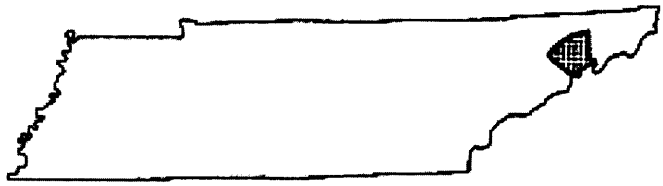
FLOOD INSURANCE STUDY

GREENE COUNTY, TENNESSEE
AND INCORPORATED AREAS



Community Name	Community Number
BAILEYTON, TOWN OF	470294
GREENEVILLE, TOWN OF	470069
MOSHEIM, TOWN OF	470310
TUSCULUM, CITY OF	470329
GREENE COUNTY (UNINCORPORATED AREAS)	470345

July 3, 2006

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
47059CV000A

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) 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 FIS may be revised and republished at any time. In addition, part of this FIS 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 components.

Initial Countywide FIS Effective Date: July 3, 2006

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FLOOD INSURANCE STUDY
GREENE COUNTY, TENNESSEE AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study revises and updates information on the existence and severity of flood hazards in the geographic area of Greene County, including the Towns of Greeneville, Mosheim, Baileyton and the City of Tusculum; and the unincorporated areas of Greene County (referred to collectively herein as Greene 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.

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 Flood Insurance Study Revision are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

The hydrologic and hydraulic analyses for Lick Creek and Pond Creek were performed by Tennessee Valley Authority (TVA), for the Federal Emergency Management Agency (FEMA), under Inter-Agency No. EMW-87-E-2513, Project Order No. 1. This study was completed in April 1988.

The hydrologic and hydraulic analyses for Richland Creek and Frank Creek were performed by the United States Army Corps of Engineers, Nashville District (USACE) for FEMA, under Inter-Agency No. EMW-96-IA-0154. This study was completed in December 1998.

The hydrologic and hydraulic analyses for the approximate-studied streams were performed by Watershed IV Alliance for FEMA, under Contract No. EMA-2002-CO-0011A, Task Order No. TO006. This study was completed in July 2005.

1.3 Coordination

The initial Consultation Coordination Officer (CCO) meeting was held on July 7, 2004, and attended by representatives of FEMA, the Study contractors and the communities.

The results of the study were reviewed at the Preliminary DFIRM Community Coordination meeting held on September 02, 2005, and attended by representatives of FEMA, the Study contractors and the communities. 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 Greene County, Tennessee, including the incorporated communities listed in Section 1.1.

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 Greene County.

2.2 Community Description

Greene County is in northeastern Tennessee. It is bordered on the north by Hawkins County, Tennessee; on the east by Unicoi and Washington Counties, Tennessee; on the south by Madison County, North Carolina and Cocke County, Tennessee; and on the west by Hamblen County, Tennessee.

Greene County is served by Interstate 81 and the Norfolk Southern Railway. The 2000 population of Greene County was reported to be 62,909 (Reference 2).

Greene County has a warm continental climate with hot summers. The highest monthly average summer temperature is 76 degrees Fahrenheit. The lowest monthly average winter temperature is 37°F. The average annual precipitation of 42 inches is reasonably well distributed throughout the year but noticeably less in the late summer and early fall (Reference 3).

2.3 Principal Flood Problems

Information about past flooding along Lick Creek is available from stream gage records at Mile 17.46 from 1947 to 1971 at the former U.S. Geological Survey (USGS) gage no. 03467000 at Mohawk, Tennessee. Additional information is obtained from floodmarks for floods of 1875, 1935, and 1972 obtained by TVA following the March 1935 and 1972 floods.The four largest floods since 1875 at or near the USGS stream gage site are listed in Table 1 below:

Table 1. Floods of Record in Greene County

DATE	RIVER MILE	ESTIMATED DISCHARGE (CFS)	FREQUENCY (YEARS)
December 10, 1972	17.46	14,700	80
February 1875	15.61	14,800	50
March 13, 1963	8.75	12,200	30
March 1935	10.7	10,100	20

Information about past flooding on Pond Creek is limited to floodmarks contained within-bank floods of unknown dates. No historical data is available for either Richland Creek or Frank Creek.

2.4 Flood Protection Measures

There are no flood protection structures along the study reaches in Greene County.

Nonstructural measures of flood protection in the form of land-use regulations are being used to control building within areas that have a high risk of flooding.

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 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 100-year flood (1-percent chance of annual exceedence) 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 each riverine flooding source studied in detail affecting the community.

For Lick Creek, the former USGS gaging station at Mohawk, Tennessee (No. 03467000, 220 square miles, period of record, 1947-1971) and available historic information were the principal sources of data defining peak discharge-frequency relationships. Upstream and downstream estimates were made by transfer using a flow-drainage area relationship through the gage point and parallel to the regional relationships adopted for Greene County. The frequency curve for the gaging station was computed using procedures outlined in Bulletin 17B (Reference 4) including the skew map of Plate 1 and adjustments for historic flood information.

Regional relationships were developed to define peak discharge-frequency for Pond Creek. The adopted relationships were determined from stream gage records on watersheds with hydro-meteorologic characteristics similar to the study streams.

Flood-frequency curves for these gaged streams were computed using the procedure outlined in Bulletin 17B including the skew map of Plate 1 and adjustments for historic flood information where available. The results of these analyses were combined to develop the regional relationships applicable to Greene County.

The hydrology for Richland Creek and Frank Creek consisted of USGS regression equations applicable to the region. The watersheds for these creeks are located in Hydrologic Area 1. Regression equations were used because no stream gage exists on either Richland or Frank

Creeks. The computed discharges were then increases using urbanization factors obtained from the Espey Winslow method (Reference 1). This was done because of the inability of the original model (with non-urbanized discharges) to duplicate high watermark data and the highly urbanized condition of the Richland Creek basin.

Peak discharge-drainage area relationships for the 10-, 2-, 1-, and 0.2-percent annual chance floods of each flooding source studied in detail in the community are shown in Table 2.

