



FLOOD INSURANCE STUDY

VOLUME 8 OF 8



MORRIS COUNTY, NEW JERSEY (ALL JURISDICTIONS)

COMMUNITY NAME	COMMUNITY NUMBER	COMMUNITY NAME	COMMUNITY NUMBER
BOONTON, TOWN OF	340335	MINE HILL, TOWNSHIP OF	340556
BOONTON, TOWNSHIP OF	340336	MONTVILLE, TOWNSHIP OF	340349
BUTLER, BOROUGH OF	340337	MORRIS PLAINS, BOROUGH OF	340351
CHATHAM, BOROUGH OF	340338	MORRIS, TOWNSHIP OF	340350
CHATHAM, TOWNSHIP OF	340504	MORRISTOWN, TOWN OF	340352
CHESTER, BOROUGH OF ¹	345534	MOUNT ARLINGTON, BOROUGH OF	340541
CHESTER, TOWNSHIP OF	340555	MOUNT OLIVE, TOWNSHIP OF	340353
DENVILLE, TOWNSHIP OF	345292	MOUNTAIN LAKES, BOROUGH OF ¹	340161
DOVER, TOWN OF	340340	NETCONG, BOROUGH OF	340354
EAST HANOVER, TOWNSHIP OF	340341	PARSIPPANY-TROY HILLS, TOWNSHIP OF	340355
FLORHAM PARK, BOROUGH OF	340342	PEQUANNOCK, TOWNSHIP OF	345311
HANOVER, TOWNSHIP OF	340343	RANDOLPH, TOWNSHIP OF	340358
HARDING, TOWNSHIP OF	340344	RIVERDALE, BOROUGH OF	340359
JEFFERSON, TOWNSHIP OF	340522	ROCKAWAY, BOROUGH OF	345315
KINNELON, BOROUGH OF	340345	ROCKAWAY, TOWNSHIP OF	340360
LINCOLN PARK, BOROUGH OF	345300	ROXBURY, TOWNSHIP OF	340362
LONG HILL, TOWNSHIP OF	340356	VICTORY GARDENS, BOROUGH OF	340162
MADISON, BOROUGH OF	340347	WASHINGTON, TOWNSHIP OF	340363
MENDHAM, BOROUGH OF	340540	WHARTON, BOROUGH OF	340364
MENDHAM, TOWNSHIP OF	340511		

¹ No Special Flood Hazard Areas Identified

**Revised Preliminary Date:
February 26, 2016**



Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
34027CV008A

**NOTICE TO
FLOOD INSURANCE STUDY USERS**

Communities participating in the National Flood Insurance Program (NFIP) have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study (FIS) report may not contain all data available within the Community Map Repository. Please contact the Community Map Repository for any additional data.

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

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

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

Initial Countywide FIS Effective Date: TBD

TABLE OF CONTENTS

Table of Contents – Volume 1 – (Date)

	<u>Page</u>
1.0 INTRODUCTION	1
1.1. Purpose of Study	1
1.2. Authority and Acknowledgments	1
1.3. Coordination	10
2.0 AREA STUDIED	12
2.1. Scope of Study	12
2.2. Community Description	20
2.3. Principal Flood Problems	21
2.4. Flood Protection Measures	28
3.0 ENGINEERING METHODS	28
3.1. Hydrologic Analyses	29
3.2. Hydraulic Analyses	62
3.3. Vertical Datum	79
4.0 FLOODPLAIN MANAGEMENT APPLICATIONS	80
4.1. Floodplain Boundaries	80
4.2. Floodways	80
5.0 INSURANCE APPLICATION	82
6.0 FLOOD INSURANCE RATE MAP	83
7.0 OTHER STUDIES	83
8.0 LOCATION OF DATA	84
9.0 BIBLIOGRAPHY AND REFERENCES	90

Table of Contents – Volume 1 – continued

	<u>Page</u>
<u>FIGURES</u>	
Figure 1 – Floodway Schematic	82

<u>TABLES</u>	
Table 1 – New and Revised Hydrologic and Hydraulic Analyses	9
Table 2 – CCO Coordination Meetings	10
Table 3 – Flooding Sources Studied by Detailed Methods	12
Table 4 – Stream Name Changes	13
Table 5 – Scope of Revision	14
Table 6 – Model Dates for Riverine Flooding	16
Table 7 – Summary of Discharges	45
Table 8 – Summary of Stillwater Elevations	61
Table 9 – Summary of Roughness Coefficients	76
Table 10 – Community Map History	85

Table of Contents – Volume 2 – (Date)

TABLES – continued

Table 11 – Floodway Data Table

EXHIBITS

Exhibit 1 – Flood Profiles	
Beaver Brook A	Panels 01-04P
Beaver Brook B	Panels 05-09P
Beaver Dam Brook	Panels 10-11P
Black Brook B	Panels 12-14P
Black Cat Ditch	Panels 15-16P
Budd Lake Tributary	Panel 17P
Burnett Brook	Panels 18-26P
Conlon Pond Brook	Panels 27-38P

Table of Contents – Volume 3 – (Date)

EXHIBITS – continued

Exhibit 1 – Flood Profiles – continued	
Crooked Brook	Panels 39-48P
Crooked Brook Tributary	Panels 49-55P
Dawsons Brook	Panels 56-57P
Den Brook	Panels 58-72P
Drakes Brook	Panels 73-86P
Drakes Brook Overflow Channel	Panel 87P
East Ditch	Panels 88-90P
Eastmans Brook	Panels 91-97P
Electric Brook	Panels 98-107P
Fish’s Brook	Panels 108-109P
Fox Brook	Panels 110-115P
Gladstone Brook	Panels 116-122P
Great Brook	Panels 123-131P

Table of Contents – Volume 4 – (Date)

EXHIBITS – continued

Exhibit 1 – Flood Profiles – continued	
Green Pond Brook	Panels 132-136P
Harmony Brook	Panels 137-143P
Hatfield Creek	Panels 144-145P
Hibernia Brook	Panels 146-154P
Indian Brook	Panels 155-157P
Jackson Brook	Panels 158-159P
Jaquis Brook	Panel 160P
Lamington River	Panels 161-169P
Little Beaverdam Brook	Panels 170-171P
Malapardis Brook	Panels 172-173P
McVickers Brook	Panel 174P
Mill Brook	Panels 175-182P
Musconetcong River	Panels 183-213P
North Branch Raritan River	Panels 214-222P
Northern Tributary	Panels 223-224P

Table of Contents – Volume 5 – (Date)

EXHIBITS – continued

Exhibit 1 – Flood Profiles – continued	
Passaic River	Panels 225-268P
Left Channel of Passaic River	Panel 269P
Peapack Brook	Panels 270-273P
Pequannock River	Panels 274-291P
Pinch Brook	Panels 292-293P
Pompton River	Panels 294-295P
Primrose Brook	Panels 296-300P

Table of Contents – Volume 6 – (Date)

EXHIBITS – continued

Exhibit 1 – Flood Profiles – continued	
Rockaway River	Panels 301-342P
Silver Brook	Panels 343-345P
South Branch Raritan River	Panels 346-378P
Southern Tributary	Panel 379P

