FLOOD INSURANCE STUDY

MONTGOMERY COUNTY, OHIO
AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER	COMMUNITY NAME	COMMUNITY NUMBER
BROOKVILLE, CITY OF	390407	MONTGOMERY COUNTY (UNINCORPORATED AREAS)	390775
CENTERVILLE, CITY OF	390408	MORAINE, CITY OF	390414
CLAYTON, CITY OF	390821	NEW LEBANON, VILLAGE OF	395435
DAYTON, CITY OF	390409	OAKWOOD, CITY OF	390415
ENGLEWOOD, CITY OF	390828	*PHILLIPSBURG, VILLAGE OF	395434
FARMERSVILLE, VILLAGE OF	395436	RIVERSIDE, CITY OF	390416
GERMANTOWN, VILLAGE OF	390411	TROTWOOD, CITY OF	390417
HUBER HEIGHTS, CITY OF	390884	UNION, CITY OF	390704
KETTERING, CITY OF	390412	VANDALIA, CITY OF	390418
MIAMISBURG, CITY OF	390413	WEST CARROLLTON, CITY OF	390419

*NO SPECIAL FLOOD HAZARD AREAS IDENTIFIED

Effective:
January 6, 2005

Federal Emergency Management Agency

FEDERAL INSURANCE STUDY NUMBER
39113CV000A

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) report may not contain all data available within the Community Map Repository. Please contact the Community Map Repository for any additional data.

The Federal Emergency Management Agency (FEMA) may revise and republish part or all of this FIS report at any time. In addition, FEMA may revise part of this FIS report by the Letter of Map Revision process, which does not involve republication or redistribution of the FIS report. Therefore, users should consult with community officials and check the Community Map Repository to obtain the most current FIS report components**.**

Effective Date: January 6, 2005

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FLOOD INSURANCE STUDY
MONTGOMERY COUNTY, OHIO AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study (FIS) investigates the existence and severity of flood hazards in the geographic area of Montgomery County, Ohio, including the Cities of Brookville, Centerville, Clayton, Dayton, Englewood, Huber Heights, Kettering, Miamisburg, Moraine, Oakwood, Riverside, Trotwood, Union, Vandalia, and West Carrollton; the Villages of Farmersville, Germantown, New Lebanon, and Phillipsburg; and the unincorporated areas of Montgomery 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 Union is geographically located in Miami and Montgomery Counties, and the Village of Carlisle is located in Montgomery and Warren Counties. The City of Union is included in its entirety in this FIS. The flood-hazard information for the Village of Carlisle is for informational purposes only. See the separately published Warren County FIS report and Flood Insurance Rate Map (FIRM) for Warren County, Ohio.

Please note that the Village of Phillipsburg has no Special Flood Hazard Areas identified.

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

Information on the authority and acknowledgments for each of the previously printed FISs and FIRMs for communities within Montgomery County was compiled, and is shown below.

Community	Authority and Acknowledgement
City of Trotwood:	The hydrologic and hydraulic analyses for the study were performed by the U.S. Geological Survey (USGS), and Water Resources Division, for the Federal Emergency Management Administration (FEMA), under Inter-Agency Agreement No. IAA-H-8-76, Project Order No. 12. This study was completed in May 1978 (Reference 1).
City of Kettering:	The hydrologic and hydraulic analyses for the study were performed by the U.S. Army Corp of Engineers (USACE), Louisville District, for FEMA, under Inter-Agency Agreement No. IAA-H-7-76, Project Order No. 7 and Inter-Agency Agreement No. IAA-H-7-76, Project Order No. 1, Amendment 1. This work, which was completed in May 1978, covered all significant flooding sources affecting the City of Kettering (Reference 2).
Village of Germantown:	The hydrologic and hydraulic analyses for the study were performed by the USACE, Louisville District, for FEMA, under Inter-Agency Agreement No. IAA-H-17-78, Project Order No. 26. This study was completed in December 1979 (Reference 3).
City of West Carrollton:	The hydrologic and hydraulic analyses for the study were performed by the USACE, Louisville District, for FEMA, under Inter-Agency Agreement No. IAA-H-17-78, Project Order No. 26. This study was completed in February 1980 (Reference 4).
City of Moraine:	The hydrologic and hydraulic analyses for the study were performed by the USACE, Louisville District, for FEMA, under Inter-Agency Agreement No. IAA-H-17-78, Project Order No. 26. This study was completed in February 1980 (Reference 5).
City of Brookville:	The hydrologic and hydraulic analyses for the study were performed by the USACE, Louisville District, for FEMA, under Inter-Agency Agreement No. IAA-H-17-78, Project Order No. 26. This study was completed in January 1980 (Reference 6).

Community	Authority and Acknowledgement
City of Vandalia:	The hydrologic and hydraulic analyses for the study were performed by the USACE, Louisville District, for FEMA, under Inter-Agency Agreement No. IAA-H-17-78, Project Order No. 26. This study was completed in January 1980 (Reference 7).
City of Centerville:	The hydrologic and hydraulic analyses for the study were performed by the USACE, Louisville District, for FEMA, under Inter-Agency Agreement No. IAA-H-17-78, Project Order No. 26. This study was completed in January 1980 (Reference 8).
City of Miamisburg:	The hydrologic and hydraulic analyses for the study were performed by the USACE, Louisville District, for FEMA, under Inter-Agency Agreement No. IAA-H-17-78, Project Order No. 26. This study was completed in January 1980 (Reference 9).
Village of Carlisle:	The hydrologic and hydraulic analyses for the study were performed by the USACE, Louisville District, for FEMA, under Inter-Agency Agreement No. IAA-H-17-78, Project Order No. 26. This study was completed in January 1980 (Reference 10).
City of Huber Heights:	The hydrologic and hydraulic analyses for the study were obtained from the FIS for Montgomery County, Unincorporated Areas, Ohio (Reference 11).
City of Riverside:	The hydrologic and hydraulic analyses for the study were performed by the USACE, Louisville District, for the FEMA, under Inter-Agency Agreement No. IAA-EMW-93-E-4119. This work was completed in August 1994. Flood hazard data for the Great Miami River and the Mad River were obtained from Montgomery County, Unincorporated Areas, and the City of Dayton FISs (Reference 12).
City of Dayton:	The hydrologic and hydraulic analyses for the study were performed by the USACE, Louisville District, for the Federal Insurance Administration, under Inter-Agency Agreement No. EMW-93-E-4119. This work was completed in August 1994 (Reference 13).

Community	Authority and Acknowledgement
Montgomery County (Unincorporated Areas):	The hydrologic and hydraulic analyses for Lilly Creek were performed by the USACE, Louisville District, for the Federal Insurance Administration, under Inter-Agency Agreement No. IAA-EMW-93-E-4119. This work was completed in August 1994 (Reference 14).

There were no previously printed FISs for the Cities of Englewood, Oakwood, and Union, and the Villages of Clayton, Farmersville, New Lebanon, and Phillipsburg.

The hydrologic and hydraulic analyses for this countywide revision were performed by Woolpert LLP, for FEMA, under Contract No. EMW-96-CO-0083.

The original hydrologic and hydraulic analyses for Montgomery County, Unincorporated Areas, were performed by the USACE, Louisville District for the Federal Insurance Administration, under Interagency Agreement No. 1AA-H-17-78, Project Order No. 26. The date of completion of the original study was February 1980.

1.3 Coordination

The initial Consultant Coordination Officer's (CCO) meetings were held with representatives from FEMA, the communities, and the study contractors to explain the nature and purpose of FISs, and to identify the streams to be studied by detailed methods. The final CCO meetings were held with representatives from FEMA, the communities, and the study contractors to review the results of the studies.

The purpose of an initial CCO meeting is to discuss the scope of the FIS. A final CCO meeting is held to review the results of the study. The dates of the initial and final CCO meetings held for the previous FISs for Montgomery County and the incorporated communities within its boundaries are shown in the following tabulation.

For this January 2005 revision, the results of the study were reviewed at the final CCO meeting held on July 9, 2003, and attended by representatives of FEMA, the Ohio Department of Natural Resources (ODNR), Wolpert LLP, and local officials and residents of several Montgomery County communities. All problems raised at that meeting have been addressed.

Community Name	Initial CCO Date	Final CCO Date
City of Trotwood	November 5, 1975	January 4, 1979
City of Kettering	March 1975	April 18, 1979
Village of Germantown	December 1977	August 5, 1980
City of West Carrollton	December 1977	November 19, 1980
City of Moraine	December 1977	November 18, 1980
Village of Brookville	December 1977	November 19, 1980
City of Vandalia	December 1977	November 19, 1980
City of Centerville	December 1977	November 18, 1980
City of Miamisburg	December 1977	August 5, 1980
Village of Carlisle	December 1977	March 31, 1982
City of Huber Heights	*	*
City of Riverside	June 1, 1993	*
City of Dayton	December 14, 1994	September 7, 1995
Montgomery County (Unincorporated Areas)	September 15, 1994	*

*Data not available

2.0 AREA STUDIED

2.1 Scope of Study

This FIS covers the geographic areas of Montgomery County, Ohio, 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 through 2002.

Table 1 shows the limits of the streams studied by detailed methods (References 1 - 14).

Approximate analyses were used to study those areas having a low development potential or minimal flood hazards.

Table 1 - Limits of Detailed Study

Stream	Limits Of Detailed Study
Wolf Creek	From its mouth at the Great Miami River to the CSX in the City of Brookville.
Tributary A	From its mouth at North Branch Wolf Creek to approximately 750 feet upstream of Colwood Street. Reach length of about 6,000 feet.

Table 1 – Limits of Detailed Study (Continued)

Stream	Limits Of Detailed Study
Tributary B	From its mouth to the northern corporate limit of the City of Trotwood. Reach length of about 1,560 feet.
Tributary F	From its mouth to just west of Salem Pike. Reach length of about 2,005 feet.
Tributary G	From its mouth to approximately 275 feet upstream of the northern corporate limit of the City of Trotwood. Reach length of about 3,940 feet.
Tributary H	From its mouth to the northern corporate limit of the City of Trotwood. Reach length of about 550 feet.
Little Beaver Creek	From its confluence with North Branch Little Beaver Creek to approximately 0.38 mile upstream of Wilmington Pike. Reach length of about 4.06 miles.
North Branch Little Beaver Creek	From its confluence with Little Beaver Creek to the corporate limits of the City of Kettering. Reach length of about 0.87 mile.
Penn Creek	From its confluence with North Branch Little Beaver Creek to approximately 250 feet upstream of Patterson Road. Reach length of about 0.86 mile.
Middle Branch Little Beaver Creek	From its confluence with Little Beaver Creek to approximately 0.23 mile upstream of West Avenue. Reach length of about 2.06 miles.
South Boulevard Creek	From its confluence with Middle Branch Little Beaver Creek to about 125 feet upstream of the CSX. Reach length of about 0.4 mile.
North Branch Little Sugar Creek	From approximately 0.31 mile upstream of the eastern corporate limit of the City of Kettering to about 125 feet upstream of the CSX. Reach length of about 0.59 mile.
Little Twin Creek	From approximately 0.28 mile downstream of Market Street in the City of Germantown to approximately 0.46 mile upstream of Cherry Street. Reach length of about 1.41 miles.

Table 1 – Limits of Detailed Study (Continued)

Stream	Limits Of Detailed Study
Twin Creek	From the western county boundary to approximately 1,700 feet upstream of the Germantown Dam. Reach length of about 6.19 miles.
Great Miami River	From the southern county boundary to approximately 0.5 mile upstream of Interstate 70. Reach length of about 29.10 miles.
Owl Creek	From its confluence with the Great Miami River upstream to approximately 0.05 mile upstream of Alexandersville Road. Reach length of about 1.1 miles.
Poplar Creek	From 1.46 miles above mouth too approximately 0.05 mile upstream of Elva Court. Reach length of about 1.53 miles.
Sugar Creek	Within Montgomery County boundaries. Reach length of about 6.2 miles.
Centerville Tributary	From the eastern county boundary to Clyo Road in the City of Centerville. Reach length of about 1.81 miles.
Whites Corner Tributary	From the eastern county boundary to approximately 0.38 mile upstream of Crossbrook Drive. Reach length of about 1.18 miles.
Unnamed Tributary to Whites Corner Tributary	From confluence with Whites Corner Tributary to approximately 1,130 feet upstream of Baldwin Bridge. Reach length of about 1,825 feet.
Unnamed Tributary to Centerville Tributary	From confluence with Centerville Tributary to approximately 100 feet upstream of Deer Run Road. Reach length of about 3,650 feet.
Sycamore Creek	From its mouth at the Great Miami River to 12th Street in the City of Miamisburg. Reach length of about 1.1 miles.
Sycamore Creek Tributary	From its mouth at Sycamore Creek to Richard Street in the City of Miamisburg. Reach length of about 0.32 mile.
Lilly Creek	From approximately 0.15 mile upstream of its confluence with the Mad River to Harshman Avenue. Reach length of about 1.33 miles.

Table 1 – Limits of Detailed Study (Continued)

Stream	Limits Of Detailed Study
Mad River	From its mouth at the Great Miami River to approximately 1.9 miles upstream of Harshman Avenue. Reach length of about 5.75 miles.
Stillwater River	From its mouth at the Great Miami River to approximately 0.87 mile upstream of Interstate Highway 70.
West Tributary Great Miami River	From its confluence with the Great Miami River to its divergence from the Great Miami River. Reach length of about 1.91 miles.
Bear Creek*	From its mouth at the Great Miami River to the confluence of Diehl Run. Reach length of about 61,350 feet.
Diehl Run*	From the confluence with Bear Creek to approximately 35 feet east of Johnsonville Road. Reach length of about 2.53 miles.
Dry Run*	From its confluence with Wolf Creek to approximately 750 feet upstream of Union Road. Reach length of about 23,915 feet.
Garber Run*	From its confluence with Bear Creek to Little Richmond Road. Reach length of about 2.58 miles.
Holes Creek*	From its confluence with the Great Miami River to approximately 210 feet upstream of Silverlake Drive.
Little Bear Creek*	From its confluence with Bear Creek to approximately 2,850 feet upstream of Old Dayton Road. Reach length of about 5.82 miles.
North Branch Wolf Creek*	From approximately 135 feet upstream of its confluence with Wolf Creek to Interstate 70. Reach length of about 4.36 miles.
Spring Run*	From its confluence with Little Bear Creek to Little Richmond Road. Reach length of about 4.87 miles.

*Streams studied in detail in this countywide revision.

2.2 Community Description

Montgomery County is located in southwestern Ohio and occupies approximately 465 square miles. The closest major urban areas are Columbus to the east and Cincinnati to the south. The largest city within Montgomery County is Dayton, the county seat. Montgomery County had a population of 559,062 in 2000, a decrease of 2.6 percent from 1990 (Reference 15).

The climate in Montgomery County is continental, with considerable annual and daily changes in temperature. Summers are moderately warm and humid, averaging 25 days of 90 degrees Fahrenheit and higher temperatures. Winters are cold and cloudy, averaging up to 4 days of subzero temperatures (Reference 16).

Precipitation varies widely each year but is normally abundant and well distributed throughout the year. The least amount occurs during the fall. Showers and thunderstorms account for most of the rainfall during the growing season. Thunderstorms occur approximately 40 days each year and are most frequent in May through August. During the winter, rain is the most frequent form of precipitation.

The predominant soil association in Montgomery County is the Miamian-Cenlina Association. These are deep, mainly gently sloping to moderately steep, well drained, and moderately well drained soils that have moderately fine textured subsoil. This soil type occupies approximately 51 percent of Montgomery County, excluding the northwestern and southwestern corners.

Farming is no longer the major industry in the county. Truck, nursery, greenhouse, and specialty crops are important locally, but finding areas of soils particularly suited to growing these crops is increasingly difficult because community and industrial development is proceeding on the soils that are well suited to these crops.

The county lies entirely in the region of Ohio that was glaciated in the Wisconsin Age. The northern and western parts of the county are nearly level or gently rolling till plains. Elevation ranges from approximately 680 to 1,000 feet above sea level. The Miami River and its tributaries dissect and drain most of the county, except for the southeastern corner, which is part of the Little Miami River watershed. Development in the floodplain is mainly rural, institutional, and light industry.

2.3 Principal Flood Problems

Floods may occur in Montgomery County during any season. However, past flood records of streams within the area indicate that the majority of severe floods events have occurred from January to May. Flooding may result from periods of general rainfall during the thunderstorms common to the region.

Numerous damaging floods have occurred in Montgomery County. Two of these floods occurred in 1913 and 1959 on the Great Miami River. The 1913 flood is

considered the most severe for the region, but little stage or discharge information is available. However, this flood is estimated at greater than a 200-year flood. The 1959 flood reached a crest on January 22, 1959, with a stage of 699.25 feet at Miamisburg, with a corresponding discharge of 61,800 cubic feet per second (cfs). This flood has a recurrence interval of once in 25 years.

2.4 Flood Protection Measures

Major flooding from the Great Miami River through the study area is controlled by both a levee system and three upstream reservoirs. The Taylorsville (on the Great Miami River), Englewood (on the Stillwater River), and Huffman (on the Mad River) reservoirs are dry bed structures, and were constructed by the Miami Conservancy District. The Germantown reservoir was constructed on Twin Creek. The reservoirs, in combination with the levee system, provide protection against the record estimated discharge of the 1913 flood plus 40 percent.

The levee system on the Great Miami River (which offers protection to some areas within Huber Heights, Dayton, Moraine, West Carrollton, Miamisburg, and unincorporated areas of Montgomery County) was certified by the Miami Conservancy District to protect against the 1-percent-annual-chance flood. The Miami Conservancy District also continues to monitor maintenance for the levee system (Reference 17).

There are no known structural or non-structural flood protection measures found in or being planned for the other flooding sources in Montgomery 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 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 (100-year) 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.

An in-depth study of all Ohio USGS gaging stations within the Louisville District was made in accordance with the U.S. Water Resources Council Bulletin No. 17A (Reference 18). Initially, there were 73 stations to study; however, 30 of these stations had some modified peak values through lake regulation. The majorities of the stations have 25 years of record or better; however, those that do not can be extended by extrapolation of nearby station data or with other historical data available. In order to enhance any relationships developed, natural flows were reconstructed wherever possible. Determination of final discharge frequency curves considered omission of low and high outliers, weighting with the general skew and historically adjusting the curves where possible.

Numerous studies have shown that increasing urbanization within a drainage basin affects the rainfall-runoff characteristics and tends to increase flood discharges in comparison to areas where urbanization has not occurred. The location of the urbanized area within the drainage basin of a particular stream affects the amount of increase in flood discharges. Other basin characteristics, which were used to evaluate flood discharges, were channel slope and basin drainage area. Based upon channel slope, drainage area, and urbanization, discharge-frequency curves were developed in gage areas and related to ungaged areas.

For the FIS, dated June 1979, for the City of Trotwood, the magnitude of the discharges for the different frequencies were determined by methods or regional analyses outlined by Webber and Bartlett. These methods consist of regression equations based on regional analysis, which utilize topological and climatological characteristics of the basin to develop a flood frequency curve. The equations are power equations based on main channel slope, drainage area, mean basin elevations, and average annual precipitation. These base discharge figures were then adjusted for land uses in the watersheds and were correlated with discharge frequencies from two nearby stream gaging stations, Wolf Creek at Trotwood (14 years of record) and Wolf Creek at Dayton (12 years of record). The discharge frequency relationships for these stations were computed by log-Pearson type III analysis of the gaging records (Reference 18).

For the FIS, dated April 1980, for the City of Kettering, several methods of analysis were used and compared, the principal one being based on a combination of the factors of basin precipitation, basin size and slope, soil characteristics, land use classification, and degree of urbanization (Reference 19). Values for the 10-, 50-, and 100-year floods were obtained by this method, and then were extrapolated graphically to obtain 500-year flood values. Extrapolations were verified by the

methods given in the report, *Approximate Method for Quick Floodplain Mapping* (Reference 20). The study developed a system by which low frequency flow determinations could be used to develop the high frequency flow determinations. When compared, this method gave results, which were in the 95-percentile range of the previous method.

For the FIS, dated January 2, 1981, for the Village of Germantown, in order to enhance any relationships developed, natural flows were reconstructed wherever possible. Determination of final discharge-frequency curves considered omission of low and high outliers, weighting with the general skew and historically adjusting the curves where possible.

For the FIS, dated April 15, 1981, for the City of West Carrollton, the absence of long-term stream gaging stations dictated that a rainfall runoff approach was used to determine streamflows for Holes Creek and Owl Creek. An SCS procedure was chosen because of its adaptability for ungaged areas and its reflection of land use (Reference 19). A "synthetic storm" technique (Reference 21) was used in calculating floods of specified frequencies. Results obtained from initial studies indicated that water movements were complex and a detailed study was required. Holes Creek and Owl Creek contain reaches where portions of the flow can spill into adjacent areas. Flow remaining in the stream may spill out at other locations downstream. Tributary creeks contribute additional inflow. Water that has spilled out may enter ponding or storage areas. The storage available modified flow out of these locations. Outflow from pending areas is also dependent upon road elevations and other topographic features. Water from pending areas may enter other pending areas, travel over land, or enter the same or a different stream.

For the FIS, dated May 18, 1981, for the City of Centerville, valley storage was found to be significant on Centerville Tributary, thus reducing the peak flow downstream from the storage area.

For the FIS, dated January 1983, for the City of Miamisburg, discharge frequency curves were developed in gage areas and related to ungaged areas, based upon channel slope, drainage area, and urbanization. Discharges on the Great Miami River were based on published peaks, reconstructed natural flow, and historical floods. Discharges for Sycamore Creek and Sycamore Creek Tributary were related to a gaged urban station with about 40 percent urbanization and 75 feet per mile stream slope as basin characteristics.

For the FIS, dated September 15, 1983, for the Village of Carlisle, the discharges for Dry Run decrease downstream of the Conrail Bridge to the mouth due to an overflow from the Dry Creek basin into the Great Miami River basin. Also, a westerly lateral-flow away from Dry Run occurs between river miles 1.6 and 2.0 toward Twin Creek. This lateral flow is called Carlisle Drain. Flooding of this site is principally from the Great Miami River, but at a lower elevation, since the total width of the

Conrail bridge openings in this area comprises only 3.5 percent of the total railroad fill. Peak discharges were determined using contracted opening computations (Reference 22). Since the flow in Carlisle Drain is caused by Great Miami River backwater on Dry Run after it reaches a certain elevation, part of this backwater is shown on the Carlisle Drain profile near divergence with the Dry River.

For the FIS, dated October 15, 1985, for the City of Huber Heights, water movements where spill and storage were involved were followed through this area by working with hydrographs of water spilling from the stream, routing of hydrographs through storage in ponding areas, and including hydrographs of water that may be reentering the stream. Frequency curves and profiles were then developed from elevations determined by step-backwater computations and hydrograph analysis.

For the revised FIS, dated September 20, 1996, for the City of Riverside, the HEC-1 Flood Hydrograph Package was used for Lilly Creek because there were no gaging stations located in or above the study area (Reference 23). This HEC-1 model was subdivided into seven subareas to better define the flow pattern and to include overbank storage and flow lost from the channel into right overbank ponding areas. SCS curve numbers (based on soil type and land usage), drainage area, time of concentration, and rainfall excess were used to compute flow for each subarea. Soil type was determined from Montgomery County soil maps while land usage was based on USGS quadrangle mapping and field reconnaissance.

The upper ponding area referred to in this FIS as Lilly Creek Ponding Area No. 2 is caused by flows overtopping the existing spoil bank along Lilly Creek from approximately Mile 0.81 downstream to the Byesville Boulevard bridge (Mile 0.39). Because the ground elevations in the right overbank area and also the 100-year ponding elevation are lower than the spoil bank along the right bank for the above-mentioned reach, flows will not be able to reenter Lilly Creek within this reach. As the flood elevations within this upper ponding area increase, this ponding water spills over a ridge of low lying natural ground and enters a lower ponding area referred to in this FIS as Lilly Creek Ponding Area No. 1. The maximum ponding elevations for these two areas were determined by the use of 100-year inflow hydrographs into the two ponding areas and modified Puls storage routings.

The ponding elevations for the 10-, 50-, 100-, and 500-year floods have been determined for Lilly Creek and are summarized in Table 2.

Table 2 - Summary of Ponding Elevations

	Elevation (feet NGVD)			
Flooding Source and Location	10-Year	50-Year	100-Year	500-Year
Lilly Creek				
Ponding Area No. 1	761.6	765.4	766.4	768.4
Ponding Area No. 2	766.3	767.1	767.4	768.7

A study of the basin to determine possible flood reduction measures for the City of Riverside was finalized in 1983. The study established that the original FIS did not account for storage in the basin or channel losses along the spoil bank levee on the right bank above and below Fairfax Avenue. Mapping developed from a 1993 aerial survey of Montgomery County, Ohio, indicated additional storage above Mile 0.80 of Lilly Creek which was not accounted for previously (Reference 24).

The HEC-1 model used in the flood reduction study was calibrated to the June 1980 flood event and updated to reflect the additional storage noted above. This additional change to the HEC-1 model did not change the flood elevations in the channel or the ponding elevations in the right overbank at the locations of known high-water marks.

The hydrologic analyses for the Great Miami River and the Mad River were taken from the FISs for the unincorporated areas of Montgomery County and the City of Dayton, which used the same methods as described for the 1981 FIS for the City of Riverside (References 13 and 14).

For the FIS, dated September 29, 1996, for the City of Dayton, the USGS, in cooperation with the Miami Conservancy District, has maintained streamflow gage records on the Great Miami River at Dayton since 1905 and on the Stillwater River since 1913. Flows of both rivers have been regulated since 1921 by retarding basins: three on the Great Miami River and one on the Stillwater River. Discharges for the 10-, 50-, 100-, and 500-year floods were computed by a regression analysis method that was developed and recommended by the Miami Conservancy District (Reference 25). The method compares the discharge at the Great Miami Dayton gage with the corresponding discharges at the Englewood Dam on the Stillwater River and the Taylorsville Dam on the Great Miami River (Reference 26).

Discharges for the Great Miami River, the Stillwater River, the Mad River, and Wolf Creek were adopted from a study of the streams in Montgomery County by the USACE, Louisville District. The hydrologic study analyzed the pertinent USGS gaging stations in the district. The effects of urbanization and storage were incorporated into the analysis.

Because no gaging stations are located in or above the study area, frequency discharges for Lilly Creek were developed using the USACE HEC-1 Flood Hydrograph Package (Reference 23). This HEC-1 model was subdivided into seven sub-areas to better define the flow pattern and to include overbank storage and flow lost from the channel into the right overbank ponding areas. SCS curve numbers (based on soil type and land usage), drainage area, time of concentration, and rainfall excess were used to compute flow for each sub-area, soil type was determined from Montgomery County soil maps, while land usage was based on USGS topographic maps and field reconnaissance.

A study of the basin to determine possible flood reduction measures for the City of Riverside was finalized in 1983. The study established that the original FISs for the City of Riverside and the unincorporated areas of Montgomery County did not account for storage in the basin or channel losses along the spoil bank levee on the right bank above and below Fairfax Avenue. Mapping developed from a 1993 aerial survey of Montgomery County indicated the existence of additional storage above Mile 0.80 of Lilly Creek, which was not accounted for in either of the previous studies.

The HEC-1 model used in the flood reduction study was calibrated to the June 1980 flood event and updated to reflect the additional storage noted above. This additional change to the HEC-1 model did not change the flood elevations in the channel or the ponding elevations in the right overbank at the locations of known high-water marks.

For this countywide FIS, the detailed hydrologic analyses for Bear Creek, Diehl Run, Dry Run, Garber Run, Holes Creek, North Branch Wolf Creek, and Spring Run were performed using the USACE HEC-1 Flood Hydrograph Package (Reference 23).

Peak discharge-drainage area relationships for the flooding sources studied in detail are shown in Table 3.

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.

For the FIS, dated June 1979, for the City of Trotwood, cross section data for each of the streams were obtained from Kucera and Associates, who utilized aerial photographs and photogrammetric methods (Reference 27). Data for underwater sections were obtained by field measurements using the low water profile as datum. All bridges and culverts were field surveyed to obtain elevation data and structural geometry.

For the FIS, dated April 1980, for the City of Kettering, cross section data were obtained by field measurement except on the State Hospital Farm property. In this area, cross sections taken on Little Beaver Creek in late 1973 were made available by the Ohio Department of Natural Resources (Reference 28). Bridges and culverts were surveyed to obtain elevations, clearances, and other structural geometry.

Table 3 - Summary of Discharges

Flooding Source And Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
Wolf Creek					
Below Dry Run	55.7	6,190	9,810	11,400	15,200
Above Dry Run	47.5	5,120	7,990	9,330	12,500
Above North Branch Wolf Creek	22.9	3,190	4,630	5,240	6,560
At mouth/confluence with the Great Miami River	78.0	6,670	10,500	12,400	17,500
Tributary A					
At mouth	0.40	188	300	352	472
Tributary B					
At mouth	7.16	1,160	1,800	2,100	2,820
Tributary F					
At mouth	0.74	486	726	832	1,040
Tributary G					
At mouth	0.44	224	355	416	551
Tributary H					
At mouth	1.58	563	989	1,130	1,430
Little Beaver Creek					
Eastern corporate limits of the City of Kettering	13.64	4,600	6,470	7,440	10,070
North Branch Little Beaver Creek					
Eastern corporate limits of the City of Kettering	3.78	1,510	2,130	2,450	3,230
Penn Creek					
Confluence with North Branch Little Beaver Creek	1.59	980	1,380	1,590	2,090
Middle Branch Little Beaver Creek					
Confluence with Little Beaver Creek	3.44	1,660	2,300	2,640	3,440

Table 3 – Summary of Discharges – *Continued*

Flooding Source And Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
South Boulevard Creek					
Confluence with Middle Branch Little Beaver Creek	1.25	1,000	1,390	1,590	2,070
North Branch Little Sugar Creek					
Eastern corporate limits of the City of Kettering	2.25	1,010	1,410	1,630	2,150
Owl Creek					
At Alexandersville Road in the City of West Carrollton	2.3	1,600	2,350	2,650	3,300
At downstream side of Conrail in the City of West Carrollton	4.2	2,550	3,800	4,300	5,350
Sugar Creek					
At eastern corporate limits of the City of Centerville	14.9	1,700	2,850	3,400	4,950
About one mile upstream of the eastern City of Centerville corporate limits	6.3	920	1,540	1,860	2,700
Whites Corner Tributary					
At eastern City of Centerville corporate limits	1.25	420	740	910	1,350
Great Miami River					
Above confluence of Mad River	1,853	38,000	53,000	60,000	74,000
At Martinsburg gage (miles 66.3)	2,718	56,000	78,000	86,000	107,000
Above confluence of Dry Run	2,720	65,000	78,000	86,000	107,000
Below confluence with Holes Creek	2,720	56,000	78,000	86,000	107,000
Above confluence of the Stillwater River	1,175	24,500	35,000	40,000	48,500
Centerville Tributary					
At mouth	3.0	930	1,350	1,600	2,260
Sycamore Creek					
At mouth	3.0	900	1,500	1,800	2,600
Sycamore Creek Tributary					
At mouth	0.52	290	470	560	820

Table 3 – Summary of Discharges – *Continued*

Flooding Source And Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
Twin Creek					
At mouth	316	14,400	17,200	18,500	21,000
Above confluence with Little Twin Creek	285	9,300	11,200	11,900	13,600
Little Twin Creek					
At mouth	22.7	4,600	7,100	8,300	11,500
Lilly Creek					
At Springfield Pike (City of Riverside)	7.42	1,248	1,791	2,136	2,493
At Fairfax Avenue (City of Riverside)	7.42	1,977	2,612	2,910	3,582
At Harshman Road (City of Riverside)	6.37	2,535	3,957	4,708	6,581
Mad River					
At mouth	*	17,000	24,000	27,500	34,500
Stillwater River					
At the confluence with Great Miami River	676	9,600	11,400	12,000	13,500
Garber Run					
At mouth (Confluence with Bear Creek)	2.90	474	745	898	1,689
Diehl Run					
At mouth (Confluence with Bear Creek)	2.82	364	580	702	1,340
Little Bear Creek					
At Mouth (Confluence with Bear Creek)	5.23	1,121	1,775	2,145	4,076
Upstream of the confluence with Spring Run	N/A	545	857	1,034	1,955
Bear Creek					
At confluence with Great Miami River	20.91	4,906	7,769	9,388	17,875
At confluence with Little Bear Creek	7.17	3,238	5,128	6,200	11,800
At confluence with Garber Run	8.60	1,554	2,463	2,977	5,660
Spring Run					
At Mouth (Confluence with Little Bear Creek)	5.91	578	920	1,113	2,125
Dry Run					
At mouth	8.12	1,740	2,566	2,908	3,600
Above Shiloh Springs Road	3.35	833	1,226	1,388	1,700

Table 3 – Summary of Discharges – *Continued*

Flooding Source And Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
Above Westbrook Road	1.59	620	952	1,090	1,345
Holes Creek					
Conrail Railroad	27.20	5,060	7,600	8,650	11,100
Mad River Road	18.90	4,260	6,030	6,800	8,650
McEwen Road (Upstream Crossing)	10.27	2,042	3,002	3,406	4,357
Lyons Road	7.90	1,571	2,309	2,620	3,351
Silver Lake Drive	3.84	764	1,122	1,273	1,629
North Branch Wolf Creek					
At Mouth	24.58	3,632	5,247	5,919	7,500
Above Oaks Road	14.90	2,426	3,515	3,966	4,840
Above Westbrook Road	13.25	2,282	3,319	3,748	4,690
Unnamed Tributary to Great Miami River					
At a point 4,100 feet upstream of the confluence with Great Miami River	0.62	N/A	N/A	780	950

For the Villages of Germantown, Brookville, and Carlisle, and the Cities of West Carrollton, Moraine, Centerville, Miamisburg, and Huber Heights, cross section data were obtained by integrating existing aerial topographic mapping (References 29 - 36) with field survey measurements; the below-water sections were obtained by field measurements. All bridges and culverts were surveyed to obtain elevation and structural geometry. Detailed structure plans were obtained whenever possible to document structure details.

For the revised FIS, dated September 20, 1996, for the City of Riverside, cross section data for Lilly Creek were obtained by field survey and mapping developed from a 1993 aerial survey of Montgomery County (Reference 37). These sections were located at bridges and at close intervals above and below the bridges in order to compute the backwater effects of the structures. Natural sections were obtained at points between bridges. Areas that would be ineffective in conveying water downstream were not included. Cross section data for the Great Miami River and the Mad River were obtained by integrating existing aerial topographic mapping with field survey measurements; the below-water sections were obtained by field measurements (Reference 38). All bridges and culverts were surveyed to obtain elevation and structural geometry. Detailed structure plans were obtained whenever possible to document structure details.

For the revised FIS, dated September 29, 1996, for the City of Dayton, cross sections were obtained from field surveys and mapping developed from a 1993 aerial survey of Montgomery County, Ohio (Reference 38). These sections were located at bridges and at close intervals upstream and downstream of bridges to compute the backwater effects of the structures. Natural sections were obtained at points between bridges. Areas that would be ineffective in conveying water downstream were not included.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 4.2), selected cross section locations are also shown on the FIRM (Exhibit 2).

For this countywide FIS, the hydraulic analysis was accomplished using the USACE HEC-2 Water Surface Profile program (Reference 39).

Cross section data was obtained by integrating data from an aerial survey completed in September 1996 with field survey data. Aerial survey was based upon a 4-foot contour interval. Field surveys provided elevation and structural geometry data at the bridge and culvert locations. Additional survey shots were taken throughout the streams channel to help better define the profile of the channel bottom.

All starting water surface elevations (WSELs) were determined by slope-area computations. Water surface profiles were developed using the USACE HEC-2 computer step-backwater model (References 39 and 40). Profiles were determined

for the 10-, 50-, 100-, and 500-year floods. Flood profiles were drawn showing computed WSELs to an accuracy of 0.5 foot for selected flood intervals.

Roughness factors (Manning's "n") used in the hydraulic computations for all other streams studied were chosen using engineering judgment based on field observations of the streams and floodplain areas. Table 4 provides roughness coefficients used for each stream studied by detailed methods.

The hydraulic analyses for this study were based on 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.

All elevations are referenced to the National Geodetic Vertical Datum of 1929 (NGVD).

Table 4 - Manning's "n" Values

Stream	Channel "n" Value	Overbank "n" Values
Wolf Creek	0.025 to 0.060	0.025 to 0.150
North Branch Wolf Creek	0.028 to 0.042	0.070 to 0.080
Bear Creek	0.030 to 0.045	0.050 to 0.200
Little Bear Creek	0.030 to 0.045	0.040 to 0.065
Diehl Run	0.031 to 0.035	0.050 to 0.085
Garber Run	0.040 to 0.042	0.070
Spring Run	0.030 to 0.039	0.040 to 0.070
Dry Run Creek	0.050 to 0.060	0.080 to 0.090
Holes Creek	0.030 to 0.085	0.050 to 0.125
Tributary A	0.030 to 0.060	0.025 to 0.080
Tributary B	0.050 to 0.055	0.045 to 0.070
Dry Run	0.030 to 0.045	0.040 to 0.200
Tributary F	0.040 to 0.060	0.040 to 0.065
Tributary G	0.030 to 0.070	0.025 to 0.150
Tributary H	0.065	0.055 to 0.070
Twin Creek	0.040 to 0.080	0.075 to 0.100
Little Twin Creek	0.050	0.075
Great Miami River	0.021 to 0.060	0.040 to 0.080
West Tributary Great Miami River	0.040 to 0.045	0.050 to 0.055
Owl Creek	0.035 to 0.080	0.025 to 0.120
Sugar Creek	0.050 to 0.060	0.070 to 0.090
Centerville Tributary	0.024 to 0.070	0.045 to 0.100
Whites Corner Tributary	0.040	0.050 to 0.060
Sycamore Creek	0.040 to 0.060	0.040 to 0.090
Sycamore Creek Tributary	0.060	0.065 to 0.090
Subdivision Tributary	0.025 to 0.040	0.050
Lilly Creek	0.020 to 0.065	0.045 to 0.065
Mad River	0.038 to 0.050	0.050 to 0.090
Stillwater River	0.035 to 0.050	0.060 to 0.070

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 (100-year) flood elevations and delineations of the 1- and 0.2 percent-annual chance (500-year) 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 (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent-annual-chance (500-year) 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 topographic maps at various scales and contour intervals (References 21, 24, and 29-38).

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, AE, V, and VE); 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 Flood Hazard Boundary Map for Englewood, Ohio (Reference 41).

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 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 (Table 5). 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 WSEL 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.

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
BEAR CREEK								
A	494	137	900	10.4	704.0	692.1[2]	692.7	0.6
B	601	159	1,650	5.7	704.0	693.4[2]	694.4	1.0
C	1,042	131	1,029	9.1	704.1	694.0[2]	694.8	0.8
D	1,569	194	1,638	5.7	704.2	696.6[2]	696.9	0.3
E	2,008	110	793	11.5	704.2	696.7[2]	696.7	0.0
F	2,303	162	1,226	7.7	704.3	698.6[2]	699.2	0.6
G	4,200	164	1,418	6.6	704.6	702.7[2]	703.5	0.8
H	6,179	145	1,176	8.0	707.2	707.2	707.8	0.6
I	6,704	127	1,127	8.3	708.4	708.4	709.2	0.8
J	7,800	130	770	12.2	711.8	711.8	711.9	0.1
K	8,481	107	1,064	8.8	715.1	715.1	716.0	0.9
L	10,554	164	2,197	4.3	721.3	721.3	722.2	0.9
M	11,511	175	2,243	4.2	723.0	723.0	724.0	1.0
N	11,723	131	1,514	6.2	723.4	723.4	724.3	0.9
O	12,876	116	1,130	8.3	725.1	725.1	726.0	0.9
P	13,556	94	782	12.0	726.8	726.8	727.3	0.5
Q	14,690	260	2,240	4.2	731.6	731.6	732.6	1.0
R	18,202	110	1,049	8.9	739.7	739.7	740.5	0.8
S	22,115	104	986	9.5	748.8	748.8	749.8	1.0
T	25,260	233	1,470	6.4	758.9	758.9	759.6	0.7

[1]Feet above mouth at Great Miami River
[2]Elevation without considering overflow effects from Great Miami River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

BEAR CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
BEAR CREEK (continued)								
U	26,320	165	1,538	6.1	761.1	761.1	762.1	1.0
V	29,521	118	954	9.8	770.5	770.5	771.4	0.9
W	29,624	120	1,067	8.8	771.6	771.6	772.3	0.7
X	32,276	174	1,089	5.7	778.6	778.6	779.1	0.5
Y	35,748	112	799	7.8	794.0	794.0	794.0	0.0
Z	35,939	95	755	8.2	794.3	794.3	794.4	0.1
AA	36,166	198	1,036	6.0	795.3	795.3	795.3	0.0
AB	38,198	110	794	7.8	801.6	801.6	802.0	0.4
AC	40,077	114	811	7.6	807.8	807.8	808.7	0.9
AD	44,287	111	733	8.5	821.2	821.2	822.1	0.9
AE	48,531	100	816	7.6	835.5	835.5	836.2	0.7
AF	48,762	104	936	6.6	836.7	836.7	836.9	0.2
AG	49,663	95	787	7.9	838.2	838.2	838.8	0.6
AH	50,768	93	789	7.9	843.7	843.7	844.4	0.7
AI	51,098	73	708	8.8	847.2	847.2	847.6	0.4
AJ	51,271	169	1,098	5.6	848.6	848.6	848.7	0.1
AK	51,885	248	1,875	3.3	849.6	849.6	850.1	0.5
AL	52,636	110	684	9.1	850.0	850.0	850.7	0.7
AM	53,406	142	1,267	4.9	854.2	854.2	854.9	0.7
AN	53,922	88	663	9.4	854.6	854.6	855.4	0.8
AO	54,412	115	896	3.3	857.8	857.8	858.1	0.3
AP	55,511	53	420	7.1	858.9	858.9	859.2	0.3
AQ	55,862	43	345	8.6	860.0	860.0	860.5	0.5

[1]Feet above mouth at Great Miami River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

BEAR CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
BEAR CREEK (continued)								
AR	57,573	42	341	8.7	869.2	869.2	870.1	0.8
AS	58,943	27	240	12.4	872.9	872.9	873.7	0.8
AT	59,880	44	387	7.7	878.4	878.4	879.4	1.0
AU	60,431	96	803	3.7	880.0	880.0	880.8	0.8
AV	61,242	40	362	8.2	880.7	880.7	881.5	0.8

[1] Feet above mouth at Great Miami River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

BEAR CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
UNNAMED TRIBUTARY TO WHITES CORNER TRIBUTARY								
A	173[1]	19	33	2.3	929.9	929.9	930.5	0.6
B	1,306[1]	20	15	5.1	958.9	958.9	958.9	0.0
CENTERVILLE TRIBUTARY								
A	0.41[2]	95	284	5.6	828.2	828.2	828.4	0.2
B	0.75[2]	58	268	6.0	847.6	847.6	848.5	0.9
C	1.07[2]	45	167	7.8	865.8	865.8	866.5	0.7
D	1.24[2]	50	209	6.2	873.8	873.8	874.7	0.9
E	1.50[2]	62	359	3.9	881.9	881.9	882.5	0.6
F	1.60[2]	52	199	5.4	883.1	883.1	883.6	0.5
G	1.64[2]	63	642	1.7	892.9	892.9	893.0	0.1
H	1.72[2]	39	257	4.2	895.1	895.1	895.2	0.1
I	1.98[2]	37	227	4.8	898.2	898.2	898.6	0.4
WHITES CORNER TRIUBUTARY								
A	2.43[2]	52	187	4.8	883.1	883.1	883.1	0.0
B	2.60[2]	44	117	6.7	891.5	891.5	891.5	0.0
C	2.69[2]	152	248	3.0	897.5	897.5	897.5	0.0
D	2.77[2]	35	142	5.2	900.9	900.9	901.2	0.3
E	3.02[2]	36	69	7.8	913.6	913.6	913.6	0.0
F	3.32[2]	12	43	8.6	934.7	934.7	935.3	0.6

[1]Feet above mouth
[2]Miles above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

UNNAMED TRIBUTARY TO WHITES CORNER TRIBUTARY – CENTERVILLE TRIBUTARY – WHITES CORNER TRIBUTARY

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
DIEHL RUN								
A	178	13	58	12.0	880.7	877.3[2]	877.3[2]	0.4
B	750	11	55	12.8	882.8	882.8	883.8	1.0
C	919	92	458	1.5	890.8	890.8	890.8	0.0
D	1,943	30	80	8.8	894.1	894.1	894.1	0.0
E	2,587	23	159	4.4	896.8	896.8	897.2	0.4
F	3,746	23	88	8.0	905.3	905.3	906.0	0.7
G	4,759	23	113	6.2	916.3	916.3	916.8	0.5
H	5,442	23	91	7.7	919.3	919.3	919.7	0.4
I	5,651	18	64	10.9	922.3	922.3	922.3	0.0
J	5,833	31	127	5.5	924.5	924.5	924.7	0.2
K	6,513	30	111	6.3	927.3	927.3	927.5	0.2
L	6,800	31	77	9.1	930.7	930.7	930.7	0.0
M	7,185	56	194	3.6	933.0	933.0	933.0	0.0
N	7,423	30	77	9.1	933.3	933.3	933.3	0.0
O	8,598	72	185	3.8	939.4	939.4	939.5	0.1
P	8,981	47	89	7.9	944.6	944.6	944.6	0.0
Q	11,937	28	81	8.7	954.1	954.1	954.1	0.0
R	12,983	30	186	3.8	959.4	959.4	960.3	0.9
S	13,383	39	129	5.4	959.7	959.7	960.6	0.9

[1]Miles above mouth
[2]Elevation without considering backwater effects of Bear Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

DIEHL RUN

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
DRY RUN								
A	0	36	274	10.6	797.5	797.5	798.0	0.5
B	862	81	397	7.3	804.3	804.3	804.3	0.0
C	1,261	62	349	8.3	806.7	806.7	806.7	0.0
D	1,910	132	627	4.6	810.3	810.3	810.4	0.1
E	3,584	100	456	6.4	822.3	822.3	822.3	0.0
F	4,832	69	467	6.2	828.2	828.2	828.5	0.3
G	6,855	133	655	4.4	835.7	835.7	836.1	0.6
H	7,561	88	408	7.1	838.8	838.8	839.8	1.0
I	7,761	206	941	3.1	840.3	840.3	841.3	1.0
J	9,170	55	343	4.1	842.2	842.2	842.8	0.6
K	10,522	36	127	11.0	845.8	845.8	845.8	0.0
L	11,682	36	253	5.5	854.4	854.4	854.6	0.2
M	12,256	32	256	5.4	860.0	860.0	860.2	0.2
N	13,029	54	296	4.7	866.5	866.5	866.8	0.3
O	14,720	79	290	4.8	870.1	870.1	871.0	0.9
P	15,766	38	157	8.8	874.8	874.8	875.0	0.2
Q	16,199	237	226	4.8	880.5	880.5	880.5	0.0
R	17,086	30	134	8.1	883.6	883.6	884.1	0.5
S	17,829	79	265	4.1	891.4	891.4	891.4	0.0
T	19,360	92	271	4.0	898.8	898.8	899.0	0.8
U	20,250	105	195	5.6	906.1	906.1	906.1	0.0

[1] Feet above confluence with Wolf Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

DRY RUN

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
DRY RUN (continued)								
V	20,966[1]	32	107	10.2	911.6	911.6	911.9	0.3
W	21,548[1]	30	143	7.6	919.2	919.2	919.4	0.2
X	22,074[1]	11	74	14.7	925.3	925.3	925.3	0.0
Y	23,369[1]	201	1,365	0.8	942.7	942.7	942.7	0.0
Z	23,915[1]	93	342	3.2	942.6	942.6	942.6	0.0
DRY RUN CREEK								
A	3.12 [2]	138	587	4.3	705.9	705.9	704.9	1.0

[1]Feet above confluence with Wolf Creek
[2]Miles above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

DRY RUN – DRY RUN CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
GARBER RUN								
A	25	34	138	6.5	856.0	851.7[2]	852.5	0.8
B	1,011	23	126	7.1	860.5	860.5	860.9	0.4
C	1,321	24	120	7.5	862.1	862.1	862.4	0.3
D	3,133	34	149	6.0	873.2	873.2	873.4	0.2
E	4,017	35	95	9.5	883.9	883.9	883.9	0.0
F	5,811	54	111	8.1	889.1	889.1	889.1	0.0
G	7,352	35	175	5.1	898.8	898.8	899.1	0.3
H	7,672	32	91	9.9	901.2	901.2	901.2	0.0
I	9,288	67	300	3.0	908.6	908.6	908.9	0.3
J	13,762	54	213	4.2	934.3	934.3	934.8	0.5

[1]Feet above confluence with Bear Creek
[2]Elevation without considering backwater effects from Bear Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

GARBER RUN

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
GREAT MIAMI RIVER								
A	61.82	379	7,423	11.6	688.7	688.7	688.7	0.0
B	62.39	1,417	17,783	4.8	692.8	692.8	693.3	0.5
C	63.08	1,660	23,478	3.7	694.6	694.6	695.3	0.7
D	63.49	594	13,501	6.4	695.3	695.3	696.1	0.8
E	63.52	596	13,798	6.2	695.9	695.9	696.6	0.7
F	64.11	570	12,811	6.7	698.0	698.0	698.8	0.8
G	64.34	662	12,444	6.9	698.6	698.6	699.5	0.9
H	64.70	578	11,837	7.3	699.5	699.5	700.2	0.7
I	65.40	678	13,531	6.4	701.3	701.3	702.0	0.7
J	66.00	775	15,555	5.5	702.3	702.3	703.1	0.8
K	66.04	775	15,726	5.5	702.6	702.6	703.4	0.8
L	66.31	676	12,861	6.7	702.9	702.9	703.7	0.8
M	66.41	677	13,066	6.6	703.2	703.2	703.9	0.7
N	66.46	677	13,461	6.4	703.6	703.6	704.1	0.5
O	67.06	686	12,913	6.7	705.0	705.0	705.6	0.6
P	67.58	675	10,947	7.9	706.1	706.1	706.8	0.7
Q	68.00	1,038	17,762	4.8	707.8	707.8	708.6	0.8
R	68.43	1,647	23,252	3.7	709.0	709.0	709.9	0.9
S	68.95	880	14,617	5.9	709.7	709.7	710.7	1.0

[1]Miles above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

GREAT MIAMI RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
GREAT MIAMI RIVER (continued)								
T	69.16	862	13,159	6.5	710.6	710.6	711.6	1.0
U	69.53	1,550	25,192	3.4	712.0	712.0	712.8	0.8
V	69.92	1,075	17,553	4.9	712.3	712.3	713.0	0.7
W	70.26	754	13,780	6.2	712.8	712.8	713.5	0.7
X	70.50	683	13,570	6.3	713.6	713.6	714.2	0.6
Y	71.01	1,634	22,718	3.8	714.9	714.9	715.4	0.5
Z	71.56	1,024	11,078	7.8	715.9	715.9	716.3	0.4
AA	72.28	798	11,068	7.8	720.5	720.5	720.5	0.0
AB	72.92	702	12,014	7.2	723.3	723.3	723.3	0.0
AC	74.01	1,798	31,516	2.7	726.4	726.4	726.5	0.1
AD	74.68	961	12,591	6.8	726.9	726.9	727.0	0.1
AE	75.09	691	14,290	6.0	729.1	729.1	729.6	0.5
AF	75.54	856	15,481	5.6	729.8	729.8	730.4	0.6
AG	76.03	828	18,277	4.7	731.5	731.5	732.4	0.7
AH	76.33	827	18,077	4.8	732.3	732.3	732.9	0.6
AI	76.46	606	14,736	5.8	733.0	733.0	733.6	0.6
AJ	76.58	690	14,044	6.1	732.9	733.0	733.6	0.6
AK	76.63	690	14,044	6.1	733.6	733.6	734.3	0.7

[1]Miles above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

GREAT MIAMI RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
GREAT MIAMI RIVER (continued)								
AL	76.79	691	14,175	6.1	733.9	733.9	734.5	0.6
AM	77.19	691	13,772	3.2	734.4	734.4	735.3	0.9
AN	77.69	680	13,296	6.5	735.1	735.1	735.9	0.8
AO	77.92	695	13,830	6.2	735.5	735.5	736.3	0.8
AP	77.98	696	14,060	6.1	735.6	735.6	736.6	1.0
AQ	78.30	686	12,871	6.7	736.1	736.1	737.0	0.9
AR	78.65	650	12,449	6.9	736.7	736.7	737.5	0.8
AS	78.74	651	12,700	6.8	736.9	736.9	737.9	1.0
AT	78.93	702	14,294	6.0	737.4	737.4	738.3	0.9
AU	79.04	659	13,728	6.3	737.5	737.5	738.5	1.0
AV	79.08	660	13,815	6.2	737.7	737.7	738.7	1.0
AW	79.27	708	13,485	6.4	738.0	738.0	739.0	1.0
AX	79.33	708	13,619	6.3	738.2	738.2	739.2	1.0
AY	79.60	694	12,043	6.6	738.6	738.6	739.5	0.9
AZ	79.71	695	12,252	6.4	738.9	738.9	739.9	1.0
BA	79.84	701	12,352	6.0	739.1	739.1	740.1	1.0
BB	80.00	610	10,055	7.9	739.1	739.1	740.1	1.0
BC	80.27	612	10,339	7.8	739.7	739.7	740.6	0.9

[1]Miles above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

GREAT MIAMI RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
GREAT MIAMI RIVER (continued)								
BD	80.55	673	12,148	6.5	740.4	740.4	741.4	1.0
BE	80.90	607	9,827	6.1	741.0	741.0	741.9	0.9
BF	81.03	609	10,113	5.9	741.4	741.4	742.4	1.0
BG	81.22	701	9,821	6.1	741.9	741.9	742.8	0.9
BH	81.31	705	10,246	5.9	742.7	742.7	743A	0.7
BI	81.53	1,050	6,646	9.0	743.4	743.4	743.7	0.3
BJ	81.58	1,150	8,656	6.9	745.0	745.0	745.8	0.8
BK	82.00	524	7,271	5.5	747.0	747.0	748.0	1.0
BL	82.40	515	8,204	4.9	747.9	7,47.9	748.7	0.8
BM	82.66	475	6,330	6.3	748.3	748.3	749.0	0.7
BN	82.70	478	6,579	6.1	748.5	748.5	749.5	1.0
BO	82.92	491	7,085	5.6	749.2	749.2	750.0	0.8
BP	82.96	493	7,224	5.5	749.4	749.4	750.4	1.0
BQ	83.50	334	6,434	6.2	750.8	750.8	751.6	0.8
BR	83.58	340	6,662	6.0	751.2	751.2	752.0	0.8
BS	83.80	432	5,527	7.2	752.0	752.0	752.9	0.9
BT	84.45	747	8,852	4.5	754.6	754.6	755.4	0.8

[1]Miles above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

GREAT MIAMI RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
GREAT MIAMI RIVER (continued)								
BU	84.89	789	8,795	4.5	756.3	756.3	756.8	0.5
BV	85.65	1,891	16,167	2.5	758.7	758.7	759.0	0.3
BW	86.10	518	6,560	6.1	759.7	759.7	759.9	0.2
BX	86.57	2,145	25,021	1.6	761.6	761.6	762.4	0.8
BY	87.27	1,762	14,697	2.7	762.0	762.0	762.8	0.8
BZ	87.54	1,340	4,574	4.4	762.4	762.4	763.2	0.8
CA	88.74	471	5,443	7.3	768.5	768.5	769.1	0.6
CB	88.99	529	6,883	5.8	769.7	769.7	770.4	0.7
CC	89.38	489	5,692	7.0	771.4	771.4	771.9	0.5
CD	89.42	786	7,311	5.5	772.5	772.5	772.5	0.0
CE	89.48	1,091	12,060	3.3	772.9	772.9	773.1	0.2
CF	89.87	876	8,821	4.5	773.7	773.7	774.1	0.4
CG	90.25	828	8,897	4.5	775.0	775.0	775.5	0.5
CH	90.30	877	9,238	4.3	775.5	775.5	776.0	0.5
CI	90.35	530	8,134	4.9	775.7	775.7	776.1	0.4
CJ	90.74	1,204	13,323	3.0	777.1	777.1	777.6	0.5

[1]Miles above mouth

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
HOLES CREEK								
A	656	164	1,162	7.4	722.2	717.6[2]	717.6	0.0
B	1,356	171	1,326	6.5	722.2	719.3[2]	719.3	0.0
C	1,656	103	735	11.8	722.2	718.8[2]	718.8	0.0
D	2,006	297	1,767	4.4	722.2	722.2	722.2	0.0
E	2,456	348	1,275	6.1	722.2	722.8	722.8	0.0
F	2,956	244	1,238	6.3	724.4	724.4	724.4	0.0
G	3,756	171	986	7.9	726.1	726.1	726.1	0.0
H	4,356	176	1,036	7.6	727.6	727.6	727.6	0.0
I	5,056	144	977	7.9	732.4	732.4	732.4	0.0
J	6,166	131	949	8.1	736.7	736.7	736.7	0.0
K	7,046	138	1,134	6.3	739.3	739.3	739.3	0.0
L	7,369	139	1,212	5.9	739.8	739.8	739.8	0.0
M	8,009	149	842	8.4	741.0	741.0	741.0	0.0
N	10,059	103	967	7.3	748.8	748.8	748.8	0.0
O	10,851	295	956	7.4	756.6	756.6	756.6	0.0
P	13,286	149	815	8.7	765.5	765.5	766.4	0.9
Q	14,216	130	589	12.0	775.1	775.1	775.1	0.0
R	15,693	234	788	9.0	784.9	784.9	784.9	0.0
S	18,871	79	682	10.0	801.4	801.4	801.7	0.3
T	20,376	146	802	8.5	804.9	804.9	805.9	1.0
U	24,990	125	789	5.0	820.5	820.5	821.1	0.6

[1]Feet above confluence with Great Miami River
[2]Elevation without considering backwater effects from Great Miami River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

HOLES CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
HOLES CREEK (continued)								
V	28,115	165	463	8.5	838.2	838.2	838.3	0.1
W	33,946	213	1,207	3.3	886.4	886.4	886.5	0.1
X	39,662	186	1,166	2.9	894.4	894.4	894.6	0.2
Y	47,400	208	1,120	2.3	905.3	905.3	906.2	0.9
Z	49,375	309	1,514	1.7	907.8	907.8	908.6	0.8