Table 2. Summary of Discharges

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. mi.)	PEAK DISCHARGES (cfs) 10% annual chance	2% annual chance	1% annual chance	0.2% annual chance
FRANK CREEK					
At Mile 0.550	2.44	495	778	922	1,243
At downstream corporate limits (Mile 0.755)	1.77	393	621	737	997
At Mile 1.136	1.64	374	586	697	943
LICK CREEK					
Downstream of confluence of Mike Creek	225.0	9,800	14,100	16,100	21,300
Just upstream of Mohawk Road	212.0	9,400	13,500	15,400	20,400
At Andrew Johnson Highway Bridge	183.0	8,300	12,000	13,700	18,100
POND CREEK					
At mouth	2.08	390	620	720	1,000
About 1.3 miles above mouth	0.48	120	190	220	310
RICHLAND CREEK					
At downstream corporate limits (Mile 6.960)	2.39	1,581	2,079	2,245	2,524
At Mile 7.858	1.29	958	1,280	1,401	1,594
At Mile 8.256	1.01	689	947	1,045	1,225

Flow estimates based on the adopted regional relationships were compared to estimates using relationships developed by the USGS for Hydrologic Area 1 (Reference 5). For the range of drainage areas studied, the discharges from the adopted regional relationships are about 13 to 28- percent lower than the estimates from the USGS-developed relationships for Tennessee.

The difference between the adopted regional relationships and those of the USGS result mainly from the different gaged watersheds used in each analysis. The adopted relationships were determined from gaged watersheds in a region hydro-meteorologically similar to the

Greene County region while the USGS relationships are based on gaged watersheds over a much larger geographic area.

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.

Cross sections for Lick Creek and Pond Creek were obtained by field surveys and were supplemented by valley cross sections prepared by photogrammetric methods (Reference 6). Elevation data and structural geometry for bridges were obtained from field surveys. Cross sections for Frank Creek and Richland Creek were obtained from the Tennessee Valley Authority (TVA) field surveys, dated Fall of 1998.

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

Water-surface elevations of floods of the selected recurrence intervals were computer using the HEC-2 step-backwater computer program (Reference 7). Starting water-surface elevations were calculated by the slope-area method.

Roughness coefficients (Manning's "n") used in the hydraulic computations were determined on the basis of field inspections of the floodplain areas, and are shown below in Table 3.

Table 3. Manning's "N" Values

Flooding Source	Channel "N"	Overbank "N"
Frank Creek	0.035-0.045	0.06-0.12
Lick Creek	0.030-0.040	0.06-0.14
Pond Creek	0.050-0.055	0.09-0.10
Richland Creek	0.035-0.050	0.07-0.12

Flood profiles were drawn showing the computed water-surface elevations for floods of the selected recurrence intervals. In cases where the 2-percent and 1-percent-annual-chance flood elevations are close together, due to limitations of the profile scale, only the 1-percent-annual-chance profile has been shown. The hydraulic analyses for this study are based on the effects of unobstructed flow. The flood elevations shown on the profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

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. 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:

Vertical Network Branch, N/CG13
National Geodetic Survey, NOAA
Silver Spring Metro Center 3
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

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 these data.

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The National Flood Insurance Program encourages state and local governments to adopt sound flood plain management programs. Therefore, each Flood Insurance Study produces maps designed to assist communities in developing flood plain management measures.

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 flood plain 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 in detail, the 1-percent and 0.2-percent-annual-chance flood plain 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 (Reference 8).

The 1-percent and 0.2-percent-annual-chance floodplain boundaries are shown on the Flood Insurance Rate Map (Exhibit 2). On this map, the 1-percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zone[s] [A, AE, and X]), and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 1-percent and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent 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.

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 base flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1 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 floodways presented in this study were 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 are tabulated for selected cross sections (see Table 4, Floodway Data). In cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary is shown.

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 (WSEL) of the base 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.

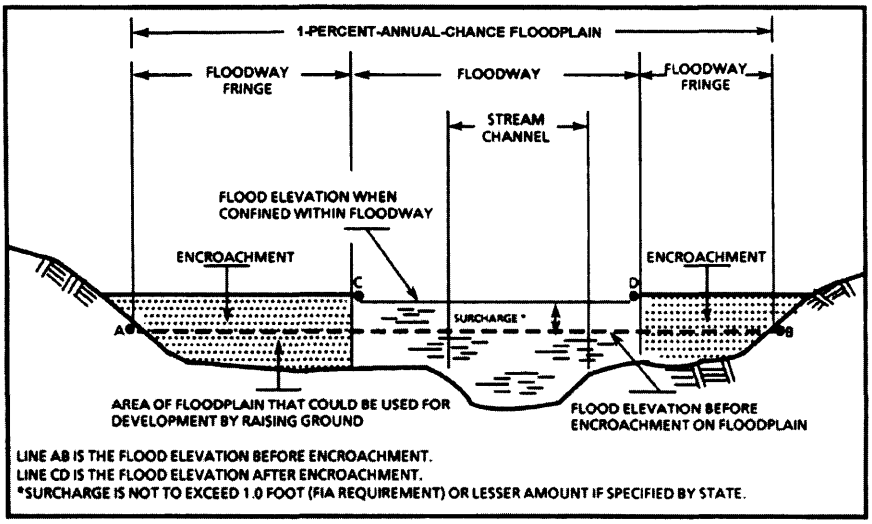

Figure 1. Floodway Schematic

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 rate zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the Flood Insurance Study by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no base (1-percent) flood elevations (BFEs) or depths are shown within this zone.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (NAVD 88)	WITHOUT FLOODWAY (NAVD 88)	WITH FLOODWAY (NAVD 88)	INCREASE (FEET)
FRANK CREEK								
A	3,495	80	459	2.9	1,433.7	1,433.7	1,433.7	0.0
B	3,648	90	431	3.2	1,433.8	1,433.8	1,433.8	0.0
C	4,715	60	160	7.5	1,441.4	1,441.4	1,441.8	0.4
D	5,312	40	265	3.8	1,453.0	1,453.0	1,454.0	1.0
E	5,507	60	263	4.9	1,453.7	1,453.7	1,454.5	0.8
F	5,998	60	136	9.9	1,457.7	1,457.7	1,457.8	0.1

