

# Elevation Design Guidelines

For Historic Homes in the Mississippi Gulf Coast Region



mississippi development authority  
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# Table of Contents

## 1. Introduction ..... 1



Hurricane Katrina and Historic Properties in Coastal Mississippi .....	1
MDA Financial Assistance Programs .....	2
Relationship of MDA Financial Assistance Programs to Section 106 of the National Historic Preservation Act.....	2
Purpose of Elevation Design Guidelines .....	3
Roles and Responsibilities .....	4
Elevation Action Alternatives .....	5
Elevation Design Review Process.....	5
Working with an Elevation Design Consultant .....	6
How to Complete a Successful Elevation Project .....	6
Organization and Use of these Elevation Design Guidelines .....	7

## 2. Site Design Guidelines ..... 8



Site Elevation and Topography.....	9
Parcel Configuration and Access.....	9
Building Footprint and Orientation.....	10
Adjoining Property Considerations .....	11
Parking and Circulation .....	13
Landscape Elements .....	13
Site Design Guidelines – Specific Recommendations.....	14

## 3. Architectural Design Guidelines ..... 15



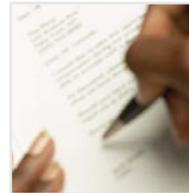
Neighborhood Context – Urban Design .....	15
Exploring and Evaluating Elevation Alternatives.....	16
Historic Building Types and Architectural Character .....	18
Composition and Scale.....	19
Elevation and Existing Façades – Design Considerations.....	20
Elevation and New Foundations – Screening and Scale Minimization Considerations .....	21
Architectural Design Guidelines – Specific Recommendations .....	24

## 4. Foundation Design Guidelines ..... 29



Foundation Design.....	29
Elevation Requirements .....	31
Relationship of Foundation Design to Architectural Design and Historic Preservation .....	34
Foundation Screening Systems.....	35
Permit Requirements .....	36

## 5. Elevation Design – Next Steps ..... 38

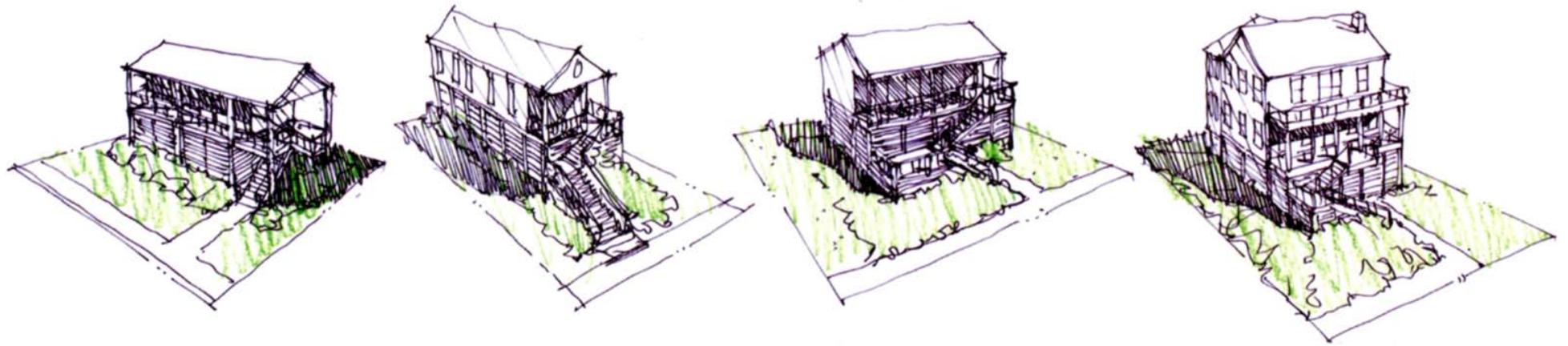


Design and Construction Guidance .....	38
Project Coordination .....	39
Elevation Approaches – Illustrated Alternatives .....	39
Elevation Decision Factors .....	39

## 6. Resources and Publications..... 44



National Reference Information and Publications.....	44
State Reference Information and Publications.....	46
Local Reference Information and Publications.....	47
Coastal Mississippi Historic Building Types and Important Architectural Features .....	48
Local Historic Preservation Review Processes, Analyses of Resources Within Boundaries of Locally Designated Historic Districts, and Damage Caused by Hurricane Katrina by Jurisdiction .....	55
Hancock County .....	55
Harrison County.....	60
Jackson County .....	88
Pearl River County .....	108
Glossary of Terms .....	112



The Mississippi Development Authority (MDA) has prepared these Elevation Design Guidelines in collaboration with the Mississippi Department of Archives and History, and historic preservation commissions representing historic preservation interests in Coastal Mississippi. In addition, MDA invited participation by local building officials and planning and zoning representatives so that the Guidelines accurately reflect the process for owners of historic residential properties to access grant and forgivable loan monies that have been made available by U.S. Department of Housing and Urban Development (HUD). MDA expressly thanks those who have actively participated in this important process to help preserve the unique character of our Mississippi coastal communities.

# Introduction

## Hurricane Katrina and Historic Properties in Coastal Mississippi

Hurricane Katrina's effects on the people and places of Mississippi are well known. When this powerful hurricane made landfall in late August of 2005, the impacts of one of the nation's largest natural disasters were immediately seen and felt in Mississippi and by all Americans across the nation. The devastating combined effects of wind and water destroyed tens of thousands of homes in Mississippi, and heavily damaged scores of other properties along the Gulf of Mexico. While Mississippi has accomplished significant rebuilding, there is much more to be done.

Although the vast majority of properties affected by Hurricane Katrina were not historic, the hurricane's effects on the region's historic properties were significant, and without precedent nationally. In many communities, scores of historically significant properties were literally washed away, and others were so heavily affected that they could not be saved. Because of health and safety concerns, many of these properties were subsequently demolished. Within locally designated historic districts on the Mississippi Coast, preservation professionals

identified significant numbers of historic buildings that were destroyed. Within these communities, the number of historic properties lost forever varies from 6 to 95 percent of the total number of historic buildings present before Hurricane Katrina.

Because of this unprecedented level of loss, the historic properties that still exist in Coastal Mississippi are rare survivors. They have become even more important because of their limited numbers. These buildings represent special places that must—now more than ever—be protected as community resources. These structures also have unique architectural and design characteristics that communities strive to maintain and enhance. Within the framework of the Mississippi Development Authority (MDA) financial assistance programs available to property



**The MDA Grant Program can help historic property owners reduce their risk from future floods.**

owners, this principle is of utmost importance. These Guidelines have been developed to ensure that both individual historic buildings, and historic buildings within historic districts, are preserved for future generations.

The purpose of this design manual is to provide recommended elevation design guidance for the rehabilitation of historic buildings funded through MDA programs. The goal of this effort is to reduce risk from future flood events through elevation, and to preserve the physical integrity and character of historic buildings. Specifically, one of the most important outcomes of this effort is to limit the total height of elevation for historic buildings so they maintain their historic character in relation to other historic buildings within each local historic district, thus protecting the architectural qualities of each historic district as a whole.

## MDA Financial Assistance Programs

To assist in the rebuilding process, the State of Mississippi has received funding through the Community Development Block Grant (CDBG) Program of the U.S. Department of Housing and Community Development. These funds are administered by the MDA, based in Jackson, Mississippi. This funding, in the form of grants and forgivable loans, is available to homeowners and other applicants whose properties in Hancock, Harrison, Jackson, and Pearl River Counties were damaged by Hurricane Katrina. Financial assistance is being provided for principal residence and rental property improvements that meet MDA's program requirements.

The two MDA programs that provide the basis for these Elevation Design Guidelines are:

### **Homeowner Elevation Grant Program (EGP).**

MDA will provide up to \$30,000 in grant assistance to homeowners whose homes were subjected to flood damage as a result of Hurricane Katrina to defray the cost to elevate their single-family residences. Three types of activities are allowed under this program: 1) elevation of an existing single-family residential structure or reconstruction of the existing residential building on the same building "footprint"; 2) elevation of an existing single-family residential building or reconstruction of the existing residential building on an expanded or changed "footprint"; and 3) replacement of an existing single-family residence with a newly constructed and elevated residence on an existing parcel at another location.

**Small Rental Assistance Program (SRAP).** Because over 70,000 affordable rental housing units were lost as the result of Hurricane Katrina, the State of Mississippi initiated SRAP to provide financial incentives to owners of property containing between one and four rental units to repair or rebuild. The maximum award under this program is \$30,000 per unit. The purpose of SRAP is to provide forgivable loans to owners of small rental properties that were either substantially damaged or destroyed by Hurricane Katrina, so that these small-scale units can again serve as affordable rental housing. Applicants may seek funding under one of four program options: 1) rental income subsidy assistance; 2) repair or reconstruction reimbursement of Hurricane Katrina-damaged property; 3) reconstruction or conversion reimbursement for existing property to rental property; and 4) new construction reimbursement.

## Relationship of MDA Financial Assistance Programs to Section 106 of the National Historic Preservation Act

Because MDA's financial assistance programs use Federal funding provided through the U.S. Department of Housing and Urban Development (HUD), MDA must comply with a variety of environmental and historic preservation laws and regulations. The most important historic preservation regulation is outlined in Section 106 of the National Historic Preservation Act of 1966 (NHPA). Under this regulatory review program, administering agencies must determine whether proposed projects have the potential to affect historic properties. Each MDA funding application is reviewed to determine whether historic properties—defined as buildings, structures, historic districts, objects, and archaeological sites listed, or eligible for listing, in the National Register of Historic Places—will be affected through use of HUD funding.

MDA has retained URS Corporation (URS) to assist with all required environmental and historic preservation review associated with applications funded under the EGP and SRAP programs. URS employs trained architectural historians and archaeologists to survey and evaluate potentially historic properties, and to determine the effect of planned elevation and rehabilitation projects. To qualify for funding, applicants whose historic buildings are located within the boundaries of locally designated historic districts, and individually significant historic buildings outside such districts, must closely coordinate their elevation and rehabilitation plans with appropriate Historic Preservation Commissions (HPCs) and the State Historic Preservation Office (SHPO).

In order for applicants whose projects involve historic buildings to achieve a No Adverse Effect determination

(refer to Section 6, Resources and Publications) under the Section 106 consultation process for their projects, they are required under the Programmatic Agreement (PA) described below to develop individual elevation design plans. The use of the *Secretary of the Interior's Standards for Rehabilitation* (see *Standards for Rehabilitation*, Section 6, Resources and Publications) is generally considered good preservation practice, and the *Standards for Rehabilitation* must be incorporated into individual elevation design and rehabilitation plans.

**Programmatic Agreement (PA).** In January 2008, the MDA, the SHPO, the Advisory Council on Historic Preservation, other local governments in Coastal Mississippi, and the Mississippi Band of Choctaw Indians developed and signed a special agreement called a PA, with which the National Trust for Historic Preservation and the Choctaw Nation of Oklahoma also concurred. Because of the size and scale of the two MDA financial assistance programs, their implementation over the course of a number of years, and the range of effects that could not be precisely identified at the outset of the program, this agreement document was developed to record the terms and conditions agreed upon to resolve potential adverse effects on multiple historic properties. In essence, this PA functions as a blueprint to help guide Federal and State agencies, local governments, and other signatories in working together to protecting historic preservation interests while rebuilding.

A key component of this agreement called upon MDA to request a program modification from HUD that would allow MDA to negotiate with the SHPO on the elevation height of historic buildings. This variance granted owners of historic properties, especially those in historic districts, the ability to elevate homes to a level lower than the standard Advisory Base Flood Elevation level (ABFE; refer to Section 4, Foundation Design Guidelines, and Section 6, Resources and Publications). This modification ensures

the characteristics of individual historic homes and concentrations of historic residences within local historic districts are preserved and that these buildings continue to be recognized as historic properties.

An important aspect of the PA is the integration of existing local HPCs into the elevation and rehabilitation design review process for historic buildings. Because these commissions know the historic buildings in their communities extremely well, they are able to offer positive, constructive advice to applicants who will be submitting individual property elevation design plans for local review. Another key component of the PA is the provision of funding to the SHPO to hire new preservation professionals, including an historic architect, who will work with MDA to provide general advice to applicants in the early phases of the elevation design process.

## Purpose of Elevation Design Guidelines

Generally, architectural design guidelines are created by communities concerned with the appearance of their buildings as well as how their appearance contributes to economic health and civic pride. Throughout the United States, over 2,200 cities, towns, and counties have adopted design guidelines as part of their historic preservation efforts. Such guidelines are developed to enhance the quality of buildings, landscapes, and public spaces and to protect these resources for the public good.

These Elevation Design Guidelines have been developed by MDA to ensure that the EGP and SRAP programs are implemented in the most architecturally sensitive manner possible. Their goal is to achieve a balancing of two very different public policy goals—risk reduction through more modest elevation than required for modern buildings or new construction, and protection and



**These Guidelines illustrate principles to help preserve the historic elements of homes located in historic districts. Shown here is a Pascagoula streetscape.**

enhancement of existing historic buildings and historic districts. Based upon the historic preservation and flood protection requirements established respectively by the U.S. Department of Interior and the Federal Emergency Management Agency (FEMA), these Elevation Design Guidelines are intended to inform program applicants and local HPCs of the process to best ensure MDA requirements are met. The Guidelines represent a framework in which a range of potential elevation actions, each with a range of planning considerations, including neighborhood context, treatment of elevation and historic fabric interface, and vacant parcels, may be evaluated to produce the best, individualized approach for a given historic building and historic district.

The information contained in these Guidelines is presented for the applicant's use in planning changes to historic buildings within a historic district, or to an individual historic building outside the boundaries of these districts. Building upon nationally recognized historic preservation principles described in the *Standards for Rehabilitation* (see Section 6, Resources and Publications), these Guidelines have been designed to assist and remind members of local HPCs and the SHPO of the issues they should consider when reviewing an MDA-assisted project. Because the architectural character may be

different among communities, information contained in *Coastal Mississippi Historic Building Types and Important Architectural Features* and *A Pattern Book for Gulf Coast Neighborhoods*, prepared by the Mississippi Renewal Forum (refer to Section 6, Resources and Publications), have also been incorporated into the Guidelines, so that applicants can integrate this information into the individual elevation plans they produce.

**These Guidelines are intended to be used as an aid for appropriate design and not as a checklist of items for compliance.** These Guidelines illustrate principles and practices in residential elevation design that will identify, retain, and preserve the historic elements of homes and their residential districts. This publication will assist property owners who are considering the MDA financial assistance programs and the elevation design requirements of local building codes and HPCs. The Guidelines provide direction for historic property owners to complete a successful elevation design project.

## Roles and Responsibilities

Understanding the various entities that play a part in the EGP and SRAP financial assistance programs is important; particularly for the applicant who will need to navigate through the grant application and approval process.

### **The Mississippi Development Authority**

**(MDA)** has been authorized by HUD to administer the EGP and SRAP programs. MDA will review and approve grant applications and disburse funds to historic-property owners who meet the grant requirements.

### **The Mississippi Department of Archives and History (MDAH)**

functions as the **State Historic Preservation Office (SHPO)** and is responsible for ensuring that all requirements of Section 106 of the National Historic Preservation Act have been adhered to. Because the MDA grants involve Federal funding, applicants who are deemed to have historically significant homes must demonstrate that their actions (in this case, elevation) do not adversely affect the characteristics and integrity of the historic property. Specifically, the SHPO reviews grant applications for historic buildings in the 4-county project region and issues a determination of project effect. Where preservation planning is required to avoid Adverse Effects, MDA contacts the applicant and requires them to generate an elevation design plan for their historic property, noting that this Adverse Effect can be eliminated by developing a successful individualized elevation design and a reduction in total elevation height. For historic buildings located in locally designated historic districts, applicants will submit elevation plans to

the appropriate HPC for review and approval. Once submitted, the SHPO also reviews and comments on the elevation plan. Final approval by the SHPO is required before MDA can disburse grant monies to eligible applicants.

### **The Historic Preservation Commissions**

**(HPCs)** undertake project review within historic districts that have been officially designated by local governments within the 4-county coastal region. The HPCs serve as the approving authority for Section 106 compliance for historic residential properties within their historic districts. Working with the local building officials, HPCs will issue a Certificate of Appropriateness that will accompany the building permit and document that the proposed elevation does not adversely affect historic residential properties.

**Local Building Officials** play an important role in the process through the issuance of building permits, which will be required for disbursement of MDA grant monies. In communities with designated historic districts, local building officials will work with HPCs to ensure that a Certificate of Appropriateness for historic structures accompanies the building permit as part of the approval process.

A thorough understanding of key words and phrases commonly used in elevation design plan development and in the local and State historic preservation review processes is important for successful projects. Each applicant is encouraged to review the detailed glossary included in Section 6 of these Guidelines, Resources and Publications.



**Low Elevation Action Alternative (Pascagoula)**



**Medium Elevation Action Alternative (Pascagoula)**



**High Elevation Action Alternative (Pascagoula)**

## Elevation Action Alternatives

In considering the opportunities of MDA's SRAP and EGP programs, each property owner should understand the range of alternative elevation scenarios available to them. Once MDA determines that a property is historic and the SHPO concurs, the homeowner should review the Elevation Design Guidelines to evaluate appropriate alternatives for elevation changes.

Taking no action is one alternative in which the owner of a historic home elects not to raise the building above its present elevation. An applicant might consider this alternative if the difference between the existing height of your property and the recommended ABFE is not great enough to justify the expense of elevation, or there is not enough room on the lot to accommodate an elevated property without loss of historic integrity and significance. As described in a variety of FEMA publications (see Section 6, Resources and Publications), an owner may also elect to reinforce the existing foundation system for the house. **Property owners who choose not to elevate their homes are generally ineligible to receive funding from the SRAP or EGP programs.**

Other alternatives include raising the elevation of a historic residential structure in response to potential flood hazards. The extent of the elevation change needed to bring a building above the designated flood elevation will vary depending upon its location and the elevation changes may range from a few feet to an entire storey or more. In some cases, applicants may consider moving a building—although this is not generally considered acceptable from a historic preservation perspective—elsewhere within the property to provide improved setbacks and access to the elevated home from within its site. Minimal changes in elevation or location are the preferred actions.

Responses to the regulatory requirements of building codes and Federal historic preservation precedents must be balanced as proposals for elevation changes are made. Applicants must work closely with local building code and historic preservation representatives to determine an appropriate elevation change and related methods to mitigate associated project impacts to historic buildings.

In choosing an action to protect a historic property from potential future flood damage—whether elevation or another mitigation measure—the property owner must understand that their property needs to continue to retain its historic integrity after rehabilitation and elevation in order to meet the “historic structure” criteria of the National Flood Insurance Program (NFIP; refer to Section 4, Foundation Design Guidelines, and Section 6, Resources and Publications).

## Elevation Design Review Process

The elevation design process for a historic property begins with SHPO concurrence regarding MDA's finding regarding historic and architectural significance. Once an applicant property is determined to be historic, property owners will receive a copy of this determination, along with these Elevation Design Guidelines. Property owners should review these Guidelines, consult with MDA representatives and the SHPO historic architect, and consider formal retention of a professional building elevation practitioner trained to assist in determining elevation design strategies.

Once an applicant has initiated the local building permit application process, the local HPC will also consider the potential impact of elevation on historic properties. Proactively addressing the issues outlined in the

Guidelines will facilitate necessary approvals and efficient processing of the elevation grant application.

Early coordination with the SHPO, local officials, and design consultants will provide crucial site planning, architectural, and engineering assistance and information for use in developing the elevation proposal. If a property is in a jurisdiction with an HPC, the elevation plans will be referred to the local HPC for review and approval upon submission to the local building permit office. If there is no local HPC, property owners should concurrently submit elevation plans to the local building permit office and to MDA for transmittal to the SHPO.

Following a successful historic review, the building permit office will issue a building construction permit. The MDA grant award occurs following the issuance of a building permit for the elevation project.

Detailed information about the historic preservation review process, and about the local application and permit process, is located in a separate Applicant Guide.

## Working with an Elevation Design Consultant

Owners of historic residential properties are making an important decision when they proceed with plans for elevating their homes. As they move forward with their grant application, professional planning, design, and engineering advice is crucial. MDA can provide initial guidance to assist applicants in the application process through grant award. Applicants should also consider the services of professional building elevation consultants who can prepare elevation design plans and provide support through the building permit and historic preservation reviews and during the elevation construction process. As described in Sections 2–4 of these Guidelines, key aspects of preparing building elevation plans include:

- Historic status determination
- Flood zones and elevation requirements
- MDA programmatic requirements
- Parcel topography
- Boundary and setback delineation
- Adjoining use assessments
- Site circulation and access alternatives
- Architectural design elements
- Structural and foundation design elements
- Elevation mitigation and screening approaches

In order to provide sufficient design information for local building permit submissions and reviews, applicants must be able to prepare elevation design plans. By working with MDA and building elevation design consultants, applicants can benefit from the experience these professionals have with similar projects, submission requirements, and review procedures.

## How to Complete a Successful Elevation Project

MDA realizes that grant recipients are anxious to complete the repair and rehabilitation of their homes and rental properties so they can move forward with their lives.

One of the primary purposes of the Elevation Design Guidelines is to facilitate the decision-making process to successfully complete the required historic preservation review, allowing elevation projects to be funded in a manner that achieves both risk reduction and preservation of irreplaceable historic buildings and districts.

There are a few ground rules that the applicant *must* follow to receive funding for their project. Unlike other financial assistance programs administered by MDA, the EGP and SRAP programs provide funding through a series of disbursements. As described below, the applicant

must submit specified documents to receive payments at project milestones.

### Rule #1. Address All Historic Preservation Review Requirements

#### All Historic Properties

In order to protect the physical integrity of an historic house or rental unit and ensure that it will continue to maintain the characteristics for which it was designated as historic, the applicant(s) must have their project reviewed and approved by the SHPO. The SHPO's final approval will be issued once the following actions are verified:

- The applicant's participation in a Pre-design Meeting with SHPO staff in which key elements from the Elevation Design Guidelines and *Standards for Rehabilitation* are identified, for integration into your new individual design plan
- Submission of the applicant's Final Elevation Design Plan, for review and approval by the SHPO prior to application for local building and development review
- Submission of a Written Commitment by the applicant to the SHPO agreeing to comply with the plans as approved

Based on review of this information, the SHPO will issue a final determination of No Adverse Effect, which concludes the Section 106 historic preservation review process. The SHPO's No Adverse Effect finding will be provided to MDA and the applicant in a letter, which will also state that elevation of the building will not preclude the building's continued designation as a historic building.

Prior to construction, the applicant must also submit a copy of the building permit and the FEMA Elevation Certificate to the SHPO for its review.

Once construction is complete, the applicant must submit a copy of the Occupancy Permit and the final FEMA Elevation Certificate to the SHPO.

### **Historic Properties Also Located Within Local Historic Districts**

In addition to the review process described above, owners of property in a local historic district must have their project reviewed and approved by the local HPC. Based on the individual elevation plan for an historic building, the Commission will issue a Certificate of Appropriateness to the applicant and local building department as verification that the elevation project complies with these Elevation Design Guidelines and the *Standards for Rehabilitation*, as well as local historic district guidelines.

After the applicant has submitted an individual elevation plan and the local HPC has issued a Certificate of Appropriateness, the applicant must submit a copy of the certificate to the SHPO.

### **Rule #2. Adhere to MDA Grant Requirements**

According to MDA requirements, grant funding will be disbursed in two equal payments:

**First Payment:** Half the awarded grant funds will be paid upon the applicant submitting a building permit and a copy of a FEMA Elevation Certificate certified by a licensed engineer or surveyor to MDA.

**Second Payment:** The remaining grant funds will be paid upon completion of the construction project when the applicant submits an Occupancy Permit to MDA.

## **Organization and Use of these Elevation Design Guidelines**

Within these Guidelines are five main report sections and a final section of reference materials and a glossary of terms. MDA's intent is to provide essential information for the property owner to use to develop an individualized elevation design project that addresses the broad principles outlined in the Guidelines and in the *Standards for Rehabilitation*.

In addition to Section 1, Introduction, this document is organized around the following topic areas:

**Section 2: Site Design Guidelines:** Provides information about the site on which the historic building is located.

**Section 3: Architectural Design Guidelines:** Discusses considerations regarding neighborhood urban design context, evaluating elevation alternatives, historic building types and architectural features, data needed for designing elevation plans and evaluating their effects on the historic building, and goals for new screening and scale minimization.

**Section 4: Foundation Design Guidelines:** Identifies engineering factors for designing new foundations for elevated buildings and includes detailed illustrated approaches to foundation screening.

### **Section 5: Elevation Design – Next Steps:**

Summarizes the process for designing a new elevation plan and illustrates elevation approaches for some of the most common historic buildings on the coast.

**Section 6: Resources and Publications:** Includes National and State reference materials for use in designing an elevation plan and identifies the status of historic districts and locally designated landmarks within each jurisdiction. Pre-Katrina and post-Katrina aerial views, a detailed current map of each historic district, and information about local HPCs are also included.

To accompany these Guidelines, MDA has also produced two related tools—an Applicant Guide and a Historic Preservation Commission Guide. These will be made available to applicants, local HPCs, and the SHPO in both electronic and hard copy form, along with copies of the Elevation Design Guidelines.

Users of these Elevation Design Guidelines are strongly encouraged to read the document completely, and not simply selected sections. Although certain portions of this guide may contain information pertaining to a specific issue, all sections contain essential information that the user should become familiar with. As noted previously, the MDA encourages funding applicants to seek the services of a design professional (refer to the Applicant Guide) who can assist in developing customized elevation plans.

# Site Design Guidelines

The overall character of an historic district is defined not only by individual historic buildings, but also by site features and plantings. Historic districts include important non-architectural features that form spaces, including topography, setback and the orientation of buildings, vistas and views, and plantings, such as hedges, foundation plantings, lawns, gardens, and tree canopies; features that define circulation, such as walkways, streets, driveways, and parking areas; and features that articulate or develop a site, such as accessory buildings, fences, walls, lighting, swales, fountains, sculptures, arbors, and planters.

Landscaping and plantings play a significant role in creating the character of the historic districts in Coastal Mississippi, and also reflect the regional climate. Mature gardens, grassy lawns, shrubs, climbing vines, ornamental trees, and tree canopies are typical of residential historic districts. Elements such as mature trees, judiciously placed, and foundation plantings soften the interface between raised first floors and the ground level.



**Sinclair Cottage, Ocean Springs, Mississippi.**

Photograph from the Detroit Publishing Company, 1880-1920, Library of Congress Prints and Photographs Division, Washington, D.C.



**Adjoining property considerations—type, scale, location, and pattern of block create neighborhood character.**

## Site Elevation and Topography

Determining the appropriate height to which an historic residence should be raised begins with establishing the site elevations associated with the existing property. A professionally produced property survey of the parcel, including a finished floor elevation for the residence, will provide initial data for the elevation design plans.

To prepare a customized elevation design plan, the applicant must

### KEY PRESERVATION GOALS:

- Limit elevation to, or under, ABFE.
- Match existing topography wherever possible.

first determine the existing elevation level of the historic home, and then secure information from the local building department regarding the recommended elevation level. FEMA flood elevation data and requirements, as well as local building codes, will specify the height to which the first floor of a new structure in the vicinity should be raised. The new elevations established for each locale through the Advisory Base Flood Elevations (ABFE) and preliminary digital Flood Insurance Rate Maps (dFIRMS) should also be referenced as required by MDA. These new elevation standards are considered by local and Federal authorities to limit impacts from future flood events. The property owner should then consult with the local HPC and building permit offices to set an appropriate strategy for the new elevation proposal.

Topographic conditions within local historic district parcels will generally feature level terrain with limited slopes. This baseline terrain condition of parcels within historic districts in Coastal Mississippi suggests a consistent approach is needed to establish the heights of related elevation design projects. Local HPCs and the SHPO will consider this consistency in their review of individual elevation plans.

## Parcel Configuration and Access

Planning an elevation design project requires a thorough understanding of the historic property's parcel configuration, boundaries, setbacks, and access. Parcel size and configuration determine the flexibility of an elevation design project and its ability to accommodate any proposed site feature improvements and mitigate the visual impacts of the elevated structure on surrounding historic buildings. Parcels with limited area and width will present greater design challenges than larger sites with ample front and side yard conditions and setbacks. Existing access to the parcel from both street and sidewalk should be evaluated for any elevation change that warrants new site circulation features. Special consideration should also be given to the relationship of the parcel to adjoining properties, especially if they are historic.

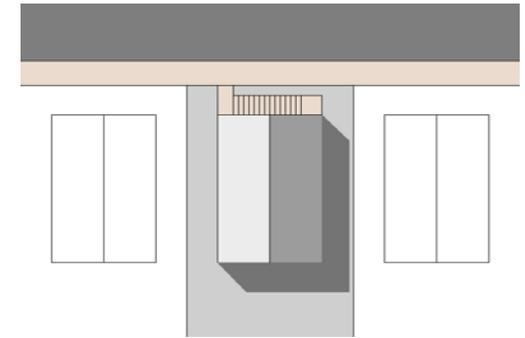
In developing a customized elevation design plan, the parcel owner should think about the following:

### KEY PRESERVATION GOALS:

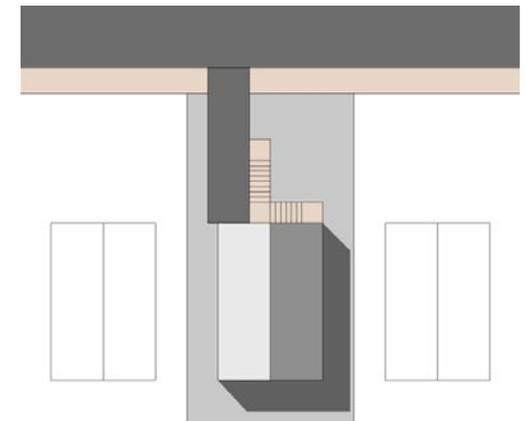
- Limit changes to parcel layout and access.
- Be sensitive to, and maintain the relationship to adjacent properties in historic districts where possible.

### Parcel Layout

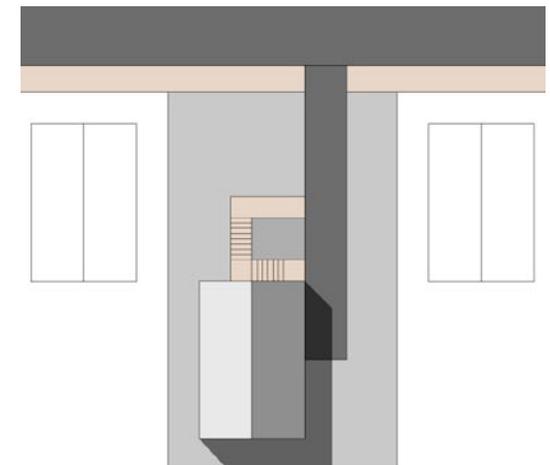
- Is sufficient space available within the parcel for new or expanded stairs? Elevating a residence requires construction of additional steps, and generally adds 11 inches to the length of stairs for each 7-inch increase in height.



Example of limited setback



Example of average setback



Example of ample setback

- Is adequate space available on the parcel for new architectural or landscape screening elements to conceal new sub-storey columns or piers? These features may require dedicated areas near the foundation of an elevated building.
- Is sufficient space available on the parcel to accommodate both new screening elements and existing site features, such as driveways and walkways?
- The size and configuration of parcels within historic districts will not generally include areas of higher elevations to which buildings could be moved to mitigate flood hazards.

### Parcel Access

- Any proposed changes to existing site access elements, such as stairs, porches, and walkways must be carefully consider existing stairs, sidewalks, and driveway conditions.

Applicants should evaluate the relationship of existing site features to proposed design elements by referring to:

- The parcel boundary
- An existing conditions survey
- Local zoning and building code requirements that establish development setbacks for residential uses

## Building Footprint and Orientation

The existing location of an historic structure within its property boundary is another factor that affects the flexibility of elevation design and related circulation design proposals. Front, rear, and side yard conditions affect the potential of providing modified entrance stairs and other exterior design features.

Many historic residential structures surveyed for these Guidelines

### KEY PRESERVATION GOAL:

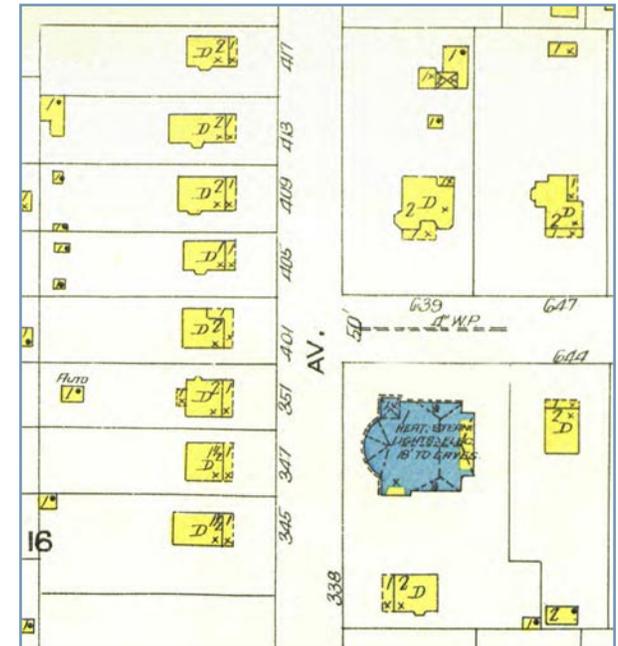
- **Maintain a building's historic footprint wherever possible.**

feature front entrance stairs and porches with side yard driveways. Because the depth of front yard conditions are generally limited and the location of driveways are often close to the residence, design challenges to elevating these structures and providing new entrance stair conditions within these front and side yards should be anticipated. These challenges can be addressed with new compact stair and landing layouts that have limited projections from existing entrance conditions. Any circulation improvement should be evaluated for its historic appropriateness.



**Elevation options can be limited by building footprint and orientation, setbacks, parking, and access.**

The location of the building footprint within its site also influences the feasibility of any potential changes in the topographic elevation of the parcel. In some cases, applicants may consider raising the elevation of both site and building in order to address flood hazards. Building footprints located within central areas of larger parcels are better suited to accommodate changes in site grade levels. Front, side, and back yards with greater depths provide an opportunity for gradual transition between grade levels. The size and orientation of a building footprint relative to the parcel's acreage affects potential elevation design screening approaches. New architectural and landscape treatments intended to visually screen a new residential base or sub-storey are most effective on sites with sufficient front and side yard depths.



**A building's footprint within its site will influence changes in site grade and levels.**

Map image courtesy of Missouri University, Ellis Library Special Collections, Sanborn Fire Insurance Map Collection. <http://digital.library.umsystem.edu/sanborn6954.jpg> 10/06/08

## Adjoining Property Considerations

An elevation design proposal for a single historic property must consider its relationship to other properties within the neighborhood in which it is located. The type, scale, location, and pattern of adjoining historic properties create the overall character of a neighborhood. Protecting these features within local historic districts in Coastal Mississippi is a key goal of the PA described in Section 1, Introduction. This character and potential visual impacts must be carefully evaluated in any elevation design proposal.

**RIGHT: Street-level view of non-elevated homes.**  
**BELOW: Aerial view of existing streetscape showing non-elevated homes.**



On parcels with limited space between residences, any change in the elevation of one

structure affects the visual setting of another. Because the relative heights and proximity of existing structures establish the visual character of an historic district, elevation design proposals must carefully consider the heights and massing of adjoining structures.

**KEY PRESERVATION GOAL:**

- Ensure that improvements are consistent with the visual character of historic districts.

**RIGHT: Street-level view of streetscape showing consistent elevation level.**  
**BELOW: Aerial view of streetscape at modest elevation level.**



Proposals for new side yard elevation design features, such as stairs or other circulation elements, introduce new visual and functional features between parcels. Potential impacts from these features must be evaluated to ensure design proposals complement the architectural setting of both the applicant property and adjoining uses.

## Parking and Circulation

A large area within each parcel is often dedicated to vehicular parking and circulation needs. In preparing an elevation design plan, present and proposed driveway and parking requirements must be considered. To accommodate new architectural and landscape screening, alternatives to existing driveway and parking layouts may be appropriate. Many historic parcels in Coastal Mississippi feature driveways with side yard alignments in close proximity to the building. Depending upon the extent of elevation proposed and existing side-yard depth, an applicant may find that the configuration of an existing driveway and parking may be affected.

Whether a limited or significant elevation change is proposed for an historic

property, the existing circulation features may require reconfiguration to provide improved entrance stair systems, terrain modification, or landscape screening. Should the elevation design include a new unoccupied sub-storey, the applicant should evaluate measures to mitigate the potentially significant visual and historic impacts associated with an increase in the first floor elevation. Architectural design alternatives are discussed in Section 3, Architectural Design Guidelines. Any sub-storey uses will be subject to local building codes and historic preservation reviews.

**KEY PRESERVATION GOAL:**  
• Minimize changes to parking and circulation that affect historic setting.



**Driveways and parking areas can have significant influence on the appropriate elevation option.**

## Landscape Elements

Complementing the historic character of residential districts, landscape elements provide important visual screening functions and outdoor space defining amenities. As a result of Hurricane Katrina, the number of these historic landscape elements has been significantly reduced. Effective elevation design plans replace these



**Landscape screening strategies provide visual buffers and scale transitions for an elevated home.**



**Foundation plantings should be scaled to the height of the new base elevation.**

elements with similar landscape features indigenous to Coastal Mississippi

**KEY PRESERVATION GOAL:**  
• Use indigenous landscape plantings to minimize the visual impacts of elevation.

to minimize the often-jarring nature of a new foundation system and an elevated historic building. When situated in areas adjoining foundations and sub-storey facades, landscape plantings can provide effective scale transitions between the ground plane and an elevated frontage of new sub-storey walls.

Landscape screening should complement the architectural elements of the residence and represent part of an overall strategy for mitigating the effects of elevated structures. In many cases, a well-planned landscape pattern of shrubs and small trees within the structure's foundation perimeter zone can complement or replace architectural breakout panels for sub-storey screening.

Landscape plantings near the new base or sub-storey of an historic residence offer one of the most cost-effective means to mitigate the visual impacts of elevating the historic structure. Specific approaches for landscape screening are provided in Section 3, Architectural Design Guidelines.

