FLOOD INSURANCE STUDY

ROCK ISLAND COUNTY, ILLINOIS
AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
ANDALUSIA, VILLAGE OF	170583
CARBON CLIFF, VILLAGE OF	170584
COAL VALLEY, VILLAGE OF	170585
CORDOVA, VILLAGE OF	170586
EAST MOLINE, CITY OF	170587
HAMPTON, VILLAGE OF	170588
HILLSDALE, VILLAGE OF	170589
MILAN, VILLAGE OF	170590
MOLINE, CITY OF	170591
*OAK GROVE, VILLAGE OF	170882
PORT BYRON, VILLAGE OF	170592
RAPIDS CITY, VILLAGE OF	170593
REYNOLDS, VILLAGE OF	170883
ROCK ISLAND, CITY OF	175171
ROCK ISLAND COUNTY (UNINCORPORATED AREAS)	170582
SILVIS, CITY OF	170595

* NO SPECIAL FLOOD HAZARD AREAS IDENTIFIED

REVISED: APRIL 5, 2010

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
17161CV000B

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study (FIS) may not contain all data available within the Community Map Repository. It is advisable to 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 by the Letter of Map Revision process, which does not involve republication or redistribution of the FIS. It is, therefore, the responsibility of the user to consult with community officials and to check the Community Map Repository to obtain the most current FIS components.

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

Old Zone(s)	New Zone
A1 through A30	AE
B	X (shaded)
C	X

Initial Countywide FIS Effective Date: October 18, 2002

Revised FIS Dates: April 5, 2010

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FLOOD INSURANCE STUDY
ROCK ISLAND COUNTY, ILLINOIS AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study (FIS) revises and supersedes the FIS reports and/or Flood Insurance Rate Maps (FIRMs) and/or Flood Hazard Boundary Maps (FHBMs) in the geographic area of Rock Island County, Illinois, including: the cities of East Moline, Moline, Rock Island, and Silvis; the villages of Andalusia, Carbon Cliff, Coal Valley, Cordova, Hampton, Hillsdale, Milan, Oak Grove, Port Byron, Rapids City, and Reynolds, and the unincorporated areas of Rock Island County (hereinafter referred to collectively as Rock Island 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 county that will be used to establish actuarial flood insurance rates. This information will also be used by Rock Island County to update existing floodplain regulations as part of the Regular Phase of the National Flood Insurance Program (NFIP), and by local and regional planners to further promote sound land use and floodplain development. Minimum floodplain management requirements for participation in the NFIP are set forth in the Code of Federal Regulations at 44 C.F.R § 60.3.

The FIS and FIRMs show the portion of the villages of Coal Valley and Reynolds that lie within Rock Island County. The remaining portions of these communities lie within other counties (Henry County and Mercer County, respectively). The flood-hazard information for these communities is shown only for the portions that lie within Rock Island County. Please see separately published FIS report and FIRM for the portions of the communities that do not lie in Rock Island County.

Note that the Village of Oak Grove has no special flood hazard areas (SFHAs) 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 Acknowledgements

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

The FIS includes the unincorporated areas of, and incorporated communities within, Rock Island County. Information on the authority and acknowledgments for each jurisdiction included in this FIS, as compiled from their previously printed FIS reports, is shown below.

Pre-Countywide FISs

Andalusia, City of:	The hydrologic and hydraulic analyses for the FIS dated July 20, 1981 (Reference 1) were prepared by the U.S. Army Corps of Engineers (USACE), Rock Island District, for the Federal Insurance Administration (FIA) under Inter-Agency Agreement No. IAA-H-9-79, Project Order No. 1, Amendment No. 1. That work was completed in November 1980.
Carbon Cliff, Village of:	The hydrologic and hydraulic analyses for the FIS dated December 1, 1981 (Reference 2) were prepared by the USACE, Rock Island District, for the FIA under Inter-Agency Agreement No. IAA-H-10-77, Project Order No. 13, Amendment No. 2. That work was completed in November 1978.
Coal Valley, Village of:	The hydrologic and hydraulic analyses for the FIS dated June 1979 (Reference 3) were prepared by the USACE, Rock Island District, for the FIA under Inter-Agency Agreement No. IAA-H-10-77, Project Order Nos. 23 and 27. That work was completed in March 1978.
Cordova, Village of:	The hydrologic and hydraulic analyses for the FIS dated June 1, 1981 (Reference 4) were prepared by the USACE, Rock Island District, for the FIA under Inter-Agency Agreement No. IAA-H-9-79, Project Order No. 1, Amendment No. 1. That work was completed in September 1980.
East Moline, City of:	The hydrologic and hydraulic analyses for the FIS dated April 15, 1982 (Reference 5) were prepared by the USACE, Rock Island District, for the Federal Emergency Management Agency (FEMA) under Inter-

Agency Agreement No. IAA-H-9-79, Project Order No. 1, Amendment No. 2. That work was completed in January 1981.

Hampton, Village of: The hydrologic and hydraulic analyses for the FIS dated July 6, 1981 (Reference 6) were prepared by the USACE, Rock Island District, for the FIA under Inter-Agency Agreement No. IAA-H-9-79, Project Order No. 1, Amendment No. 1. That work was completed in August 1980.

Hillsdale, Village of: The hydrologic analyses for the FIS dated January 19, 1982 (Reference 7) were prepared by the USACE, Rock Island District, for FEMA under Inter-Agency Agreement No. IAA-H-10-77, Project Order No. 13, Amendment No. 3. That work was completed in July 1979. The hydraulic analyses for the Rock River and Meredosia Ditch were taken from the 1986 FIS for the Unincorporated Areas of Rock Island County (Reference 8).

Milan, Village of: The hydrologic and hydraulic analyses for the FIS dated March 18, 1980 (Reference 9) were prepared by the USACE, Rock Island District, for the FIA under Inter-Agency Agreement Nos. IAA-H-7-76 and IAA-H-10-77, and Project Order Nos. 23 and 27, respectively. That work was completed in October 1976. The hydrologic and hydraulic analyses for the FIS dated November 5, 1986 (Reference 10) were prepared by the USACE, Rock Island District, to reflect the completion of the Local Flood Protection Project, which involved the construction of several levees.

Moline, City of: The hydrologic and hydraulic analyses for the FIS dated August 1979 (Reference 11) were prepared by the USACE, Rock Island District, for the FIA under Inter-Agency Agreement Nos. IAA-H-7-76 and IAA-H-10-77, and Project Order Nos. 23 and 27,

respectively. That work was completed in March 1978.

Port Byron, Village of: The hydrologic and hydraulic analyses for the FIS dated August 3, 1981 (Reference 12) were prepared by the USACE, Rock Island District, for the FIA under Inter-Agency Agreement No. IAA-H-9-79, Project Order No. 1, Amendment No. 1. That work was completed in October 1980.

Rapids City, Village of: The hydrologic and hydraulic analyses for the FIS dated July 6, 1981 (Reference 13) were prepared by the USACE, Rock Island District, for the FIA under Inter-Agency Agreement No. IAA-H-9-79, Project Order No. 1, Amendment No. 1. That work was completed in July 1980.

Rock Island, City of: The hydrologic and hydraulic analyses for the FIS dated January 1980 (Reference 14) were prepared by the USACE, Rock Island District, for the FIA, under Inter-Agency Agreement No. H-16-75, Project Order No. 9. That work was completed in March 1978. The hydrologic and hydraulic analyses for the revised FIS dated February 4, 1987 (Reference 15), were obtained from the USACE, Rock Island District, to reflect the completion of the Local Flood Protection Project, which involved the construction of several levees.

Rock Island County (Unincorporated Areas): The hydrologic and hydraulic analyses for the FIS dated August 2, 1982 (Reference 16) were prepared by Howard, Needles, Tammen, and Bergendoff for FEMA under Contract No. H-3976. That work was completed in February 1981. The hydrologic and hydraulic analyses for the revised FIS dated December 18, 1986 (Reference 8) were obtained from the USACE, Rock Island District, to reflect the completion of the Local Flood Protection Project, which involved the construction of several levees.

The authority and acknowledgements for the villages of Oak Grove and Reynolds and the City of Silvis are not included because there were no previously printed FISs for those communities.

October 18, 2002
Initial Countywide FIS

The hydrologic and hydraulic analyses for the initial countywide FIS dated October 18, 2002 (Reference 17) were prepared by the USACE, Rock Island District, for FEMA under Inter-Agency Agreement No. EMW-96-IA-0294, Project Order No. 18. That work was completed in March 2000.

April 5, 2010
Revised Countywide FIS

For this revised countywide FIS, the hydrologic and hydraulic analyses for the Mississippi River and Sylvan Slough were prepared by USACE and reported in the *Upper Mississippi River Flow Frequency Study* (UMRSFFS) (Reference 18). Appendix C of this study details the hydrologic and hydraulic analyses for Rock Island District and was completed in August, 2003. The *Upper Mississippi River Floodway Computation* (Reference 19) was prepared for FEMA upon completion of the UMRSFFS under contract EMW-2002-IA-0114, Order No. 4. The work was completed June 30, 2004.

Planimetric base map information was derived from U.S. Geological Survey (USGS) digital orthophoto quarter quadrangles at a one-half meter ground resolution (Reference 20). Illinois State Geological Survey statewide ArcSDE raster mosaic of USGS digital raster graphs at a scale of 1:24,000 (Reference 21) and the USGS National Elevation Dataset were also used in the digitization (Reference 22).

The coordinate system used for the production of the digital FIRMs is Universal Transverse Mercator (UTM) North American Datum of 1983 (NAD 83) Geodetic Reference System 1980 (GRS80) spheroid.

This countywide FIS was performed under the Cooperating Technical Partners (CTP) Partnership Agreement Nos. EMC-2007-CA-7026, EMC-2005-GR-7026 and EMC-2004-GR-0214 between the Illinois Department of Natural Resources (hereinafter referred to as IDNR) and FEMA, per the Mapping Activity Statement (MAS) Nos. IDNR07-25, IDNR05-18, and IDNR04-04.

1.3 Coordination

Coordination and outreach activities were performed to create a climate of understanding and ownership of the mapping process at the state and local levels. These activities were ongoing throughout the entirety of the project.

Pre-Countywide FISs

The purpose of an initial consultation coordination officer (CCO) meeting, or project team meeting, is to discuss the scope of the project. An intermediate CCO meeting, or scoping meeting, is meant to continue outreach and create a climate of understanding throughout the process. A final CCO meeting, or open house, is held with public officials and the general public to review the results of the study. The dates of the initial and final CCO meetings held for the pre-countywide studies for Rock Island County's incorporated communities and unincorporated areas are shown in Table 1, "CCO Meeting Dates for Pre-Countywide Studies."

Table 1 - CCO Meeting Dates for Pre-Countywide Studies

Community	Initial CCO Date	Final CCO Date
Andalusia, Village of	November 1978	February 23, 1981
Carbon Cliff, Village of	September 1976	June 18, 1981
Coal Valley, Village of	January 1976	November 2, 1978
Cordova, Village of	November 1978	January 8, 1981
East Moline, City of	November 1978	August 20, 1981
Hampton, Village of	November 1978	February 19, 1981
Hillsdale, Village of	September 1976	August 19, 1981
Milan, Village of	January 1976	November 2, 1978
Moline, City of	January 1976	November 1, 1978
Port Byron, Village of	November 1978	March 2, 1981
Rapids City, Village of	November 1978	February 18, 1981
Rock Island, City of	May 13, 1976	November 2, 1978
Rock Island County (Unincorporated Areas)	March 1976	August 19, 1981

October 18, 2002
Initial Countywide FIS

For the October 18, 2002 countywide FIS, the communities were notified by FEMA, in letters dated February 12, 1998, that a countywide FIS would be prepared.

The final CCO meeting was held on September 9, 1999 and was attended by representatives of the USACE, the State, the County, and FEMA.

April 5, 2010
Revised Countywide FIS

The project team meeting was held on February 17, 2005 in Rock Island, Illinois and was attended by representatives of Rock Island County; the cities of East Moline, Moline, and Rock Island; and IDNR. This meeting was intended to discuss various issues and concerns for the study area. A scoping meeting was held on March 22, 2005 in Rock Island, Illinois and was attended by representatives of Rock Island County; the cities of East Moline, Moline, and Rock Island; the villages of Andalusia, Coal Valley, and Port Byron; and IDNR.

A preliminary FIRM and FIS were prepared by merging effective FIS text, tables, and profiles with new study data. A preliminary Summary of Map Actions (PSOMA) was also prepared for all affected communities. The PSOMA lists pertinent information regarding Letters of Map Change (LOMCs) that will be affected by the issuance of the FIRM (i.e., superseded, incorporated, and revalidated). Preliminary copies of the FIRM, FIS, and SOMA were distributed to community officials for public review and comment.

The results of the study were reviewed at the open house held on February 23, 2009 in Milan, Illinois, and attended by representatives of Rock Island County; the cities of East Moline, Moline, and Rock Island; the villages of Andalusia, Coal Valley, Hampton, Milan, Oak Grove, and Port Byron . All problems raised at that meeting have been addressed in this study.

2.0 AREA STUDIED

2.1 Scope of Study

This FIS covers the geographic area of Rock Island County including the incorporated areas listed in Section 1.1.

The flooding information for the entire county, including both incorporated and unincorporated areas is shown. The vertical datum was converted from the National Geodetic Vertical Datum of 1929 (NGVD 29) to the North American Vertical Datum of 1988 (NAVD 88).

Typically, areas studied by detailed methods are selected with priority given to all known flood hazards and areas of projected development or proposed construction. Approximate analyses are used to study those areas having low development potential or minimal flood hazards.

The streams, or portions of streams, listed in Table 2, "Limits of New or Revised Detailed Study," have new or revised hydrologic and hydraulic analyses for this countywide FIS.

Table 2 - Limits of Revised or New Detailed Study

Flooding Source	Limits of Revised or New Detailed Study
Mississippi River	From the Rock Island/Mercer County Boundary at RM 448.75, approximately 1 mile downstream of Blanchard Island Recreation Area; to the Rock Island/Whiteside County Boundary at RM 512.25, approximately 1,300 feet downstream of Meredosia Road
Sylvan Slough	From the convergence with the Mississippi River, approximately 900 feet downstream of Arsenal Road; to the divergence from the Mississippi River, approximately 900 feet upstream of Interstate 74

The streams, or portions of streams, listed in Table 3, "Limits of Detailed Study," were studied in detail and are included in this report. The limits of detailed study are also indicated on the Flood Profiles (Exhibit 1) and on the FIRM (Exhibit 2).

Table 3 - Limits of Detailed Study

Flooding Source	Limits of Detailed Study
Coal Creek	From confluence with Rock River to approximately 125 feet upstream of 22nd Avenue
Coal Creek Tributary	From confluence with Coal Creek to approximately 365 feet upstream of 1st Street
Eckhart Creek	From confluence with Old Channel Mill Creek to approximately 900 feet upstream of Andalusia Road
Kyte Creek	From confluence with Old Channel Mill Creek to approximately 175 feet upstream of 14th Street W
Meredosia Ditch	From confluence with Rock River to approximately 9,770 feet upstream of Interstate Route 88
Mill Creek	From confluence with Rock River to US Route 67
Mississippi River	From river mile 449 to river mile 512
North Channel Rock River	From confluence with Rock River to the divergence from the Rock River

Table 3 - Limits of Detailed Study (continued)

Flooding Source	Limits of Detailed Study
Rock River	From confluence with Mississippi River to approximately 3,960 feet upstream of 83rd Avenue North
Shaffer Creek	From confluence with Rock River to approximately 4,100 feet upstream of East Third Avenue
Sylvan Slough	From the convergence with the Mississippi River, approximately 900 feet downstream of Arsenal Road; to the divergence from the Mississippi River, approximately 900 feet upstream of Interstate 74
Tributary 1 to Unnamed Creek	From confluence with Unnamed Creek to approximately 3,180 feet above confluence
Tributary 2 to Unnamed Creek	From confluence with Unnamed Creek to approximately 950 feet above confluence
Tributary 3 to Unnamed Creek	From confluence with Unnamed Creek to approximately 800 feet above confluence
Unnamed Creek	From the Railroad culvert, approximately 3,500 feet downstream of 1st Avenue; to 4,900 feet upstream of State Route 84

October 18, 2002
Initial Countywide FIS

For the October 18, 2002 FIS, new analyses were included for the following streams in the Village of Carbon Cliff and the City of Silvis: Unnamed Creek, Tributary 1, Tributary 2, and Tributary 3.

All or portions of Barber Creek, Copperas Creek, Hills Creek, Mill Creek, and unnamed creeks and drainage streams were studied by approximate methods.

April 5, 2010
Revised Countywide FIS

The 2004 USACE *Upper Mississippi River System Flow Frequency Study* was incorporated into the revised countywide FIS report and FIRM. The new floodplain delineation encompasses the entire reach of the Mississippi River through Rock Island County (Unincorporated Areas); the cities of East Moline, Moline and Rock Island; and the villages of Andalusia, Cordova, Hampton, Milan, Port Byron, Rapids City; and the entire reach of the Sylvan Slough through the cities of Rock Island and Moline.

Also, special flood hazard areas were delineated for limited distances between study reaches using additional information from the model or interpolated for consistency.

Summary of Map Actions (SOMA)

Letters issued by FEMA that resulted in map changes (Letter of Map Revision [LOMR] and/or Special Response [SR]) of sufficient scale to be incorporated in this countywide FIS are listed in Table 4, "Letters of Map Change."

Table 4 - Letters of Map Change

LOMC Type	Case Number	Effective Date	Community	Flooding Source	Project Identifier
LOMR	08-05-2696P	March 28, 2008	Rock Island County (Unincorporated Areas)	Rock River	Rock River Levee

2.2 Community Description

Rock Island County has a total area of approximately 288,910 acres, or 451 square miles. Located approximately 175 miles west of Chicago in northwestern Illinois, it is bounded by Whiteside and Henry Counties on the east, by Mercer County on the south, and by the Mississippi River on the west and north (Reference 23). Interstate Highways 80, 280, and 74 run through the county along with U.S. Routes 6, 67, and 150 and State Routes 2, 92, and 84 (Reference 24). According to the U.S. Census Bureau, the 2006 population of the county was estimated at 147,545, down 1.2 percent from a population of 149,374 in 2000 (Reference 25).

At the center of Rock Island County is a section of a metropolitan complex known as the Quad Cities, which includes the cities of Davenport and Bettendorf in Iowa and Rock Island and Moline in Illinois. The Quad Cities is considered the "tractor capital of the world" and is also the location of a number of educational facilities including Augustana College, Western Illinois University, and Blackhawk Junior College on the Illinois side of the Mississippi River. The Quad City Airport provides service to connections throughout the U.S. (Reference 23).

There are several small industries located in the county along with the U.S. Army Weapons Command, Rock Island Arsenal. Cordova Township has a large industrial complex and a nuclear generating station, which provides power for much of east-central Iowa and northwestern Illinois. It also generates power for the Chicago metropolitan area (Reference 23).

Farming has been a major industry in Rock Island County since its settlement (Reference 23), and farmland covers the largest percentage of acreage in the county (108,043 acres). The remainder of the county is covered by grassland (87,424

acres), forest/woodland (36,322 acres), urban areas (23,508 acres), wetland areas (13,379), and open water (20,201 acres). Of the 102 counties in Illinois, Rock Island County ranks second in acreage (17,299 acres) covered by lakes and rivers (Reference 26).

The climate of the area is classified as temperate continental, indicating cold, dry arctic air masses in the winter months, and hot, humid southwestern air masses in the summer. As recorded by the weather station in Moline, Illinois (Station 115751), the average annual temperature for Rock Island County is 50.2 degrees Fahrenheit (°F). The coldest average temperatures are in January and the warmest average temperatures are in July. The coldest temperature recorded was -28 °F on February 3, 1996. The warmest temperature recorded was 106 °F on August 18, 1936. The average annual total precipitation for Rock Island County at Moline is 38.04 inches, which includes an average annual snowfall total of 35.3 inches (Reference 27).

Rock Island County's topography includes upland plains, highly dissected valley sides, terraces, and floodplains. The gently rolling surface of the upland plains was produced by glacial deposition while the floodplains and dissected valley sides are the result of subsequent stream erosion. The floodplains are located mainly along the Mississippi and Rock Rivers and on the Meredosia bottomlands. Floodplain elevations range from 540 feet at the southwestern end of the county to 610 feet on the sand plains in the northern part (Reference 23).

The major waterway in Rock Island County is the Mississippi River, which forms the northern boundary of the county with Scott County, Iowa. The Rock River is also a major waterway. It bisects Rock Island County and forms part of the eastern boundary with Henry County, Illinois. The floodplains of the Mississippi and Rock Rivers have many residential, industrial and commercial structures. Other streams in the county include Mill Creek in the southern and western part of the county, Coal Creek in the southern and eastern part of the county, and Meredosia Ditch in the northern part of the county. Development along the floodplains of these smaller streams is primarily agricultural with a few industrial or residential structures (Reference 16).

2.3 Principal Flood Problems

Flooding problems in Rock Island County result primarily from spring and summer floods. The worst floods generally occur in spring and are caused by snowmelt or snowmelt in combination with rainfall. Intense thunderstorms may cause floods during other seasons (Reference 17). In addition, ice jams can occur anytime from early winter to late spring in Rock Island County, developing near river bends, mouths of tributaries, points where the river slope decreases, downstream of dams and upstream of bridges or obstructions. Flooding may occur upstream of an ice jam, and there is also the possibility of flash flooding downstream if an obstruction suddenly gives way (Reference 28).

Flooding from both the Mississippi and Rock River affects a significant portion of Rock Island County, as 41,310 acres are located in the floodplain. Local drainage problems in the county further exacerbate flooding. The drainage problems result primarily from development and filling in of wetlands, which hinders their floodwater storage capacity (Reference 28).

The greatest floods of record on the Mississippi River in Rock Island County have occurred in 1965, 1993, and 2001. River stages of record are listed in Table 5, "Historical Flood Data." Information for the table was collected from *River Stages in Illinois* (Reference 29) and the *National Weather Service Advanced Hydrologic Prediction Service* (Reference 30). Please note that the datum of gage at the Clinton/Camanche, Iowa location is NGVD 29 while the datum of gage is MSL 1912 (Reference 31) at LeClaire, Iowa and Rock Island, Illinois.

Table 5 - Historical Flood Data - Mississippi River

Gage Location	Datum of Gage	Flood Stage	Date	River Stage (feet)
Clinton/Camanche, IA	562.68	17 feet	04/28/1965	24.65
	(NGVD 29)		04/24/2001	23.62
			07/08/1993	22.98
			04/19/1997	21.58
			04/26/1969	21.52
			04/27/1952	21.24
Lock and Dam #14 at LeClaire, IA	557.08	11 feet	04/28/1965	17.75
	(MSL 1912)		04/24/2001	16.93
			07/08/1993	16.56
			06/16/2008	14.84
			04/19/1997	14.61
			04/26/1969	14.60
Lock and Dam # 15 at Rock Island, IL	542.50	15 feet	07/09/1993	22.63
	(MSL 1912)		04/28/1965	22.48
			04/25/2001	22.33
			03/10/1868	22.00
			06/16/2008	21.49
			04/20/1997	19.66

The Rock River poses the greatest flooding threats to the floodplain residents in Rock Island County. Unlike much the Mississippi River's shoreline, which has been developed for industrial use, the Rock River is lined with residential structures (Reference 28). Between 1993 and 2002, the Rock River reached record stages in 7 separate years at the Joslin, Illinois gage. In 2008, the Rock River would also reach record stage at the Moline, Illinois gage. River stages of record for the Rock River in Rock Island County are listed in Table 6, "Historical Flood Data."

Table 6 - Historical Flood Data - Rock River

Gage Location	Datum of Gage	Flood Stage	Date	River Stage (feet)
Joslin, IL	564.06	12 feet	06/07/2002	19.24
	(NGVD 29)		02/23/1997	18.88
			05/31/1996	18.73
			06/16/2000	18.55
			03/26/1993	18.35
			02/27/2001	18.02
			02/22/1994	18.01
Moline, IL	551.34	12 feet	03/06/2008	16.38
	(NGVD 29)		04/26/1973	16.15
			06/07/2002	15.79
			05/20/1974	15.70
			02/24/1997	15.31
			05/31/1996	15.25
			02/24/1971	15.20

Major floods of the Meredosia Ditch and the downstream portions of Mill Creek and Coal Creek are closely related to flooding of the Rock River (Reference 17).

Flooding along Eckhart Creek and Unnamed Creek is characterized by high peak flows with relatively small volumes. Floods on these creeks are most often caused by rainfall on snow-covered or saturated ground (Reference 2, 15).

2.4 Flood Protection Measures

Flood protection measures such as levees, pumping facilities, and/or drainage structures exist in Rock Island County along the Mississippi and Rock Rivers; Meredosia Ditch; and Case, Eckhart, Kyte, Mill and Old Channel Mill Creeks. The levee systems include the Arsenal Levee on Arsenal Island; the East Moline Levee within East Moline, Silvis, and Rock Island County (unincorporated areas); the Meredosia Levee within Rock Island County (unincorporated areas); the Milan Levee within the City of Rock Island, Rock Island County (unincorporated areas), and Milan; and the Rock Island Levee within the City of Rock Island.

3.0 ENGINEERING METHODS

For the flooding sources studied by detailed methods in Rock Island County, 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 which equals or exceeds the 1-percent-annual-chance flood in any 50-year period is approximately 40 percent (4 in 10), and, for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potential based on conditions existing in Rock Island County 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 county.

Pre-Countywide FISs

Each incorporated community within, and the unincorporated areas of, Rock Island County, with the exceptions of the villages of Oak Grove and Reynolds and the City of Silvis, has a previously printed FIS report. The hydrologic analyses described in those reports that have not been superseded by new study information are summarized below.

Streamflow records for the Rock River and North Channel Rock River at Joslin, Illinois (drainage area = 9,542 square miles) are published in *Water Resources Data for Illinois* (Reference 32). The length of record is 37 years. A frequency curve was developed in accordance with the techniques described in Bulletin No. 17 (Reference 33). A regionalized skew coefficient of -0.4 was obtained from the Rock Island District regional skew study. The resulting frequency curve was coordinated with the State of Illinois.

In 1974, a flow frequency curve was developed for the Joslin gage No. 05446500 using 34 years of record and the criteria outlined in *Statistical Methods of Hydrology* (Reference 34). The resulting log normal frequency curve along with the 0.05 and 0.95 limit curves were computed for the Joslin gage using Bulletin No. 17 procedures.

The above 1974 log normal frequency curve was used for flood protection projects for the cities of Milan and East Moline. In 1976, this curve was used for the Whiteside County, Illinois Flood Plain Information Report (Reference 35). The Illinois State Flood Plain Information Repository approved the use of the log normal discharge-frequency curve for the lower Rock River. The Illinois Division

of Water Resources directed Harza Engineering to use the 1974 flow-frequency values for a flood damage reduction plan (Reference 36).

Due to the work completed in the past and the interest expressed by the State of Illinois to use consistent discharge-frequency values for regulations of the Rock River floodplain below Joslin, Illinois, it was decided to retain the 1974 analysis in the study of the lower Rock River instead of the recent frequency curve using Bulletin No. 17 procedures. The coordinated frequency curve falls within the 95 percent and 5 percent confidence limits as calculated by Bulletin No. 17 procedures and was used for this study. Since the drainage area between Joslin and Carbon Cliff and East Moline is small, the Joslin discharge-frequency curve was used directly. To obtain a frequency curve at Rock Island, Moline, and Coal Valley, Illinois, flow-frequency values for the Joslin gage were adjusted by the square root of the drainage area.

For streams where no flow records are available, synthetic procedures were employed to develop flow frequency estimates. A regional regression study was completed in August 1975, entitled *Bluff Frequency Study, Upper Mississippi River, Rock Island District* (Reference 37). The study is for small, ungaged bluff drainage basins bordering the Mississippi River and has been approved for use by the State of Illinois. The synthetic unit graphs were developed at the mouth of Meredosia Ditch. Using these unit graphs and rainfall amounts obtained from Technical Paper No. 40, the peak flow for the 1-percent exceedence frequency flood was obtained. The approved flow frequency estimates by the State of Illinois for Meredosia Ditch in the FIS for the unincorporated areas of Rock Island County were obtained (Reference 8). These values compared favorably. The recommended values were the ones developed from the Bluff Drainage Study.

For the Meredosia Ditch, there are no gaging station records that are applicable to this stream for use in the weighting technique (Reference 33), and only approximately 40 percent of total drainage area in upstream areas shows the pattern of bluff drainage. Therefore, the peak discharge frequency determination was based on regional equations described in *Magnitude and Frequency of Floods in Illinois*, by Jack M. Carns, in 1973 (Reference 38). On Mill Creek, there is a USGS gaging station at Milan, Illinois, USGS gage No. 05448000, which has been operating since April 1940. Discharges for the gaged site on Mill Creek were determined in accordance with the techniques described in *Guidelines For Determining Flood Flow Frequency* by U.S. Water Resources Council, Bulletin No. 17 (Reference 33). Discharges for several other points on Mill Creek and discharges on Coal Creek were determined by using regional equations from the *Bluff Frequency Study, Upper Mississippi River, Rock Island District* (Reference 37).

For the approximate study area on Mill Creek, the 1-percent-annual-chance occurrence discharge at U.S. Route 67 was used as determined in the detailed study area. The 1-percent-annual-chance occurrence discharge for the approximate study

area of Copperas Creek was determined based on regional equations described in *Magnitude and Frequency of Floods in Illinois* (Reference 38).

October 18, 2002
Initial Countywide FIS

For the October 18, 2002 initial countywide FIS, peak flood discharges for the 10-, 2-, 1-, and 0.2- percent-annual-chance flood events were determined for Unnamed Creek and its tributaries (Tributary 1, 2, and 3 to Unnamed Creek). The flow frequency values were developed using regional regression equations (Reference 39). Overland split flow occurs along Unnamed Creek and Tributary 1 to Unnamed Creek. This results in decreased discharges and the 10-, 2-, 1-, and 0.2-percent-annual-chance flood peak discharges being equal downstream of the overland split-flow areas.

April 5, 2010
Revised Countywide FIS

Information on the methods used to determine peak discharge-frequency relationships for the streams studied as part of this countywide FIS is given below.

Mississippi River flood elevations were determined by the January 2004 *Upper Mississippi River System Flow Frequency Study* (UMRSFFS) (Reference 18). The UMRSFFS was developed by five Corps of Engineer Districts (St. Paul, Rock Island, Omaha, Kansas City, St. Louis) and coordinated through representatives from seven federal agencies and seven states. The study addresses flooding of the Illinois River from Lockport to the mouth, the Missouri River below the Gavins Point Dam to the mouth, and the Mississippi River from St. Paul to the confluence with the Ohio River. The St. Louis District conducted the study of the Mississippi River from the confluence with the Ohio to Lock and Dam 22 tailwater (river mile 301.2) and the Illinois River from the confluence with the Mississippi River to the La Grange Lock and Dam tailwater (river mile 80.2). The Rock Island District conducted the study of the Mississippi River from river mile 301.2 to 614.9 and the Illinois River from river mile 80.2 to Lockport, Illinois.

