

FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 2 OF 2



MADISON COUNTY, KENTUCKY

AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
MADISON COUNTY UNINCORPORATED AREAS	210342
BEREA, CITY OF	210156
RICHMOND, CITY OF	210157



FEMA

REVISED: PRELIMINARY 2/26/2016

FLOOD INSURANCE STUDY NUMBER
21151CV002B

Version Number 2.3.3.2

TABLE OF CONTENTS

Volume 1

	<u>Page</u>
SECTION 1.0 – INTRODUCTION	1
1.1 The National Flood Insurance Program	1
1.2 Purpose of this Flood Insurance Study Report	2
1.3 Jurisdictions Included in the Flood Insurance Study Project	2
1.4 Considerations for using this Flood Insurance Study Report	3
SECTION 2.0 – FLOODPLAIN MANAGEMENT APPLICATIONS	14
2.1 Floodplain Boundaries	14
2.2 Floodways	15
2.3 Base Flood Elevations	33
2.4 Non-Encroachment Zones	33
2.5 Coastal Flood Hazard Areas	33
2.5.1 Water Elevations and the Effects of Waves	33
2.5.2 Floodplain Boundaries and BFEs for Coastal Areas	34
2.5.3 Coastal High Hazard Areas	34
2.5.4 Limit of Moderate Wave Action	34
SECTION 3.0 – INSURANCE APPLICATIONS	34
3.1 National Flood Insurance Program Insurance Zones	34
3.2 Coastal Barrier Resources System	34
SECTION 4.0 – AREA STUDIED	35
4.1 Basin Description	35
4.2 Principal Flood Problems	35
4.3 Non-Levee Flood Protection Measures	36
4.4 Levees	37
SECTION 5.0 – ENGINEERING METHODS	38
5.1 Hydrologic Analyses	38
5.2 Hydraulic Analyses	49
5.3 Coastal Analyses	68
5.3.1 Total Stillwater Elevations	69
5.3.2 Waves	69
5.3.3 Coastal Erosion	69
5.4 Alluvial Fan Analyses	69
SECTION 6.0 – MAPPING METHODS	69
6.1 Vertical and Horizontal Control	69
6.2 Base Map	70
6.3 Floodplain and Floodway Delineation	71

TABLE OF CONTENTS

Volume 1 (continued)

Tables

	<u>Page</u>
Table 1: Listing of NFIP Jurisdictions	3
Table 2: Flooding Sources Included in this FIS Report	17
Table 3: Flood Zone Designations by Community	34
Table 4: Coastal Barrier Resources System Information	35
Table 5: Basin Characteristics	35
Table 6: Principal Flood Problems	35
Table 7: Historic Flooding Elevations	36
Table 8: Non-Levee Flood Protection Measures	36
Table 9: Levees	37
Table 10: Summary of Discharges	39
Table 11: Summary of Non-Coastal Stillwater Elevations	48
Table 12: Stream Gage Information used to Determine Discharges	49
Table 13: Summary of Hydrologic and Hydraulic Analyses	50
Table 14: Roughness Coefficients	68
Table 15: Summary of Coastal Analyses	68
Table 16: Tide Gage Analysis Specifics	69
Table 17: Coastal Transect Parameters	69
Table 18: Summary of Alluvial Fan Analyses	69
Table 19: Results of Alluvial Fan Analyses	69
Table 20: Countywide Vertical Datum Conversion	70
Table 21: Stream-by-Stream Vertical Datum Conversion	70
Table 22: Base Map Sources	71
Table 23: Summary of Topographic Elevation Data used in Mapping	72
Table 24: Floodway Data	73

Figures

	<u>Page</u>
Figure 1: FIRM Panel Index	6
Figure 2: FIRM Notes to Users	7
Figure 3: Map Legend for FIRM	10
Figure 4: Floodway Schematic	16
Figure 5: Wave Runup Transect Schematic	33
Figure 6: Coastal Transect Schematic	34
Figure 7: Frequency Discharge-Drainage Area Curves	48
Figure 8: 1% Annual Chance Total Stillwater Elevations for Coastal Areas	69
Figure 9: Transect Location Map	69

TABLE OF CONTENTS

Volume 2

	<u>Page</u>
6.4 Coastal Flood Hazard Mapping	98
6.5 FIRM Revisions	98
6.5.1 Letters of Map Amendment	98
6.5.2 Letters of Map Revision Based on Fill	99
6.5.3 Letters of Map Revision	99
6.5.4 Physical Map Revisions	100
6.5.5 Contracted Restudies	100
6.5.6 Community Map History	100
SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION	101
7.1 Contracted Studies	101
7.2 Community Meetings	102
SECTION 8.0 – ADDITIONAL INFORMATION	104
SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES	105

	<u>Page</u>
	<u>Tables</u>
Table 25: Flood Hazard and Non-Encroachment Data for Selected Streams	96
Table 26: Summary of Coastal Transect Mapping Considerations	98
Table 27: Incorporated Letters of Map Change	99
Table 28: Community Map History	101
Table 29: Summary of Contracted Studies Included in this FIS Report	102
Table 30: Community Meetings	103
Table 31: Map Repositories	104
Table 32: Additional Information	104
Table 33: Bibliography and References	106

Volume 2
Exhibits

Flood Profiles	<u>Panel</u>
Brushy Fork	01-02 P
Dreaming Creek Tributary	03-05 P
Irvine Lick Creek	06-08 P
Kentucky River	09-13 P
Lower Tate Creek	14-15 P
Otter Creek	16-17 P
Otter Creek Tributary 1	18-22 P
Otter Creek Tributary 1.1	23-24 P
Otter Creek Tributary 2	25-29 P
Silver Creek	30-31 P
Taylor Fork	32-35 P
Taylor Fork Tributary 1	36-37 P
Taylor Fork Tributary 2	38-40 P
Taylor Fork Tributary 2A	41 P
Taylor Fork Tributary 3	42-43 P
Taylor Fork Tributary 4	44-45 P
Taylor Fork Tributary 5	46-47 P
Taylor Fork Tributary 6	48-50 P
Taylor Fork Tributary 7	51 P
Terrill Branch	52-54 P
Upper Tate Creek	55-57 P
Walnut Meadow Branch	58-60 P

Published Separately

Flood Insurance Rate Map (FIRM)

Table 25: Flood Hazard and Non-Encroachment Data for Selected Streams

Flooding Source	Cross Section	Stream Station	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)	Non-Encroachment Width (feet)	
					Left	Right
Irvine Lick Creek	A	114 ¹	1,679	842.9 ⁴	20	20
Irvine Lick Creek	B	396 ¹	1,679	842.9 ⁴	23	23
Irvine Lick Creek	C	786 ¹	1,679	846.4	18	18
Irvine Lick Creek	D	981 ¹	1,679	847.5	13	13
Irvine Lick Creek	E	1,038 ¹	1,679	850.4	19	19
Irvine Lick Creek	F	1,806 ¹	1,624	850.9	11	11
Irvine Lick Creek	G	1,846 ¹	1,624	855.7	14	14
Irvine Lick Creek	H	2,619 ¹	1,624	855.9	18	19
Irvine Lick Creek	I	2,665 ¹	1,624	857.7	18	19
Irvine Lick Creek	J	4,096 ¹	1,409	861.2	33	33
Irvine Lick Creek	K	4,218 ¹	1,409	861.7	22	22
Irvine Lick Creek	L	4,287 ¹	1,409	864.9	22	22
Irvine Lick Creek	M	5,059 ¹	1,409	866.2	29	29
Irvine Lick Creek	N	5,234 ¹	1,409	867.0	17	17
Irvine Lick Creek	O	5,281 ¹	1,266	868.8	20	20
Irvine Lick Creek	P	5,432 ¹	1,266	869.2	17	38
Irvine Lick Creek	Q	6,366 ¹	1,266	875.7	18	18
Otter Creek Tributary 1	A	0 ²	940	889.9	16	16
Otter Creek Tributary 1	B	173 ²	940	902.9	21	21
Otter Creek Tributary 1	C	1,208 ²	516	903.5	10	10
Otter Creek Tributary 1	D	1,351 ²	516	906.8	6	6
Otter Creek Tributary 1	E	1,642 ²	516	915.9	24	32
Otter Creek Tributary 1	F	2,158 ²	401	918.3	14	14
Otter Creek Tributary 1.1	A	18 ¹	656	867.8 ⁴	13	13
Otter Creek Tributary 1.1	B	67 ¹	656	867.8 ⁴	13	13
Otter Creek Tributary 1.1	C	583 ¹	618	870.3	28	13
Otter Creek Tributary 1.1	D	633 ¹	618	872.0	35	4
Otter Creek Tributary 1.1	E	959 ¹	618	874.7	54	9

Table 25: Flood Hazard and Non-Encroachment Data for Selected Streams

Flooding Source	Cross Section	Stream Station	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)	Non-Encroachment Width (feet)	
					Left	Right
Otter Creek Tributary 1.1	F	1,688 ¹	618	881.9	19	19
Otter Creek Tributary 1.1	G	1,909 ¹	618	886.5	22	22
Otter Creek Tributary 1.1	H	2,242 ¹	469	886.6	19	19
Otter Creek Tributary 1.1	I	2,777 ¹	469	889.5	6	6
Otter Creek Tributary 1.1	J	3,044 ¹	469	892.4	9	26
Otter Creek Tributary 1.1	K	3,375 ¹	355	894.3	11	11
Otter Creek Tributary 1.1	L	3,502 ¹	355	896.4	13	13
Otter Creek Tributary 1.1	M	3,543 ¹	355	900.0	39	21
Otter Creek Tributary 1.1	N	3,790 ¹	355	901.0	39	13
Otter Creek Tributary 1.1	O	3,827 ¹	355	907.2	39	13
Otter Creek Tributary 1.1	P	4,451 ¹	355	908.2	11	11
Otter Creek Tributary 1.1	Q	4,600 ¹	355	909.5	10	16
Otter Creek Tributary 1.1	R	4,676 ¹	355	910.5	9	7
Otter Creek Tributary 1.1	S	4,741 ¹	355	916.0	27	18
Otter Creek Tributary 1.1	T	5,244 ¹	236	916.1	41	14
Otter Creek Tributary 2	A	24 ³	184	894.4	10	11
Otter Creek Tributary 2	B	52 ³	184	894.9	5	5
Otter Creek Tributary 2	C	79 ³	184	896.1	7	7
Otter Creek Tributary 2	D	1,113 ³	120	916.5	38	38
Otter Creek Tributary 2	E	1,151 ³	120	916.5	55	55
Terrill Branch	A	123 ¹	1,947	910.6 ⁴	101	15
Terrill Branch	B	960 ¹	1,947	910.6 ⁴	167	31
Terrill Branch	C	1,104 ¹	1,947	910.6 ⁴	165	17
Terrill Branch	D	2,309 ¹	1,905	910.6 ⁴	33	37

Table 25: Flood Hazard and Non-Encroachment Data for Selected Streams

Flooding Source	Cross Section	Stream Station	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)	Non-Encroachment Width (feet)	
					Left	Right
Terrill Branch	E	2,644 ¹	1,905	911.3	22	28
Terrill Branch	F	2,702 ¹	1,905	915.8	41	39
Terrill Branch	G	3,396 ¹	1,905	917.5	31	65
Terrill Branch	H	3,656 ¹	1,905	920.0	27	27
Terrill Branch	I	3,760 ¹	1,905	922.1	49	26
Terrill Branch	J	4,601 ¹	1,378	925.8	26	26
Terrill Branch	K	6,112 ¹	1,378	932.0	32	32
Terrill Branch	L	7,312 ¹	1,274	938.1	28	28

¹ Feet above mouth

² Stream distance in feet approximately 0.02 miles downstream of Big Hill Avenue

³ Stream distance in feet approximately 0.06 miles downstream of Evansdale Avenue

⁴ Water-surface elevations include backwater effects

6.4 Coastal Flood Hazard Mapping

This section is not applicable to this FIS project.

Table 26: Summary of Coastal Transect Mapping Considerations

[Not Applicable to this FIS Project]

6.5 FIRM Revisions

This FIS Report and the FIRM are based on the most up-to-date information available to FEMA at the time of its publication; however, flood hazard conditions change over time. Communities or private parties may request flood map revisions at any time. Certain types of requests require submission of supporting data. FEMA may also initiate a revision. Revisions to FIS projects may take several forms, including Letters of Map Amendment (LOMAs), Letters of Map Revision Based on Fill (LOMR-Fs), Letters of Map Revision (LOMRs) (referred to collectively as Letters of Map Change (LOMCs)), Physical Map Revisions (PMRs), and FEMA-contracted restudies. These types of revisions are further described below. Some of these types of revisions do not result in the republishing of the FIS Report. To assure that any user is aware of all revisions, it is advisable to contact the community repository of flood-hazard data (shown in Table 31, “Map Repositories”).

6.5.1 Letters of Map Amendment

A LOMA is an official revision by letter to an effective NFIP map. A LOMA results from an administrative process that involves the review of scientific or technical data submitted by the owner or lessee of property who believes the property has incorrectly been included in a designated SFHA. A LOMA amends the currently effective FEMA map and establishes that a specific property is not located in a SFHA. A LOMA cannot be issued for properties located on the PFD (primary frontal dune).

To obtain an application for a LOMA, visit www.fema.gov/floodplain-management/letter-map-amendment-loma and download the form “MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill”. Visit the “Flood Map-Related Fees” section to determine the cost, if any, of applying for a LOMA.

FEMA offers a tutorial on how to apply for a LOMA. The LOMA Tutorial Series can be accessed at www.fema.gov/online-tutorials.

For more information about how to apply for a LOMA, call the FEMA Map Information eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627).

6.5.2 Letters of Map Revision Based on Fill

A LOMR-F is an official revision by letter to an effective NFIP map. A LOMR-F states FEMA’s determination concerning whether a structure or parcel has been elevated on fill above the base flood elevation and is, therefore, excluded from the SFHA.

Information about obtaining an application for a LOMR-F can be obtained in the same manner as that for a LOMA, by visiting www.fema.gov/floodplain-management/letter-map-amendment-loma for the “MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill” or by calling the FEMA Map Information eXchange, toll free, at 1-877-FEMA MAP (1-877-336-2627). Fees for applying for a LOMR-F, if any, are listed in the “Flood Map-Related Fees” section.

A tutorial for LOMR-F is available at www.fema.gov/online-tutorials.

6.5.3 Letters of Map Revision

A LOMR is an official revision to the currently effective FEMA map. It is used to change flood zones, floodplain and floodway delineations, flood elevations and planimetric features. All requests for LOMRs should be made to FEMA through the chief executive officer of the community, since it is the community that must adopt any changes and revisions to the map. If the request for a LOMR is not submitted through the chief executive officer of the community, evidence must be submitted that the community has been notified of the request.

To obtain an application for a LOMR, visit www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/mt-2-application-forms-and-instructions and download the form “MT-2 Application Forms and Instructions for Conditional Letters of Map Revision and Letters of Map Revision”. Visit the “Flood Map-Related Fees” section to determine the cost of applying for a LOMR. For more information about how to apply for a LOMR, call the FEMA Map Information eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627) to speak to a Map Specialist.

Previously issued mappable LOMCs (including LOMRs) that have been incorporated into the Madison County FIRM are listed in Table 27.

Table 27: Incorporated Letters of Map Change

Case Number	Effective Date	Flooding Source	FIRM Panel(s)
N/A	N/A	N/A	N/A

* There are no incorporated LOMCs in Madison County

6.5.4 Physical Map Revisions

PMRs are an official republication of a community's NFIP map to effect changes to base flood elevations, floodplain boundary delineations, regulatory floodways and planimetric features. These changes typically occur as a result of structural works or improvements, annexations resulting in additional flood hazard areas or correction to base flood elevations or SFHAs.

The community's chief executive officer must submit scientific and technical data to FEMA to support the request for a PMR. The data will be analyzed and the map will be revised if warranted. The community is provided with copies of the revised information and is afforded a review period. When the base flood elevations are changed, a 90-day appeal period is provided. A 6-month adoption period for formal approval of the revised map(s) is also provided.

For more information about the PMR process, please visit <http://www.fema.gov> and visit the "Flood Map Revision Processes" section.

6.5.5 Contracted Restudies

The NFIP provides for a periodic review and restudy of flood hazards within a given community. FEMA accomplishes this through a national watershed-based mapping needs assessment strategy, known as the Coordinated Needs Management Strategy (CNMS). The CNMS is used by FEMA to assign priorities and allocate funding for new flood hazard analyses used to update the FIS Report and FIRM. The goal of CNMS is to define the validity of the engineering study data within a mapped inventory. The CNMS is used to track the assessment process, document engineering gaps and their resolution, and aid in prioritization for using flood risk as a key factor for areas identified for flood map updates. Visit www.fema.gov to learn more about the CNMS or contact the FEMA Regional Office listed in Section 8 of this FIS Report.

6.5.6 Community Map History

The current FIRM presents flooding information for the entire geographic area of Madison County. Previously, separate FIRMs, Flood Hazard Boundary Maps (FHBMs) and/or Flood Boundary and Floodway Maps (FBFMs) may have been prepared for the incorporated communities and the unincorporated areas in the county that had identified SFHAs. Current and historical data relating to the maps prepared for the project area are presented in Table 28, "Community Map History." A description of each of the column headings and the source of the date is also listed below.

- *Community Name* includes communities falling within the geographic area shown on the FIRM, including those that fall on the boundary line, nonparticipating communities, and communities with maps that have been rescinded. Communities with No Special Flood Hazards are indicated by a footnote. If all maps (FHBM, FBFM, and FIRM) were rescinded for a community, it is not listed in this table unless SFHAs have been identified in this community.
- *Initial Identification Date (First NFIP Map Published)* is the date of the first NFIP map that identified flood hazards in the community. If the FHBM has been converted to a FIRM, the initial FHBM date is shown. If the community has never been mapped, the upcoming effective date or "pending" (for Preliminary FIS Reports) is shown. If the community is listed in Table 28 but not identified on the map, the community is treated as if it were unmapped.

- *Initial FHBM Effective Date* is the effective date of the first Flood Hazard Boundary Map (FHBM). This date may be the same date as the Initial NFIP Map Date.
- *FHBM Revision Date(s)* is the date(s) that the FHBM was revised, if applicable.
- *Initial FIRM Effective Date* is the date of the first effective FIRM for the community. This is the first effective date that is shown on the FIRM panel.
- *FIRM Revision Date(s)* is the date(s) the FIRM was revised, if applicable. This is the revised date that is shown on the FIRM panel, if applicable. As countywide studies are completed or revised, each community listed should have its FIRM dates updated accordingly to reflect the date of the countywide study. Once the FIRMs exist in countywide format, as Physical Map Revisions (PMR) of FIRM panels within the county are completed, the FIRM Revision Dates in the table for each community affected by the PMR are updated with the date of the PMR, even if the PMR did not revise all the panels within that community.

The initial effective date for the Madison County FIRMs in countywide format was 10/02/2012.

Table 28: Community Map History

Community Name	Initial Identification Date (First NFIP Map Published)	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Madison County (Unincorporated Areas)	08/26/1977	08/26/1977	None	09/28/1990	10/02/2012
City of Berea	06/07/1974	06/07/1974	02/27/1976	09/30/1988	10/02/2012
City of Richmond	05/10/1974	05/10/1974	08/06/1976	09/18/1985	10/02/2012

SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION

7.1 Contracted Studies

Table 29 provides a summary of the contracted studies, by flooding source, that are included in this FIS Report.

Table 29: Summary of Contracted Studies Included in this FIS Report

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Irvine Lick Creek, Otter Creek Tributary 1, Otter Creek Tributary 1.1, Otter Creek Tributary 2, Terrill Branch, and Approximate Studies in HUCs 051002050308, 051002050106, 051002050306, 051002050105, 051002050205, 051002050203, 051002050204, 051002050202, 051002050201	TBD	AECOM	EMA-2012-CA-5465	November 2014	Madison County Unincorporated Areas and Cities of Berea and Richmond
Brushy Fork, Dreaming Creek Tributary, East Fork Silver Creek, Kentucky River, Otter Creek, Otter Creek Tributary 1, Otter Creek Tributary 2, Silver Creek, Tate Creek, Taylor Fork, Taylor Fork Tributary 1, Taylor Fork Tributary 2, Taylor Fork Tributary 2A, Taylor Fork Tributary 3, Taylor Fork Tributary 4, Taylor Fork Tributary 5, Taylor Fork Tributary 6, Taylor Fork Tributary 7, Terrill Branch and all streams within HUCs 051002050101, 051002050102, 051002050302, 051002050303, and 051002050305	10/2/12	AMEC Earth & Environmental	EMA-2007-CA-5772	July 2009	Madison County Unincorporated Areas and Cities of Berea and Richmond

7.2 Community Meetings

The dates of the community meetings held for this FIS project and any previous FIS projects are shown in Table 30. These meetings may have previously been referred to by a variety of names (Community Coordination Officer (CCO), Scoping, Discovery, etc.), but all meetings represent opportunities for FEMA, community officials, study contractors, and other invited guests to discuss the planning for and results of the project.

Table 30: Community Meetings

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Madison County (Unincorporated Areas)		9/12/2012	Discovery	Representatives of FEMA, KDOW, U.S. Army Corps of Engineers (Huntington District), the study contractor, and local community officials
		11/3/2015, 11/4/2015	Flood Risk Review Meeting	Representatives of FEMA, KDOW, USGS, AECOM, Stantec, Bluegrass ADD, and local community officials
			Resilience	TBD
			CCO Open House	TBD
City of Berea		9/12/2012	Discovery	Representatives of FEMA, KDOW, U.S. Army Corps of Engineers (Huntington District), the study contractor, and local community officials
		11/3/2015, 11/4/2015	Flood Risk Review Meeting	Representatives of FEMA, KDOW, USGS, AECOM, Stantec, Bluegrass ADD, and local community officials
			Resilience	TBD
			CCO Open House	TBD
City of Richmond		9/12/2012	Discovery	Representatives of FEMA, KDOW, U.S. Army Corps of Engineers (Huntington District), the study contractor, and local community officials
		11/3/2015, 11/4/2015	Flood Risk Review Meeting	Representatives of FEMA, KDOW, USGS, AECOM, Stantec, Bluegrass ADD, and local community officials
			Resilience	TBD
			CCO Open House	TBD

SECTION 8.0 – ADDITIONAL INFORMATION

Information concerning the pertinent data used in the preparation of this FIS Report can be obtained by submitting an order with any required payment to the FEMA Engineering Library. For more information on this process, see <http://www.fema.gov>.

Table 31 is a list of the locations where FIRMs for Madison County can be viewed. Please note that the maps at these locations are for reference only and are not for distribution. Also, please note that only the maps for the community listed in the table are available at that particular repository. A user may need to visit another repository to view maps from an adjacent community.

Table 31: Map Repositories

Community	Address	City	State	Zip Code
Madison County (Unincorporated Areas)	101 West Main Street	Richmond	KY	40475
City of Berea	212 Chestnut Street	Berea	KY	40403
City of Richmond	239 West Main Street	Richmond	KY	40475

The National Flood Hazard Layer (NFHL) dataset is a compilation of effective FIRM databases and LOMCs. Together they create a GIS data layer for a State or Territory. The NFHL is updated as studies become effective and extracts are made available to the public monthly. NFHL data can be viewed or ordered from the website shown in Table 32.

Table 32 contains useful contact information regarding the FIS Report, the FIRM, and other relevant flood hazard and GIS data. In addition, information about the state NFIP Coordinator and GIS Coordinator is shown in this table. At the request of FEMA, each Governor has designated an agency of State or territorial government to coordinate that State's or territory's NFIP activities. These agencies often assist communities in developing and adopting necessary floodplain management measures. State GIS Coordinators are knowledgeable about the availability and location of state and local GIS data in their state.

Table 32: Additional Information

FEMA and the NFIP	
FEMA and FEMA Engineering Library website	http://www.fema.gov
NFIP website	www.fema.gov/national-flood-insurance-program
NFHL Dataset	http://msc.fema.gov
FEMA Region IV	Federal Regional Office, 3003 Chamblee Tucker Rd, Atlanta, GA 30341 (770) 220-5200
Other Federal Agencies	
USGS website	http://www.usgs.gov

Table 32: Additional Information

Hydraulic Engineering Center website	http://www.hec.usace.army.mil
State Agencies and Organizations	
State NFIP Coordinator	Alex J. VanPelt Environmental Scientist IV Floodplain Management Branch Kentucky Division of Water 200 Fair Oaks Lane Frankfort, KY 40601 (502) 564-3410 alex.vanpelt@ky.gov
State GIS Coordinator	Kent Anness Kentucky Division of Geographic Information 100 Fair Oaks Frankfort, KY 40601 (502) 564-6268 kent.anness@ky.gov
Statewide Regulatory Coordinator	Carey Johnson Coordinating Technical Program Manager Kentucky Division of Water 200 Fair Oaks Lane Frankfort, KY 40601 (502) 564-3410 Carey.Johnson@ky.gov

SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES

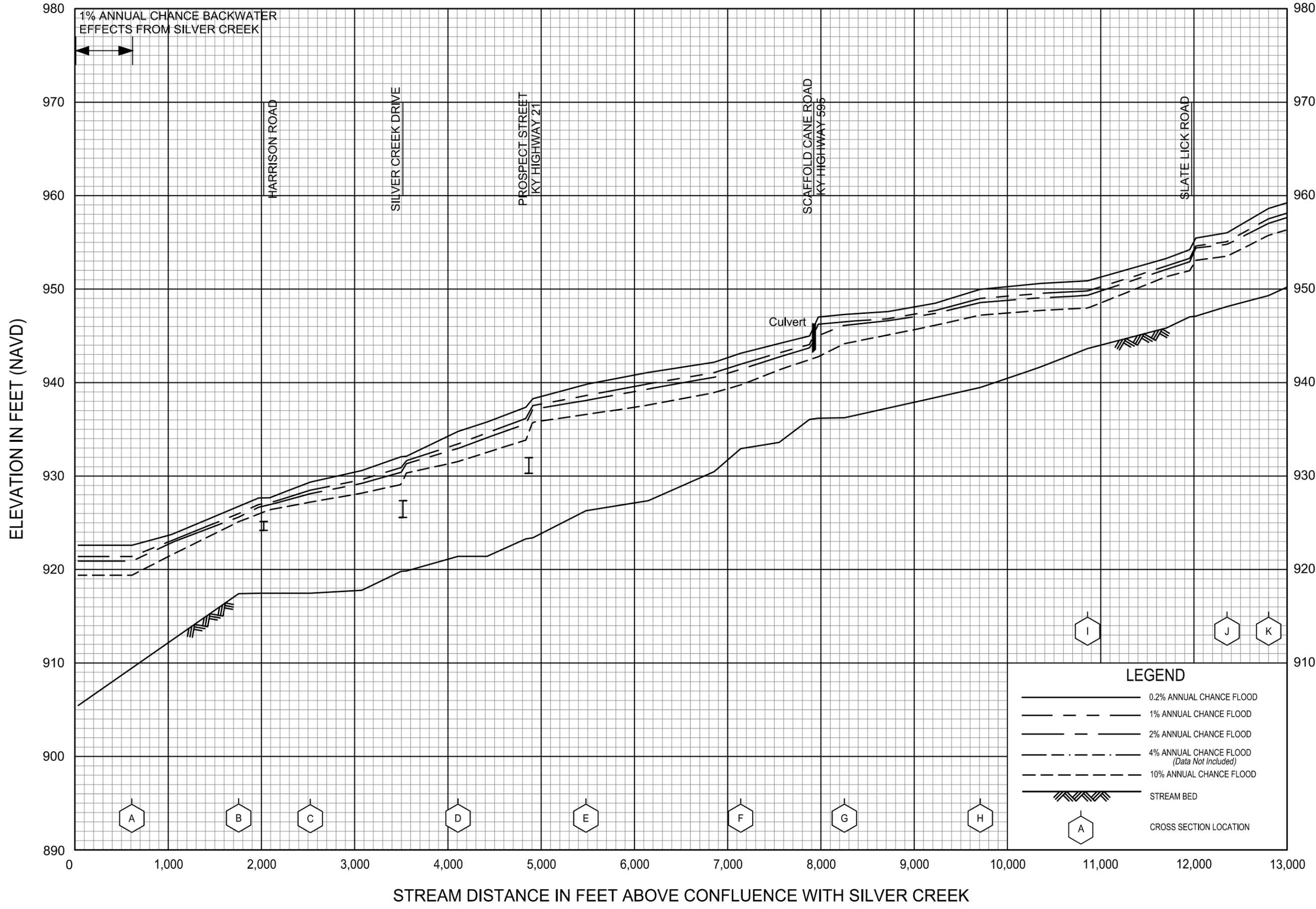
Table 33 includes sources used in the preparation of and cited in this FIS Report as well as additional studies that have been conducted in the study area.

