East Biloxi, as on Pass Road, this leads to large paved areas between the sidewalk and building. These areas contribute significantly to the urban heat island effect, by which paved areas add several degrees to the surrounding environments. This is particularly exacerbated by parking lots on the South sides of buildings. Trees and other plantings can reduce this impact. Parking at the side or rear of buildings, as is called for in the CRD zoning district, can also soften the impact and at a minimum do not require pedestrians to cross large parking lots to enter the building. Parking is further discussed in the next section.

Another aspect of the zoning code that might require reconsideration relates to the new base flood elevations. Current setback requirements do not allow stairs or any structure above 30" to be located within the front yard setback. As elevated buildings require more space for vertical circulation, the city may want to consider allowing some elements into the setback. For example, stairs, covered porches, and other architectural elements that help define the relationship between the entrance to the building and the sidewalk should be considered.

FIGURE 59.

Division Street Zoning Analysis.

June 2009.

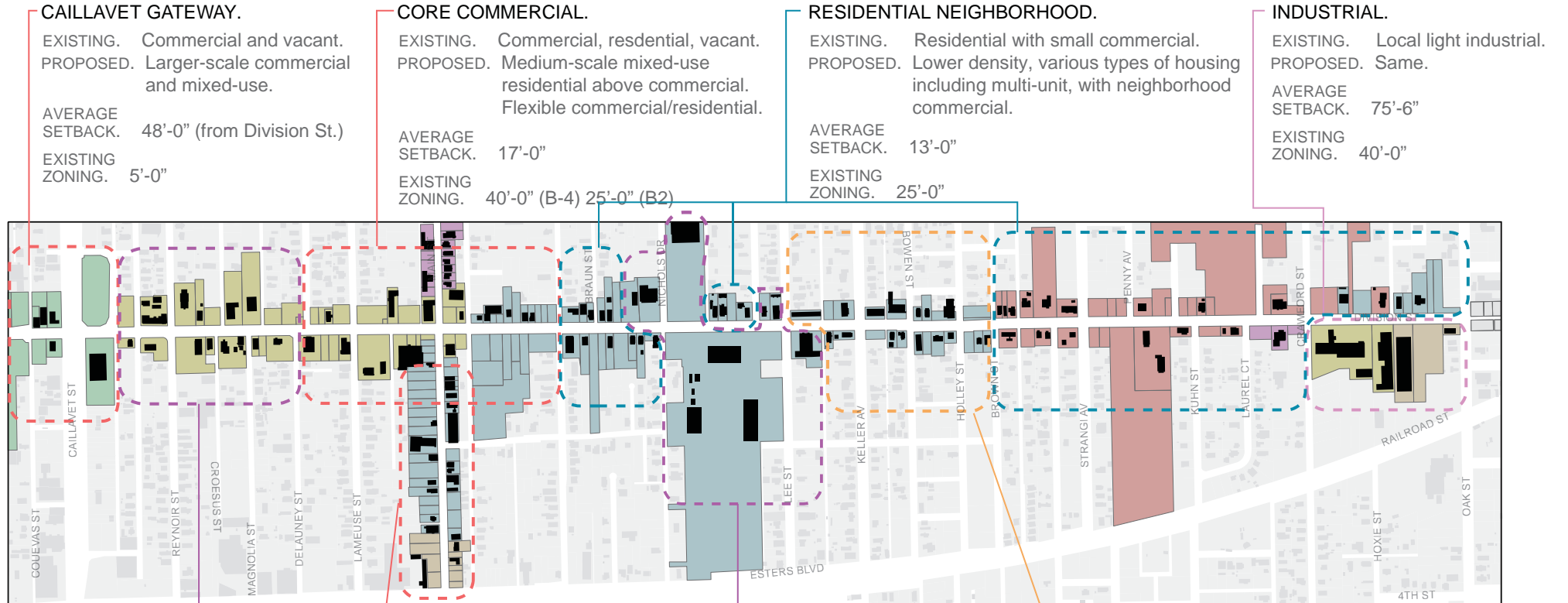
ZONING COMPLIANCE.

COMPLIANT BUILDINGS.	29
NON-COMPLIANT BUILDINGS.	61

City of Biloxi Zoning Classification

B-2	RM-25
B-4	RS-5
CRD	
I-1	

Sources: City of Biloxi, 2008.



CAILLAVET GATEWAY.

EXISTING. Commercial and vacant.
 PROPOSED. Larger-scale commercial and mixed-use.
 AVERAGE SETBACK. 48'-0" (from Division St.)
 EXISTING ZONING. 5'-0"

CORE COMMERCIAL.

EXISTING. Commercial, residential, vacant.
 PROPOSED. Medium-scale mixed-use residential above commercial. Flexible commercial/residential.
 AVERAGE SETBACK. 17'-0"
 EXISTING ZONING. 40'-0" (B-4) 25'-0" (B2)

RESIDENTIAL NEIGHBORHOOD.