Technical aspects of the study include impacts of levees, land use change, and climate variation. Hydrology was accomplished based on 100 years of record from 1898 to 1998 using a log-Pearson Type III distribution for unregulated flows at gages on the Mississippi River. In situations where historic records were not adequate to develop discharge frequency relationships or to verify the results, hydrologic modeling was used to create synthetic flows based on rainfall.

The discharge values for the Sylvan Slough for all reported events remain unchanged from the previous study as the maximum discharge is controlled by turbine restrictions at the power dams.

A summary of the drainage area-peak discharge relationships for all the streams studied by detailed methods is shown in Table 7, "Summary of Discharges."

Table 7 - Summary of Discharges

Flooding Source and Location	*Drainage Area (square miles)*	*Peak Discharges (cubic feet per second)*			
		10-Percent-Annual-Chance	*2-Percent-Annual-Chance*	*1-Percent-Annual-Chance*	*0.2-Percent-Annual-Chance*
Coal Creek					
At confluence with the Rock River	26.7	4,000	7,500	9,400	14,300
At River Mile 2.26	20.7	3,550	6,660	8,350	12,700
At River Mile 3.34	18.7	3,370	6,320	7,920	12,050
At western Coal Valley corporate limits	15.19	2,950	5,600	7,050	10,700
Coal Creek Tributary					
At mouth	1.43	875	1,650	2,100	3,180
Eckhart Creek					
At mouth	1.66	810	1,560	1,970	3,150
Kyte Creek					
At mouth	2.88	1,120	2,050	2,600	3,800
Meredosia Ditch					
At confluence with the Rock River	59.9	3,750	5,810	6,980	10,600
Just upstream of State Route 5	9.8	1,170	1,920	2,390	3,939
Mississippi River					
At Lock & Dam 17 (RM 437.0)	99,600	227,000	291,000	315,000[1]	370,000[1]
At Lock & Dam 16 (RM 457.2)	99,400	227,000	291,000	318,000	379,000
At confluence of the Rock River (RM 479.1)	99,400	227,000	290,000	317,000	377,000

[1] Decrease in discharge due to model-simulated levee overtopping

Table 7 - Summary of Discharges (continued)

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cubic feet per second) 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
Mississippi River (continued)					
At Lock & Dam 15 (RM 482.9)	88,500	207,000	266,000	290,000	345,000
At Lock & Dam 14 (RM 493.3)	88,400	206,000	265,000	289,000	344,000
At confluence of the Wapsipinicon River (506.8)	88,100	206,000	265,000	289,000	344,000
At Clinton, Iowa (RM 511.8)	85,600	202,000	259,000	283,000	337,000
Mill Creek					
At mouth	62.9	7,250	11,900	14,000	18,900
At USGS gage at Milan-upstream side of Knoxville Road	62.5	7,250	11,900	14,000	18,900
Just downstream of 127th Street	45.3	6,100	10,200	12,300	16,000
Just downstream-near U.S. Route 67	33.2	5,100	8,700	10,500	14,000
North Channel Rock River					
At confluence with the Rock River	10,903	15,000	24,700	31,500	49,000
Rock River					
At mouth	10,903	43,000	65,000	76,000	108,000
Just downstream of U.S. Route 6	10,821	43,000	65,000	76,000	108,000
Just downstream of State Route 92	9,551	41,000	62,000	71,300	97,000
At Joslin gage	9,542	40,300	61,500	71,300	99,000
Shaffer Creek					
At mouth	7.43	1,970	3,850	4,900	7,800
Sylvan Slough					
At convergence with the Mississippi River (RM 482.7)	88,500	5,000[2]	5,000[2]	5,000[2]	5,000[2]

[2] The maximum discharge is due to the turbine restriction at two power dams

Table 7 - Summary of Discharges (continued)

Flooding Source and Location	*Drainage Area (square miles)*	*Peak Discharges (cubic feet per second)* 10-Percent-Annual-Chance	2-Percent-Annual-Chance	1-Percent-Annual-Chance	0.2-Percent-Annual-Chance
Tributary 1 to Unnamed Creek					
Above Unnamed Creek	0.43	170	170	170	170
Above Overland Split Flow	*	360	550	640	850
Tributary 2 to Unnamed Creek					
Above Unnamed Creek	0.31	260	420	490	660
Tributary 3 to Unnamed Creek					
Above Unnamed Creek	0.26	225	365	425	575
Unnamed Creek					
Above 1st Avenue	1.34	400	400	400	400
Above State Route 84	1.29	860	1,250	1,430	1,870
Above Tributary 1 to Unnamed Creek	0.94	690	1,080	1,260	1,700
Above Tributary 2 to Unnamed Creek	0.425	335	545	635	860
Above Tributary 3 to Unnamed Creek	0.10	110	175	200	275

*Data not available

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 tables 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 encouraged to use the flood elevation data presented in this FIS in conjunction with the data shown on the FIRM.

Pre-Countywide FIS

Each incorporated community within, and the unincorporated areas of, Rock Island County, with the exceptions of the villages of Oak Grove and Reynolds and the City of Silvis, has a previously printed FIS report. The hydraulic analyses

described in those reports that have not been superseded by new study information are summarized below.

Cross-section data for detailed study streams included: soundings and valley sections for the Rock River developed by the USACE, Rock Island District; stream cross sections and structure information for Coal Creek and the downstream portion of Mill Creek developed by the USACE, Rock Island District; and cross sections and structure information for Mill Creek and Meredosia Ditch determined by field survey. Valley sections for the upper 18 miles of the Rock River were modified based on recent floodplain mapping (Reference 40). Cross-section data was also obtained by field surveys.

Water-surface elevations of floods of the selected recurrence intervals, other than the Mississippi River, were computed using the USACE HEC-2 step-backwater computer program (Reference 41). Starting water-surface elevations were determined by normal depth analysis except as follows. Starting water-surface elevations used for Coal and Shaffer Creeks were based on the elevation of the Rock River for a 10-percent-annual-chance event. Starting water-surface elevations for Coal Creek Tributary were taken from the 4-percent-annual-chance event on Coal Creek. Starting water-surface elevations for the Rock River were obtained from a report entitled *Rock River, Rock Island County, Strategic Planning Study, Flood Damage Reduction Plan* (Reference 36).

For the Rock River, upstream of the Green River, the backwater model was calibrated by comparing computed water-surface elevations to observed highwater marks for the April 1973 flood. Highwater marks were provided by the USACE, Rock Island District (Reference 42). The flooding condition on the Rock River governs the water-surface profiles for the lower 0.08 mile of Coal Creek and the entire study reach of Meredosia Ditch.

Roughness factors (Manning's "n") for the Rock River were modified to obtain a reasonable relationship between computed elevations and historical highwater marks. Small differences between computed and recorded elevations were permitted to avoid unreasonable variation sin roughness coefficients.

October 18, 2002
Initial Countywide FIS

For the October 18, 2002 FIS, channel cross sections were obtained by land survey or were taken from 1-foot topographic maps, and bridge dimensions for Unnamed Creek and its tributaries were obtained by land survey.

The hydraulic analyses for Unnamed Creek and its tributaries were made using the USACE one-dimensional steady flow computer program, HEC-RAS (Reference 43). The starting water-surface elevations for Unnamed Creek and the split flow were obtained from normal depth.

The discharges for the split were determined from the amount of discharge, which was in the right overbank at cross section 3975. It was observed that this water would not be able to rejoin the flow in the channel and would therefore become shallow overland flow. A floodway was not computed for the split flow due to the fact that it is shallow flow.

A normal depth analysis by approximate methods was used from the study on Hills Creek. Cross sections for the approximate study were surveyed and supplemented using detailed topographic maps (Reference 42).

Approximate study methods were used to establish 1-percent-annual-chance flood limits for upstream portions of Mill Creek (between U.S. Route 67 and Illinois Route 94) and a portion of Copperas Creek (east of Illinois Route 92). The approximate flood limits for Mill Creek and Copperas Creek were set based on field inspection, normal depth of uniform flow, and structure capacity computations.

A normal depth analysis was used for streams studied by approximate methods in the village of Carbon Cliff. Cross sections for the approximate studies were surveyed and supplemented using detailed topographic maps (Reference 40).

Approximate flood elevations in Moline were taken from known water-surface elevations at their confluence points with the Mississippi River and the Rock River studied by detailed methods.

A normal depth analysis was used for the study by approximate methods on Barber Creek (Reference 44). No streamflow records were available for Barber Creek. For this stream, a synthetic procedure was employed to develop a flow-frequency estimate. A regional regression study was completed in August 1975 (Reference 37). The regional regression study consisted of a set of curves developed by drainage area and discharge data in the area. Flow-frequency values used in this study were approved by the Illinois Department of Transportation, Division of Water Resources, and the Illinois State Water Survey. Cross sections for the approximate study were surveyed and supplemented using detailed topographic maps (Reference 45). Manning's "n" value was determined by field inspection used in the normal depth analyses.

A normal depth analysis was used to determine the 1-percent-annual-chance elevations for the sheet flow and ponding areas.

April 5, 2010
Revised Countywide FIS

Cross sections for the Mississippi River were developed using channel hydrographic surveys in conjunction with Scientific Assessment and Strategy

Team (SAST) floodplain digital terrain data collected in 1995 and 1998. The floodplain digital terrain models were developed from 1998 aerial photography and photogrammetry and digital hydrographic surveys that date from 1997 or later; supplemented as necessary with USGS National Elevation Dataset (NED) 1/3 arc second coverage (Reference 22). For areas where no digital hydrographic surveys were available, such as in some side channels and chutes, depths were estimated from the most current printed surveys available (Reference 18).

The UMRSFFS (discussed in Section 3.1) is based on an unsteady flow model (UNET). Levee failure was assumed at the top of existing levee grade based on an upstream and a downstream point. The UNET model was calibrated by both stage and discharge at gaging locations primarily by adjusting roughness coefficients and estimated lateral inflows. Some special considerations and techniques were required to address especially complex flow reaches and levee failure impacts.

Backwater affects from the UMRSFFS have been considered for tributaries to the Mississippi River within the county.

Following guidance from the USACE Rock Island District, the Sylvan Slough Flood Profiles show Mississippi River backwater effects from the Mississippi River/Sylvan Slough convergence (approximately RM 482.7) upstream to the power dams. Elevations of the pool behind the dams are controlled by the elevation of the Mississippi River/Sylvan Slough at the divergence (approximately RM 486). The flood profile elevation data at the convergence and divergence are from the UMRSFFS UNET model.

The 1-percent-annual-chance backwater computed at Mississippi River Cross Section 477 has been applied to Eckhart Creek.

The 1-percent-annual-chance backwater computed at Mississippi River Cross Section 479 has been applied to the Rock River.

Backwater affects from the Rock River have been considered for tributaries to the Rock River within the county.

The 1-percent-annual-chance backwater from the Rock River has been applied to Coal Creek and to Shaffer Creek.

Flooding conditions on the Rock River govern the water-surface profiles for the entire study reach of Meredosia Ditch.

A portion of the Rock River is the jurisdictional divide between Rock Island and Henry Counties and a portion is the jurisdictional divide between Rock Island and Whiteside Counties. Meredosia Ditch is the jurisdictional divide between Rock Island and Whiteside Counties. Due to the lateral sharing of the floodplain and the longitudinal overlap of the limits of flooding affecting each county, portions of

the Rock River and Meredosia Ditch Flood Profiles and Floodway Data Tables should be duplicated within adjacent countywide FIS(s). However, the hydrologic and hydraulic studies for the Rock River and for Meredosia Ditch are independent for each county. The effective data is inconsistent between counties.

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).

Channel and overbank roughness factors (Manning's "n") used in the hydraulic computations were chosen by engineering judgment and were based on field observations of the stream and floodplain areas. The range of the Manning's "n" coefficients for each stream is shown in Table 8, "Roughness Coefficients (Manning's 'n' Values)."

Table 8 - Roughness Coefficients (Manning's "n" Values)

Stream	Channel "n"	Overbank "n"
Coal Creek	0.040-0.055	0.045-0.070
Coal Creek Tributary	0.035-0.055	0.040-0.075
Eckhart Creek	0.030-0.045	0.040-0.090
Kyte Creek	0.030-0.045	0.040-0.090
Meredosia Ditch	0.030-0.045	0.050-0.065
Mississippi River		
Pool 17 (RM 437.1 - 457.0)	0.018-0.033	0.040-0.165
Pool 16 (RM 457.2 - 482.7)	0.020-0.025	0.035-0.120
Pool 15 (RM 482.9 - 493.2)	0.022-0.033	0.060-0.450
Pool 14 (RM 493.4 - 522.5)	0.023-0.035	0.040-0.121
Mill Creek	0.040-0.045	0.045-0.085
North Channel Rock River	0.018-0.035	0.040-0.095
Rock River	0.018-0.035	0.040-0.095
Shaffer Creek	0.035-0.040	0.045-0.075
Sylvan Slough	0.026-0.068	0.025-0.250
Tributary 1 to Unnamed Creek	0.045	0.070-0.080
Tributary 2 to Unnamed Creek	0.050	0.070
Tributary 3 to Unnamed Creek	0.050	0.070
Unnamed Creek	0.040-0.070	0.040-0.050

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

3.3 Vertical Datum

All FISs and FIRMs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. Until recently, the standard vertical datum in use for newly created or revised FISs and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD 29). With the finalization of the North American Vertical Datum of 1988 (NAVD 88), many FIS reports and FIRMs are being prepared using NAVD 88 as the referenced vertical datum.

All flood elevations shown in this FIS report and on the FIRM are referenced to NAVD 88. Structure and ground elevations in the community must, therefore, be referenced to NAVD 88. It is important to note that adjacent counties may be referenced to NGVD 29. This may result in differences in base flood elevations (BFEs) across the county boundary.

Effective information for this FIS report was converted from NGVD 29 to NAVD 88 based on data presented in Figure 1 and Table 9a. Computations show a single average conversion factor of -0.190 feet (NGVD 29 – 0.190 = NAVD 88) for the county. The conversion factor was applied uniformly across the county, with the exception of the Mississippi River and the Sylvan Slough, and was used to prepare the Floodway Data Tables, Flood Profiles, and FIRMs.

The cross section specific conversion factor (cross section-by-cross section) method was applied to the Mississippi River and the Sylvan Slough for Rock Island County. The cross section specific conversion factor method is applied to all Illinois reaches of the Mississippi River for consistency within the state.

The data presented in the *Upper Mississippi River System Flow Frequency Study* (Reference 18) were incorporated into this FIS and associated FIRMs. This information was converted to NAVD 88 based on data presented in Table 9b and 9c. A conversion factor was calculated using the latitude and longitude of each Mississippi River and Sylvan Slough cross section. The conversion factor for each cross section was used to prepare the new Mississippi River and Sylvan Slough Floodway Data Tables, Flood Profiles, and FIRMs.

For more information on NAVD 88, see *Guidelines and Specifications for Flood Hazard Mapping Partners Appendix B: Guidance for Converting to the North American Vertical Datum of 1988* (Reference 46) available at http://www.fema.gov/plan/prevent/fhm/dl_cgs.shtm or contact the Vertical Network Branch, National Geodetic Survey, Coast and Geodetic Survey, National Oceanic and Atmospheric Administration, Rockville, Maryland 20910 (Internet address http://www.ngs.noaa.gov).

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

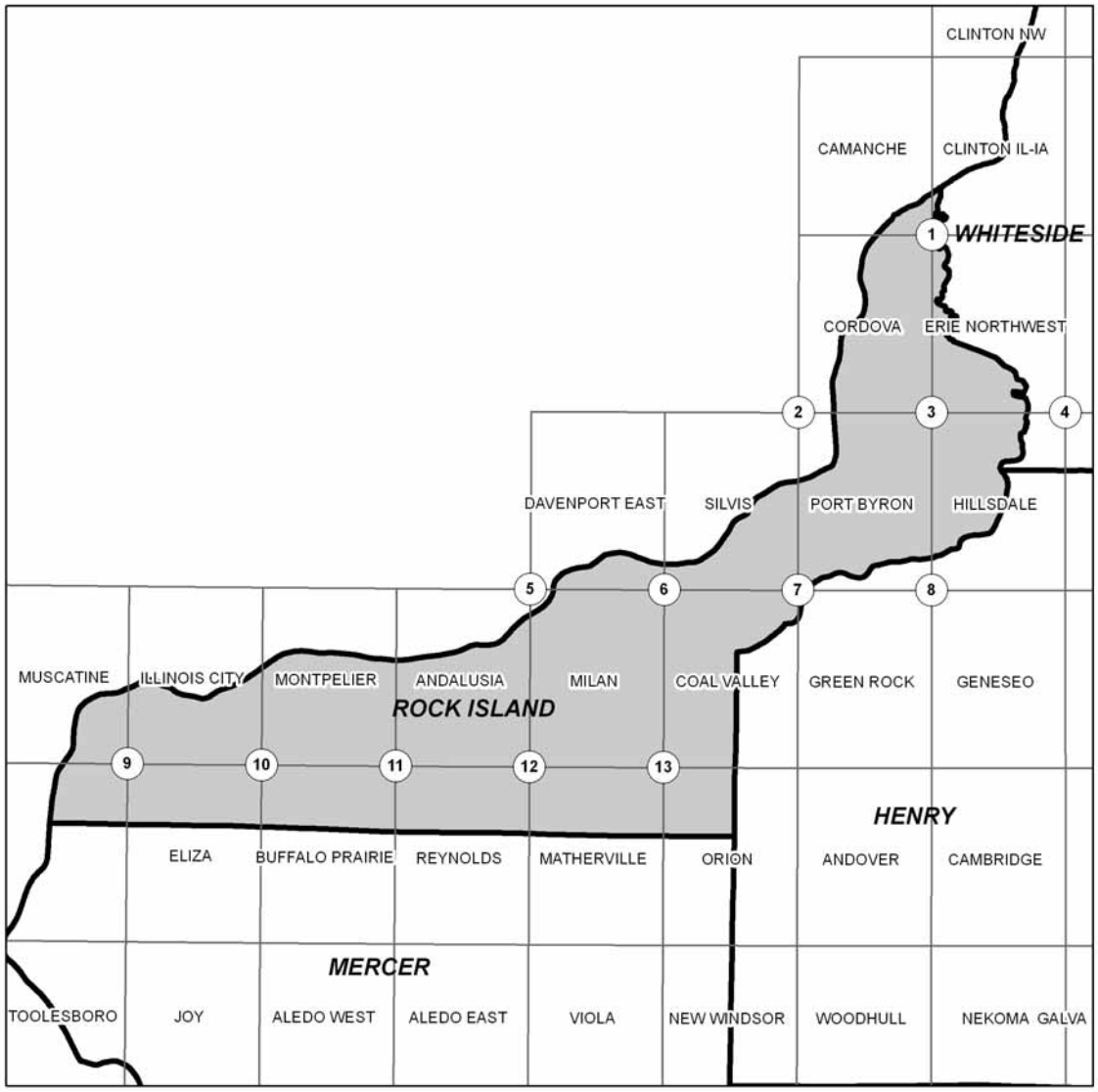

Figure 1 – Vertical Datum Conversion
USGS Quadrangle Corner Intersections
The change in elevation for each Point ID is listed in Table 9a.

Table 9a - Vertical Datum Conversions
Single Conversion Factor (countywide) Method
Rock Island County

Point ID #	Quadrangle Name	Corner	NAD83 Latitude (dec. deg.)	NAD83 Longitude (dec. deg.)	NGVD29 to NAVD88 Elevation Change (feet)
1	Erie Northwest	NW	41.750	90.250	-0.066
2	Port Byron	NW	41.625	90.375	-0.148
3	Hillsdale	NW	41.625	90.250	-0.138
4	Spring Hill	NW	41.625	90.125	-0.174
5	Milan	NW	41.500	90.625	-0.203
6	Coal Valley	NW	41.500	90.500	-0.233
7	Green Rock	NW	41.500	90.375	-0.256
8	Geneseo	NW	41.500	90.250	-0.243
9	Eliza	NW	41.375	91.000	-0.217
10	Buffalo Prarie	NW	41.375	90.875	-0.194
11	Reynolds	NW	41.375	90.750	-0.184
12	Matherville	NW	41.375	90.625	-0.194
13	Orion	NW	41.375	90.500	-0.217

Range of conversion values	-0.256 through -0.066
Average conversion factor	**-0.190**
Maximum variance from the average conversion (Within 0.25-foot tolerance)	0.124
Maximum variance from a no-conversion value	0.256

Table 9b - Vertical Datum Conversions
Cross Section Specific (cross section-by-cross section) Conversion Factors
Mississippi River

Cross Section ID	NAD83 Latitude (dec. deg.)	NAD83 Longitude (dec. deg.)	NGVD29 to NAVD88 Elevation Change (feet)
449	41.335	91.055	-0.2
449.4	41.342	91.039	-0.2
450	41.350	91.039	-0.2
450.5	41.357	91.040	-0.2
451	41.361	91.040	-0.2
451.5	41.365	91.039	-0.2
452	41.373	91.038	-0.2
452.5	41.379	91.034	-0.2
453	41.388	91.031	-0.2
453.6	41.396	91.031	-0.2
454	41.398	91.028	-0.2

Table 9b - Vertical Datum Conversions (continued)
Cross Section Specific (cross section-by-cross section) Conversion Factors
Mississippi River

Cross Section ID	NAD83 Latitude (dec. deg.)	NAD83 Longitude (dec. deg.)	NGVD29 to NAVD88 Elevation Change (feet)
454.3	41.400	91.026	-0.2
454.7	41.402	91.027	-0.2
455	41.404	91.027	-0.2
455.6	41.408	91.024	-0.2
455.9	41.410	91.022	-0.2
456	41.411	91.020	-0.2
456.6	41.415	91.014	-0.2
457	41.417	91.007	-0.2
457.2	41.417	91.005	-0.2
457.6	41.421	91.000	-0.2
458	41.423	90.994	-0.2
458.6	41.426	90.985	-0.2
459	41.426	90.979	-0.2
459.5	41.423	90.968	-0.2
460	41.422	90.960	-0.2
460.5	41.420	90.951	-0.2
461	41.418	90.941	-0.2
461.5	41.418	90.930	-0.2
462	41.420	90.919	-0.2
462.5	41.421	90.910	-0.2
463	41.423	90.900	-0.2
463.6	41.426	90.891	-0.2
464	41.430	90.881	-0.2
464.5	41.434	90.873	-0.2
465	41.438	90.866	-0.2
465.5	41.442	90.858	-0.2
466	41.444	90.851	-0.2
466.5	41.446	90.842	-0.2
467	41.445	90.835	-0.2
467.6	41.447	90.824	-0.2
468	41.447	90.816	-0.2
469	41.447	90.797	-0.2
469.5	41.446	90.788	-0.2
470	41.445	90.779	-0.2
470.6	41.444	90.769	-0.2
471	41.443	90.761	-0.2
471.5	41.443	90.749	-0.2
472	41.443	90.740	-0.2
472.6	41.445	90.729	-0.2
473	41.446	90.721	-0.2
473.5	41.447	90.712	-0.2

Table 9b - Vertical Datum Conversions (continued)
Cross Section Specific (cross section-by-cross section) Conversion Factors
Mississippi River

Cross Section ID	NAD83 Latitude (dec. deg.)	NAD83 Longitude (dec. deg.)	NGVD29 to NAVD88 Elevation Change (feet)
474	41.447	90.703	-0.2
474.5	41.449	90.693	-0.2
475	41.451	90.684	-0.2
476	41.452	90.667	-0.2
476.5	41.451	90.652	-0.2
477	41.457	90.635	-0.2
477.6	41.465	90.630	-0.2
477.9	41.468	90.628	-0.2
478.2	41.471	90.624	-0.2
478.3	41.472	90.623	-0.2
478.6	41.475	90.619	-0.2
479	41.479	90.614	-0.2
480	41.492	90.601	-0.2
480.1	41.494	90.598	-0.2
480.7	41.502	90.600	-0.2
481	41.507	90.598	-0.2
481.5	41.510	90.590	-0.2
482	41.513	90.583	-0.2
482.1	41.513	90.580	-0.2
482.3	41.514	90.577	-0.2
482.7	41.514	90.569	-0.2
482.9	41.517	90.566	-0.2
483	41.518	90.564	-0.2
483.6	41.522	90.554	-0.2
484	41.524	90.548	-0.2
484.4	41.524	90.540	-0.2
485	41.521	90.529	-0.2
485.4	41.518	90.522	-0.2
485.8	41.518	90.513	-0.2
486	41.518	90.510	-0.2
487	41.513	90.489	-0.2
487.6	41.514	90.479	-0.2
487.8	41.515	90.474	-0.2
488	41.516	90.470	-0.2
488.6	41.518	90.458	-0.2
489	41.525	90.450	-0.2
489.5	41.529	90.443	-0.2
490	41.535	90.435	-0.2
490.6	41.542	90.428	-0.2
491	41.545	90.425	-0.2

Table 9b - Vertical Datum Conversions (continued)
Cross Section Specific (cross section-by-cross section) Conversion Factors
Mississippi River

Cross Section ID	NAD83 Latitude (dec. deg.)	NAD83 Longitude (dec. deg.)	NGVD29 to NAVD88 Elevation Change (feet)
491.3	41.550	90.419	-0.2
492	41.559	90.412	-0.2
492.5	41.563	90.407	-0.2
493	41.567	90.401	-0.2
493.2	41.569	90.397	-0.2
493.4	41.570	90.395	-0.2
494	41.572	90.388	-0.2
494.6	41.574	90.378	-0.2
495	41.576	90.370	-0.2
495.3	41.577	90.363	-0.2
496	41.581	90.351	-0.2
496.5	41.586	90.340	-0.2
497.1	41.598	90.337	-0.2
498	41.611	90.338	-0.2
498.5	41.619	90.338	-0.2
499	41.626	90.338	-0.1
499.5	41.634	90.339	-0.1
500	41.641	90.339	-0.1
500.5	41.647	90.339	-0.1
501	41.654	90.337	-0.1
501.5	41.661	90.332	-0.1
502	41.669	90.331	-0.1
502.5	41.675	90.329	-0.1
502.9	41.680	90.327	-0.1
503.3	41.684	90.321	-0.1
504	41.692	90.314	-0.1
505	41.706	90.309	-0.1
505.5	41.714	90.312	-0.1
506	41.719	90.314	-0.1
506.9	41.729	90.306	-0.1
507.4	41.735	90.303	-0.1
507.9	41.741	90.299	-0.1
508.6	41.748	90.294	-0.1
509	41.752	90.290	-0.1
509.3	41.756	90.285	-0.1
510.1	41.762	90.276	-0.1
511	41.768	90.259	-0.1
511.6	41.772	90.250	-0.1
512	41.779	90.244	-0.1

Table 9c - Vertical Datum Conversions
Cross Section Specific (cross section-by-cross section) Conversion Factors
Sylvan Slough

Cross Section ID	NAD83 Latitude (dec. deg.)	NAD83 Longitude (dec. deg.)	NGVD29 to NAVD88 Elevation Change (feet)
Sylvan Slough			
A	41.517	90.566	-0.2
B	41.518	90.564	-0.2
C	41.522	90.554	-0.2
D	41.524	90.548	-0.2
E	41.524	90.540	-0.2
F	41.521	90.529	-0.2
G	41.518	90.522	-0.2
H	41.518	90.513	-0.2
I	41.518	90.510	-0.2

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The NFIP encourages state and local governments to adopt sound floodplain management programs. Therefore, each FIS provides 1-percent-annual-chance flood elevations and delineations of the 1- and 0.2-percent-annual-chance floodplain boundaries and 1-percent-annual-chance floodway to assist communities in developing floodplain management measures. This information is presented on the FIRM and in many components of the FIS report, including Flood Profiles and Floodway Data tables. Users should reference the data presented in the FIS as well as additional information that may be available at the local community map repository before making flood elevation and/or floodplain boundary determinations.

4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent-annual-chance flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent-annual-chance flood is employed to indicate additional areas of flood risk in the community. For the flooding sources 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 on the basis of available topography.

Where available along the Mississippi River, digital terrain data provided by the USACE Rock Island and St. Louis Districts were used to delineate the floodplain (Reference 47). In areas along the Mississippi River where the digital terrain data were not available, the USGS National Elevation Dataset was supplemented as available data (Reference 22).

The 1- and 0.2-percent 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, AH, AO, and AE); and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 1- and 0.2-percent-annual-chance floodplain boundaries are close together or collinear, 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).

4.2 Floodways

Encroachment on floodplains, such as structures and fill, has the potential to reduce flood-carrying capacity, increase flood heights and velocities, and increase flood hazards in areas beyond the encroachment itself. For purposes of the NFIP, a floodway is used as a tool to assist local communities in 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 (see Figure 2, "Floodway Schematic") that must be kept free of encroachment so that the 1-percent-annual-chance flood can be carried without substantial increases in flood heights. Minimum federal standards limit such increases to 1.0 foot, provided that hazardous velocities are not produced. In Illinois, however, under the *Rivers, Lakes and Streams Act* (615 ILCS 5/23, 29 & 30 and 615 ILCS 5/18), encroachment in the floodplain is limited to that which will cause only an insignificant increase in flood heights (Reference 48). The State of Illinois has adopted this more stringent criterion, which limits the increase in flood heights to 0.1 foot, no more than a 10 percent reduction in floodplain volume, and no more than a 10 percent increase in average velocity. This has generally been interpreted as the least surcharge measurable, consistent with the encroachment option of the computer program utilized for the floodway determination. The floodways in this FIS are presented to local agencies as a minimum standard that can be adopted directly or that can be used as a basis for additional floodway studies.

The area between the floodway and the 1-percent-annual-chance floodplain boundaries is termed the flood fringe. The flood fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the water-surface elevation of the 1-percent-annual-chance flood by more than 0.1 foot at any point. Typical relationships between the floodway and the floodway

fringe and their significance to floodplain development are shown in Figure 2, "Floodway Schematic."