## Site Design Guidelines – Specific Recommendations

The following recommendations support preservation goals and should be incorporated, whenever possible, into customized elevation plans:

- Retain and preserve building and landscape features that contribute to the overall historic character of the individual building and/or the historic district, including trees, gardens, yards, arbors, ground cover, fences, foundations, and significant vistas and views.
- Retain and preserve the historic relationship between buildings and landscape features of the district setting, including site topography, retaining walls, foundation plantings, hedges, streets, walkways, and driveways.
- Protect and maintain historic building materials and plant features through appropriate routine maintenance and repair of constructed elements and pruning and management of plantings.
- Replace missing or deteriorated site features with new features that are compatible with the character of the site and the historic district.
- Design new construction or additions to protect large trees or other significant site features, such as vistas.
- Protect large trees and other significant site features from construction activities and from delayed damage due to construction activities, such as loss of root area or compaction of soil by equipment. Avoiding compaction of the soil within the drip line of trees is critical to maintain the health of root systems.



**Protect large trees and preserve historic vistas.**

Library of Congress, Prints and Photographs Division, Historic American Buildings Survey, Reproduction Number (HABS,ALA,49-MOBI,224-2)

Actions that are **inconsistent with established preservation goals** and should be avoided include:

- × Within historic districts, altering the residential character of the district by significantly reducing the proportion of built area to open space on a given site through new construction or additions
- × Introducing contemporary equipment or incompatible site features, including mechanical units, in locations that compromise the historic character of the building or historic district. Such features should be located unobtrusively, to shield them from view.

# Architectural Design Guidelines

As described in Section 1, Introduction, the NHPA Section 106 historic review process for MDA-funded projects requires each applicant's elevation design plan be reviewed by both local HPCs and the SHPO, or the SHPO independently. Each plan will be evaluated based on the plan's demonstrated understanding of neighborhood, site, and architectural conditions and features. This review will determine whether an applicant has provided effective mitigation approaches that limit visual and material impacts on historic buildings and districts created by the flood hazard protection actions. The following architectural guidelines should be addressed by each applicant in designing their elevation design plan.

## Neighborhood Context – Urban Design

Whether the applicant's historic residential property is situated within an historic district or it stands within the context of another setting, it is part of a distinct environment of related uses. This setting reflects village, suburban, or rural conditions with a range of adjoining uses. Considering these settings through the perspectives of development and landscape character is an initial step in the elevation design process.

The arrangement of historic structures within their community represents a distinct pattern of cultural development that should be valued and preserved. Within the Mississippi Coastal area, historic development patterns may take the form of residential structures situated together on modest lots, situated nearby within ample parcels, or situated in isolation on several acres. Each elevation design plan should reflect an understanding of the overall context of the neighborhood.

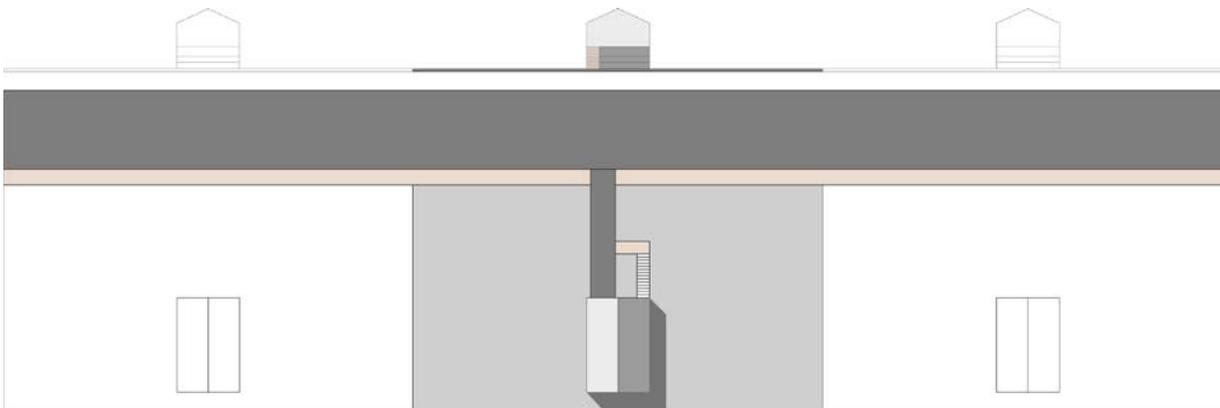
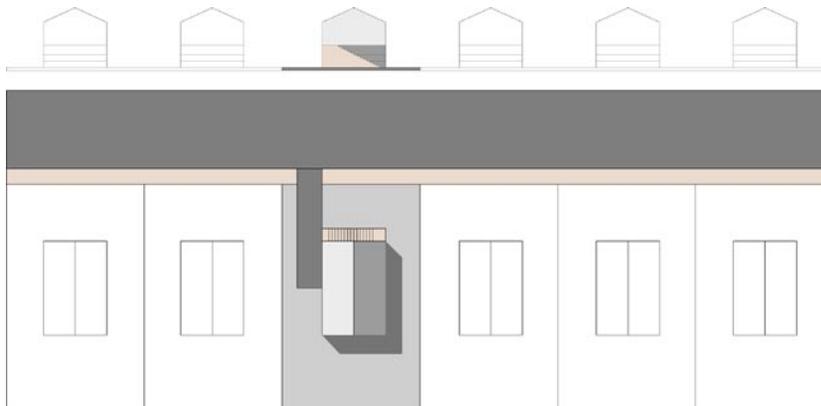


**Historic examples of context reveal neighboring houses with different elevations. Shown here are 502 and 504 Beach Boulevard in Bay St. Louis, destroyed in Hurricane Katrina.**

Hancock County Historical Society

As noted in Section 2, Site Design Guidelines, relative building heights, setbacks from local streets, and distances between homes are principal features that characterize residential neighborhoods. These features and their landscape elements contribute to the character of each neighborhood setting. Applicants should identify

The proximity of neighboring homes within an historic district must be considered when evaluating the potential impacts associated with a proposed elevation project.



elements of the local neighborhood character to integrate them in the customized elevation plan for each parcel. Each elevation design plan should complement or enhance the principal features of both its neighborhood context and its individual site.

**KEY PRESERVATION GOAL:**

- Identify local neighborhood character elements.
- Integrate these elements into your design.

Once elements of the neighborhood character are identified, options for integrating these elements into the elevation design should be evaluated for the residential site. Mitigating, or offsetting, damaging visual effects of elevating an historic residential structure will depend upon the extent of proposed elevation change, architectural treatments, parcel size and setbacks, distance between homes, and landscape screening measures.

## Exploring and Evaluating Elevation Alternatives

The allowed level of elevation for the majority of historic homes within locally

**KEY PRESERVATION GOAL:**

- Minimize elevation change for historic buildings.

designated historic districts is below the standard ABFE or dFIRM levels, depending upon which standard the local community, in negotiation with the SHPO and/or a local HPC, has adopted. Developing a customized elevation plan that adheres to the appropriate level and to the *Standards for Rehabilitation* for grant-assisted work affecting historic building fabric, will ensure that the local HPC issues an approved Certificate of Appropriateness. It will also ensure that the SHPO renders a No Adverse Effect determination under the Section 106 historic preservation review process, and that the applicant maintains eligibility to receive MDA funding for the project.

**Elevation alternatives are illustrated below, and include:**

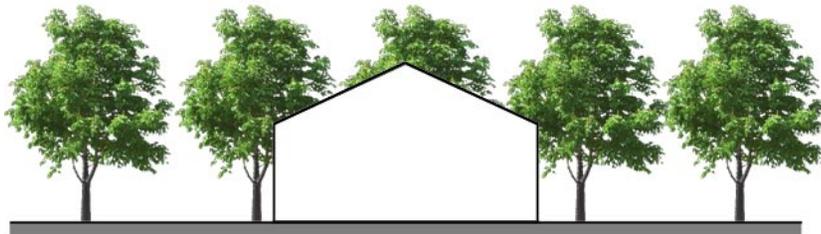
**Foundation Strengthening:** This alternative is appropriate when the elevation height required for a specific parcel is minimal, and strengthening the foundation would save the applicant a considerable amount of money compared to other elevation alternatives.

**Limited Elevation Change:** This alternative will result in only a nominal visual effect on the historic character of the property, and can be achieved through:

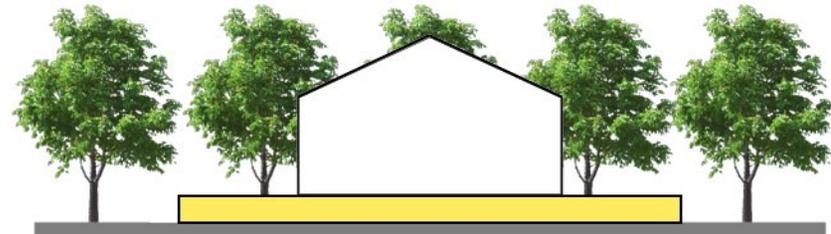
- Minor changes in the existing ground level that will provide a modest elevation level of less than 5 feet for both the parcel and the residence. This approach maintains the physical relationship between the ground level and the residence.
- An increase to the base of the existing home of less than one storey.
- A combination of the above, with a slight change in ground elevation and a slight increase in height.

**Significant Elevation Change:** This alternative increases the elevation of a home to a greater extent by raising the residence a full storey or more. This approach could result in greater impacts to the historic character of the property and building, and may require significant screening and scale transition actions in order to access these concerns.

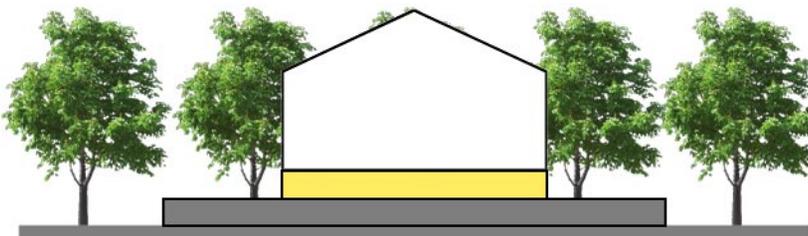
Applicants must work with local building permit offices and HPCs to determine an appropriate elevation for the property. Local and federal guidelines must be considered in selection of the elevation to maintain historic character and address ABFE levels and flood hazard protection for structures.



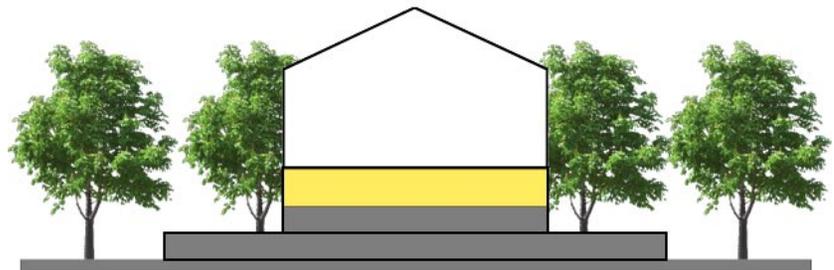
**Existing grade.**



**Elevated grade and building.**



**Elevated grade, base, and building.**



**Elevated grade, base, sub-storey, and building.**

## Historic Building Types and Architectural Character

A thorough understanding of historic building types and their related architectural character is fundamental to a successful elevation design project. Historic buildings reflect longstanding traditions of residential design in the Gulf Coast region and exhibit a vast array of architectural references used in the development of the Elevation Design Guidelines. The MDA elevation design program offers a new opportunity to preserve and protect these valuable buildings by mitigating flood hazards.

A wide range of residential building types comprise the Gulf Coast historic districts and communities, and are described in Section 6, Resources and Publications, under the heading: Coastal Mississippi Historic Building Types and Important Architectural Features. Applicants may also benefit from the information contained in *A Pattern Book for Gulf Coast Neighborhoods*, prepared by the Mississippi Renewal Forum.

Residential building types are distinguished by their relative size, form, height, roof pattern, and principal external elements, such as porches, stairs, and chimneys. These massing characteristics can provide important insights for assessing the effects of elevating a home and mitigating these effects within the existing setting.

A successful elevation design program often begins with an examination of elevation design plans for other historic properties. Past elevations of local landmarks, such as Beauvoir, illustrate important techniques for first floor elevation, which can inform elevation designs for historic homes today. These Guidelines consider a range of architectural typologies and styles to provide insights for applicants as they move forward with the elevation design under MDA's EGP or SRAP programs.



**Beauvoir, former home of Jefferson Davis.**

Library of Congress, Prints and Photographs Division, Historic American Buildings Survey, Reproduction Number (HABS,MISS,24-BILX,2-4)

A survey of local Gulf Coast historic resources identified five principal residential building types to serve as a basis for developing broad design guidelines for elevating prototypical historic structures. These residential building types are representative of many other distinguished residential forms found within the region. These building types include:

- Rectangular plan (gable-front)
- Massed plan (side-gable)
- I-shaped (gable-front-and-wing)
- Pyramidal (complex roof)
- I-house-two-storey box (side gable)

As models, the building types provide a sufficient range of design features that can be included within the development of individual design plans. Applicants should consider relevant examples as they prepare elevation design proposals for their specific architectural styles. These examples provide a variety of architectural elements, including the configuration of exterior entrances, stairs, porches, windows, columns, and other

details, that can be applied to elevation design plans for specific historic residential projects.

Existing residential building type and massing provide important guidance on the basic form and arrangement of the vertical building elements within the site and can inform the potential first order impacts created by elevating a structure and introducing new exterior elements. Two examples illustrate these relationships:

**Example 1:** The overall visual effect of raising a residential structure by one floor level depends to a great extent on its site context. Far greater negative visual effects may result from changes to a one-storey home on a small lot than to a two-storey home on a larger parcel, due to the range of screening and scale transition actions that are possible on the larger site.

**Example 2:** Adding new exterior stair and landing systems to a home that already has a porch feature represents less visual impact than adding new stair elements to a home without a porch.

### KEY PRESERVATION GOAL:

- Identify architectural type and massing characteristics.
- Examine successful elevations of similar historic homes.
- Incorporate representative and relevant design features into the elevation design plan to minimize visual impacts.

## Composition and Scale

The essence of an historic home's visual character is closely tied to the composition and scale of its principal architectural features. One goal for a successful elevation design project is to minimize the effects of any elevation change upon its visual character. Historic preservation reviews will focus on maintaining the proportions and relationships of these original architectural features within the proposed new elevation setting.

Elevation design plans should consider existing architectural composition and scale of historic features.

### KEY PRESERVATION GOAL:

- Minimize change to visual character by maintaining proportions, relationships, and scale of architectural features.

The composition and scale of existing elements, such as multiple building levels, projecting wings, exterior columns, and the arrangements of doors and windows, provide design references for the location of any new entrance features, stair systems, and other sub-storey elements.

The design of new elevated base conditions, whether they are open, enclosed, or screened through landscape plantings, should reflect, wherever possible, existing composition and scale features. Existing façade elements should be integrated in the elevation design plan for the new base or sub-storey levels by repeating, contrasting, or complementing.



**Composition and scale of features provide design references.**

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**Adjoining properties in Pascagoula illustrate the challenges of contrasting elevations.**



**The composition and scale of elevation design proposals should be consistently applied to adjoining homes.**

Because the visual relationship between building features and the site may be changed by an elevation design plan, first evaluating the scale of existing features is important. Design efforts to manage the scale transition between the new elevation and existing grade will require appropriate architectural and landscape treatments.

## Elevation and Existing Façades – Design Considerations

An evaluation of elevation options for the principal design elements of an historic home should include consideration of its most important feature, called the façade, and its entryway. The façade faces the street, and is often the most-highly decorated of all building elevations.

This feature establishes the purpose and placement of all other elements within the front

### KEY PRESERVATION GOAL:

- Use historic building façade and entry features to develop new design elements.

building face, and sets the stage for the design of each adjoining façade.

Most historic façades feature a prominent and central location for the front entrance door, which may be further defined by entrance steps, porches, and adjoining windows. Other defining features include the size, extent, symmetry, and character of façade treatments and ornamentation. The elevation design plan should focus these design elements to minimize visual impacts to the historic structure. New stairs and landings introduced to

compensate for elevation changes must complement the design of the existing front façade, which may already include porch structures and related details.

Porch structures and associated roof, column, and balustrade elements provide design references that should be incorporated in elevation design proposals. Placement of new foundation, base and sub-storey elements should also coincide with existing vertical references to porch columns and other repeating façade elements.



**Important façade elements set the stage for the placement of all other elements.**



**New sub-storey elements should coincide with existing vertical references to columns.**



**Elevation changes need to complement existing façade, porches, and related details.**



**Structural supports take into account the location of prominent features and repeat vertical elements. Shown here is 116 Ballentine Street (demolished), circa 1880, Bay St Louis.**

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## Elevation and New Foundations – Screening and Scale Minimization Considerations

Placement of new structural supports should account for the location of prominent external façade design elements and reflect or complement existing repeating vertical elements on the façade, such as columns, posts, or other trim details. This approach promotes continuity of the historic design elements of the façade as they are expressed through the new base treatments, thereby minimizing the visual impacts of the new elevation change on the historic building as a whole.

Other significant façade components, such as chimneys and major masonry features, require special consideration in an elevation design project. In order to maintain their historic and functional attributes, these masonry elements require continued physical connections to established grade conditions within the project site. Adapting major masonry features to address elevation changes may shape the overall strategy of an elevation design project.



**Significant façade components such as major masonry features require special consideration.**

Appropriate measures to reduce or eliminate adverse visual effects resulting from the elevation of an historic residential structure will depend upon the extent of the new elevation proposed and proportion of the new base area. When establishing the proposed elevation, the applicant and elevation design consultant should prepare plans that include appropriate screening and other treatments for the elevated residence.



**Landscape screening strategies can provide an effective means to minimize the visual impacts of elevation.**

**Existing façade features** offer direction to the elevation design project through architectural design references that can be repeated, contrasted, or complemented within the new base or sub-storey levels. Both architectural and landscape screening strategies can provide effective means to minimize the visual impacts to the historic residence.

The proposed screening approaches for an elevation design plan should focus on providing new visual buffers to the elevated area. Related design approaches may also focus on providing new shielding elements that create a gradual transition for the space between the existing ground level to the new first floor level. These approaches can reduce the negative visual effects of elevating an historic property in a manner that maintains or complements its character and setting.



**Small panel treatments can provide effective screening for limited elevation changes.**

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**For new base or sub-storey proposals,** architectural screening approaches may take the form of open or enclosed panels of various sizes. These panels can be designed to cover the newly elevated foundation areas. Small panel treatments may include new lattice patterns or other designs for projects with limited elevation changes.



**Architectural screening for large areas conveys the features of an existing façade within a new sub-storey zone.**

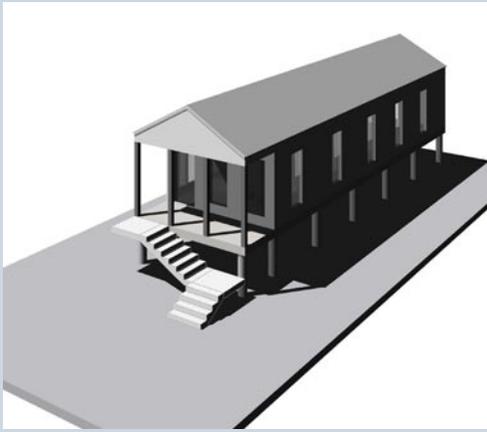
**Architectural screening treatments for larger areas** can be designed to convey features of the existing façade within the new sub-storey zone. In each case, the panels must be designed as flow-through or breakaway structures that will not restrict potential flood waters.

To achieve scale minimization associated with higher elevation projects, several approaches are available to provide site transitions through both architectural and landscape treatments. The architectural approaches include new stair and landing designs that complement existing porches and entrances. The landscape approaches include new foundation planting areas that provide visual buffers for the new elevated areas.

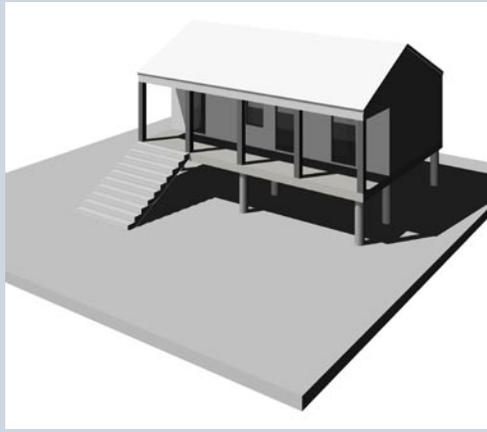
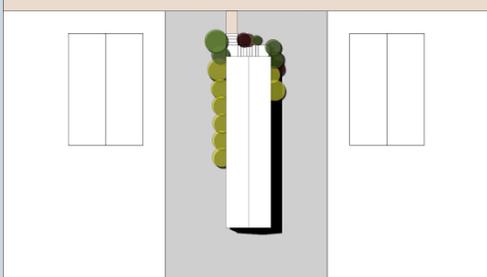
**KEY PRESERVATION GOAL:**

- Incorporate screening and scale minimization measures to mitigate elevation visual impacts.

Elevation design consultants can assist applicants in designing alternative treatments and selecting one that most successfully minimizes adverse effects on the historic building while also reducing risk through some level of elevation. Elevation design plans that effectively incorporate screening and/or scale minimization measures to complement the architectural character of the historic building and historic district will generally be well received by local and state historic preservation agencies, facilitating approval for MDA funding.



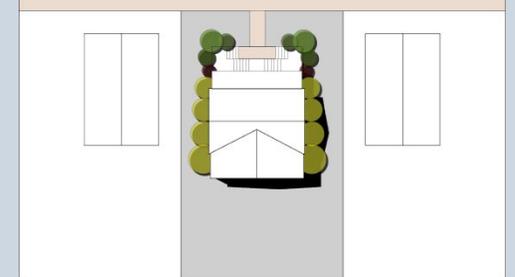
Gable Front (Rectangular Plan)



Side Gable (Creole Cottage)



Two-Storey Massed Plan (Neoclassic)



# Architectural Design Guidelines – Specific Recommendations

Elevation design plans involving **NEW CONSTRUCTION** should incorporate the following design recommendations, as applicable:



## Additions to Historic Buildings

- Minimize the loss of historic fabric and ensure that character-defining features of the historic building are not destroyed, damaged, or obscured.
- Retain the overall character of the site, site topography, character-defining site features, trees, and significant district vistas and views.
- Protect large trees and other significant site features from immediate and delayed construction damage.
- Limit the size and scale of an addition to avoid diminishing or visually overpowering the historic building.
- Design to be compatible with the historic building in mass, materials, color, and the relationship of solids and voids to exterior walls, yet make the addition discernible from the original.

Actions that are **inconsistent with established preservation goals** and should be avoided include:

- ✗ Constructing an addition that detracts from the overall historic character of the principal building and the site, or requires the removal of a significant element or site feature.

- ✗ Constructing an addition that significantly changes the proportion of built mass to open space on an individual site.



## New Construction

- Site new construction to be compatible with the overall character of surrounding buildings and the historic district in terms of setback, orientation, spacing, and distance from adjacent buildings.
- Preserve the overall character of the site, site topography, character-defining site features, trees, and significant vistas and views.
- Protect large trees and other significant site features from immediate and delayed construction damage, such as loss of root area and compaction of the soil by heavy equipment.
- Design the height, form, size, scale, massing, proportion, and roof shape to be compatible with the overall character of surrounding buildings and the historic district.
- Design the proportion of the proposed new building's front façade to approximate the front façade proportion of surrounding historic buildings.
- Design the spacing, placement, scale, orientation, proportion, and size of window and door openings to be compatible with the overall character of surrounding buildings and the historic district.

- Select windows and doors with material, subdivision, proportion, pattern, and detail compatible with the windows and doors of surrounding buildings and that contribute to the character of the historic district.
- Select materials and finishes compatible with the materials and finishes of surrounding buildings in terms of composition, scale, module, pattern, detail, texture, finish, color, and sheen to contribute to the character of the historic district.
- Design new buildings to be compatible with, but discernible from, historic buildings in the district.

Elevation design plans involving **REPAIR AND REPLACEMENT** of exterior building features should incorporate the following recommendations, as applicable:



## Wooden Architectural Features

- Retain and preserve wooden features that contribute to the overall historic character of a building and its site, including such functional and decorative elements as siding, shingles, cornices, architraves, brackets, pediments, columns, balustrades, and architectural trim.
- Use recognized preservation methods for patching, consolidating, splicing, and reinforcing.

- Replace only deteriorated details or elements in kind, rather than replacing entire features. Match the original detail or element in design, dimension, texture, and material. Consider compatible substitute materials only if using the original material is not technically feasible.
- Replace missing features with equivalent features, based on accurate documentation of the original feature, or a new design compatible in scale, size, material, texture, and color with the overall character of the building and historic district.
- Repaint wooden surfaces and features in colors that are appropriate to the historic building and district.
- Clean wooden architectural features using gentle methods such as low-pressure washes with detergents and natural bristle brushes. Chemical stripping may be used only if gentler methods are ineffective.

**Actions that are inconsistent with established preservation goals and should be avoided include:**

- ✗ Cleaning wooden features and surfaces with destructive methods such as sandblasting and power washing, or using propane or butane torches.
- ✗ Stripping painted surfaces down to bare wood and applying clear stains or finishes to create a natural wood appearance.
- ✗ Replacing sound, painted wooden siding with new siding to achieve a uniformly smooth wooden surface.
- ✗ Replacing or covering wooden siding, trim, or window sashes with contemporary substitute materials such as aluminum or vinyl.

- ✗ Introducing wooden features or details to an historic building in an attempt to create a false sense of historical appearance.



**Masonry**

- Retain and preserve, as practicable, masonry features that contribute to the overall historic character of a building and a site, including walls, foundations, roofing materials, chimneys, cornices, quoins, steps, buttresses, piers, columns, lintels, arches, and sills.
- Protect and maintain historic masonry materials, such as brick, terra-cotta, limestone, granite, stucco, slate, concrete, cement block, and clay tile, and their distinctive construction features, including bond patterns, corbels, water tables, and unpainted surfaces.
- Use recognized preservation methods for piecing-in, consolidating, or patching damaged or deteriorated masonry surfaces.
- Repoint masonry mortar joints if the mortar is cracked, crumbling, or missing, or if damp walls or damaged plaster indicate moisture penetration. Before repointing, carefully remove deteriorated mortar using hand tools. Replace the mortar with new mortar that duplicates the original in strength, color, texture, and composition. Match the original mortar joints in width and profile.

- Replace only the deteriorated portion of a detail, module, or element of a masonry surface or feature in kind rather than replacing the entire surface or feature. Consider compatible substitute materials only if using the original material is not technically feasible.
- Replace large masonry surfaces or entire features, if necessary, in kind, matching the original in design, detail, dimension, color, pattern, texture and material. Consider compatible substitute materials only if using the original material is not technically feasible.
- Replace missing masonry features with equivalent features, based on accurate documentation of the original feature, or a new design compatible in scale, size, material, and color with the overall character of the building and historic district.
- Test any cleaning technique, including chemical solutions, on an inconspicuous sample area well in advance of the proposed cleaning to evaluate its effects. Cleaning masonry features with destructive methods, including sandblasting, high-pressure water blasting, and power washing is not appropriate.
- Repaint previously painted masonry surfaces in colors that are appropriate to the historic material, building, and district.

**Actions that are inconsistent with established preservation goals and should be avoided include:**

- ✗ Applying a waterproof coating to exposed masonry rather than repairing it.
- ✗ Painting previously unpainted masonry surfaces.



## Architectural Metals

- Retain and preserve architectural metal features that contribute to overall historic character of a building and a site, including such functional and decorative elements as roofing, flashing, cornices, railings, hardware, casement windows, and fences.
- Retain and preserve architectural metals, such as copper, tin, brass, cast iron, wrought iron, and lead, that contribute to the overall historic character of the building and historic district.
- Repair deteriorated architectural metal features and surfaces using recognized preservation methods for splicing, patching, and reinforcing.
- Replace only the deteriorated detail or element of an architectural metal feature in kind rather than replacing the entire feature. Match the original detail or element in design, dimension, texture, and material. Consider compatible substitute materials only if using the original material is not technically feasible.
- Replace entire architectural features, if necessary, in kind, matching the original feature in design, detail, dimension, texture and material. Consider compatible substitute materials only if using the original material is not technically feasible.
- Replace a missing architectural feature with an equivalent feature, based on accurate documentation of the original feature, or a new design compatible with the scale, size, material, and color of the historic building and district.

- Repaint architectural metal surfaces and features in colors that are appropriate to the building and historic district.
- Pretest chemical solutions before cleaning soft metals, including lead, tin, and copper, to ensure they do not damage the color and the texture of the metal surface.
- Clean hard metals such as cast iron, wrought iron, and steel using the gentlest means possible. Consider low-pressure glass bead blasting only if hand scraping and wire brushing are ineffective.

### Actions that are **inconsistent with established preservation goals** and should be avoided include:

- ✗ Introducing metal features or details to an historic building in an attempt to create a false historical appearance.
- ✗ Patching metal roofs or flashing with tar or asphalt products.
- ✗ Cleaning soft metal surfaces with destructive methods like grit blasting.



## Roofs

- Retain and preserve roofs and roof forms that contribute to the overall historic character of a building, including their functional and decorative features, such as roofing materials, cresting, dormers, chimneys, cupolas, and cornices.

- Repair historic roofs and their distinctive features through recognized preservation methods for resetting or reinforcing.
- Replace only the deteriorated portion of a partially deteriorated roof feature in kind to match the original feature in design, dimension, detail, color, and material, rather than replacing the entire feature. Consider compatible substitute materials only if using the original material is not technically feasible.
- Replace a deteriorated historic roofing material or feature, if necessary, in kind to match the original feature in scale, detail, pattern, design, material, and color. Consider compatible substitute materials only if using the original material is not technically feasible.
- Replace a missing roof feature with an equivalent feature, based on accurate documentation of the original feature, or a new design compatible with the scale, size, material, and color of the historic building and district.
- Install new gutters and downspouts, if necessary, so that no architectural features are lost or damaged. Select new gutters and downspouts that match the trim color, unless the existing features are copper. Replace traditional half-round gutters and downspouts with like gutters and downspouts.

### Actions that are **inconsistent with established preservation goals** and should be avoided include:

- ✗ Removing a roof feature that is important in defining the overall character of an historic building, rather than repairing or replacing it.

- ✗ Replacing concealed, built-in gutter systems with exposed gutters.
- ✗ Introducing new roof features, such as skylights, dormers, or vents, that compromise the historic roof design, damage character-defining roof materials, or deviate from the character of the historic district.
- ✗ Installing ventilators, solar collectors, antennas, skylights, or mechanical equipment in locations that compromise character-defining roofs or on roof slopes prominently visible from the street.
- ✗ Installing exposed tarpaper rolls as finished roofing material or roofing tar as a replacement for valley flashing.
- ✗ Patching any roofing or flashing with tar or asphalt products.



### Exterior Walls

- Retain and preserve exterior walls that contribute to the overall historic form and character of a building, including their functional and decorative features, such as cornices, foundations, bays, quoins, arches, water tables, brackets, and entablatures.
- Retain and preserve exterior wall materials that contribute to the overall historic character of a building, including brickwork, stucco, stone, wooden shingles, wooden siding, asbestos siding, and metal, wooden, or masonry trim work.

- Repair exterior wall surfaces, details, and features using recognized preservation repair methods for the surface material or coating.
- Replace only the deteriorated detail or element of an exterior wall in kind to match the original feature in design, dimension, detail, color, and material, rather than replacing the entire exterior wall. Consider compatible substitute materials only if using the original material is not technically feasible.
- Replace an entire exterior wall or feature, if necessary, in kind, matching the original in design, dimension, detail, texture, color, and material. Consider compatible substitute materials only if using the original material is not technically feasible.
- Replace a missing exterior wall or feature with an equivalent wall or feature, based on accurate documentation of the original feature, or a new design compatible with the historic character of the building and the historic district.

Actions that are **inconsistent with established preservation goals** and should be avoided include:

- ✗ Introducing new features, such as window or door openings, bays, vents, balconies, or chimneys, to character-defining exterior walls if they will compromise the architectural integrity of the building.
- ✗ Removing or covering any material detail associated with exterior walls, including decorative shingles, panels, brackets, bargeboards, and cornerboards, unless an accurate restoration requires it.

- ✗ Covering historic wall material, including wooden siding, wooden shingles, stucco, brick, and stonework, with coatings or temporary substitute materials.
- ✗ Introducing features or details to an exterior wall in an attempt to create a false historical appearance.



### Windows and Doors

- Retain and preserve windows that contribute to the overall historic character of a building, including their functional and decorative features, such as frames, sash, muntins, sills, heads, mouldings, surrounds, hardware, shutters, and blinds.
- Retain and preserve doors that contribute to the overall historic character of a building, including their functional and decorative features, such as frames, glazing, panels, sidelights, fanlights, surrounds, thresholds, and hardware.
- Repair historic windows and doors and their distinctive features using recognized preservation methods for patching, consolidating, splicing, and reinforcing.
- Replace only the deteriorated window or door feature in kind, rather than replacing the entire unit. Match the original feature in design, dimension, and materials. Consider compatible substitute materials only if using the original material is not technically feasible.

- Replace a deteriorated window or door, if necessary, in kind, matching the design and the dimension of the original sash or panels, pane configuration, architectural trim, detailing, and materials. Consider compatible substitute materials only if using the original material is not technically feasible.
- Replace a missing window or door with an equivalent unit, based on accurate documentation of the original unit, or a new design compatible with the original opening and the historic character of the building.
- Replace deteriorated or missing wooden shutters with wooden shutters sized to fit the opening and mounted to be operational.
- If desired, introduce narrow-profile exterior or interior storm windows so that they do not obscure or damage the existing sash and frame. Select exterior storm windows with a painted or baked enamel finish color that is compatible with the sash color. For double-hung windows, operable storm window dividers should align with the existing meeting rail.
- If desired, introduce full-light storm doors constructed of wood or aluminum so that they do not obscure or damage the existing door and frame. Select storm doors with a painted, stained, or baked-enamel finish color that is compatible with the color of the existing door.
- If desired and where historically appropriate, carefully install fabric awnings over window, door, or porch openings to ensure that historic features are not damaged or obscured.

**Actions that are inconsistent with established preservation goals and should be avoided include:**

- ✗ Removing original doors, windows, shutters, blinds, hardware, and trim from a character-defining façade.
- ✗ Removing any detail material associated with windows and doors, such as stained glass, beveled glass, or tracery, unless an accurate restoration requires it.
- ✗ Using snap-in muntins to create a false divided-light appearance.
- ✗ Replacing clear glazing with tinted or opaque glazing.
- ✗ Introducing shutters on an historic building with no evidence of previous shutters.
- ✗ Using bare aluminum storm doors.



**Entrances, Porches, and Balconies**

- Retain and preserve entrances, porches, and balconies that contribute to the overall historic character of a building, including functional and decorative elements as columns, pilasters, piers, entablatures, balustrades, sidelights, fanlights, transoms, steps, railings, floors and ceilings.
- Repair historic entrances, porches, and balconies and their distinctive features and materials using recognized preservation methods for patching, consolidating, splicing, and reinforcing.

- Replace only the deteriorated detail or element of an entrance, porch, or balcony feature in kind, rather replacing than the entire feature. Match the original in design, dimension, and material. Consider compatible substitute materials only if using the original material is not technically feasible.
- Replace an entire entrance, porch, or balcony, if necessary, in kind, matching the original in design, dimension, detail, texture, and material. Consider compatible substitute materials only if using the original material is not technically feasible.
- Replace a missing entrance, porch, or balcony with an equivalent feature, based on accurate documentation of the original feature, or a new design compatible with the historic character of the building and district.
- Consider the enclosure of an historic porch to accommodate a new use only if the enclosure can be designed to preserve the historic character of the porch and the building.

**Actions that are inconsistent with established preservation goals and should be avoided include:**

- ✗ Removing any detail material associated with entrances and porches, such as spindlework, beveled glass, or beaded board, unless an accurate restoration requires it.
- ✗ Introducing features or details to an historic entrance, porch, or balcony in an attempt to create a false historical appearance.
- ✗ Enclosing a front porch or a front balcony.

# Foundation Design Guidelines

Buildings have been erected in Coastal Mississippi for over a century in ways which attempt to minimize damage from flooding. Historic buildings, like the one shown below in Bay St. Louis, demonstrate methods used in the Victorian era to treat architectural foundations, and raise the living area above the flood zone. Many of the same foundation design treatments can be used in today's elevation design plans.



**Historic homes can often illustrate a range of elevation approaches previously used in Coastal Mississippi.**

Bay St. Louis Historical Society.

Because of the unique challenges involved in designing an appropriate foundation system for an elevated building, this topic is presented separately from the architecturally related factors that must be evaluated in developing an elevation design plan. Much of the information presented in this section relates to specific engineering factors an applicant must consider in designing a foundation system. These factors include the applicable FEMA flood zone and the ABFE for the location of the historic building. Foundation systems must be designed by professional engineers familiar with relevant safety considerations.

## Foundation Design

The following discussion provides an overview of recommended foundation designs for the elevation of residential buildings in Coastal Mississippi. This information will assist an historic property owner in choosing a foundation design that reduces flood risk and preserves the visual and architectural integrity of the property. These foundation design recommendations have been prepared by FEMA for new construction in the Gulf Coast region.

The two major types of residential foundations within the Gulf Coast region include open and closed foundations.

**Closed foundations** are distinguished by perimeter walls of masonry construction that enclose the footprint of a residence. These foundations may also include concrete slab-on-grade construction. Generally, closed foundations are limited to an elevation of 8 feet above adjoining grade. Historic homes located within the immediate vicinity of the Gulf Coast may not be suited for closed foundation design, considering the local flood and wind hazards.

**Open foundations** are characterized by raised piers or piles with open area under the elevated structure. In some cases, open foundations may be fitted with non-structural, porous, architectural screening panels through which rising water levels can flow without restriction.