Table of Contents – Volume 7 – (Date)

EXHIBITS – continued

Exhibit 1 – Flood Profiles – continued	
Spring Garden Brook	Panels 380-385P
Stephensburg Brook	Panels 386-390P
Stonehouse Brook	Panels 391-395P
Stony Brook	Panels 396-402P
Stony Brook A	Panels 403-405P
Succasunna Brook	Panels 406P
Tanglewood Brook	Panels 407-408P
Tanners Brook	Panels 409-413P
Tributary 1 to Malapardis Brook	Panel 414P
Tributary 1 to Musconetcong River	Panels 415-419P
Tributary 1 to Whippany River	Panels 420-421P
Tributary 2 to Rockaway River	Panels 422-424P
Tributary 5 to Rockaway River	Panels 425-428P
Tributary 5-1 to Rockaway River	Panels 429-432P
Tributary 6 to Rockaway River	Panels 433-434P
Tributary 7 to Rockaway River	Panels 435-444P
Tributary to Beaver Brook A	Panel 445P
Tributary to Great Brook	Panel 446P
Tributary to Lake Hopatcong	Panel 447P
Tributary to Pequannock River	Panel 448P
Tributary to Spring Garden Brook	Panel 449P

Table of Contents – Volume 7 – continued

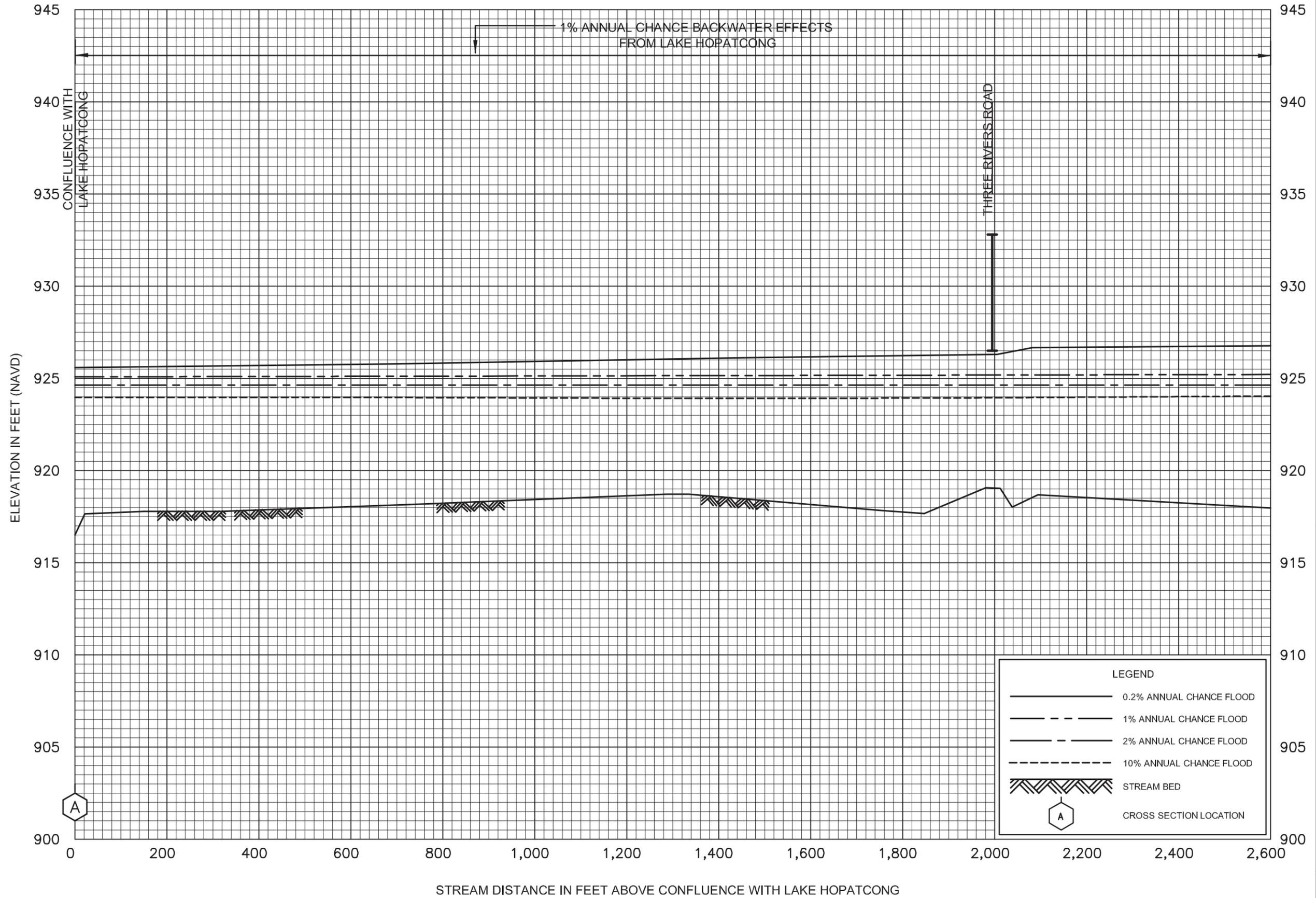
EXHIBITS – continued

Troy Brook	Panels 450-460P
Watnong Brook	Panels 461-472P

Table of Contents – Volume 8 – (Date)

EXHIBITS – continued

Exhibit 1 – Flood Profiles – continued	
Weldon Brook	Panels 473-477P
West Brook	Panels 478-481P
West Ditch	Panels 482-486P
Western Tributary	Panels 487-488P
Whippany River	Panels 489-507P
White Meadow Brook	Panels 508-525P
Wills Brook	Panels 526-535P