EXISTING. Residential with small commercial.
 PROPOSED. Lower density, various types of housing including multi-unit, with neighborhood commercial.
 AVERAGE SETBACK. 13'-0"
 EXISTING ZONING. 25'-0"

INDUSTRIAL.

EXISTING. Local light industrial.
 PROPOSED. Same.
 AVERAGE SETBACK. 75'-6"
 EXISTING ZONING. 40'-0"

TRANSITION ZONE.

EXISTING. Churches and vacant commercial, surrounded by dense residential.
 PROPOSED. Medium-scale commercial and mixed-uses, transitioning from Caillavet to neighborhood.
 AVERAGE SETBACK. 15'-0"
 EXISTING ZONING. 40'-0"

MAIN STREET MIXED-USE.

EXISTING. Comm'l, residential, vacant.
 PROPOSED. Revitalize existing buildings w/ residential above comm'l. Infill housing.
 AVERAGE SETBACK. 7'-0" (B-2); 37'-0" (I-1)
 EXISTING ZONING. 25'-0" (B-2); 40'-0" (I-1)

CORE INSTITUTIONS.

EXISTING. School, Kroc Center, some commercial, flanked by housing.
 PROPOSED. Smaller-scale mixed-use residential above commercial.
 AVERAGE SETBACK. 11'-6"
 EXISTING ZONING. 25'-0"

MIXED USE.

EXISTING. Mix of commercial and residential.
 PROPOSED. Lower density, various types of housing including multi-unit, with neighborhood commercial.
 AVERAGE SETBACK. 17'-6"
 EXISTING ZONING. 25'-0"

NOTE. Average setback calculation excludes major outliers within each zone. Caillavet Gateway includes properties to I-110, not all shown on this map.



FIGURE 60. Existing buildings on Division Street that comply with current zoning setback requirements.



FIGURE 61. Existing buildings on Division Street that DO NOT comply with current zoning setback requirements.



RESIDENTIAL LAND USES. The residential streets of East Biloxi are important elements of the city's historic fabric. The city will considerably undermine its own efforts to make itself an appealing tourism destination if it is not careful to maintain this fabric, and restore it where buildings have been lost. Current zoning, rather than helping to preserve that character, would turn East Biloxi into a suburban neighborhood. Current dimensional requirements (shown in Figure 63) call for minimum lot widths of 50'-0", while many of East Biloxi's lots are considerable narrower. Individual variances on these lots are often granted, but the nature of the historic fabric suggests that perhaps a different category or an overlay zone should be applied to allow for smaller lot sizes in keeping with the historic urban patterns.

Parking.

In addition to the various dimensional requirements addressed above, the zoning code regulates the minimum number of parking spaces based on the building use and square footage. These figures do not include on-street parking in their calculations. They do, however, allow building owners to propose alternative means of meeting the requirements.

Typical parking ratios require large areas to be devoted to parking. As on Pass Road, this leads to large setbacks of hot, paved areas. In East Biloxi, individual lots are often too small to allow for large parking areas. In addition, the urban fabric of the area, and the fact that most of its businesses are neighborhood-serving rather than regional attractions, mean that consumers are arriving both on foot and by car. Finally, the large amount of on-street parking on Division Street is currently underutilized by area businesses. These factors make a strong

argument for creating an alternative parking requirement system for the Main Street study area.

The zoning code allows for clustered, shared parking to be created in commercial areas. They are required to be provided within 700'-0" of shopping access or 1000'-0" of employment centers to minimize walking distance.

In the Main Street Study Area, this strategy could work well for several reasons. For one, it would be a way to productively use some of the vacant lots on the street now, while alleviating the pressure on small businesses to find properties large enough to accommodate their business and meet the parking requirements. If permeable pavers or other similar material is used in place of the asphalt that covers many of these lots, there could be a significant environmental benefit both in terms of reducing storm runoff that needs to be handled by the city's system, and in reducing the heat island effect.

Second, the use of shared parking would work well to meet the needs of different users in the community. For example, peak commercial demand occurs during weekdays. This means that lots are often empty on the weekend, as at the health clinic on Division Street. Yet East Biloxi's many churches require significant parking during Sunday church services. (See images in Figure 62.) Already churchgoers park in vacant lots during services. Shared parking lots could be an efficient way to meet the needs of both parishioners and area businesses, while also improving the appearance and function of vacant lots. It would also help

FIGURE 62. Church parking on Division Street at 10:30 am on a Sunday.



serve the demand for parking during parades and other festivals. The fairly dense, walkable nature of East Biloxi also contributes to the feasibility of using small parking lots located every few blocks.

For on-site parking, the required ratios could be reduced in light of shared parking lots. In addition, an overlay district that addresses other setback issues might encourage parking at side and rear of buildings, as in the CRD zone.