The selection of an open or closed foundation depends upon the proposed height of a foundation above grade and the potential storm-related hazards within the flood zone. Open foundations are generally most appropriate where the foundation height is greater than 8 feet above grade and for sites that are located in a flood zone where the highest potential flood-related forces, especially those pertaining to high wind and water levels associated with storm surges, can be anticipated. Oceanfront locations

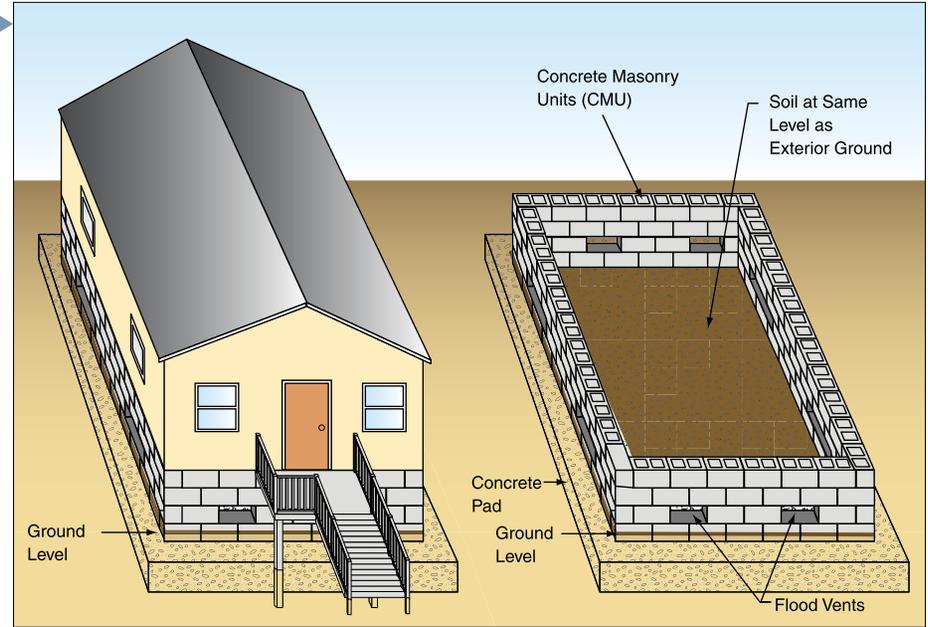
within the designated velocity zone or “V Zone” require open foundations.

For detailed foundation design criteria and strategies, applicants and their design professionals should refer to local building codes and FEMA publication 550, *Recommended Residential Construction for the Gulf Coast: Building Strong and Safe Foundations*. Typical residential foundation plans are illustrated in the Mississippi Renewal Forum publication: *A Pattern Book for Gulf Coast Neighborhoods*.

### Residential Foundations Types

#### Closed Foundation:

- Foundations up to 8 feet above grade
- Generally for inland areas
- Reinforced masonry – crawl space
- Reinforced masonry – stem wall



**Figure 4-1. Closed Foundation with Crawl Space.**

FEMA 550

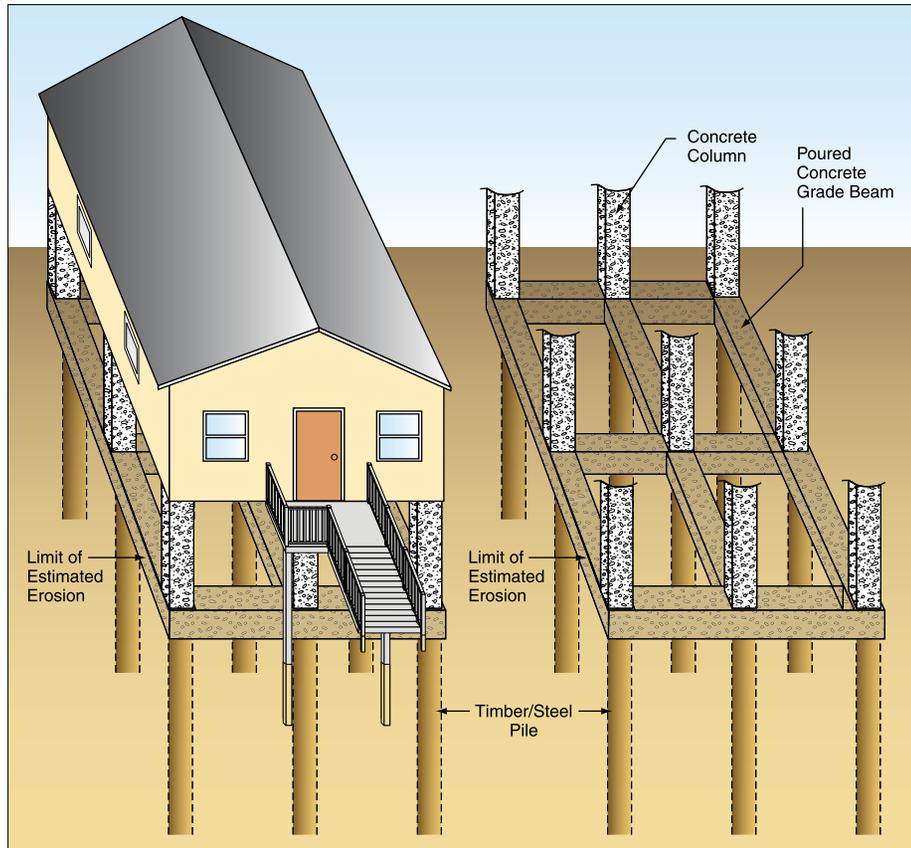
#### Open Foundation:

- Foundations up to 15 feet above grade
- Generally for coastal areas
- Timber pile
- Steel pipe pile, concrete column, grade beam
- Timber pile, concrete column, grade beam
- Concrete column, grade beam
- Concrete column, grade beam, slab

FEMA has delineated zones on dFIRMs that depict floodplains and areas subject to flooding. These zones provide guidance for owners and design professionals on foundation design and elevation design projects.

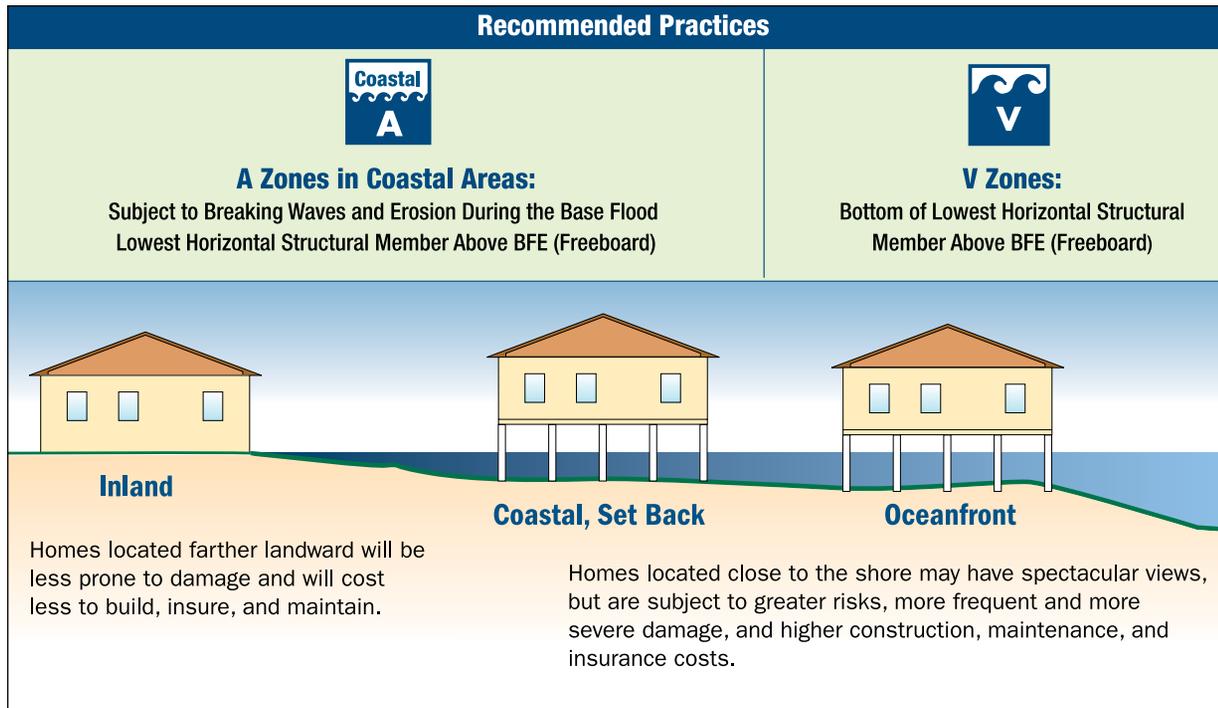
**V Zone – Coastal High Hazard Area.** 1 percent or greater chance of annual flooding from storm surge, and breaking waves greater than 3 feet above flood conditions; significant wind forces.

**VE Zone.** Areas subject to inundation by the 1-percent-annual-chance flood event with additional hazards due to storm-induced velocity wave action. Mandatory flood insurance purchase requirements and floodplain management standards apply.



**Figure 4-2. Open Foundation with Grade Beam.**

FEMA 550



- Preservation of the overall roof-ridgeline height within an historic district (if the historic building is located in such an area).
- Retention of historic status of the elevated historic building (defined as either listed, or eligible for listing, in the National Register of Historic Places, or locally designated historic as either an individual landmark or a contributing building within a locally designated historic district).
- Eligibility to maintain flood insurance under the NFIP at the most favorable rate.

**Under NFIP guidance, any new construction on vacant parcels within historic districts is not exempt from the floodplain ordinance requirement, and must be elevated to maximum ABFE level.**

After Hurricane Katrina, flood maps were revised to account for all historic flood data since the maps were last updated. To reflect a more accurate risk of flooding in the coastal counties, FEMA, through the NFIP, issued Katrina Flood Recovery Maps, also known as ABFEs, that expanded the geographic size and vertical height estimates of the 100-year or standard estimated flood level. After further analysis, FEMA revised the existing Flood Insurance Rate Maps (FIRMs), which were subsequently digitized. Once adopted by a local community, the dFIRM becomes the required elevation standard for all new construction and substantial improvements.

For MDA's EGP and SRAP programs, the elevation requirement is the ABFE for property owners with a building permit application dated before November 15, 2007, and the dFIRM, for applications submitted after this date.

**Figure 4-3. Recommended Open Foundation Practice for Buildings in A Zones, Coastal A Zones, and V Zones.**

FEMA Coastal Construction Manual 55

### Coastal A Zone – Special Flood Hazard Area.

Landward side of V Zone subject to velocity flows, erosion, and breaking wave heights of up to 3 feet above flood conditions.

**Base Flood Elevation (BFE).** The expected elevation of flood waters during the 1-percent-annual-chance flood event.

**Design Flood Elevation (DFE).** Locally mandated flood elevation, equal to or higher than the BFE.

Additional information on delineated zones is included in the glossary in Section 6, Resources and Publications, of these Guidelines.

## Elevation Requirements

Complying with MDA's grant requirements and preserving the historic integrity of the structure to meet the requirements of historic preservation reviews and the NFIP are important considerations in the elevation of an historic property. As outlined in Section 1, Introduction, the goal of this effort is to establish an appropriate elevation height below the level required for existing non-historic buildings or new construction on vacant parcels. By coordinating this effort with HPCs and the SHPO, owners of historic properties will benefit from:

- Reduced flood risk from future natural disasters

Table 4-1 provides estimated elevation heights in the five communities with local HPCs, using data from preliminary EGP applications, and was computed by subtracting the topographic elevation (above mean sea level) from the ABFE height (above mean sea level). Some applicants may need to refer to the dFIRM to identify the relevant flood elevation. The data in Table 4-1 was compiled from the ABFE contour maps and U.S. Geological Survey topographic maps.

Table 4-1 provides an estimate of how high a non-historic building would need to be elevated to meet the ABFE height requirement. The table is based on the assumption that the buildings are at grade. The table provides potential maximum height requirements, e.g., if an existing building is on a crawl space two feet above grade, the required change in height will be less than if the building is at grade.

Table 4-1 is provided as a reference for local jurisdictions and their HPCs in consideration of appropriate elevations heights in their respective historic districts. This information will be used in the review by HPCs of requests for Certificates of Appropriateness involving MDA-funded projects.

The appropriate height is likely to vary district by district based on the flood risk and the existing foundation heights of other contributing historic structures. Although the owners of historic structures may receive an exemption from the floodplain ordinance height requirement, they are likely to be interested in elevating their home at least a few feet to achieve a reduction in flood risk.

**Table 4-1. Estimated Elevation Height Requirements for Selected Coastal Communities.**

City	Historic District	Number of Applicants*	Estimated Height Requirement
<b>Pass Christian</b>		0	Varies from 0 ft. – 12 ft.
<b>Bay St. Louis</b>	Beach Boulevard	26	1 structure at 2 ft.
			12 structures at 3 ft.
			1 structure at 5 ft.
			10 structures at 6 ft.
			1 structure at 7 ft.
	1 structure at 11 ft.		
Washington Street	0	Varies from 4 – 6 ft.	
Sycamore Street	0	Varies from 2 – 6 ft.	
Main Street	0	0 ft.	
<b>Biloxi</b>	Edgewater Park	0	Varies from 0 – 3 ft.
	West Beach	0	Varies from 0 – 25 ft.
	West Central	6	5 structures vary from 0 – 12 ft.
			1 structure at 0 ft.
	Downtown	0	Varies from 0 – 15 ft.
	East Central	6	1 structure varies from 3 – 15 ft.
5 structures at 3 ft.			
Point Cadet	0	Varies from 0 – 25 ft.	
<b>Ocean Springs</b>	Lover’s Lane	0	Varies from 0 – 21 ft.
	Old Ocean Springs	3	1 structure at 0 ft.
			1 structure at 6 ft.
			1 structure at 9 ft.
	Bowen	0	0 ft.
	Railroad	0	0 ft.
	Indian Springs	0	Varies from 0 – 18 ft.
	Marble Springs	0	Varies from 0 – 18 ft.
Shearwater	0	Varies from 0 – 21 ft.	
Sullivan-Charnley	0	Varies from 0 – 21 ft.	
<b>Pascagoula</b>	Krebsville	0	Varies from 0 – 11 ft.
	Orange Avenue	0	Varies from 3 – 10 ft.
	Front Street	0	Varies from 6 – 21 ft.

\*As of July 15, 2008. Exact height requirements must be confirmed with local floodplain managers.



# Relationship of Foundation Design to Architectural Design and Historic Preservation

The foundation design and elevation height should be selected to preserve physical integrity of the historic building. Property owners should consider working with a design professional or elevation contractor, in concert with a professional engineer, to choose the appropriate foundation and treatment. The local HPC, and building permit staff, can provide guidance on complying with design guidelines and building codes.

Successful elevation designs preserve the visual and architecturally significant features of an historic property while minimizing the flood risk. Preparing elevation design proposals for historic residential structures requires careful analysis of architectural elements and the context of the property. Some properties may require a minimal change in elevation with little impact on the historic integrity of the property or surrounding neighborhood. In other situations, there may be a dramatic difference between the existing elevation and the maximum ABFE height requirement.

## Elevation Considerations

- Consider the location of the historic property, determine the flood zone of the site, and identify local building code requirements.
- Review local flood mapping sources and then determine the ABFE for the property. The height for the first floor elevation of the building is based on the ABFE for the flood zone for the property.
- Compare the existing first floor elevation of the residence to the ABFE.

## Architectural Considerations

Determine the most appropriate elevation based on the analysis presented in Section 3, Architectural Design Guidelines, of these Guidelines:

- Review building massing, architectural style, and façade design.
- Review distinguishing features of the property, including its site.
- Evaluate and assess the potential visual impacts on adjoining properties.
- Identify architectural and landscape screening alternatives.

Taking these considerations into account, choose a foundation design that will minimize the flood risk but preserve your property's historic features.

The placement of potential piers, columns, and other foundation elements must reflect an understanding of the architectural elements of the historic structure. Placement of the foundation components should complement existing locations of façade features such as columns, colonnades, corners, trim elements, and other vertical features. The existing elements provide visual references that can be repeated and extended throughout the new foundation design.



**The Pollack House, located along East Beach Boulevard in Pascagoula, depicts a raised first floor living area reached by flanking entry stairs.**

Library of Congress, Prints and Photographs Division, Historic American Buildings Survey, Reproduction Number (HABS, MISS, 30\_PASCA, 5-1)



**This historic home in Mobile, Alabama represents an elevation of approximately 7 feet above grade, and exhibits architectural screening with repetition of architectural forms.**

Library of Congress, Prints and Photographs Division, Historic American Buildings Survey, Reproduction Number (HABS, ALA, 49-MOBI, 212-3)

## Foundation Screening Systems

Architectural and landscape screening approaches for new foundation conditions can provide effective means to mitigate the adverse visual effects associated with elevating an historic property. These approaches must carefully consider foundation requirements associated with relevant flood hazard zones. Architectural screening of open foundations must address potential flood and wind forces and consider their effect upon the historic character of the structure.

Landscape screening near the foundation perimeter may offer the most flexible and effective approach to maintaining the scale of an historic property and its site. Evergreen and deciduous shrubs and small trees can provide scale transition, without restricting potential flood flows under the open foundation. This benefit is particularly important in zones where flood forces may be significant.

Because many architectural screening systems are prohibited in the highest hazards zones (V Zone), applicants and designers must determine at the outset whether an architectural screening system is practical or feasible. In other hazard zones, the use of open lattice screening panels and other non-structural breakaway façade panels for a new base or sub-storey can offer effective means to buffer the changes in elevation to an existing structure.



**This historic building in Pascagoula is an excellent example of a foundation with a combination of architectural and landscaping screening.**

The key considerations for foundation screening systems include: design provisions that allow unrestricted flows of rising flood waters, breakaway features that do not add wind loads to a structure, and design elements that provide a suitable architectural statement for the base or sub-storey that complements the historic property.

FEMA's Technical Fact Sheet No. 27, *Enclosures and Breakaway Panels*, summarizes building code requirements and design considerations for these architectural screening systems.

Historic property owners and designers should familiarize themselves with **landscape design practices and materials** appropriate for use within Coastal Mississippi. A variety of governmental, university, and published sources are available to provide information on indigenous plant materials and historically appropriate landscape design. The following list provides a starting point for the development of customized elevation designs incorporating foundation screening through new plantings. For further information, please consult:

- The Mississippi Association of Agricultural Agents, which maintains a Horticultural Committee. ([www.countyagent.com/macaa/index.html](http://www.countyagent.com/macaa/index.html))
- The Natural Resources Conservation Service (NRCS) operates the Jamie L. Whiten Plant Materials Center. The Center has published documents to solve specific resource conservation needs. (<http://plant-materials.nrcs.usda.gov/mspmc/publications.html>)  
The NRCS offers the following resource: "Planting Guide for Establishing Coastal Vegetation on the Mississippi Gulf Coast" by Homer Wilkes, State Conservationist, Jackson, MS. Available as Technical Note 104 (April 2007) in the NRCS Plant Materials Program. ([www.plant-materials.nrcs.usda.gov/pubs/mspmmspu7271.pdf](http://www.plant-materials.nrcs.usda.gov/pubs/mspmmspu7271.pdf))
- The Mississippi State University Department of Landscape Architecture is a resource on plant use on the Mississippi Coast. Telephone: 662-325-3012. ([www.lalc.msstate.edu](http://www.lalc.msstate.edu))

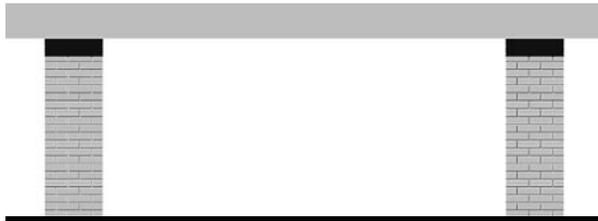
Additional Published Resources for Landscape Plant Selection and Design:

- Barrick, William and Pelczar, Rita. *Smart Garden Regional Guide: Southeast (American Horticultural Society Smartgarden Regional Garden Guides)*
- Harrison, Marie. *Southern Gardening: An Environmentally Sensitive Approach*
- O'Malley, Therese (ed.). *Regional Garden Design in the United States (Dumbarton Oaks Colloquium Series in the History of Landscape Architecture)*
- Wasowski, Sally. *Gardening with Native Plants of the South*

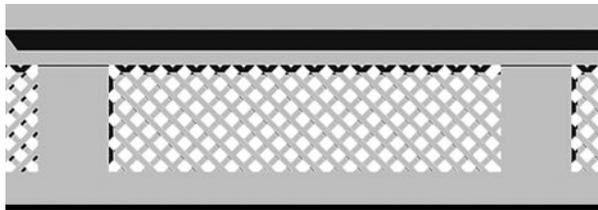
Historic Landscape Design Web Resources:

- Mississippi State University Extension Service, Mississippi Agricultural and Forestry Experiment Station, Landscape Design for Antebellum Homes. (<http://msucare.com/lawn/landscape/types/antebellum.html>)
- Old House Journal. ([www.oldhousejournal.com/npsbriefs2/brief36.shtml](http://www.oldhousejournal.com/npsbriefs2/brief36.shtml))

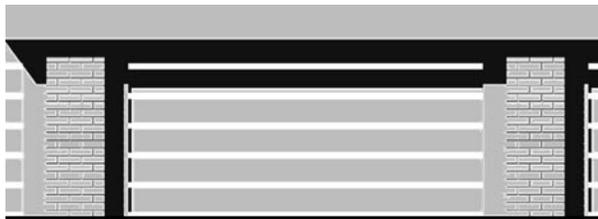
## Screening Panel Configurations



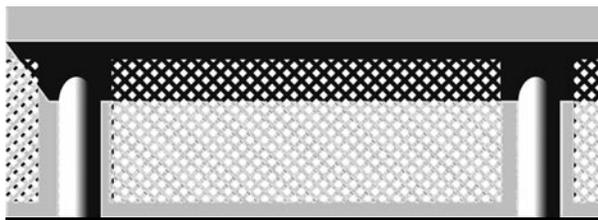
Elevation with no screen.



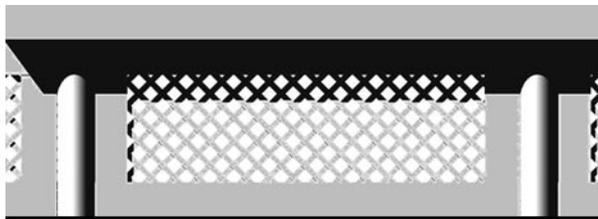
Elevation with lattice covering piers.



Elevation with louver screen panel.

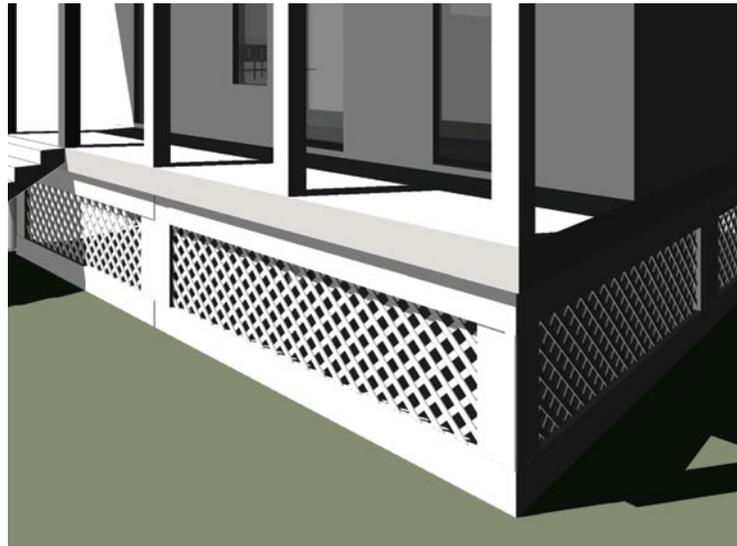


Elevation with fine pattern lattice screen panel.



Elevation with bold pattern lattice screen panel.

## Foundation Screening Concepts



Architectural screening of base.



Screening of extended sub-storey.



Screening of sub-storey with compound stair.

## Permit Requirements

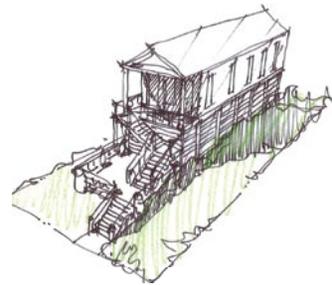
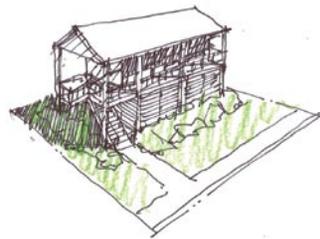
All elevation design plans and related foundation designs must be reviewed and approved by the local building permit office and the HPC. The historic property owner must submit elevation and foundation design plans prepared by a qualified professional designer. Successful elevation design plans demonstrate a thorough understanding of architectural, engineering, historic preservation, and flood hazard mitigation concerns. Once a project has received approval by the local building permit office and HPC, MDA will issue its second financial disbursement under the EGP or SRAP program, as described in Section 1, Introduction, and the Applicant Guide. Section 5, Elevation Design – Next Steps, provides more specific permitting information on a community-by-community basis.



**TOP:** Applicants should examine examples of landscaping approaches involving historic buildings within their communities.

**RIGHT:** Based on site design factors, topography, and ABFE requirements, foundation screening and circulation alternatives can then be developed for further evaluation.

**BOTTOM:** These renderings depict the residential types elevated to a moderate (5 foot) level, and illustrate the range of natural landscape screening that could be used to minimize adverse visual effects associated with elevation.



# Elevation Design – Next Steps

Sections 1 through 4 of these Elevation Design Guidelines have presented a series of factors that must be carefully evaluated in developing an elevation design plan that achieves both risk reduction and preservation of important historic buildings and historic districts. This process requires careful discernment of patterns for entire neighborhoods, topography, site design, and architectural context related to both individual historic buildings and larger historic districts. Whereas individual elements are presented in previous sections of the Guidelines, this section assembles and integrates these factors to provide a series of broad design approaches for use in Coastal Mississippi. The goal of this effort is to visually depict the ways in which elevation design involving historic buildings can be successfully completed. These designs should not be viewed as the only ways in which historic preservation concerns can be addressed in the elevation design process. Hopefully, these will spark applicants and their design professionals to think creatively about how elevation can be handled in a positive and sensitive manner. Because of the national import of Hurricane Katrina on Coastal Mississippi, these elevation projects may be viewed over time as “historic” in their own right.

## Design and Construction Guidance

Considering the range of building permit and historic preservation requirements, applicants for the MDA EGP and SRAP programs must work closely with a design professional to prepare the elevation design plans and a home elevation contractor to implement the project. Some firms may be able to provide both design and construction services.



**Historic Preservation Commission members will provide useful advice to applicants in the development of elevation plans.**

These professionals will serve as the applicant’s representatives in preparing and submitting elevation design plans to local building permit offices and HPCs. Initially, MDA staff provide architectural guidance to the applicant, who will then contract with the design and construction professionals to complete the project planning, design, and construction efforts.

## Project Coordination

Although the responsibility of initiating and completing an elevation design project rests with the owner/applicant, advice and direction for the project will be available from MDA and other local planning and preservation authorities. Once an applicant approaches MDA on a potential project, their historic preservation staff will be available to respond to grant application and local project coordination aspects.

## Elevation Approaches – Illustrated Alternatives

These Guidelines outline a series of factors to be weighed by the property owner/applicant in the customized design plan development process.

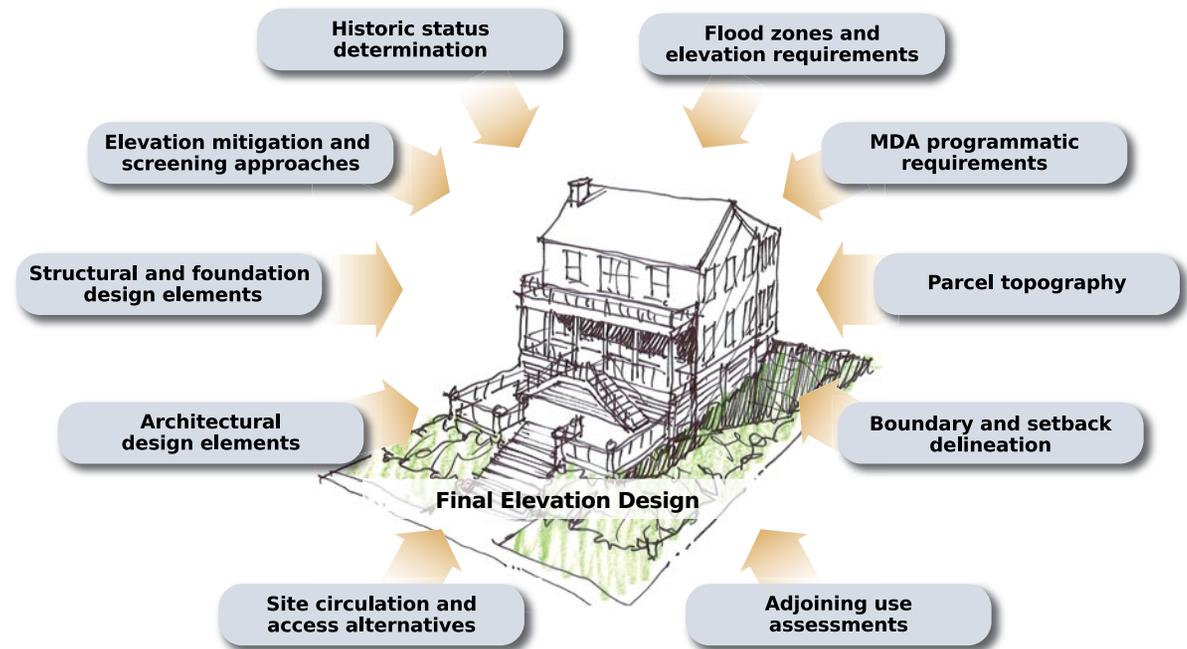
Based upon the unique characteristics of the parcel on which an historic home is located, the applicant should develop a series of options for elevation using the information contained in these Guidelines. Then the applicant should select the option that best addresses the factors noted above and achieves the best balance of risk reduction and limited elevation height level. To assist in this process, a series of possible elevation scenarios is depicted on the following two pages. They are presented using three of the most typical house forms found in Coastal Mississippi—Side Gable (Creole Cottage), Gable Front Rectangular Plan (Shotgun), and Two Storey Massed Plan (Neoclassic). Each house type is also depicted at three differing elevation heights—a minor elevation level increase (less than 5 feet), a modest elevation level increase (5 feet to less than one storey), and a significant elevation level increase (more than one storey).

## Elevation Decision Factors

The decision to elevate a historic home involves the owner's appraisal of the long-term benefits of the elevation alternatives. The decision-making should include a careful appraisal of the effects of an elevation action upon the historic character of the property, the protection of the home against future storm events, the mitigation measures to screen the new foundation, and the overall costs and potential savings over time from the elevation project.

The practical aspects of elevating a property above the flood hazard elevations must be carefully weighed against the potential adverse effects on the historic character of the home. Applicants are encouraged to consider nominal elevation increases in order to prevent significant negative visual impacts to their historic properties. This approach requires close coordination with local building permit offices and HPCs to arrive at a successful outcome.

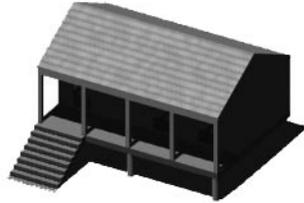
The architectural and landscape screening and scaling measures identified in these Elevation Design Guidelines provide important ways to limit the effects of an elevation project and support lasting flood hazard protection for the historic home.



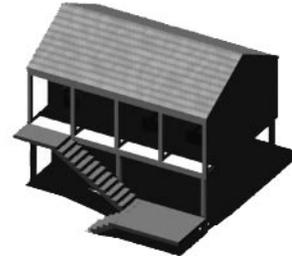
**Factors to be considered when developing a customized elevation design plan.**



At Grade



5' Above Grade



10' Above Grade

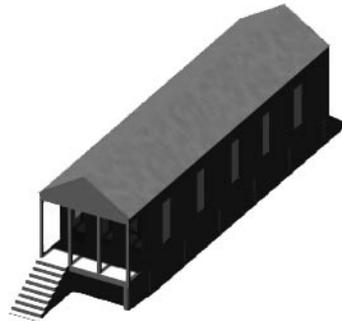


15' Above Grade

Side Gable (Creole Cottage)



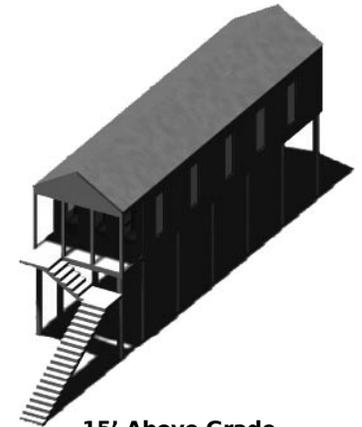
At Grade



5' Above Grade



10' Above Grade



15' Above Grade

Gable Front Rectangular Plan (Shotgun)



At Grade



5' Above Grade



10' Above Grade



15' Above Grade

Two Storey Massed Plan (Neoclassic)



At Grade



5' Above Grade



10' Above Grade



15' Above Grade

Side Gable (Creole Cottage)



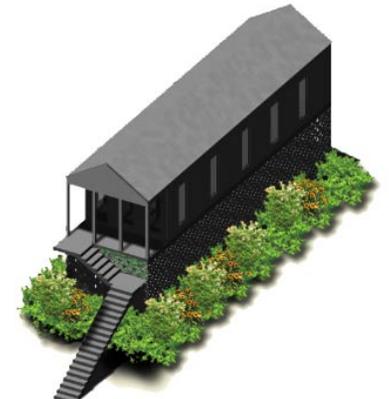
At Grade



5' Above Grade



10' Above Grade



15' Above Grade

Gable Front Rectangular Plan (Shotgun)



At Grade



5' Above Grade

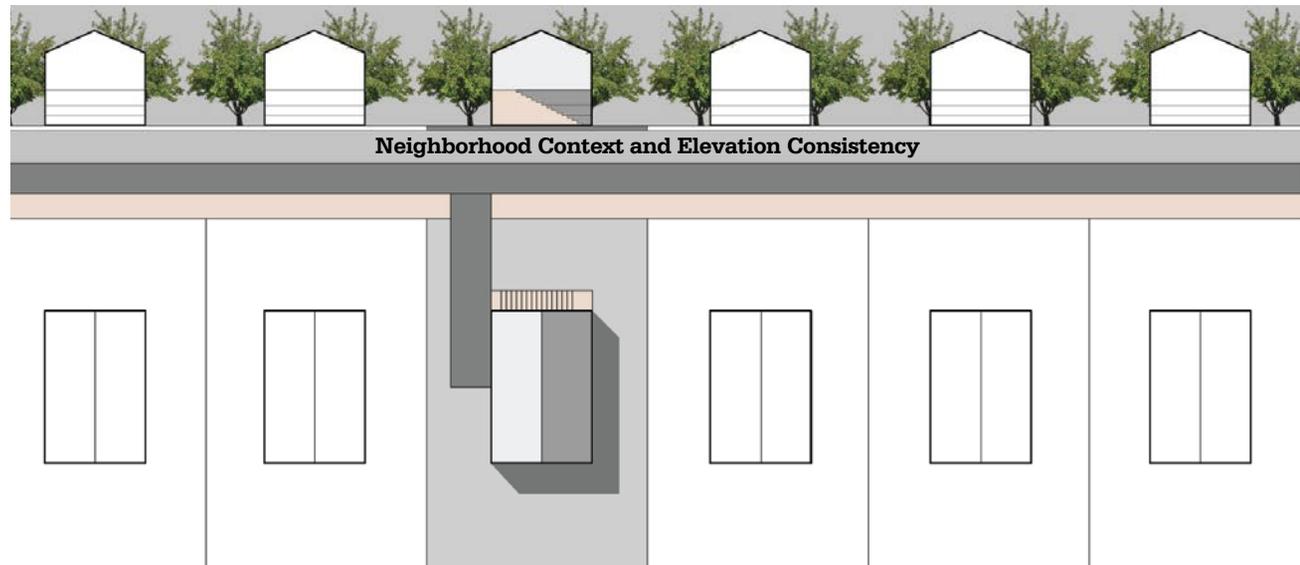


10' Above Grade

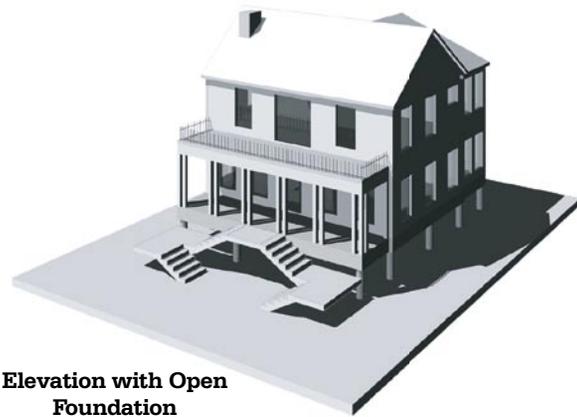


15' Above Grade

Two Storey Massed Plan (Neoclassic)



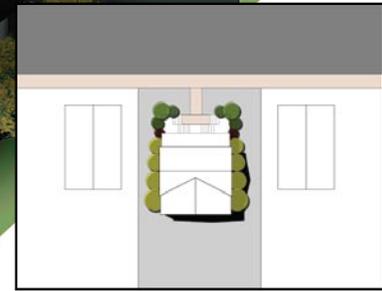
Elevation Alternatives



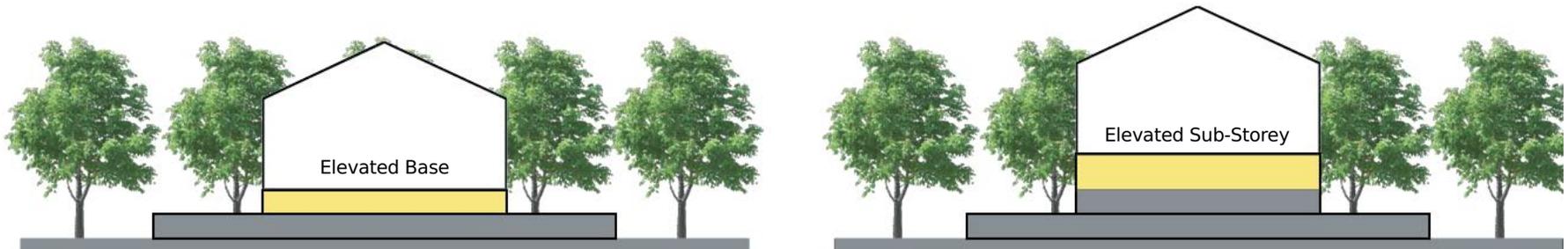
**Elevation with Open Foundation**



**Elevation with Landscape Screening**



**Landscape Screening Site Plan**



# Resources and Publications

## National Reference Information and Publications

### Secretary of the Interior's Standards for Rehabilitation

The *Secretary of the Interior's Standards for Rehabilitation* (Department of the Interior Regulations, Title 36 Code of Federal Regulations [CFR] Part 67) are used by Federal agencies in carrying out their historic preservation responsibilities for properties in Federal ownership or control, and State and local officials in reviewing both Federal and non-Federal rehabilitation projects. They have also been adopted by numerous local historic preservation commissions for use in evaluating renovation and new construction within locally designated historic districts.

