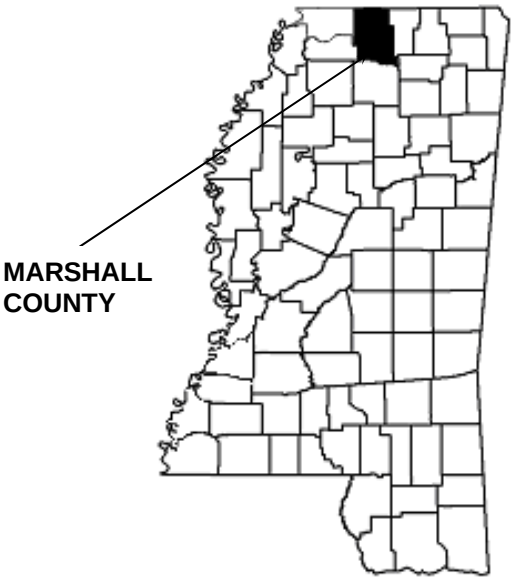
FLOOD INSURANCE STUDY

MARSHALL COUNTY, MISSISSIPPI
AND INCORPORATED AREAS



COMMUNITY NAME	COMMUNITY NUMBER
BYHALIA, TOWN OF	280112
HOLLY SPRINGS, CITY OF	280113
MARSHALL COUNTY (UNINCORPORATED AREAS)	280274
POTTS CAMP, TOWN OF	280114

EFFECTIVE:

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
28093CV000A

NOTICE TO
FLOOD INSURANCE STUDY USERS

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

Selected Flood Insurance Rate Map panels for this community contain information that was previously shown separately on the corresponding Flood Boundary and Floodway Map panels (e.g., floodways, cross sections),. In addition, former flood hazard zone designations have been changed as follows:

Old Zone(s)	New Zone
A1 through A30	AE
V1through V30	VE
B	X
C	X

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

Initial Countywide FIS Report Effective Date:

Revised Countywide FIS Report Dates:

TABLE OF CONTENTS

TABLE OF CONTENTS - continued

FLOOD INSURANCE STUDY
MARSHALL COUNTY, MISSISSIPPI AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study (FIS) revises and supersedes the FIS reports and/or Flood Insurance Rate Maps (FIRMs) in the geographic area of Marshall County, Mississippi, including the City of Holly Springs, the Towns of Byhalia and Potts Camp, and unincorporated areas of Marshall County (hereinafter referred to collectively as Marshall County).

This FIS 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. This information will also be used by Marshall County to update existing floodplain regulations as part of the Regular Phase of the National Flood Insurance Program (NFIP), and by local and regional planners to further promote sound land use and floodplain development. Minimum floodplain management requirements for participation in the NFIP are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

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 Acknowledgments

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

January 17, 1991, FIS Marshall County (Unincorporated Areas)

The hydrologic and hydraulic analyses for this study were performed by Spencer-Engineers, Inc./Consultants (the Study Contractor) for the Federal Emergency Management Agency (FEMA), under Contract No. EMW-87-C-2458. This study was completed in September 1988.

Detailed flood elevations for Sardis Lake were obtained from the Flood Insurance Study for Lafayette County, Mississippi (FEMA, 1991).

This Countywide FIS

The hydrologic and hydraulic analyses for this countywide FIS were performed by the State of Mississippi for the Federal Emergency Management Agency (FEMA), under Contract No. EMA-2007-CA-5774. This study was completed in July 2009.

The digital base map information files were provided by the U.S. Army Corps of Engineers—Vicksburg District, 4155 East Clay Street, Vicksburg, MS 39183, phone number (601) 631-5053. The digital orthophotography was acquired in March 2006, with the imagery processed to a 2-foot pixel resolution.

The digital FIRM was produced using the Mississippi State Plane Coordinate System, East Zone, FIPS ZONE 2301. The horizontal datum was the North American Datum of 1983, GRS 1980 spheroid. Distance units were measured in U.S. feet.

The Letter of Map Revision 98-04-091P dated May 28, 1998, has been incorporated into this study. Initially, the LOMC only affected the Marshall County Unincorporated FIRM and not the Town of Byhalia FIRM due to the Town of Byhalia annexing the area affected by the LOMC after the effective dates of the FIRM panels. In this countywide study, the data in the LOMC has been incorporated and affects the Town of Byhalia.

1.3 Coordination

An initial Consultation Coordination Officer's (CCO) meeting is held with representatives from FEMA, the community, and the study contractor to explain the nature and purpose of a FIS, and to identify the streams to be studied by detailed methods. A final CCO meeting is held with representatives from FEMA, the community, and the study contractor to review the results of the study.

January 17, 1991, Marshall County (Unincorporated Areas) FIS

On October 17, 1986, a meeting was held with representatives of FEMA, Marshall County, and the Study Contractor. Letters were sent to various State, Federal, and private agencies informing them of this Study, and requesting any pertinent information available.

On February 20, 1990, the results of this Flood Insurance Study were reviewed and accepted at a final coordination meeting attended by representatives of the Study Contractor, FEMA, and the community.

This Countywide FIS

For this countywide FIS, the Project Scoping Meeting was held on April, 2008 in Holly Springs, MS. Attendees for these meetings included representatives from the Mississippi Department of Environmental Quality, Mississippi Emergency Management Agency, FEMA National Service Provider, Marshall County, the City of Natchez, and the Study Contractor. Coordination with county officials and Federal, State, and regional agencies produced a variety of information pertaining to floodplain regulations, available community maps, flood history, and other hydrologic data. All problems raised in the meetings have been addressed.

2.0 AREA STUDIED

2.1 Scope of Study

This FIS covers the geographic area of Marshall County, Mississippi, and its incorporated communities listed in Section 1.1

January 17, 1991, Marshall County (Unincorporated Areas) FIS

Flooding caused by overflow of Byhalia Creek, Nonconnah Creek Lateral B, and Sardis Lake was studied in detail.

Areas having low development potential or minimal flood hazards were previously studied using approximate analyses. The results were shown on the Flood Hazard Boundary Map for Marshall County, Mississippi (Dept. of Housing and Urban Development, 1977), and are incorporated into this Flood Insurance Study.