Table 33: Bibliography and References

Citation in this FIS	Publisher/ Issuer	<i>Publication Title, "Article," Volume, Number, etc.</i>	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Berea 1988	Federal Emergency Management Agency	Flood Insurance Study, City of Berea, Madison County, Kentucky		Washington D.C.	September 30,1988	
CED 2009	Cabinet for Economic Development	"Kentucky Quick Facts"			2009	http://www.thinkkentucky.com
Madison 1988	Federal Emergency Management Agency	Flood Insurance Study, Madison County, Kentucky and Incorporated Areas		Washington D.C.	September 30,1988	
Madison 1990	Federal Emergency Management Agency	Flood Insurance Study, Madison County, Kentucky and Incorporated Areas		Washington D.C.	September 28,1990	
Madison 2012	Federal Emergency Management Agency	Flood Insurance Study, Madison County, Kentucky and Incorporated Areas		Washington D.C.	October 2, 2012	
USACE 1984	U.S. Army Corps of Engineers	HEC-2 Water-Surface Profiles Generalized Computer Program	Hydrologic Engineering Center	Davis, California	April 1984	
USACE 2004	U.S. Army Corps of Engineers	HEC-RAS "River Analysis System" Version 3.1.2	Hydrologic Engineering Center	Davis, California	April 2004	
USACE 2010	U.S. Army Corps of Engineers	HEC-RAS "River Analysis System" Version 4.1.0	Hydrologic Engineering Center	Davis, California	January 2010	

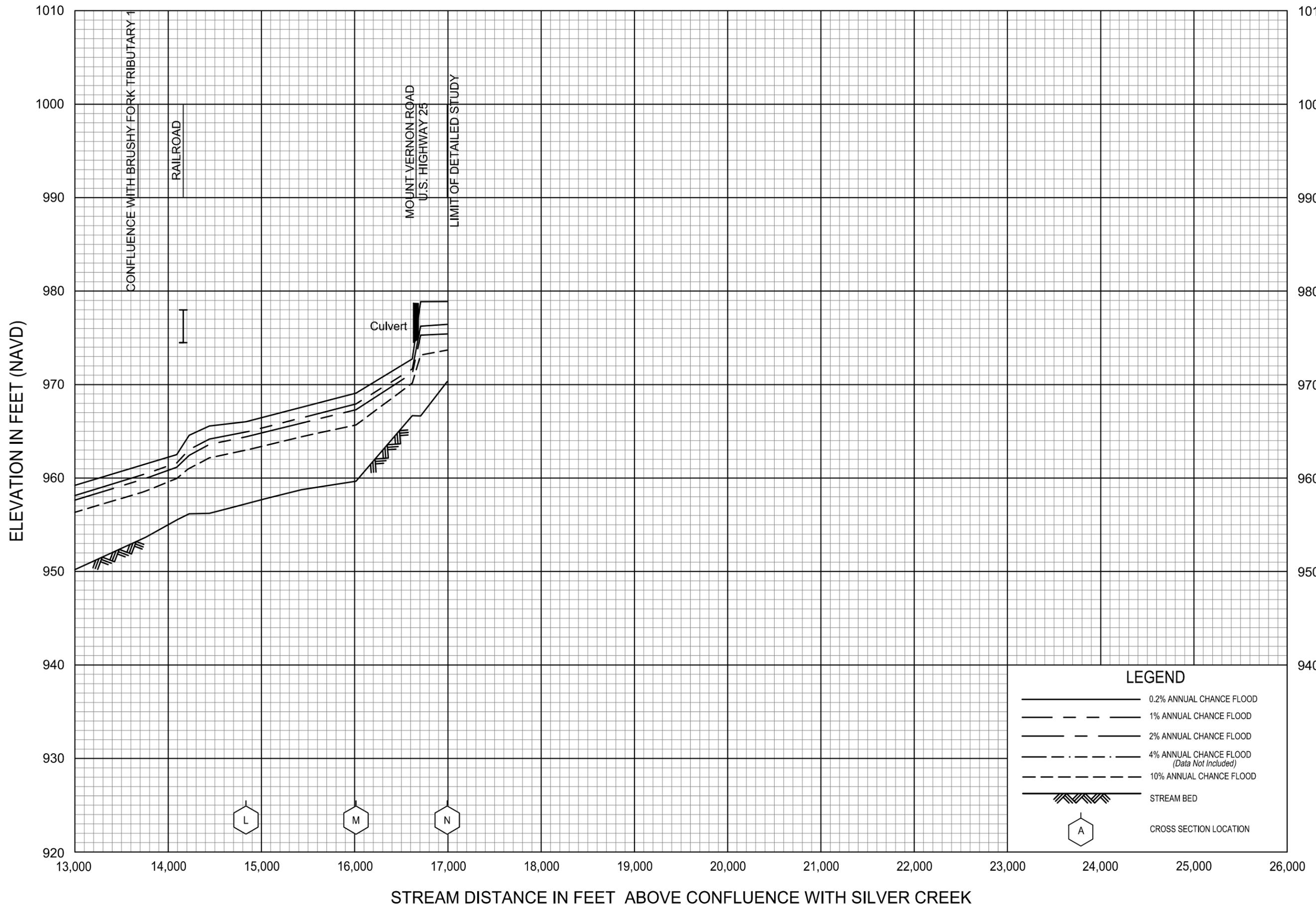
Table 33: Bibliography and References

Citation in this FIS	Publisher/ Issuer	<i>Publication Title</i> , "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USGS 2003	U.S. Geological Survey	"Estimating the Magnitude of Peak Flows for Streams in Kentucky for Selected Recurrence Intervals." Water Resources Investigations Report 03-4180, 68 p.	Hodgkins, G.A. and Martin, G.R.		2003	



**FLOOD PROFILES
BRUSHY FORK**

FEDERAL EMERGENCY MANAGEMENT AGENCY
MADISON COUNTY, KY
AND INCORPORATED AREAS



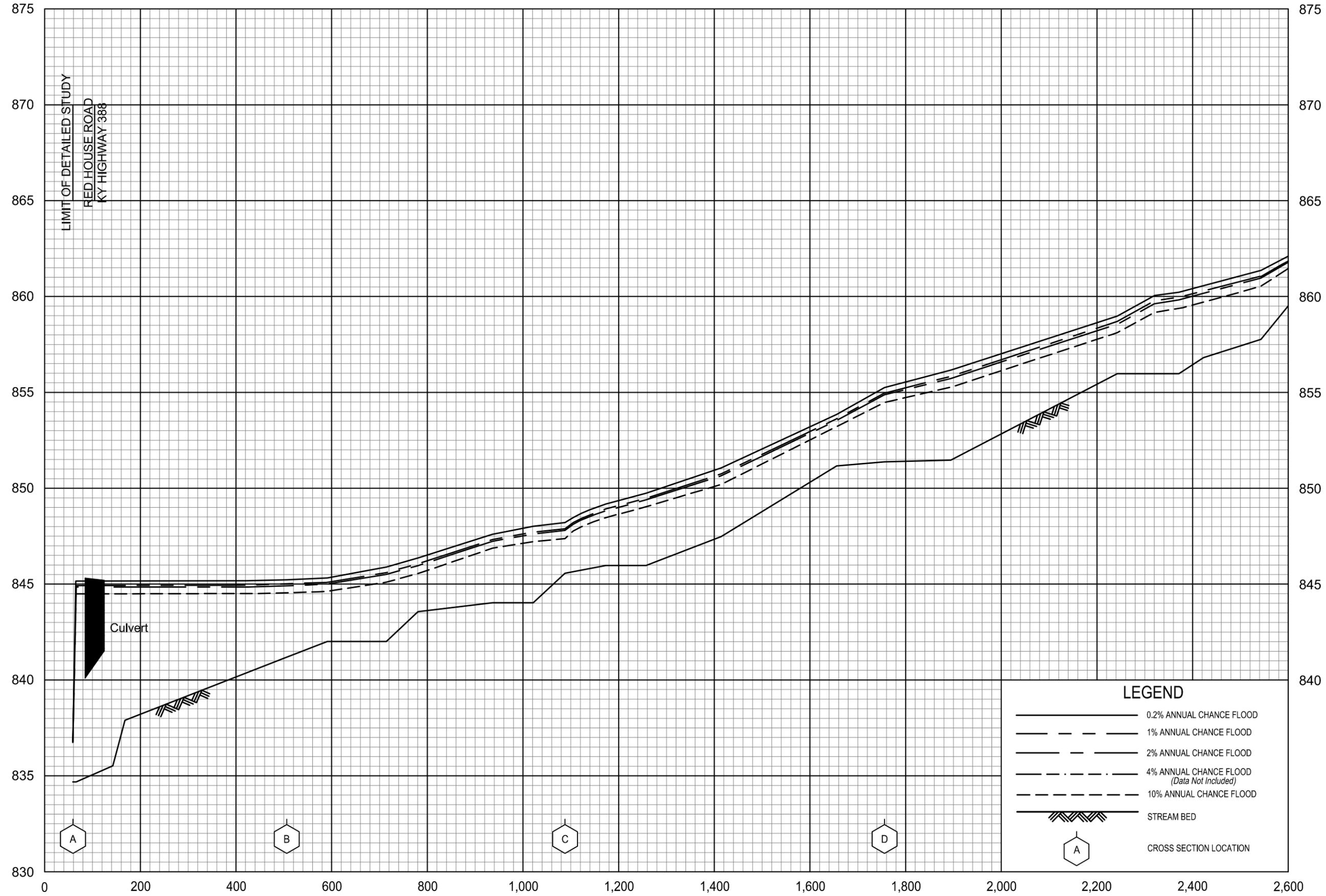
FLOOD PROFILES

BRUSHY FORK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



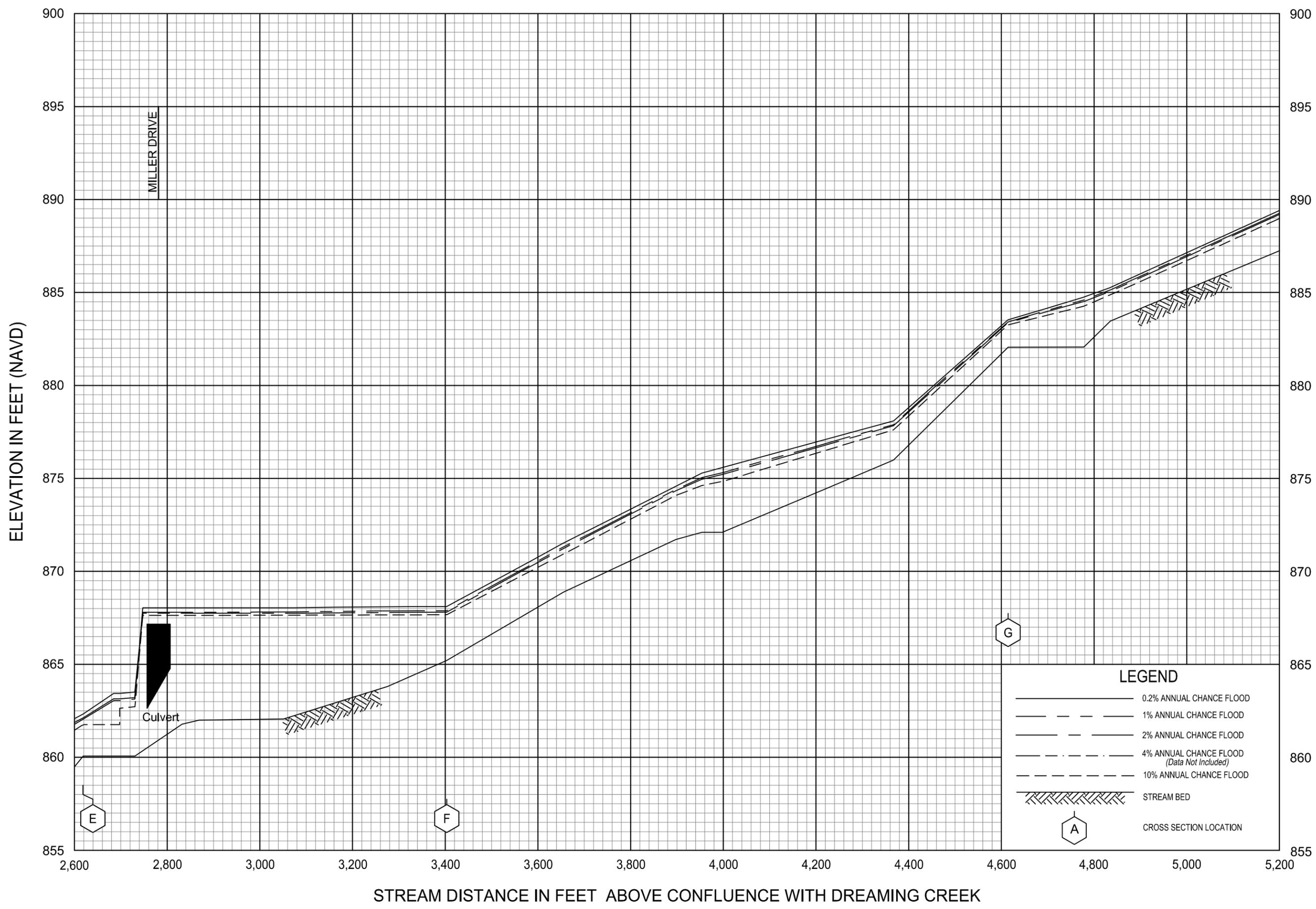
FLOOD PROFILES

DREAMING CREEK TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

03P



ELEVATION IN FEET (NAVD)

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH DREAMING CREEK

LEGEND

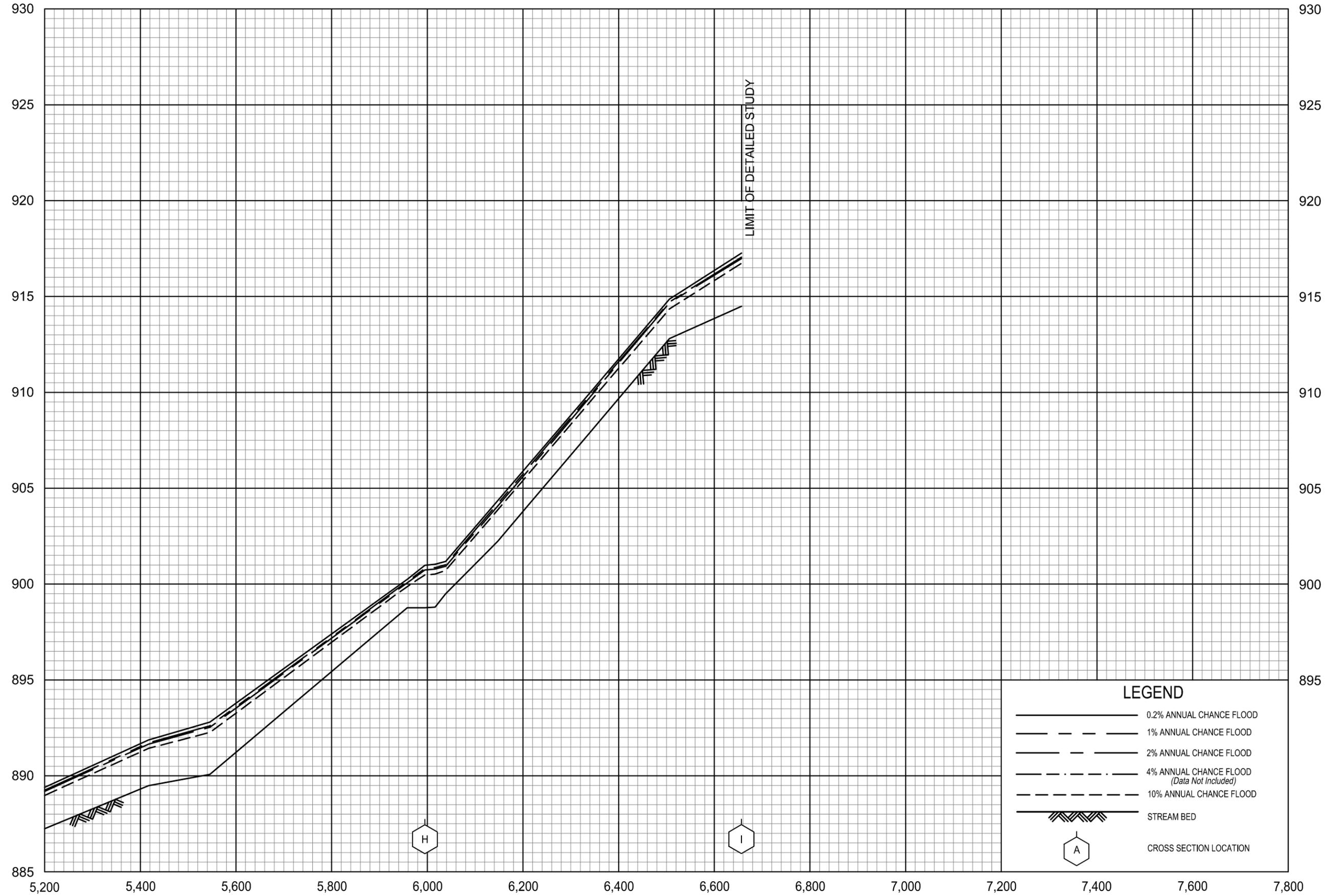
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- - - 1% ANNUAL CHANCE FLOOD
- · - · 2% ANNUAL CHANCE FLOOD
- · - · - · 4% ANNUAL CHANCE FLOOD (Data Not Included)
- - - 10% ANNUAL CHANCE FLOOD
- ▨ STREAM BED
- ⬡ A CROSS SECTION LOCATION

FLOOD PROFILES
DREAMING CREEK TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY
MADISON COUNTY
AND INCORPORATED AREAS

04P

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH DREAMING CREEK

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD
(Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

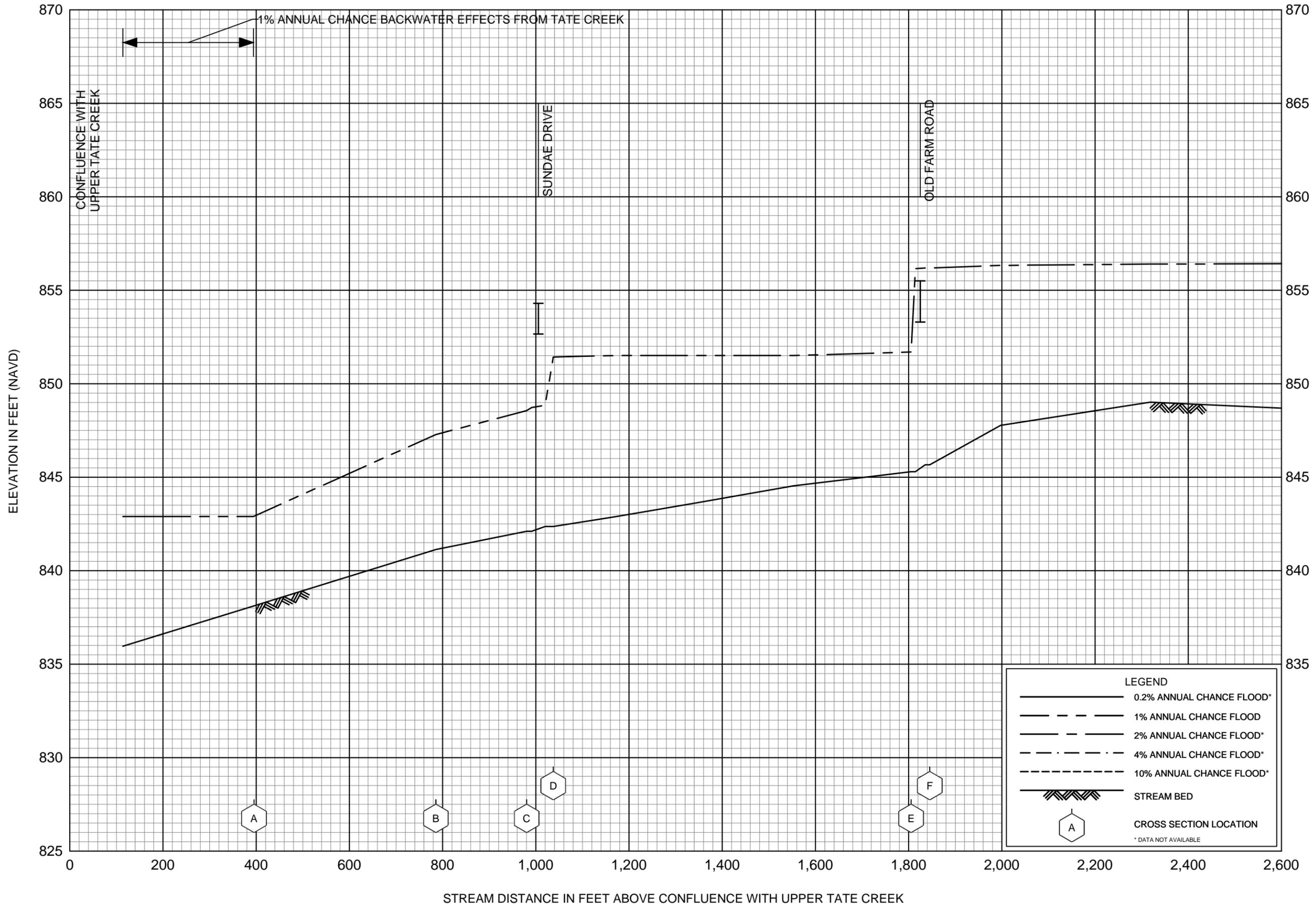
FLOOD PROFILES

DREAMING CREEK TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

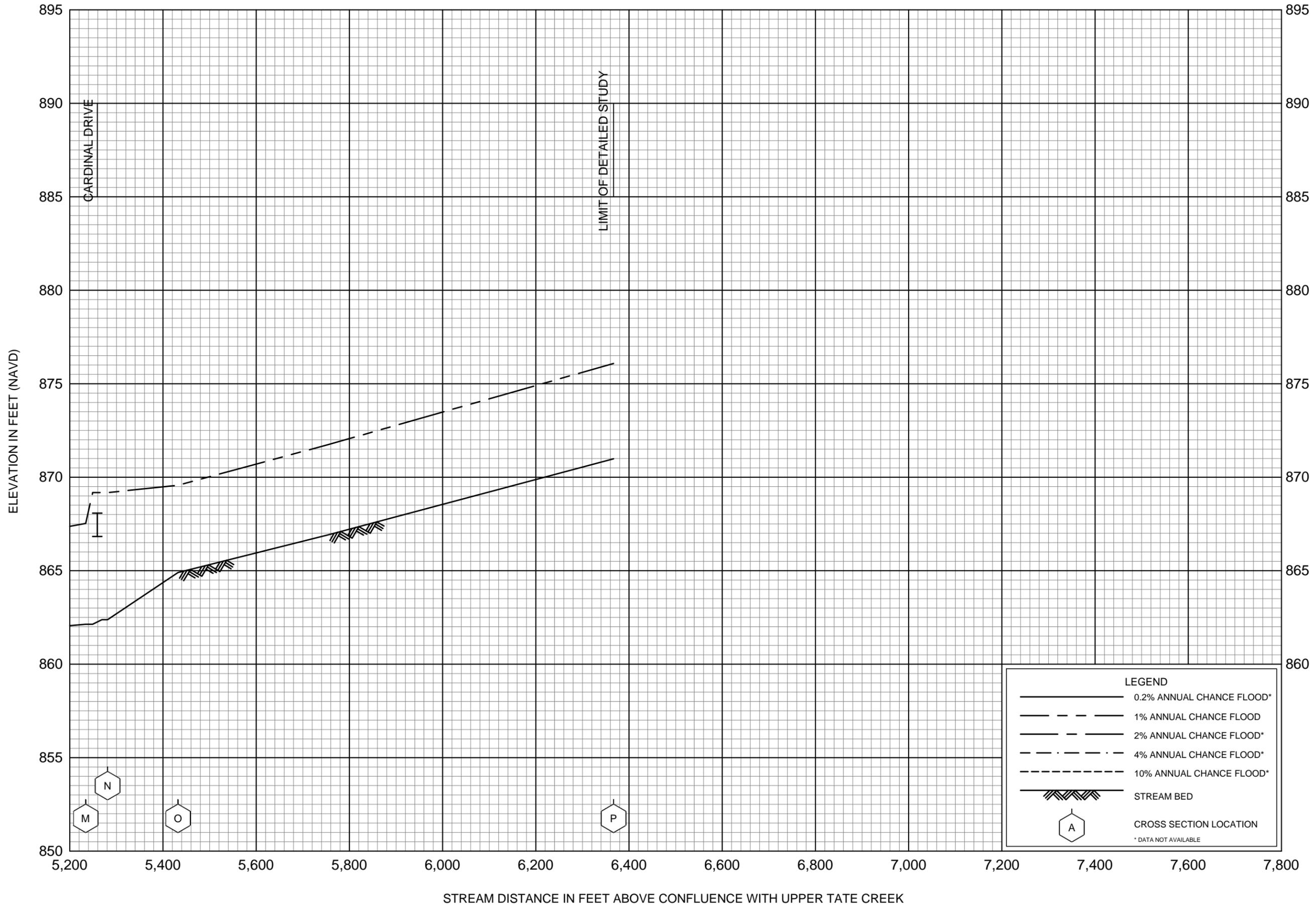
MADISON COUNTY, KY
AND INCORPORATED AREAS

05P



FLOOD PROFILES
IRVINE LICK CREEK

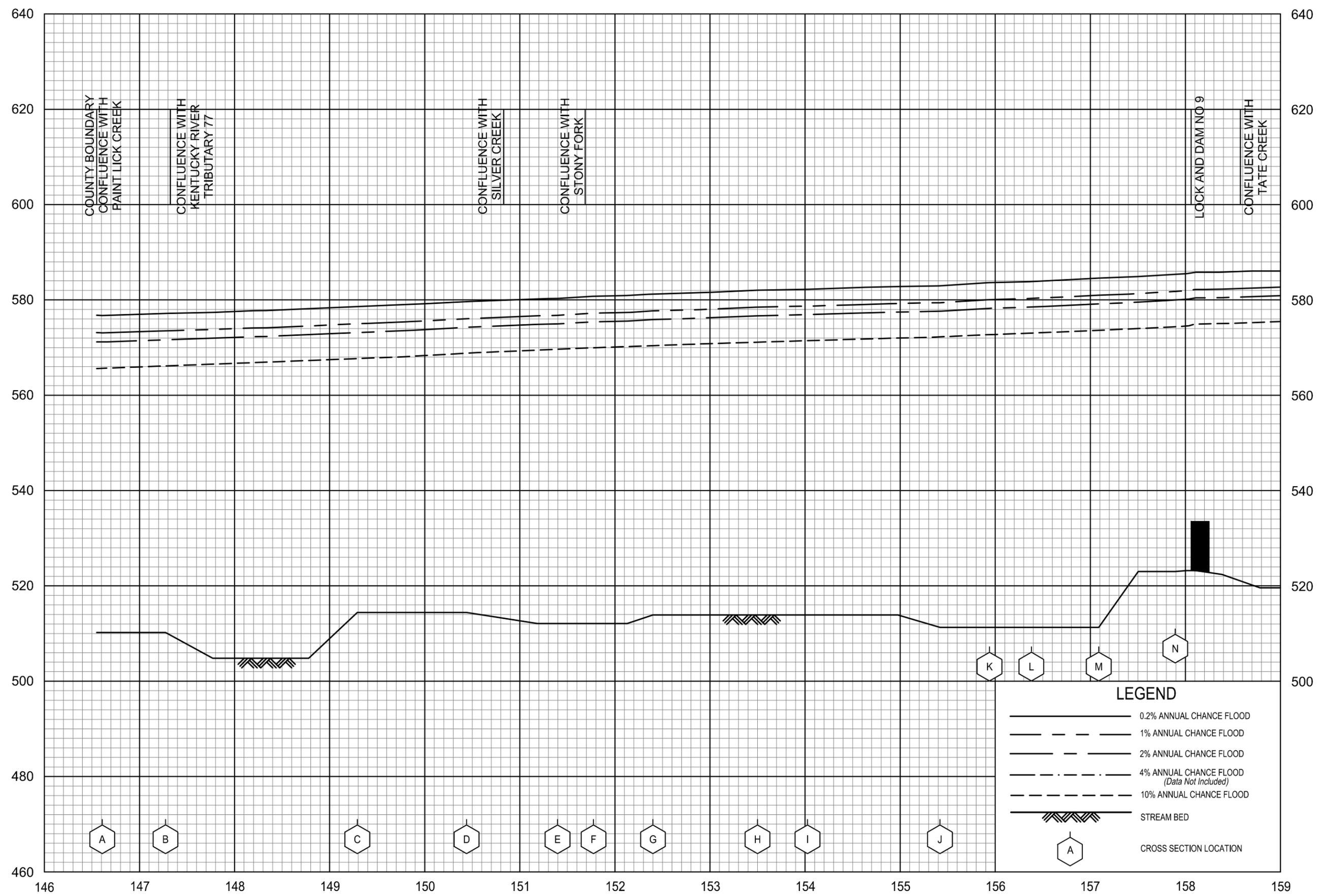
FEDERAL EMERGENCY MANAGEMENT AGENCY
MADISON COUNTY, KY
AND INCORPORATED AREAS



FLOOD PROFILES
IRVINE LICK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
MADISON COUNTY, KY
 AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