[1]Feet above confluence with Great Miami River

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION				
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)	
LILLY CREEK									
A	0.150	76	468	4.6	760.9	760.9	761.9	1.0	
B	0.180	40	246	8.7	761.3	761.3	762.3	1.0	
C	0.222	39	291	7.3	763.9	763.9	764.5	0.6	
D	0.231	39	286	7.5	764.4	764.4	765.0	0.6	
E	0.258	77	672	3.2	766.6	766.6	767.2	0.6	
F	0.260	81	676	3.2	766.6	766.6	767.2	0.6	
G	0.280	87	648	3.3	766.6	766.6	767.2	0.6	
H	0.306	81	570	3.8	766.6	766.6	767.2	0.6	
I	0.378	62	377	3.1	766.9	766.9	767.4	0.5	
J	0.404	46	316	3.7	767.8	767.8	768.2	0.4	
K	0.424	45	286	4.1	767.8	767.8	768.2	0.4	
L	0.439	55	302	3.8	767.8	767.8	768.3	0.5	
M	0.483	29	125	11.8	768.0	768.0	768.1	0.1	
N	0.543	42	275	6.5	771.4	771.4	771.4	0.0	
O	0.643	94	501	5.8	773.6	773.6	774.4	0.8	
P	0.684	105	603	4.8	774.3	774.3	775.2	0.9	
Q	0.755	63	364	11.6	775.9	775.9	776.8	0.9	
R	0.824	252	1,624	2.9	778.9	778.9	779.9	1.0	
S	0.863	386	2,137	2.2	779.1	779.1	780.1	1.0	
T	0.939	215	1,205	3.9	779.5	779.5	780.4	0.9	
U	1.085	288	1,019	4.8	782.3	782.3	783.0	0.7	
V	1.286	270	481	9.8	786.1	786.1	786.6	0.5	

[1]Miles above confluence with Mad River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

LILLY CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
LITTLE BEAR CREEK								
A	130	66	333	6.4	775.2	770.1[2]	771.1	1.0
B	4,332	64	278	7.7	788.0	788.0	788.2	0.2
C	5,615	69	338	6.3	792.5	792.5	792.7	0.2
D	6,358	112	433	5.0	795.2	795.2	795.3	0.1
E	6,860	141	387	5.5	796.3	796.3	796.3	0.0
F	7,976	148	530	4.0	802.5	802.5	802.5	0.0
G	8,749	49	275	7.8	806.3	806.3	806.4	0.1
H	13,156	128	618	1.7	825.2	825.2	825.3	0.1
I	14,680	70	164	6.3	829.0	829.0	829.6	0.6
J	17,404	28	154	6.7	843.2	843.2	843.7	0.5
K	18,388	30	167	6.2	848.6	848.6	848.8	0.2
L	19,449	51	195	5.3	854.5	854.5	854.8	0.3
M	19,788	28	101	10.2	855.7	855.7	855.7	0.0
N	20,176	36	124	8.4	860.6	860.6	860.7	0.1
O	20,631	71	278	3.7	862.6	862.6	862.7	0.1
P	21,061	26	136	7.6	863.8	863.8	863.9	0.1
Q	21,340	27	94	11.0	867.4	867.4	867.4	0.0

[1]Feet above mouth

[2]Elevation without considering backwater effects from Bear Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

LITTLE BEAR CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
LITTLE BEAR CREEK (continued)								
R	21,562	32	194	5.3	870.1	870.1	870.2	0.1
S	21,874	88	336	3.1	871.3	871.3	871.8	0.5
T	22,395	22	133	7.8	871.6	871.6	872.5	0.9
U	28,804	22	150	6.9	911.4	911.4	912.2	0.8
V	29,274	67	221	4.7	915.0	915.0	915.5	0.5
W	29,958	259	656	1.6	921.2	921.2	922.1	0.9
X	31,875	71	307	3.4	934.7	934.7	935.7	1.0

[1]Feet above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

LITTLE BEAR CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
LITTLE BEAVER CREEK								
A	0.06	224[2]	835	6.36	869.9	869.9	870.4	0.5
B	0.34	500[2]	2,670	1.99	873.2	873.2	873.7	0.5
C	0.56	642	2,180	2.44	875.5	875.5	875.7	0.2
D	0.65	405	1,295	4.10	876.5	876.5	876.7	0.2
E	0.86	475	1,577	3.37	879.9	879.9	880.3	0.4
F	1.01	280	1,043	5.33	880.9	880.9	881.1	0.2
G	1.18	180	1,189	4.47	882.6	882.6	882.7	0.1
H	1.38	138	693	9.29	887.5	887.5	888.3	0.8
I	1.49	90	631	8.32	890.4	890.4	890.6	0.2
J	1.96	70	437	4.69	903.3	903.3	903.6	0.3
K	2.18	57	326	6.29	908.1	908.1	908.1	0.0
L	2.56	57	370	5.54	917.5	917.5	917.6	0.1
M	2.73	143	537	2.83	920.0	920.0	920.4	0.4
N	2.94	55	274	5.55	923.2	923.2	923.5	0.3
0	3.18	49	298	5.10	930.5	930.5	931.0	0.5
P	3.27	47	215	7.07	930.6	930.6	931.1	0.5
Q	3.42	149	689	2.21	937.8	937.8	938.1	0.3
R	3.59	24	198	7.68	940.5	940.5	940.8	0.3
S	3.62	26	139	10.94	941.3	941.3	941.5	0.2
T	3.68	50	402	3.78	944.7	944.7	945.2	0.5
U	3.85	36	135	11.26	950.3	950.3	950.3	0.0
V	4.07	137	1,767	0.59	965.2	965.2	965.7	0.5

[1]Miles above corporate limits
[2]Portion of width lies outside community

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

LITTLE BEAVER CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
NORTH BRANCH LITTLE BEAVER CREEK								
A	0.11[1]	221	984	2.49	868.7	867.2[3]	867.7	0.5
B	0.31[1]	243	905	2.71	868.7	867.5[3]	868.0	0.5
C	0.67[1]	546	1,394	1.79	868.7	868.2[3]	868.7	0.5
D	0.75[1]	400	862	2.84	868.9	868.9	869.3	0.4
E	0.83[1]	236	632	1.93	869.9	869.9	870.2	0.3
PENN CREEK								
A	0.14[2]	439	707	2.25	869.5	869.5	870.0	0.5
B	0.48[2]	104	411	3.65	884.3	884.3	884.5	0.2
C	0.51[2]	86	355	4.23	884.8	884.8	885.0	0.2
D	0.68[2]	95	377	3.98	889.6	889.6	890.1	0.5
E	0.72[2]	88	436	3.42	890.7	890.7	891.2	0.5
F	0.75[2]	88	438	3.42	890.9	890.9	891.4	0.5
G	0.80[2]	38	257	5.84	891.5	891.5	892.0	0.5
H	0.83[2]	137	635	2.36	892.3	892.3	892.8	0.5
I	0.86[2]	142	496	3.02	892.3	892.3	892.8	0.5

[1]Miles above confluence with Little Beaver Creek
[2]Miles above confluence with North Branch Little Beaver Creek
[3]Elevations without considering backwater effects from Little Beaver Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

NORTH BRANCH LITTLE BEAVER CREEK – PENN CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
LITTLE TWIN CREEK								
A	0.27	216	1,445	5.7	713.5	713.5	714.2	0.7
B	0.42	316	2,504	3.3	716.2	716.2	716.9	0.7
C	0.45	179	1,750	4.7	716.3	716.3	717.0	0.7
D	0.52	126	1,259	6.6	717.5	717.5	718.2	0.7
E	0.70	216	1,834	4.5	719.4	719.4	720.2	0.8
F	0.94	153	1,051	7.9	722.2	722.2	722.9	0.7
G	1.12	289	1,569	5.3	726.3	726.3	727.0	0.7
H	1.41	122	1,092	7.6	732.1	732.1	731.1	1.0

[1]Miles above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

LITTLE TWIN CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
MAD RIVER								
A	0.28	238	3,688	7.5	740.4	740.2[3]	741.2	1.0
B	0.32	256[2]	3,953	7.0	740.4	740.4	741.4	1.0
C	0.53	192[2]	3,019	9.1	741.5	741.5	742.5	1.0
D	0.57	192[2]	2,983	9.2	741.9	741.9	742.8	0.9
E	0.61	192[2]	2,738	10.0	742.1	742.1	743.0	0.9
F	0.65	192[2]	2,728	10.1	742.7	742.7	743.5	0.8
G	0.99	214	3,195	8.6	746.3	746.3	747.0	0.7
H	1.34	314	5,424	5.1	748.2	748.2	749.1	0.9
I	1.62	328	4,694	5.9	749.1	749.1	750.0	0.9
J	1.66	328	4,755	5.8	749.3	749.3	750.2	0.9
K	2.14	351	5,065	5.4	752.1	752.1	753.1	1.0
L	2.68	298	3,919	7.0	757.4	757.4	758.2	0.8
M	2.72	309	4,186	6.6	758.2	758.2	758.8	0.6
N	3.32	359	4,933	5.6	764.0	764.0	764.4	0.4
0	3.87	204	2,823	9.7	770.4	770.4	771.0	0.6
P	3.91	198	2,566	10.7	770.9	770.9	771.5	0.6
Q	4.53	1,165	6,097	4.5	778.7	778.7	779.7	1.0
R	5.29	535	4,988	5.5	785.1	785.1	785.9	0.8

[1]Miles above mouth
[2]Floodway width extended to include levee
[3]Elevation without considering backwater effects from Great Miami River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

MAD RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
MIDDLE BRANCH LITTLE BEAVER CREEK								
A	0.18[1]	44	280	9.43	897.3	897.3	897.8	0.5
B	0.47[1]	60	386	6.84	905.1	905.1	905.1	0.0
C	0.54[1]	57	376	7.02	906.3	906.3	906.5	0.2
D	0.59[1]	64	314	8.41	908.8	908.8	909.0	0.2
E	0.60[1]	18	157	16.82	910.1	910.1	910.1	0.0
F	0.67[1]	85	854	3.06	915.7	915.7	916.0	0.3
G	1.00[1]	79	605	4.36	917.5	917.5	917.7	0.2
H	1.27[1]	67	352	7.50	922.9	922.9	923.2	0.3
I	1.51[1]	60	524	5.04	930.6	930.6	930.9	0.3
J	1.67[1]	310	1,038	1.60	933.3	933.3	933.7	0.4
K	1.86[1]	295	1,101	1.50	933.6	933.6	934.0	0.4
L	1.94[1]	56	413	3.90	934.3	934.3	934.6	0.3
M	1.99[1]	70	525	2.90	934.9	934.9	935.3	0.4
SOUTH BOULEVARD CREEK								
A	0.08[2]	270	1,103	2.34	932.7	932.7	933.2	0.5
B	0.14[2]	250	896	2.69	933.0	933.0	933.4	0.4
C	0.34[2]	200	527	4.99	938.5	938.5	938.5	0.0

[1]Miles above confluence with Little Beaver Creek
[2]Miles above confluence with Middle Branch Little Beaver Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

MIDDLE BRANCH LITTLE BEAVER CREEK – SOUTH BOULEVARD CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
NORTH BRANCH LITTLE SUGAR CREEK								
A	0.31	79	263	6.20	939.5	939.5	939.6	0.1
B	0.62	56	259	6.29	962.8	962.8	962.8	0.0
C	0.84	66	314	3.82	968.8	968.8	969.1	0.3
D	0.99	50	298	4.03	971.9	971.9	972.3	0.4
E	1.03	40	277	4.33	972.0	972.0	972.4	0.4
F	1.17	32	133	9.02	977.0	977.0	977.0	0.0
G	1.60	146	729	1.17	982.5	982.5	982.6	0.1
H	1.68	159	737	1.15	982.8	982.8	982.8	0.0
I	1.79	147	689	1.23	985.2	985.2	985.3	0.1

[1]Miles above corporate limits

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

NORTH BRANCH LITTLE SUGAR CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
NORTH BRANCH WOLF CREEK								
A	135	100	762	6.9	827.1	827.0[2]	827.2	0.2
B	1,285	94	716	7.4	831.4	831.4	831.4	0.0
C	1,750	400	1,377	3.8	833.3	833.3	833.4	0.1
D	2,255	400	1,382	3.8	834.1	834.1	834.6	0.5
E	2,835	230	908	5.7	835.8	835.8	836.2	0.4
F	3,365	230	1,132	4.6	837.5	837.5	838.0	0.5
G	3,850	105	729	7.1	838.6	838.6	839.1	0.5
H	3,950	79	601	8.6	839.0	839.0	839.4	0.4
I	4,450	79	600	8.6	841.8	841.8	841.8	0.0
J	5,045	100	827	6.2	844.6	844.6	844.6	0.0
K	5,830	100	670	7.6	847.1	847.1	847.4	0.3
L	6,495	190	897	5.7	850.3	850.3	850.7	0.4
M	7,040	290	2,821	1.8	851.4	851.4	851.9	0.5
N	7,475	95	808	6.0	851.7	851.7	852.1	0.4
0	8,130	80	614	7.8	854.1	854.1	854.6	0.5
P	8,715	90	764	6.3	856.8	856.8	857.3	0.5
Q	8,835	155	687	7.0	857.8	857.8	857.8	0.0
R	9,000	121	955	6.2	858.7	858.7	859.7	1.0
S	9,505	116	818	4.8	859.9	859.9	860.8	0.9

[1]Feet above mouth
[2]Backwater from Wolf Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

NORTH BRANCH WOLF CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
NORTH BRANCH WOLF CREEK (continued)								
T	11,523	102	606	6.5	868.2	868.2	869.1	0.9
U	13,267	74	447	8.9	875.1	875.1	875.8	0.7
V	13,582	701	3,369	1.2	879.5	879.5	880.5	1.0
W	14,880	305	1,552	2.6	880.6	880.6	881.6	1.0
X	16,524	206	956	4.1	886.4	886.4	887.2	0.8
Y	19,713	69	403	9.9	896.5	896.5	896.9	0.4
Z	21,203	152	753	5.3	902.0	902.0	902.8	0.8
AA	21,642	78	568	7.0	903.3	903.3	904.0	0.7
AB	22,485	217	1,267	3.1	907.9	907.9	908.1	0.2
AC	25,736	185	1,073	3.5	915.0	915.0	916.0	1.0
AD	27,276	131	786	4.8	919.1	919.1	920.1	1.0
AE	28,907	168	829	4.5	924.2	924.2	924.8	0.6
AF	29,137	318	1,961	1.9	929.7	929.7	929.7	0.0
AG	29,739	246	1,580	2.4	930.1	930.1	930.2	0.1
AH	30,066	217	1,484	2.5	930.7	930.7	931.2	0.5
AI	30,910	122	846	4.4	931.2	931.2	931.8	0.6
AJ	31,373	85	468	8.0	932.1	932.1	932.9	0.8
AK	31,755	207	907	4.1	934.5	934.5	935.4	0.9
AL	33,303	320	1,045	3.6	940.6	940.6	940.8	0.2
AM	33,723	48	276	13.6	943.7	943.7	943.7	0.0

[1] Feet above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

NORTH BRANCH WOLF CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
POPLAR CREEK								
A	1.47	55	360	5.0	844.4	844.4	844.6	0.2
B	1.69	75	279	6.4	856.0	856.0	857.0	1.0
C	1.82	50	304	5.9	864.2	864.2	864.3	0.1
D	1.97	50	264	6.8	872.4	872.4	872.8	0.4
E	2.08	45	281	6.4	882.5	882.5	883.0	0.5
F	2.25	39	193	8.4	892.7	892.7	892.8	0.1
G	2.44	36	201	8.1	907.8	907.8	908.0	0.2
H	2.47	30	190	8.6	909.8	909.8	910.2	0.4
I	2.55	30	229	7.1	919.3	919.3	919.5	0.2
J	2.60	50	283	5.8	924.0	924.0	924.5	0.5
K	2.76	50	278	5.1	941.5	941.5	942.2	0.7
L	2.90	44	261	5.4	952.6	952.6	953.3	0.7

[1]Miles above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

POPLAR CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
SPRING RUN								
A	600	50	231	4.8	820.0	818.2[2]	819.2	1.0
B	2,454	28	166	6.7	823.6	823.6	823.9	0.3
C	2,962	22	101	11.1	829.1	829.1	829.3	0.2
D	4,008	48	195	5.7	836.6	836.6	836.6	0.0
E	4,914	41	170	6.6	841.8	841.8	841.9	0.1
F	6,875	25	140	8.0	856.2	856.2	856.4	0.2
G	9,738	45	211	5.3	873.9	873.9	874.0	0.1
H	11,742	35	199	5.6	880.2	880.2	880.4	0.2
I	15,148	20	140	7.9	886.2	886.2	886.5	0.3
J	15,646	70	402	2.8	888.9	888.9	889.5	0.6
K	17,113	36	193	5.8	890.0	890.0	890.8	0.8
L	17,948	33	159	7.0	893.2	893.2	893.4	0.2
M	18,465	51	309	3.6	895.4	895.4	896.2	0.8
N	19,381	31	162	6.9	897.1	897.1	897.4	0.3
0	19,702	32	159	7.0	898.1	898.1	898.6	0.5
P	20,390	24	189	5.9	900.3	900.3	901.2	0.9

[1]Feet above confluence with Little Bear Creek
[2]Elevation without considering backwater effects from Little Bear Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

SPRING RUN

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
SPRING RUN (continued)								
Q	20,844	44	243	4.6	901.2	901.2	902.1	0.9
R	22,006	97	618	1.8	905.2	905.2	906.1	0.9
S	22,517	38	226	4.9	905.5	905.5	906.3	0.8
T	22,839	149	555	2.0	907.0	907.0	907.4	0.4
U	23,186	117	446	2.5	907.3	907.3	907.7	0.4
V	23,572	28	142	7.8	908.0	908.0	908.7	0.7
W	25,323	33	181	6.1	916.1	916.1	917.1	1.0

[1]Feet above confluence with Little Bear Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

SPRING RUN

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
STILLWATER RIVER								
A	0.32	234	2,500	4.7	746.2	745.4[2]	745.4	0.0
B	0.36	234	2,461	4.9	746.4	744.5[2]	745.4	0.9
C	0.93	219	2,240	5.4	747.1	747.1	747.2	0.1
D	1.44	230	2,555	4.7	749.4	749.4	749.9	0.5
E	1.48	230	2,595	4.6	749.6	749.6	750.3	0.7
F	1.97	195	2,133	5.6	752.7	752.7	753.5	0.8
G	2.65	304	3,710	3.2	755.5	755.5	756.3	0.8
H	2.84	297	2,985	4.0	756.2	756.2	756.9	0.7
I	2.88	297	3,054	3.9	756.5	756.5	757.2	0.7
J	3.18	523	3,202	3.7	757.8	757.8	758.4	0.6
K	3.53	250	3,146	3.8	758.7	758.7	759.5	0.8
L	3.74	241	2,343	5.1	759.3	759.3	760.0	0.7
M	4.14	250	2,376	5.1	761.1	761.1	761.5	0.4
N	4.51	276	2,333	5.1	762.6	762.6	763.0	0.4
O	4.99	316	2,341	5.1	765.7	765.7	766.6	0.9
P	5.21	265	2,671	4.5	767.3	767.3	768.1	0.8
Q	5.55	320	3,681	3.3	768.8	768.8	769.7	0.9
R	6.93	407	3,529	3.4	775.7	775.7	776.6	0.9

[1]Miles above mouth

[2]Elevation without considering backwater effects from Great Miami River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

STILLWATER RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
STILLWATER RIVER (continued)								
S	7.52	214	2,557	4.7	777.6	777.6	778.6	1.0
T	7.57	214	2,593	4.6	777.9	777.9	778.8	0.9
U	7.98	277	3,488	3.4	778.8	778.8	779.7	0.9
V	8.05	277	3,246	3.7	778.9	778.9	779.9	1.0
W	8.90	249	2,576	4.7	781.8	781.8	782.5	0.7

[1]Miles above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

STILLWATER RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
SUGAR CREEK								
A	5.34	90	341	8.6	857.6	857.6	857.6	0.0
B	5.69	93	465	4.0	862.3	862.3	863.1	0.8
C	6.07	56	286	6.5	878.5	878.5	879.4	0.9
D	6.39	233	850	2.2	889.5	889.5	890.4	0.9
E	6.84	91	414	3.9	908.3	908.3	908.9	0.6
F	7.15	53	266	6.0	920.8	920.8	921.7	0.9
G	7.23	92	418	3.8	923.4	923.4	924.0	0.6
H	7.36	80	444	3.6	924.4	924.4	925.3	0.9
I	7.76	42	216	6.6	933.4	933.4	933.8	0.4
J	8.28	87	472	2.7	938.0	938.0	938.9	0.9
K	8.40	95	364	3.5	939.5	939.5	940.3	0.8
L	8.72	72	388	2.9	944.3	944.3	945.3	1.0
M	8.95	73	338	3.3	947.4	947.4	948.3	0.9
N	9.26	47	221	4.4	954.1	954.1	954.8	0.7
O	9.35	79	369	2.7	956.6	956.6	957.4	0.8
P	9.51	44	169	5.3	958.6	958.6	959.5	0.9
Q	9.83	68	340	2.6	964.6	964.6	964.8	0.2
R	10.12	67	196	3.6	973.8	973.8	974.7	0.9
S	10.25	98	413	1.7	978.8	978.8	978.9	0.1

[1]Miles above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

SUGAR CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
TRIBUTARY A								
A	120	95	132	2.7	847.2	847.2	847.7	0.5
B	490	95	146	2.4	848.4	848.4	848.9	0.5
C	1,595	70	303	1.1	864.0	864.0	864.5	0.5
D	2,325	25	49	6.7	865.9	865.9	866.2	0.3
E	2,840	25	107	3.1	870.3	870.3	870.8	0.5
F	3,750	22	48	7.0	876.6	876.6	876.6	0.0
G	3,870	280	490	0.7	880.6	880.6	880.8	0.2
H	4,370	25	73	4.7	881.7	881.7	881.8	0.1
I	4,820	25	73	4.6	885.1	885.1	885.5	0.4
J	4,930	25	97	3.4	886.3	886.3	886.5	0.2
K	5,195	30	40	8.4	888.5	888.5	888.9	0.4
L	5,315	70	146	2.3	889.6	889.6	889.8	0.2
M	5,995	20	53	6.2	893.9	893.9	894.3	0.4
TRIBUTARY B								
A	70	80	497	4.4	860.5	860.5	861.0	0.5
B	830	50	232	9.1	864.0	864.0	864.3	0.3
C	1,210	130	412	5.1	868.2	868.2	868.4	0.2

[1]Feet above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

TRIBUTARY A – TRIBUTARY B

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
TRIBUTARY F								
A	1,580	130	245	3.4	850.6	850.6	851.1	0.5
B	2,010	35	109	7.6	855.0	855.0	855.1	0.1
C	2,120	110	354	2.4	857.4	857.4	857.9	0.5
D	2,405	80	310	2.7	862.5	862.5	862.5	0.0
TRIBUTARY G								
A	690	21	60	6.9	843.8	843.8	844.3	0.5
B	1,360	78	186	1.8	851.6	851.6	852.1	0.5
C	1,780	35	116	3.5	853.2	853.2	853.3	0.1
D	2,180	170	205	2.7	854.4	854.4	854.4	0.0
E	2,420	120	176	2.4	857.4	857.4	857.8	0.4
F	2,520	120	146	2.8	859.3	859.3	859.4	0.1
G	2,925	100	215	1.9	861.1	861.1	861.4	0.3
H	3,590	40	62	6.7	863.6	863.6	863.9	0.3
TRIBUTARY H								
A	300	265	1,281	0.9	853.8	853.8	854.3	0.5

[1] Feet above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

TRIBUTARY F – TRIBUTARY G – TRIBUTARY H

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
TWIN CREEK								
A	3.66	470[2]	7,131	2.6	688.7	688.7	689.7	1.0
B	4.32	645	5,268	3.5	693.5	693.5	694.4	0.9
C	4.86	728	6,882	2.7	697.6	697.6	698.5	0.9
D	5.53	240	3,225	5.7	703.2	703.2	704.0	0.8
E	5.82	517	5,575	3.3	705.7	705.7	706.6	0.9
F	6.34	366	3,837	4.8	708.0	708.0	709.0	1.0
G	6.39	296	3,838	4.8	709.7	709.7	710.3	0.6
H	6.68	1,119	9,588	1.9	711.1	711.1	711.9	0.8
I	6.90	494	4,512	2.6	711.7	711.7	712.5	0.8
J	6.95	494	3,972	3.0	711.9	711.9	712.9	1.0
K	6.99	494	3,573	3.3	712.2	712.2	713.1	0.9
L	7.03	494	3,318	3.6	713.1	713.1	713.8	0.7
M	7.09	365	3,763	3.2	713.5	713.5	714.1	0.6
N	7.74	681	4,226	2.8	716.5	716.5	717.5	1.0
O	8.24	128	1,490	8.0	721.4	721.4	722.4	1.0
P	8.73	773	5,162	1.9	724.0	724.0	725.0	1.0
Q	8.78	779	5,264	1.8	724.1	724.1	725.1	1.0
R	9.37	162	1,881	5.1	726.1	726.1	727.0	0.9
S	9.83	96	982	9.8	729.0	729.0	730.0	1.0

[1]Miles above mouth
[2]Width within corporate limits

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

TWIN CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
UNNAMED TRIBUTARY TO GREAT MIAMI RIVER								
A	5,400	44	194	4.0	946.8	946.8	947.6	0.8
B	6,400	120	132	4.3	956.1	956.1	956.1	0.0
C	7,250	75	109	5.2	959.6	959.6	960.0	0.4
WEST TRIBUTARY GREAT MIAMI RIVER								
A	0.12	604	4,574	4.4	762.4	762.4	763.2	0.8
B	0.24	417	3,192	6.3	763.1	763.1	763.9	0.8
C	0.27	799	4,520	4.4	763.3	763.3	764.3	1.0
D	1.46	1,322	10,724	1.9	767.6	767.6	768.4	0.8
E	1.64	1,068	10,350	1.9	767.6	767.6	768.6	0.8

[1]Miles above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

UNNAMED TRIBUTARY TO GREAT MIAMI RIVER - WEST TRIBUTARY GREAT MIAMI RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
WOLF CREEK								
A	0.07	103	1,109	11.2	738.3	731.5[2]	732.1	0.6
B	0.32	123	1,294	9.6	738.3	733.8[2]	734.6	0.8
C	0.52	135	1,549	8.0	738.3	735.9[2]	736.5	0.6
D	0.83	130	1,300	9.5	741.1	741.1	741.2	0.1
E	1.15	239	2,091	5.9	744.1	744.1	745.0	0.9
F	1.85	172	1,464	8.5	752.7	752.7	753.2	0.5
G	2.60	161	1,802	6.8	765.0	765.0	765.9	0.9
H	3.30	189	2,285	5.3	771.7	771.7	771.8	0.1
I	3.85	200	2,320	5.3	775.4	775.4	775.5	0.1
J	4.42	134	1,113	9.7	781.6	781.6	781.6	0.0
K	5.08	234	2,101	5.1	793.1	793.1	793.4	0.3
L	5.65	88	834	11.5	804.5	804.5	804.5	0.0
M	5.71	130	823	11.3	806.8	806.8	806.8	0.0
N	5.85	95	1,040	9.0	810.3	810.3	810.8	0.5
O	5.90	95	1,036	9.0	811.1	811.1	811.4	0.3
P	5.99	95	1,014	9.2	812.6	812.6	812.8	0.2
Q	6.09	100	1,151	8.1	814.3	814.3	814.3	0.0
R	6.17	115	1,073	8.7	815.3	815.3	815.3	0.0
S	6.18		1,466	6.4	816.3	816.3	816.3	0.0

[1]Miles above mouth

[2]Elevations without considering backwater effects from Great Miami River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

WOLF CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
WOLF CREEK (continued)								
T	6.27	125	1,200	7.8	817.0	817.0	817.0	0.0
U	6.33	115	1,052	8.5	817.9	817.9	817.9	0.0
V	6.39	85	903	9.9	818.7	818.7	818.7	0.0
W	6.43	85	874	10.3	819.5	819.5	819.6	0.1
X	6.57	125	1,224	7.3	821.9	821.9	822.4	0.5
Y	6.68	200	1,129	8.0	823.2	823.2	823.5	0.3
Z	6.73	105	1,035	8.7	824.1	824.1	824.6	0.5
AA	6.80	155	1,412	6.4	826.0	826.0	826.2	0.2
AB	6.90	85	694	7.6	827.8	827.8	828.0	0.2
AC	6.93	100	758	6.9	828.3	828.3	828.5	0.2
AD	7.02	111	652	8.0	829.8	829.8	830.0	0.2
AE	7.12	200	1,124	4.6	831.9	831.9	832.2	0.3
AF	7.13	250	1,539	3.3	832.8	832.8	832.9	0.1
AG	7.22	150	777	6.6	833.2	833.2	833.5	0.3
AH	7.31	115	677	7.6	834.7	834.7	835.1	0.4
AI	7.34	150	798	6.4	835.6	835.6	835.9	0.3
AJ	7.40	300	1,406	3.6	836.9	836.9	837.1	0.2
AK	7.55	105	604	8.3	838.9	838.9	839.3	0.4
AL	7.60	170	724	7.0	842.1	842.1	842.5	0.4
AM	7.68	240	1,219	4.1	844.1	844.1	844.3	0.2
AN	7.85	125	804	6.3	846.1	846.1	846.4	0.3

[1]Miles above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

WOLF CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
WOLF CREEK (continued)								
AO	7.91	300	1,408	3.6	847.8	847.8	848.0	0.2
AP	8.06	130	725	6.9	849.6	849.6	849.3	0.3
AQ	8.18	180	987	5.1	852.4	852.4	852.0	0.4
AR	8.33	210	1,013	5.0	854.7	854.7	854.3	0.4
AS	8.46	160	1,016	5.0	856.9	856.9	856.4	0.5
AT	9.70	92	760	7.4	884.8	884.8	883.9	0.9
AU	10.00	105	805	6.2	889.6	889.6	888.6	1.0
AV	10.41	226	1,426	3.5	896.4	896.4	895.8	0.6
AW	10.97	300	1,449	3.4	907.1	907.1	906.5	0.6
AX	11.50	194	1,319	3.8	919.5	919.5	918.7	0.8
AY	11.60	133	902	5.5	920.2	920.2	919.5	0.7
AZ	11.88	84	672	7.4	925.0	925.0	924.5	0.5
BA	12.12	119	977	4.2	930.0	930.0	929.2	0.8
BB	12.32	180	883	4.8	933.3	933.3	932.7	0.6
BC	12.50	96	658	5.9	935.7	935.7	935.5	0.2
BD	12.70	112	564	5.9	939.3	939.3	938.9	0.4
BE	13.08	101	415	8.0	950.8	950.8	950.5	0.3
BF	13.32	112	675	4.9	958.2	958.2	957.9	0.3
BG	13.67	168	851	3.9	962.4	962.4	961.8	0.6
BH	14.19	80	326	8.9	971.8	971.8	971.4	0.4

[1]Miles above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

WOLF CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
WOLF CREEK (continued)								
BI	14.64	54	366	8.0	982.3	982.3	982.0	0.3
BJ	14.67	102	633	4.6	984.5	984.5	984.2	0.3
BK	14.80	115	605	4.8	986.1	986.1	985.4	0.7
BL	15.03	55	300	9.7	990.4	990.4	990.8	0.4
BM	15.35	152	533	5.5	999.8	999.8	1,000.2	0.4
BN	15.39	213	787	3.7	1,001.1	1,001.1	1,001.5	0.4
BO	15.56	112	601	4.9	1,002.7	1,002.7	1,002.9	0.2
BP	15.60	69	304	9.6	1,003.4	1,003.4	1,003.4	0.0
BQ	15.65	61	420	6.9	1,005.5	1,005.5	1,005.6	0.1
BR	15.70	62	502	5.8	1,006.9	1,006.9	1,006.9	0.0
BS	15.80	47	412	7.1	1,008.9	1,008.9	1,009.2	0.3
BT	15.95	96	521	5.6	1,011.8	1,011.8	1,012.7	0.9
BU	16.20	75	600	4.9	1,015.8	1,015.8	1,016.3	0.5
BV	16.43	48	300	6.4	1,018.8	1,018.8	1,019.3	0.5

[1]Miles above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH
AND INCORPORATED AREAS

FLOODWAY DATA

WOLF CREEK

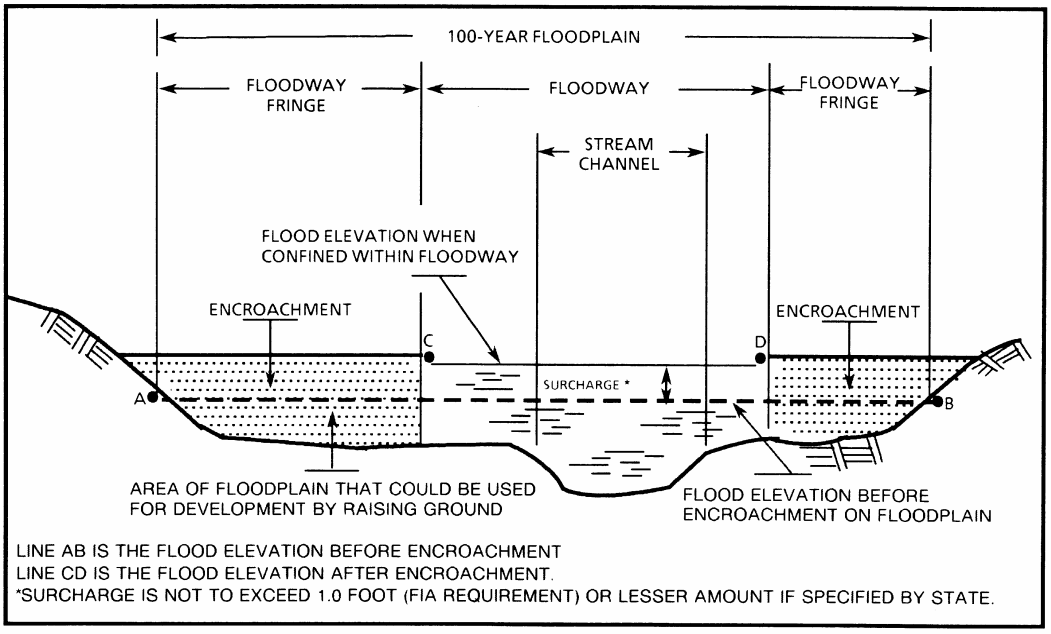


Figure 1- Floodway Schematic

No floodways were computed for the effective Sycamore Creek and Sycamore Creek Tributary.

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 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 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 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 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 Montgomery County, Ohio. 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, where applicable.

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 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 Federal Insurance and Mitigation Division, FEMA, 536 South Clark Street, Sixth Floor, Chicago, Illinois 60605.

9.0 BIBLIOGRAPHY AND REFERENCES

1. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, City of Trotwood, Montgomery County, Ohio, June 1979.

2. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, City of Kettering, Montgomery County, Ohio, April 1980.

3. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, Village of Germantown, Montgomery County, Ohio, January 2, 1981.

4. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, City of West Carrollton, Montgomery County, Ohio, April 15, 1981.

5. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, City of Moraine, Montgomery County, Ohio, April 15, 1981.

6. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, Village of Brookville, Montgomery County, Ohio, April 15, 1981.

7. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, City of Vandalia, Montgomery County, Ohio, May 4, 1981.

8. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, City of Centerville, Montgomery County, Ohio, May 18, 1981.

9. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, City of Miamisburg, Montgomery County, Ohio, January 1983.

10. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, Village of Carlisle, Montgomery County, Ohio, September 15, 1983.

11. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, City of Huber Heights, Montgomery County, Ohio, October 15, 1985.

12. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, City of Riverside, Montgomery County, Ohio, Revised September 20, 1996.

13. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, City of Dayton, Montgomery County, Ohio, Revised September 29, 1996.

14. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, Montgomery County, Unincorporated Areas, Ohio, Revised September 29, 1996.

15. 2000 U.S. Census: Montgomery County, Ohio. Retrieved on June 3, 2002, from http://factfinder.census.gov/.

16. U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Montgomery County, Ohio, June 1976.

17. The Board of Consultants, The Miami Conservancy District. Report to the Board of Directors, August 13, 1992.

18. U.S. Water Resources Council, Bulletin No. 17A, Guidelines for Determining Flood Flow Frequencies, June 1977.

19. U.S. Department of Agriculture, Soil Conservation Service, Technical Release No. 55, Urban Hydrology for Small Watersheds, January 1975.

20. Powell, Roy F., L. Douglas Jones, and D. Earl Jones, Jr., Approximate Method for Quick Floodplain Mapping, American Society of Civil Engineers, Convention Preprint 2559, November 1975.

21. U.S. Army Corps of Engineers, Louisville District, Interim Report for Water Resources Development: Miami River, Little Miami River, and Mill Creek Basins; Southwest Ohio, Louisville, Kentucky, Scale 1:2400, Contour Interval two feet, March 1980.

22. U.S. Army Corps of Engineers, Louisville District, Detailed Project Report, Miami River, Carlisle, Ohio, January 1981.

23. U.S. Army Corps of Engineers, Hydrologic Engineering Center, HEC-1 Flood Hydrograph Package, Davis, California, September 1990.

24. U.S. Army Corps of Engineers, Louisville District, Topographic Mapping, Scale 1"=100', Contour Interval 2 Feet, Aerial Photography flown in April 1993.

25. The Miami Conservancy District, Basin Hydrologic Data, 1977.

26. Communications with the Miami Conservancy District, 1967-1977.

27. Kucera and Associates, Mentor, Ohio, Aerial Photographs, Scale 1:4800; Contour Interval two feet: Trotwood, Ohio, March 1977.

28. Ohio Department of Natural Resources, Division of Planning, Floodplain Management Section, HEC-2 Computer Program Input Data for Floodplain Information Study.

29. U.S. Geological Survey, 7.5 Minute Series Topographic Maps, Scale 1:24000, Contour Intervals 5 and 10 feet: Franklin, Ohio, 1974; Miamisburg, Ohio, 1974; Farmersville, Ohio, 1960; Middletown, Ohio, 1970.

30. U.S. Geological Survey, 7.5 Minute Series Topographic Maps, Scale 1:24000, Contour Interval 10 feet: Dayton South, Ohio, 1974, and Miamisburg, Ohio, 1974.

31. U.S. Geological Survey, 7.5 Minute Series Topographic Maps, Scale 1:24000, Contour Interval 10 feet: Miamisburg, Ohio, 1965, (photorevised) 1974; Dayton South, Ohio, 1966, (photorevised) 1975.

32. U.S. Geological Survey, 7.5 Minute Series Topographic Map, Scale 1:24000, Contour Interval 10 feet: Village of Brookville, Ohio, 1961.

33. U.S. Geological Survey, 7.5 Minute Series Topographic Maps, Scale 1:24000, Contour Interval 10 feet: Bellbrook, Ohio, 1974; Dayton South, Ohio, 1966; Springboro, Ohio, 1974; and Waynesville, Ohio, 1974.

34. U.S. Geological Survey, 7.5 Minute Series Topographic Maps, Scale 1:24000, Contour Interval 10 feet: Dayton South, Ohio, 1974; Franklin, Ohio, 1974; Miamisburg, Ohio, 1974; and Springboro, Ohio, 1974.

35. U.S. Geological Survey, 7.5 Minute Series Topographic Map, Scale 1:24000, Contour Interval 10 feet: Franklin, Ohio, 1981.

36. U.S. Geological Survey, 7.5 Minute Series Topographic Maps, Scale 1:24000, Contour Interval 10 feet: Dayton North, Ohio, 1974; Dayton South, Ohio, 1974; Fairborn, Ohio, 1974; New Carlisle, Ohio, 1968.

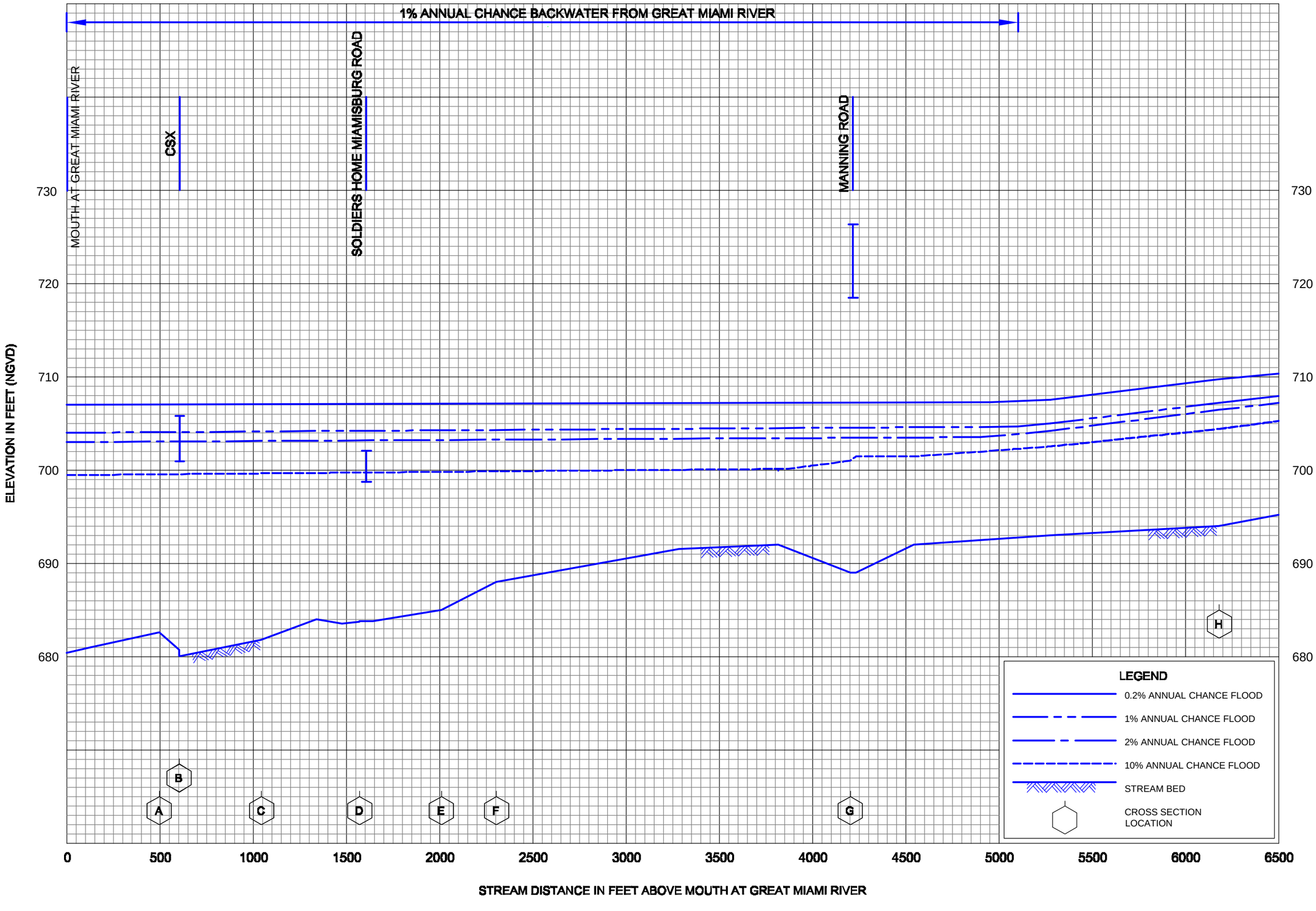
37. U.S. Army Corps of Engineers, Louisville District, Topographic Mapping, Scale 1"=100', Contour Interval 2 Feet, Aerial Photography flown in April 1993.

38. U.S. Department of the Interior, Geological Survey, 7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 10 Feet: Dayton North and Fairborn, Ohio, 1974; Dayton South, Ohio, 1966, photorevised 1975.

39. U.S. Army Corps of Engineers, Hydrologic Engineering Center, HEC-2 Water Surface Profiles Generalized Computer Program, Davis, California, May 1991.

40. U.S. Army Corps of Engineers, Hydrologic Engineering Center, HEC-2 Water surface Profiles Generalized Computer Program, Davis, California, October 1973.

41. U.S. Department of Housing and Urban Development, Federal Insurance Administration, Flood Hazard Boundary Map, City of Englewood, Montgomery County, Ohio, November 3, 1978.



FLOOD PROFILES

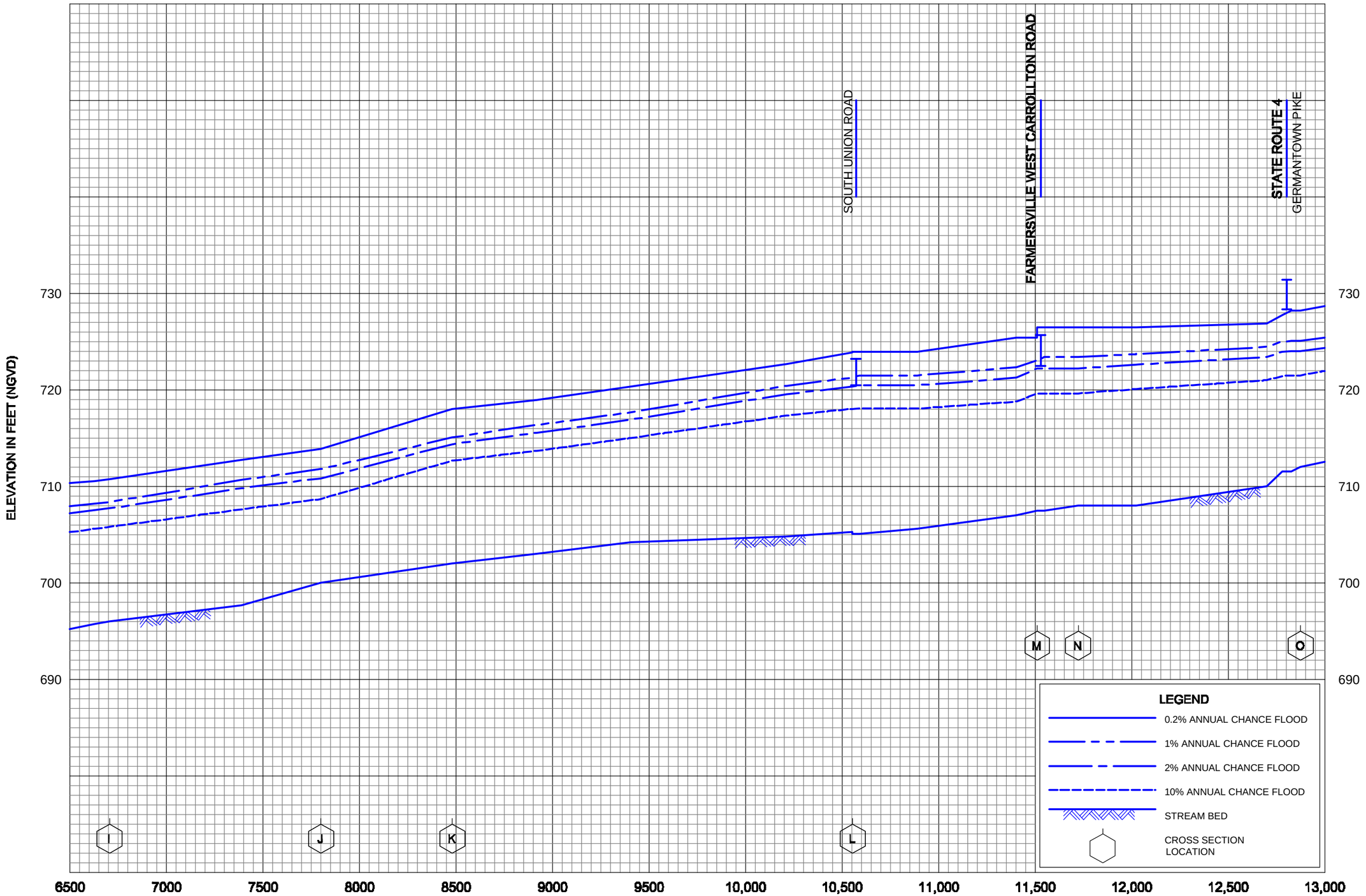
BEAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

01P



FLOOD PROFILES

BEAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

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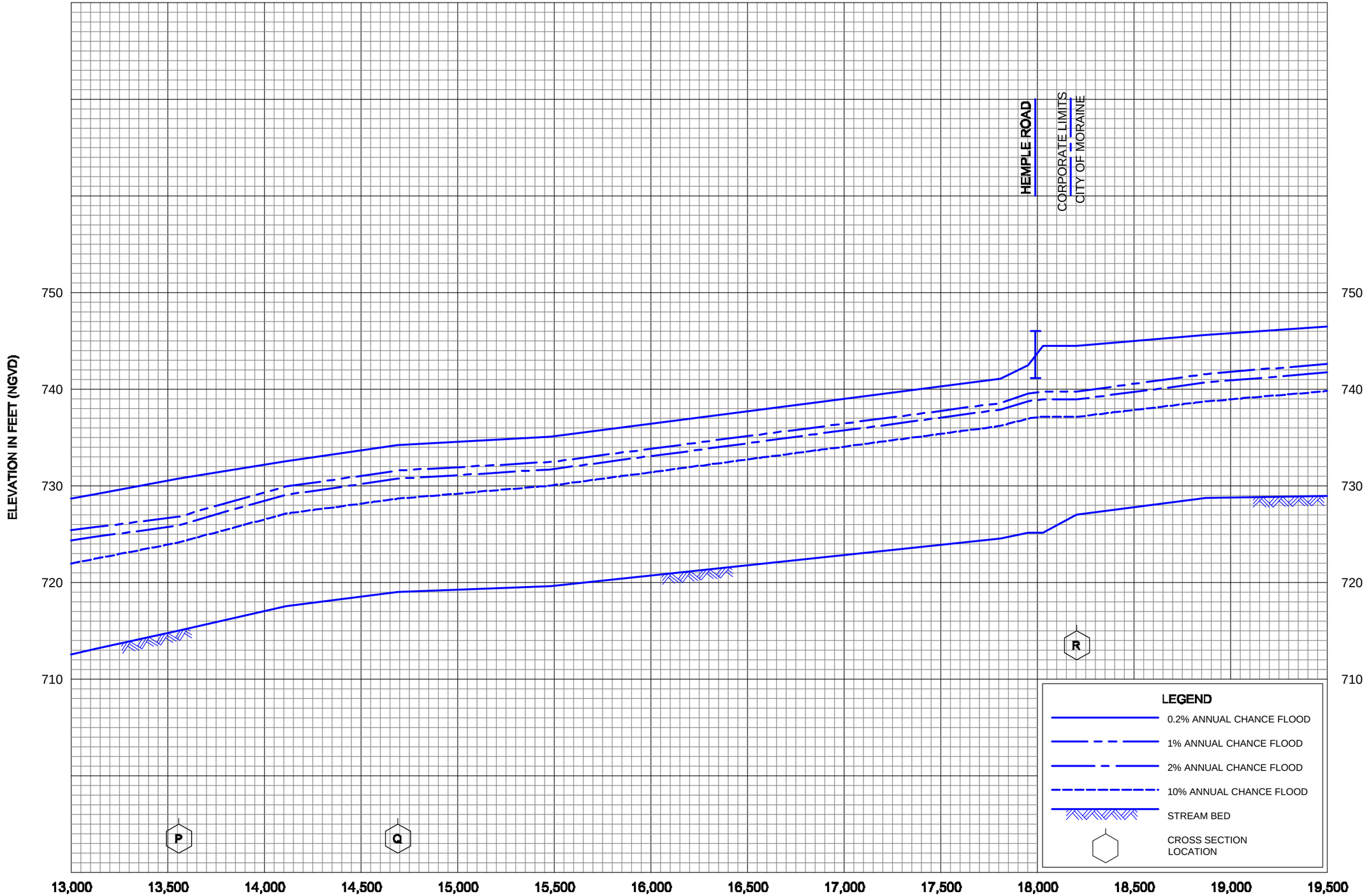


FLOOD PROFILES

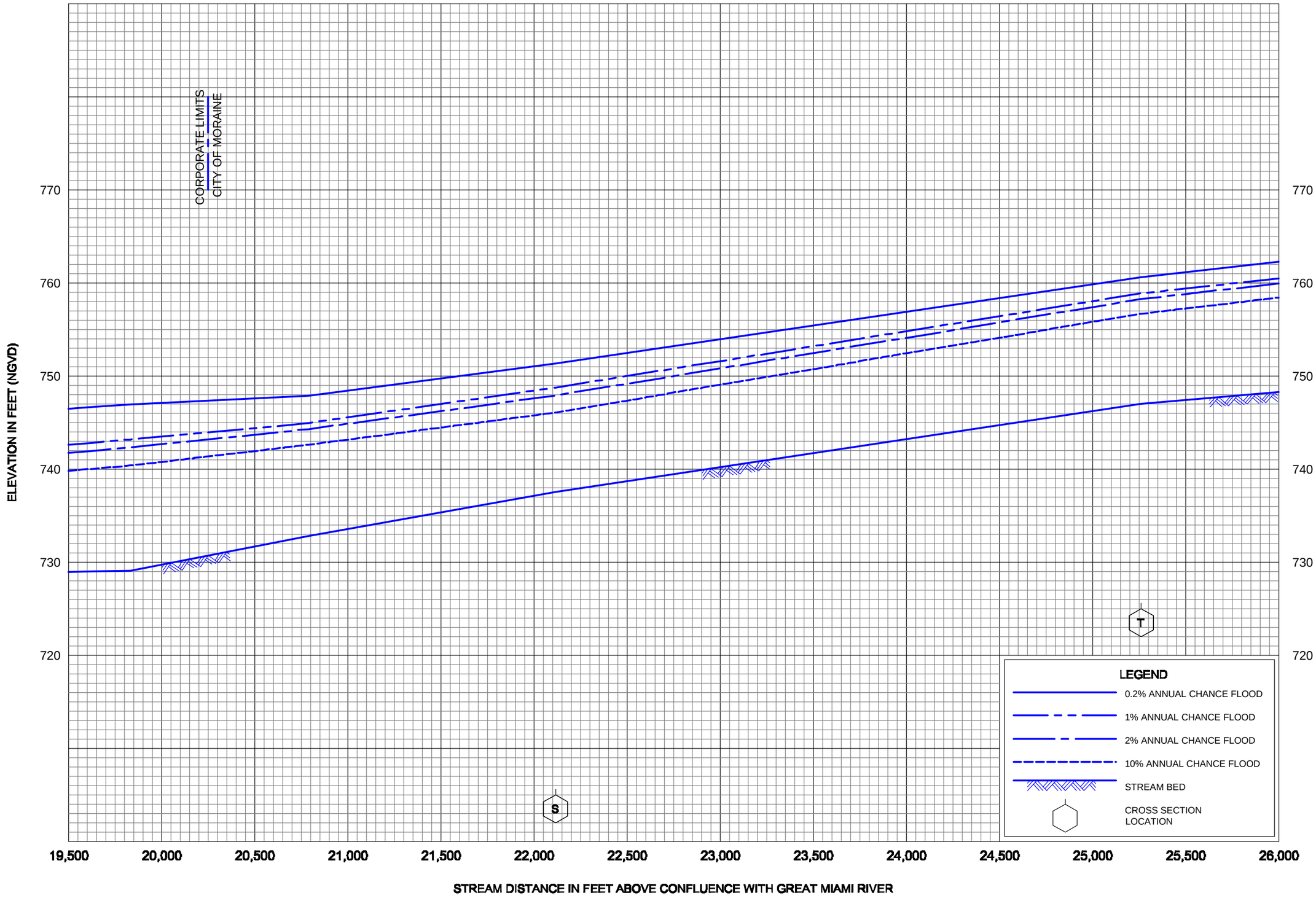
BEAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

03P



FLOOD PROFILES

BEAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

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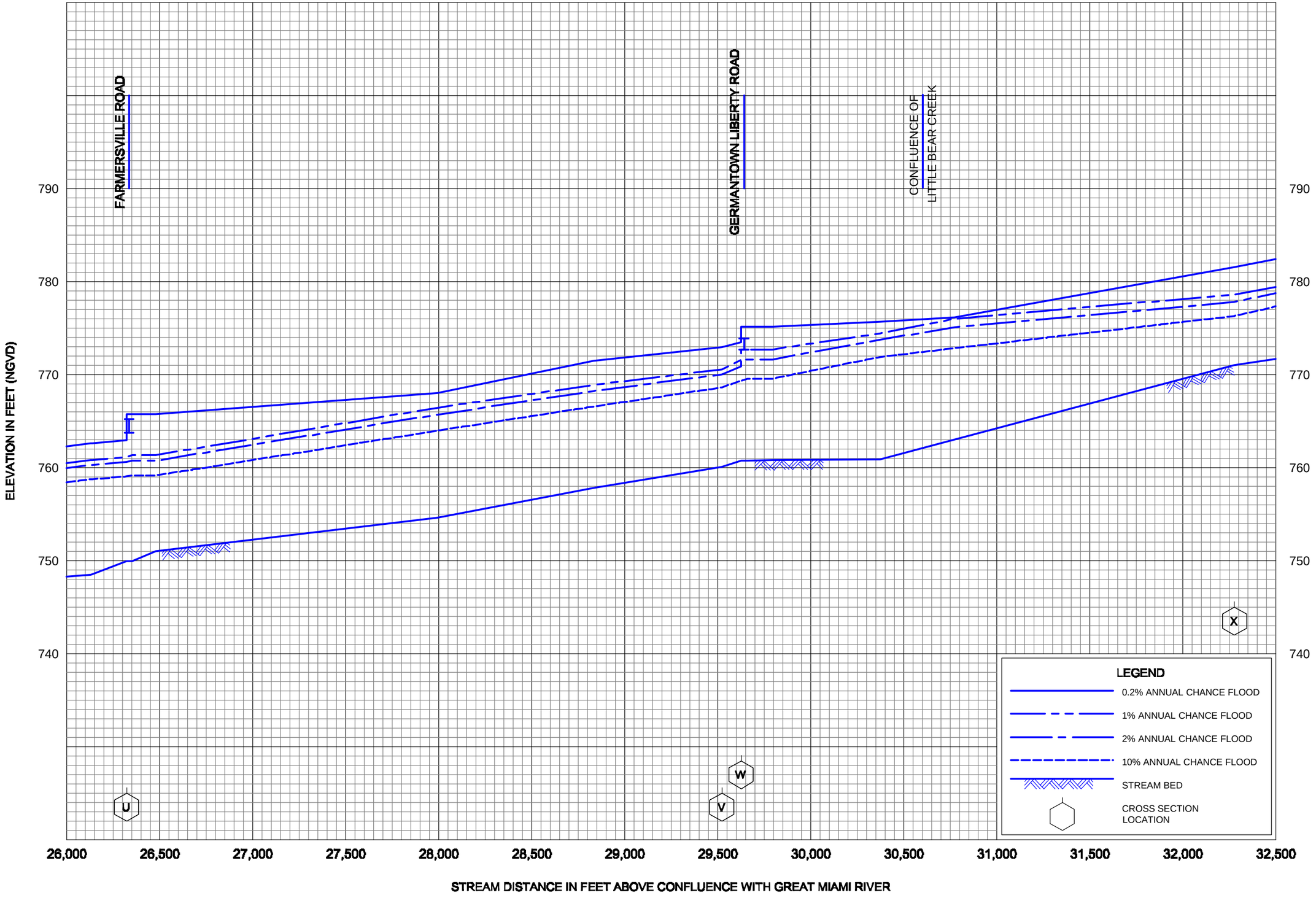