Finally, on-street parking is only used during church services at this time. Counterintuitively, on-street parking can actually improve the quality of the pedestrian environment, as it forms a buffer between people and cars without impeding visibility. The addition of trees or other plantings on Division Street, as discussed in the next section, could also create shade over on-street parking spaces making them more desirable than large surface lots.

Figure 64 shows the locations of existing parking lots, areas of significant demand for church parking, and suggested locations for shared public parking lots.

Streetscapes.

In late 2009, the City of Biloxi will begin street repair work along Division Street as part of the FEMA-funded infrastructure repair work. While the goal of this program is to return the street to its previous condition, there are opportunities to make minor improvements in the street layout that could drastically improve the quality of the pedestrian

FIGURE 63. Dimensional requirements for current zoning groups in East Biloxi.

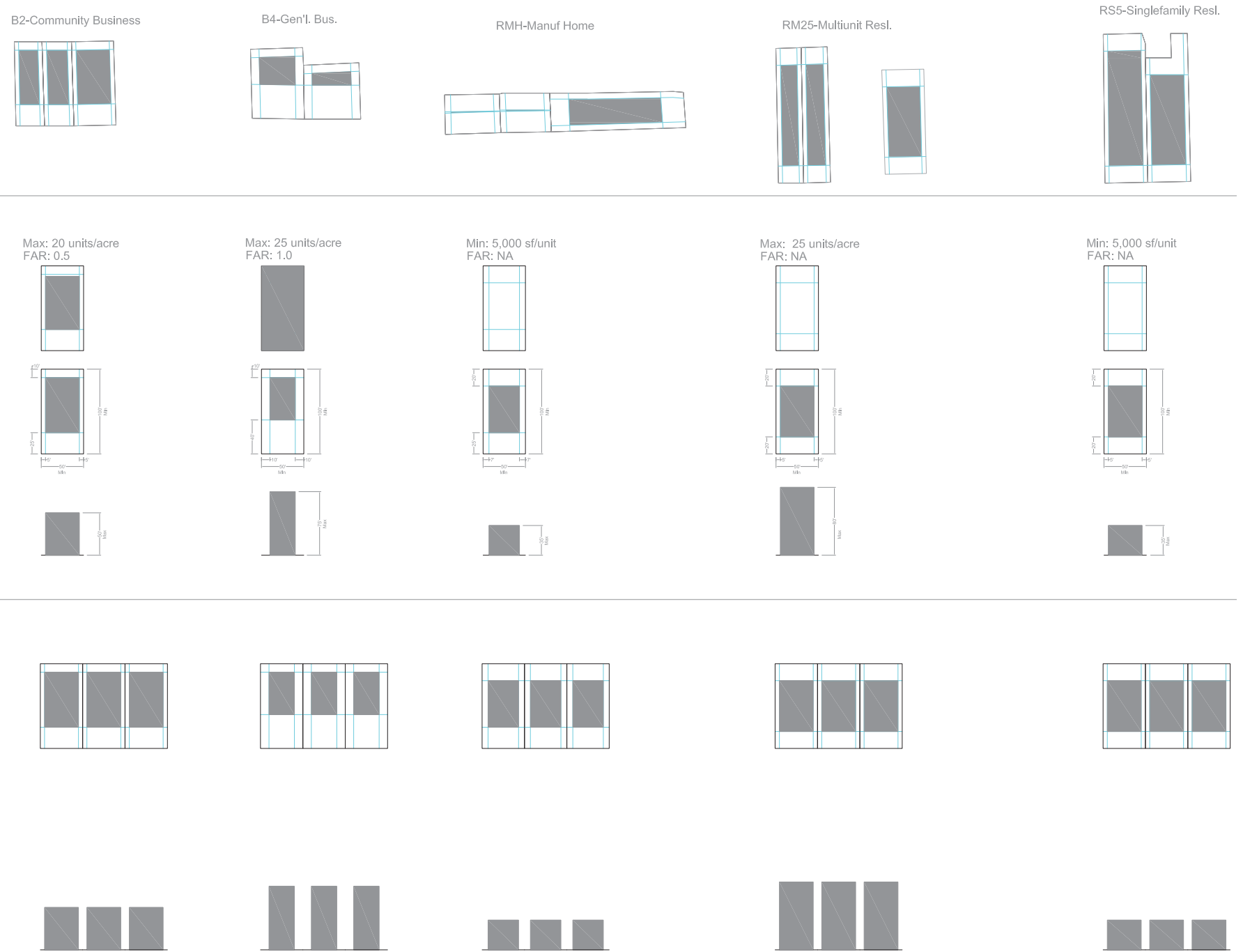
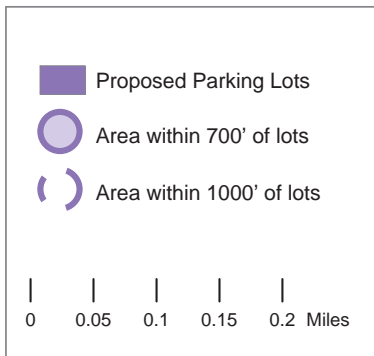
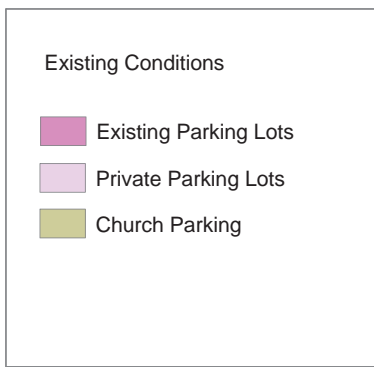


FIGURE 64.
Division Street
Parking Analysis.