[1] Feet above mouth

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

GREENE COUNTY, TN

AND INCORPORATED AREAS

FLOODWAY DATA

FRANK CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (NAVD 88)	WITHOUT FLOODWAY (NAVD 88)	WITH FLOODWAY (NAVD 88)	INCREASE (FEET)
LICK CREEK								
A	20[1]	647	5,467	2.9	1,073.7	1,073.7	1,074.6	0.9
B	4,170[1]	440	4,858	3.2	1,076.4	1,076.4	1,077.2	0.8
C	7,975[1]	820	6,704	2.3	1,077.9	1,077.9	1,078.6	0.7
D	9,620[1]	766	7,570	2.0	1,078.8	1,078.8	1,079.7	0.9
E	13,685[1]	735	6,079	2.5	1,080.1	1,080.1	1,080.9	0.8
F	16,045[1]	720	6,096	2.5	1,081.7	1,081.7	1,082.6	0.9
G	20,485[1]	1,160	7,064	2.1	1,083.0	1,083.0	1,084.0	1.0
H	23,505[1]	1,309	11,738	1.3	1,083.9	1,083.9	1,084.8	0.9
I	25,265[1]	1,700	12,199	1.2	1,084.3	1,084.3	1,085.3	1.0
J	28,575[1]	1,080	7,937	1.8	1,084.9	1,084.9	1,085.8	0.9
K	30,680[1]	1,100	8,228	1.7	1,086.0	1,086.0	1,086.8	0.8
L	32,555[1]	900	7,659	1.8	1,086.4	1,086.4	1,087.2	0.8
M	34,915[1]	1,250	10,609	1.3	1,086.6	1,086.6	1,087.6	1.0
N	39,835[1]	740	5,502	2.5	1,088.3	1,088.3	1,089.3	1.0
O	42,255[1]	290	2,834	4.8	1,090.2	1,090.2	1,091.0	0.8
POND CREEK								
A	600[2]	275[3]	986	0.7	1,082.0	1,082.0	1,082.9	0.9
B	3,130[2]	85[3]	287	1.8	1,085.9	1,085.9	1,086.5	0.6
C	4,350[2]	44	158	2.7	1,088.4	1,088.4	1,089.2	0.8
D	7,440[2]	27	78	2.8	1,097.9	1,097.9	1,098.5	0.6

[1] Feet above Green Road
[2] Feet above mouth
[3] Width perpendicular to flow

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

GREENE COUNTY, TN
AND INCORPORATED AREAS

FLOODWAY DATA

LICK CREEK – POND 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 (NAVD 88)	WITHOUT FLOODWAY (NAVD 88)	WITH FLOODWAY (NAVD 88)	INCREASE (FEET)
RICHLAND CREEK								
A	36,749	100	712	5.1	1,430.9	1,430.9	1,431.8	0.9
B	38,180	42	214	11.5	1,445.8	1,445.8	1,445.9	0.1
C	38,322	130	592	6.1	1,449.8	1,449.8	1,450.4	0.6
D	38,676	140	832	5.5	1,450.7	1,450.7	1,451.3	0.6
E	38,956	130	523	5.7	1,451.0	1,451.0	1,452.0	1.0
F	39,056	110	414	6.1	1,452.0	1,452.0	1,452.8	0.8
G	39,188	60	271	7.2	1,452.1	1,452.1	1,453.1	1.0
H	39,816	40	170	9.4	1,456.1	1,456.1	1,456.2	0.1
I	39,927	30	170	8.8	1,456.8	1,456.8	1,457.2	0.4
J	40,329	30	171	8.5	1,460.0	1,460.0	1,460.2	0.2
K	40,660	54	398	3.5	1,466.5	1,466.5	1,467.1	0.6
L	40,780	60	375	3.8	1,466.6	1,466.6	1,467.3	0.7
M	41,190	60	301	5.1	1,467.4	1,467.4	1,467.8	0.4
N	41,460	70	385	4.4	1,471.3	1,471.3	1,472.1	0.8
O	41,540	60	208	6.2	1,471.3	1,471.3	1,472.1	0.8
P	42,140	57	209	7.0	1,473.8	1,473.8	1,474.2	0.4
Q	43,240	23	94	11.1	1,480.9	1,480.9	1,481.0	0.1
R	43,565	24	108	9.7	1,485.6	1,485.6	1485.6	0.0

[1] Feet above mouth

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

GREENE COUNTY, TN

AND INCORPORATED AREAS

FLOODWAY DATA

RICHLAND CREEK

Zone AE

Zone AE is the flood insurance rate zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the Flood Insurance Study by detailed methods. 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 1-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 depths are shown within this zone.

6.0 FLOOD INSURANCE RATE MAP

The Flood Insurance Rate Map 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 base flood elevations or average depths. Insurance agents use the zones and base flood elevations 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-percent and 0.2-percent-annual-chance floodplains, the floodways, and the locations of selected cross sections used in the hydraulic analyses and floodway computations.

The countywide Flood Insurance Rate Map presents flooding information for the entire geographic area of Greene County. Previously, Flood Insurance Rate Maps were prepared for each incorporated community and the unincorporated areas of the County identified as flood-prone. This countywide Flood Insurance Rate Map also includes flood-hazard information that was presented separately on Flood Boundary and Floodway Maps, where applicable. Historical data relating to the maps prepared for each community are presented in Table 5, "Community Map History."

7.0 OTHER STUDIES

The Flood Insurance Studies for Unicoi, Washington, Cocke Counties, Tennessee and Madison County, North Carolina (References 9-12) agrees with this study. The Flood Insurance Studies in progress for Hawkins and Hamblen Counties, Tennessee (References 13 and 14) agree with this study. 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 the 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 the Natural and Technological Hazards Division, FEMA, Region IV, Koger-Center — Rutgers Building, 3003 Chamblee Tucker Road, Atlanta, Georgia 30341.