FLOOD PROFILES

KENTUCKY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

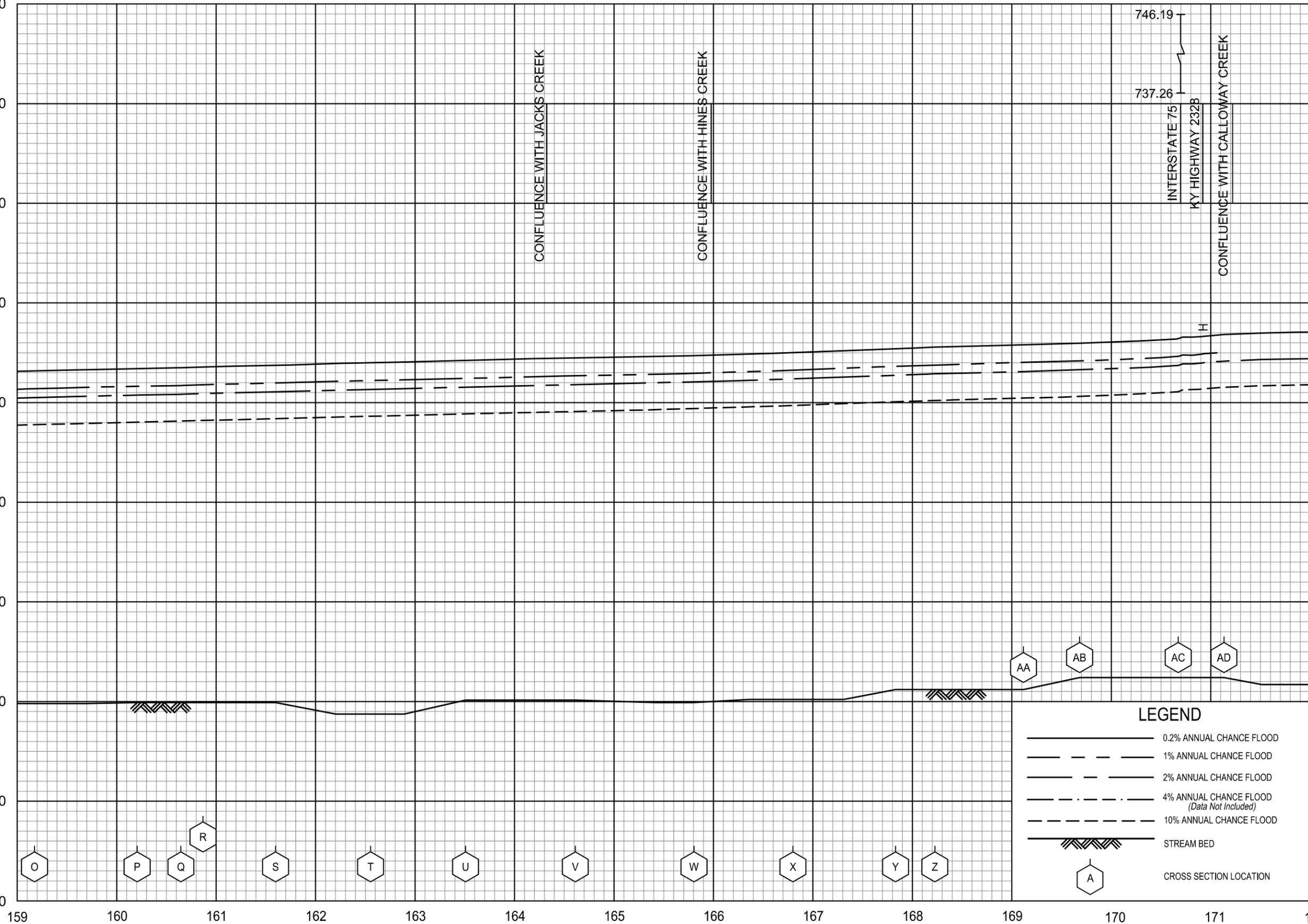
MADISON COUNTY, KY
AND INCORPORATED AREAS

09P

ELEVATION IN FEET (NAVD)

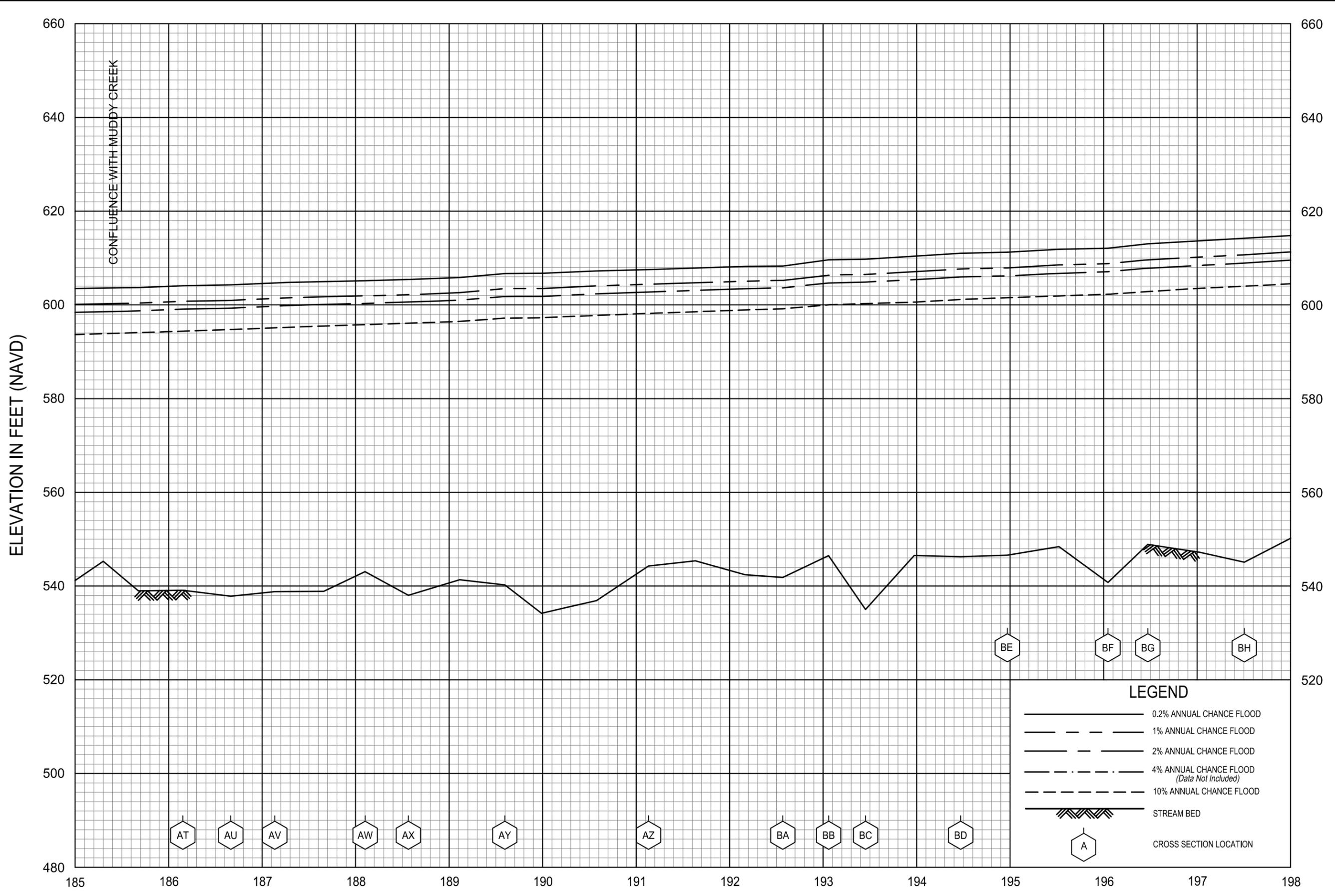
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560
540
520



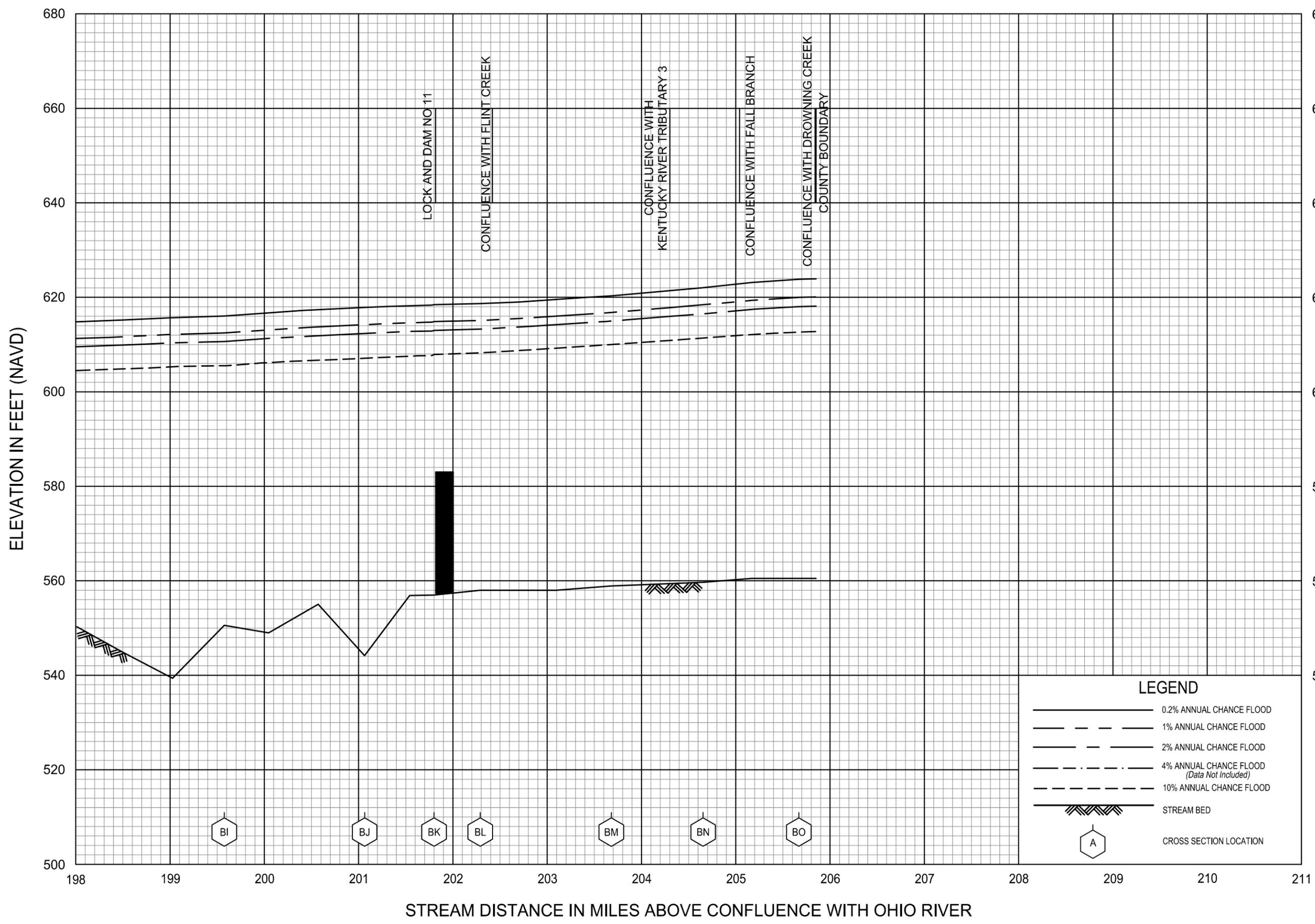
FLOOD PROFILES
KENTUCKY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
MADISON COUNTY, KY
AND INCORPORATED AREAS



FLOOD PROFILES
KENTUCKY RIVER

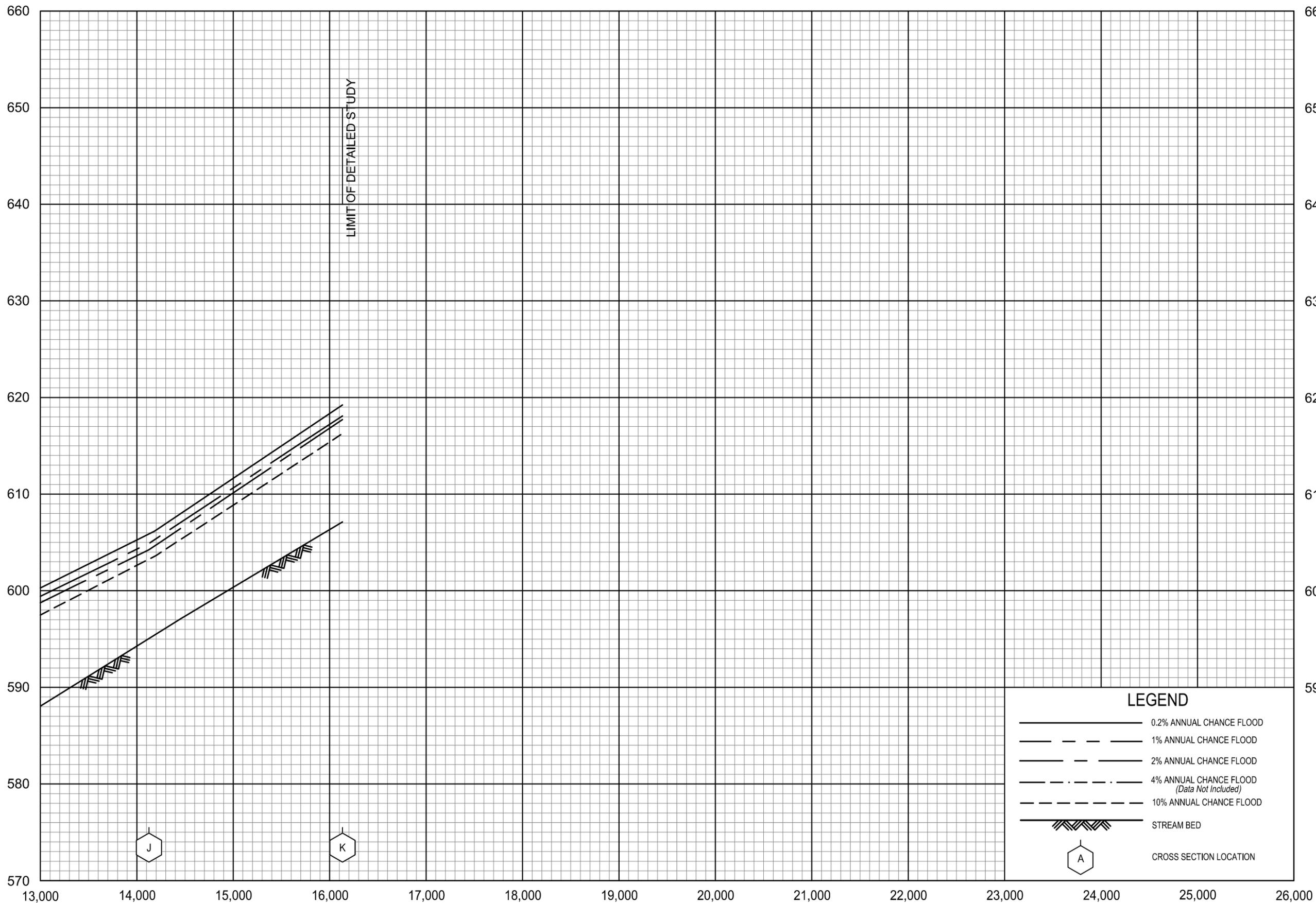
FEDERAL EMERGENCY MANAGEMENT AGENCY
 MADISON COUNTY, KY
 AND INCORPORATED AREAS



FLOOD PROFILES
KENTUCKY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH KENTUCKY RIVER

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD
(Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

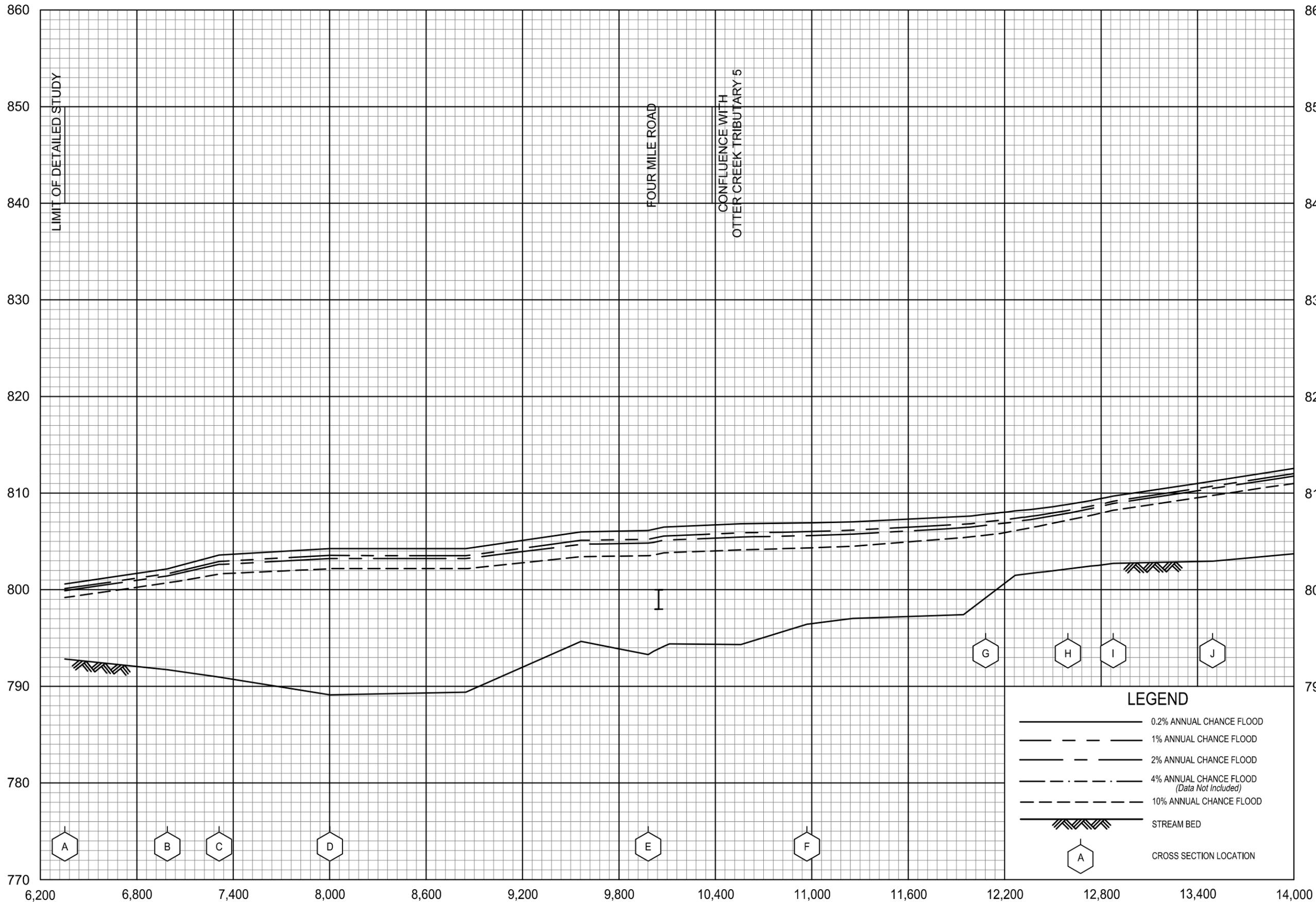
FLOOD PROFILES

LOWER TATE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH DREAMING CREEK

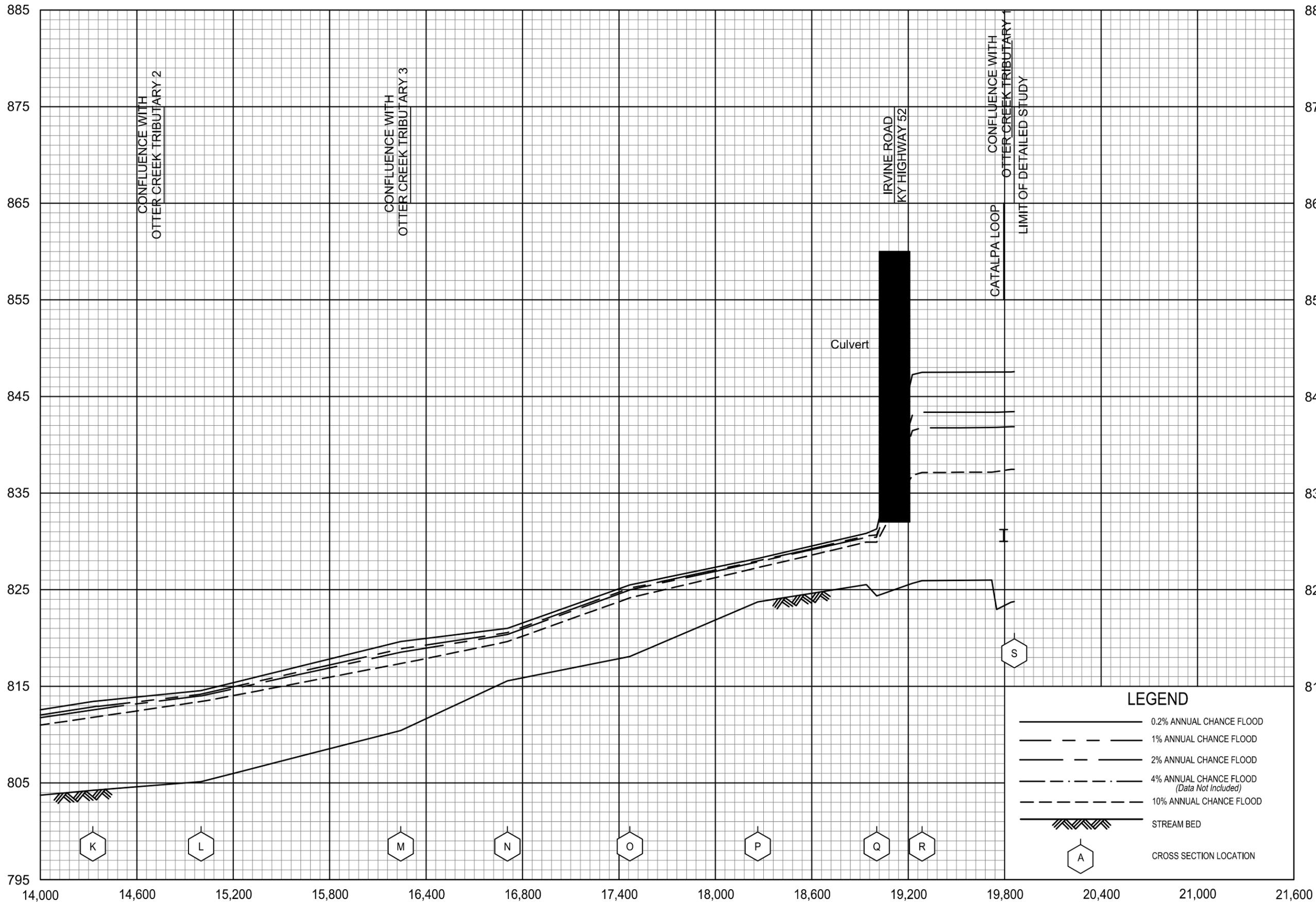
FLOOD PROFILES

OTTER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD (Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

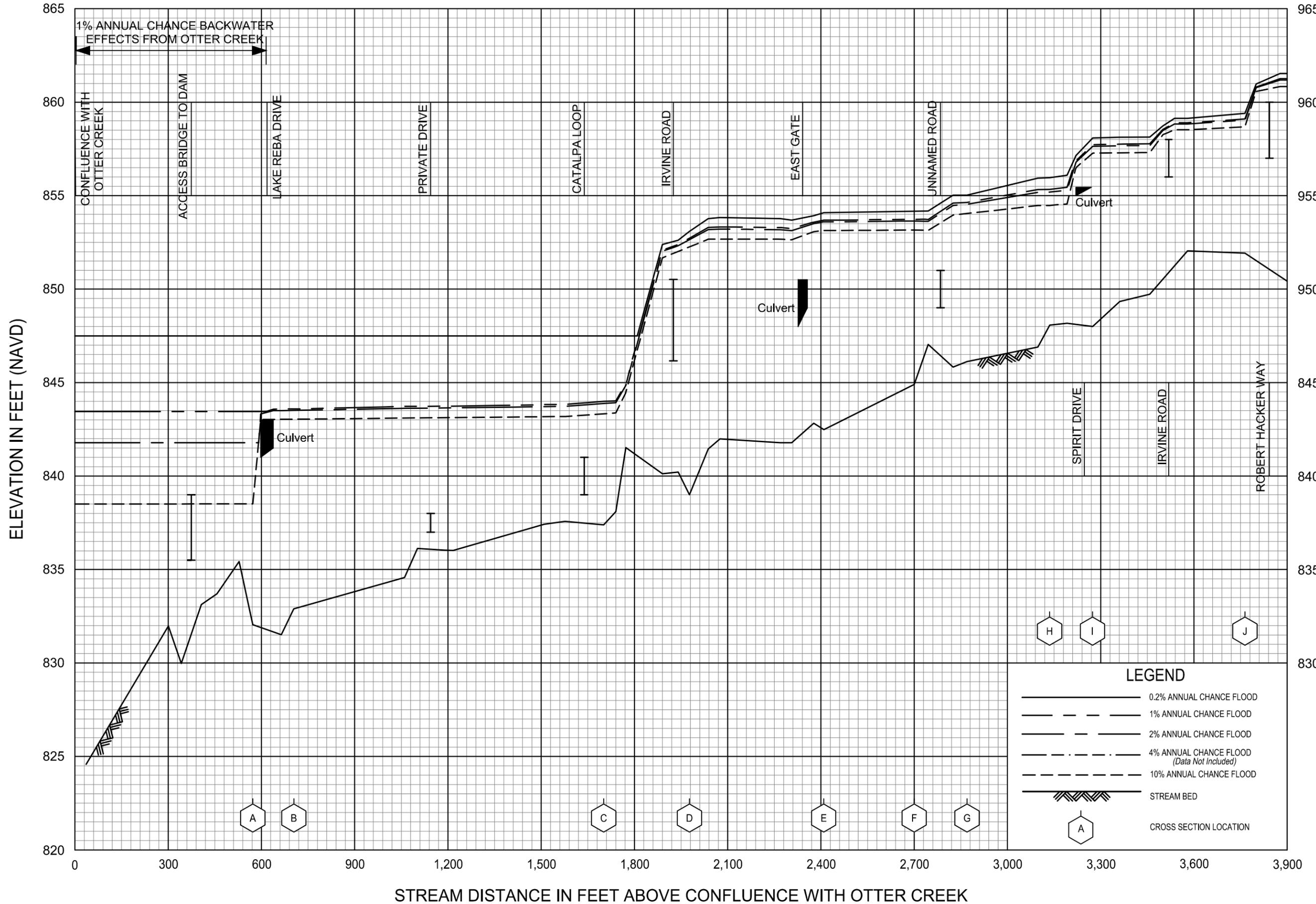
STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH DREAMING CREEK