The Mississippi Development Authority (MDA) funds Elevation Grant Program (EGP) and Small Rental Assistance Program (SRAP) activities with Federal monies provided through the U.S. Department of Housing and Urban Development (HUD). As a result, MDA must carry out historic preservation responsibilities delegated to it by HUD, including the requirement to work with funding applicants to minimize adverse effects on historic properties under Section 106 of the National Historic Preservation Act of 1966. Reducing the overall height of elevation, and using the *Standards for Rehabilitation* in conjunction with these MDA Elevation Design Guidelines, should ensure that projects move successfully through the historic preservation review process, resulting in the award of project funding.

The intent of the *Standards for Rehabilitation* is to assist in the long-term preservation of a property's significance

through the retention of historic materials and features. The *Standards for Rehabilitation* pertain to historic buildings of many construction types, materials, sizes, and occupancies. They also address related landscape features and the building's site and environment, as well as attached, adjacent, or related new construction.

"Rehabilitation" of an historic building involves at least some repair to allow efficient contemporary use; however, these repairs and alterations must not damage or destroy materials, features, or finishes that are important in defining the building's historic character. For example, certain treatments, if improperly applied, may cause or accelerate physical deterioration of the historic building. This can include using improper repointing or exterior masonry cleaning techniques, or introducing insulation that damages the historic fabric. In most of these situations, use of these materials and treatments will result in a project that does not meet the *Standards for Rehabilitation*. Similarly, exterior additions that slavishly replicate the form, material, and detailing of the building to the extent that they compromise the historic character of the building will also fail to meet the *Standards for Rehabilitation*.

When working with a design professional to design an elevation project that will be successfully approved by a local historic preservation commission and the State Historic Preservation Office (Mississippi Department of Archives and History), the *Standards for Rehabilitation* should be carefully integrated into the proposed design. They are to be applied to specific rehabilitation projects in a reasonable manner, taking into consideration economic and technical feasibility. The *Standards for Rehabilitation* are as follows:

**Standard 1.** A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building, site, and environment.

**Standard 2.** The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

**Standard 3.** Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.

**Standard 4.** Most properties change over time; those changes that have acquired significance in their own right shall be retained and preserved.

**Standard 5.** Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.

**Standard 6.** Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

**Standard 7.** Chemical or physical treatments, such as sandblasting, that cause damage to historic materials, shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

**Standard 8.** Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

**Standard 9.** New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

**Standard 10.** New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

To review the *Standards for Rehabilitation* and their associated guidelines, along with more detailed visual information on the treatment of historic building materials using the *Standards*, please visit [www.nps.gov/history/hps/tps/standguide/index.htm](http://www.nps.gov/history/hps/tps/standguide/index.htm).

## Federal Emergency Management Agency Publications

The Federal Emergency Management Agency (FEMA) makes available numerous publications of interest to the public and professional engineers, floodplain managers, building officials, and local historic preservation commissions. In particular, the following publications may be of use to applicants requesting MDA funding, to learn

more about the design of foundation systems in high-hazard coastal areas.

**FEMA 15.** *Design Guidelines for Flood Damage Reduction* (December 1981)

**FEMA 54.** *Elevated Residential Structures* (March 1984)

**FEMA 55.** *Coastal Construction Manual*, Third Edition (June 2000) (foundations, but not pilings) three-volume set

**FEMA 102.** *Floodproofing Non-Residential Structures* (May 1986)

**FEMA 114.** *Design Manual for Retrofitting Floodprone Residential Structures* (December 1986. Presents floodproofing techniques that can be used for existing residential structures.)

**FEMA 259.** *Engineering Principles and Practices for Retrofitting Floodprone Residential Buildings* (January 1995. Provides engineering design and economic guidance to engineers, architects, and local code officials about what constitutes technically feasible and cost-effective retrofitting measures for floodprone residential structures.)

**FEMA 265.** *Managing Floodplain Development in Approximate Zone A Areas*, A Guide for Obtaining and Developing Base (100-Year) Flood Elevations with Quick-2, Version 1.0, Computation of Water Surface Elevations (July 1995)

**FEMA 311.** *Guidance on Estimating Substantial Damage Using the National Flood Insurance Program (NFIP) Residential Substantial Damage Estimator*, Guidance: Software and Manual Computation Worksheet, Software Version 1.1 (December 1998)

**FEMA 346VT (Video Tape).** *Above the Flood: Elevating Your Floodprone House*. (June 2000. Narrated version of FEMA 347 including animations, live footage, and interviews)

**FEMA 347.** *Above the Flood: Elevating Your Floodprone House* (May 2000)

**FEMA 348.** *Protecting Building Utilities from Flood Damage* (November 1999)

**FEMA 386-1.** *Getting Started, Building Support for Mitigation Planning*, State and Local Mitigation How-To Guide (September 2002)

**FEMA 386-6.** *Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning*, State and Local Mitigation How-To Guide (May 2005)

**FEMA 480.** *National Flood Insurance Program Floodplain Management Requirements*, A Study Guide and Desk Reference for Local Officials (February 2005)

**FEMA 496.** *Joining the National Flood Insurance Program* (May 2005)

**FEMA 499.** *Home Builder's Guide to Coastal Construction* Technical Fact Sheet Series (August 2005. Contains recommendations for residential buildings subject to flood and wind forces in coastal environments. Addresses siting of coastal buildings and recommended building design and construction practices including structural connections, the building envelope, and utilities.)

**FEMA 550.** *Recommended Residential Construction for the Gulf Coast; Building on Strong and Safe Foundations* (July 2006. This design manual provides recommended designs and guidance for rebuilding homes destroyed by hurricanes in the

Gulf Coast. The manual also provides guidance in designing and building less vulnerable new homes that reduce the risk to life and property.)

- Fact Sheet No. 1.** Coastal Building Successes and Failures
- Fact Sheet No. 2.** Summary of Coastal Construction Requirements and Recommendations
- Fact Sheet No. 3.** Using a Flood Insurance Rate Map (FIRM)
- Fact Sheet No. 4.** Lowest Floor Elevation
- Fact Sheet No. 5.** V Zone Design and Construction Certification
- Fact Sheet No. 6.** How Do Siting and Design Decisions Affect the Owner's Costs?
- Fact Sheet No. 7.** Selecting a Lot and Siting the Building
- Fact Sheet No. 8.** Coastal Building Materials
- Fact Sheet No. 9.** Moisture Barrier Systems
- Fact Sheet No. 10.** Load Paths
- Fact Sheet No. 11.** Foundations in Coastal Areas
- Fact Sheet No. 12.** Pile Installation
- Fact Sheet No. 13.** Wood-Pile-to-Beam Connections
- Fact Sheet No. 14.** Reinforced Masonry Pier Construction
- Fact Sheet No. 15.** Foundation Walls
- Fact Sheet No. 16.** Masonry Details
- Fact Sheet No. 17.** Use of Connectors and Brackets

- Fact Sheet No. 18.** Roof Sheathing Installation
- Fact Sheet No. 19.** Roof Underlayment for Asphalt Shingle Roofs
- Fact Sheet No. 20.** Asphalt Shingle Roofing for High-Wind Areas
- Fact Sheet No. 21.** Tile Roofing for High-Wind Areas
- Fact Sheet No. 22.** Window and Door Insulation
- Fact Sheet No. 23.** Housewrap
- Fact Sheet No. 24.** Roof-to-Wall and Deck-to-Wall Flashing
- Fact Sheet No. 25.** Siding Installation and Connectors
- Fact Sheet No. 26.** Shutter Alternatives
- Fact Sheet No. 27.** Enclosures and Breakaway Walls
- Fact Sheet No. 28.** Decks, Pools, and Accessory Structures
- Fact Sheet No. 29.** Protecting Utilities
- Fact Sheet No. 30.** Repairs, Remodeling, Additions, and Retrofitting
- Fact Sheet No. 31.** References
- FEMA.** *Answers to Questions About the National Flood Insurance Program*, May 2006
- FEMA.** *Reducing Flood Losses Through the International Codes, Meeting the Requirements of the National Flood Insurance Program*, 2nd Edition, 2005
- Title 44.** Code of Federal Regulations, Parts 59-78, National Flood Insurance (NFIP) Regulations (Revised October 2002)

Individuals may view electronic copies of these documents by visiting to the FEMA Library, an electronic collection of research and publication materials maintained by this agency. To search for files in the library, please visit [www.fema.gov/library](http://www.fema.gov/library).

In addition, many of these publications are available, free of charge, by requesting them from FEMA's Publications Warehouse. Have the publication reference number available and contact the warehouse at:

Telephone: 1-800-480-2520  
(8:00 a.m. – 5:00 p.m. Eastern Time)  
Address: P.O. Box 2012, Jessup, MD 20794-2012  
Fax: 301-362-5335

## State Reference Information and Publications

### Mississippi State Historic Preservation Office

Under the National Historic Preservation Act, State governments act in partnership with the Federal government to carry out a series of broad historic preservation programs to preserve and protect historic properties across the United States. In Mississippi, the Mississippi Department of Archives and History undertakes surveys of historic properties and archaeological sites, evaluates resources for listing in the National Register of Historic Places, works with Federal agencies on protection of historic properties through regulatory review, assists local governments with historic preservation activities, provides direct grants to property owners for repair and improvements to significant resources, and administers tax incentive programs to encourage the re-use of income-producing historic buildings.

For more information:

Mississippi Department of Archives and History  
Historic Preservation Division  
P.O. Box 571, Jackson, MS 39205-0571  
Telephone: 601-576-6940  
Fax: 601-576-6955  
jwood@mdah.state.ms.us

For general information on historic preservation programs and techniques via the Internet, visit [www.mdah.state.ms.us/hpres/index.php](http://www.mdah.state.ms.us/hpres/index.php).

### **Mississippi Flood Map Modernization Initiative**

The Mississippi Flood Map Modernization Initiative was begun in 2003 to modernize the flood mapping program for Mississippi and across the United States. In Mississippi, this program is a joint effort of FEMA, the Mississippi Emergency Management Agency (MEMA), and the Mississippi Department of Environmental Quality (MDEQ). This ongoing effort should provide all 82 counties within Mississippi with new countywide Digital Flood Insurance Maps (DFIRMs) by 2010.

The MDEQ Web site (see below) contains useful information on the status of mapping initiatives, a detailed list of agencies that may be contacted for additional information, as well as links to national and regional information source materials.

For more information on this initiative via the Internet, visit <http://geology.deq.ms.gov/floodmaps/default.htm>.

### **Mississippi Coastal Mapping Project**

To assist with ongoing Hurricane Katrina and Rita recovery efforts, FEMA, in concert with MEMA and MDEQ, is undertaking a comprehensive remapping of coastal

flood hazards for the 14 communities within Mississippi's coastal counties.

Members of the public can obtain information by calling the Project Call Center:  
1-800-816-2804  
(9:00 a.m. – 5:00 p.m., Monday through Friday)

For more information on this initiative via the Internet, please visit [www.mscoastalmapping.com](http://www.mscoastalmapping.com).

### **Guide to Integration of Requirements: FEMA, Mississippi Building and Fire Codes, and the Secretary of the Interior's Guidelines for Rehabilitation**

Under contract to the State Historic Preservation Office, Preservation Architecture—a specialty architectural firm in Albany, NY, headed by Marilyn E. Kaplan—developed this excellent guide in August 2007. This guide discusses the interrelated requirements of adopted building codes, construction in areas susceptible to flooding and wind damage, and local and Federal historic preservation requirements.

This guide was developed to provide information to the State Historic Preservation Office in its administration of \$26 million in Federal funds, made available through the U.S. Department of the Interior and the National Park Service, for its Hurricane Grants Assistance Program.

To obtain a copy of this guide, please contact:  
Mississippi Department of Archives and History  
Historic Preservation Division  
P.O. Box 571, Jackson, MS 39205-0571  
Telephone: 601-576-6940  
Fax: 601-576-6955  
hpres@mdah.state.ms.us

## **Local Reference Information and Publications**

### **Mississippi Renewal Forum Summary Report for Bay St. Louis, Biloxi, D'Iberville, Gautier, Gulfport, Long Beach, Moss Point, Ocean Springs, Pascagoula, Pass Christian, and Waveland**

To obtain a copy, contact:

The Town Paper  
309 Main Street, Gaithersburg, MD 20878  
[www.TNDtownpaper.com](http://www.TNDtownpaper.com)

See also a companion piece:

### **A Pattern Book for Gulf Coast Neighborhoods**

To obtain a copy, contact:

Urban Design Associates  
707 Grant Street, 31st Floor, Pittsburgh, PA 15219  
[www.urbandesignassociates.com](http://www.urbandesignassociates.com)

## Coastal Mississippi Historic Building Types and Important Architectural Features

### TYPE: Rectangular Plan (Gable-Front)

Buildings exhibiting the Rectangular Plan (Gable-Front) form are usually row-like and rectangular in composition. In urban areas, these are often placed on city lots with narrow façades as the principal street entrance. Often typified in the south as “shotgun” houses, this form can be seen in very narrow, one-family detached examples or as attached duplex or multi-family dwellings. Design of these homes varies from railroad-like, one-room wide versions to side-hall composition. These buildings were also constructed with gable-front and/or hipped roofs.

Within the coastal area of Mississippi, three distinct styles of this building form began to be built during the period between 1880 and 1930. Most common is the Folk House style, which is distinctive in itself, often exhibiting simple steps and a front porch. Small dwellings were also built in the Folk Victorian style, often characterized with Victorian detail, but generally in much less elaborate ways.<sup>1</sup> For example, the Folk Victorian building in the photograph below depicts a typical double shotgun that has been embellished with spindlework porch detailing and a balustrade. Also prevalent are buildings with a Craftsman influence, dating from the late 19th to the early 20th century. These dwellings are also long and narrow in form, but are characterized by varying porch styles. For example, the Craftsman building photograph below depicts a projecting entry porch, which is half the width of the house, and the addition of two tiers of gables to the front of the building. This use of gables, often supported by exposed rafters is indicative of the Craftsman style.

1. McAlester, Virginia and Lee. *A Field Guide to American Houses*, rev. ed. New York, 1989.

### STYLES: Folk House, Folk Victorian, and Craftsman

#### CHARACTER-DEFINING FEATURES:

##### Folk House (Shotgun)

- Rectangular form, often row-like
- Sits on simple brick or concrete foundation
- Rooms aligned one behind the other
- Interior chimneys
- Full or partial front porch
- Situated on lot close to street
- Wood frame structural system
- Sheathed with wood siding, often with decorative spindlework

##### Folk Victorian

- Square, symmetrical shape (with occasional examples with asymmetrical massing)
- One-and-one-half storeys or two storeys in height
- Hip or gable roofs (often in combination)
- Mixed wall cladding (clapboard and shingle combinations)
- Open, spacious front porches or verandas
- Variety in placement and grouping of windows
- Flat jigsaw trim, cornice returns, cornerboards, two-storey bays, brackets, spindlework, stickwork, turned porch posts and balusters, and bay windows

##### Craftsman

- Mixed construction materials (wood, stone, brick) throughout exterior and interior
- Exhibit “look” of hand-crafted construction
- Full or partial front porch extends beneath extension of main house
- Roof highlighted by exposed rafters or decorated brackets
- Deeply overhanging eaves
- Tapered, square, or pyramidal columns supporting roof
- Multi-paned windows and heavy doors



Folk House (Shotgun)



Folk Victorian



Craftsman

## **TYPE: Massed Plan (Side-Gable)**

This building type, often called Creole Cottage or Acadian Cottage in the south, consists of one to one-and-one-half storeys, massed-plan dwellings with side gabled roofs that commonly extend to shed-roofed porches along the façade. The roof pitch and size of the porch vary depending on the style of the house.

There are five distinctive styles adapted to this type of dwelling. The Folk House style, including the Creole and Acadian Cottage, is very simple and almost always has a full-length front porch or overhang. The Colonial Revival style was adapted to this type with the use of subdued details from the Georgian and Adams styles. Also adapted, the Craftsman style usually features deep front porches, exposed roof beams, triangular knee braces, gabled and/or shed dormers with distinct lines of windows, and a myriad of porch supports and railings that were usually constructed with short upper columns resting on massive piers. More simplistic was the Cape Cod, which is typically of a box shape with a high-pitched side gabled roof, and a subdued stoop. The Minimal Traditional style usually includes a similar form, but will vary in size with a low-pitched side gable roof, larger windows, and varying stoop styles.

## **STYLES: Folk House, Colonial Revival, Craftsman, Cape Cod, and Minimal Traditional**

### CHARACTER-DEFINING FEATURES:

#### **Folk House (Creole Cottage)**

- Square or rectangular in plan form
- Often has a raised basement level
- Two-bay or three-bay plan orientation
- Full-width front porch
- Gable or hipped roof
- Roof ridge runs parallel to street
- Interior chimney pierces roofline

#### **Colonial Revival**

- Simple rectangular plan
- One or two storeys
- Side-gabled roofs
- Symmetrical and balanced fenestration
- Classical colonial detailing (columns, engaged pilasters, cornices, entablatures, and shuttered windows)
- Horizontal wood siding (clapboards or lapped siding)

#### **Craftsman**

- Mixed construction materials (wood, stone, brick) throughout exterior and interior
- Exhibit “look” of hand-crafted construction
- Full or partial front porch extends beneath extension of main house
- Roof highlighted by exposed rafters or decorated brackets
- Deeply overhanging eaves
- Tapered, square, or pyramidal columns supporting roof
- Multi-paned windows and heavy doors



**Folk House (Creole Cottage)**



**Colonial Revival**



**Craftsman**

### **Cape Cod**

- Symmetrical appearance with centrally-placed front entry
- Steep roof with side gables
- Small roof overhang
- One or one-and-one-half storeys
- Wood frame, covered in lap, shake, or shingle siding
- Chimney placed at gable end of house
- Gabled dormers
- Multi-paned, double-hung windows
- Shutters
- Simple exterior ornamentation



**Cape Cod**

### **Minimal Traditional**

- Lack of important architectural features
- One or one-and-one-half storeys (occasionally full two storeys)
- Low pitched gable roof
- Dominant front gable
- Ribbon windows
- Picture windows
- No front porches
- Attached garages



**Minimal Traditional**

## **TYPE: L-Shaped (Gable-Front-and-Wing)**

In form, these houses generally exhibit two distinct sections that include a long narrow portion, like a “shotgun” with a shorter, box-like wing constituting an L-shaped form. This composition varies in two ways depending on its situation on a lot—as a gable-front-and-wing or in the manner of row-like building with the wing’s gable as the façade. Porches or galleries are usually found along the front or side of the wing or longest section of the house. These houses usually have an L-shaped pitched roof with gables at each end. While most commonly constructed as one-storey dwellings, this form is occasionally expanded to a full two-storey height.

Buildings exhibiting this form are usually found in two distinct styles. The Folk House is the most common stylistic type, with almost no use of decorative detail. It is situated in a row-like setting with the small wing in the rear and the long, narrow portion projecting to the front of the lot with its narrow gable and side-porch as the buildings façade. Typically situated in the gable-front-and-wing situation, the Folk Victorian style is typified by its use of brackets under eaves, spindlework porch details, and, occasionally, ornate doors and/or stained glass windows.

## **STYLES: Folk House and Folk Victorian**

### CHARACTER-DEFINING FEATURES:

**Folk House** (with side hall and rear wing); **Folk Victorian** (side hall and rear wing); **Folk Victorian** (front gable and side hall)

- L-shaped plan
- Wood siding
- Front and side hall (L-shaped porch)
- Front and side gable (L-shaped porch)

### **Folk Victorian**

- L-shaped plan
- Elaborate wood siding
- Spindlework and turned banisters and balusters
- Wrap-around porches
- Decorative architectural elements in roof apex



**Folk House**



**Folk Victorian**



**Folk Victorian (Front Gable and Side Hall)**

## **TYPE: Pyramidal (Complex Roof)**

This house type is found throughout the region typically as a one- or one-and-one-half-storey massing often called a Bayed Cottage. This building form is usually found with square plans, but often allows for projecting bay windows, dormers, towers, and even small wings. Roof pitch varies from medium to high. Almost always, this building form provides sufficient space for wrap-around or full façade porches.

The Pyramid form can be found in five distinct styles. The Folk House style usually includes full length or wrap-around porches, high pitched roofs, and limited detail. This form adapted to the Folk Victorian style is personified by decorative brick chimneys, dormers, wrap-around porches, spindle work porch details, and occasionally, ornate doors and/or stain glass windows.

The Queen Anne style is represented in one- to one-and-one-half-storey dwellings with extensive decorative detail found on porches, cornices, doors, and windows. For example, in the photo labeled Queen Anne, a Pyramidal house has been elaborated with a projecting entry porch, a side porch, and a tower-like projection with decorative frieze windows and ornamental brackets.

The Neoclassical adaptation of the Pyramidal can be found with full porches along the building's façade with columns that seemingly work as roof supports. Balustrades, wide steps, and full transoms often compliment homes designed in the Neoclassic style.

The Colonial Revival style was also apparent in the Pyramidal with the use of accentuated front doors, full transoms, side gabled and hipped roofs, windows in adjacent pairs, the use of symmetry, stoops rather than porches, and in some cases second-storey overhangs.

The Craftsman style can also be found in the region, with shed or gabled dormers, exposed beams, varied shed and gabled porches, and varied support columns. Integral features for the Pyramidal house include complex floor plan, pyramid, complex roof, wood siding, and front and/or wrap-around porches.

**STYLES: Folk House (no photo), Folk Victorian, Queen Anne, Neoclassic, Colonial Revival, and Craftsman**

CHARACTER-DEFINING FEATURES:

### **Folk Victorian**

- Square, symmetrical shape
- Wrap-around porches with spindlework
- Front gable and side wings
- Bracketed eaves
- Low pitched pyramidal roof
- Decorative jigsaw-cut architectural elements

### **Queen Anne**

- Complex floor plan
- Pyramidal/complex roof
- Wood siding
- Front and/or wrap-around, spacious porch
- Stain glass and/or irregular shaped windows
- Towers and/or turrets
- Decorative vents, flat jigsaw trim, cornice returns, cornerboards, two-storey bays, brackets, spindlework, stickwork, turned porch posts and balusters, and bay windows
- Mixed wall cladding (clapboard and shingle)



**Folk Victorian**



**Queen Anne**



**Neoclassic**



### Neoclassic

- Front porches (varying in size)
- Columns (varying in size and use)
- Clean lines, symmetry, balance, and basic geometric forms
- Monumental appearance
- Simple porch detail and monumental cornices

### Colonial Revival

- Simple rectangular plan
- One or two storeys
- Side-gabled roofs
- Symmetrical and balanced fenestration
- Classical colonial detailing (columns, engaged pilasters, cornices, entablatures, and shuttered windows)
- Horizontal wood siding (clapboards or lapped siding)



### Craftsman

- Mixed construction materials (wood, stone, brick) throughout exterior and interior
- Exhibit “look” of hand-crafted construction
- Full or partial front porch extends beneath extension of main house
- Roof highlighted by exposed rafters or decorated brackets
- Deeply overhanging eaves
- Tapered, square, or pyramidal columns supporting roof
- Multi-paned windows and heavy doors

## TYPE: I-House Two-Storey Box (Side Gable)

This building form is found throughout the United States, but is usually less stylized in the South. The house comes in two basic forms—rectangular and box—and is generally two or more storeys with a side-gable roof. Often there are additions to these houses; however, the most common are in the rear or even to the side. These houses can be found in four distinct styles. The Folk House style maintains the box or I-House form, but have limited stylized details. The Folk Victorian often has a porch with ornamental porch details, brackets, decorative gables in front, and ornamental brackets. The Colonial Revival style was distinct as it maintained subdued attributes from the Georgian and Adams architectural tradition. For example, the Colonial Revival house shown here exhibits notable features such as a small stoop-like porch and classically-inspired fanlight above the door. The Neoclassic style is defined by a full front porch, one- or two-storey building height, and decorative, often Grecian, columns supporting the overhang.

**STYLES: Folk House, Folk Victorian, Colonial Revival, and Neoclassic**

CHARACTER-DEFINING FEATURES:

### Folk House

- I-House, box plan
- Two storeys
- Side-gabled roofs
- Clapboard/wood siding
- Exaggerated stoop or front porch (varying in size)

### Folk Victorian

- Complex floor plan
- Pyramidal/complex roof
- Wood siding
- Front and/or wrap-around, spacious porch
- Stain glass and/or irregular shaped windows



- Towers and/or turrets
- Decorative vents, flat jigsaw trim, cornice returns, cornerboards, two-storey bays, brackets, spindlework, stickwork, turned porch posts and balusters, and bay windows
- Mixed wall cladding (clapboard and shingle)

### Colonial Revival

- Simple rectangular plan
- One or two storeys
- Side-gabled roofs
- Symmetrical and balanced fenestration



- Classical colonial detailing (columns, engaged pilasters, cornices, entablatures, and shuttered windows)
- Horizontal wood siding (clapboards or lapped siding)

### Neoclassic

- Front porches (varying in size)
- Columns (varying in size and use)
- Clean lines, symmetry, balance, and basic geometric forms
- Monumental appearance
- Simple porch detail and monumental cornices

# Local Historic Preservation Review Processes, Analyses of Resources Within Boundaries of Locally Designated Historic Districts, and Damage Caused by Hurricane Katrina by Jurisdiction

## Hancock County

### Historic Preservation Review – Bay St. Louis

The following is a brief overview of the design review process for a Certificate of Appropriateness only and should not be used in place of the Bay St. Louis Historic Preservation or Zoning Ordinance.

#### **Bay St. Louis Preservation Commission**

The Bay St. Louis Preservation Commission preserves and promotes the city's historic resources and advises the city on the designation of historic districts, landmarks, and landmark sites.

The Preservation Commission reviews proposed changes to any individual landmark or property located within a locally designated historic whether the property is improved or unimproved.

Design review guidelines for the respective landmarks, landmark sites, and historic districts are set out in City Ordinance No. 509.

#### **Purpose of Design Review**

The purpose of design review is to protect and preserve the existing character and integrity of individual properties and their immediate surroundings whether located within an historic district or standalone.

The design review process applies to all properties included in a locally designated district regardless of age or architectural style. In addition, the Commission reviews new construction to ensure visual compatibility with the surrounding environment.

#### **What is a Certificate of Appropriateness?**

A Certificate of Appropriateness is simply a document that you receive from the Preservation Commission stating that the application conforms with appropriate design criteria and standards. A Certificate is required before most exterior work begins and before a building permit can be issued.

#### **Design Review Approval Process**

An application for a Certificate of Appropriateness can be filed on a form provided by the City's building department. All applications require supporting documentation which will generally include photos of the area where work is to be done, a site plan and drawings depicting any new construction or alterations, and the materials proposed.

The Commission may approve, deny, or defer the application pending further information or changes. In some cases, the Commission may approve the application contingent on certain conditions that must be met before a Certificate is issued. Decisions of the Commission are final, and are appealable to the Bay St. Louis City Council.

The issuance of a Certificate does not relieve you from compliance with any other zoning or building requirement under the laws of the City.

#### **Preservation Commission Approval Process**

- Submit application with required documentation to the Bay St. Louis Building Department.
- If a meeting of the Commission is not already scheduled within 30 days, the completed application will be considered no later than 15 days after filing.

- Hearings are conducted on the 2nd and 4th Thursdays of every month at 5:30 p.m.
- You may request a preliminary conference with a member of the Commission to make any changes to the application that might be more consistent with the Commission's standards.
- Attend the Commission hearing to present your relevant information in support of your application.
- The Commission may approve, deny, or continue your case to the next scheduled hearing.
- If the project is approved, the Certificate will be issued to you and the building official.
- Obtain any other necessary permits or variances. (Contact the building department at 228-469-0531 for further information.)
- Work may proceed once a building permit has been issued.
- Certificate expires in 6 months if work has not begun.

For more information, contact:

Bay St. Louis Building Department  
688 Highway 90  
Bay St. Louis, MS 39520  
228-496-0531  
[www.baysaintlouiscity.com](http://www.baysaintlouiscity.com)

## **Summary Description of Beach Boulevard Historic District**

The Beach Boulevard Historic District was designated a local historic district by the City Council of Bay St. Louis in 1980. Within this large historic district there are four districts listed in the National Register of Historic Places: the Beach Boulevard Historic District, Main Street Historic District, Sycamore Street Historic District, and Washington Street Historic District. The local district is bound at the south by Beach Boulevard; at the north by Third and St. Francis Streets, as well as Dunbar Avenue; at the west by Ramaneda and Washington Streets; and at the east by Highway 90. Prior to the hurricane, the district contained roughly 728 residential (with some commercial) buildings and the architectural styles varied greatly. The building types and styles ranged from small row-like shotgun houses, Creole cottages, and Craftsman/bungalow residential buildings to Neoclassical and Spanish Colonial local institutional buildings. The historic district conveys a sense of the small town, rural life in the Mississippi Gulf Coast.

The local historic district is physically segregated by periods of construction and utility. These “boundaries” are embodied, in part, by the existing National Register Districts. For example, Washington Street contains a combination of commercial, institutional, and residential buildings that in some cases are used as they were historically, and in other cases serve a different, contemporary function. And while Beach Boulevard has a few commercial and institutional buildings, it is primarily a residential street boasting medium- to large-size waterfront houses.

## **How Has the Historic District Changed Due to the Effects of Hurricane Katrina?**

According to the Hancock County Historical Society, Bay St. Louis’s local historic district consisted of roughly 728 buildings prior to the storm. In an effort to account for both the buildings lost and those extant, members of the historical society conducted a house-by-house survey, which included photographs that can be found, listed by each specific address, on their Web site. The photography, in most cases, includes imagery of buildings destroyed by the storm, which serves as a permanent record of the historic fabric that is no longer extant. Conducted post-Katrina, the survey accounted for roughly 232 buildings, predominantly residential, that are no longer extant. It is estimated that roughly 32 percent of the buildings within the historic district were lost and/or rendered to an irrecoverable condition as a result of the hurricane.<sup>2</sup>

These results were further confirmed in July 2008 by an architectural historian contracted by the MDA who performed a windshield survey of the district.

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<sup>2</sup> “Preservation: Historic Districts.” The Hancock County Historical Society. July 2008 <<http://www.hancockcountyhistoricalsociety.com/preservation/preservation.htm#districts>>

# Pre-Hurricane Katrina - Beach Boulevard Historic District

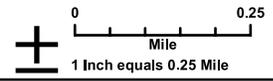
Prepared by URS for Mississippi Development Authority



### Legend

- Road Type**
- Interstate
  - US Highway
  - State Highway
  - Local
  - Local Historic District

Imagery:  
2004 NAIP  
National Agriculture Imagery Program  
Salt Lake City, UT



### Location Map



Local Historic District  
**Bay St. Louis**

# Post-Hurricane Katrina - Beach Boulevard Historic District

Prepared by URS for Mississippi Development Authority

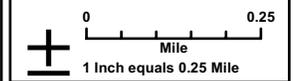


## Legend

### Road Type

- Interstate
- US Highway
- State Highway
- Local
- Local Historic District

Imagery:  
Aug. 30, 2005  
Gulf Coast Aerial Mapping  
Baton Rouge, LA



## Location Map

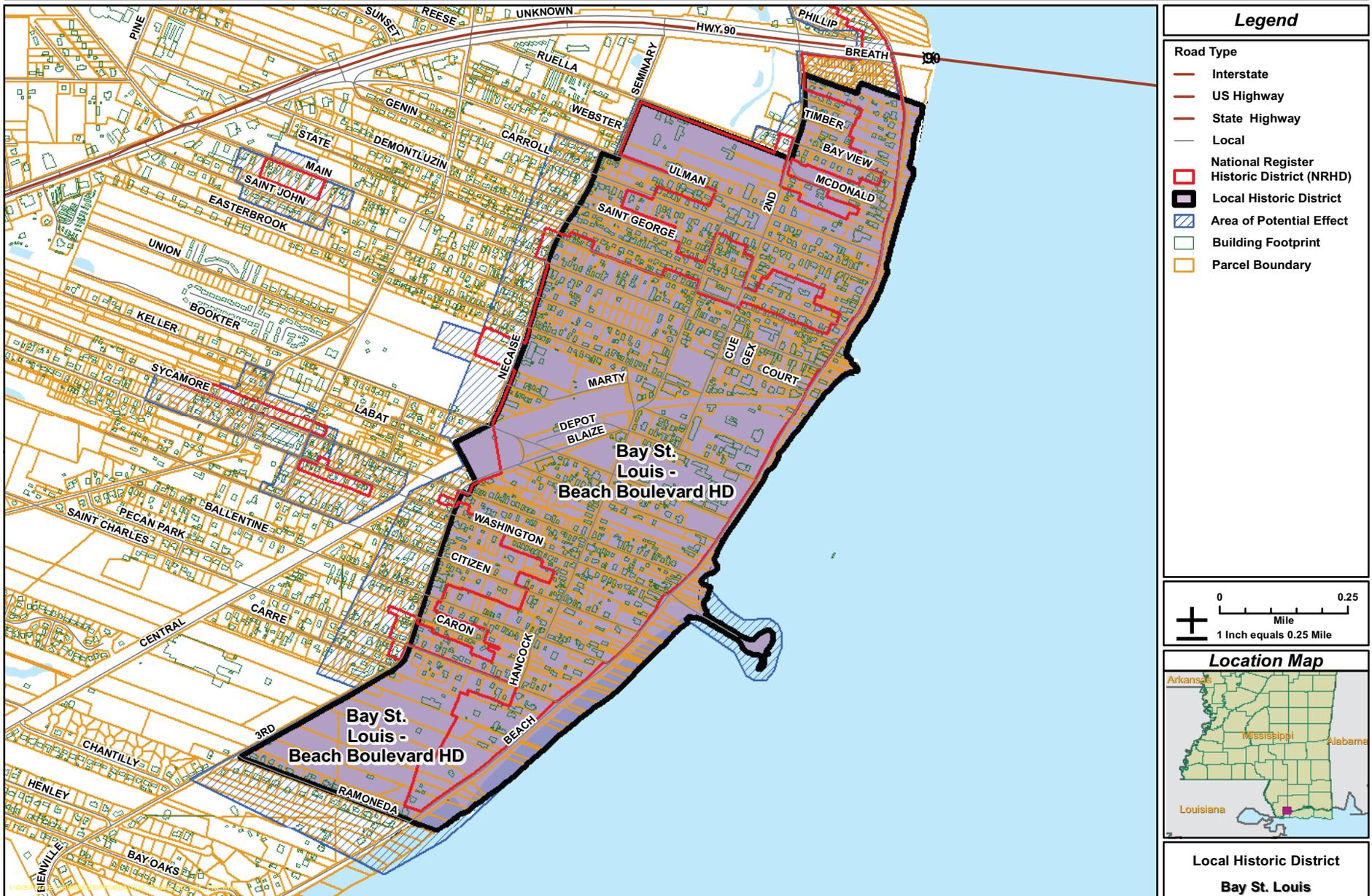


Local Historic District

**Bay St. Louis**

# Beach Boulevard Historic District

Prepared by URS for Mississippi Development Authority



### Legend

**Road Type**

- Interstate
- US Highway
- State Highway
- Local

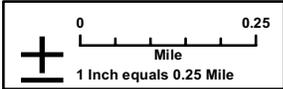
National Register Historic District (NRHD)

Local Historic District

Area of Potential Effect

Building Footprint

Parcel Boundary



Local Historic District  
**Bay St. Louis**

# Harrison County

## Historic Preservation Review – Biloxi

The following is a brief overview of the design review process for a Certificate of Appropriateness only and should not be used in place of the City of Biloxi Historic Preservation Ordinance or the Land Development Ordinance.

### Biloxi Architectural and Historical Review Commission (AHRC)

The Biloxi AHRC promotes historic preservation efforts in the community and provides a review process to ensure appropriate rehabilitation and compatible new construction in Biloxi's historic areas.

The AHRC reviews proposed changes to any building or lot within any Architectural/Historic Overlay (AHO) District, including new construction. In addition, the AHRC reviews proposed changes to any landmark or any building or lot located within 300 feet of any landmark or historic district.

Design review guidelines for the respective landmarks, landmark sites, and architectural/historic overlay districts are set out in Appendix A of the Biloxi Land Development Ordinance.

### Purpose of Design Review

The purpose of design reviews is to protect and preserve the existing character of historic districts and individual historic properties whether part of an historic district or a Local Landmark.

The design guidelines apply to all properties that are included in a locally designated historic district regardless of age or architectural style. For non-historic buildings the AHRC's primary concern is to preserve the relationship of

the non-historic buildings with adjacent historic buildings and streetscapes.

### What is a Certificate of Appropriateness?

A Certificate of Appropriateness is simply a document that you receive from the AHRC stating that the application conforms and is in keeping with appropriate design criteria and standards. A Certificate is required before most exterior work begins and before a building permit can be issued.

### Design Review Approval Process

An application for design review can be filed with the AHRC staff on the form provided by the Community Development Department. All applications require supporting documentation which generally includes photos of the area where work is to be done, a site plan and drawings depicting any new construction or alterations, and the materials proposed. Contact the building department for a complete list of required documents.

The AHRC may approve or deny all or part of the application, as it determines appropriate. An approval with conditions is subject to final approval of the planning staff after all conditions and standards have been fully met. Decisions of the AHRC are final, and are appealable to the Biloxi City Council.

Once the AHRC has approved the application, the AHRC secretary shall issue a Certificate of Appropriateness and transmit copies to you and the building official, as well as retain a copy for the AHRC files.

The issuance of a Certificate does not relieve you from compliance with any other zoning or building requirement under the laws of the City.

### AHRC Approval Process

- Submit application with required documentation.
- Hearings are conducted on the 2nd and 4th Thursdays of every month at 8:30 a.m.
- The completed application will be considered if filed 7 days prior to the next scheduled AHRC meeting.
- Attend the Commission hearing to present your case to the AHRC.
- AHRC may approve, deny, or continue your case to the next scheduled hearing.
- If the project is approved, the Certificate will be issued to you and the building official.
- Obtain any other necessary permits or variances. (Contact the Building Division at 228-435-6270 for further information.)
- Work may proceed once a building permit has been issued.
- Upon completing construction, an Occupancy Permit will be issued when all conditions of the Certificate of Appropriateness and other required permits have been met.
- A Certificate expires in 1 year if work has not substantially commenced.