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISIONS DATE	FIRM EFFECTIVE DATE	FIRM REVISIONS DATE
Greene County (Unincorporated Areas)	December 2, 1977		August 1, 1986	March 18,1991 July 3, 2006
Greeneville, Town of	March 1, 1974	January 7, 1977	August 1, 1986	August 23, 2000 July 3, 2006
Mosheim, Town of	September 3,1976		July 3, 2006	
Baileyton, Town of	September 3,1976		July 3, 2006	
Tusculum, City of	July 2, 1976		November 1, 2002	July 3, 2006

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

GREENE COUNTY, TN

AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

Future revisions may be made that do not result in the republishing of the Flood Insurance Study report. To ensure that any user is aware of all revisions, it is advisable to contact the map repository of flood hazard data located in the community.

9.0 REFERENCES AND BIBLIOGRAPHY

1. Espey, William H. Jr., and David E. Winslow, "Urban Flood Frequency Characteristics," *Proceedings of the American Society of Civil Engineers Journal of the Hydraulics Division*, February 1974, Volume 100, No. HY2, pp. 279-293.

2. U.S. Census Bureau, *2000 Data for the State of Tennessee*. United States Census 2000.Washington: July 2003. http://www.census.gov/census2000/states/tn.html

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4. U.S. Department of the Interior, Geological Survey, Interagency Advisory Committee on Water Data, Office of Water Data Coordination, Hydrology Subcommittee, Bulletin No. 17B, Guidelines for Determining Flood Flow Frequency, September 1981, revised March 1982.

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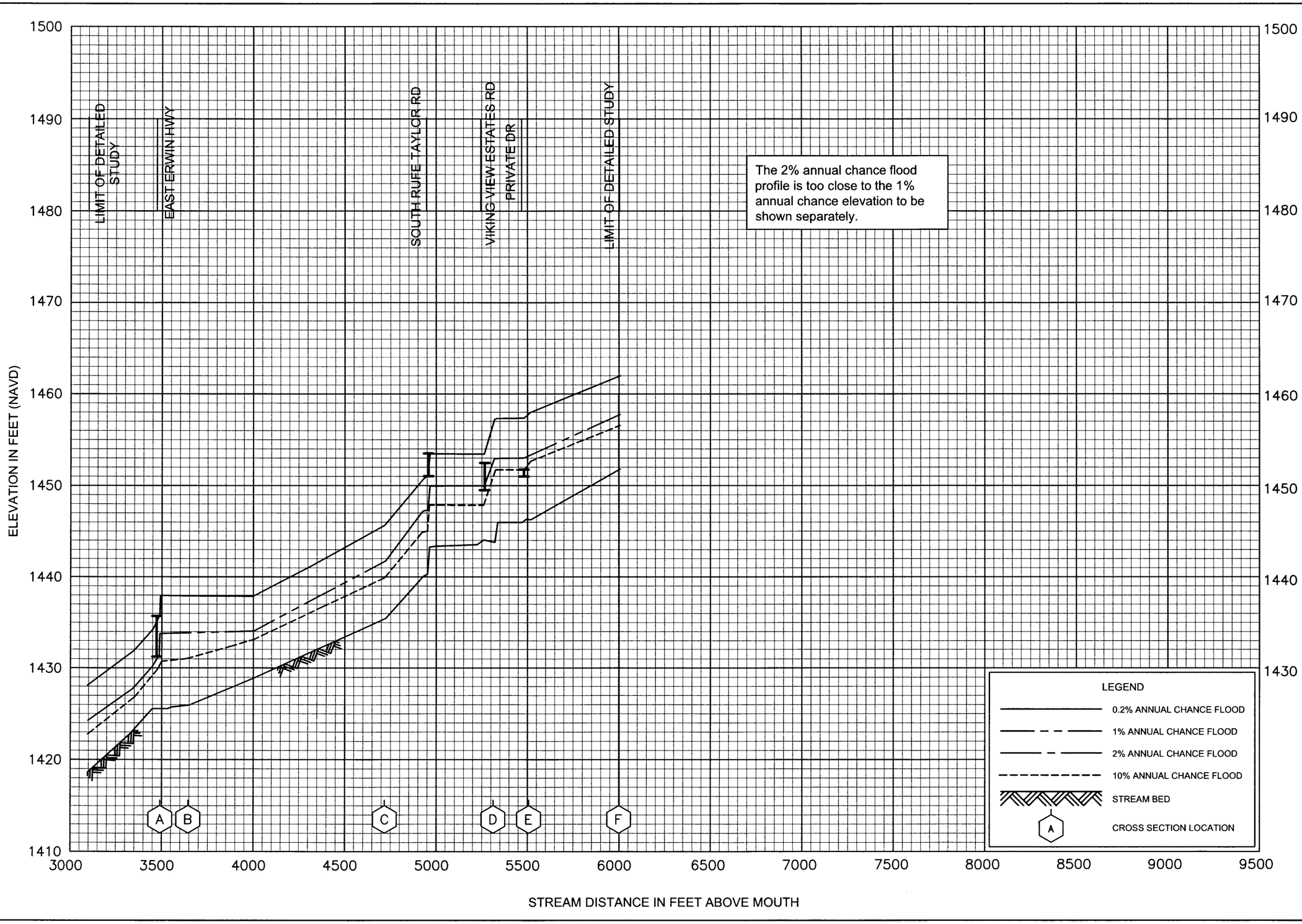
10. Federal Emergency Management Agency, Flood Insurance Study, Washington County, Unincorporated Areas, Tennessee, September 1982.

11. Federal Emergency Management Agency, Flood Insurance Study, Cocke County, and Incorporated Areas, Tennessee, January 1988.

12. Federal Emergency Management Agency, Flood Insurance Study, Madison County, Unincorporated Areas, North Carolina, September 1982.

13. Federal Emergency Management Agency, Flood Insurance Study, Hawkins County, Unincorporated Areas, Tennessee, in progress.

14. Federal Emergency Management Agency, Flood Insurance Study, Hamblen County, Unincorporated Areas, Tennessee, in progress.



