

## U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT:

### 8-STEP PROCESS - FLOODPLAIN

**Project Name:** Richwood - Flood and Drainage - 24-065-013-E170

**State/Local Identifier:** 24-065-013-E170 / B-18-DP-48-0002

#### **Project Location:**

All work will occur in the City of Richwood, Brazoria County, Texas at the following locations:

#### Water Improvements

- Magnolia Ln. from north side of Audubon Woods Dr. (29.06938, -95.41544) south down ROW to point 30' south of Quail Run Dr. (29.06613, -95.41513).
- Quail Run Dr. from Oyster Creek Dr. to ROW aligned with Magnolia Ln. (29.06628, -95.41513)
- Briar Creek St. from Quail Run Dr. to Magnolia Ln.
- 4 Oaks St. from Briar Creek St. east to ROW aligned with Magnolia Ln. (29.06699, -95.41512)

#### Drainage Improvements

- ROW from point 115' northwest of Audubon (29.06938, -95.41544) south to Quail Run Dr
- Briarcreek St. from Magnolia Ln. to Quail Run Dr.
- Quail Run Dr. from Oyster Creek Dr. east 1,230' (29.06615, -95.41464)
- 4 Oaks St from Briar Creek St. east 622' (29.06705, -95.41465)
- ROW from point on northwest side of Briarcrest St. (29.06833, -95.41546) southeast 116' (29.06827, -95.4151)
- ROW from point north of 4 Oaks St. on the northwest side of Briarcreek St. (29.06742, -95.41646) to southeast side of Briarcrest St. (29.06732, -95.41637).
- ROW from point south of 4 Oaks St on northwest side of Briarcreek St. (29.06718, -95.41669) to southeast side of Briarcreek St. (29.06712, -95.41663).
- ROW from point 14' northeast of Quail Run on northwest side of Briarcreek St. (29.0665, -95.41745) to southeast side of Briarcreek St. (29.06642, -95.41737).
- Briarcreek St. from point 40' northeast of 4 Oaks St. southwest 465' to point 100' northeast of Quail Run Dr. (29.06642, -95.41737)
- 4 Oaks St. from Briarcreek St. east 622' (29.06705, -95.41465)
- Quail Run Dr. from point 260' east of Briarcreek St. (29.06613, -95.41673) east 650' (29.06615, -95.41464)
- ROW from point 260' east of Briarcreek St. on north side of Quail Run Dr. (29.06626, -95.41673) to southside of Quail Run Dr. (29.06613, -95.41673).
- ROW at end of Quail Run Dr. and on north side of Quail Run Dr. (29.06625, -95.41519) to southside of Quail Run Dr. (29.06617, -95.41519)

### Street Improvements

- Quail Run Dr. from Oyster Creek Drive east to end (1,045 lf)
- Brian Creek St from 290' south of Audubon Woods Dr. south to Quail Run Drive4 Oaks St. from Briar Creek St. east to end 475'

### **Description of the Proposed Project** [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:

The proposed improvements will improve the existing drainage by conveying it via an underground storm sewer system and outfalling the storm sewer structures to a recently improved drainage ditch. The project will improve the condition of the street by reworking and stabilizing the base material and performing a full street reconstruction. A uniform street section coupled with the addition of an underground storm sewer system will help to convey stormwater away from adjacent homes during future flooding disasters and lessen street inundation during intense rain events. The proposed water main improvements will replace aging water main infrastructure.

**Step 1: Determine whether the action is located in a FFRMS floodplain.**

According to FEMA floodplain map #48039C0610K (Effective Date 12/30/20), the project is located in FEMA Zone AE (100-year floodplain).

According to FFSST, based on the user-defined location, service life (36 Years), and non-critical designation, the proposed action is in the FFRMS floodplain.

The 2050 estimated sea-level rise amount is 3 ft, corresponding to a FFRMS flood elevation of 15 FT NAVD88.

The 2060 estimated sea-level rise amount is 3 ft, corresponding to a FFRMS flood elevation of 15 FT NAVD88.

The North American Vertical Datum of 1988 (NAVD88) is the datum used on FEMA Digital Flood Insurance Rate Maps (DFIRMs) for Base Flood Elevations (BFEs).