For additional questions, please call:

Community Development: 228-435-6266

Building Division: 228-435-6270

Historical Administrator: 228-435-6244

[www.biloxi.ms.us](http://www.biloxi.ms.us)

## Summary Description of the West Central Historic District

The West Central Historic District was designated a local historic district by the City of Biloxi on September 16, 1988. This designation followed a formal listing in the National Register on May 18, 1984. Boundaries for the local district are much larger and more inclusive than the National Register District. The local district includes West Beach Boulevard between Porter Avenue and Hopkins Boulevard, Benachi Avenue between West Beach Boulevard and Howard Avenue, Seal Avenue between West Beach Boulevard and Division Street, and three properties on the south end of Suter Place.

A majority of the buildings along West Beach Boulevard were constructed from the mid-nineteenth century through the early-twentieth century. The residences are large one- and two-storey wood-frame houses most commonly clad in lap siding. While most of the homes are stylistically vernacular, some of the homes retain influences of the Eastlake, Queen Anne, Neoclassical, and Craftsman styles.<sup>3</sup>

The homes along West Beach Boulevard were originally summer homes and are among the earliest in the area. After 1900 the streets adjacent to Beach Boulevard were established as a residential section for business people sharing in Biloxi's economic boom of the early-twentieth century.<sup>4</sup>

According to the National Register nomination form, 12 of the standing properties, pre-Katrina, are identified as "primary significant," meaning the buildings retained their architectural integrity and were key elements of the streetscape. Thirty-eight properties were considered to be

contributing as their appearance did not detract from the streetscape and were compatible in terms of materials and scale. Eleven properties were described as "marginal" due to the inclusion of incompatible alterations that are irreversible or failure to maintain the scale in comparison to primary significant and contributing properties. Nine properties were categorized as "intrusive," meaning the buildings had been altered to such a degree that their original character was irretrievably obscured and/or the scale and materials were incompatible.<sup>5</sup>

### How Has the Historic District Changed Due to the Effects of Hurricane Katrina?

In July 2008 an architectural historian under contract with the MDA completed a windshield survey of the historic district to assess the damage inflicted by the hurricane. Prior to the storm, there were approximately 430 buildings within the district. The survey concluded that approximately 50 of these buildings were destroyed, which means that roughly 12 percent of the district's fabric was lost as a result of the hurricane. Only a handful of these parcels have been repopulated with new buildings.

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<sup>3</sup> National Register of Historic Places Nomination Form: West Central Historic District, Biloxi, Mississippi. 1984.

<sup>4</sup> National Register of Historic Places Nomination Form: West Central Historic District, Biloxi, Mississippi. 1984.

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<sup>5</sup> National Register of Historic Places Nomination Form: West Central Historic District, Biloxi, Mississippi. 1984.

## Summary Description of the Downtown Historic District

The Downtown Historic District was established by the City of Biloxi as a local historic district. The district was also formally listed in the National Register of Historic Places (National Register) on September 3, 1998. Boundaries for both the local and National Register designations are the same. The district is located in the south central part of Biloxi and is bound at the north by Dr. Martin Luther King Boulevard, at the South by Highway 90, at the west by Access Road 1A of Highway 110, and at the west by Main Street. While the appearance of the district is commercial there is a mixture of businesses, residences, public buildings, and churches in it. The district is composed of late-nineteenth and early-twentieth century structures, as well as a number of contemporary buildings. The structures include one-, two-, and three-storey commercial buildings, as well as large residential structures, a church, and a public building.

This section of Biloxi was historically the densest part of the city with the earliest buildings built as dwellings in the early part of the nineteenth century. While the late-nineteenth century brought great development and, in turn, a dense commercial district, three fires—in 1889, 1894, and 1900—destroyed almost the entire early commercial district. Consequentially, the Downtown Historic District is composed of buildings from the early-twentieth century. One of the oldest commercial buildings is Ellzey’s Hardware, historically known as The Peoples Bank (circa 1896), located at 100 West Howard Street. Howard Street, between Reynoir and Main Streets, is the most cohesive part of the district with a long row of commercial buildings on the north and south sides of the street. These structures are of stone and masonry construction predominantly built in the Romanesque, Colonial Revival, and Art Deco styles. Both original and adapted commercial structures are also found away

from Howard Street in various parts of the district. These buildings are intermixed with large residential mansions and are the former homes of business owners. Other structures within the district include the Church of the Nativity and City Hall, which are some of Biloxi’s most notable edifices.<sup>6</sup>

According to an architectural survey conducted in 1976, the historic district included roughly 17 commercial and 20 residential structures. The public buildings included City Hall, the City Water Works Pump House, and the Biloxi Public Library.

### How Has the Historic District Changed Due to the Effects of Hurricane Katrina?

In July 2008 an architectural historian under contract with MDA completed a windshield survey of the historic district and its boundaries to assess the damage caused by the hurricane. The assessment concluded that the Downtown Historic District contains roughly 134 parcels consisting of extant buildings, empty lots as a result of the storm, and vacant parcels. The commercial district of Howard Street is extant, as are many other surrounding businesses that are housed in historic structures. Among the residences, many in the heart of the district survived with minimal damage. Along and near Beach Boulevard are roughly 8 new buildings and 5 empty lots representing buildings destroyed by the storms. It is estimated that approximately 10 percent of the district’s buildings were lost as a result of hurricanes, and over half of these have or are being rebuilt.

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<sup>6</sup> The Buildings of Biloxi: An Architectural Survey. City of Biloxi: Biloxi, Mississippi. 1976.

# Pre-Hurricane Katrina - West Central and Downtown Historic Districts

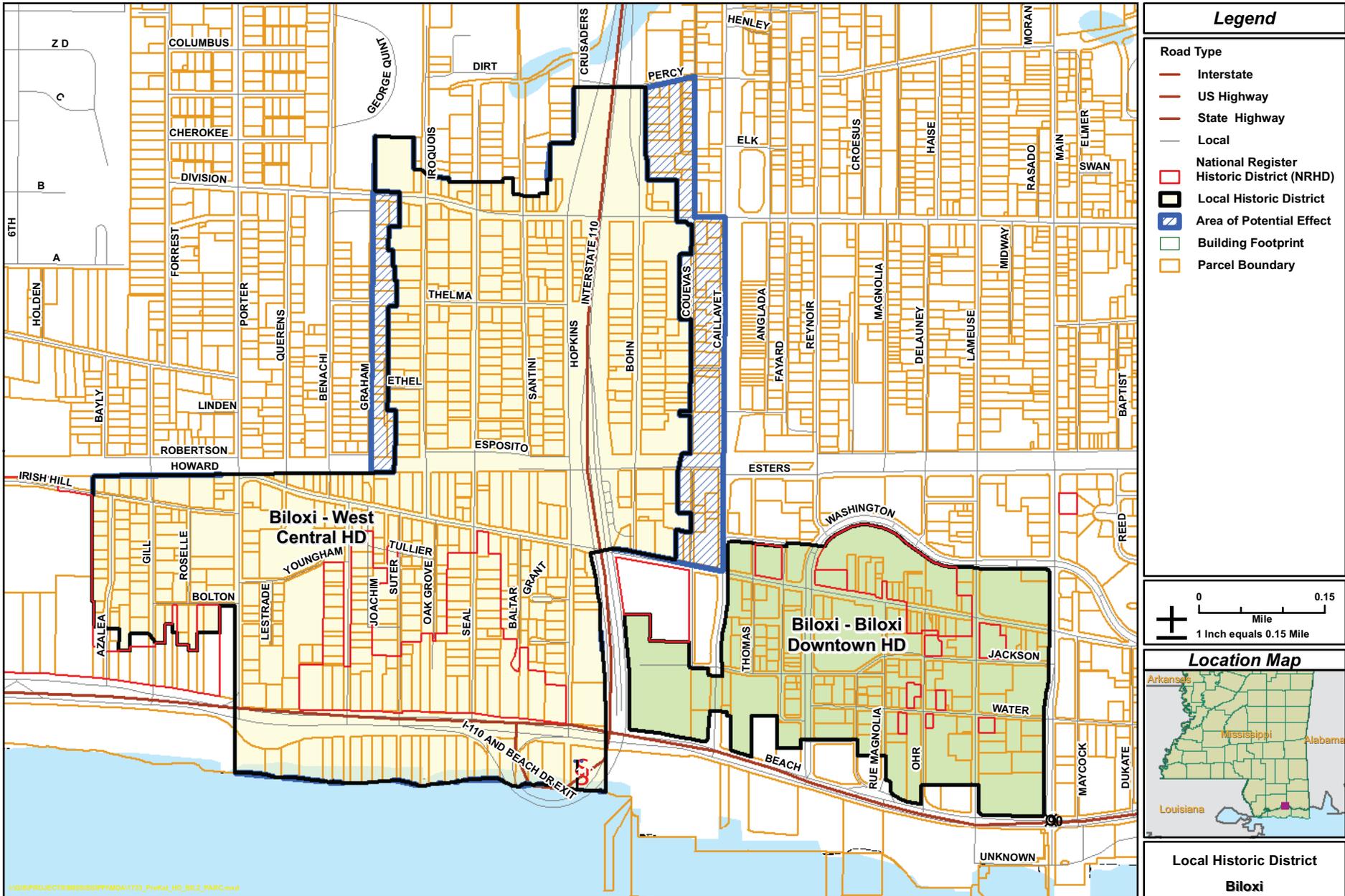
Prepared by URS for Mississippi Development Authority





# West Central and Downtown Historic Districts

Prepared by URS for Mississippi Development Authority



## **Summary Description of the East Central Historic District**

The East Central Historic District was established as a local historic district by the City of Biloxi. The district is located in east Biloxi and primarily to the north and also to the south of Highway 90 extending west from Nixon Street to a few blocks east of Kuhn Street. With very few structures south of the highway, the district is a mix of residential and commercial structures.

Established in the late-nineteenth century as summer residences for the wealthy, the area that encompasses the East Central Historic District was, in part, the estate of J.H. Keller, a wealthy soap manufacturer from New Orleans. The property was used as his summer residence until it was developed in 1896 as a subdivision for residential housing. Dwellings were built in the late-nineteenth and early-twentieth centuries and represent middle class development in Biloxi during that period. The district also includes businesses and a park. The park includes a “Shoo-fly,” which was an elevated deck raised in height in order to keep the mosquitoes away from inhabitants. The current Shoo-fly is a reconstruction of the original which was lost in a past storm. The residential structures include various residential building types, such as shotgun houses and Creole cottages, and were designed in the Folk Victorian, Queen Anne, and Craftsman styles.<sup>7</sup>

According to an architectural survey conducted in 1976, the district included roughly 50 residences. The survey also identifies two commercial buildings—a large six-storey hotel and a small one-storey barbecue factory.<sup>8</sup>

## **How Has the East Central Historic District Changed Due to the Effects of Hurricane Katrina?**

In July 2008 an architectural historian under contract with MDA completed a windshield survey of the historic district in order to assess the damage caused by the hurricanes. Prior to the storm, the district included roughly 31 beachfront parcels populated with buildings. Only 3 of the 31 original buildings are extant, all of which are new buildings, including the new and incomplete Ohr-O’Keefe Museum, which was being designed by modern architect Frank Gehry at the time of the storm, and is currently being completed. With the devastation to this district, no historic buildings remain on the beachfront and the district suffered a loss of roughly 95 percent of its original fabric.

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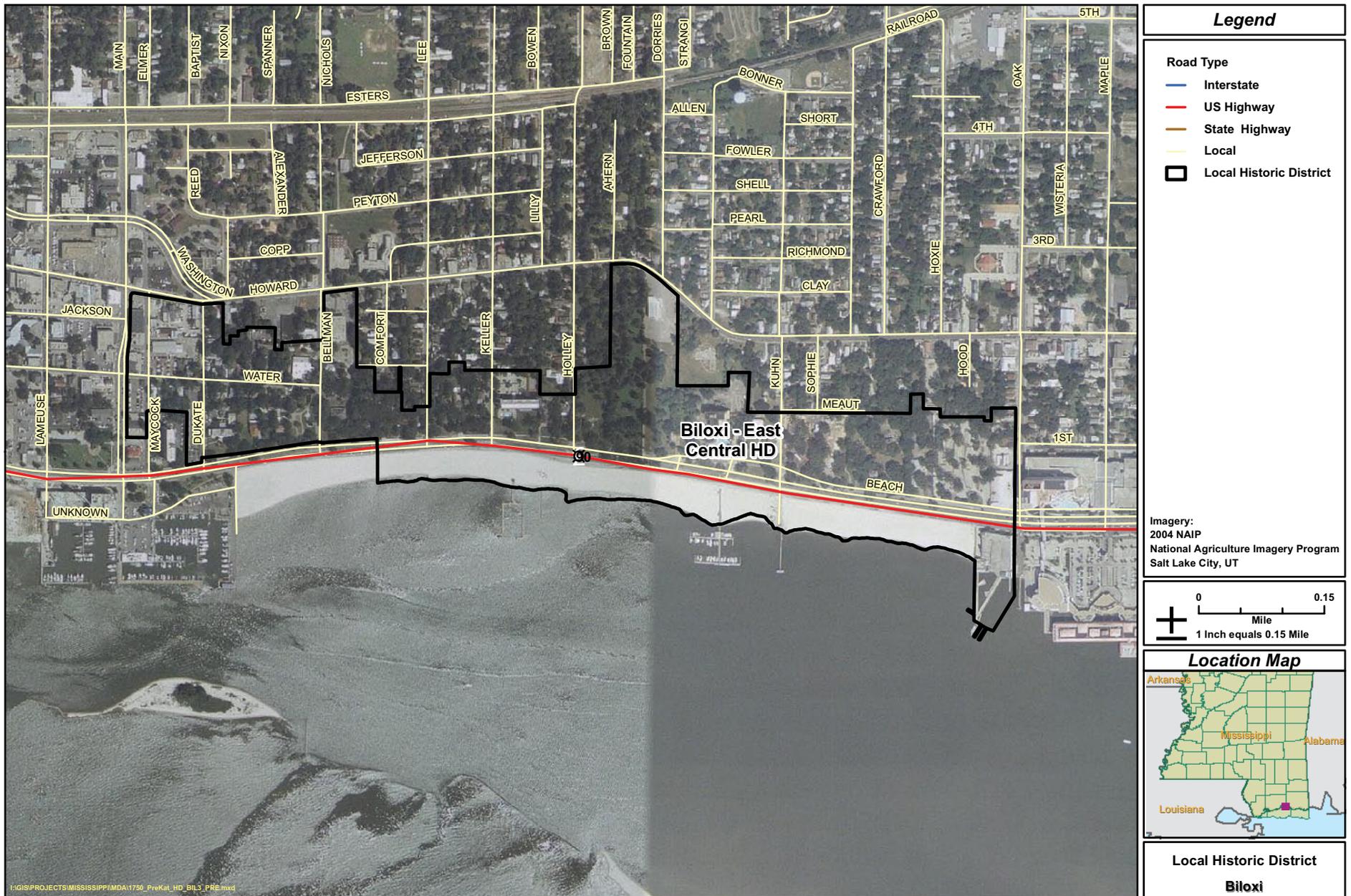
<sup>7</sup> The Buildings of Biloxi: An Architectural Survey. City of Biloxi: Biloxi, Mississippi 1976.

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<sup>8</sup> The Buildings of Biloxi: An Architectural Survey. City of Biloxi: Biloxi, Mississippi. 1976.

# Pre-Hurricane Katrina - East Central Historic District

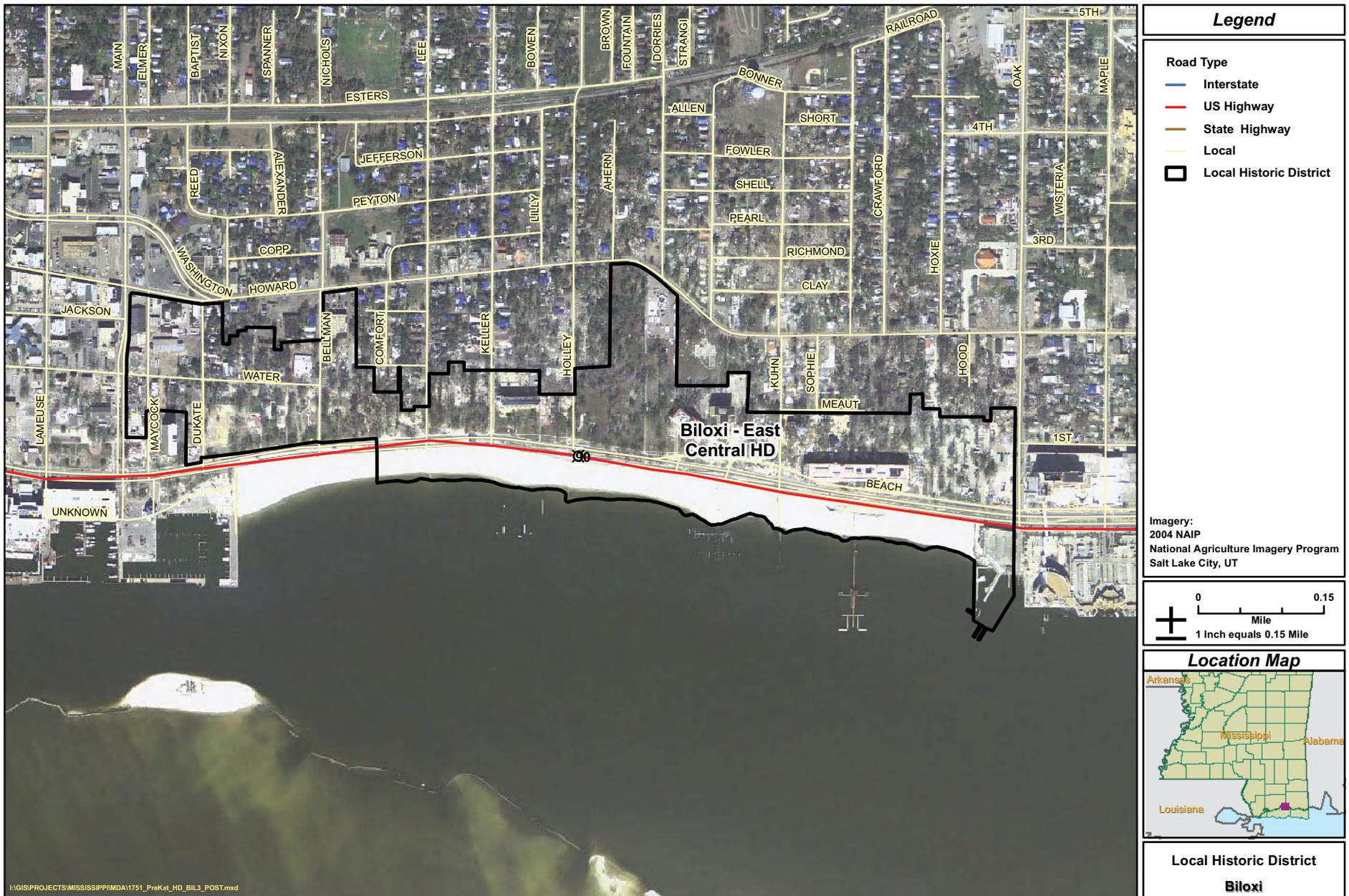
Prepared by URS for Mississippi Development Authority



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# Post-Hurricane Katrina - East Central Historic District

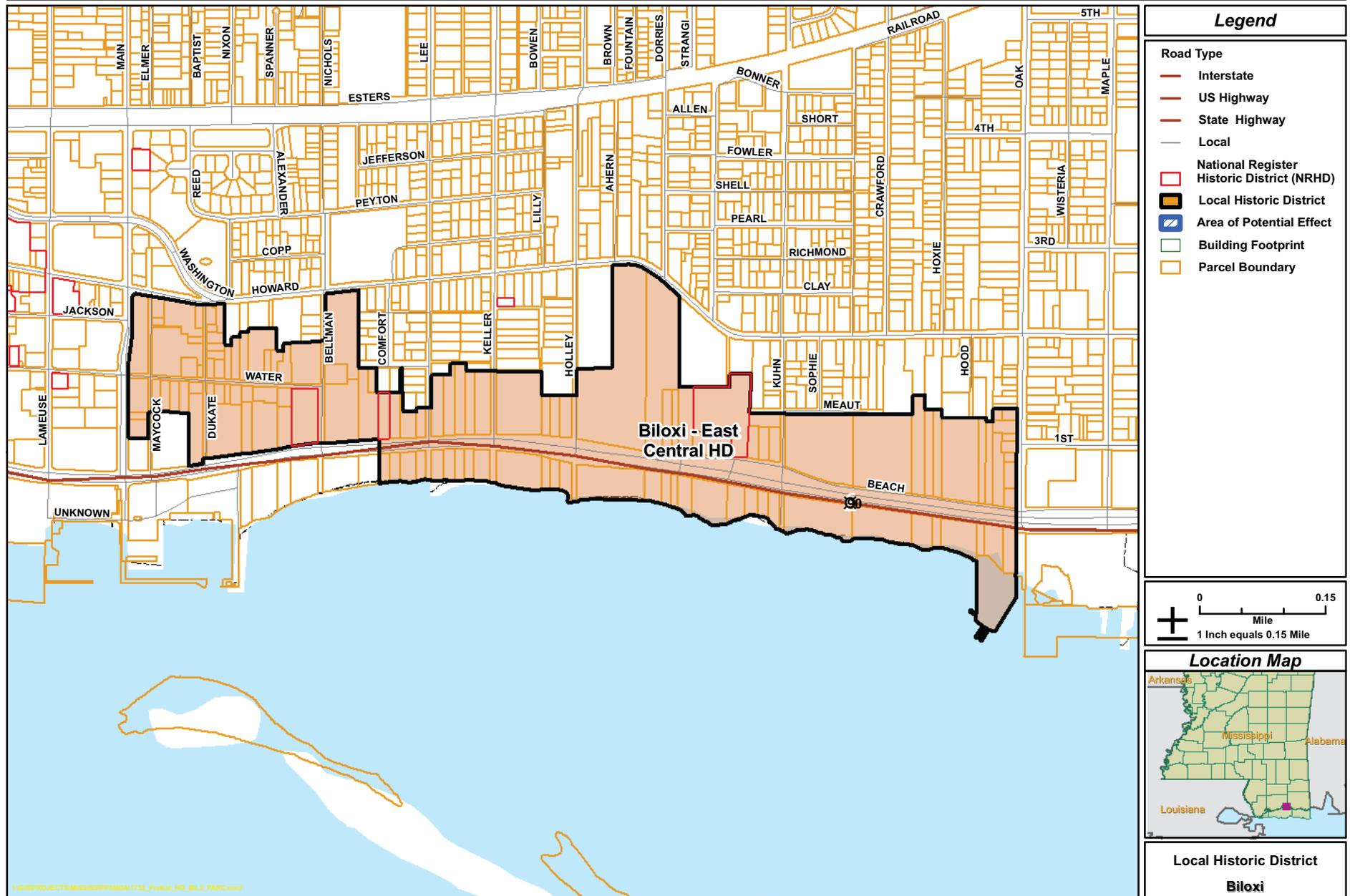
Prepared by URS for Mississippi Development Authority



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# East Central Historic District

Prepared by URS for Mississippi Development Authority



## **Summary Description of the Edgewater Park Historic District**

The Edgewater Park Historic District was established by the City of Biloxi as a local historic district, although it functions more like a conservation district. District boundaries include Beach Boulevard to the south, the Edgewater Mall to the west, Switzer-Kenmore Road to the north, and the parcels east of Balmoral Street to the east. The district represents one of the early-twentieth century subdivisions in West Biloxi. The neighborhood was developed in the 1920s, but only maintains 3 buildings from that period. Originally, a large resort hotel bearing the name Edgewater was adjacent to the neighborhood. The hotel was razed in the 1960s when Edgewater Park was experiencing the growth that is evident in its extant fabric. The majority of the dwellings within the district were built between the 1960s and 1980s.

### **How Has the Historic District Changed Due to the Effects of Hurricane Katrina?**

In July 2008, an architectural historian under contract with MDA completed a windshield survey of the historic district and its boundaries to assess the damage caused by the hurricanes. The assessment concluded that the district contains approximately 137 total parcels, including extant buildings, empty lots resulting from the storm, and vacant parcels. Thirteen buildings within the district were lost as a result of the storm. This led to a 6 percent loss of the district's buildings.

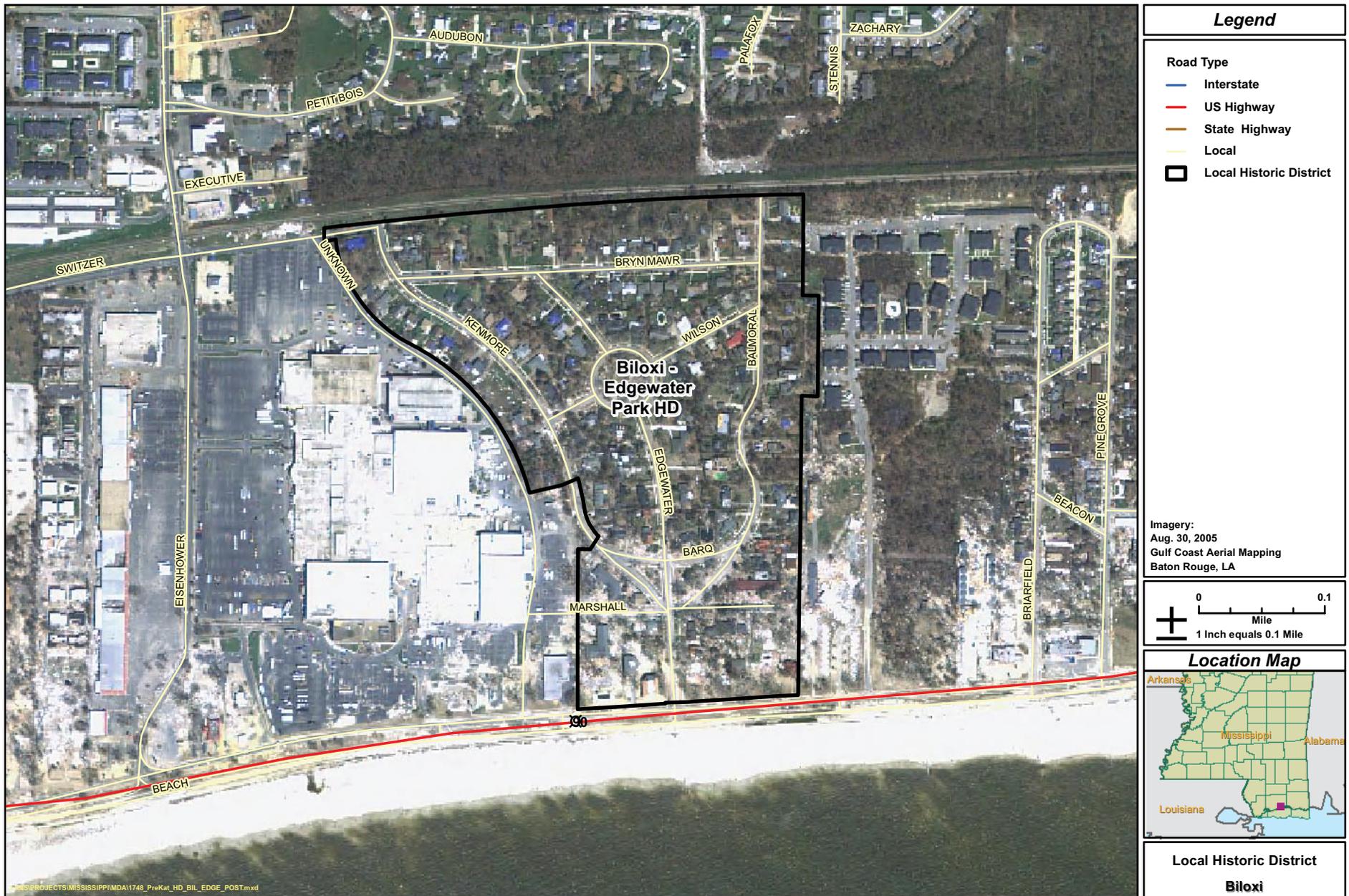
# Pre-Hurricane Katrina - Edgewater Park Historic District

Prepared by URS for Mississippi Development Authority



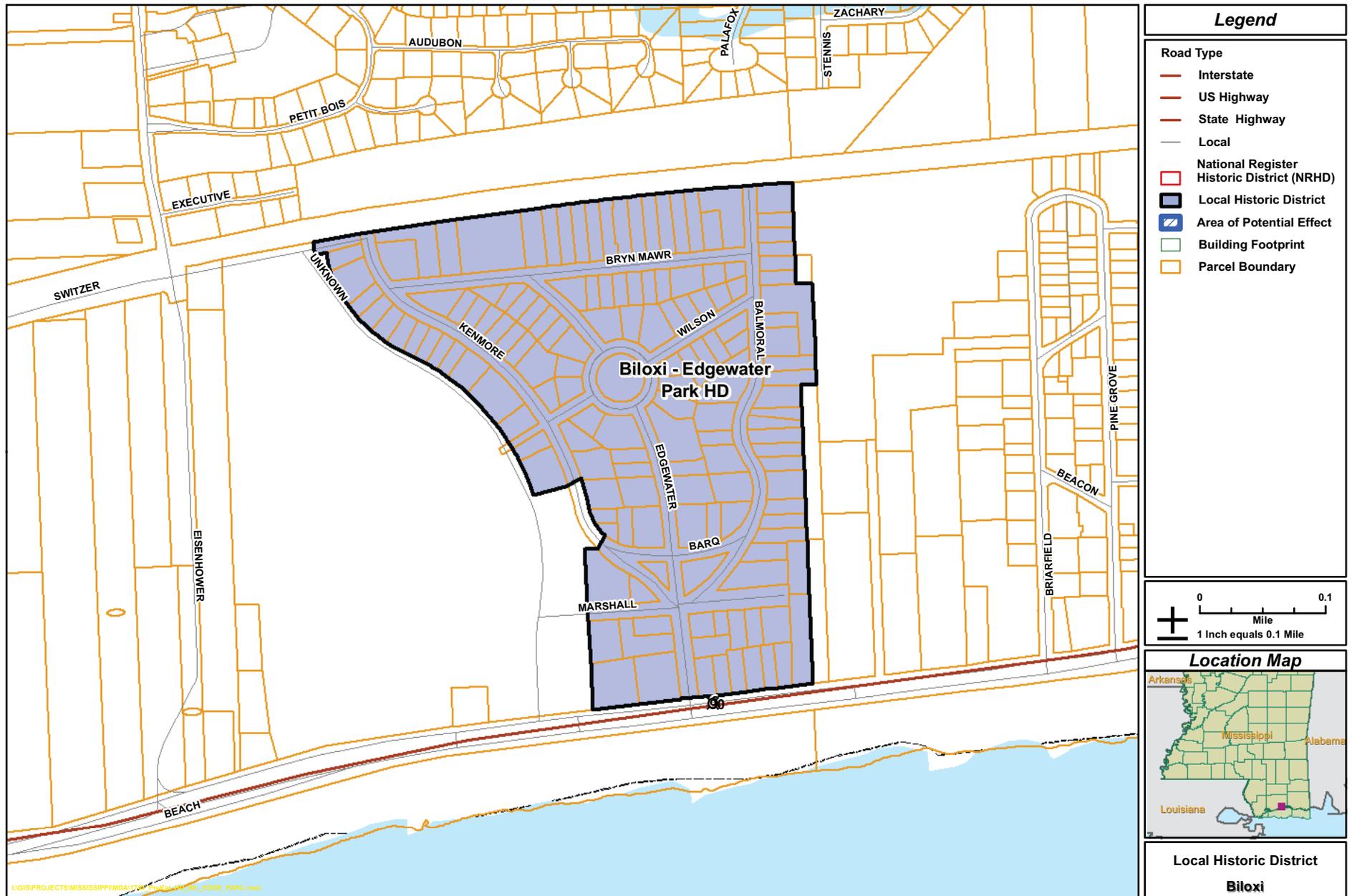
# Post-Hurricane Katrina - Edgewater Park Historic District

Prepared by URS for Mississippi Development Authority



# Edgewater Park Historic District

Prepared by URS for Mississippi Development Authority



## **Summary Description of the Point Cadet Historic District**

The Point Cadet Historic District was designated a local historic district by city ordinance on September 16, 1988. The district is located in the southeast section of Biloxi and extends on the north and south sides of Highway 90 from the west at Oak Street to the eastern end of the peninsula named Point Cadet. The buildings to the north of Highway 90 were mainly wood-frame residential structures from the late-nineteenth and early-twentieth centuries, whereas the buildings to the south of the highway and along the waterfront were commercial and/or industrial buildings.

Cadet Point was developed in the mid-nineteenth century (1845) when Biloxi's first subdivision, Summerville, was established by Charles Eugenius McCaleb. Until the late-nineteenth century, there were only a few homes built in Summerville, which served as residences for wealthy business people. The Bailey House, also known as the Wesley House, was built between 1846 and 1852 and is a principle attribute of the historic district. In 1884, the first canning companies were established along the waterfront, which is now the area south of Highway 90. Establishment of the seafood businesses on Cadet Point led to the need for labor and housing for employees. Because of the need for conveniently located housing, Summerville was no longer reserved for the wealthy and lots were sold to factory workers who were primarily of Slavic and Acadian descent. Development of Cadet Point continued through the early-twentieth century, which is reflected in the majority of homes that constitute the district.<sup>9</sup>

## **How Has the Historic District Changed Due to the Effects of Hurricane Katrina?**

In July 2008, an architectural historian under contract with MDA conducted a windshield survey of the historic district and its boundaries to assess the hurricane's impact to the historic fabric. According to an architectural survey of Biloxi conducted in 1976, 25 residential buildings were listed as contributing resources. Whether or not there were non-contributing buildings within the district is unknown. None of the buildings constituting the historic district are extant.

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<sup>9</sup> The Buildings of Biloxi: An Architectural Survey, City of Biloxi: Biloxi, Mississippi. 1976.

*Pre-Hurricane Katrina - Point Cadet Historic District*

Prepared by URS for Mississippi Development Authority



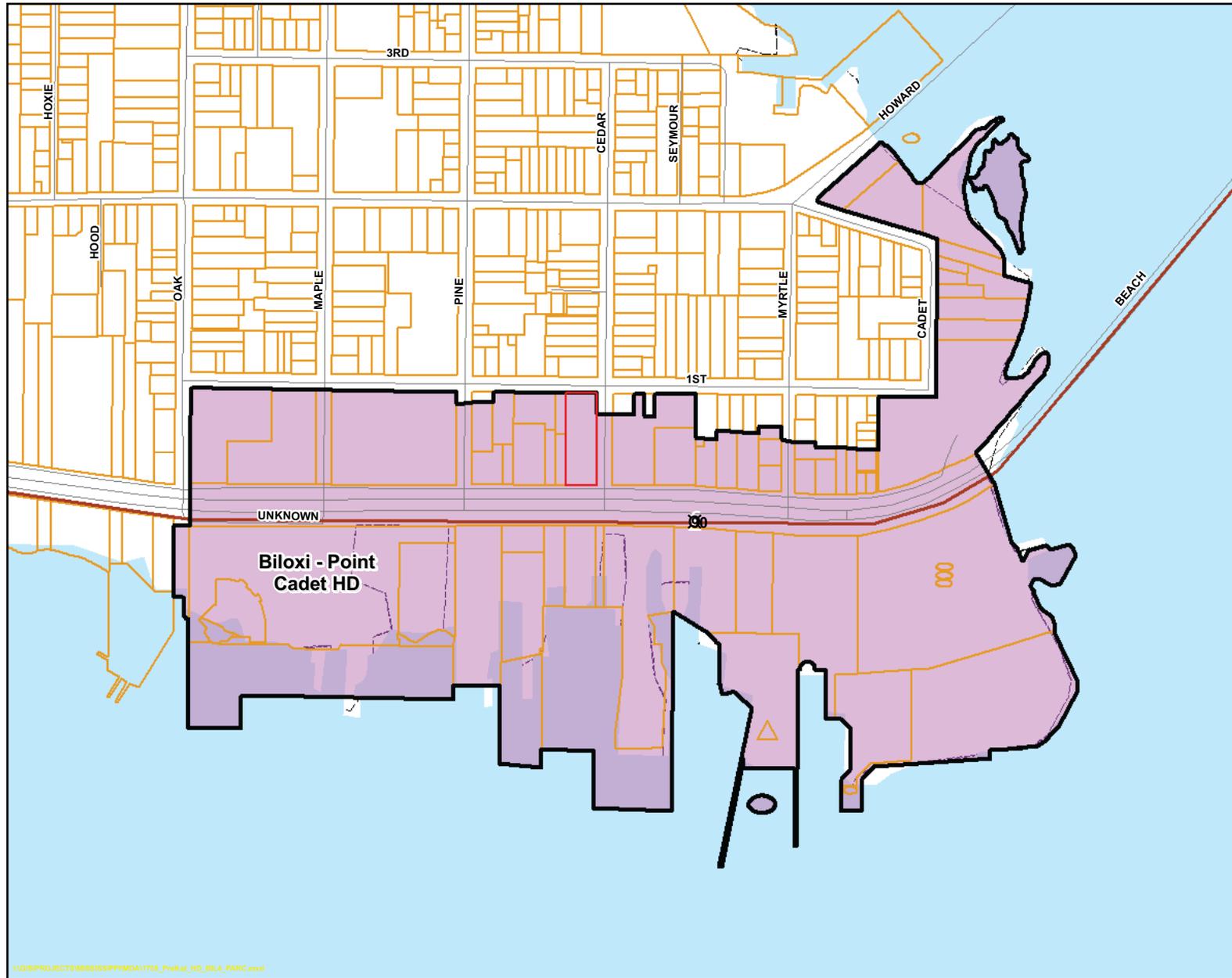
**Post-Hurricane Katrina - Point Cadet Historic District**

Prepared by URS for Mississippi Development Authority



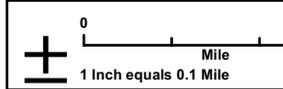
# Point Cadet Historic District

Prepared by URS for Mississippi Development Authority



## Legend

- Road Type**
- Interstate
  - US Highway
  - State Highway
  - Local
- Historic Districts**
- National Register Historic District (NRHD)
  - Local Historic District
- Other Features**
- Area of Potential Effect
  - Building Footprint
  - Parcel Boundary



## Location Map



**Local Historic District**  
**Biloxi**

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## **Summary Description of the West Beach Historic District**

The West Beach Historic District was designated a local historic district by the City of Biloxi on September 16, 1988. This designation followed a formal listing in the National Register on May 18, 1984. Boundaries for both the local and National Register designations are the same. The district includes a 1-mile stretch of West Beach Boulevard (Highway 90) between the Seashore Campgrounds and Porter Avenue, Morrison Avenue between West Beach Boulevard and Father Ryan Avenue, and several properties located at the south ends of Carter Avenue and West Second Street. Most of the buildings in the district were constructed in the late-nineteenth and early-twentieth centuries, with Eastlake and Neoclassical Revival stylistic influences. The houses are generally one- and two-storey frame buildings set back from West Beach Boulevard on spacious, cultivated lots. Within the district boundaries is the park-like Old Biloxi Cemetery, distinguished by its above-ground tombs built of brick with a stucco veneer.

