FLOOD INSURANCE STUDY

WILSON COUNTY, TEXAS
AND INCORPORATED AREAS

PRELIMINARY

June 30, 2021

Community Name	Community Number
ELMENDORF, CITY OF	480710
FLORESVILLE, CITY OF	480671
LA VERNIA, CITY OF	481050
NIXON, CITY OF	481114
POTH, CITY OF	480672
STOCKDALE, CITY OF	480673
WILSON COUNTY (UNINCORPORATED AREAS)	480230

Revised: TBD

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
48493CV000B

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study (FIS) may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

Part or all of this Flood Insurance Study may be revised and republished at any time. In addition, part of this Flood Insurance Study may be revised by Letter of Map Revision process, which does not involve republication or redistribution of flood Insurance Study. It is, therefore, the responsibility of the user to consult with community officials and to check the community repository to obtain the most current Flood Insurance Study components.

This FIS was revised on TBD. Users should refer to Section 10.0 Revision Descriptions, for further information. Section 10.0 is intended to present the most up-to-date information for specific portions of this FIS report. Therefore, users of the FIS report should be aware that the information presented in Section 10.0 supersedes information in Section 1.0 through 9.0 of this FIS report.

Initial Countywide FIS Effective Date: November 26, 2010

First Revised Countywide FIS Date: TBD – to update corporate limits, to change Base Flood Elevations, to add Base Flood Elevations, to add Special Flood Hazard Areas, to change Special Flood Hazard Areas, to change zone designations, to update roads and road names, to reflect updated topographic information, and to incorporate previously issued Letters of Map Revision.

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FLOOD INSURANCE STUDY
WILSON COUNTY, TEXAS AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study (FIS) revises and updates information on the existence and severity of flood hazards in the geographic area of Wilson County, Texas, including the cities of Elmendorf, Floresville, La Vernia, Nixon, Poth, and Stockdale and the unincorporated areas of Wilson County (referred to collectively herein as Wilson County), and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood risk data for various areas of the community that will be used to establish actuarial flood insurance rates and to assist the community in its efforts to promote sound floodplain management. Minimum floodplain management requirements for participation in the National Flood Insurance Program (NFIP) are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

Please note that the City of Elmendorf is geographically located in Wilson and Bexar Counties; and the City of Nixon is geographically located in Wilson and Gonzales Counties.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence and the State (or other jurisdictional agency) will be able to explain them.

1.2 Authority and Acknowledgements

The sources of authority for this FIS are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

The hydrologic and hydraulic analyses for this countywide FIS study were performed by Pape-Dawson Engineers, Inc. for the Federal Emergency Management Agency (FEMA), under contract with the San Antonio River Authority (SARA). This work was completed in December 2007.

1.3 Coordination

The initial Consultation Coordination Officer (CCO) meeting was held on September 6, 2006, and attended by representatives of FEMA, SARA, the study contractors, and the communities.

The results of the study were reviewed at the final CCO meeting held on November 18, 2008, and attended by representatives of FEMA, SARA, the communities and study contractor. All problems raised at that meeting have been addressed in this study.

2.0 AREA STUDIED

2.1 Scope of Study

This FIS report covers the geographic area of Wilson County, Texas, including the incorporated communities listed in Section 1.1. The areas studied by detailed methods were selected with priority given to all known flood hazards and areas of projected development or proposed construction.

Approximate analyses were used to study those areas having a low development potential or minimal flood hazards. The scope and methods of study were proposed to and agreed upon by FEMA and SARA.

The scope of study is listed in Table 1 – Scope of Study. They are also indicated on the Flood Profiles (Exhibit 1) and on the Flood Insurance Rate Map (FIRM) (Exhibit 2).

Table 1 - Scope of Study

Flooding Source	Limits of Detailed Study
Clifton Branch Watershed	
North Branch to Stockdale Creek	From confluence with Stockdale Creek to approximately 875 feet upstream of confluence with Stockdale Creek
South Tributary to Stockdale Creek	From confluence with Stockdale Creek to headwaters of South Tributary to Stockdale Creek
Stockdale Creek	From approximately 1,350 feet downstream of U.S. Highway 87 to approximately 950 feet downstream of Farm to Market Road (FM) 1107
Lodi Branch Watershed	
Lodi Branch	From confluence with San Antonio River to approximately 100 feet upstream of North Bluebonnet Road
Marcelinas Creek Watershed	
East Branch to Poth Creek	From confluence with Poth Creek to headwaters of East Branch to Poth Creek

Table 1 - Scope of Study *(continued)*

Flooding Source	Limits of Detailed Study
Poth Creek	From approximately 1,400 feet downstream of Oaklawn Street to approximately 2,100 feet upstream of Menchaca Road
Pajarito Creek Watershed	
Pajarito Creek	From approximately 250 feet downstream of Southern Pacific Railroad to confluence with Pajarito Creek Tributary B
Stream 1	From confluence with Pajarito Creek to headwaters of Stream 1
Stream 2	From confluence with Stream 1 to headwaters of Stream 2
San Antonio River Basin	
San Antonio River	From approximately 400 feet upstream of County Road 337 to approximately 2,300 feet downstream of County Road 347
Flooding Source	**Limits of Redelineation**
Cibolo Creek Watershed	
Cibolo Creek	From approximately 400 feet upstream of County Road 337 to Wilson-Bexar County line
Colibro Creek	From confluence with Dry Hollow Creek to FM 1346
Dry Hollow Creek	From confluence with Cibolo Creek to County Road 348
Elm Creek #1	From confluence with Cibolo Creek to headwaters of Elm Creek #1
South Creek	From confluence with Cibolo Creek to approximately 3,500 feet upstream of County Road 342
Tributary 99 Lower Cibolo Creek Watershed	From confluence with Dry Hollow Creek to headwaters of Tributary 99 Lower Cibolo Creek
Tributary 3 to Dry Hollow Creek	From confluence with Dry Hollow Creek to headwaters of Tributary 3 to Dry Hollow Creek

Table 1 - Scope of Study *(continued)*

Flooding Source	Limits of Enhanced Approximate Type II Study
Tributary 2 to Dry Hollow Creek	From confluence with Dry Hollow Creek to headwaters of Tributary 2 to Dry Hollow Creek
Cibolo Creek Watershed	
Cibolo Creek (Downstream Limits of Detailed Study)	From Wilson-Karnes County line to approximately 400 feet upstream of County Road 337
Clifton Branch Watershed	
Clifton Branch (Upstream Limits of Detailed Study)	From confluence with Cibolo Creek to headwaters of Clifton Branch
North Branch to Stockdale Creek (Upstream Limits of Detailed Study)	From approximately 875 feet upstream of confluence with Stockdale Creek to headwaters of North Branch to Stockdale Creek
Stockdale Creek (Downstream Limits of Detailed Study)	From confluence with Clifton Branch to approximately 1,350 feet downstream of U.S. Highway 87 West
Lodi Branch Watershed	
Lodi Branch (Upstream Limits of Detailed Study)	From approximately 100 feet upstream of North Bluebonnet Road to headwaters of Lodi Branch
Marcelinas Creek Watershed	
Marcelinas Creek (Upstream Limits of Detailed Study)	From Wilson-Karnes County line to confluence with Tributary 35 to Marcelinas Creek Watershed
Poth Creek (Downstream Limits of Detailed Study)	From confluence with Marcelinas Creek to approximately 1,400 feet downstream of Oaklawn Street
Pajarito Creek Watershed	
Pajarito Creek (Upstream Limits of Detailed Study)	From the confluence with Pajarito Creek Tributary B to headwaters of Pajarito Creek
Pajarito Creek (Downstream Limits of Detailed Study)	From confluence with San Antonio River to approximately 250 feet downstream of Southern Pacific Railroad

Table 1 - Scope of Study *(continued)*

Flooding Source	Limits of Enhanced Approximate Type II Study
San Antonio River Basin	
San Antonio River (Upstream Limits of Detailed Study)	From confluence with Tributary 320 to Lower San Antonio River Watershed to Wilson-Bexar County line
San Antonio River Basin	
San Antonio River (Downstream Limits of Detailed Study)	From Wilson-Karnes County line to approximately 1,400 feet downstream of confluence with Pajarito Creek

2.2 Community Description

Wilson County is located about 25 miles southeast of San Antonio, Bexar County. Bexar and Guadalupe Counties are located immediately to the north of Wilson County, with Gonzales County along the eastern edge, Karnes County along the southern boundary, and the county of Atascosa along the western edge.

The current major transportation routes include the Southern Pacific Railroad, U.S. Highways 87 and 181, and State Highways 97 and 123. Floresville, La Vernia, Nixon, Poth, and Stockdale are the major cities in Wilson County.

The City of Floresville is located in central Wilson County on the north bank of the San Antonio River about 30 miles south of the City of San Antonio. Floresville is the county seat of Wilson County and is principally a residential community with an agriculturally based economy. The city has an extraterritorial jurisdiction (ETJ) extending one half mile beyond the corporate limits. This ETJ does not have any defined boundary. Floresville had a population of 1,935 when it was incorporated in 1950. The city had a population of 7,250 according to an estimate in 2006 by the U.S. Census Bureau (Reference 1). Average annual growth rates for Floresville are 1.18% (Reference 2).

Floresville lies within the Lower San Antonio River basin. The city is drained primarily by the San Antonio River, Pajarito Creek, Lodi Branch, and their tributaries. Lodi Branch flows into the San Antonio River on the west side of Floresville. Pajarito Creek's headwaters begin just east of Floresville. Stream 2 headwaters begin just upstream of 5th Street and combine with Stream 1 just upstream of Hospital Boulevard. Stream 1 flows into Pajarito Creek south of Floresville, with Pajarito Creek's confluence with San Antonio River approximately a mile and a half south of the city.

Development in the floodplains of streams studied is residential in nature with new residential structures being built along the northern bank of the San Antonio

River, along Pajarito Creek and its tributaries and along the lower portions of the Lodi Branch (Reference 3).

The City of La Vernia is located in the northwest corner of Wilson County about 25 miles southeast of San Antonio in southeastern Texas. The population of La Vernia is growing slowly but steadily. A 2006 estimated count placed the population of La Vernia at 1,168 (Reference 1). The average annual growth rate in La Vernia is 4.57% (Reference 2).

The area surrounding La Vernia is primarily agricultural with major emphasis on the production of livestock, peanuts, and various truck crops. The La Vernia economy is largely retail and service oriented. The major industry is the manufacture of steel tanks.

Cibolo Creek, together with its tributary Dry Hollow Creek, form the northern and northwestern boundary of the city. These streams flow in a generally southeastern direction. South Creek drains in the southern portion of the city.

Most commercial development is located along U.S. Highway 87, Spur 321 and Seguin Road (FM 775). Residential areas are nearly equally distributed to the north and south of U.S. Highway 87. Several homes and some commercial establishments are located in flood prone areas adjacent to Cibolo Creek (Reference 4).

The City of Nixon is located in the eastern portion of Wilson County along the Wilson-Gonzales County boundary. It is about 53 miles southeast of the city of San Antonio. The population in Nixon was estimated to be 2,241 in 2006 (Reference 1). The city lies at the crossroads of State Highways 87 and 80.

The City of Poth is located on the West Gulf Plain about 35 miles southeast of San Antonio in south-central Wilson County in southeast Texas. The population of Poth was estimated in 2006 by the U.S. Census Bureau to be 2,238 (Reference 1). The average annual growth rate of Poth is 1.27% (Reference 2). Primary transportation routes through the community include U.S. Highway 181, FM 541, and the Southern Pacific Railroad.

The Poth area is known locally for its meat processing operations. The community is also noted for its grain and gin mills. Commercial development is located primarily in the central part of the city. Residential areas are, for the most part, located on the east side of Highway 181.

Development in the floodplains has historically been minimal because land was available elsewhere within the community. Some residential development, however, is located within the floodplain of East Branch Poth Creek. Poth Creek and its East Branch flow through Poth in a southerly direction. Railroad Creek, a gully that drains into Poth Creek, does not have a well-defined stream channel.

Railroad Creek is located north of Maeckel Street and is crossed by Railroad Avenue, Route 181 and the Missouri Pacific Railroad at about four miles south of Poth. Poth Creek drains into Marcelinas Creek, a tributary of the San Antonio River (Reference 5).

The City of Stockdale is located in east-central Wilson County in southeastern Texas, about 60 miles southeast of San Antonio. Major highways passing through Stockdale include State Highway 123, U.S. Highway 87, and FM 1107. In 2006, an estimated 1,629 citizens occupied the City of Stockdale (Reference 1). The average annual growth rate for the City of Stockdale is 1.03% (Reference 2).

The floodplain is impacted from agricultural, residential, and small-scale commercial sites. The vegetation consists of light to moderate growth of small trees and grass (Reference 6).

Most of the streams flowing through Wilson County drain into the San Antonio River basin. Major streams in the county are the San Antonio River, Cibolo Creek, Ecleto Creek, and Marcelinas Creek. The western portions of the county drain into the San Antonio River with the eastern portions of the county draining into Cibolo and Ecleto Creeks.

The sub-tropical, sub-humid climate of Wilson County is characterized by warm summers and mild winters. The typical growing season lasts approximately 280 days per year with the first freeze occurring in December and the final freeze in February. The average winter low is 40^{o}F with an average high of 65^{o}F. The average summer temperatures vary between 74^{o}F and 96^{o}F. The average annual rainfall is about 30 inches and is generally well distributed throughout the year. The heaviest average monthly rainfall occurs from April to June and in September. Individual rains of high intensity and excessive amounts fall at regular intervals during the year. The high intensity rainfall is caused by either thunderstorms, resulting from certain climatological conditions such as cool air from the north moving into the warm and moist gulf air, or hurricanes that move into this area from the gulf.

Wilson County is located on the upper coastal plain of South Texas with elevations ranging from 300 to 600 feet. The terrain is nearly flat to gently undulating, surfaced by deep loamy soils with clayey sub-soils (Reference 7).

2.3 Principal Flood Problems

Flooding problems were reported in Wilson County and its communities from Hurricane Beulah in 1967, Tropical Storm Charley in 1998, and floods in Texas in 1913, 1942, 1946, 1973, October 1998, and July 2002.

This City of Floresville has experienced flood damage in the past primarily from Lodi Branch and the San Antonio River. The San Antonio River is the primary

cause of flood damage in Floresville. Floods occurring in September 1946 and September 1973 caused damage to residences, sewage-treatment facilities, and agriculture storage structures. Floods have also occurred on Pajarito Creek. Some undersized bridges, low-water crossings, and other constrictions contribute to flooding problems (Reference 3).

Cibolo Creek and Dry Hollow Creek represent the primary flood hazards to the City of La Vernia. Backwater from these streams also contributes to flooding conditions on their tributaries within the city. The City of La Vernia experienced two major floods of the same magnitude in 1913 and 1973. During the 1973 flood, most of the city north of the railroad right-of-way as well as the area south and east of the intersection of U.S. Highway 87 and Spur 321 was inundated (Reference 4). As a result of the October 1998 flood, several businesses in La Vernia were flooded with several feet of water. U.S. Highway 87, southeast of La Vernia, flooded for several miles. Sheet flows were recorded up to 6 feet deep and 2 miles wide above and below La Vernia (Reference 8).

No flooding concerns in the Wilson County portion of the City of Nixon.

Poth Creek and East Branch Poth Creek pose the greatest flood problems to residents in the City of Poth. This is primarily due to short duration, high intensity rainstorms, and flat topography combined with unimproved channels. In 1967, rainstorms from Hurricane Buelah produced 22 inches of rainfall in one week (Reference 5).

The Stockdale area is subject to occasional general flooding from Stockdale Creek, North Branch to Stockdale Creek, and South Tributary to Stockdale Creek. Short duration high intensity storms coupled with relatively flat topography contribute to these flooding conditions (Reference 6).

2.4 Flood Protection Measures

There are no documented flood protection measures in Wilson County.

3.0 ENGINEERING METHODS

For the flooding sources studied by detailed methods in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that are expected to be equaled or exceeded once, on average, during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10-, 2-, 1-, and 0.2-percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long-term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases

when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 100-year flood (1-percent chance of annual exceedance) in any 50-year period is approximately 40 percent (4 in 10); for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for the flooding source studied in detail, affecting the community.

In this countywide FIS, the precipitation-runoff process was modeled using U.S. Army Corps of Engineers watershed program model, HEC-HMS (Reference 9).

Per the methodology described in the General Hydrologic and Hydraulic Modeling Tasks: Development of Design Rainfall Information by PBS&J (Reference 10), an ellipsoidal rainfall distribution was used to represent statistical storm routing for the lower portion of Cibolo Creek and the San Antonio River.

The areal reduction factors from the technical document by PBS&J (Reference 11), were used in conjunction with the point rainfall values of Wilson County to generate 5-minute design hyetographs for the 10-, 2-, 1- and 0.2-percent-annual-chance rainfall events for all other studied watersheds.

To estimate the amount of runoff losses, curve numbers and percent impervious cover were calculated for individual watersheds of the hydrologic model.

The San Antonio River Basin Regional Modeling Standards for Hydrology and Hydraulic Models Floodplain Modeling (Reference 12), provided guidance for selecting the Snyder's peaking coefficient, where applicable. Additionally, the Soil Conservation Service (SCS) unit hydrograph method was used to compute runoff hydrographs.

The Modified-Puls method of channel routing was used to route hydrographs through the routing reaches, where hydraulic models were either available or created. In areas of routing reaches, where 2-foot contour data was not available, the Muskingum method of channel routing was used.

Peak discharge-drainage area relationships for each flooding source studied in detail are shown in Table 2, Summary of Discharges.

Table 2 - Summary of Discharges

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cubic feet per second) 10-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance
CIBOLO CREEK					
Just upstream of confluence with Dry Creek	773.07	35,196	60,013	70,296	94,408
Just downstream of confluence with Pulaski Creek	771.23	35,206	60,066	70,382	94,489
Just upstream of confluence with Pulaski Creek	763.69	35,206	60,065	70,378	94,484
Just downstream of confluence with Wallace Branch	744.89	35,999	61,833	71,037	95,055
Just upstream of confluence with Wallace Branch	736.57	35,999	61,833	71,010	95,020
Approximately 1,500 feet downstream of FM 537	729.60	37,731	61,938	71,237	95,299
Approximately 2,850 feet downstream of County Road 312	726.30	39,146	61,997	71,326	95,366
Just downstream of confluence with Clifton Branch	721.14	39,618	62,044	71,395	95,425
Just upstream of confluence with Clifton Branch	704.14	39,618	62,044	71,251	95,252
Approximately 250 feet upstream of County Road 401	697.79	39,834	62,127	71,382	95,390
Just downstream of confluence with Alum Creek	681.84	39,946	62,236	71,222	94,964
Approximately 2,600 feet upstream of FM 539	647.98	40,248	62,307	70,265	94,315
Just upstream of confluence with Gum Branch	640.05	40,248	62,302	69,990	94,309
Approximately 6,300 feet upstream of County Road 337	614.85	40,530	62,385	69,395	94,408
Approximately 10,200 feet downstream of confluence with Elm Creek	608.82	40,527	62,349	69,073	94,364
Just downstream of confluence with Elm Creek	540.10	29,380	46,300	55,680	78,340
Just upstream of confluence with Elm Creek	544.60	29,190	46,190	54,910	76,650
CLIFTON BRANCH					
At Cibolo Creek	16.99	4,225	8,269	10,197	17,371
Approximately 1,825 feet downstream of County Road 401	14.79	4,393	8,614	10,645	17,827
Just upstream of confluence with Stockdale Creek	8.53	3,245	6,008	7,258	11,486
Approximately 1,600 feet upstream of U.S. Highway 87	8.35	3,271	6,057	7,297	11,439
Approximately 3,750 feet upstream of U.S. Highway 87	6.75	2,908	5,414	6,491	9,977

Table 2 - Summary of Discharges *(continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cubic feet per second) 10-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance
DRY HOLLOW CREEK					
At mouth	58.5	20,500	30,800	35,300	47,500
EAST BRANCH POTH CREEK					
Approximately 200 feet downstream of Southern Pacific Railroad A	2.87	2,404	4,188	5,301	8,048
Approximately 200 feet downstream of Southern Pacific Railroad B	1.51	1,109	2,010	2,500	3,827
Approximately 275 feet upstream of U.S. Highway 181	1.45	1,110	1,994	2,410	3,745
Approximately 275 feet upstream of U.S. Highway 181	1.26	917	1,742	2,091	3,243
Approximately 1,800 feet upstream of Griffith	1.00	787	1,491	1,776	2,693
Approximately 700 feet downstream of FM 427	0.72	669	1,192	1,419	2,092
Approximately 700 feet upstream of FM 427	0.53	523	901	1,078	1,563
LODI BRANCH					
Approximately 200 feet downstream of County Road 407	5.66	1,658	3,528	4,440	7,340
Approximately 425 feet upstream of 1st Street	5.19	1,609	3,394	4,238	6,803
Approximately 575 feet upstream of 4th Street	4.88	1,616	3,387	4,155	6,487
Approximately 300 feet downstream of County Road 329	4.50	1,551	3,146	3,817	6,155
Approximately 225 feet downstream of Sutherland Springs Road	4.24	1,467	2,931	3,554	5,865
Approximately 3,500 feet upstream of County Road 405	3.79	1,418	2,630	3,168	5,499
Approximately 1,350 feet upstream of confluence with Tributary 2 to Lodi Branch Watershed	3.44	1,282	2,285	2,800	5,083
Approximately 225 feet downstream of Blue Bonnet Road	3.27	1,215	2,141	2,650	4,959
At confluence with Tributary 2 to Lodi Branch Watershed	3.04	1,114	1,953	2,452	4,762
Just upstream of confluence with Tributary 2 to Lodi Branch Watershed	2.30	712	1,291	1,629	3,634
Approximately 1,300 feet upstream of State Highway 97	2.00	606	1,234	1,669	3,311
Approximately 1,300 feet upstream of State Highway 97	1.84	511	1,177	1,587	3,083
At San Antonio River	1.63	925	1,827	2,235	3,471