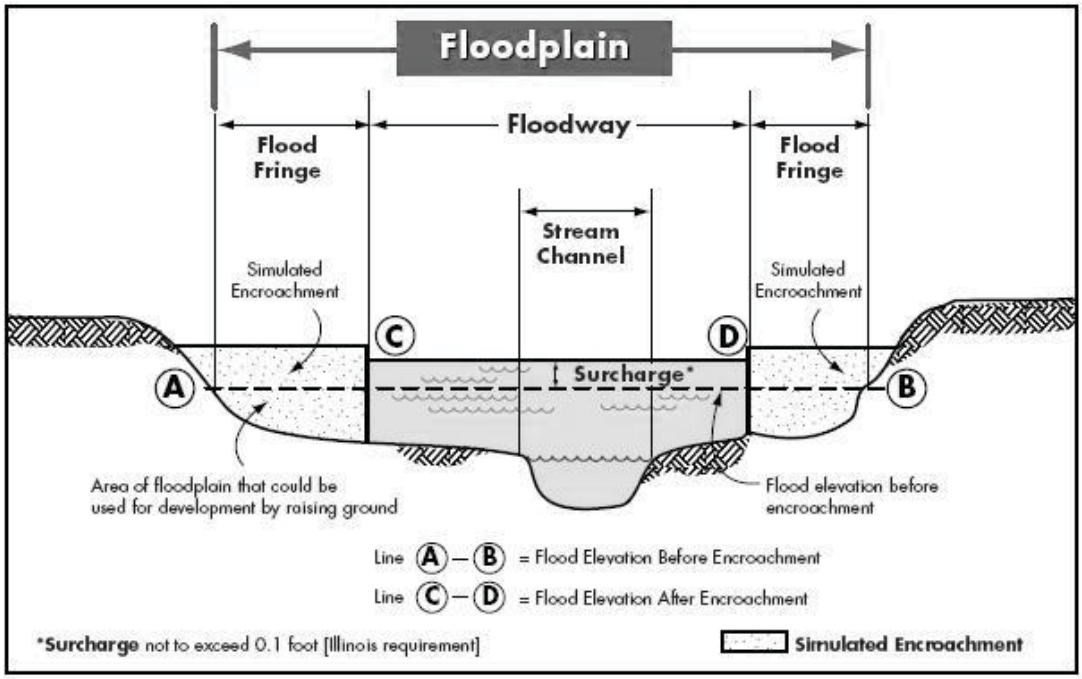

Figure 2 - Floodway Schematic

The floodway presented in this FIS report and on the FIRM was computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. The results of the floodway computations have been tabulated for selected cross sections (see Table 10, "Floodway Data"). The computed floodways are shown on the FIRM (Exhibit 2). In cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary is shown.

Due to the limitation of the UNET (as described in Section 3.2) with floodway encroachment modeling, floodway calculations for the Mississippi River and the Sylvan Slough are based on the June 2004 *Upper Mississippi River Floodway Computation* (Reference 19) performed by the St. Paul, Rock Island, and St. Louis Districts of the Corps of Engineers. The study extends from Cairo, Illinois to Hastings, Minnesota covering 815 miles.

The objective of the study was to produce a floodway consistent with the results of the UMRSFFS (discussed in Section 3.1). A steady flow HEC-RAS model was built and calibrated to the 1-percent-annual-chance UMRSFFS profile only. The model was not calibrated to other frequency events or to "natural" conditions. This model was then used to compute the floodway.

When states on opposite banks defined the floodway based on differing allowable increases in elevation to the UMRSFFS 1-percent-annual-chance profile, two floodway computations were performed. Floodway computations were based on equal reduction in conveyance from both banks using first one state's criteria and then the other state's criteria. The floodway computation using the criteria of the state on the left bank was used to set the floodway boundary of the left bank. Likewise the floodway computation using the criteria of the state on the right bank was used to set the right bank floodway. A third *composite* floodway run was performed using the floodway boundaries identified in the previous calculations for the left and right bank limits respectively. The appropriate floodway boundary on each bank was delineated and used in the HEC-RAS model resulting in a composite encroached 1-percent-annual-chance profile. When a levee defined the floodway, the floodway boundaries were placed at the landside toe of the levee. Illinois has a more restrictive allowable rise than Iowa or Missouri, therefore the composite floodway run produces a profile that exceeds the Illinois limit of 0.1 foot rise and is not reported in the FIS for Illinois Counties.

As a result of this approach, the Floodway Data Tables for the Mississippi River and Sylvan Slough are a special case. Floodway widths are reported in two columns; the width of the floodway within the state of Illinois and the total width of the composite floodway. Floodway section areas, floodway mean velocities, and 1-percent-annual-chance floodwater surface elevations with floodways are not reported from the steady state hydraulic models. However, regulatory 1-percent-annual-chance floodwater surface elevations are reported from the UNET model.

To properly model the Sylvan Slough flow and develop a floodway around Arsenal Island near Lock and Dam No. 15, a split flow reach was incorporated into a HEC-RAS model. The principal result of this model is geo-coded floodway limits provided at each model cross-section. The flow used in the Sylvan Slough reach of the HEC-RAS model is a conservative value used only for computing the regulatory floodway.

There are inconsistencies between the floodway widths reported on the Floodway Data Table and the floodway widths shown on the FIRM for Eckhart Creek and Mill Creek within the Village of Milan. The floodway has been mapped as contained within the levees. The appropriate cross-sections are footnoted as "Floodway width reflects model width; see FIRM panel for regulatory floodway."

In the State of Illinois, any portion of a stream or watercourse that lies within the floodway fringe of a studied (AE) stream may have a state regulated floodway. The FIRM may not depict these state regulated floodways.

Floodways restricted by anthropogenic features such as bridges and culverts are drawn to reflect natural conditions and may not agree with the widths listed in the

floodway data table in the Flood Insurance Study. The floodway as shown on the FIRM should be used for regulatory purposes.

In Illinois, along streams where floodways have not been computed, the community must obtain state permit approval (when applicable) for development. This ensures that the cumulative effect of development in the floodplain will not cause an increase in the base flood elevations that creates a potential for flood damages.

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Coal Creek								
A	0.11[1]	2,161	17,329	0.5	572.7	572.7	572.8	0.1
B	0.44[1]	1,571	8,643	1.1	572.9	572.9	573.0	0.1
C	1.07[1]	382	2,121	4.4	579.3	579.3	579.4	0.1
D	1.44[1]	429[4]	1,799	5.2	584.3	584.3	584.4	0.1
E	1.88[1]	397	2,563	3.7	598.9	598.9	599.0	0.1
F	2.26[1]	251	959	8.7	604.6	604.6	604.7	0.1
G	2.70[1]	426[4]	2,292	3.6	613.1	613.1	613.1	0.0
H	3.04[1]	212	1,942	4.3	621.7	621.7	621.8	0.1
I	3.25[1]	141	1,038	8.0	623.1	623.1	623.2	0.1
J	3.34[1]	103	784	10.1	625.4	625.4	625.4	0.0
K	3.51[1]	180	1,088	7.3	629.4	629.4	629.4	0.0
Coal Creek Tributary								
A	220[2]	200	1,396	1.5	627.1	627.1	627.1	0.0
B	1,720[2]	90	260	8.1	635.9	635.9	635.9	0.0
Eckhart Creek								
A	1,800[3]	250[4]	878	2.2	563.2	560.2[5]	560.2	0.0
B	3,300[3]	400[4]	582	3.4	564.8	564.8	564.8	0.0
C	4,400[3]	200[4]	534	3.7	574.1	574.1	574.1	0.0

[1]Miles above confluence with Rock River
[2]Feet above confluence with Coal Creek
[3]Feet above confluence with Old Channel Mill Creek
[4]Floodway width reflects model width, see FIRM panel for regulatory floodway
[5]Elevation computed without consideration of backwater effects from Mississippi River

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

COAL CREEK - COAL CREEK TRIBUTARY - ECKHART CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Kyte Creek								
A	2,740[1]	63	380	6.8	571.8	571.8	571.8	0.0
B	4,050[1]	173	390	6.7	578.6	578.6	578.6	0.0
C	4,640[1]	107	280	9.3	581.2	581.2	581.2	0.0
Meredosia Ditch								
A	0.50[2]	5,940/1,450[3]	11,097	0.6	587.3	580.6[4]	580.7	0.1
B	0.76[2]	2,395/2,100[3]	5,575	1.3	587.5	580.9[4]	581.0	0.1
C	0.85[2]	5,219/2,800 [3]	48,944	0.1	587.6	586.8[4]	586.9	0.1
D	1.00[2]	4,994/2,550[3, 5]	45,364	0.2	587.7	586.8[4]	586.9	0.1
E	1.27[2]	5,159/2,300[3, 5]	42,770	0.2	587.8	586.8[4]	586.9	0.1
F	1.33[2]	5,914/2,950[3]	48,953	0.1	587.9	586.8[4]	586.9	0.1
G	2.05[2]	4,402/2,380[3]	26,578	0.3	588.2	586.8[4]	586.9	0.1
H	2.80[2]	3,512/840[3]	27,796	0.3	588.3	586.8[4]	586.9	0.1
I	3.05[2]	4,398/2,850[3]	37,510	0.1	588.4	587.0[4]	587.1	0.1
J	3.60[2]	2,677/500[3]	21,655	0.1	588.4	587.0[4]	587.1	0.1
K	4.20[2]	2,488/325[3]	23,843	0.1	588.4	587.0[4]	587.1	0.1
L	4.50[2]	2,430/200[3]	21,758	0.1	588.4	587.0[4]	587.1	0.1
M	4.80[2]	1,929/500[3]	16,916	0.1	588.4	587.0[4]	587.1	0.1
Mill Creek								
A	2,500[6]	325[7]	3,660	3.8	568.5	568.5	568.6	0.1
B	3,450[6]	410[7]	2,496	5.6	569.9	569.9	570.0	0.1
C	4,550[6]	460[7]	2,064	6.8	572.1	572.1	572.2	0.1

[1]Feet above confluence with Old Channel Mill Creek
[2]Miles above confluence with Rock River
[3]Total width/width within Rock Island County
[4]Elevation computed without consideration of backwater effects from Rock River
[5]Floodway width reflects constricted section, see FIRM panel for regulatory floodway
[6]Feet above confluence with Rock River
[7]Floodway width reflects model width, see FIRM panel for regulatory floodway

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

KYTE CREEK - MEREDOSIA DITCH - MILL CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Mill Creek (continued)								
D	5,270	450[2]	1,877	7.5	575.1	575.3	575.2	0.1
E	6,250	239[2]	1,678	8.3	578.0	578.0	578.1	0.1
F	7,300	357	1,379	10.2	580.9	580.9	581.0	0.1
G	12,850	247	2,845	4.9	598.5	598.5	598.5	0.0
H	14,550	630	5,373	2.6	599.6	599.6	599.7	0.1
I	15,700	180	1,205	11.6	599.6	599.6	599.7	0.1
J	16,350	93	1,207	11.6	600.9	600.9	600.9	0.0
K	18,744	667	4,379	3.2	605.8	605.8	605.9	0.1
L	20,064	587	5,118	2.7	606.7	606.7	606.8	0.1
M	22,862	692	5,354	2.6	608.5	608.5	608.6	0.1
N	25,714	444	2,874	4.9	611.2	611.2	611.3	0.1
O	30,307	315	2,993	4.7	618.0	618.0	618.1	0.1
P	34,188	567	4,388	3.2	621.0	621.0	621.1	0.1
Q	37,594	471	3,836	3.7	623.3	623.3	623.4	0.1
R	43,982	738	5,400	2.6	627.9	627.9	628.0	0.1
S	47,098	774	4,399	3.1	631.7	631.7	631.8	0.1
T	48,576	392	2,837	4.3	633.7	633.7	633.8	0.1
U	49,210	419	3,312	3.7	635.5	635.5	635.6	0.1
V	51,374	811	4,850	2.5	637.4	637.4	637.5	0.1
W	52,932	968	3,325	3.7	638.8	638.8	638.9	0.1
X	54,278	890	4,387	2.8	640.1	640.1	640.2	0.1
Y	54,912	585	3,071	4.0	640.5	640.5	640.6	0.1
Z	57,077	597	3,129	3.9	643.2	643.2	643.3	0.1
AA	58,344	712	2,741	4.5	644.7	644.7	644.8	0.1
AB	61,116	885	3,434	3.6	650.1	650.1	650.2	0.1
AC	61,908	831	3,667	2.9	651.9	651.9	652.0	0.1

[1]Feet above confluence with Rock River
[2]Floodway width reflects model width, see FIRM panel for regulatory floodway

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

MILL CREEK

FLOODING SOURCE		FLOODWAY				1-PERCENT-ANNUAL-CHANCE FLOOD WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH[2] (FEET) WITHIN ILLINOIS	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	WIDTH[2] (FEET) TOTAL	REGULATORY FROM UNET MODEL	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Mississippi River									
449	449.0	4,235	N/A	N/A	5,487	554.3	N/A	N/A	N/A
449.4	449.4	4,584	N/A	N/A	5,775	554.6	N/A	N/A	N/A
450	450.0	4,320	N/A	N/A	5,353	554.9	N/A	N/A	N/A
450.5	450.5	3,583	N/A	N/A	4,800	555.1	N/A	N/A	N/A
451	451.0	3,696	N/A	N/A	4,824	555.3	N/A	N/A	N/A
451.5	451.5	3,819	N/A	N/A	4,916	555.5	N/A	N/A	N/A
452	452.0	3,690	N/A	N/A	4,244	555.6	N/A	N/A	N/A
452.5	452.5	2,477	N/A	N/A	3,265	555.8	N/A	N/A	N/A
453	453.0	1,912	N/A	N/A	2,967	555.9	N/A	N/A	N/A
453.6	453.6	1,777	N/A	N/A	3,946	556.2	N/A	N/A	N/A
454	454.0	1,286	N/A	N/A	4,459	556.3	N/A	N/A	N/A
454.3	454.3	1,116	N/A	N/A	4,378	556.3	N/A	N/A	N/A
454.7	454.7	1,223	N/A	N/A	3,588	556.4	N/A	N/A	N/A
455	455.0	1,525	N/A	N/A	2,963	556.4	N/A	N/A	N/A
455.6	455.6	1,699	N/A	N/A	2,892	556.5	N/A	N/A	N/A
455.9	455.9	1,990	N/A	N/A	3,397	556.6	N/A	N/A	N/A
456	456.0	1,940	N/A	N/A	3,295	556.7	N/A	N/A	N/A
456.6	456.6	1,166	N/A	N/A	3,434	556.9	N/A	N/A	N/A
457	457.0	428	N/A	N/A	3,826	557.0	N/A	N/A	N/A
457.2	457.2	397	N/A	N/A	3,928	557.5	N/A	N/A	N/A
457.6	457.6	899	N/A	N/A	4,780	557.7	N/A	N/A	N/A
458	458.0	1,547	N/A	N/A	5,423	557.7	N/A	N/A	N/A
458.6	458.6	3,319	N/A	N/A	7,192	557.9	N/A	N/A	N/A
459	459.0	3,961	N/A	N/A	7,630	558.0	N/A	N/A	N/A
459.5	459.5	4,396	N/A	N/A	8,055	558.1	N/A	N/A	N/A

[1]Miles above confluence with Ohio River
[2]Widths are reported as widths to state line and composite width from USACE floodway model
*Floodway Data Tables for the Mississippi River are a special case. See Flood Insurance Study text for full explanation.
N/A – Not applicable

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

MISSISSIPPI RIVER*

FLOODING SOURCE		FLOODWAY				1-PERCENT-ANNUAL-CHANCE FLOOD WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH[2] (FEET) WITHIN ILLINOIS	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	WIDTH[2] (FEET) TOTAL	REGULATORY FROM UNET MODEL	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Mississippi River (Continued)									
460	460.0	3,871	N/A	N/A	7,302	558.2	N/A	N/A	N/A
460.5	460.5	2,965	N/A	N/A	6,824	558.3	N/A	N/A	N/A
461	461.0	2,660	N/A	N/A	6,442	558.4	N/A	N/A	N/A
461.5	461.5	2,046	N/A	N/A	6,025	558.5	N/A	N/A	N/A
462	462.0	3,072	N/A	N/A	5,784	558.5	N/A	N/A	N/A
462.5	462.5	3,812	N/A	N/A	5,720	558.6	N/A	N/A	N/A
463	463.0	4,027	N/A	N/A	5,700	558.7	N/A	N/A	N/A
463.6	463.6	4,617	N/A	N/A	5,949	558.8	N/A	N/A	N/A
464	464.0	5,317	N/A	N/A	6,567	558.9	N/A	N/A	N/A
464.5	464.5	5,814	N/A	N/A	6,815	559.0	N/A	N/A	N/A
465	465.0	6,132	N/A	N/A	6,800	559.2	N/A	N/A	N/A
465.5	465.5	6,369	N/A	N/A	7,216	559.3	N/A	N/A	N/A
466	466.0	6,550	N/A	N/A	7,338	559.5	N/A	N/A	N/A
466.5	466.5	6,502	N/A	N/A	7,256	559.6	N/A	N/A	N/A
467	467.0	6,106	N/A	N/A	6,960	559.8	N/A	N/A	N/A
467.6	467.6	4,922	N/A	N/A	5,948	560.0	N/A	N/A	N/A
468	468.0	4,888	N/A	N/A	6,030	560.2	N/A	N/A	N/A
469	469.0	4,536	N/A	N/A	5,799	560.5	N/A	N/A	N/A
469.5	469.5	4,643	N/A	N/A	5,873	560.6	N/A	N/A	N/A
470	470.0	4,381	N/A	N/A	5,599	560.8	N/A	N/A	N/A
470.6	470.6	4,529	N/A	N/A	5,600	561.0	N/A	N/A	N/A
471	471.0	4,551	N/A	N/A	5,484	561.2	N/A	N/A	N/A
471.5	471.5	4,046	N/A	N/A	5,300	561.3	N/A	N/A	N/A
472	472.0	3,691	N/A	N/A	5,067	561.5	N/A	N/A	N/A
472.6	472.6	3,119	N/A	N/A	4,204	561.6	N/A	N/A	N/A

[1]Miles above confluence with Ohio River
[2]Widths are reported as widths to state line and composite width from USACE floodway model
*Floodway Data Tables for the Mississippi River are a special case. See Flood Insurance Study text for full explanation. N/A – Not applicable

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

MISSISSIPPI RIVER*

FLOODING SOURCE		FLOODWAY				1-PERCENT-ANNUAL-CHANCE FLOOD WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH[2] (FEET) WITHIN ILLINOIS	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	WIDTH[2] (FEET) TOTAL	REGULATORY FROM UNET MODEL	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Mississippi River (Continued)									
473	473.0	2,788	N/A	N/A	3,959	561.7	N/A	N/A	N/A
473.5	473.5	3,091	N/A	N/A	4,298	561.9	N/A	N/A	N/A
474	474.0	3,647	N/A	N/A	4,910	562.1	N/A	N/A	N/A
474.5	474.5	4,199	N/A	N/A	4,909	562.2	N/A	N/A	N/A
475	475.0	4,775	N/A	N/A	5,658	562.4	N/A	N/A	N/A
476	476.0	5,157	N/A	N/A	6,520	562.8	N/A	N/A	N/A
476.5	476.5	5,610	N/A	N/A	7,492	563.0	N/A	N/A	N/A
477	477.0	7,257	N/A	N/A	9,248	563.2	N/A	N/A	N/A
477.6	477.6	7,295	N/A	N/A	8,714	563.3	N/A	N/A	N/A
477.9	477.9	7,047	N/A	N/A	8,070	563.4	N/A	N/A	N/A
478.2	478.2	6,232	N/A	N/A	7,452	563.5	N/A	N/A	N/A
478.3	478.3	6,430	N/A	N/A	7,726	563.6	N/A	N/A	N/A
478.6	478.6	6,003	N/A	N/A	8,150	563.7	N/A	N/A	N/A
479	479.0	4,910	N/A	N/A	7,633	563.8	N/A	N/A	N/A
480	480.0	3,209	N/A	N/A	7,470	563.9	N/A	N/A	N/A
480.1	480.1	873	N/A	N/A	4,688	563.9	N/A	N/A	N/A
480.7	480.7	1,435	N/A	N/A	3,251	564.1	N/A	N/A	N/A
481	481.0	1,171	N/A	N/A	2,426	564.2	N/A	N/A	N/A
481.5	481.5	1,237	N/A	N/A	2,375	564.5	N/A	N/A	N/A
482	482.0	1,247	N/A	N/A	2,267	564.6	N/A	N/A	N/A
482.1	482.1	1,089	N/A	N/A	2,094	564.6	N/A	N/A	N/A
482.3	482.3	975	N/A	N/A	2,030	564.7	N/A	N/A	N/A
482.7	482.7	1,721	N/A	N/A	2,850	564.9	N/A	N/A	N/A
482.9	482.9	357	N/A	N/A	1,479	565.6	N/A	N/A	N/A

[1]Miles above confluence with Ohio River
[2]Widths are reported as widths to state line and composite width from USACE floodway model
*Floodway Data Tables for the Mississippi River are a special case. See Flood Insurance Study text for full explanation.
N/A – Not applicable

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

MISSISSIPPI RIVER*

FLOODING SOURCE		FLOODWAY				1-PERCENT-ANNUAL-CHANCE FLOOD WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH[2] (FEET) WITHIN ILLINOIS	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	WIDTH[2] (FEET) TOTAL	REGULATORY FROM UNET MODEL	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Mississippi River (continued)									
483	483.0	374	N/A	N/A	1,643	565.7	N/A	N/A	N/A
483.6	483.6	993	N/A	N/A	1,796	566.5	N/A	N/A	N/A
484	484.0	938	N/A	N/A	1,823	566.8	N/A	N/A	N/A
484.4	484.4	1,239	N/A	N/A	2,287	567.2	N/A	N/A	N/A
485	485.0	702	N/A	N/A	1,444	567.8	N/A	N/A	N/A
485.4	485.4	1,188	N/A	N/A	2,168	568.4	N/A	N/A	N/A
485.8	485.8	991	N/A	N/A	1,922	568.9	N/A	N/A	N/A
486	486.0	915	N/A	N/A	2,106	569.3	N/A	N/A	N/A
487	487.0	1,186	N/A	N/A	2,481	570.0	N/A	N/A	N/A
487.6	487.6	1,295	N/A	N/A	2,824	570.5	N/A	N/A	N/A
487.8	487.8	1,444	N/A	N/A	3,573	570.8	N/A	N/A	N/A
488	488.0	1,537	N/A	N/A	3,055	571.0	N/A	N/A	N/A
488.6	488.6	1,391	N/A	N/A	2,784	571.4	N/A	N/A	N/A
489	489.0	1,456	N/A	N/A	2,955	571.8	N/A	N/A	N/A
489.5	489.5	2,125	N/A	N/A	3,492	572.1	N/A	N/A	N/A
490	490.0	2,676	N/A	N/A	4,031	572.6	N/A	N/A	N/A
490.6	490.6	2,876	N/A	N/A	4,426	573.1	N/A	N/A	N/A
491	491.0	3,176	N/A	N/A	4,852	573.4	N/A	N/A	N/A
491.3	491.3	2,280	N/A	N/A	3,965	573.7	N/A	N/A	N/A
492	492.0	1,457	N/A	N/A	3,027	574.0	N/A	N/A	N/A
492.5	492.5	1,327	N/A	N/A	2,891	574.2	N/A	N/A	N/A
493	493.0	1,420	N/A	N/A	2,839	574.4	N/A	N/A	N/A
493.2	493.2	1,280	N/A	N/A	2,294	574.5	N/A	N/A	N/A
493.4	493.4	1,748	N/A	N/A	2,749	577.1	N/A	N/A	N/A
494	494.0	1,965	N/A	N/A	3,357	577.5	N/A	N/A	N/A

[1]Miles above confluence with Ohio River
[2]Widths are reported as widths to state line and composite width from USACE floodway model
*Floodway Data Tables for the Mississippi River are a special case. See Flood Insurance Study text for full explanation. N/A – Not applicable

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

MISSISSIPPI RIVER*

FLOODING SOURCE		FLOODWAY				1-PERCENT-ANNUAL-CHANCE FLOOD WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH[2] (FEET) WITHIN ILLINOIS	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	WIDTH[2] (FEET) TOTAL	REGULATORY FROM UNET MODEL	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Mississippi River (continued)									
493.4	493.4	1,748	N/A	N/A	2,749	577.1	N/A	N/A	N/A
494	494.0	1,965	N/A	N/A	3,357	577.5	N/A	N/A	N/A
494.6	494.6	1,654	N/A	N/A	3,274	577.8	N/A	N/A	N/A
495	495.0	1,098	N/A	N/A	2,614	578.0	N/A	N/A	N/A
495.3	495.3	1,215	N/A	N/A	2,594	578.4	N/A	N/A	N/A
496	496.0	1,059	N/A	N/A	2,342	578.9	N/A	N/A	N/A
496.5	496.5	1,480	N/A	N/A	3,133	579.5	N/A	N/A	N/A
497.1	497.1	897	N/A	N/A	1,714	580.1	N/A	N/A	N/A
498	498.0	1,116	N/A	N/A	1,970	580.5	N/A	N/A	N/A
498.5	498.5	1,122	N/A	N/A	2,892	580.8	N/A	N/A	N/A
499	499.0	1,193	N/A	N/A	2,564	581.2	N/A	N/A	N/A
499.5	499.5	1,301	N/A	N/A	2,583	581.5	N/A	N/A	N/A
500	500.0	1,355	N/A	N/A	2,811	581.7	N/A	N/A	N/A
500.5	500.5	1,354	N/A	N/A	2,704	581.9	N/A	N/A	N/A
501	501.0	1,073	N/A	N/A	2,058	582.1	N/A	N/A	N/A
501.5	501.5	1,244	N/A	N/A	2,455	582.3	N/A	N/A	N/A
502	502.0	1,420	N/A	N/A	2,451	582.6	N/A	N/A	N/A
502.5	502.5	1,512	N/A	N/A	2,622	582.9	N/A	N/A	N/A
502.9	502.9	1,419	N/A	N/A	3,255	583.0	N/A	N/A	N/A
503.3	503.3	2,379	N/A	N/A	5,617	583.3	N/A	N/A	N/A
504	504.0	991	N/A	N/A	6,421	583.6	N/A	N/A	N/A
505	505.0	713	N/A	N/A	5,819	584.0	N/A	N/A	N/A
505.5	505.5	1,241	N/A	N/A	4,979	584.3	N/A	N/A	N/A
506	506.0	1,514	N/A	N/A	4,251	584.5	N/A	N/A	N/A

[1]Miles above confluence with Ohio River
[2]Widths are reported as widths to state line and composite width from USACE floodway model
*Floodway Data Tables for the Mississippi River are a special case. See Flood Insurance Study text for full explanation.
N/A – Not applicable

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

MISSISSIPPI RIVER*

FLOODING SOURCE		FLOODWAY				1-PERCENT-ANNUAL-CHANCE FLOOD WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH[2] (FEET) WITHIN ILLINOIS	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	WIDTH[2] (FEET) TOTAL	REGULATORY FROM UNET MODEL	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Mississippi River (continued)									
506.9	506.9	937	N/A	N/A	3,610	584.9	N/A	N/A	N/A
507.4	507.4	890	N/A	N/A	4,001	585.5	N/A	N/A	N/A
507.9	507.9	1,040	N/A	N/A	4,239	585.8	N/A	N/A	N/A
508.6	508.6	839	N/A	N/A	4,785	586.1	N/A	N/A	N/A
509	509.0	776	N/A	N/A	5,020	586.3	N/A	N/A	N/A
509.3	509.3	577	N/A	N/A	4,348	586.5	N/A	N/A	N/A
510.1	510.1	1,599	N/A	N/A	3,793	586.8	N/A	N/A	N/A
511	511.0	3,530	N/A	N/A	6,052	587.2	N/A	N/A	N/A
511.6	511.6	3,877	N/A	N/A	4,590	587.4	N/A	N/A	N/A
512[3]	512.0	3,598/2008[4]	N/A	N/A	4,577	587.7	N/A	N/A	N/A

[1]Miles above confluence with Ohio River
[2]Widths are reported as widths to state line and composite width from USACE floodway model
[3]Portions of this Floodway Data are duplicated within the countywide FIS for Whiteside County, Illinois
[4]Illinois width/width within Rock Island County
*Floodway Data Tables for the Mississippi River are a special case. See Flood Insurance Study text for full explanation.
N/A – Not applicable

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

MISSISSIPPI RIVER*

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
North Channel Rock River								
A	5,211[1]	490	4,833	6.5	564.7	564.7	564.8	0.1
B	7,017[1]	650	6,763	4.7	565.7	565.7	565.8	0.1
C	10,517[1]	550	6,198	5.1	566.6	566.6	566.7	0.1
Rock River								
A	0.98[2]	4,100[3]	15,720	4.8	563.8	559.4[5]	559.5	0.1
B	1.76[2]	3,360	28,071	2.7	563.8	561.1[5]	561.2	0.1
C	2.54[2]	1,730	18,636	4.1	563.8	562.1[5]	562.0	0.1
D	3.64[2]	1,100[4]	9,587	4.6	564.4	564.4	564.5	0.1
E	4.05[2]	1,050	7,769	5.7	564.8	564.8	564.9	0.1
F	5.01[2]	2,450	14,535	5.2	566.7	566.7	566.7	0.0
G	5.75[2]	1,620	17,295	4.4	567.9	567.9	568.0	0.1
H	6.32[2]	2,230	21,624	3.5	568.7	568.7	568.8	0.1
I	6.92[2]	1,600	17,815	4.3	569.5	569.5	569.6	0.1
J	7.51[2]	840	12,270	6.2	570.4	570.4	570.5	0.1
K	7.57[2]	840	12,367	6.1	570.5	570.5	570.5	0.0
L	7.77[2]	2,845	25,447	3.1	571.0	571.0	571.1	0.1
M	8.38[2]	2,620	26,291	2.9	571.7	571.7	571.8	0.1
N	8.82[2]	2,360	23,417	3.2	571.9	571.9	572.0	0.1
O	9.44[2]	2,830	28,000	2.7	572.3	572.3	572.4	0.1
P	10.02[2]	4,060	34,858	2.2	572.6	572.6	572.7	0.1
Q	10.84[2]	4,020	40,072	1.9	572.8	572.8	572.9	0.1
R	11.44[2]	4,490/3,550[6]	47,585	1.6	573.2	573.2	573.3	0.1

[1]Feet above confluence with Rock River
[2]Miles above confluence with Mississippi River
[3]Floodway width reflects model width, see FIRM panel for regulatory floodway
[4]Width includes high ground not included in floodway conveyance calculation
[5]Elevation computed without consideration of backwater effects from Mississippi River
[6]Total width/width within Rock Island County

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

NORTH CHANNEL ROCK RIVER - ROCK RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)[2]	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Rock River (continued)								
S	11.83	4,530/3,100	43,844	1.7	573.4	573.4	573.5	0.1
T	12.32	3,010/1,450	30,277	2.5	573.8	573.8	573.9	0.1
U	12.86	2,560/500	25,604	3.0	574.0	574.0	574.1	0.1
V	13.00	2,757/400	26,883	2.7	574.2	574.2	574.3	0.1
W	13.26	3,580/300	32,355	2.2	574.5	574.5	574.6	0.1
X	13.87	2,886/1,600	30,621	2.3	574.8	574.8	574.9	0.1
Y	14.29	5,858/3,500	57,311	1.2	575.1	575.1	575.2	0.1
Z	14.74	3,937/3,532	28,989	2.5	575.4	575.4	575.5	0.1
AA	15.11	2,924/1,500	30,223	2.4	575.7	575.7	575.8	0.1
AB	15.13	2,900/1,400	21,596	3.3	575.8	575.8	575.9	0.1
AC	16.26	1,580/750	22,722	3.1	576.3	576.3	576.4	0.1
AD	16.84	5,521/3,650	49,955	1.4	576.7	576.7	576.8	0.1
AE	17.43	3,225/2,650	25,623	2.8	576.8	576.8	576.9	0.1
AF	17.84	5,046/2,600	36,472	2.0	577.1	577.1	577.2	0.1
AG	18.13	3,095/2,650	27,616	2.6	577.2	577.2	577.3	0.1
AH	18.73	5,124/2,625	35,636	2.0	577.5	577.5	577.6	0.1
AI	19.20	4,318/850	26,442	2.7	578.0	578.0	578.1	0.1
AJ	21.08	2,571/450	26,499	2.7	579.5	579.5	579.6	0.1
AK	21.82	4,050/3,200	16,929	4.2	579.7	579.7	579.8	0.1
AL	22.69	6,732/6,582	18,434	3.9	580.6	580.6	580.7	0.1
AM	23.36	9,101/8,701	25,829	2.8	581.7	581.7	581.8	0.1
AN	24.59	10,829/9,679	43,346	1.6	582.8	582.8	582.9	0.1
AO	25.48	11,586/11,136	32,966	2.2	583.4	583.4	583.5	0.1
AP	26.88	11,015/8,750	60,495	1.2	584.0	584.0	584.1	0.1

[1]Miles above confluence with Mississippi River
[2]Total width/width within Rock Island County

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

ROCK RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Rock River (continued)								
AQ	27.73[1]	9,035/4,550[2]	17,930	4.0	584.1	584.1	584.2	0.1
AR	28.65[1]	4,612/3,800[2]	16,658	4.3	585.1	585.1	585.2	0.1
AS	29.13[1]	6,665/1,750[2]	19,893	3.6	585.6	585.6	585.7	0.1
AT	30.87[1]	13,774/3,890[2]	36,197	2.0	586.9	586.9	587.0	0.1
Shaffer Creek								
A	500[3]	50	365	13.4	572.5	569.8[4]	569.8	0.0
B	1,100[3]	324	1,812	2.7	574.5	574.5	574.5	0.0
C	2,720[3]	254	1,041	4.7	583.6	583.6	583.7	0.1
D	4,770[3]	174	619	7.9	594.9	594.9	594.9	0.0

[1]Miles above confluence with Mississippi River
[2]Total width/width within Rock Island County
[3]Feet above confluence with Rock River
[4]Elevation computed without consideration of backwater effects from Rock River

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

ROCK RIVER - SHAFFER CREEK

FLOODING SOURCE		FLOODWAY				1-PERCENT-ANNUAL-CHANCE FLOOD WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH[2] (FEET) WITHIN ILLINOIS	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	WIDTH[2] (FEET) TOTAL	REGULATORY FROM UNET MODEL	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Sylvan Slough									
A	1,245	1,145	N/A	N/A	1,145	564.9[3]	N/A	N/A	N/A
B	1,430	1,384	N/A	N/A	1,384	564.9[3]	N/A	N/A	N/A
C	3,990	891	N/A	N/A	891	564.9[3]	N/A	N/A	N/A
D	5,960	800	N/A	N/A	800	564.9[3]	N/A	N/A	N/A
E	8,350	1,659	N/A	N/A	1,659	564.9[3]	N/A	N/A	N/A
F	10,485	1,365	N/A	N/A	1,365	569.3	N/A	N/A	N/A
G	12,760	904	N/A	N/A	904	569.3	N/A	N/A	N/A
H	16,230	1,028	N/A	N/A	1,028	569.3	N/A	N/A	N/A
I	17,015	1,078	N/A	N/A	1,078	569.3	N/A	N/A	N/A

[1]Feet above convergence with Mississippi River
[2]Widths are reported as widths to state line and composite width from USACE floodway model.
[3]Elevations include backwater effects from Mississippi River
*Floodway Data Tables for the Sylvan Slough are a special case. See Flood Insurance Study text for full explanation.