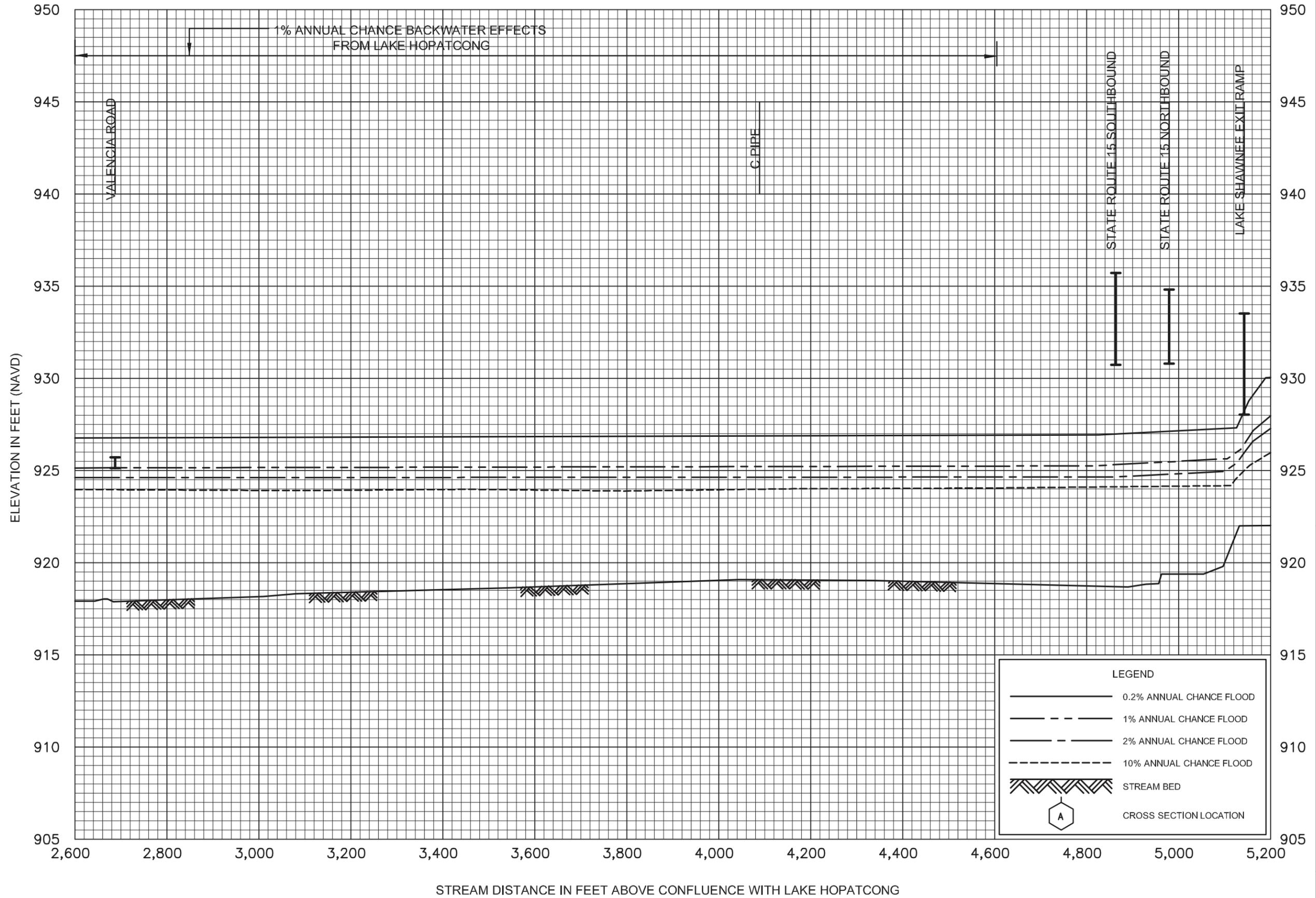
FLOOD PROFILES

WELDON BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

473P



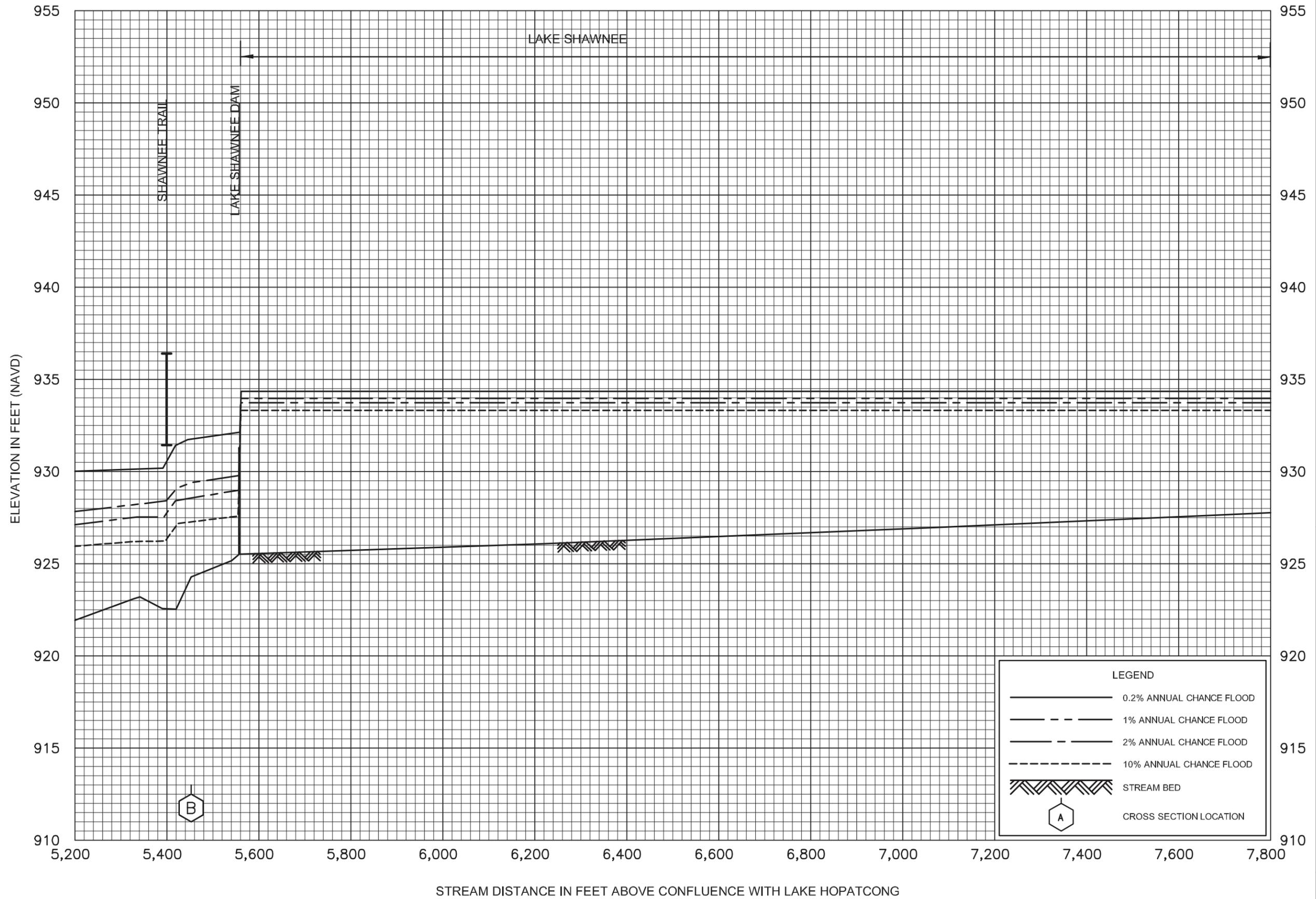
FLOOD PROFILES

WELDON BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

474P



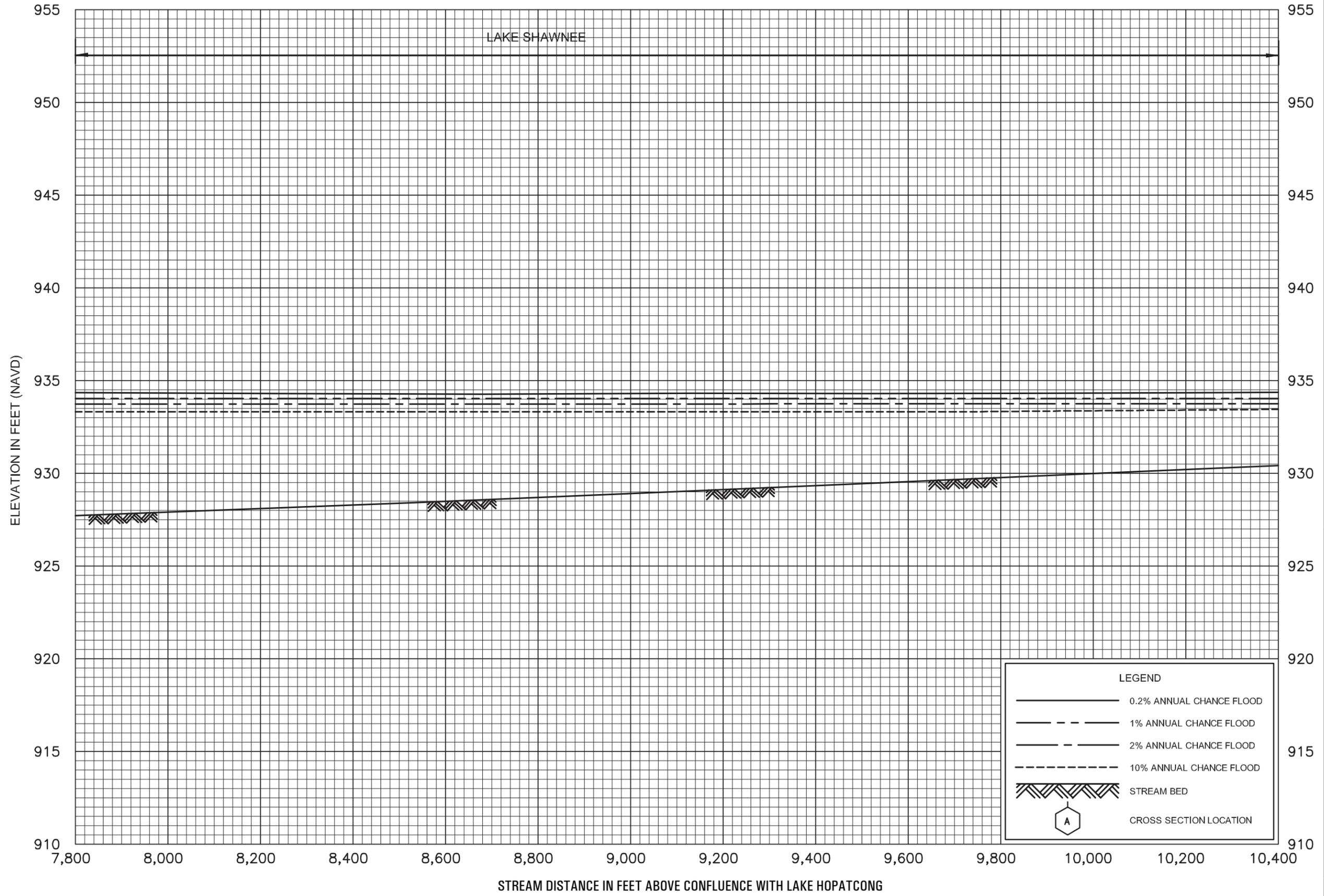
FLOOD PROFILES

WELDON BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

475P



LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- - - 1% ANNUAL CHANCE FLOOD
- · - 2% ANNUAL CHANCE FLOOD
- · · 10% ANNUAL CHANCE FLOOD
- ▨ STREAM BED
- ⬡ A CROSS SECTION LOCATION