Table 2 - Summary of Discharges *(continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cubic feet per second) 10-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance
MARCELINAS CREEK					
Approximately 1,525 feet downstream of County Road 229	69.48	6,256	12,791	15,652	27,560
Approximately 1,525 feet downstream of County Road 229	69.48	6,256	12,791	15,652	27,560
Approximately 1,450 feet upstream of County Road 202	65.66	6,195	12,587	15,339	27,080
Approximately 3,700 feet upstream of County Road 202	62.40	5,997	12,139	14,759	26,224
At confluence with Poth Creek	58.81	5,827	11,763	14,266	25,598
Approximately 3,100 feet downstream of FM 541	44.62	4,556	9,564	12,047	21,050
Approximately 2,700 feet upstream of FM 541	43.48	4,538	9,521	12,009	20,978
Approximately 3,700 feet upstream of FM 541	41.58	4,387	9,147	11,532	20,623
Approximately 5,000 feet upstream of FM 541	36.22	3,824	8,329	10,883	19,641
Approximately 1,525 feet upstream of County Road 225	34.28	3,798	8,242	10,785	19,469
Approximately 2,300 feet upstream of County Road 225	28.25	3,450	7,703	9,977	17,527
Approximately 3,900 feet downstream of Kotara Lane	27.58	3,474	7,753	10,032	17,616
Approximately 800 feet upstream of Kotara Lane	26.07	3,512	7,826	10,091	17,628
Approximately 4,800 feet downstream of FM 537	24.11	3,556	7,899	10,122	17,543
Approximately 675 feet upstream of FM 537	22.03	3,604	7,953	10,116	17,306
Approximately 2,000 feet downstream of County Road 401	12.38	3,519	6,853	8,304	13,089
Approximately 2,200 feet upstream of County Road 401	11.21	3,469	6,678	8,069	12,784
Approximately 4,800 feet downstream of State Highway 97	10.12	3,396	6,476	7,782	12,500
Approximately 4,000 feet downstream of State Highway 97	7.60	2,606	5,017	5,925	9,638
Approximately 1,300 feet downstream of State Highway 97	6.59	2,437	4,702	5,570	8,958
Approximately 3,000 feet upstream of State Highway 97	5.73	2,302	4,510	5,461	8,537
Approximately 6,800 feet upstream of State Highway 97	5.20	2,181	4,253	5,150	7,942
Approximately 2,800 feet downstream of County Road 305	4.68	1,988	3,857	4,664	7,187
Approximately 1,275 feet upstream of County Road 305	3.99	1,798	3,416	4,132	6,348
At FM 539	3.99	1,798	3,416	4,132	6,348
Just upstream of FM 539	2.86	1,329	2,503	3,028	4,628

Table 2 - Summary of Discharges *(continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cubic feet per second) 10-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance
NORTH BRANCH STOCKDALE CREEK					
Just upstream of confluence with Stockdale Creek	1.54	667	1,491	1,867	3,050
Approximately 3,200 feet downstream of County Road 467	1.25	620	1,336	1,666	2,678
Approximately 1,100 feet downstream of County Road 467	0.95	493	1,054	1,319	2,115
PAJARITO CREEK					
Just downstream of confluence with Stream 1	11.83	4,292	8,241	10,068	16,278
Just upstream of confluence with Stream 1	9.69	3,640	7,210	8,813	14,268
Approximately 1,300 feet downstream of Southern Pacific Railroad	9.29	3,612	7,175	8,797	14,262
Approximately 525 feet downstream of Southern Pacific Railroad	8.74	3,529	7,010	8,566	13,802
Approximately 250 feet downstream of State Loop 181	8.31	3,541	7,036	8,556	13,852
Approximately 375 feet upstream of Quall Lane	7.80	3,537	6,944	8,436	13,437
Approximately 1,550 feet upstream of Quall Lane	7.28	3,334	6,540	7,962	12,657
Approximately 3,500 feet upstream of County Road 405	3.19	1,582	3,195	3,916	6,219
POTH CREEK					
Just upstream of confluence with Marcelinas Creek	9.38	4,060	8,421	10,629	17,731
Approximately 1,250 feet downstream of Southern Pacific Railroad	8.40	4,045	8,334	10,428	16,913
Approximately 5,600 feet upstream of U.S. Highway 181	5.41	3,646	6,680	8,254	13,109
Approximately 6,800 feet downstream of Oaklawn Street	3.82	2,745	4,956	6,127	9,646
Approximately 1,400 feet downstream of Oaklawn Street	3.47	2,627	4,705	5,827	9,085
Approximately 2,300 feet upstream of Oaklawn Street	3.13	2,517	4,433	5,532	8,474
Approximately 200 feet downstream of Southern Pacific Railroad A	1.59	1,432	2,557	3,074	4,564
Just upstream of confluence with East Branch Poth Creek	1.36	1,368	2,374	2,893	4,226
Approximately 2,650 feet downstream of Menchaca Road	1.09	1,188	2,043	2,457	3,613
Approximately 1,200 feet downstream of Menchaca Road	0.82	995	1,689	2,040	2,981
Just upstream of Railroad Creek	0.71	879	1,479	1,782	2,608

Table 2 - Summary of Discharges *(continued)*

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cubic feet per second) 10-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance
POTH CREEK *(continued)*					
Approximately 450 feet upstream of Menchaca Road	0.60	822	1,335	1,626	2,337
Approximately 455 feet upstream of Menchaca Road	0.45	631	1,028	1,254	1,805
Approximately 2,250 feet upstream of Menchaca Road	0.31	524	806	993	1,399
SAN ANTONIO RIVER					
At confluence with Calaveras Creek	1,801	33,236	63,790	70,248	94,396
SOUTH TRIBUTARY STOCKDALE CREEK					
At confluence with Stockdale Creek	0.77	422	767	921	1,389
STOCKDALE CREEK					
Just upstream of confluence with Clifton Branch	5.52	1,637	3,367	4,350	7,738
Approximately 1,200 feet upstream of County Road 401	5.03	1,582	3,228	4,153	7,354
At William Street	4.73	1,572	3,194	4,116	7,201
Approximately 125 feet upstream of North 6th Street	4.15	1,811	3,737	4,658	7,471
Just downstream of confluence with North Branch to Stockdale Creek	3.17	1,489	3,054	3,747	5,908
Just upstream of confluence with North Branch to Stockdale Creek	1.63	823	1,566	1,889	2,881
Approximately 3,050 feet upstream of FM 1107	1.26	704	1,298	1,550	2,329
STREAM 1					
Just upstream of confluence with Pajarito Creek	2.14	1,668	2,799	3,283	4,777
STREAM 2					
At confluence with Stream 1	1.54	1,416	2,252	2,621	3,729

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods for the selected recurrence intervals. Users should be aware that flood elevations shown on the Flood Insurance Rate Map (FIRM) represent rounded whole-foot elevations and may not exactly reflect the elevations shown on the Flood Profiles or in the Floodway Data table in the FIS report. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or

floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS report in conjunction with the data shown on the FIRM.

The cross-section data for the backwater analysis were obtained from field surveys and aerial 2-foot topographic data (References 13 and 14, respectively). All bridges and culverts, within the limits of detailed study, were field surveyed to obtain elevation data and structural geometry. HEC-RAS version 4.0 (Reference 15) was used to compute water surface elevations. With the exception of the Cibolo Creek, Lower San Antonio River, and Marcelinas Creek, all of the hydraulic models specify normal depth as the downstream boundary condition. The Cibolo Creek, Lower San Antonio River, and Marcelinas Creek models were stopped at the county boundary and populated with the water surface elevation corresponding to the Karnes County hydraulic models.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1) and on the FIRM.

The hydraulic analyses for this study were based on unobstructed flow. The flood elevations shown on the Flood Profiles (Exhibit 1) are thus considered valid only if hydraulic structures remain unobstructed, operate properly and do not fail.

Table 3 - Summary of Roughness Coefficients

Watershed	Stream	Channel "n"	Overbank "n"
Cibolo Creek	Cibolo Creek	0.04-0.085	0.018-0.085
Clifton Branch	Clifton Branch	0.055	0.04-0.085
Clifton Branch	North Branch Stockdale Creek	0.04-0.045	0.045-0.085
Clifton Branch	South Tributary Stockdale Creek	0.05-0.085	0.05-0.085
Clifton Branch	Stockdale Creek	0.04-0.06	0.04-0.085
Lodi Branch	Lodi Branch	0.04-0.085	0.04-0.085
Marcelinas Creek	East Branch to Poth Creek	0.045-0.085	0.045-0.085
Marcelinas Creek	Marcelinas Creek	0.04-0.075	0.03-0.1
Marcelinas Creek	Poth Creek	0.045-0.085	0.03-0.085
Pajarito Creek	Pajarito Creek	0.045-0.085	0.03-0.085
Pajarito Creek	Stream 1	0.03-0.085	0.03-0.085
Pajarito Creek	Stream 2	0.045-0.085	0.015-0.1
Lower San Antonio River	San Antonio River	0.045-0.085	0.03-0.085

3.3 Vertical Datum

All FIS reports and FIRMs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. Until recently, the standard vertical datum used for newly created or revised FIS reports and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD). With the completion of the North American Vertical Datum of 1988 (NAVD), many FIS reports and FIRMs are now prepared using NAVD as the referenced vertical datum.

Flood elevations shown in this FIS report and on the FIRM are referenced to the NAVD. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. The average conversion factor from NGVD29 to NAVD88 in Wilson County is 0.21 feet. Some of the data used in this revision were taken from the prior effective FIS reports and FIRMs and adjusted to NAVD88.

For information regarding conversion between the NGVD and NAVD, visit the National Geodetic Survey website at www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services, NOAA, N/NGS12
National Geodetic Survey SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282
Telephone: (301) 713-3242

Temporary vertical monuments are often established during the preparation of a flood hazard analysis for the purpose of establishing local vertical control. Although these monuments are not shown on the FIRM, they may be found in the Technical Support Data Notebook associated with the FIS report and FIRM for this community. Interested individuals may contact FEMA to access this data.

To obtain current elevation, description, and/or location information for benchmarks shown on this map, please contact the Information Services Branch of the NGS at (301) 713-3242, or visit their website at www.ngs.noaa.gov.

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The NFIP encourages State and local governments to adopt sound floodplain management programs. To assist in this endeavor, each FIS report provides 1-percent-annual-chance floodplain data, which may include a combination of the following: 10-, 2-, 1-, and 0.2-percent-annual-chance flood elevations; delineations of the 1- and 0.2-percent-annual-chance floodplains; and a 1-percent-annual-chance floodway. This information is presented on the FIRM and in many components of the FIS report, including Flood Profiles, Floodway Data tables, and Summary of Stillwater Elevation tables. Users should reference the data presented in the FIS report as well as additional information that may be available at the local community map repository before making flood elevation and/or floodplain boundary determinations.

4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent-annual-chance flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent-annual-chance flood is employed to

indicate additional areas of flood risk in the community. For each stream studied by detailed methods, the 1- and 0.2-percent-annual-chance floodplain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections the boundaries were interpolated using digital topographic maps with a contour interval of 2 feet (Reference 14).

The 1- and 0.2-percent-annual-chance floodplain boundaries are shown on the FIRM. On this map, the 1-percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones A, AE) and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 1- and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

For the streams studied by approximate methods, only the 1-percent-annual-chance Floodplain boundary is shown on the FIRM (Exhibit 2).

Approximate 1-percent-annual-chance floodplain boundaries in some portions of the study area were taken directly from the existing Flood Hazard Boundary Maps for Wilson County (Reference 16).

4.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the NFIP, a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 1-percent-annual-chance floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 1-percent-annual-chance flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1.0 foot, if hazardous velocities are not produced. The floodways in this study are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway studies.

The floodway presented in this FIS report and on the FIRM was computed for certain stream segments based on equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. The results of the floodway computations have been tabulated for selected cross sections (Table 4). In cases

where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary has been shown.

The area between the floodway and 1-percent-annual-chance floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portions of the floodplain that could be completely obstructed without increasing the Water Surface Elevation (WSEL) for the 1-percent-annual-chance flood more than 1 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 1.

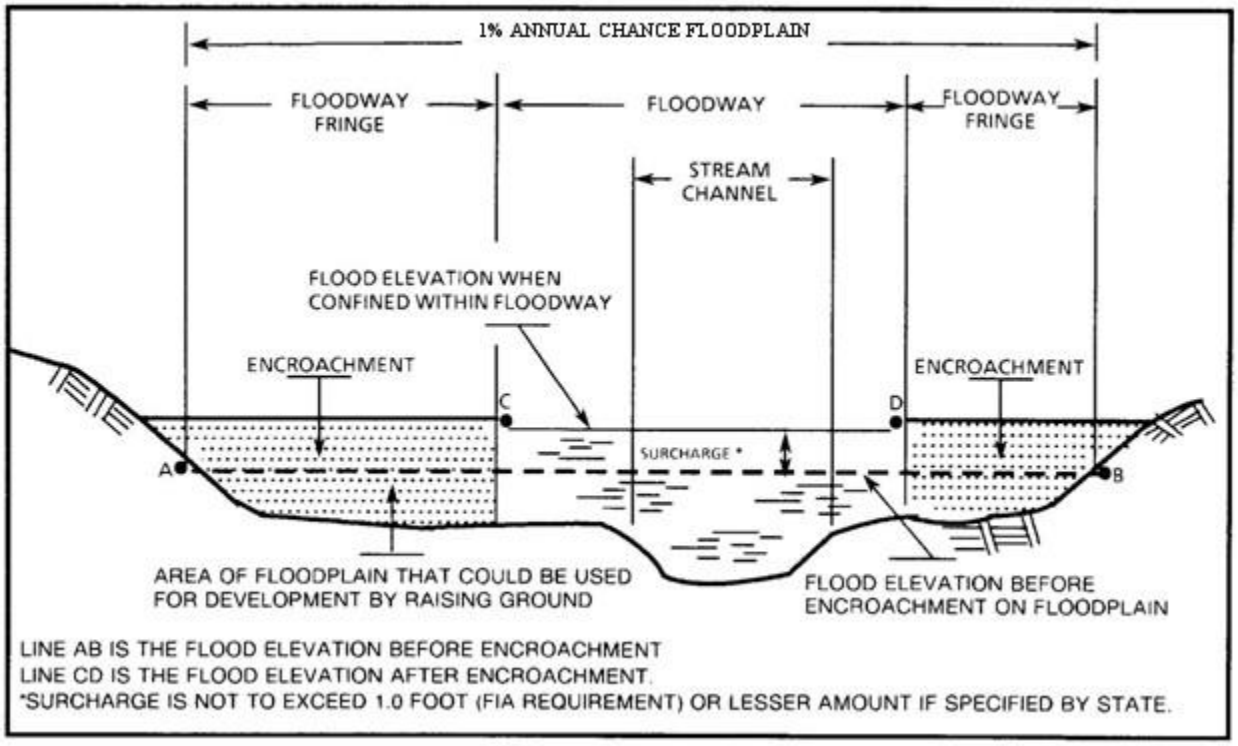


Figure 1 - Floodway Schematic

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Cibolo Creek								
A	251730	3335	23941	6.3	460.2	460.2	461.2	1.0
B	257779	1446	17452	7.0	469.0	469.0	469.6	0.6
C	259253	2089	17050	7.4	470.6	470.6	471.4	0.8
D	262485	4527	29342	4.9	474.5	474.5	475.4	0.9
E	265381	4953	27142	6.2	475.9	475.9	476.4	0.5
F	267287	3402	17907	7.9	477.8	477.8	478.0	0.2
G	268357	2664	12851	10.5	479.3	479.3	479.6	0.3
H	272642	1793	12835	6.1	483.5	483.5	484.5	1.0
I	275502	577	13930	3.1	487.8	487.8	488.2	0.4
J	280004	627	7956	7.7	493.6	493.6	493.7	0.1
K	283703	1535	16955	7.9	500.2	500.2	500.7	0.5
L	286250	3105	32017	6.4	502.8	502.8	503.5	0.7
M	289052	1904	18658	8.5	504.3	504.3	504.9	0.6
N	292612	1838	19739	7.5	508.6	508.6	509.2	0.6
O	294519	2154	19197	9.3	510.1	510.1	510.7	0.6
P	298282	2954	22420	8.4	513.7	513.7	514.2	0.5
Q	302406	2514	14794	11.0	518.3	518.3	519.1	0.8
R	305363	1876	17848	10.2	522.7	522.7	523.1	0.4
S	307044	1344	13831	10.2	524.7	524.7	525.2	0.5

[1] Feet above confluence with San Antonio River.

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

And Incorporated Areas

FLOODWAY DATA

CIBOLO CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Cibolo Creek Spill 1								
A	4066[1]	4592	29776	1.2	485.8	485.8	486.5	0.7
B	7294[1]	3362	14813	2.1	486.4	486.4	487.0	0.6
C	9248[1]	924	5314	5.7	491.0	491.0	492.0	1.0
D	11376[1]	1469	6815	4.0	493.3	493.3	494.1	0.8
E	13049[1]	1340	6906	4.2	495.7	495.7	496.5	0.8
Colibro Creek								
A	739[2]	1188	4542	3.4	492.5	492.5	493.4	0.9
B	3960[2]	1169	6983	2.2	498.6	498.6	499.6	1.0
C	4752[2]	1737	11614	1.3	499.1	499.1	500.1	1.0
D	5808[2]	1446	8676	1.8	499.6	499.6	500.5	0.9
Dry Hollow Creek								
A	15576[3]	1302	14888	2.2	486.8	486.8	487.8	1.0
B	19404[3]	1745	16313	1.9	489.1	489.1	489.9	0.8
C	28380[3]	879	5840	4.7	491.7	491.7	492.5	0.8
D	30888[3]	1020	5382	3.3	494.9	494.9	495.8	0.9

[1] Feet above confluence with Cibolo Creek.
[2] Feet above confluence with Dry Hollow Creek.
[3] Feet above confluence with Cibolo Creek.

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

And Incorporated Areas

FLOODWAY DATA

CIBOLO CREEK SPILL 1-COLIBRO CREEK-DRY HOLLOW CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
East Branch to Poth Creek								
A	962[1]	131	461	6.3	394.8	394.8	395.3	0.5
B	1625[1]	102	653	3.2	400.0	400.0	400.5	0.5
C	5852[1]	267	514	4.3	420.9	420.9	420.9	0.0
D	7625[1]	164	380	2.5	429.2	429.2	429.2	0.0
E	9048[1]	423	1488	0.7	442.1	442.1	442.1	0.0
Lodi Branch								
A	5026[2]	193	477	9.0	385.3	385.3	385.3	0.0
B	5790[2]	285	1018	7.3	390.1	390.1	391.1	1.0
C	6721[2]	803	2276	2.2	392.1	392.1	392.9	0.8
D	11620[2]	148	702	6.7	407.1	407.1	407.7	0.6
E	13095[2]	316	800	6.7	412.0	412.0	412.4	0.4
F	15741[2]	220	872	3.2	418.5	418.5	419.4	0.9
G	17376[2]	434	1018	3.7	424.2	424.2	425.2	1.0
Pajarito Creek								
A	8425[2]	273	1972	6.4	374.1	374.1	374.3	0.2
B	11613[2]	152	1726	5.6	383.8	383.8	384.6	0.8
C	11802[2]	282	3127	3.3	384.8	384.8	385.6	0.8
D	12203[2]	114	1127	10.7	384.6	384.6	385.4	0.8
E	12640[2]	348	2802	4.0	386.5	386.5	387.4	0.9
F	14340[2]	250	1661	5.5	390.3	390.3	391.3	1.0
G	15796[2]	584	3752	2.6	393.4	393.4	394.3	0.9

[1] Feet above confluence with Poth Creek.
[2] Feet above confluence with San Antonio River.

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

And Incorporated Areas

FLOODWAY DATA

EAST BRANCH TO POTH CREEK - LODI BRANCH - PAJARITO CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Poth Creek								
A	27887[1]	380	1806	6.5	377.2	377.2	378.2	1.0
B	28528[1]	238	1298	4.9	379.5	379.5	380.5	1.0
C	30881[1]	249	1147	5.2	384.6	384.6	385.6	1.0
D	32486[1]	196	793	8.2	391.2	391.2	392.1	0.9
E	33687[1]	162	681	4.5	394.9	394.9	395.9	1.0
F	36294[1]	134	569	4.3	408.6	408.6	409.4	0.8
G	38260[1]	104	375	5.3	420.1	420.1	421.0	0.9
H	39495[1]	225	233.17	3.4	424.7	424.7	424.7	0.0
South Creek								
A	5834[2]	176	612	6.9	482.6	482.6	483.6	1.0
B	6996[2]	84	447	7.5	488.9	488.9	489.8	0.9
South Tributary to Stockdale Creek								
A	1476[3]	130	408	3.5	434.4	434.4	435.3	0.9
B	2722[3]	83	216	6.6	441.0	441.0	442.0	1.0
C	4672[3]	107	219	4.2	457.9	457.9	458.9	1.0

[1] Feet above confluence with Marcelinas Creek.
[2] Feet above confluence with Cibolo Creek.
[3] Feet above confluence with Stockdale Creek.

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

And Incorporated Areas

FLOODWAY DATA

POTH CREEK - SOUTH CREEK - SOUTH TRIBUTARY TO STOCKDALE CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Stockdale Creek								
A	6602[1]	267	1071	4.7	417.0	417.0	418.0	1.0
B	7128[1]	98	620	6.6	418.7	418.7	419.5	0.8
C	8612[1]	285	1159	5.4	422.3	422.5	423.4	0.9
D	9080[1]	222	858	7.7	424.1	424.1	425.1	1.0
E	9148[1]	350	1100	7.6	425.2	425.2	425.9	0.7
F	9484[1]	472	1752	4.7	426.8	426.8	427.7	0.9
G	10083[1]	291	1167	6.1	429.1	429.1	430.1	1.0
H	10778[1]	309	1328	4.5	431.1	431.1	432.1	1.0
I	11526[1]	306	1118	4.2	433.9	433.9	434.5	0.6
J	12801[1]	71	212	10.3	438.2	438.2	438.7	0.5
K	13158[1]	89	332	6.6	442.0	442.0	442.9	0.9
Stream 1								
A	5599[2]	151	756	1.8	373.8	373.8	374.3	0.5
B	6082[2]	315	278	6.2	373.8	373.8	374.8	1.0
C	6289[2]	183	207	8.2	376.6	376.6	377.6	1.0
D	6478[2]	273	1897	1.2	384.3	384.3	385.3	1.0

[1] Feet above confluence with Clifton Branch.
[2] Feet above confluence with Pajarito Creek.