The West Beach Historic District illustrates Biloxi's prominence as a summer resort in the late-nineteenth and early-twentieth centuries. Most of the homes in the area were developed by and for summer residents. These wealthy vacationers primarily came from New Orleans, traveling on regularly scheduled "packet boats," which were replaced in the 1870s with the opening of the New Orleans and Mobile Railroad.<sup>10</sup>

According to the National Register nomination form, 49 of the standing properties, pre-Katrina, were identified as contributing resources, meaning the buildings retained their architectural integrity and were a key element of the streetscape and/or were compatible in terms of materials

and scale. Eighteen properties were characterized as non-contributing resources due to the addition of incompatible alterations that are irreversible or fail to maintain the scale in comparison to the contributing properties in the district. The buildings characterized as non-contributing were constructed in the 1970s and consist of condominiums and apartment buildings.

### **How Has the Historic District Changed Due to the Effects of Hurricane Katrina?**

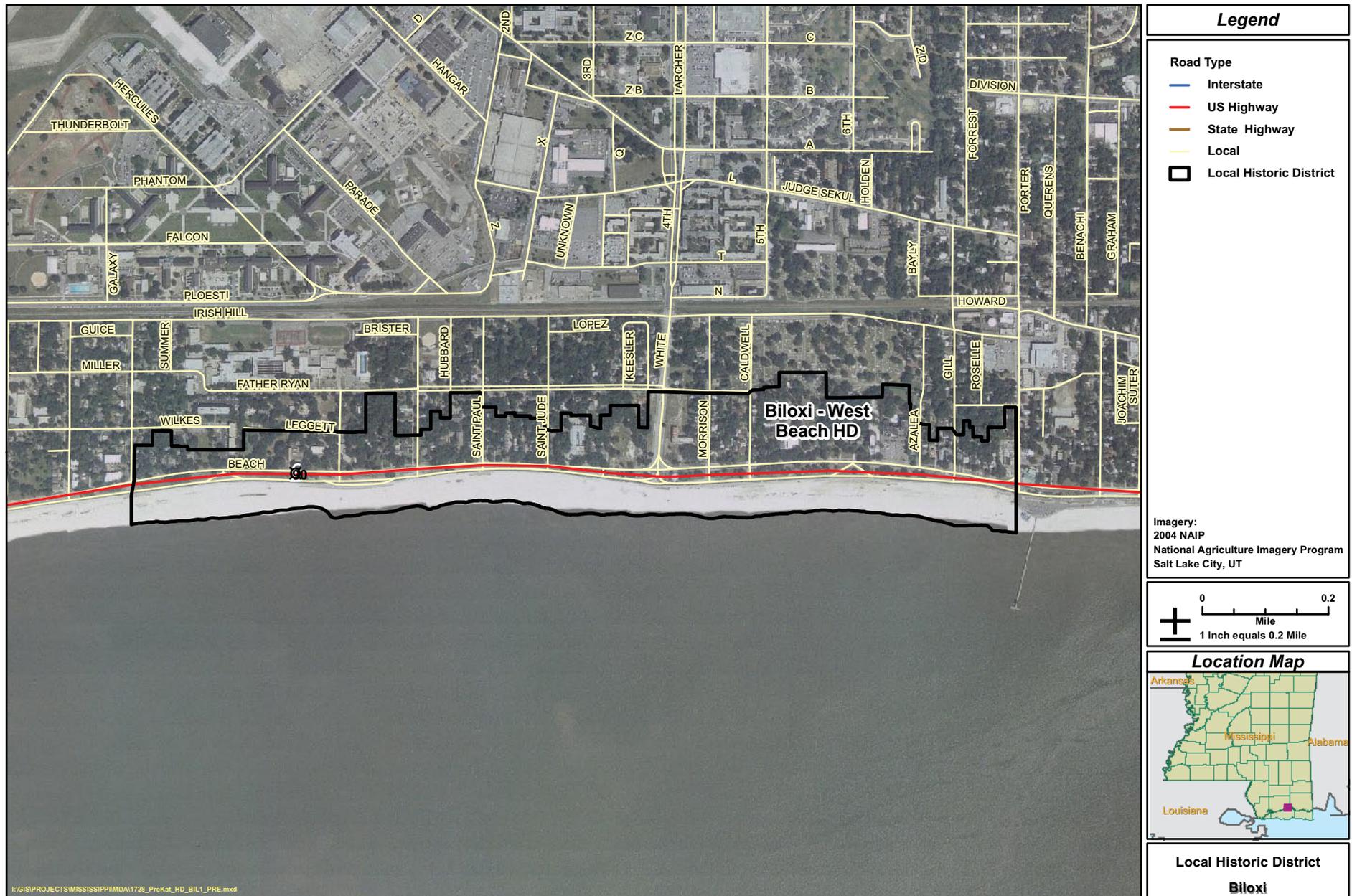
In July 2008, an architectural historian under contract with MDA completed a windshield survey of the historic district to assess the damage inflicted by the hurricane. Prior to the storm, there were approximately 64 buildings along the beachfront. The survey concluded that 46 of these buildings were destroyed by the storm, resulting in a 70 percent loss of the district's fabric. Five of the 46 parcels have been repopulated with new buildings.

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<sup>10</sup> National Register of Historic Places Nomination Form: West Beach Historic District, Biloxi, Mississippi. 1984.

# Pre-Hurricane Katrina - West Beach Historic District

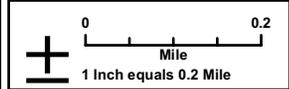
Prepared by URS for Mississippi Development Authority



## Legend

- Road Type**
- Interstate
  - US Highway
  - State Highway
  - Local
  - Local Historic District

Imagery:  
2004 NAIP  
National Agriculture Imagery Program  
Salt Lake City, UT



## Location Map



**Local Historic District**  
**Biloxi**

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# Post-Hurricane Katrina - West Beach Historic District

Prepared by URS for Mississippi Development Authority

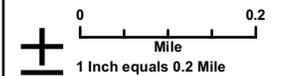


## Legend

### Road Type

- Interstate
- US Highway
- State Highway
- Local
- Local Historic District

Imagery:  
 Aug. 30, 2005  
 Gulf Coast Aerial Mapping  
 Baton Rouge, LA



## Location Map



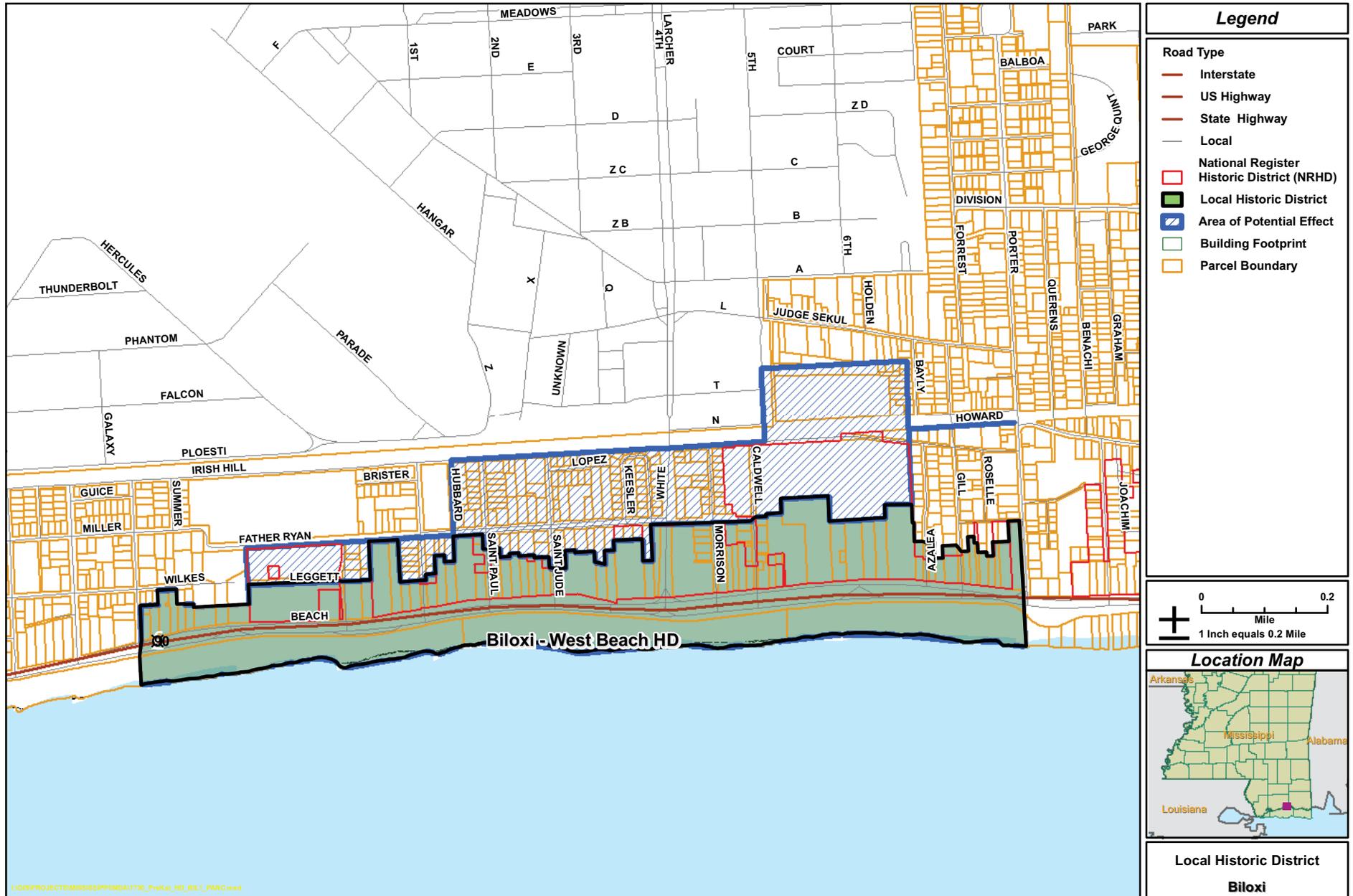
Local Historic District

**Biloxi**

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# West Beach Historic District

Prepared by URS for Mississippi Development Authority



## Individually Designated Local Landmarks

Within and outside of the City of Biloxi's designated local historic districts are a number of individually designated Local Landmarks. Local Landmarks outside of local historic districts are surrounded by a 300-foot protective buffer zone which is also under the Historic Architectural Review Board's jurisdiction. Local Landmarks were established by City ordinance on September 16, 1998.

In July 2008, an architectural historian under contract with MDA conducted a windshield survey of the individual landmarks to determine if they were extant. The following 5 Local Landmarks were found to be no longer extant:

- 360 Beach Boulevard, Tullis-Toledano Manor
- 1042 Beach Boulevard, Dantzler House
- 710 Beach Boulevard, Brielmaier House & Foretich House/Town Green
- 610 Water Street, Church of the Redeemer
- 122 Caldwell Avenue

The following is a list of the remaining Local Landmarks in Biloxi:

- 147 Balmoral Avenue (Home in Edgewater Park)
- 622 Bayview Avenue (Old Brick House)
- 1061 Beach Boulevard (Biloxi Lighthouse)
- 1096 Beach Boulevard
- 1120 Beach Boulevard
- 1210 Beach Boulevard (O.G. Swetman House)
- 1230 Beach Boulevard (White House Hotel)
- 1332 Beach Boulevard
- 2244 Beach Boulevard (Beauvoir)
- 126 Benachi Avenue
- 127 Benachi Avenue
- 132 Benachi Avenue
- 135 Benachi Avenue
- 142 Benachi Avenue
- 146 Benachi Avenue
- 158 Benachi Avenue
- 162 Benachi Avenue
- 575 Comfort Place
- 634 Copp Street
- 671 Division Street
- 769 Division Street (United Novelty Company)
- 803 Division Street (Our Mother of Sorrows)
- 970 Division Street
- 971 Division Street
- 132 Dukate Street
- 112 Edgewater Drive
- 1269 Father Ryan Avenue
- 1326 Father Ryan Avenue
- 1352 Father Ryan Avenue (Water Plant)
- 1400 Father Ryan Avenue (Water Plant)
- 177 First Street (St. Michael's Church)
- 129 Fayard Street
- 131 Fayard Street
- 358 Forrest Avenue
- 1596 Glenn Swetman St. (Glenn Swetman House)
- 319 Haise Street (Fred Haise House)
- 154 Hopkins Boulevard
- 290 Hopkins Boulevard
- 555 Howard Avenue (Bowen House)
- 566 Howard Avenue
- 567 Howard Avenue
- 579 Howard Avenue
- 632 Howard Avenue (Galloway's Funeral Home)
- 638 Howard Avenue
- 657 Howard Avenue
- 675 Howard Avenue (Bradford-O'Keefe Funeral Home)
- 709 Howard Avenue (Masonic Temple)
- 750 Howard Avenue (Old Peoples Bank)
- 759 Howard Avenue
- 781/783 Howard Avenue (Old Eddie's Drug Store)
- 784 Howard Avenue
- 796 A&B Howard Avenue
- 796 C Howard Avenue
- 814 Howard Avenue (Kress Building)

- 870 Howard Avenue (Church of the Nativity)
- 932 Howard Avenue (Bond House – Moved Structure from 917 Howard Avenue)
- 953 Howard Avenue
- 955 Howard Avenue
- 979 Howard Avenue
- 988 Howard Avenue
- 1046 Howard Avenue
- 770 Jackson Street (Redding House)
- 141 Jefferson Davis Avenue
- 140 Keller Avenue (E. Barq Pop Factory)
- 1295 Kensington Drive
- 124 Lameuse Street (Old Biloxi Library)
- 139 Lameuse Street (Creole Cottage)
- 139 Lameuse Street (Biloxi Library)
- 140 Lameuse Street (Biloxi City Hall)
- 152 Lameuse Street (Peoples Bank)
- 208 Lameuse Street
- 225 Lameuse Street
- 234 Lameuse Street
- 364 Lameuse Street
- 378 Lameuse Street
- 168 Lee Street
- 1400 Leggett Drive (Van Hook Hall, Seashore Methodist Campground)
- 210 Main Street
- 127 Morrison Avenue (Labuzan-Stirling House)
- 141 Morrison Avenue
- 870 Nativity Drive (Sacred Heart High School)
- 130 Porter Avenue
- 170 Reynoir Street (Saenger Theater)
- 330 Reynoir Street
- 352 Reynoir Street
- 398 Reynoir Street
- 439 Reynoir Street
- 116 Rue Magnolia (Brunet-Fourchey House)
- 119 Rue Magnolia (Magnolia Hotel)
- 125 Rue Magnolia

- 129 Rue Magnolia
- 131 Rue Magnolia
- 134 Rue Magnolia
- 136 Rue Magnolia
- 149 St. Charles Street
- 124 St. Paul Street
- 168 St. Paul Street
- 122 Seal Avenue
- 126 Seal Avenue
- 129 Seal Avenue
- 130 Seal Avenue
- 143 Seal Avenue
- 144 Seal Avenue
- 149 Seal Avenue
- 155 Seal Avenue
- 159 Seal Avenue
- 187 Seal Avenue
- 219 Seal Avenue
- 220 Seal Avenue
- 231 Seal Avenue
- 235 Seal Avenue
- 239 Seal Avenue
- 245 Seal Avenue
- 251 Seal Avenue
- 257 Seal Avenue
- 266 Seal Avenue
- 272 Seal Avenue
- 281 Seal Avenue
- 1012 Tullier Court (Suter House)
- 764 Water Street (Clemens House)
- 782 Water Street (Scherer House [Old Spanish House])

## Historic Preservation Review – Pass Christian

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The following is a brief overview of the design review process for a Certificate of Appropriateness only and should not be used in place of the Historic Preservation Commission or the Pass Christian Smart Code.

### Pass Christian Historic Preservation Commission

The Pass Christian Historic Preservation Commission preserves and promotes the city’s historic resources and advises the city on the designation of historic districts, landmarks, and landmark sites.

The Preservation Commission reviews proposed changes to any individual landmark or property located within a locally designated historic district whether the property is improved or unimproved.

Design review guidelines for the respective landmarks, landmark sites, and historic districts are set out in the Historic Preservation Ordinance.

### Purpose of Design Review

The purpose of design review is to protect and preserve the existing character and integrity of individual properties and their immediate surroundings whether located within an historic district or standalone.

The design review process applies to all properties included in a locally designated district regardless of age or architectural style. In addition, the Commission reviews new construction to ensure visual compatibility with the surrounding environment.

### What is a Certificate of Appropriateness?

A Certificate of Appropriateness is simply a document that you receive from the Historic Preservation Commission

granting approval of the Commission for the work you proposed. A Certificate is required before most exterior work begins and before a building permit can be issued.

### Design Review Approval Process

An application for a Certificate of Appropriateness can be filed on a form provided by the City’s Historic Preservation Code Enforcement (HPCE) Officer. All applications require supporting documentation which generally include drawings and sketches of the work to be done, a site plan, and the materials proposed.

The Commission may approve, deny, or defer the application pending further information or changes. An approval with conditions is subject to final approval of the HPCE Officer after all conditions and standards have been fully met. Decisions of the Commission are final and are appealable to the Bay St. Louis City Council.

The issuance of a Certificate does not relieve you from compliance with any other zoning or building requirement under the laws of the City.

### Preservation Commission Approval Process

- Submit application with required documentation to the building department.
- An application will be considered if filed 7 days prior to a meeting of the Commission.
- Hearings are conducted on the first Wednesday of every month at 6:00 p.m.
- You may request a pre-design conference with the Commission for guidance on conforming to the design guidelines.
- Attend the Commission hearing to present relevant information in support of your application.

- The Commission may approve, deny, or continue your case to the next scheduled hearing.
- If the project is approved, the Certificate will be issued to you and the building official.
- Obtain any other necessary permits or variances. (Contact Code Enforcement Office at 228-452-3316 for further information.)
- Work may proceed once a building permit has been issued.
- A Certificate expires in 12 months if work has not begun.

For more information:  
 City of Pass Christian Planning Office  
 203 Fleitas Avenue  
 Pass Christian, MS 39571  
 228-452-3316  
 www.ci.pass-christian.ms.us

### **Summary Description of Scenic Drive Historic District**

The Scenic Drive Historic District was designed by the City of Pass Christian as a local historic district in June 1989. It was listed in the National Register on May 7, 1979. The boundaries of the local historic district are larger and include the entire National Register District. The local historic district area includes a 5-mile stretch of beachfront parcels consisting of substantial, and occasionally palatial, “cottages” that was considered to be architecturally the most complete and significant example of an historic resort community in the region.<sup>11</sup> Popular among prosperous planters and financiers since the 1830s, summer residents of Pass Christian were from Mississippi, Louisiana, and Alabama. The district is also distinctive and architecturally significant for its building forms and the architectural styles that were dictated by climatic conditions, including inset galleries, double-leaf doors, and full-length windows allowing maximum ventilation and circulation.

### **How was the Historic District Changed Due to the Effects of Hurricane Katrina?**

In July 2008, an architectural historian under contract with MDA completed a windshield survey of the historic district to assess the damage inflicted by the hurricane. Prior to the storm, there were roughly 130 buildings within the historic district, which were mostly along the beachfront. The survey concluded that about 76 of these buildings were destroyed by the storm, which means that roughly 58 percent of the district’s fabric was lost as a result of the hurricane. About 7 of the 76 parcels have been repopulated with new buildings and many of the existing buildings on the west side of the district have been rehabilitated.

<sup>11</sup> National Register of Historic Places Nomination Form: Scenic Drive Historic District, Pass Christian, Mississippi. 1979.

### **Individually Designated Local Landmarks**

Pass Christian Ordinance #496 created an historic Preservation Commission that provides the procedure to establish Historic Preservation Districts and to designate archaeological, historical, cultural, and architectural landmarks and landmark sites. Within and outside the Scenic Drive Historic District described above are a series of individually designated Local Landmarks, which were established by city ordinance on April 18, 1989.

In July 2008, an architectural historian under contract with MDA conducted a windshield survey of the individual landmarks to determine if they were extant. The following 11 Local Landmarks were found to be no longer extant:

- 520 West Beach Boulevard
- 706 West Beach Boulevard
- 710 West Beach Boulevard
- 716 West Beach Boulevard
- 722 West Beach Boulevard
- 800 West Beach Boulevard
- 1010 West Beach Boulevard
- 1020 West Beach Boulevard
- 1024 West Beach Boulevard
- 113 Seal Avenue
- 113 Davis Avenue

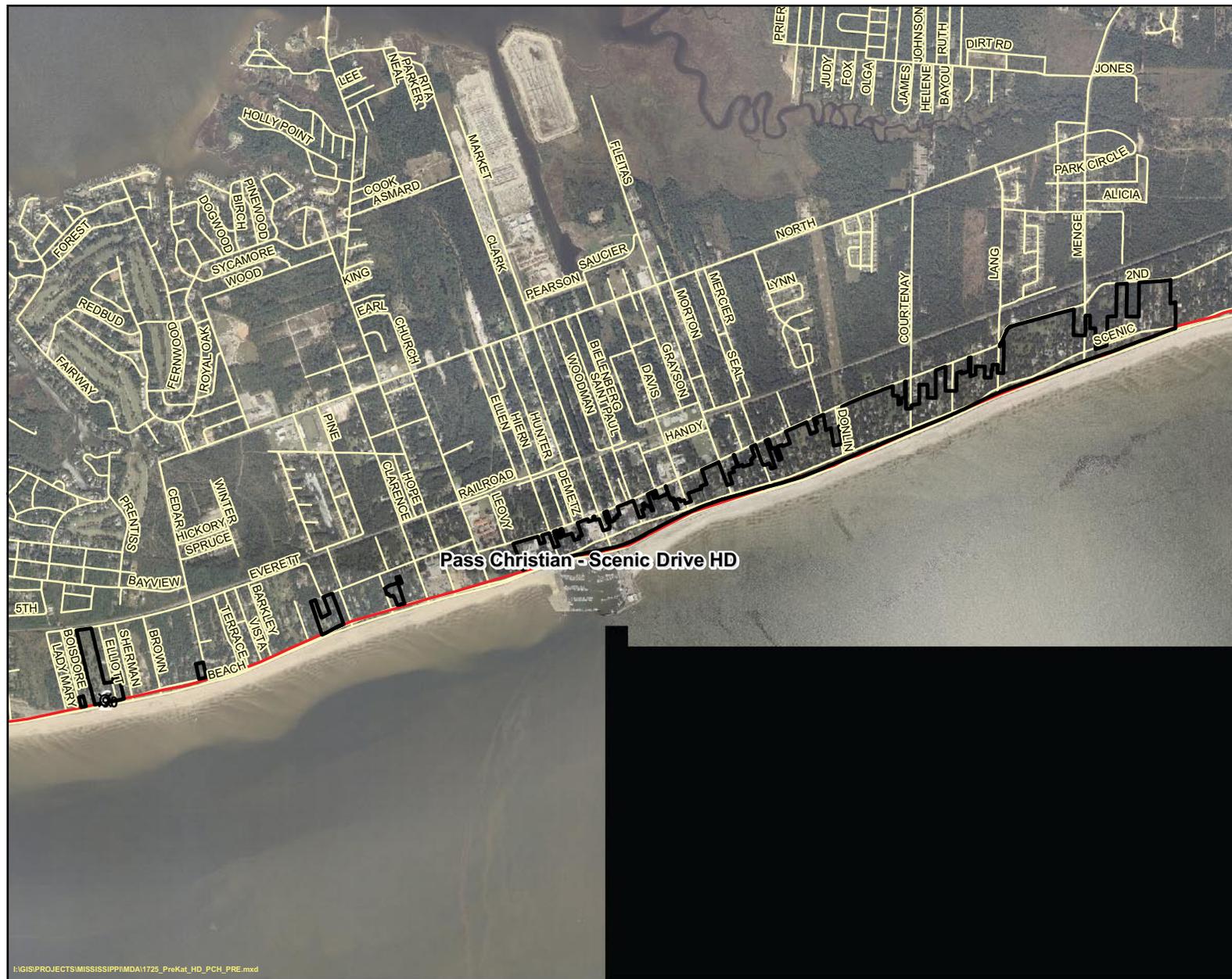
The remaining Local Landmarks in Pass Christian are extant:

- 1012 West Beach Boulevard
- 117 Seal Avenue
- 121 Seal Avenue
- 123 Seal Avenue
- 127 Seal Avenue
- 131 Seal Avenue
- 105 Land Avenue
- 554 East Second Street
- 722 East Second Street

This constitutes a 55 percent loss of the Local Landmarks in Pass Christian.

# Pre-Hurricane Katrina - Scenic Drive Historic District

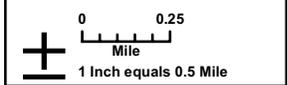
Prepared by URS for Mississippi Development Authority



## Legend

- Road Type**
- Interstate
  - US Highway
  - State Highway
  - Local
  - Local Historic District

Imagery:  
2004 NAIP  
National Agriculture Imagery Program  
Salt Lake City, UT



## Location Map

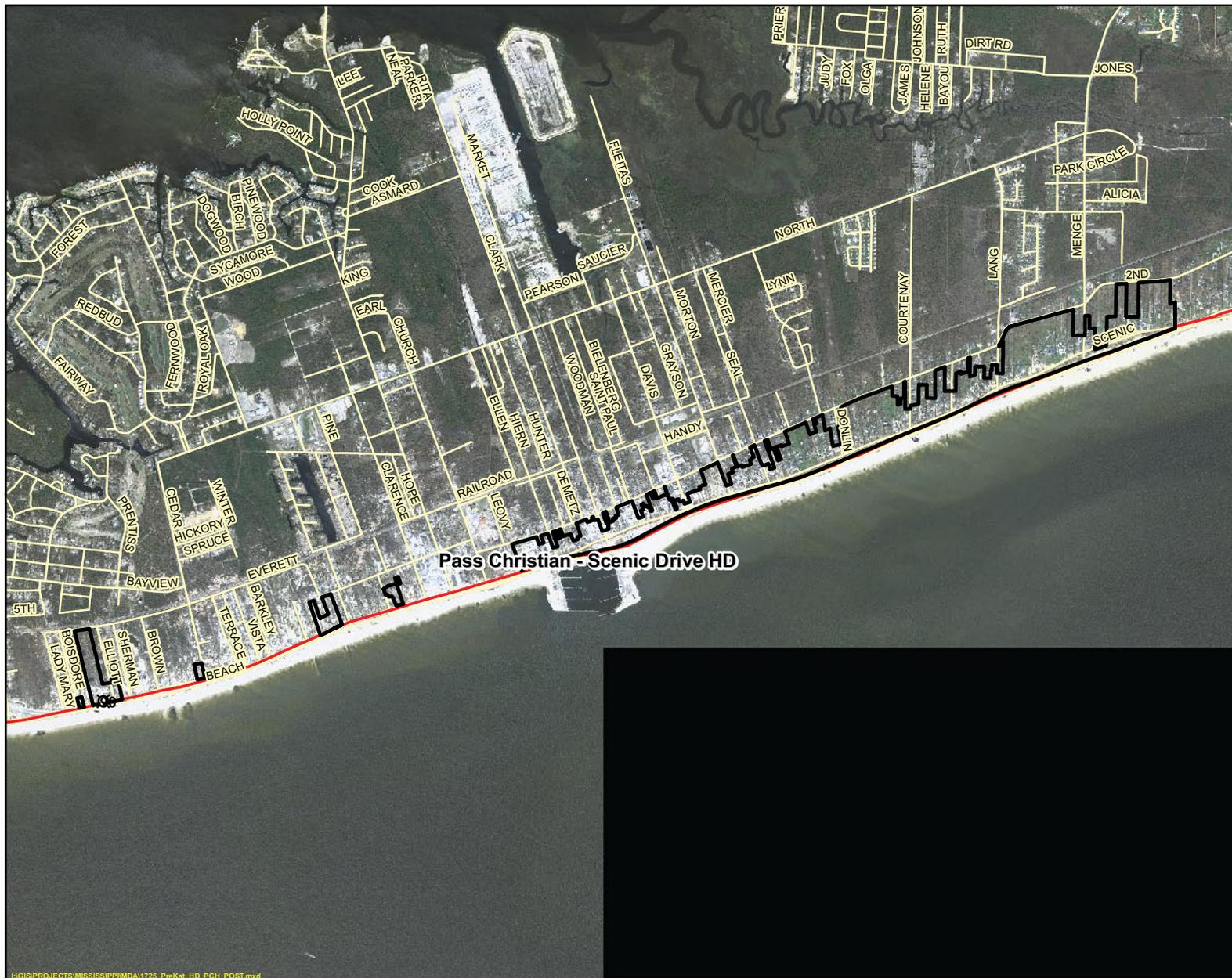


**Local Historic District**  
**Pass Christian**

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# Post-Hurricane Katrina - Scenic Drive Historic District

Prepared by URS for Mississippi Development Authority

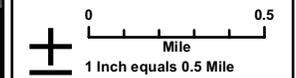


## Legend

### Road Type

- Interstate
- US Highway
- State Highway
- Local
- Local Historic District

Imagery:  
 Aug. 30, 2005  
 Gulf Coast Aerial Mapping  
 Baton Rouge, LA



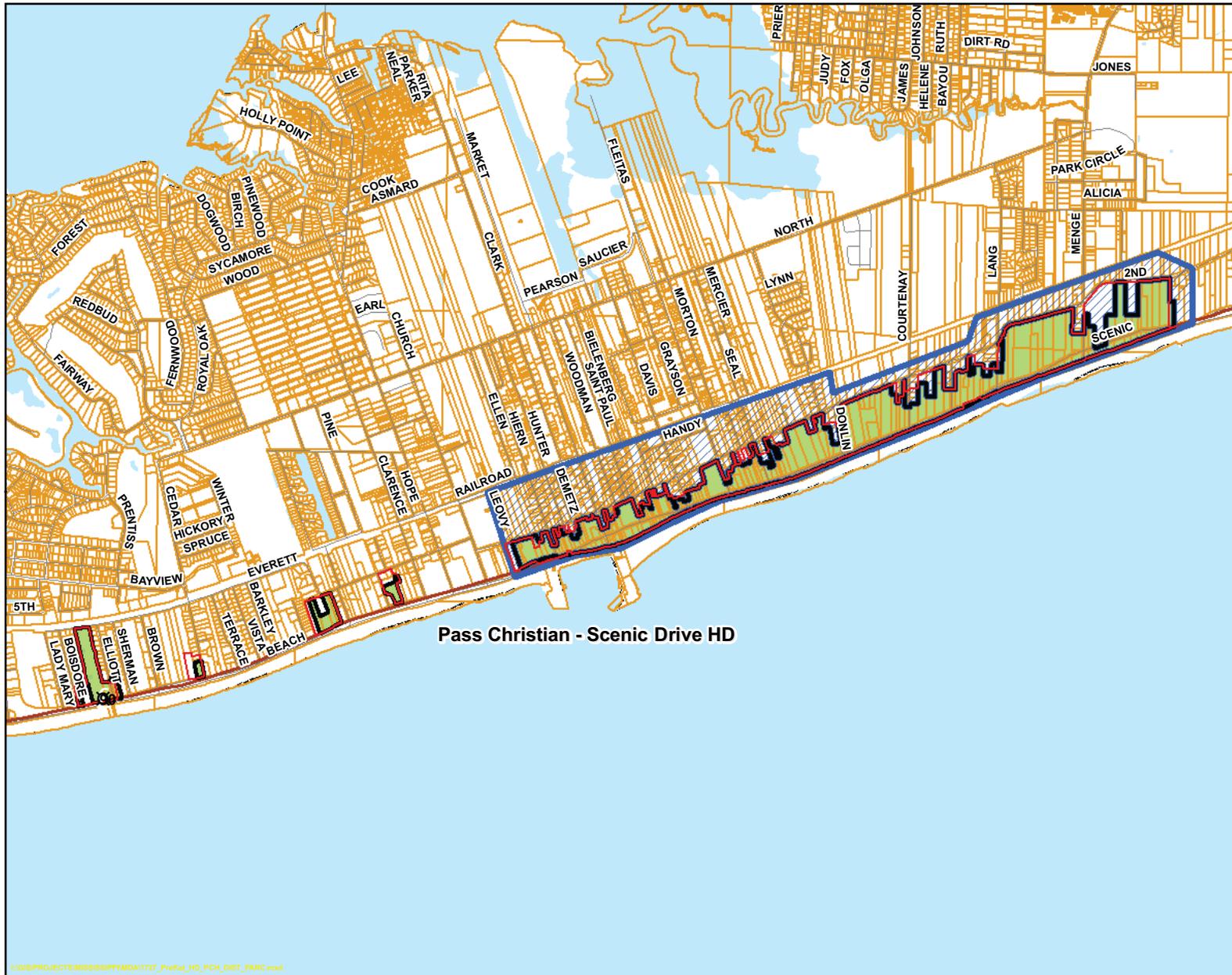
## Location Map



Local Historic District  
**Pass Christian**

# Scenic Drive Historic District

Prepared by URS for Mississippi Development Authority



### Legend

**Road Type**

- Interstate
- US Highway
- State Highway
- Local

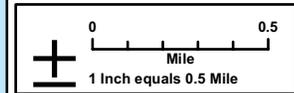
National Register Historic District (NRHD)

Local Historic District

Area of Potential Effect

Building Footprint

Parcel Boundary



Local Historic District  
**Pass Christian**

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# Jackson County

## Historic Preservation Review – Ocean Springs

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The following is a brief overview of the design review process for a Certificate of Appropriateness only and should not be used in place of the Ocean Springs Historic Preservation Ordinance.

### Ocean Springs Preservation Commission

The Ocean Springs Preservation Commission preserves and promotes the city’s historic resources and advises the city on the designation of historic districts, landmarks, and landmark sites.

The Preservation Commission reviews proposed changes to any individual landmark or property located within an historic district whether the property is improved or unimproved.

Design review guidelines for the respective landmarks, landmark sites, and historic districts are set out in Chapter 17, Article III of the Ocean Springs Municipal Code No. 19-2007.

### Purpose of Design Review

The purpose of design review is to protect and preserve the existing character and integrity of individual properties and their immediate surroundings, whether located within an historic district or standalone.

### What is a Certificate of Appropriateness?

A Certificate of Appropriateness is simply a document that you receive from the AHRC stating that the application conforms with appropriate design criteria and standards. A Certificate is required before most exterior work begins and before a building permit can be issued.

The issuance of a Certificate does not relieve you from compliance with any other provision of the laws of the City concerning a building permit, variances, or zoning.

### Design Review Approval Process

An application for a Certificate of Appropriateness can be filed on a form provided by the City’s Building Department. All applications require supporting documentation which will generally include photos of the area where work is to be done, a site plan and drawings depicting any new construction or alterations, and the materials proposed. Contact the building department for a complete list of required documents.

The Commission may approve, deny, or defer the application pending further information or changes. In some cases, the Commission may approve the application contingent on certain conditions that must be met before a Certificate is issued. Decisions of the Commission are final and are appealable to the Ocean Springs City Council.

### Approval Process

- Submit an application with required documentation to the building department for review.
- If a meeting of the Commission is not already scheduled, the completed application will be considered no later than 10 working days after filing.
- Hearings are conducted on the 2nd Thursday of every month at 7:00 p.m.
- You may request a preliminary conference with a member of the Commission to make any changes to the application that might be more consistent with the Commission’s standards.

- You should attend the Commission hearing to present relevant information in support of your application.
- The Commission may approve, deny, or continue your case to the next scheduled hearing.
- If the project is approved, the Certificate will be issued to you and the building official.
- Obtain any other necessary permits or variances. (Contact the building department for further information.)
- Work may proceed once the building permit has been issued.
- Construction must begin within 1 year and be completed within 2 years unless an extension is granted.

For more information contact:  
Building Department  
1018 Porter Avenue  
Ocean Springs, MS 39564  
228-875-4415  
[www.oceansprings-ms.gov](http://www.oceansprings-ms.gov)

## Summary Description of Old Ocean Springs Historic District

The Old Ocean Springs Historic District was designated a local historic district by city ordinance on October 16, 1990. This designation followed a formal listing in the National Register of Historic Places on October 7, 1987. Boundaries for both the local and National Register designations are the same. The district is comprised of several residential blocks situated along the southern and western borders of the central business district of Ocean Springs. The boundaries encompass properties on Jackson and Washington Avenues between Porter Avenue and Front Beach Drive, the waterfront homes on the north side of Front Beach Drive between Martin Avenue and Inner Harbor Road, and the those on the east side of Martin Avenue between Front Beach Drive and Cleveland Avenue.<sup>12</sup>

The district is significant for its architecture and offers a variety of forms and styles, which have been adapted for the weather conditions of the Gulf Coast Region.<sup>13</sup> The period of significance for the historic district spans from circa 1850 to 1935. Most of the houses are one- or one-and-one-half-storey wood-frame buildings. Many of the buildings rest on brick piers or have raised or partially raised basements. The contributing buildings were influenced by the Greek Revival, Queen Anne, and Craftsman styles. While built as a residential neighborhood, some of the buildings have been adapted for commercial use, including small offices and a funeral home. The district also includes two church complexes and a small modern office building.

An architectural response to Gulf Coast climatic conditions is reflected in the scarcity of chimneys and the wide-

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<sup>12</sup> National Register of Historic Places Nomination Form: Old Ocean Springs Historic District, Ocean Springs, Mississippi. 1987.

<sup>13</sup> National Register of Historic Places Nomination Form: Old Ocean Springs Historic District, Ocean Springs, Mississippi. 1987.

spread use of full-width or wrap-around porches or galleries. Although settled as a fishing village shortly after the 1699 establishment of nearby Fort Maurepas, the area that constitutes this district experienced only limited growth until the inception of steamer service between Mobile and New Orleans in the 1820s and 1830s. In the 1850s, the awakening interest in the small community received additional impetus from the discovery and exploitation of the mineral springs near the Old Fort Bayou. This discovery led many residents of New Orleans to build resort homes in the town.