The areas studied were selected with priority given to all known flood hazard areas and areas of projected development or proposed construction through September 1993. The scope and methods study were proposed to and agreed upon by FEMA and Marshall County.

This Countywide FIS

For this countywide FIS, several flooding sources within the county were studied by approximate methods. Approximate analyses are used to study those areas having a low developmental potential or minimal flood hazards. The scope and methods of study were proposed to, and agreed upon, by FEMA and the State of Mississippi.

Floodplain boundaries of streams that have been previously studied by detailed methods were redelineated based on best available topographic information.

2.2 Community Description

Marshall County is in north-central Mississippi, about 15 miles southeast of Memphis, Tennessee. The county is bordered on the north by Shelby and Fayette Counties, Tennessee; on the east by Benton and Union Counties, Mississippi; on the south by Lafayette County, Mississippi; and on the west by DeSoto and Tate Counties, Mississippi. Marshall County is served by U.S. Highways 72 and 78; by State Highways 4, 7, 309, 310, 311, 313, and 349; and by the BNSF Railroad and the Canadian National Railroad. The 2007 population of Marshall County was reported to be 36,695 (U.S. Census Bureau, 2009).

Byhalia Creek rises in the northwestern part of Marshall County near the town of Byhalia, and flows along the eastern and southern edge of town before leaving the county to its confluence with Pigeon Roost Creek. Byhalia Creek has a broad alluvial valley with an average slope of 10 feet per mile over the detail study reach. Nonconnah Creek Lateral B rises in the northern part of Marshall County and flows westward along the Tennessee border before turning north into Shelby County, Tennessee, to its confluence with Nonconnah Creek, southwest of Collierville, Tennessee. Nonconnah Creek Lateral B is a meandering stream in a broad alluvial valley with an average valley slope of about 9 feet per mile in the study segment.

The average minimum temperature in Marshall County is 37.5 ^{o}F in January while the average maximum temperature is 78.9 ^{o}F in July. The annual mean precipitation is 57 inches (Mississippi State University Dept. of Geosciences, 2009). Generally, winter rains are of several days duration and cover large areas from frontal type storms. Summer rains are usually thunderstorms with high intensities over small areas.

2.3 Principal Flood Problems

Principal flood problems in Marshall County are due to the overflow of Nonconnah Creek Lateral B, primarily due to runoff from intense rainfall. Flooding may occur during any season of the year, but the majority of floods occur during the winter and spring. Due to relative small size of drainage basins, flash floods occur from local high intensity thunderstorms.

2.4 Flood Protection Measures

Byhalia Creek has been channelized by the U.S. Soil Conservation Service. No structural flood protection measures are known to exist within the study area.

3.0 ENGINEERING METHODS

For the flooding sources studied by detailed methods in the communities, 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 the 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 1-percent-annual-chance flood 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 peak discharge-frequency relationships for each flooding source studied by detailed methods affecting the community.

January 17, 1991, Marshall County (Unincorporated Areas) FIS Analyses

Since there are no gaging stations on the streams studied by detailed methods, peak discharges for floods of the 10-, 2-, 1-, and 0.2-percent-annual-chance recurrence intervals were estimated using U.S. Geological Survey regional equations (Department of the Interior, 1976). Discharges for the 0.2-percent-annual-chance flood of streams studied by detailed methods were determined by straight line extrapolation of a log-probability graph of flood discharges computed for frequencies up to 100 years.

This Countywide FIS Analysis

Peak discharges were calculated based on USGS regional regression equations (U.S. Department of the Interior, 1991). For the discharges calculated based on regional

regression equations, the rural regression values were modified to reflect stream gage weighting and/or urbanization as necessary.

A summary of the drainage area-peak discharge relationships for all the streams is shown in Table 1, "Summary of Discharges."

TABLE 1. SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. mi.)	PEAK DISCHARGES (cfs)			
		10-percent	2-percent	1-percent	0.2-percent
BYHALIA CREEK					
At Byhalia Road	21.44	4,900	7,900	9,300	13,100
NONCONNAH LATERAL B					
At Quinn Road	6.65	1,560	2,490	3,100	4,400

Elevations for floods of the selected recurrence intervals of Sardis Lake are shown in Table 2.

TABLE 2. SUMMARY OF ELEVATIONS

FLOODING SOURCE AND LOCATION	PEAK ELEVATION (NAVD 88)	
	10-percent	1-percent
SARDIS LAKE		
Along shoreline	283.1	285.6

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 of the selected recurrence intervals. Users should be aware that flood elevations shown on the 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.

January 17, 1991, Marshall County (Unincorporated Areas) FIS Analyses

Cross-section data for the backwater analyses were obtained from field surveys. All bridges and culverts were surveyed to obtain elevation data and structural geometry.

Locations of selected cross sections used in the hydraulic analyses are shown in the Flood Profiles and on the Flood Insurance Rate Map.

Water-surface elevations of floods of the selected recurrence intervals were computed using the HEC-2 water-surface profile computer program (USACE, 1984). The starting water-surface elevation for Byhalia Creek was determined by the slope-area method. The starting water-surface elevation for Nonconnah Creek Lateral B was taken from the upstream cross section in the Flood Insurance Study for Shelby County, Tennessee (FEMA, 1985).

Roughness coefficients (Manning's "n) used in the hydraulic computations were chosen by engineering judgment and based on field observations of the stream and floodplain areas. Channel and overbank coefficients ranged from 0.05 to 0.07 and 0.08 to 0.10, respectively.

Flood profiles were drawn showing the computed water-surface elevations for floods of the selected recurrence intervals. In cases where the 2- and 1.0-percent annual-chance flood elevations are close together, due to limitations of the profile scale, only the 1-percent annual-chance flood profile has been shown.

This Countywide FIS Analysis

Cross section geometries were obtained from a combination of terrain data and field surveys. Bridges and culverts located within the limited detailed study limits were field surveyed to obtain elevation data and structural geometry.

Downstream boundary conditions for the hydraulic models were set to normal depth using a starting slope calculated from values taken from topographic data, or where applicable, derived from the water-surface elevations. Water-surface profiles were computed through the use of the USACE HEC-RAS version 3.1.3 computer program (USACE, 2003). The model was run for the 1-percent-annual-chance storm for the limited detail and approximate studies.