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

And Incorporated Areas

FLOODWAY DATA

STOCKDALE CREEK - STREAM 1

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Stream 2								
A	171[1]	128	417	3.9	373.9	373.9	374.9	1.0
B	342[1]	220	2718	0.7	384.8	384.8	385.8	1.0
C	1271[1]	109	559	2.7	385.5	385.5	386.3	0.8
D	1760[1]	127	477	4.2	385.6	385.6	386.6	1.0
E	2126[1]	146	379	4.6	386.6	386.6	387.6	1.0
F	2521[1]	38	135	10.7	391.6	391.6	391.9	0.3
Tributary 2 to Dry Hollow Creek								
A	2086[2]	340	1521	5.3	486.9[3]	486.9	487.9	1.0

[1] Feet above confluence with Stream 1.
[2] Feet above confluence with Dry Hollow Creek.
[3] Base Flood Elevations determined without backwater effects from Dry Hollow Creek.

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

And Incorporated Areas

FLOODWAY DATA

STREAM 2 – TRIBUTARY 2 TO DRY HOLLOW CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
Tributary 3 to Dry Hollow Creek								
A	2455[1]	250	1014	4.0	483.7[2]	483.7	484.6	0.9
B	3854[1]	282	1207	3.4	486.7[2]	486.7	487.7	1.0
Tributary 4 to Dry Hollow Creek								
A	607[1]	110	335	11.6	473.2[2]	473.2	473.2	0.0[3]

[1] Feet above confluence with Dry Hollow Creek.
[2] Base Flood Elevations determined without backwater effects from Dry Hollow Creek.
[3] Floodway limited by hazardous velocity.

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

And Incorporated Areas

FLOODWAY DATA

TRIBUTARY 3 TO DRY HOLLOW CREEK
TRIBUTARY 4 TO DRY HOLLOW CREEK

5.0 INSURANCE APPLICATIONS

For flood insurance rating purposes, flood insurance zone designations are assigned to a community based on the results of the engineering analyses. These zones are as follows:

Zone A

Zone A is the flood insurance rate zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no base (1-percent-annual-chance) flood elevations (BFEs) are shown within this zone.

Zone AE

Zone AE is the flood insurance rate zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS by detailed methods. In most instances, whole-foot BFEs derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone X

Zone X is the flood insurance rate zone that corresponds to areas outside the 0.2-percent-annual-chance floodplain, areas within the 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance flooding where average depths are less than 1 foot, areas of 1-percent-annual-chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1-percent-annual-chance flood by levees. No BFEs or base flood depths are shown within this zone.

6.0 FLOOD INSURANCE RATE MAP

The FIRM is designed for flood insurance and floodplain management applications.

For flood insurance applications, the map designates flood insurance rate zones as described in Section 5.0 and, in the 1-percent-annual-chance floodplains that were studied by detailed methods, shows selected whole-foot BFEs or average depths. Insurance agents use the zones and BFEs in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

For floodplain management applications, the map shows by tints, screens, and symbols, the 1- and 0.2-percent-annual-chance floodplains, floodways, and the locations of selected cross sections used in the hydraulic analyses and floodway computations.

The countywide FIRM presents flooding information for the entire geographic area of Wilson County. Previously, FIRMs were prepared for each incorporated community and the unincorporated areas of the County identified as flood prone. Historical data relating to the maps prepared for each community prior to the initial countywide FIRM are presented in Table 5.

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISIONS DATE	FLOOD INSURANCE RATE MAP EFFECTIVE DATE	FLOOD INSURANCE RATE MAP REVISIONS DATE
Elmendorf, City of[1]	July 11, 1976	None	September 3, 1980	September 29, 2010
Floresville, City of	March 8, 1974	June 4, 1976	November 16, 1977	None
La Vernia, City of	August 6, 1976	None	May 1, 1978	August 16, 1995
*Nixon, City of[1]	July 27, 1975	None	November 26, 2010	None
Poth, City of	May 24, 1974	January 16, 1976	December 1, 1977	None
Stockdale, City of	May 31, 1974	October 10, 1975	March 1, 1978	None
Wilson County (Unincorporated Areas)	March 15, 1978	None	March 15, 1978	August 16, 1995

*Non-Floodprone in Wilson County
[1]Multi County Community

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX
AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

7.0 OTHER STUDIES

This FIS report either supersedes or is compatible with all previous studies published on streams studied in this report and should be considered authoritative for purposes of the NFIP.

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting FEMA Region VI, Federal Insurance and Mitigation Division, 800 North Loop 288, Denton, Texas 76209.

9.0 BIBLIOGRAPHY AND REFERENCES

1. U.S. Census Bureau. http://www.census.gov. 2006

2. Federal Emergency Management Agency. Pre-Scoping Report for Wilson County, TX. 2006.

3. Federal Emergency Management Agency. Flood Insurance Study for City of Floresville, Texas, Wilson County. 1977.

4. Federal Emergency Management Agency. Flood Insurance Study for City of La Vernia, Texas, Wilson County. 1995.

5. Federal Emergency Management Agency. Flood Insurance Study for City of Poth, Texas, Wilson County. 1977.

6. Federal Emergency Management Agency. Flood Insurance Study for City of Stockdale, Texas, Wilson County. 1977.

7. Texas State Historical Association The Handbook of Texas Online, http://www.tsha.utexas.edu/handbook/online/articles/WW/hcw12.html, retrieved on June 6, 2001.

8. Major and Catastrophic Storms and Floods in Texas, 215 Major and 41 Catastrophic Events 1853 to September 1, 2002; U.S. Geological Survey Open File Report 03-193, by Raymond M. Slade, Jr. and John Patton.

9. U.S. Army Corps of Engineers, Hydrologic Engineering Center. HEC-HMS Version 3.1.0, Build: 1206, U.S. Army Corps of Engineers, Davis, California.

10. PBS&J. General Hydrologic and Hydraulic Modeling Tasks: Development of Design Rainfall Information. March 2005.

11. PBS&J. Areal Reduction Approach for HEC-HMS. March 2005.

12. Bexar Regional Watershed Management, San Antonio River Basin Regional Modeling Standards for Hydrology and Hydraulic Models Floodplain Modeling. (Not Dated).

13. Pape-Dawson Engineers, Inc. Field Survey and Reconnaissance Technical Support Data Notebook. March 2007.

14. Pape-Dawson Engineers, Inc. Topographic Data Development Technical Support Data Notebook. February 2007.

15. U.S. Army Corps of Engineers, Hydrologic Engineering Center. HEC-RAS Version 4.0 Beta, U.S. Army Corp of Engineers, Davis, California.

16. Flood Insurance Study, Wilson County Unincorporated Areas, Texas. Revised August 16, 1995.

10.0 REVISION DESCRIPTIONS

This section has been added to provide information regarding significant revisions made since the original FIS report and FIRM were printed. Future revisions may be made that do not result in the republishing of the FIS report. All users are advised to contact the Community Map Repository to obtain the most up-to-date flood hazard data.

10.1 First Revision - TBD

10.1.1 Acknowledgements

The hydrologic and hydraulic analyses for this restudy were prepared for the Federal Emergency Management Agency (FEMA) by the San Antonio River Authority (SARA) Cooperating Technical Partner (CTP) under Mapping Activity Statement (MAS) 13. This work was completed in March and June 2019.

Base map information shown on the FIRM was derived from multiple sources. The Texas Natural Resources Information System (TNRIS) provided the Texas Department of Transportation (TxDOT) county and community boundaries dated 2016. TNRIS also provided TxDOT transportation layers dated 2019.

The projection used in the preparation of the map was NAD 1983 State Plane Texas South Central FIPS 4204 Feet. The horizontal datum was NAD83, GRS1980 spheroid.

10.1.2 Coordination

An initial coordination meeting was held on April 30, 2019, and was attended by local officials, as well as representatives of SARA CTP. The final CCO meeting was held on TBD to review and accept the results of this FIS. Those who attended this meeting included representatives of FEMA, Compass PTS JV and the communities. All problems raised at the meeting have been addressed in this study.

10.1.3 Scope

This Physical Map Revision (PMR) incorporates new detailed analyses and mapping for 2 miles of stream for Calaveras Creek, along with 1.3 stream miles of Limit of Detailed (LDS) analysis and 0.1 stream miles of Base Level Engineering (BLE) study. A description of the stream extents are described in Table 6 below.

Table 6 – Flooding Sources Included in this FIS Report– First Revision

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM
Calaveras Creek	Approximately 23,00 feet upstream of confluence with San Antonio River	Bexar/Wilson County Boundary	HEC-HMS 4.2	HEC-RAS 4.1.0	3/18/2019	AE
Zone A Streams	Various	Various	HEC-HMS 4.2	HEC-RAS 4.1.0	6/30/2019	A

10.1.4 Hydrologic and Hydraulic Analyses

The hydrologic modeling supporting Calaveras Creek was modeled in HEC-HMS version 4.2. Hydrologic analyses were carried out to establish peak discharge-frequency relationships for each studied flooding source. Table 7 summarizes the updated peak runoff rates at key locations along the study streams.

The hydraulic analysis was completed using the USACE HEC-RAS version 4.1.0 computer program. Cross section geometries were obtained from a combination of field survey and cross sections take-offs based on the San Antonio River Authority (SARA) 2011 LiDAR (5-foot DEM). All structures along the studied streams were field surveyed and measurements were incorporated using a reference point that could be tied to a LiDAR elevation. Roughness coefficients (Manning's "n" values) used in the hydraulic computations are shown below in Table 8, "Revised Summary of Roughness Coefficients", and were estimated based on aerial imagery and the SARB. Generally, areas of highly wooded areas were given a value of 0.085 while pasture areas were given a value of 0.045.

Floodplain boundaries were delineated using the TNRIS 2010 LiDAR. The mapping was updated for the studied flooding sources in the watershed. Flood Profiles (Exhibit 1) were revised to reflect changes resulting from the study.

The hydrologic modeling supporting the Limited Detail (LDS) and Base Level Engineering (BLE) study streams used Regression equations within HEC-HMS. The hydraulic analysis was completed using the USACE HEC-RAS version 4.1.0 computer program for the 10-percent, 4-percent, 2-percent, 1-percent, 1-percent plus, 0.2-percent events. The LDS and

BLE studies do not include field surveys, detailed surveys of bridges and culverts, and floodway analysis. All stream crossings were modeled with the best available terrain data.

Table 7 – Revised Summary of Discharges – First Revision

		Peak Discharges (cubic feet per second)				
Flooding Source and Location	**Drainage Area (square miles)**	**10-Percent Annual Chance**	**4-Percent Annual Chance**	**2-Percent Annual Chance**	**1-Percent Annual Chance**	**0.2-Percent Annual Chance**
CALAVERAS CREEK						
Confluence with San Antonio River	94.51	4,085	6,361	7,959	10,370	30,314
Approximately 6,700 feet upstream of confluence with San Antonio River	94.13	4,113	6,394	8,025	10,384	30,370
Approximately 21,000 feet upstream of confluence with San Antonio River	91.45	4,154	6,455	8,330	10,524	31,243
Approximately 2,000 feet downstream of Bexar/Wilson County Boundary	83.72	4,109	6,212	8,557	10,683	33,136
Approximately 2,600 feet upstream of County Road 150	83.21	4,251	6,318	8,737	10,895	33,660
Approximately 600 feet downstream of US Highway 181	82.1	4,295	6,374	8,867	11,090	34,507

Table 8 – Revised Summary of Roughness Coefficients – First Revision

Watershed	**Stream**	**Channel "n"**	**Overbank "n"**
Calaveras Creek	Calaveras Creek	0.035-0.045	0.045-0.085

10.1.5 Incorporated Letters of Map Revision (LOMR)

This revision incorporates the determinations of Letters of Map Revision issued by FEMA for the projects listed by case number in Table 9, "Letters of Map Revision – First Revision." These changes are also reflected in Table 4, "Floodway Data" and Exhibit 1, "Flood Profiles."

Table 9: Incorporated Letters of Map Change – First Revision

Case Number	Effective Date	Flooding Source	FIRM Panel(s)
18-06-3960P	05/02/2019	San Antonio River	48493C0275D
18-06-2146P	11/23/2018	Kicaster Creek	48493C0150D
16-06-0558P	12/08/2016	Tributary 99A to Lower Cibolo Creek Watershed	48493C0150D
12-06-2559P	12/20/2012	Dry Hollow Creek, Tributary 2 to Dry Hollow Creek	48493C0025D 48493C0150D

APPENDIX A

Each FIRM panel may contain specific notes to the user that provide additional information regarding the flood hazard data shown on that map. However, the FIRM panel does not contain enough space to show all the notes that may be relevant in helping to better understand the information on the panel. Figure 2 contains the full list of these notes.

Figure 2: FIRM Notes to Users

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM including historic versions of this FIRM, how to order products, or the National Flood Insurance Program in general, please call the FEMA Mapping and Insurance eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Flood Map Service Center website or by calling the FEMA Mapping and Insurance eXchange.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to Table 5 in this FIS Report.

To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

PRELIMINARY FIS REPORT: FEMA maintains information about map features, such as street locations and names, in or near designated flood hazard areas. Requests to revise information in or near designated flood hazard areas may be provided to FEMA during the community review period, at the final Consultation Coordination Officer's meeting, or during the statutory 90-day appeal period. Approved requests for changes will be shown on the final printed FIRM.

The map is for use in administering the NFIP. It may not identify all areas subject to flooding, particularly from local drainage sources of small size. Consult the community map repository to find updated or additional flood hazard information.

BASE FLOOD ELEVATIONS: For more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, consult the Flood Profiles and Floodway Data and/or Summary of Non-Coastal Stillwater Elevations tables within this FIS Report. Use the flood elevation data within the FIS Report in conjunction with the FIRM for construction and/or floodplain management.

Figure 2: FIRM Notes to Users (cont'd)

FLOODWAY INFORMATION: Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the FIS Report for this jurisdiction.

FLOOD CONTROL STRUCTURE INFORMATION: Certain areas not in Special Flood Hazard Areas may have reduced flood hazards due to flood control structures.

PROJECTION INFORMATION: The projection used in the preparation of the map was State Plane Lambert Conformal Conic, Texas South Central Zone FIPS 4204. The horizontal datum was the North American Datum of 1983 NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

ELEVATION DATUM: Flood elevations on the FIRM are referenced to the North American Vertical Datum of 1988**.** These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion 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.

BASE MAP INFORMATION: Base map information shown on the FIRM was derived from multiple sources. The Texas Natural Resources Information System (TNRIS) provided the Texas Department of Transportation (TxDOT) county and community boundaries dated 2016. TNRIS also provided TxDOT transportation layers dated 2019.

The map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables may reflect stream channel distances that differ from what is shown on the map.

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

NOTES FOR FIRM INDEX

REVISIONS TO INDEX: As new studies are performed and FIRM panels are updated within Wilson County, TX, corresponding revisions to the FIRM Index will be incorporated within the FIS Report to reflect the effective dates of those panels. Please refer to Table 5: Community Map History of this FIS Report to determine the most recent FIRM revision date for each community. The most recent FIRM panel effective date will correspond to the most recent index date.

ATTENTION: The corporate limits shown on this FIRM Index are based on the best information available at the time of publication. As such, they may be more current than those shown on FIRM panels issued before TBD.

SPECIAL NOTES FOR SPECIFIC FIRM PANELS

This Notes to Users section was created specifically for Wilson County, TX, effective TBD.

Figure 2: FIRM Notes to Users (cont'd)

FLOOD RISK REPORT: A Flood Risk Report (FRR) may be available for many of the flooding sources and communities referenced in this FIS Report. The FRR is provided to increase public awareness of flood risk by helping communities identify the areas within their jurisdictions that have the greatest risks. Although non-regulatory, the information provided within the FRR can assist communities in assessing and evaluating mitigation opportunities to reduce these risks. It can also be used by communities developing or updating flood risk mitigation plans. These plans allow communities to identify and evaluate opportunities to reduce potential loss of life and property. However, the FRR is not intended to be the final authoritative source of all flood risk data for a project area; rather, it should be used with other data sources to paint a comprehensive picture of flood risk.

Each FIRM panel contains an abbreviated legend for the features shown on the maps. However, the FIRM panel does not contain enough space to show the legend for all map features. Figure 3 shows the full legend of all map features. Note that not all of these features may appear on the FIRM panels in Wilson County.

Figure 3: Map Legend for FIRM

SPECIAL FLOOD HAZARD AREAS: The 1% annual chance flood, also known as the base flood or 100-year flood, has a 1% chance of happening or being exceeded each year. Special Flood Hazard Areas are subject to flooding by the 1% annual chance flood. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights. See note for specific types. If the floodway is too narrow to be shown, a note is shown.

	Special Flood Hazard Areas subject to inundation by the 1% annual chance flood (Zones A, AE, AH, AO, AR, A99, V and VE)
Zone A	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. No base (1% annual chance) flood elevations (BFEs) or depths are shown within this zone.
Zone AE	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. Base flood elevations derived from the hydraulic analyses are shown within this zone.
Zone AH	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot BFEs derived from the hydraulic analyses are shown at selected intervals within this zone.
Zone AO	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average whole-foot depths derived from the hydraulic analyses are shown within this zone.
Zone AR	The flood insurance rate zone that corresponds to areas that were formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
Zone A99	The flood insurance rate zone that corresponds to areas of the 1% annual chance floodplain that will be protected by a Federal flood protection system where construction has reached specified statutory milestones. No base flood elevations or flood depths are shown within this zone.
Zone V	The flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations are not shown within this zone.
Zone VE	Zone VE is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations derived from the coastal analyses are shown within this zone as static whole-foot elevations that apply throughout the zone.
	Regulatory Floodway determined in Zone AE.

Figure 3: Map Legend for FIRM (Cont'd)

OTHER AREAS OF FLOOD HAZARD

Shaded Zone X: Areas of 0.2% annual chance flood hazards and areas of 1% annual chance flood hazards with average depths of less than 1 foot or with drainage areas less than 1 square mile.

Future Conditions 1% Annual Chance Flood Hazard – Zone X: The flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined based on future-conditions hydrology. No base flood elevations or flood depths are shown within this zone.

Area with Reduced Flood Hazard due to Accredited or Provisionally Accredited Levee System: Area is shown as reduced flood hazard from the 1-percent-annual-chance or greater flood by a levee system. Overtopping or failure of any levee system is possible.

Area with Undetermined Flood Hazard due to Non-Accredited Levee System: Analysis and mapping procedures for non-accredited levee systems were applied resulting in a flood insurance rate zone where flood hazards are undetermined, but possible.

OTHER AREAS

Zone D (Areas of Undetermined Flood Hazard): The flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.

Unshaded Zone X: Areas of minimal flood hazard.

FLOOD HAZARD AND OTHER BOUNDARY LINES

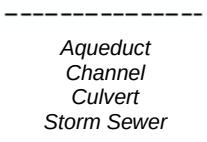
Flood Zone Boundary (white line on ortho-photography-based mapping; gray line on vector-based mapping)

Limit of Study

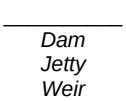
Jurisdiction Boundary

Limit of Moderate Wave Action (LiMWA): Indicates the inland limit of the area affected by waves greater than 1.5 feet

GENERAL STRUCTURES



Channel, Culvert, Aqueduct, or Storm Sewer



Dam, Jetty, Weir

Levee, Dike, or Floodwall

Figure 3: Map Legend for FIRM (Cont'd)

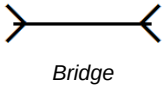
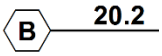
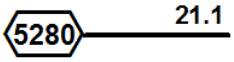
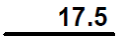
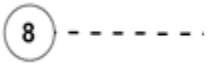
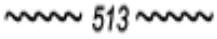
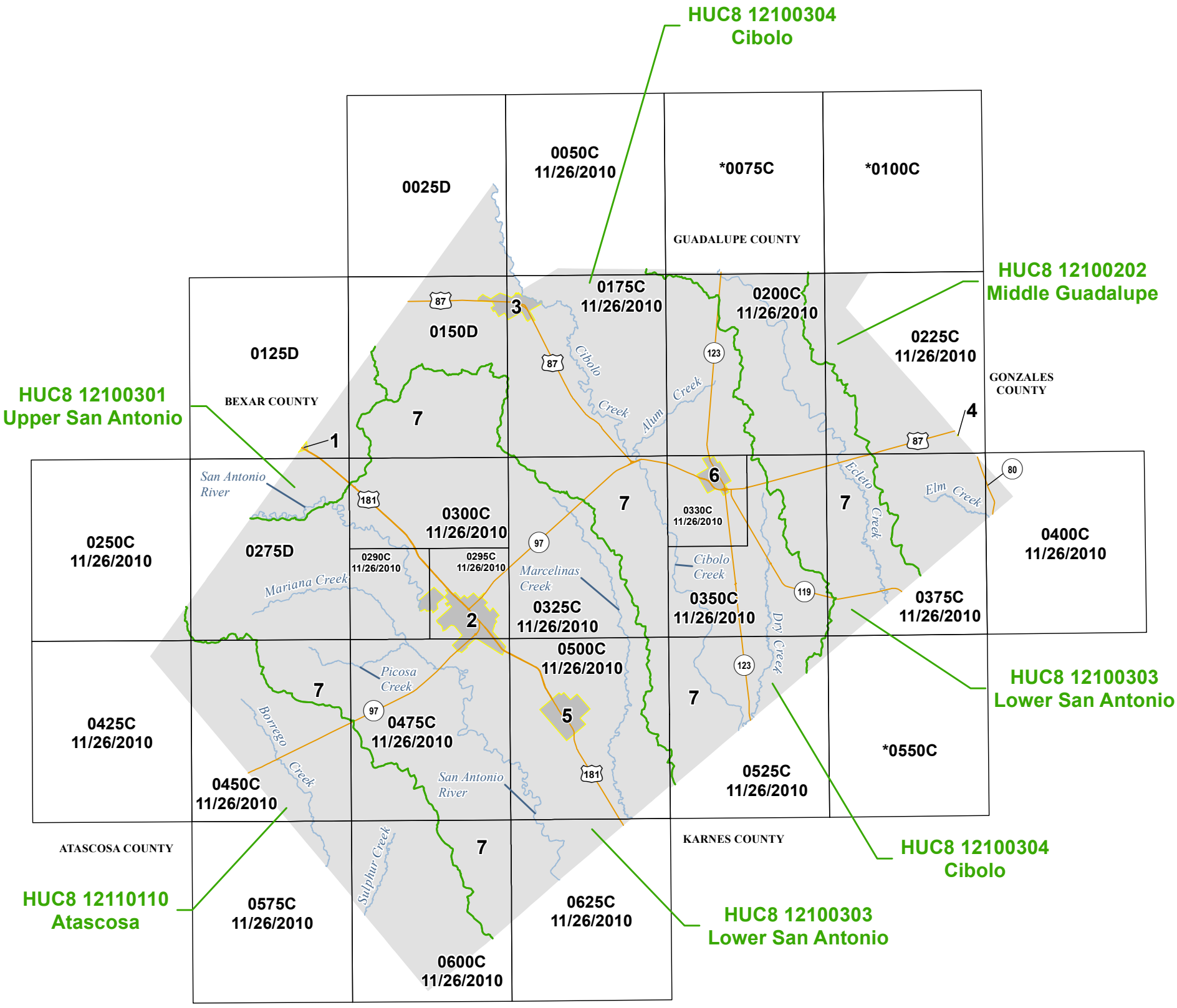
 *Bridge*	Bridge
REFERENCE MARKERS	
 22.0	River mile Markers
CROSS SECTION & TRANSECT INFORMATION	
 B 20.2	Lettered Cross Section with Regulatory Water Surface Elevation (BFE)
 5280 21.1	Numbered Cross Section with Regulatory Water Surface Elevation (BFE)
 17.5	Unlettered Cross Section with Regulatory Water Surface Elevation (BFE)
 8	Coastal Transect
	Profile Baseline: Indicates the modeled flow path of a stream and is shown on FIRM panels for all valid studies with profiles or otherwise established base flood elevation.
	Coastal Transect Baseline: Used in the coastal flood hazard model to represent the 0.0-foot elevation contour and the starting point for the transect and the measuring point for the coastal mapping.
 513	Base Flood Elevation Line
ZONE AE (EL 16)	Static Base Flood Elevation value (shown under zone label)
ZONE AO (DEPTH 2)	Zone designation with Depth
ZONE AO (DEPTH 2) (VEL 15 FPS)	Zone designation with Depth and Velocity
BASE MAP FEATURES	
 *Missouri Creek*	River, Stream or Other Hydrographic Feature
 234	Interstate Highway
 234	U.S. Highway
 234	State Highway
 234	County Highway