FLOOD PROFILES

BEAR CREEK

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MONTGOMERY COUNTY, OH

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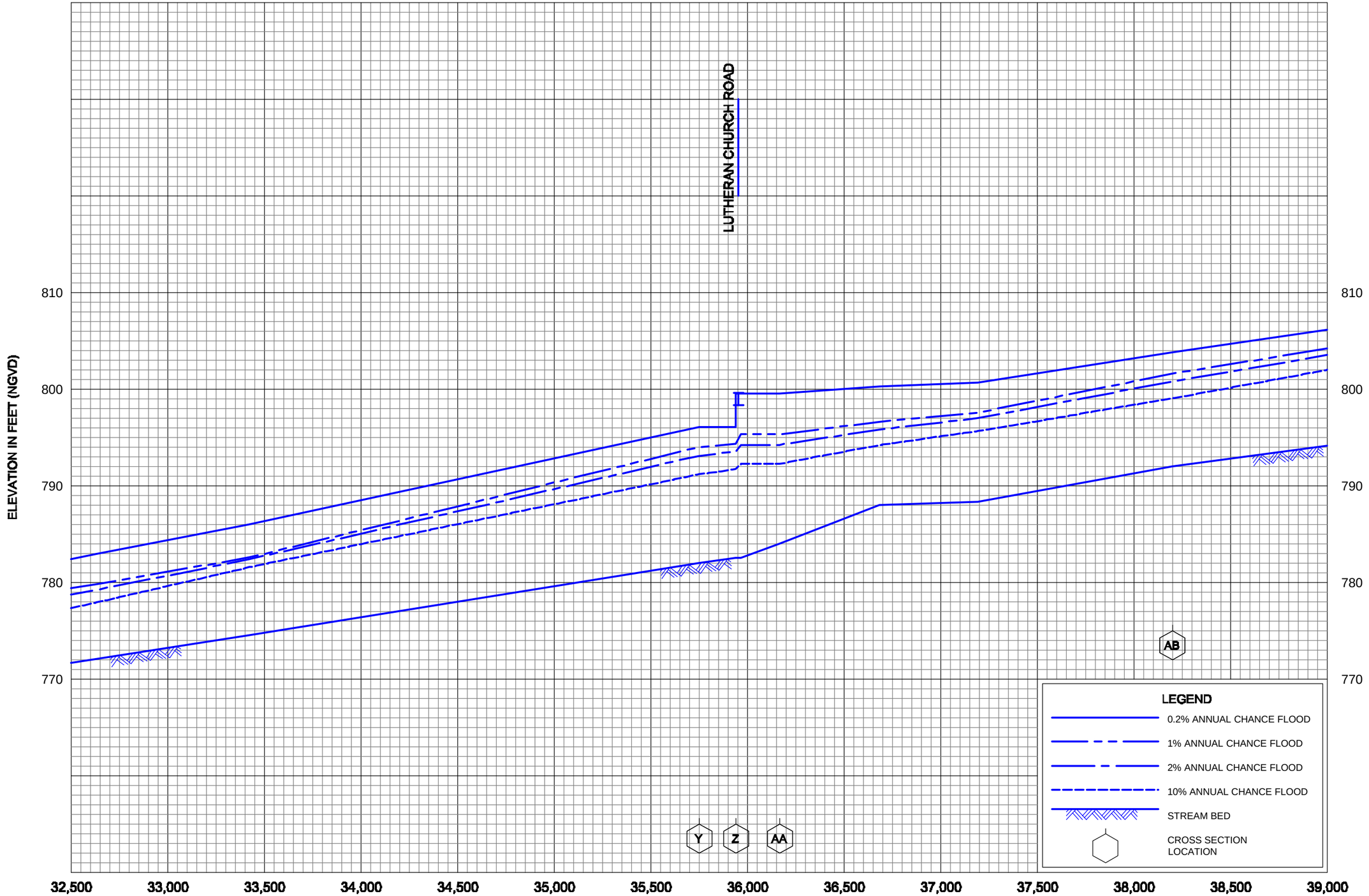

FLOOD PROFILES

BEAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

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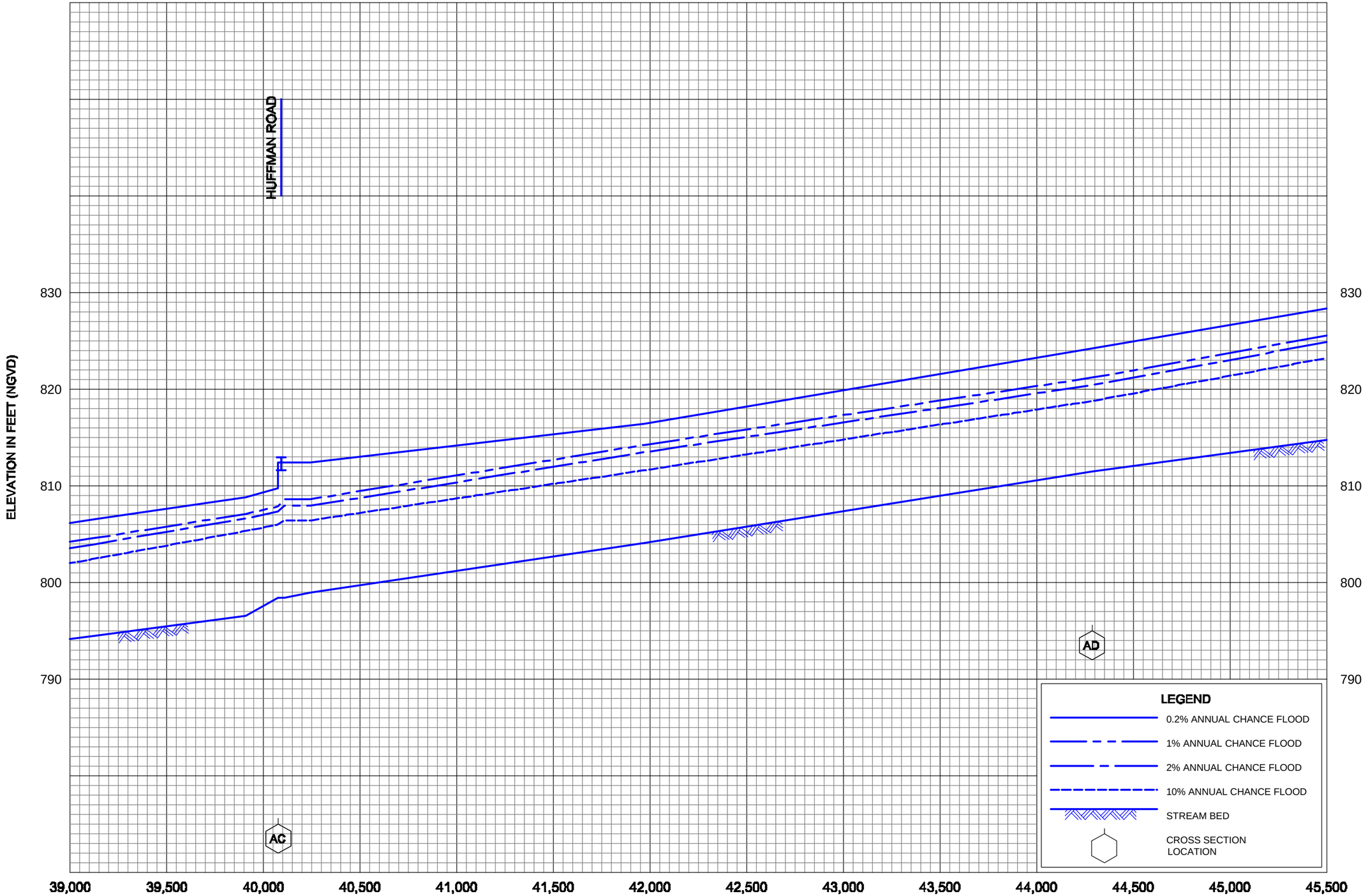

FLOOD PROFILES

BEAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

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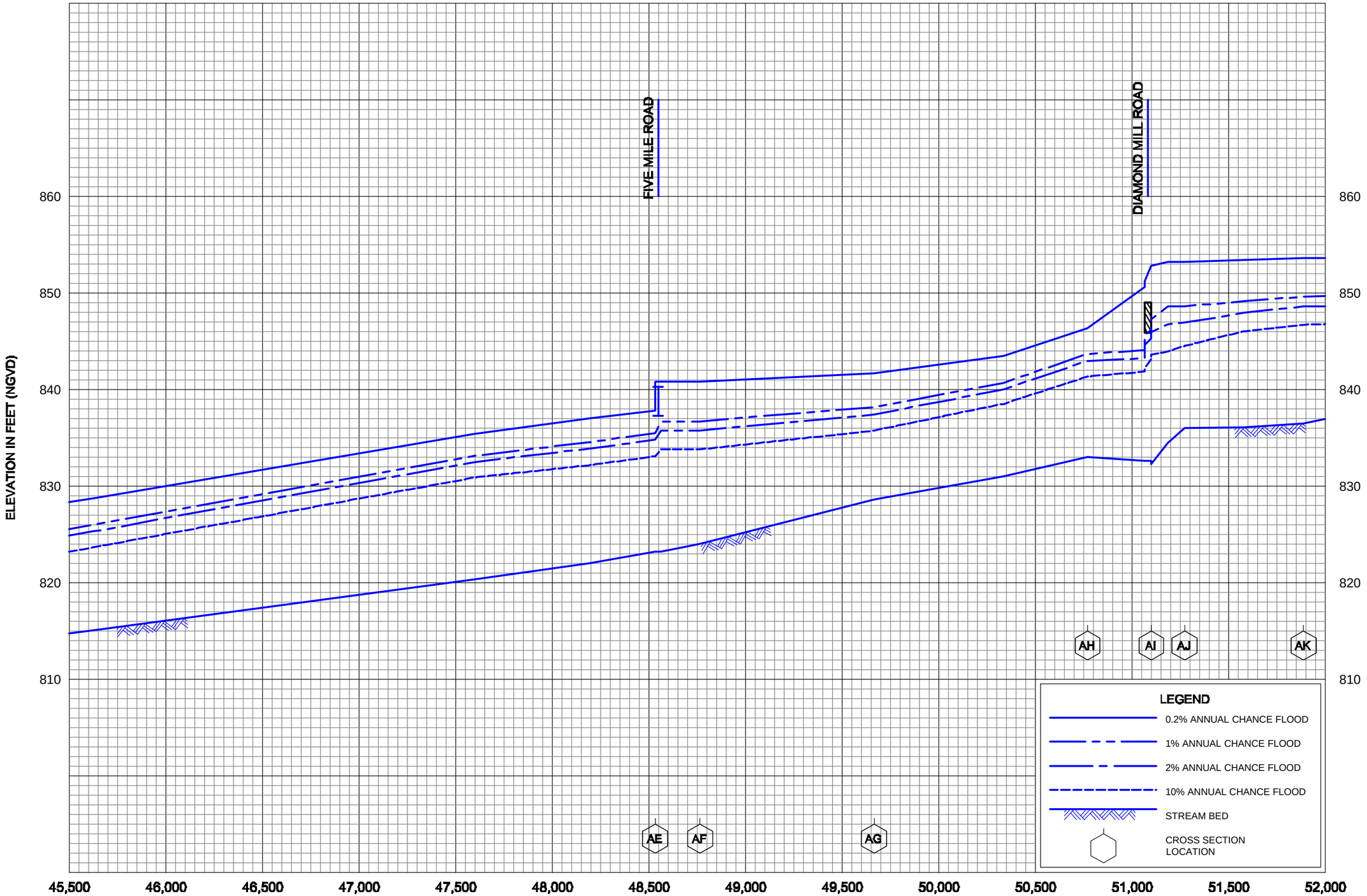

FLOOD PROFILES

BEAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

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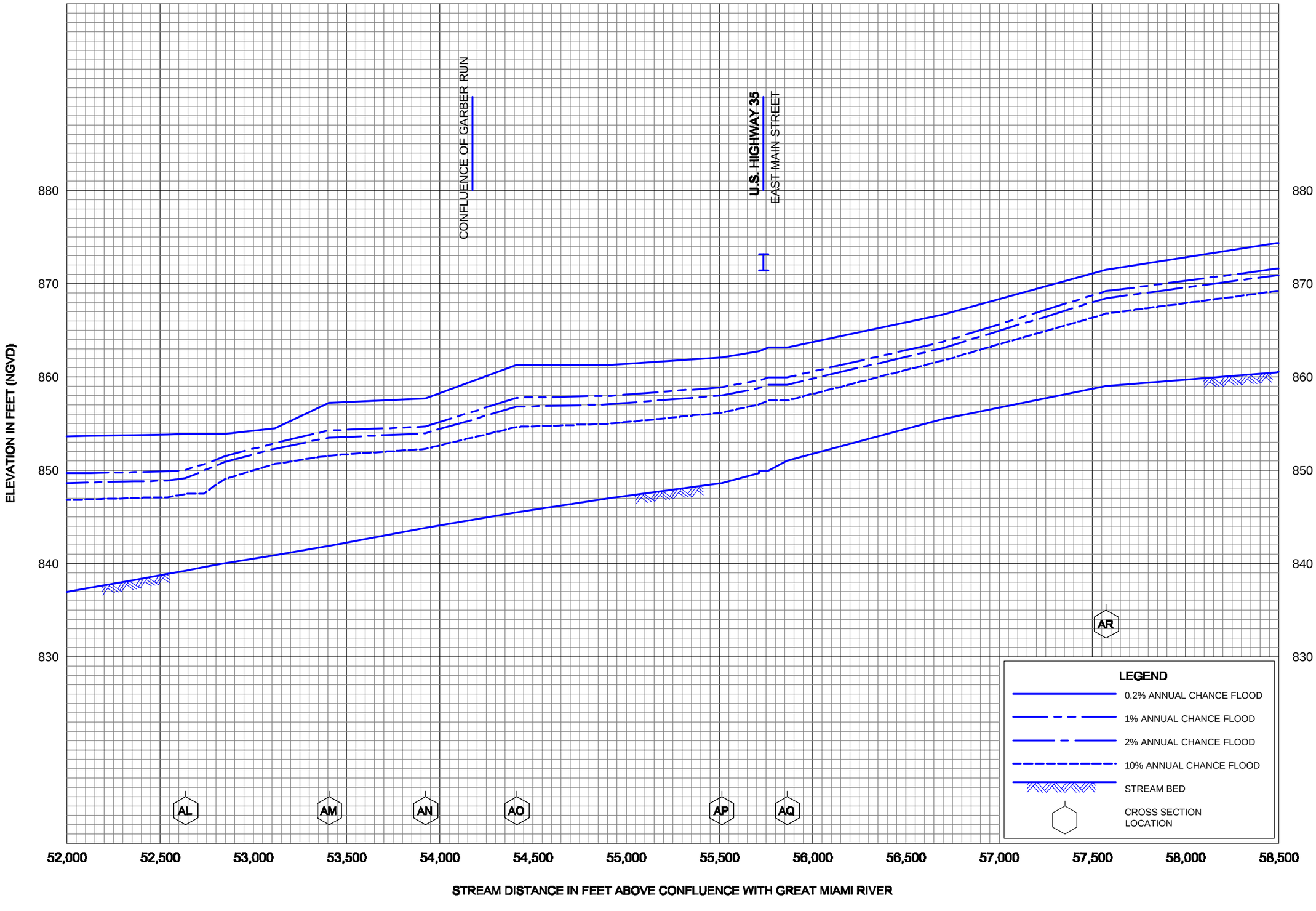

FLOOD PROFILES

BEAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

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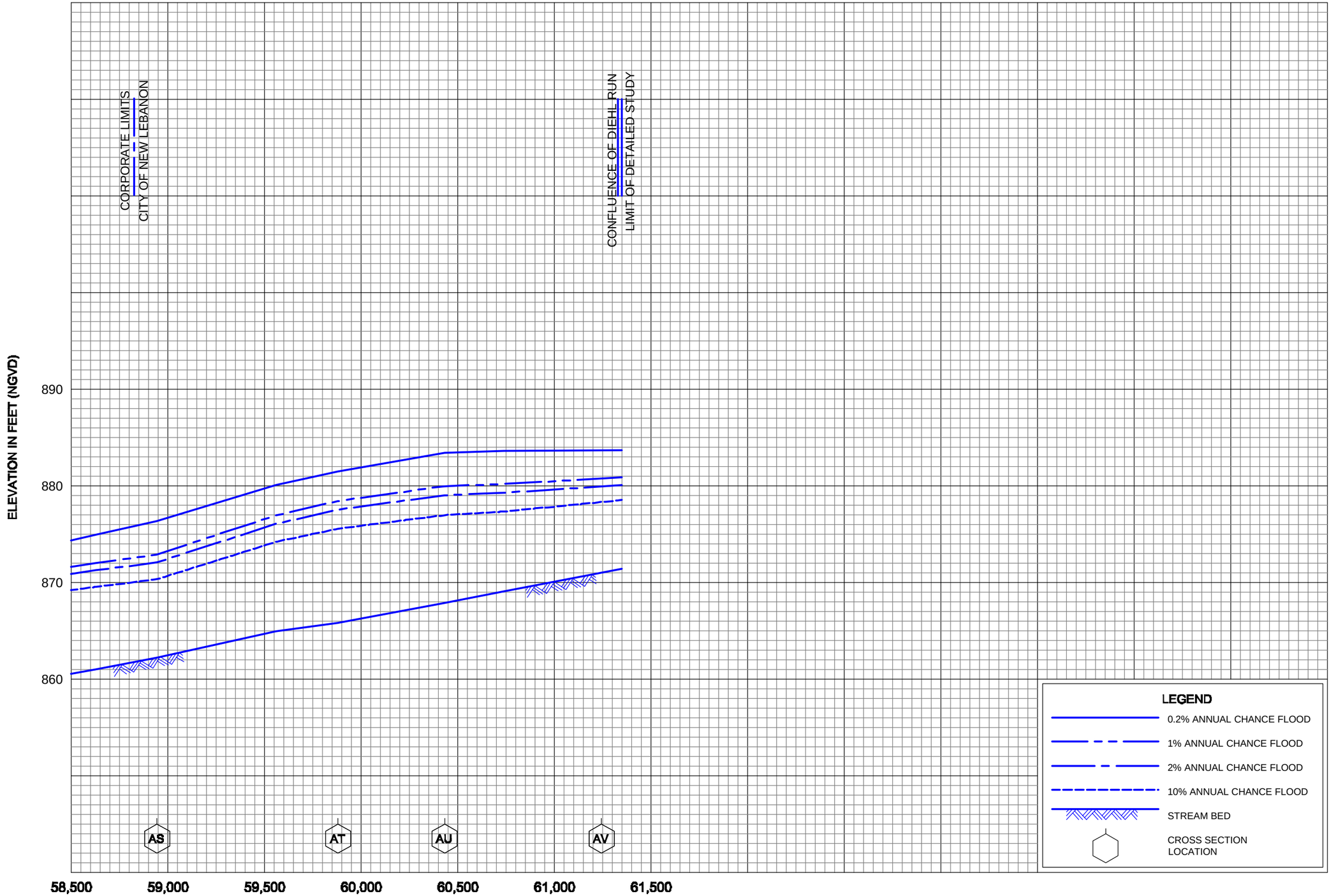


FLOOD PROFILES

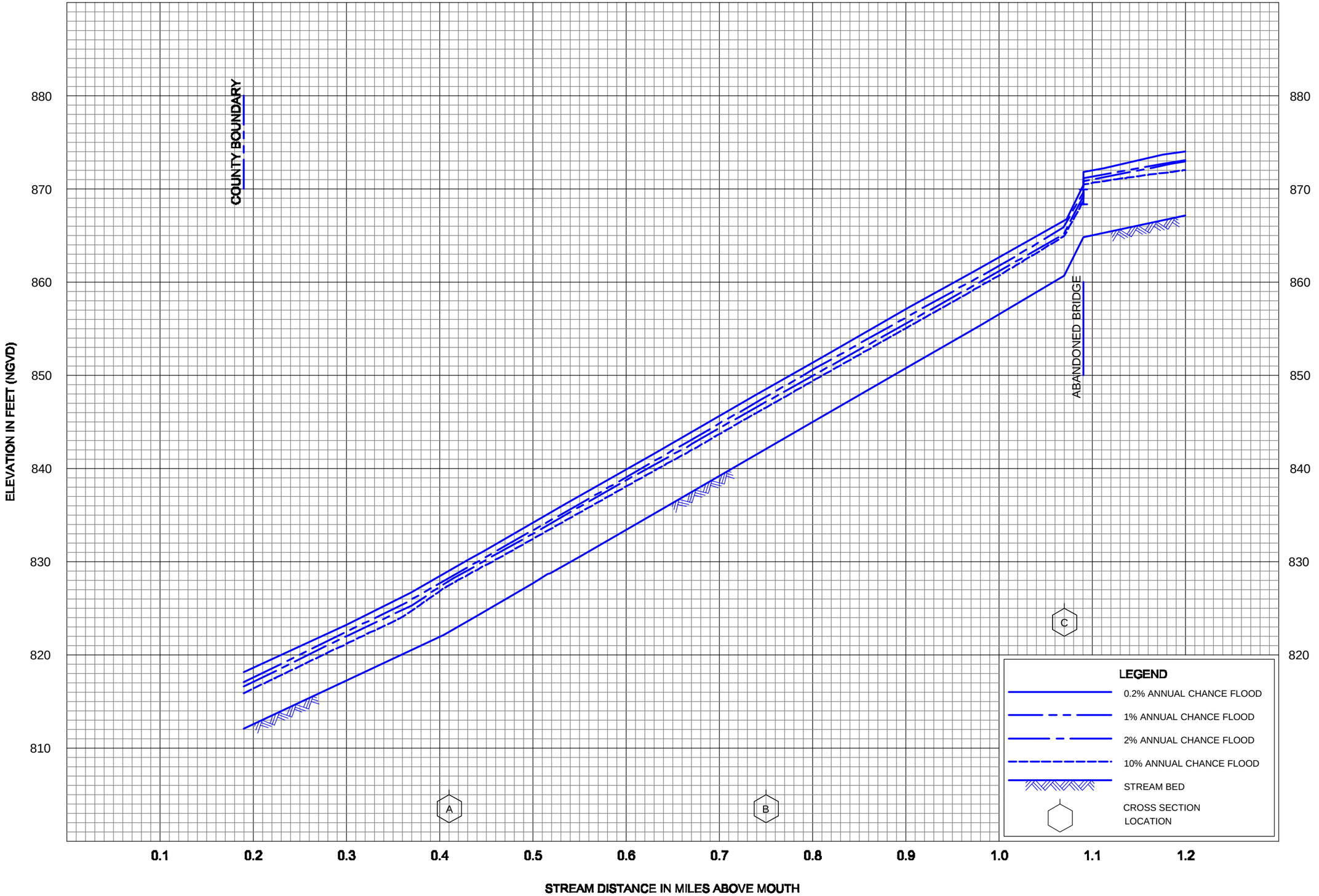
BEAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

10P



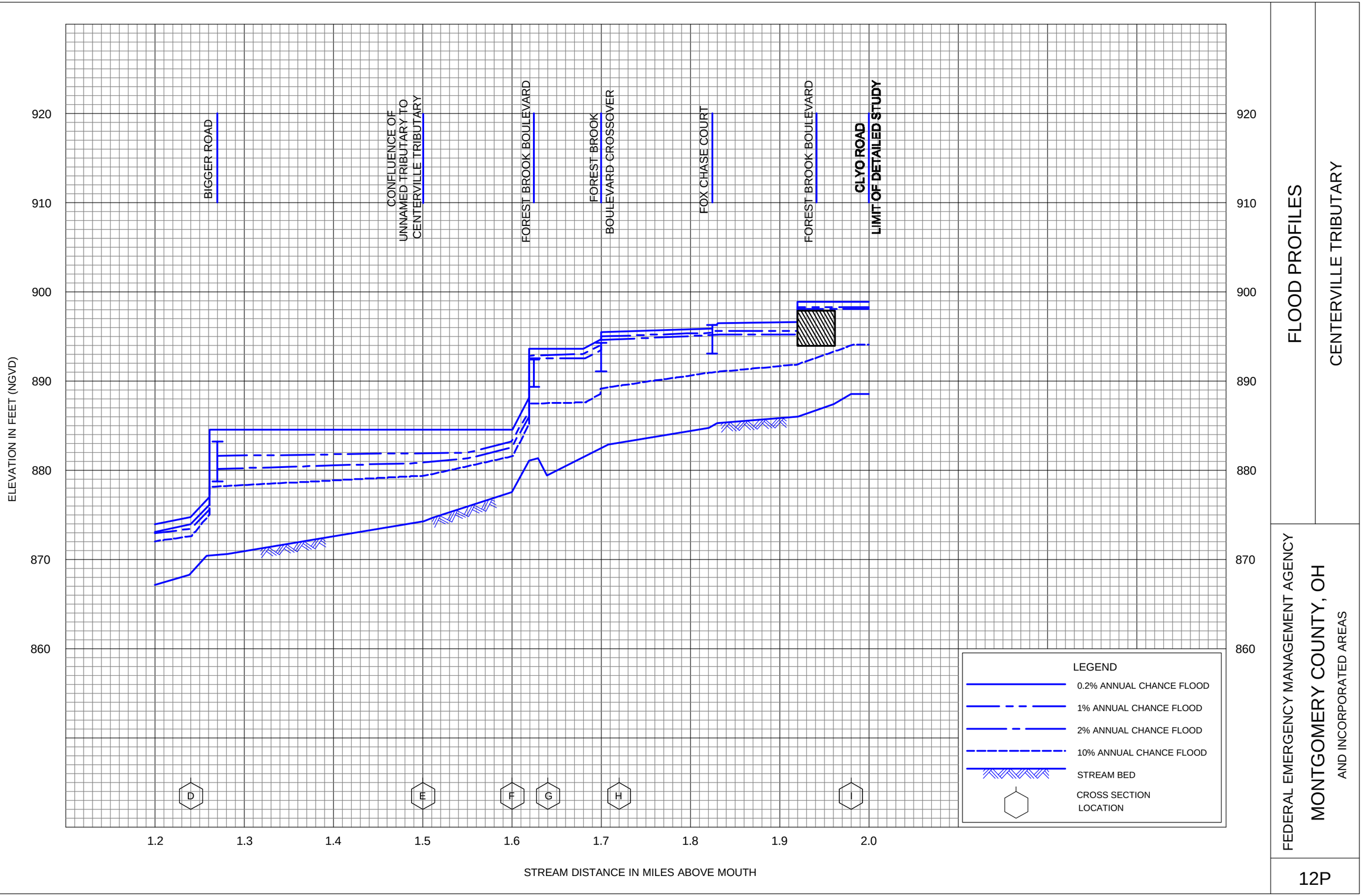
FLOOD PROFILES

CENTERVILLE TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



FLOOD PROFILES

CENTERVILLE TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

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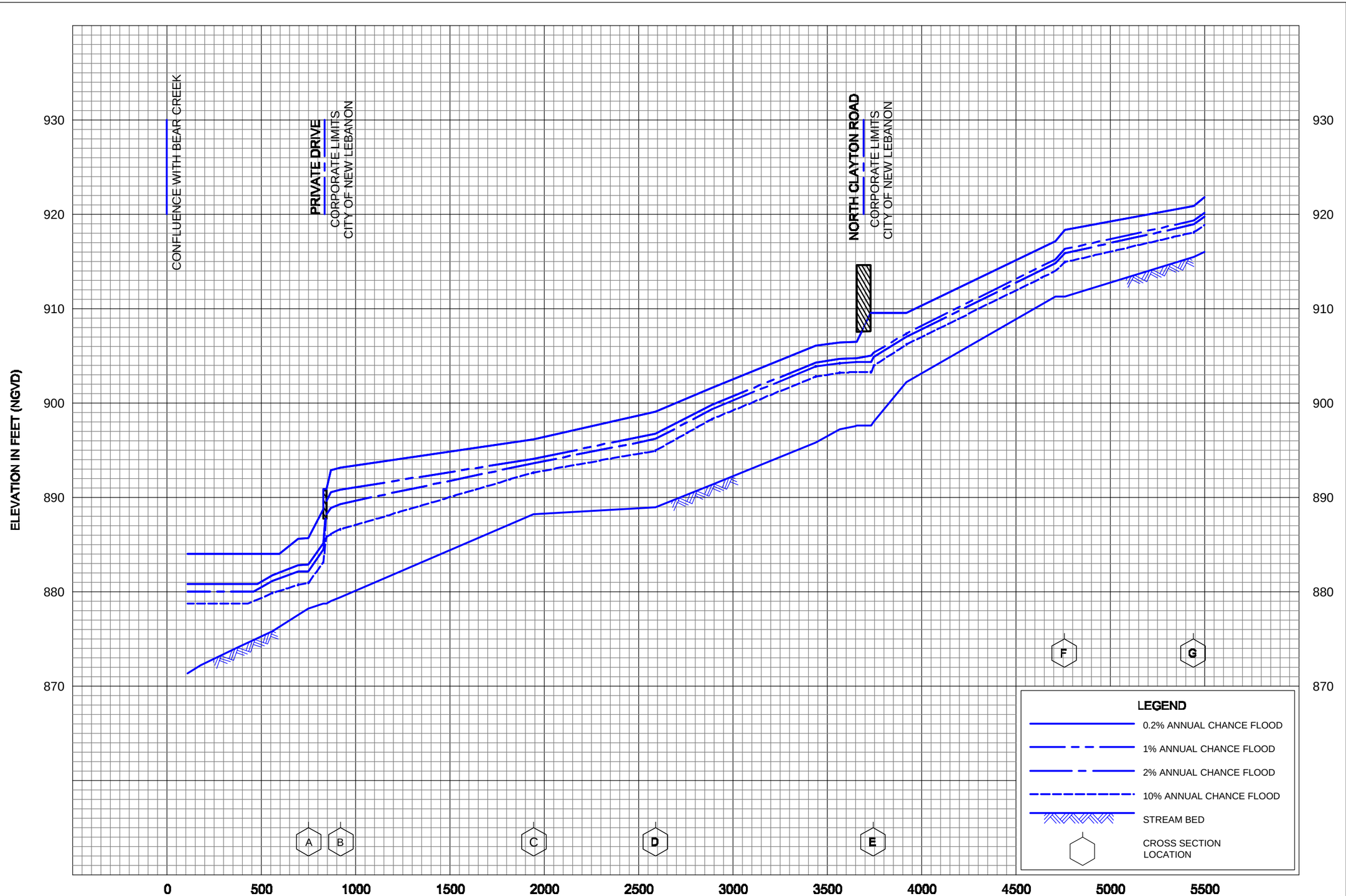

FLOOD PROFILES

DIEHL RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

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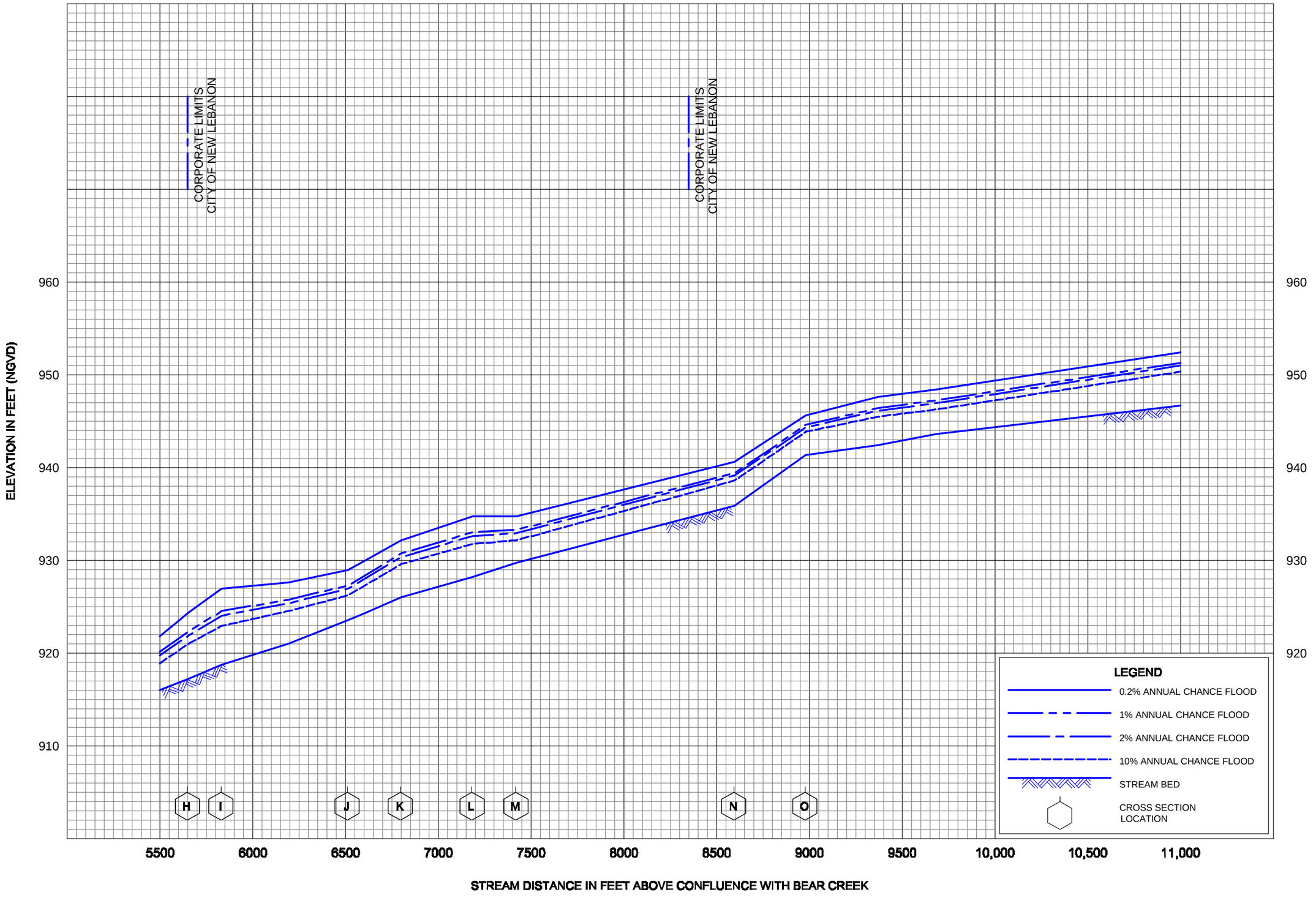

FLOOD PROFILES

DIEHL RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

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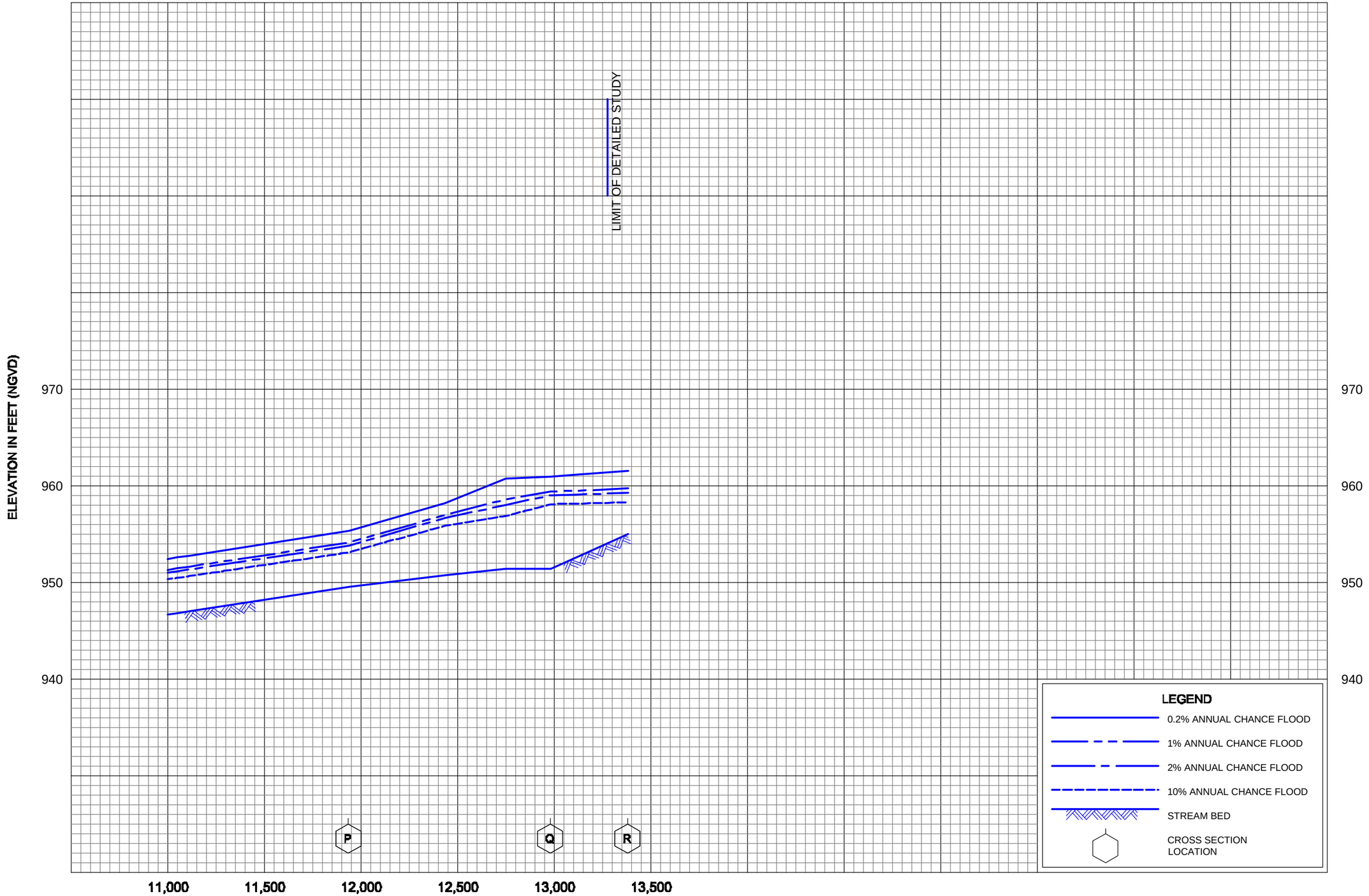

FLOOD PROFILES

DIEHL RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

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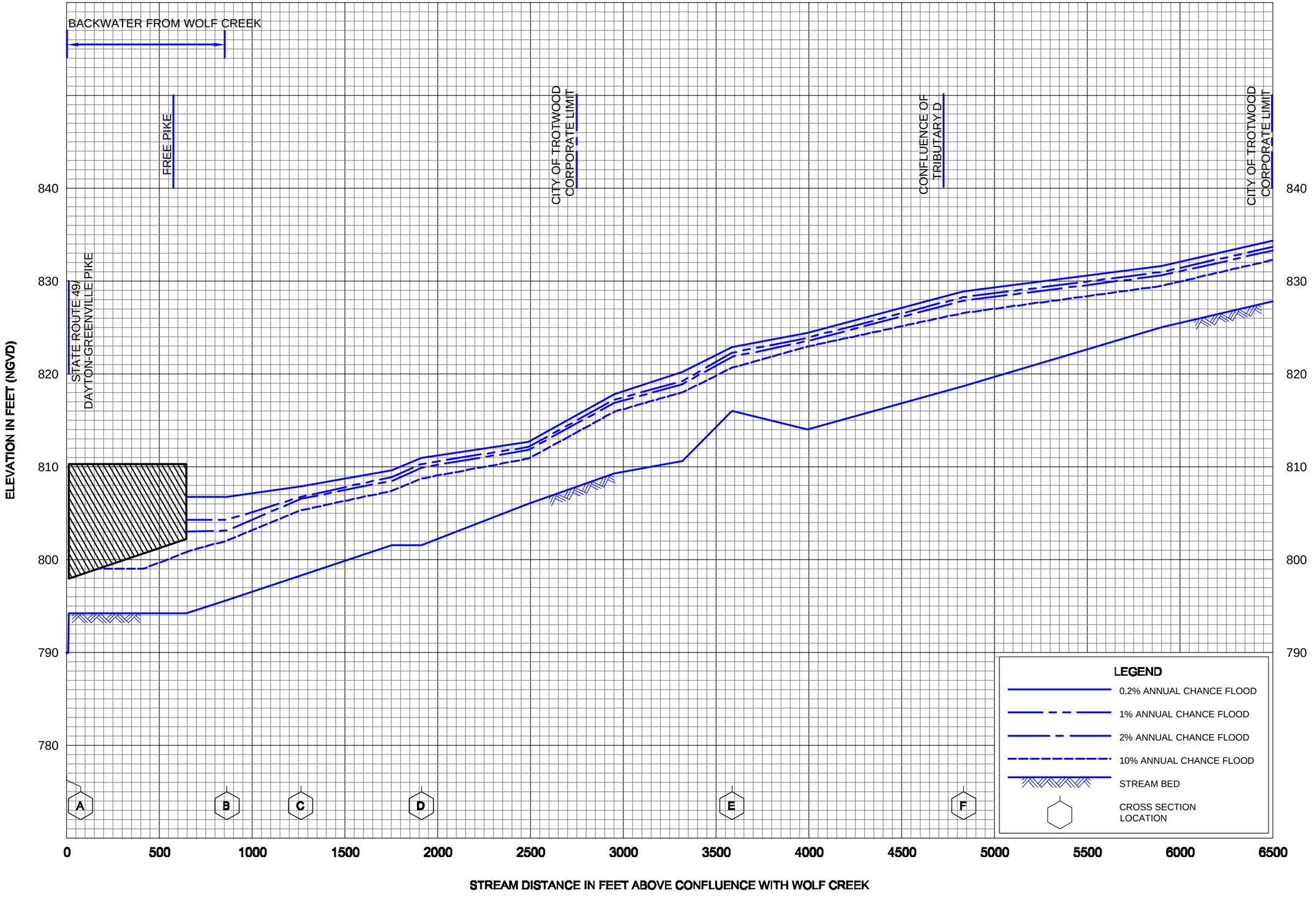


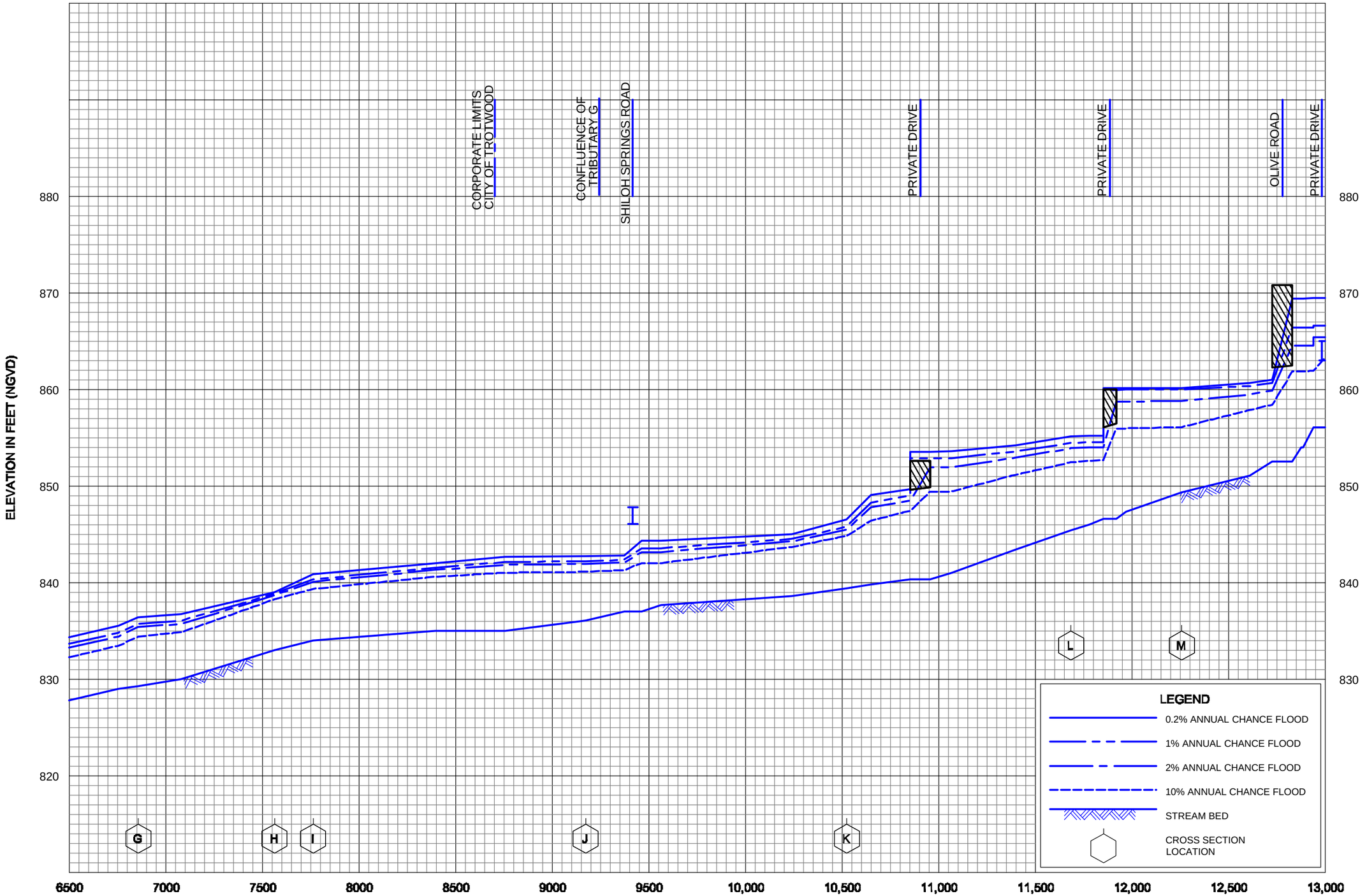
FLOOD PROFILES

DRY RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



FLOOD PROFILES

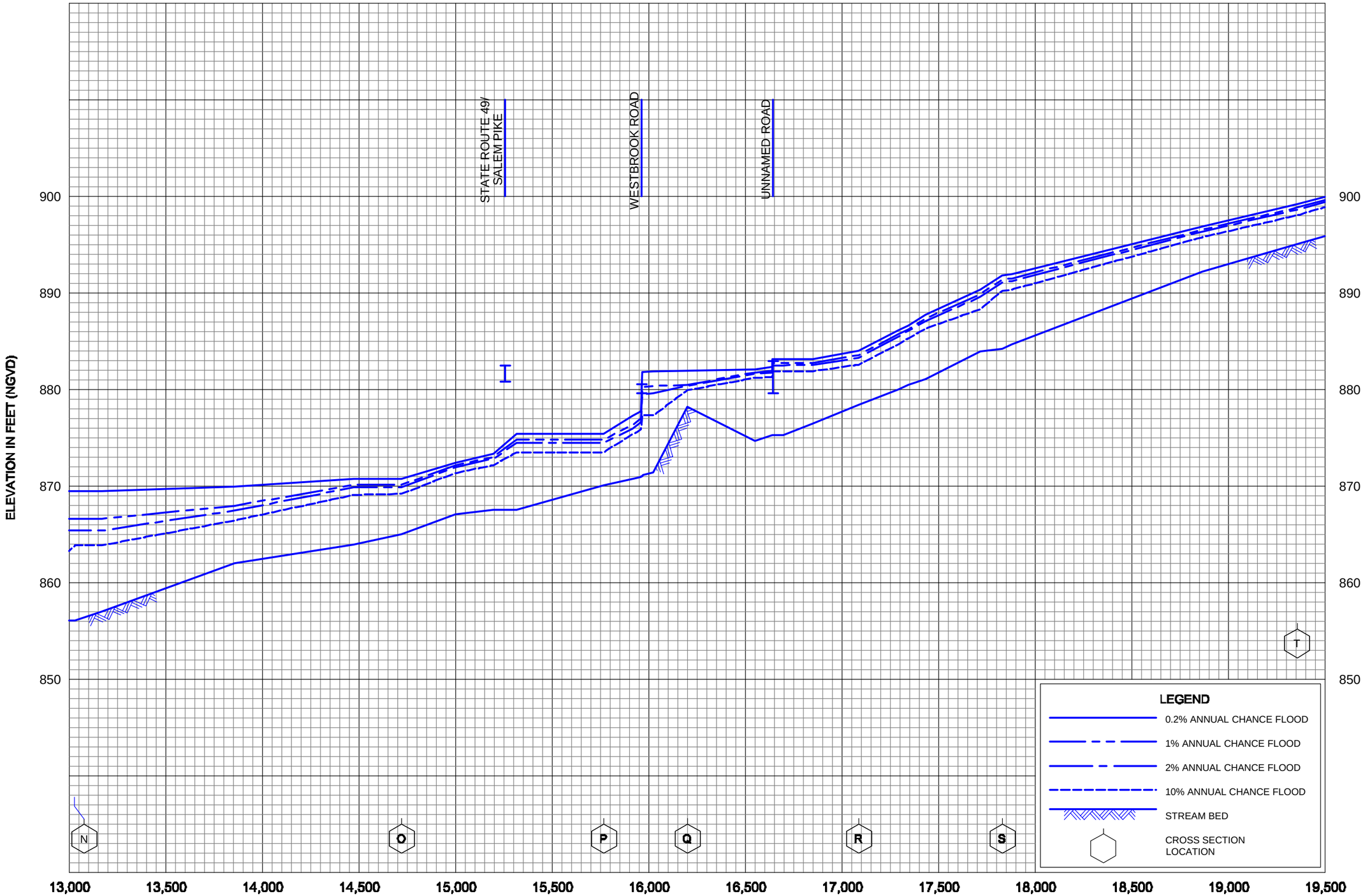
DRY RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

17P



FLOOD PROFILES

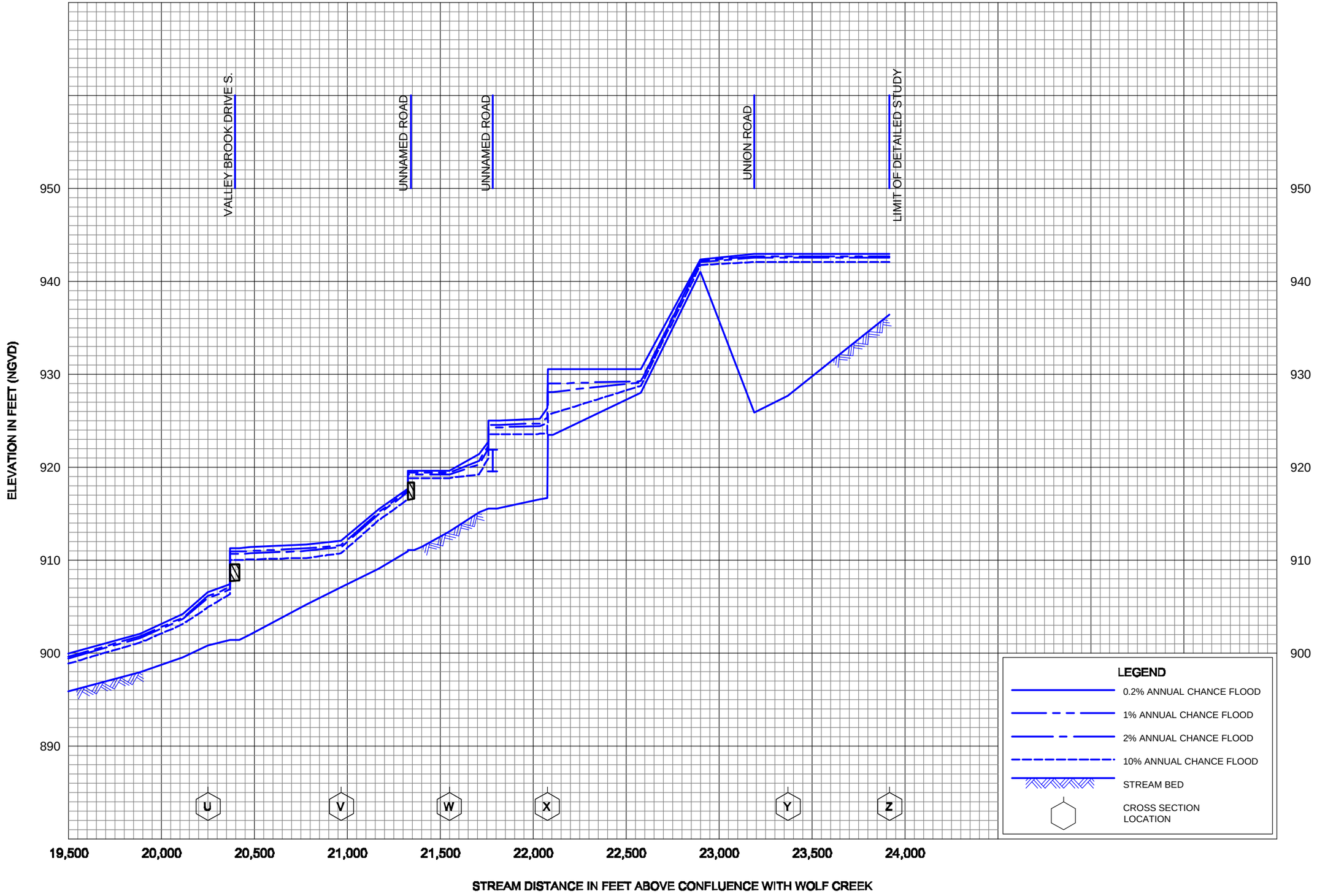
DRY RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

18P



ELEVATION IN FEET (NGVD)

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH WOLF CREEK

FLOOD PROFILES

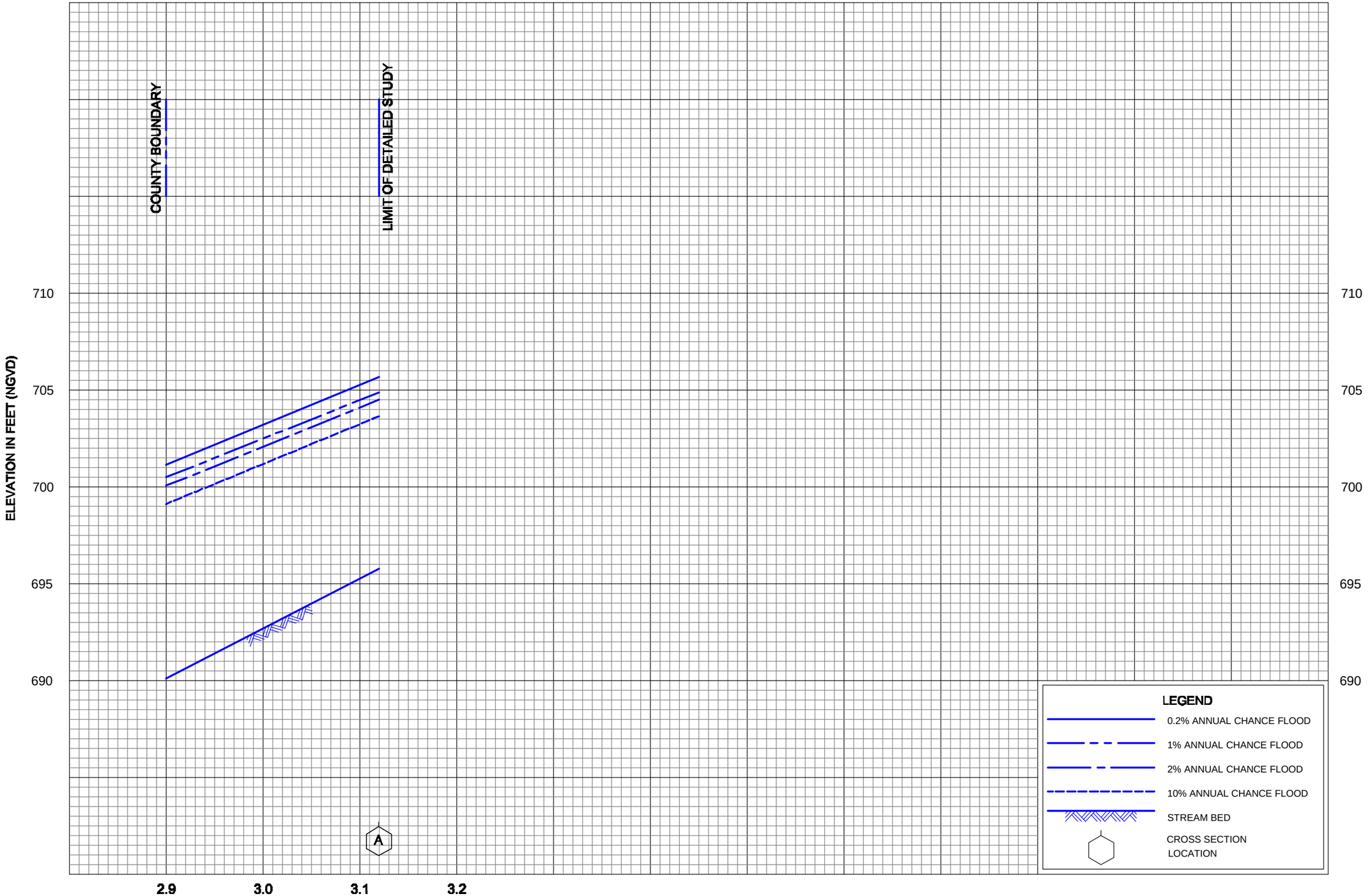
DRY RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