The hydraulic analyses for this countywide FIS 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.

Qualifying bench marks within a given jurisdiction that are cataloged by the National Geodetic Survey (NGS) and entered into the National Spatial Reference System (NSRS) as First or Second Order Vertical and have a vertical stability classification of A, B, or C are shown and labeled on the FIRM with their 6-character NSRS Permanent Identifier.

Benchmarks cataloged by the NGS and entered into the NSRS vary widely in vertical stability classification. NSRS vertical stability classifications are as follows:

> Stability A: Monuments of the most reliable nature, expected to hold position/elevation well (e.g., mounted in bedrock)
>
> Stability B: Monuments which generally hold their position/elevation well (e.g., concrete bridge abutment)

Stability C: Monuments which may be affected by surface ground movements (e.g., concrete monuments below frost line)

Stability D: Mark of questionable or unknown vertical stability (e.g., concrete monument above frost line, or steel witness post)

In addition to NSRS benchmarks, the FIRM may also show vertical control monument established by a local jurisdiction; these monuments will be shown on the FIRM with the appropriate designations. Local monuments will only be placed on the FIRM if the community has requested that they be included, and if the monuments meet the aforementioned NSRS inclusion criteria.

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

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. Interested individuals may contact FEMA to access this data.

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 in use for newly created or revised FIS reports and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD29). With the finalization of the North American Vertical Datum of 1988 (NAVD88), many FIS reports and FIRMs are being prepared using NAVD88 as the referenced vertical datum.

All flood elevations shown in this FIS report and on the FIRM are referenced to NAVD88. Structure and ground elevations in the community must, therefore, be referenced to NAVD88. It is important to note that adjacent communities may be referenced to NGVD29. This may result in differences in Base Flood Elevations (BFEs) across the corporate limits between the communities.

Ground, structure, and flood elevations may be compared and/or referenced to NGVD29 by applying a conversion factor. To convert elevations from NAVD88 to NGVD29, subtract 0.12 feet from the NAVD88 elevation. The 0.12 feet value is an average for the entire county. The adjustment value was determined using the USACE Corpscon 6.0.1 computer program (USACE, 2004) and topographic maps (Department of the Interior, 1965). The BFE's shown on the FIRM represent whole-foot rounded values. For example, a BFE of 12.4 feet will appear as 12 feet on the FIRM, and 12.6 feet as 13 feet. Users who wish to convert the elevations in this FIS report to NGVD29 should apply the stated conversion factor to elevations shown on the Flood Profiles and supporting data tables in the FIS report, which are shown at a minimum to the nearest 0.1-foot.

For more information regarding conversion between the NGVD and the NAVD, see the FEMA publication entitled *Converting the National Flood Insurance Program to the*

North American Vertical Datum of 1988 or contact the Vertical Network Branch, National Geodetic Survey, Coast and Geodetic Survey, National Oceanic and Atmospheric Administration, Rockville, Maryland 20910 (Internet address http://www.ngs.noaa.gov).

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The NFIP encourages State and local governments to adopt sound floodplain management programs. Therefore, each FIS provides 1-percent-annual-chance flood elevations and delineations of the 1- and 0.2-percent-annual-chance floodplain boundaries and 1-percent-annual-chance floodway to assist communities in developing floodplain management measures. This information is presented on the FIRM and in many components of the FIS report, including Flood Profiles, Floodway Data Table and Summary of Stillwater Elevations Table. Users should reference the data presented in the FIS report as well as additional information that may be available at the local 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-annual-chance floodplain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated using topographic maps at a scale of 1:24,000 with a contour interval of 10 feet (USGS, 1965).

The 1- and 0.2-percent-annual-chance floodplain boundaries are shown on the FIRM (Exhibit 2), On this map, the 1-percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones A and 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 limited detailed and approximate methods, only the 1-percent-annual-chance floodplain boundary is shown on the FIRM (Exhibit 2). Floodplain boundaries for these streams, as well as those streams that have been previously studied by detailed methods, were generated using USGS 10-meter Digital Elevation Models (USGS), then refined using detailed hydrographic data.

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, provided that 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.

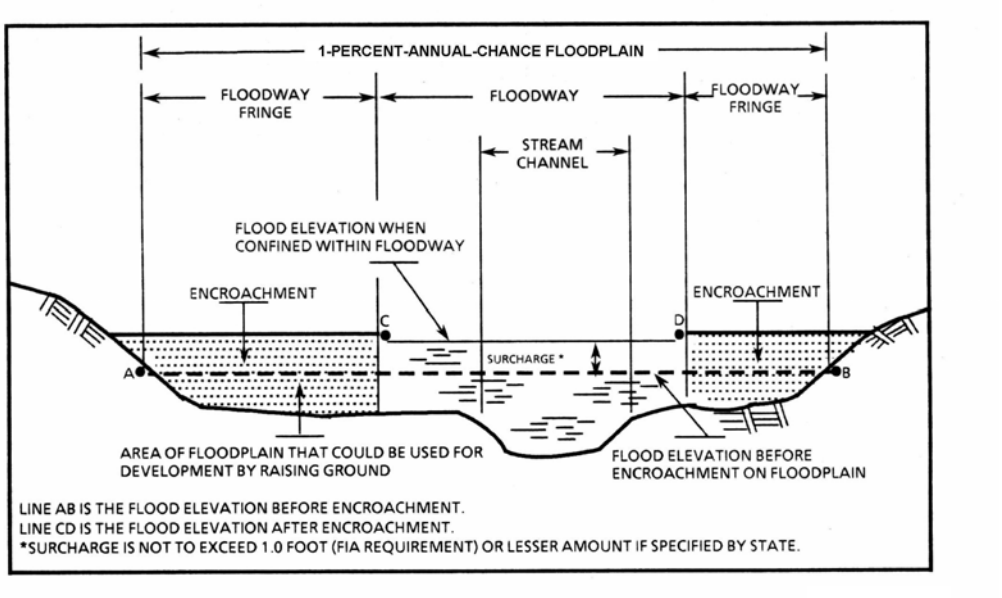
The floodway presented in this FIS report and on the FIRM was computed for certain stream segments on the basis of equal-conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. The results of the floodway computations have been tabulated for selected cross sections of detailed study streams (Table 2). For detailed study streams, in cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary is shown.