June 2009.



environment as well as the overall working of the street. In addition, because current sidewalks do not meet the requirements of the Americans with Disabilities Act (ADA) as enforced by local codes, they will need to be altered rather than returned to their previous condition. This section addresses some of the current problems with the existing street, and proposes alternatives for its reconstruction.

SIDEWALKS. Sidewalks throughout the study area are in extremely poor condition. An inventory of the street completed by a group of NYU graduate students found many segments of the sidewalks to be broken or otherwise damaged in a way that makes them impassable for pedestrians to traverse. In particular, the sidewalks are almost completely unnavigable by the disabled, or those with mobility impairments, which is a significant portion of East Biloxi's population. (Figure 65.) Individuals in wheelchairs are often forced to use the roadway, at personal risk, due to the condition of the sidewalks. Further impeding the function of the sidewalks, utility poles are often placed in the center of the walking path throughout Division Street. (Figure 65.)

Finally, the lack of vegetation along most of the street makes it an extremely hostile pedestrian environment. Despite this, many pedestrians and bicyclists use Division Street regularly. Because of the scale of the neighborhood, walking and bicycling are good means of getting around, not to mention that they are inexpensive. It is one of the streets most heavily used by pedestrians in East Biloxi, and should therefore be designed to accommodate and encourage this mode of transportation.

In addition to repairing the sidewalks to make them navigable, they should be widened and the utility poles removed or relocated to their perimeter to allow for a full 5'-0" walking area.



FIGURE 65. Existing conditions on Division Street. Top left and right, a lack of trees and broken, narrow, and discontinuous sidewalks create a difficult environment for pedestrians and the disabled, who are often forced to ride in the road rather than on the sidewalks. Bottom, many utility poles are located in the middle of the sidewalk, making it impossible for disabled residents to use them.

When these changes are made, care should be taken to maintain aspects of the sidewalks that contribute to the historic urban fabric of East Biloxi. Of particular importance in defining the architectural character of the street are the small retaining walls, stairs, and other elements that border most of Division Street's sidewalks along the property lines. Some of these are shown in Figure 66.

TRAVEL, PARKING, AND TURNING LANES. Division Street's roadway is roughly 50'-0" wide, with some variation. That includes parking lanes on both sides of the street, followed by one travel lane in each direction, with a shared turning lane in the center. (Figure 67.)

The road is exceptionally wide for the amount of traffic that it carries, causing drivers to go much faster than the posted speed limits. GCCDS, as the first step in an ongoing effort to address the streetscape improvements along Division Street, developed different scenarios of how the street cross section might be adjusted to allow for widened sidewalks (as will be required to meet ADA requirements) without expanding the overall street right of way. These are shown in Figures 68 and 69. The section shown here is taken near the intersection of Dorries, but the two proposals represent ideas that could work well on different parts of the street, with more funds being focused on the portion of the street West of Lee, where there is greater pedestrian traffic.

The proposals shown here remove the center, turning lane and provide two lanes of on-street parking with two travel lanes. Unlike the heavy traffic that warrants the use of a turning lane on Pass Road, it is not difficult to make a left turn on Division Street without the use of a turning lane. In addition, the left turn lights at most intersections are sorely underused and are considered to be a nuisance by residents who regularly drive along this street. It would also be possible to create a similar configuration that maintains the turning lane, however, and

removes one of the lanes of parking, if the community considered this to be more desirable.

PLANTINGS. Currently there are few trees along Division Street, making it an unpleasant walking environment. The first proposal shown here shows a widened sidewalk with trees placed between the walking path and the roadway. These would provide shade for pedestrians and parked cars, improve the overall appearance of the street, create a greater capacity to absorb stormwater runoff, and reduce the heat island effect. Care should be taken to select hearty trees well suited for the climate and able to withstand some degree of soil compaction. This scenario is encouraged for use West of Lee Street, and could include trees on the inside of the sidewalk, or allow for gaps where large oaks on existing properties provide shade to the street (as at Our Mother of Sorrows rectory building).