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

SYLVAN SLOUGH*

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Tributary 1 to Unnamed Creek								
A	1,010[1]	47	102	6.3	605.1	605.1	605.1	0.0
B	3,120[1]	64	132	4.9	635.8	635.8	635.9	0.1
Tributary 2 to Unnamed Creek								
A	560[1]	44	81	6.0	627.4	627.4	627.4	0.0
B	850[1]	36	101	4.9	629.5	629.5	629.6	0.1
Tributary 3 to Unnamed Creek								
A	400[1]	25	52	8.1	654.2	654.2	654.3	0.1
B	800[1]	37	69	6.2	661.7	661.7	661.7	0.0
Unnamed Creek								
A	1,650[2]	*	*	*	576.2	576.2	*	*
B	3,689[2]	*	*	*	582.1	582.1	*	*
C	5,753[2]	78	231	5.5	603.1	603.1	603.2	0.1
D	7,670[2]	117	250	2.5	630.8	630.8	630.8	0.0
E	8,747[2]	89	344	1.6	649.3	649.3	649.3	0.0

[1]Feet above confluence with Unnamed Creek
[2]Feet above upstream side of Railroad culvert
*No floodway data calculated

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL AND INCORPORATED AREAS

FLOODWAY DATA

TRIBUTARY 1 TO UNNAMED CREEK - TRIBUTARY 2 TO UNNAMED CREEK - TRIBUTARY 3 TO UNNAMED CREEK - UNNAMED CREEK

5.0 INSURANCE APPLICATIONS

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

Zone A

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

Zone AE

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

Zone AH

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

Zone AO

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

Zone X

Zone X is the flood insurance rate zone that corresponds to areas outside the 0.2-percent-annual-chance floodplain, areas within the 0.2-percent-annual-chance floodplain, and to 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 base flood elevations or depths are shown within this zone.

6.0 FLOOD INSURANCE RATE MAP

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

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

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

The current FIRM presents flooding information for the entire geographic area of Rock Island County. Previously, separate Flood Hazard Boundary Maps and/or FIRMs were prepared for each identified flood prone incorporated community and the unincorporated areas of the county. The countywide FIRM also includes flood hazard information that was presented separately on Flood Boundary and Floodway Maps (FBFM), where applicable. Historical data relating to the community maps prepared is presented in Table 11, "Community Map History."

7.0 OTHER STUDIES

Flood Insurance Studies have been prepared for Henry, Mercer, and Whiteside Counties, Illinois and Muscatine and Scott Counties, Iowa (Reference 49).

Information pertaining to revised and unrevised flood hazards for each jurisdiction, or the portions of each jurisdiction, within Rock Island County has been compiled into this FIS. Therefore, this FIS supersedes all previously printed FISs, FHBMs, FBFMs, and FIRMs for all of the incorporated and unincorporated jurisdictions in Rock Island County.

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this FIS can be obtained by contacting FEMA, Federal Insurance and Mitigation Division, 536 South Clark Street, Sixth Floor, Chicago, Illinois 60605.

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISION DATE(S)	FLOOD INSURANCE RATE MAP EFFECTIVE DATE	FLOOD INSURANCE RATE MAP REVISION DATES(S)
Andalusia, Village of	March 15, 1974	June 18, 1976	January 20, 1982	None
Carbon Cliff, Village of	April 12, 1974	April 16, 1976	June 1, 1982	August 15, 1983
Coal Valley, Village of	March 1, 1974	December 20, 1974 November 3, 1978	December 4, 1979	None
Cordova, Village of	March 15, 1974	February 14, 1975 October 1, 1976	December 1, 1981	None
East Moline, City of	October 15, 1982	None	October 15, 1982	None
Hampton, Village of	March 1, 1974	February 14, 1975	January 6, 1982	None
Hillsdale, Village of	June 28, 1974	January 30, 1976	July 19, 1982	None
Milan, Village of	May 10, 1974	September 24, 1976 May 13, 1977	March 18, 1980	November 5, 1986
Moline, City of	May 3, 1974	September 24, 1976	February 1, 1980	None

TABLE 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISION DATE(S)	FLOOD INSURANCE RATE MAP EFFECTIVE DATE	FLOOD INSURANCE RATE MAP REVISION DATES(S)
Oak Grove, Village of [1]	N/A	None	N/A	None
Port Byron, Village of	March 22, 1974	February 14, 1975	September 2, 1981	None
Rapids City, Village of	March 22, 1974	February 14, 1975	January 6, 1982	None
Reynolds, Village of	April 18, 1975	None	October 18, 2002	None
Rock Island, City of	July 10, 1971	None	June 9, 1972	July 1, 1974 September 12, 1975 January 16, 1980 September 18, 1981 February 4, 1987
Rock Island County (Unincorporated Areas)	April 14, 1978	None	August 2, 1982	December 18, 1986
Silvis, City of	October 18, 2002	None	October 18, 2002	None

[1]No special flood hazard areas identified
N/A - Not applicable

TABLE 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

9.0 BIBLIOGRAPHY AND REFERENCES

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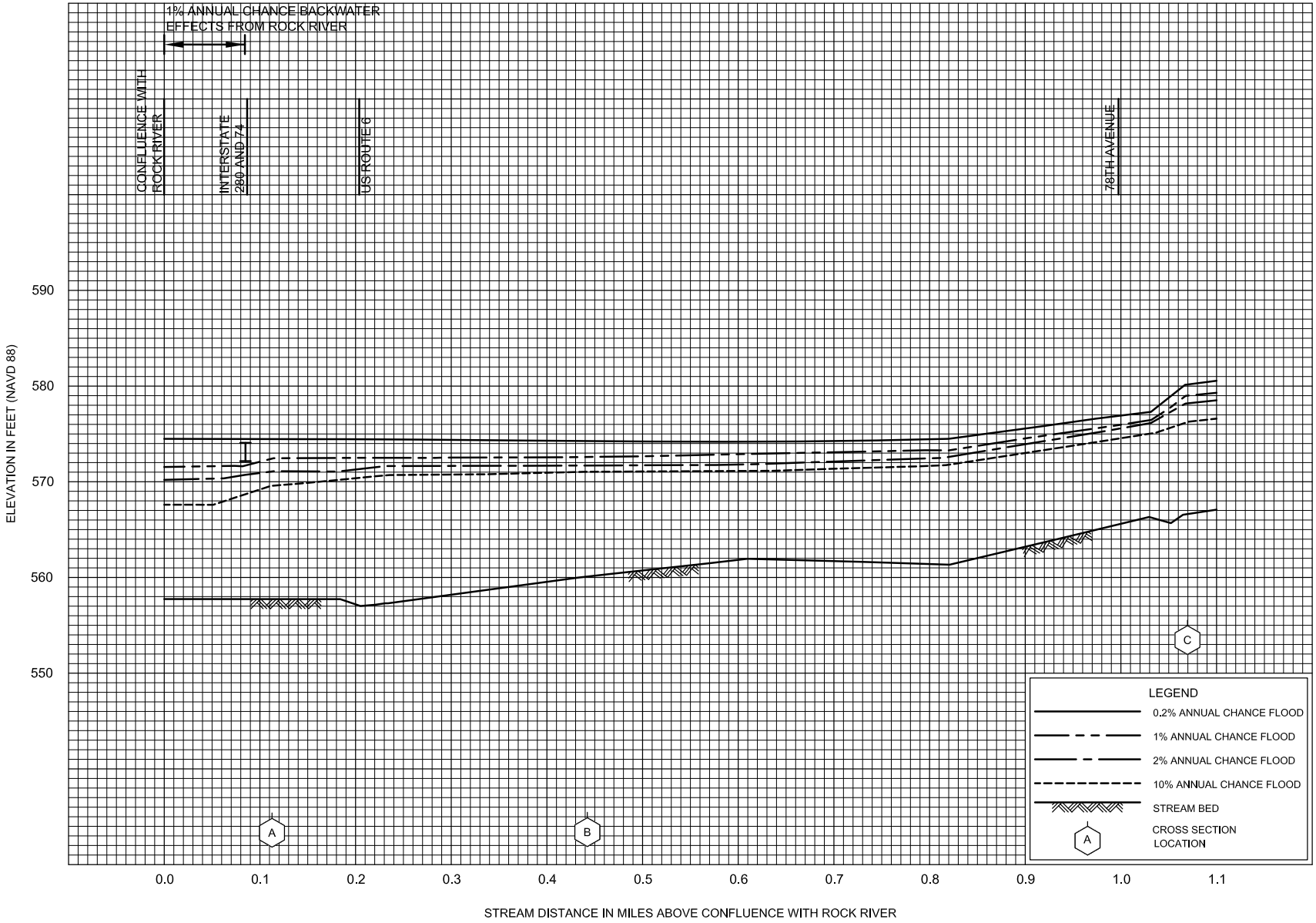


FLOOD PROFILES

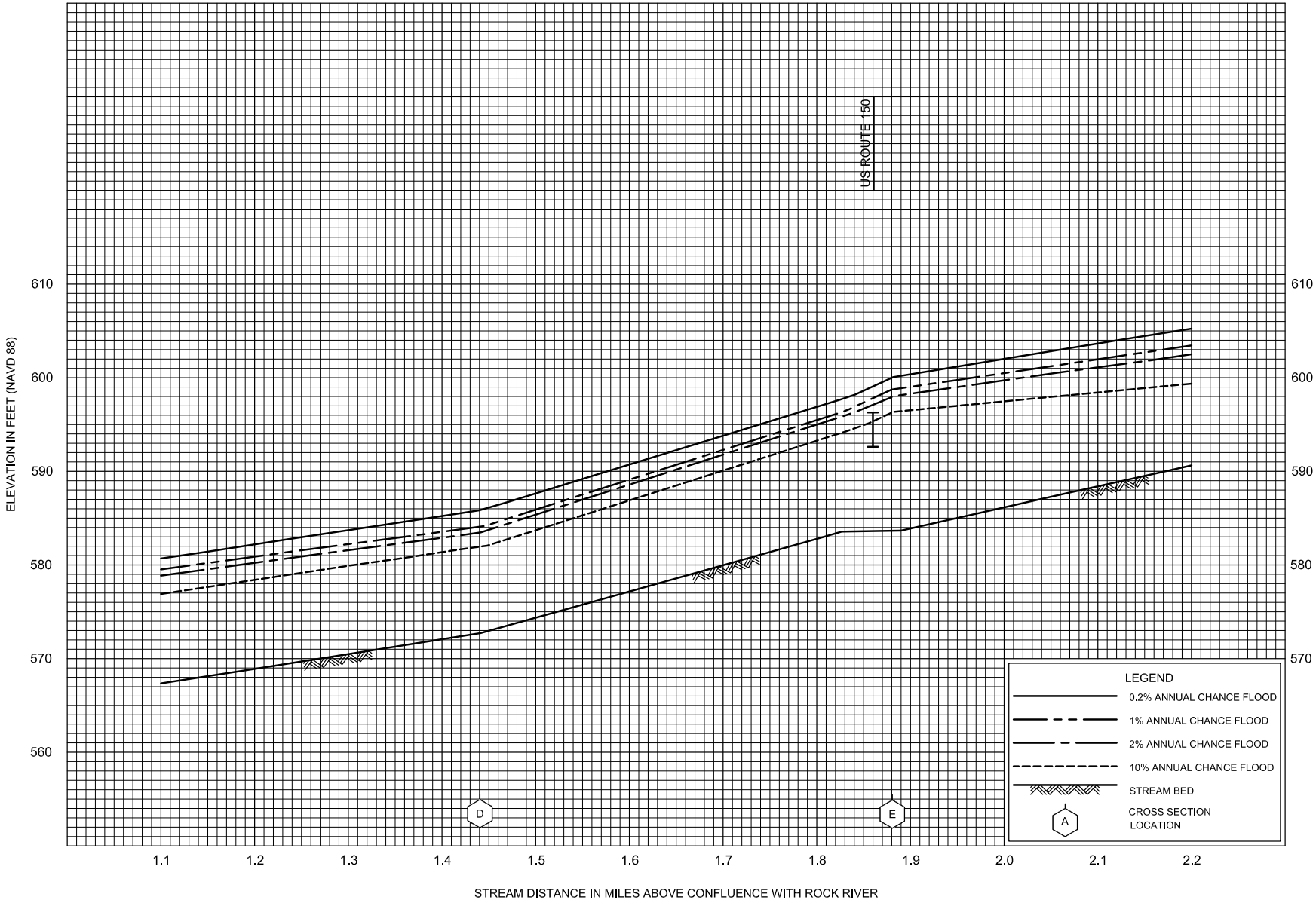
COAL CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS

01P



FLOOD PROFILES

COAL CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS

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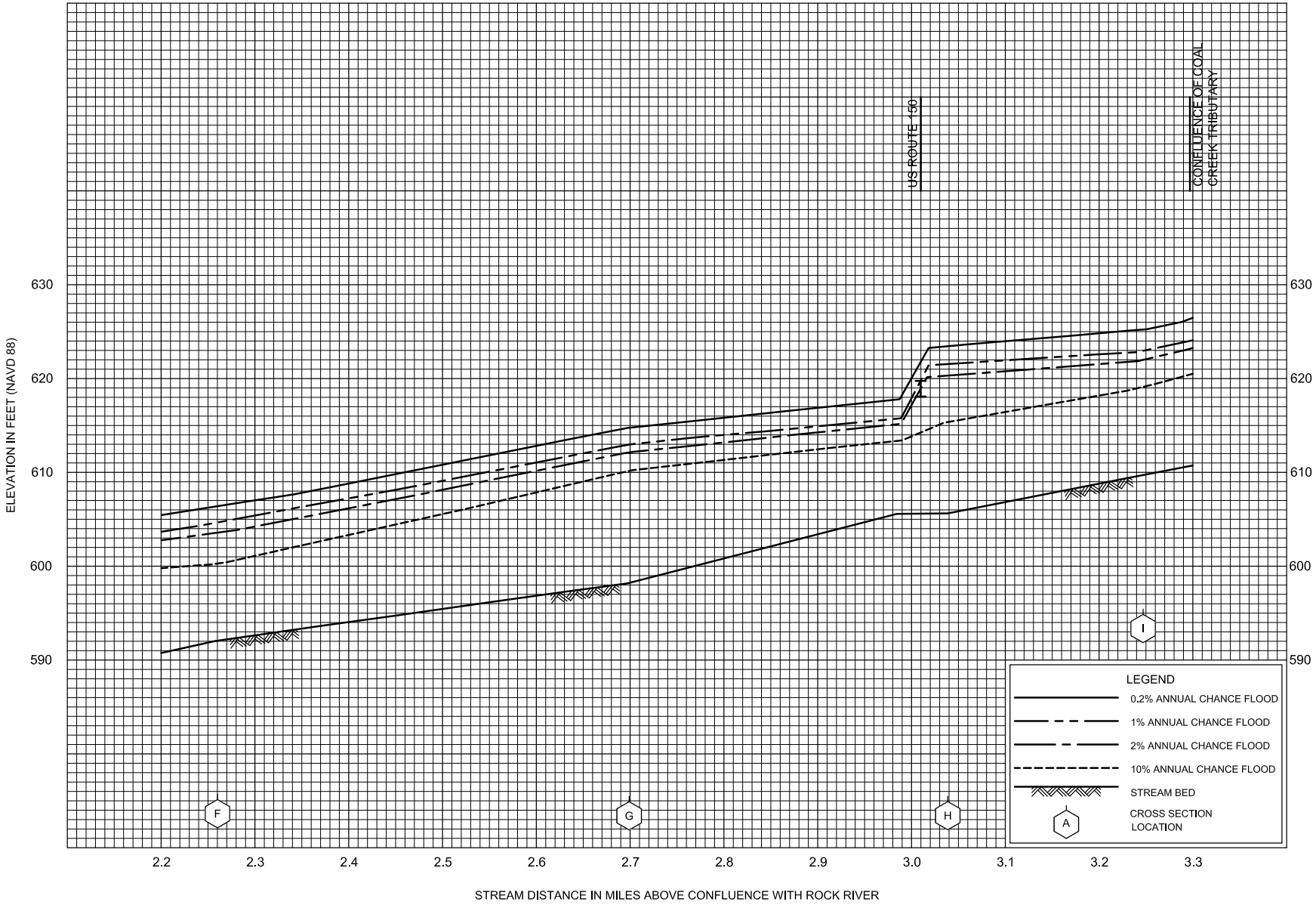

FLOOD PROFILES

COAL CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS

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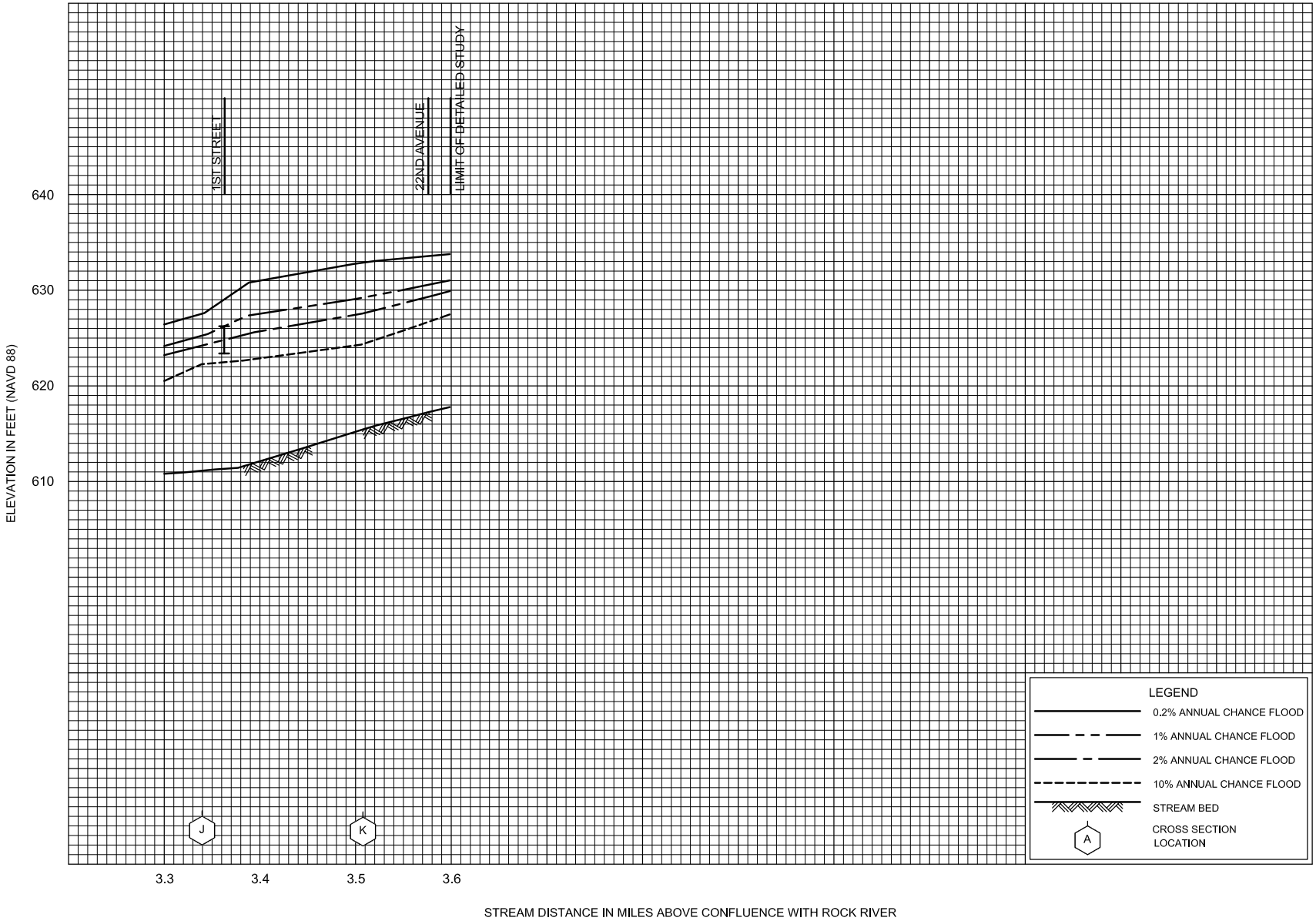

FLOOD PROFILES

COAL CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS

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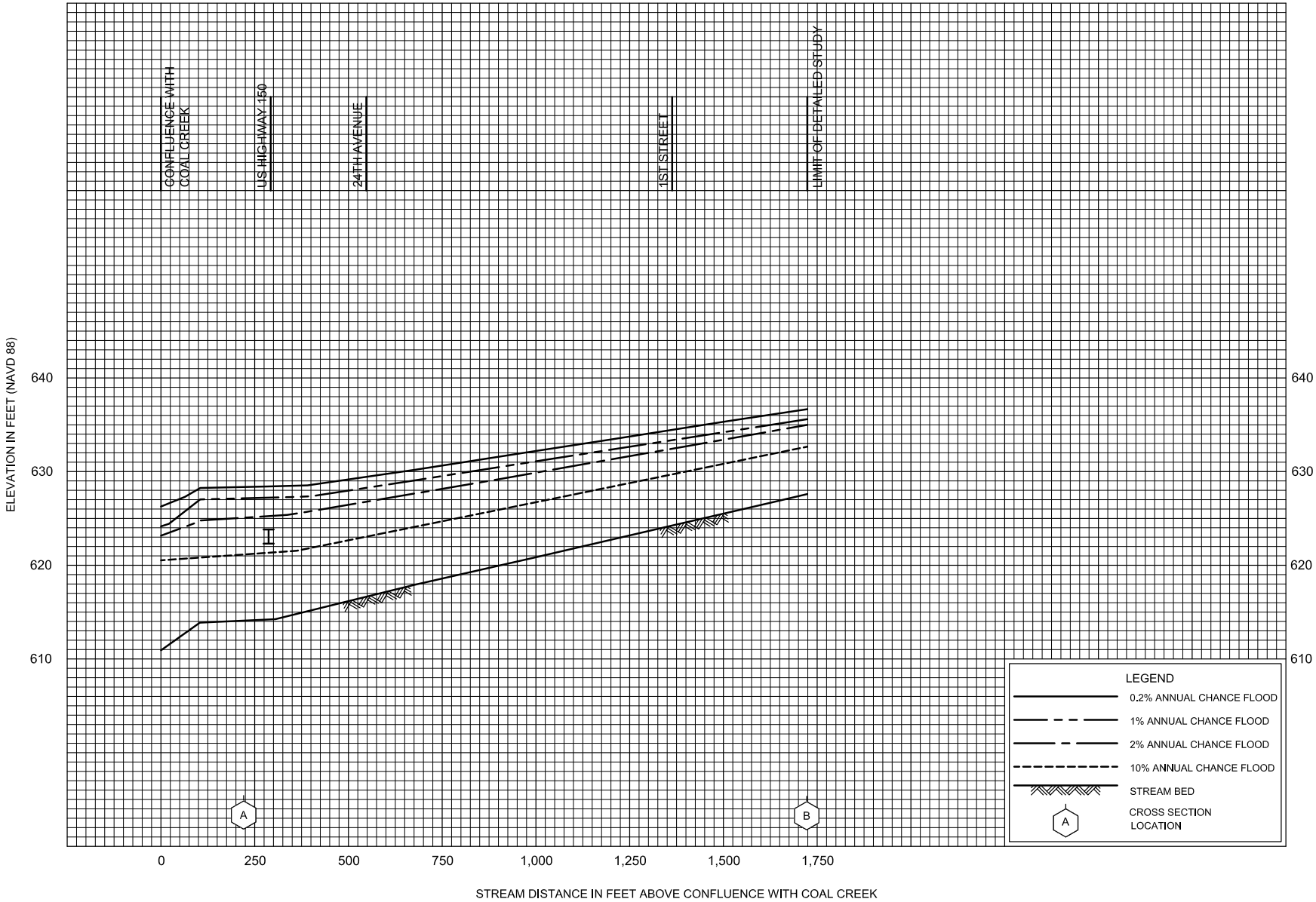


FLOOD PROFILES

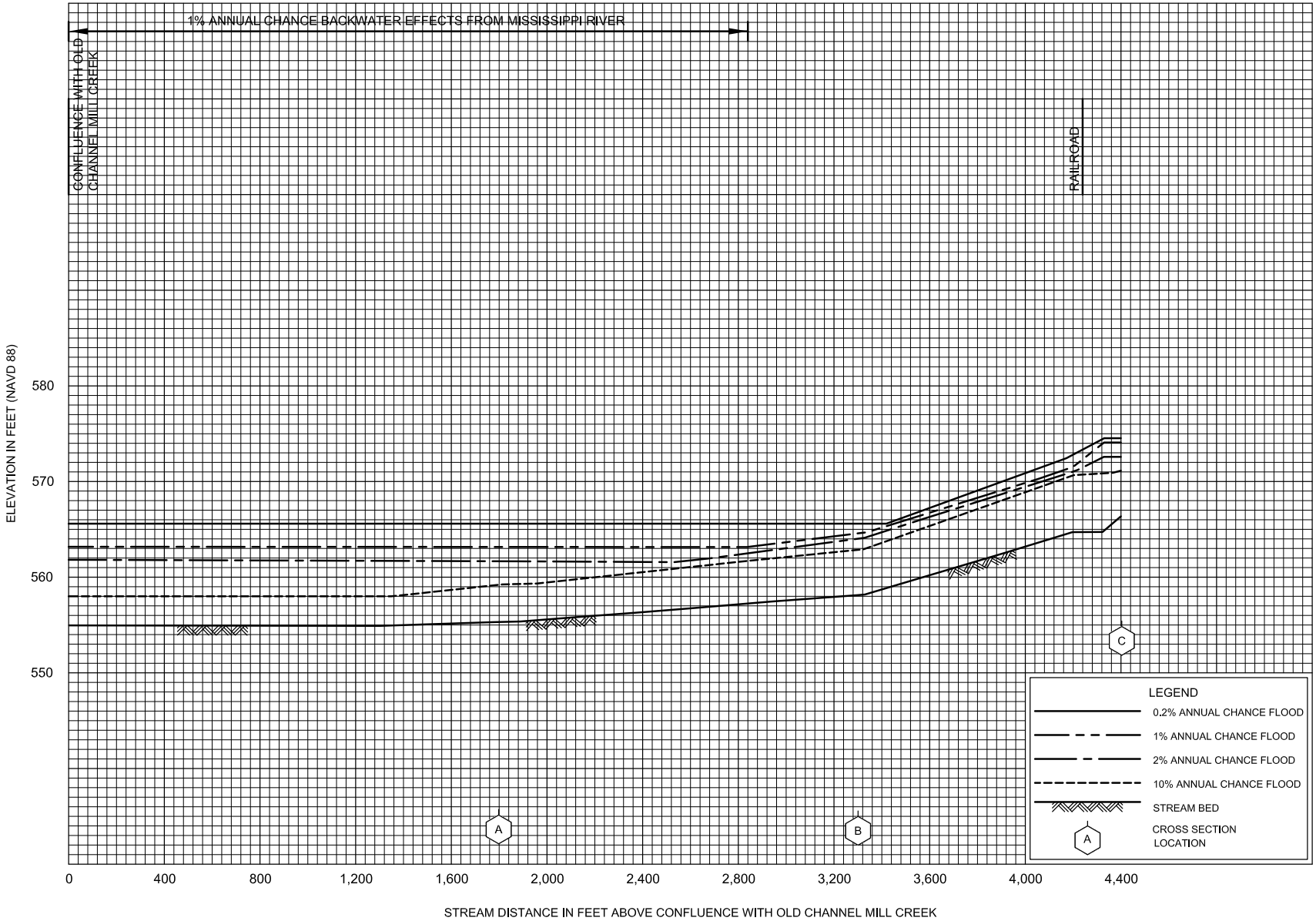
COAL CREEK TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS