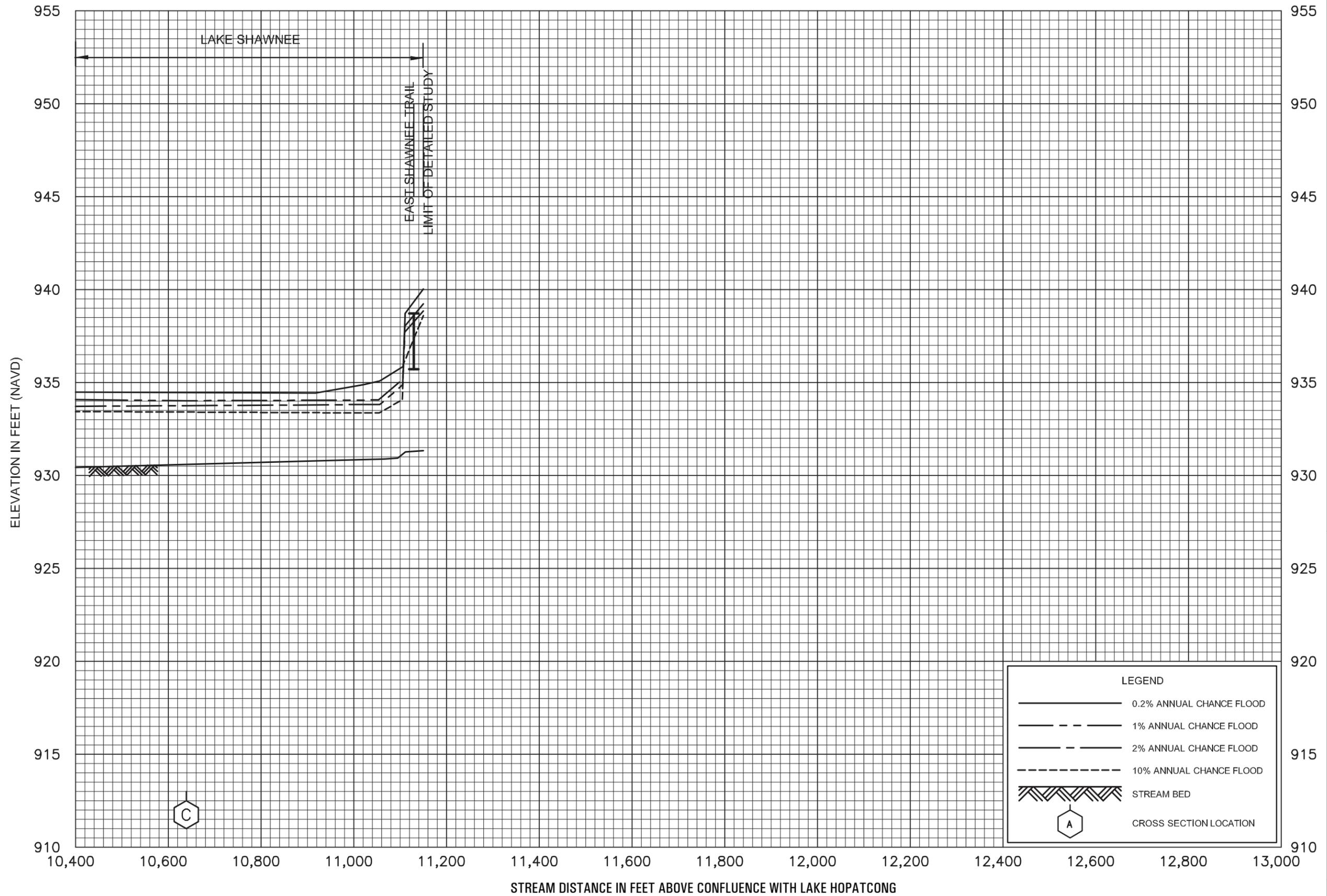
FLOOD PROFILES

WELDON BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

476P



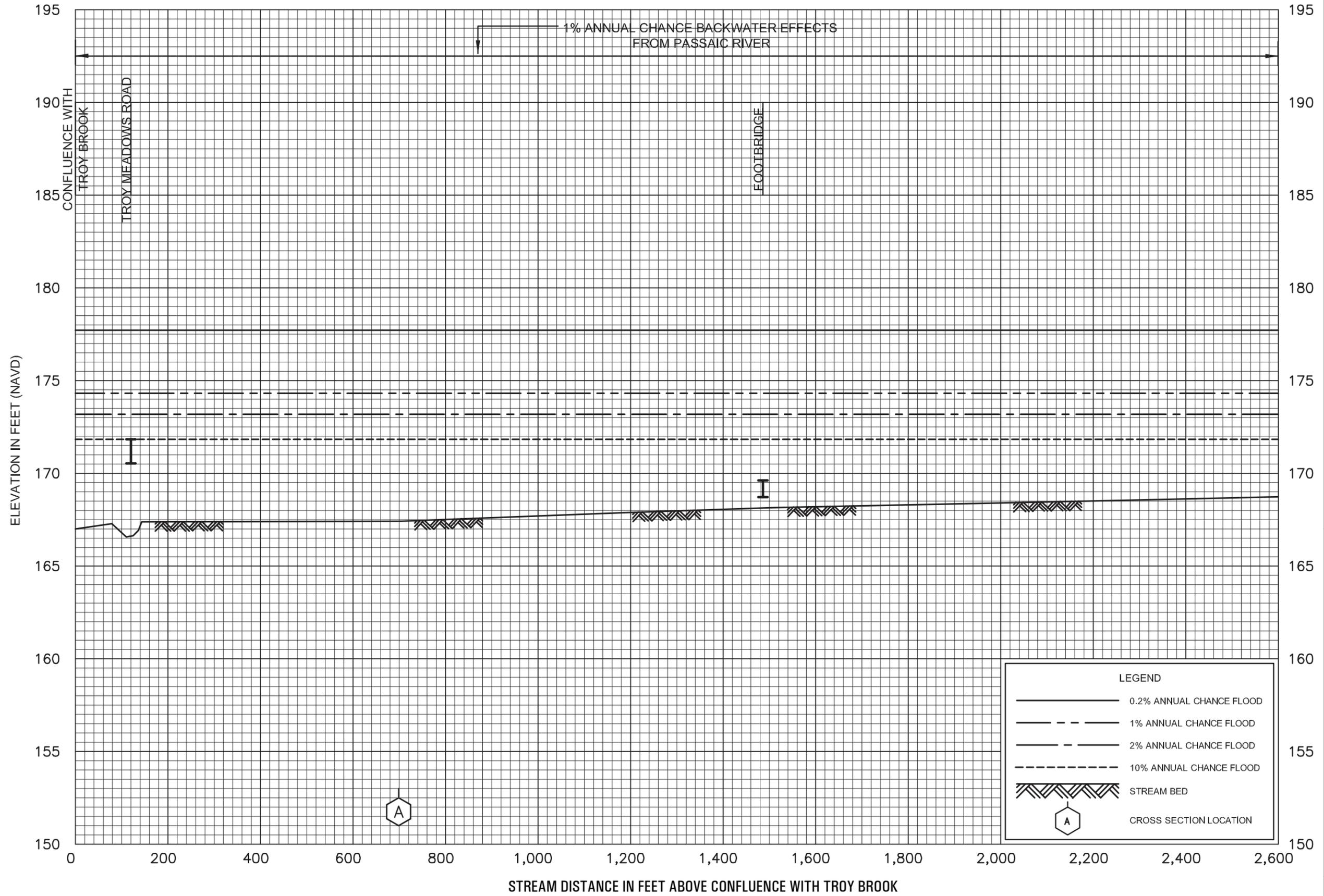
FLOOD PROFILES

WELDON BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

477P



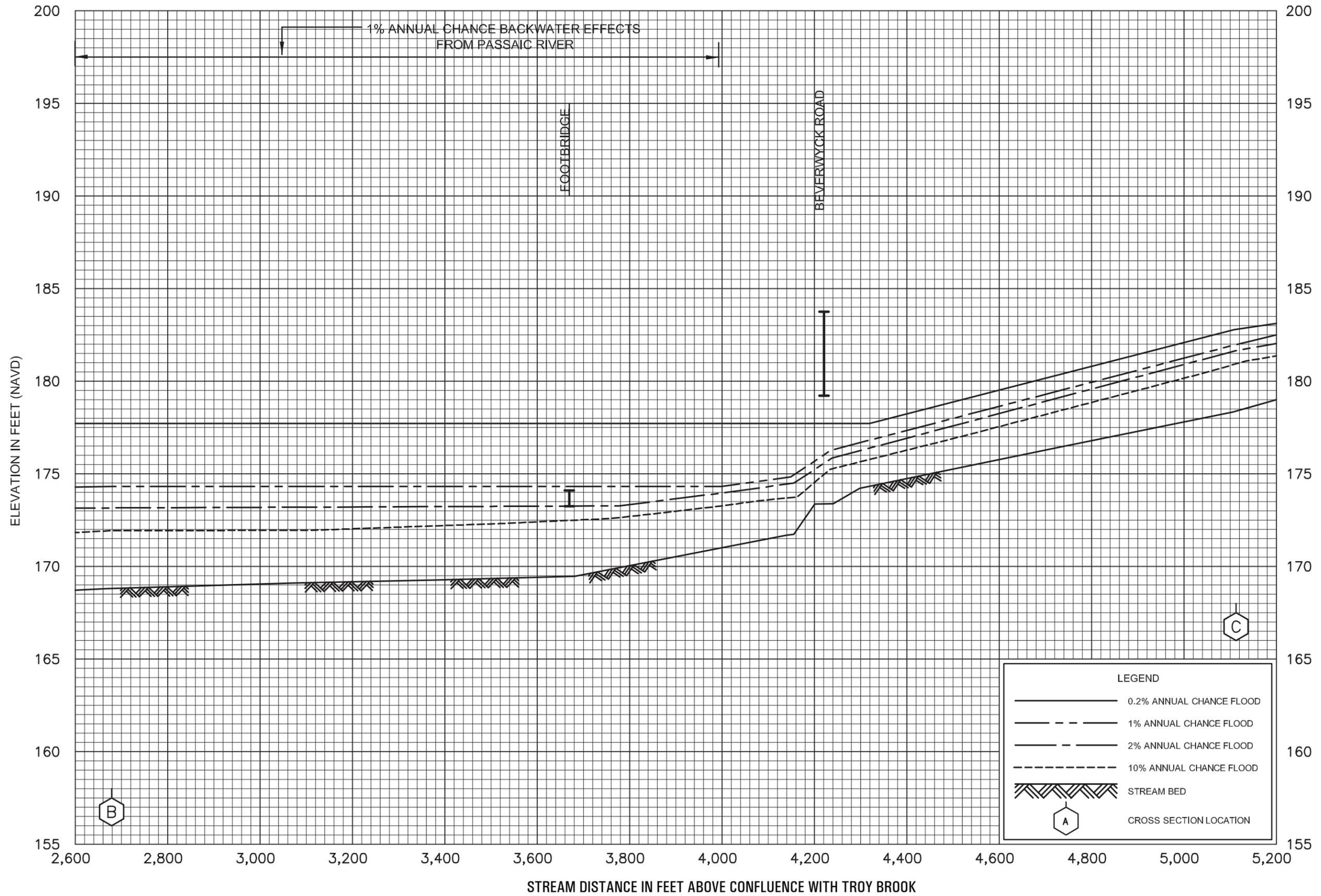
FLOOD PROFILES

WEST BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

478P



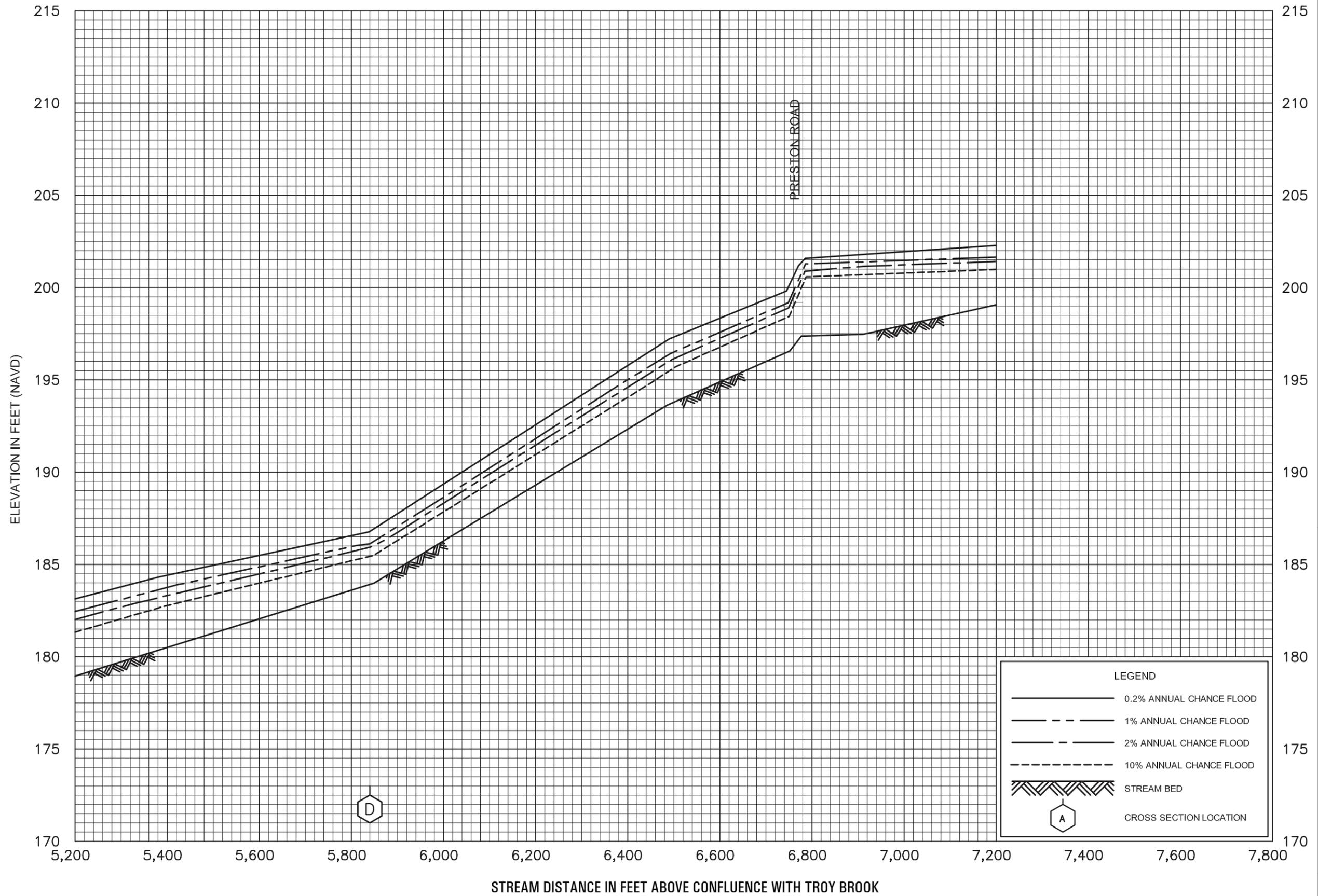
