

**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It is not intended to be used for any other purpose. Users are encouraged to check for possible updates or additional flood hazard information.

For more detailed information in areas where **Base Flood Elevations** and/or **Floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Profiles tables contained within the Flood Insurance Study (FIS) report that contains this FIRM. Users should be aware that BFEs shown on the FIRM are rounded whole-foot elevations. These BFEs are intended for flood rating purposes only and should not be used as the sole source of elevation information. Accordingly, flood elevation data presented in the report should be utilized in conjunction with the FIRM for purposes of action and/or floodplain management.

**Base Flood Elevations** shown on this map apply only to landward of 0.07' American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should refer to coastal flood elevations are also provided in the Summary of Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables are used for construction and/or floodplain management purposes when higher than the elevations shown on this FIRM.

**Floodway** boundaries were computed at cross sections and interpolated at cross sections. The floodways were based on hydraulic considerations and to requirements of the National Flood Insurance Program. Floodway and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Areas not in Special Flood Hazard Areas may be protected by **flood structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

Information used in the preparation of this map was Texas State Plane Central Zone (FIPS zone 4204). The horizontal datum was NAD 83, 1983 spheroid. Differences in datum, spheroid, projection or State Plane zone between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at [www.ngs.noaa.gov](http://www.ngs.noaa.gov) or contact the National Geodetic Survey at the following address:

Information Services Branch  
NADNS12  
National Geodetic Survey  
P.O. Box 1378  
Silver Spring, Maryland 20910-3282  
Phone: 301-732-3242

Information on current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at [www.ngs.noaa.gov](http://www.ngs.noaa.gov).

Map information shown on this FIRM was derived from multiple sources. Map files were provided in digital format by Texas Natural Resources Conservation Systems (TNRS) StratMap, National Oceanic and Atmospheric Administration (NOAA), National Geodetic Survey (NGS), Velasco Drainage and the Brazoria County Appraisal District.

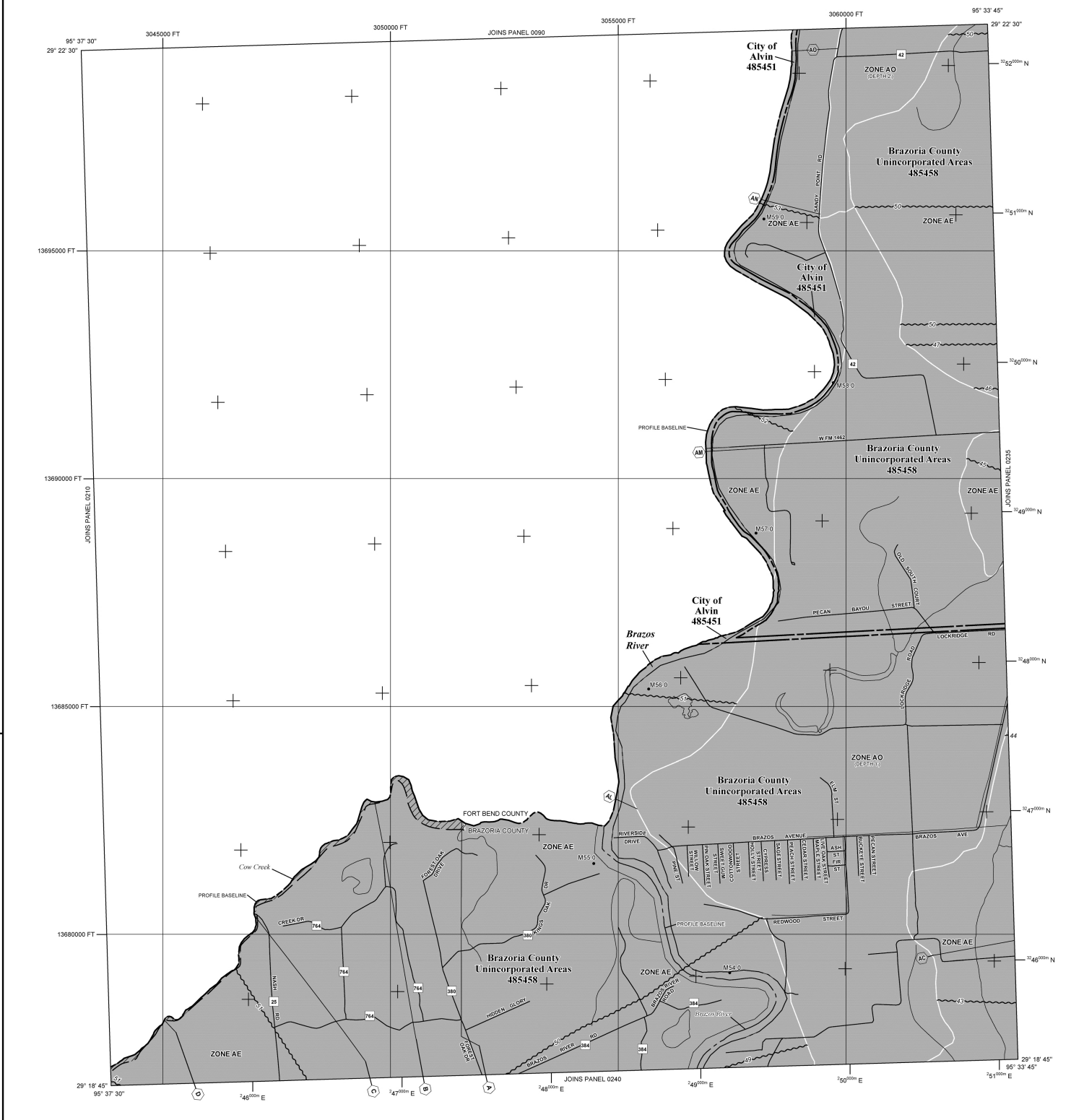
This FIRM reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and profiles that were transferred from the previous FIRM may have been updated to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect channel distances that differ from what is shown on this map.