Out of the 105 resources in the Old Ocean Springs Historic District, 65 are contributing buildings and 40 are non-contributing buildings. In addition, there is the Little Children's Park and adjoining city-owned vacant lot, both of which are non-contributing elements.<sup>14</sup>

### How Has the Historic District Changed Due to the Effects of Hurricane Katrina?

In July 2008, an architectural historian under contract with MDA performed a field survey of the Old Ocean Springs Historic District. Maps show that prior to Hurricane Katrina there were approximately 148 residential buildings included in the local district. Post-Katrina, there are approximately 127 residential buildings. This loss of historic fabric has resulted in a 15 percent loss of the districts' original composition. At least 5 of the 21 parcels lost have had new structures built on them since the storm.

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<sup>14</sup> National Register of Historic Places Nomination Form: Old Ocean Springs Historic District, Ocean Springs, Mississippi. 1987.

## Summary Description of Bowen Avenue Historic District

The Bowen Avenue Historic District was designated a local historic district by city ordinance on October 16, 1990. The district visually reflects the major trends of middle-class residential development in Ocean Springs from the late-nineteenth to the mid-twentieth century. The residences that constitute the historic district are single-family, detached structures located on the north and south sides of Bowen Avenue. The district consists of two blocks of Bowen Avenue and is bound by Kotzum Avenue to the west and Pershing Avenue to the east. Among the dwellings within the local historic district, 1112 and 1410 Bowen Avenue are individually listed in the National Register and represent late-nineteenth and early-twentieth century residential development, as well as architecture designed in the Queen Anne style in Ocean Springs. The structures within the district are one-storey dwellings that are primarily of wood-frame construction.<sup>15</sup>

### How Has the Historic District Changed Due to the Effects of Hurricane Katrina?

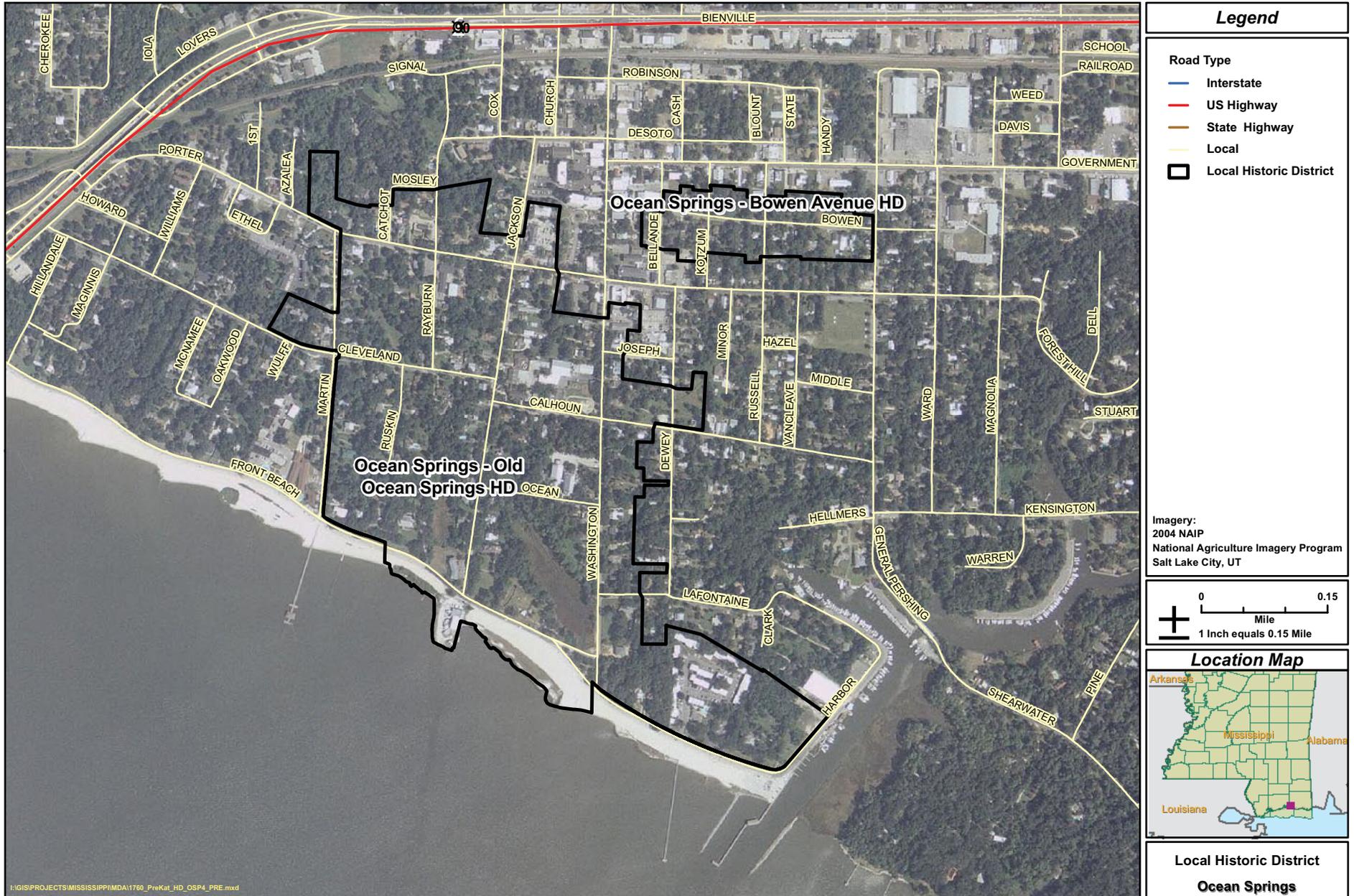
In July 2008, an architectural historian under contract with MDA performed a field survey of the Bowen Avenue Historic District. Maps show that prior to Hurricane Katrina there were 35 residential buildings included in the local district. While there are now 33 residential buildings within the district boundaries, the loss of historic fabric was not a result of the Hurricane Katrina and there was no substantive storm damage to the properties within the district.

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<sup>15</sup> "National Register Information System." ParkNet. National Park Service. 28 May 2008 <<http://www.nr.nps.gov/nrloc1.htm>>.

# Pre-Hurricane Katrina - Old Ocean Springs and Bowen Avenue Historic Districts

Prepared by URS for Mississippi Development Authority



# Post-Hurricane Katrina - Old Ocean Springs and Bowen Avenue Historic Districts

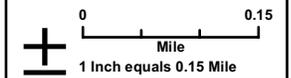
Prepared by URS for Mississippi Development Authority



## Legend

- Road Type**
- Interstate
  - US Highway
  - State Highway
  - Local
  - Local Historic District

Imagery:  
 Aug. 30, 2005  
 Gulf Coast Aerial Mapping  
 Baton Rouge, LA



## Location Map

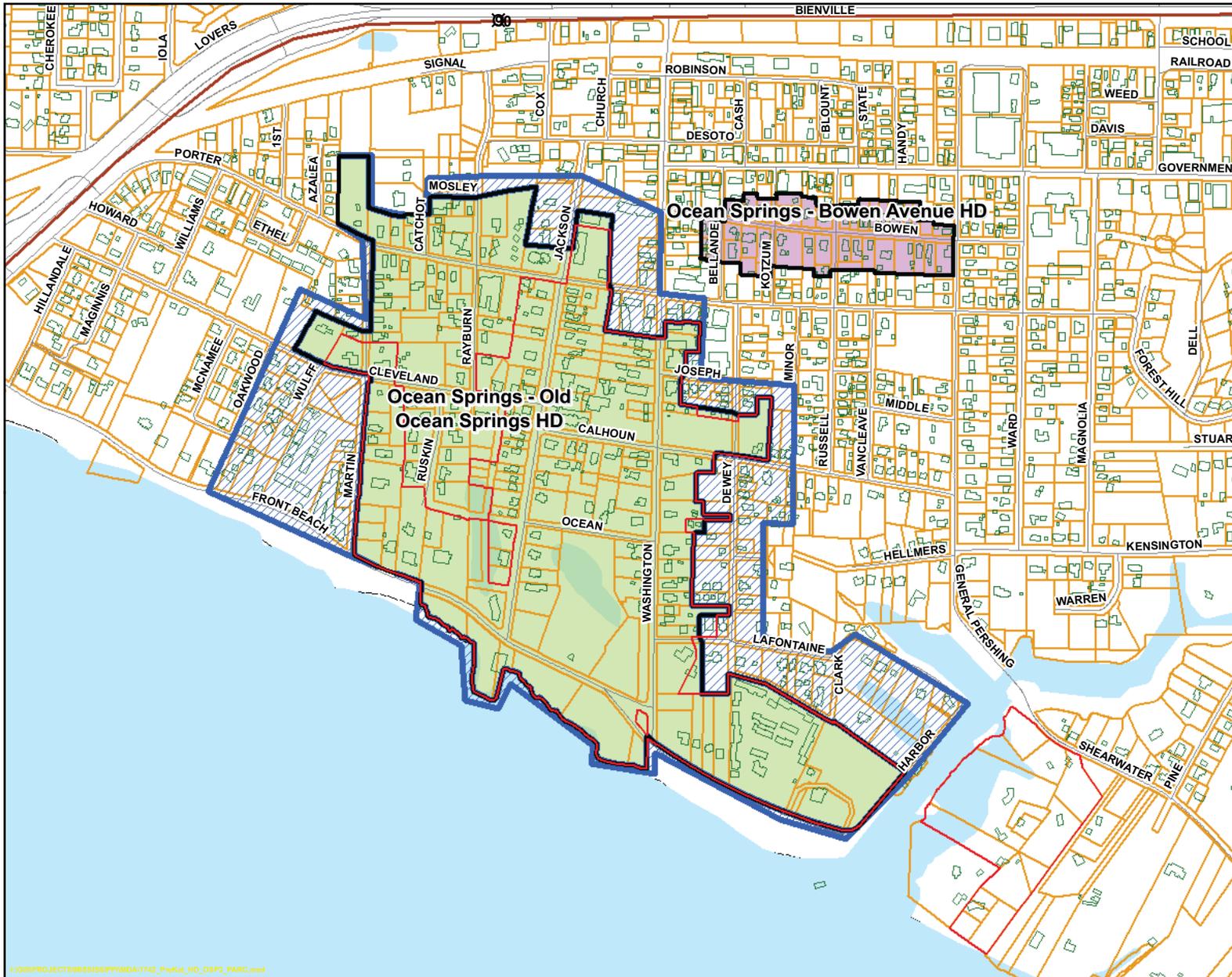


Local Historic District  
**Ocean Springs**

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# Old Ocean Springs and Bowen Avenue Historic Districts

Prepared by URS for Mississippi Development Authority



### Legend

**Road Type**

- Interstate
- US Highway
- State Highway
- Local

**National Register Historic District (NRHD)**

- National Register Historic District (NRHD)
- Local Historic District

**Area of Potential Effect**

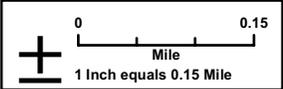
- Area of Potential Effect

**Building Footprint**

- Building Footprint

**Parcel Boundary**

- Parcel Boundary



Local Historic District  
**Ocean Springs**

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## Summary Description of Indian Springs Historic District

The Indian Springs Historic District was designated a local historic district by city ordinance on October 16, 1990. This designation followed a formal listing in the National Register of Historic Places on April 20, 1987, as part of the Ocean Springs Multiple Resource Area (MRA). Boundaries for both the local and National Register designations are the same. The local historic district is approximately defined by Old Fort Bayou on the north, Washington Avenue North on the east, the southernmost property lines of 816 Church Street and 810 Iberville Street on the south, and the northward extension to the bayou of the western boundary of the latter property.<sup>16</sup>

There are 11 buildings within the district boundaries—9 of which are contributing and 2 non-contributing. They are one- and two-storey buildings of wood frame construction, some of which were influenced by the Queen Anne, Greek Revival, and Arts and Crafts styles and were constructed between the late 1800s and the early 1900s. The lot sizes vary as does the placement of the buildings on their lots. The district is significant for its architecture because of the diversity of forms and styles within its limited number of structures.<sup>17</sup>

## How Has the Historic District Changed Due to the Effects of Hurricane Katrina?

In July 2008, an architectural historian under contract with MDA performed a field survey of the Indian Springs Historic District. Maps show that prior to Hurricane Katrina there were 17 residential buildings included in the local district. Post-Katrina there are 13 residential buildings. This loss of historic fabric has resulted in 24 percent loss of the district's original composition. At least 3 of the 4 parcels comprising the loss of fabric already have new structures.

## Summary Description of Marble Springs Historic District

The Marble Springs Historic District was designated a local historic district by city ordinance on October 16, 1990. This designation followed a formal listing in the National Register of Historic Places on April 20, 1987. Boundaries for both the local and National Register designations are the same. The district is bound on the west by the western property lines of 1007 and 1012 Iberville Avenue, on the north by the northern property lines of the properties on the north side of Iberville Avenue to the convergence of Iberville and Sunset Avenue, and on the south by 1012 through 1118, 1202, and 1204 Iberville Avenue.

The district is primarily residential except for the Veterans of Foreign Wars Meeting Hall. The district is composed of 14 contributing and 4 non-contributing buildings and is architecturally significant for its contrast of building scale and style, which reflect the periods of growth and recession of Ocean Springs as a resort community in the early-twentieth century. The architectural styles of the district include the Arts and Crafts and Bungalow styles.

<sup>16</sup> National Register of Historic Places Nomination Form: Indian Springs Historic District, Ocean Springs, Mississippi. 1987.

<sup>17</sup> National Register of Historic Places Nomination Form: Indian Springs Historic District, Ocean Springs, Mississippi. 1987.

### **How Has the Historic District Changed Due to the Effects of Hurricanes Katrina and Rita?**

In July 2008, an architectural historian under contract with MDA completed a windshield survey of the Marble Springs Historic District. Based on those observations, the buildings appeared to be intact and in good condition. No major damage was observed.

Furthermore, FEMA assessed the effects of Hurricanes Katrina and Rita on the properties that appeared to have met the National Register criteria prior to the disaster to determine if they retained integrity and continued to convey their historic significance after sustaining damages from the 2005 hurricane.<sup>18</sup> According to FEMA's assessment, dated August 2007, damage to historic resources within the Marble Springs Historic District was categorized as insignificant.<sup>19</sup>

### **Summary Description of Railroad Historic District**

The Railroad Historic District was designated a local historic district by city ordinance on October 16, 1990. The district is composed of open parks, a depot, and various other commercial and residential buildings that represent a period of industrial growth that resulted from the construction of railroad lines in Ocean Springs and the Gulf Coast Region. The district is bound by the Louisville and Nashville (L&N) railroad tracks on the north, Robinson Street on the south, Church Avenue on the west, and the footprint of Handy on the east. The L&N Railroad Depot, currently called the Whistle Shop, is the most significant structure within the district and is a small wood-frame station typical of the period. The depot is individually listed in the National Register as is the Cochran-Cassanova House at 9000 Robinson Street, a late-nineteenth century dwelling. The district includes 4 commercial buildings at its southwest corner that date from the late-nineteenth and early-twentieth centuries. These buildings are primarily of load-bearing masonry construction and possess storefronts.<sup>20</sup>

### **How Has the Historic District Changed Due to the Effects of Hurricane Katrina?**

In February 2008, URS architectural historians completed a field survey of the Railroad Historic District. Aside from the recent (summer 2008) arson of a private house—located at 900 Robinson Street—all of the structures that originally constituted the local historic district are extant. The historic properties and the composition of the district suffered minimal to no damage from Hurricane Katrina.

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<sup>18</sup> Federal Emergency Management Agency, Inventory of Historic Properties Post-Katrina. August 2007.

<sup>19</sup> Federal Emergency Management Agency, Inventory of Historic Properties Post-Katrina. August 2007.

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<sup>20</sup> "National Register Information System." ParkNet. National Park Service. 28 May 2008 < <http://www.nr.nps.gov/nrlloc1.htm> >.

**Pre-Hurricane Katrina - Indian Springs, Marble Springs and Railroad Historic Districts**

Prepared by URS for Mississippi Development Authority

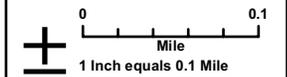


**Legend**

**Road Type**

- Interstate
- US Highway
- State Highway
- Local
- Local Historic District

Imagery:  
2004 NAIP  
National Agriculture Imagery Program  
Salt Lake City, UT



**Location Map**



**Local Historic District**  
**Ocean Springs**

**Post-Hurricane Katrina - Indian Springs, Marble Springs and Railroad Historic Districts**

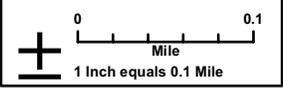
Prepared by URS for Mississippi Development Authority



**Legend**

- Road Type**
- Interstate
  - US Highway
  - State Highway
  - Local
  - Local Historic District

Imagery:  
 Aug. 30, 2005  
 Gulf Coast Aerial Mapping  
 Baton Rouge, LA



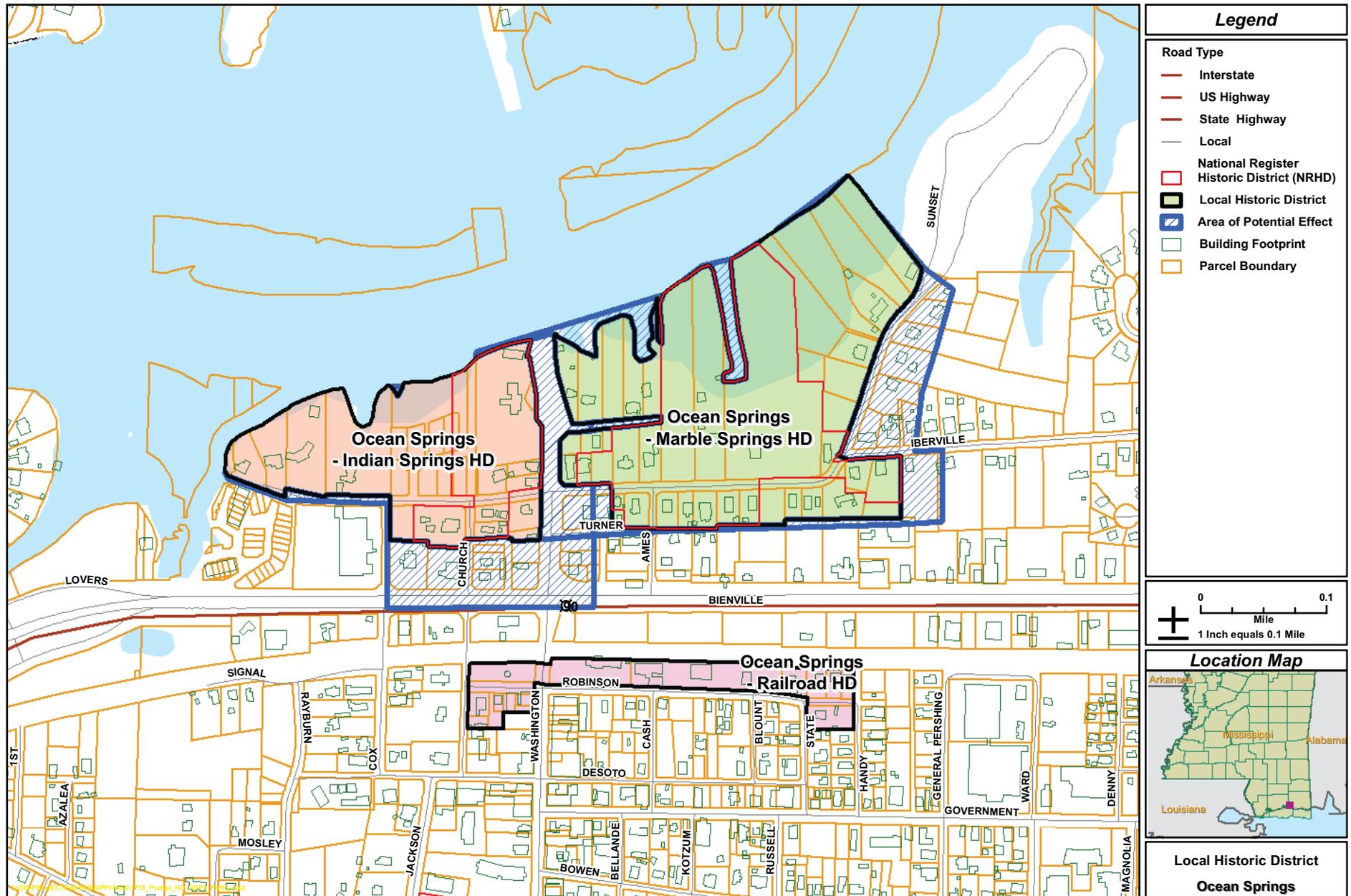
**Location Map**



**Local Historic District**  
**Ocean Springs**

# Indian Springs, Marble Springs and Railroad Historic Districts

Prepared by URS for Mississippi Development Authority



## Summary Description of Lover's Lane Historic District

The Lover's Lane Historic District was designated a local historic district by city ordinance on October 16, 1990. This designation followed a formal listing in the National Register of Historic Places on June 9, 1987. Boundaries for both the local and National Register designations are the same. The district occupies the western shore of a small peninsula that separates the Back Bay of Biloxi from the mouth of the Old Fort Bayou.<sup>21</sup> Lover's Lane, a narrow asphalt roadway flanked by thick foliage, bisects the peninsula and establishes the eastern boundary of the historic district.

The district is composed of a cohesive neighborhood of vacation estates that reflect the continued development and popularity of Ocean Springs as a resort community. The district is significant for architecture, which includes influences of the Greek Revival, Queen Anne, and Spanish Colonial Revival styles. The forms and styles have been adapted to accommodate the weather and climate conditions of the Gulf Coast Region, with wide eaves, deep porches, arcades, and shaded balconies.<sup>22</sup> The ages of these residences vary, as they were individually built during the mid to late-nineteenth and early-twentieth centuries.

The district is composed of 9 contributing and 3 non-contributing buildings, all of which are residential. Each of the residences are recessed from the shore and situated on large, cultivated tracts of land. Spacious extant historic landscapes are also an integral part of the historic fabric and are highlighted by surviving oyster-shell paths and drives.

## How Has the Historic District Changed Due to the Effects of Hurricane Katrina?

In July 2008, an architectural historian under contract with MDA conducted a windshield survey of the historic district. All contributing buildings in the district remained intact and, according to an inventory assessment of historic properties completed by FEMA in August 2007, building damage within the historic district was categorized as insignificant and/or minimal. Though the properties may have been littered with woody debris, the damage was limited to roofing, siding, windows, and doors.<sup>23</sup>

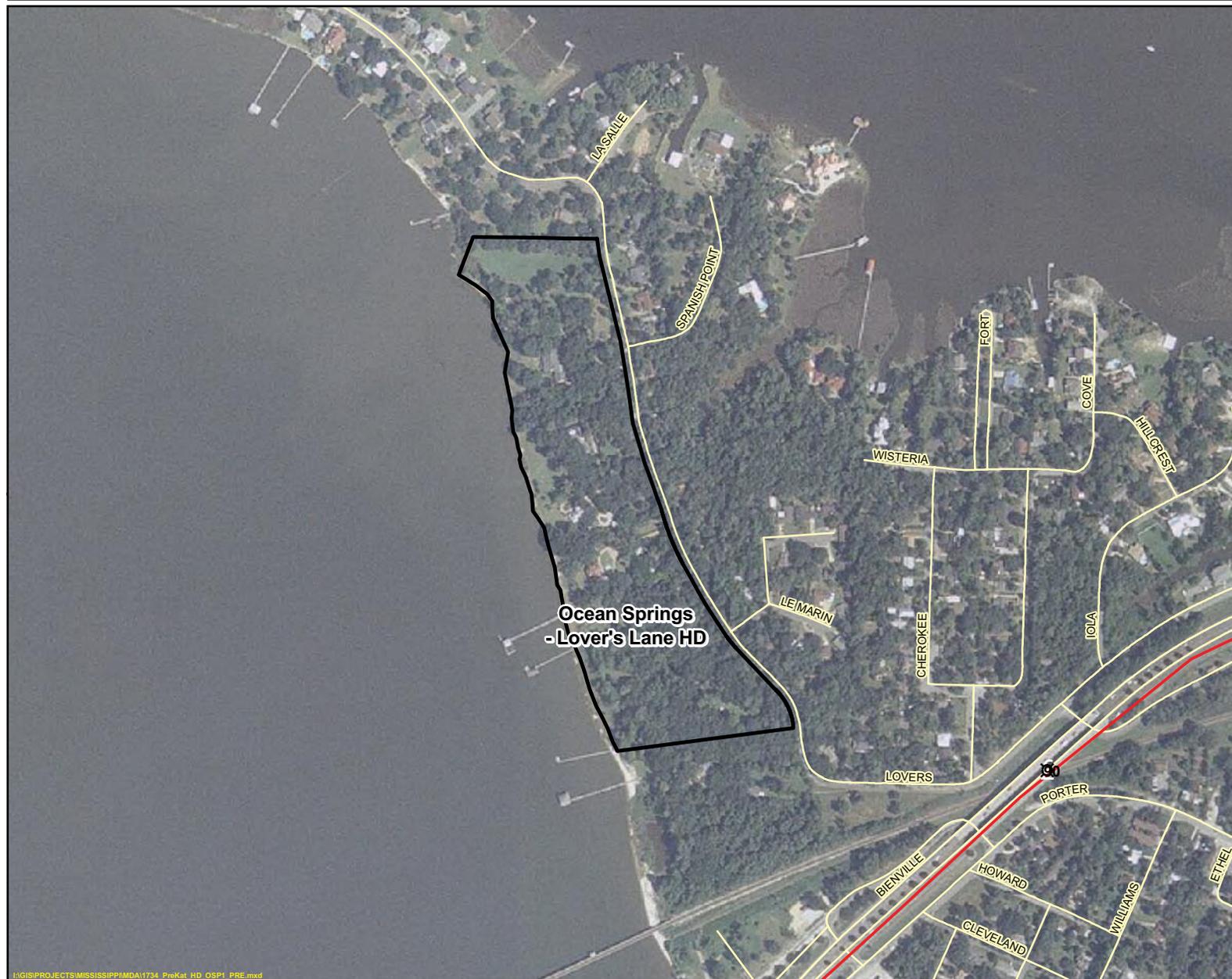
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21 National Register of Historic Places Nomination Form: Lover's Lane Historic District, Ocean Springs, Mississippi. 1987.

22 National Register of Historic Places Nomination Form: Lover's Lane Historic District, Ocean Springs, Mississippi. 1987.

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23 Federal Emergency Management Agency, Inventory of Historic Properties Post-Katrina. August 2007.



**Legend**

**Road Type**

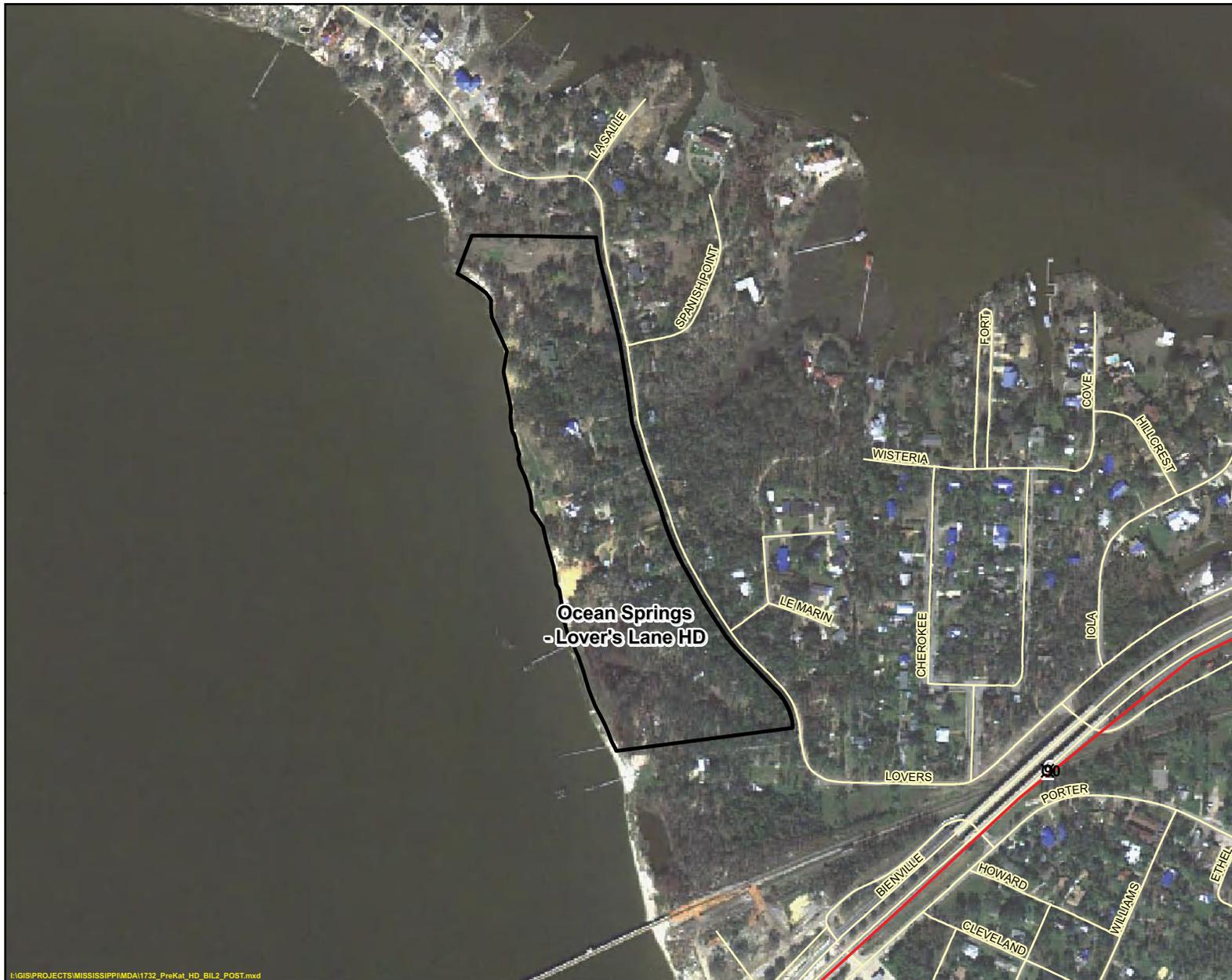
- Interstate
- US Highway
- State Highway
- Local
- Local Historic District

Imagery:  
 Aug. 30, 2005  
 Gulf Coast Aerial Mapping  
 Baton Rouge, LA

0 0.1  
 Mile  
 1 Inch equals 0.1 Mile

**Location Map**

**Local Historic District**  
**Ocean Springs**

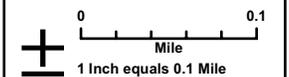


**Legend**

**Road Type**

- Interstate
- US Highway
- State Highway
- Local
- Local Historic District

Imagery:  
 Aug. 30, 2005  
 Gulf Coast Aerial Mapping  
 Baton Rouge, LA



**Location Map**

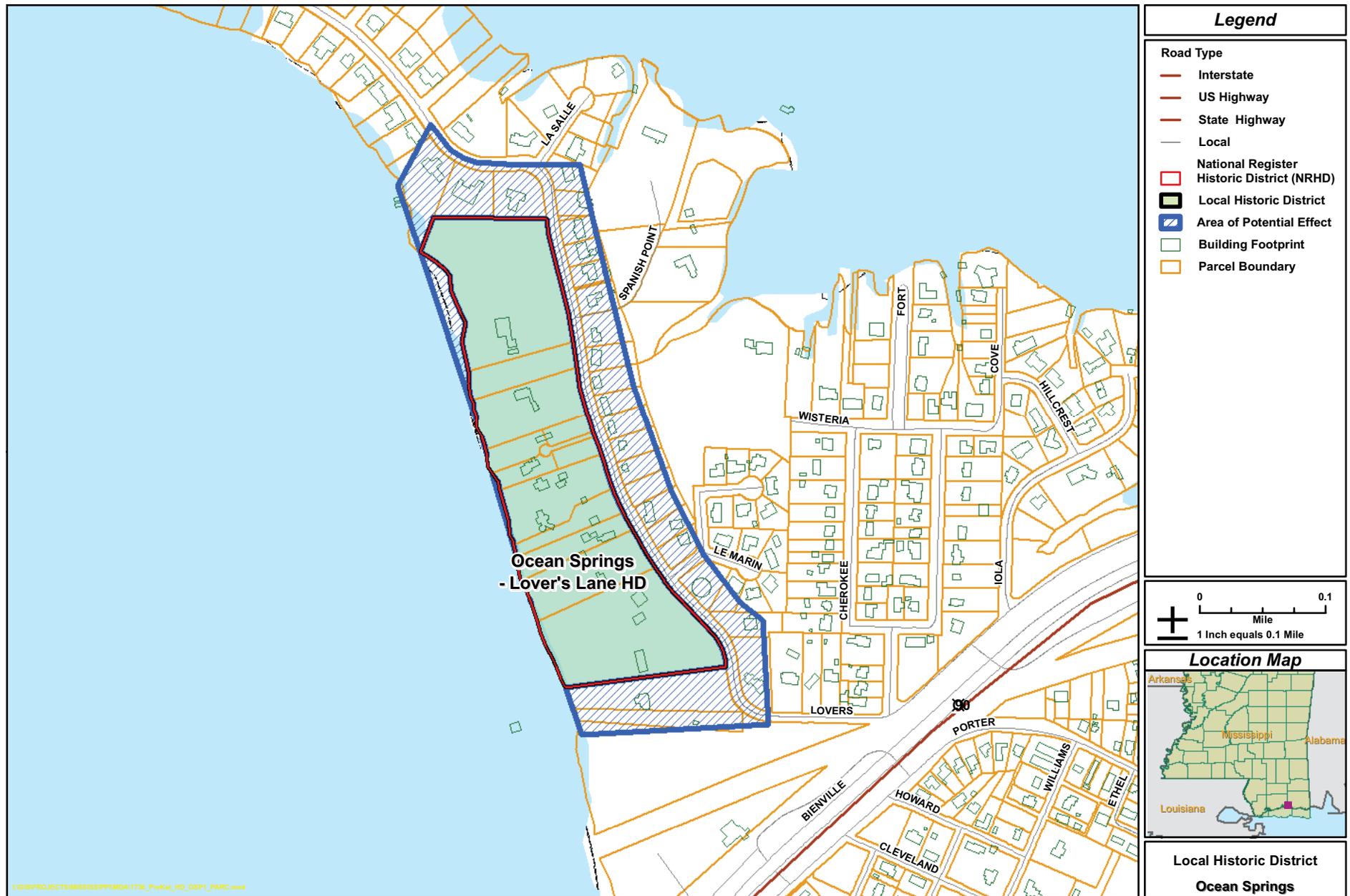


**Local Historic District**  
**Ocean Springs**

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# Lover's Lane Historic District

Prepared by URS for Mississippi Development Authority



## Summary Description of Shearwater National Register Historic District

The Shearwater Historic District was designated a local historic district by city ordinance on October 16, 1990. This designation followed a formal listing in the National Register on August 24, 1989. Boundaries for both the local and National Register designations are the same. The district occupies a site bound on the north by Shearwater Drive, on the west by the Inner Harbor, and on the south by the Bay of Biloxi. The district is heavily wooded and a small area of marshland defines the Inner Harbor shore drive which is constituted by a tightly curving private road leading southward from Shearwater Drive through the district.<sup>24</sup>

The Shearwater Historic District derives major significance from its association with the life and work of nationally noted artist Walter Inglis Anderson (1903–1965). From the early 1930s to his death in 1965, Anderson and his family became nationally known for creating “Shearwater Pottery,” a type of decorative earthenware ceramics. The district is significant in the history of American art from the 1930s to 1965. According to the National Register nomination form, of the 10 buildings that constitute the district, 6 are contributing and 4 are non-contributing.

## How Has the Historic District Changed Due to the Effects of Hurricane Katrina?

In July 2008, an architectural historian under contract with MDA performed a field survey of the Shearwater Historic District. Maps show that prior to Hurricane Katrina there were 18 residential buildings included in the local district. Post-Katrina there are 5 residential buildings that are original to the district. This loss of historic fabric has resulted in a 73 percent loss of the districts’ original composition. At least 8 of the 13 parcels composing the loss of fabric have already had new structures built on them.

## Summary Description of Sullivan-Charnley Historic District

The Sullivan-Charnley Historic District was designated a local historic district by city ordinance on October 16, 1990. This designation followed a formal listing in the National Register of Historic Places on October 7, 1987. Boundaries for both the local and National Register designations are the same. The district is significant for its association with master American architects Louis Sullivan (1856-1924) and Frank Lloyd Wright (1869-1959). The district was comprised of 3 waterfront parcels on East Beach Drive, which borders the Gulf of Mexico. There were 3 residential buildings on neighboring estates, 2 of which were designed by Adler and Sullivan of Chicago. These buildings were cottages, which Sullivan described as “shacks or bungalows,” and served as coastal getaways for Louis Sullivan and his friends Mr. and Mrs. James Charnley. Frank Lloyd Wright, who worked for Sullivan in his early career, later designed a guest cottage for the Charnleys, which they used as a vacation house. The cottages and their respective guest quarters were of simple wood-frame construction and shingle-clad, much in contrast to Sullivan’s well-known, geometric and terra-cotta-foliated designs. These are the only known buildings to be designed by Sullivan in Mississippi and, aside from “Fountainhead” in Jackson County, the same is true of Wright.<sup>25</sup> Prior to the storm, the houses were in good to excellent condition and had been altered only slightly through the years. The environment includes numerous stately oak trees, which are a contributing aspect to the historic landscape.

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<sup>24</sup> National Register of Historic Places Nomination Form: Shearwater Historic District, Ocean Springs, Mississippi. 1989.

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<sup>25</sup> National Register of Historic Places Nomination Form: Sullivan-Charnley Historic District, Ocean Springs, Jackson County, Mississippi. 1987.

### **How was the Historic District Changed Due to the Effects of Hurricanes Katrina?**

In February 2008, URS architectural historians completed a field survey of the Sullivan-Charnley Historic District. One of the 3 buildings was destroyed by Hurricane Katrina, which constitutes a 33 percent loss of the district's historic fabric. The remaining buildings include the former vacation cottages of Frank Lloyd Wright and Mr. and Mrs. James Charnley, both addressed as 509 Shearwater Drive. The extant buildings are in poor condition.