19P



FLOOD PROFILES

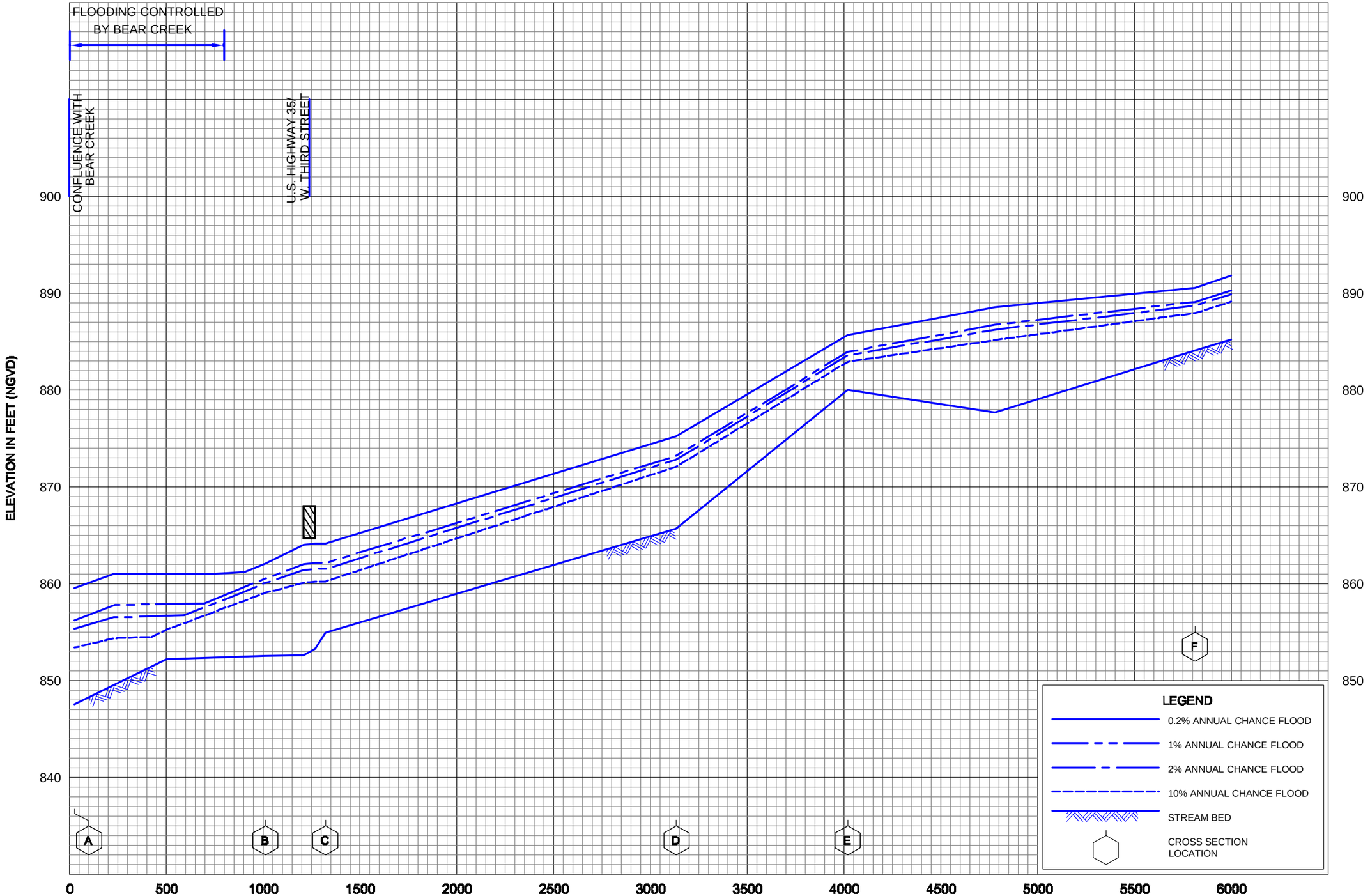
DRY RUN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

20P



FLOOD PROFILES

GARBER RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

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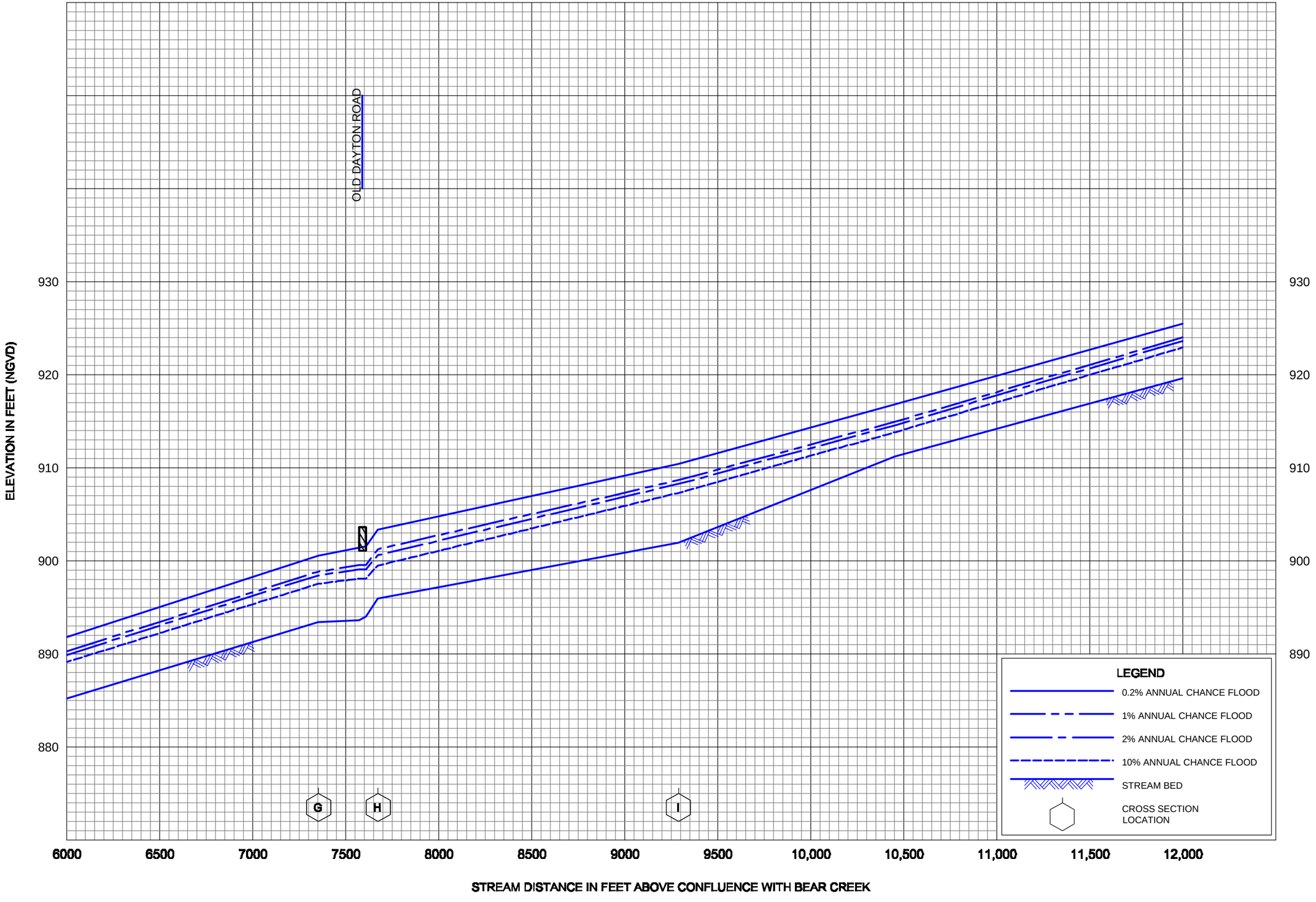

FLOOD PROFILES

GARBER RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

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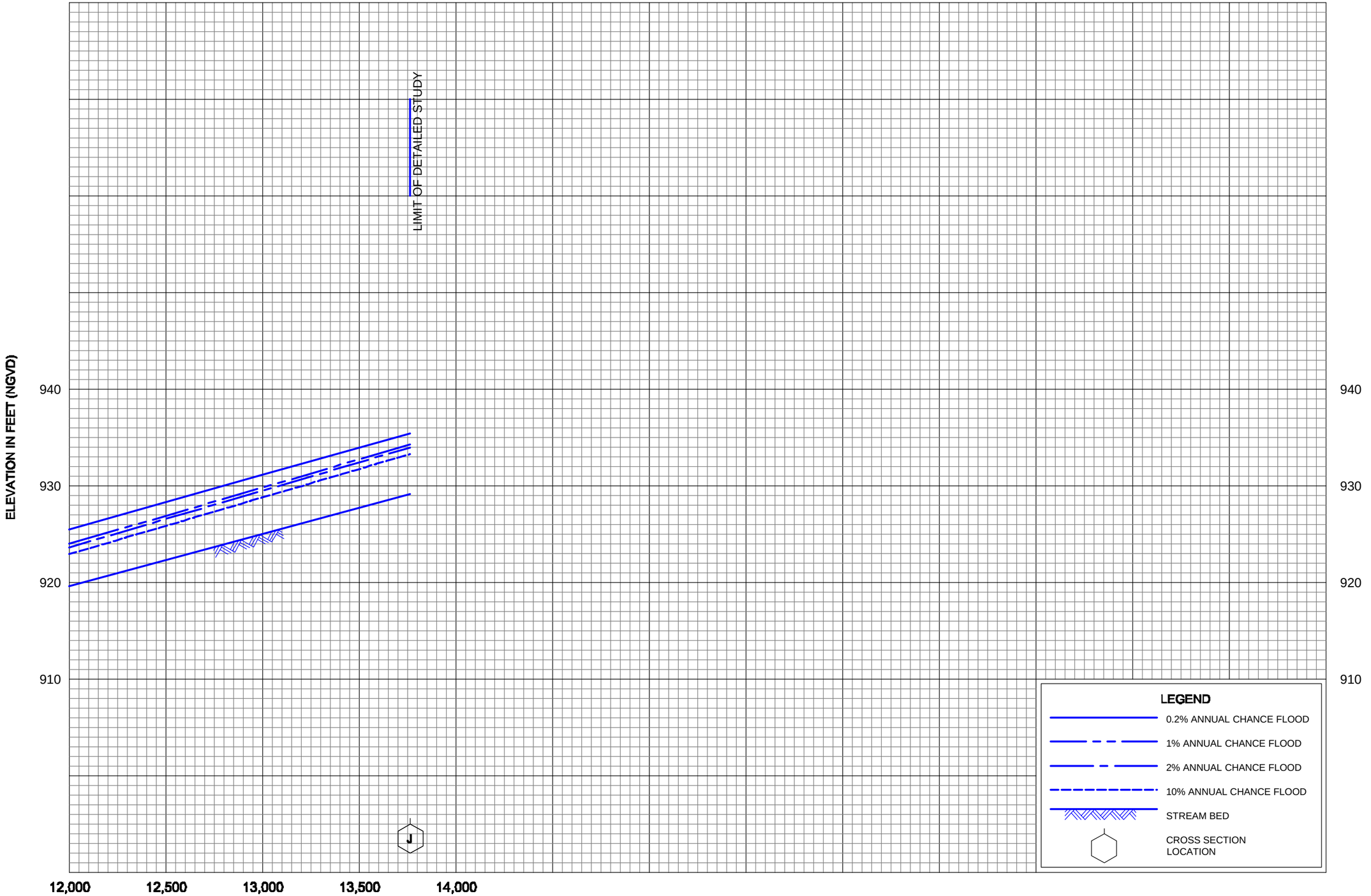

FLOOD PROFILES

GARBER RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

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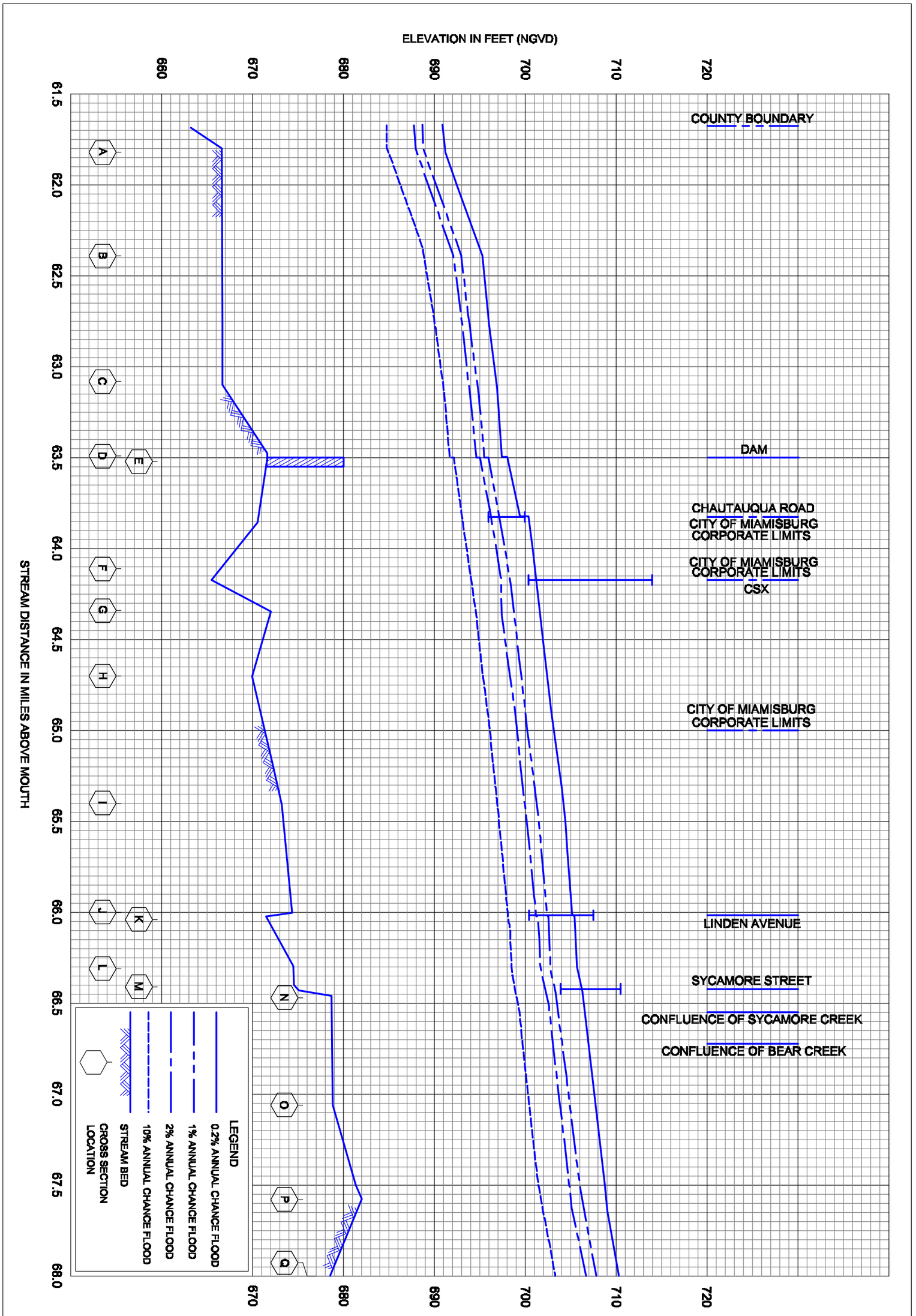


24P

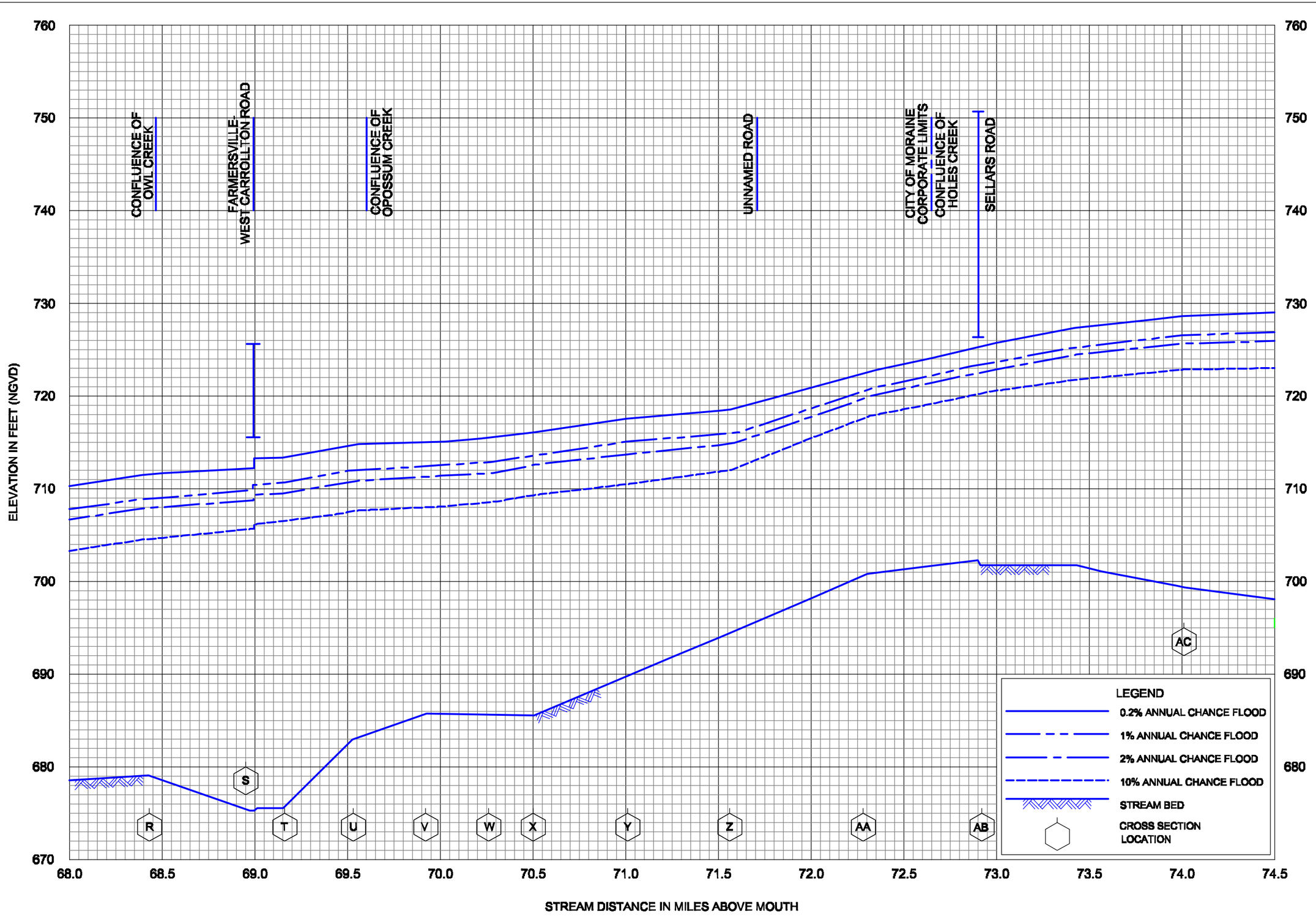
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

GREAT MIAMI RIVER



FLOOD PROFILES

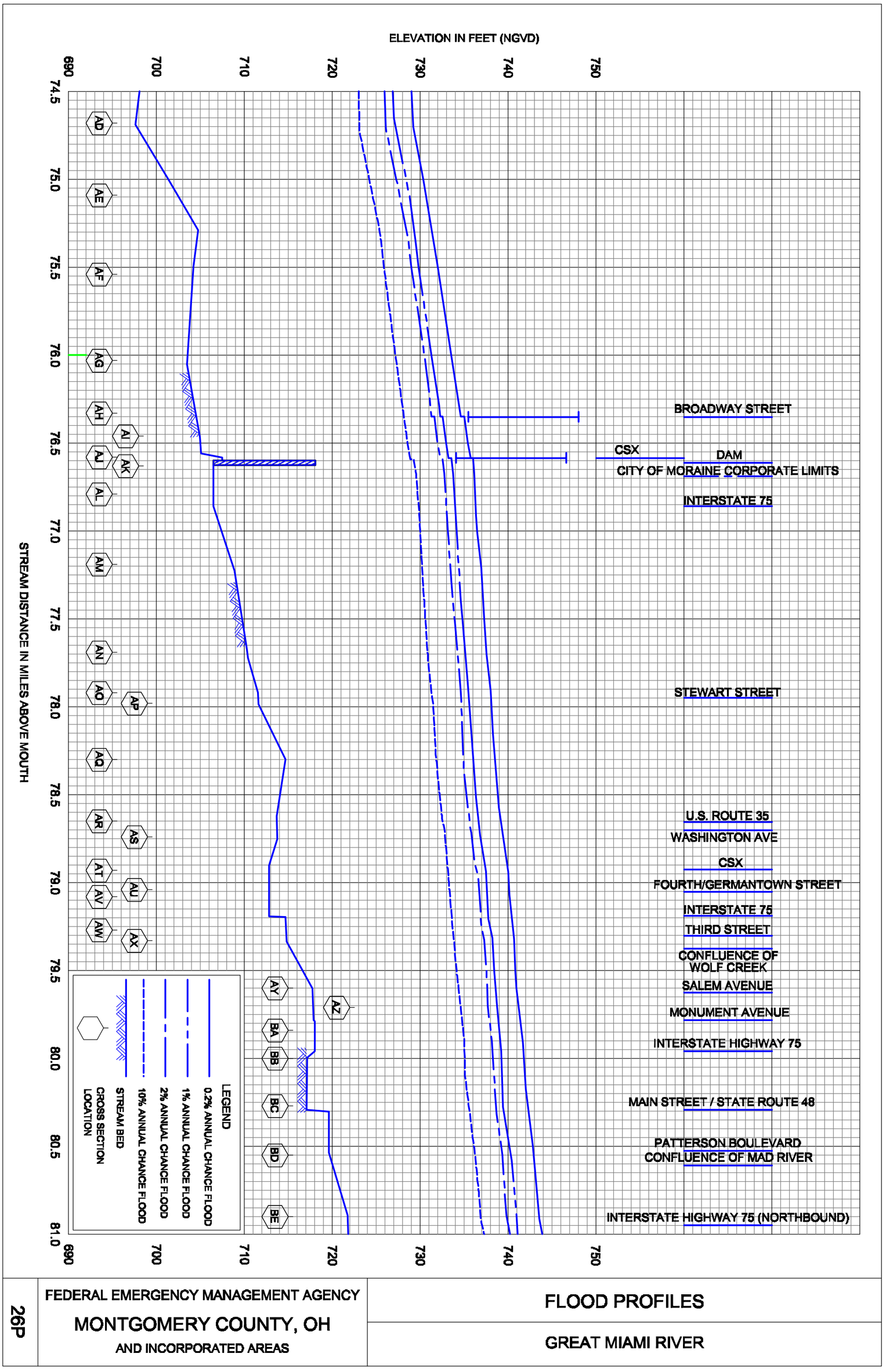
GREAT MIAMI RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

25P



26P

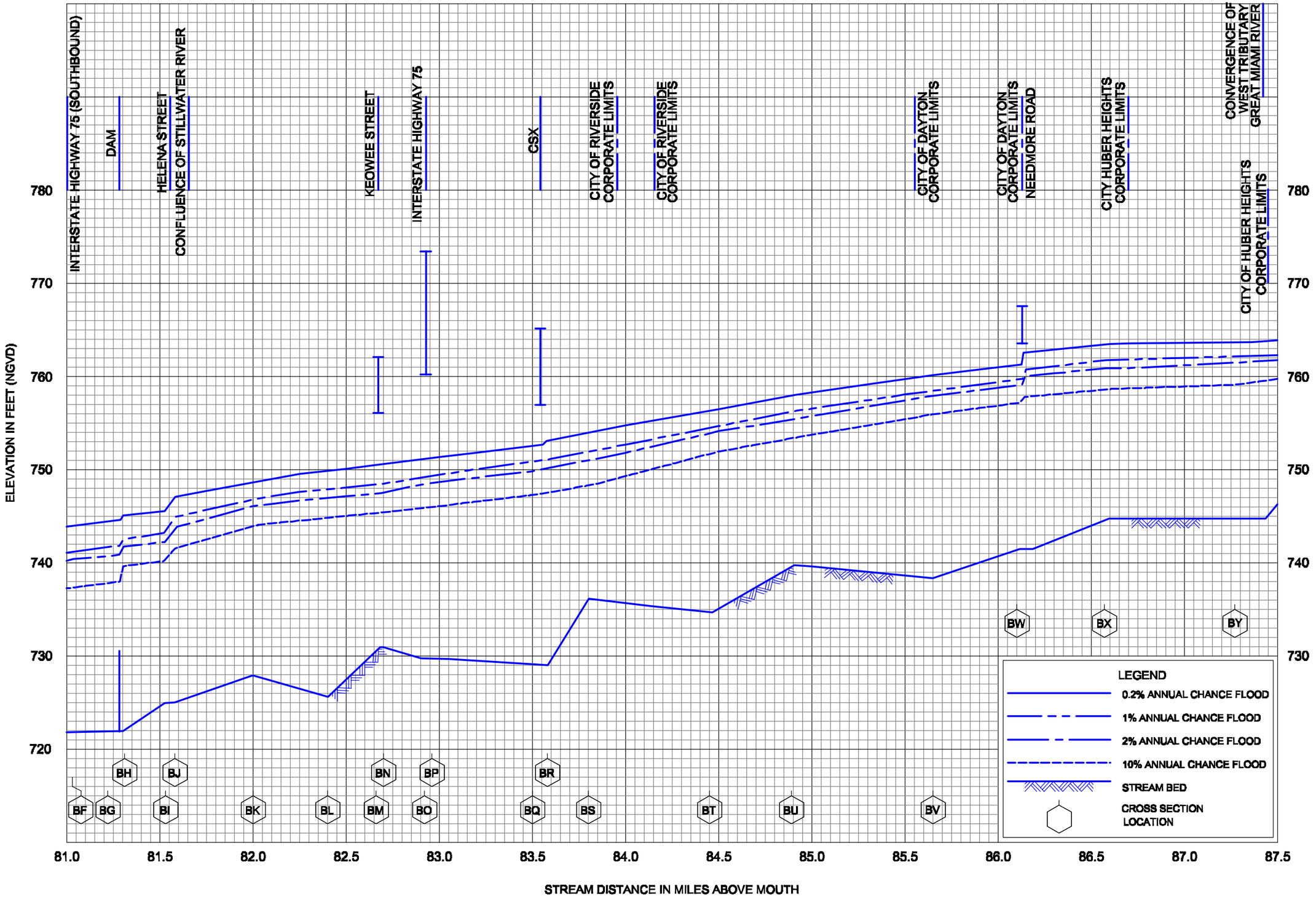
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

GREAT MIAMI RIVER



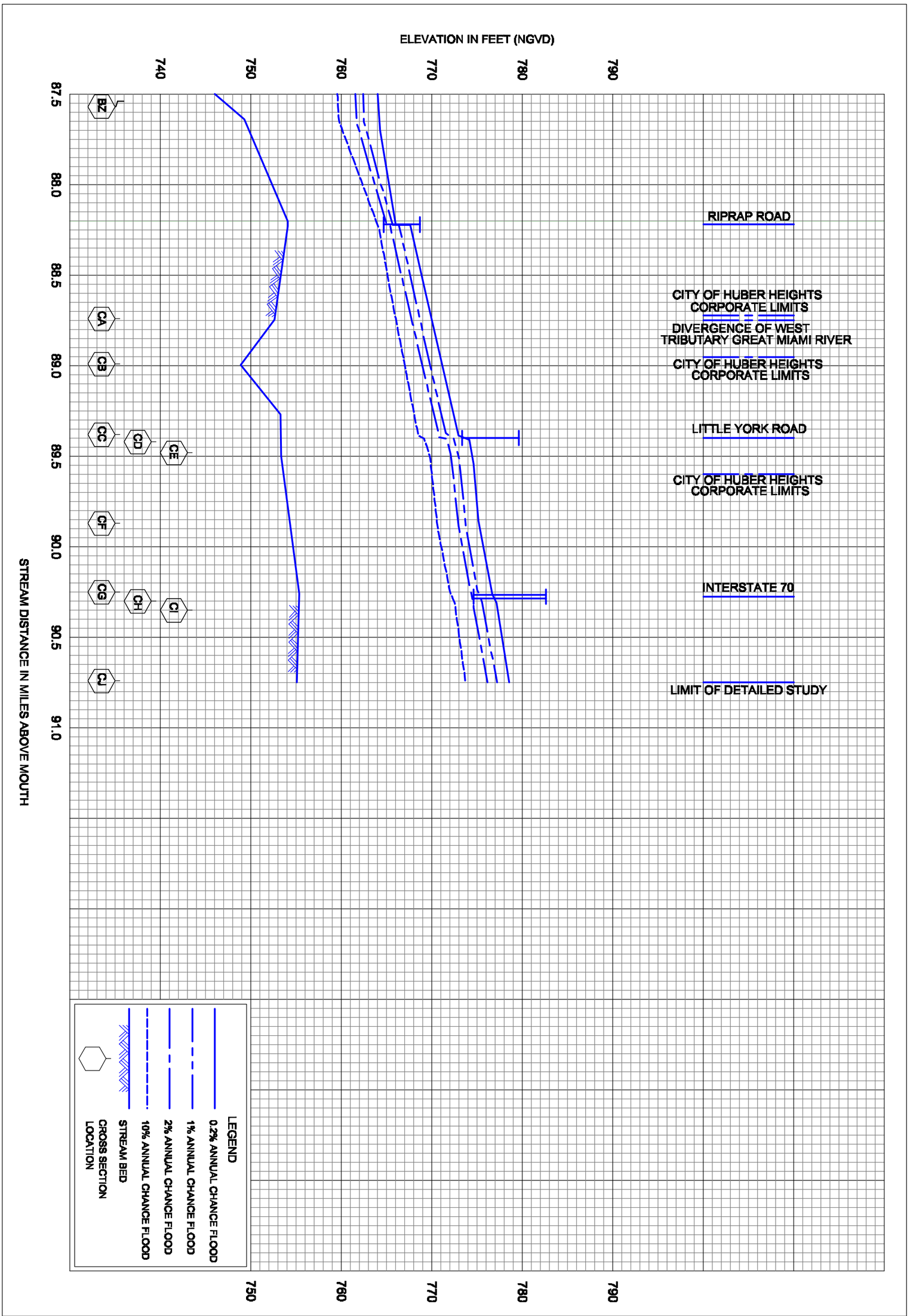
FLOOD PROFILES

GREAT MIAMI RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



28P

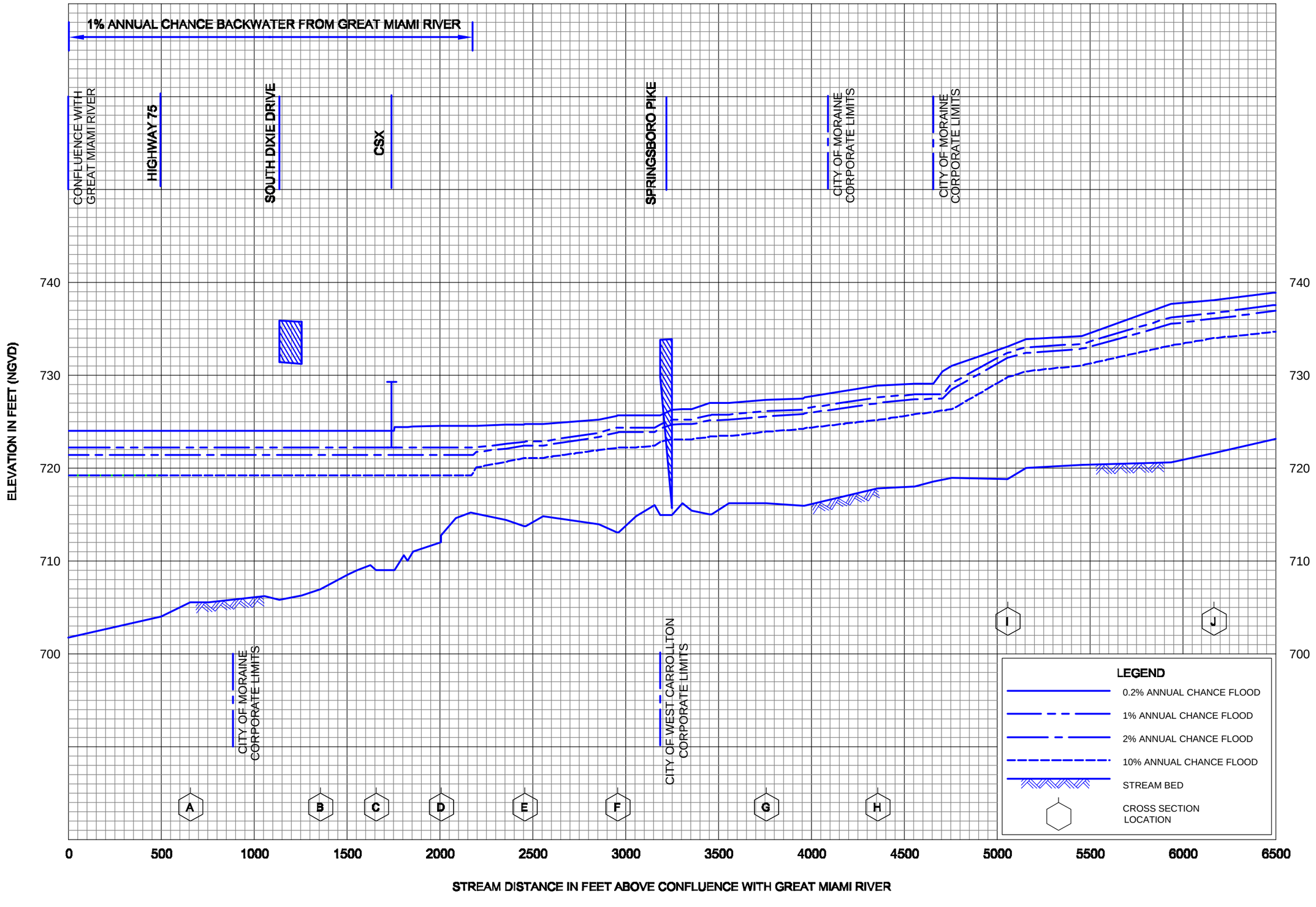
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

GREAT MIAMI RIVER



FLOOD PROFILES

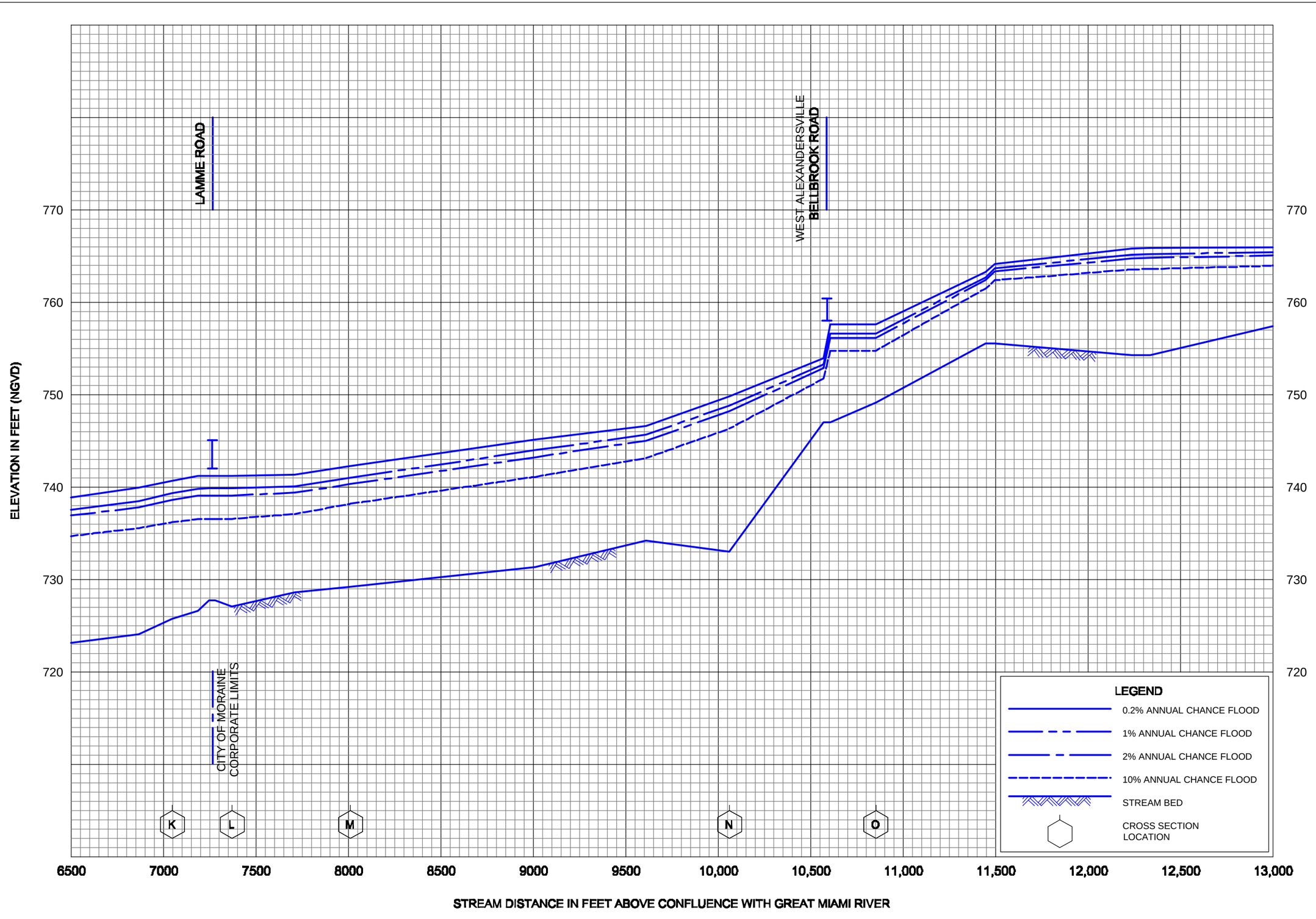
HOLES CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

29P



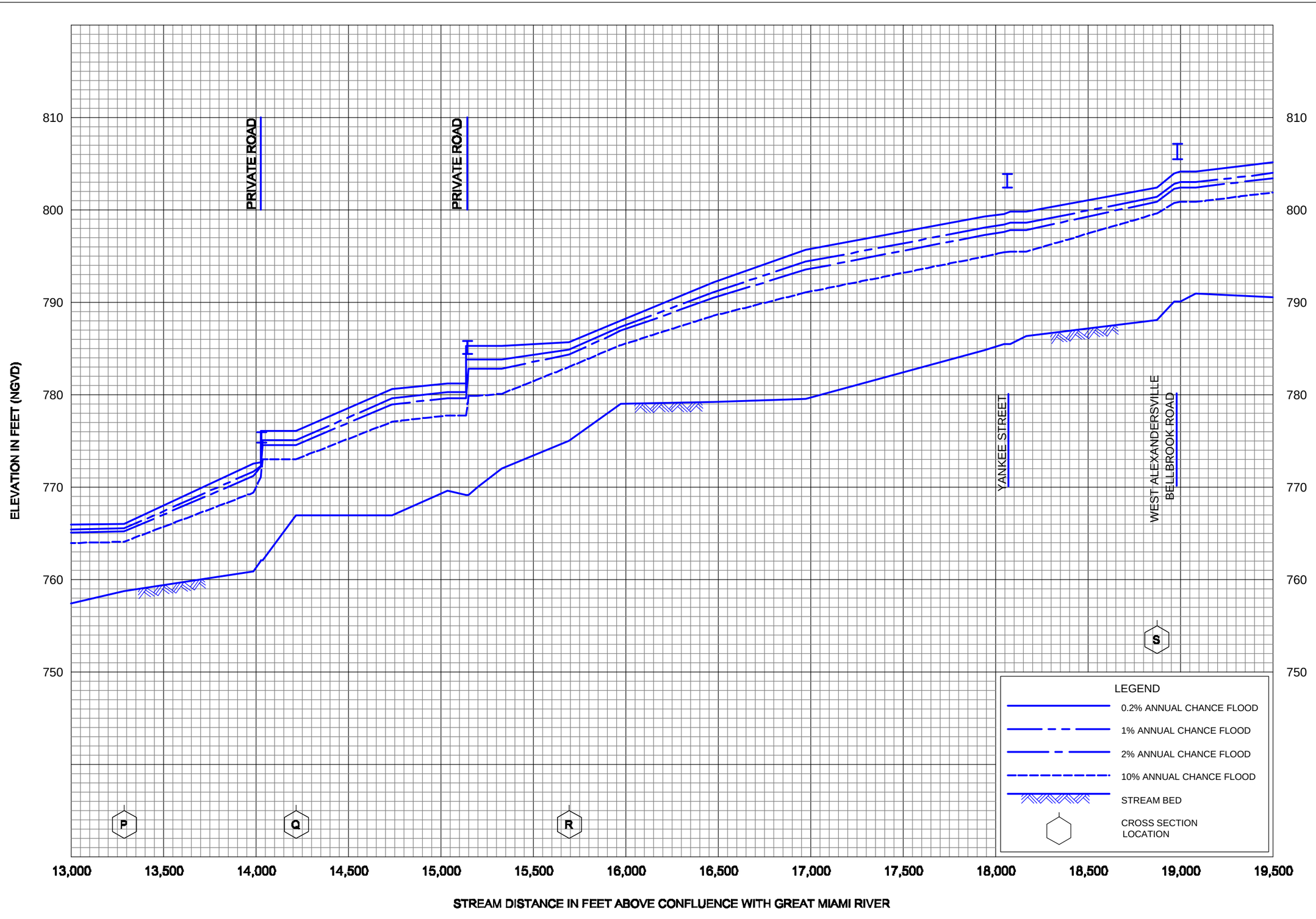
FLOOD PROFILES

HOLES CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



FLOOD PROFILES

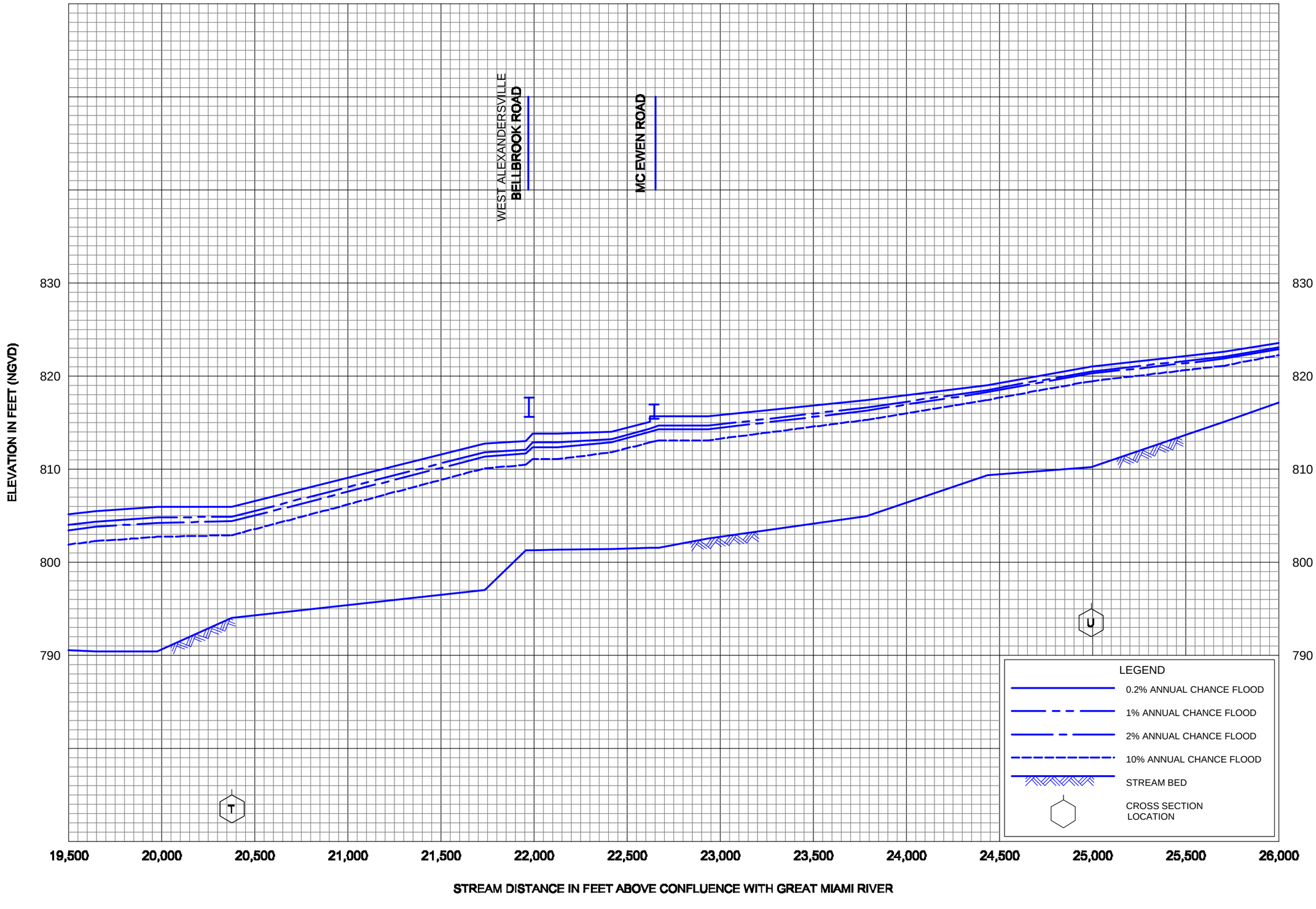
HOLES CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

31P



FLOOD PROFILES

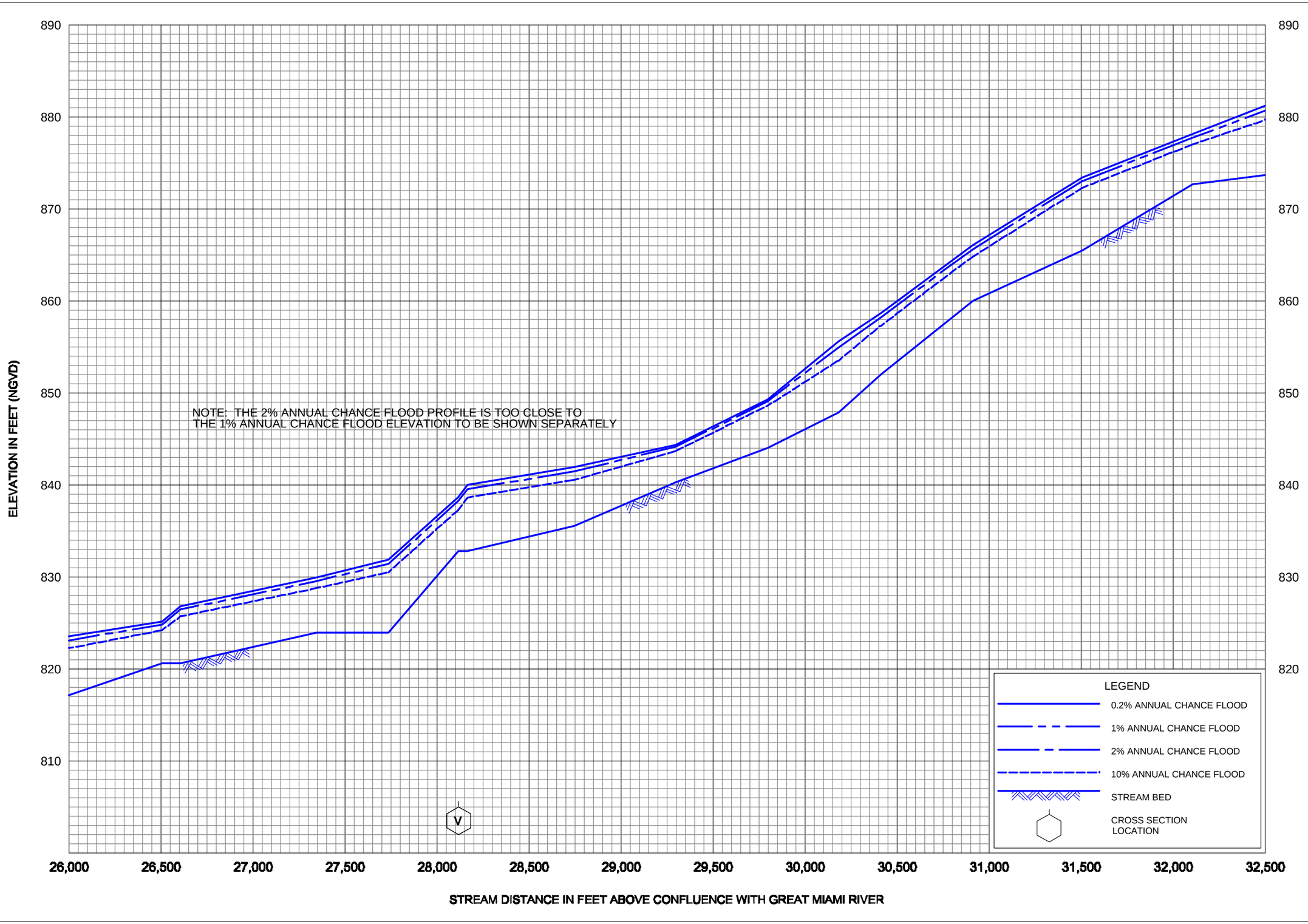
HOLES CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

32P



FLOOD PROFILES

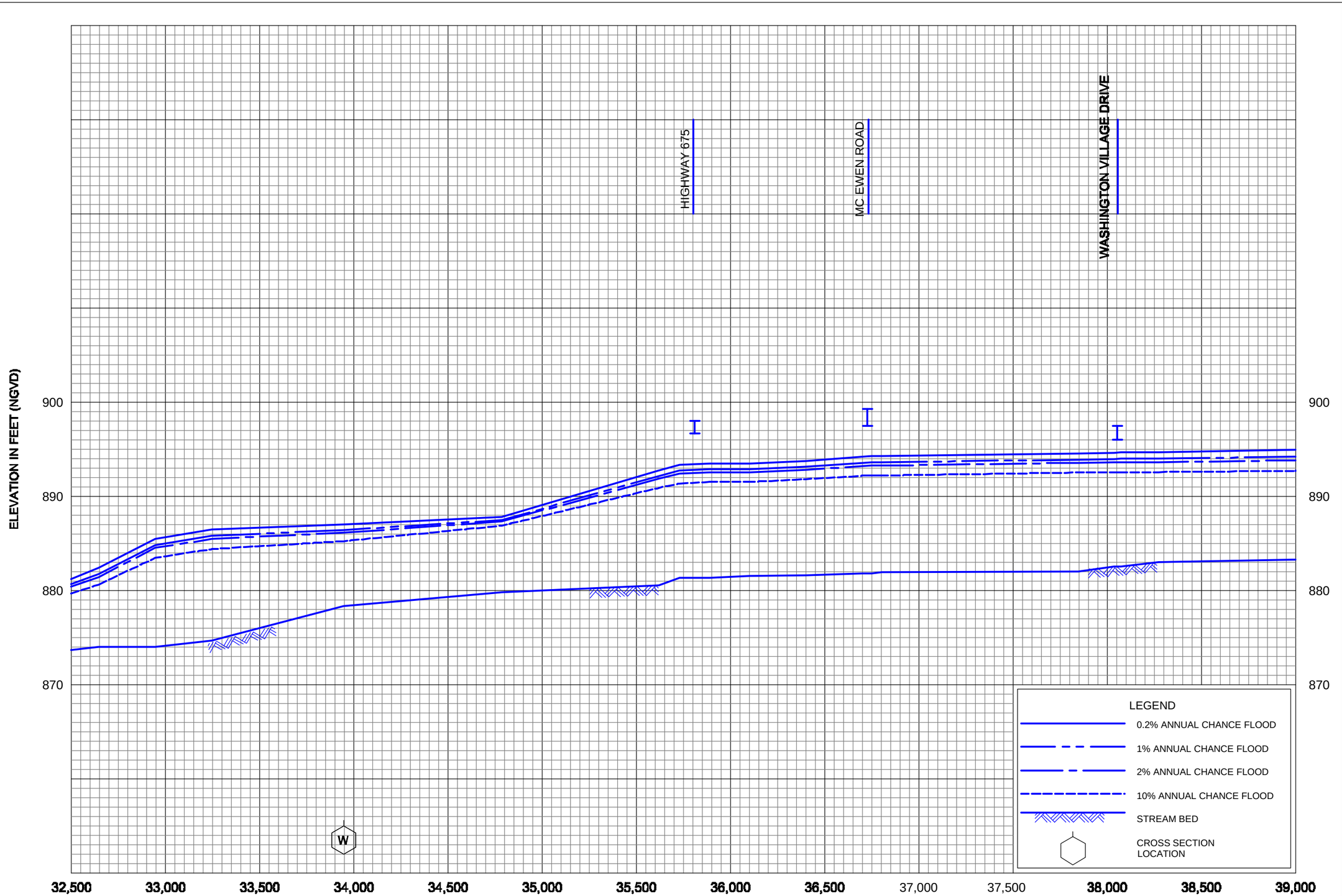
HOLES CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

33P



FLOOD PROFILES

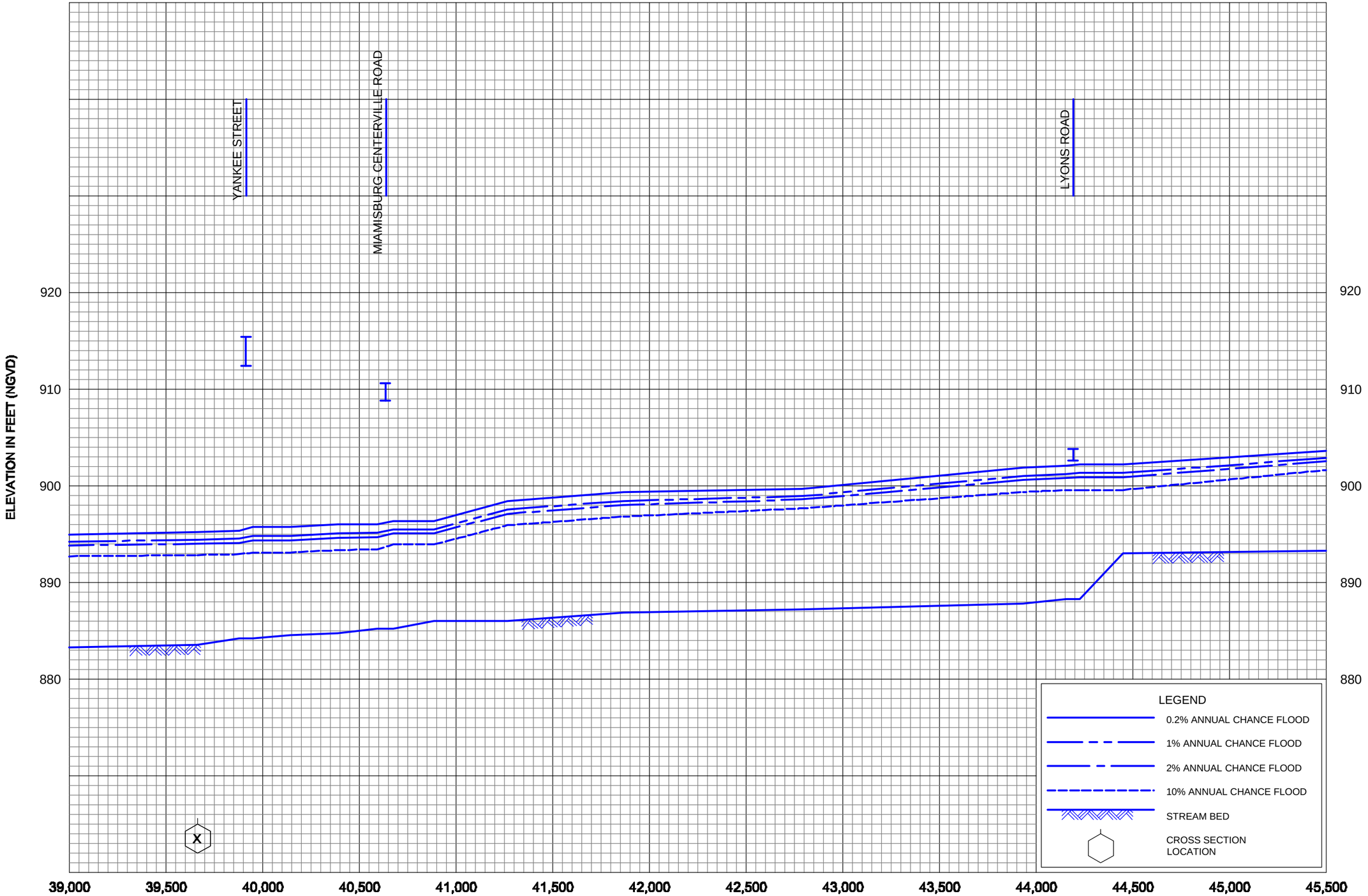
HOLES CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