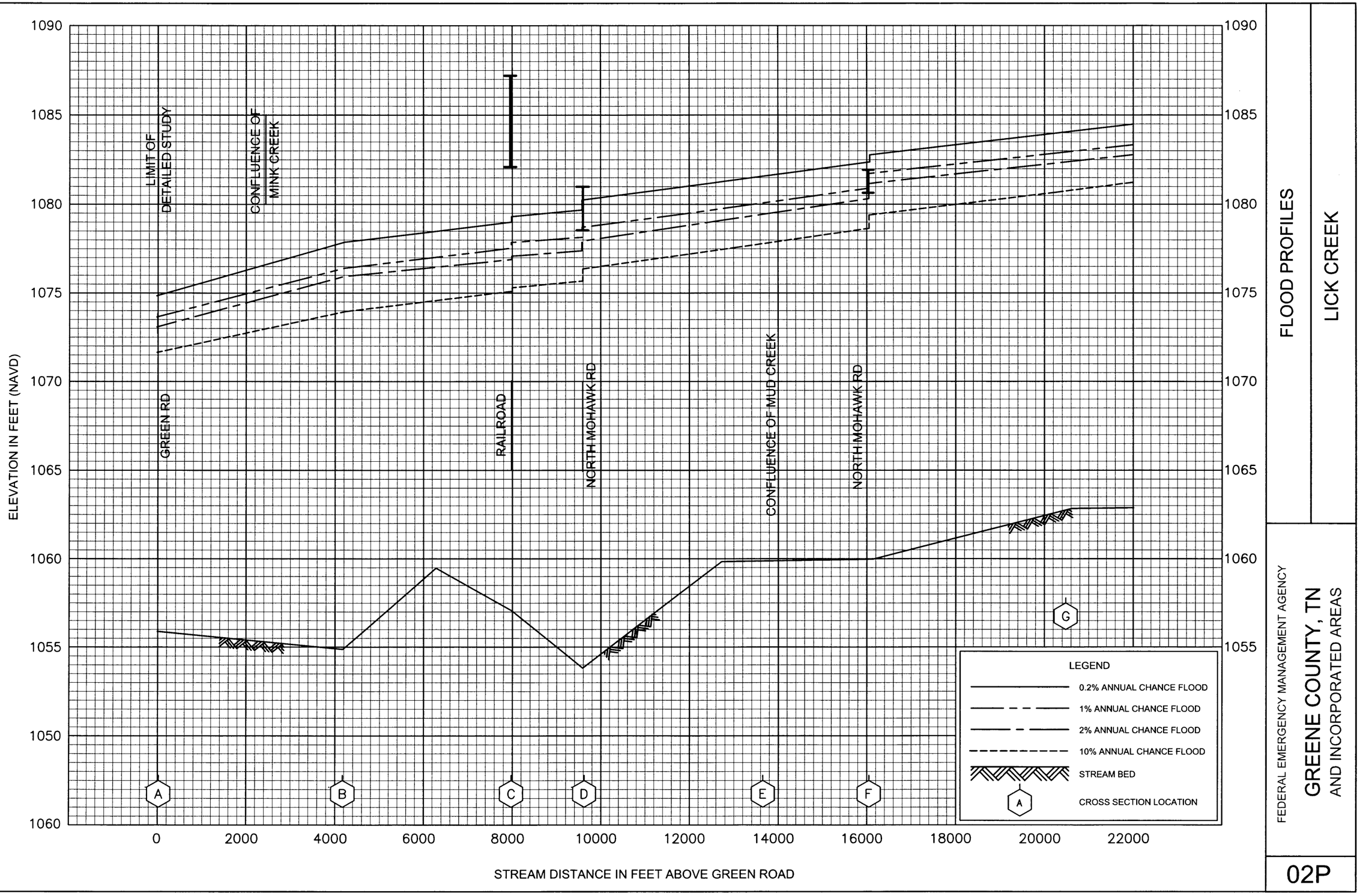
FLOOD PROFILES

FRANK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

GREENE COUNTY, TN
AND INCORPORATED AREAS

01P



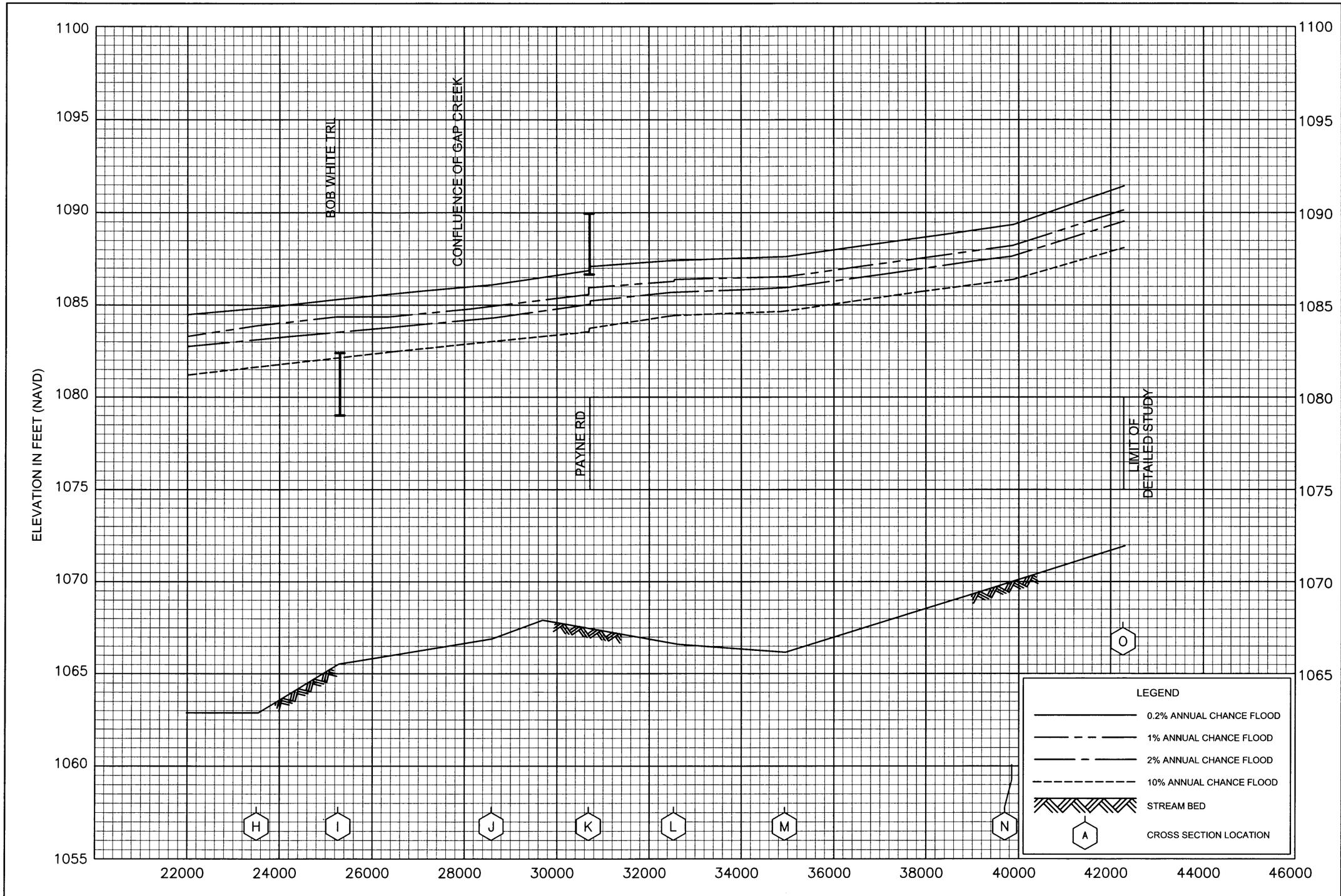
FLOOD PROFILES

LICK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