Near the mouths of streams studied in detail, floodway computations are made without regard to flood elevations on the receiving water body. Therefore, "Without Floodway" elevations presented in Table 2, "Floodway Data," for certain downstream cross sections are lower than the regulatory flood elevations in that area, which must take into account the 1-percent-annual-chance flooding due to backwater from other sources.

Encroachment into areas subject to inundation by floodwaters having hazardous velocities aggravates the risk of flood damage, and heightens potential flood hazards by further increasing velocities. For detailed study streams, a listing of stream velocities at selected cross sections is provided in Table 2. In order to reduce the risk of property damage in areas where the stream velocities are high, the county may wish to restrict development in areas outside the floodway.

The area between the floodway and 1-percent-annual-chance floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the water-surface elevation of the 1-percent-annual-chance flood more than 1.0 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 1.

Floodways were calculated for Byhalia Creek and Nonconnah Creek Lateral B.



FLOODWAY SCHEMATIC

Figure 1

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD 88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
BYHALIA CREEK								
A	4,700	714	2,706	3.4	305.1	305.1	306.1	1.0
B	8,800	879	3,940	2.4	312.5	312.5	313.5	1.0
C	10,600	300	1,629	5.7	315.5	315.5	316.3	0.8
D	11,100	106	1,413	6.6	318.4	318.4	318.7	0.3
E	13,100	521	2,762	3.4	320.2	320.2	320.7	0.5
F	14,800	77	960	4.9	322.0	322.0	322.6	0.6
G	15,800	709	3,149	1.5	323.2	323.2	323.7	0.5
H	18,400	489	1,288	3.7	326.5	326.5	327.5	1.0
I	21,100	70	717	6.6	331.9	331.9	332.7	0.8
J	23,265	200	1,845	2.5	335.1	335.1	336.0	0.9
K	24,400	552	1,451	3.2	338.4	338.4	339.4	1.0
L	26,200	260	1,047	4.5	342.4	342.4	343.4	1.0
M	29,000	102	563	4.8	347.6	347.6	348.6	1.0
N	30,500	45	466	5.8	350.7	350.7	351.5	0.8
O	32,600	47	476	5.7	356.5	356.5	356.6	0.1

[1] FEET ABOVE COUNTY BOUNDARY

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARSHALL COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

BYHALIA CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD 88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
NONCONNAH CREEK LATERAL B								
A	15,300	1,300[2]	5,025	0.9	333.6	333.6	334.6	1.0
B	19,000	764	2,320	2.0	336.8	336.8	337.3	0.5
C	24,400	1,000	3,664	1.3	341.4	341.4	342.4	1.0
D	26,300	593	2,162	2.2	344.0	344.0	344.8	0.8
E	28,630	700	3,887	1.2	349.0	349.0	349.1	0.1
F	30,700	614	2,309	2.0	350.2	350.2	351.0	0.8
G	35,200	882	2,945	1.6	357.1	357.1	358.1	1.0
H	38,100	474	2,081	1.8	363.8	363.8	363.9	0.1
I	41,600	450	1,570	2.0	368.4	368.4	368.3	0.9
J	45,600	398	1,620	1.9	373.3	373.3	374.3	1.0

[1] FEET ABOVE CONFLUENCE WITH NONCONNAH CREEK
[2] THIS WIDTH EXTENDS BEYOND STATE BOUNDARY

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARSHALL COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

NONCONNAH CREEK LATERAL B

5.0 INSURANCE APPLICATION

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 risk 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), or base flood depths are shown within this zone.

Zone AE

Zone AE is the flood insurance risk 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 AH

Zone AH is the flood insurance rate zone that corresponds to the areas of 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within the zone.

Zone AO

Zone AO is the flood insurance rate zone that corresponds to the areas of 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where the average depths are between 1 and 3 feet. Average whole-foot depths derived from the detailed hydraulic analyses are shown within the zone.

Zone A99

Zone A99 is the flood insurance rate zone that corresponds to areas of the 1-percent floodplain that will be protected by a Federal flood protection system where construction has reached specified statutory milestones. No base flood elevations or depths are shown within this zone.

Zone V

Zone V is the flood insurance rate zone that corresponds to the 1-percent coastal floodplains that have additional hazards associated with storm waves. Because approximate hydraulic analyses are performed for such areas, no base flood elevations are shown within this zone.

Zone VE

Zone VE is the flood insurance rate zone that corresponds to the 1-percent coastal floodplains that have additional hazards associated with storm waves. Whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone X

Zone X is the flood insurance risk 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 base flood by levees. No BFEs or depths are shown within this zone.

Zone D

Zone D is the flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.

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 risk 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 Marshall County. Previously, FIRMs were prepared for each incorporated community and the unincorporated areas of the County identified as flood-prone. This countywide FIRM also includes flood-hazard information that was presented separately on Flood Boundary and Floodway Maps (FBFMs), where applicable. Historical data relating to the maps prepared for each community, up to and including this countywide FIS are presented in Table 4, “Community Map History.”

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISIONS DATE	FIRM EFFECTIVE DATE	FIRM REVISIONS DATE
Byhalia, Town of	June 7, 1974	August 27, 1976	June 18, 1987	--
Holly Springs, City of	June 7, 1974	July 23, 1976	August 5, 1985	--
Marshall County (Unincorporated Areas)	October 28, 1977	--	January 17, 1991	--
Potts Camp, Town of	August 23, 1974	July 30, 1976	August 5, 1985	--

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARSHALL COUNTY, MS

AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

7.0 OTHER STUDIES

Information pertaining to revised and unrevised flood hazards for each jurisdiction within Marshall County has been compiled into this FIS. Therefore, this FIS supersedes all previously printed FIS reports, FIRMs, and/or FBFMs for all of the incorporated and unincorporated jurisdictions within Marshall County 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 Federal Insurance and Mitigation Division, FEMA Region IV, Koger-Center — Rutgers Building, 3003 Chamblee Tucker Road, Atlanta, GA 30341.