05P



FLOOD PROFILES

ECKHART CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS

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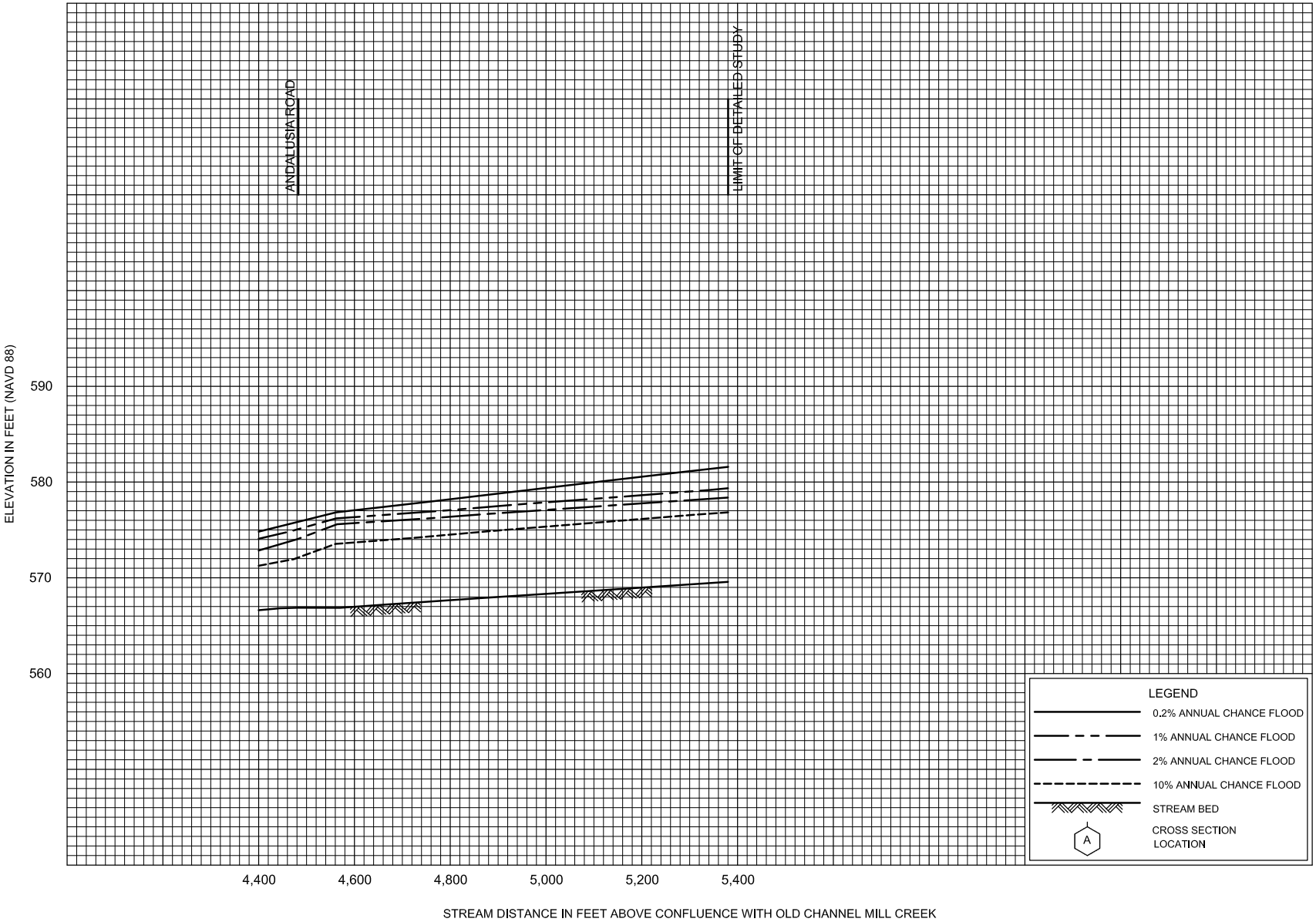


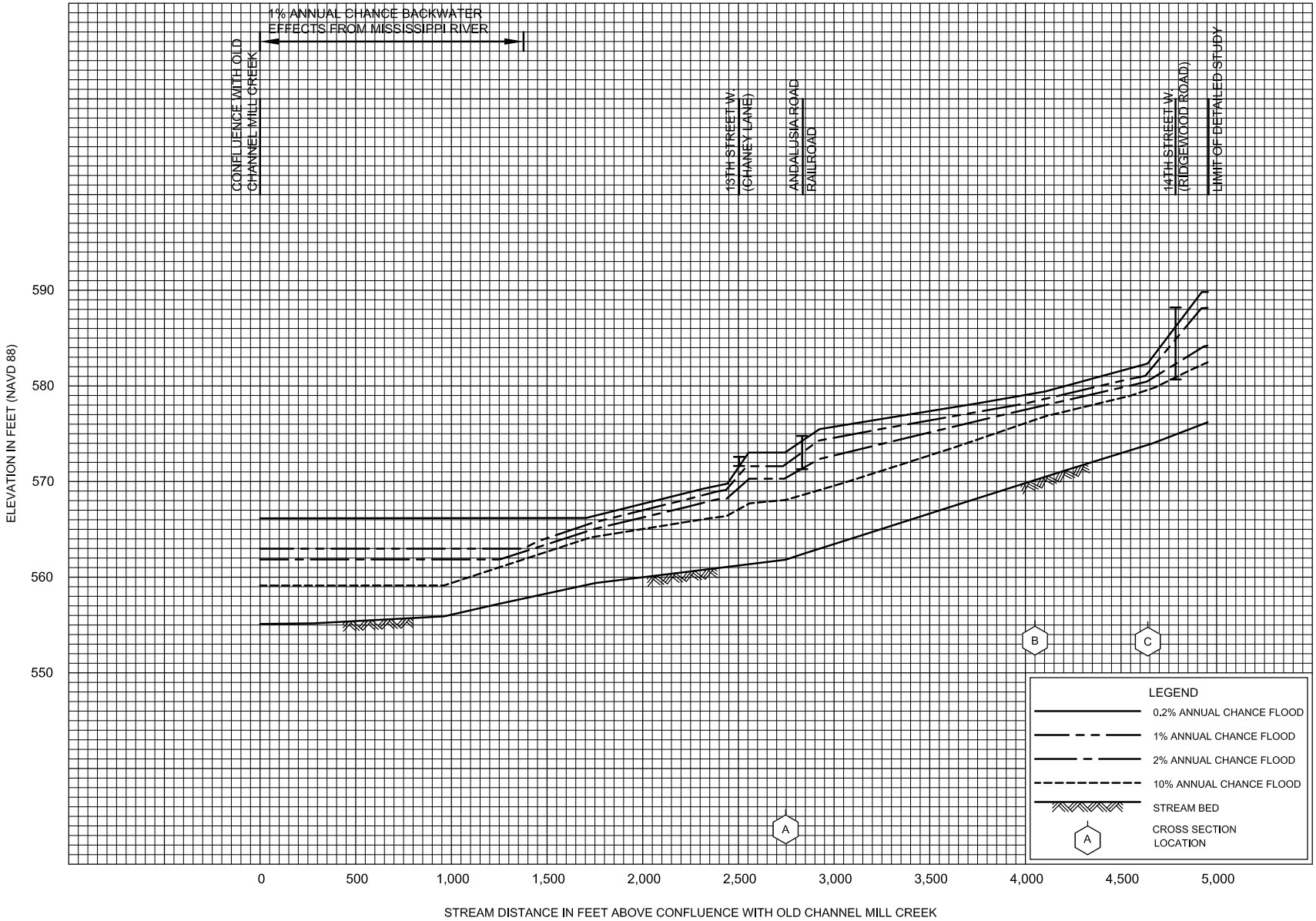
FLOOD PROFILES

ECKHART CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



FLOOD PROFILES

KYTE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS

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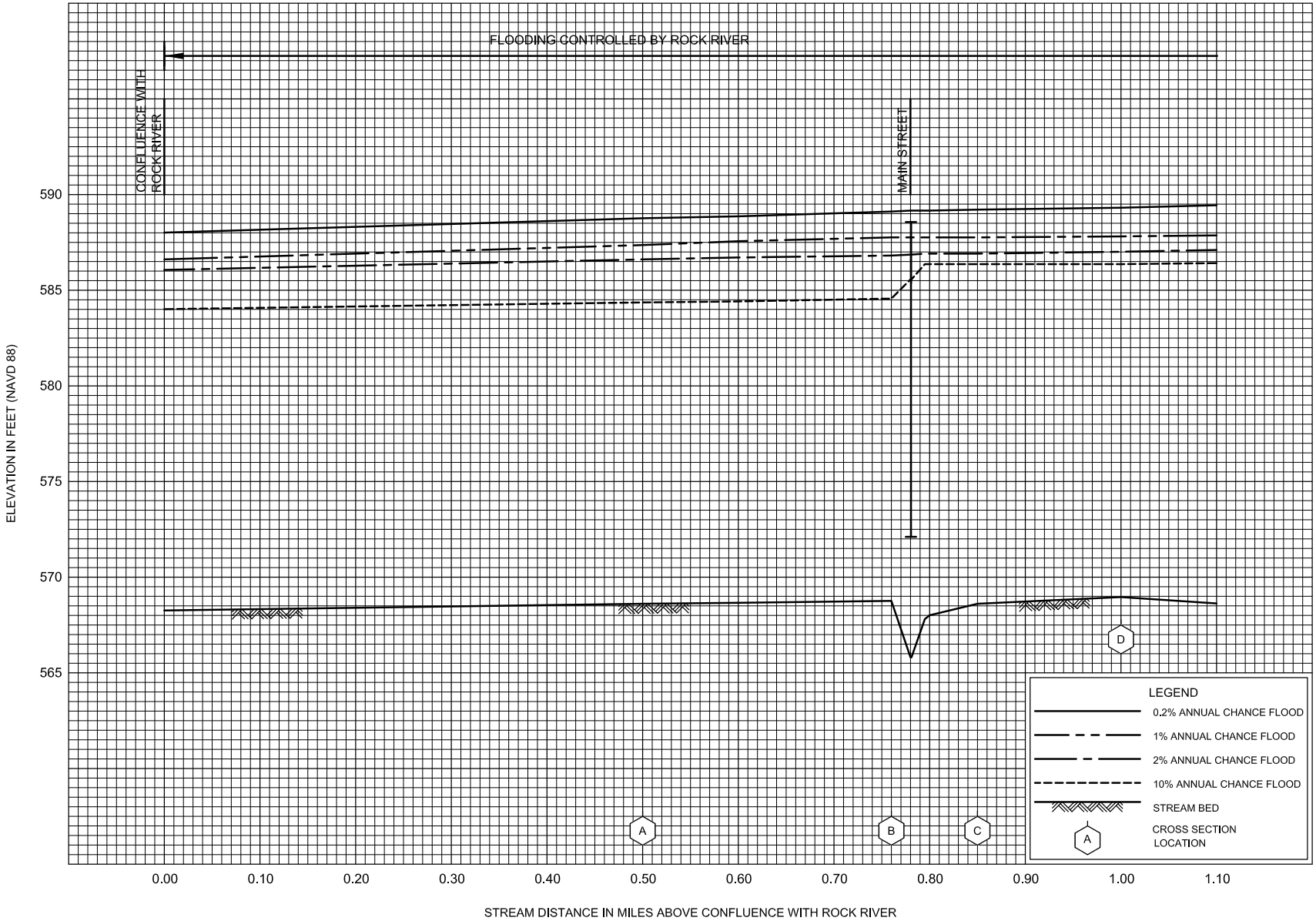

FLOOD PROFILES

MEREDOSIA DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS

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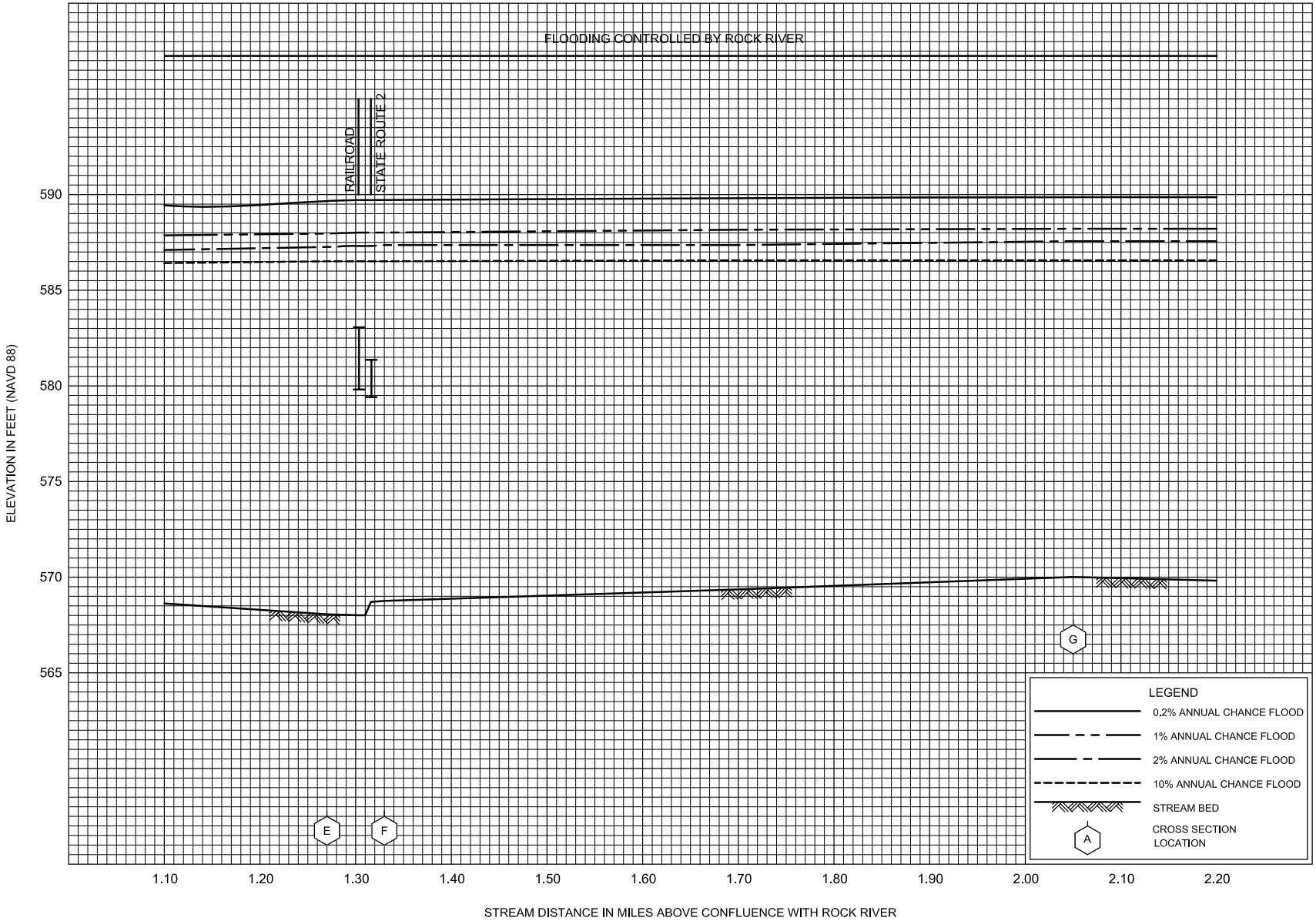