FLOOD PROFILES

WEST BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

479P



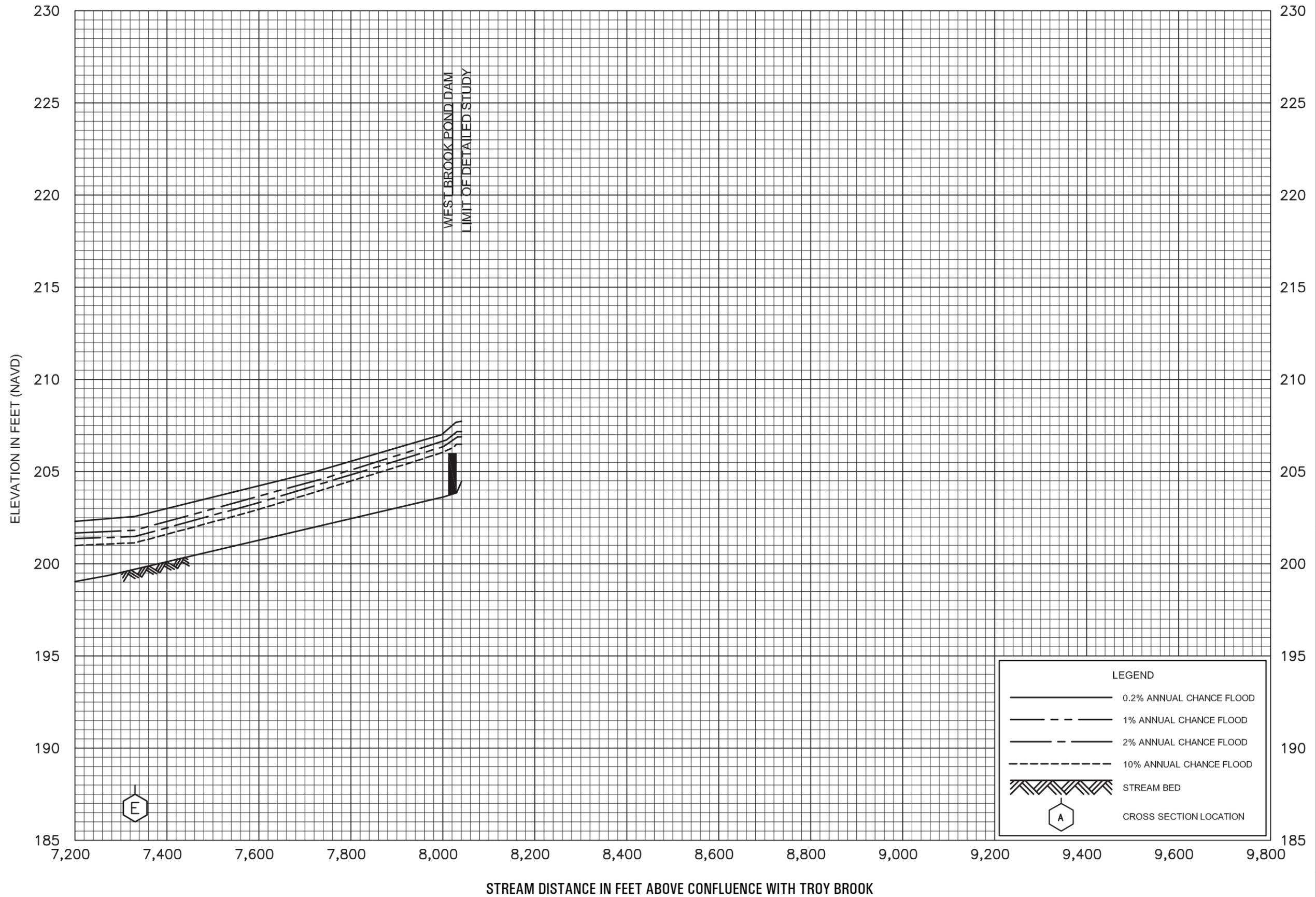
FLOOD PROFILES
WEST BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY
MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

480P

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- - - 1% ANNUAL CHANCE FLOOD
- · - 2% ANNUAL CHANCE FLOOD
- · · 10% ANNUAL CHANCE FLOOD