9.0 BIBLIOGRAPHY AND REFERENCES

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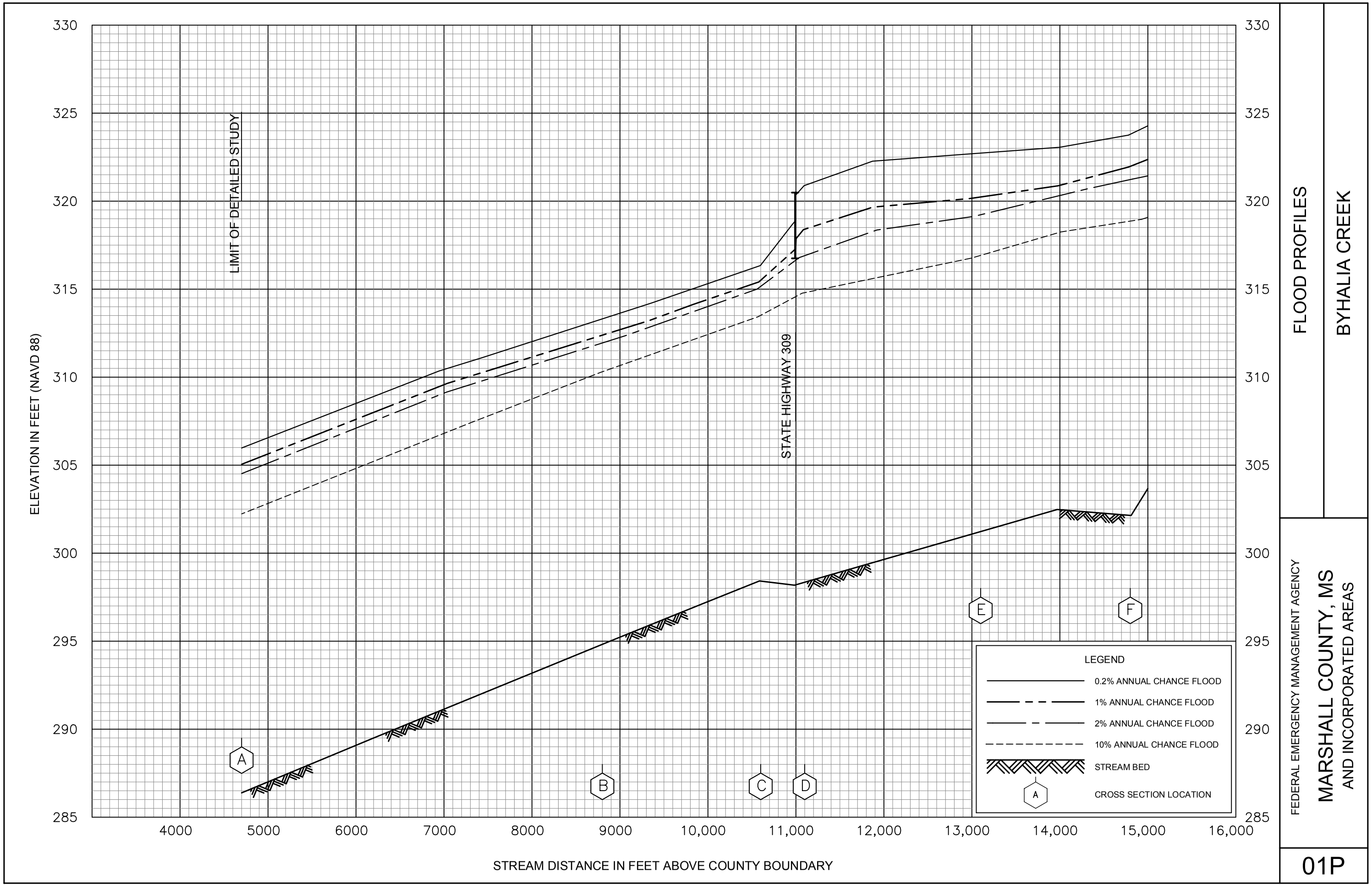