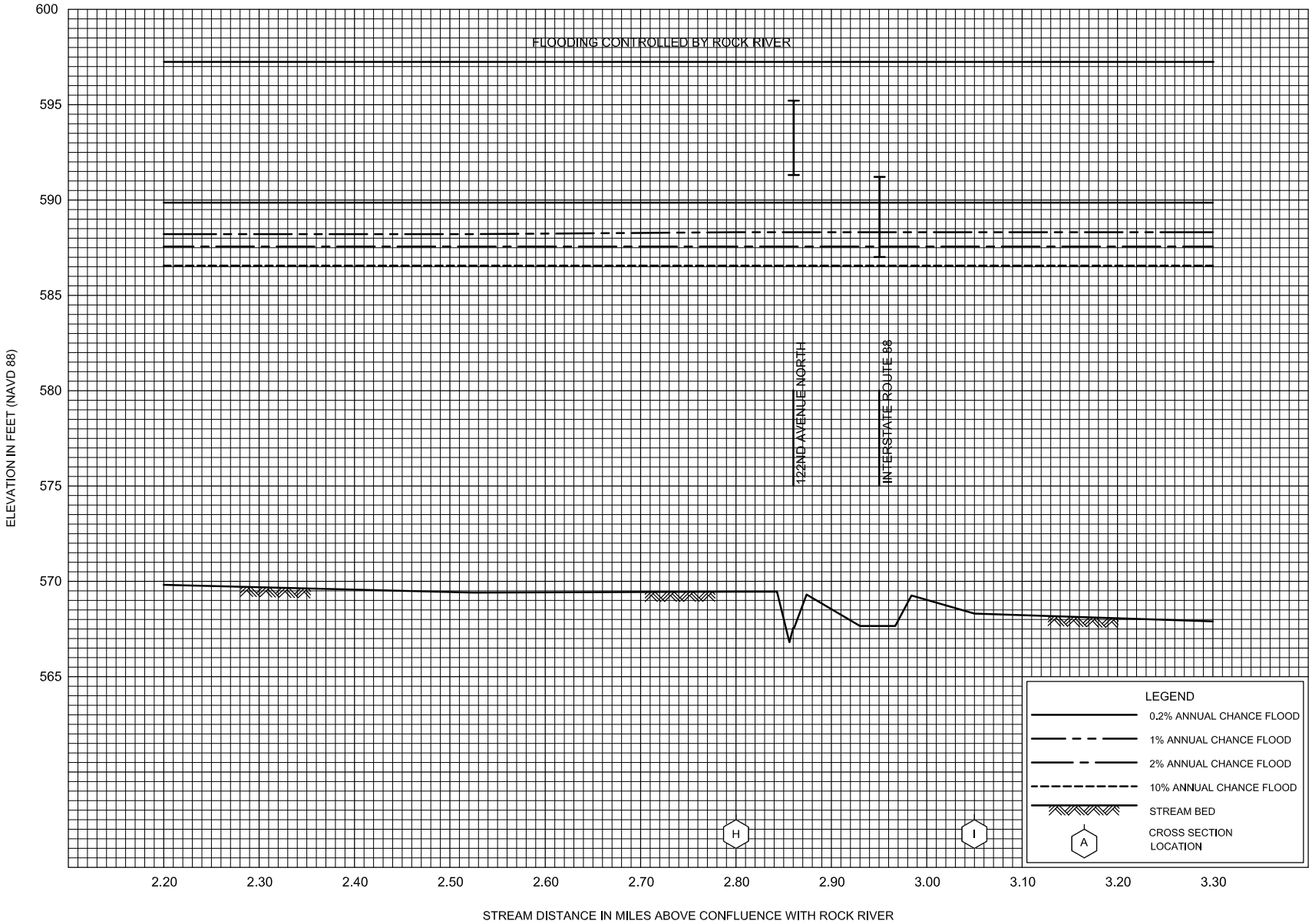
FLOOD PROFILES

MEREDOSIA DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



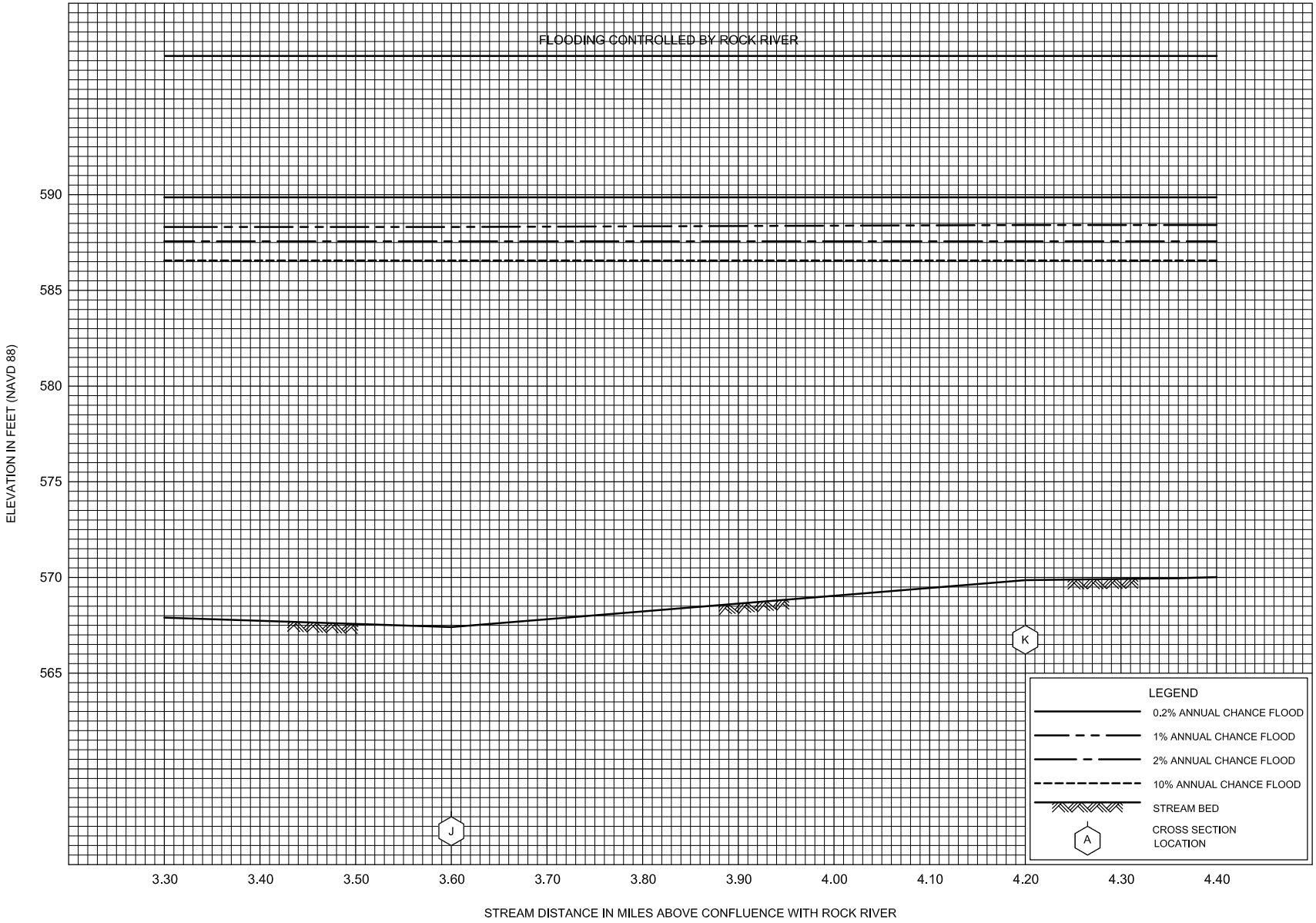
FLOOD PROFILES

MEREDOSIA DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



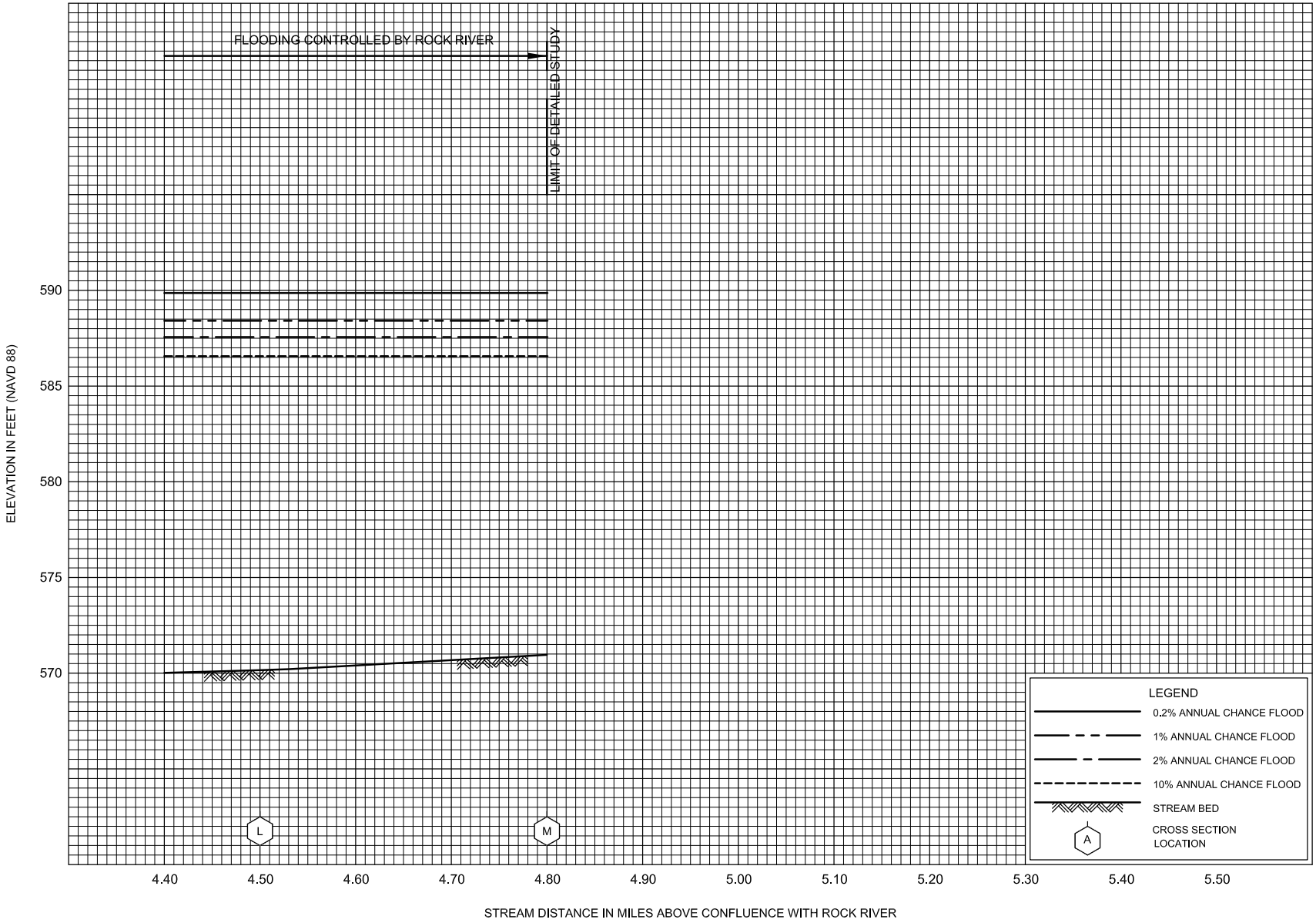
FLOOD PROFILES

MEREDOSIA DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



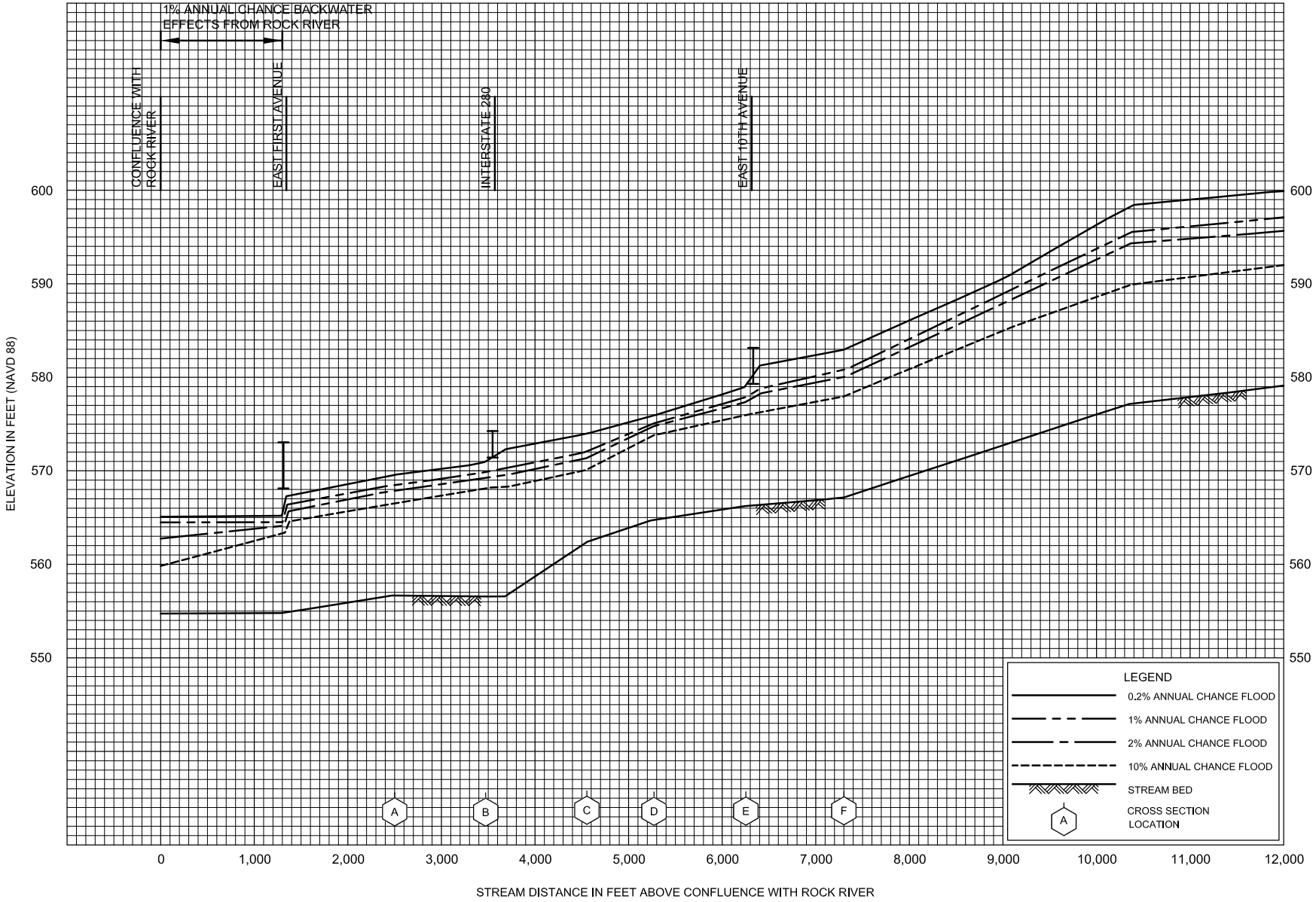
FLOOD PROFILES

MEREDOSIA DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



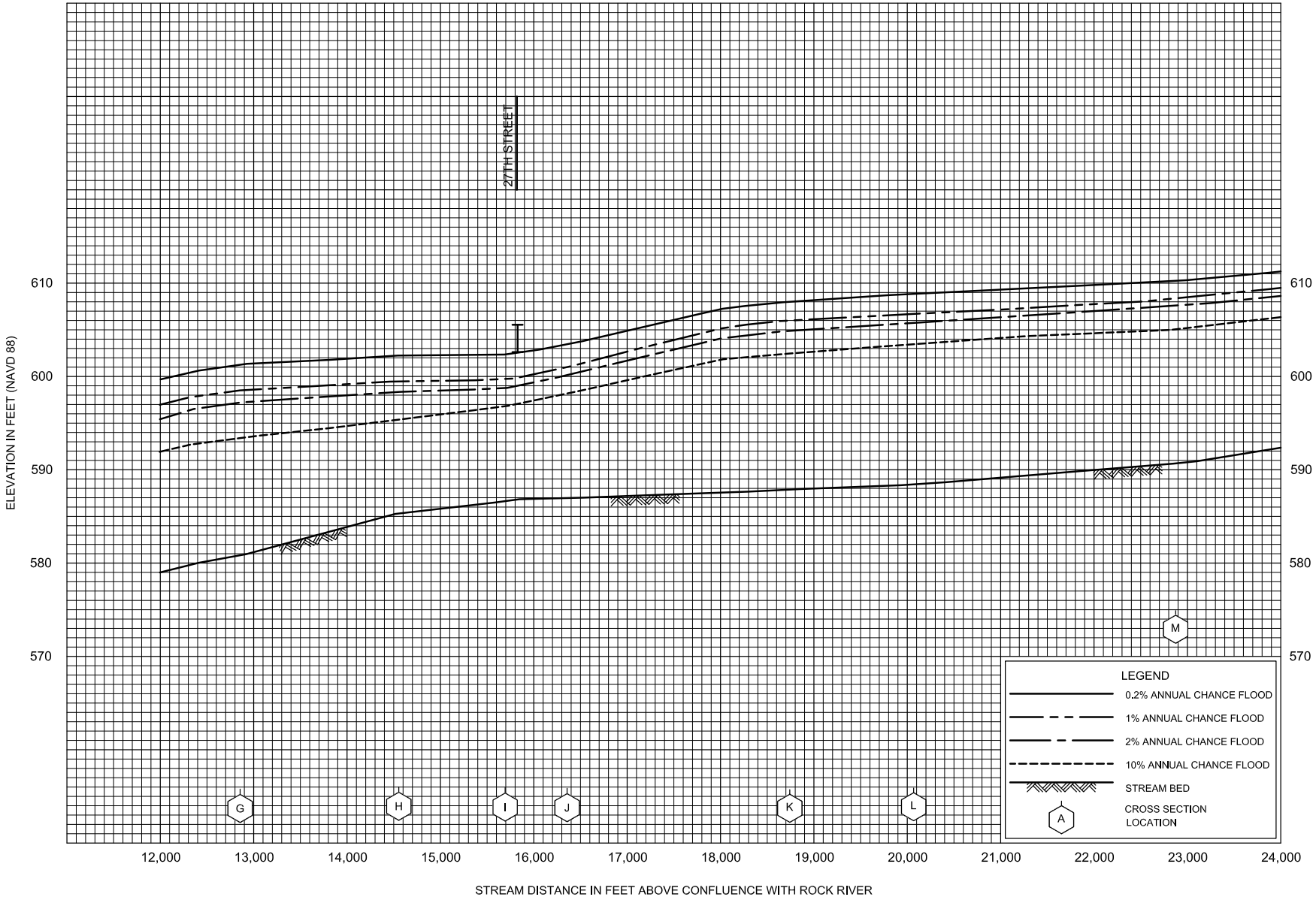
FLOOD PROFILES

MILL CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



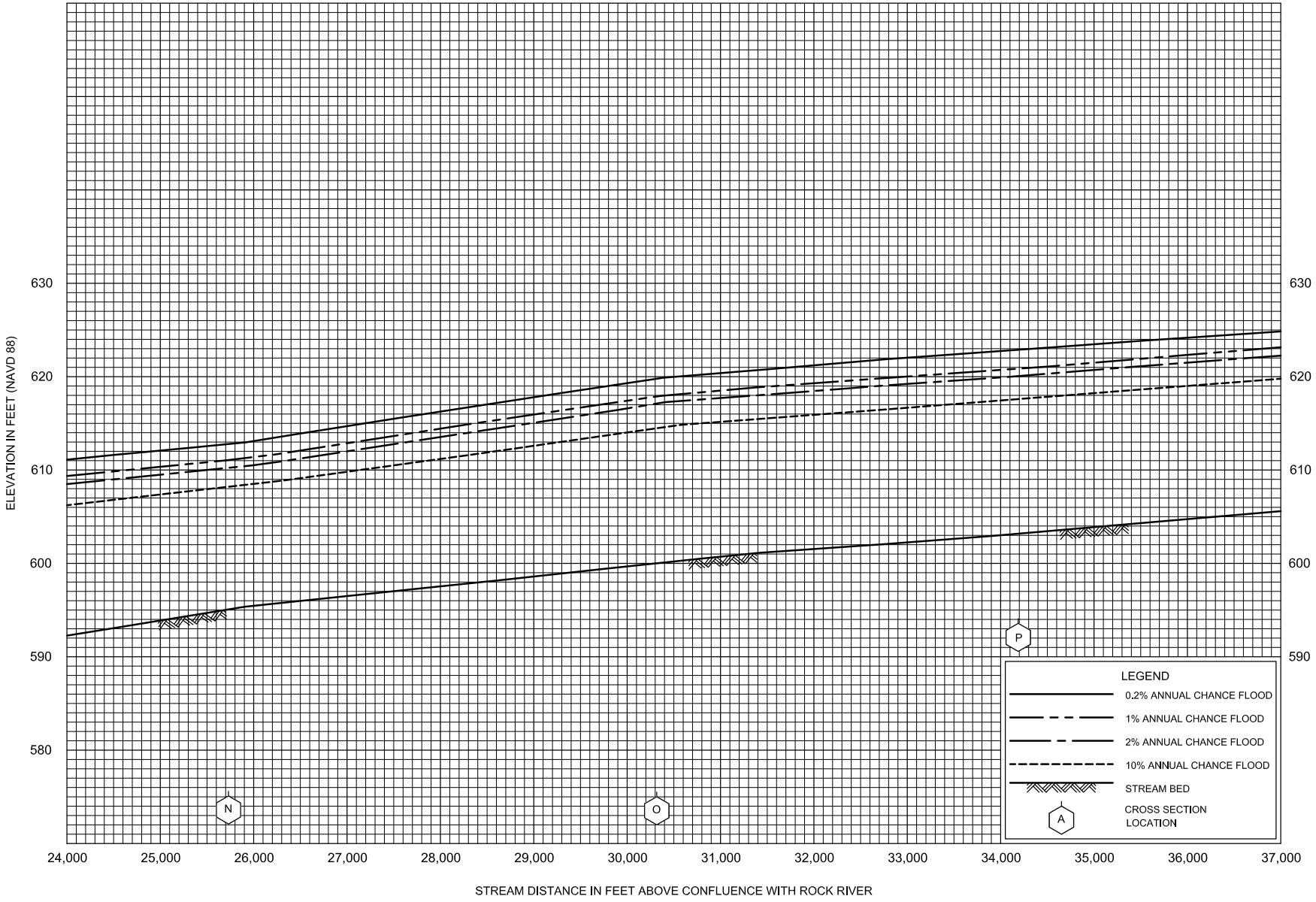
FLOOD PROFILES

MILL CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



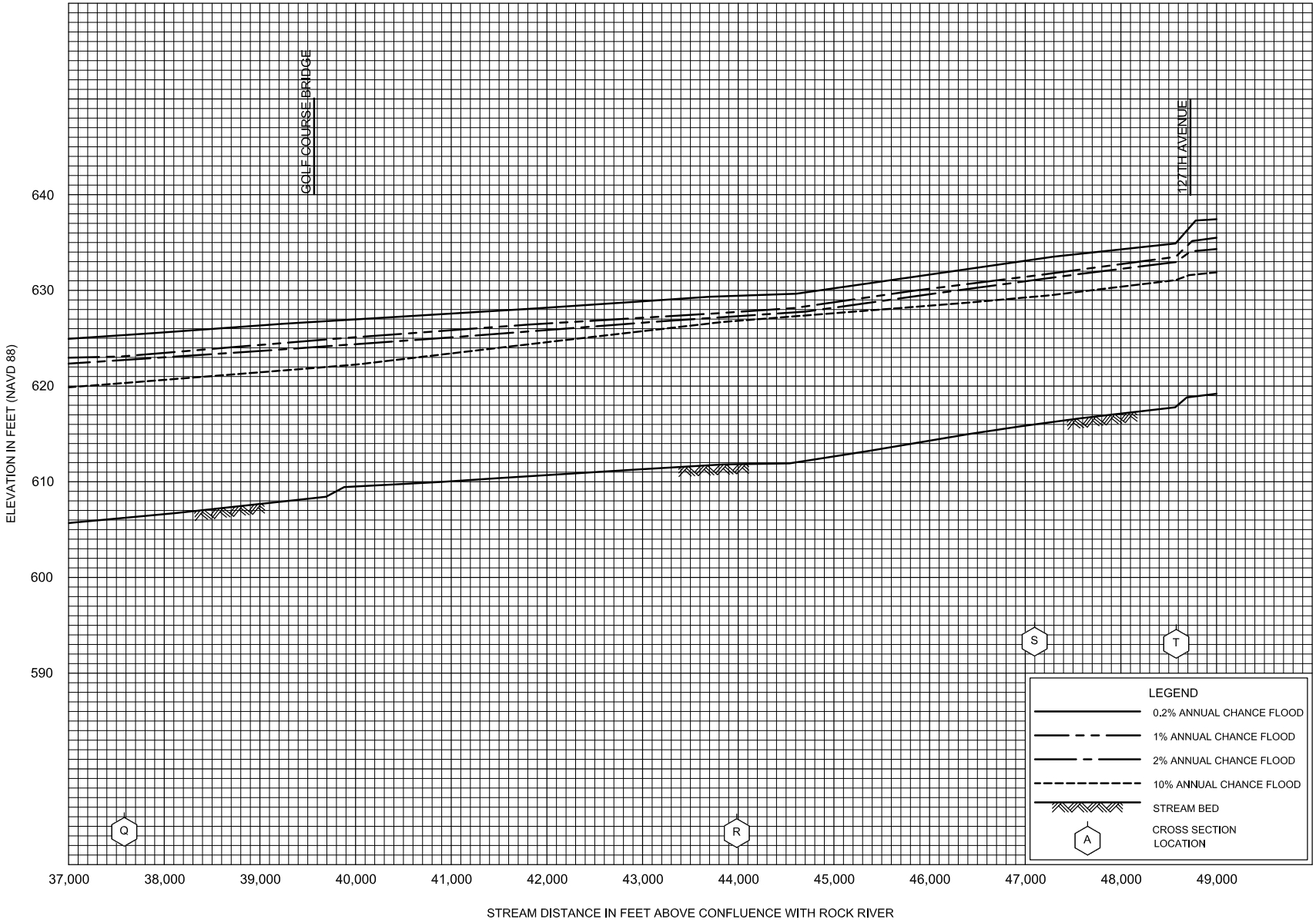
FLOOD PROFILES

MILL CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



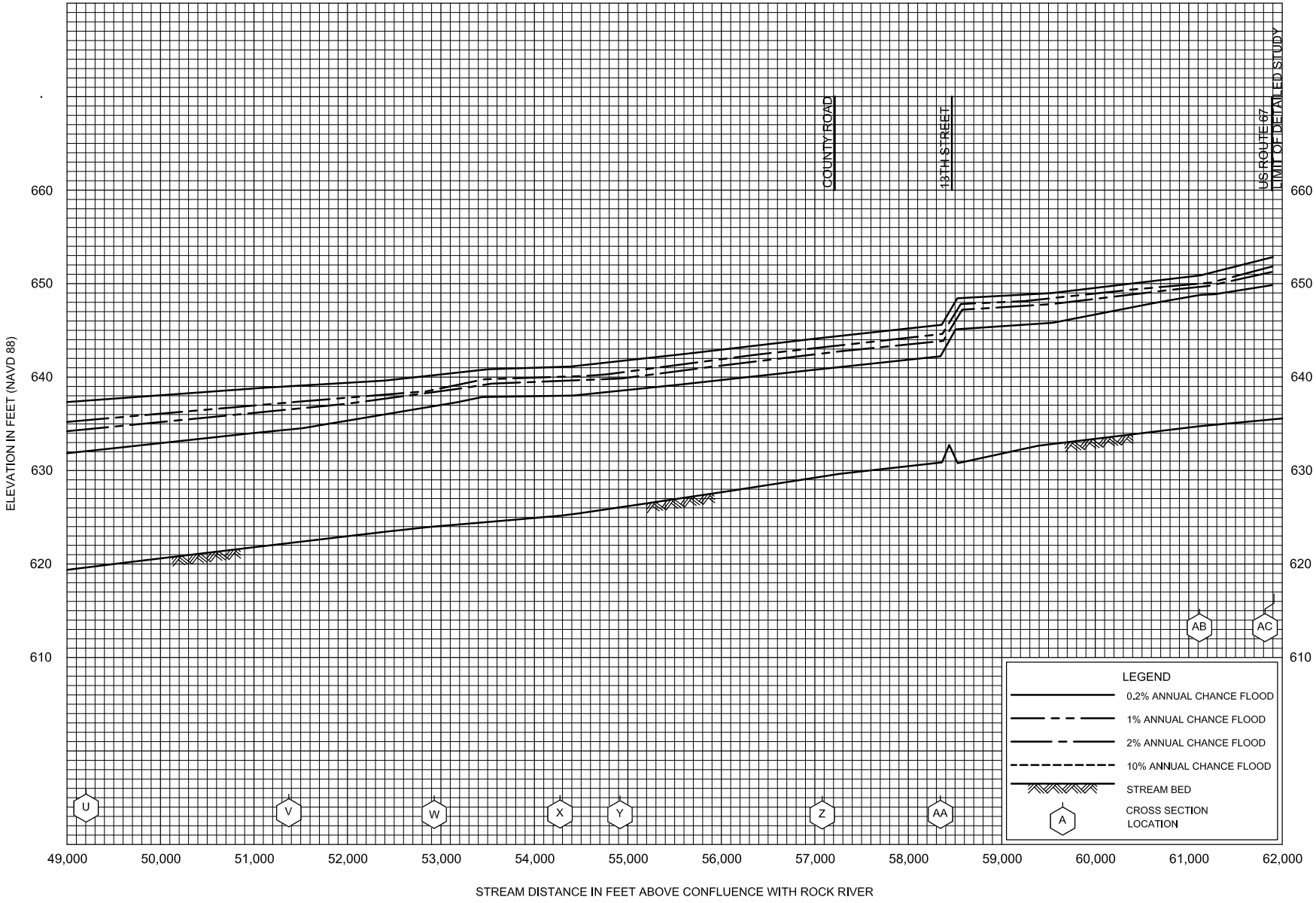
FLOOD PROFILES

MILL CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



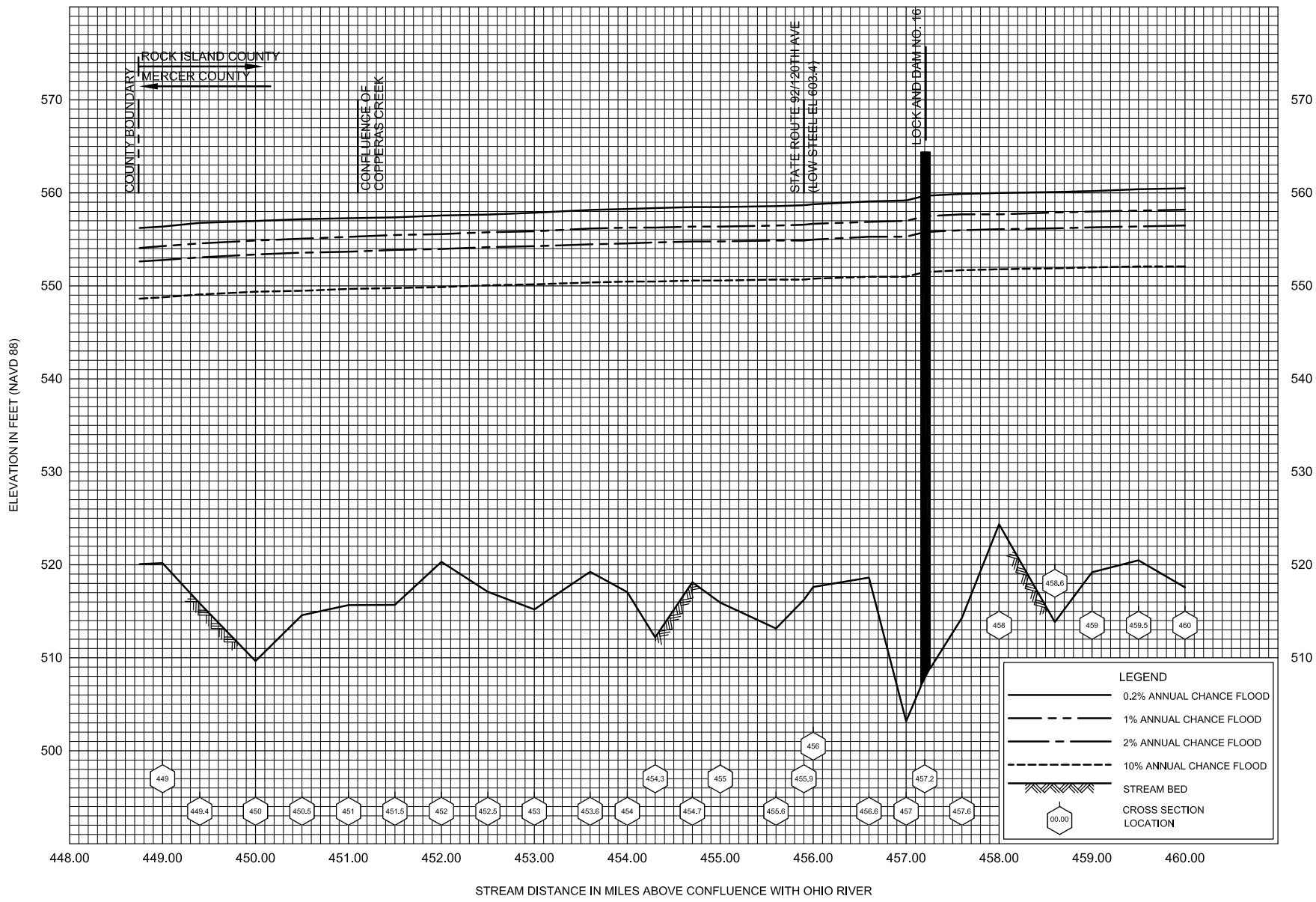
FLOOD PROFILES

MILL CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



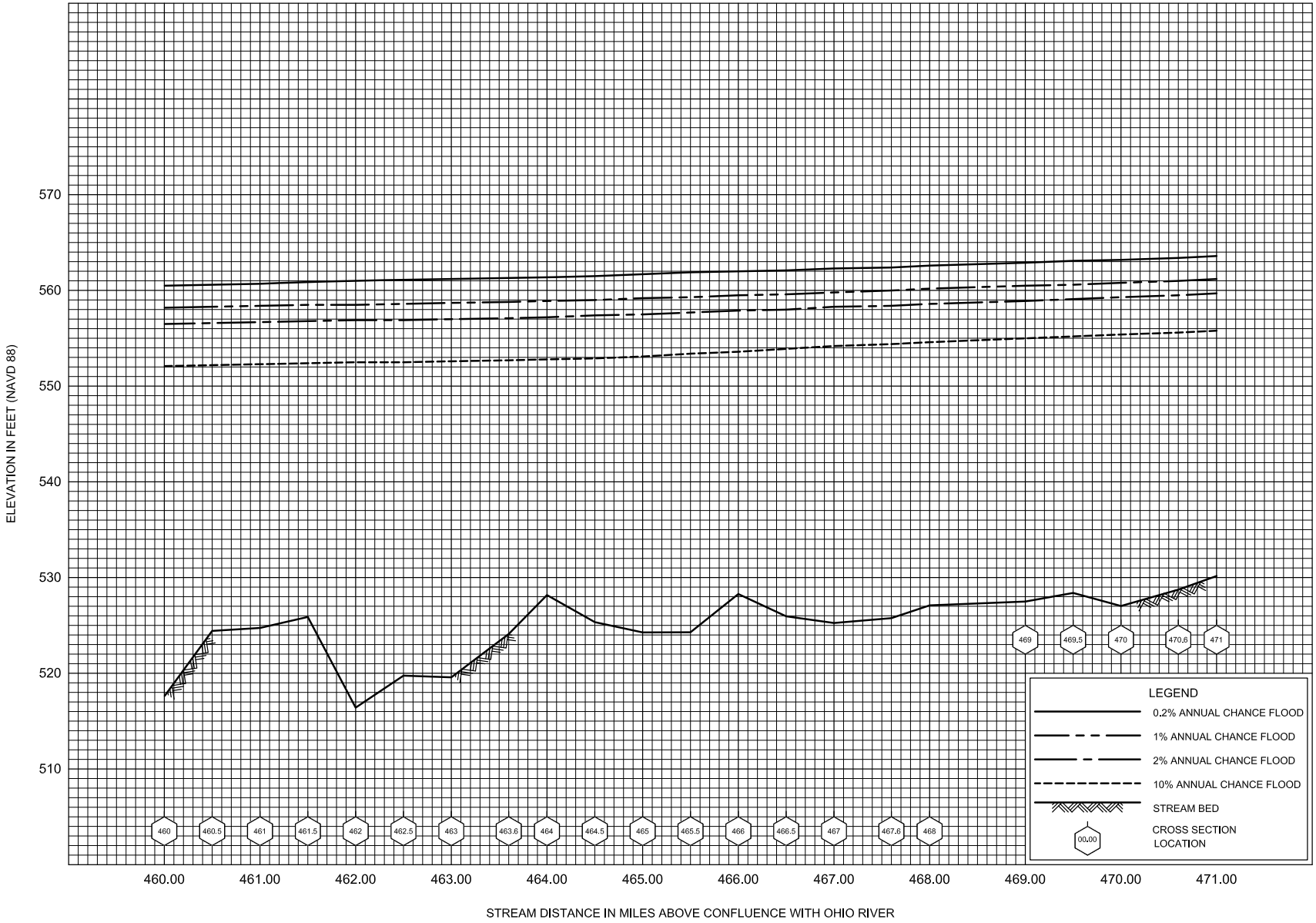
FLOOD PROFILES

MISSISSIPPI RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



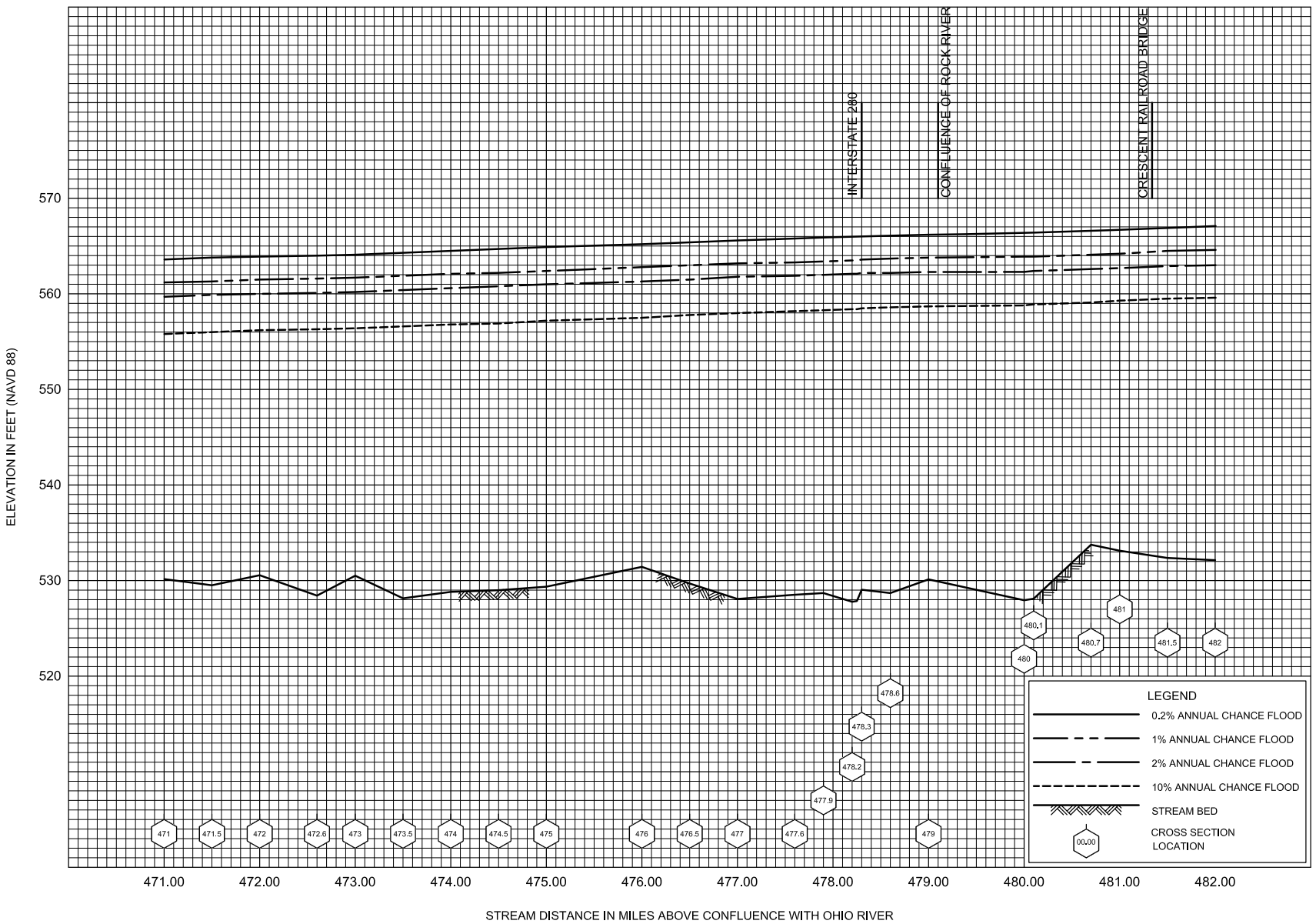
FLOOD PROFILES

MISSISSIPPI RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



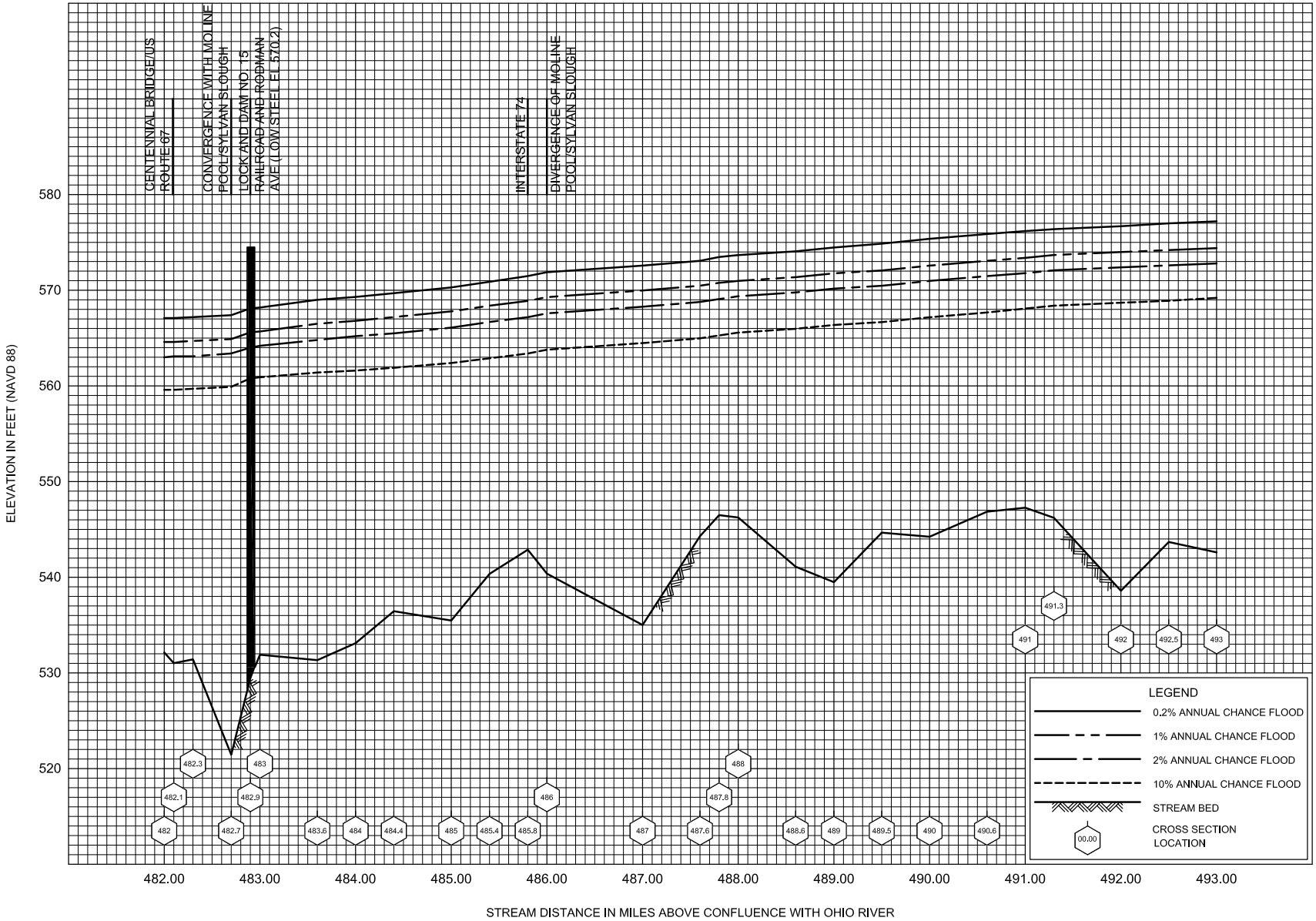
FLOOD PROFILES

MISSISSIPPI RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



FLOOD PROFILES

MISSISSIPPI RIVER

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ROCK ISLAND COUNTY, IL

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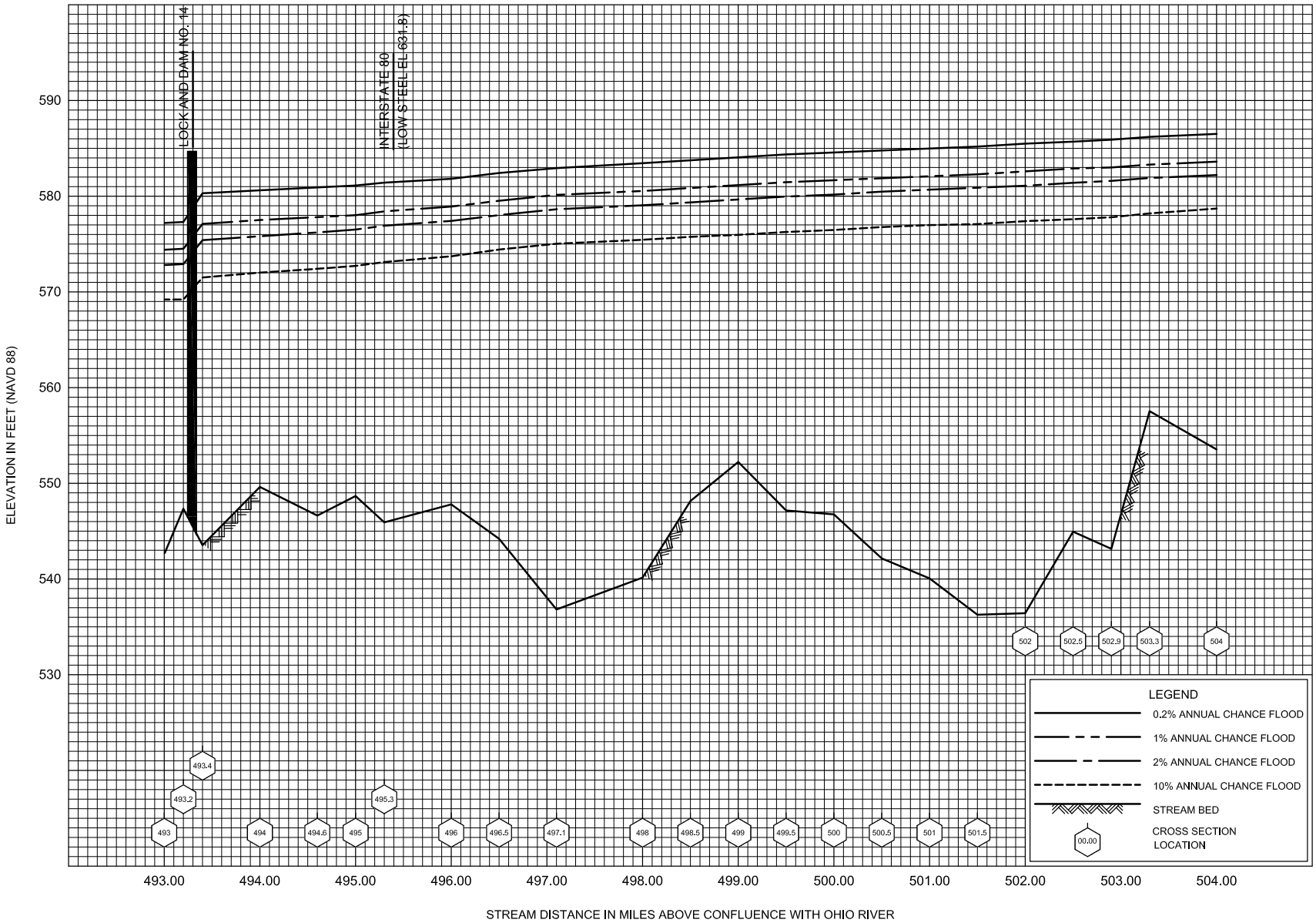