FLOOD PROFILES

OTTER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

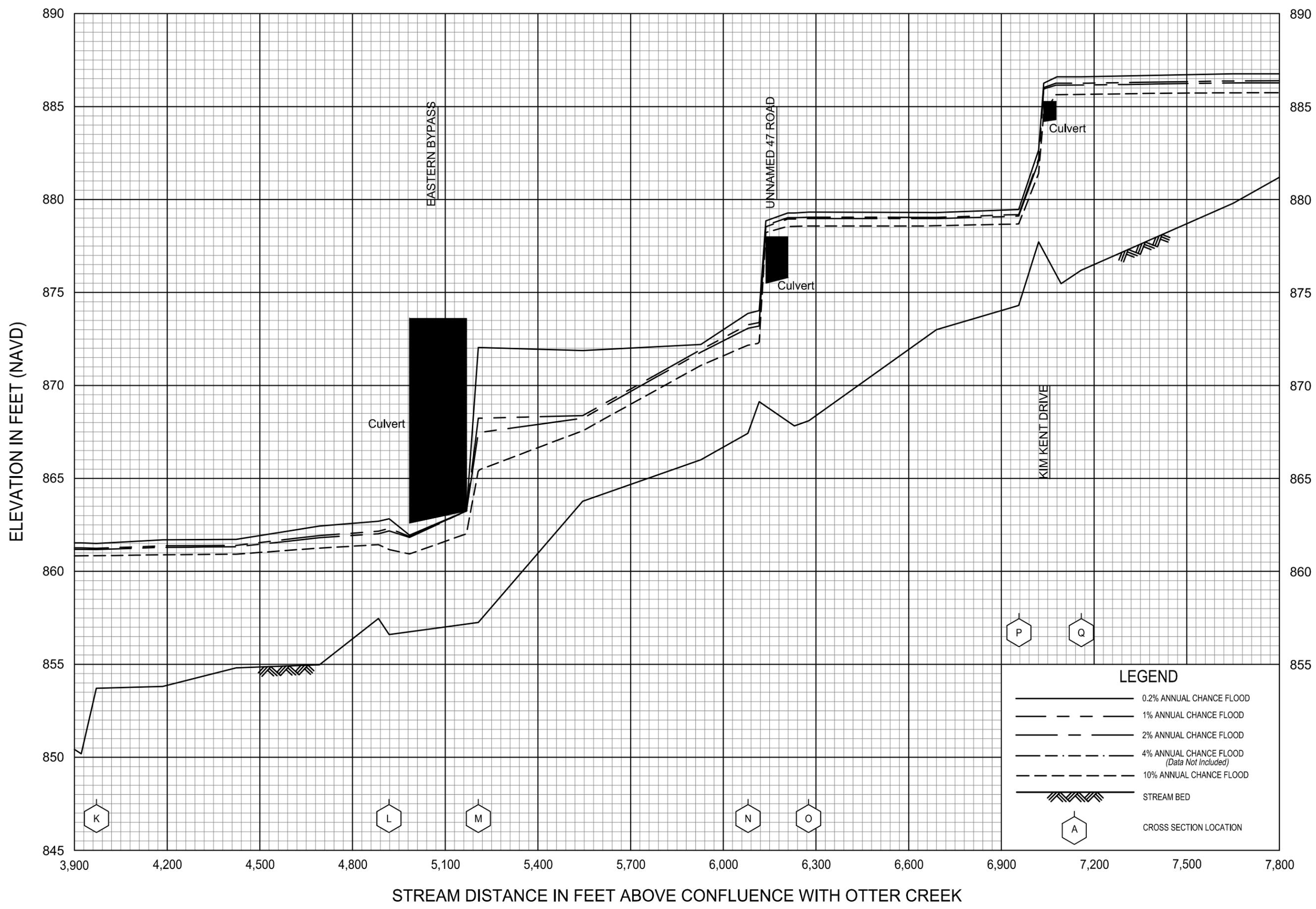
MADISON COUNTY, KY
AND INCORPORATED AREAS



FLOOD PROFILES

OTTER CREEK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY
 MADISON COUNTY, KY
 AND INCORPORATED AREAS



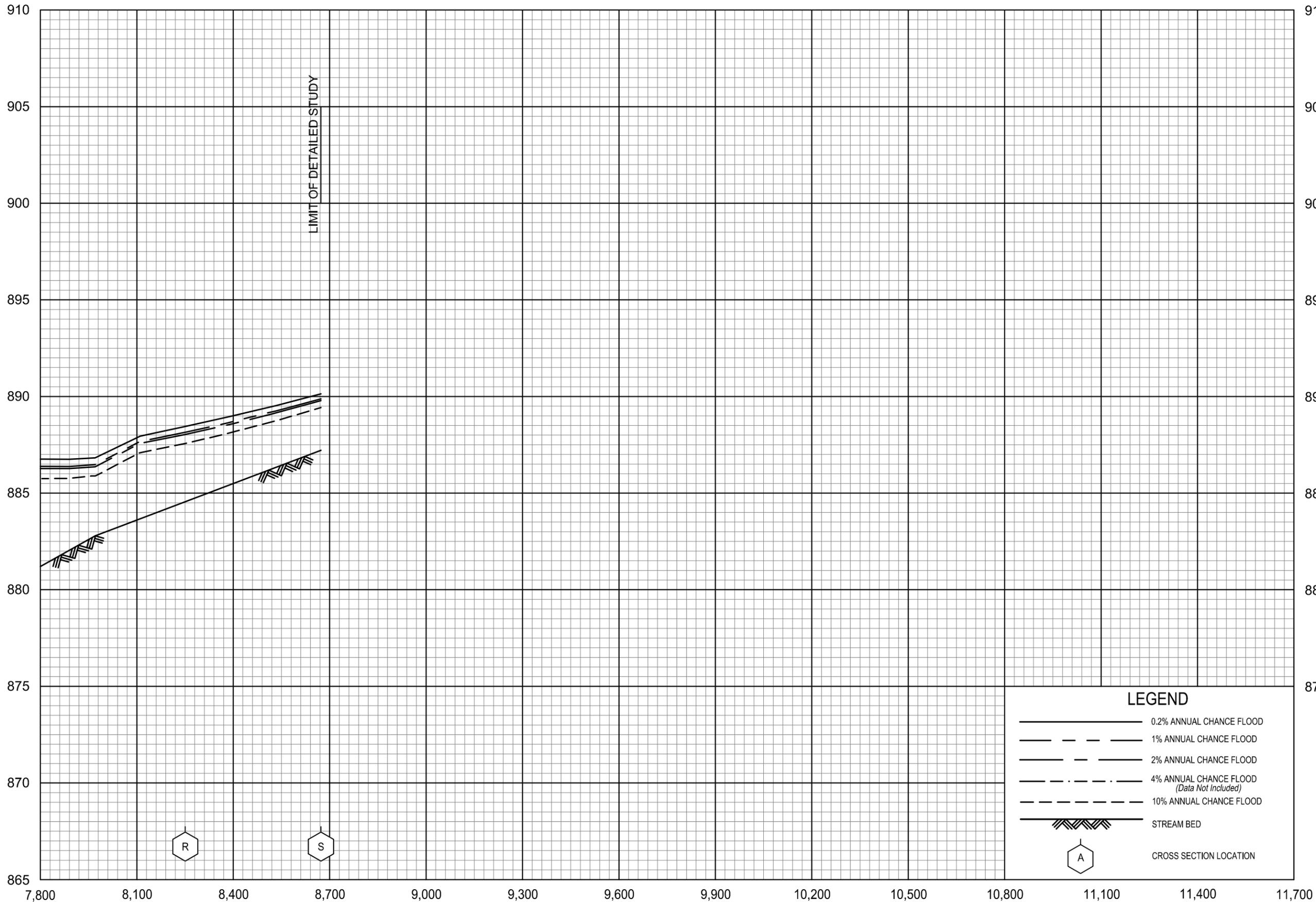
FLOOD PROFILES

OTTER CREEK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



LEGEND

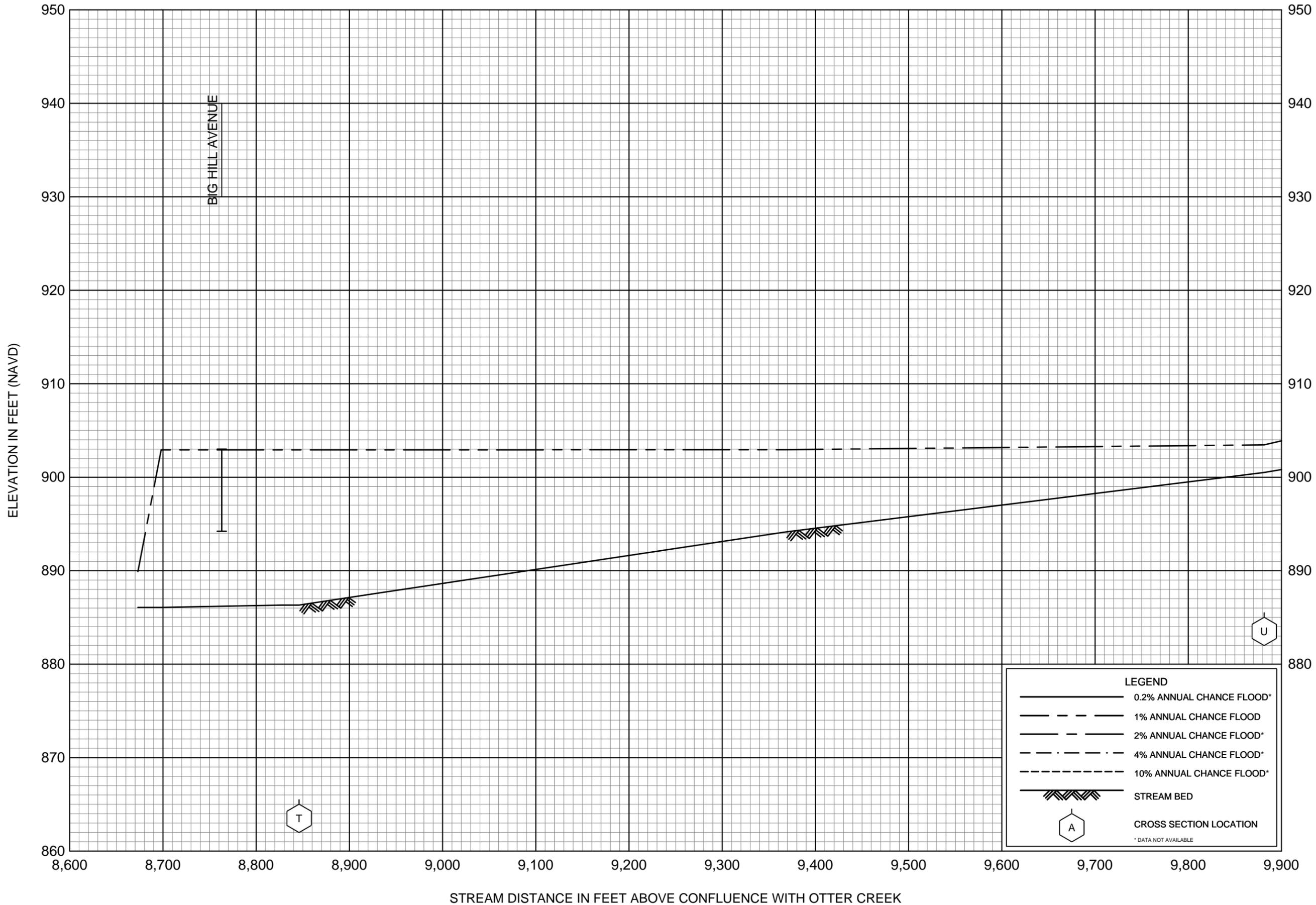
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(Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

OTTER CREEK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

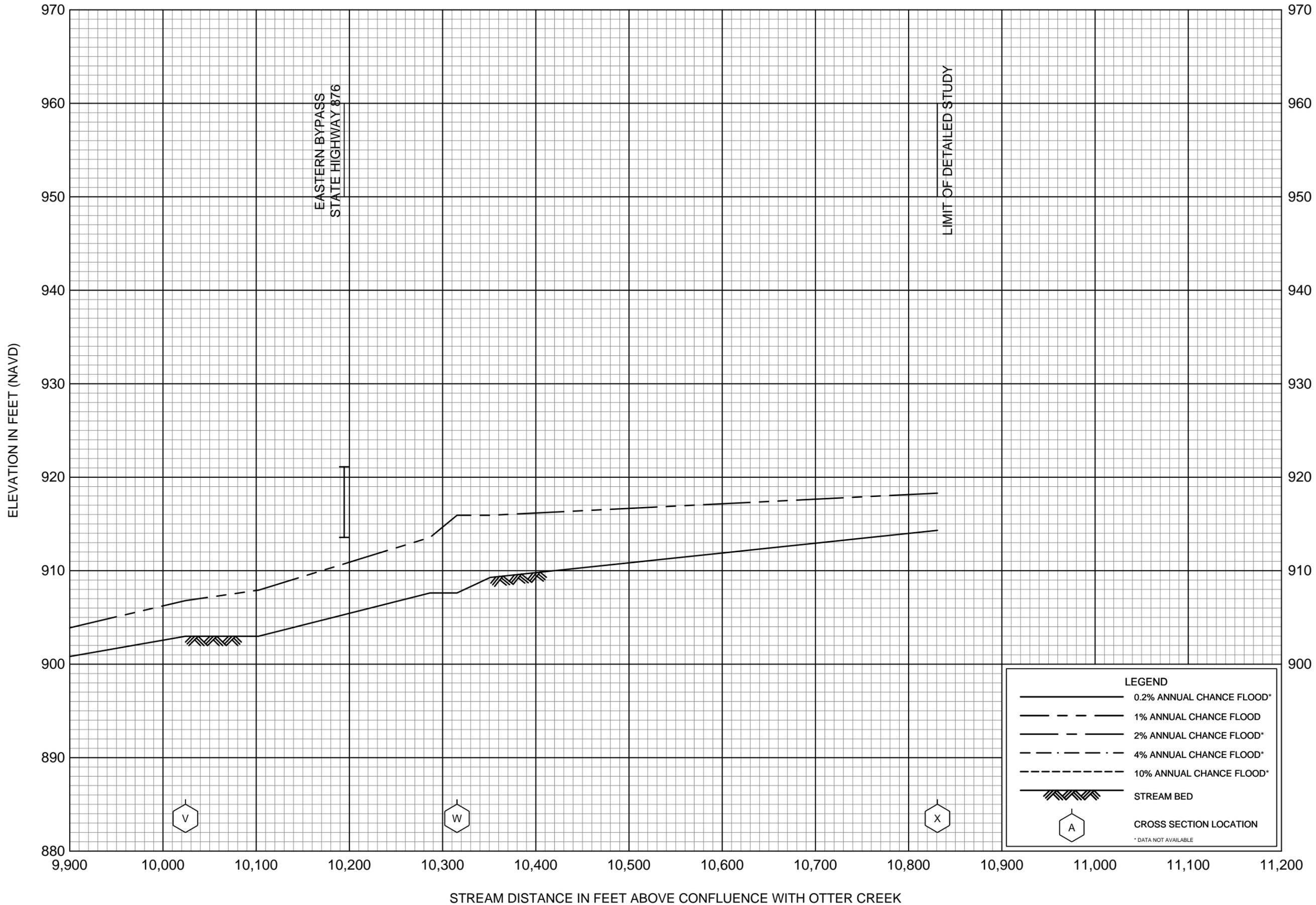
MADISON COUNTY, KY
AND INCORPORATED AREAS



FLOOD PROFILES

OTTER CREEK TRIBUTARY 1

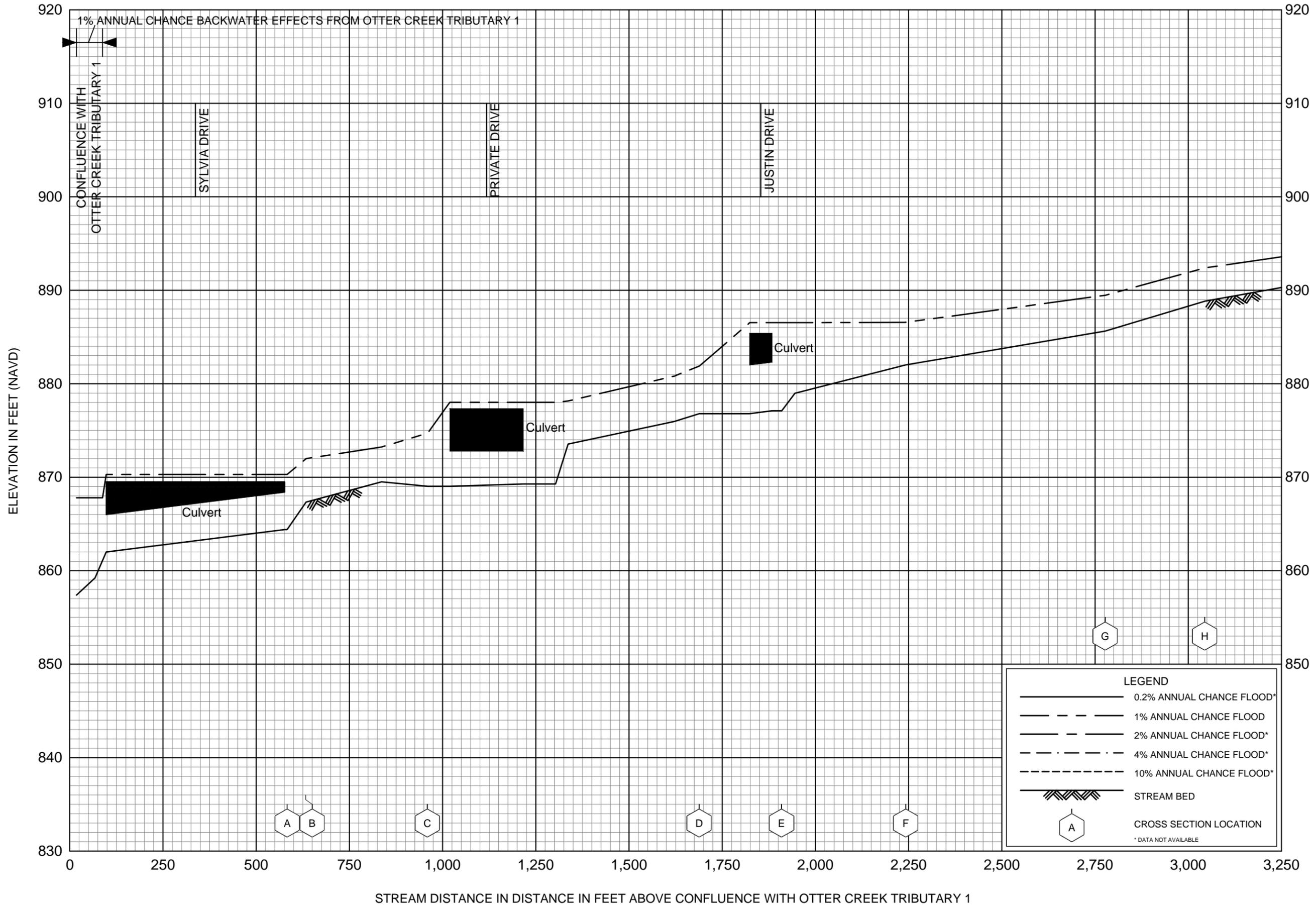
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MADISON COUNTY, KY
 AND INCORPORATED AREAS



FLOOD PROFILES

OTTER CREEK TRIBUTARY 1

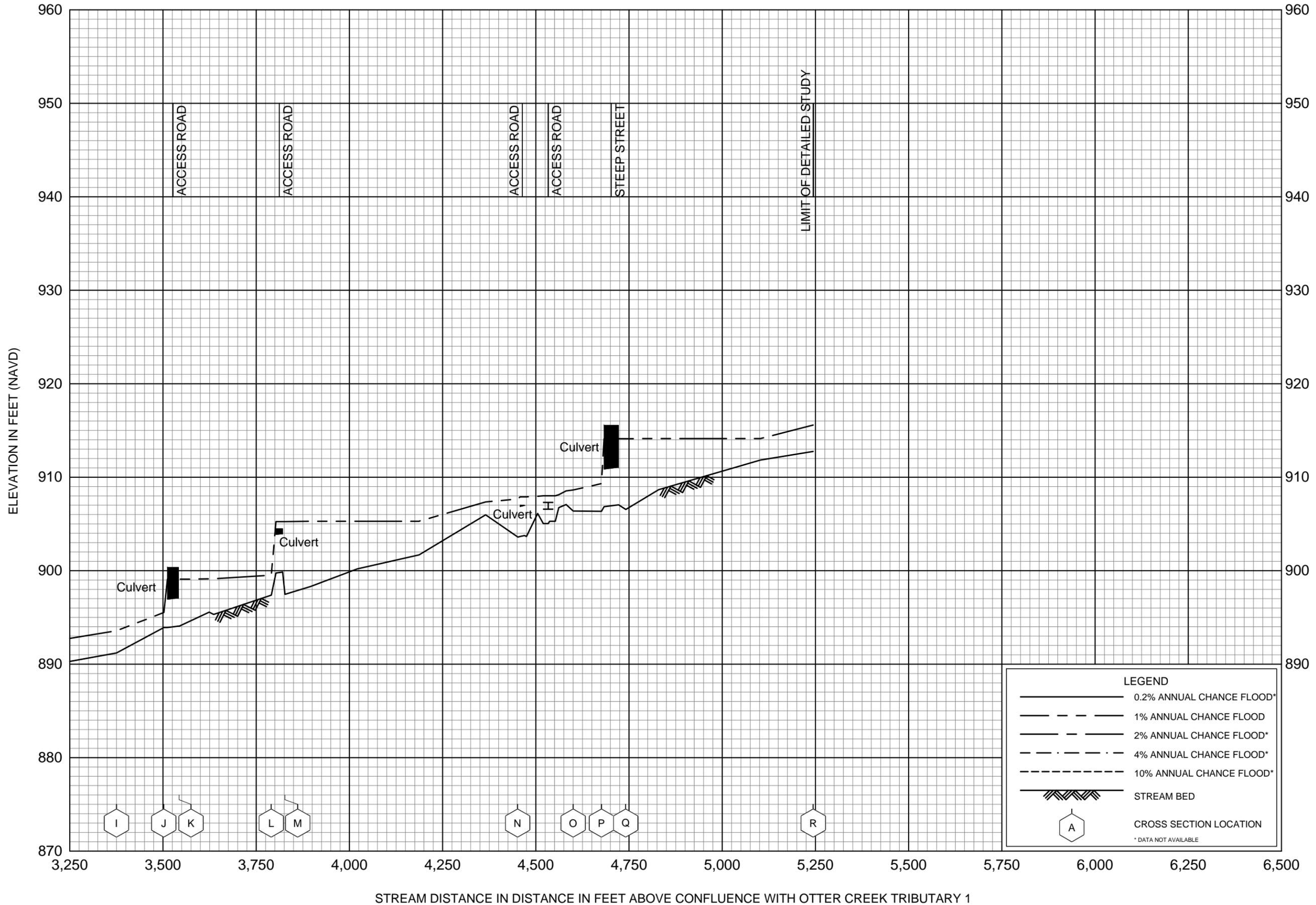
FEDERAL EMERGENCY MANAGEMENT AGENCY
MADISON COUNTY, KY
 AND INCORPORATED AREAS



FLOOD PROFILES

OTTER CREEK TRIBUTARY 1.1

FEDERAL EMERGENCY MANAGEMENT AGENCY
MADISON COUNTY, KY
 AND INCORPORATED AREAS

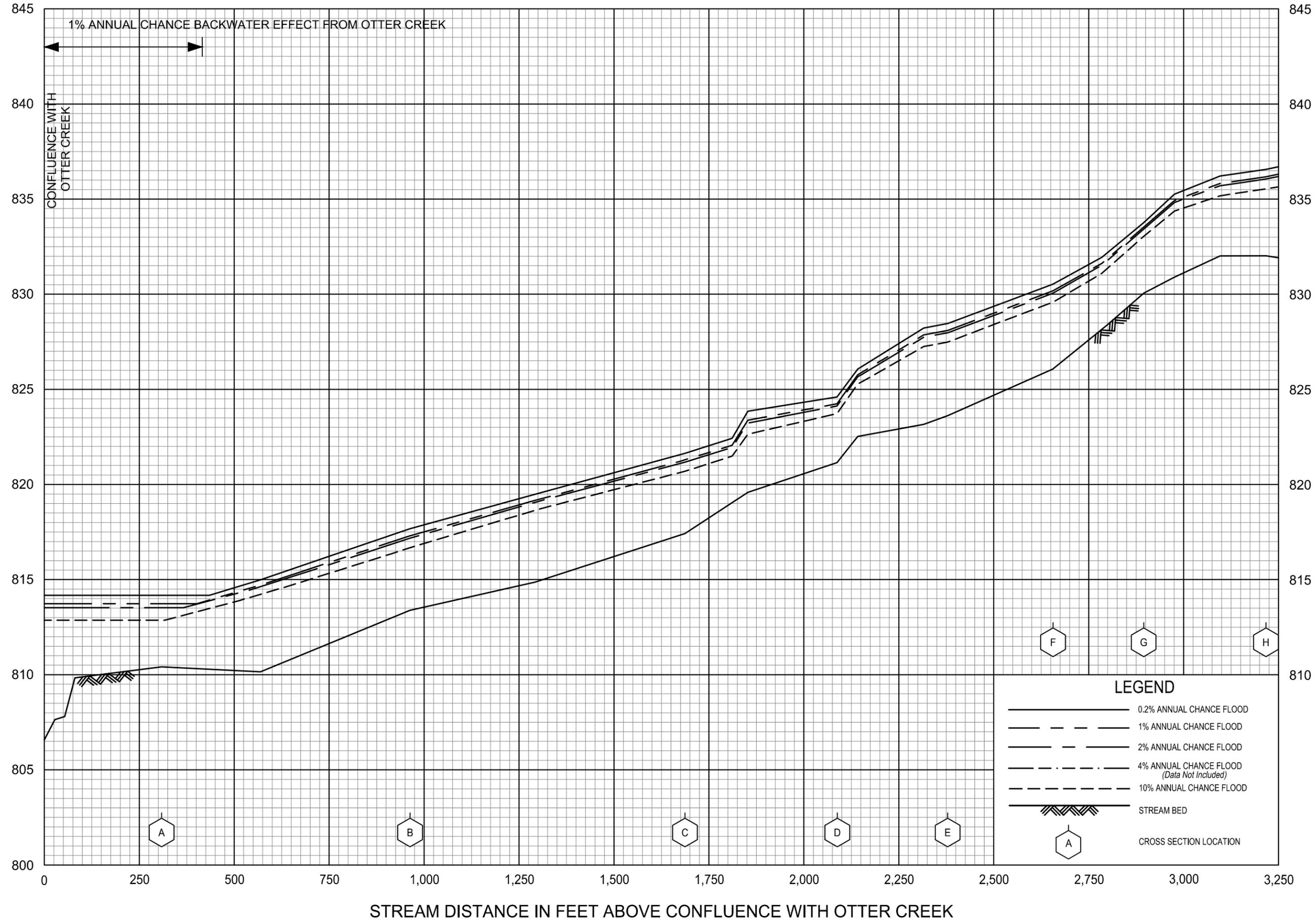


LEGEND	
	0.2% ANNUAL CHANCE FLOOD*
	1% ANNUAL CHANCE FLOOD
	2% ANNUAL CHANCE FLOOD*
	4% ANNUAL CHANCE FLOOD*
	10% ANNUAL CHANCE FLOOD*
	STREAM BED
	CROSS SECTION LOCATION
* DATA NOT AVAILABLE	

FLOOD PROFILES
OTTER CREEK TRIBUTARY 1.1

FEDERAL EMERGENCY MANAGEMENT AGENCY
MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD (Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

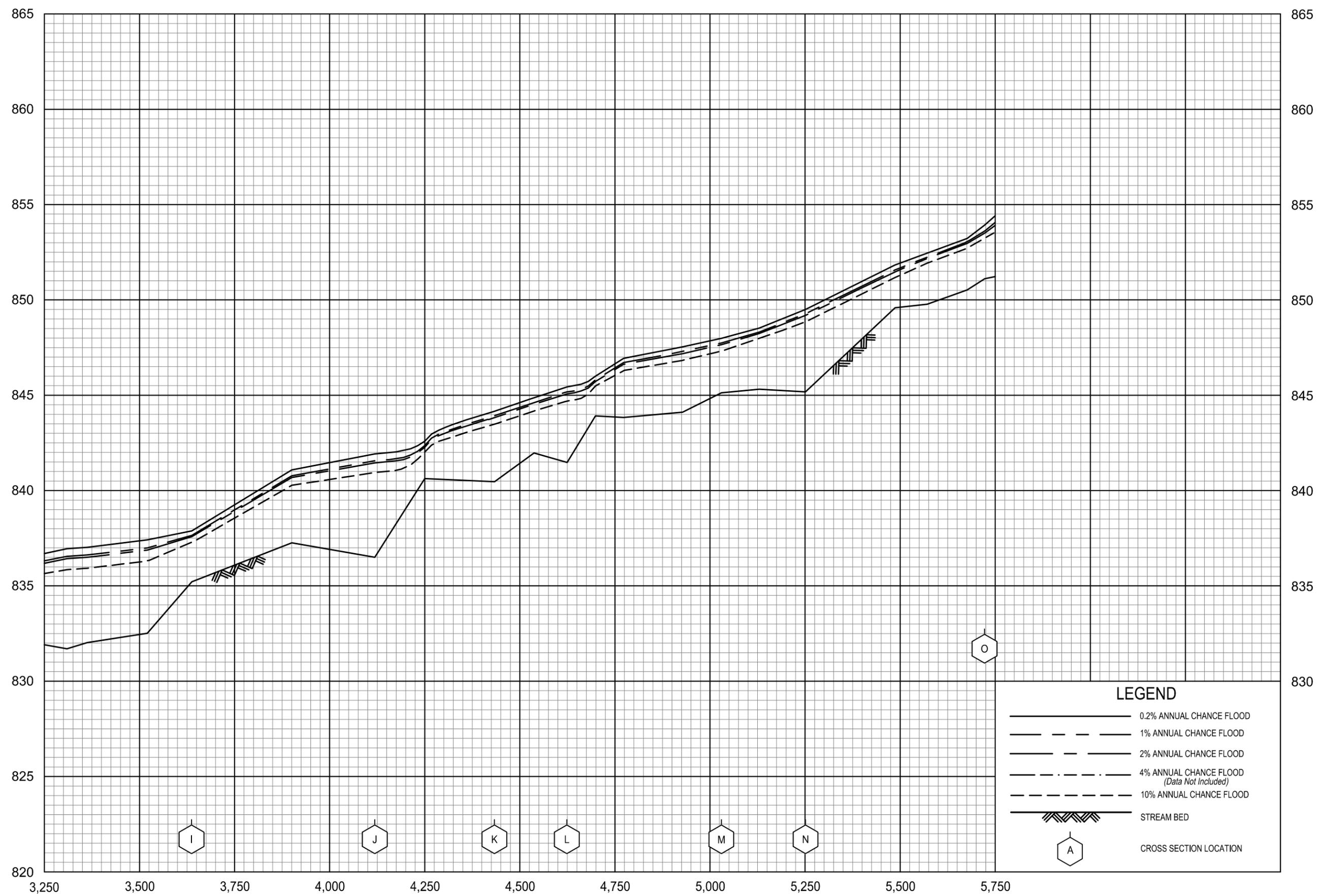
FLOOD PROFILES

OTTER CREEK TRIBUTARY 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD
(Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