**Profile limits** shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may occur after this map was published, map users should contact the community officials to verify current corporate limit locations.

Refer to the separately printed **Map Index** for an overview map of the jurisdiction showing the layout of map panels, community map repository addresses, listing of Communities table containing National Flood Insurance Program information for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Repository Center (MRC)** website at <http://mrc.fema.gov>. Available products may previously issued Letters of Map Change, a Flood Insurance Study and/or digital versions of this map. Many of these products can be purchased or obtained directly from the MRC website.

For **more questions about this map**, how to order products or the National Flood Insurance Program in general, please call the Flood Mapping and Information Exchange (FMIX) at 1-877-FEMA-MAP (1-877-336-2627) or visit the website at <https://www.fema.gov/business/fmix>.



**LEGEND**

**SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Areas are subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water elevation of the 1% annual chance flood.

**ZONE A** Areas with Flood Elevations determined.

**ZONE AE** Base Flood Elevations determined.

**ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

**ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); depths determined. For areas of alluvial fan flooding, velocity determined.

**ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently identified. AR indicates that the former flood control system is being removed; provide protection from the 1% annual chance or greater flood.

**ZONE A99** Area to be protected from 1% annual chance flood by a Federal protection system under construction; no Base Flood Elevation determined.

**ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

**ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

**ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot and with damage areas less than 1 mile; and areas protected by levees from 1% annual chance flood.

**OTHER AREAS**

Areas determined to be outside the 1% annual chance floodplain.

**ZONE X** Areas in which flood hazards are determined, but possible.

**BOUNDARIES**

- Floodplain boundary
- Floodway boundary
- Zone boundary

**BOUNDARY DIVIDING SPECIAL FLOOD HAZARD AREAS**

- Boundary dividing Special Flood Hazard Area Zone boundary dividing Special Flood Hazard Areas of different flood elevations, flood depths or flood velocities.
- Limit of Moderate Wave Action
- Base Flood Elevation line and value; elevation in feet\* (EL 567)
- Base Flood Elevation value where uniform within zone; in feet\*

\* Referenced to the North American Vertical Datum of 1988

**SYMBOLS**

- Profile Baseline
- Cross-section line
- Transect line
- Culvert, Flume, Penstock or Aqueduct
- Road or Railroad Bridge
- Footbridge

**COORDINATES**

- 87°07'45" 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), NAD83 Hemisphere
- 7600000 Meters Universal Transverse Mercator grid values, zone 16Q UTM projection
- 600000 FT 5000-foot grid values; Texas State Plane coordinate projection
- DX5510 X Search mark (use explanation in Notes to Users section of FIRM panel)
- M1.5 River Mile

**MAP REPOSITORIES**

Refer to Map Repository List on Map Index.

**EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP PANEL**

JUNE 5, 1999

**EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**

MAY 4, 1992  
NOVEMBER 17, 1993  
SEPTEMBER 22, 1999  
DECEMBER 30, 2009

For community map revision history prior to countywide mapping, refer to the County Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-675-8647.

**MAP SCALE 1" = 1000'**

500 0 1000 2000 FEET  
300 0 300 600 METERS

**NFIP**

**PANEL 0230K**

**FIRM**

**FLOOD INSURANCE RATE MAP**

**BRAZORIA COUNTY, TEXAS AND INCORPORATED AREAS**

**PANEL 230 OF 925**

(SEE MAP INDEX FOR FIRM PANEL LIST)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL
ALVIN, CITY OF	485451	0230
BRAZORIA COUNTY	485458	0230K

Note to User: The Map Number shown below is used when placing map orders. The Community Name shown above should be used on insurance application subject community.

**MAP NUMBER 48039C**

**MAP REVISION DATE DECEMBER 3, 2009**

**Federal Emergency Management Agency**