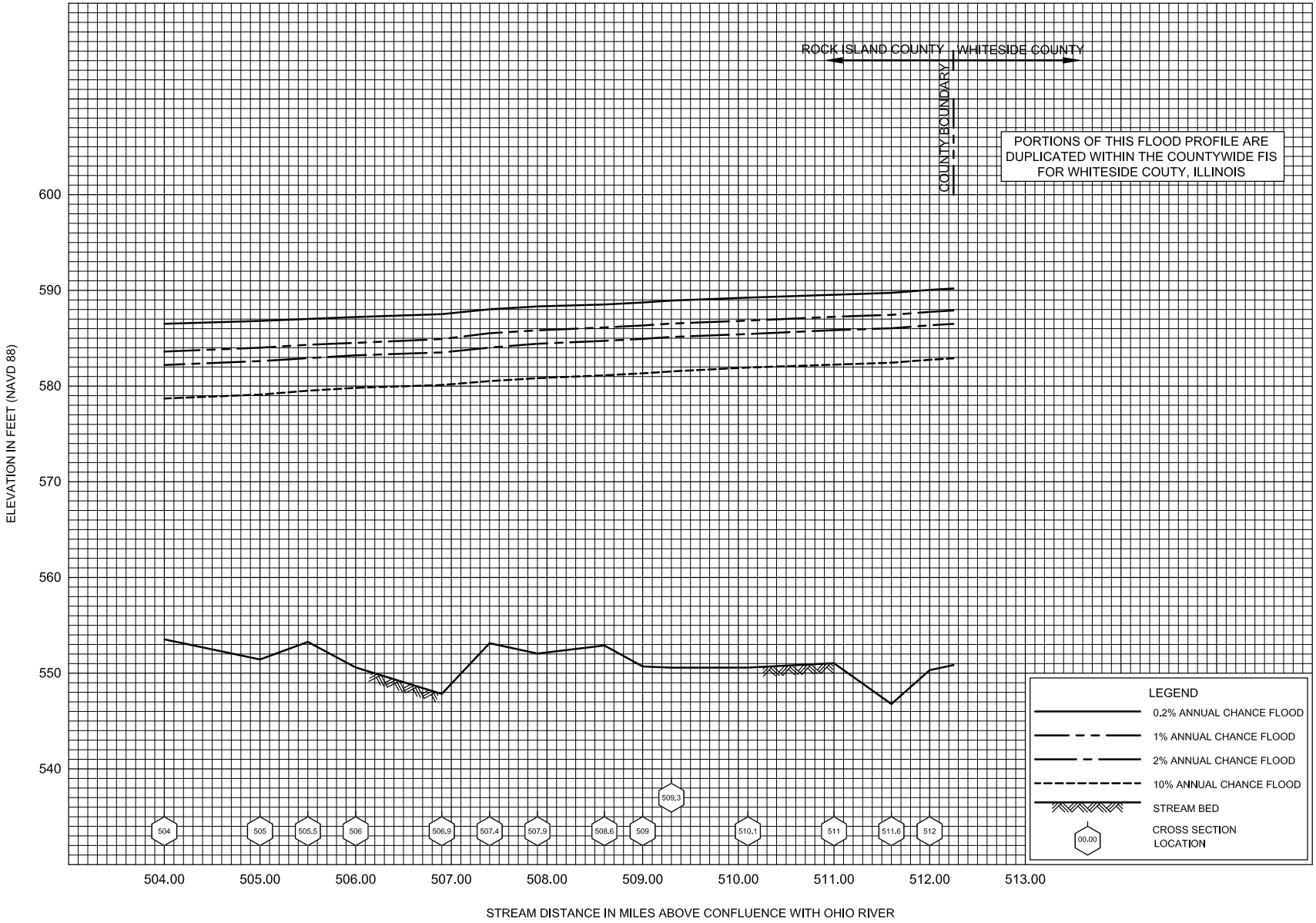
FLOOD PROFILES

MISSISSIPPI RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



FLOOD PROFILES

MISSISSIPPI RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

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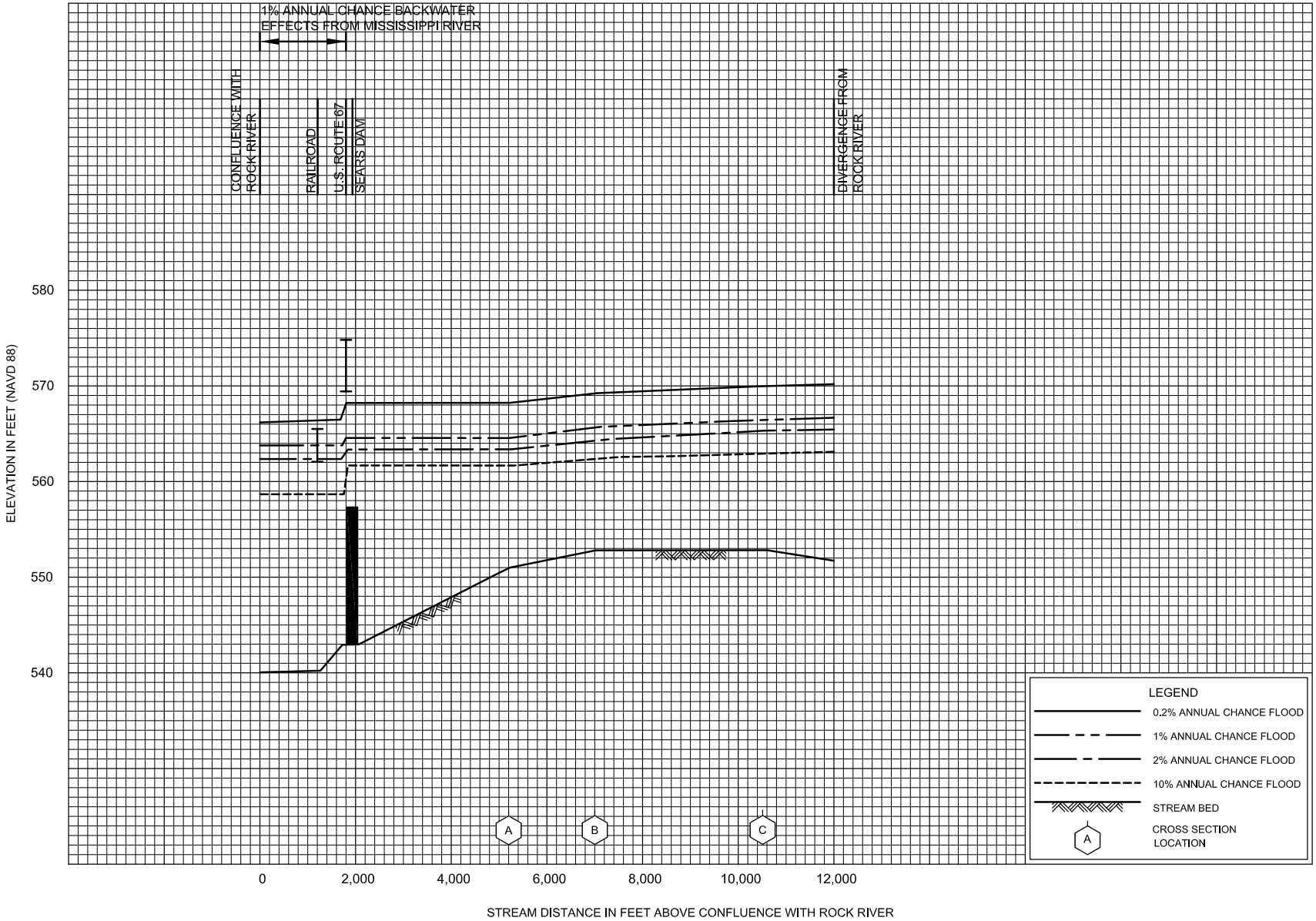


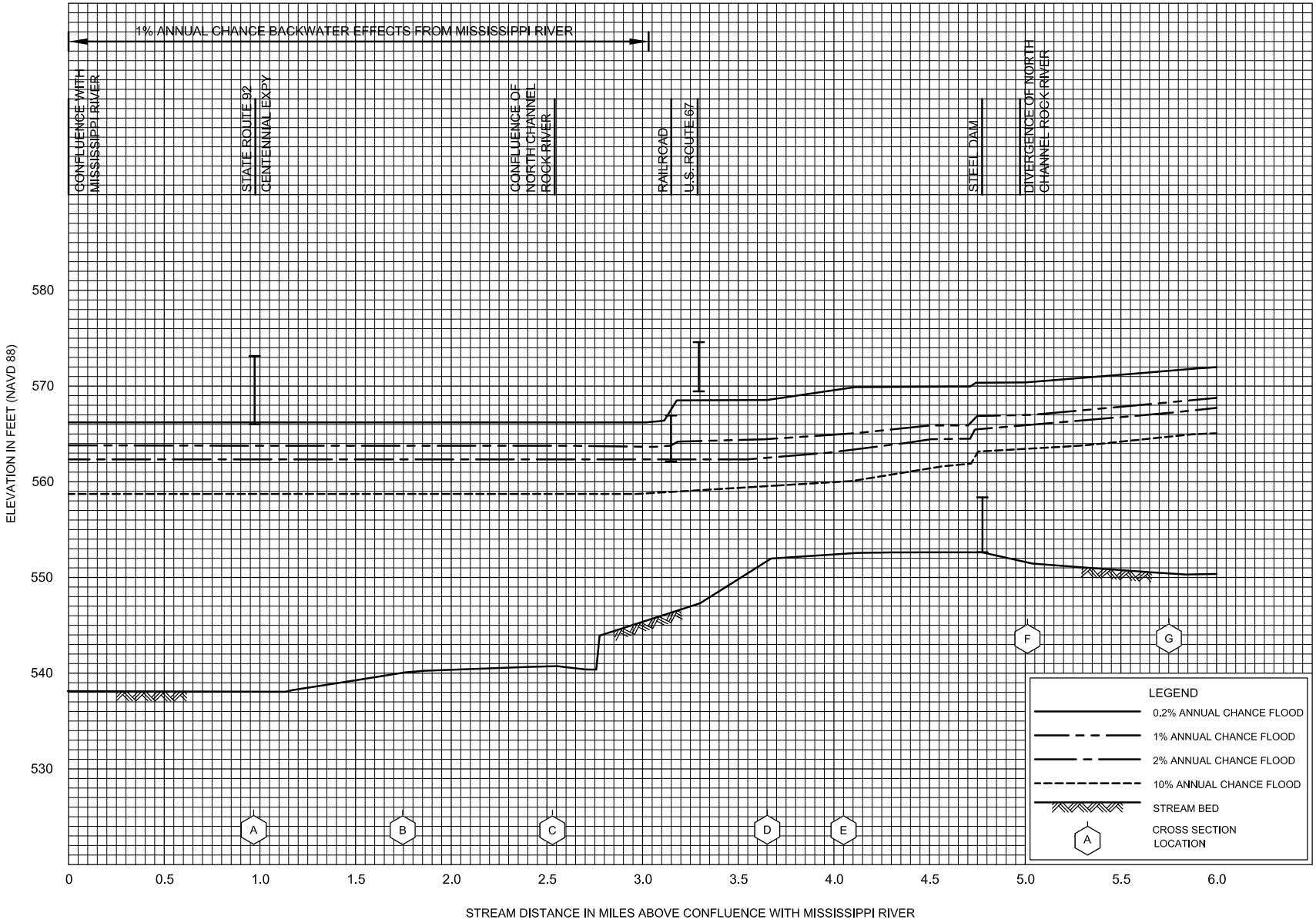
FLOOD PROFILES

NORTH CHANNEL ROCK RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



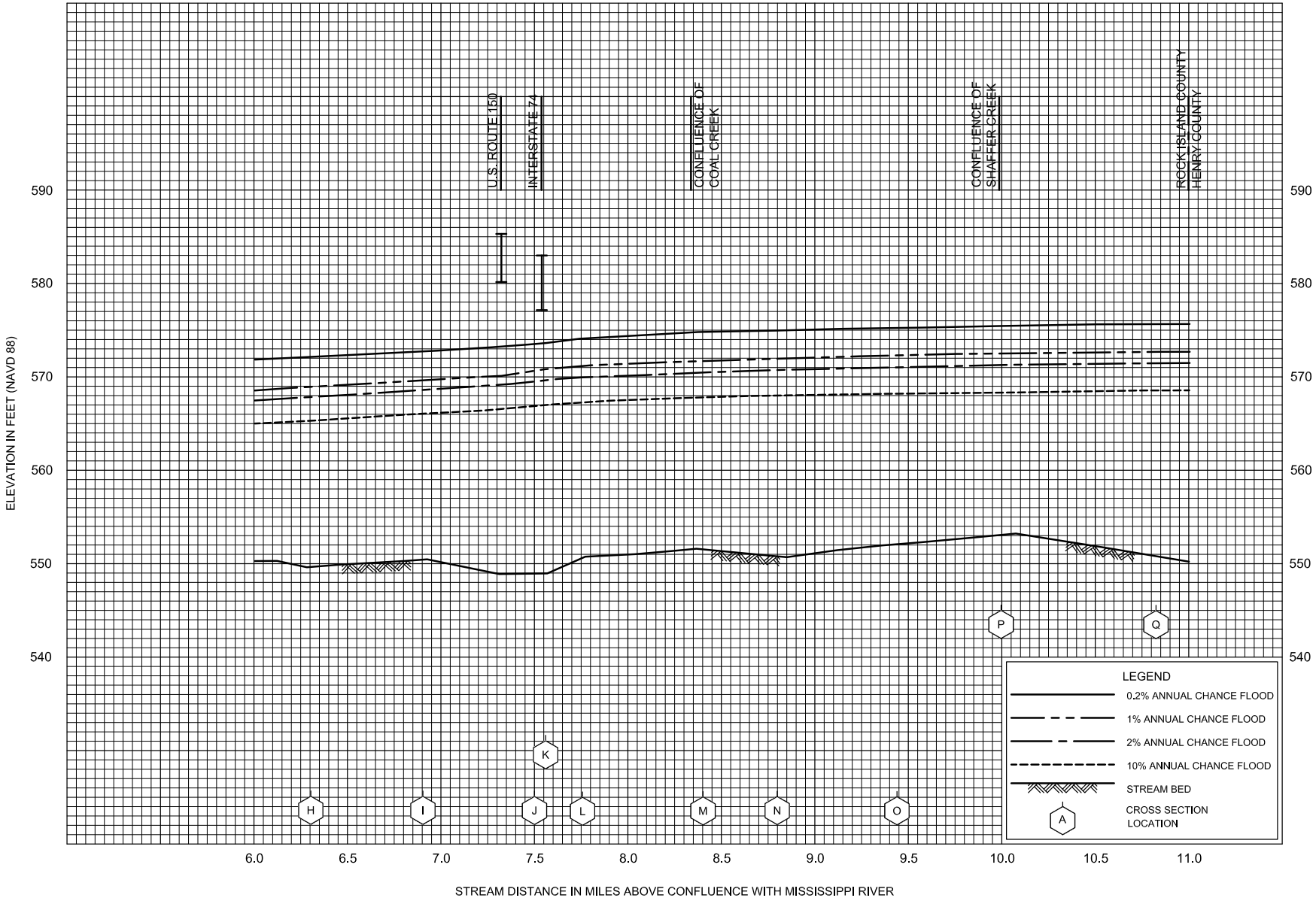
FLOOD PROFILES

ROCK RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



FLOOD PROFILES

ROCK RIVER

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ROCK ISLAND COUNTY, IL

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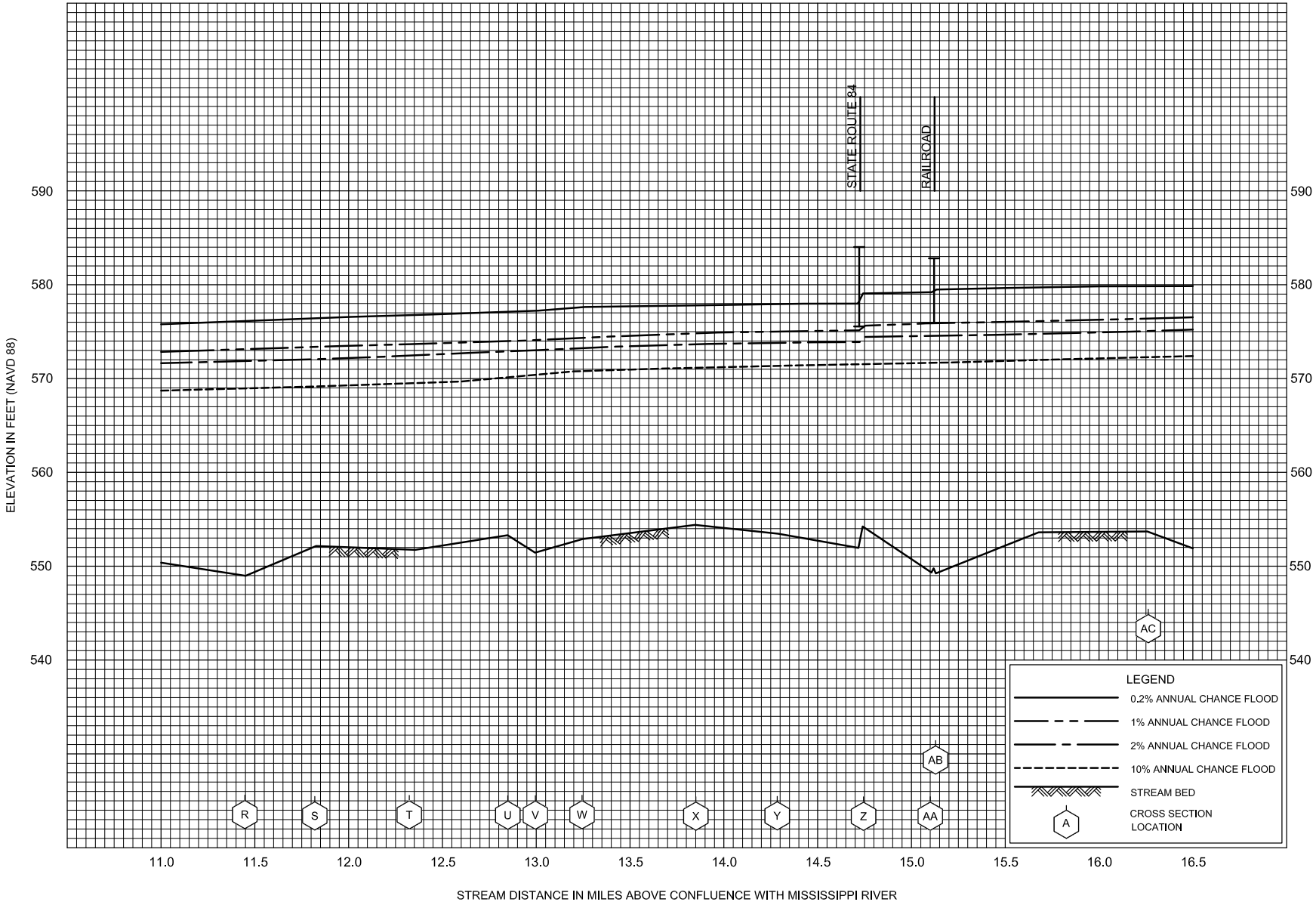

FLOOD PROFILES

ROCK RIVER

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ROCK ISLAND COUNTY, IL

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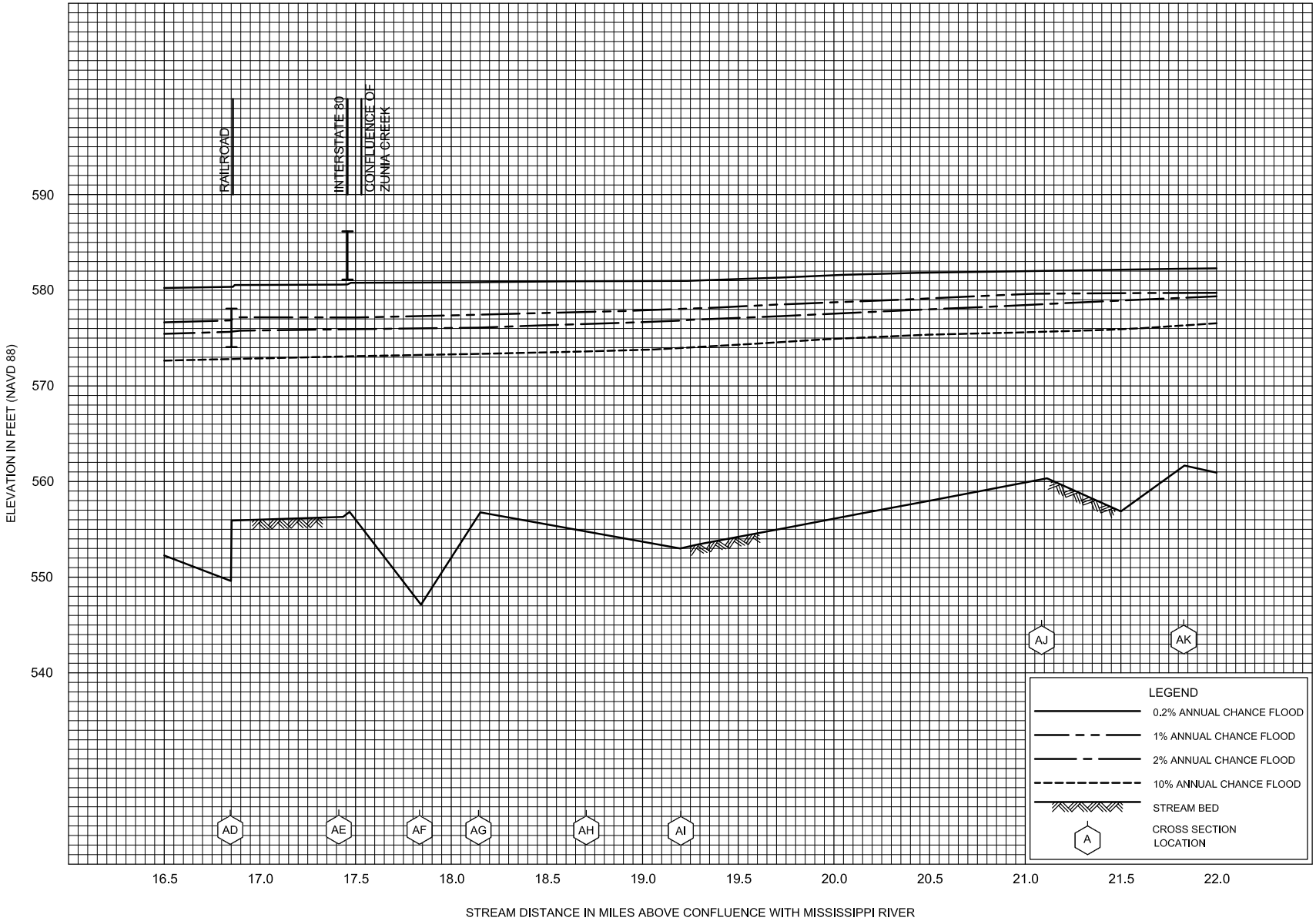

FLOOD PROFILES

ROCK RIVER

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ROCK ISLAND COUNTY, IL

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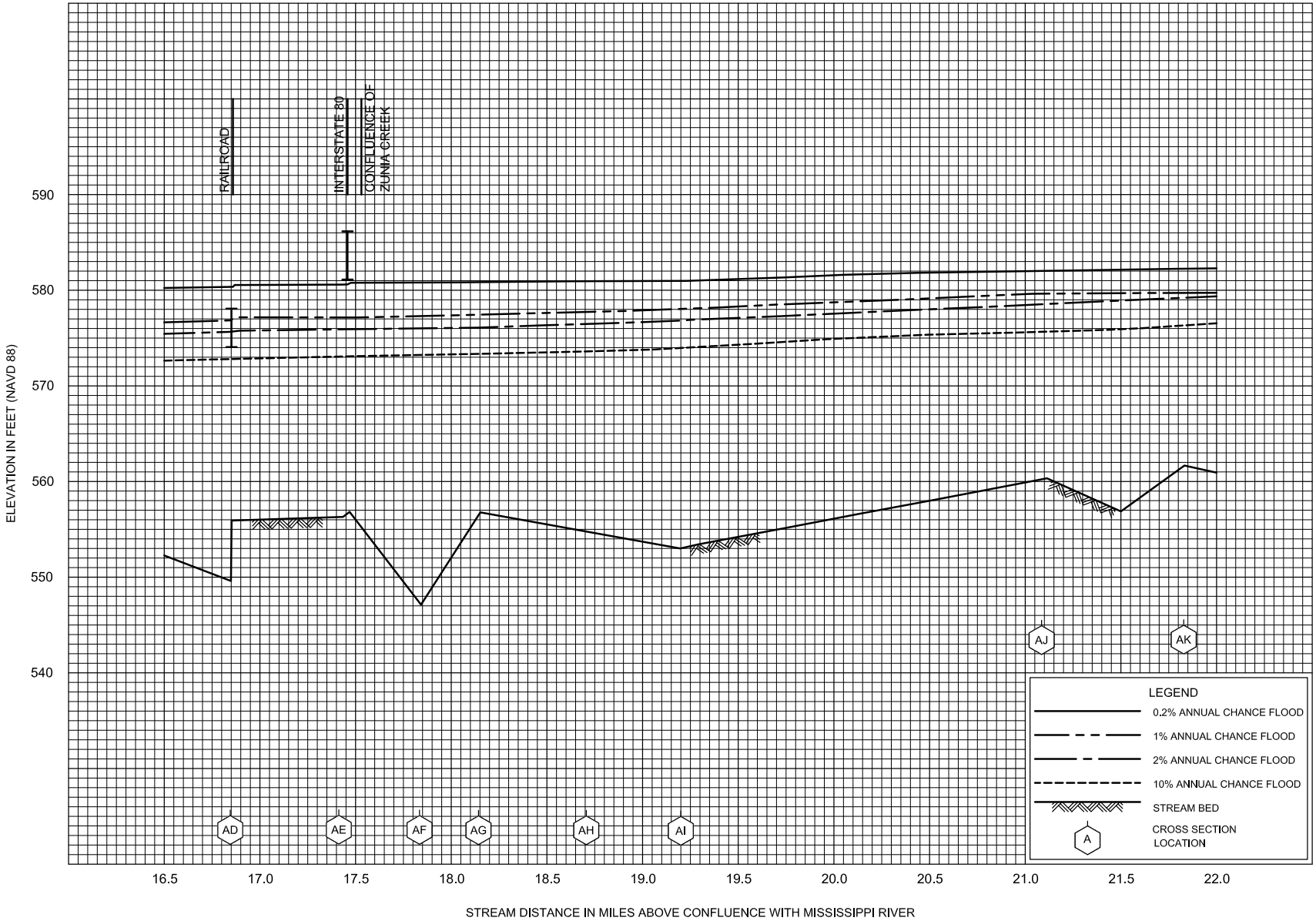