OTTER CREEK TRIBUTARY 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)

920
915
910
905
900
895
890
885
880
875

920
915
910
905
900
895
890
885
880
875

DOUGLAS COURT

Culvert

V

W

X

Y

A

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD
(Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

9,000 9,250 9,500 9,750 10,000 10,250 10,500 11,000 11,250 11,500 11,750 11,000 12,000 13,000

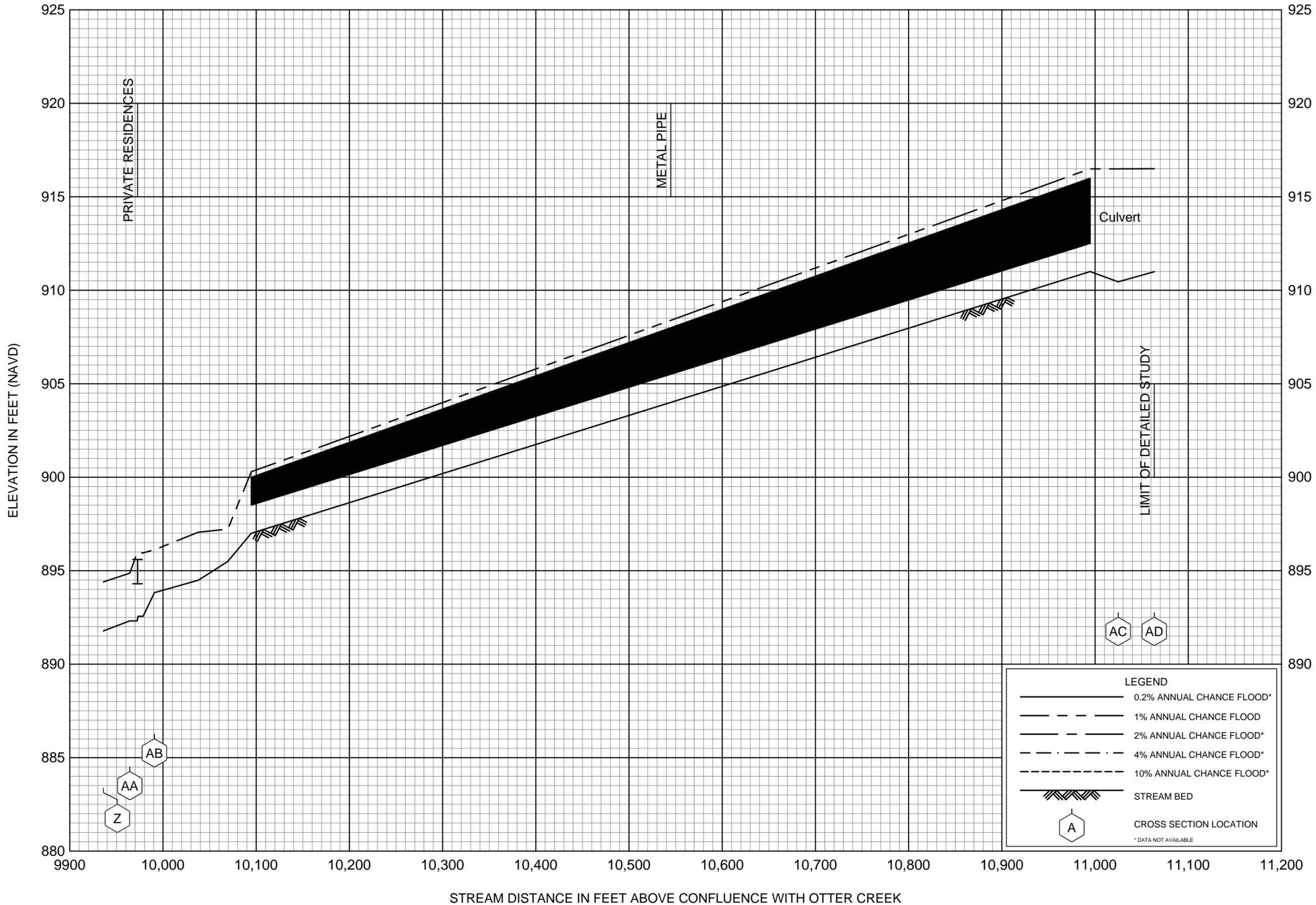
STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH OTTER CREEK

FLOOD PROFILES

OTTER CREEK TRIBUTARY 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

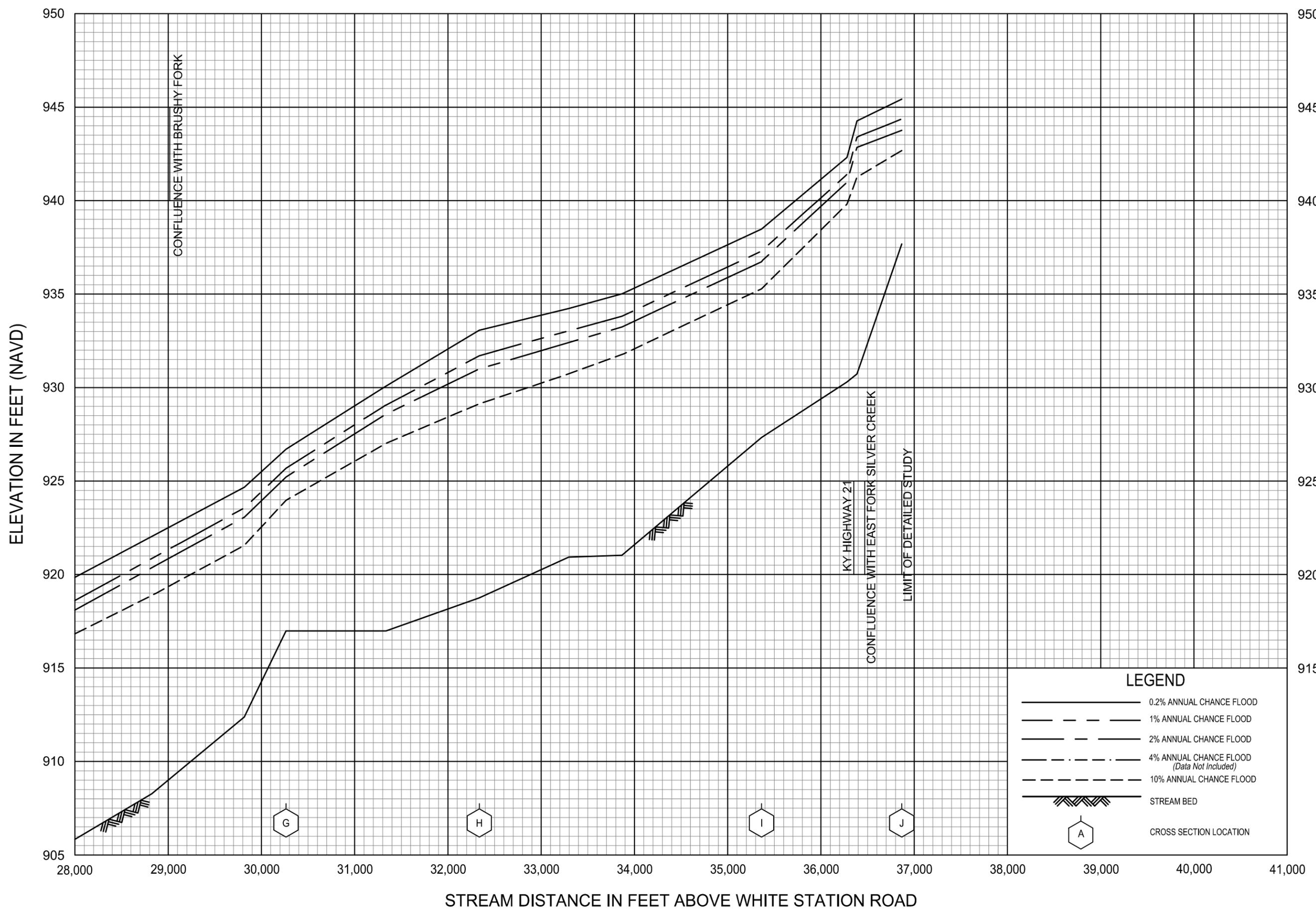
MADISON COUNTY, KY
AND INCORPORATED AREAS



FLOOD PROFILES

OTTER CREEK TRIBUTARY 2

FEDERAL EMERGENCY MANAGEMENT AGENCY
MADISON COUNTY, KY
 AND INCORPORATED AREAS



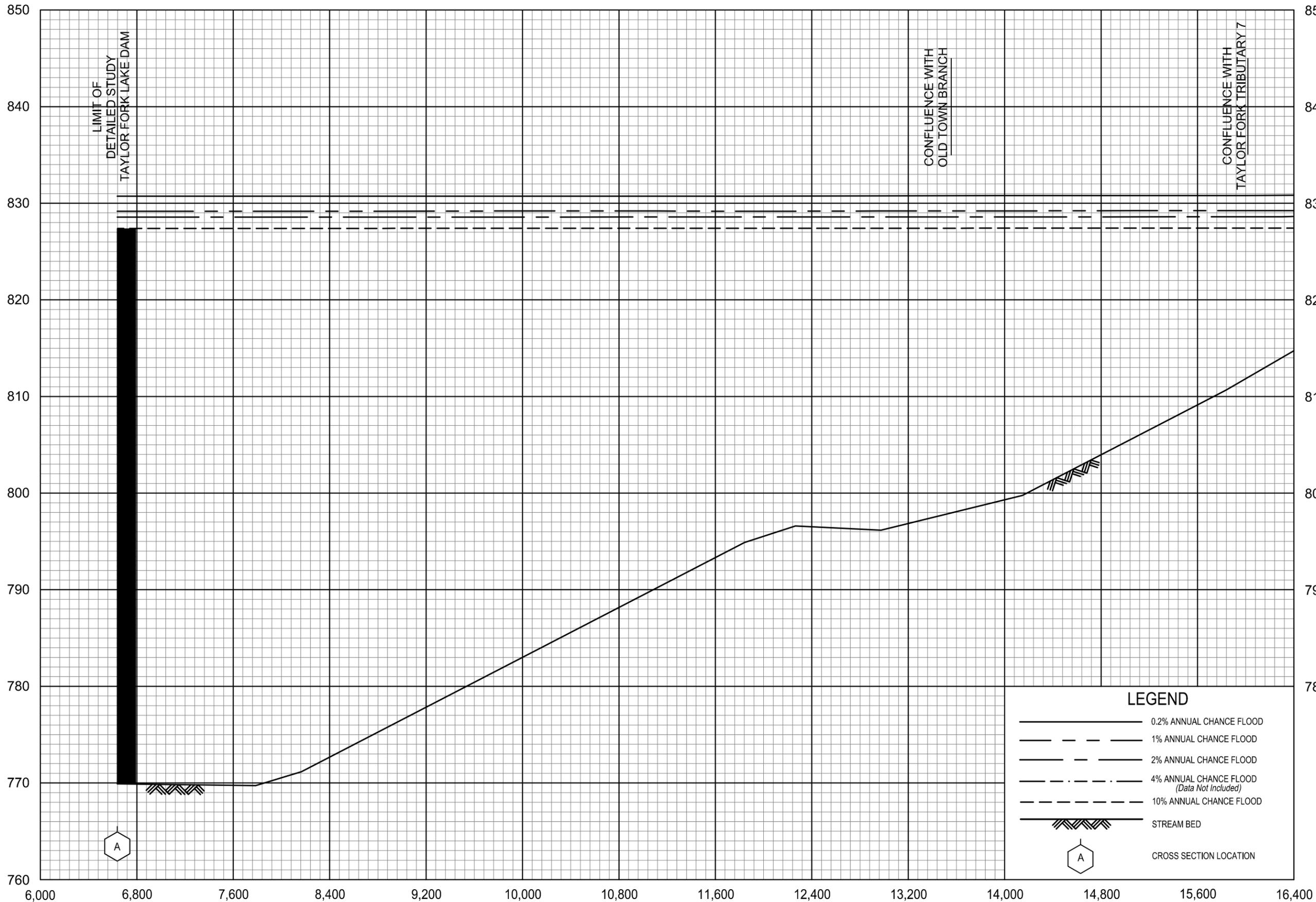
LEGEND

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	1% ANNUAL CHANCE FLOOD
	2% ANNUAL CHANCE FLOOD
	4% ANNUAL CHANCE FLOOD <i>(Data Not Included)</i>
	10% ANNUAL CHANCE FLOOD
	STREAM BED
	CROSS SECTION LOCATION

FLOOD PROFILES
SILVER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH SILVER CREEK

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD (Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

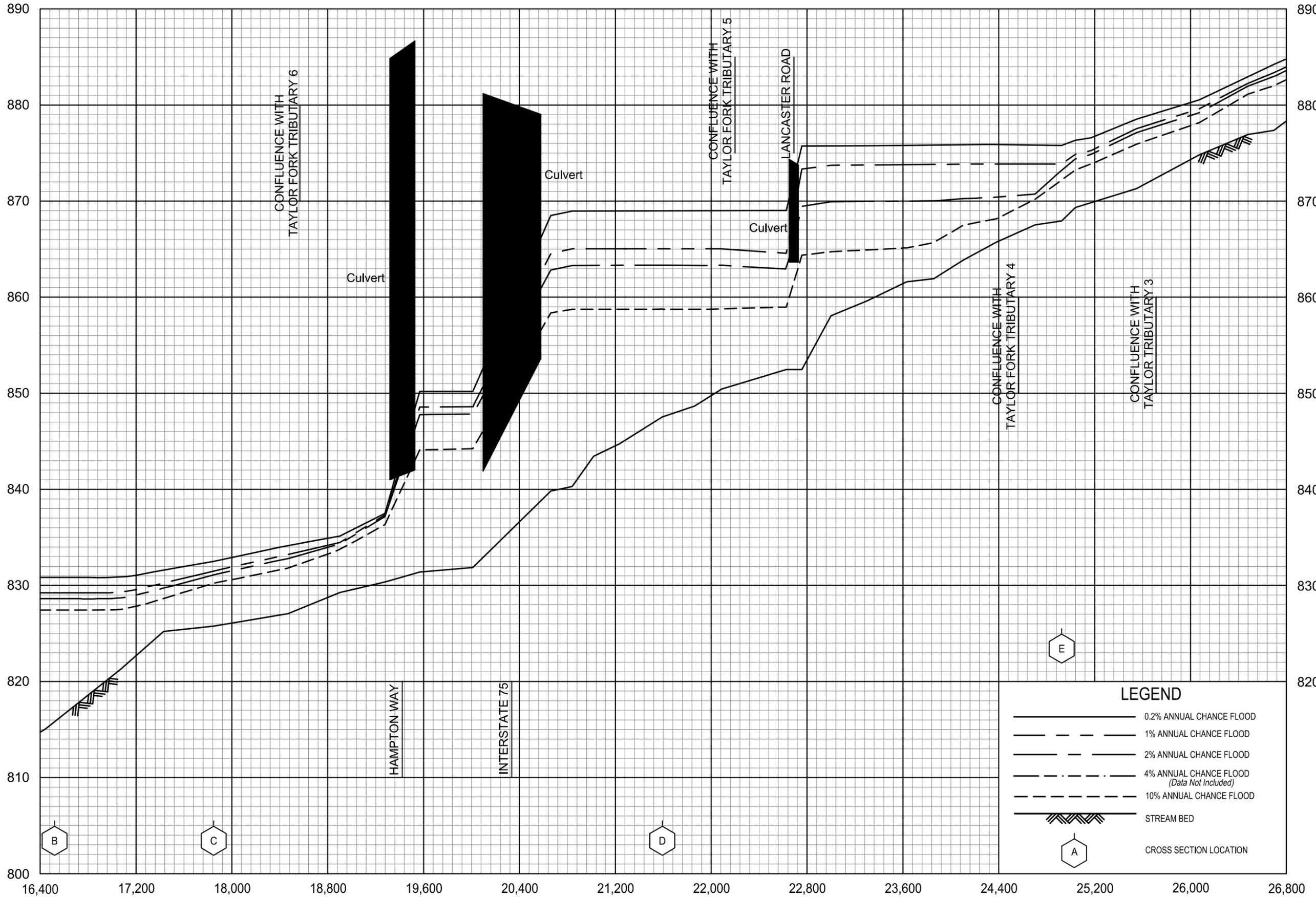
FLOOD PROFILES

TAYLOR FORK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH SILVER CREEK

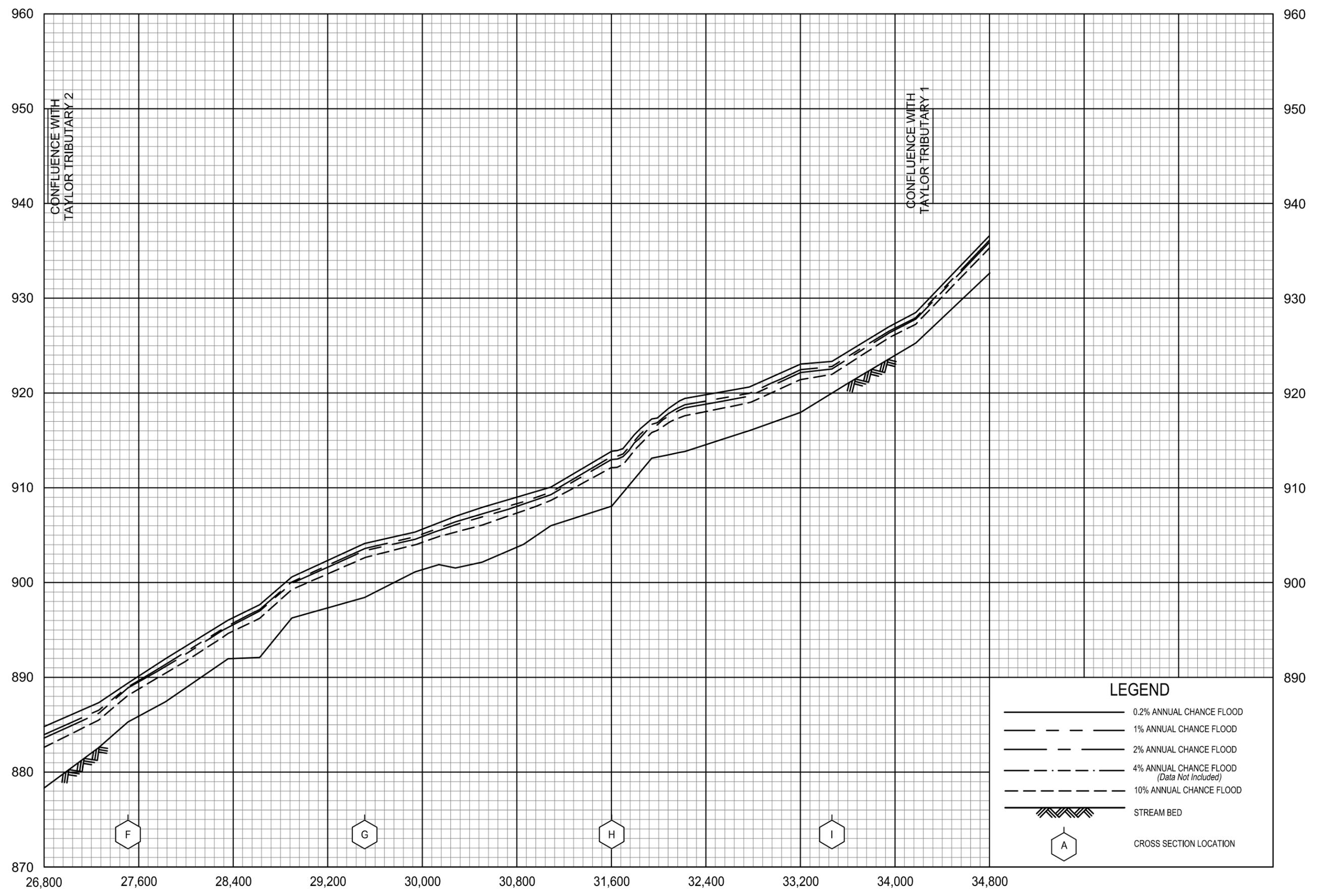
FLOOD PROFILES

TAYLOR FORK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



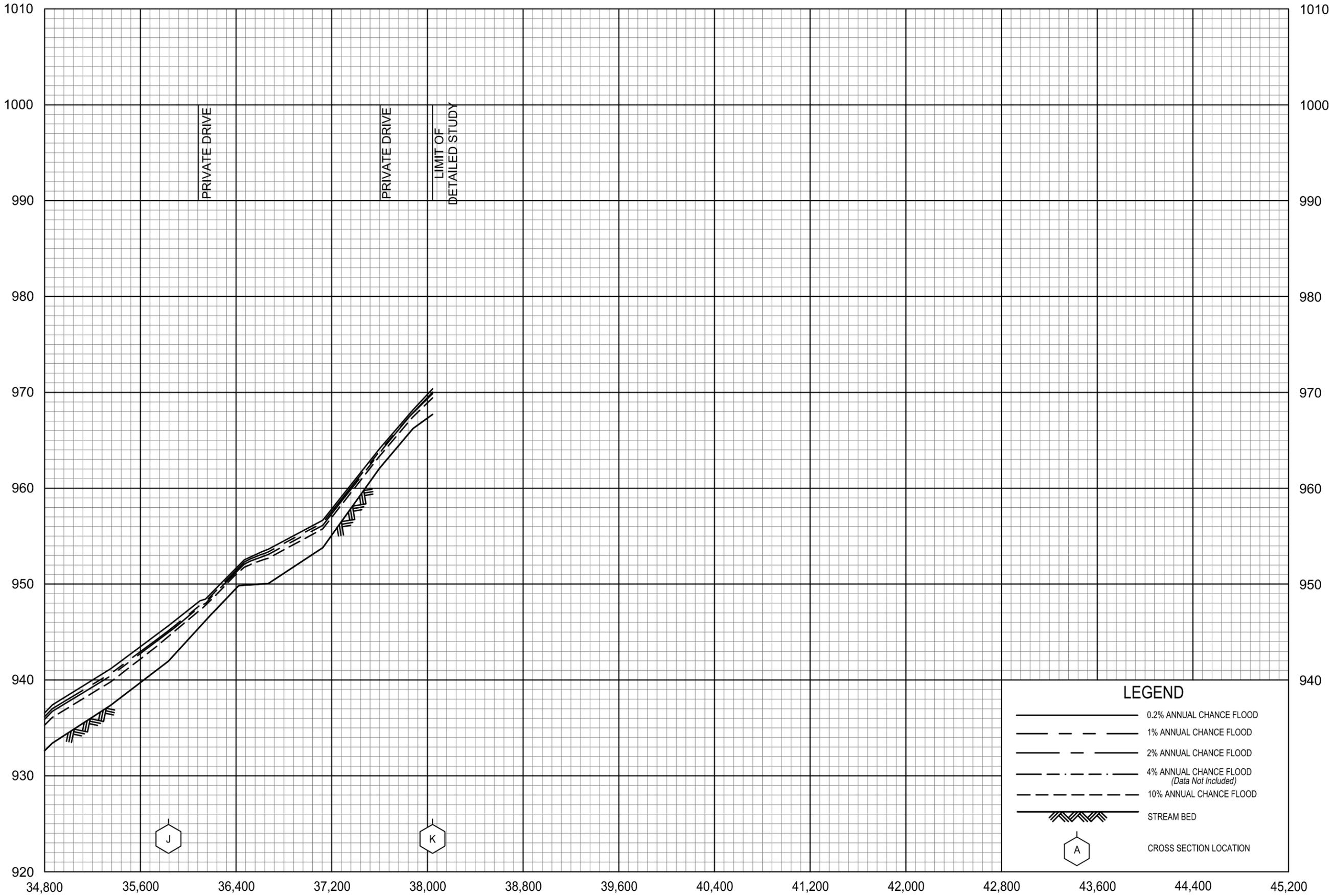
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- 4% ANNUAL CHANCE FLOOD (Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES
TAYLOR FORK

FEDERAL EMERGENCY MANAGEMENT AGENCY
MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
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(Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

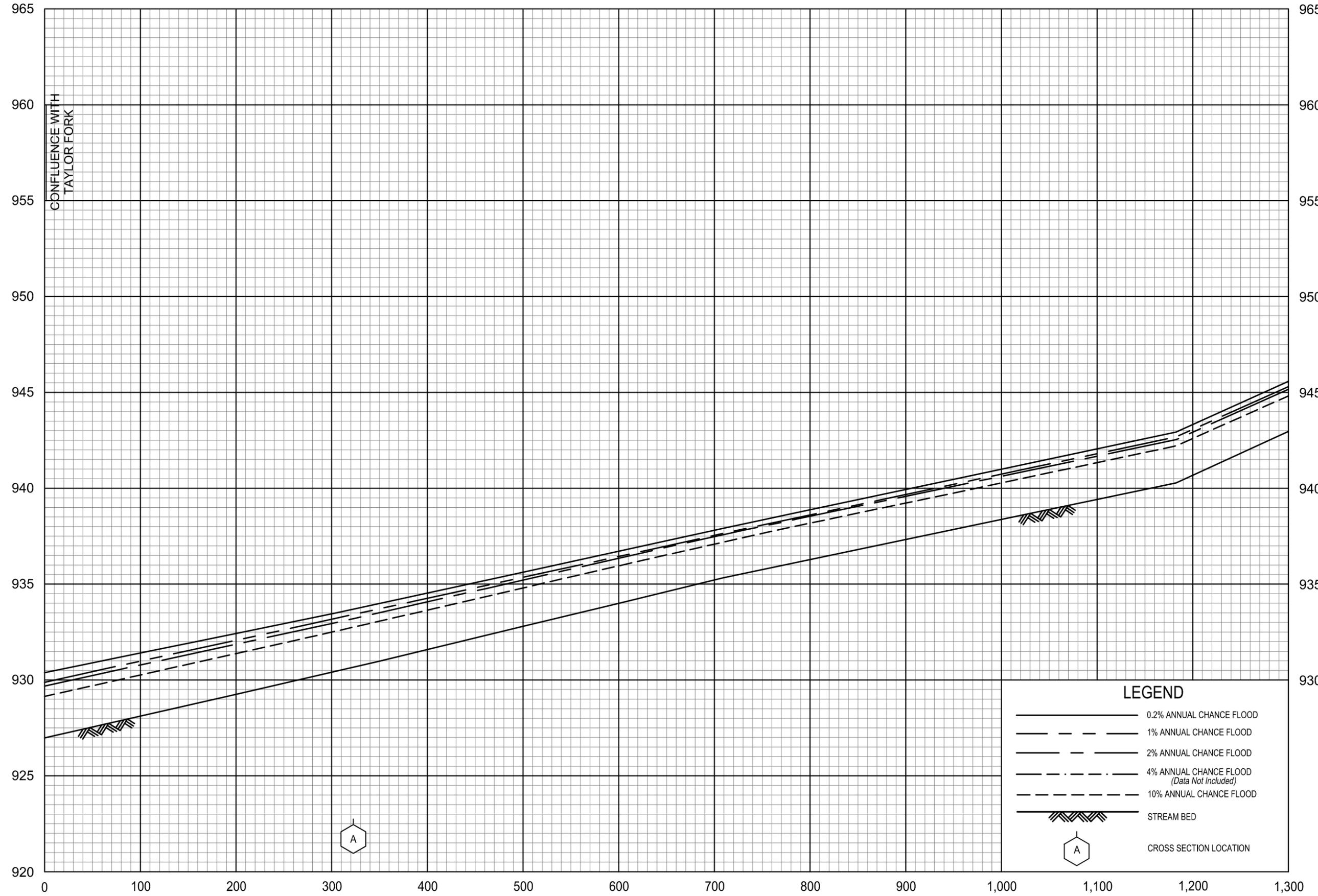
TAYLOR FORK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