The second scenario emphasizes the water treatment and aesthetic improvement aspects of plantings. Here, shallow beds of plantings are designed to allow for stormwater to flow into them from the street. The beds then clean and store the water, returning it to the water table below rather than contributing to overflow. In the areas East of Lee Street, particularly the low-lying areas around Bayou Auguste, this could help prevent on-street flooding that happens with great regularity. It would also provide an aesthetically pleasing bed of plantings that are low-maintenance. Cities such as Seattle and Portland, Oregon have developed green streets programs based on the use of similar tools to help mitigate stormwater runoff while creating a pleasant sidewalk experience. Trees can be used in combination with this design, as well.

LIGHTING. Currently, the lighting along Division Street is inconsistent and leads to the perception of it being unsafe. Careful lighting design can help make the street seem and be safer, while improving the over-

all appearance and creating a sense of continuity. Street lights should be directed towards the ground, and should be designed not to create glare in the direction of residences, as well as to avoid ambient light pollution.

Conclusions.

These proposals offer preliminary ideas of how changes along Main and Division Streets can contribute to the overall improvement of the neighborhood, as well as help create an environment that is conducive to economic development. GCCDS will continue to develop proposals for street improvements, and hopes to work with the city and neighborhood residents in determining how make changes that best serve the community.

FIGURE 66. Many properties along Division have small retaining walls, steps, or other architectural features that contribute to the historic architectural character of the street. These should be preserved.



FIGURE 67. Typical section along Division Street. Note the narrow sidewalk width and the utility poles within the walking path.

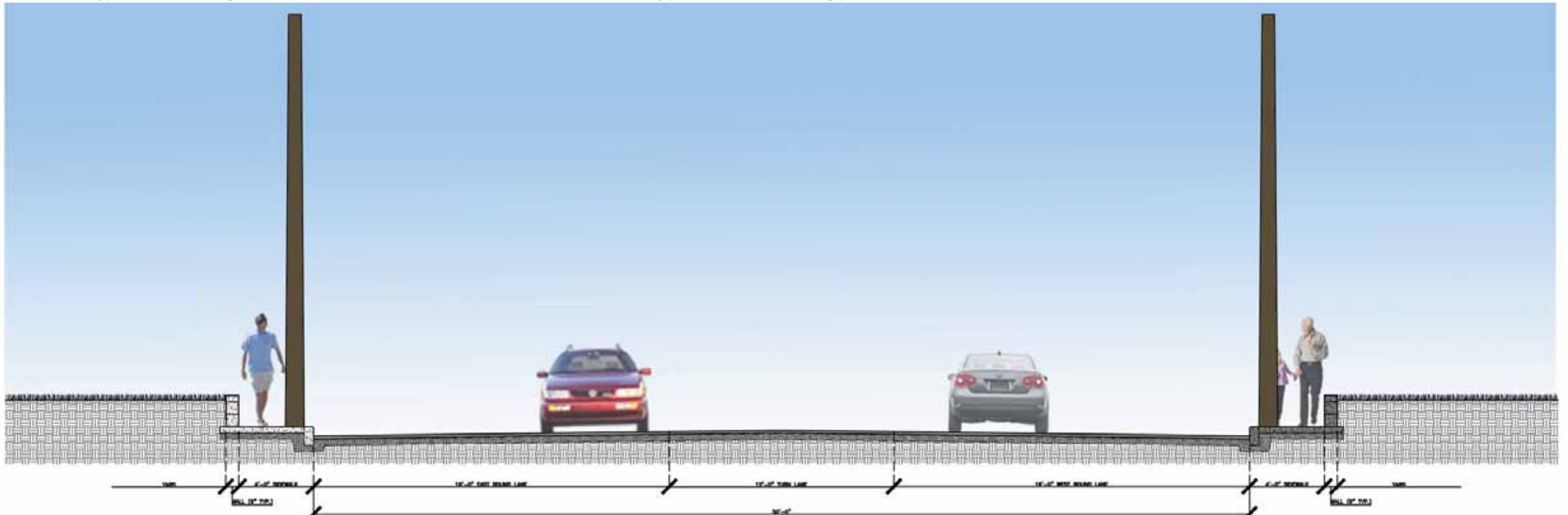
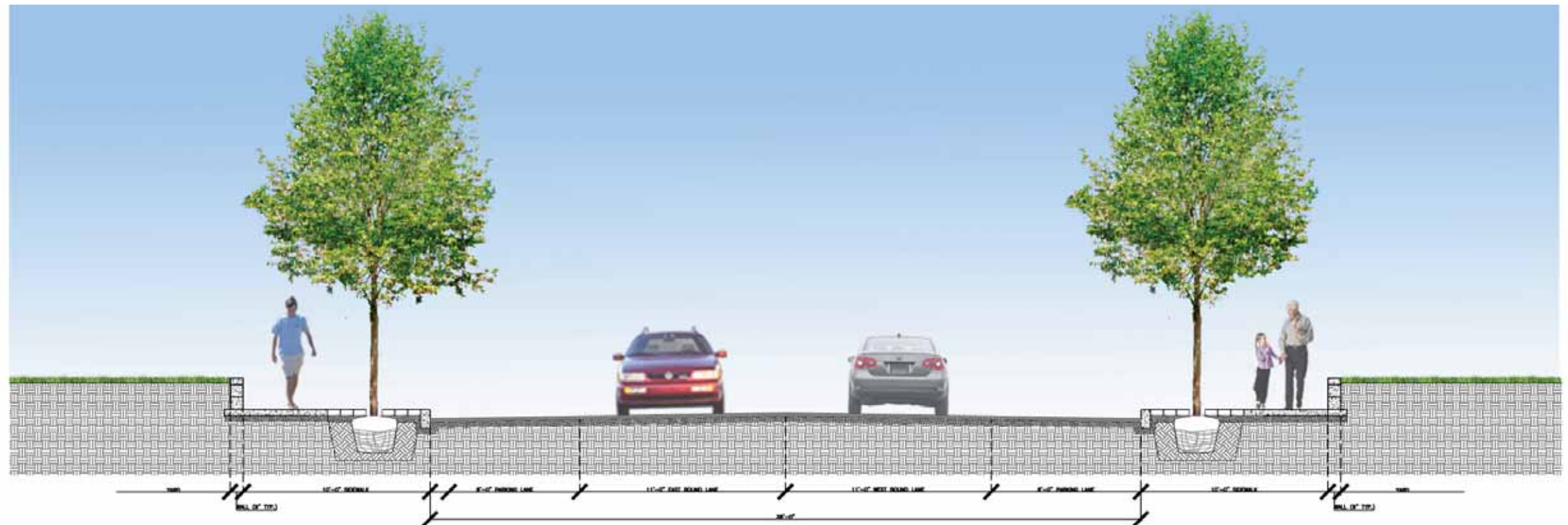