FLOOD PROFILES

ROCK RIVER

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ROCK ISLAND COUNTY, IL

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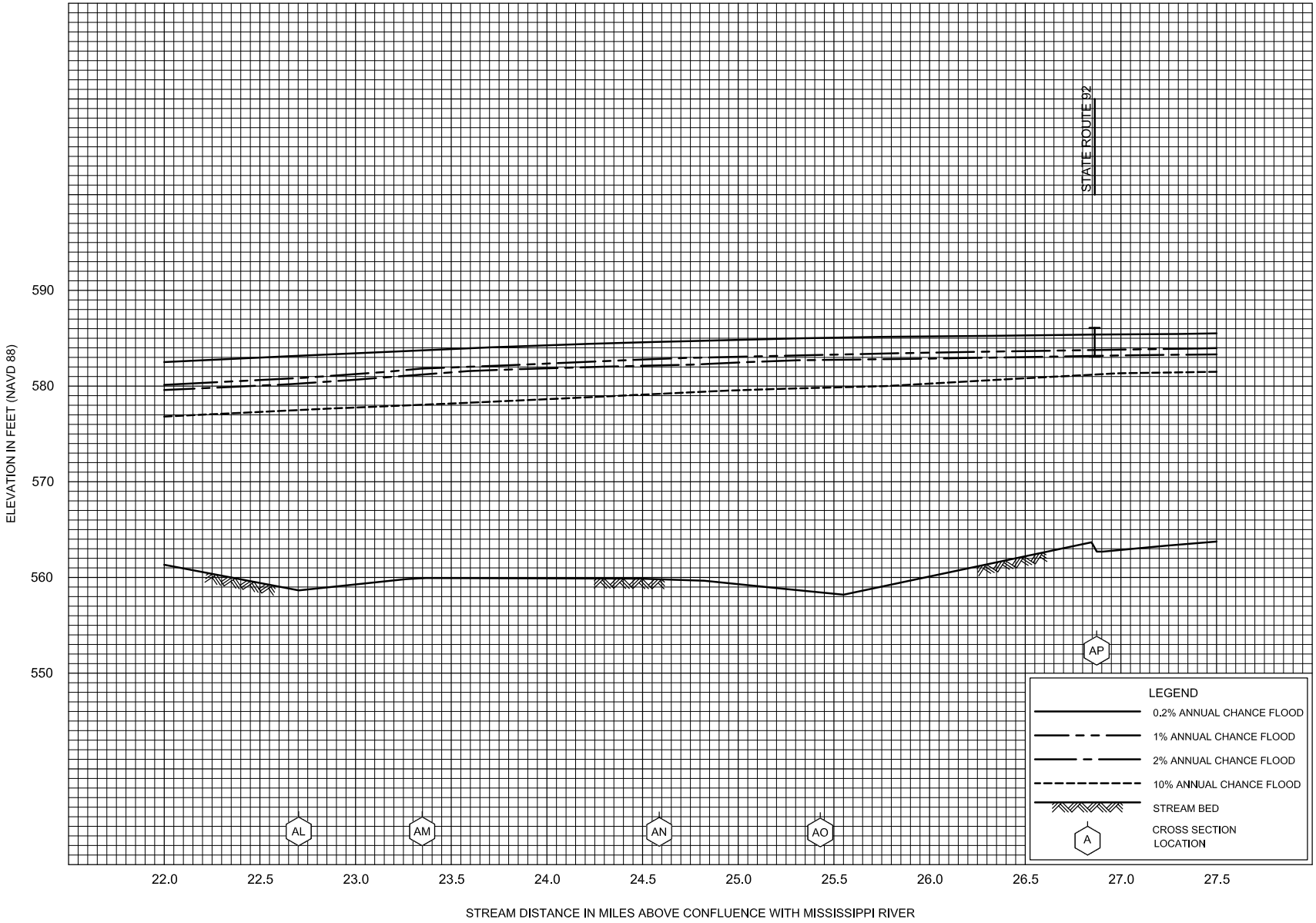

FLOOD PROFILES

ROCK RIVER

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ROCK ISLAND COUNTY, IL

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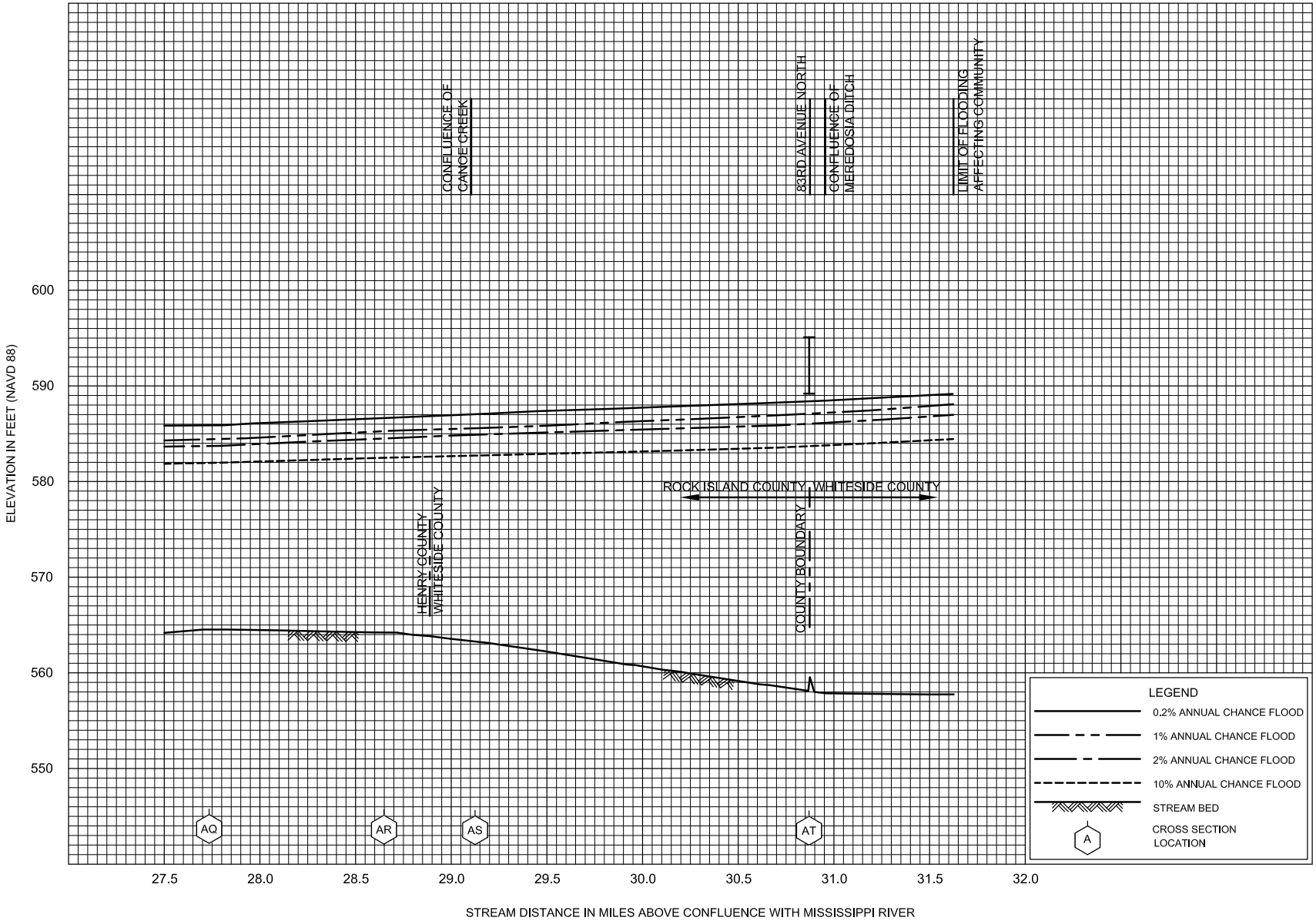


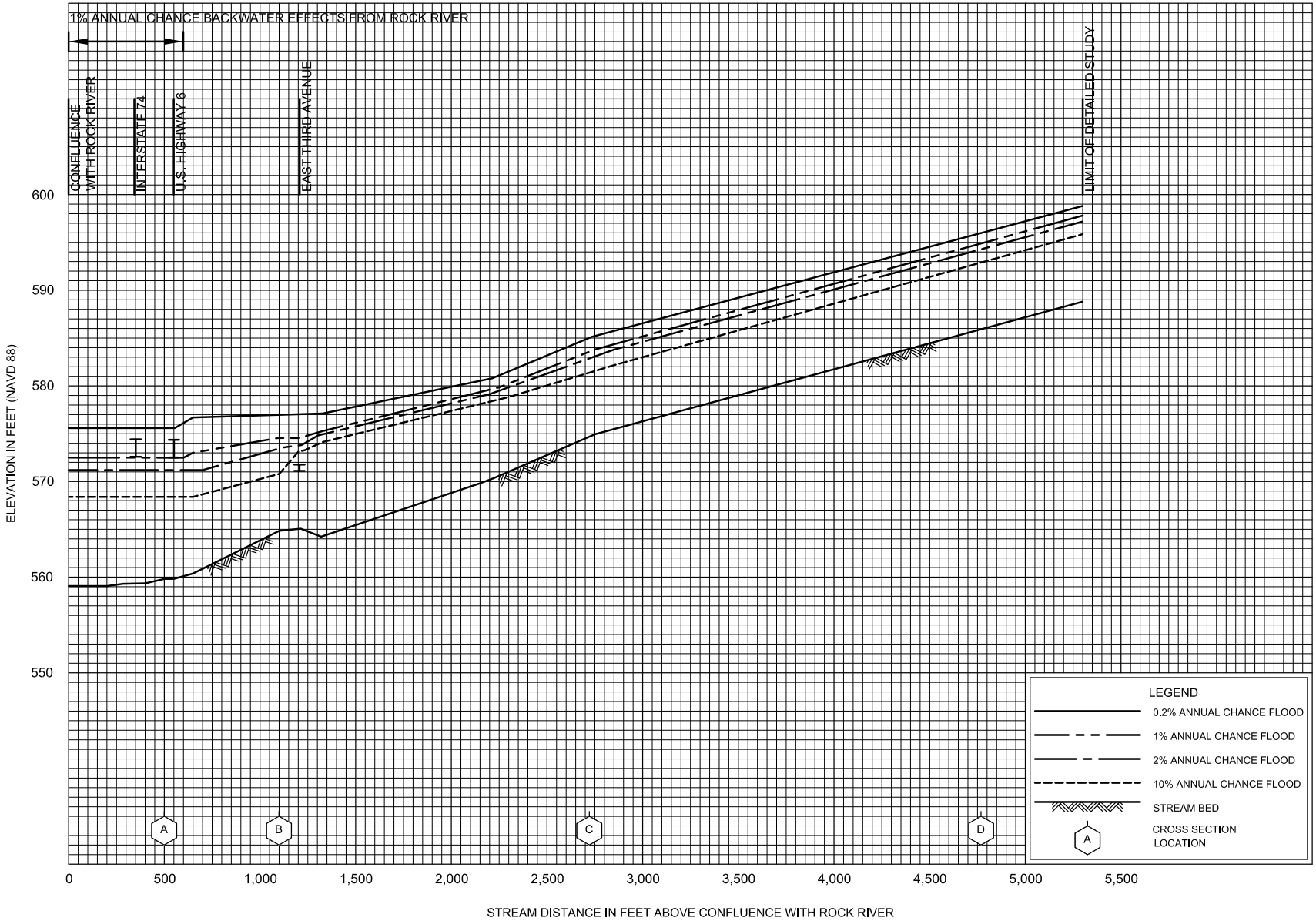
FLOOD PROFILES

ROCK RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



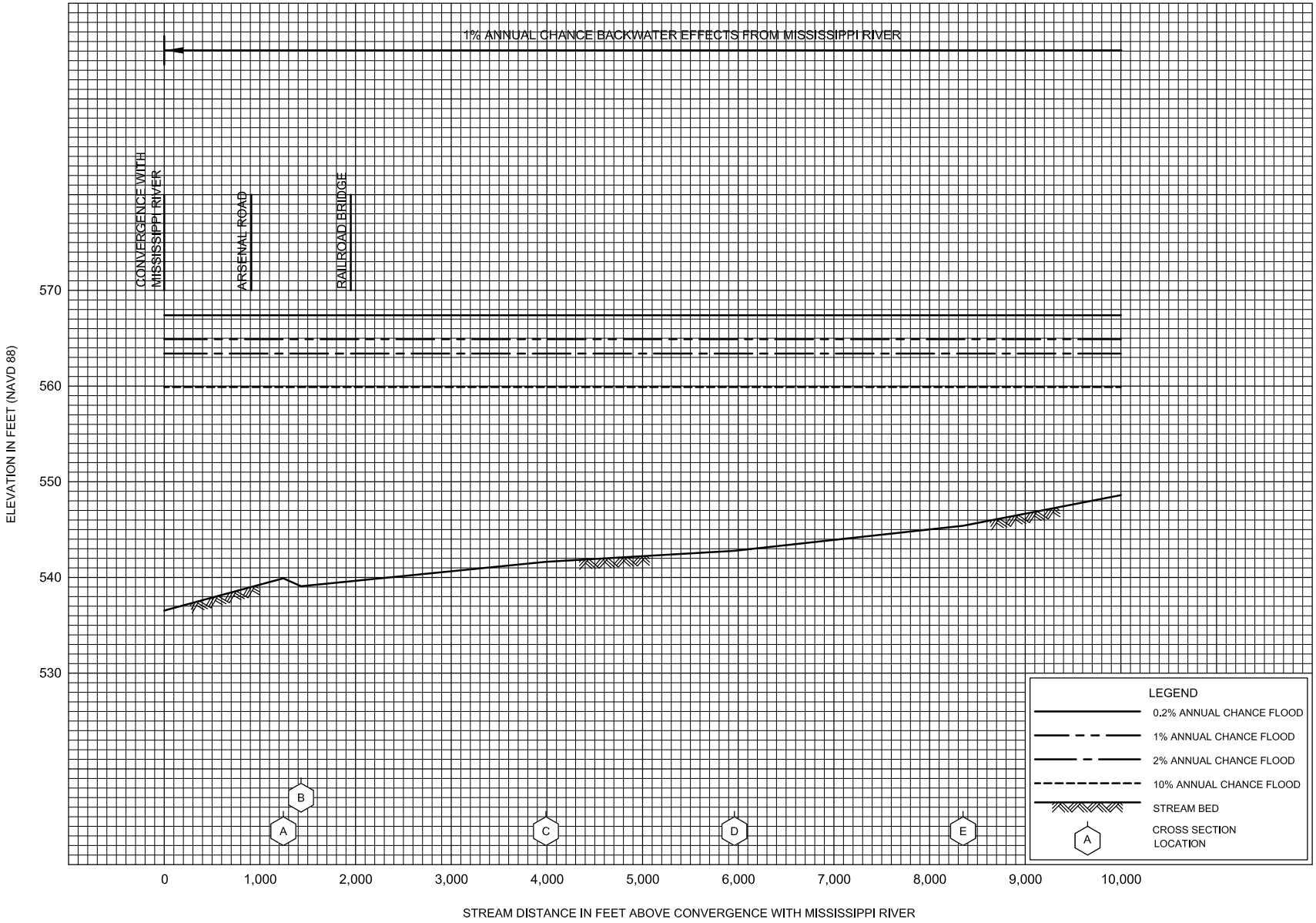
FLOOD PROFILES

SHAFFER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



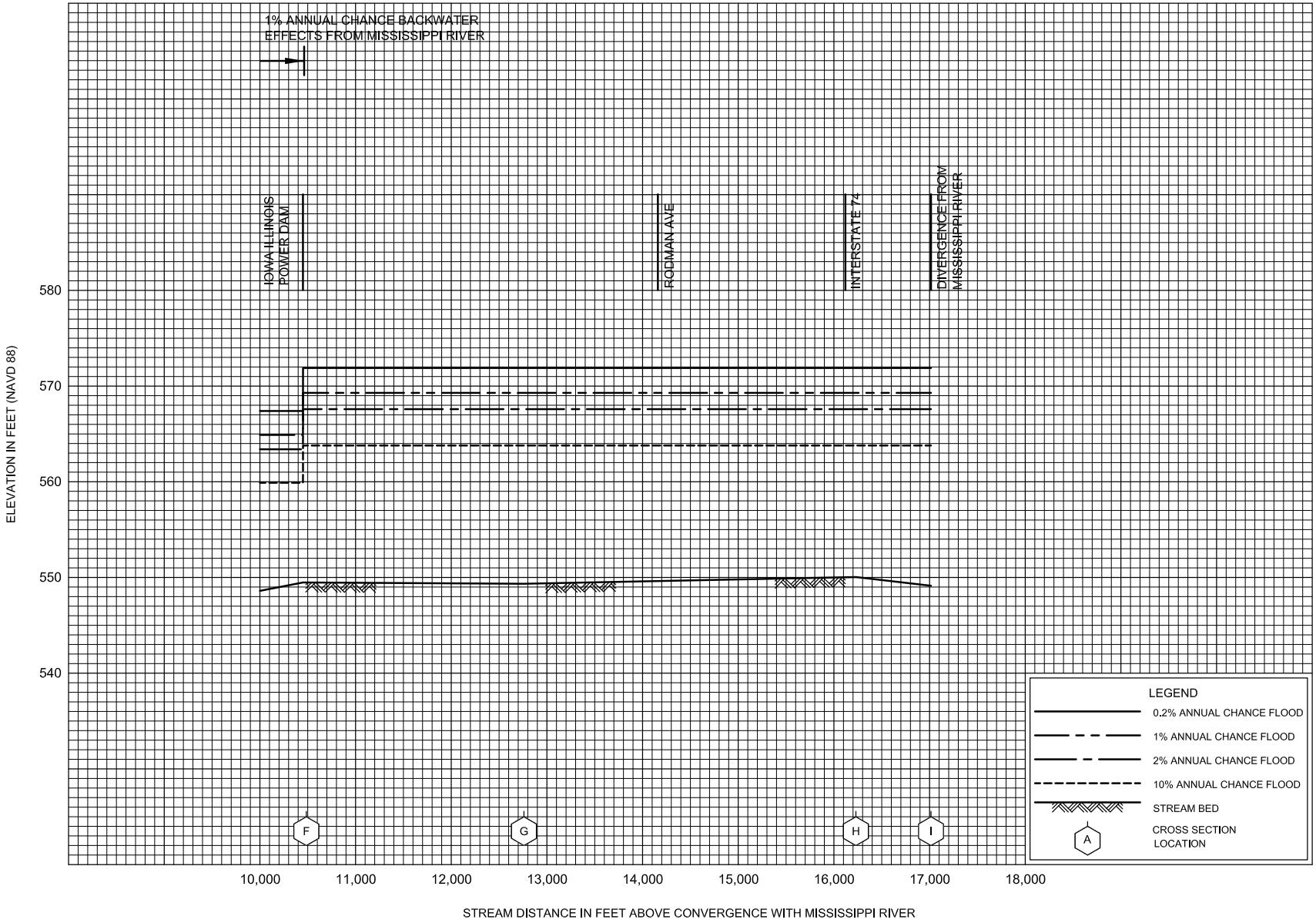
FLOOD PROFILES

SYLVAN SLOUGH

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



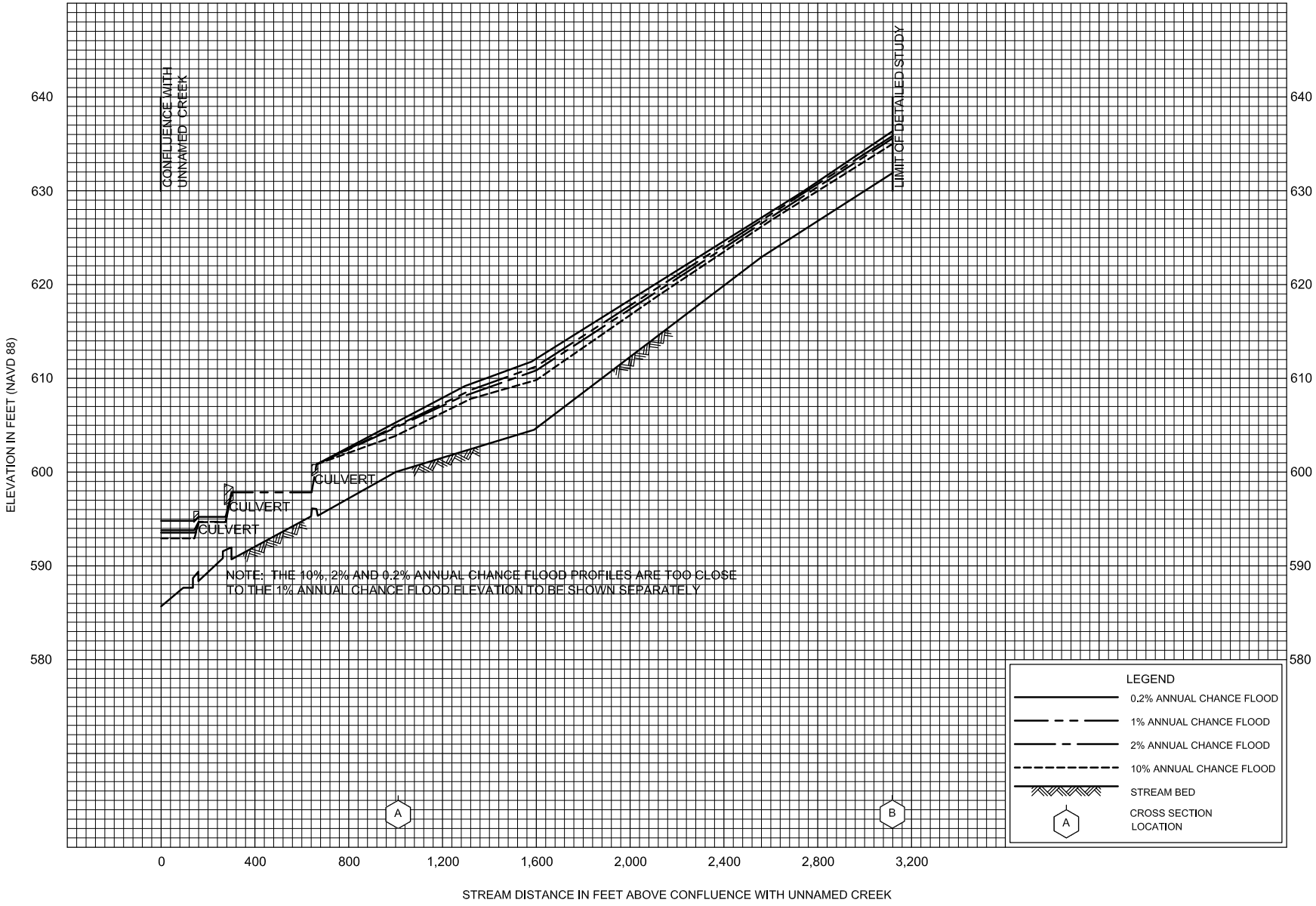
FLOOD PROFILES

SYLVAN SLOUGH

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



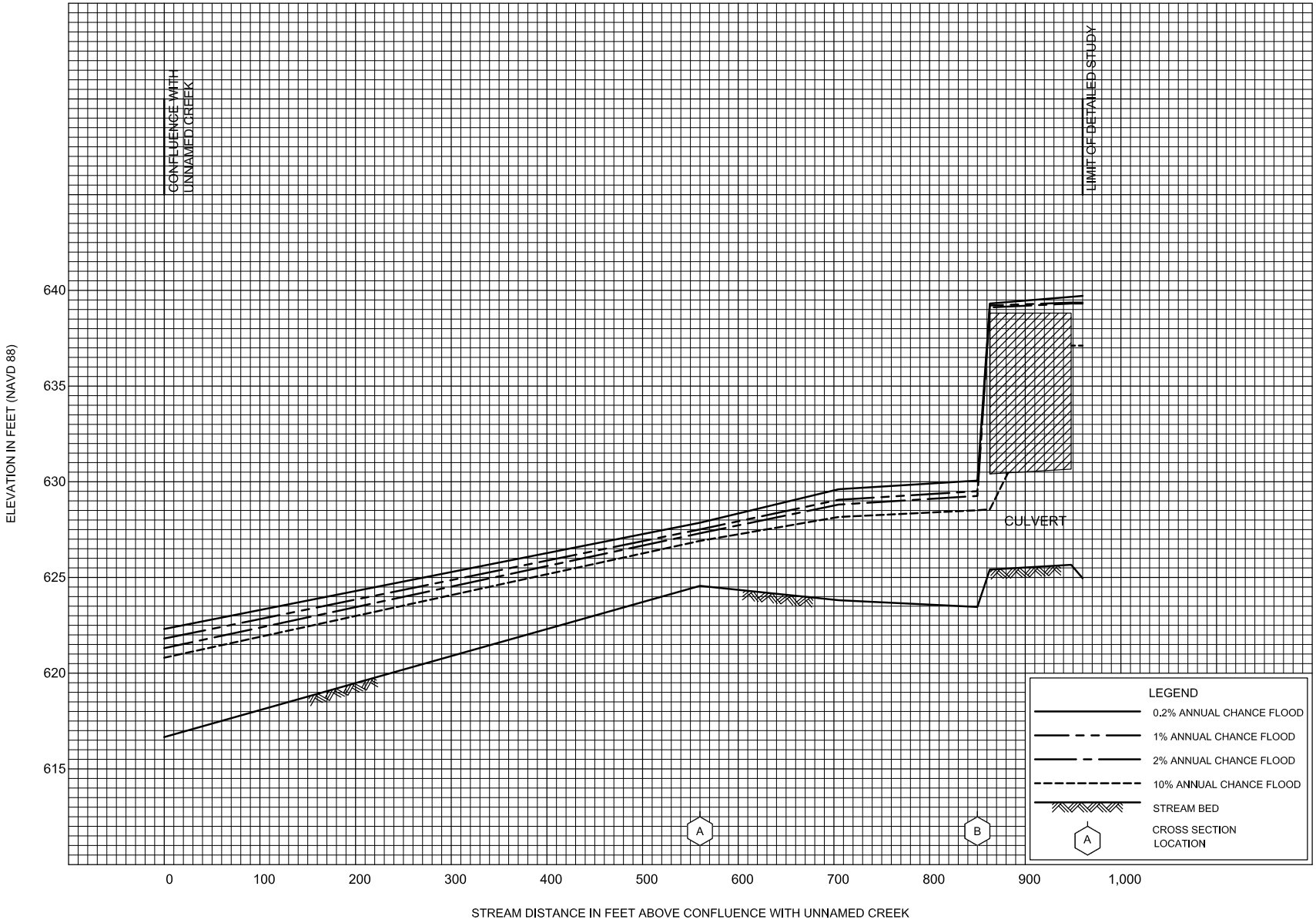
FLOOD PROFILES

TRIBUTARY 1 TO UNNAMED CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



FLOOD PROFILES

TRIBUTARY 2 TO UNNAMED CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS

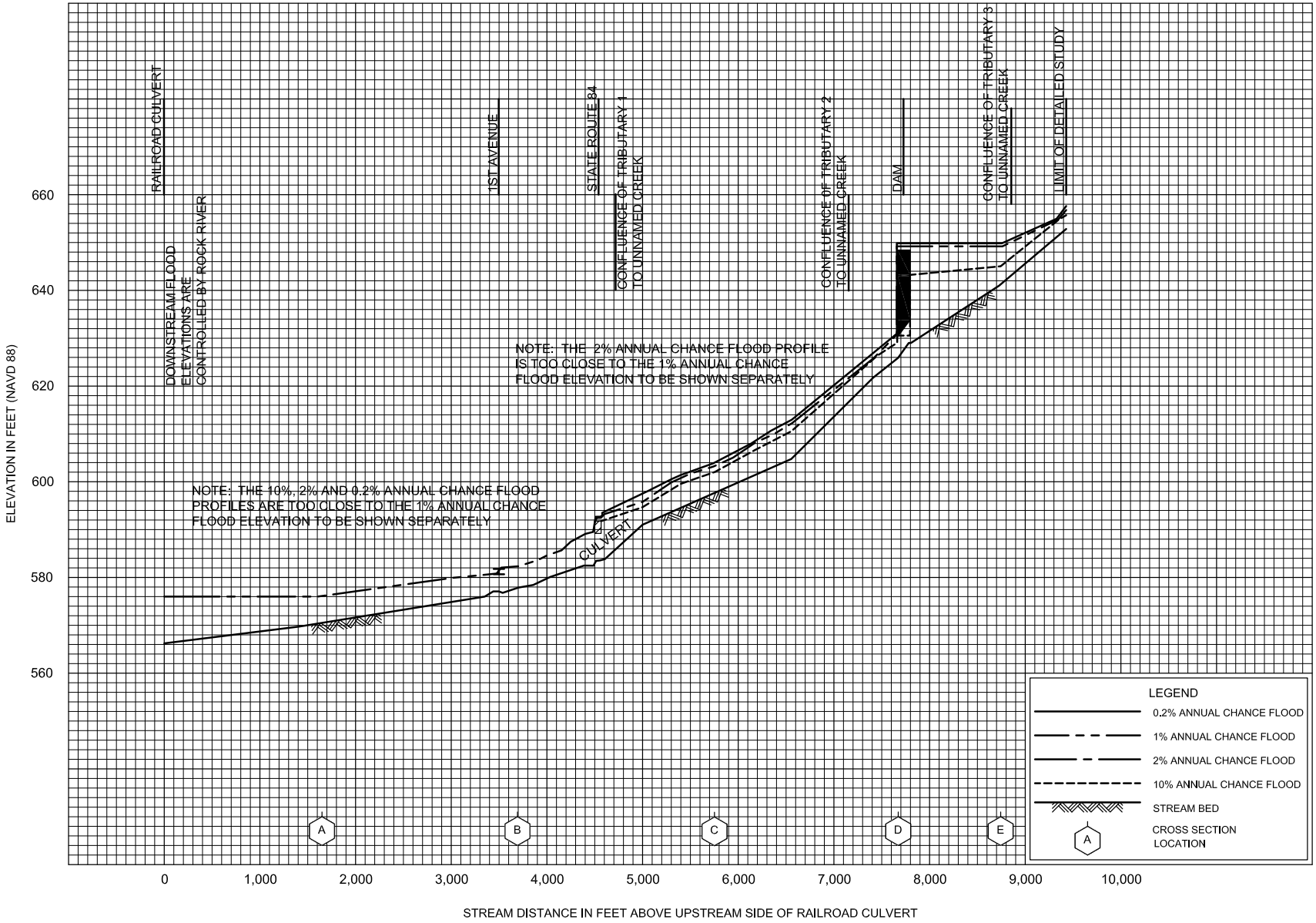
FLOOD PROFILES

TRIBUTARY 3 TO UNNAMED CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS



FLOOD PROFILES

UNNAMED CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCK ISLAND COUNTY, IL

AND INCORPORATED AREAS