35P

ELEVATION IN FEET (NAVD)



LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD (Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

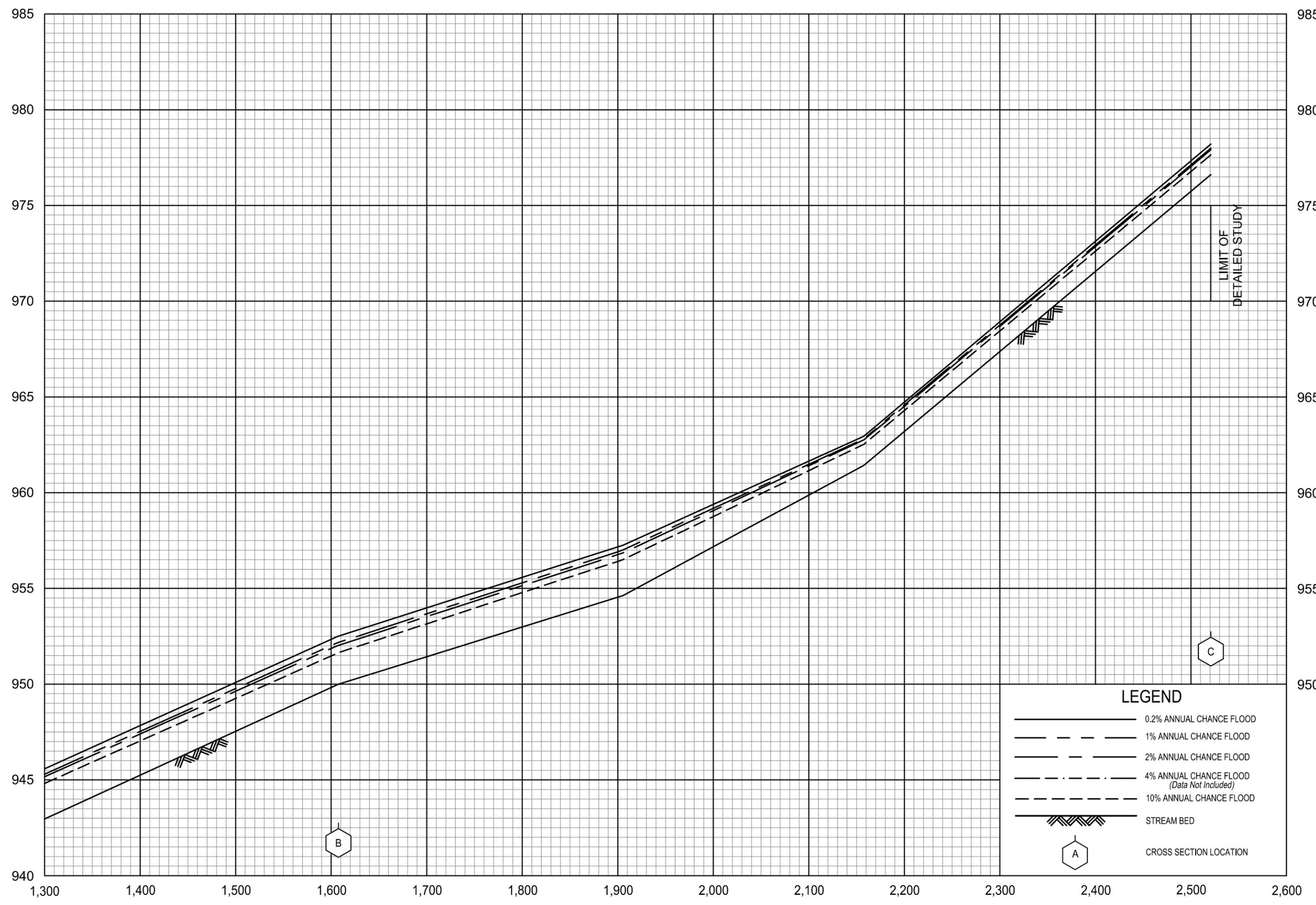
FLOOD PROFILES

TAYLOR FORK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD (Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

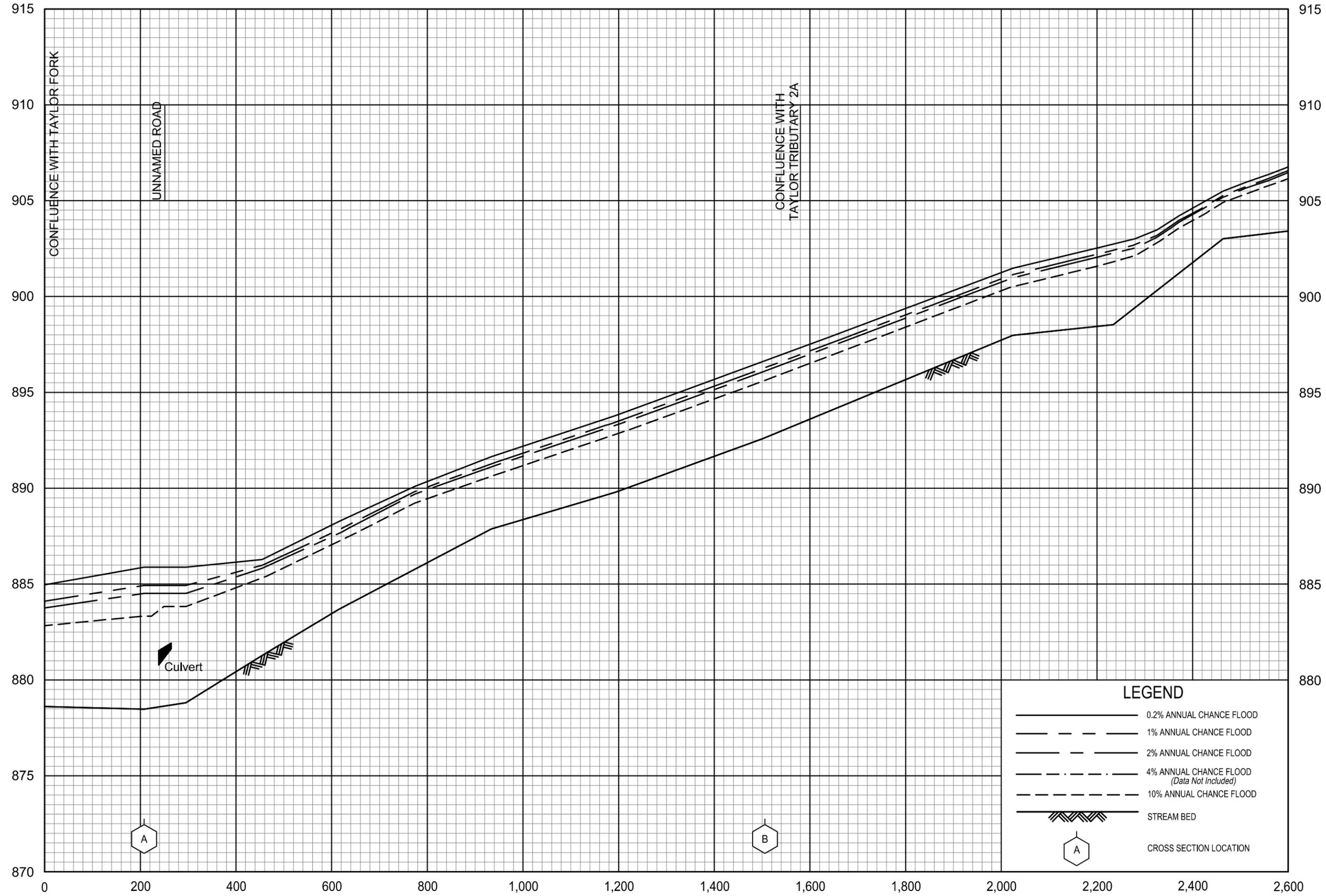
FLOOD PROFILES

TAYLOR FORK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH TAYLOR FORK

FLOOD PROFILES

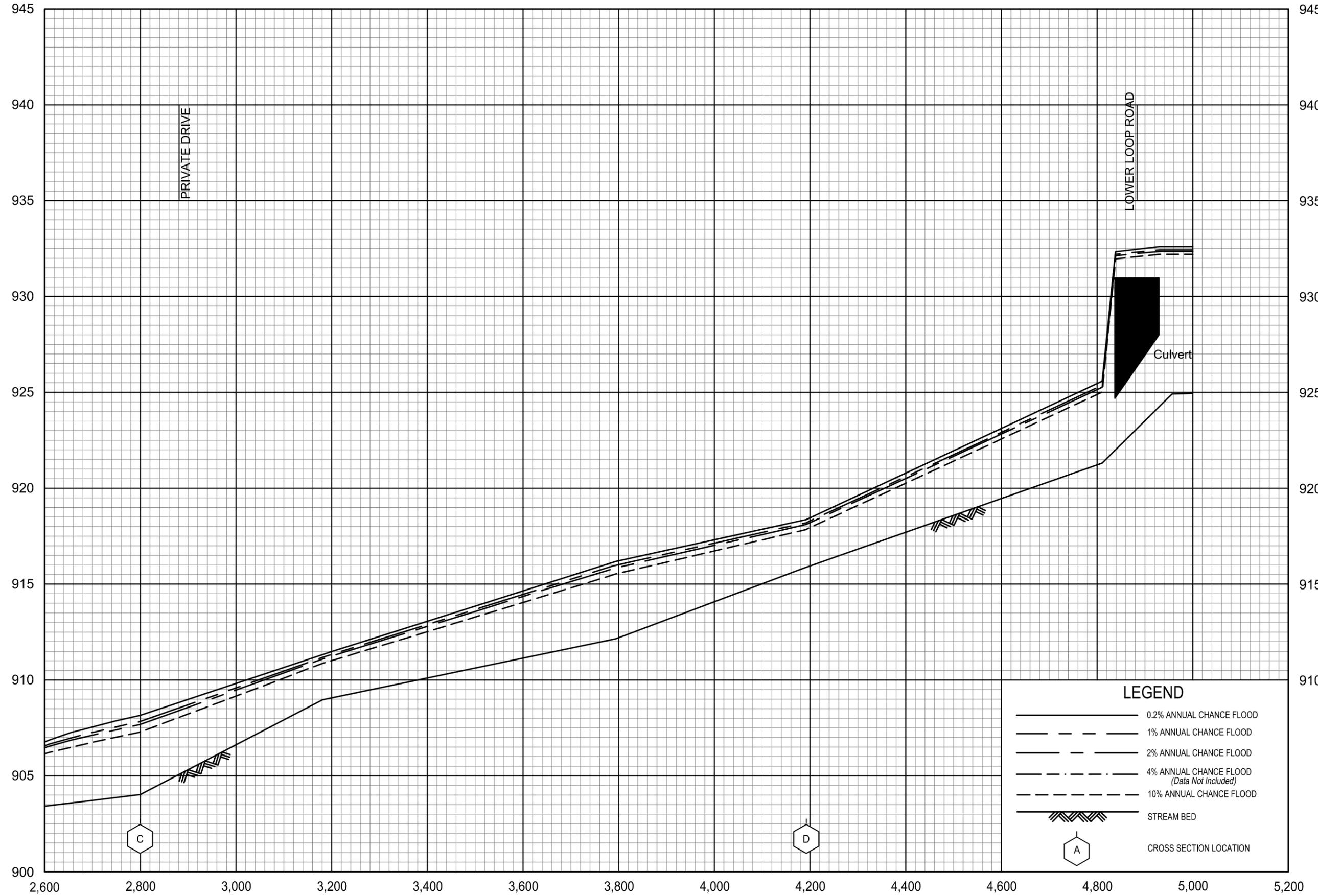
TAYLOR FORK TRIBUTARY 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

38P

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH TAYLOR FORK

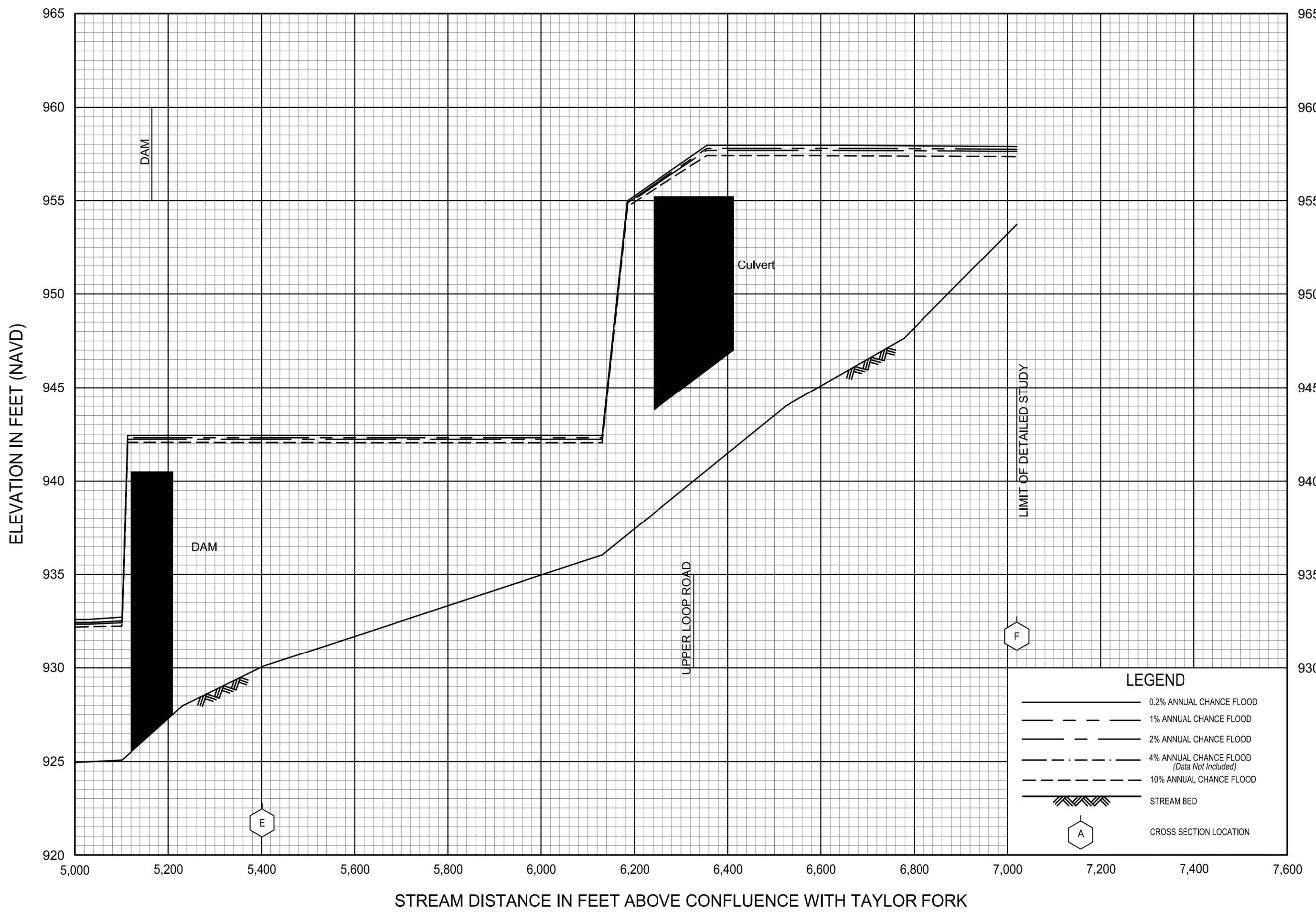
FLOOD PROFILES

TAYLOR FORK TRIBUTARY 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

39P



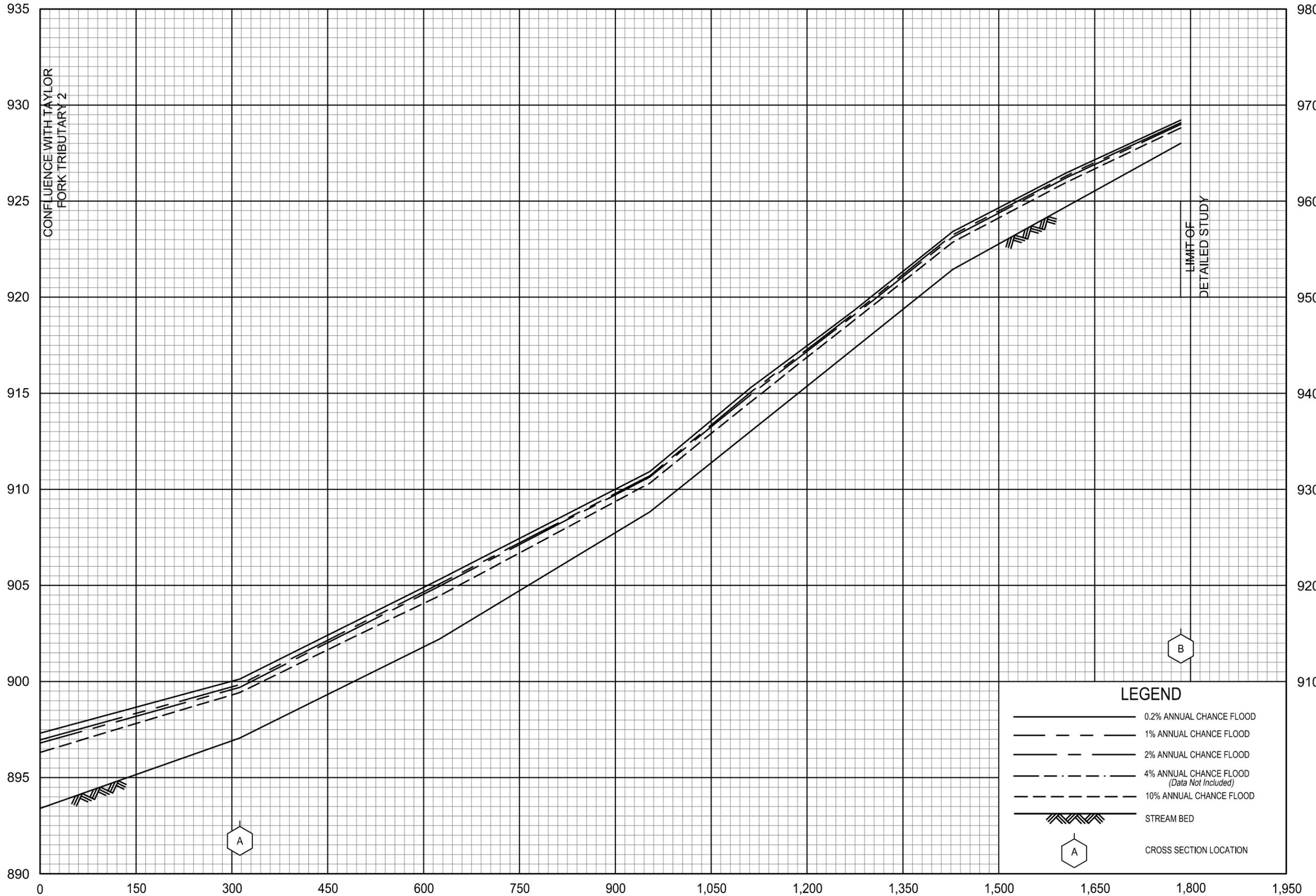
FLOOD PROFILES

TAYLOR FORK TRIBUTARY 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD (Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

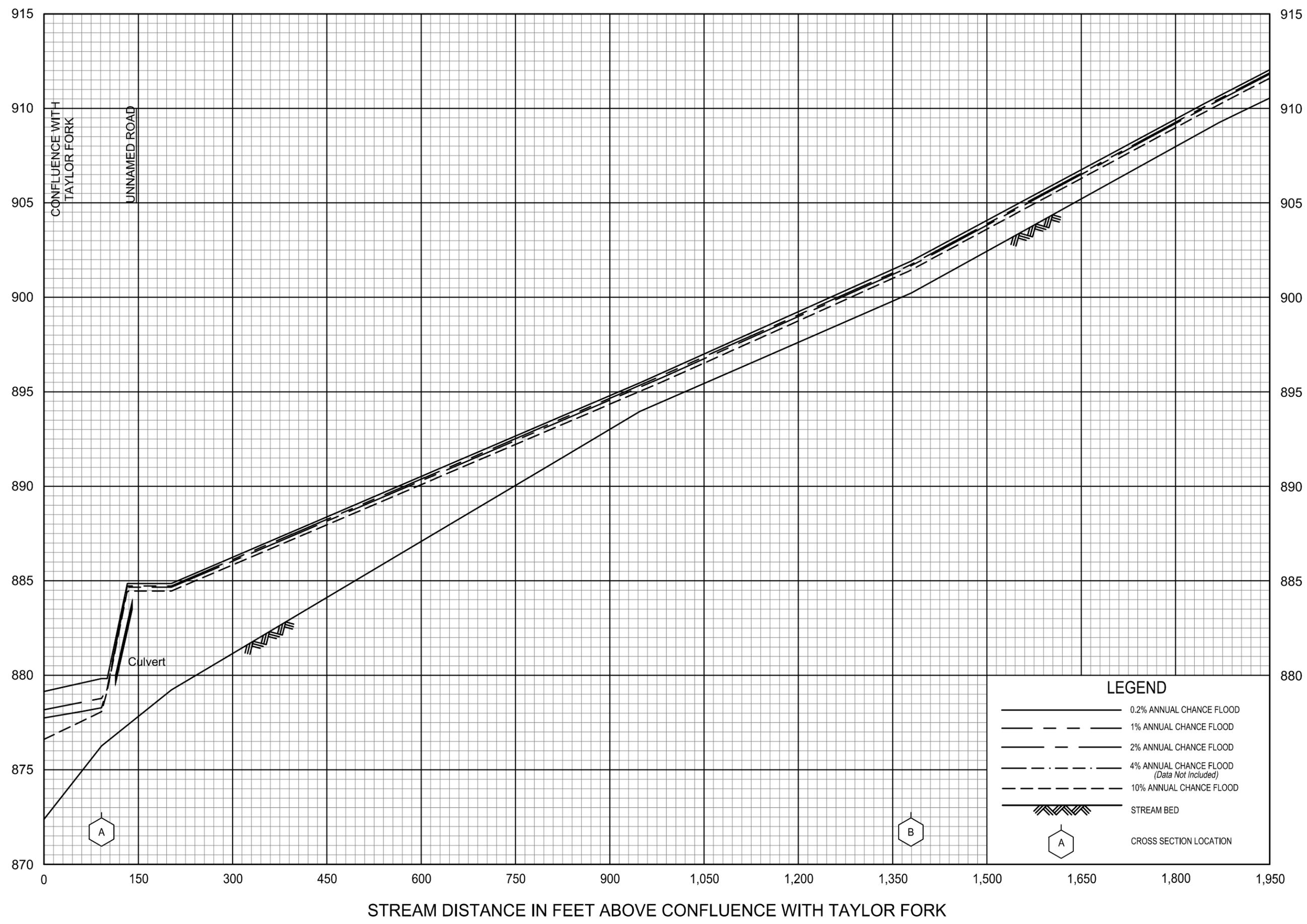
FLOOD PROFILES

TAYLOR FORK TRIBUTARY 2A

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH TAYLOR FORK

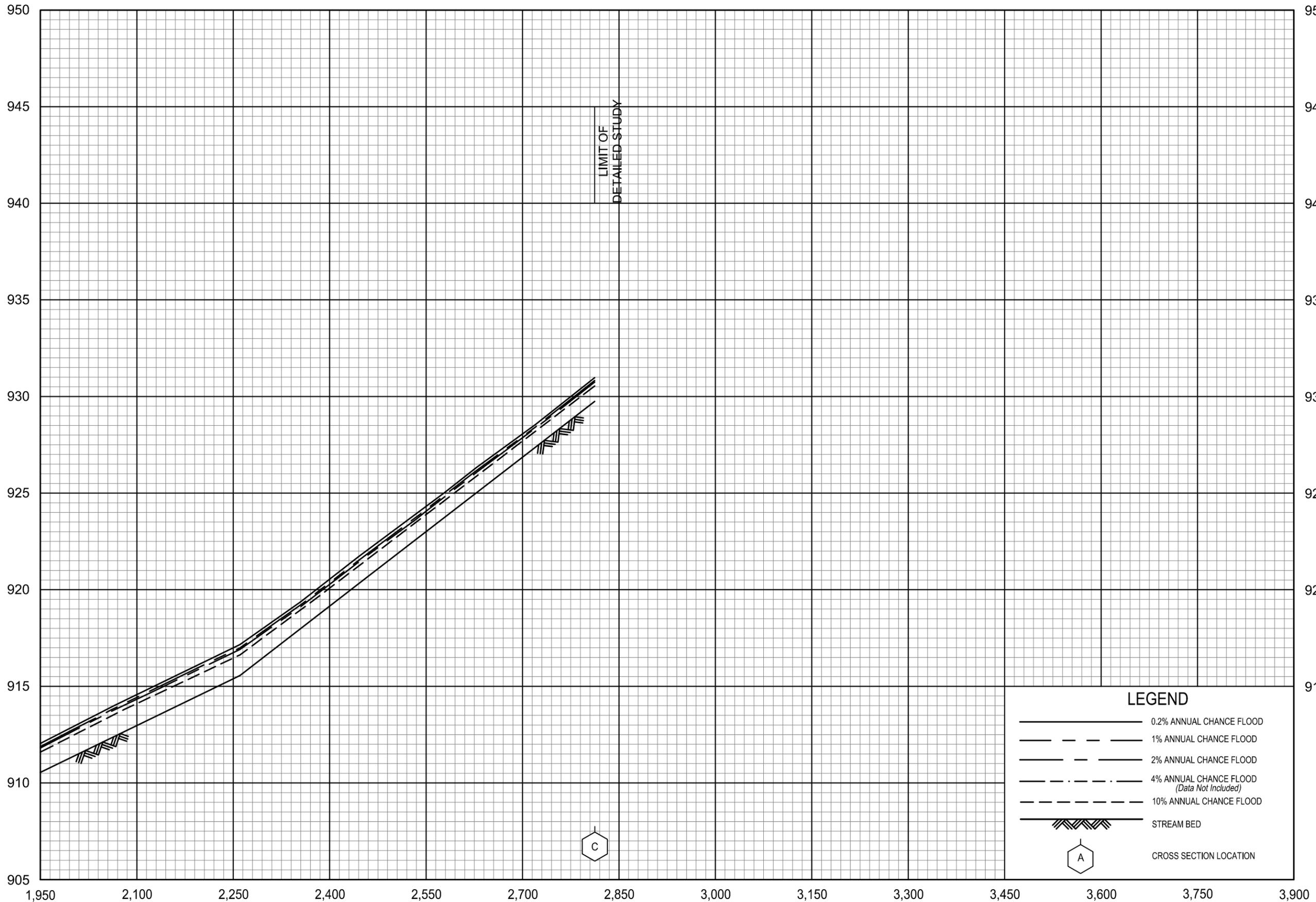
FLOOD PROFILES

TAYLOR FORK TRIBUTARY 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH TAYLOR FORK