34P



FLOOD PROFILES

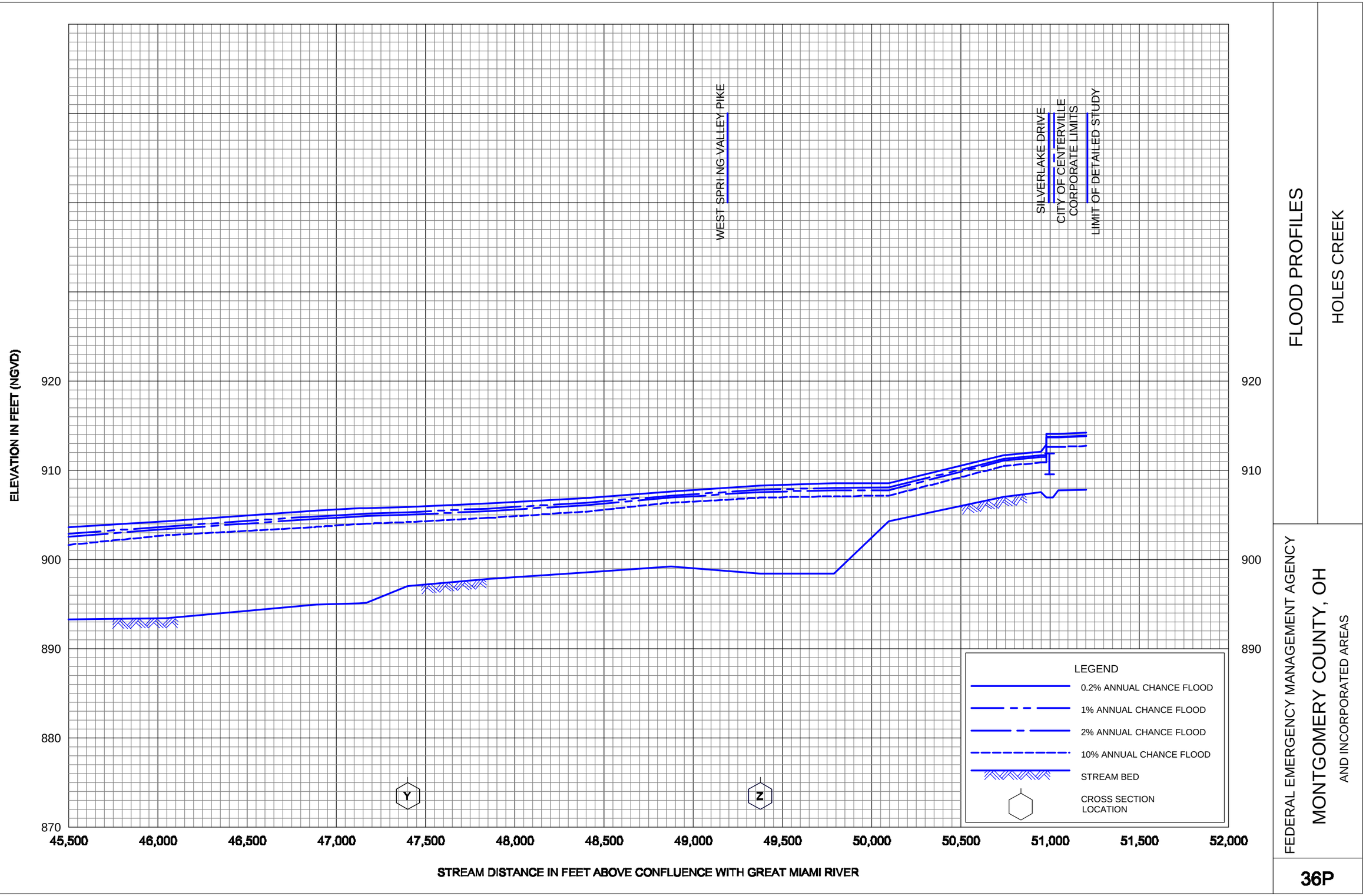
HOLES CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

35P



FLOOD PROFILES

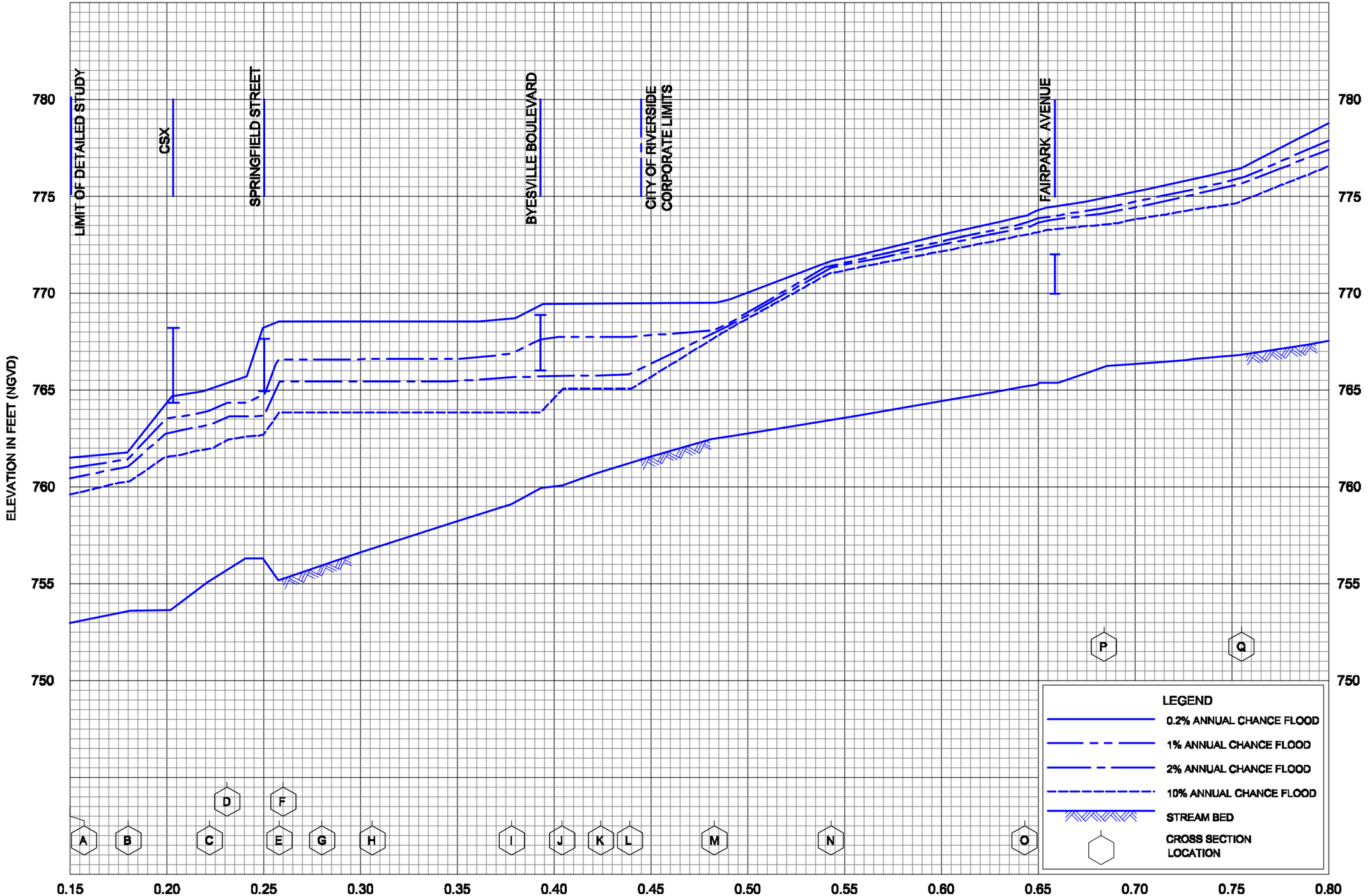
HOLES CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

36P



FLOOD PROFILES

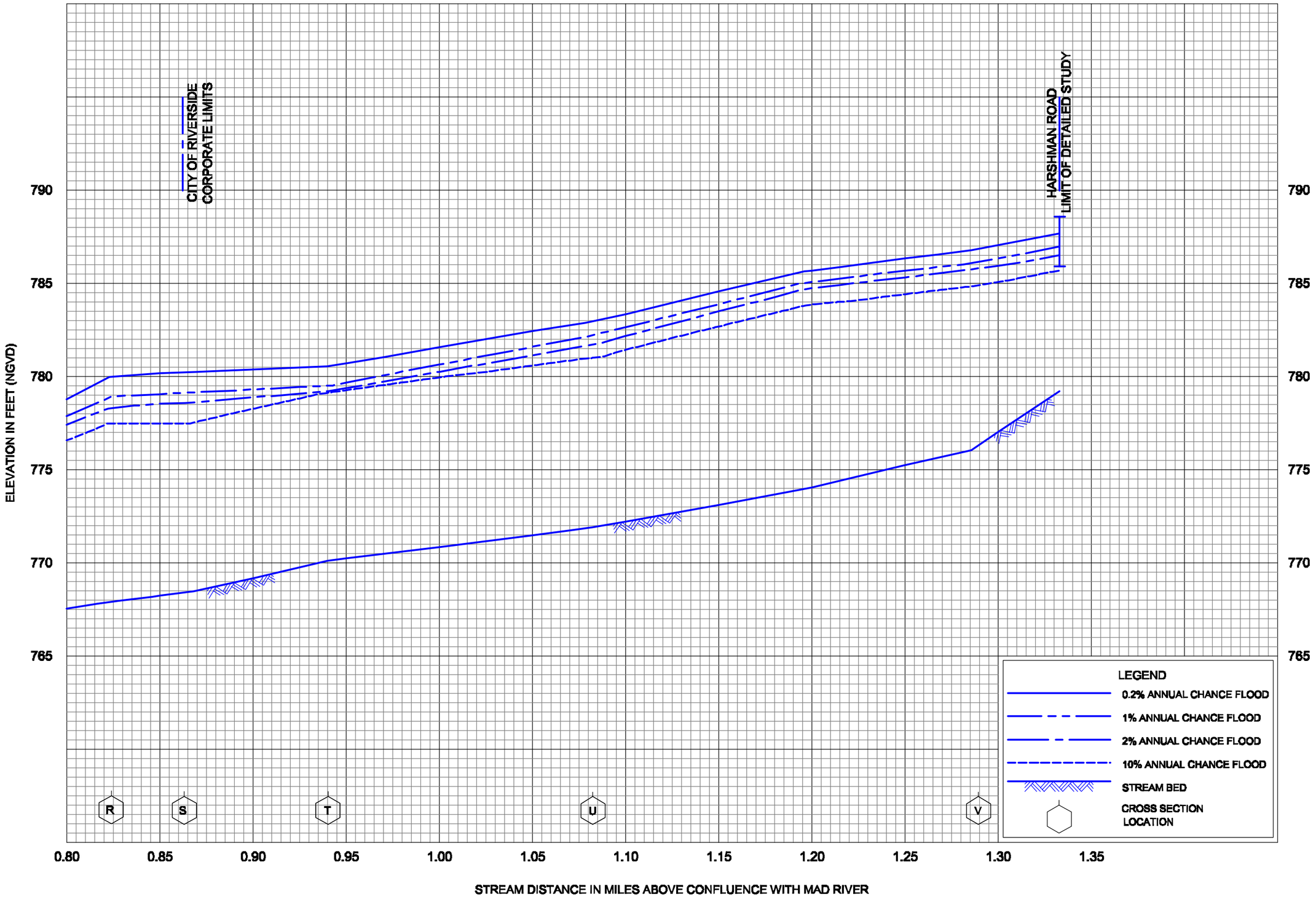
LILLY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

37P



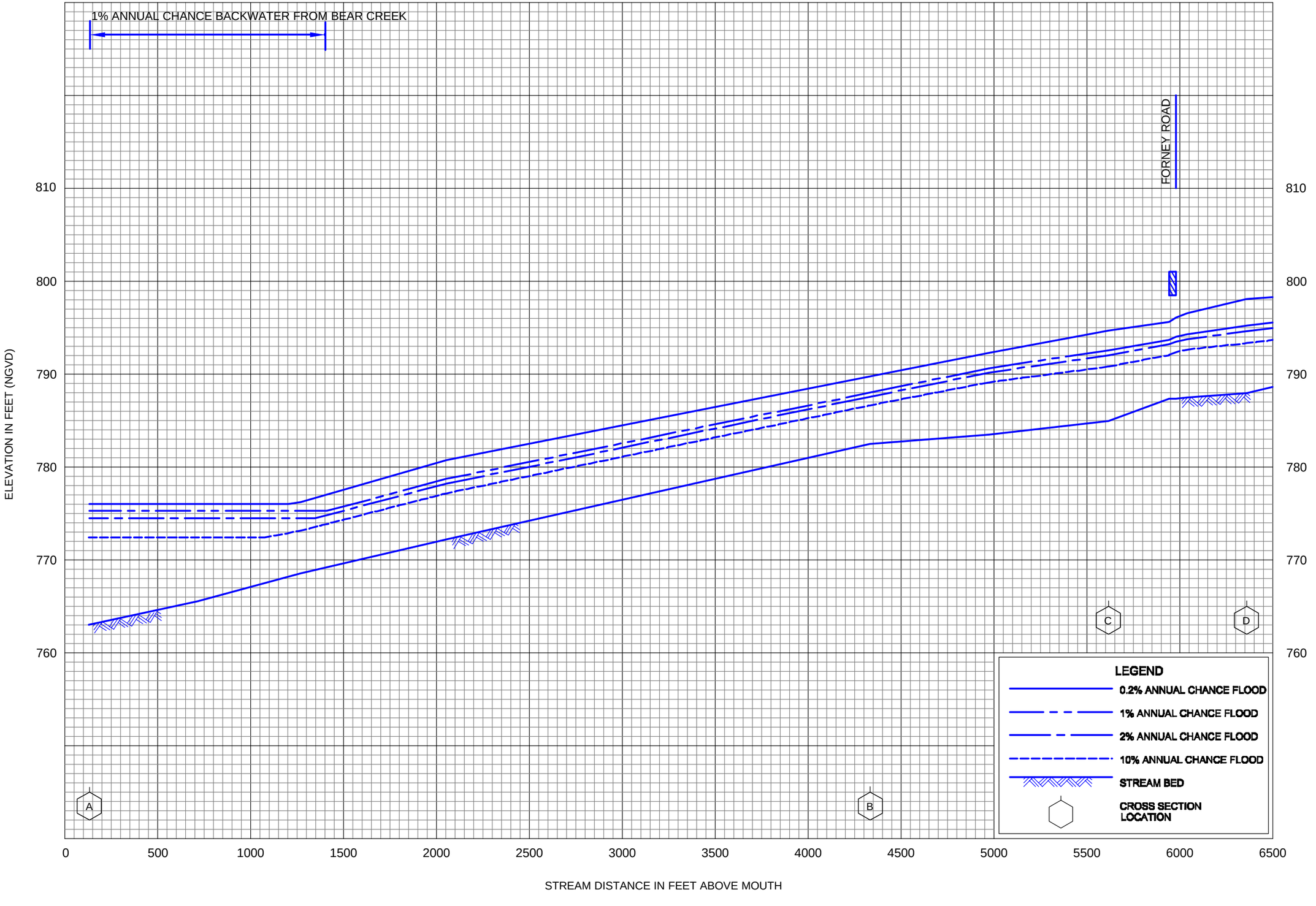
FLOOD PROFILES

LILLY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



FLOOD PROFILES

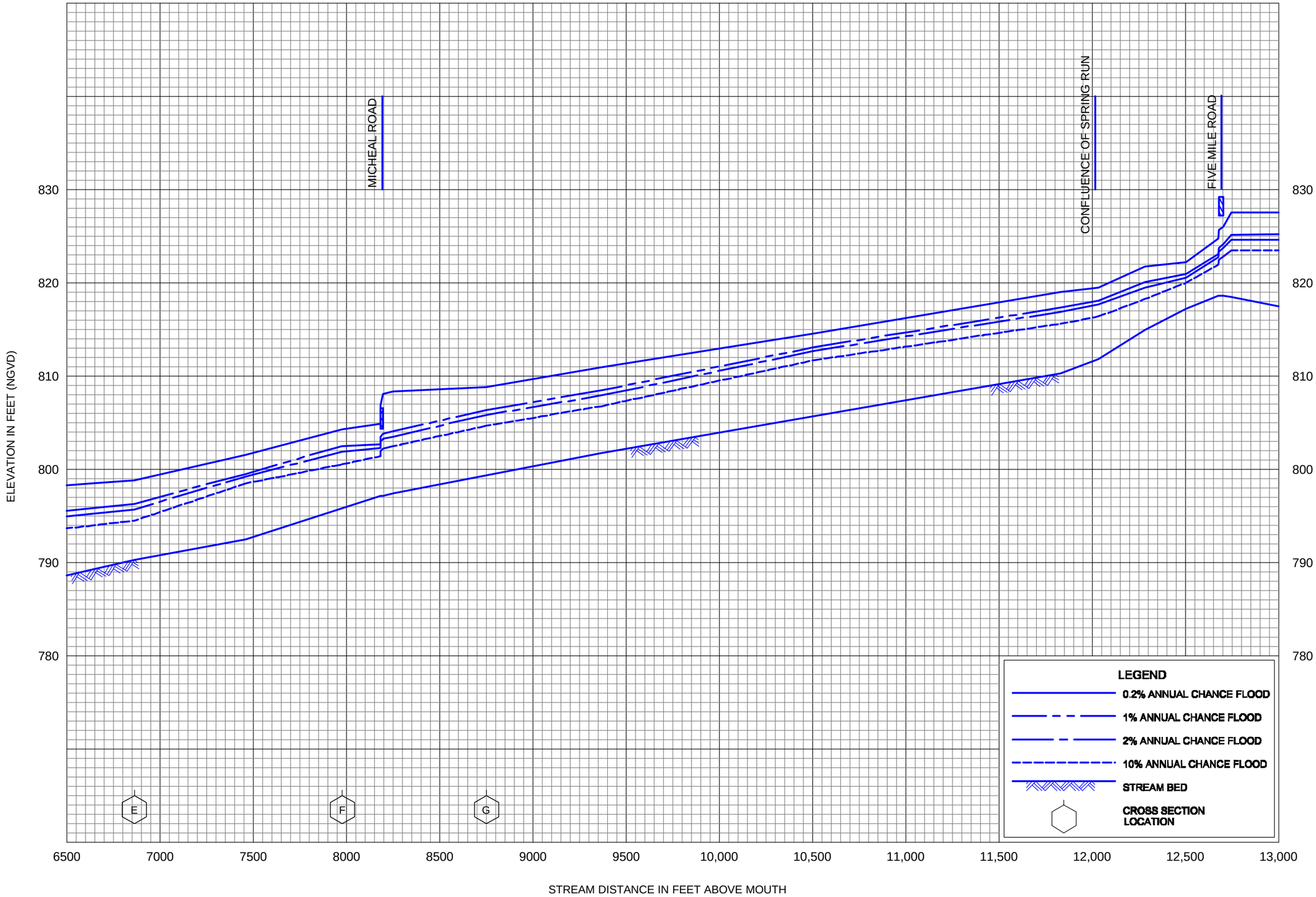
LITTLE BEAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

39P



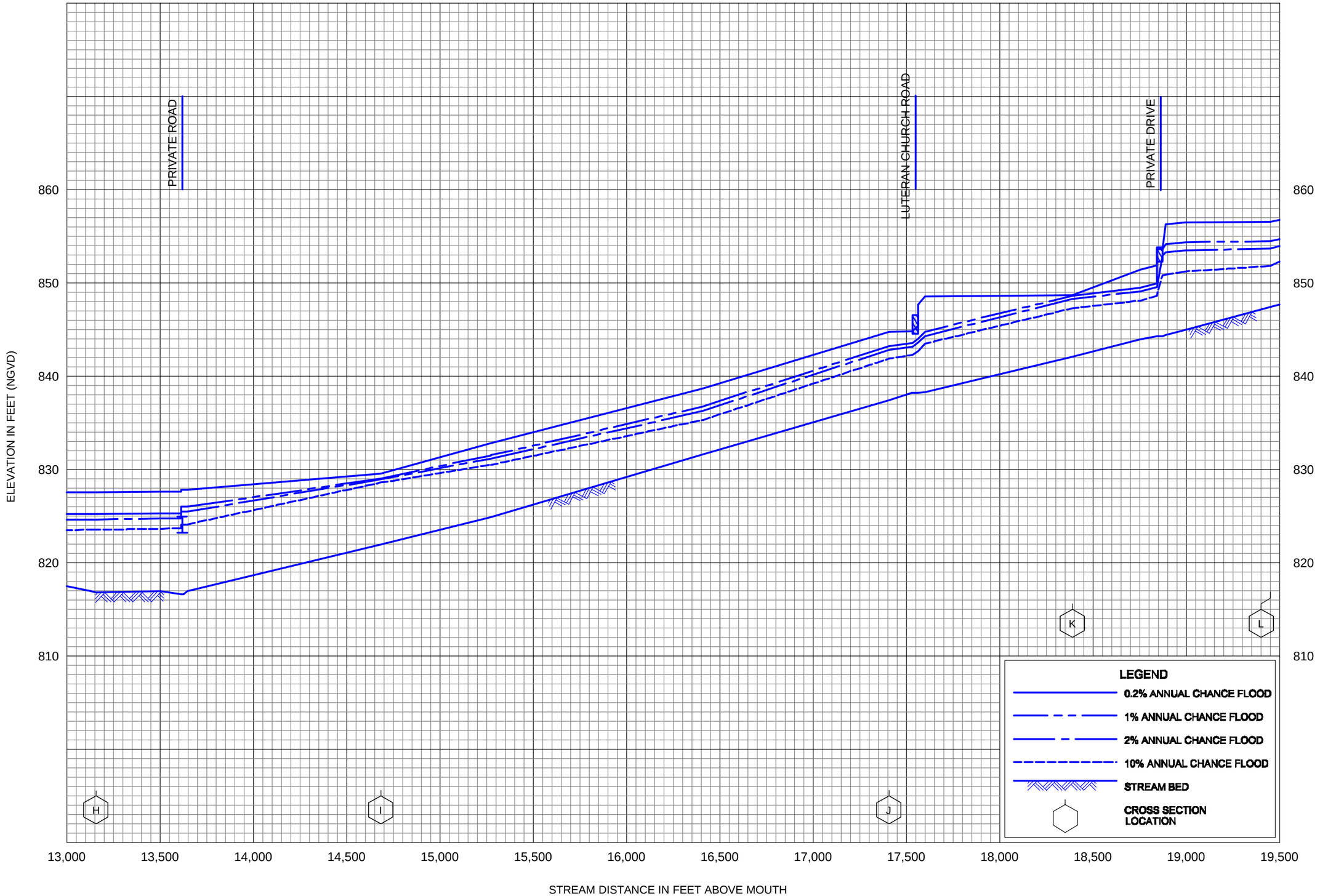
FLOOD PROFILES

LITTLE BEAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



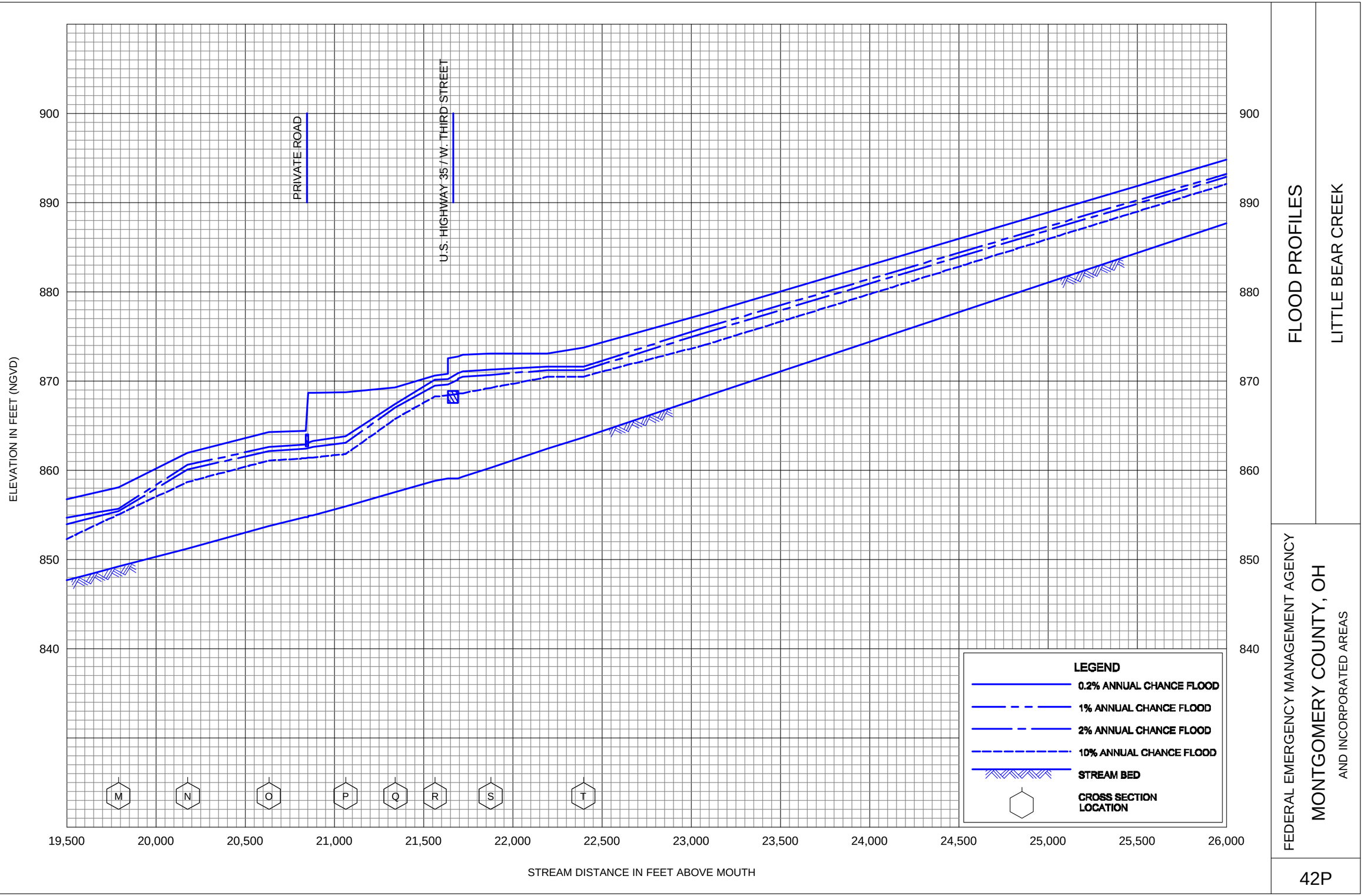
FLOOD PROFILES

LITTLE BEAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



FLOOD PROFILES

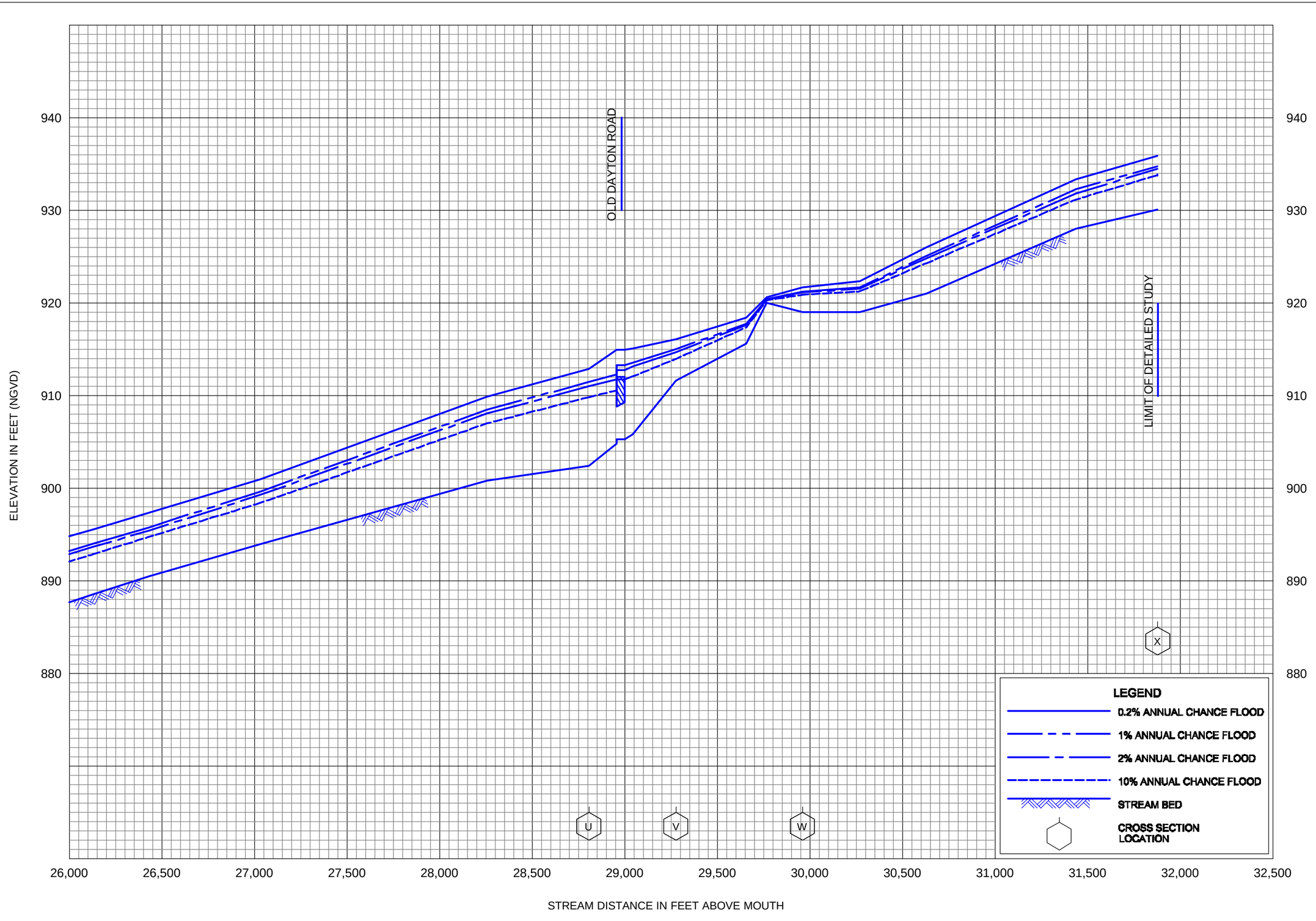
LITTLE BEAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

42P



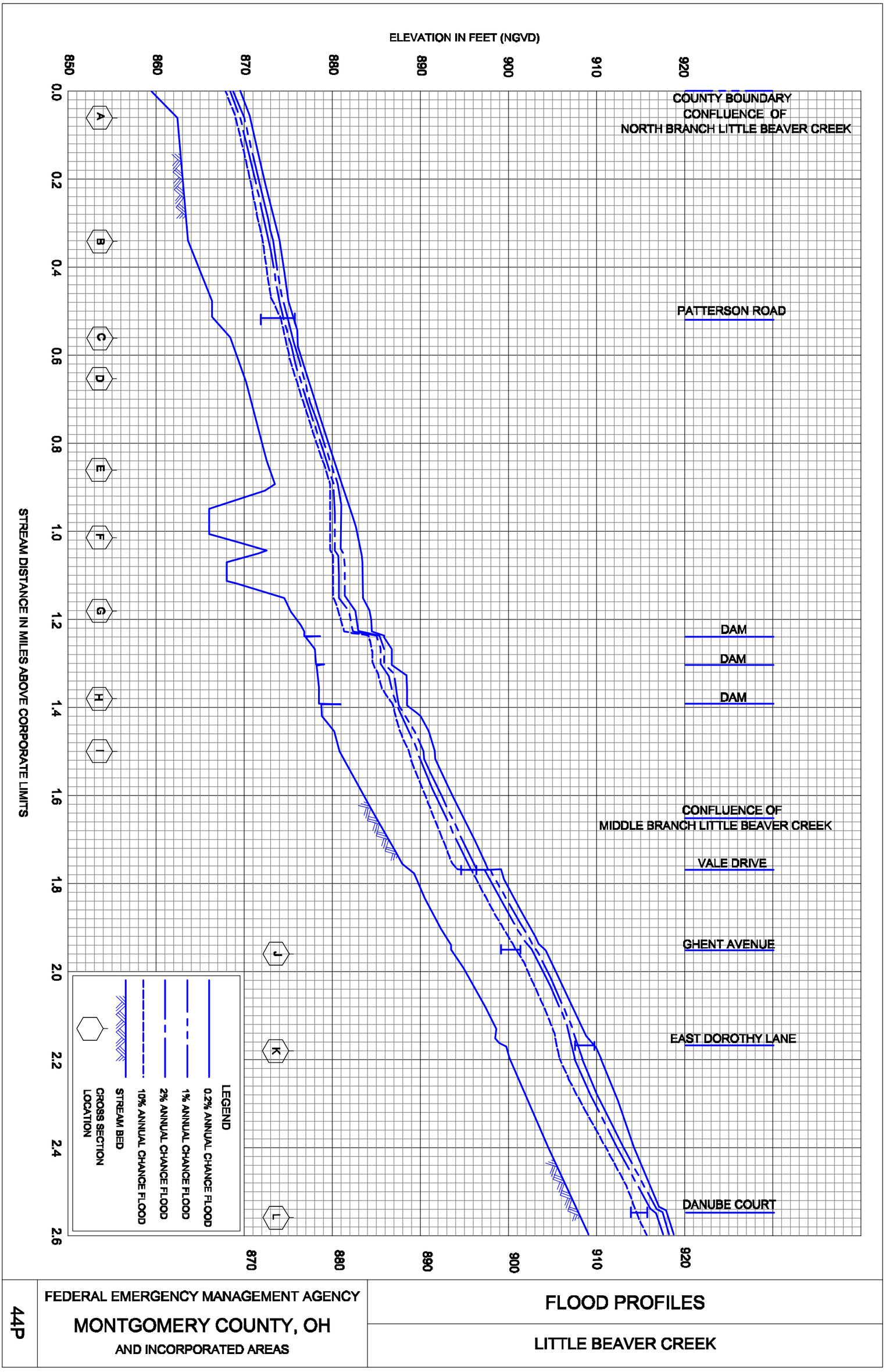
FLOOD PROFILES

LITTLE BEAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



44P

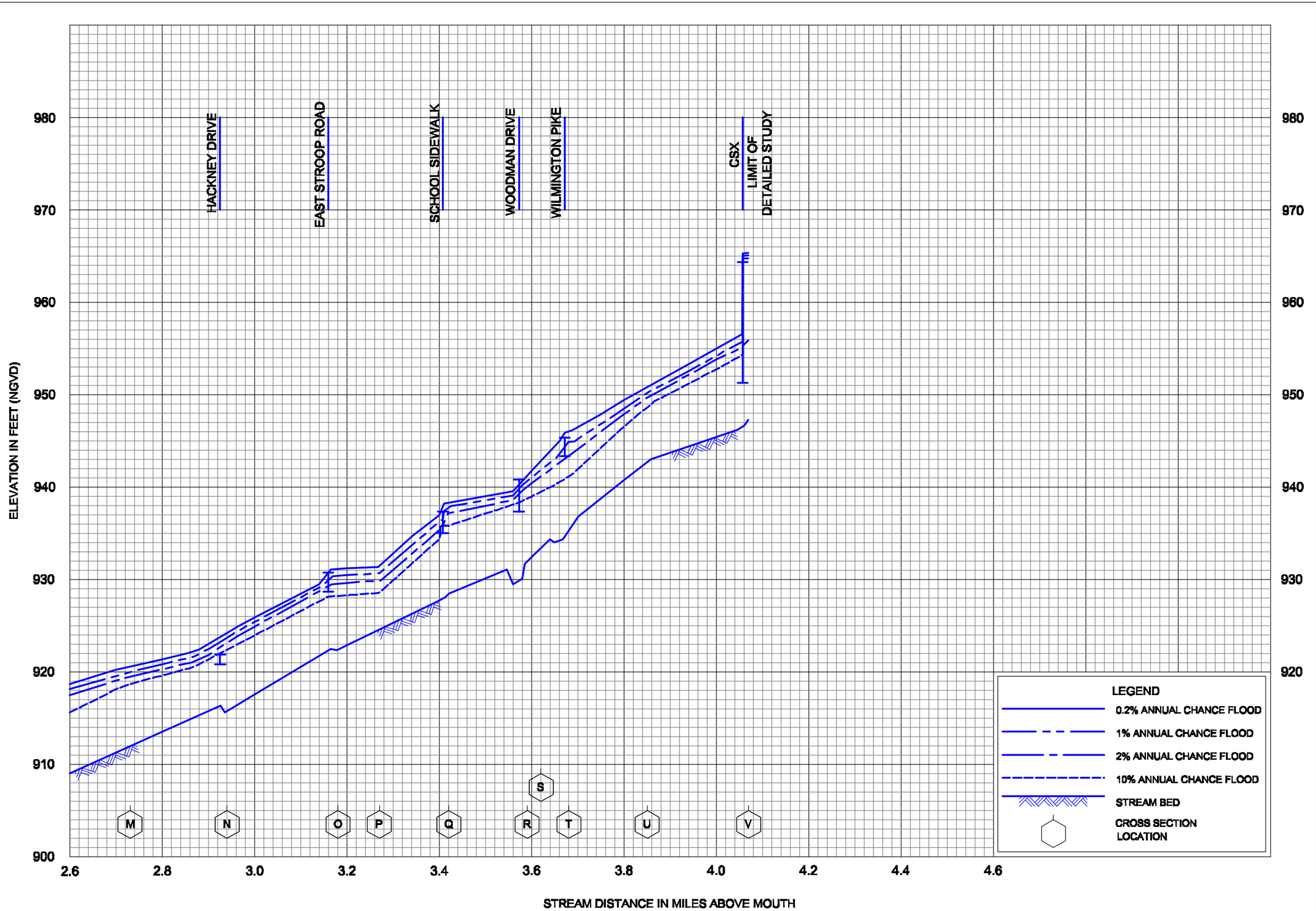
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

LITTLE BEAVER CREEK



FLOOD PROFILES

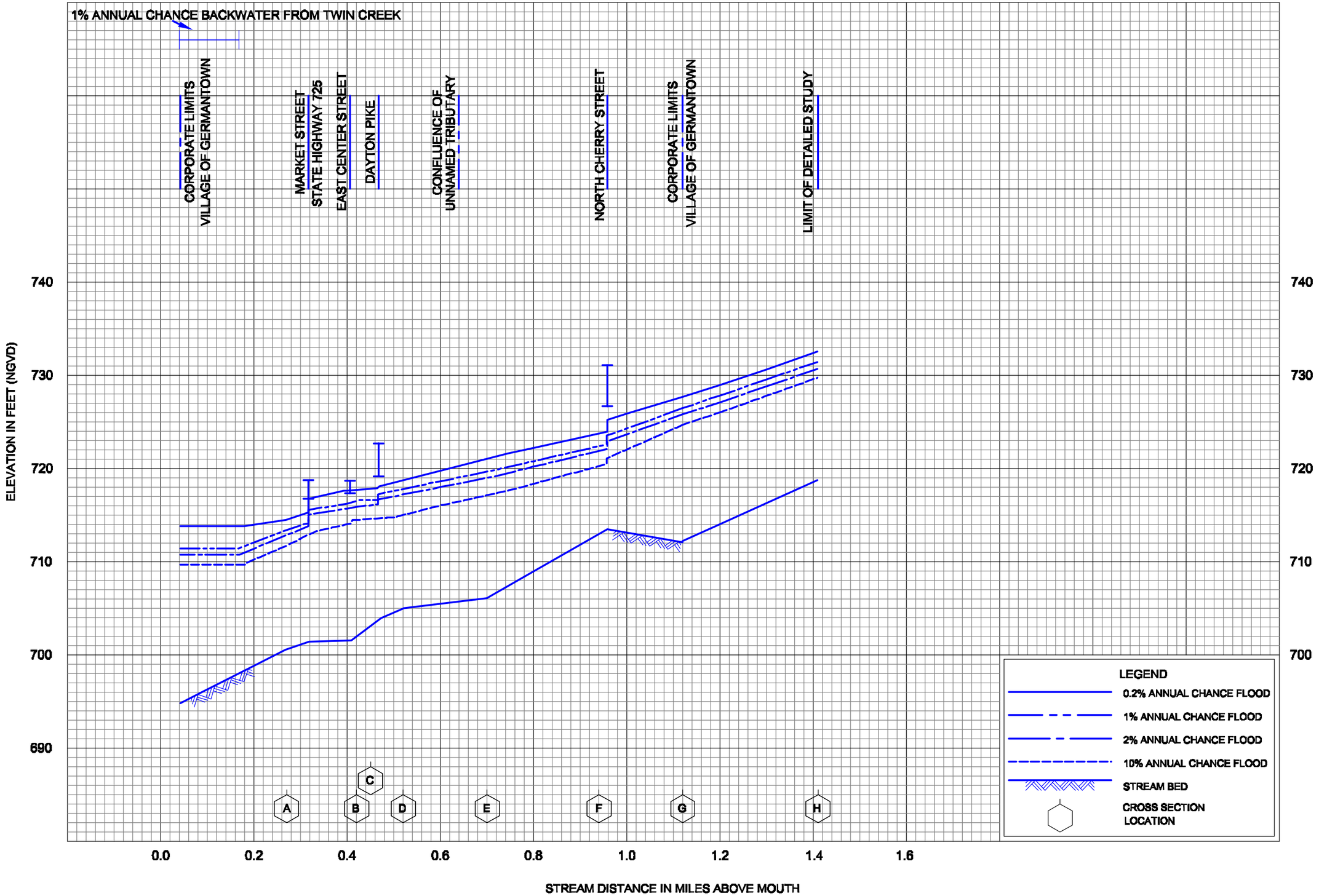
LITTLE BEAVER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

45P



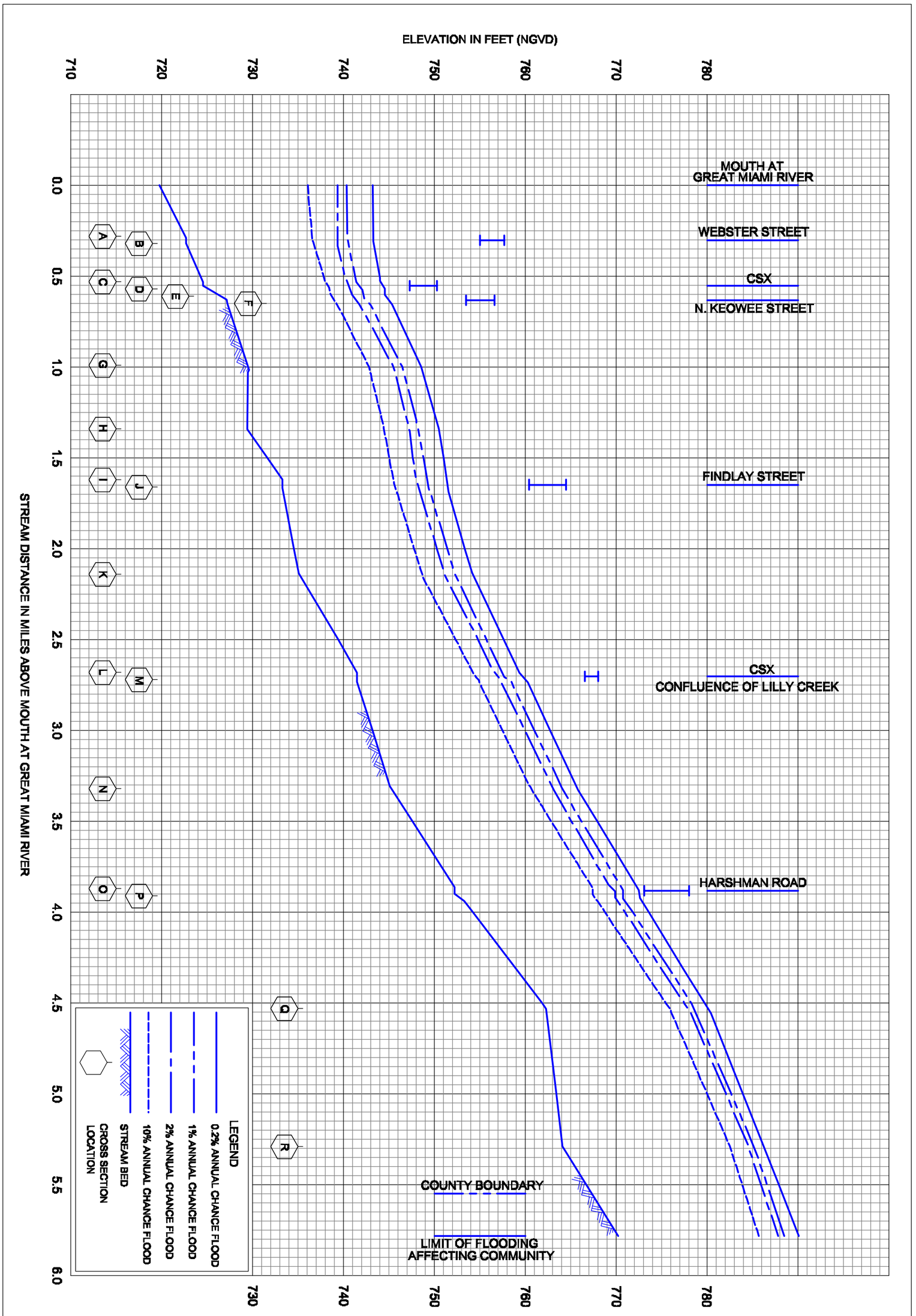
FLOOD PROFILES

LITTLE TWIN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



47P

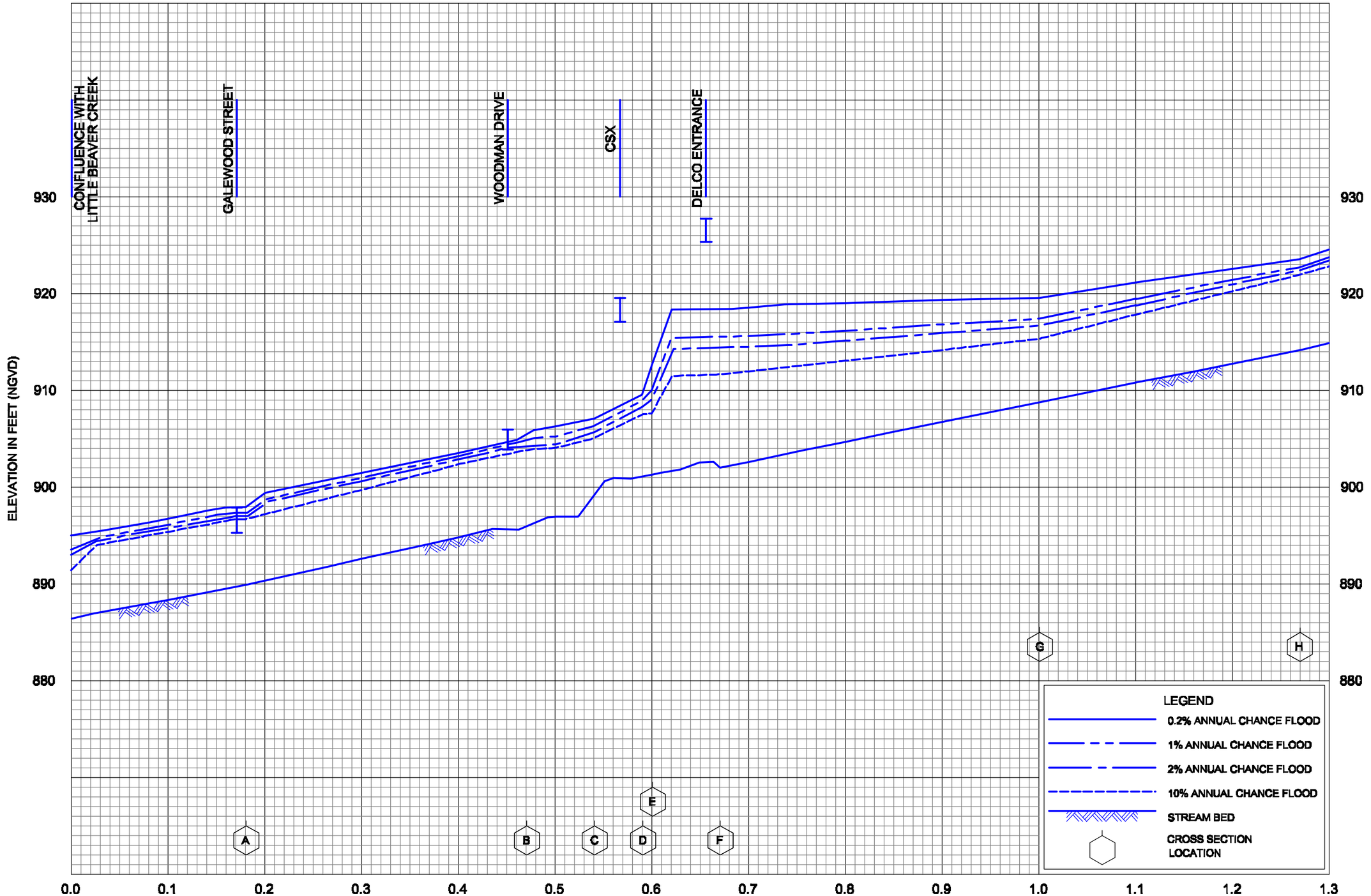
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

MAD RIVER



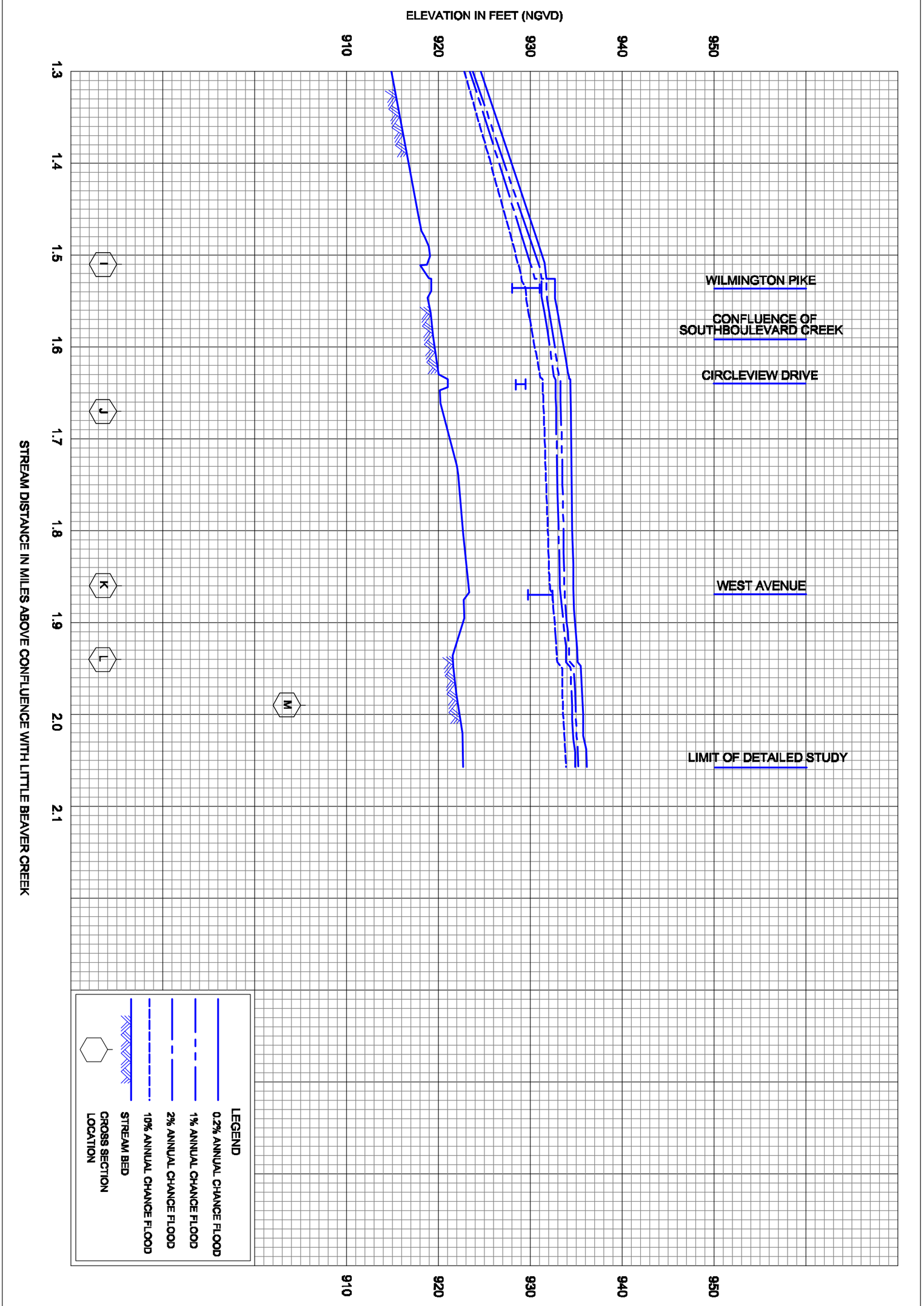
FLOOD PROFILES

MIDDLE BRANCH LITTLE BEAVER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



49P

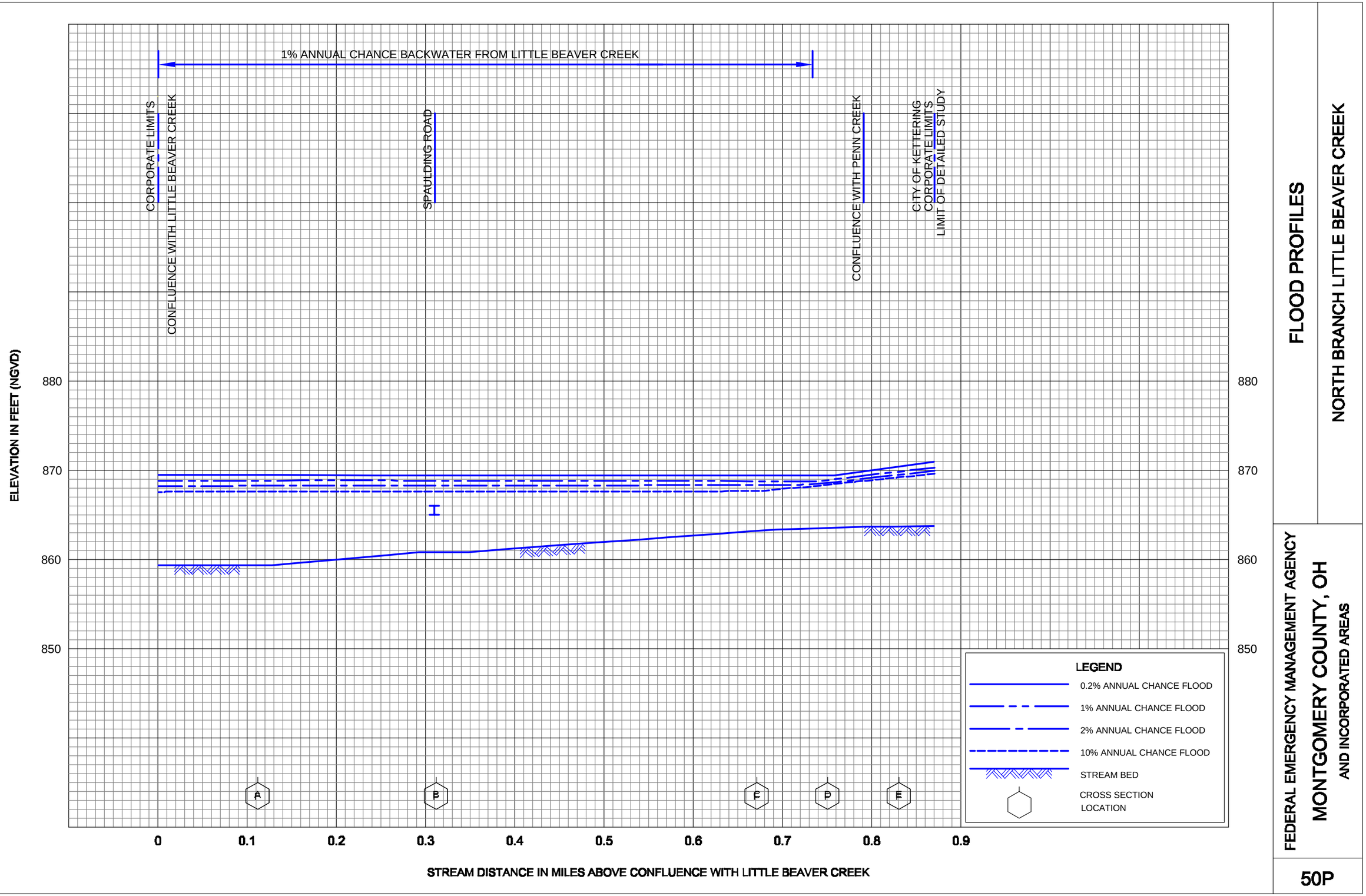
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

MIDDLE BRANCH LITTLE BEAVER CREEK



FLOOD PROFILES

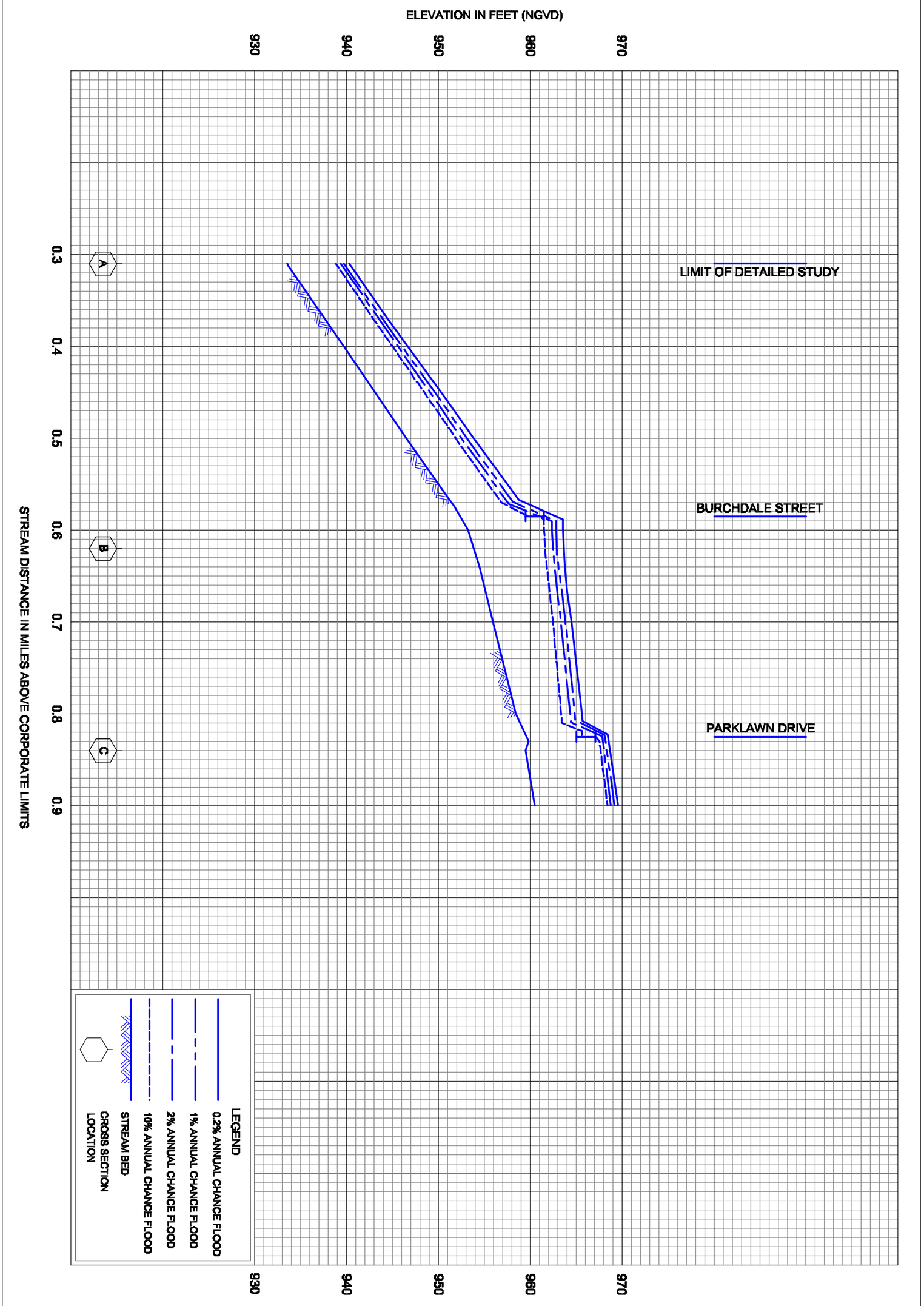
NORTH BRANCH LITTLE BEAVER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