FIGURE 68. Proposal one, widened sidewalk with trees between travel lanes and sidewalk. Roadway consists of two travel and two parking lanes (no turning lane). This design is recommended for areas West of Lee Street. Below, section; opposite, plan.



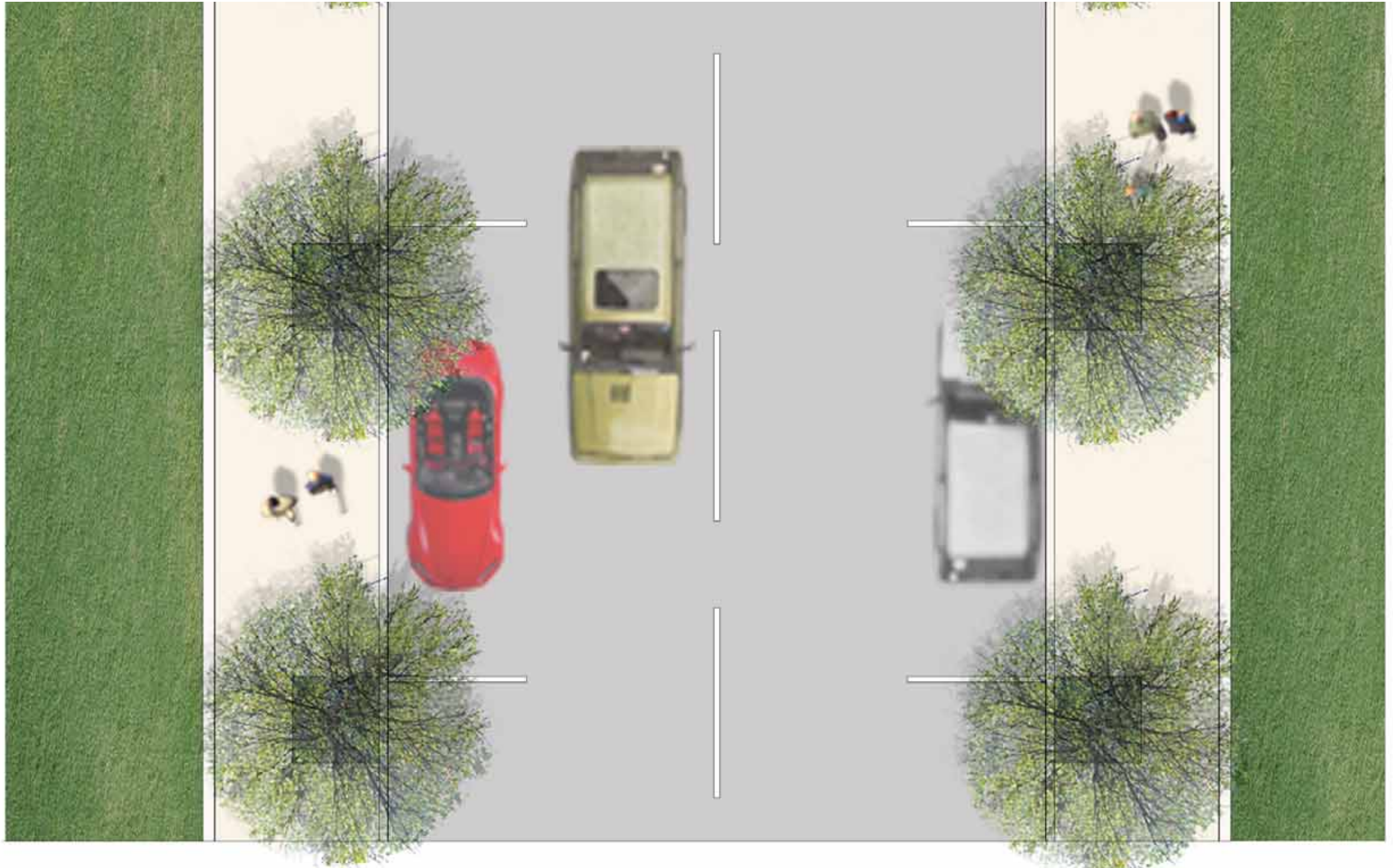
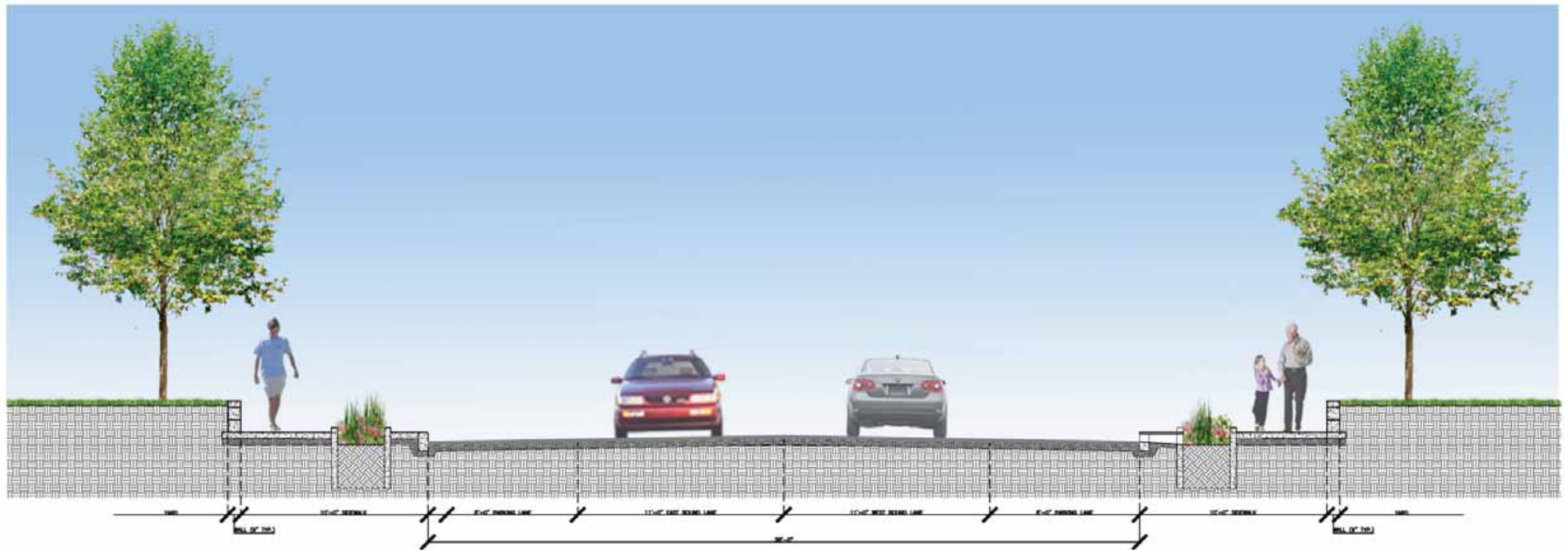


FIGURE 69. Proposal two, widened sidewalk with water filtration plantings between travel lanes and sidewalk. Roadway consists of two travel and two parking lanes (no turning lane). This design is recommended for areas East of Lee Street. Below, section; opposite, plan.





Recommendations.

Introduction.

A number of recommendations are made throughout this report. They are summarized here, and presented with a general time frame for implementation. Short-term projects are those that could go forward immediately, or at least begin within the calendar year. Medium-term projects are those that might occur within the next five years or so. Long-term ones are those that would not likely occur for a minimum of five to ten years. Some of the items listed here are ongoing changes to construction efforts and could begin with any new construction, while others call for zoning or legal changes and still others are larger projects that would require significant capital in quantities that are not likely to be available during the next several years while the economy recovers.

The recommendations are shown by category, as addressed within the report above.

Residential.

Continue to build infill housing on vacant lots in established neighborhoods on higher ground.

Timeframe: Short-term to Medium-term.

Action: Individual efforts of residents and rebuilding groups.

Encourage development of ADUs particularly on higher ground to increase density in safer areas and provide alternative sources of income while meeting the need for affordable rental units in the area.