FLOOD PROFILES

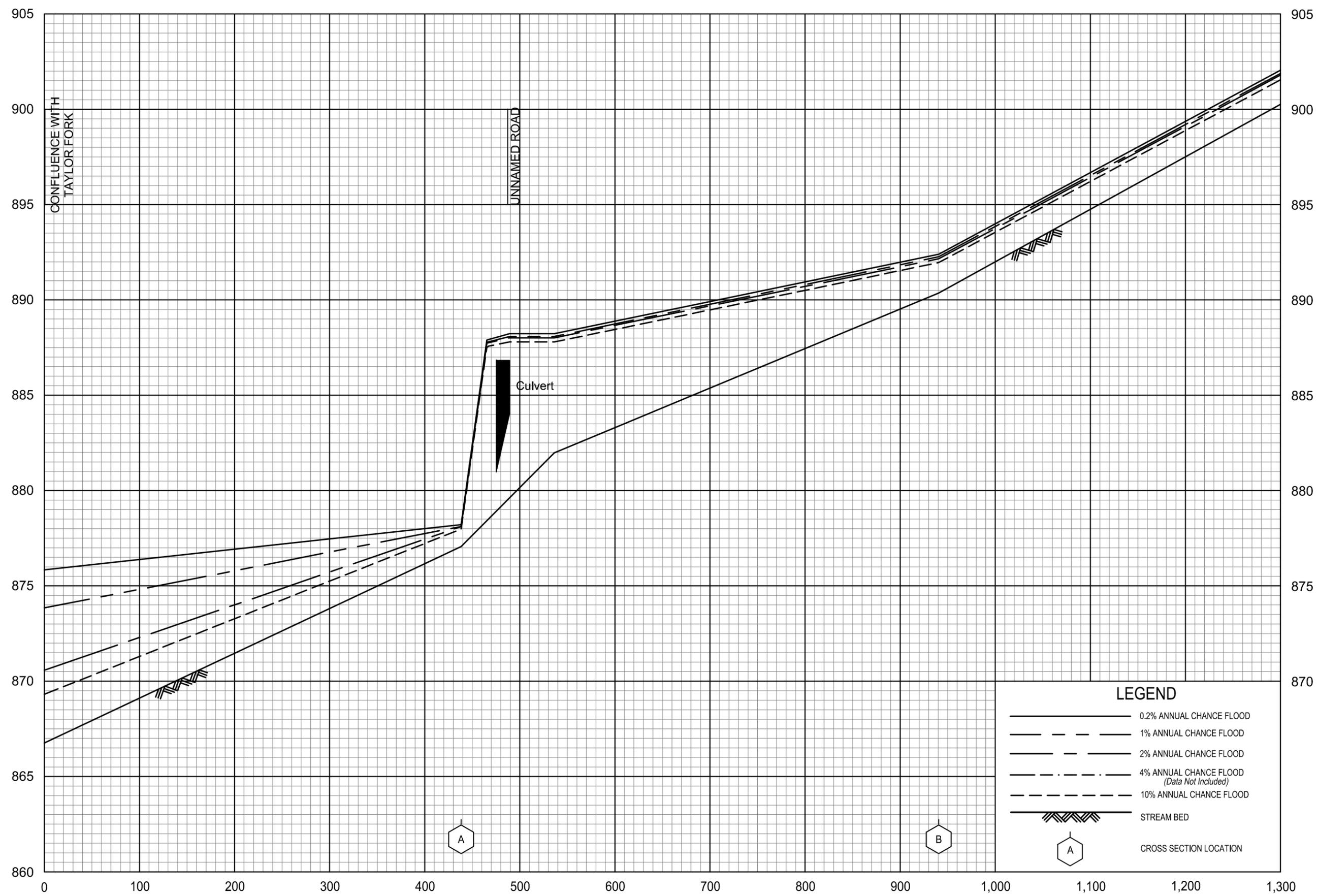
TAYLOR FORK TRIBUTARY 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

43P

ELEVATION IN FEET (NAVD)



LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD
(Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

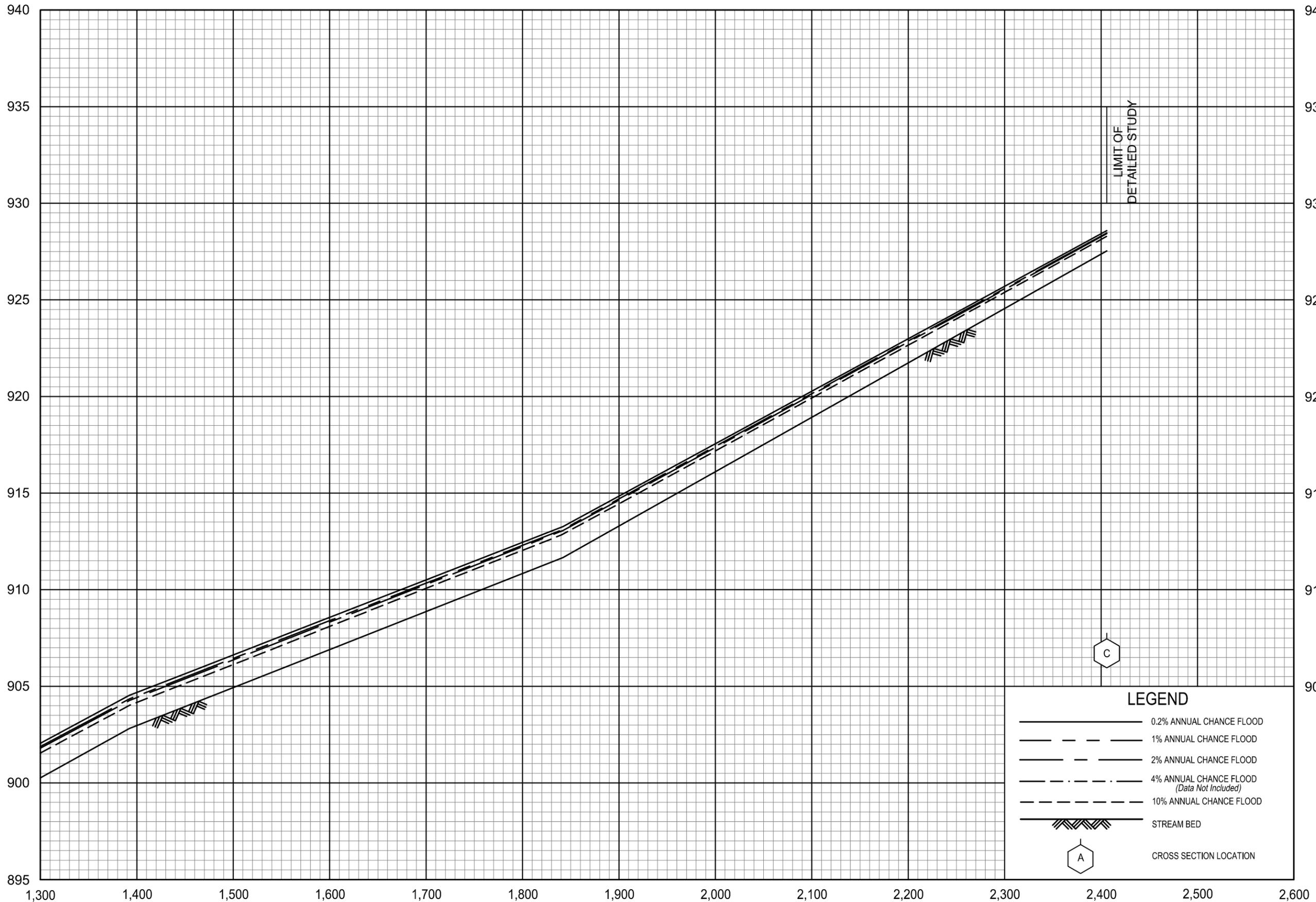
FLOOD PROFILES

TAYLOR FORK TRIBUTARY 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD (Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

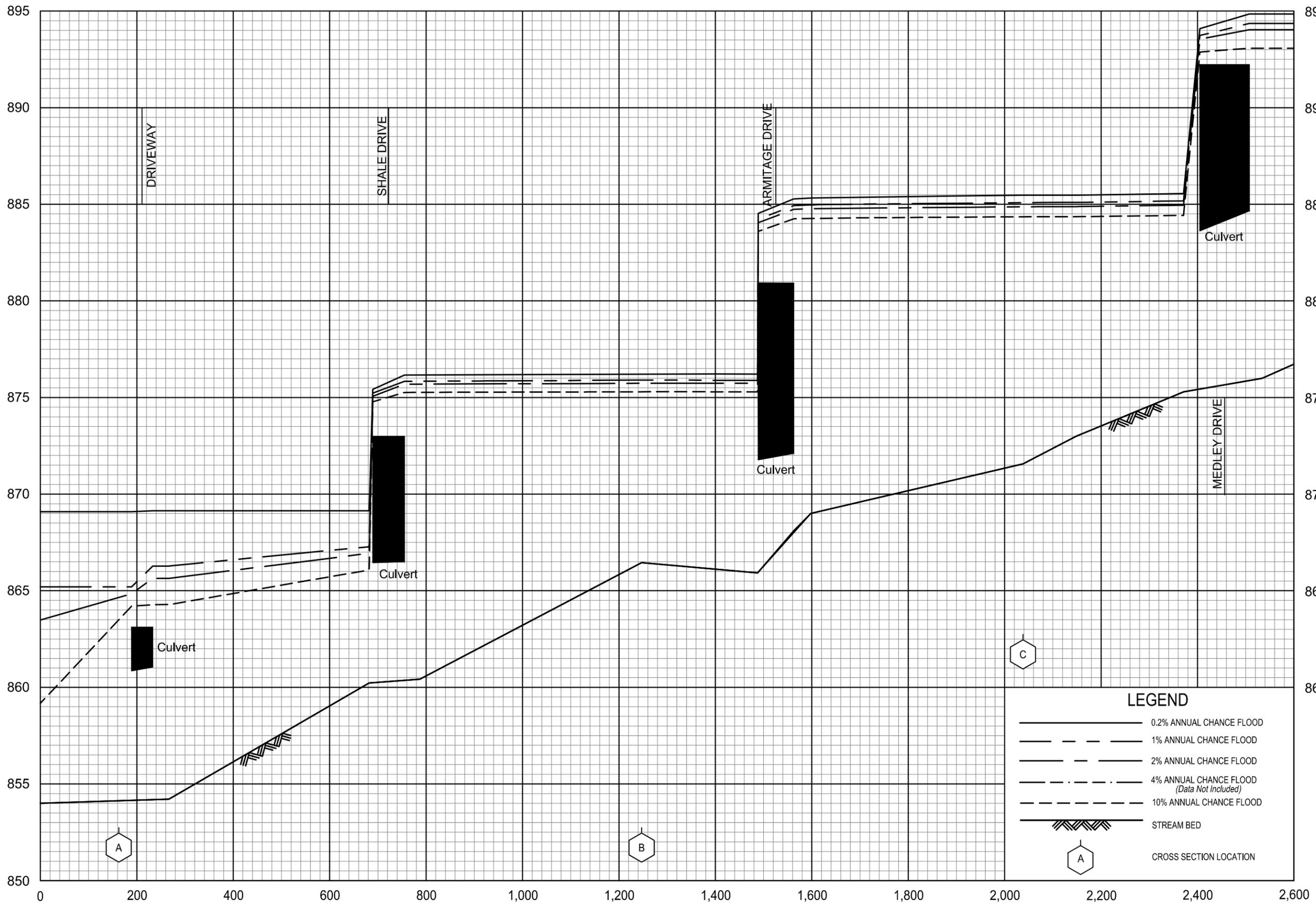
FLOOD PROFILES

TAYLOR FORK TRIBUTARY 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH TAYLOR FORK

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD (Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

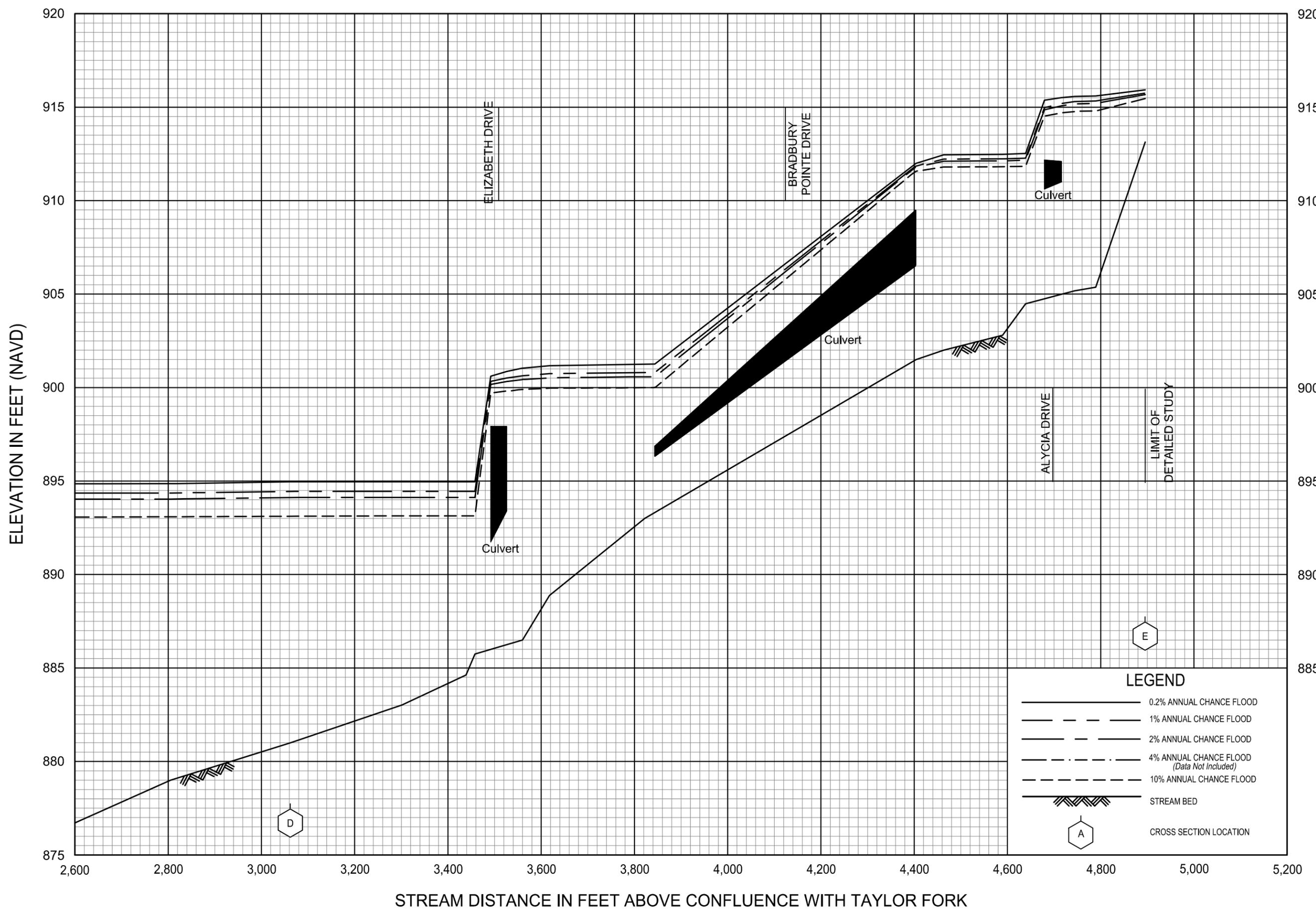
FLOOD PROFILES

TAYLOR FORK TRIBUTARY 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

46P



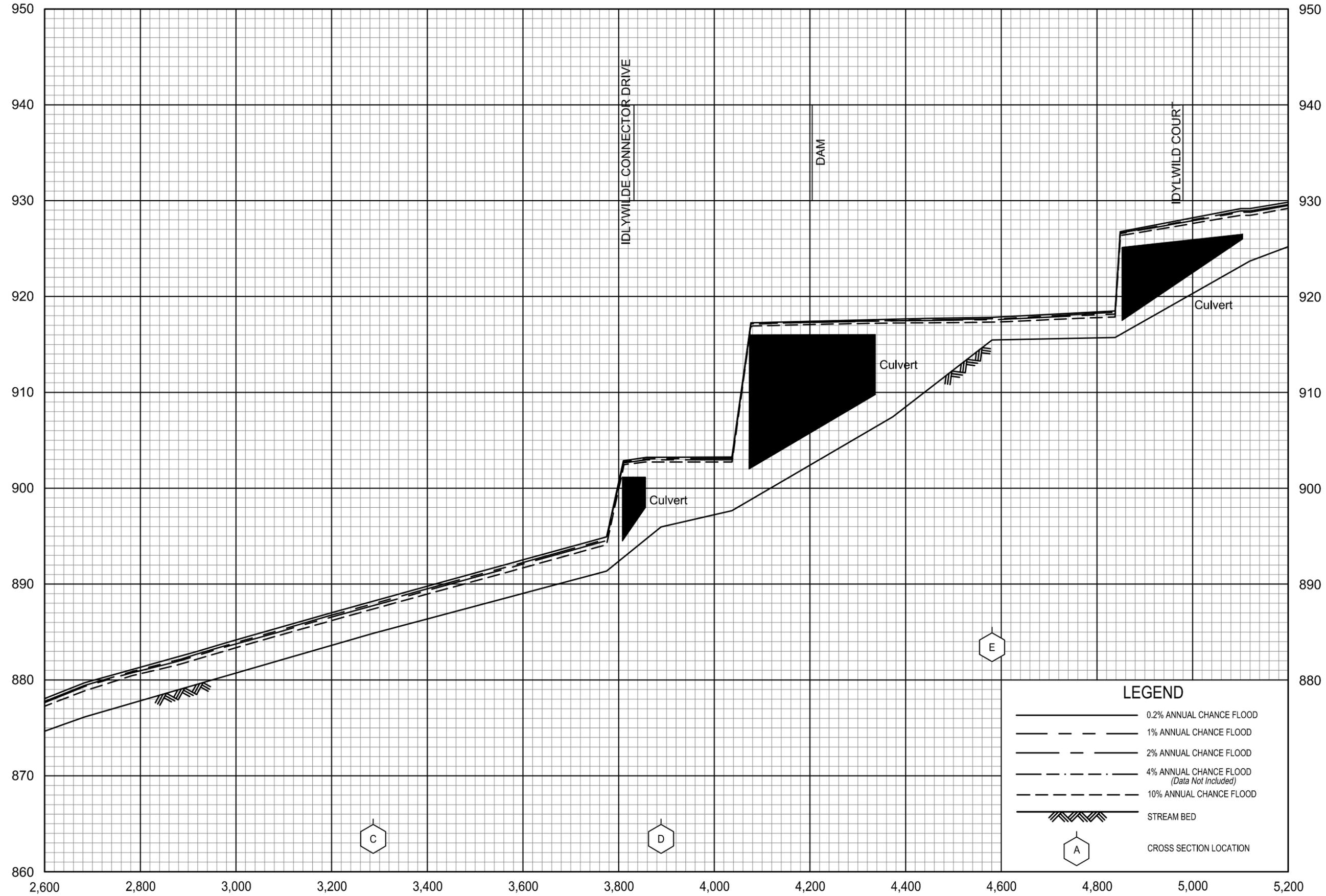
FLOOD PROFILES

TAYLOR FORK TRIBUTARY 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH TAYLOR FORK

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD (Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

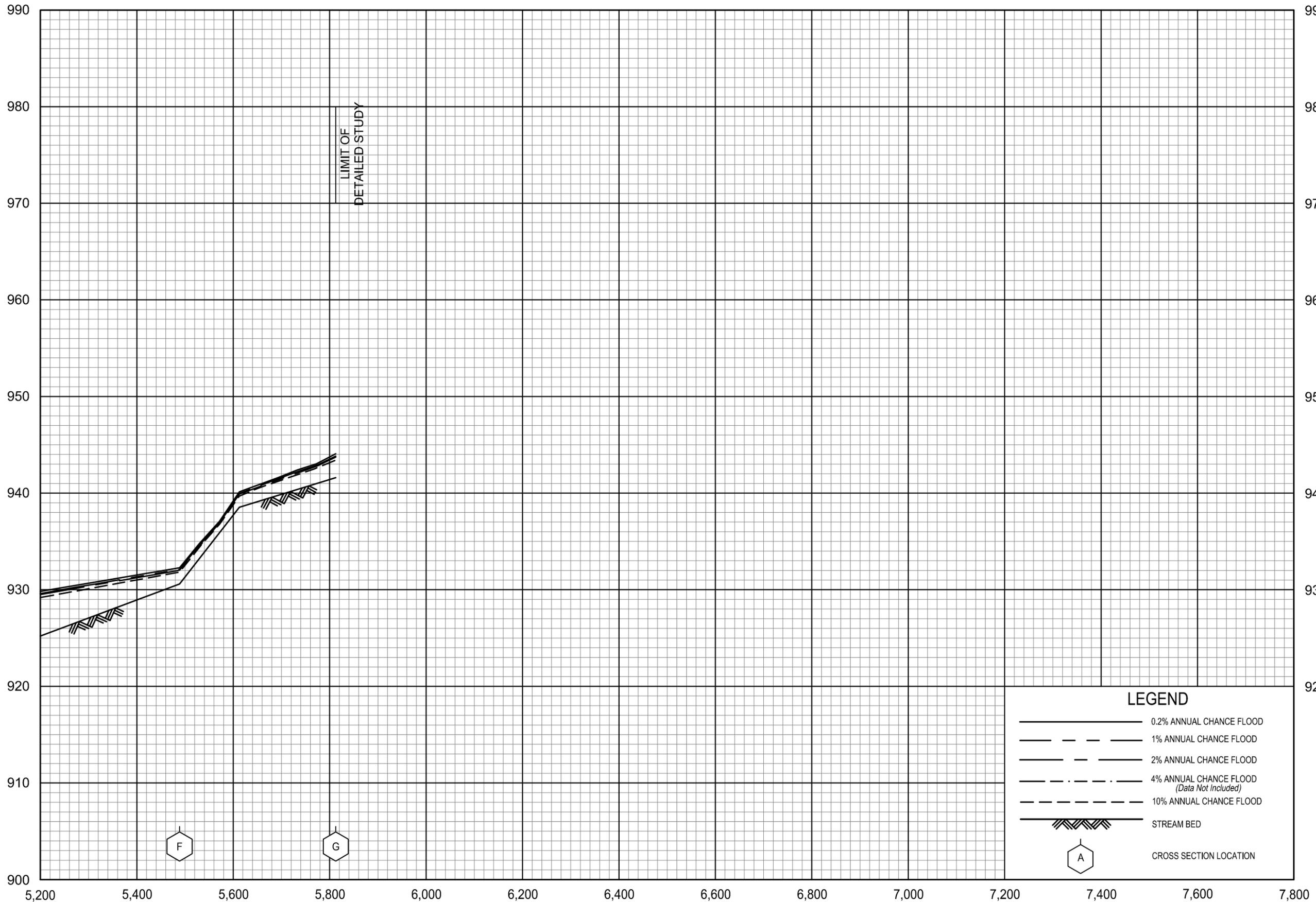
TAYLOR FORK TRIBUTARY 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

49P

ELEVATION IN FEET (NAVD)



LIMIT OF
DETAILED STUDY

LEGEND

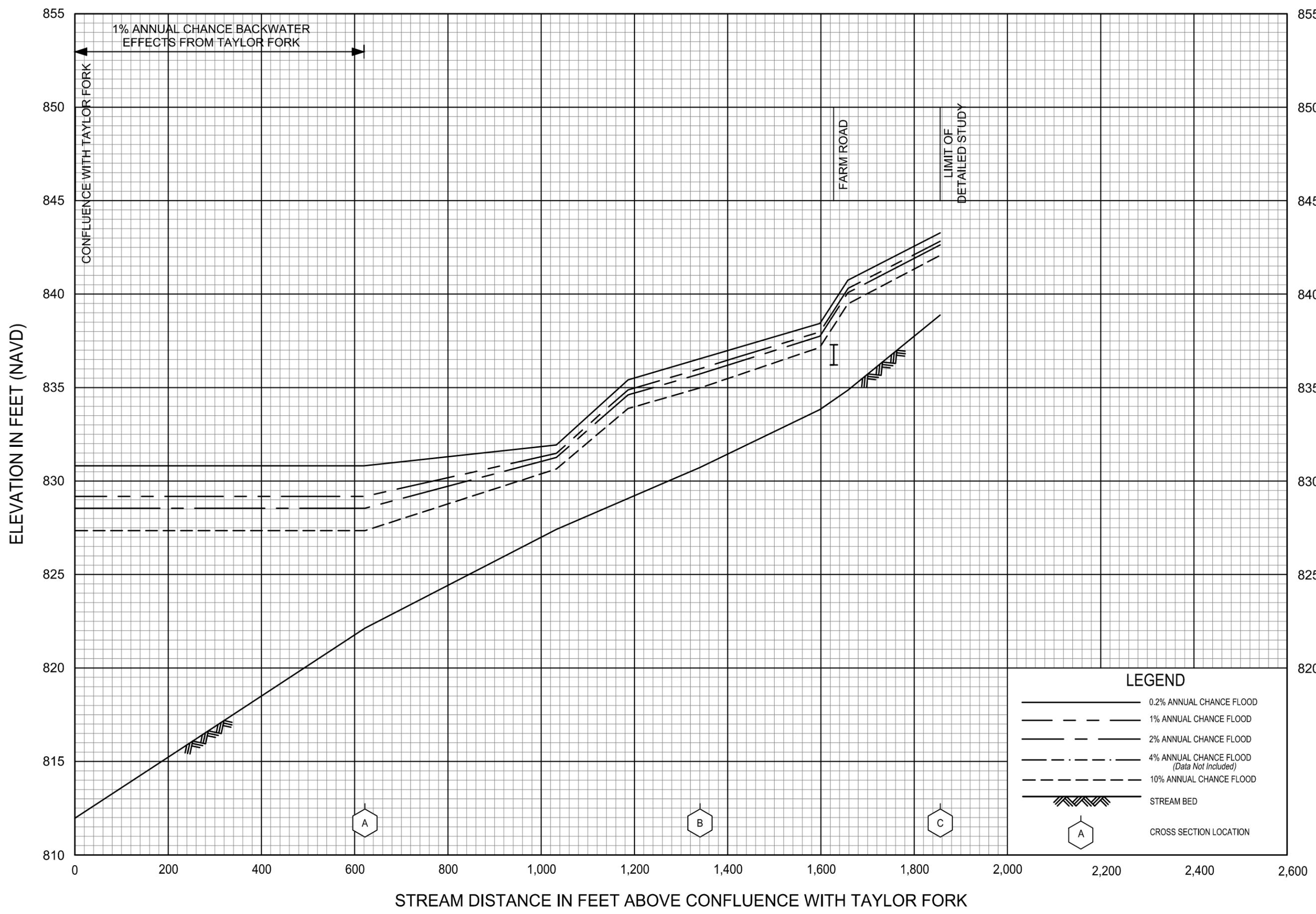
- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD
(Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

TAYLOR FORK TRIBUTARY 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS



LEGEND

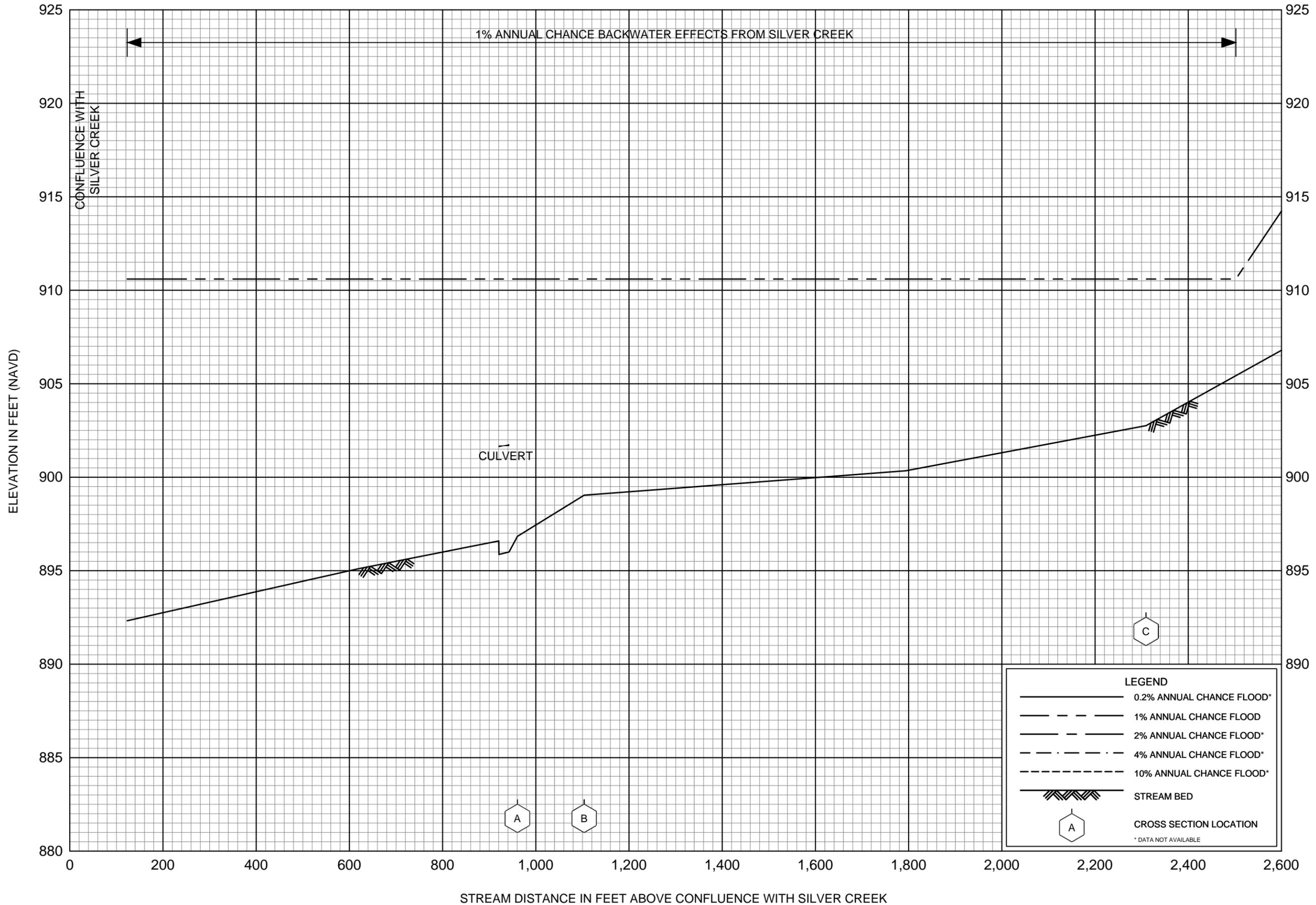
	0.2% ANNUAL CHANCE FLOOD
	1% ANNUAL CHANCE FLOOD
	2% ANNUAL CHANCE FLOOD
	4% ANNUAL CHANCE FLOOD <i>(Data Not Included)</i>
	10% ANNUAL CHANCE FLOOD
	STREAM BED
	CROSS SECTION LOCATION