50P



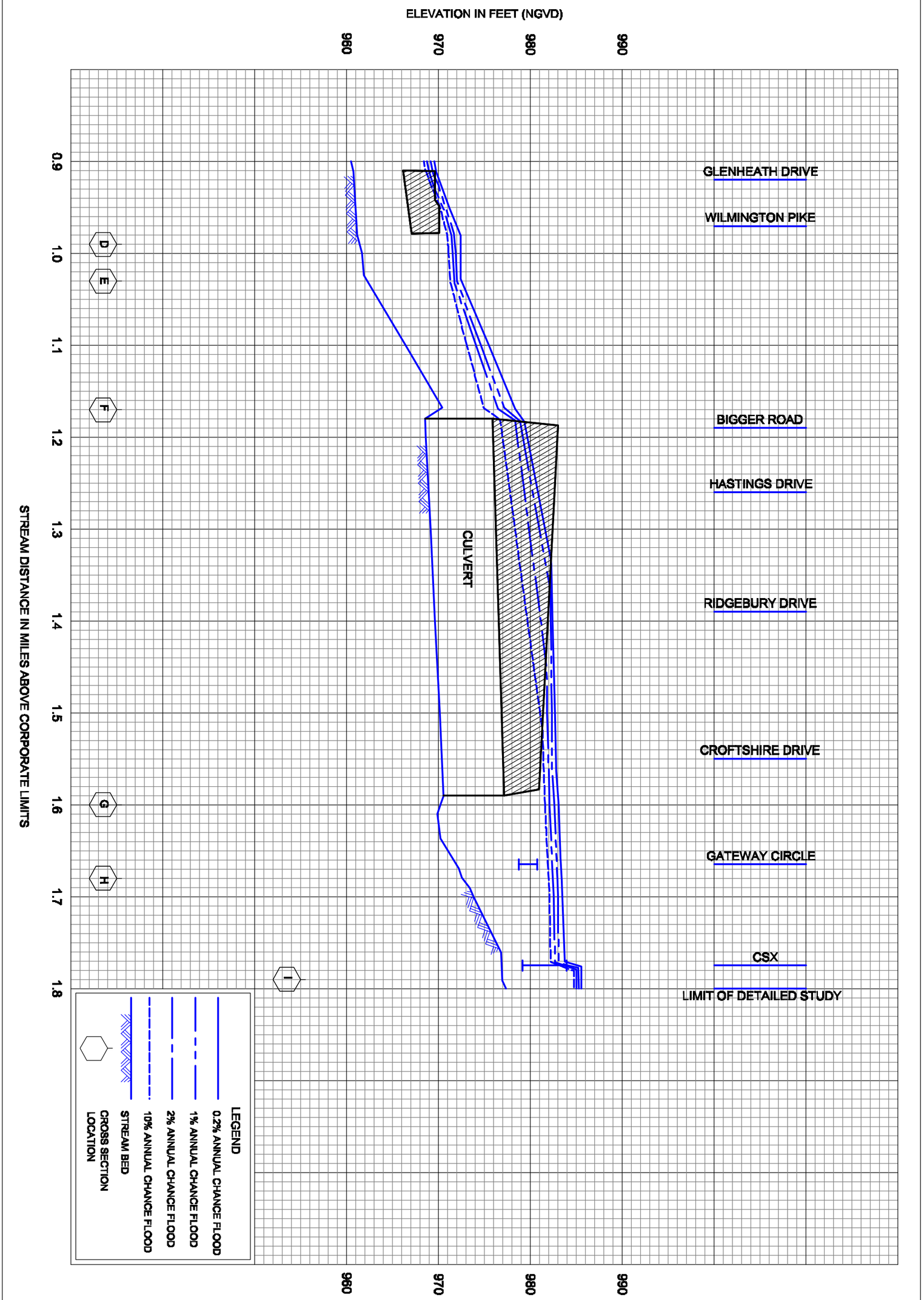
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

NORTH BRANCH LITTLE SUGAR CREEK



52P

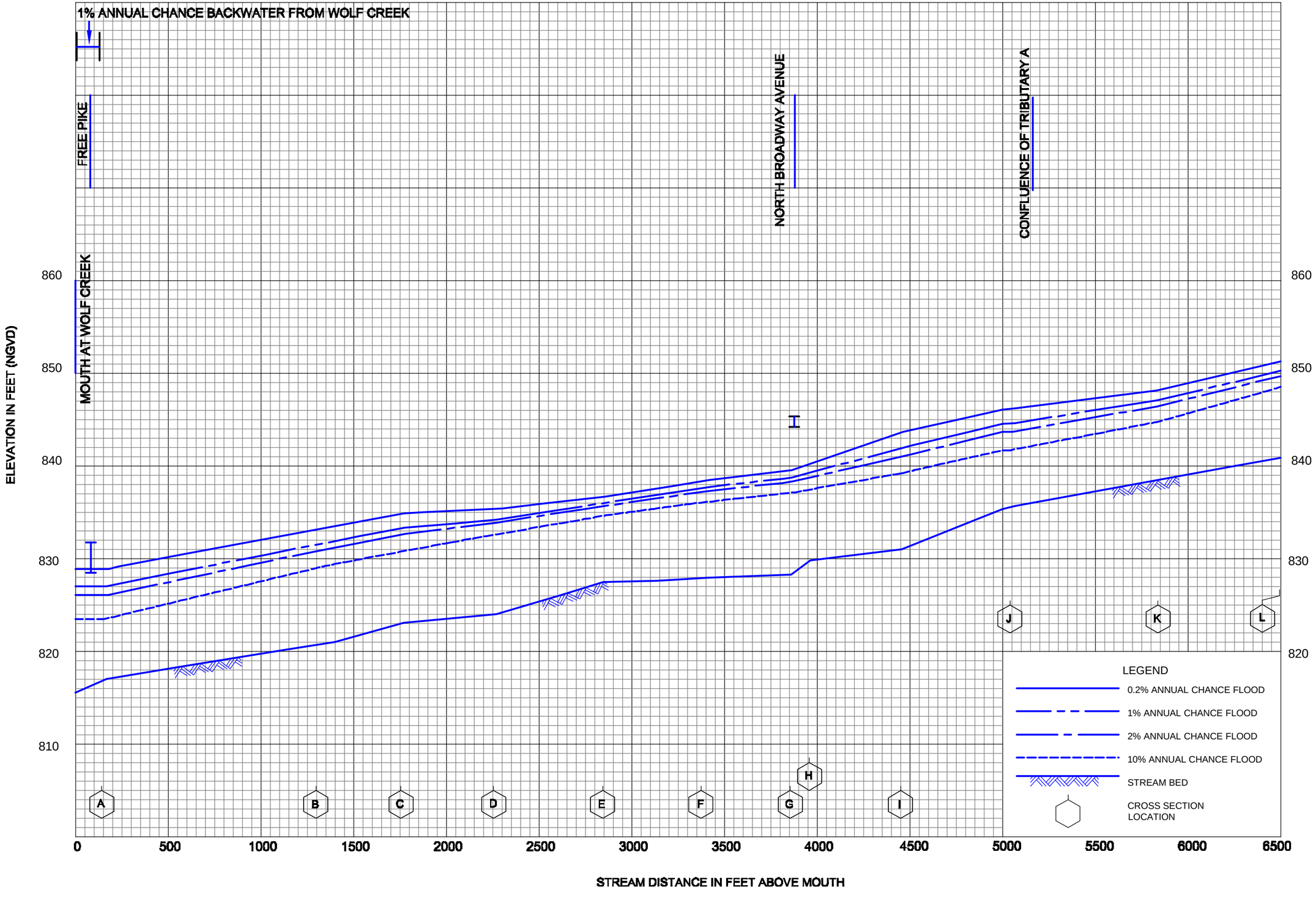
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

NORTH BRANCH LITTLE SUGAR CREEK



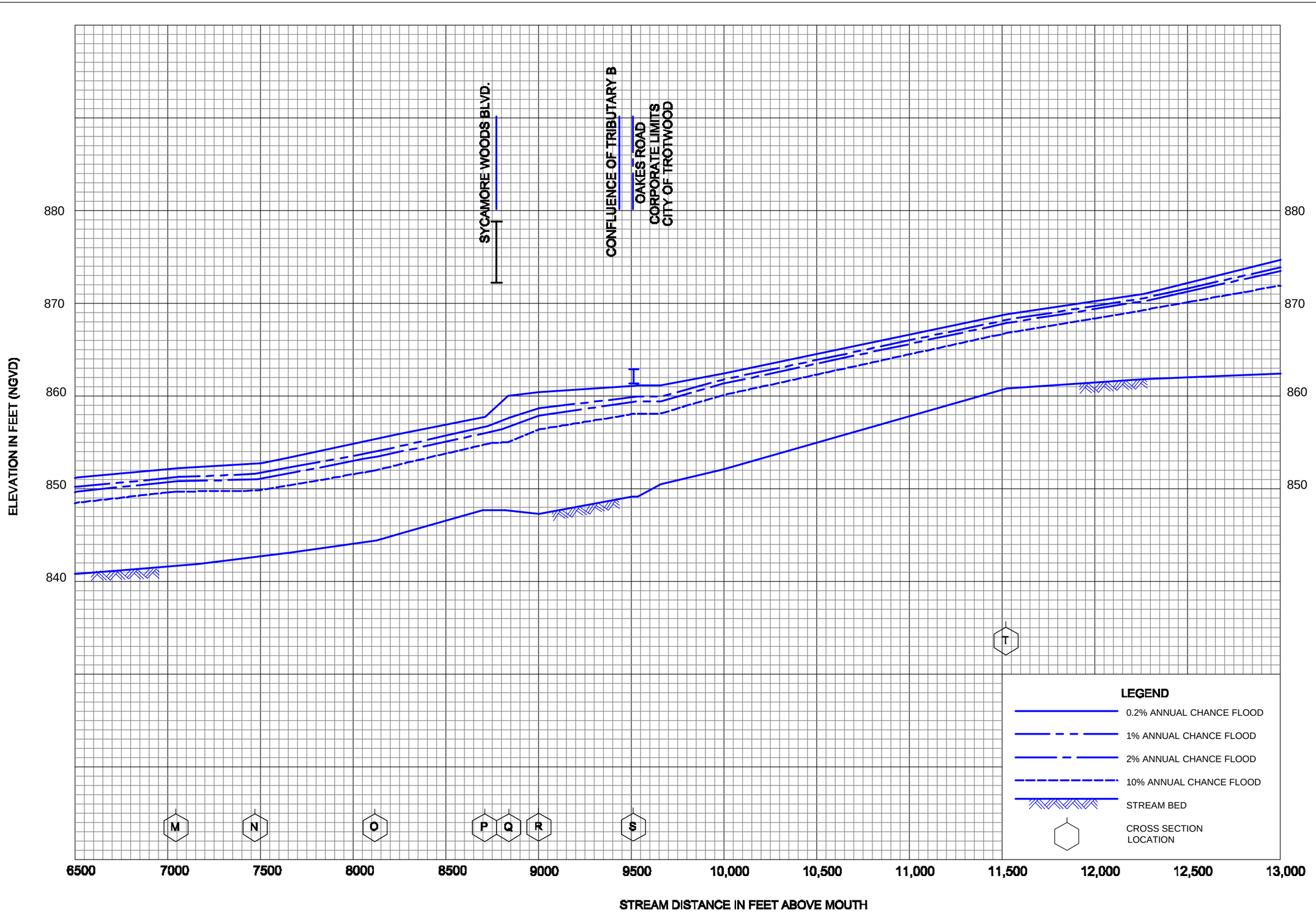
FLOOD PROFILES

NORTH BRANCH WOLF CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



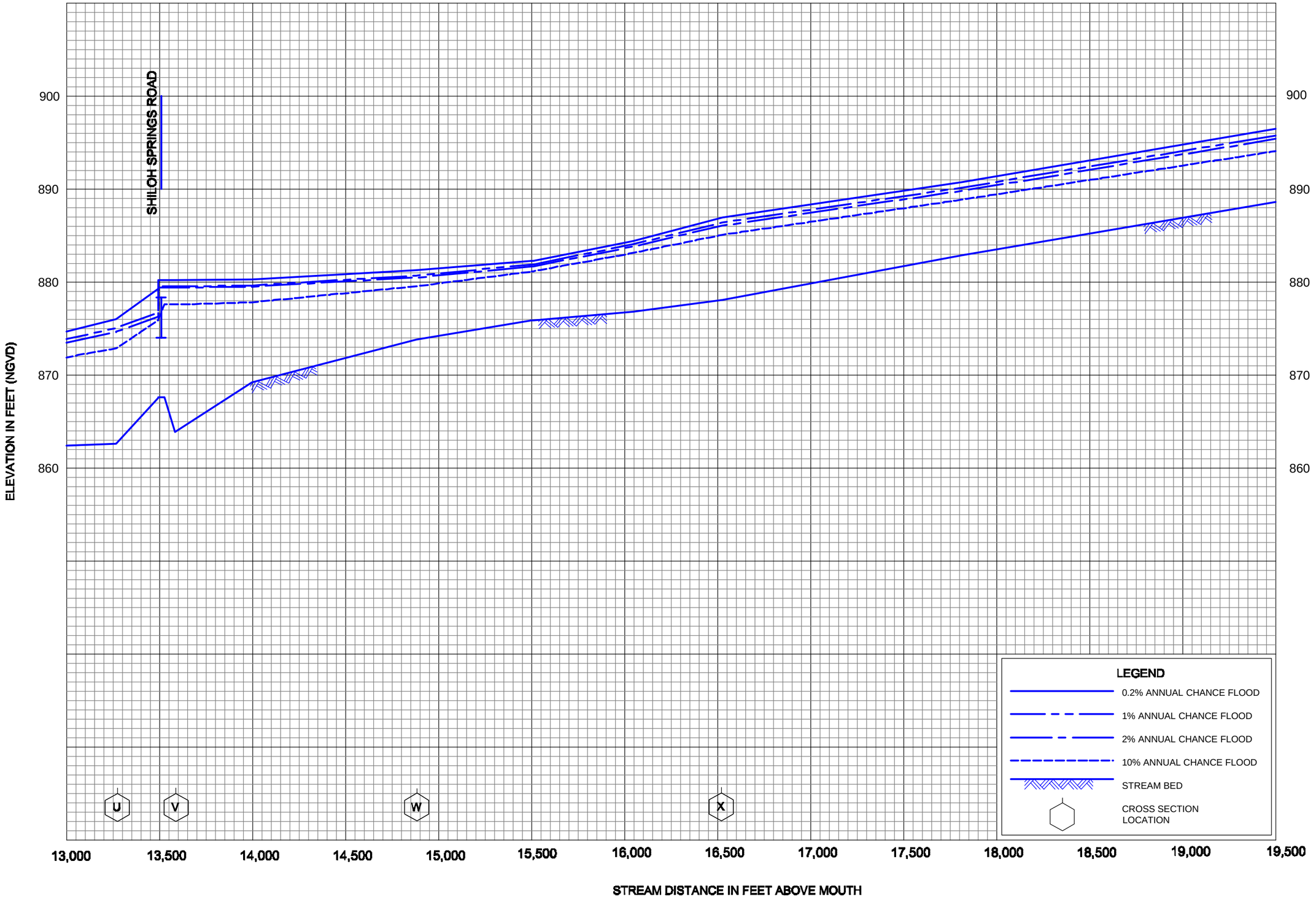
FLOOD PROFILES

NORTH BRANCH WOLF CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



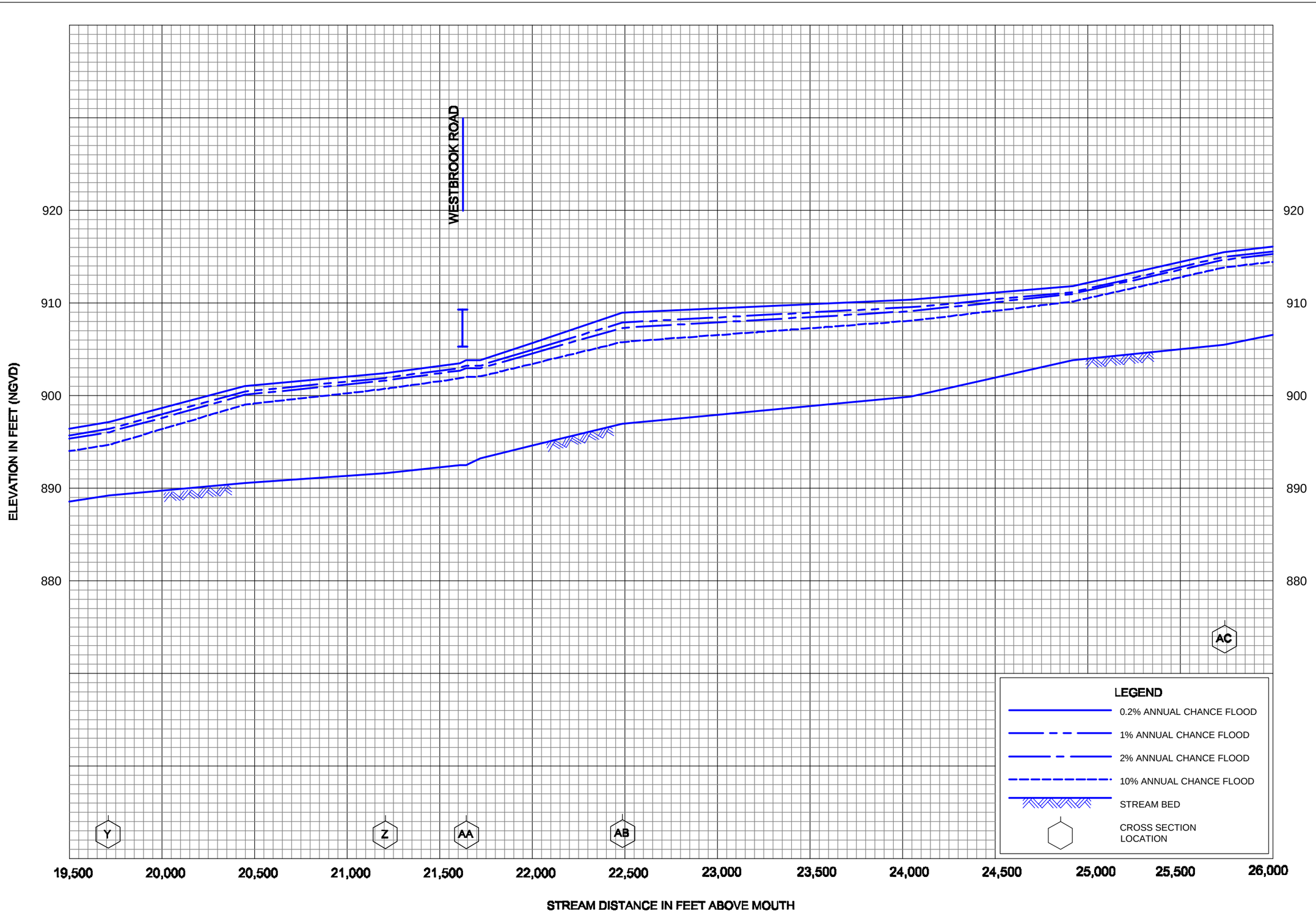
FLOOD PROFILES

NORTH BRANCH WOLF CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



FLOOD PROFILES

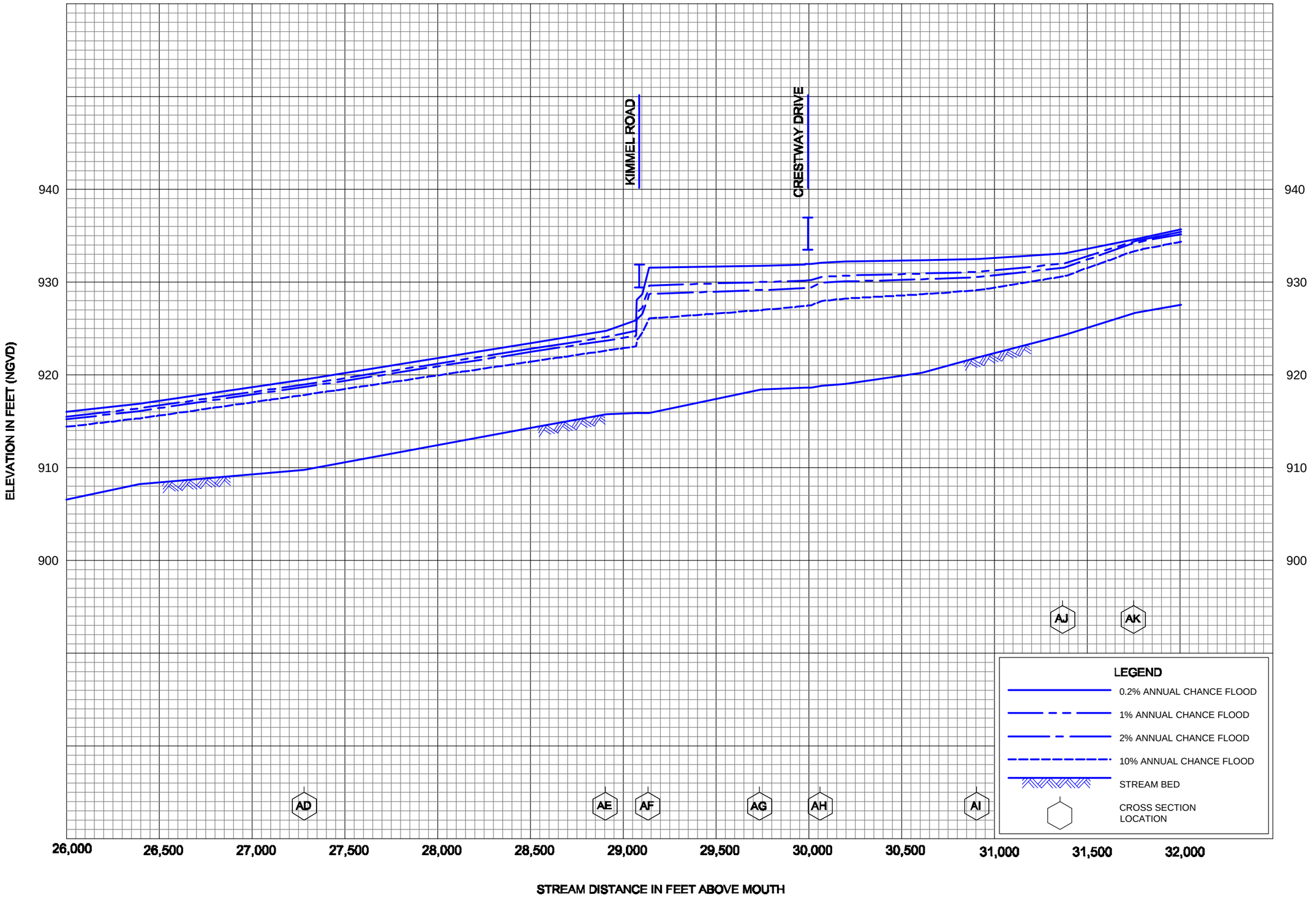
NORTH BRANCH WOLF CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

56P



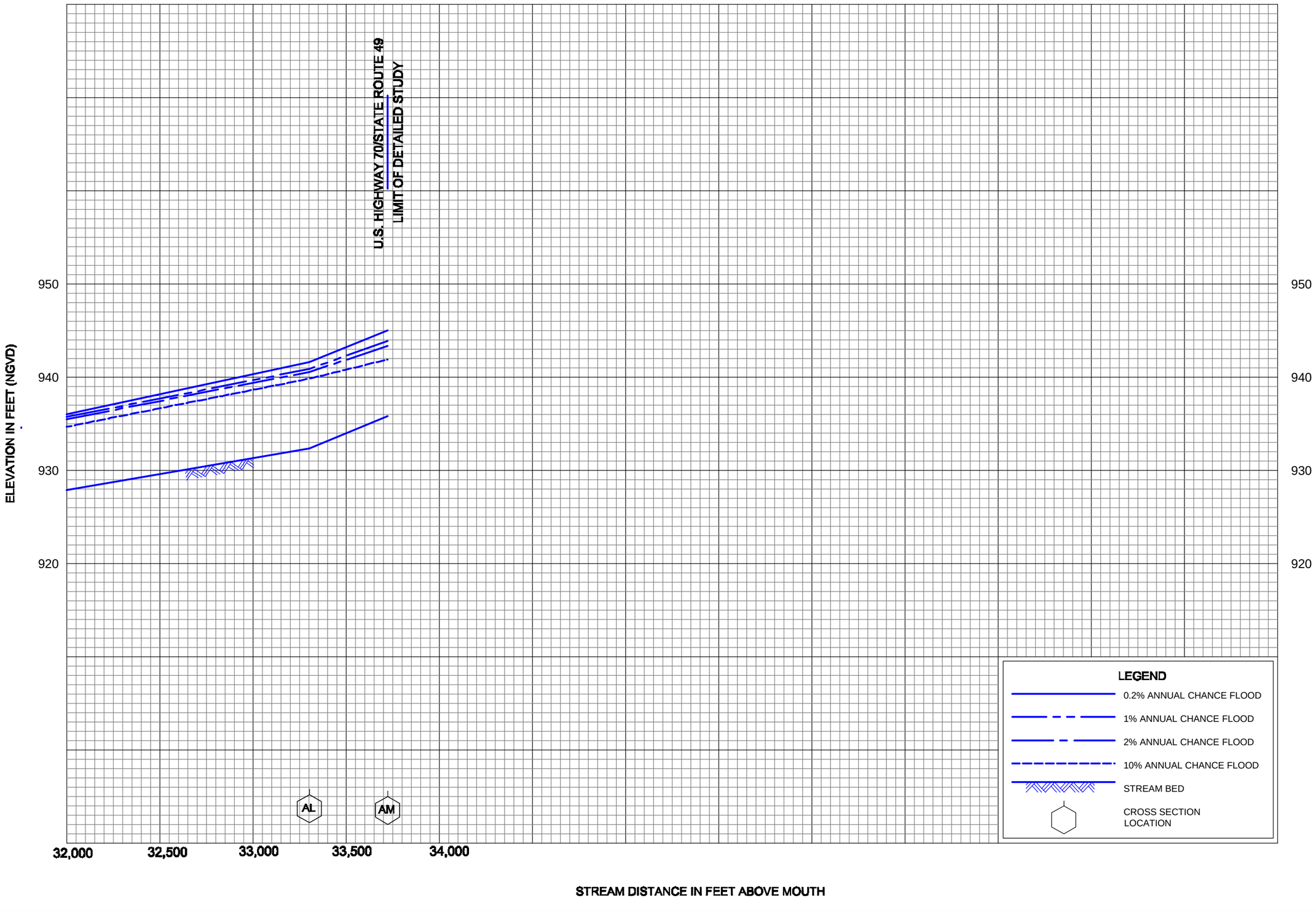
FLOOD PROFILES

NORTH BRANCH WOLF CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



FLOOD PROFILES

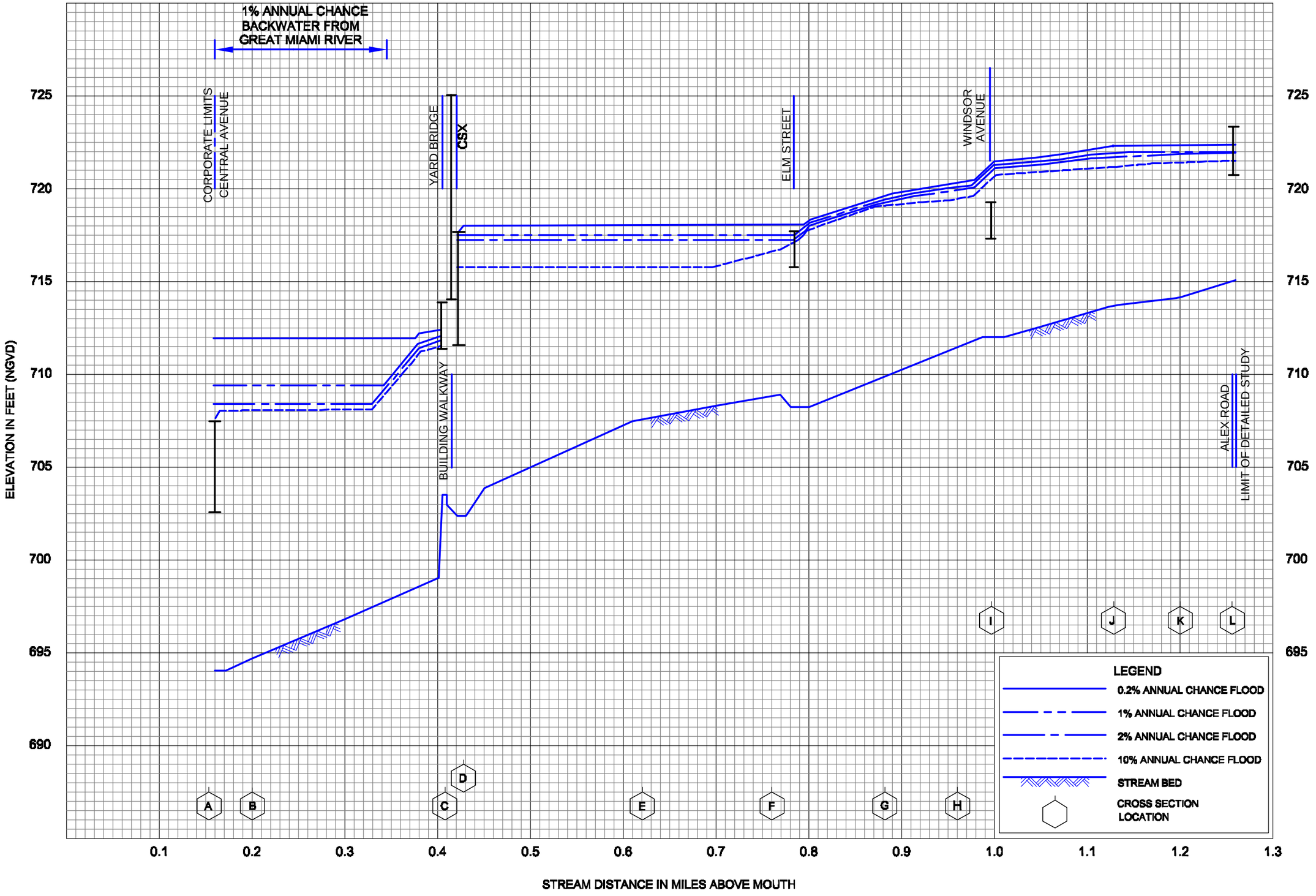
NORTH BRANCH WOLF CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

58P



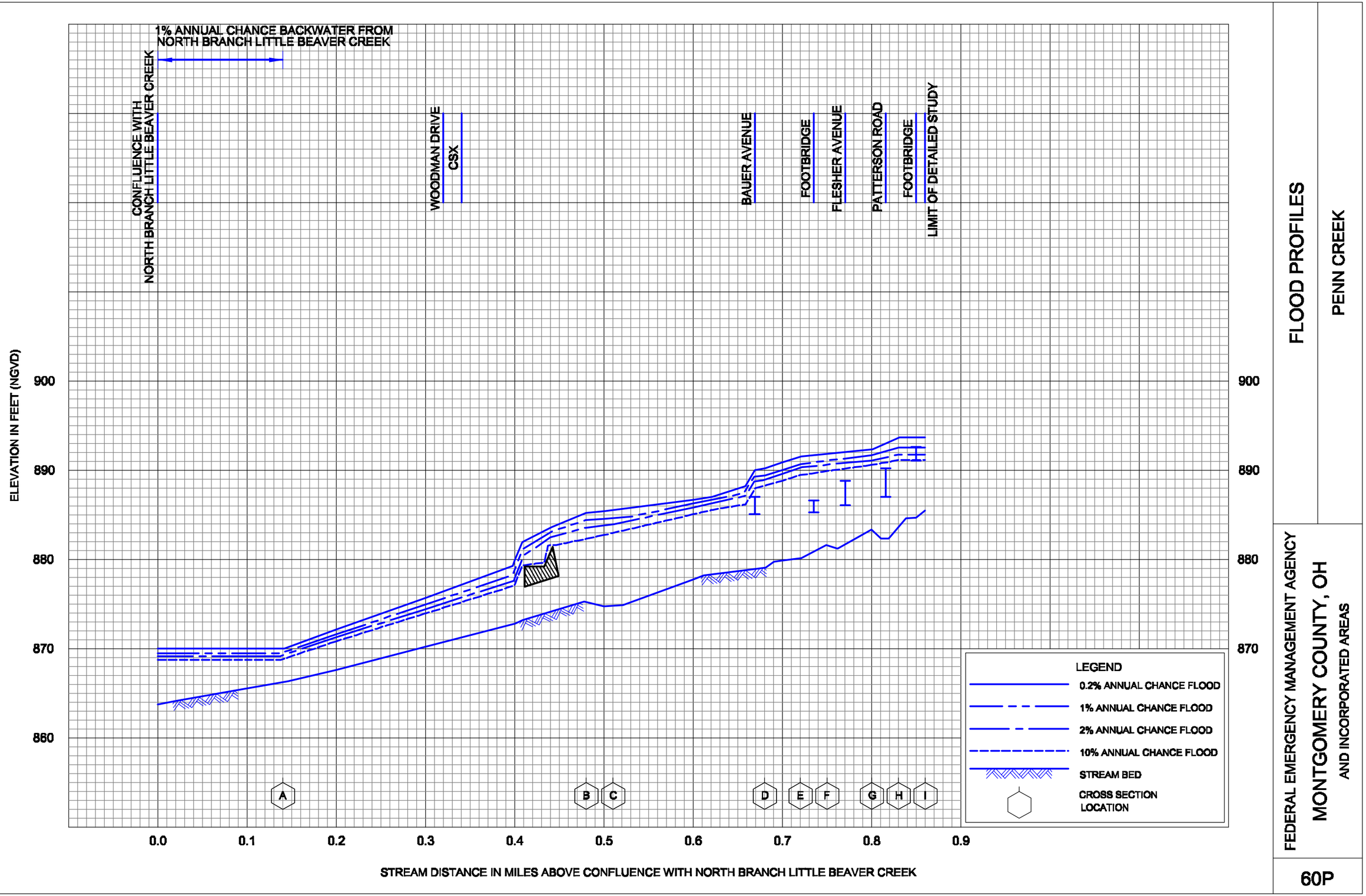
FLOOD PROFILES

OWL CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNT, OH

AND INCORPORATED AREAS



FLOOD PROFILES

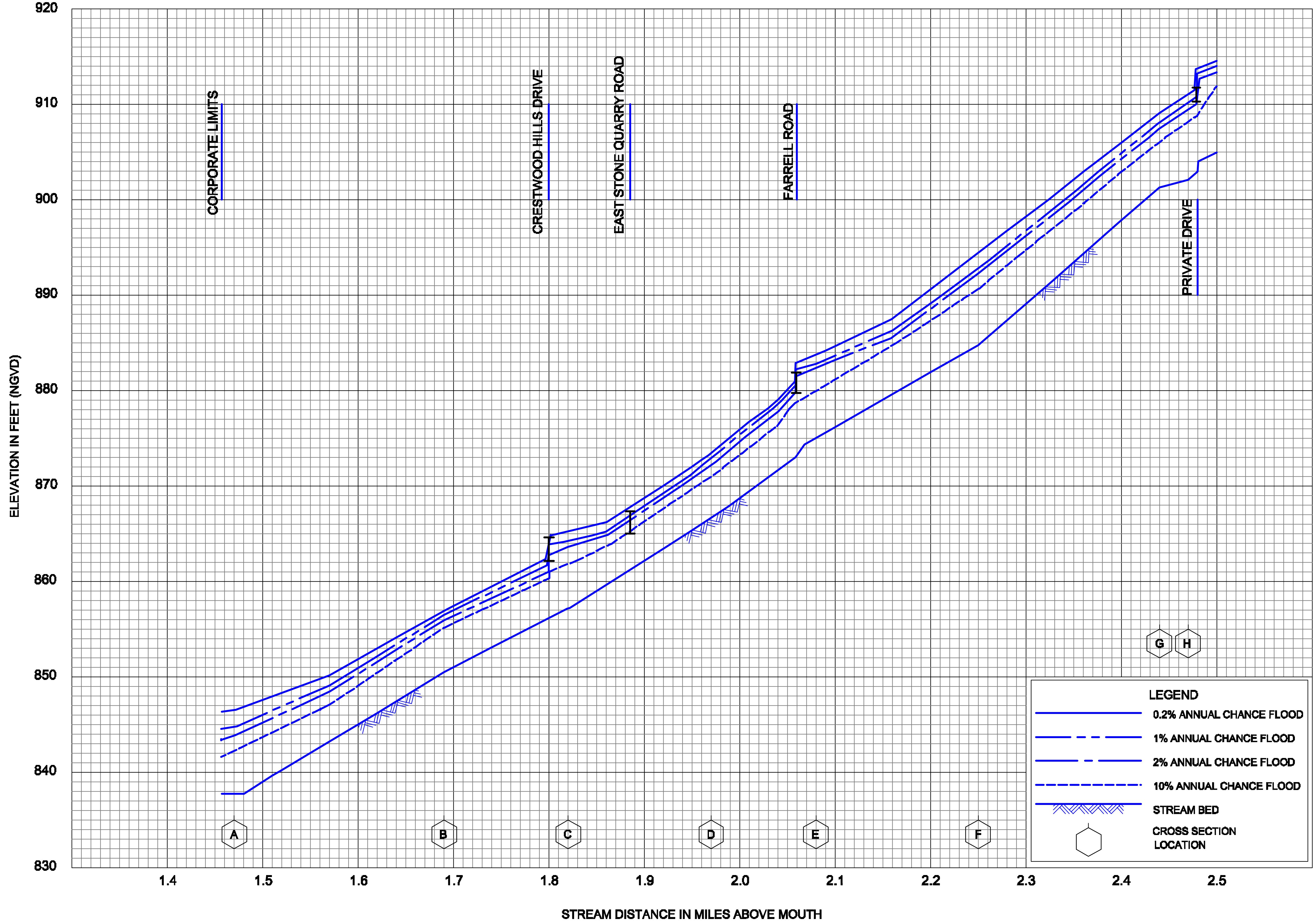
PENN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

60P



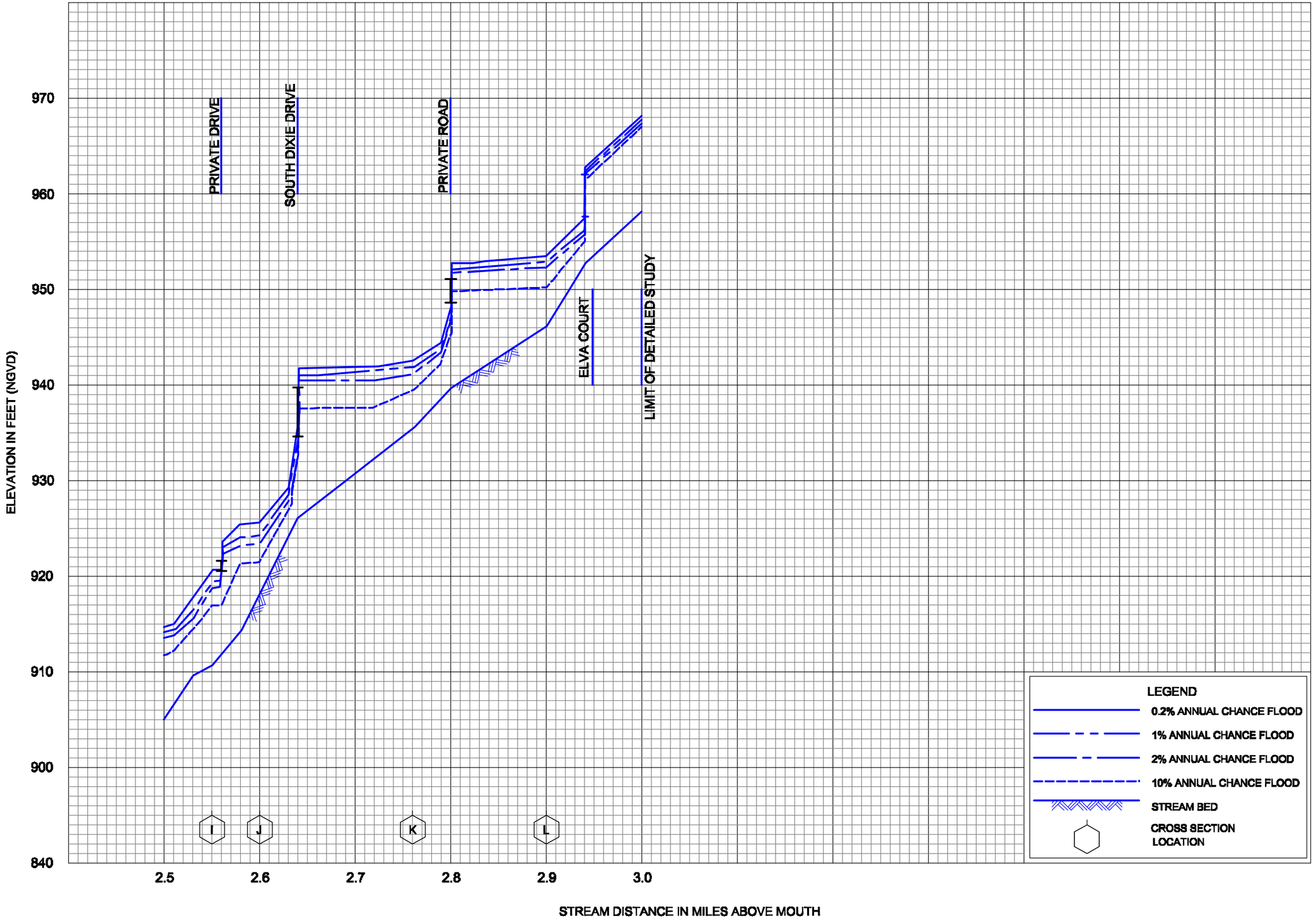
FLOOD PROFILES

POPLAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



FLOOD PROFILES

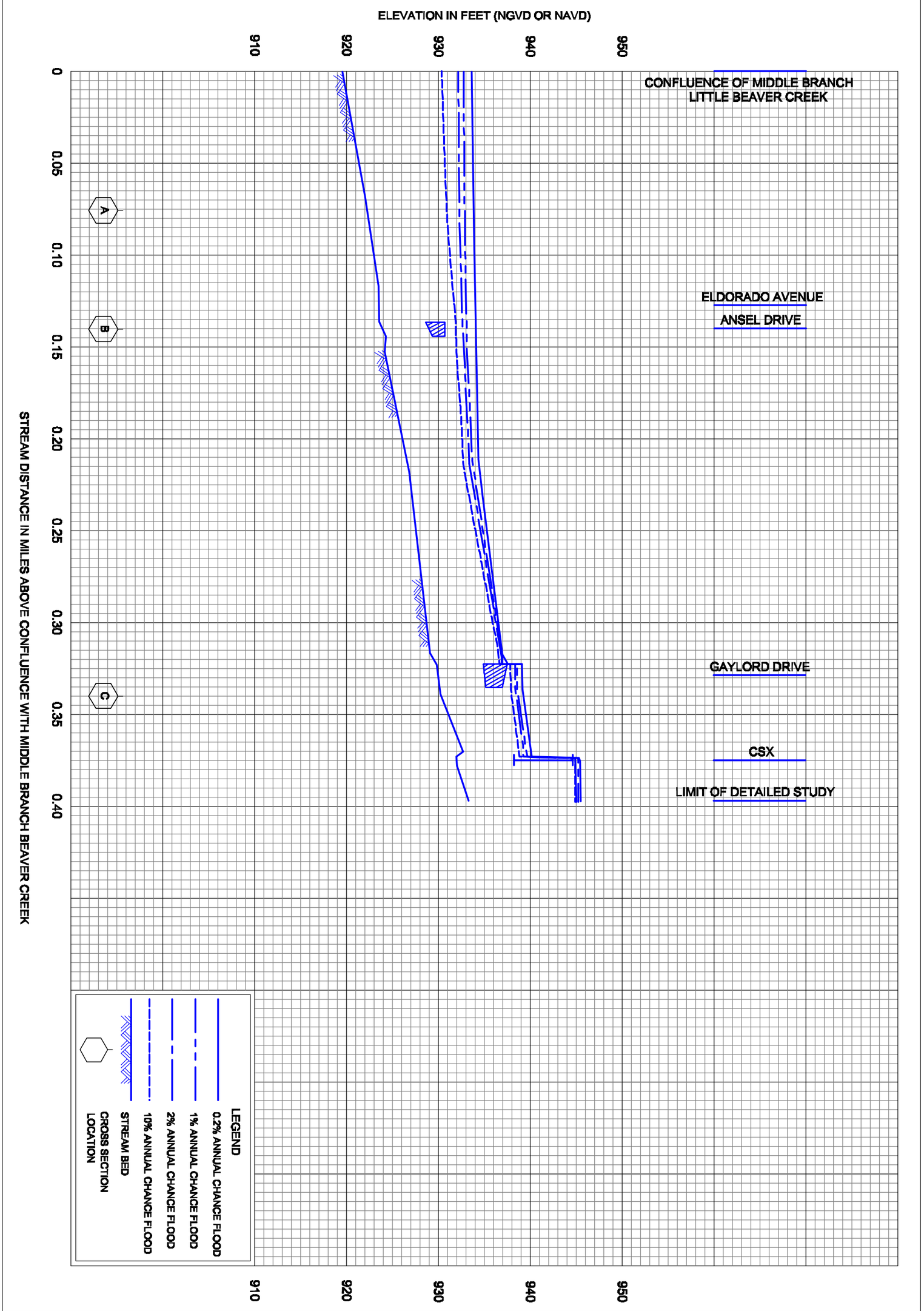
POPLAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

62P



63P

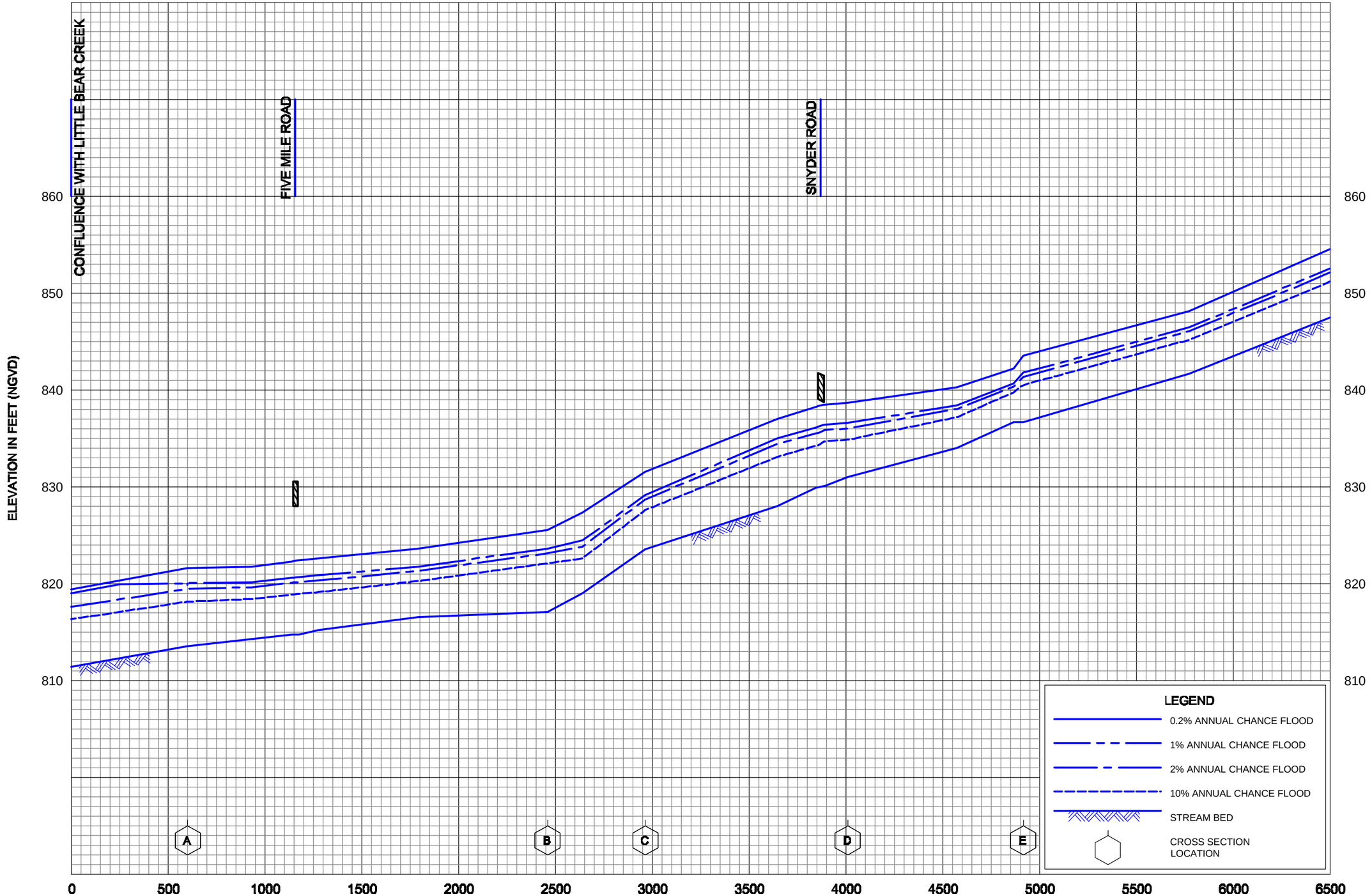
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

SOUTH BOULEVARD CREEK



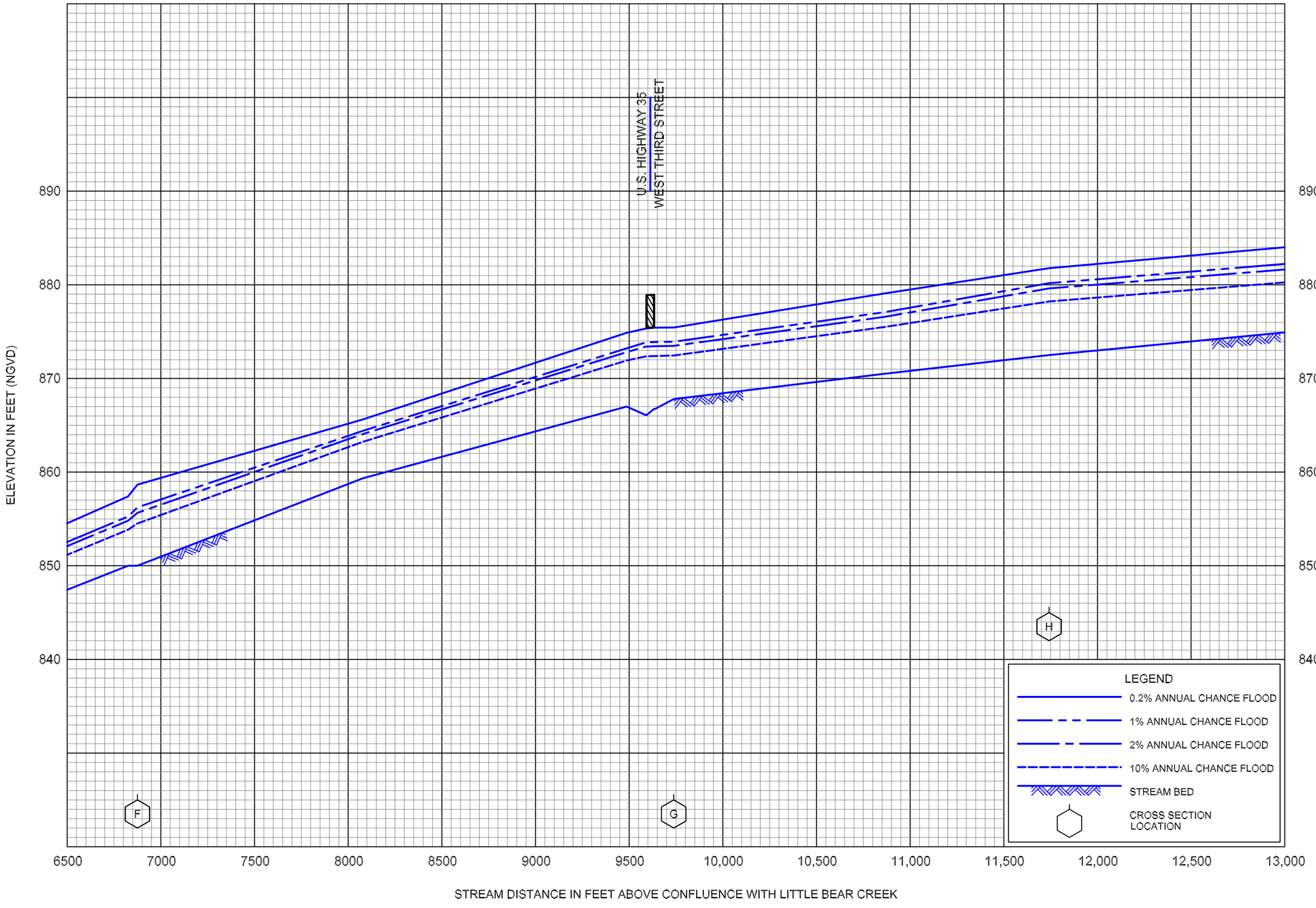
FLOOD PROFILES

SPRING RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



FLOOD PROFILES

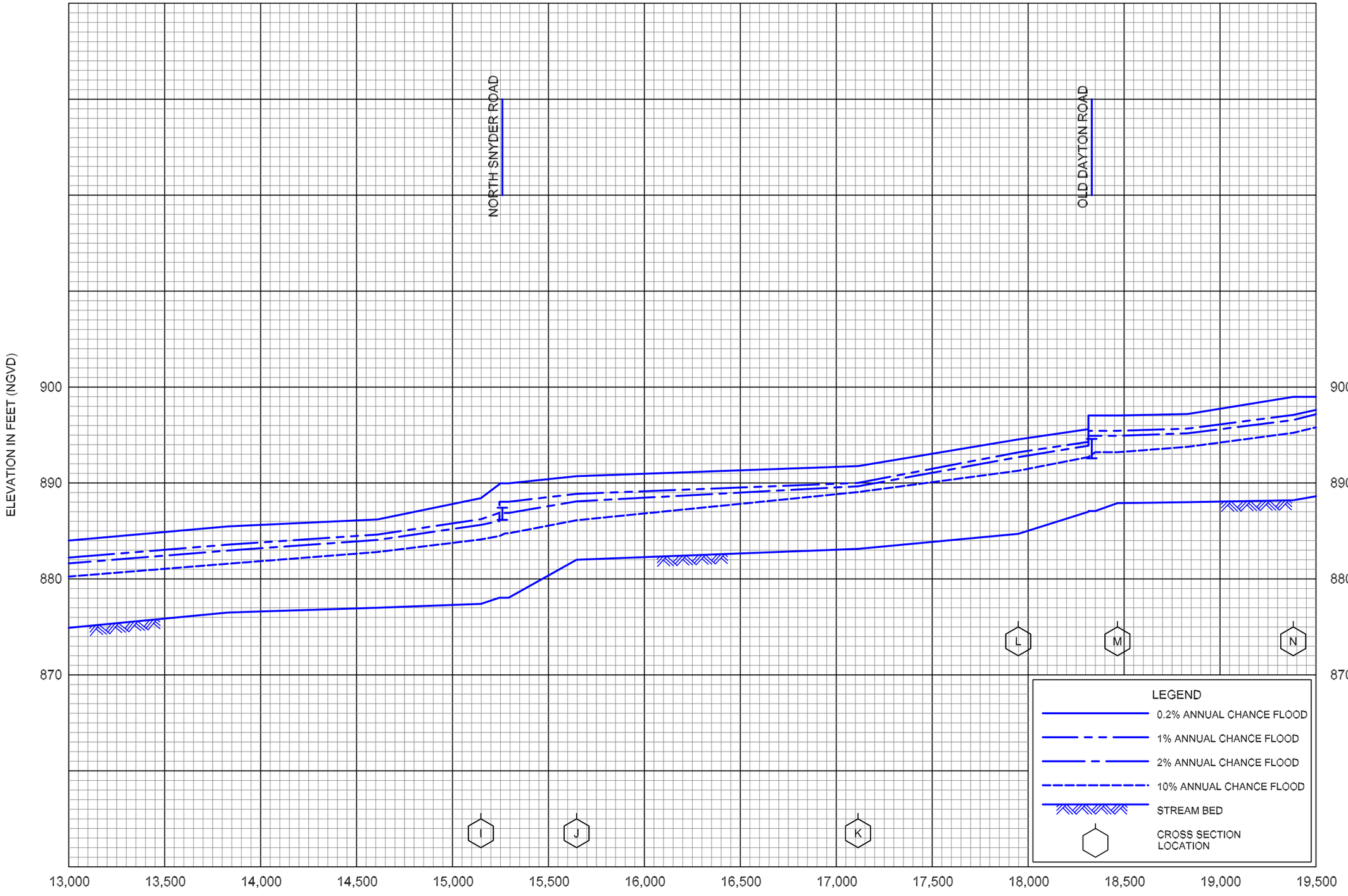
SPRING RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