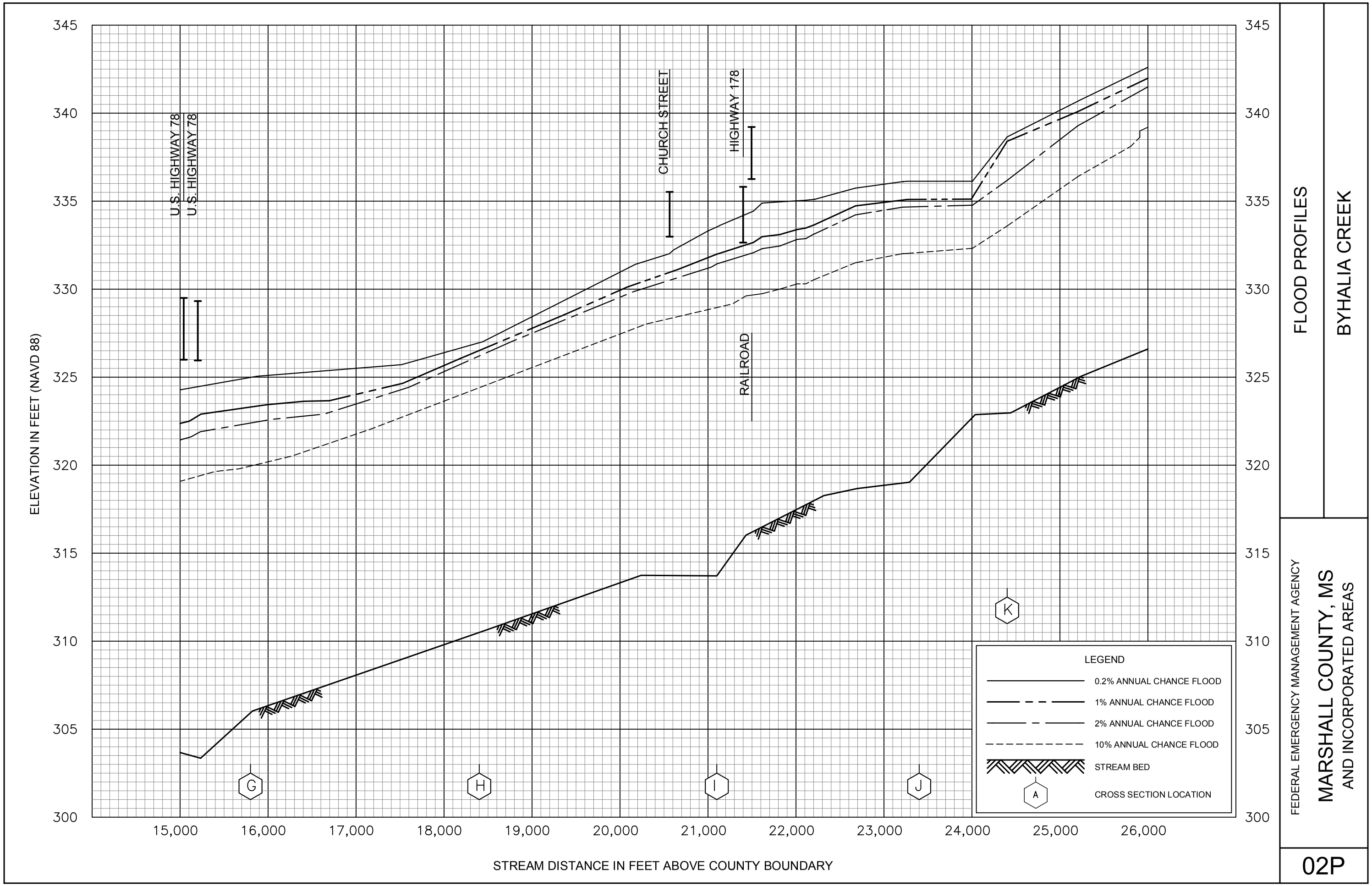
FLOOD PROFILES

BYHALIA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARSHALL COUNTY, MS
AND INCORPORATED AREAS

01P



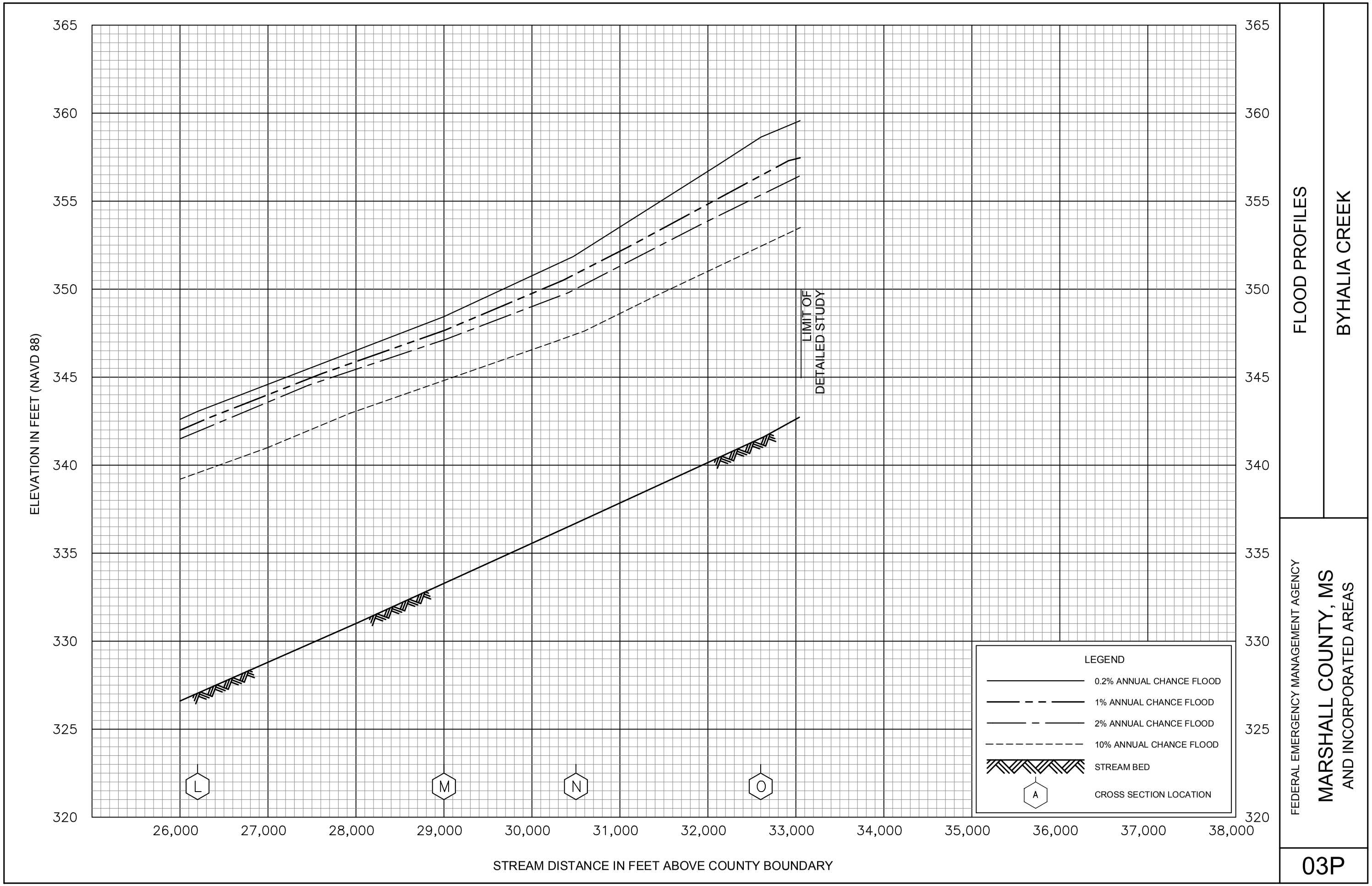
FLOOD PROFILES

BYHALIA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARSHALL COUNTY, MS
AND INCORPORATED AREAS

02P