GREENE COUNTY, TN
AND INCORPORATED AREAS

02P



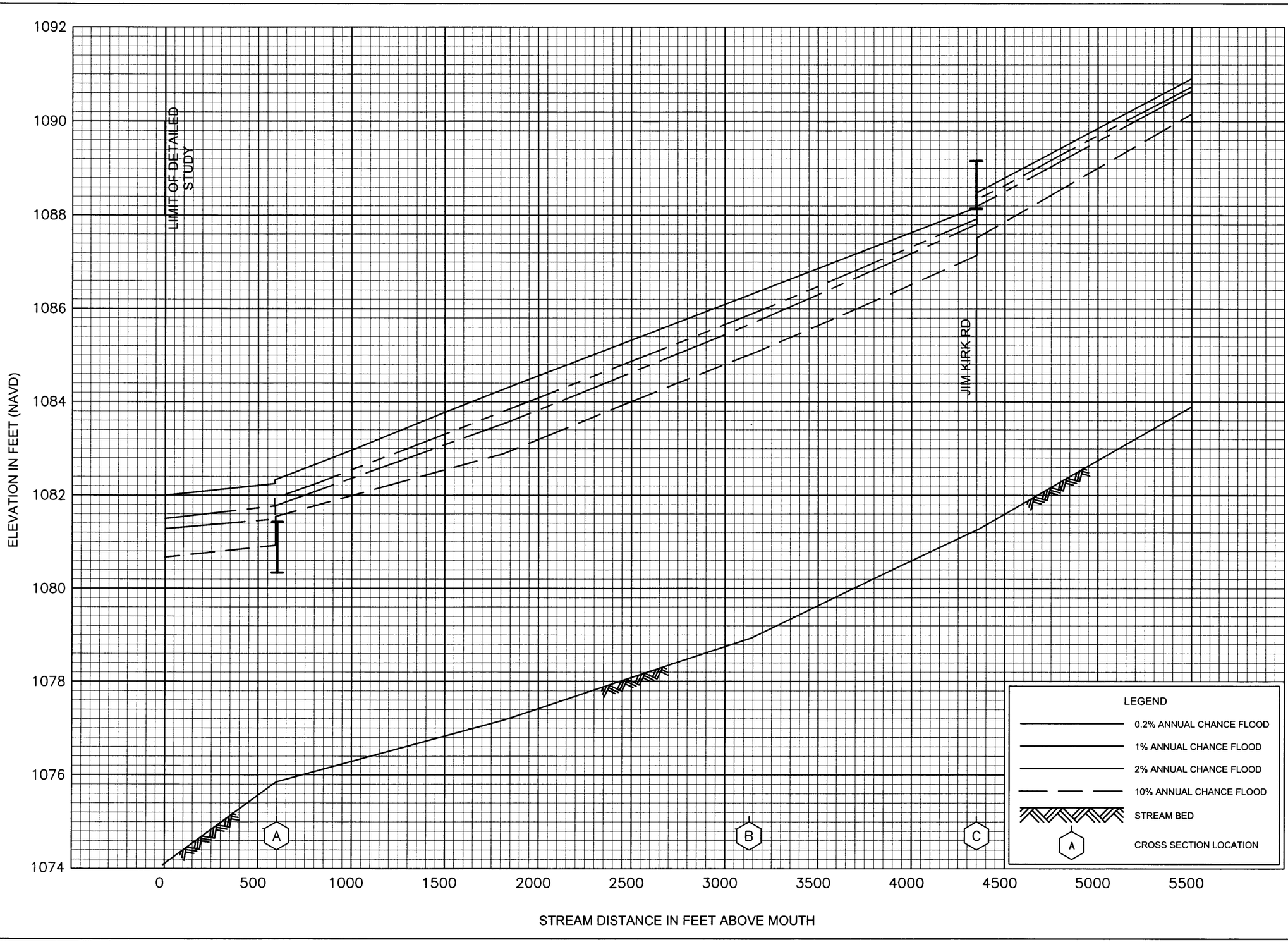
FLOOD PROFILES

LICK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

GREENE COUNTY, TN
AND INCORPORATED AREAS

03P



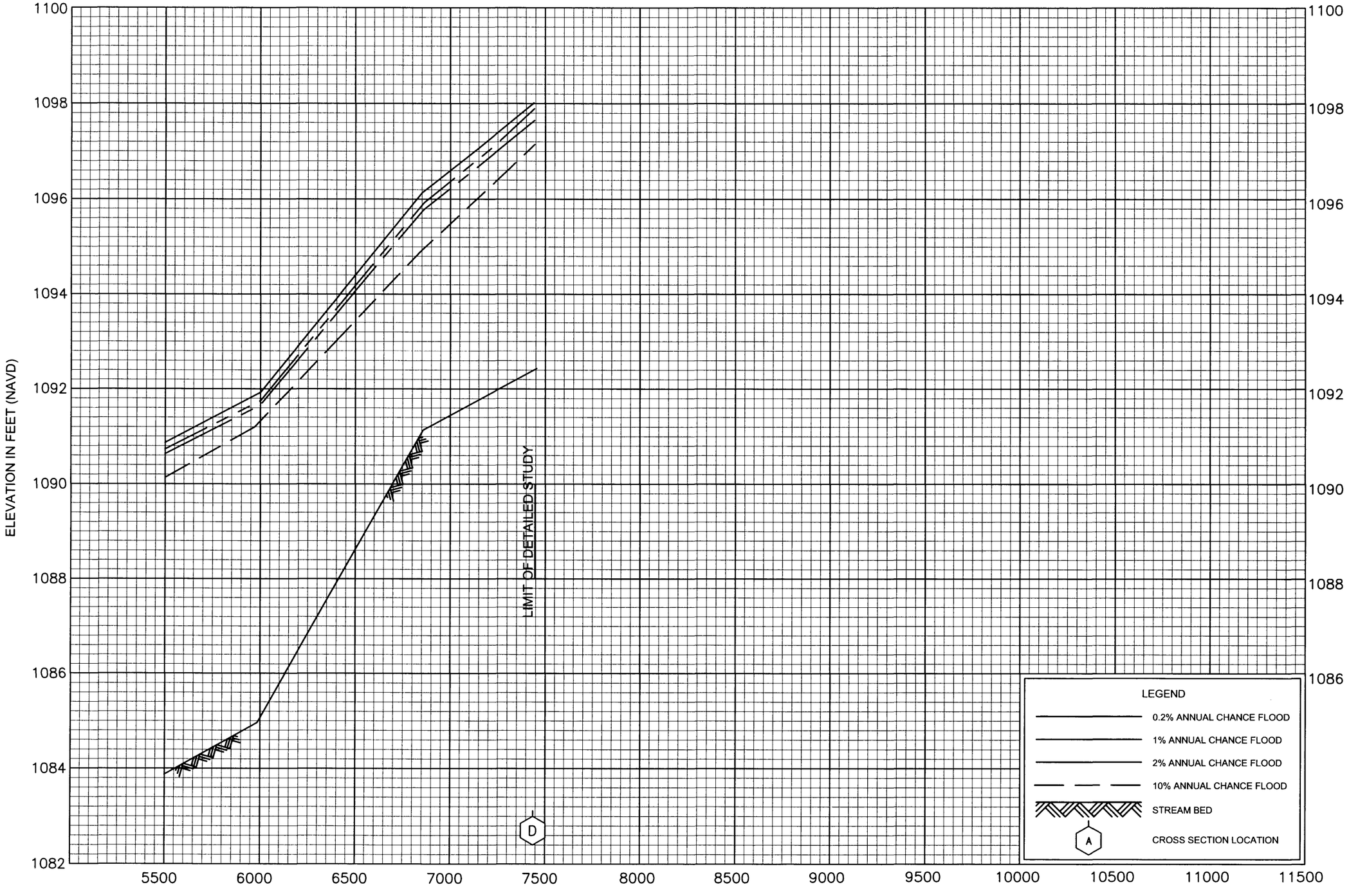
FLOOD PROFILES