65P



FLOOD PROFILES

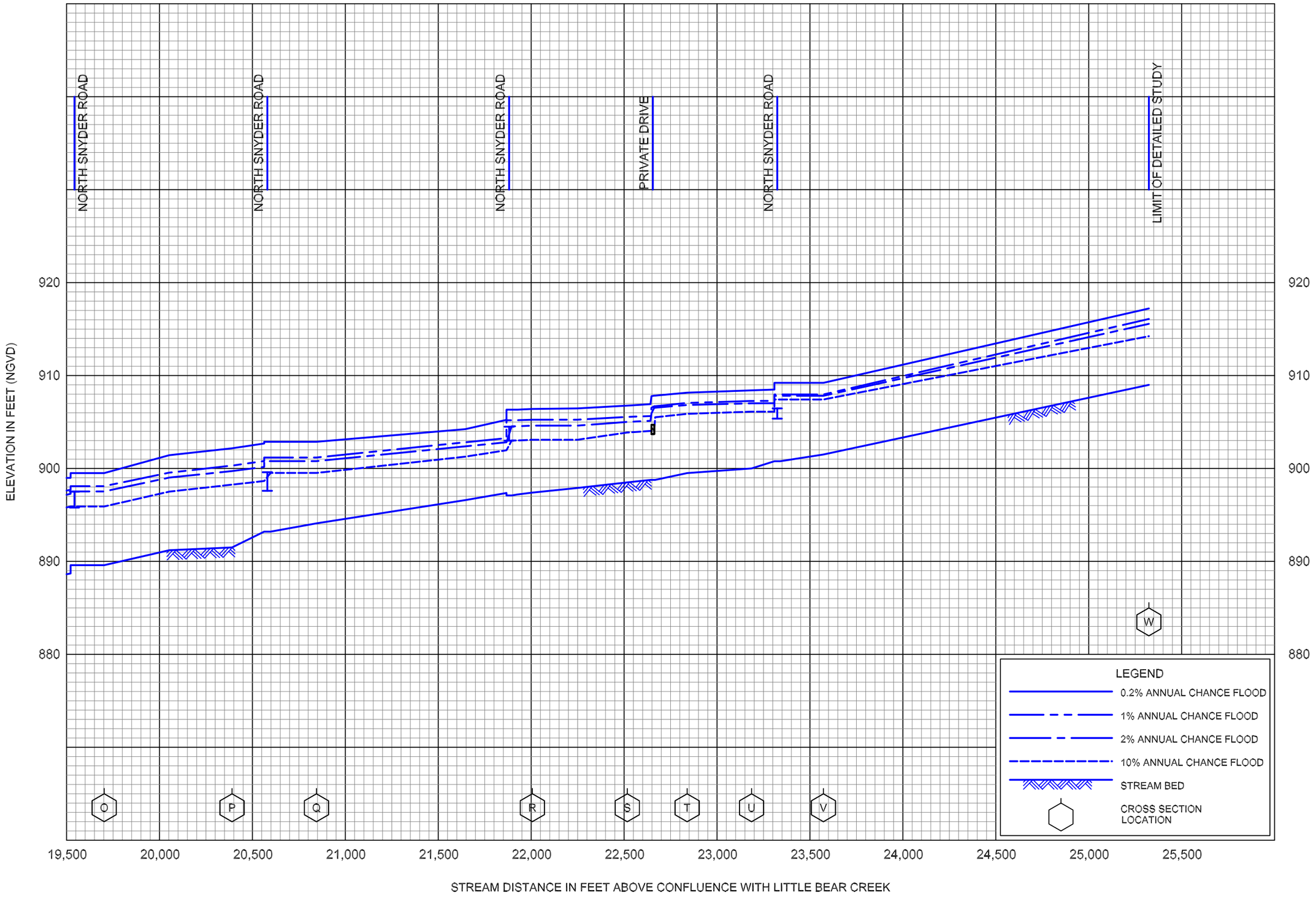
SPRING RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

66P



FLOOD PROFILES

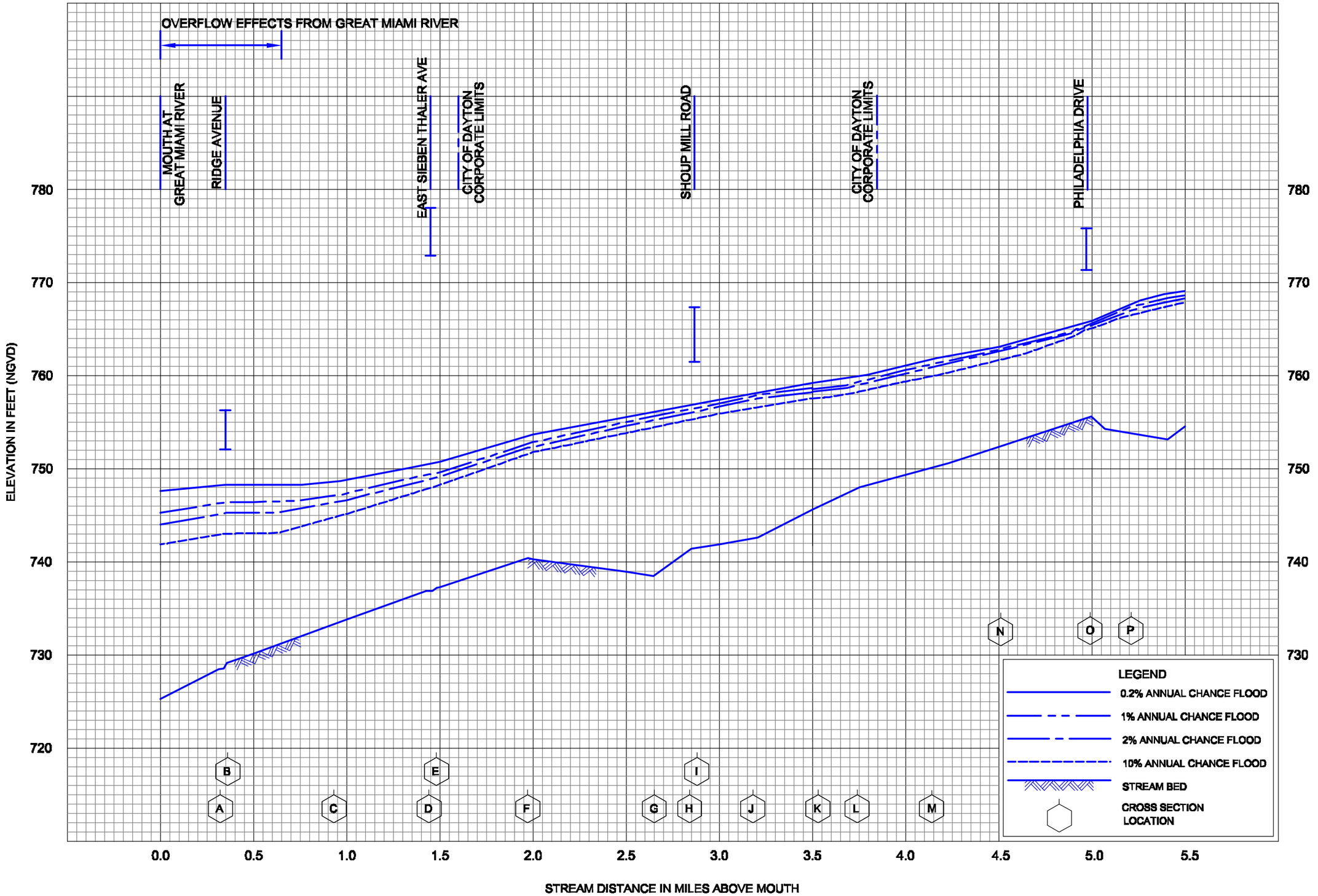
SPRING RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

67P



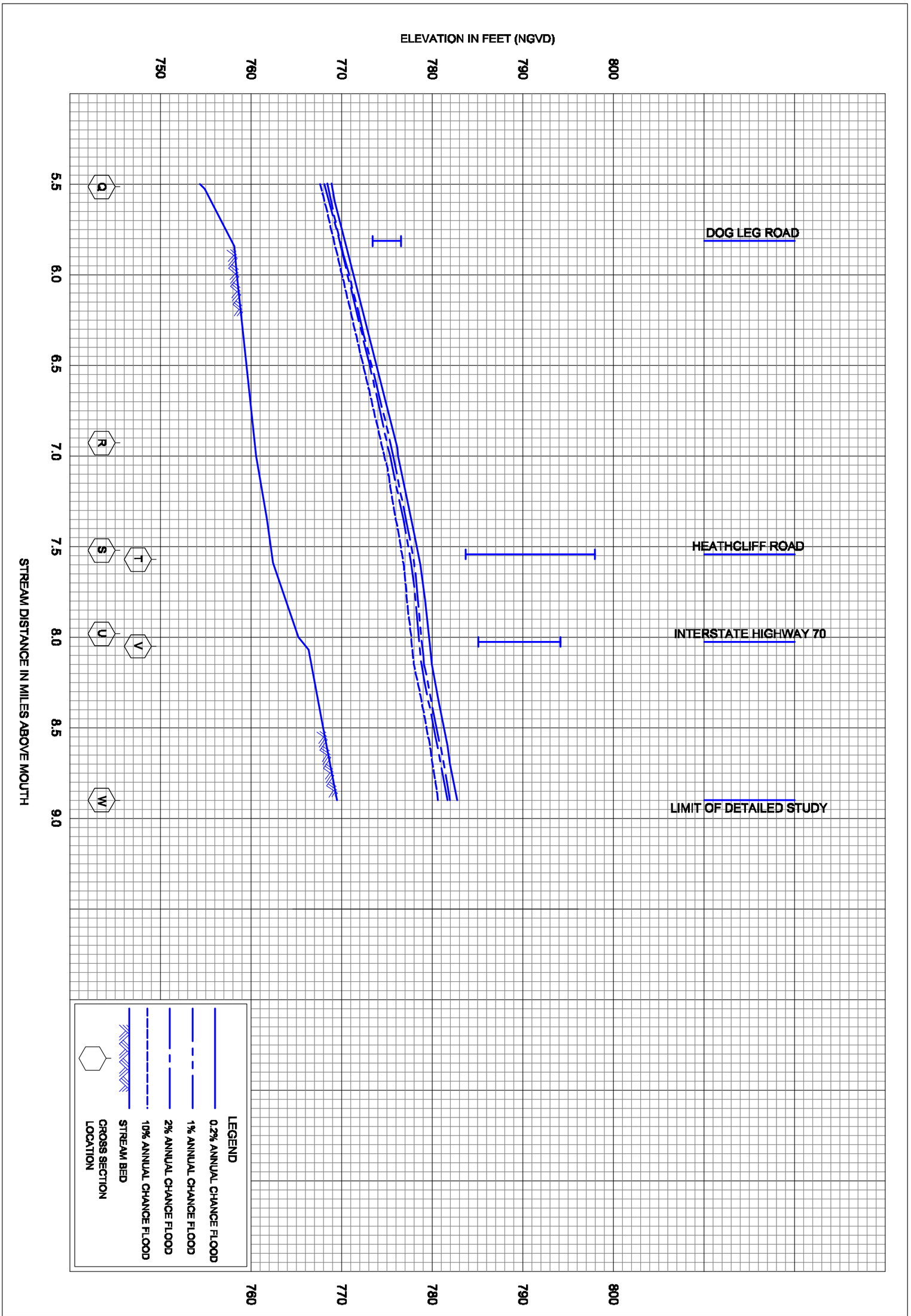
FLOOD PROFILES

STILLWATER RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



69P

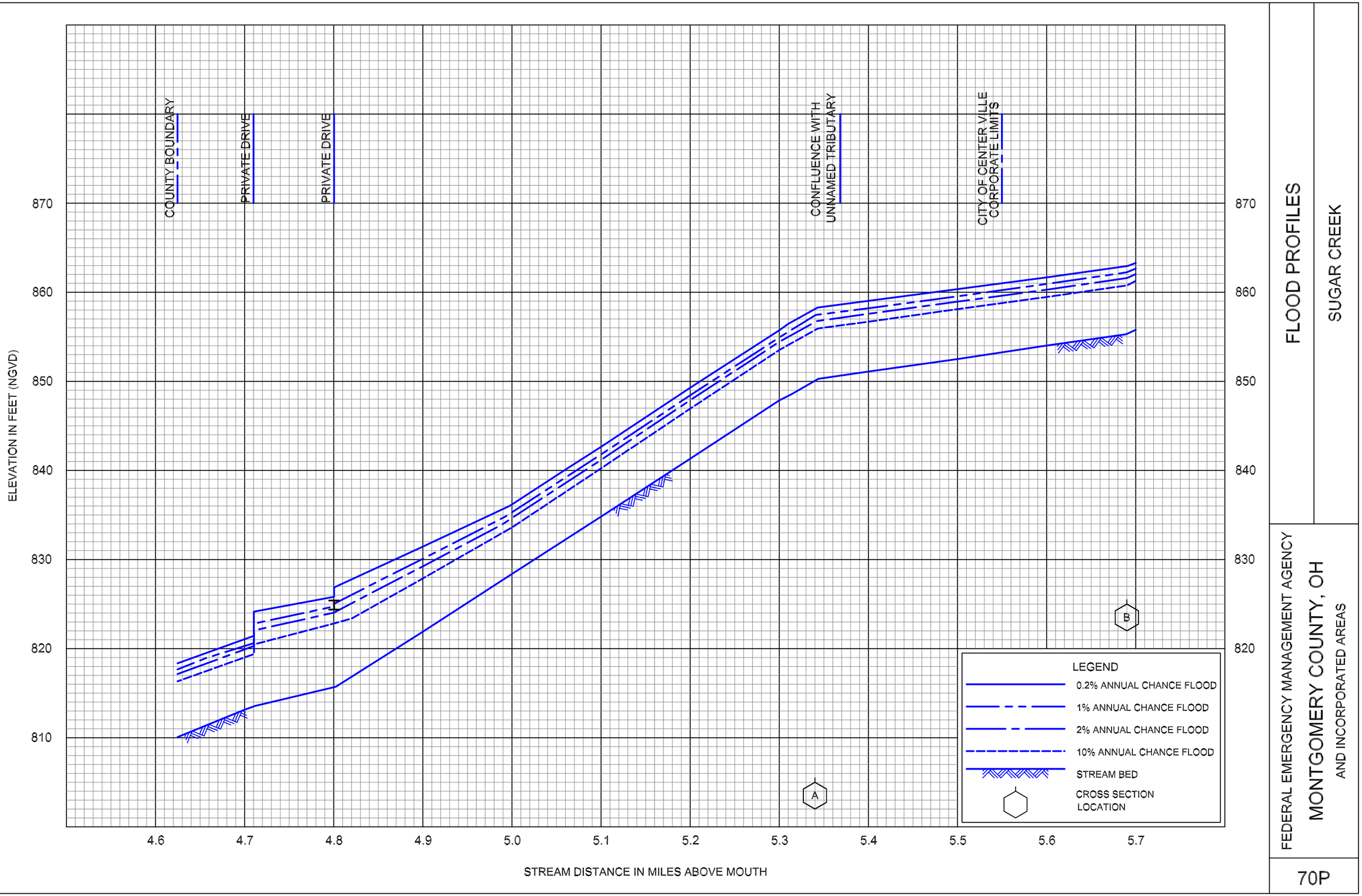
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

STILLWATER RIVER



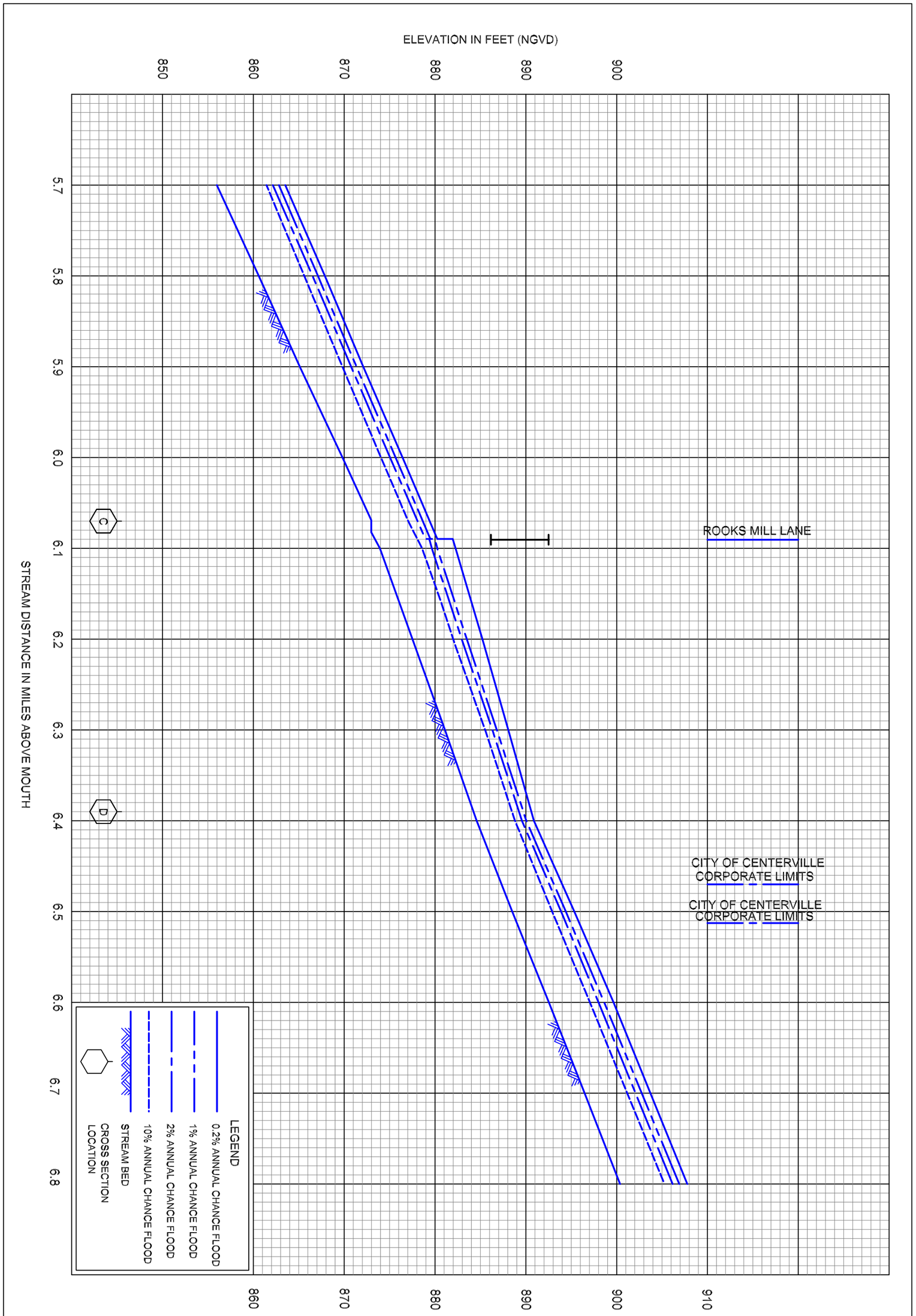
FLOOD PROFILES

SUGAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



71P

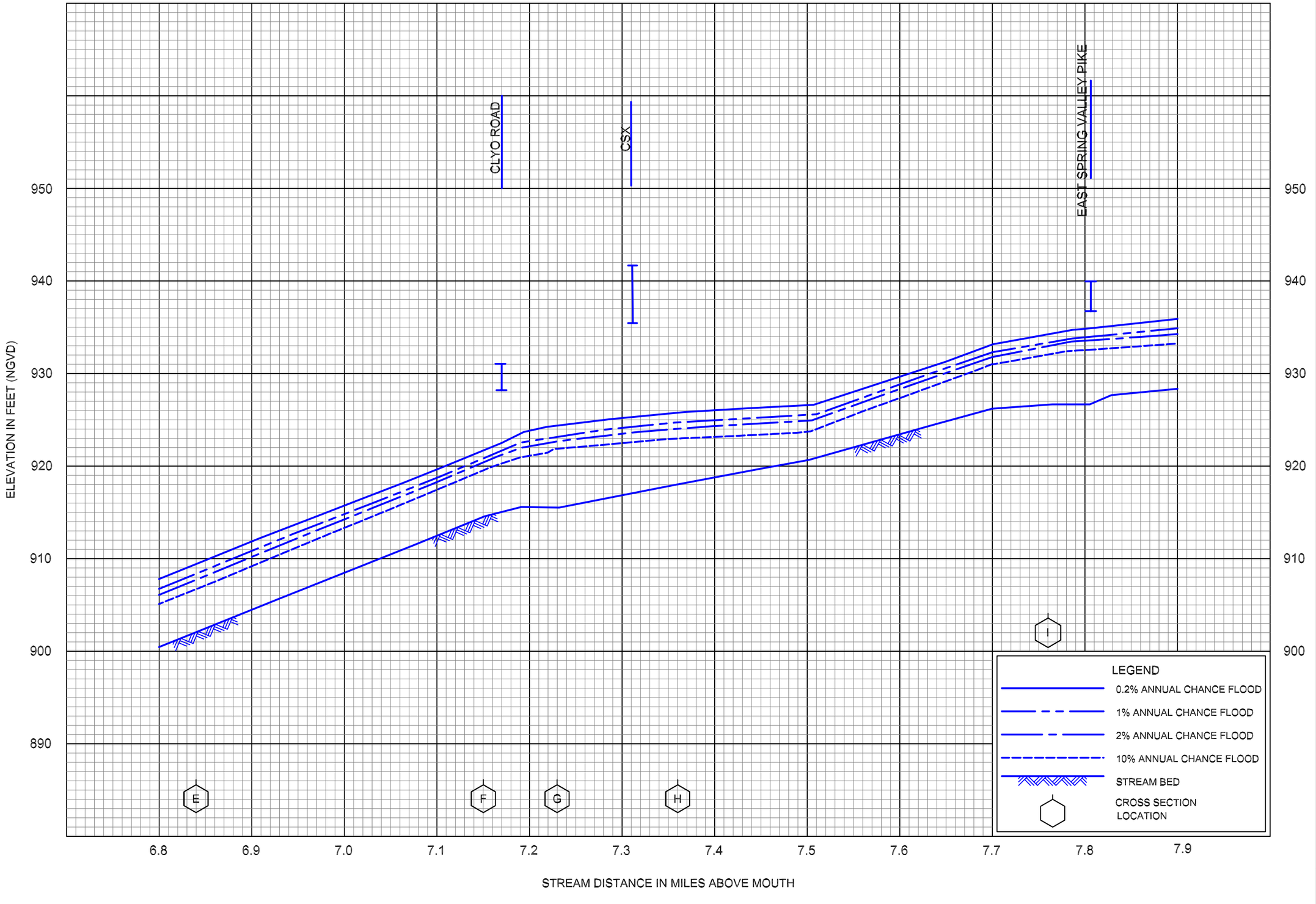
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

SUGAR CREEK



FLOOD PROFILES

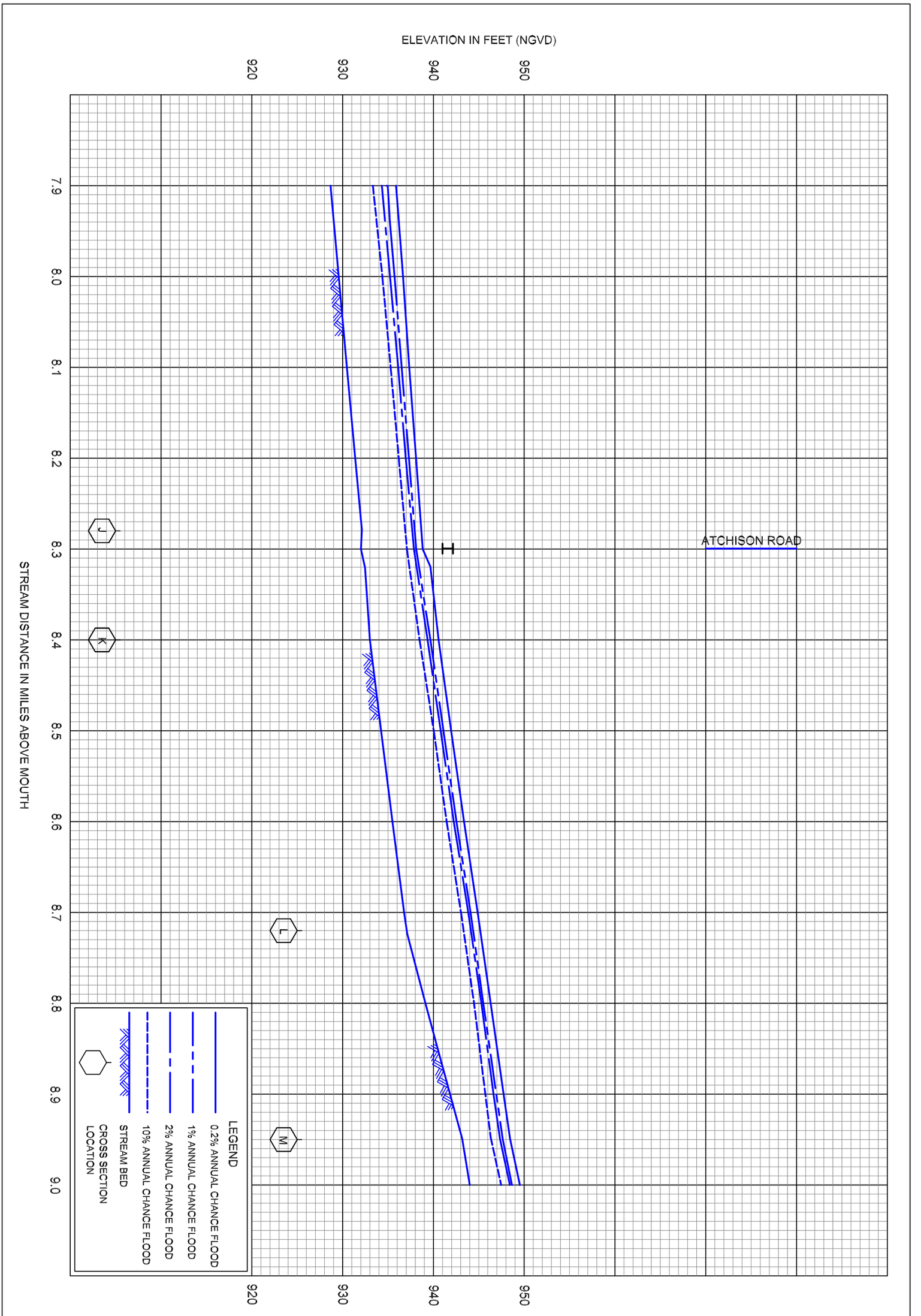
SUGAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

COUNTY OF MONTGOMERY, OH

AND INCORPORATED AREAS

72P



73P

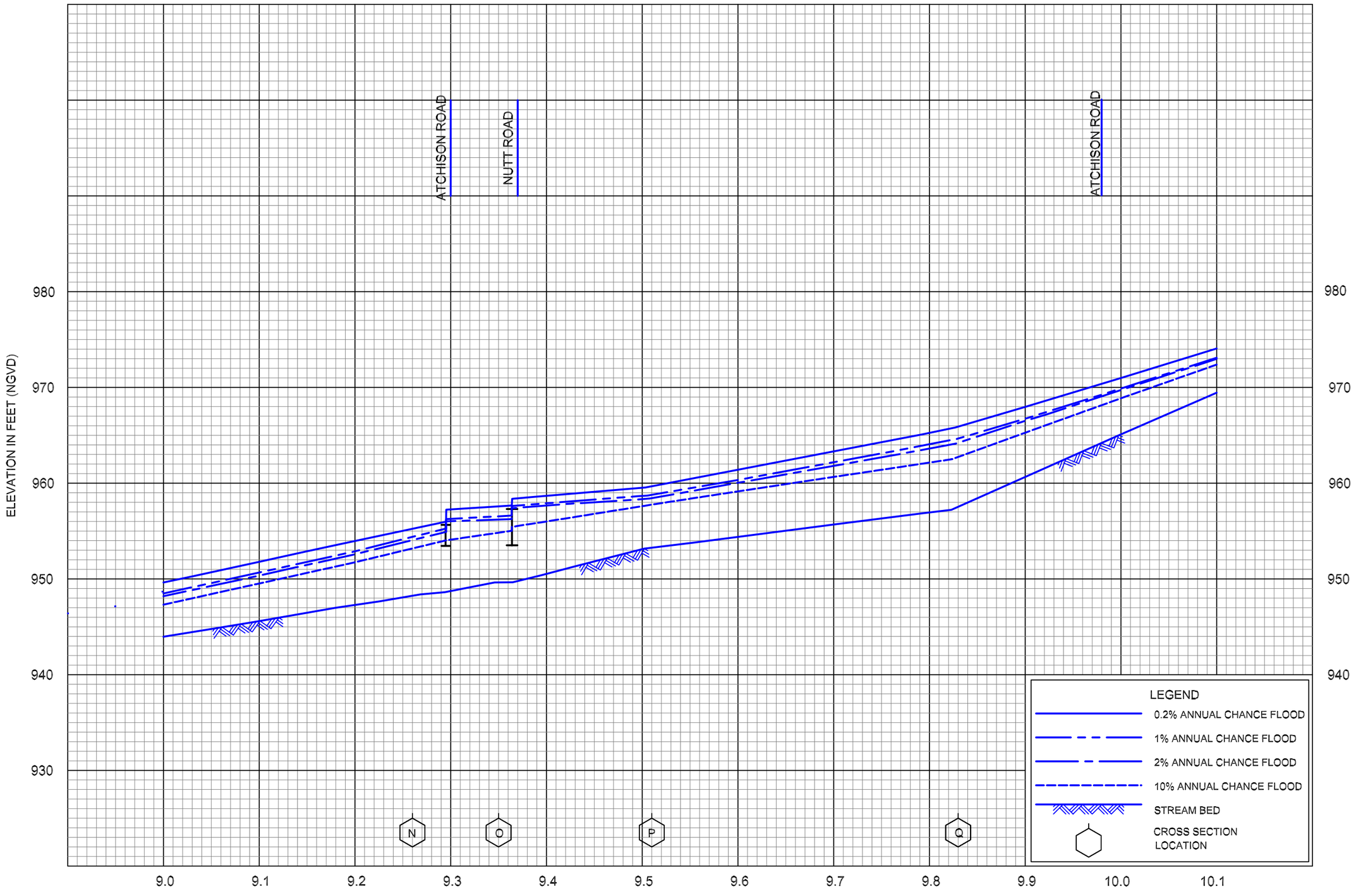
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

SUGAR CREEK



FLOOD PROFILES

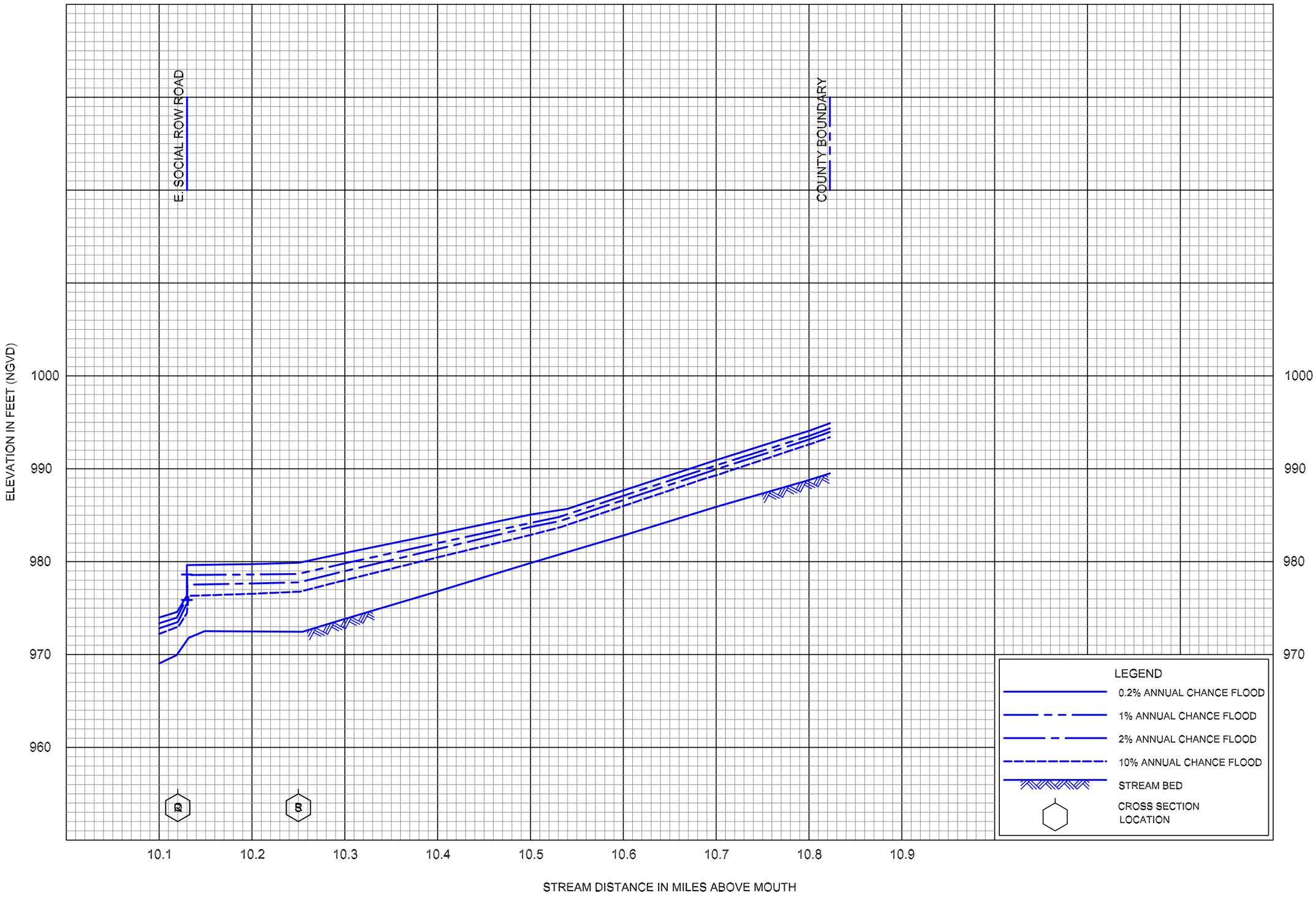
SUGAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

74P



FLOOD PROFILES

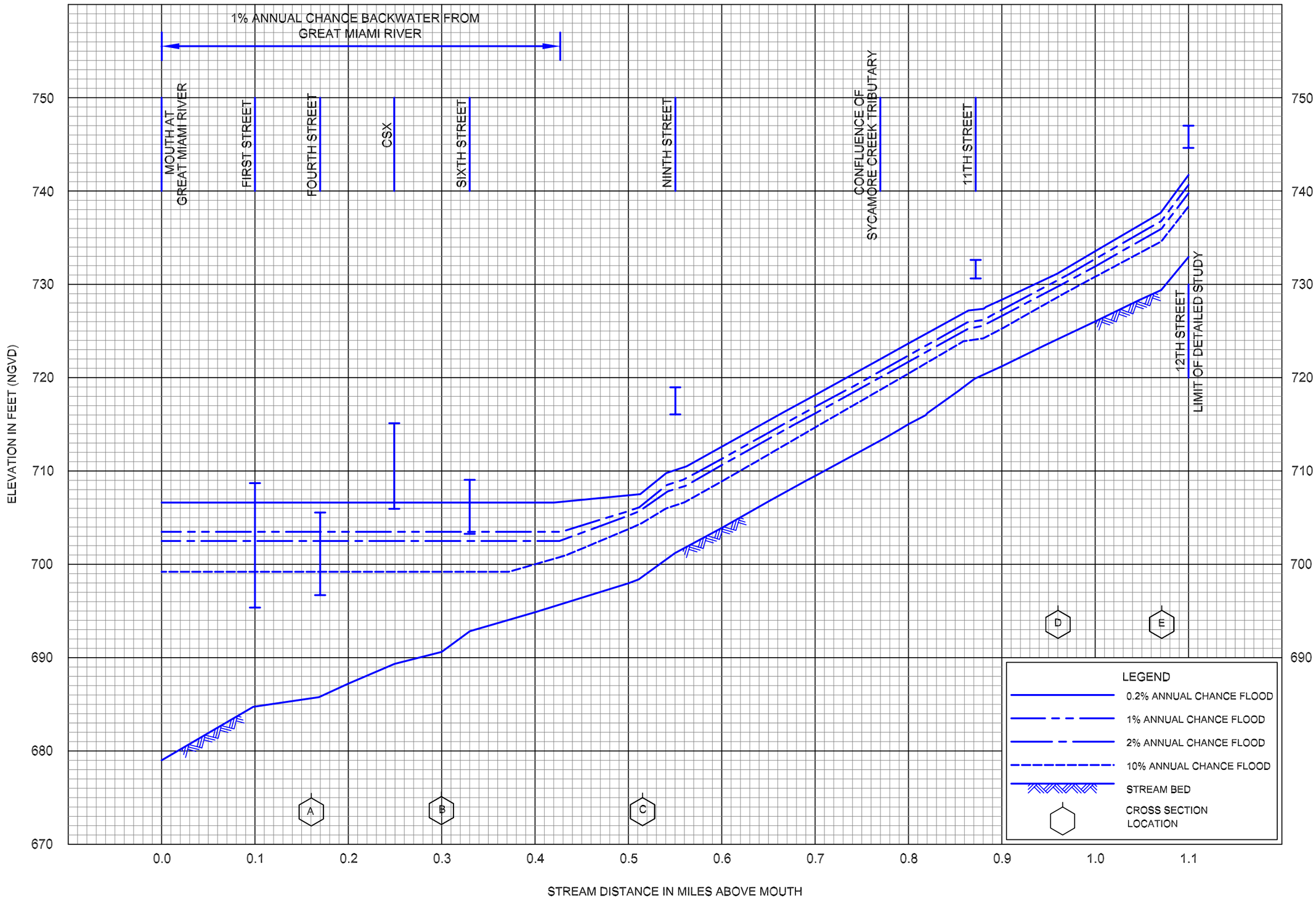
SUGAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

75P



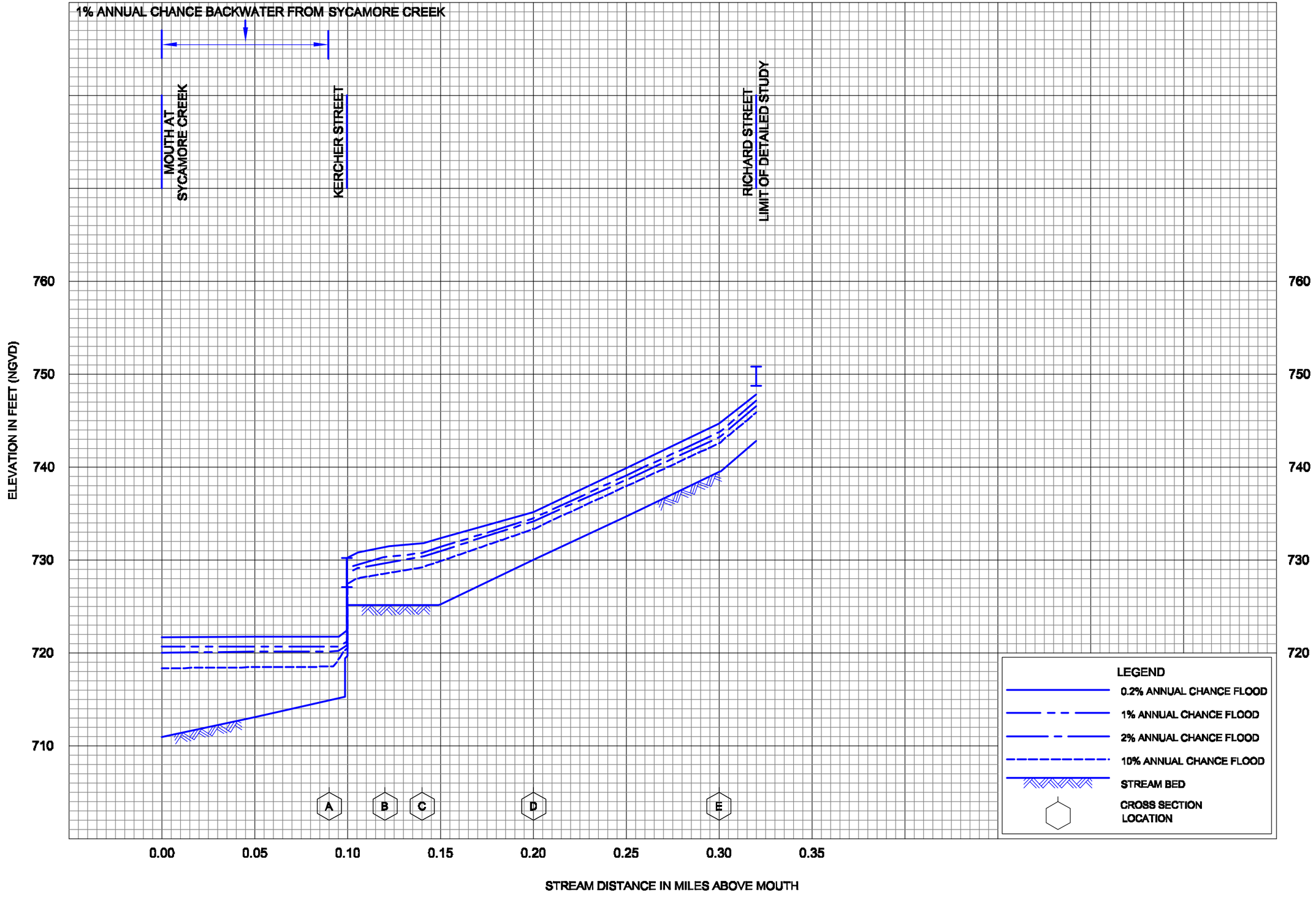
FLOOD PROFILES

SYCAMORE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS



FLOOD PROFILES

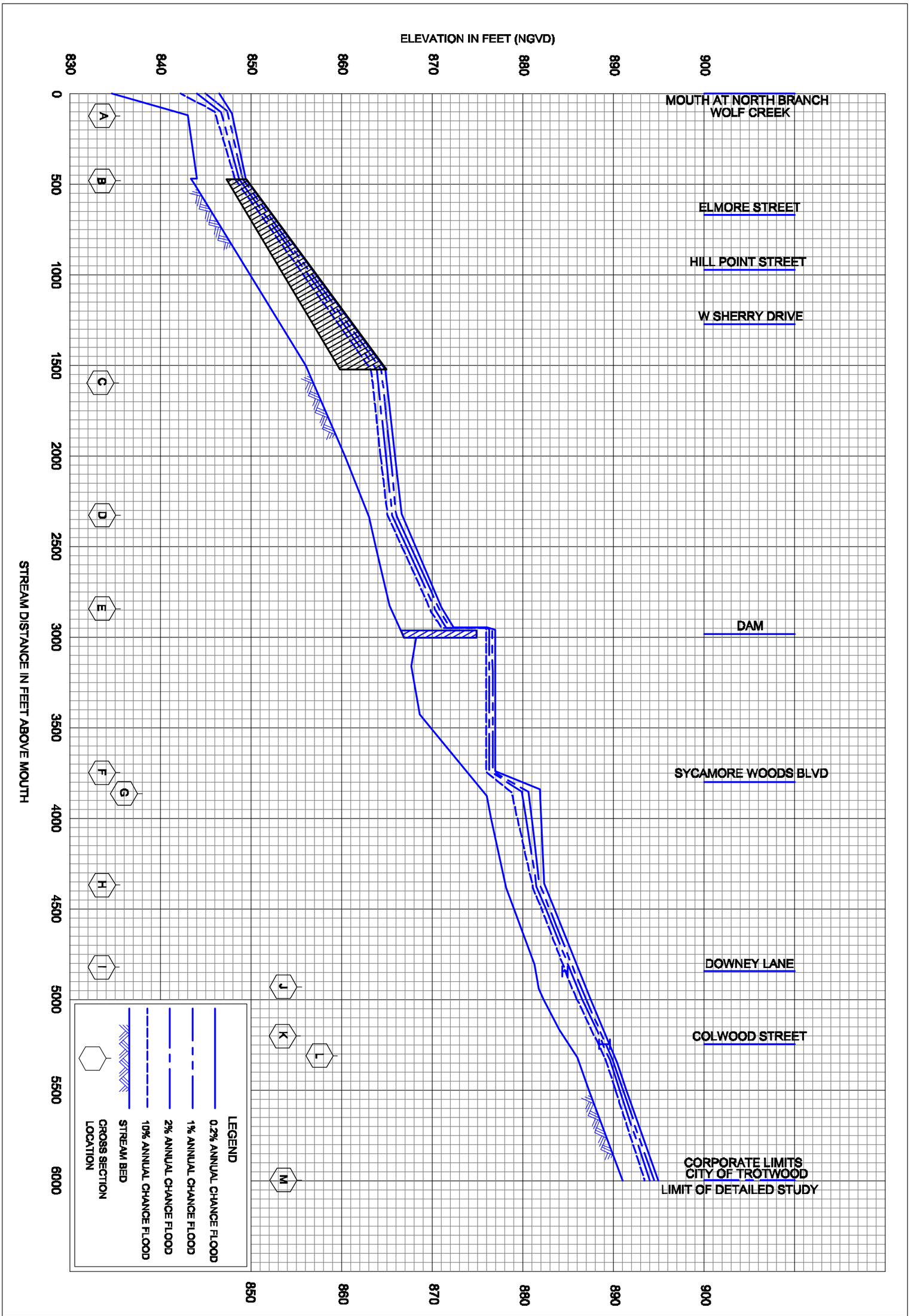
SYCAMORE CREEK TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

77P



78P

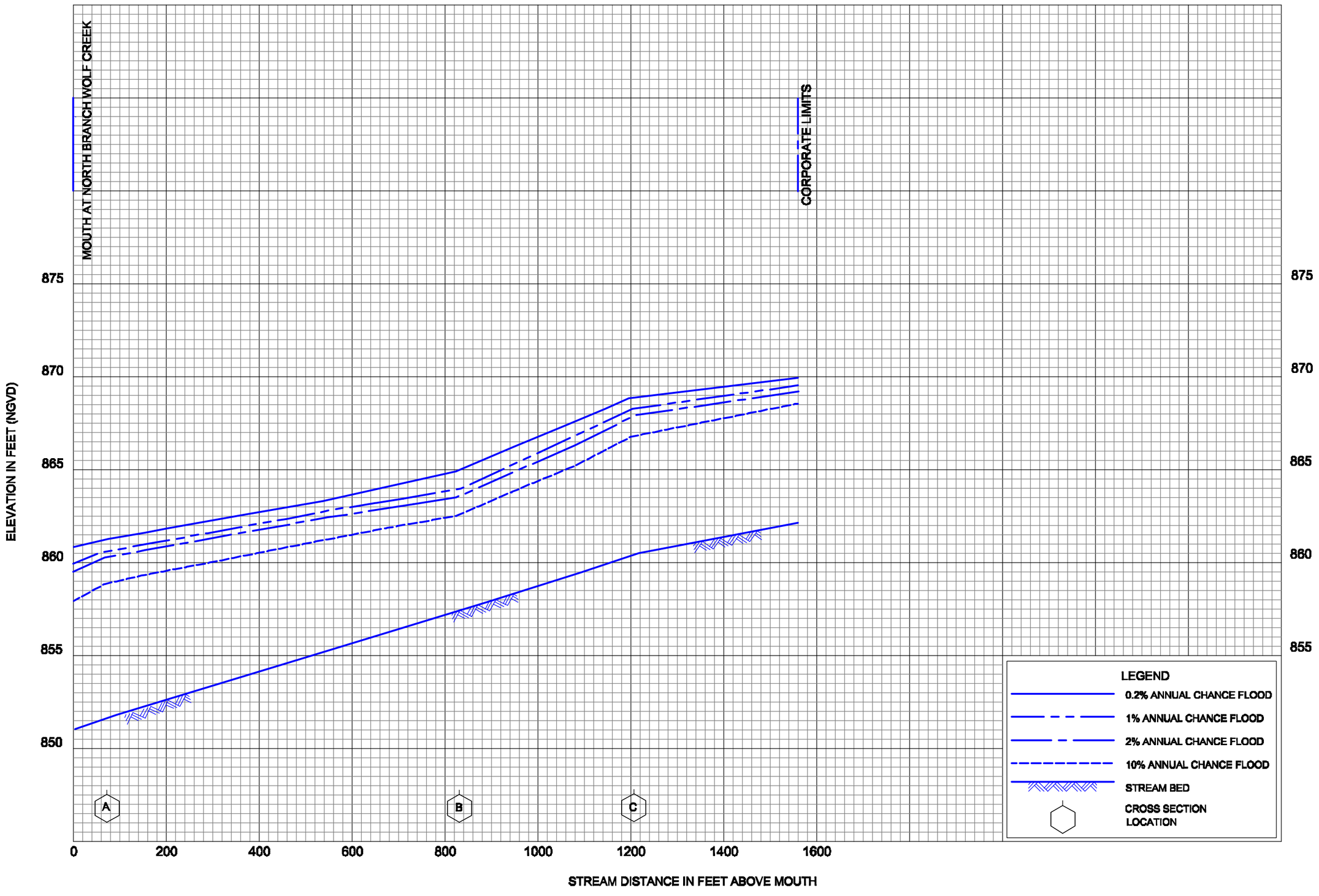
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

TRIBUTARY A



FLOOD PROFILES

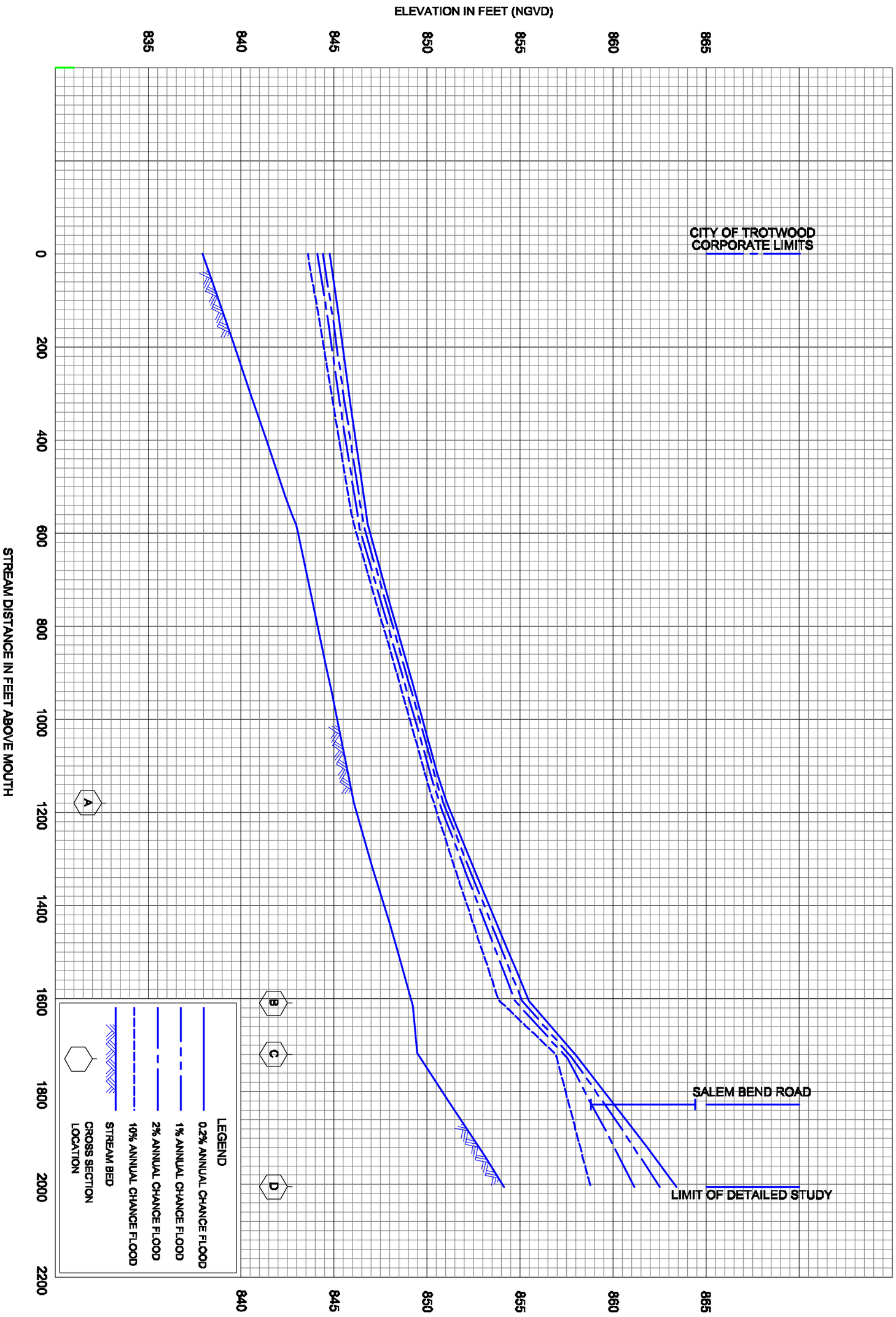
TRIBUTARY B

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

79P



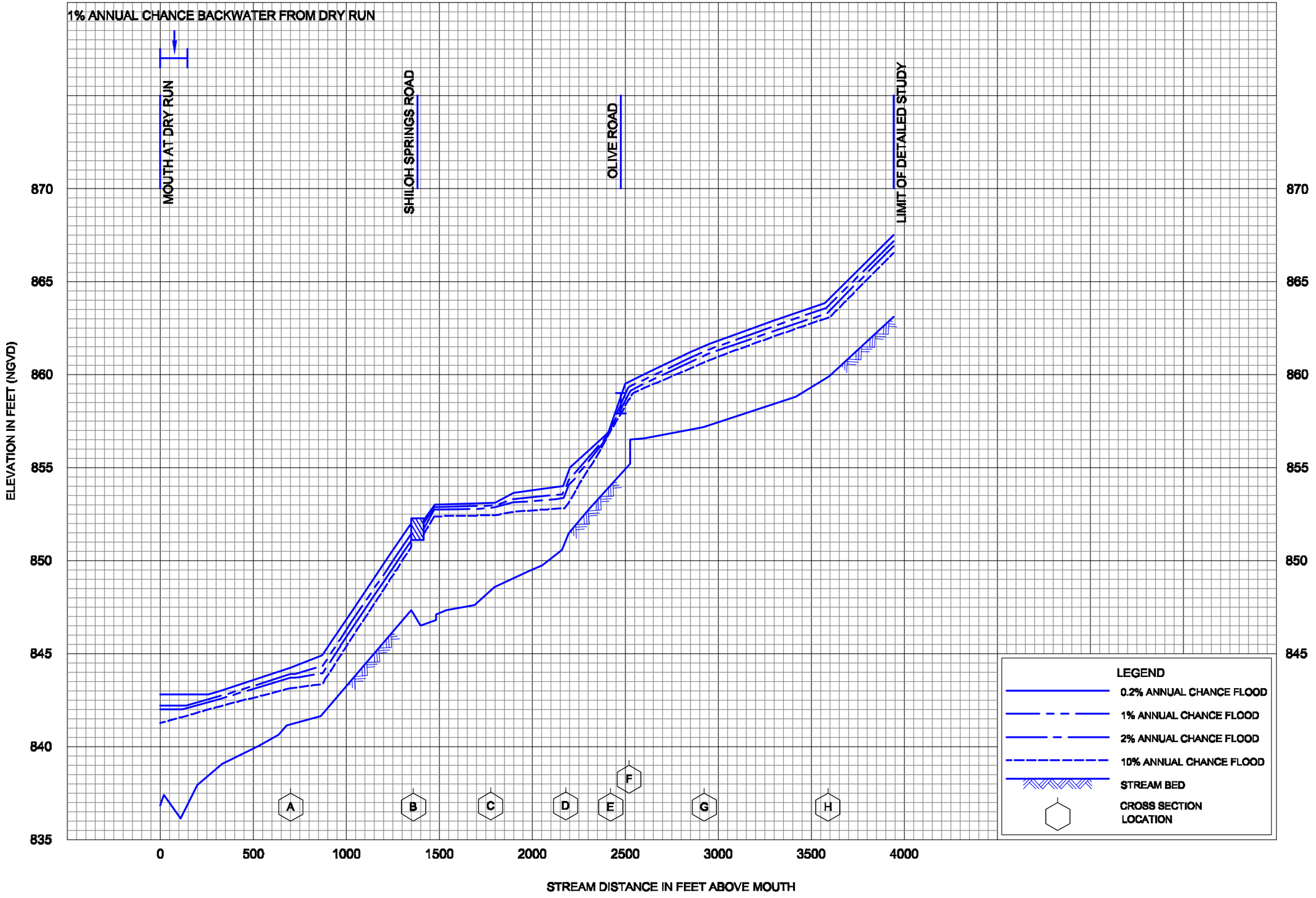
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