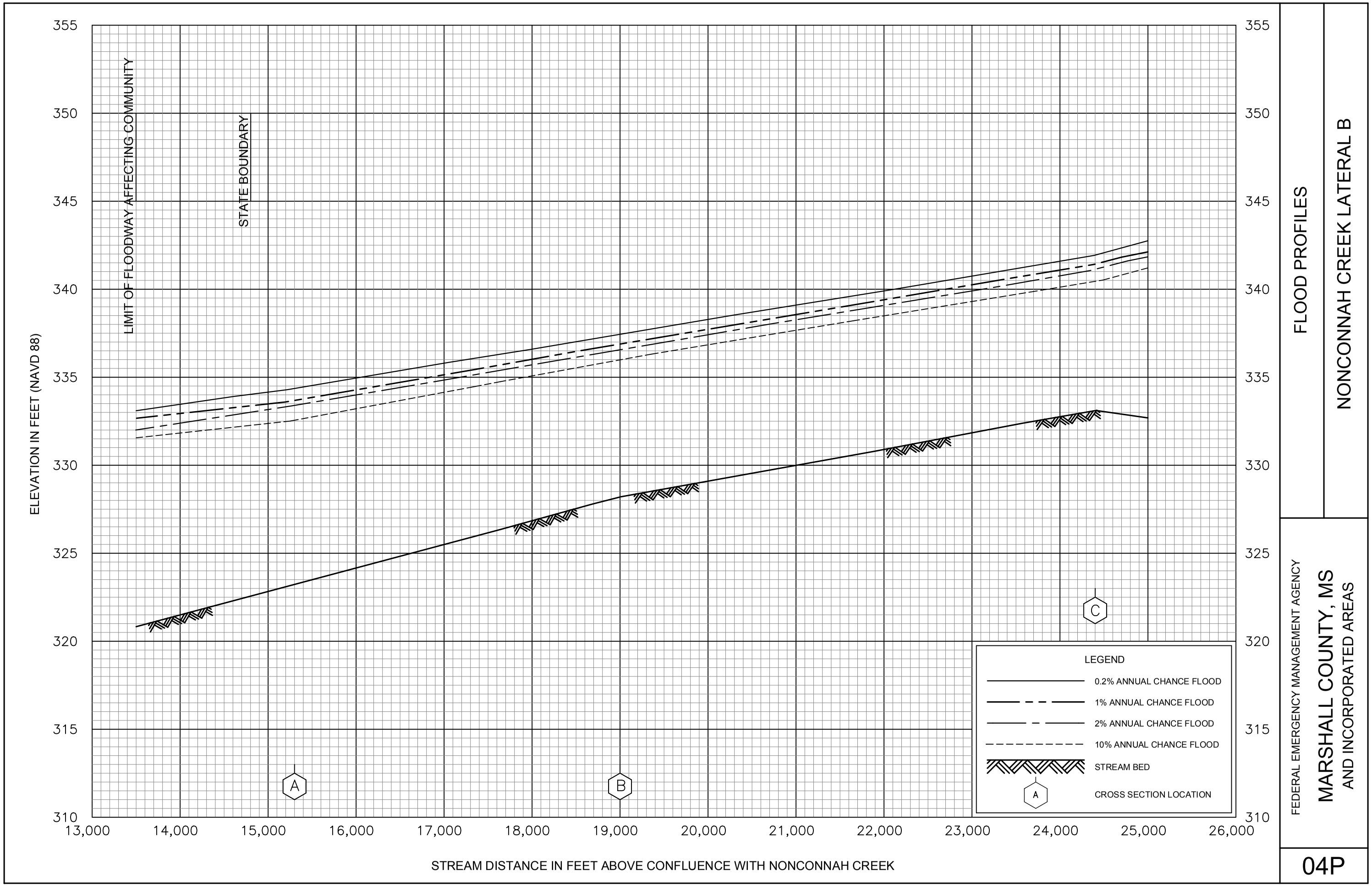
FLOOD PROFILES

BYHALIA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARSHALL COUNTY, MS
AND INCORPORATED AREAS

03P

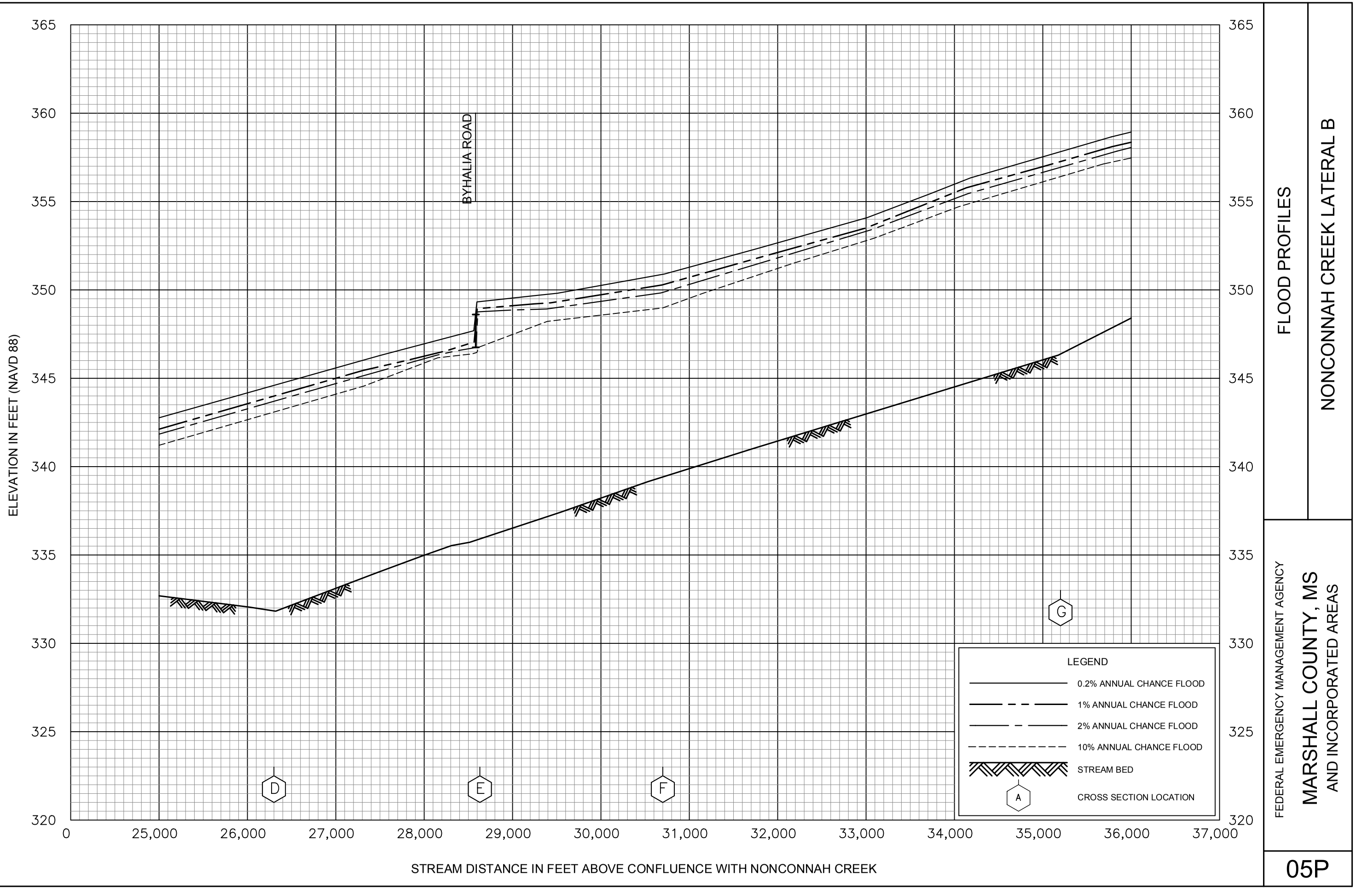


FLOOD PROFILES

NONCONNAH CREEK LATERAL B

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARSHALL COUNTY, MS
AND INCORPORATED AREAS