### **Individually Designated Local Landmarks**

The Historic Preservation Ordinance of Ocean Springs gives the City the authority to establish Local Landmarks, landmark sites, and historic districts. In addition to the Bowen Avenue, Indian Springs, Lover's Lane, Marble Springs, Old Ocean Springs, Railroad, Shearwater, and Sullivan-Charnley historic districts described above, a series of individual Local Landmarks have been designated.

In July 2008, an architectural historian under contract with MDA conducted a windshield survey of the individual Local Landmarks to determine if they were extant. Of the 7 original Local Landmarks, none were lost as a result of the storms. The following is a list of the Local Landmarks in Ocean Springs:

- 619–619A Washington Avenue (Bertuccini House and Barbershop)
- 321 Cleveland Avenue (C. E. Thompson Place)
- 1061 Beach Boulevard (Miss-La-Bama)
- Magnolia and Government Streets (Old Ocean Springs High School)
- 1017 DeSoto Avenue (Thomas Isaac Keys House)
- 1302 Government Street (VanCleave Cottage)
- 227 Front Beach Drive (W. B. Schmidt Estate)

**Pre-Hurricane Katrina - Shearwater and Sullivan-Charnley Historic Districts**

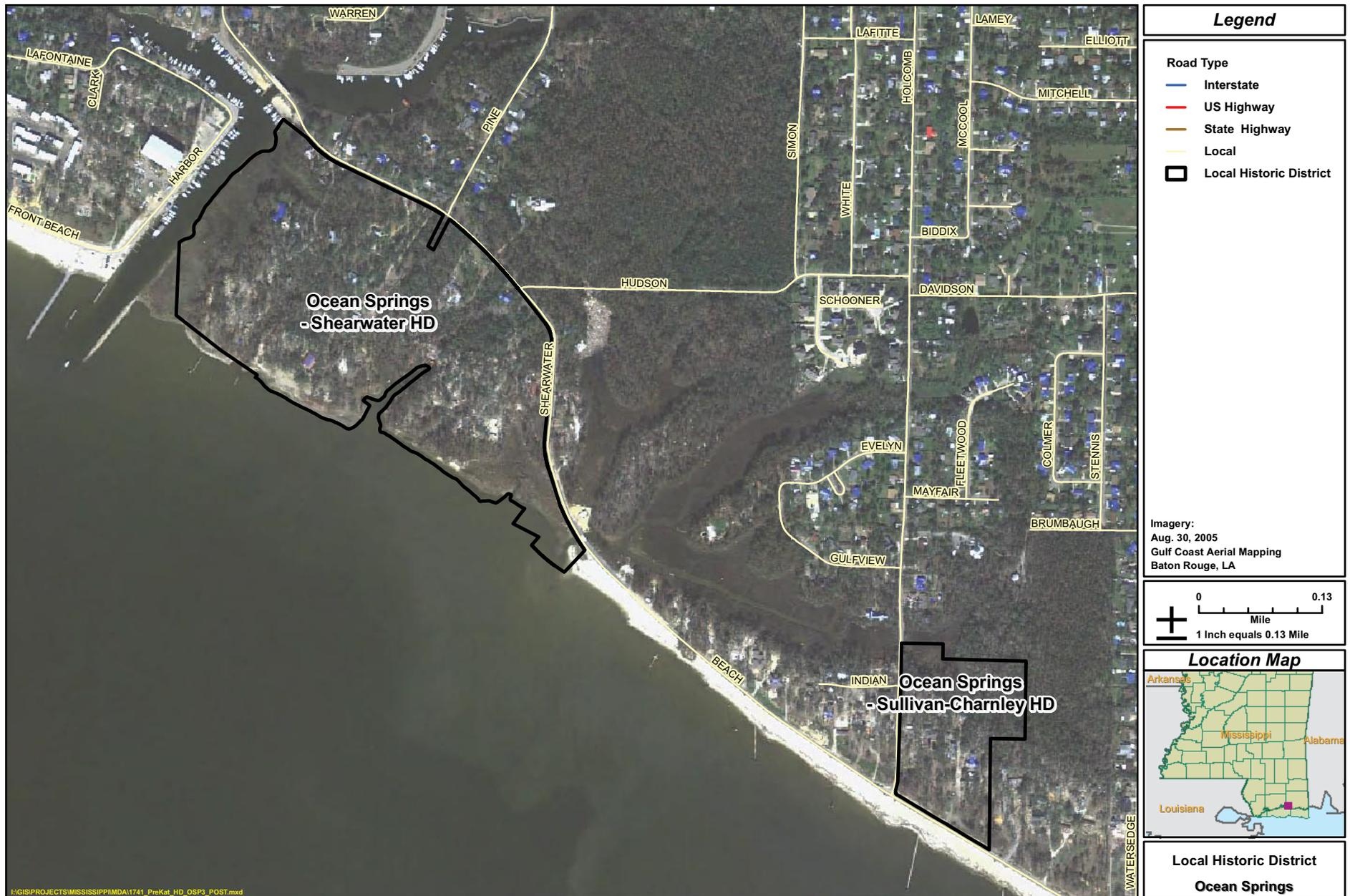
Prepared by URS for Mississippi Development Authority



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# Post-Hurricane Katrina - Shearwater and Sullivan-Charnley Historic Districts

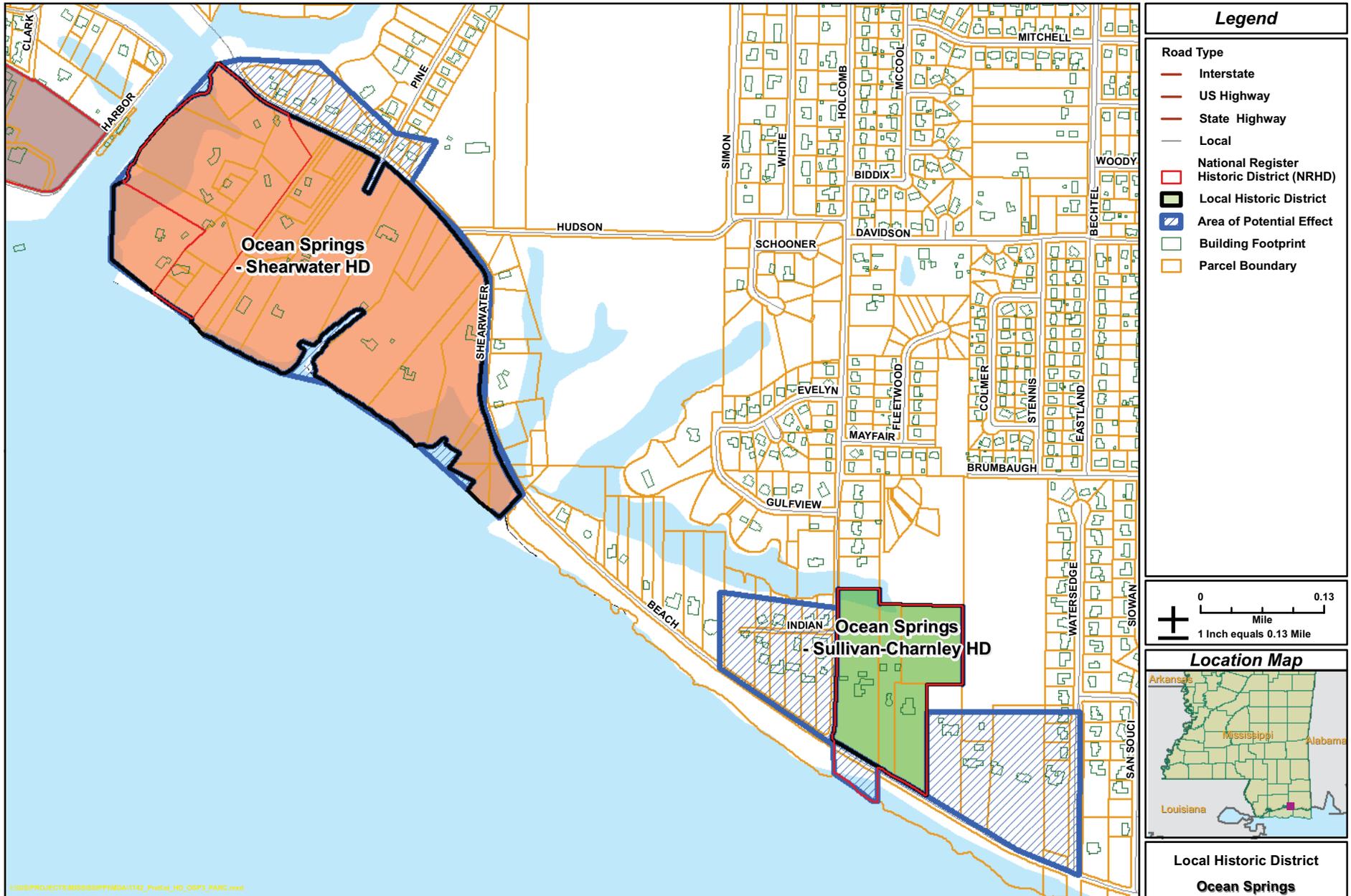
Prepared by URS for Mississippi Development Authority



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# Shearwater and Sullivan-Charnley Historic Districts

Prepared by URS for Mississippi Development Authority



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## Historic Preservation Review – Pascagoula

The following is a brief overview of the design review process for a Certificate of Appropriateness only and should not be used in place of the Pascagoula historic Preservation Ordinance.

### Pascagoula Historic Preservation Commission

The Pascagoula Historic Preservation Commission serves as a review body and recommends to the City Council whether applications for Certificates of Appropriateness should be granted. The City Council may impose conditions not recommended by the Commission.

The Historic Preservation Commission and the City Council seek to preserve and protect the integrity and character of any historic landmark, landmark site, or historic preservation district.

Design review guidelines for the respective landmarks, landmark sites, and historic districts are set out in Chapter 38 of the Pascagoula Code of Ordinances.

### Purpose of Design Review

The purpose of the design review is to protect and preserve the existing historic character of both the individual properties within a district and the district as a whole.

### What is a Certificate of Appropriateness?

A Certificate of Appropriateness is a document issued by the Historic Preservation Commission and City Council stating that the application conforms with appropriate design criteria and standards. A Certificate is required before most exterior work may begin and before a building permit can be issued.

### Design Review Approval Process

An application for a building permit will be considered an application for a Certificate of Appropriateness and should include any additional information required by the Historic Preservation Commission. Contact the building department for a complete list of required documents.

Upon hearing a request for a Certificate, the Historic Preservation Commission will submit minutes of its meeting along with a recommendation to the City Council to grant or deny the application. If the application is approved by the City Council, a Certificate will be issued.

The issuance of a Certificate does not relieve you from compliance with any other zoning or building requirement under the laws of the City.

### Approval Process

- Submit an application with required documentation to the buildings department.
- The completed application will be considered if filed 15 days prior to the next scheduled commission meeting.
- Hearings are conducted on the third Wednesday of every month at 12:00 p.m.
- You should attend the Commission hearing to present any relevant information in support of your application.
- The commission submits minutes of their meeting to the City Council with a recommendation to grant or deny a Certificate of Appropriateness.
- The City Council will review the recommendation of the Commission and issue a Certificate of Appropriateness to you and the building official.

- Obtain any other necessary permits or variances. (Contact the building department for further information.)
- Work may proceed once the building permit has been issued.
- The certificate expires 1 year from the date of the building permit.

For more information contact:

Pascagoula Building Department  
4015 14th Street  
Pascagoula, MS 39567  
228-938-6620  
[www.cityofpascagoula.com](http://www.cityofpascagoula.com)

## Summary Description of the Front Street Historic District

The Front Street Historic District was designated a local historic district by a resolution of the City Council of Pascagoula in March 1984. This designation preceded a formal listing in the National Register of Historic Places on May 17, 1984. Boundaries for both the local and National Register designations are the same. The district visually reflects the major trends of Pascagoula's nineteenth-century residential development.<sup>26</sup> The district comprised 5 homes that were examples of the Colonial Revival style with a period of significance of the late 1800s. The 2800 and 2900 blocks of Front Street included the 5 contributing residences in the district, each possessing architectural elements indicative of the region (i.e., large front galleries, floor-to-ceiling windows, and raised brick foundation piers). The houses were all in fair to good condition and most had been altered only slightly through the years. The environment includes numerous stately live oak trees, which are a contributing aspect to the historic landscape.

## How Has the Historic District Changed Due to the Effects of Hurricanes Katrina?

In February 2008, URS architectural historians completed a field survey of the Front Street Historic District. Three of the 5 one-and-one-half-storey residences were destroyed by Hurricane Katrina and subsequently demolished. The only remaining residences were the Charles B. Delmas House, addressed as 2914 Front Street, and the John B. Delmas House, addressed as 2916 Front Street. Overall damage to both buildings was minimal.

## Pearl River County

No locally designated historic districts are extant in Pearl River county.

For more information on building permits contact:  
Pearl River County Department of Planning and  
Development, Building Division Office  
402 S. Main Street  
Poplarville, MS 39470  
601-403-2300, ext. 202  
[www.pearlrivercounty.net](http://www.pearlrivercounty.net)

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<sup>26</sup> National Register of Historic Places Nomination Form: Front Street Historic District, Pascagoula, Mississippi. 1984.

# Pre-Hurricane Katrina - Front Street Historic District

Prepared by URS for Mississippi Development Authority



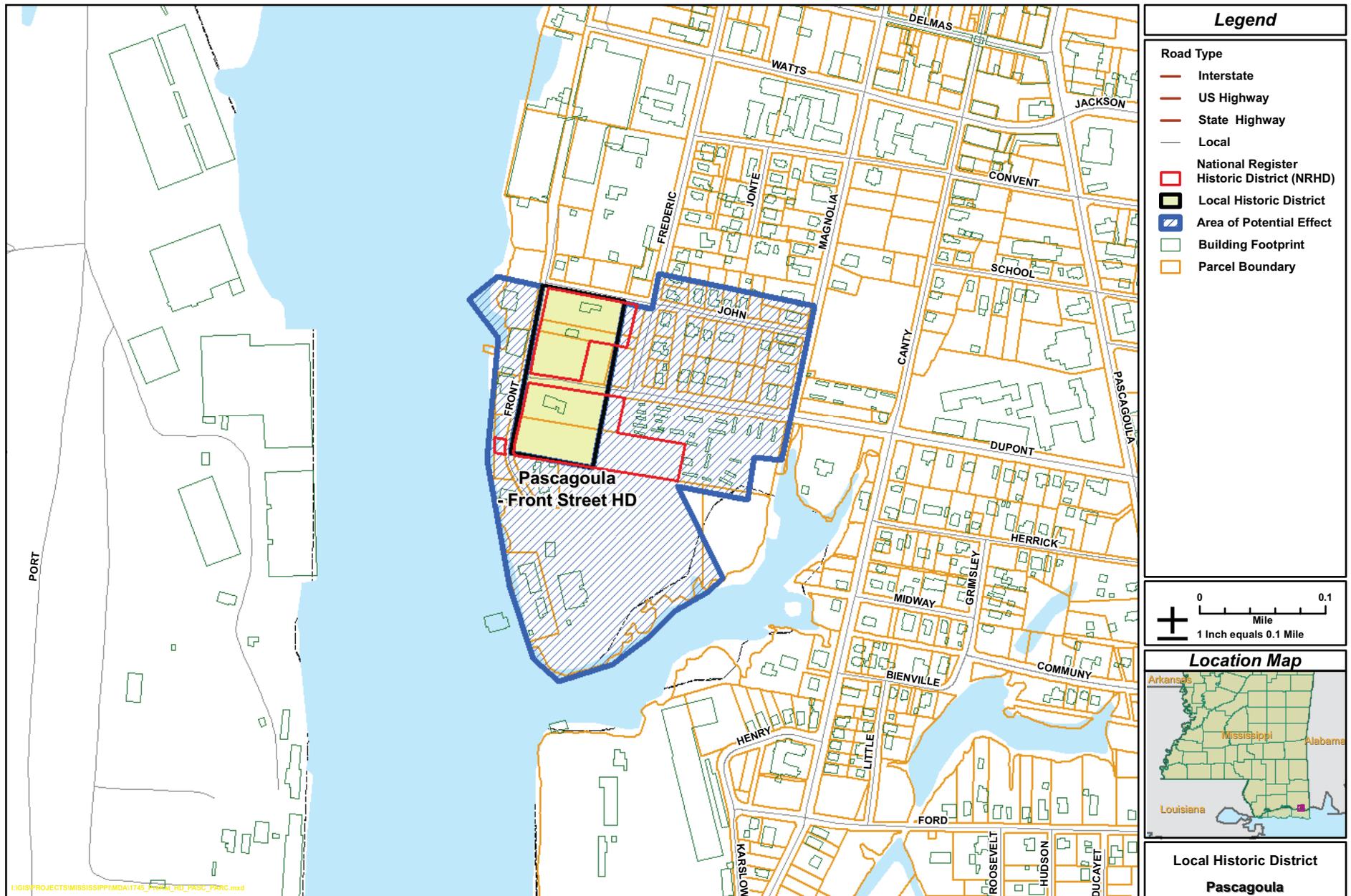
# Post-Hurricane Katrina - Front Street Historic District

Prepared by URS for Mississippi Development Authority



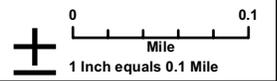
# Front Street Historic District

Prepared by URS for Mississippi Development Authority



## Legend

- Road Type**
- Interstate
  - US Highway
  - State Highway
  - Local
- National Register Historic District (NRHD)**
- National Register Historic District (NRHD)
- Local Historic District**
- Local Historic District
- Area of Potential Effect**
- Area of Potential Effect
- Building Footprint**
- Building Footprint
- Parcel Boundary**
- Parcel Boundary



**Local Historic District  
Pascagoula**

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# Glossary of Terms

## Architectural Terminology

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### Alterations

Generally, any construction or renovation to an existing building or structure other than repair or repainting.

### Architectural Character

The basic detailing, architectural rhythm, architectural style, appearance, and historic period of a building or a group of buildings or structures, including the site and landscape improvements.

### Architectural Detailing

The exterior placement and/or construction of different architectural features, including all horizontal and vertical surfaces.

### Architectural Feature

A prominent or significant part or element of a building, structure, or site. Architectural features may include special lines, massing, projections, recesses, and texture.

### Architectural Style

The characteristic form and detail of a building or structure dating to a particular time period.

### Bay

A regularly repeated spatial element, defined by beams or ribs and their supports, within a building or structure.

### Building Typology

A systematic classification or study of types of buildings or structures. As this pertains to historic districts, this means the study of general groupings of buildings or structures, organized by such features as overall form, style, and characteristic features.

### Composition

The assemblage of architectural features and details of a specific architectural style, or the use of materials that are based upon specific examples found in the area or time period.

### Façade

The portion of any exterior elevation on the building extending from grade to the parapet, wall, or eaves, and the entire width of the building elevation that faces a public street, excluding alleys.

### Integrity

The ability of an historic property to convey its significance. To be significant, a property will possess several, and usually most, of seven aspects of integrity:

1. Location: The place where an historic property was constructed or the place where an historic event occurred
2. Design: The combination of elements that create the form, plan, space, structure, and style of a property
3. Setting: The physical environment of an historic property
4. Materials: The physical elements that were combined during a particular period of time and in a particular pattern or configuration to form an historic property
5. Workmanship: The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory
6. Feeling: A property's expression of the artistic or historic sense of a particular period of time
7. Association: The direct link between an important historic event or person and an historic property

### Lines

Visual elements of a building, either within the façade or on the building edge, that are linear in form either horizontally or vertically and may be composed of masonry, glass, or other related materials.

### Massing

Pertains to the volume or bulk of a building or structure.

### Projections

Items such as sills, eaves, cornices, canopies, porches, and chimneys.

### Recesses

Portions of a building both in a horizontal and vertical plane that are set back from the building wall either for pedestrian articulation, to provide space for windows and/or doors, or to create special architectural detailing.

### Rhythm

The recurrence at regular or uniform intervals of features, especially windows, masonry, textures, etc., within a building.

### Scale

A proportional relationship among the size of parts to one another, and to the human figure.

### Texture

The quality of a surface, ranging from mirror finish, smooth, etc., to coarse or unfinished.

## Historic Preservation Regulatory Terminology

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### Adverse Effect

A finding under the National Historic Preservation Act Section 106 consultation process that an undertaking may alter, directly or indirectly, any of the characteristics of an historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design setting, materials, workmanship, feeling, or association. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative. Examples of adverse effects include:

1. Physical destruction of or damage to all or part of a property
2. Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous materials remediation, and provision of handicapped access, that is not consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR Part 68) and applicable guidelines
3. Removal of a property from its historic location
4. Change of the character of a property's use or of physical features within the property's setting that contribute to its historic significance
5. Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features
6. Neglect of a property that causes its deterioration, except where such neglect or deterioration are recognized qualities of a property of religious or cultural significance to an Indian Tribe or Native Hawaiian organization
7. Transfer, lease, or sale of a property out of Federal ownership without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance

#### **Area of Potential Effects**

The geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

#### **Certificate of Appropriateness**

A decision document issued by a local Historic Preservation Commission through which approval for certain actions involving individual historically significant

landmark buildings or structures, or buildings within locally designated historic districts, is granted. An application for a Certificate of Appropriateness must be made prior to applying for a building permit or a demolition permit, or altering the exterior architectural appearance of any landmark building or any building or structure within a locally designated historic district. The following actions trigger a request for a Certificate of Appropriateness:

1. Any construction, alteration, or removal requiring a building permit/zoning approval
2. Any alternation affecting a significant architectural feature or appearance as specified in the ordinance designating the landmark or historic district
3. Any demolition in whole or in part requiring a demolition permit

#### **Conditional No Adverse Effect**

A determination rendered under the National Historic Preservation Act Section 106 consultation process, through which the State Historic Preservation Office may suggest changes in a project or impose conditions so that adverse effects can be avoided and thus result in a No Adverse Effect determination. Generally, if an historic property is restored, rehabilitated, repaired, maintained, stabilized, remediated, or otherwise changed in accordance with the *Standards for Rehabilitation*, then it will not be considered as having an Adverse Effect.

#### **Consultation**

The process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising from the National Historic Preservation Act Section 106 review process.

#### **Effect**

Alteration to the characteristics of an historic property qualifying it for inclusion in the National Register of Historic Places.

Eligibility for Inclusion in the National Register includes both properties formally determined as such in accordance with the regulations of the Secretary of the Interior and all other properties that meet the National Register criteria.

#### **Historic Property**

Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. The term also includes properties of traditional religious or cultural importance to an Indian Tribe or Native Hawaiian organization that meet the National Register criteria.

#### **Memorandum of Agreement**

The document that records the terms and conditions agreed upon to resolve the adverse effects of an undertaking upon an historic property.

#### **National Historic Preservation Act, Section 106 Consultation**

The Nation's most important historic preservation law, through which Federal agencies must "take into account" (e.g., consider the effects of their undertakings on historic properties), and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. This law is implemented through regulations codified at 36 CFR Part 800, called "Protection of Historic Properties." This process seeks to accommodate historic preservation concerns with the needs of Federal undertakings through consultation among the Federal agencies and other parties with an interest in the effects of the undertaking on historic properties. The goal of consultation is to identify historic properties potentially affected by the undertaking, assess the effects, and seek ways to minimize or mitigate (offset) any adverse effects on historic properties.

**National Historic Landmark**

An historic property that the Secretary of the Interior has designated a National Historic Landmark.

**National Register**

The National Register of Historic Places maintained by the Secretary of the Interior.

**National Register Criteria**

The criteria established by the Secretary of the Interior for use in evaluating the eligibility of properties for the National Register (36 CFR Part 60).

**Programmatic Agreement**

A document that records the terms and conditions agreed upon to resolve the potential adverse effects of a Federal agency program, complex undertaking, or other situations in accordance with 36 CFR Section 800.14 (Section 106 regulations).

**State Historic Preservation Officer (SHPO)**

The official appointed or designated pursuant to section 101(b)(1) of the National Historic Preservation Act to administer the State historic preservation program or a representative designated to act for the State Historic Preservation Officer. In Mississippi, this individual is the head of the Mississippi Department of Archives and History (MDAH). This agency's historic preservation division carries out historic preservation programs within the State.

**Tribal Historic Preservation Officer (THPO)**

The Tribal official appointed by the Tribe's chief governing authority or designated by a Tribal ordinance or preservation program who has assumed the responsibilities of the SHPO for purposes of Section 106 compliance on Tribal lands in accordance with section 101(d)(2) of the National Historic Preservation Act.

**Undertaking**

A project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license, or approval.

**Building Elevation and Related FEMA Terminology**

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**A1-A30 and Zone AE**

A Special Flood Hazard Area (SFHA) subject to inundation by the 100-year flood, for which base flood elevations are determined.

**Advisory Base Flood Elevation (ABFE) Maps**

Where adopted, a community's Floodplain Management Map, for which FEMA has delineated the updated estimated 1-percent-annual-chance (100-year) stillwater elevations plus estimated wave effects known as the ABFEs.

**Advisory Flood Hazard Area (AFHE)**

Portion of land subject to inundation as shown on the ABFE maps to the ABFE inland limit.

**Area of Special Flood Hazard**

Land in the floodplain within a community subject to a 1-percent or greater chance of flooding in any given year.

**Base Flood**

Flood having a 1 percent chance of being equaled or exceeded in any given year (also called the "100-year flood").

**Base Flood Elevation (BFE)**

Elevation shown on the Flood Insurance Rate Map (FIRM) for Zones AE, AH, A1-30, AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO, V1-V30, and VE that indicates the water

surface elevation resulting from a flood that has a 1-percent or greater chance of being equaled or exceeded in any given year.

**Breakaway Wall**

A wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or the supporting foundation system.

**Coastal Barrier Resources System (CBRS)**

In undeveloped communities, coastal barriers and other protected areas that are subject to certain flood coverage restrictions. These areas were designated by the Coastal Barrier Resources Act of 1982 (CBRA) and the Coastal Barrier Improvement Act of 1990, and are shown on appropriate FIRM panels.

**Coastal High Hazard Area**

The area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast, and any other area subject to high-velocity wave action from storms or seismic sources. The area is designated on the FIRM as Zone V1 – V30, VE, or V.

**Coastal Zone A**

Portion of the SFHA landward of a Zone V or landward of an open coast without mapped Zone Vs, in which the principal sources of flooding are astronomical tides, storm surges, seiches, or tsunamis, not riverine sources. Coastal Zones A may be subject to wave effects, velocity flows, erosion, scour, or combinations of these forces and are treated as Zone Vs.

**Community Rating System (CRS)**

The program developed by the Federal Insurance Administration to provide incentives for those communities in the National Flood Insurance Program (NFIP) that have gone beyond the minimum floodplain

management requirements to develop extra measures to provide protection from flooding.

### **Community Flood Hazard Area (CFHA)**

The area determined by the Floodplain Administrator (or other delegated, designated, or qualified community official) from available technical studies, historical information, and other available and reliable sources, that may be subject to periodic inundation by floodwaters that can adversely affect the public health, safety, and general welfare. This includes areas downstream from dams.

### **Community Floodplain Management Map**

Any map produced by the community utilizing any base flood elevation and floodway data available from a Federal, State, or other source.

### **Conditional Letter of Map Revision (CLOMR)**

A formal review and comment by FEMA as to whether a proposed project complies with the minimum NFIP floodplain management criteria. A CLOMR does not amend or revise effective FIRMs, Flood Boundary and Floodway Maps, or Flood Insurance Studies.

### **Elevated Building**

A non-basement building built to have the lowest floor elevated above the ground level by means of fill, solid foundation perimeter walls, pilings, columns (posts and piers), shear walls, or breakaway walls.

### **Elevation Certificate**

A certified statement that verifies a building's elevation information necessary to ensure compliance with community floodplain management ordinances, to determine the proper insurance premium rate, and to support a request for a Letter of Map Amendment (LOMA) or Letter of Map Revision based on fill (LOMR-F).

An Elevation Certificate is required in order to properly rate post-FIRM buildings, which are buildings constructed

after publication of the FIRM, located in flood insurance Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, and AR/AO. The Elevation Certificate is not required for pre-FIRM buildings unless the building is being rated under the optional post-FIRM flood insurance rules.

### **Executive Order 11988 (Floodplain Management)**

Issued by President Carter in 1977, it requires that no federally assisted activities be conducted in or have the potential to affect identified SFHAs, unless there is no practicable alternative.

### **Five-Hundred-Year Flood (500-Year Flood)**

Flood with a 0.2-percent chance of being equaled or exceeded in any year. Areas subject to the 500-year flood have a moderate to low risk of flooding.

### **Flood or Flooding**

General and temporary condition of partial or complete inundation of normally dry land areas from: 1) the overflow of inland or tidal waters, or 2) the unusual and rapid accumulation or runoff of surface waters from any source.

### **Flood Hazard Boundary Map (FHBM)**

An older type of flood map produced by FEMA, based on approximate data. These have been superseded by FIRMs. Most communities now have FIRMs.

### **Flood Insurance Rate Map (FIRM)**

An official map of a community, on which FEMA has delineated both the areas of special flood hazard and the risk premium zones applicable to the community.

### **Flood Insurance Study (FIS)**

The official hydraulic and hydrologic report provided by FEMA. The report contains flood profiles, as well as the FIRM, FHBM (where applicable), and the water surface elevation of the base flood.

### **Floodplain**

Any land area susceptible to being inundated by flood waters from any source.

### **Floodplain Management**

The operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain, including but not limited to emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.

### **Floodplain Administrator**

The individual appointed to administer and enforce the floodplain management regulations.

### **Floodplain Management Regulations**

Zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances, and other applications of police power that control development in floodprone areas. This term describes Federal, State, or local regulations in any combination thereof, which provide standards for preventing and reducing flood loss and damage.

### **Floodproofing Certificate**

Documentation of certification by a registered professional engineer or architect that the design and methods of construction of a nonresidential building are in accordance with accepted practices for meeting the floodproofing requirements in a community's floodplain management ordinance. This documentation is required for both floodplain management requirements and insurance rating purposes.

### **Floodway**

The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to

discharge the base flood without cumulatively increasing the water surface elevation more than 1 foot.

### **Floodway Fringe**

Area of the floodplain on either side of the regulatory floodway where encroachment may be permitted without additional hydraulic and/or hydrologic analysis.

### **Freeboard**

A factor of safety, usually expressed in feet above the BFE, that is applied for the purposes of floodplain management. It is used to compensate for the many unknown factors that could contribute to flood heights greater than those calculated for the base flood.

### **Hardship (Gulfport)**

Exceptional hardship that would result from a failure to grant the requested variance. The City of Gulfport requires that the variance is exceptional, unusual, and peculiar to the property involved. Mere economic or financial hardship alone is NOT exceptional. Inconvenience, aesthetic considerations, physical handicaps, personal preferences, or the disapproval of one's neighbors likewise cannot, as a rule, qualify as an exceptional hardship. All of these problems can be resolved through other means without granting a variance, even if the alternative is more expensive, or requires the property owner to build elsewhere or put the parcel to a different use than originally intended.

### **Highest Adjacent Grade**

Highest natural elevation of the ground surface, prior to construction, next to the proposed walls of a building.

### **Hydrologic and Hydraulic Engineering Analysis**

Analysis performed by a professional engineer, registered in the State of Mississippi, in accordance with standard engineering practices as accepted by FEMA, used to determine flood elevations and/or floodway boundaries.

### **Increased Cost of Compliance (ICC)**

The cost to repair a substantially damaged building that exceeds the minimal repair cost and that is required to bring a substantially damaged building into compliance with the local flood damage prevention ordinance. Acceptable mitigation measures are elevation, relocation, demolition, or any combination thereof. All renewal and new business policies with effective dates on or after June 1, 1997, include ICC coverage.

### **Letter of Map Change (LOMC)**

An official FEMA determination, by letter, to amend or revise effective FIRMs, Flood Boundary and Floodway Maps, and FISs. LOMCs are broken down into the following categories:

#### **Letter of Map Amendment (LOMA)**

A revision based on technical data showing that a property was incorrectly included in a designated SFHA. A LOMA amends the current effective FIRM and establishes that a specific property is not located in an SFHA.

#### **Letter of Map Revision (LOMR)**

A revision based on technical data that, usually due to manmade changes, shows changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features. One common type of LOMR, a LOMR-F, is a determination concerning whether a structure or parcel has been elevated by fill above the BFE and is, therefore, excluded from the SFHA.

### **Lowest Adjacent Grade**

Elevation of the sidewalk, patio, deck support, or basement entryway immediately next to the structure and after the completion of construction. It does not include earth that is emplaced for aesthetic or landscape reasons around a foundation wall. It does include natural ground or properly compacted fill that comprises a component of a building's foundation system.

### **Lowest Floor**

Lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, used solely for parking of vehicles, building access, or storage, in an area other than a basement, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the non-elevation provisions of this code.

### **Map Panel Number**

The four-digit number followed by a letter suffix assigned by FEMA on a flood map. The first four digits represent the map panel, and the letter suffix represents the number of times the map panel has been revised.

### **Map Amendment**

A change to an effective NFIP map that results in the exclusion from the SFHA of an individual structure or a legally described parcel of land that has been inadvertently included in the SFHA (i.e., no alterations of topography have occurred since the date of the first NFIP map that showed the structure or parcel to be within the SFHA).

### **Market Value**

Building value, excluding the land (as agreed between a willing buyer and seller), as established by what the local real estate market will bear. Market value can be established by independent certified appraisal, replacement cost depreciated by age of building (Actual Cash Value), or adjusted assessed values.

### **Mean Sea Level**

The average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the floodplain. For purposes of this ordinance, the term is synonymous with National Geodetic Vertical Datum (NGVD).

**Mitigation**

Sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects. The purpose of mitigation is twofold: to protect people and structures, and to minimize the costs of disaster response and recovery.

**National Flood Insurance Program (NFIP)**

Federal program that makes flood insurance available to owners of property in participating communities nationwide through the cooperative efforts of the Federal Government and the private insurance industry.

**National Geodetic Vertical Datum (NGVD)**

As corrected in 1929, a vertical control used as a reference for establishing varying elevations within the floodplain.

**One-Hundred Year Flood (100-Year Flood)**

Flood with a 1-percent chance of being equaled or exceeded in any given year. Any flood zone that begins with the letter A or V is subject to the 100-year flood and areas within the ABFE limits. Over the life of a 30-year loan, there is a 26-percent chance of experiencing such a flood with the SFHA.

**Participating Community**

Any community that voluntarily elects to participate in the NFIP by adopting and enforcing floodplain management regulations that are consistent with the standards of the NFIP.

**Post-FIRM Construction**

Construction or substantial improvement that started after December 31, 1974.

**Pre-FIRM Construction**

Construction or substantial improvement that started on or before December 31, 1974.

**Regular Program**

The phase of the community's participation in the NFIP where more comprehensive floodplain management requirements are imposed and higher amounts of insurance are available based upon risk zones and elevations determined in an FIS.

**Regulatory Floodway**

The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than 1 foot.

**Repair**

Reconstruction or renewal of any part of an existing building.

**Repetitive Loss**

Under the NFIP, repetitive loss pertains to any insurable building for which two or more claims of more than \$1,000 were paid by the NFIP within any rolling 10-year period since 1978. A repetitive loss property may or may not be currently insured by the NFIP. There are over 122,000 repetitive loss properties nationwide.

**Section 1316**

Section of the National Flood Insurance Act of 1968, as amended, which states that no new flood insurance coverage shall be provided for any property that the Administrator finds has been declared by a duly constituted State or local zoning authority or other authorized public body to be in violation of State or local laws, regulations, or ordinances that are intended to discourage or otherwise restrict land development or occupancy in floodprone areas.

**Special Flood Hazard Area (SFHA)**

Portion of the base (100-year) floodplain subject to inundation by the base flood and/or flood-related erosion

hazards as shown on a FHBM or FIRM as Zone A, AE, A1 – A30, AH, AO, AR, V, VE, or V1-V30.

**Start of Construction**

For other than new construction or substantial improvements under the CBRA P. L. 97-348, includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of a building (including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, foundations, or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main building. For substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

**Structure**

All walled and roofed buildings, including gas or liquid storage tanks and manufactured homes that are principally above ground.

**Subrogation**

Action brought by FEMA when flood damages have occurred, flood insurance has been paid, and all or part of the damage can be attributed to acts or omissions by a community or other third party.

### **Substantial Damage**

Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. The term includes Repetitive Loss buildings (see definition). For the purposes of this definition, “repair” is considered to occur when the first repair or reconstruction of any wall, ceiling, floor, or other structural part of the building commences. The term does not apply to:

1. Any project for improvement of a building required to comply with existing health, sanitary, or safety code specifications that have been identified by the Building Official and that are solely necessary to ensure safe living conditions
2. Any alteration of an historic structure provided that the alteration will not preclude the structure’s continued designation as an historic structure
3. Any improvement to a building

### **Substantial Improvement**

Any combination of reconstruction, alteration, or improvement to a building, taking place over a 10-year period, in which the cumulative percentage of improvement equals or exceeds 50 percent of the current market value of the building. For the purposes of this definition, an improvement occurs when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the building. This term includes structures, which have incurred “repetitive loss” or “substantial damage,” regardless of the actual repair work done. The term does not apply to:

1. Any project for improvement of a building required to comply with existing health, sanitary, or safety code specifications that have been identified by the Building Official and that are solely necessary to ensure safe living conditions

2. Any alteration of an historic structure provided that the alteration will not preclude the structure’s continued designation as an historic structure
3. Any building that has been damaged from any source or is categorized as repetitive loss

### **V1 – V30 and Zone VE**

Portion of the SFHA subject to inundation by the 100-year flood or coastal floods with velocity hazards (wave action) and for which base flood elevations are determined.

### **Variance**

A grant of relief from the requirements of this ordinance, which permits construction in a manner otherwise prohibited by this ordinance where specific enforcement would result in unnecessary hardship.

### **Water Surface Elevation**

Height, in relation to the NGVD of 1929, (or other datum, where specified) of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

### **Zone**

A geographical area shown on a FHBM or a FIRM that reflects the severity or type of flooding in the area.

### **Zone A**

Portions of the SFHA in which the principle source of flooding is runoff from rainfall, snowmelt, or a combination of both. In a Zone A, floodwaters may move slowly or rapidly, but waves are usually not a significant threat to buildings.

### **Zone X**

Area where the flood hazard is less than that in the SFHA. Shaded Zone Xs shown on recent FIRMs (Zone Bs on older FIRMs) designate areas subject to inundation by the flood with a 0.2-percent annual probability of being equaled or exceeded (the 500-year flood). Unshaded Zone Xs (Zone Cs on older FIRMs) designate areas where the annual exceedence probability of flooding is less than 0.2 percent.