TRIBUTARY F



FLOOD PROFILES

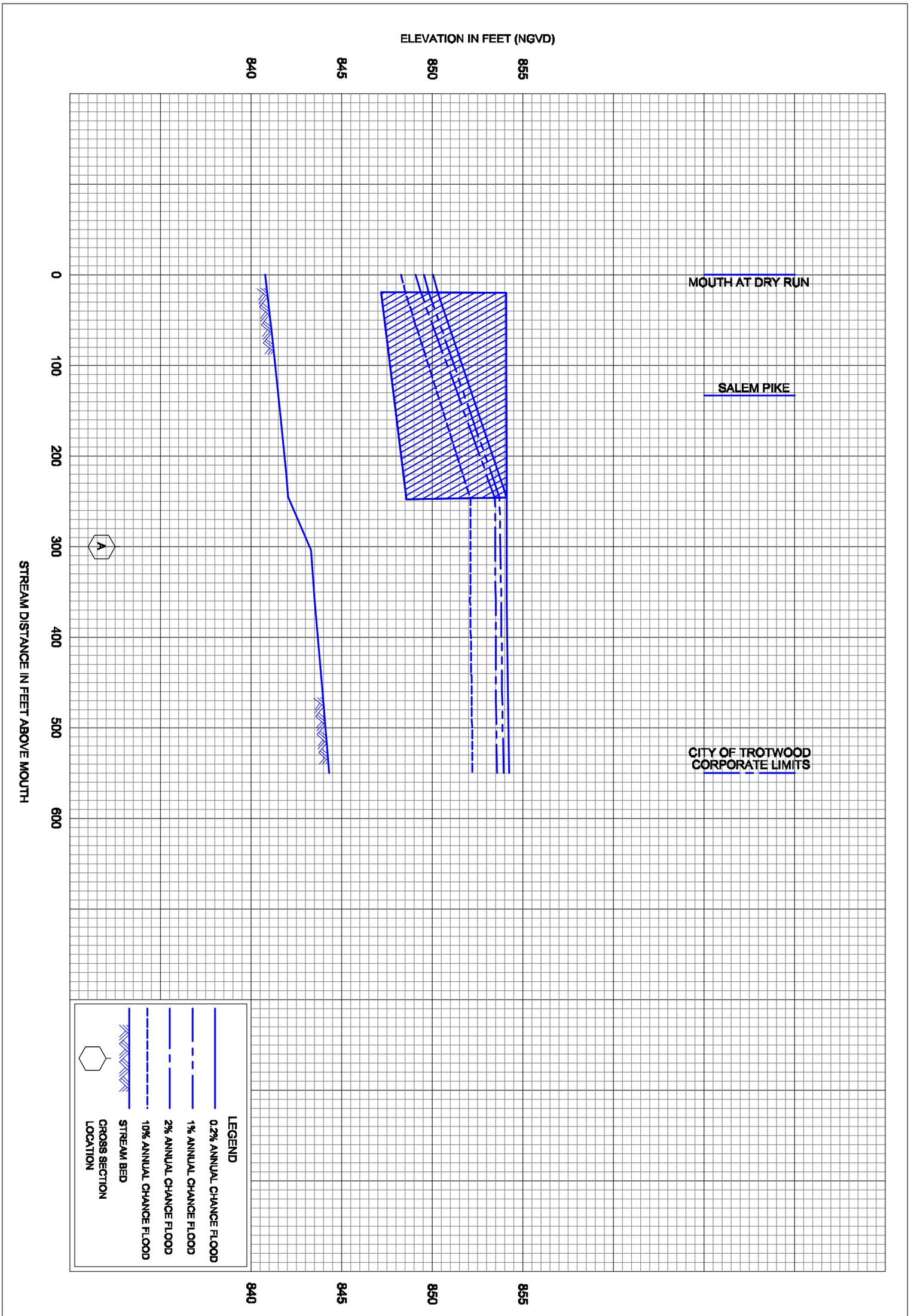
TRIBUTARY G

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

81P



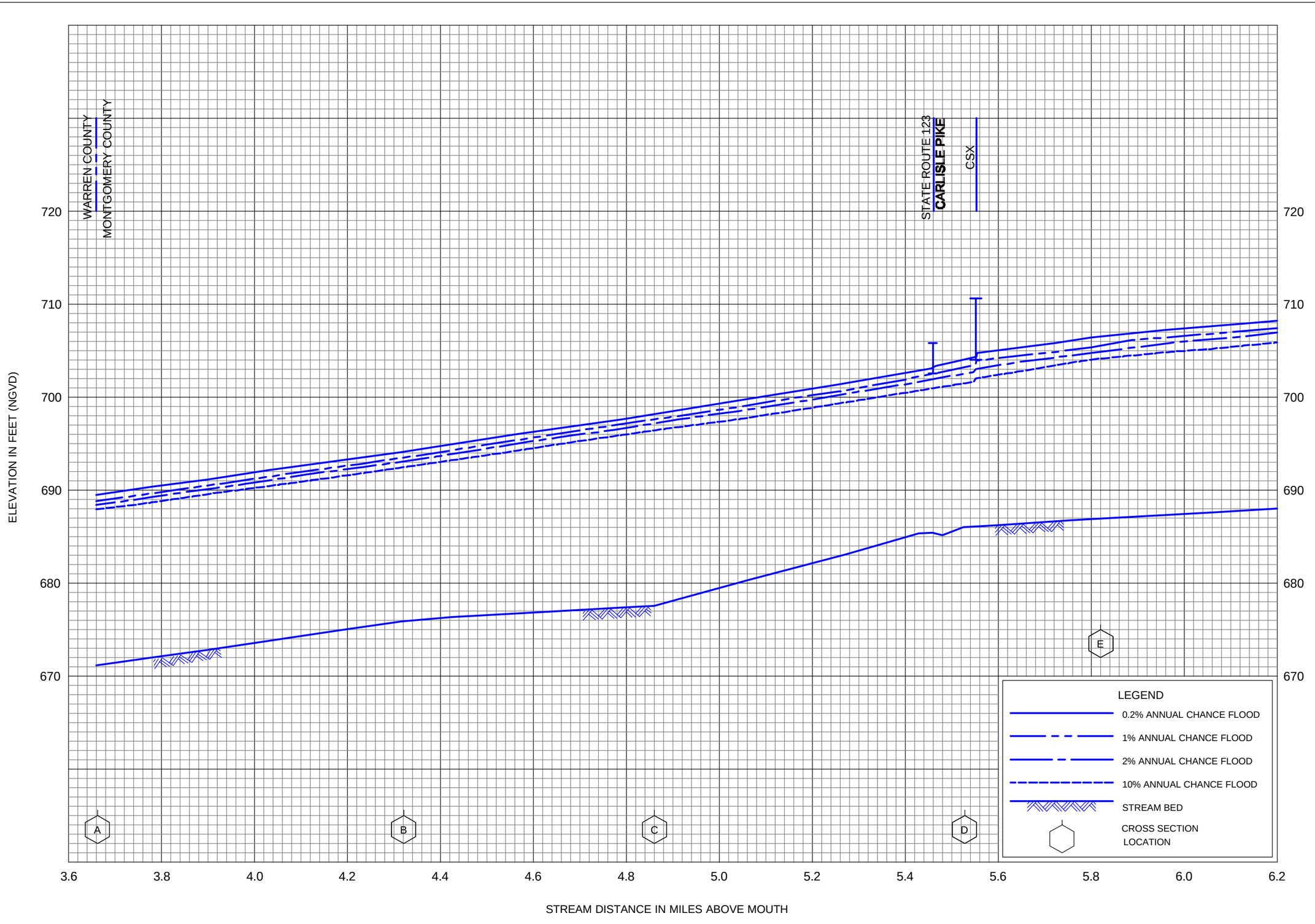
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

TRIBUTARY H



FLOOD PROFILES

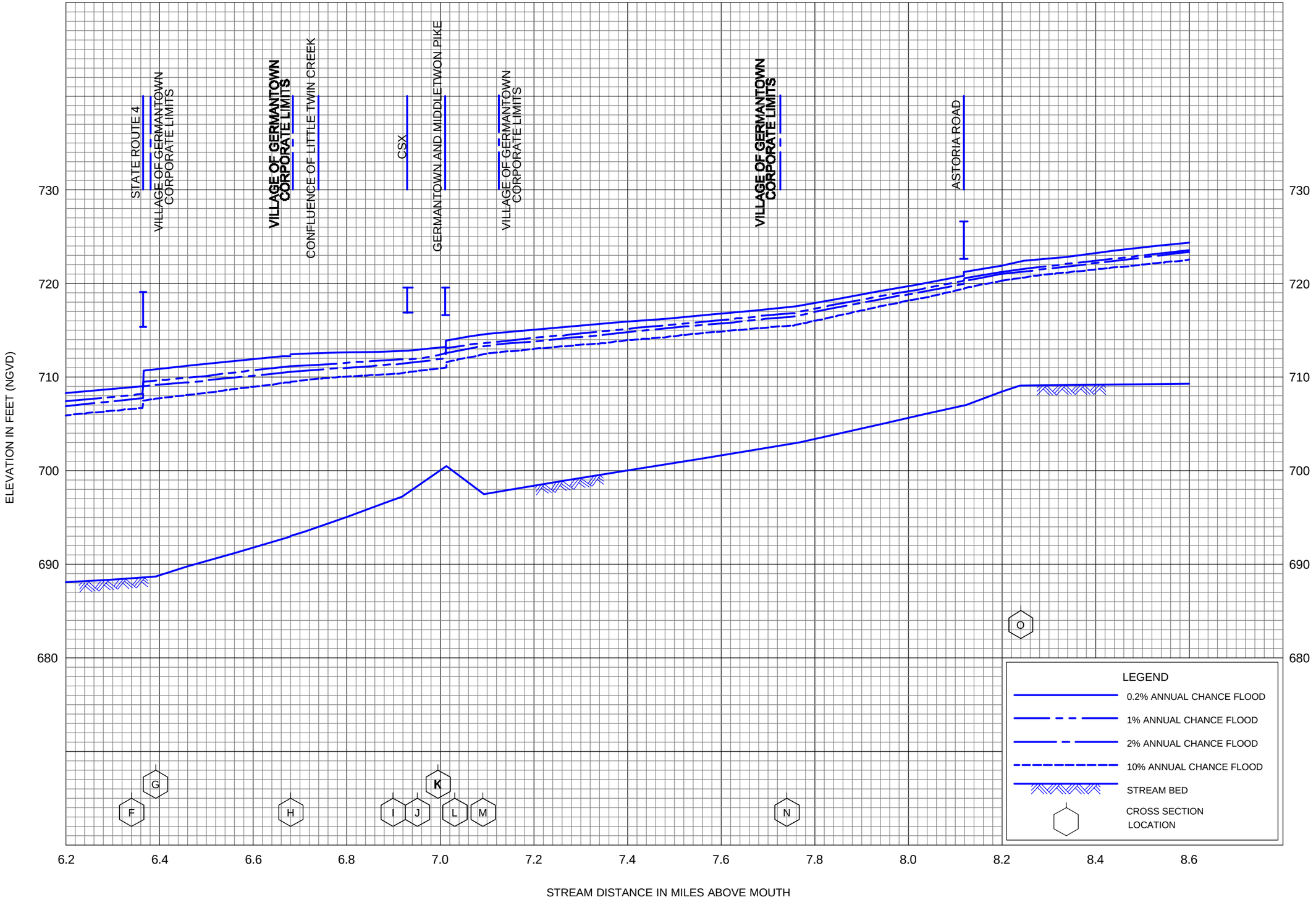
TWIN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMER COUNTY, OH

AND INCORPORATED AREAS

83P



FLOOD PROFILES

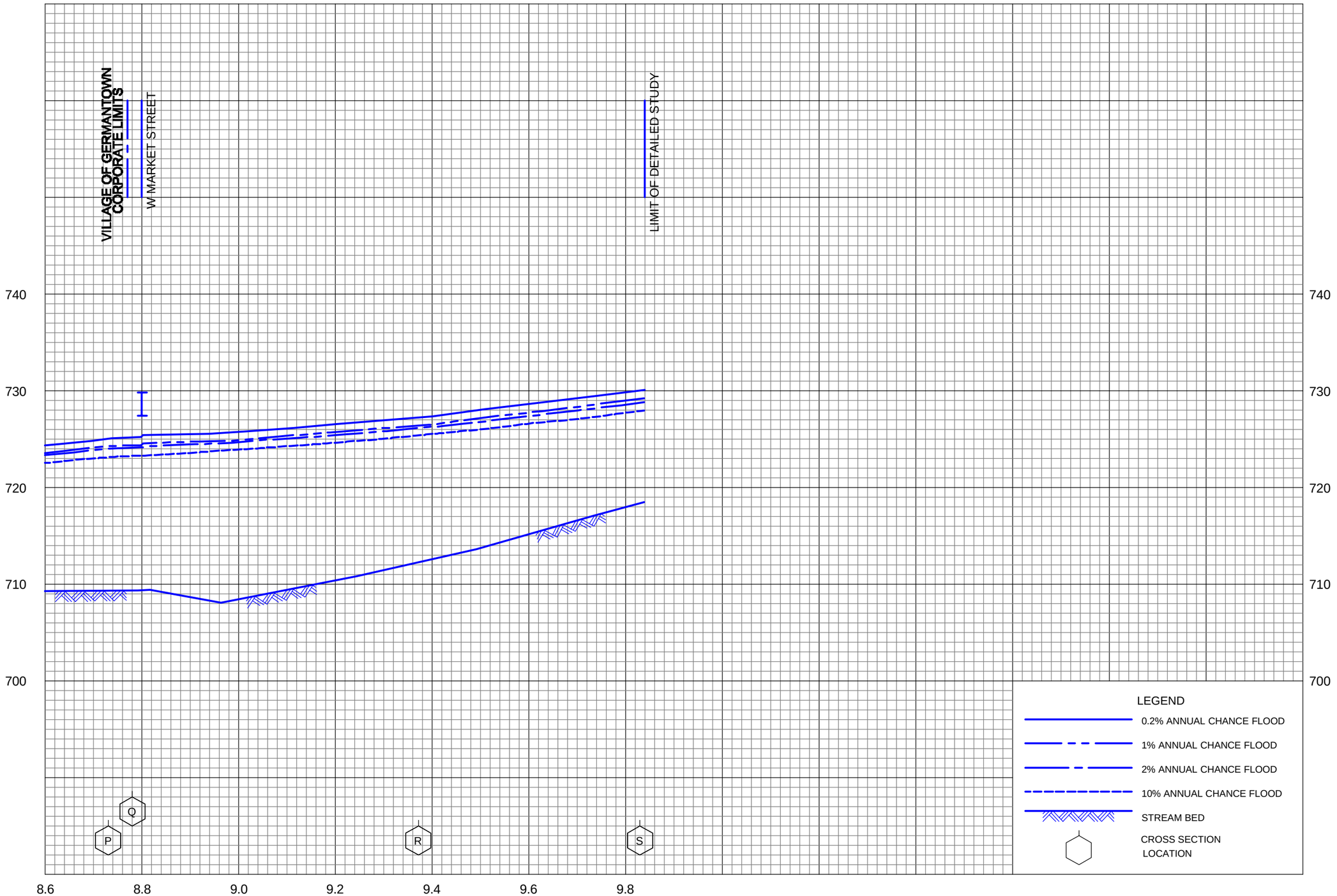
TWIN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMER COUNTY, OH

AND INCORPORATED AREAS

84P



FLOOD PROFILES

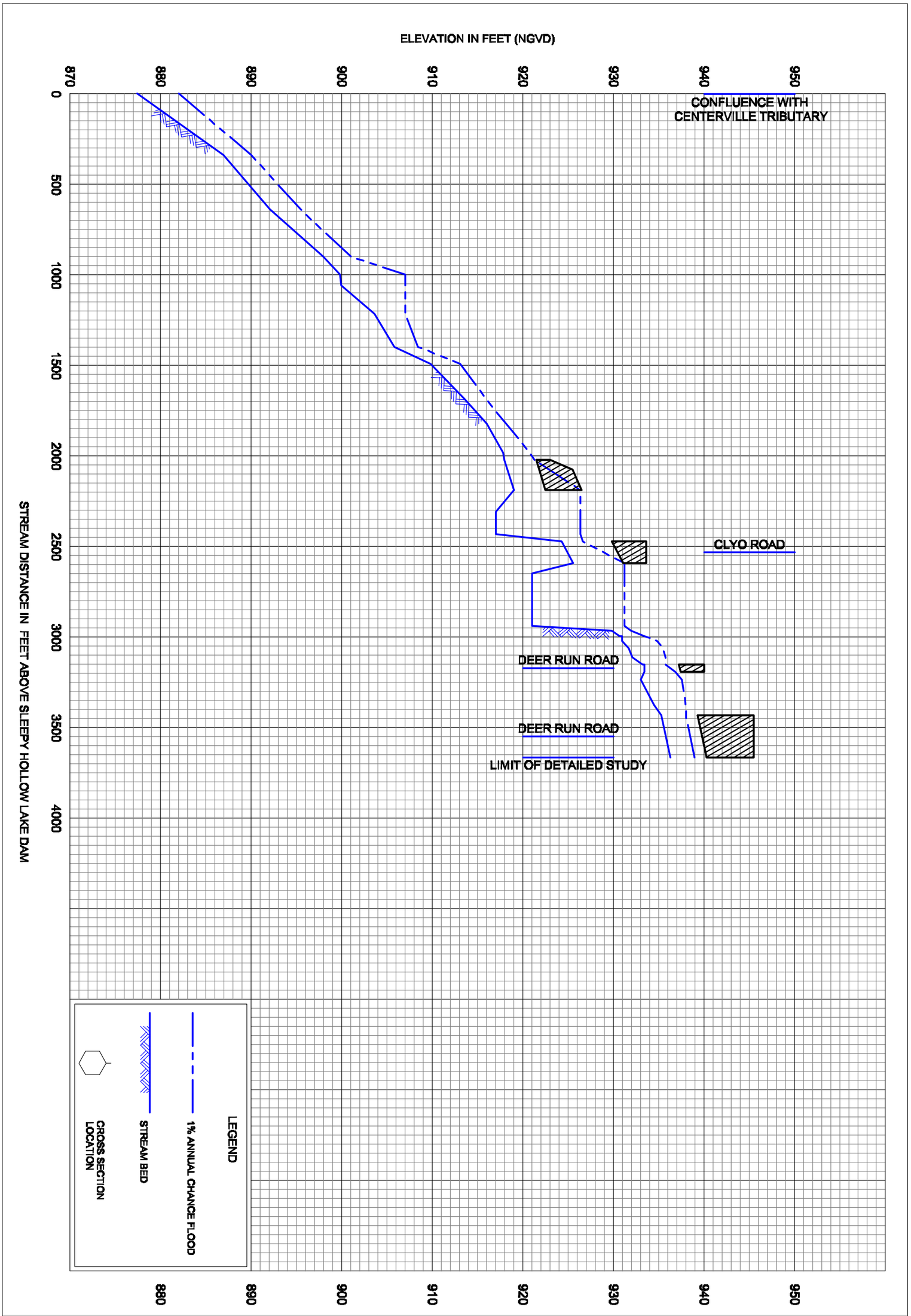
TWIN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMER COUNTY, OH

AND INCORPORATED AREAS

85P



86P

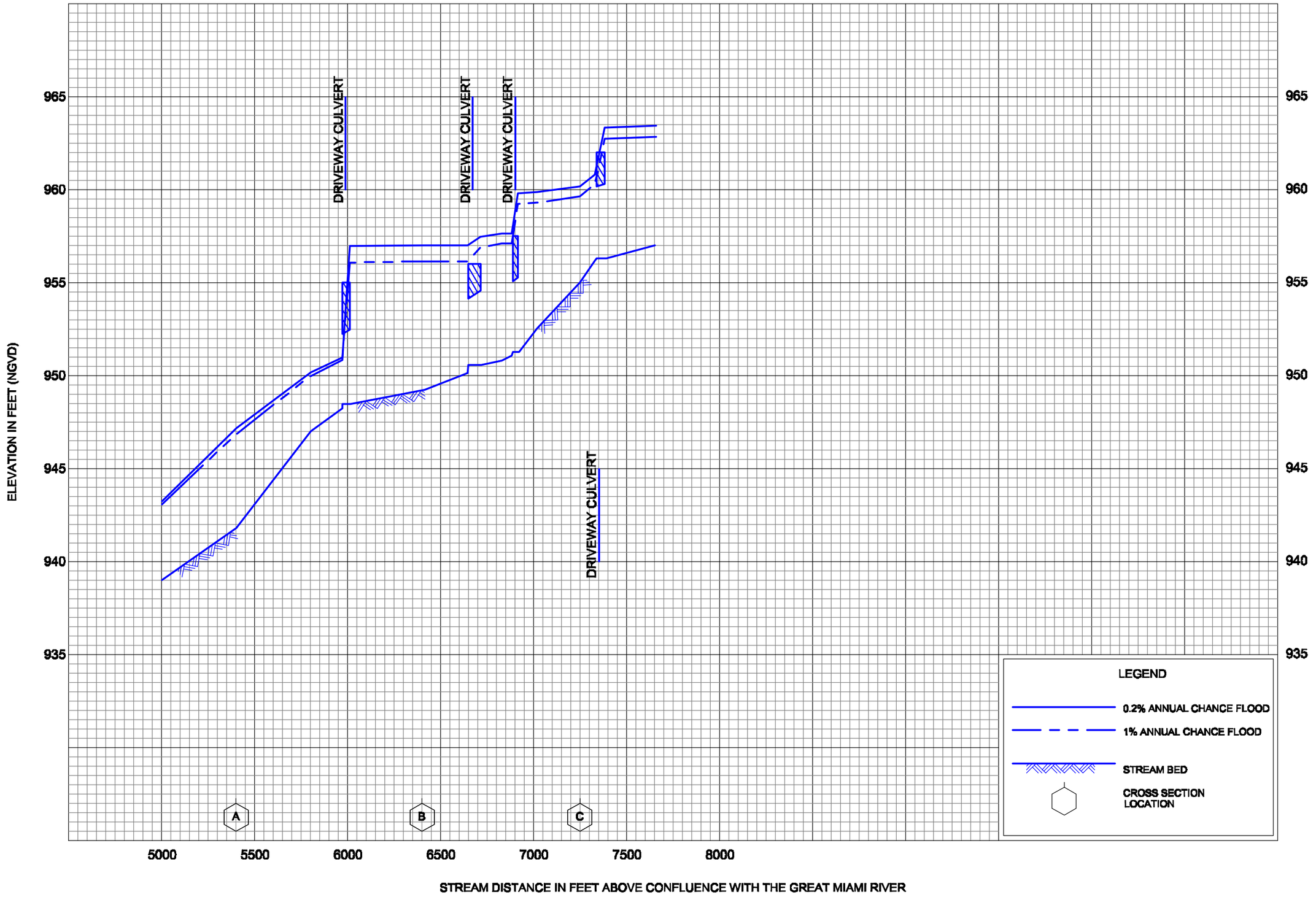
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

UNNAMED TRIBUTARY TO CENTERVILLE TRIBUTARY



FLOOD PROFILES

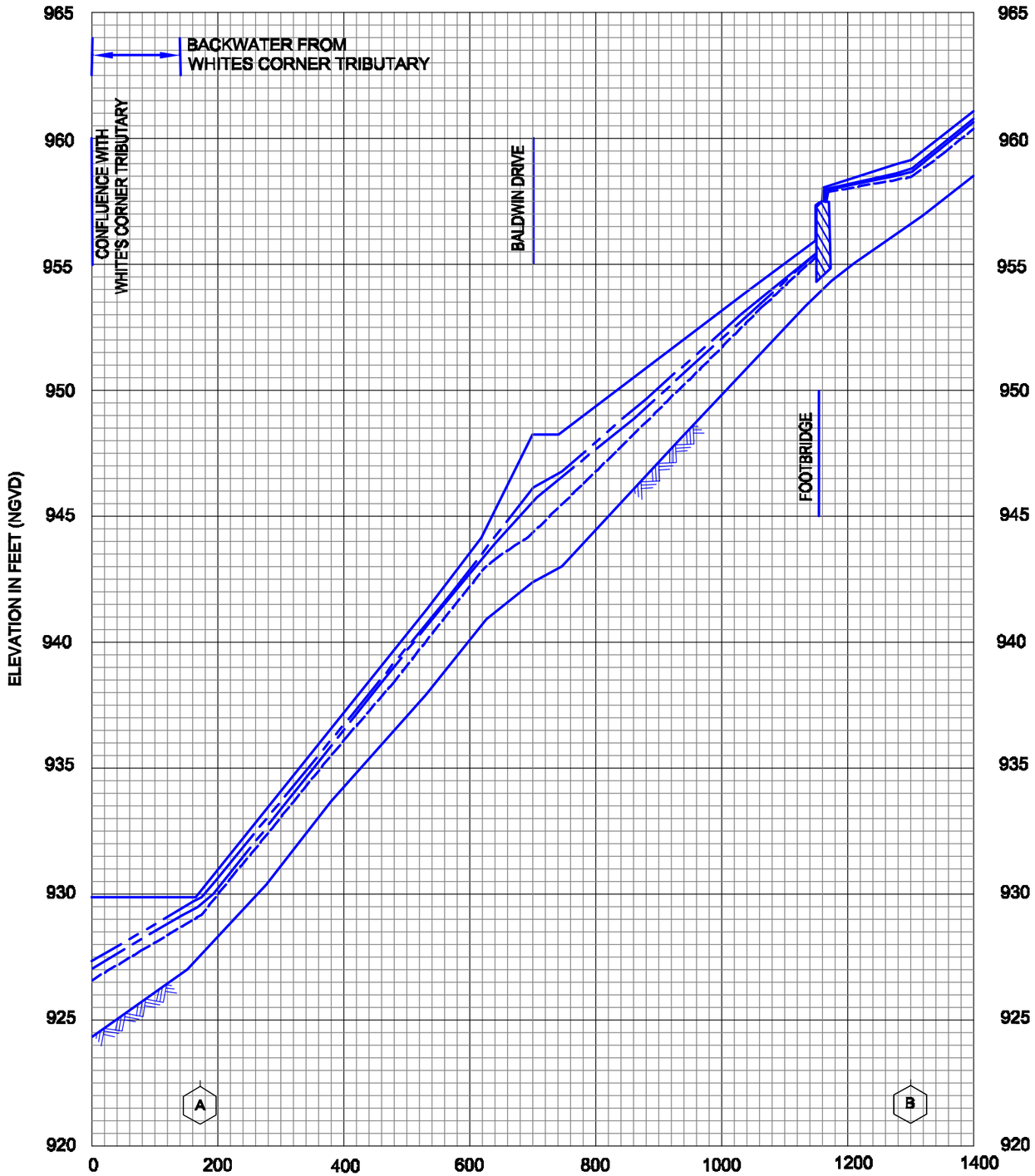
UNNAMED TRIBUTARY TO GREAT MIAMI RIVER

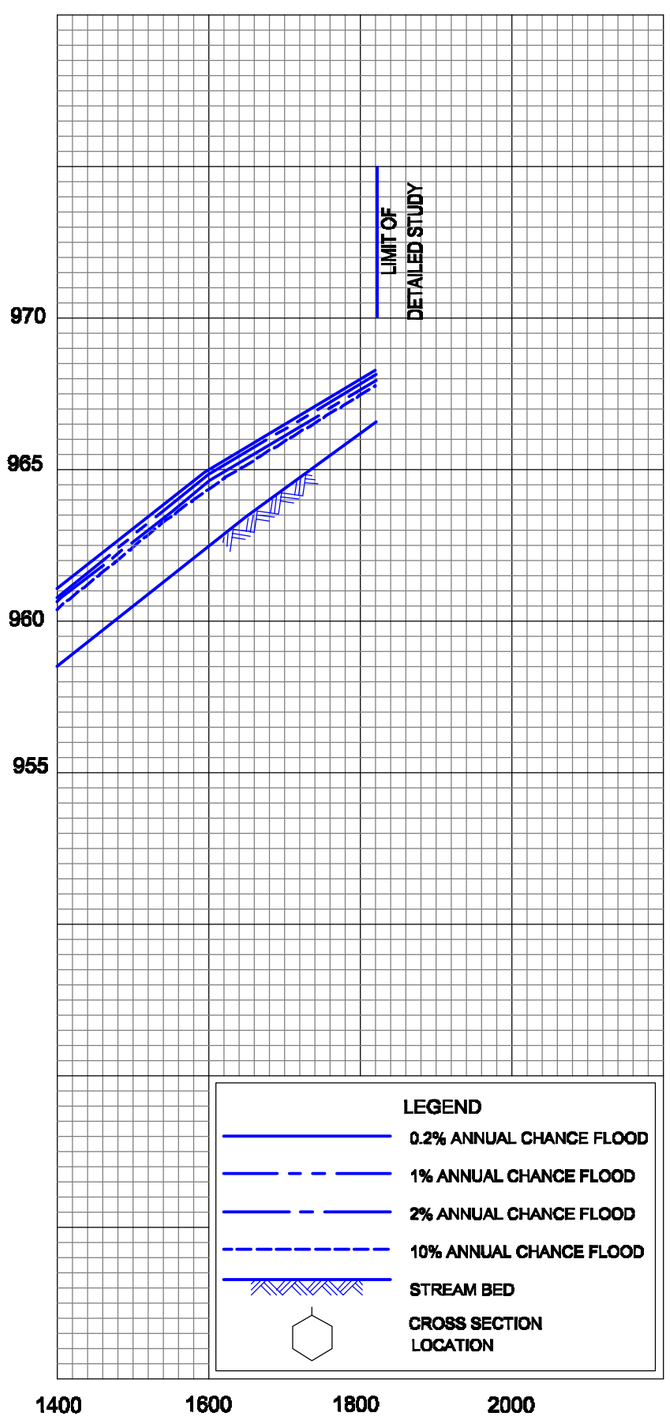
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

87P





FLOOD PROFILES

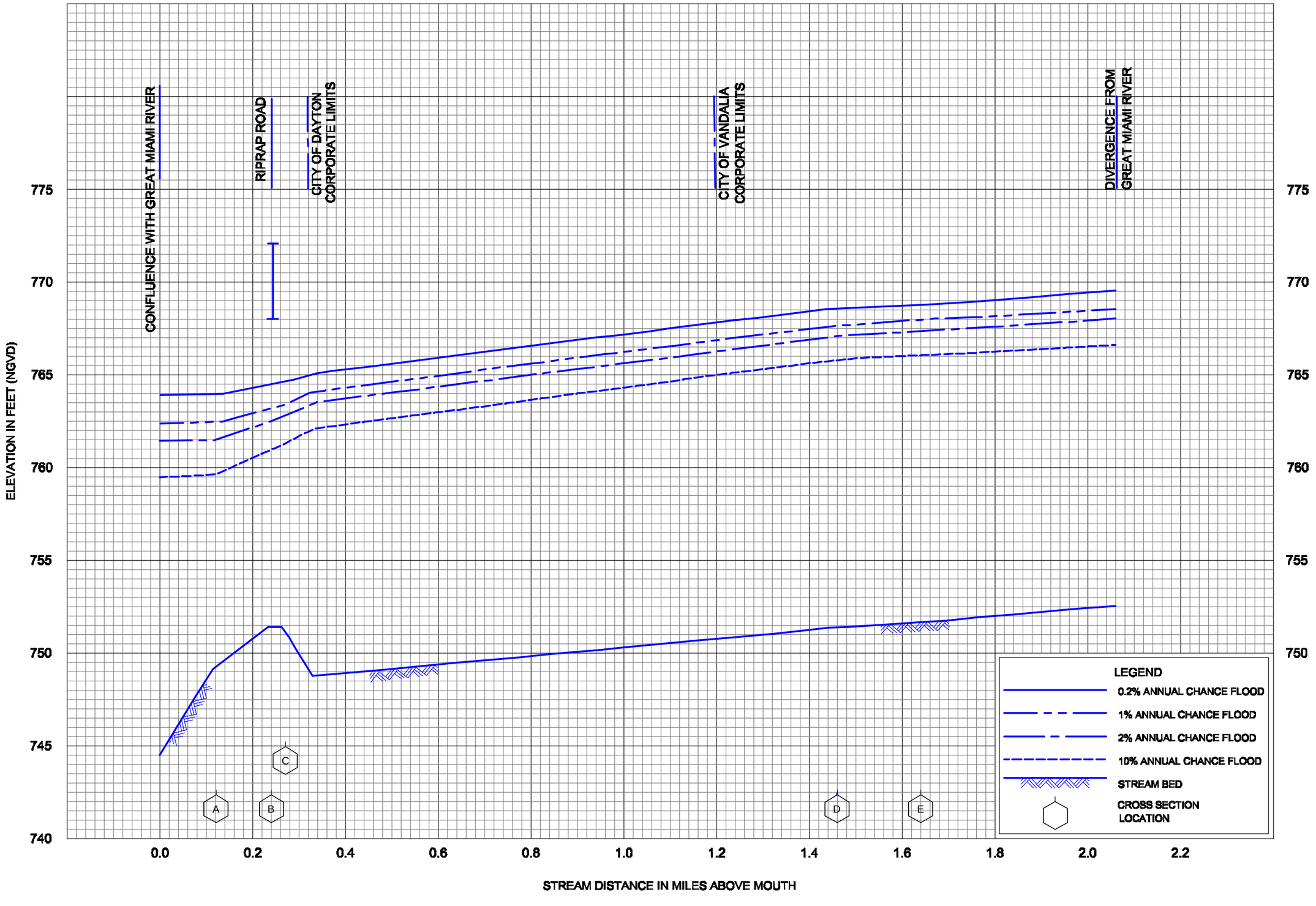
UNNAMED TRIBUTARY TO WHITES CORNER TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

88P



FLOOD PROFILES

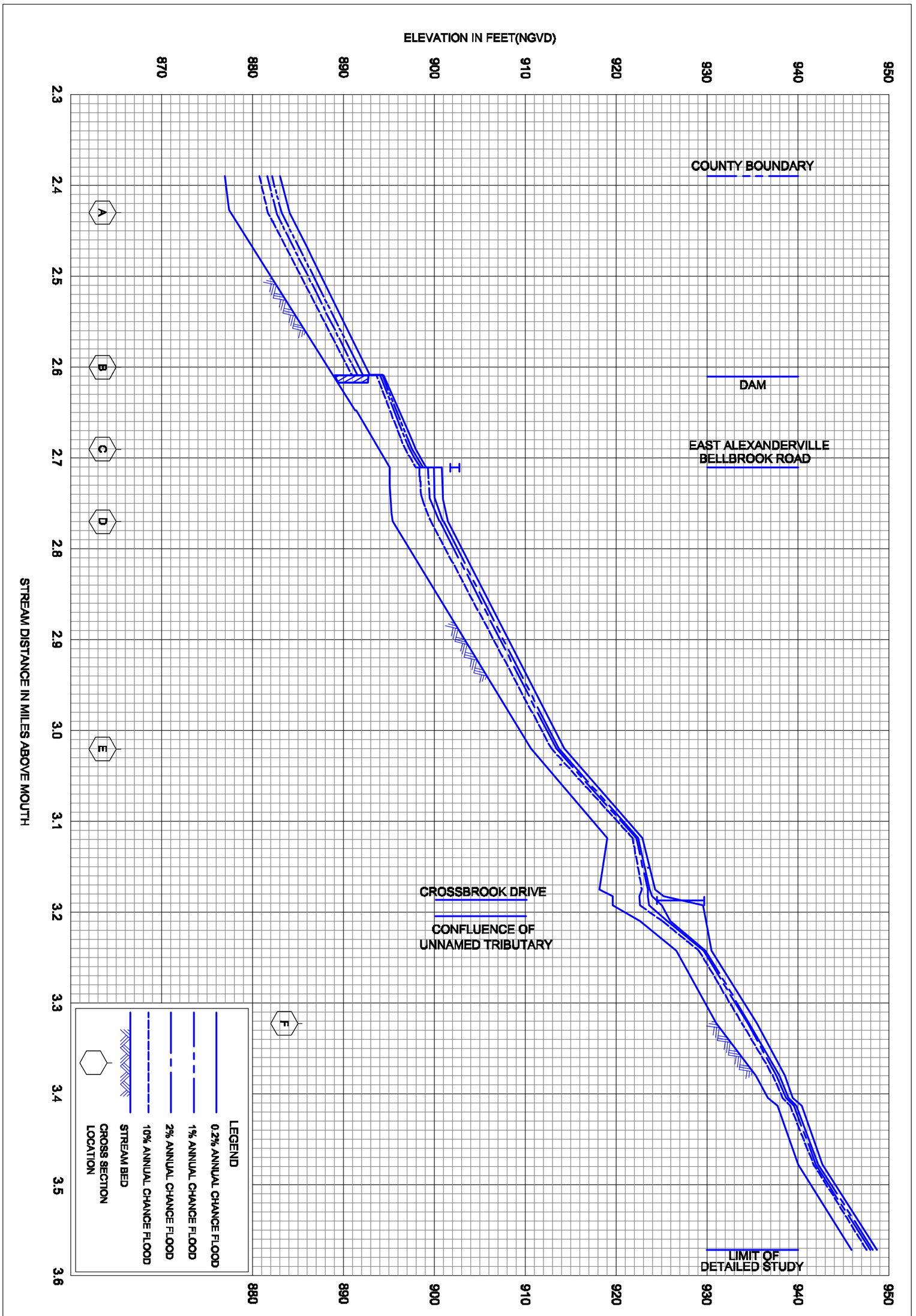
WEST TRIBUTARY GREAT MIAMI RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

89P



90P

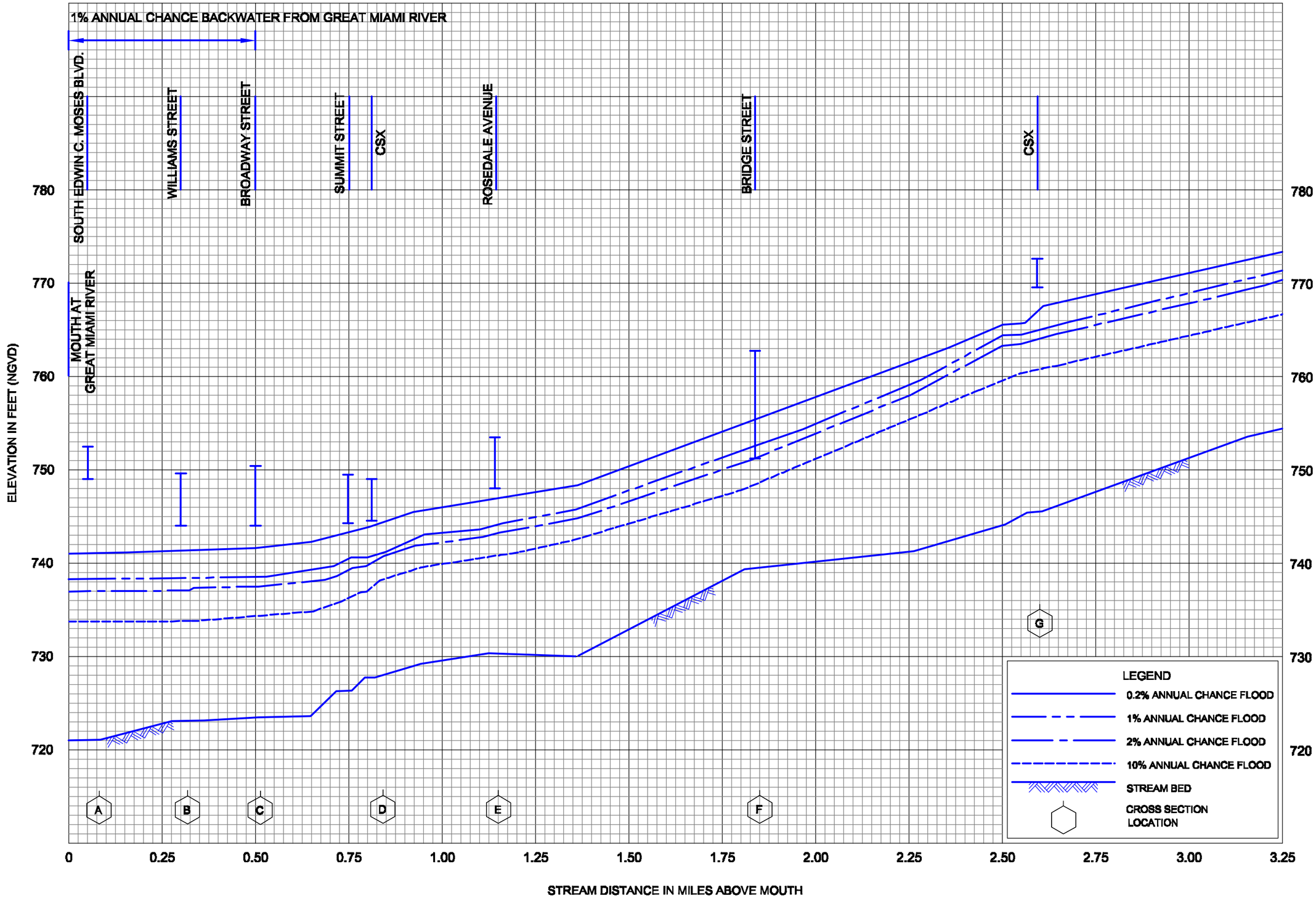
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OHIO

AND INCORPORATED AREAS

FLOOD PROFILES

WHITES CORNER TRIBUTARY



FLOOD PROFILES

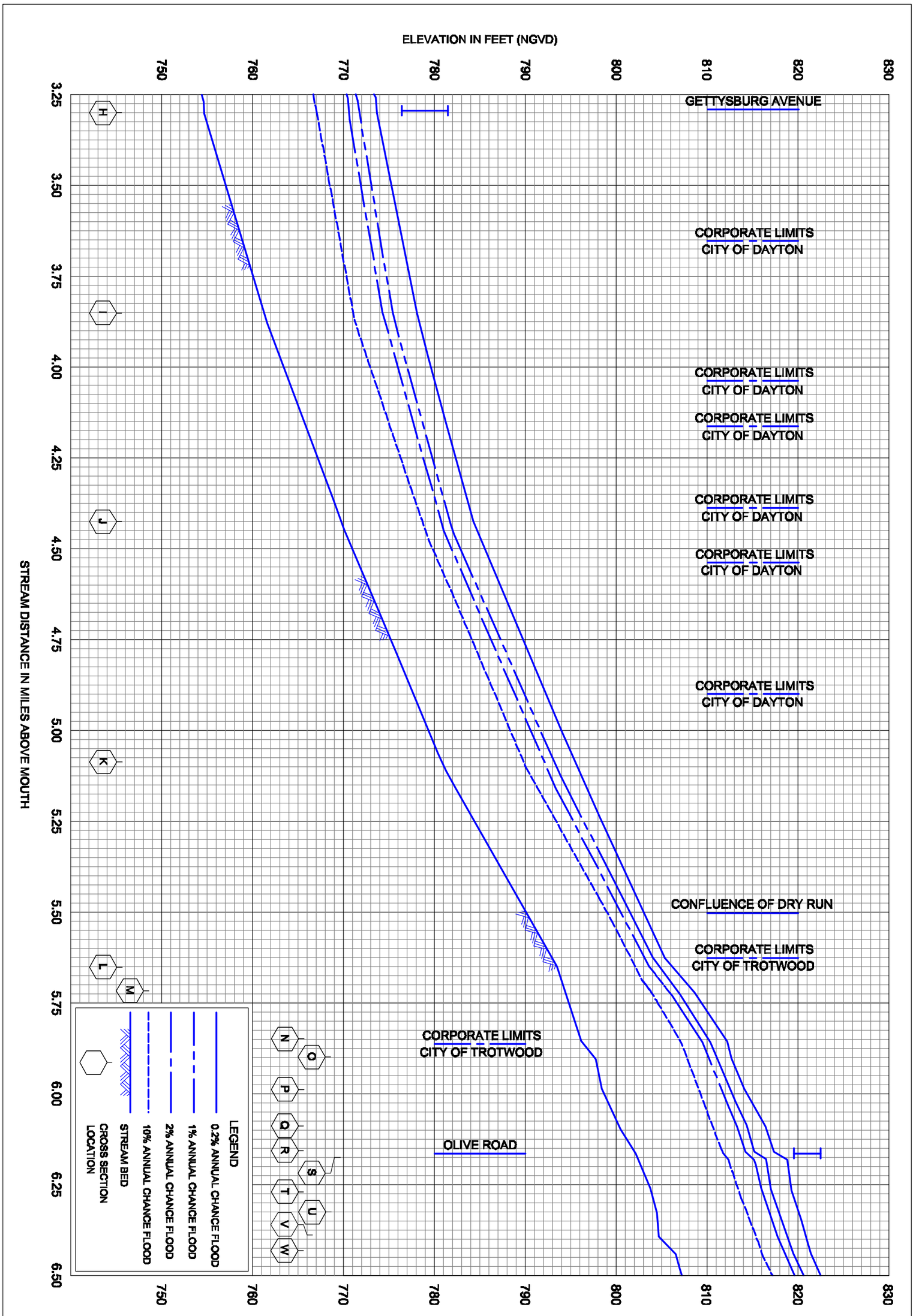
WOLF CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

(AND INCORPORATED AREAS)

91P



92P

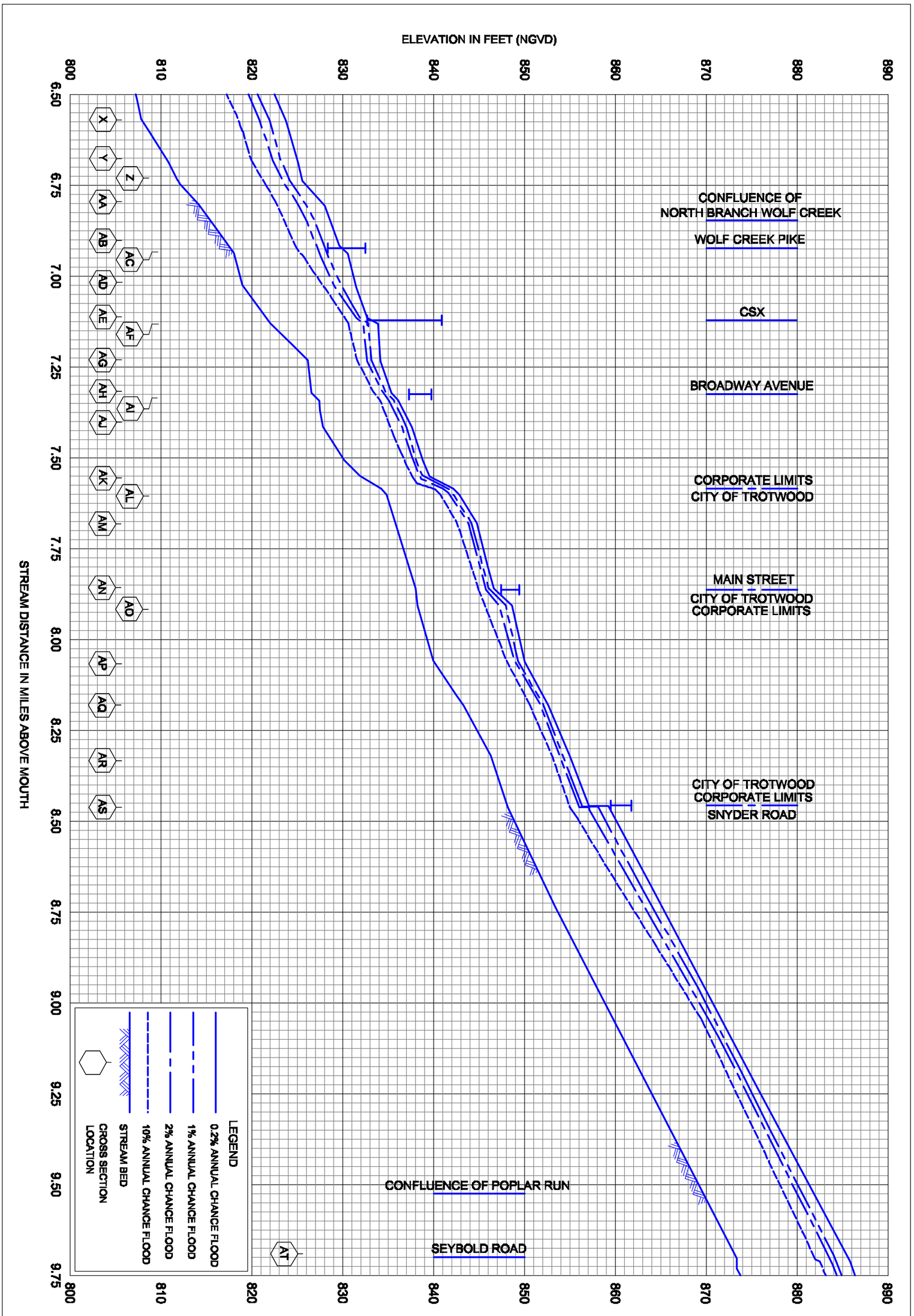
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

(AND INCORPORATED AREAS)

FLOOD PROFILES

WOLF CREEK



93P

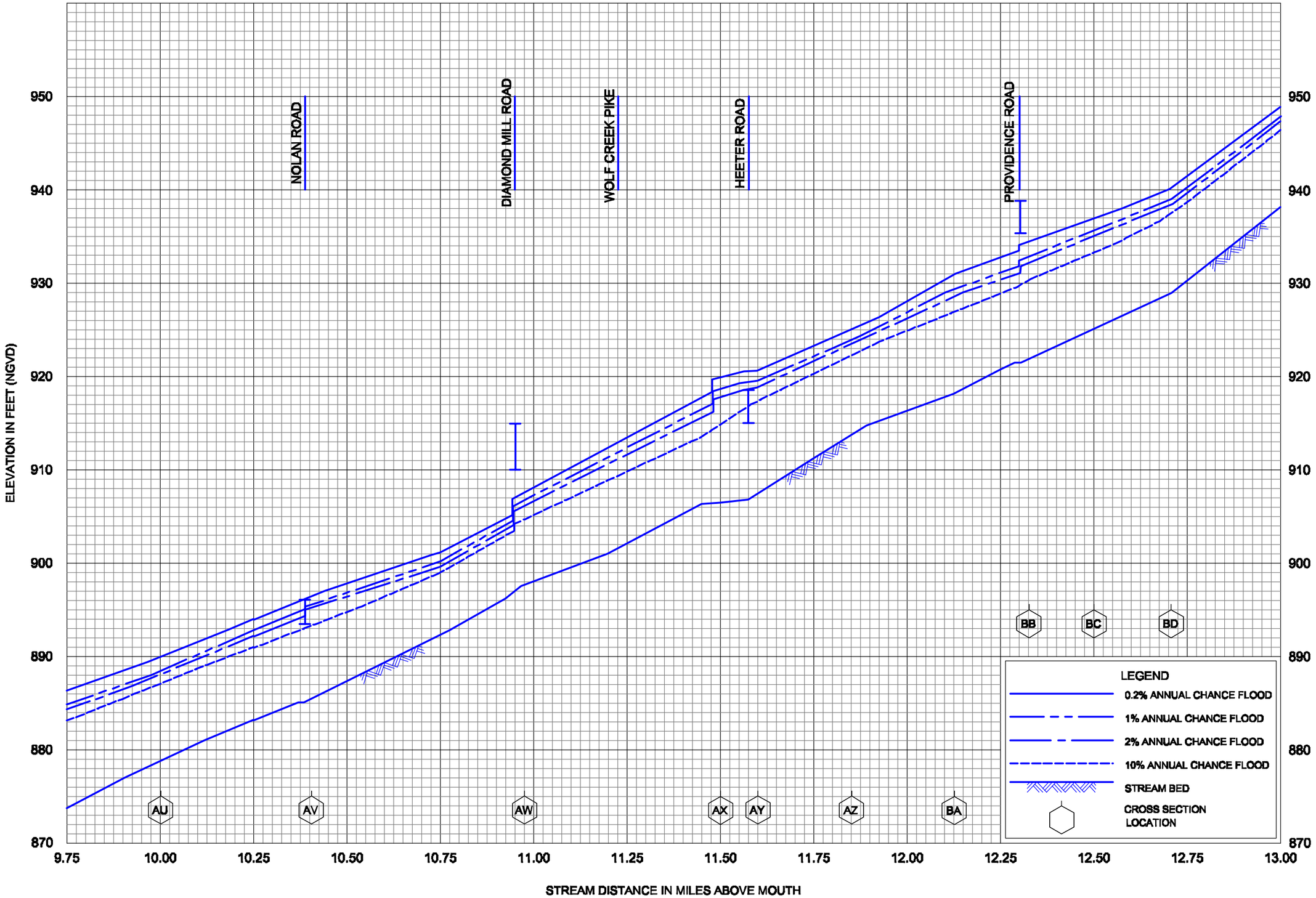
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

(AND INCORPORATED AREAS)

FLOOD PROFILES

WOLF CREEK



FLOOD PROFILES

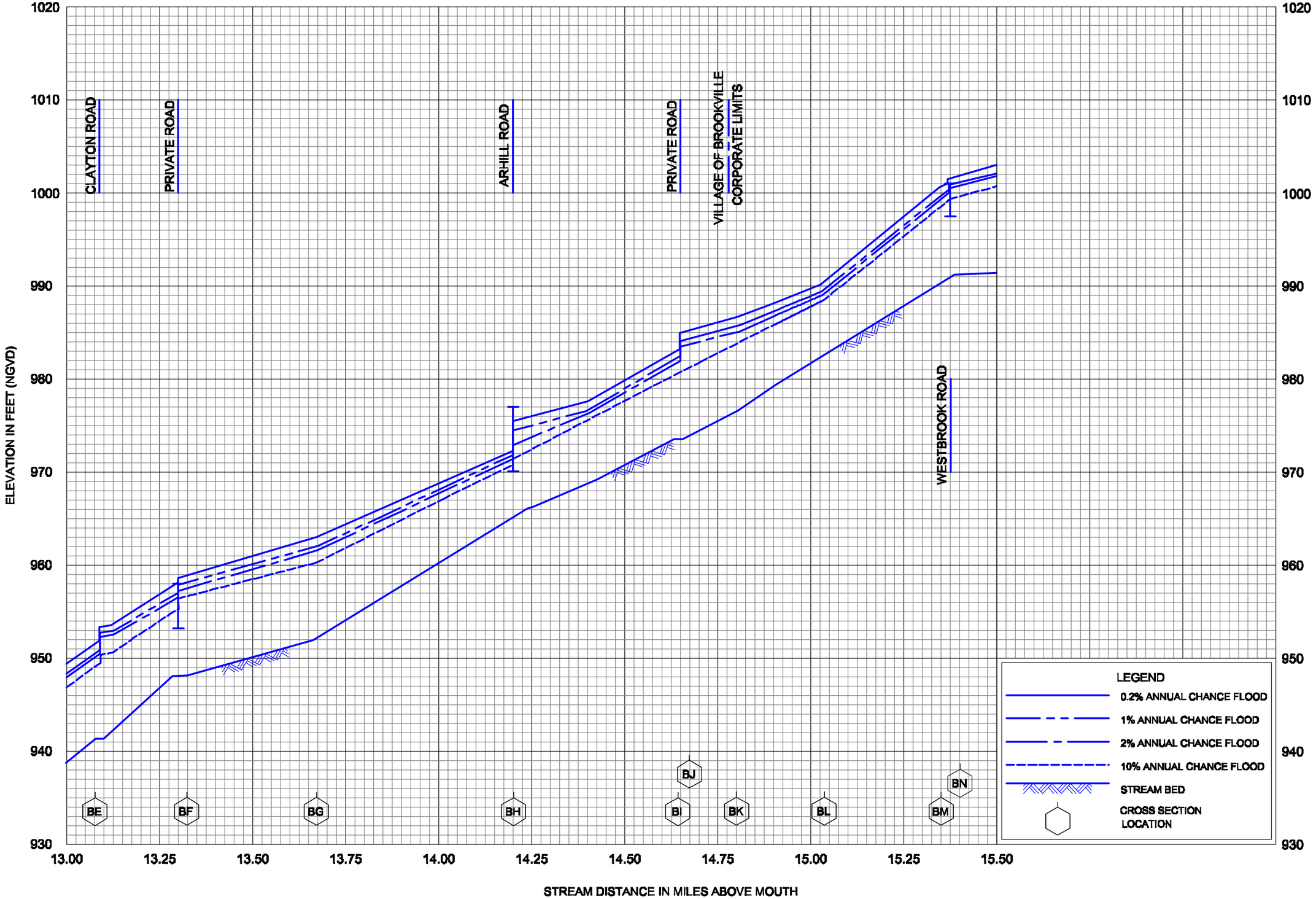
WOLF CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

(AND INCORPORATED AREAS)

94P



FLOOD PROFILES

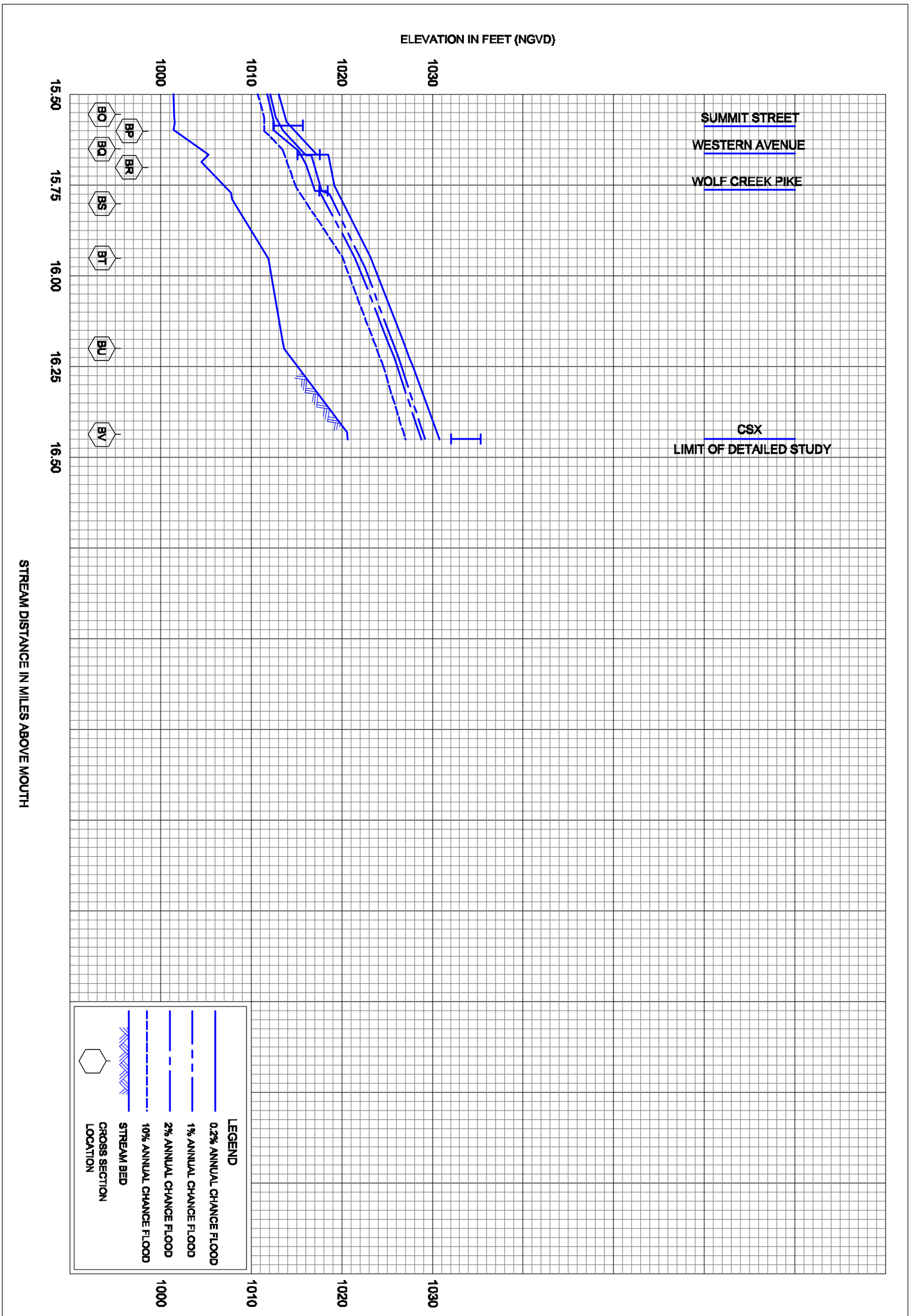
WOLF CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

(AND INCORPORATED AREAS)

95P



FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTGOMERY COUNTY, OH

AND INCORPORATED AREAS

FLOOD PROFILES

WOLF CREEK