POND CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

GREENE COUNTY, TN
AND INCORPORATED AREAS

04P



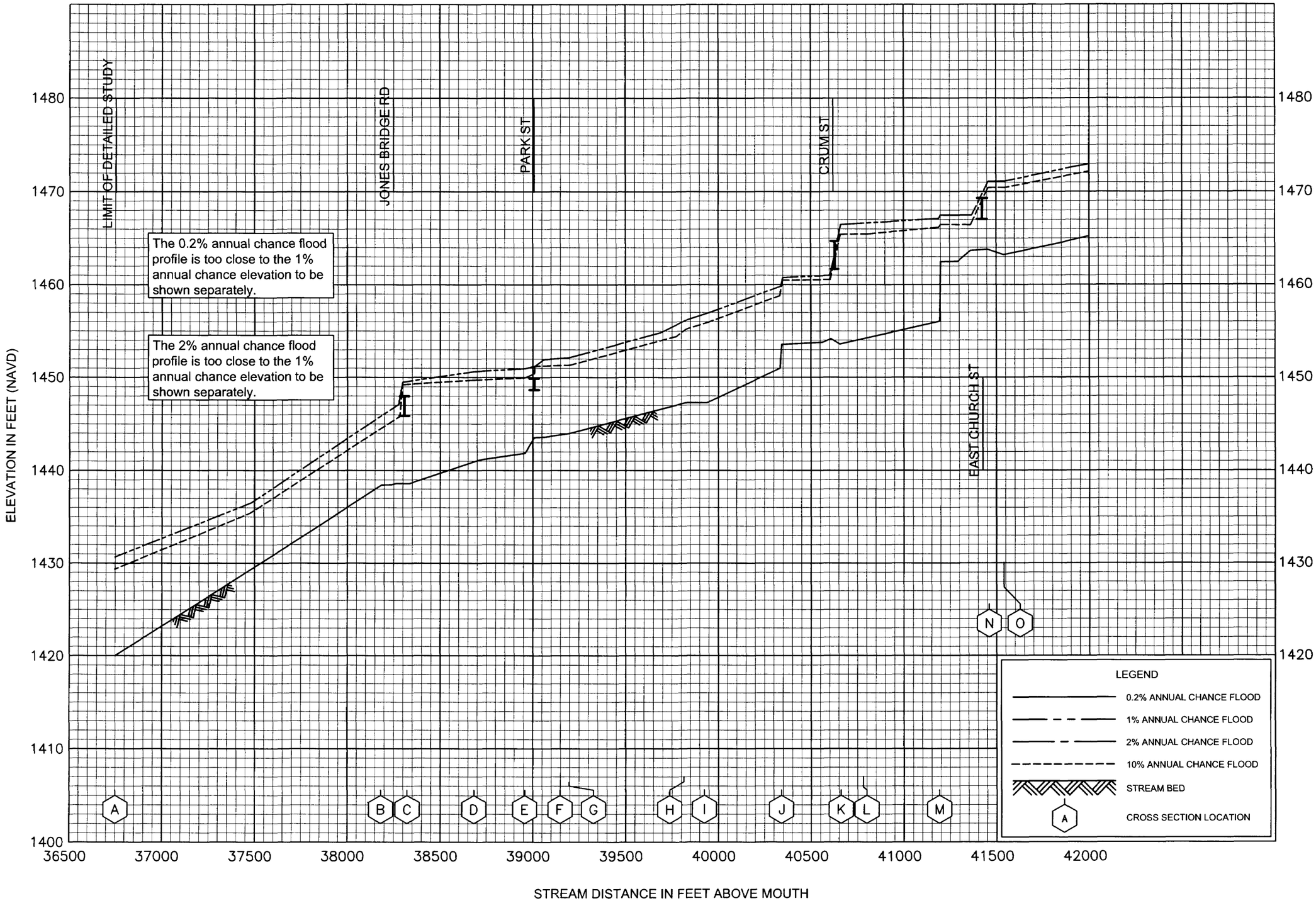
FLOOD PROFILES

POND CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

GREENE COUNTY, TN
AND INCORPORATED AREAS

05P