Projects located in the FFRMS floodplain should be designed consistent with the applicable policies and directives of the agency taking or approving the action.

The area of disturbance: 3.84 acres.

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***Exemptions to Part 55:***

*Actions listed in the revised 24 CFR 55.12 that are exempt from the floodplain management requirements of Part 55 include:*

- *Exempt activities and actions that are Categorically Excluded Not Subject to 50.4 or 58.5*
- *Restoration or preservation of floodplains, acquisition of floodplains property provided the site is used for flood control or open space but only if structures are cleared and improvements are specifically limited*
- *Receivership or foreclosure and related actions*
- *Policy-level actions not involving site-based work*
- *Issuance of non-project-based housing vouchers*
- *A minor amendment to a previously approved action*

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The project is subject to Part 55 because it meets the criteria for none of the exemptions.

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***Critical Actions:***

*Critical action means any activity for which even a slight chance of flooding would be too great because such flooding might result in loss of life, injury to persons, or damage to property.*

*Critical actions include activities that create, maintain, or extend the useful life of those structures or facilities that:*

- *Produce, use, or store highly volatile, flammable, explosive, toxic, or water-reactive materials*
- *Provide essential and irreplaceable records or utility or emergency services that may become lost or inoperative during flood and storm events (e.g., community stormwater management infrastructure, water treatment plants, data storage centers, generating plants, principal utility lines, emergency operations centers including fire and police stations, and roadways providing sole egress from flood-prone areas)*
- *Are likely to contain occupants who may not be sufficiently mobile to avoid loss of life or injury during flood or storm events, e.g., persons who reside in hospitals, nursing homes, convalescent homes, intermediate care facilities, board and care facilities, and retirement service centers; housing for independent living for the elderly is not considered a critical action*

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Because the project meets none of the above criteria, it is not considered a critical action.

***Step 2: Notify the public for early review of the proposal and involve the affected and interested public in the decision making process.***

There are designated floodplains associated with the proposed project sites. An early floodplain notice was published regarding the project, affording the opportunity for public input. No comments were received.

Posting Date: 6/28/24

**Step 3: *Identify and evaluate practicable alternatives.***

The City project site selection criteria are:

- (a) The project cannot cause current residents to become displaced;
- (b) The project must be within the City in order for grant proceeds to be used;
- (c) The project must address infrastructure which was damaged due to recent flooding.

The City considered several alternative sites and actions:

1. **Do only work outside the 100-year floodplain.** - It is not possible to complete the project outside the 100-year floodplain.
2. **Obtain a Letter of Map Amendment (LOMA) or Letter of Map Revision (LOMR).** - The City also considered applying for a LOMA Map Amendment or Letter of Map Revision but it was determined that this site would not be a good candidate for such action and the time required to request such action could not be justified.
3. **Other infrastructure considered.** - Other infrastructure projects were also considered within the City Jurisdictional limits. However, the City concluded that this project was the highest priority of any eligible projects.
4. **No Action or Alternative Actions that Serve the Same Purpose.** - A no-action alternative was considered but the infrastructure to be addressed is currently not functioning properly which could pose a health hazard to the community.

**Step 4: *Identify Potential Direct and Indirect Impacts of Associated with Floodplain Development.***

1. Preventing loss of life and property as a result of flooding is the highest priority. A flood could damage the new infrastructure.
2. In addition to concerns for life and property, the City has considered the natural values of the floodplain. The natural resources of the floodplain include water, biological, and societal resources. The proposed project will have minimal impacts to the floodplains because appropriate mitigation will be in place.
3. After review of the County Lists of Endangered and Threatened Species for the County, on-site inspections of the project site, and consultation with the USFWS and TPWD, it was concluded that the construction of the facilities will have no quantifiable impact on plant and animal life. Only native plants are to be used in the floodplain and on the site.
4. Societal resources should also be considered during the design process. The designs are meant to complement the natural features of the area and to offer an aesthetically pleasing structure. The site will not have an effect on agricultural lands.