- ▨ STREAM BED
- ⬡ A CROSS SECTION LOCATION



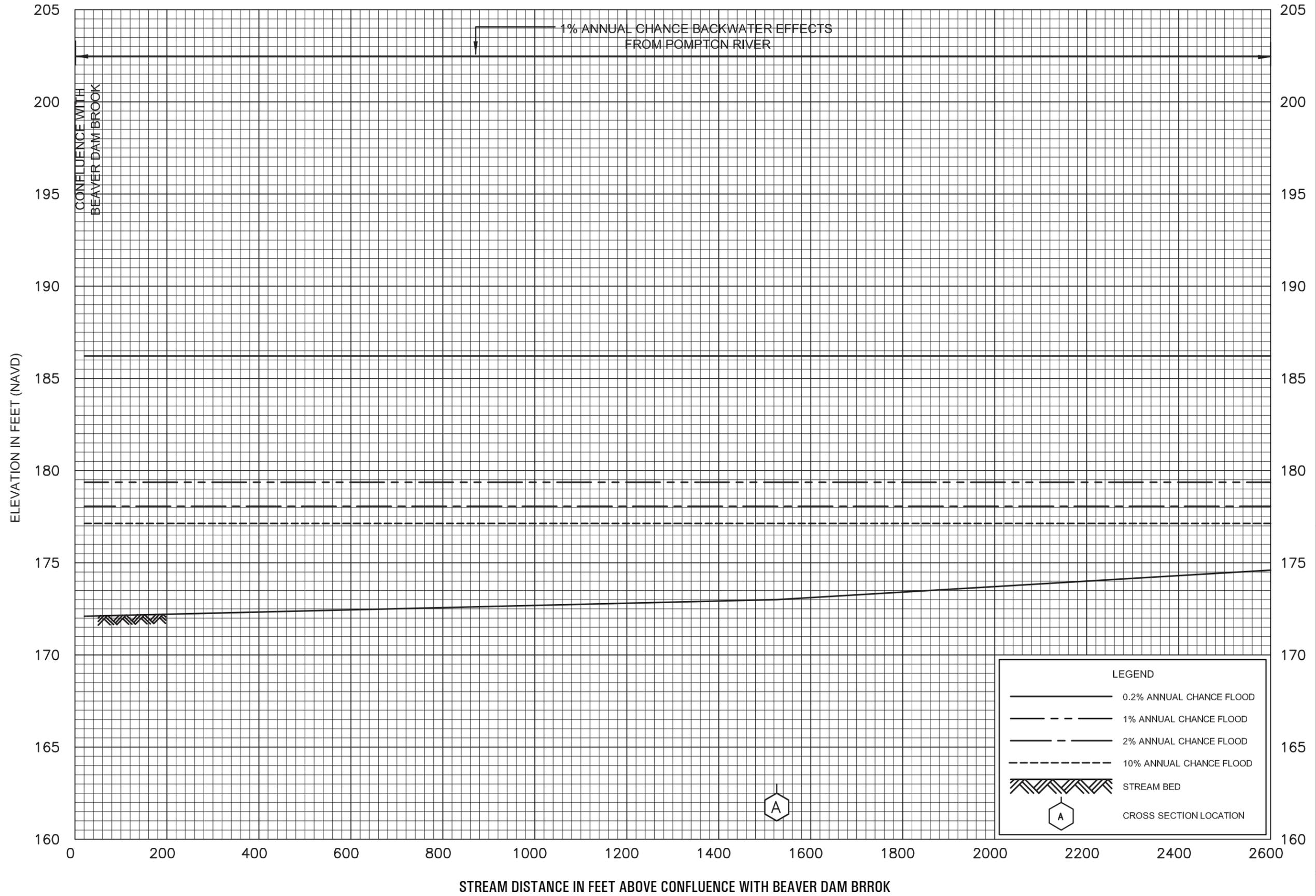
LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- - - 1% ANNUAL CHANCE FLOOD
- · - 2% ANNUAL CHANCE FLOOD
- · · 10% ANNUAL CHANCE FLOOD
- ▨ STREAM BED
- ⬡ A CROSS SECTION LOCATION

FLOOD PROFILES
WEST BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY
MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