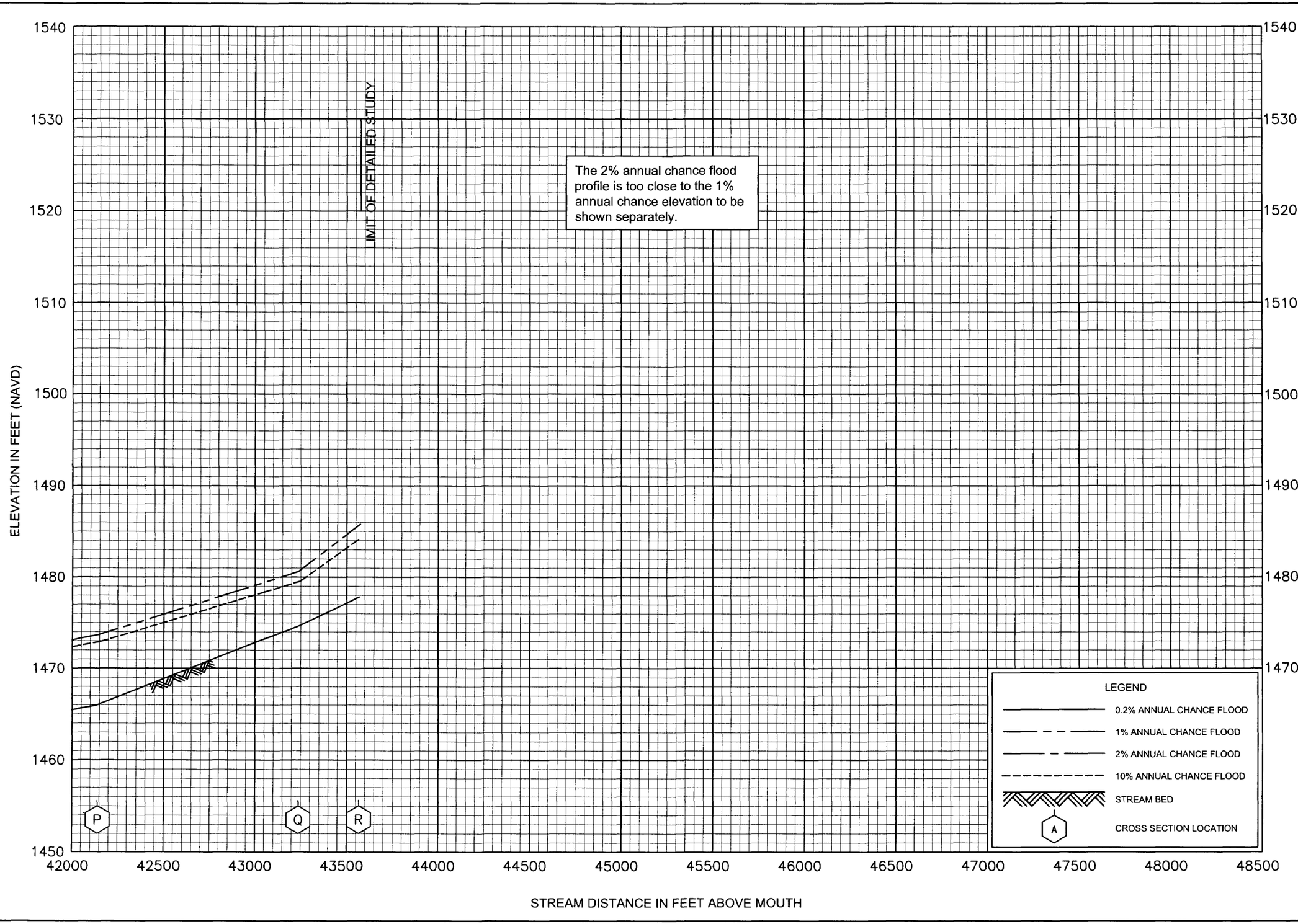
FLOOD PROFILES

RICHLAND CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

GREENE COUNTY, TN
AND INCORPORATED AREAS

06P



FLOOD PROFILES

RICHLAND CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

GREENE COUNTY
AND INCORPORATED AREAS

07P