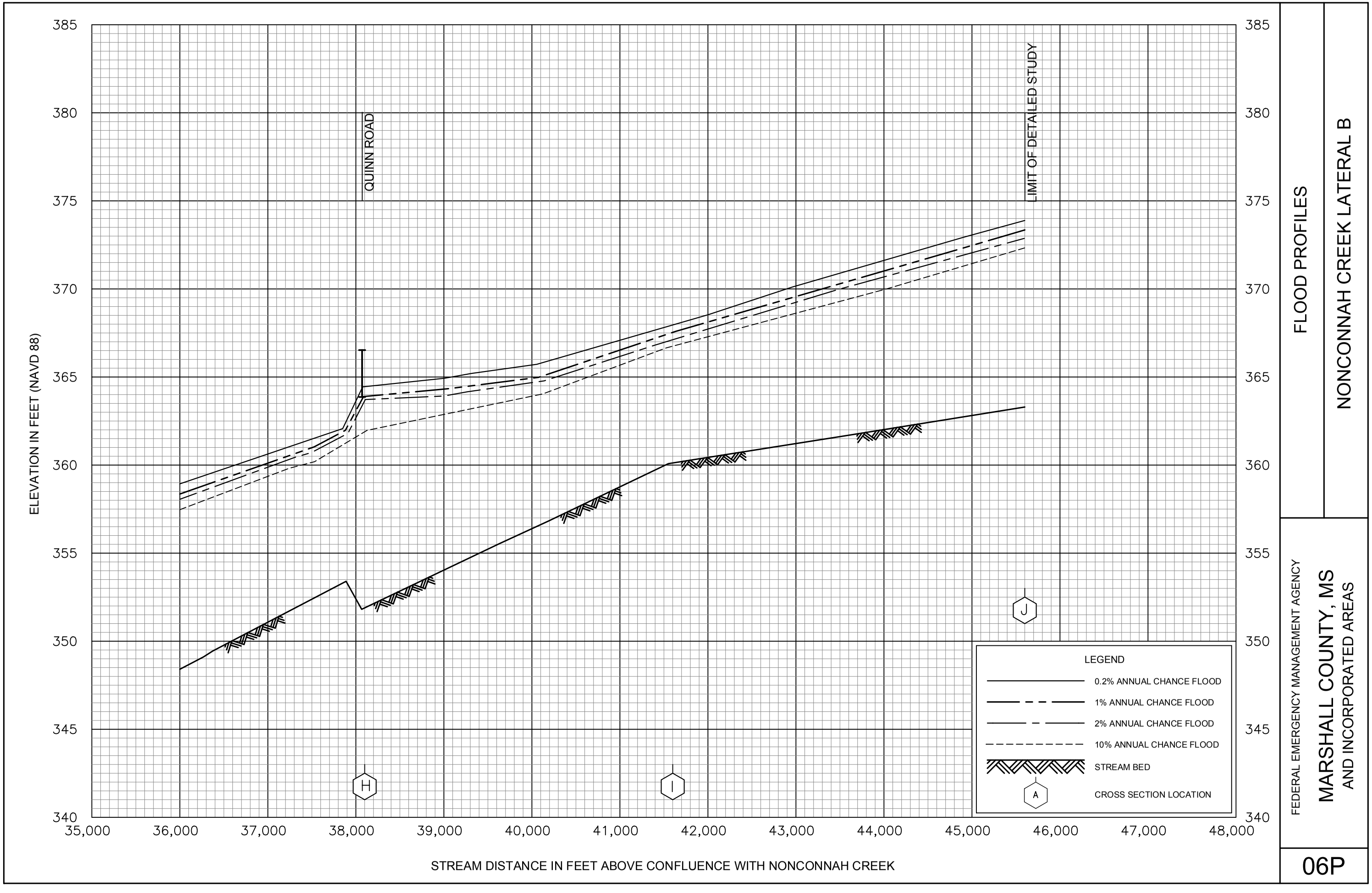
FLOOD PROFILES

NONCONNAH CREEK LATERAL B

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARSHALL COUNTY, MS
AND INCORPORATED AREAS

05P



FLOOD PROFILES

NONCONNAH CREEK LATERAL B

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARSHALL COUNTY, MS
AND INCORPORATED AREAS

06P