Timeframe: Short-term to Medium-term.

Action: Creation of city program like in Austin or Santa Cruz.
Individual efforts and decisions to pursue ADUs.
Changes to the zoning code to make it easier to build.

Avoid construction in low-lying areas, those less than 12'-0" above sea level.

Timeframe: Short-term.

Action: Individual efforts of residents and rebuilding groups.

Develop no-build zone around bayous and create restored wetlands surrounded by buffer zones of usable park space to create amenities for residents and tourists, while providing greater protection from storms and greater capacity to absorb stormwater runoff without municipal treatment or polluting overflow

Timeframe: Medium-term to Long-term.

Action: City effort to identify undevelopable lands.

City and land trust effort to purchase property and repair wetlands.

Parks department plan for buffer area recreation.

City effort to include this as part of larger hazard mitigation strategy to further reduce community insurance costs.

In areas requiring significant elevation, focus development close to existing developed neighborhoods to take advantage of repaired infrastructure and safety.

Timeframe: Short-term.

Action: Individual efforts of residents and rebuilding groups.

In these areas build small clusters of multi-unit housing to distribute the cost of elevation, stairs, and elevators over several units.

Timeframe: Medium-term to long-term.

Action: Efforts of rebuilding organizations, and developers.

Commercial.

For buildings under 5'-0" above grade, use shared platforms, secondary sidewalks, intermediate stairs with benches and planters or other similar infrastructure to soften transition to higher buildings and to allow necessary access to ground floor uses.

Timeframe: Medium-term to long-term.

Action: Developers and rebuilding organizations.

Create building forms that allow for multiple uses. These may be larger buildings, as shown in this document, or smaller ones that can be used for residences not but adapt to commercial over time.

Timeframe: Medium-term to long-term.

Action: Developers and rebuilding organizations.

Take advantage of existing buildings, which have at-grade entrances. Renovate them or new uses, or create new additions that incorporate space of residential uses above commercial ground floors.

Timeframe: Short-term to medium-term.

Action: Developers, rebuilding organizations, and property owners.

Where financing allows and where the land use requires it, as with very public programs, use flood proof construction to build closer to grade.

Timeframe: Medium-term to long-term.

Action: Developers, rebuilding organizations, and property owners.

Zoning.

Encourage mixed-use development along commercial streets like Division, Main, and Oak.

Timeframe: Short-term to Medium-term.

Action: Changes to zoning code.

Create an overlay district for the Main Street community allowing for smaller front yard setbacks, perhaps even establishing max front yard setbacks, and encouraging parking to be located on the side or rear setbacks.

Timeframe: Short-term to Medium-term.

Action: Changes to zoning code.

Consider allowing vertical circulation, porches, overhangs, and other elements that help link elevated buildings to grade to be built in setbacks.

Timeframe: Short-term to Medium-term.

Action: Changes to zoning code.

Consider creating East Biloxi overly to allow smaller lot sizes as of right.

Timeframe: Short-term to Medium-term.

Action: Changes to zoning code.

Parking.

Discourage large parking lost in front of buildings to reduce heat-island effect, improve pedestrian environment, and maintain historic character of East Biloxi streets. Encourage parking to be located at

the side or rear of buildings.

Timeframe: Short-term.

Action: Changes to zoning code.

Create small parking lots in strategic areas (largely West of Main Street) to support existing and new commercial development and allow for overflow church parking on Sundays. These parking lots can use permeable paving, plantings, fences, and other elements to improve the visual appearance of the street, reduce the heat-island effect, and manage stormwater runoff, as well.

Timeframe: Short-term.

Action: BHA, city, or civic organization-led effort. Changes to zoning code.

Develop a Division and Main Street commercial corridor parking plan that takes into account newly created public parking lots in reducing the required on-site parking ratios for new commercial development.

Timeframe: Short-term.

Action: City or community-led planning effort. Changes to zoning code.

Streetscapes.

Incorporate sidewalk improvements into Division Street repairs. In particular, widen existing sidewalks to allow ADA accessibility; remove utility poles from walking paths, potentially burying utilities if feasible; in western portions of street introduce trees for shade, stormwater management, improved appearance and reduction of heat-island effect; in eastern portions of street, introduce bioswales or other vegetation to manage surface water while providing an attractive amenity.

Timeframe: Short-term.

Action: Work with city to include these elements in planned

construction.

Preserve and maintain existing retaining walls, steps, and other architectural features that contribute to the unique urban fabric of the area.

Timeframe: Short-term.

Action: Work with city to include these elements in planned construction.

Consider removing center, shared turning lane to allow for widened sidewalks without expanding overall right of way.

Timeframe: Short-term.

Action: Work with city to include these elements in planned construction.

Provide improved street lighting that creates evenly-lighted sidewalks for greater security.

Timeframe: Short-term.

Action: Work with city to include these elements in planned construction.



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