FLOOD PROFILES

TAYLOR FORK TRIBUTARY 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

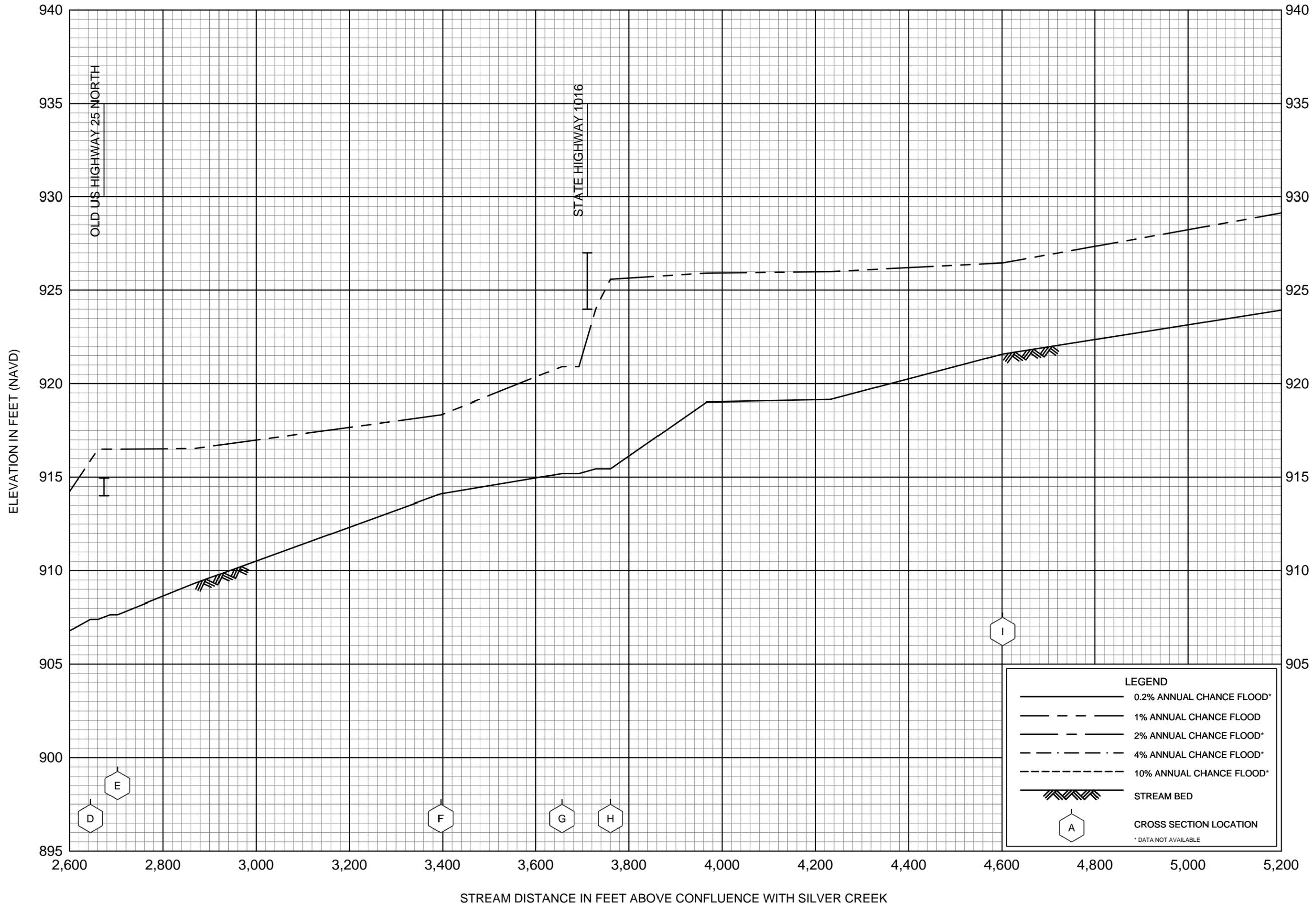
MADISON COUNTY, KY
AND INCORPORATED AREAS



FLOOD PROFILES

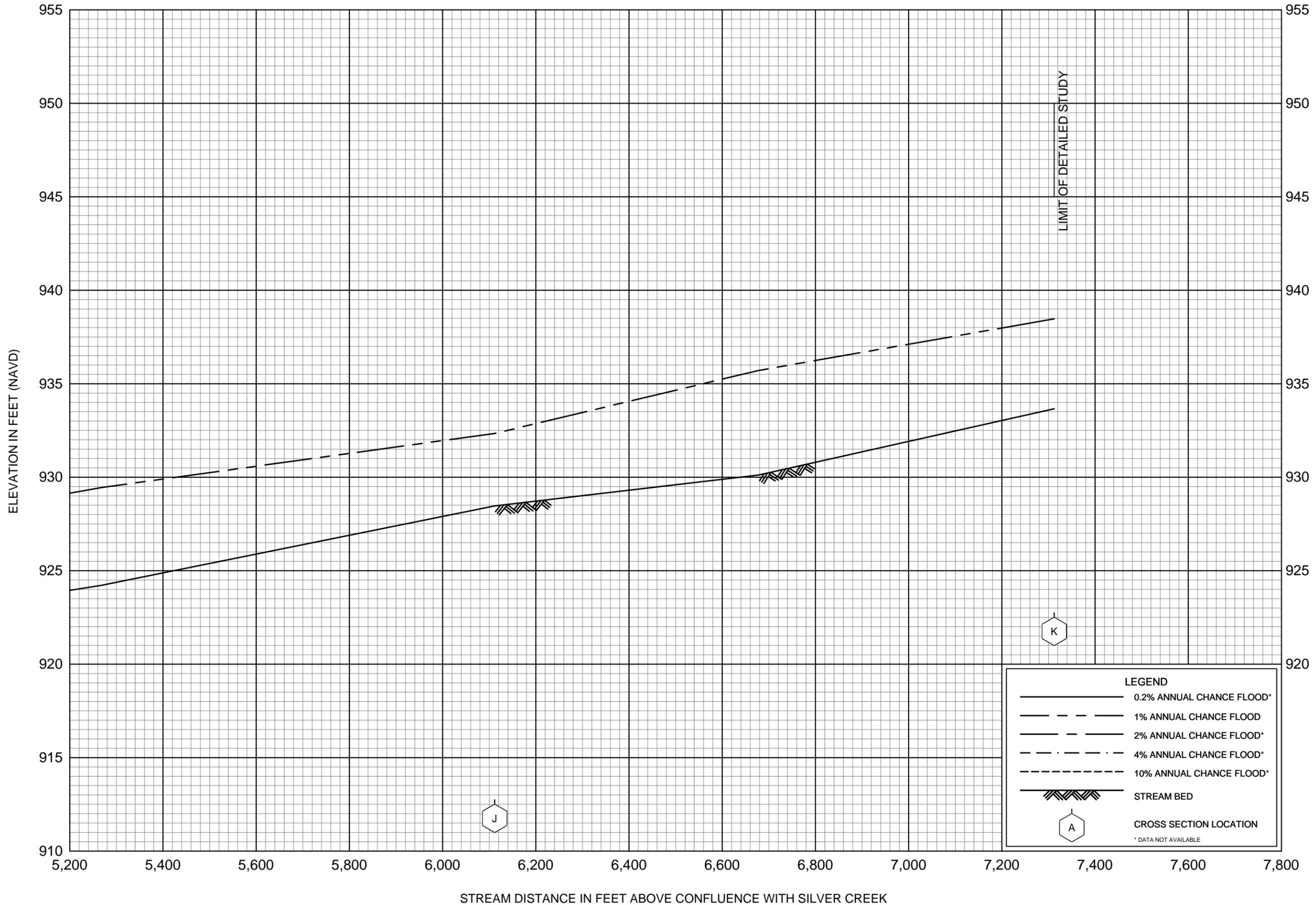
TERRILL BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY
MADISON COUNTY, KY
 AND INCORPORATED AREAS



FLOOD PROFILES
TERRILL BRANCH

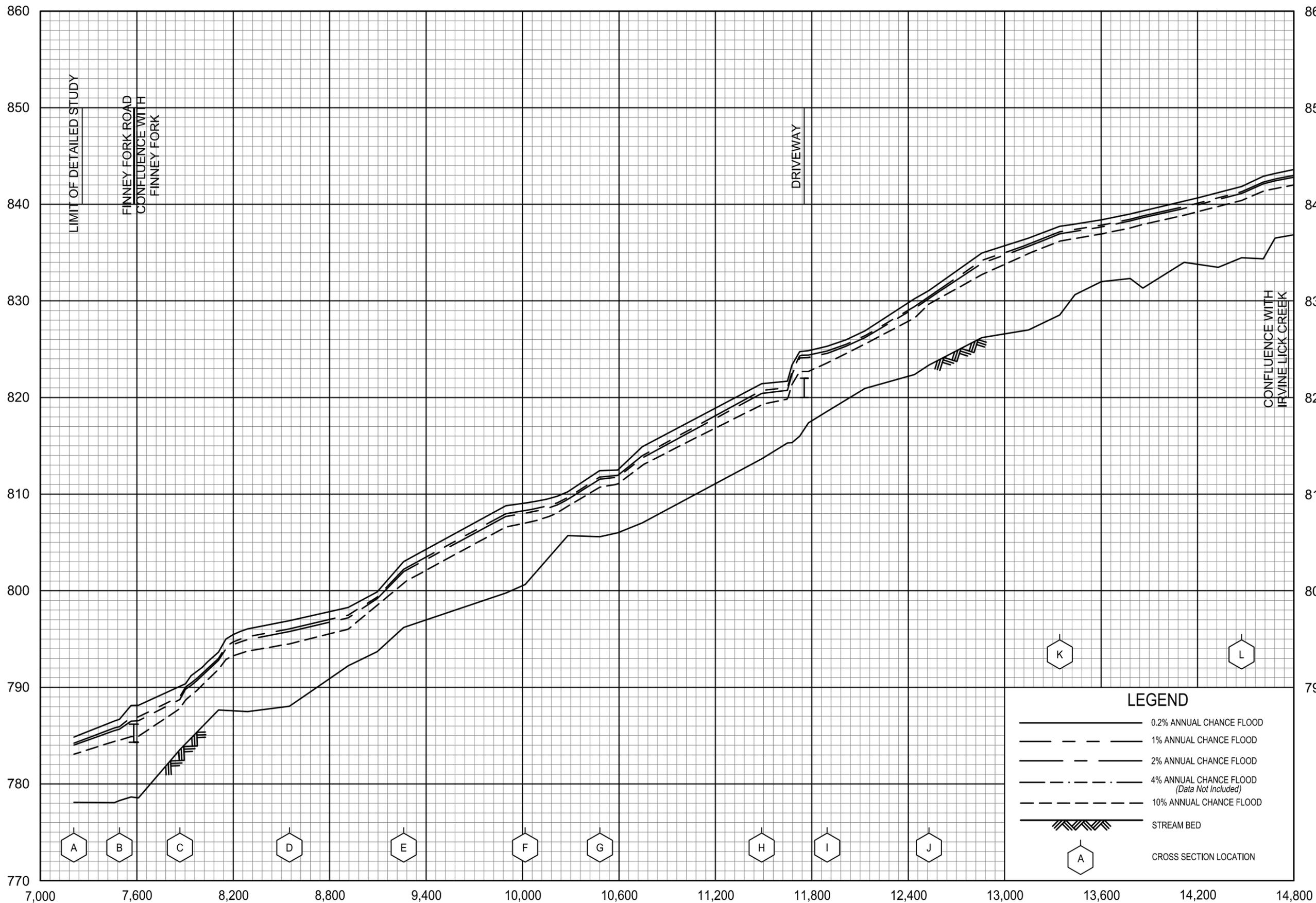
FEDERAL EMERGENCY MANAGEMENT AGENCY
MADISON COUNTY, KY
AND INCORPORATED AREAS



FLOOD PROFILES
TERRILL BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY
MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH CRUTCHER FORK

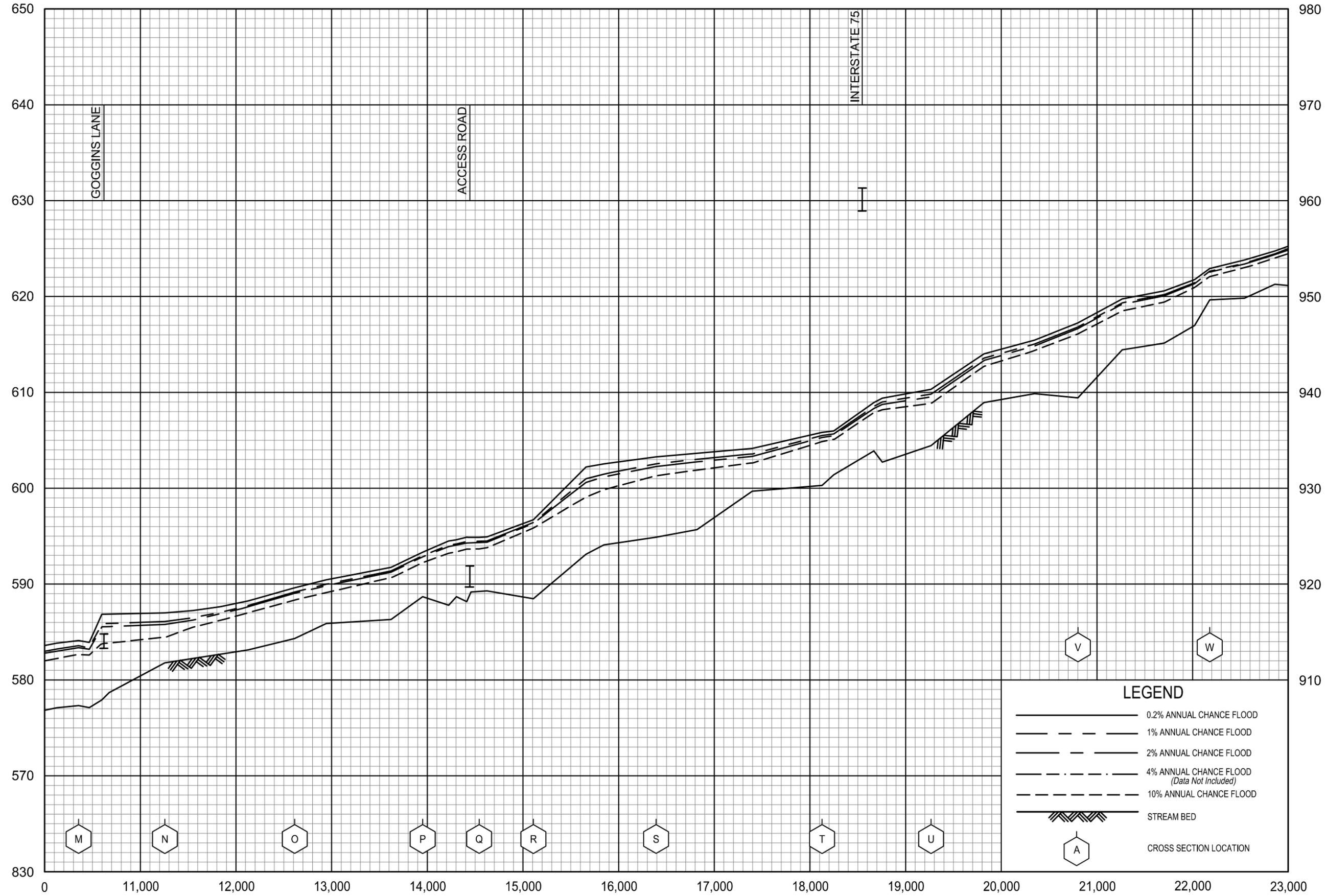
LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD (Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES
UPPER TATE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH CRUTCHER FORK

FLOOD PROFILES

UPPER TATE CREEK

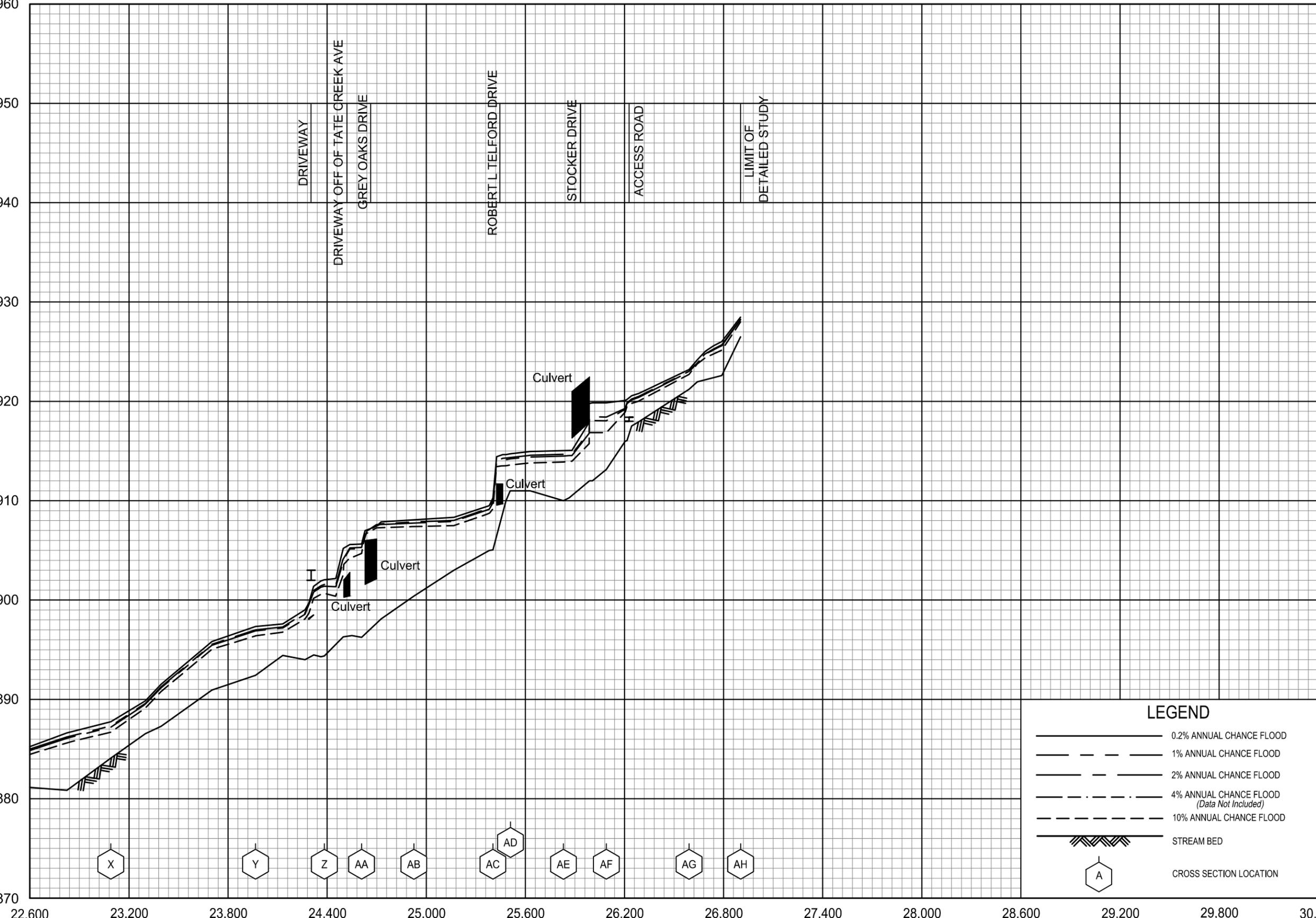
FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

56P

ELEVATION IN FEET (NAVD)

960
950
940
930
920
910
900
890
880
870



22,600 23,200 23,800 24,400 25,000 25,600 26,200 26,800 27,400 28,000 28,600 29,200 29,800 30,400

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH CRUTCHER FORK

LEGEND

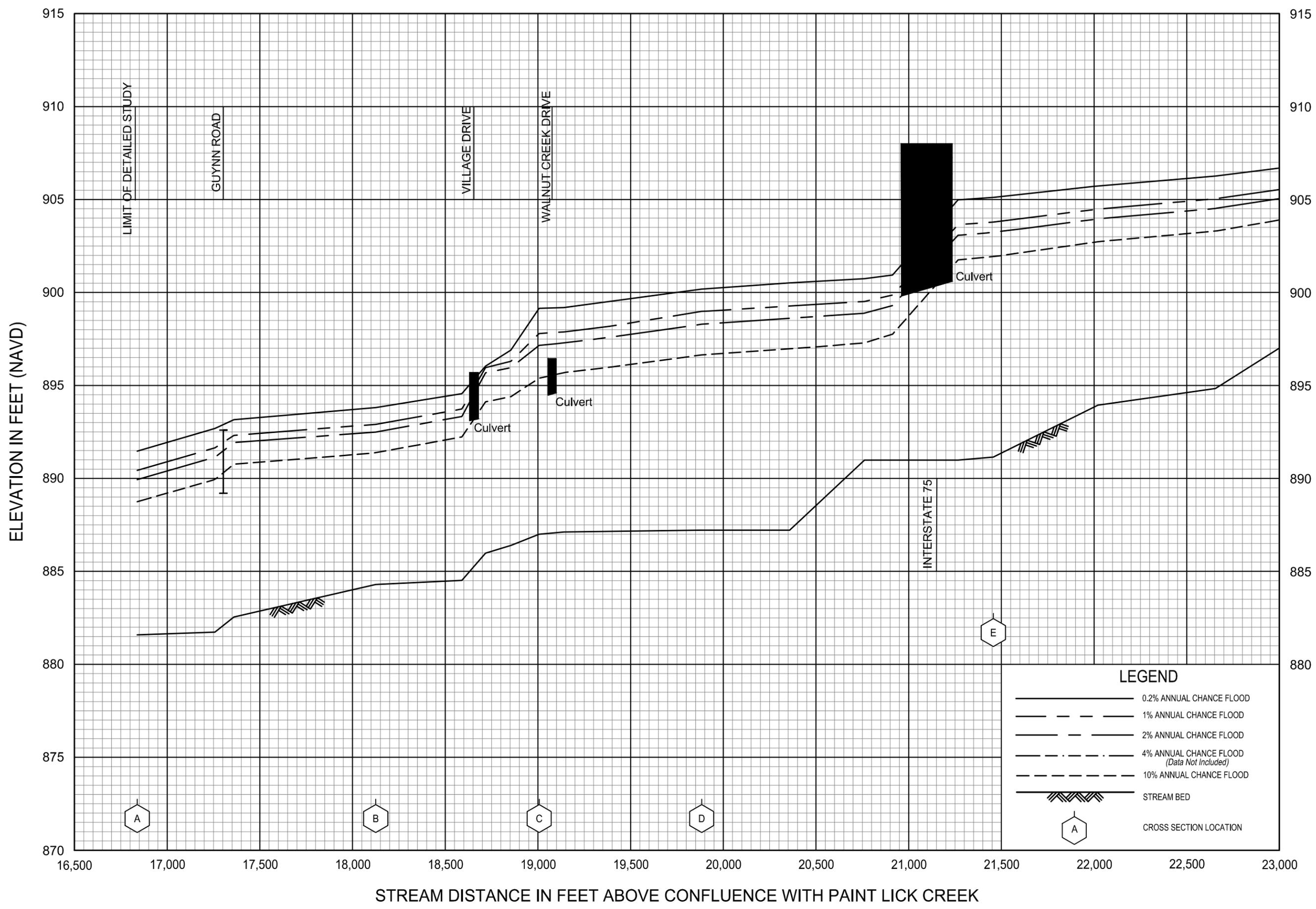
- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD (Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

UPPER TATE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS



LEGEND

	0.2% ANNUAL CHANCE FLOOD
	1% ANNUAL CHANCE FLOOD
	2% ANNUAL CHANCE FLOOD
	4% ANNUAL CHANCE FLOOD <i>(Data Not Included)</i>
	10% ANNUAL CHANCE FLOOD
	STREAM BED
	CROSS SECTION LOCATION

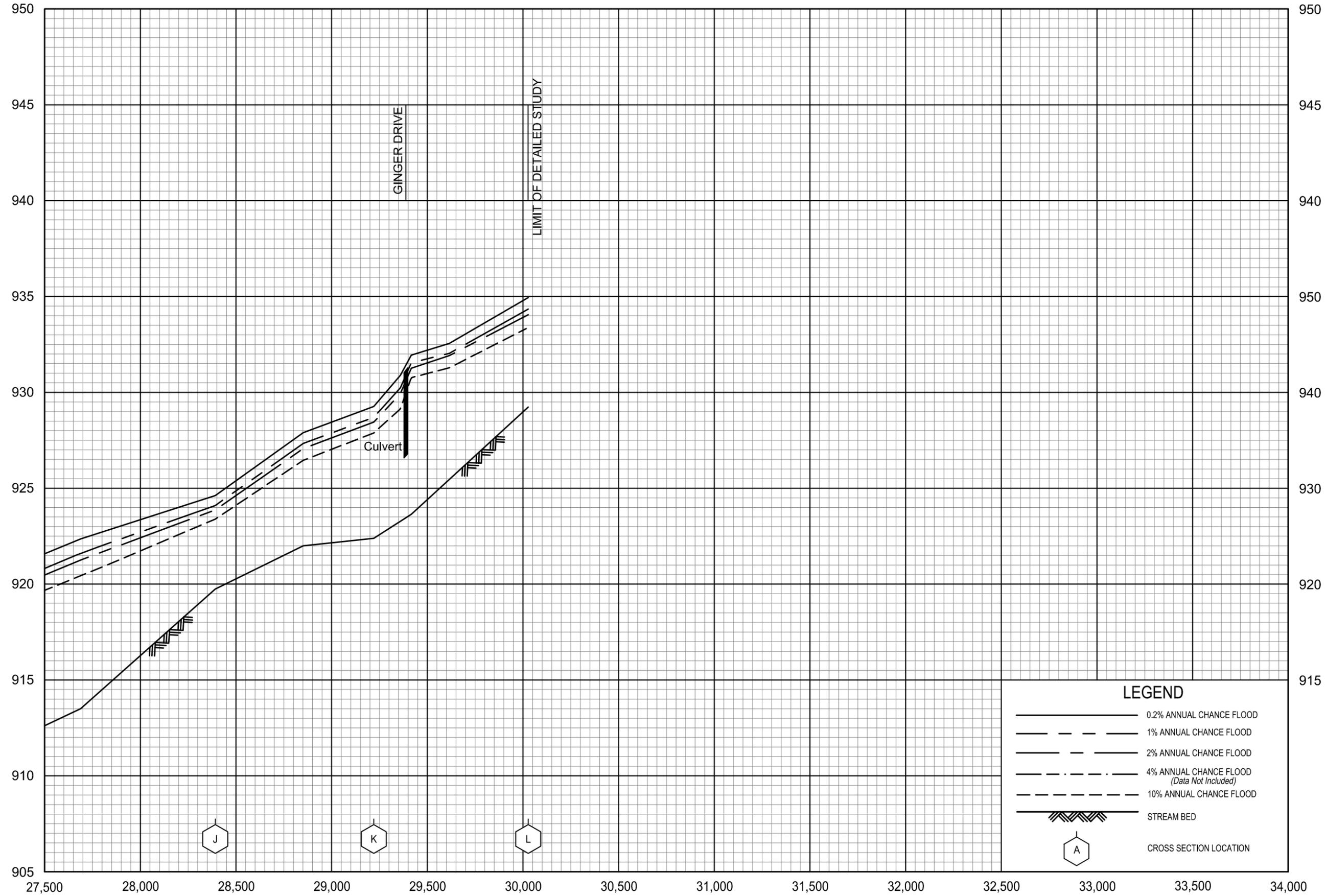
FLOOD PROFILES

WALNUT MEADOW BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH PAINT LICK CREEK

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD
(Data Not Included)
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES

WALNUT MEADOW BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

MADISON COUNTY, KY
AND INCORPORATED AREAS

60P