**Step 5: *Where practicable, design or modify the proposed action to minimize the potential adverse impacts to lives, property, and natural values within the floodplain and to restore, and preserve the values of the floodplain.***

1. Preserving Property: Project designs should, to the best extent possible, incorporate measures to reduce the risk of damage to the new infrastructure via a flood.
2. Preserving Natural Values and Minimizing Impacts: After construction is completed, the disturbed area will need to be immediately re-vegetated with native grasses. Only native plants are to be used in the floodplain and on the site.
3. Deposition and excavation of materials will need to be performed in such a manner that erosion and sedimentation will be controlled.
4. Precautions will need to be taken in the handling of fuels or other hazardous materials to prevent discharge or spillage resulting in lower groundwater quality.
5. Erosion control measures such as hay bales or silt screen barriers will need to be implemented and maintained during construction as required.
6. The project engineer will need to incorporate best management practices into the specifications and plans.

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**Mitigation Requirements:**

CFR 55.20 (e)(1):

For actions in the FFRMS floodplain, the required elevation described in this section must be documented on an Elevation Certificate or a Floodproofing Certificate in the Environmental Review Record prior to construction, or by such other means as HUD may from time to time direct, provided that notwithstanding any language to the contrary, the minimum elevation or floodproofing requirement for new construction or substantial improvement actions shall be the elevation of the FFRMS floodplain as defined in this section.

Non-Critical Actions

CFR 55.7(d)(1):

- The FFRMS floodplain includes those areas that result from adding an additional two feet to the base flood elevation based on best available information.

Critical Actions

CFR 55.7(d)(2):

- The FFRMS floodplain includes those areas that result from adding an additional three feet to the base flood elevation based on best available information.

Applicable Projects

According to the HUD Exchange on Floodplain Management (Complying with 24 CFR Part 55 (2)), if a project involves new construction or substantial improvement, elevation requirements apply.

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Substantial Improvement:

A substantial improvement is any repair, reconstruction, modernization or improvement of a structure, including one of the following:

1. The cost of which equals or exceeds 50 percent of the market value of the structure either before the improvement or repair is started, or, if the structure has been damaged and is being restored, before the damage occurred
2. That results in an increase of more than 20 percent in the number of dwelling units in a residential project or in the average peak number of customers and employees likely to be on-site at any one time for a commercial or industrial project

Certain types of projects are specifically not considered substantial improvement under Part 55.

- Any project solely for improvement of a structure to comply with existing state or local health, sanitary or safety code specifications that is solely necessary to assure safe living conditions
- Any alteration of a structure listed on the National Register of Historical Places or on a State Inventory of Historic Places
- Structural repairs, reconstruction, or improvements not meeting the definition for substantial improvement are considered "minor improvements."

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Because this project is not considered a structure, elevation requirements do not apply.

**Step 6: *Reevaluate the Alternatives.***

1. **Do only work outside the 100-year floodplain.** - The infrastructure to be addressed is located within 100-year floodplains and must be addressed. (Not Viable)
2. **Obtain a Letter of Map Amendment (LOMA) or Letter of Map Revision (LOMR).** - It was determined that neither a LOMA nor a LOMR was likely nor practical for the project area. (Not Viable)
3. **Other infrastructure considered.** - After considering other potential projects in the City, it was determined that of the eligible projects, this project was of the highest priority. (Not Viable)
4. **No Action or Alternative Actions that Serve the Same Purpose.** - The infrastructure to be addressed is inadequate for the area and must be addressed to prevent public health hazards. (Not Viable)

**Step 7: *Determination of No Practicable Alternative***

It is our determination that there are no practical alternatives for locating the project in the floodplain.

A final notice was published detailing the reasons why the project must be located in the floodplain, a list of *alternatives* considered, and all mitigation measures taken to minimize adverse impacts and preserve natural and beneficial floodplain values. No concerns were expressed by the public concerning this notice.

Posting Date: 7/18/24

**Step 8: *Implement the Proposed Action***

The City will assure that this plan, as modified and described above, is executed and necessary language will be included in all agreements with participating parties. The City will also take an active role in monitoring the construction process to ensure no unnecessary impacts occur nor unnecessary risks are taken.