Figure 3: Map Legend for FIRM (Cont'd)

MAPLE LANE	Street, Road, Avenue Name, or Private Drive if shown on Flood Profile
RAILROAD	Railroad
_____	Horizontal Reference Grid Line
___	Horizontal Reference Grid Ticks
+	Secondary Grid Crosshairs
Land Grant	Name of Land Grant
7	Section Number
R. 43 W. T. 22 N.	Range, Township Number
^{42}**76**^{000m}**E**	Horizontal Reference Grid Coordinates (UTM)
365000 FT	Horizontal Reference Grid Coordinates (State Plane)
80° 16' 52.5"	Corner Coordinates (Latitude, Longitude)

Figure 4: FIRM Index



KEY TO COMMUNITY NAMES AND CID		
KEY NUMBER	COMMUNITY NAME	CID
1	ELMENDORF, CITY OF	480710
2	FLORESVILLE, CITY OF	480671
3	LA VERNIA, CITY OF	481050
4	NIXON, CITY OF	481114
5	POTH, CITY OF	480672
6	STOCKDALE, CITY OF	480673
7	WILSON COUNTY	480230

ATTENTION: The corporate limits shown on this FIRM Index are based on the best information available at the time of publication. As such, they may be more current than those shown on FIRM panels issued before [date].

N

1 inch = 30,000 feet 1:360,000

Feet
0 7,500 15,000 30,000 45,000 60,000

Map Projection:
State Plane Lambert Conformal Conic Texas South Central FIPS Zone 4204; North American Datum 1983

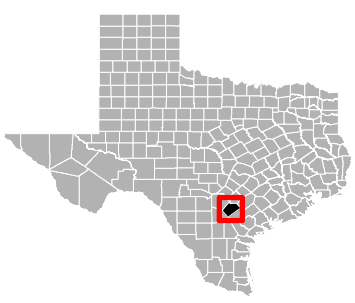
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTPS://MSC.FEMA.GOV

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION

*PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS

COUNTY LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP INDEX

WILSON COUNTY, TEXAS and Incorporated Areas

PANELS PRINTED:

0025, 0050, 0125, 0150, 0175, 0200, 0225, 0250, 0275, 0290, 0295, 0300, 0325, 0330, 0350, 0375, 0400, 0425, 0450, 0475, 0500, 0525, 0575, 0600, 0625

FEMA

PRELIMINARY
06/30/2021
MAP NUMBER
48493CIND0B
MAP REVISED

Table 10 is a list of the locations where FIRMs for Wilson County can be viewed. Please note that the maps at these locations are for reference only and are not for distribution. Also, please note that only the maps for the community listed in the table are available at that particular repository. A user may need to visit another repository to view maps from an adjacent community.

Table 10: Map Repositories

Community	Address	City	State	Zip Code
Elmendorf, City of	City Hall, 8304 FM 327	Elmendorf	TX	78112
Floresville, City of	City Hall, 1120 D Street	Floresville	TX	78114
La Vernia, City of	City Hall, 102 East Chihuahua Street	La Vernia	TX	78121
Nixon, City of[1]	City Hall, 100 West 3rd Street	Nixon	TX	78140
Poth, City of	City Hall, 200 North Carroll Street	Poth	TX	78147
Stockdale, City of	City Hall, 700 West Main Street	Stockdale	TX	78160
Wilson County, Unincorporated Areas	Wilson County Courthouse, 1420 3rd Street, Suite 101	Floresville	TX	78114

[1] No Special Flood Hazard Areas Identified in Wilson County

The jurisdictions that are included in this project area, along with the Community Identification Number (CID) for each community and the United States Geological Survey (USGS) 8-digit Hydrologic Unit Code (HUC-8) sub-basins affecting each, are shown in Table 11. The FIRM panel numbers that affect each community are listed. If the flood hazard data for the community is not included in this FIS Report, the location of that data is identified.

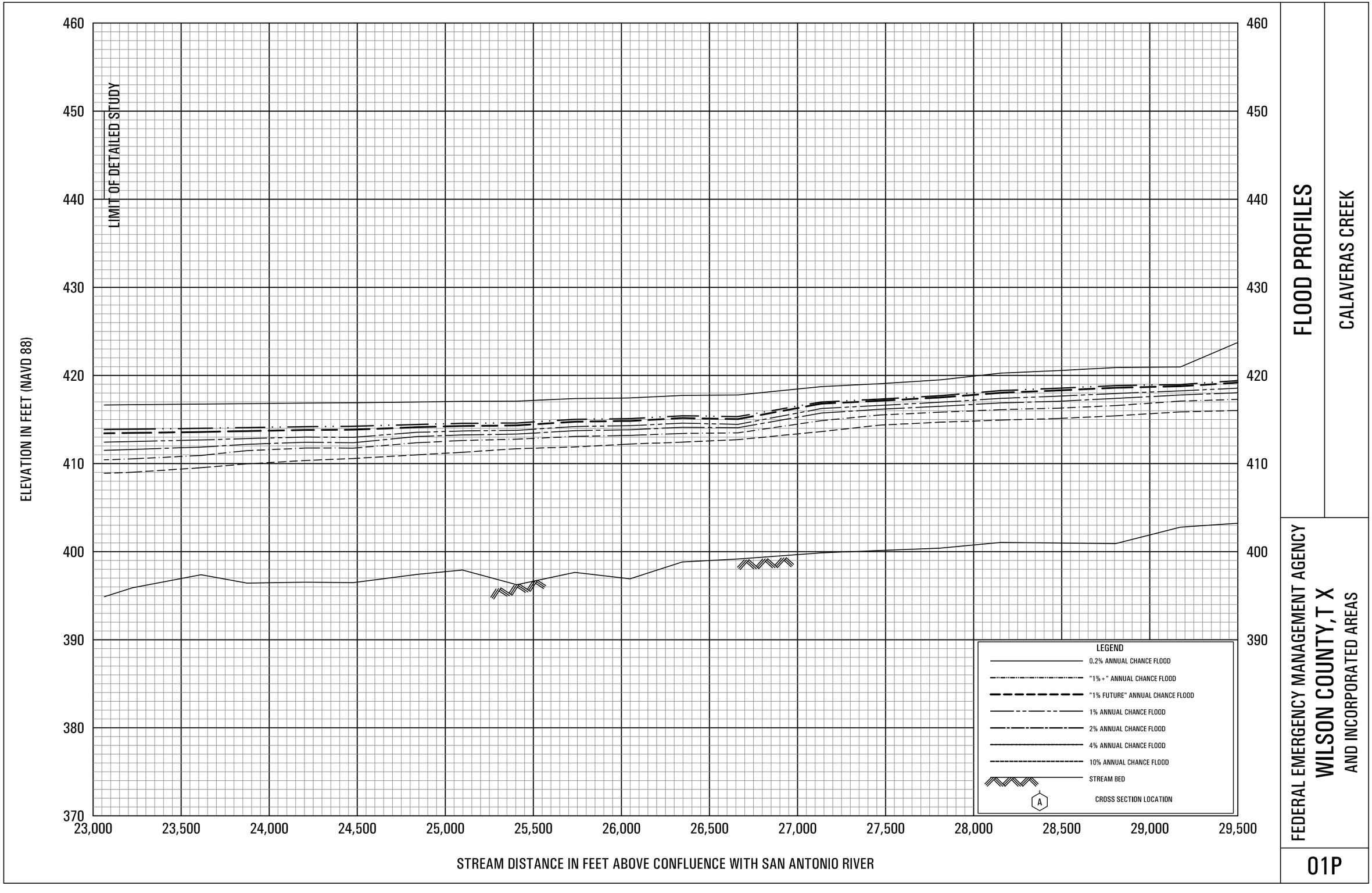
Table 11: Listing of NFIP Jurisdictions

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Elmendorf, City of[3]	480710	12100301	48493C0125D	
Floresville, City of	480671	12100303	48493C0290C 48493C0295C 48493C0475C	
La Vernia, City of	481050	12100304	48493C0150D 48493C0175C	
Nixon, City of[1,3]	481114	12100202	48493C0225C	
Poth, City of	480672	12100303	48493C0500C	
Stockdale, City of	480673	12100304	48493C0330C	
Wilson County, Unincorporated Areas	480230	12100202 12100301 12100303 12100304 12110110	48493C0025D 48493C0050C 48493C0075C[2] 48493C0100C[2] 48493C0125D 48493C0150D 48493C0175C 48493C0200C 48493C0225C 48493C0250C 48493C0275D 48493C0290C 48493C0295C 48493C0300C 48493C0325C 48493C0330C 48493C0350C 48493C0375C 48493C0400C 48493C0425C 48493C0450C 48493C0475C 48493C0500C 48493C0525C 48493C0550C[2] 48493C0575C 48493C0600C 48493C0625C	

[1] No Special Flood Hazard Areas Identified in Wilson County

[2] Panel Not Printed

[3] Community is mapped in multiple counties. This FIS only covers the portion within Wilson County.



FLOOD PROFILES

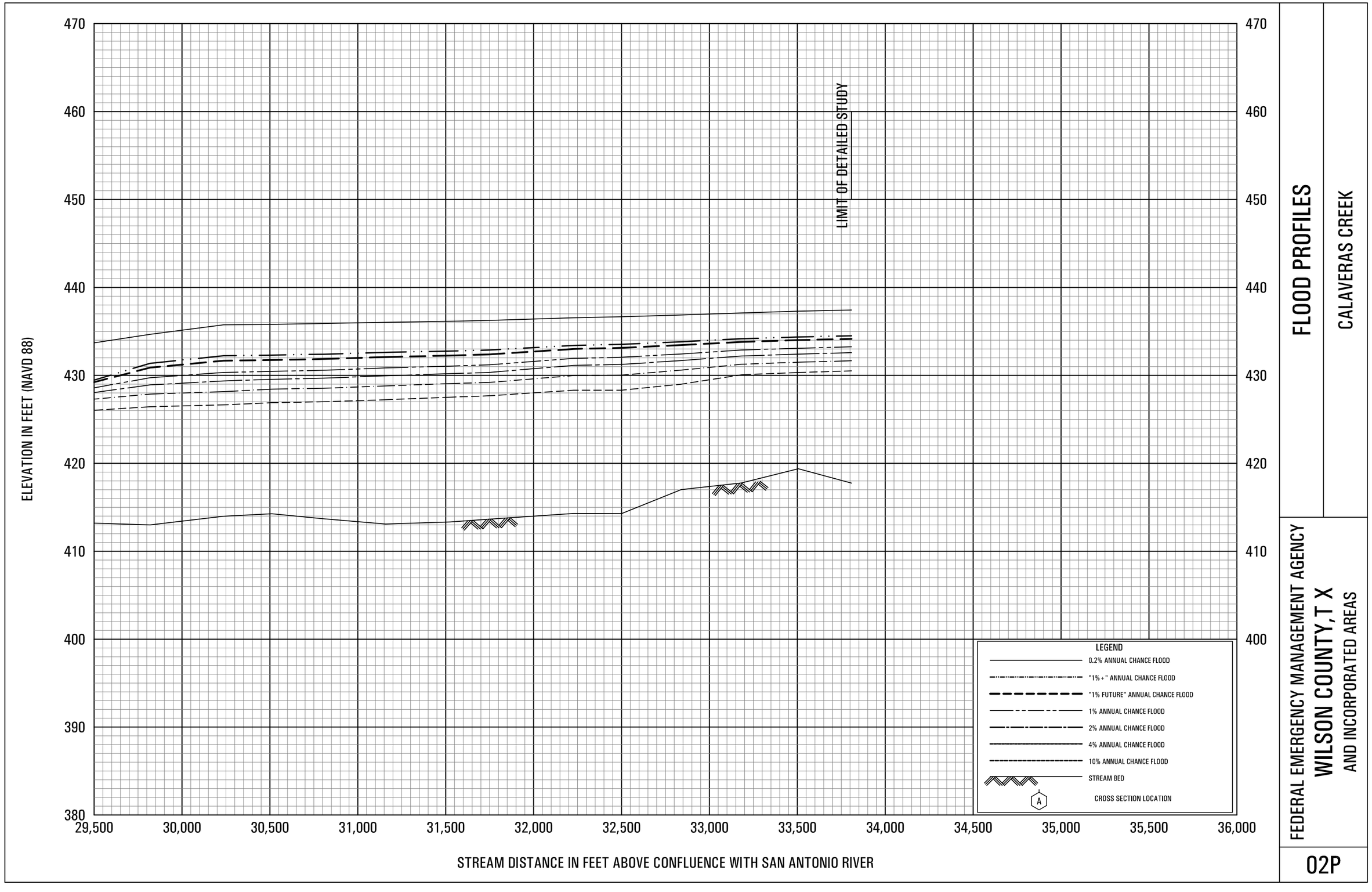
CALAVERAS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, T X

AND INCORPORATED AREAS

01P



FLOOD PROFILES

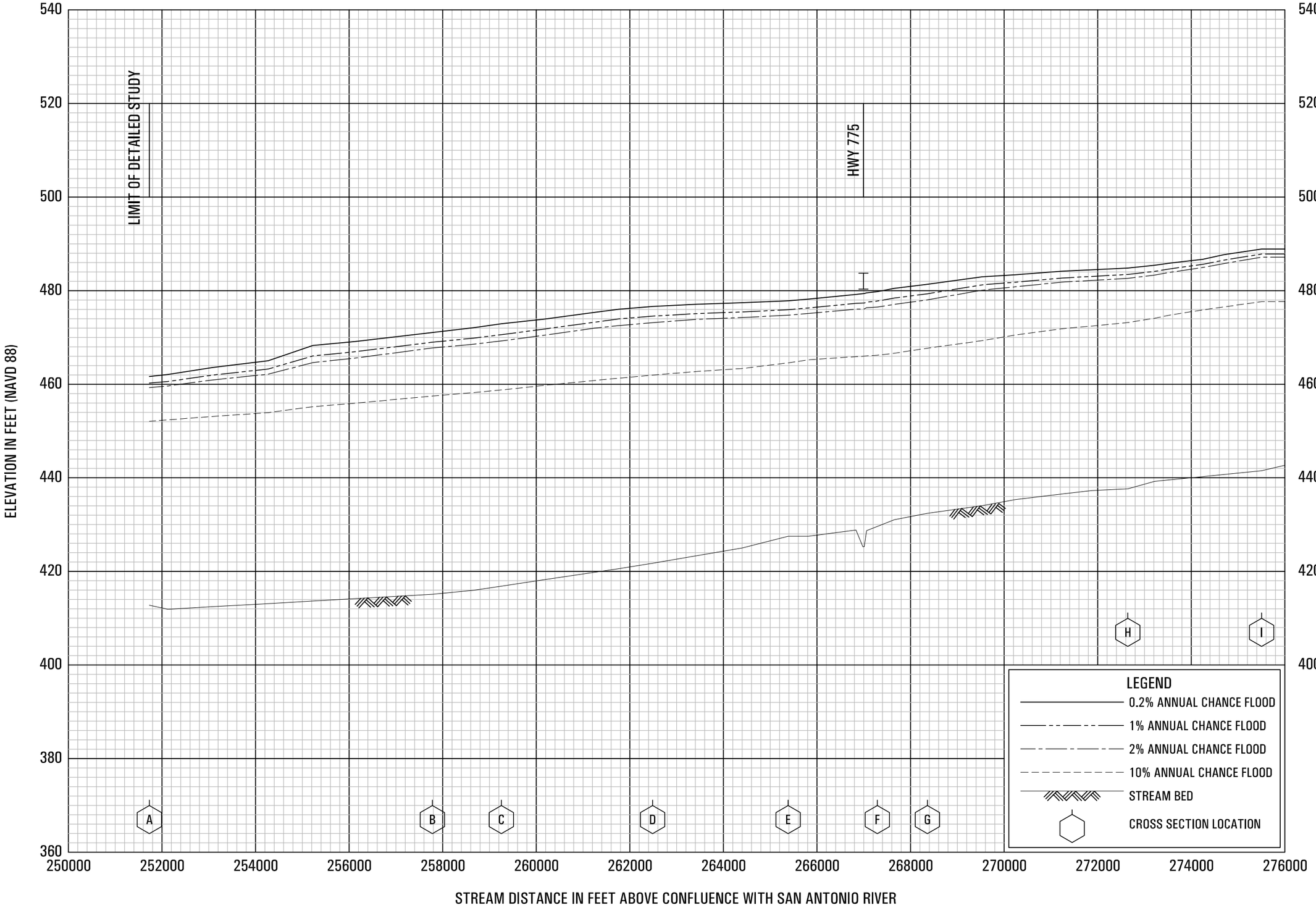
CALAVERAS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, T X

AND INCORPORATED AREAS

02P



FLOOD PROFILES

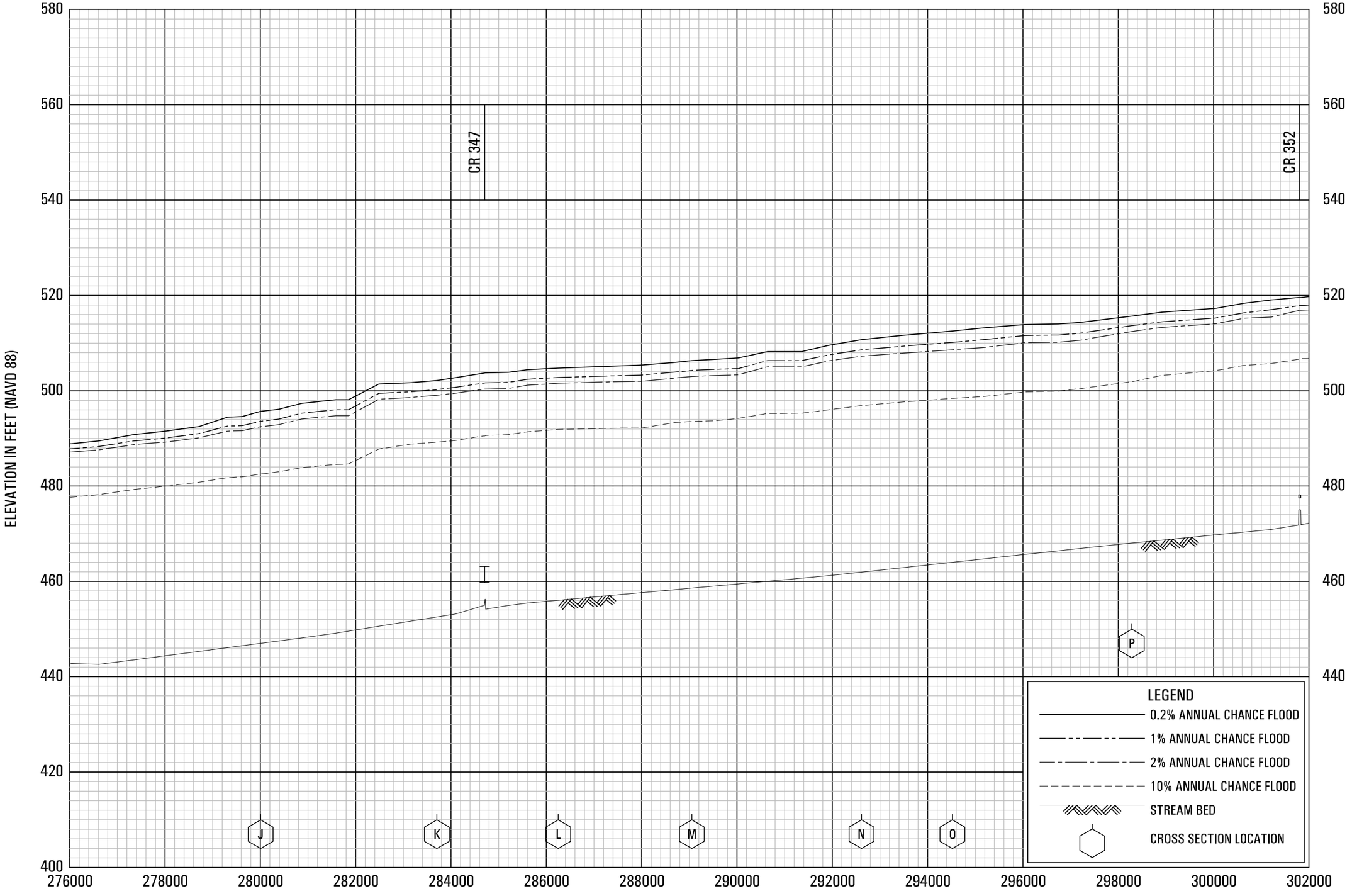
CIBOLO CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS

03P



FLOOD PROFILES

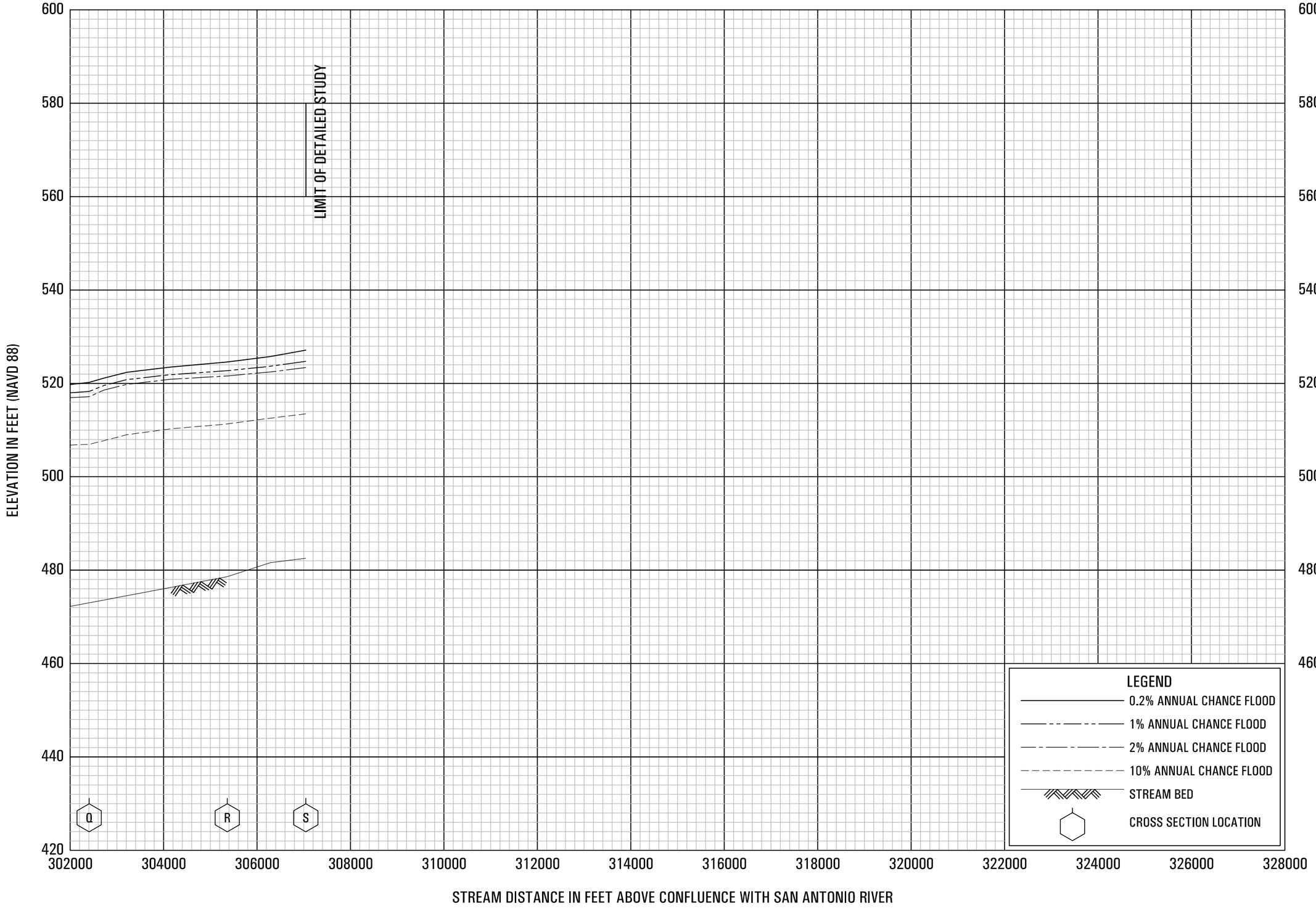
CIBOLO CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS

03(a)P



FLOOD PROFILES

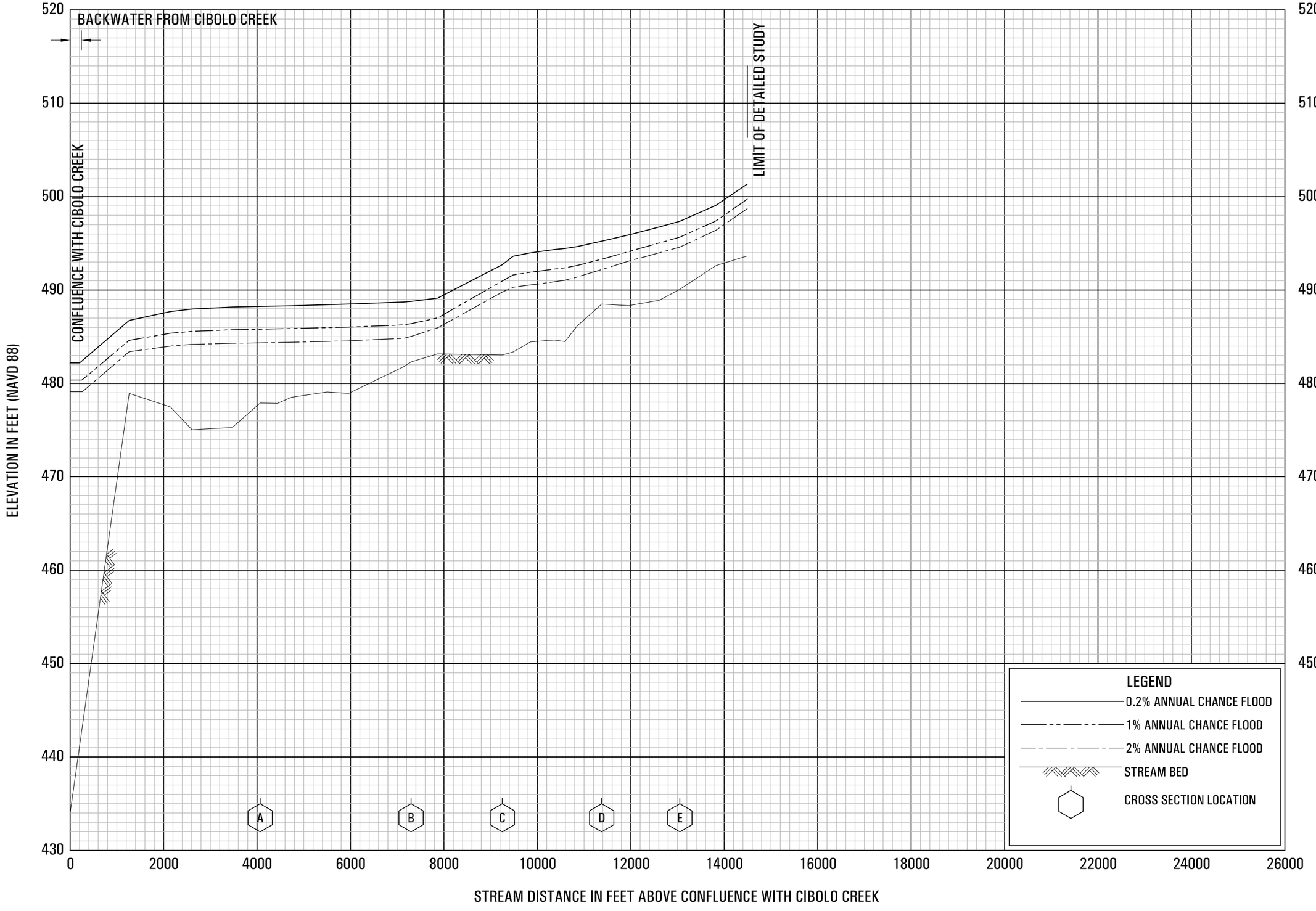
CIBOLO CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS

03(b)P



FLOOD PROFILES

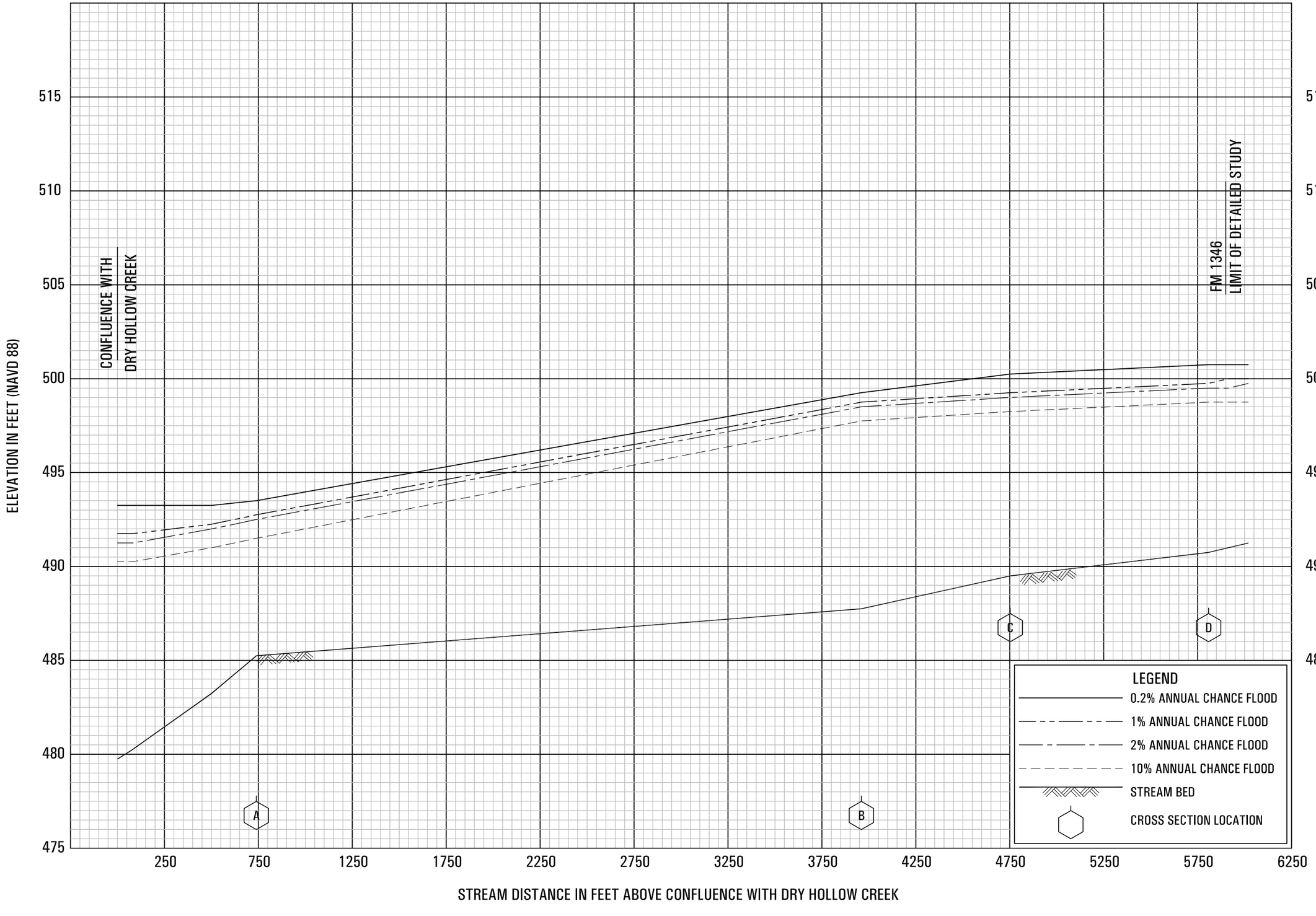
CIBOLO CREEK SPILL 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS

04P



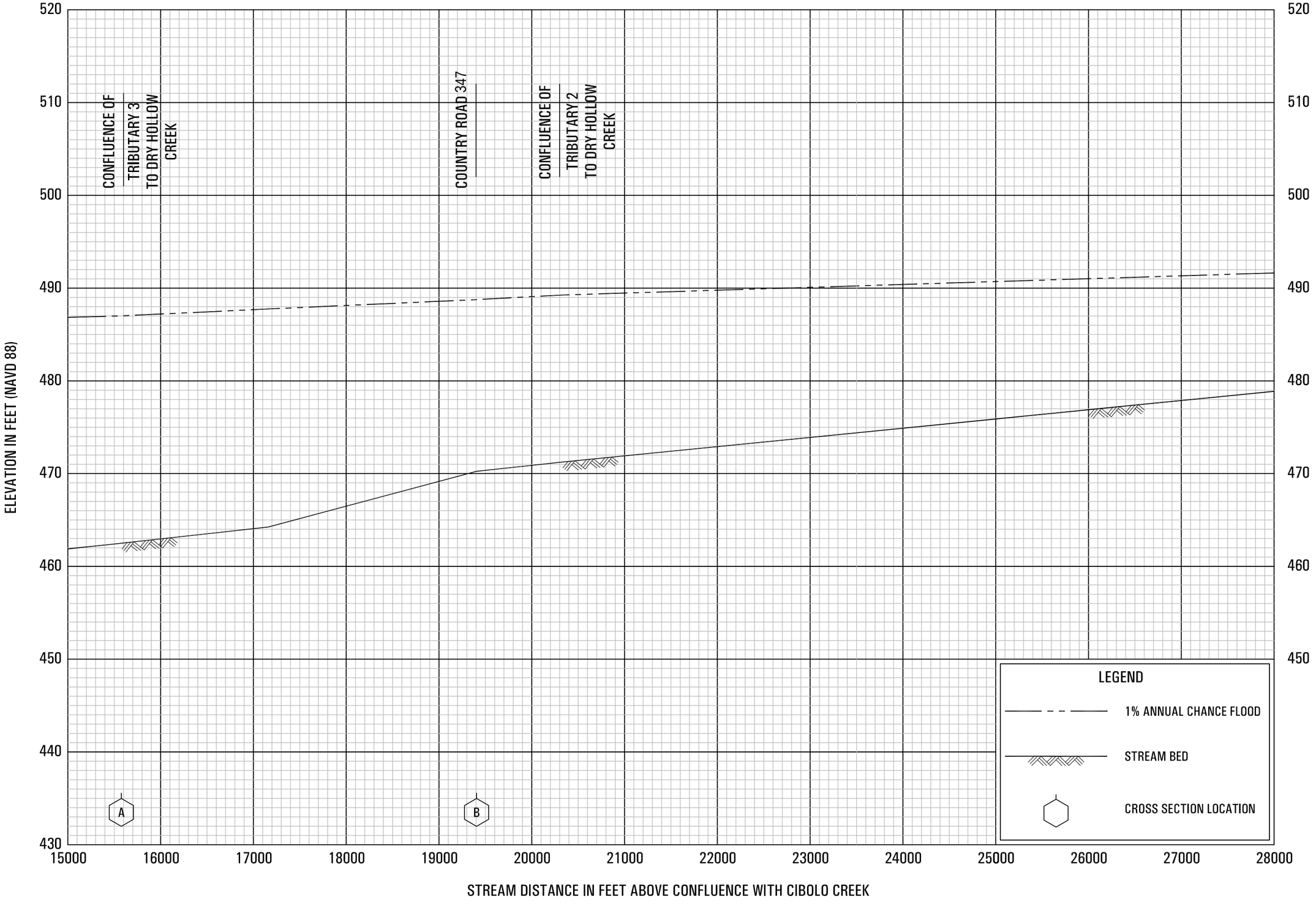
FLOOD PROFILES

COLIBRO CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS



FLOOD PROFILES

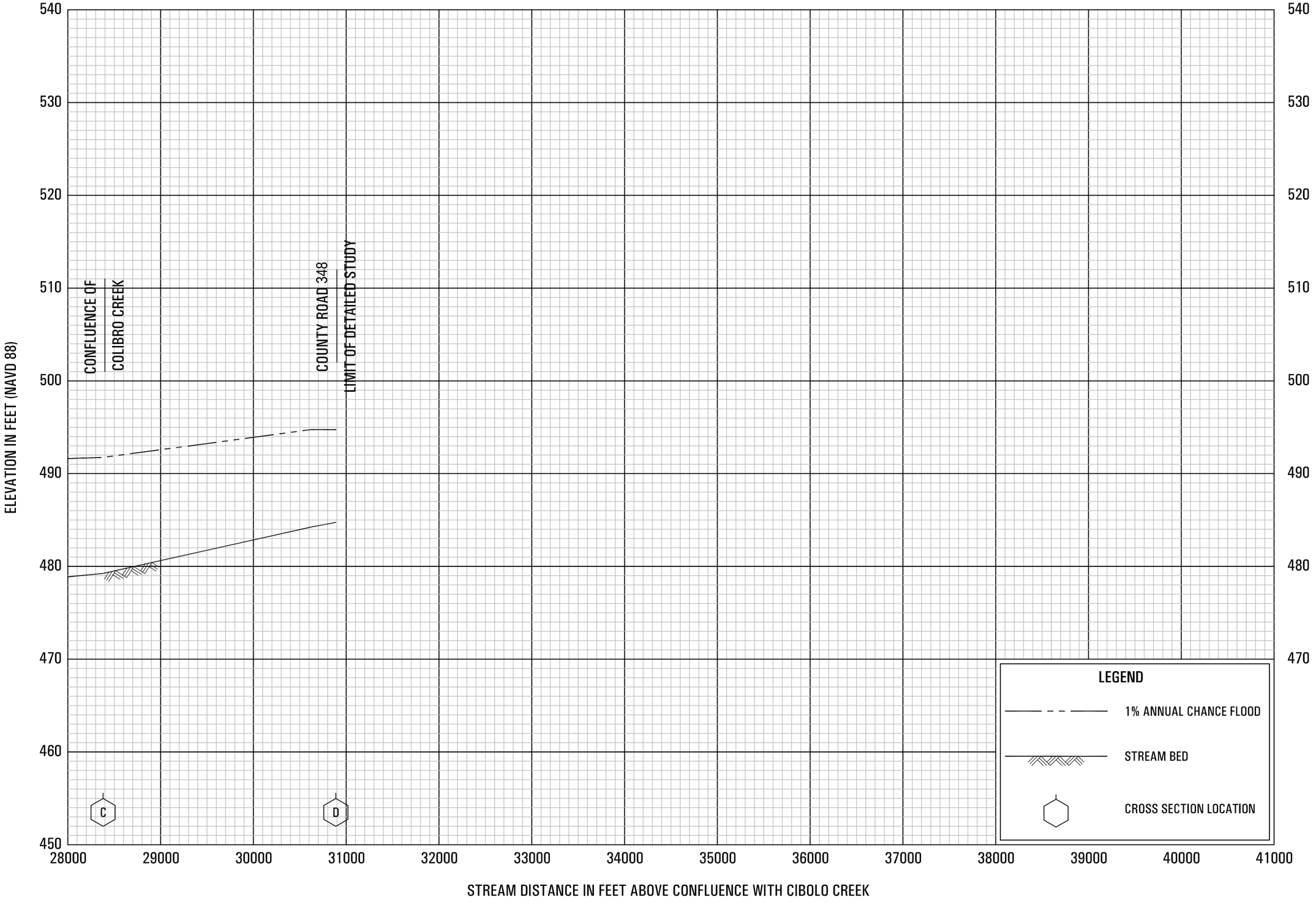
DRY HOLLOW CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS

06P



FLOOD PROFILES

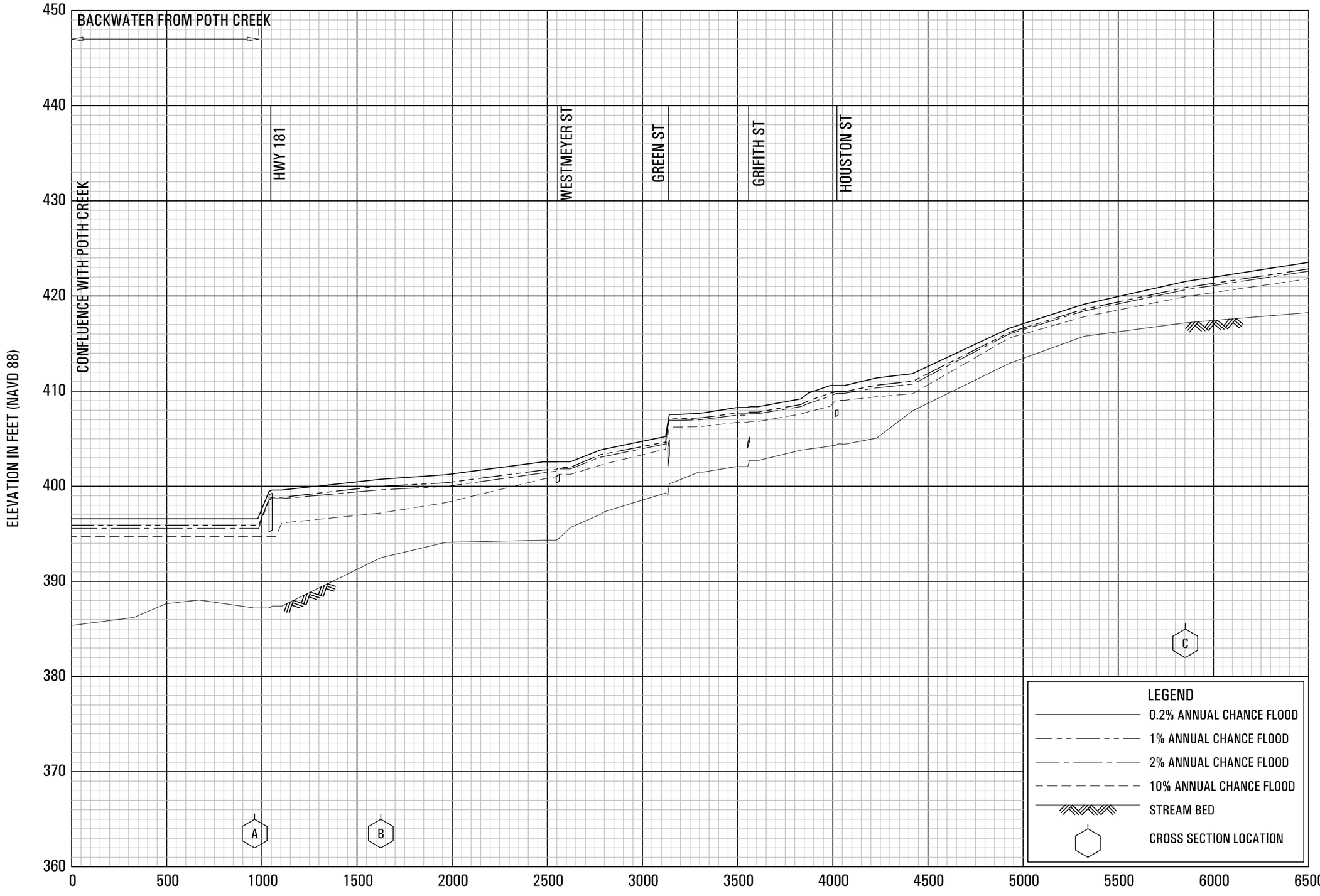
DRY HOLLOW CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS

07P



FLOOD PROFILES

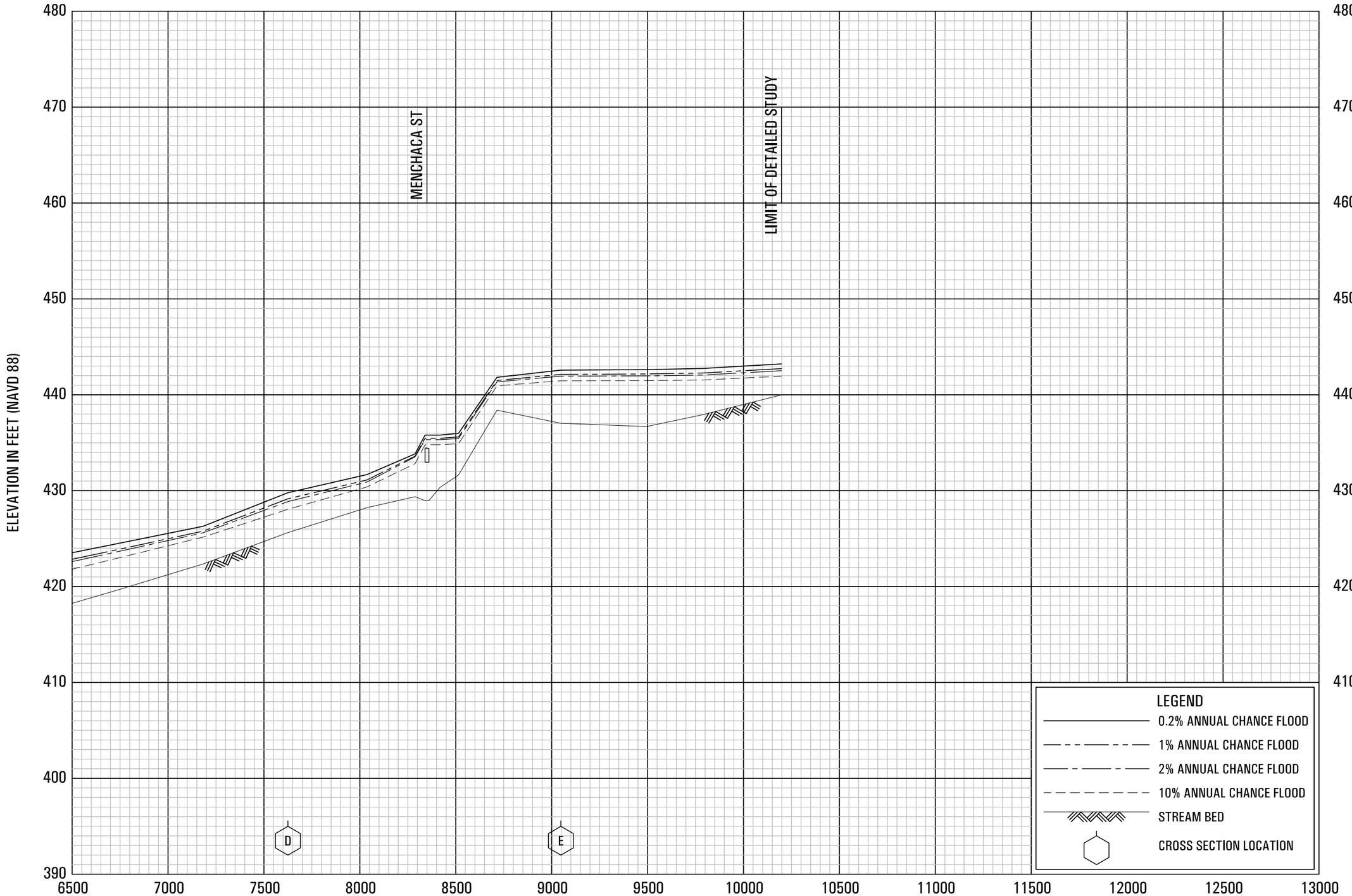
EAST BRANCH TO POTH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS

08P



FLOOD PROFILES

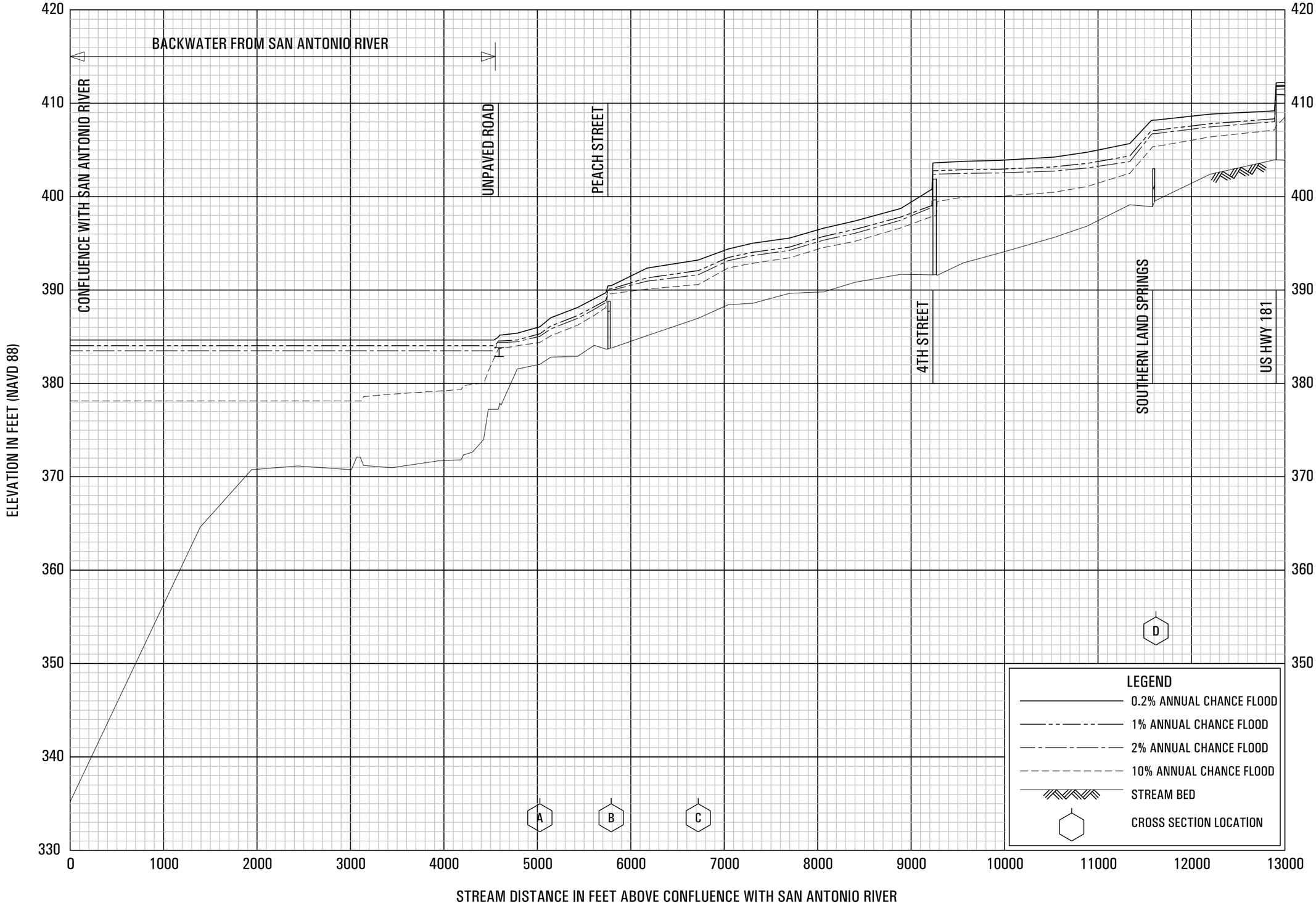
EAST BRANCH TO POTH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS

09P



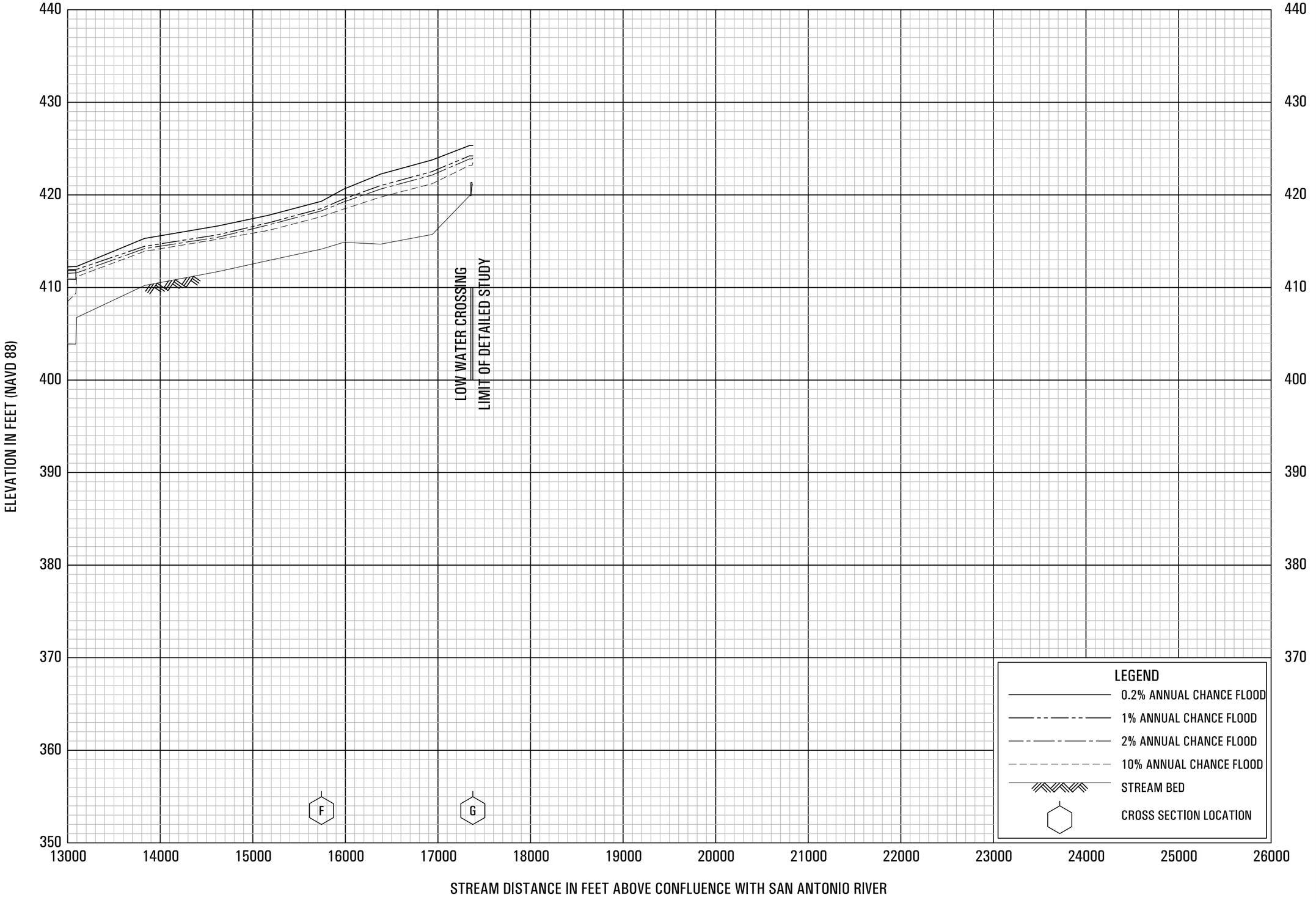
FLOOD PROFILES

LODI BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS



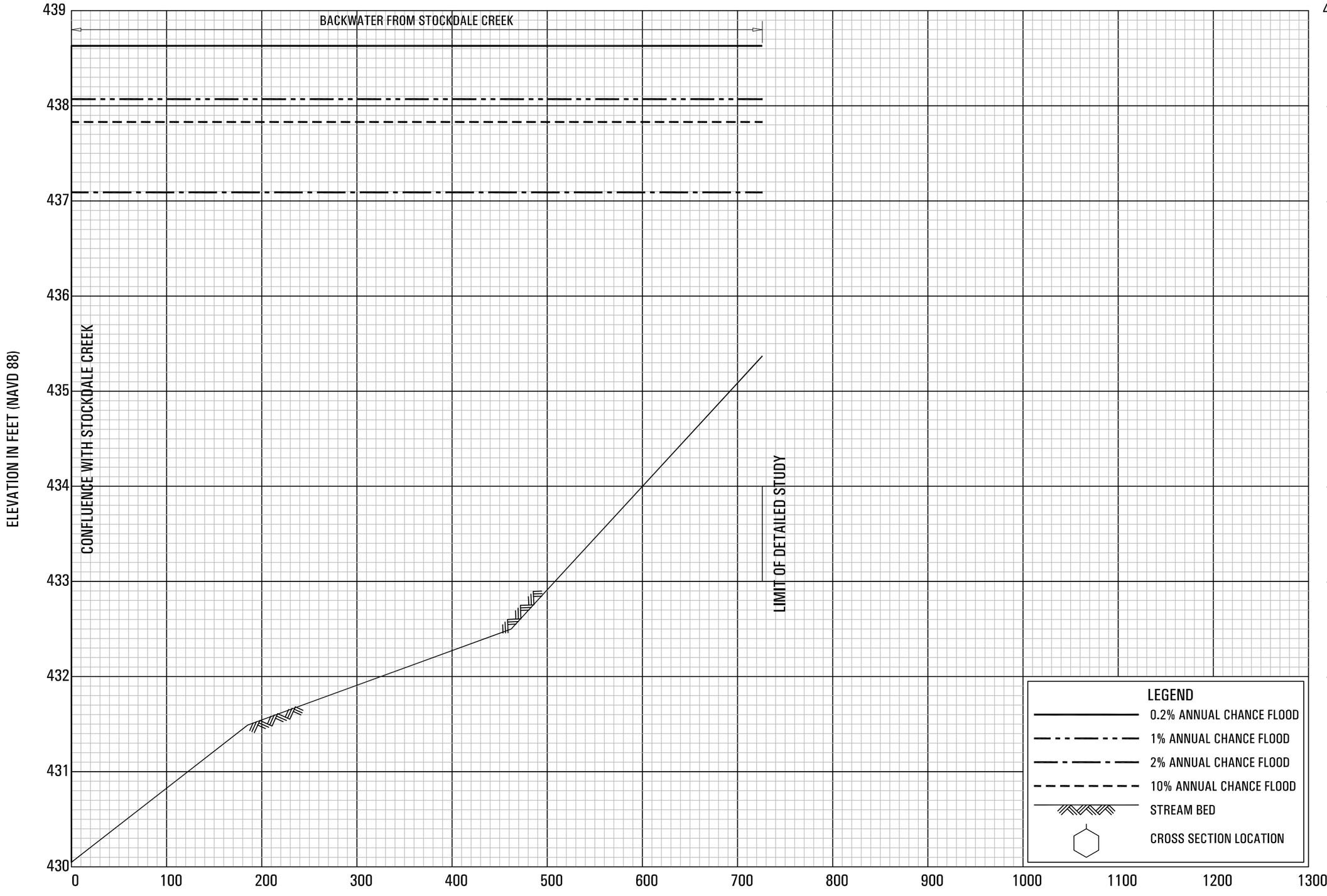
FLOOD PROFILES

LODI BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS



FLOOD PROFILES

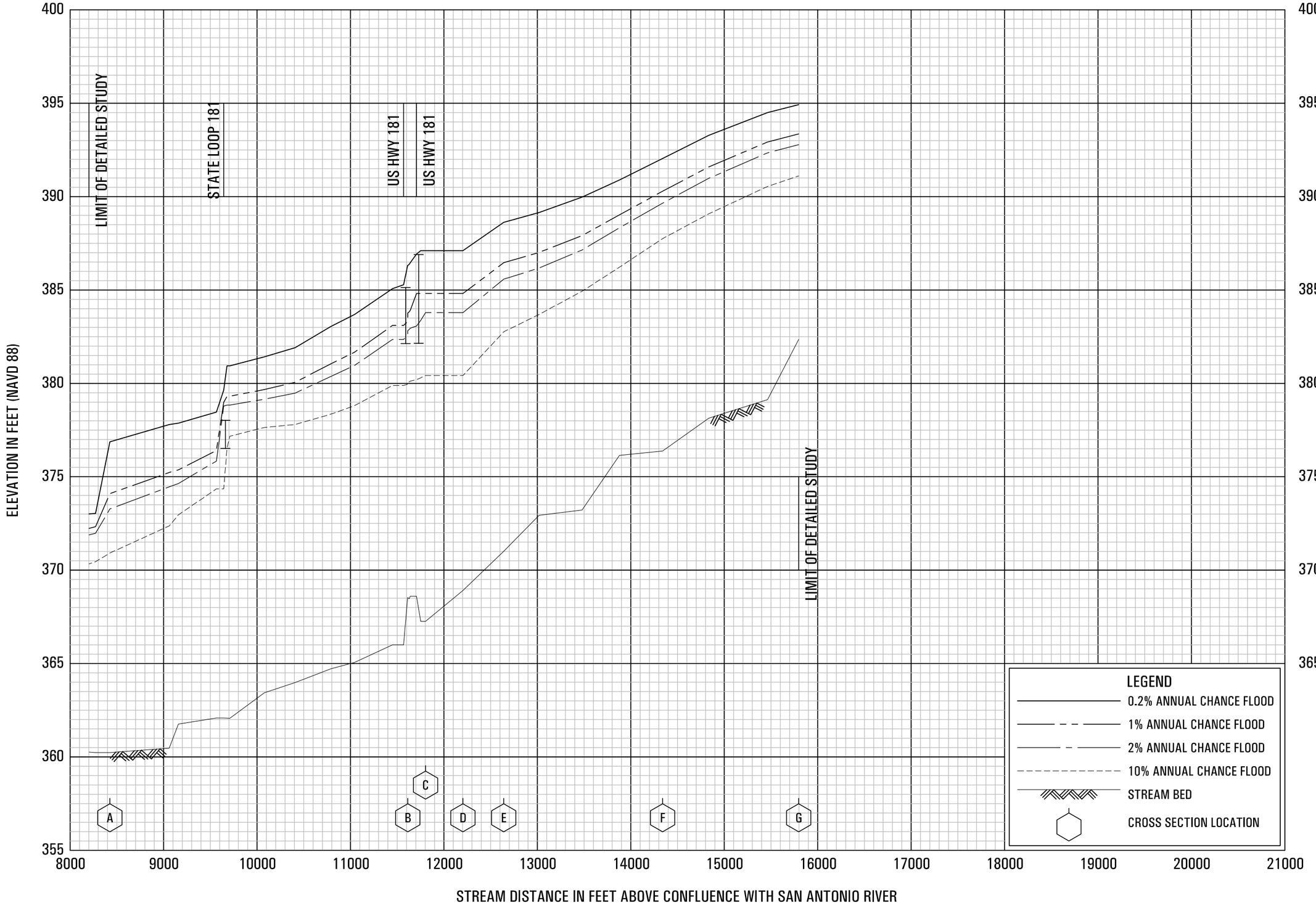
NORTH BRANCH TO STOCKDALE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS

12P



FLOOD PROFILES

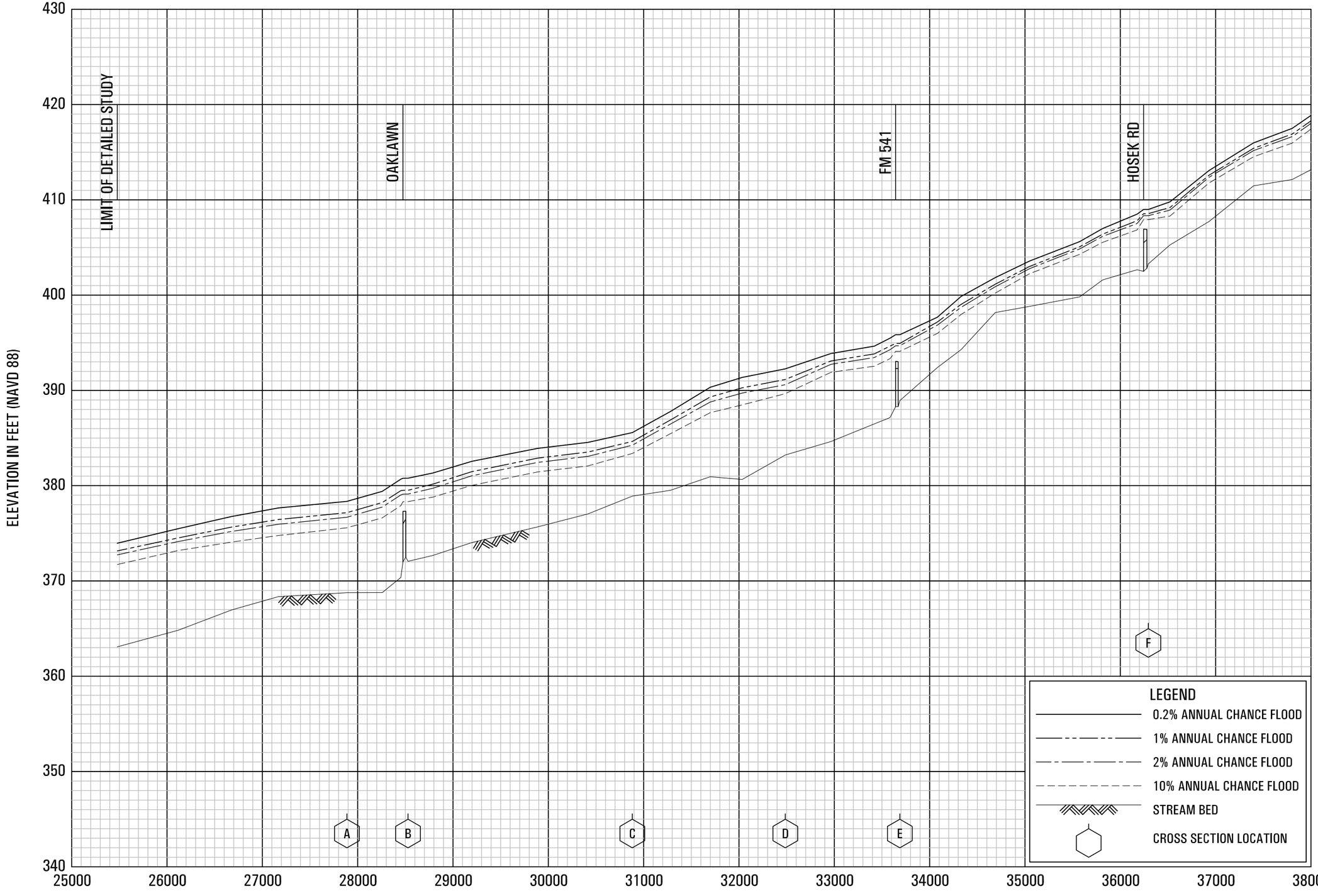
PAJARITO CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS

13P



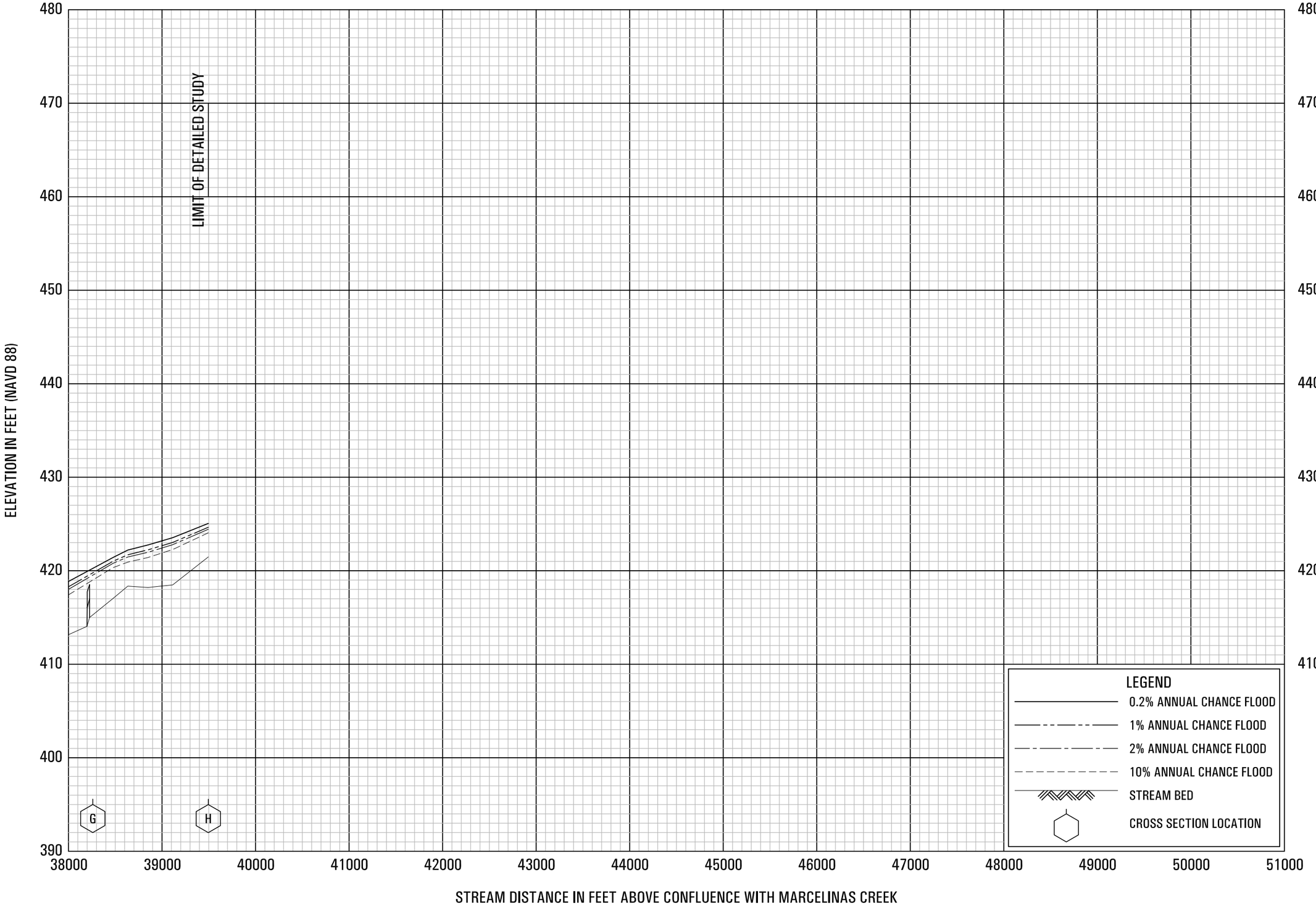
FLOOD PROFILES

POTH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS



FLOOD PROFILES

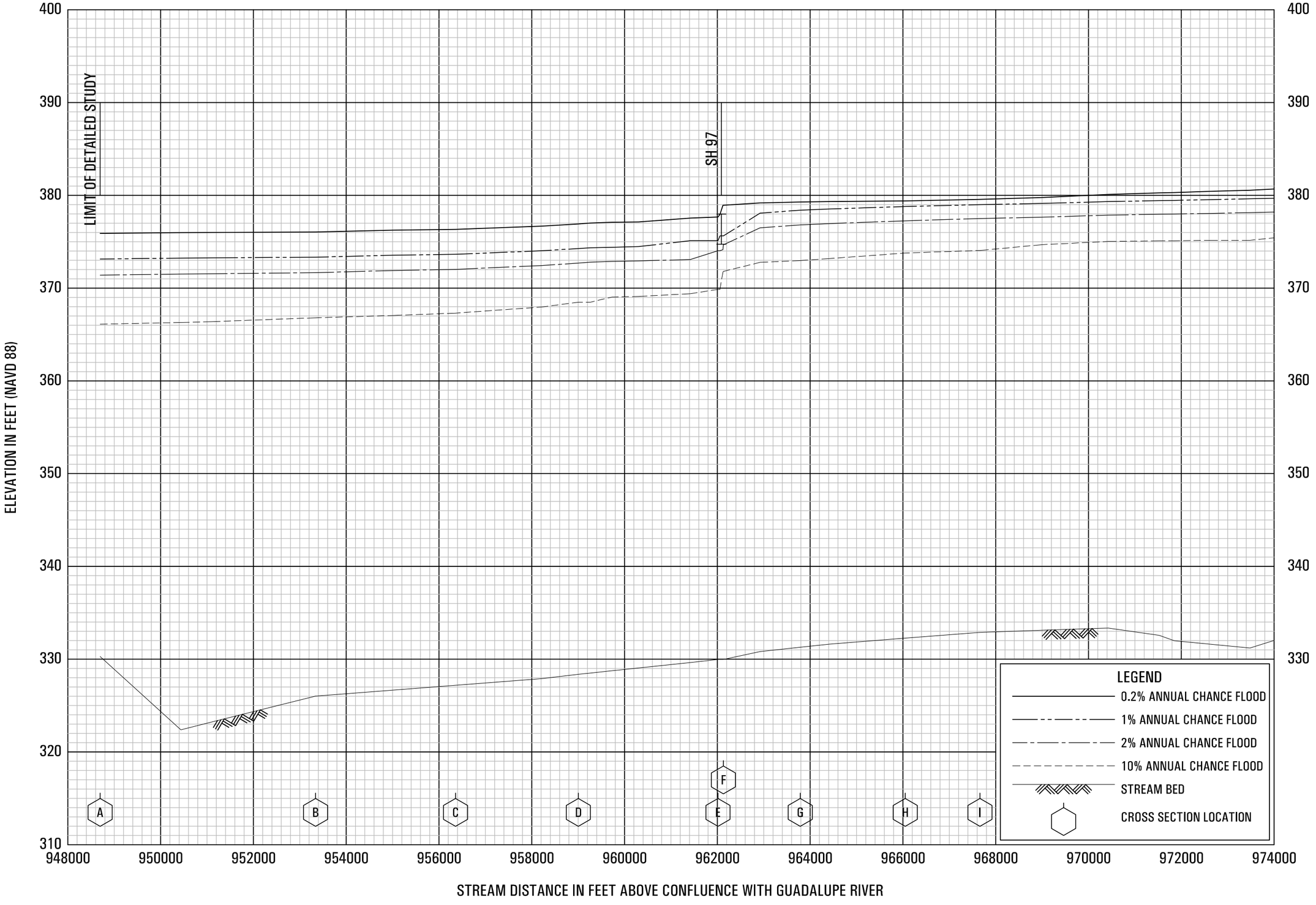
POTH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS

15P



FLOOD PROFILES

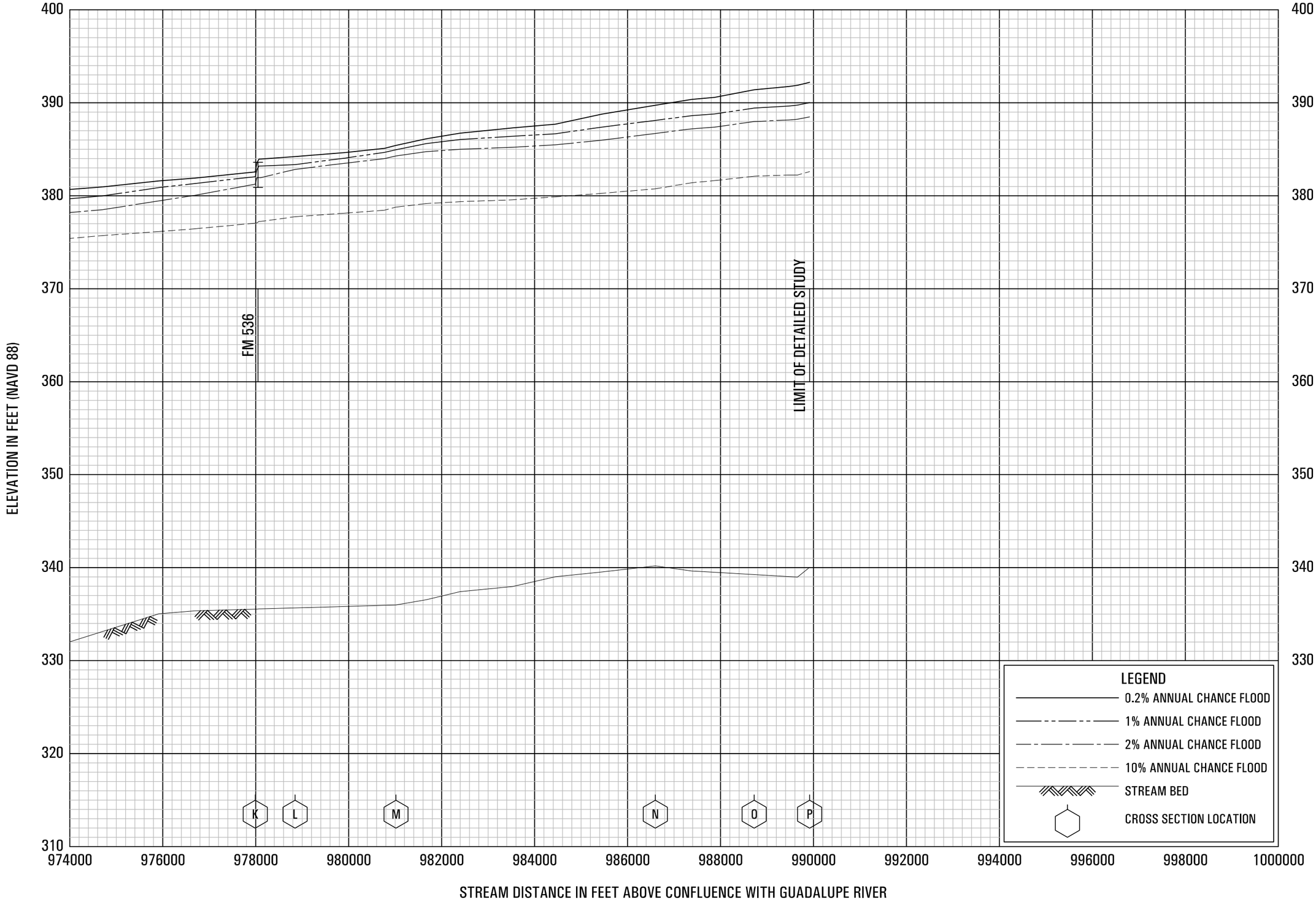
SAN ANTONIO RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS

16P



FLOOD PROFILES

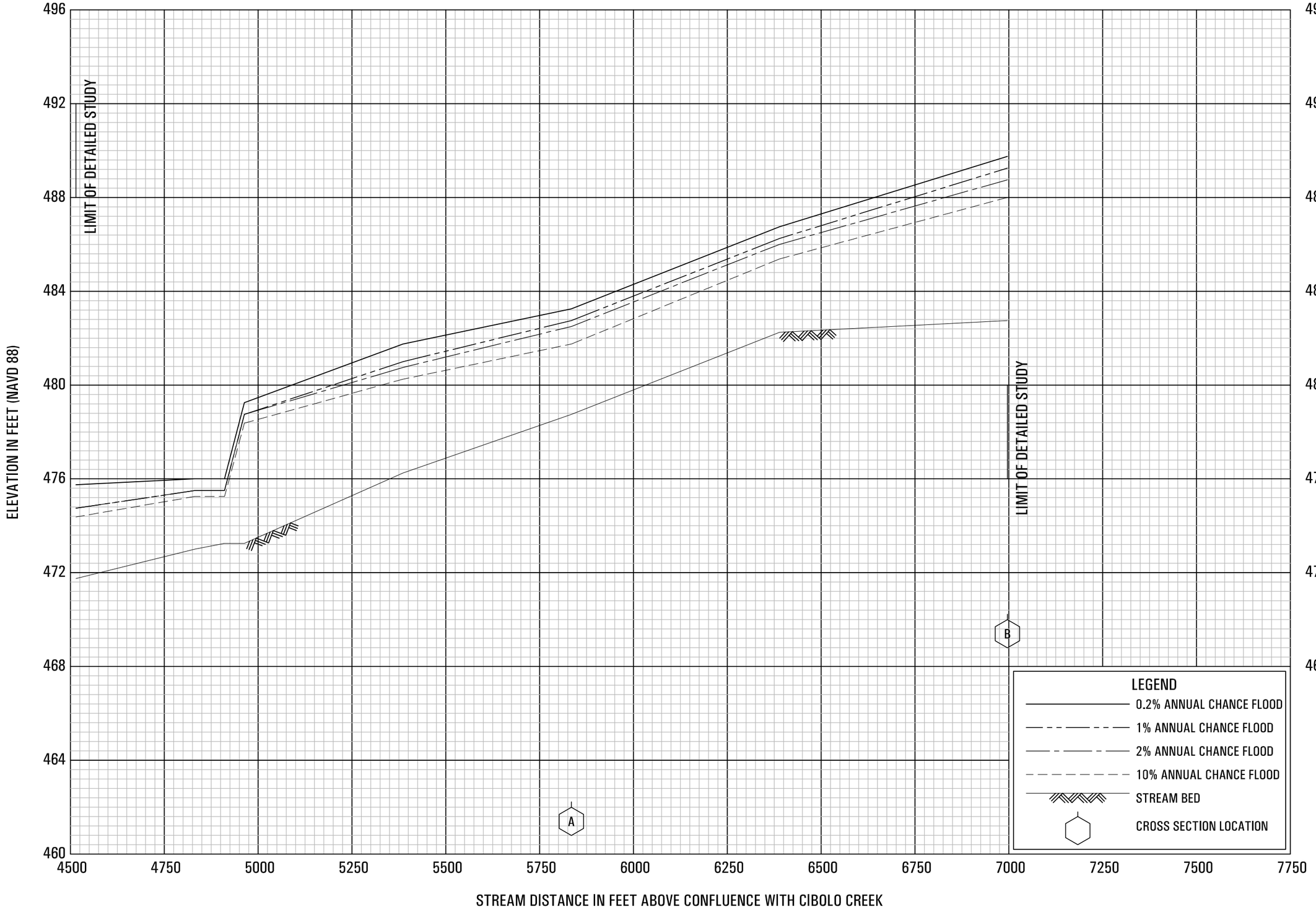
SAN ANTONIO RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS

17P



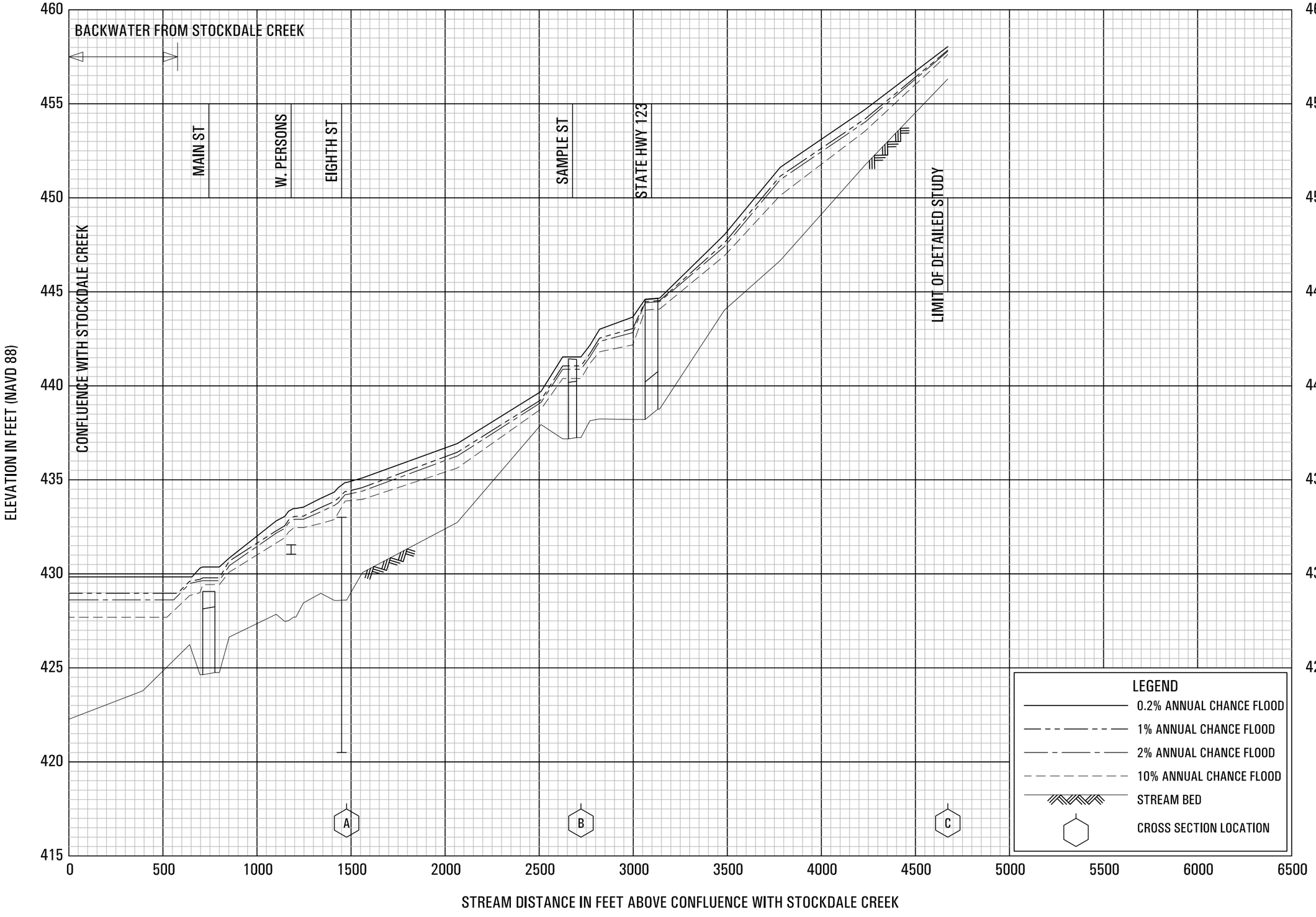
FLOOD PROFILES

SOUTH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS



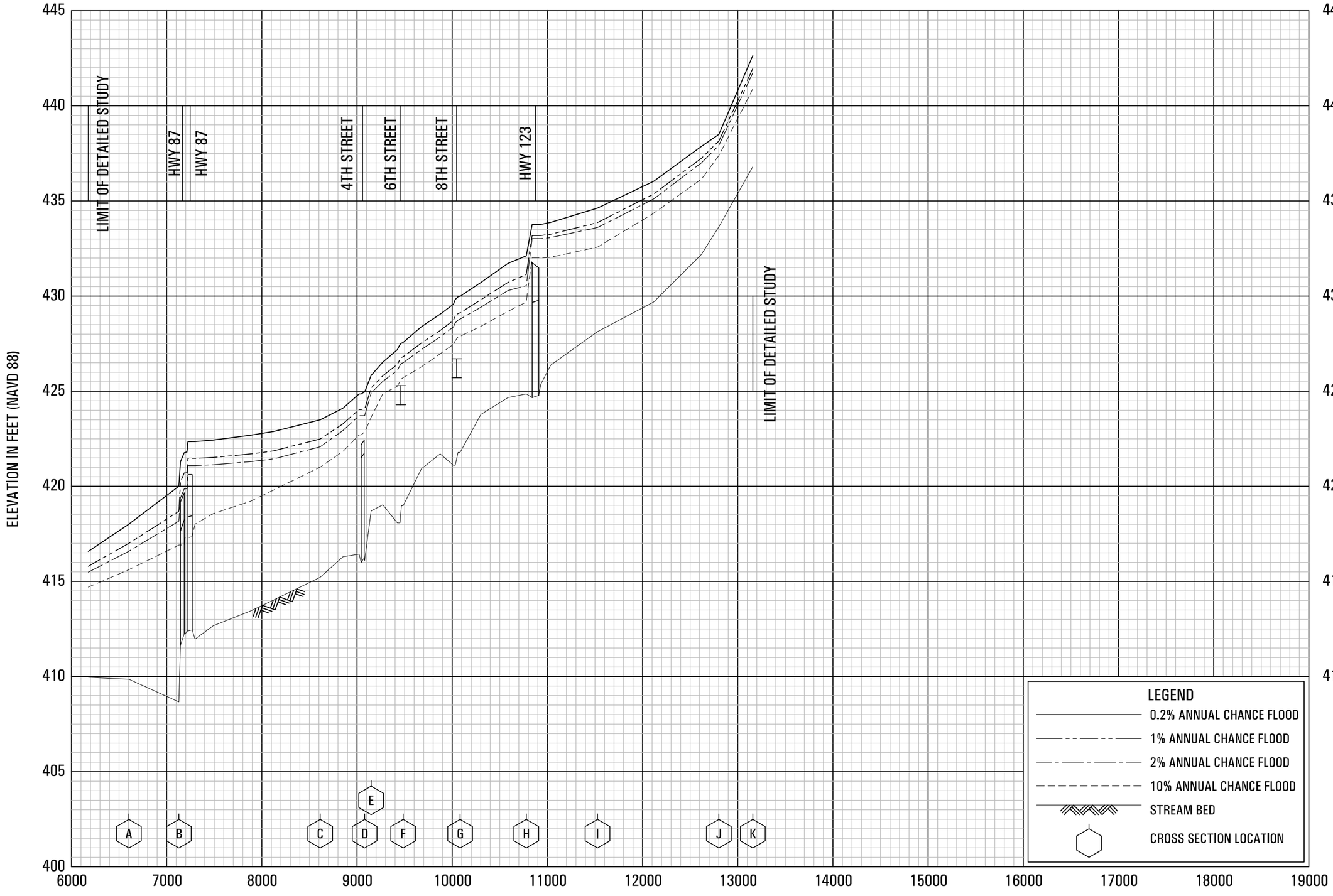
FLOOD PROFILES

SOUTH TRIBUTARY TO STOCKDALE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS



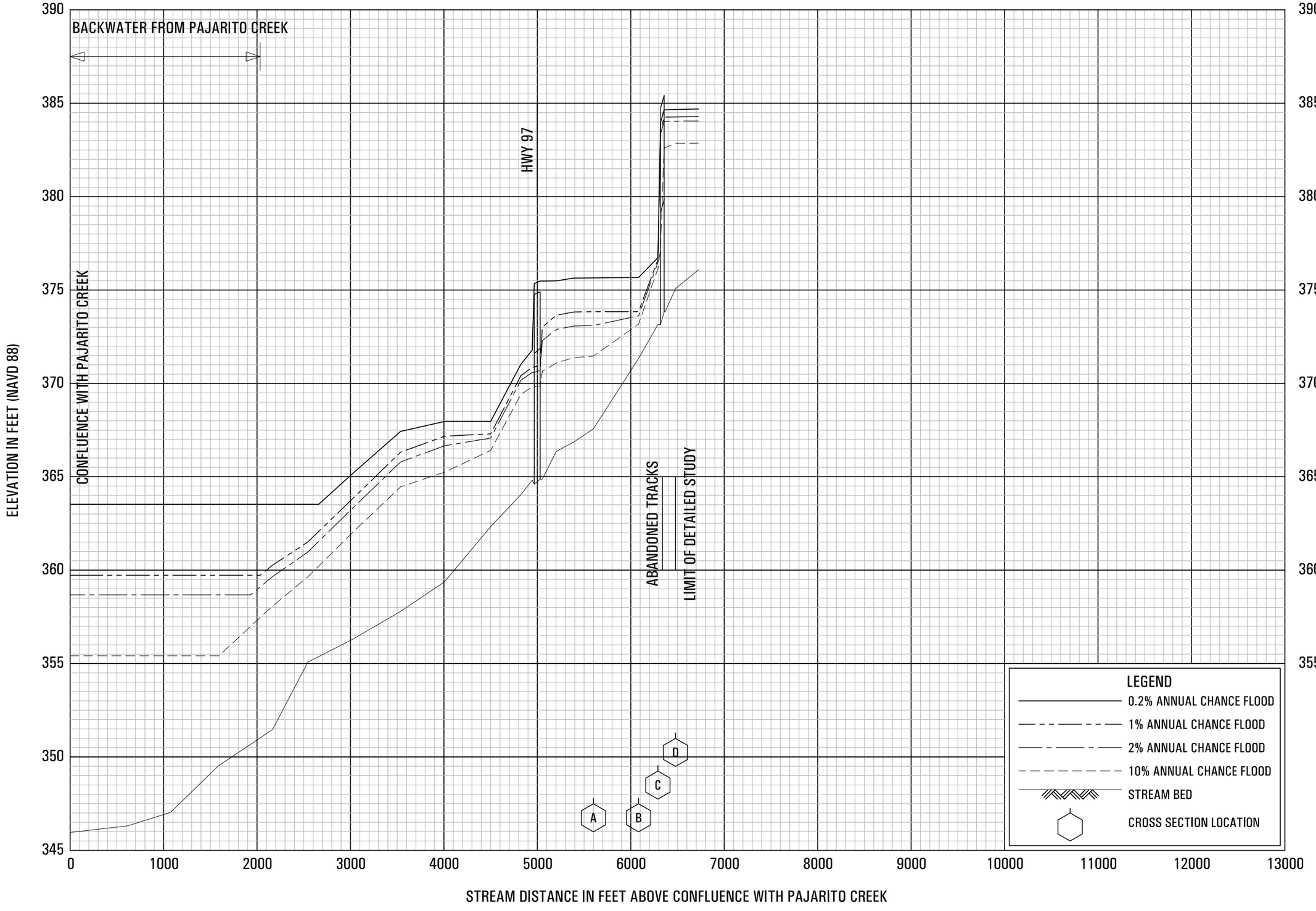
FLOOD PROFILES

STOCKDALE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS



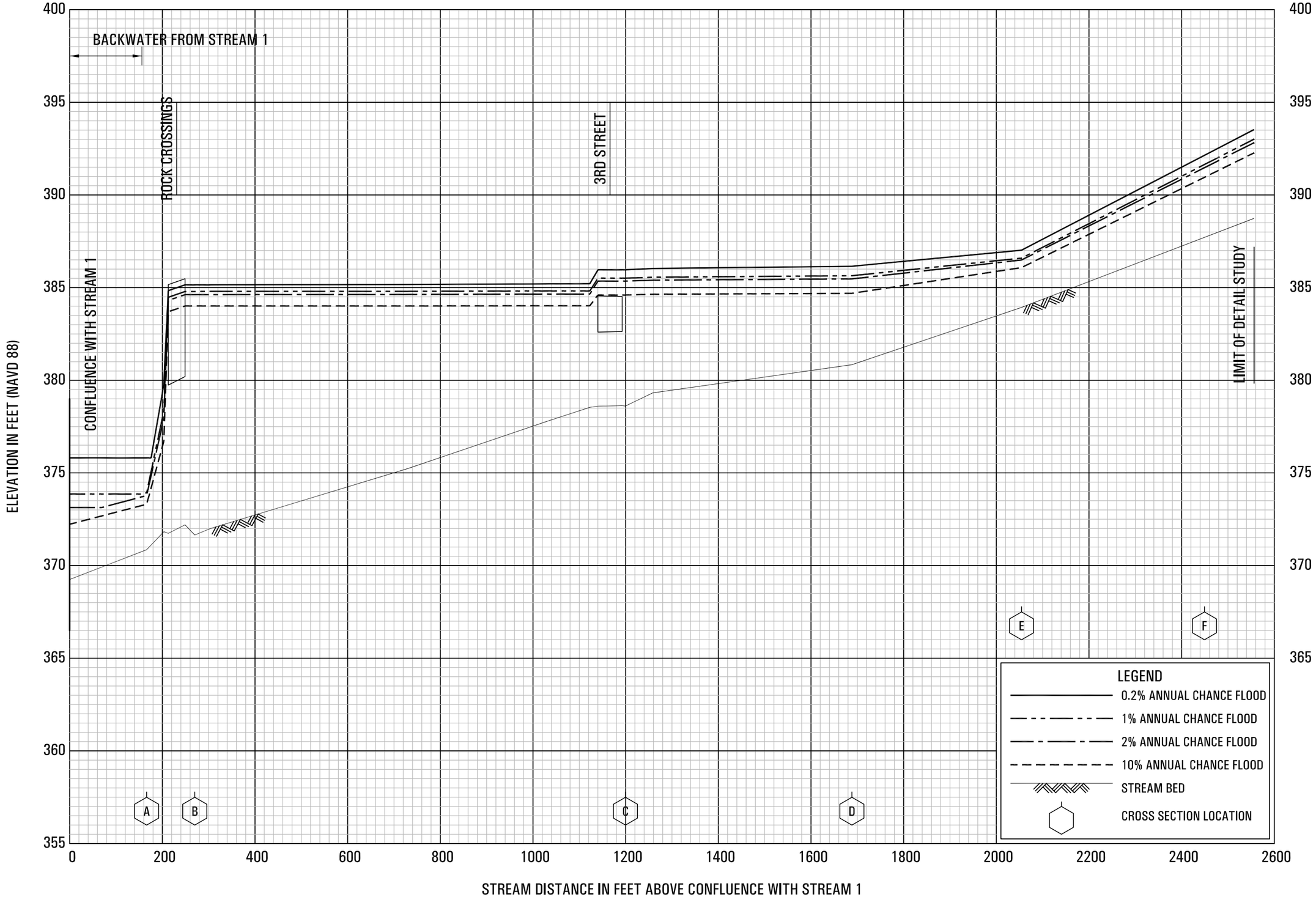
FLOOD PROFILES

STREAM 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS



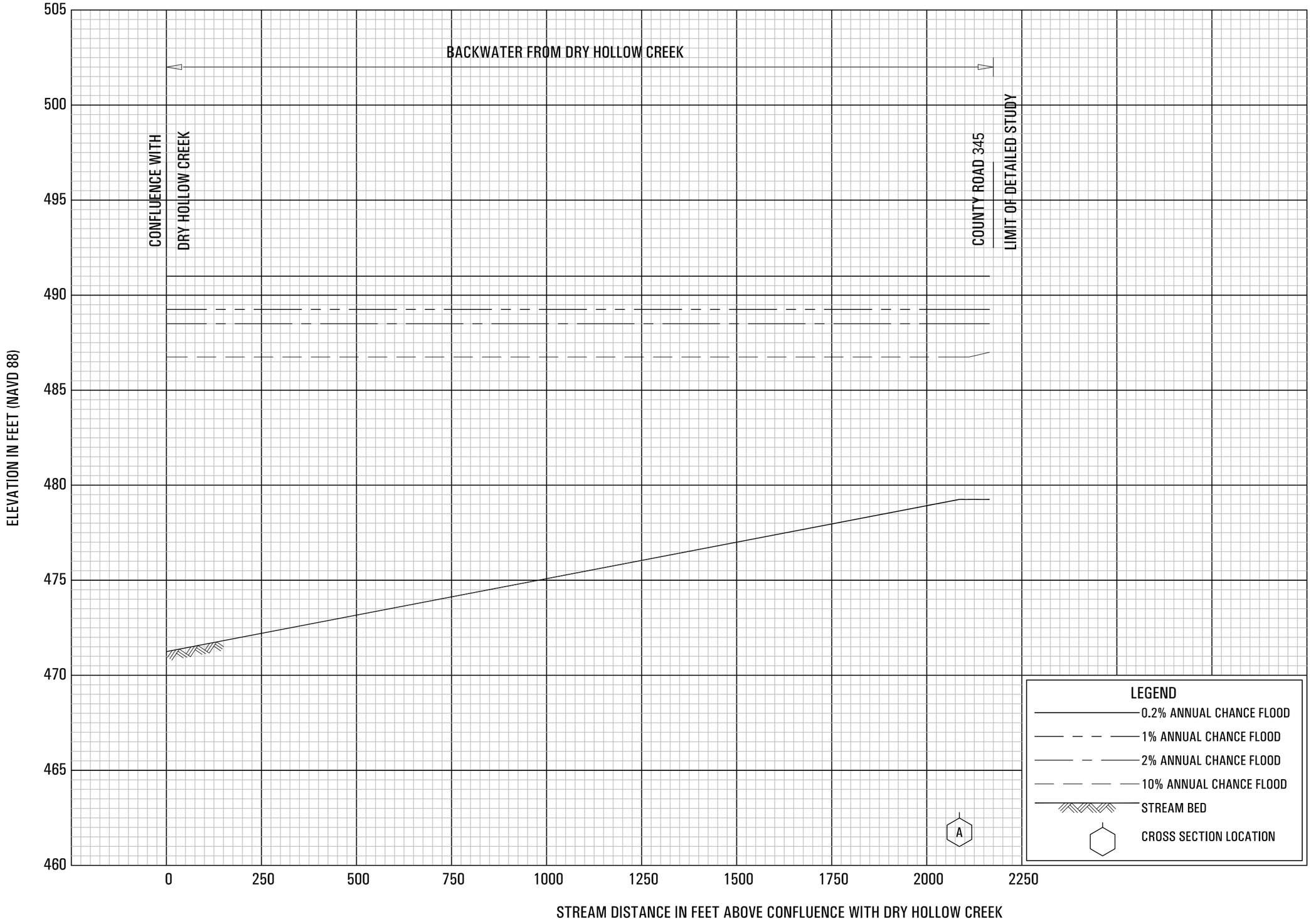
FLOOD PROFILES

STREAM 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS



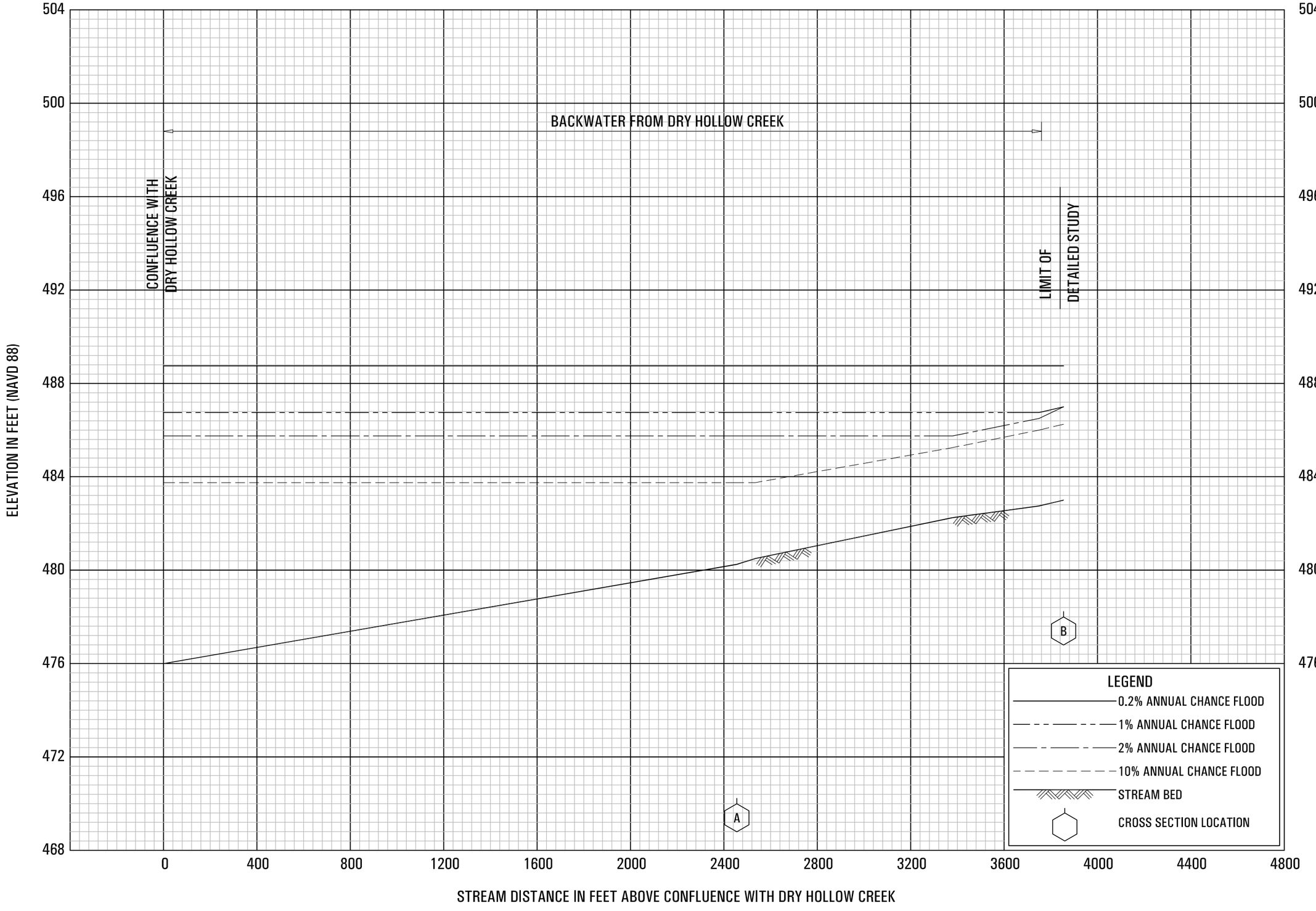
FLOOD PROFILES

TRIBUTARY 2 TO DRY HOLLOW CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS



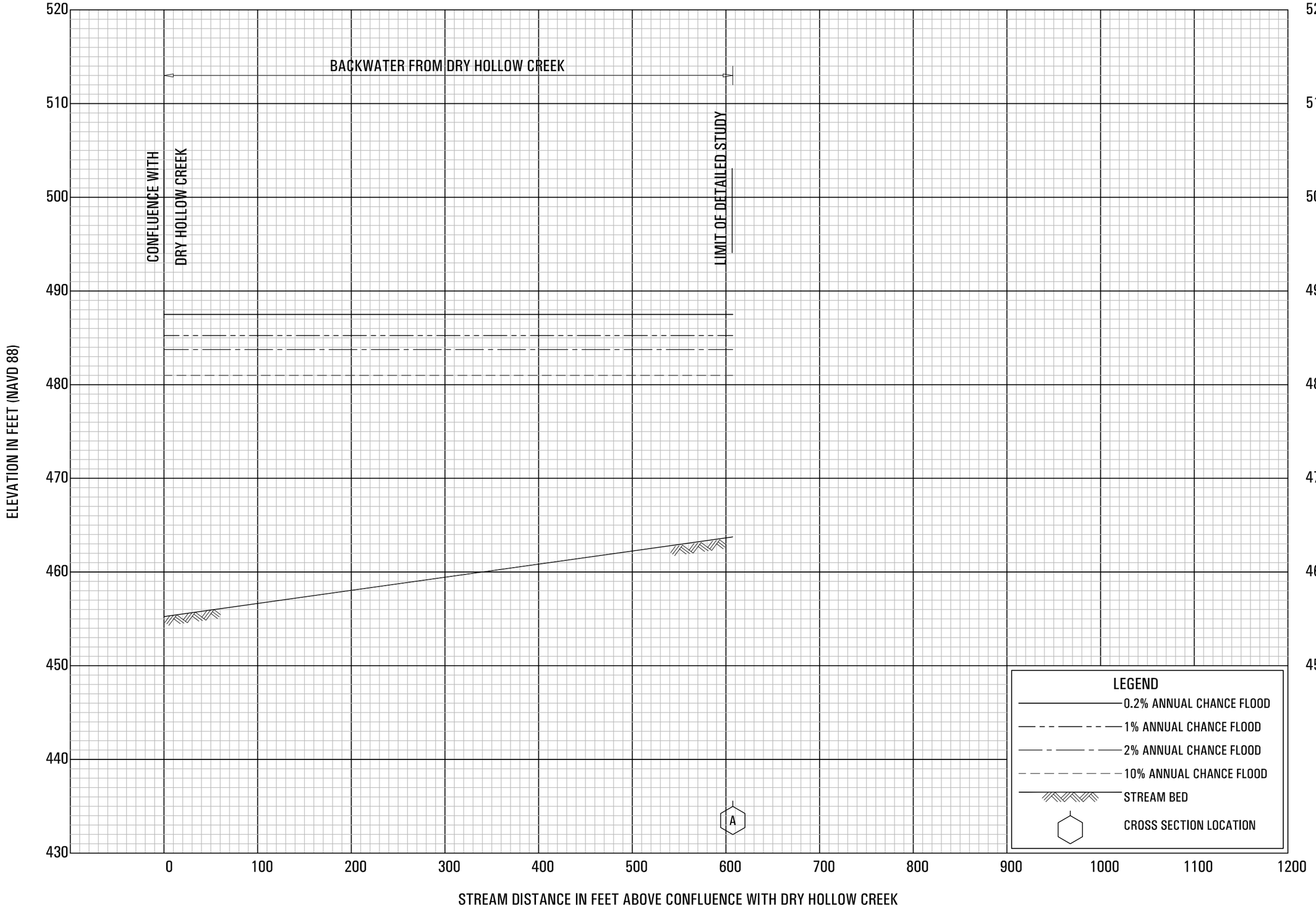
FLOOD PROFILES

TRIBUTARY 3 TO DRY HOLLOW CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS



FLOOD PROFILES

TRIBUTARY 4 TO DRY HOLLOW CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

WILSON COUNTY, TX

AND INCORPORATED AREAS