481P



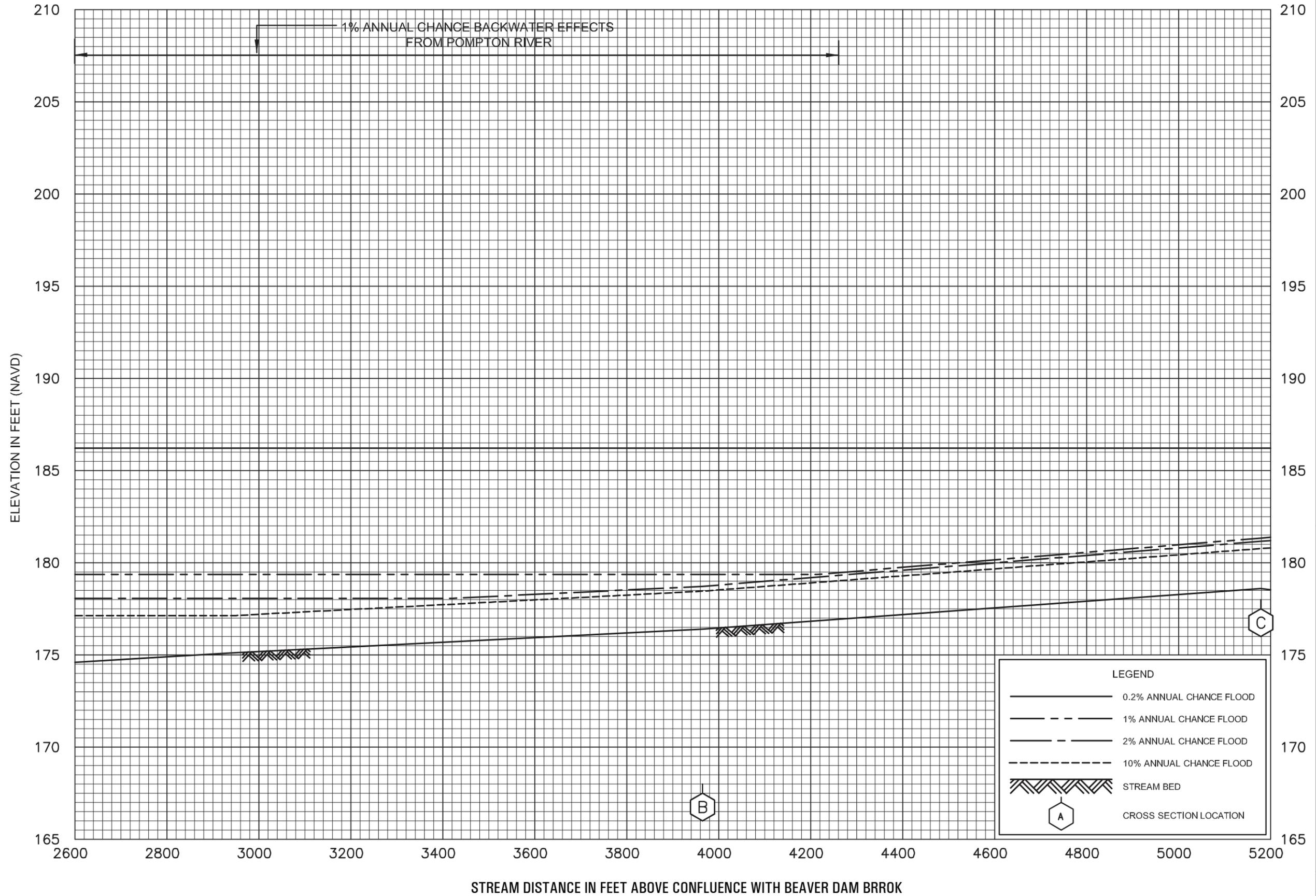
FLOOD PROFILES

WEST DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

482P



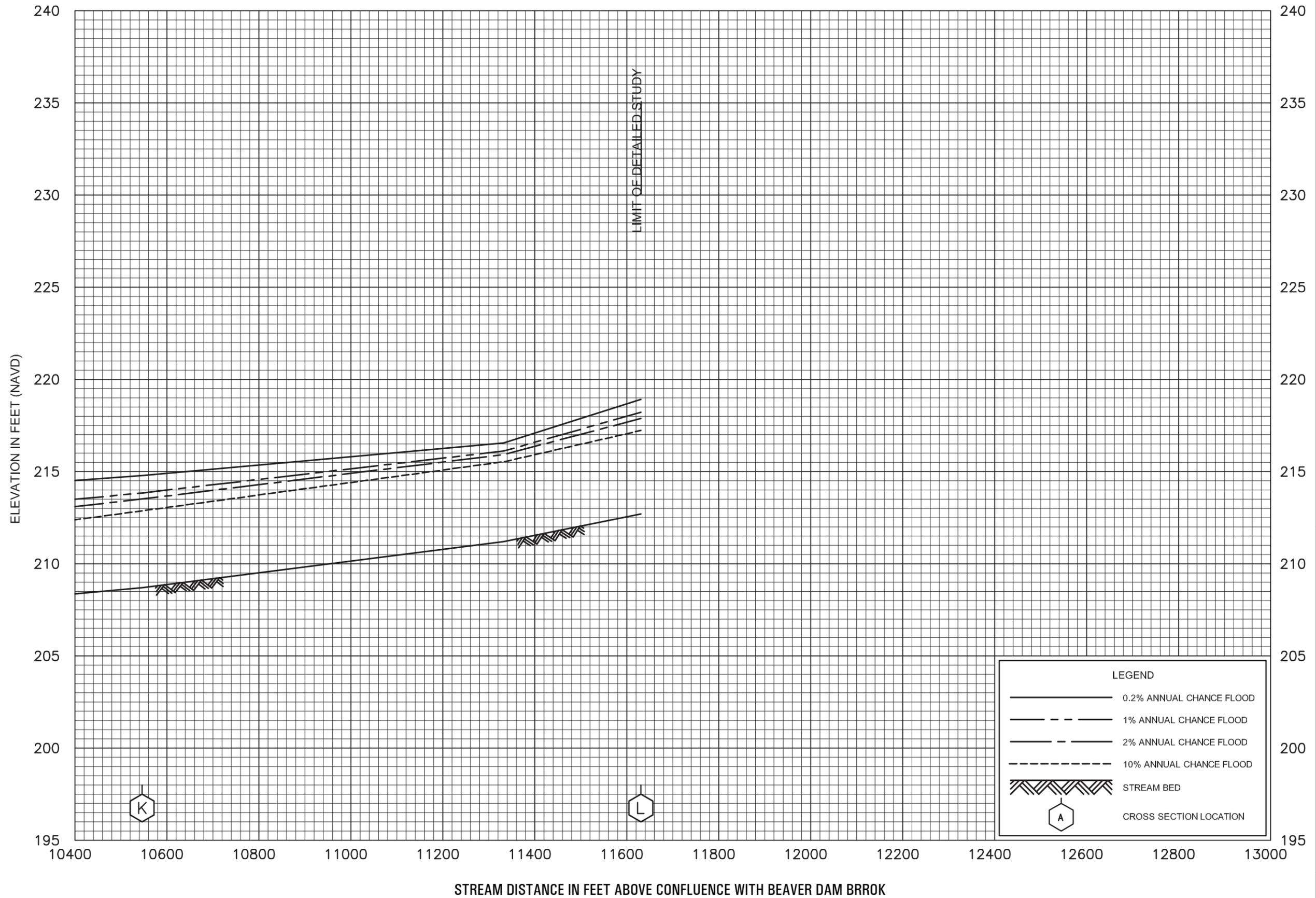
FLOOD PROFILES

WEST DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

483P



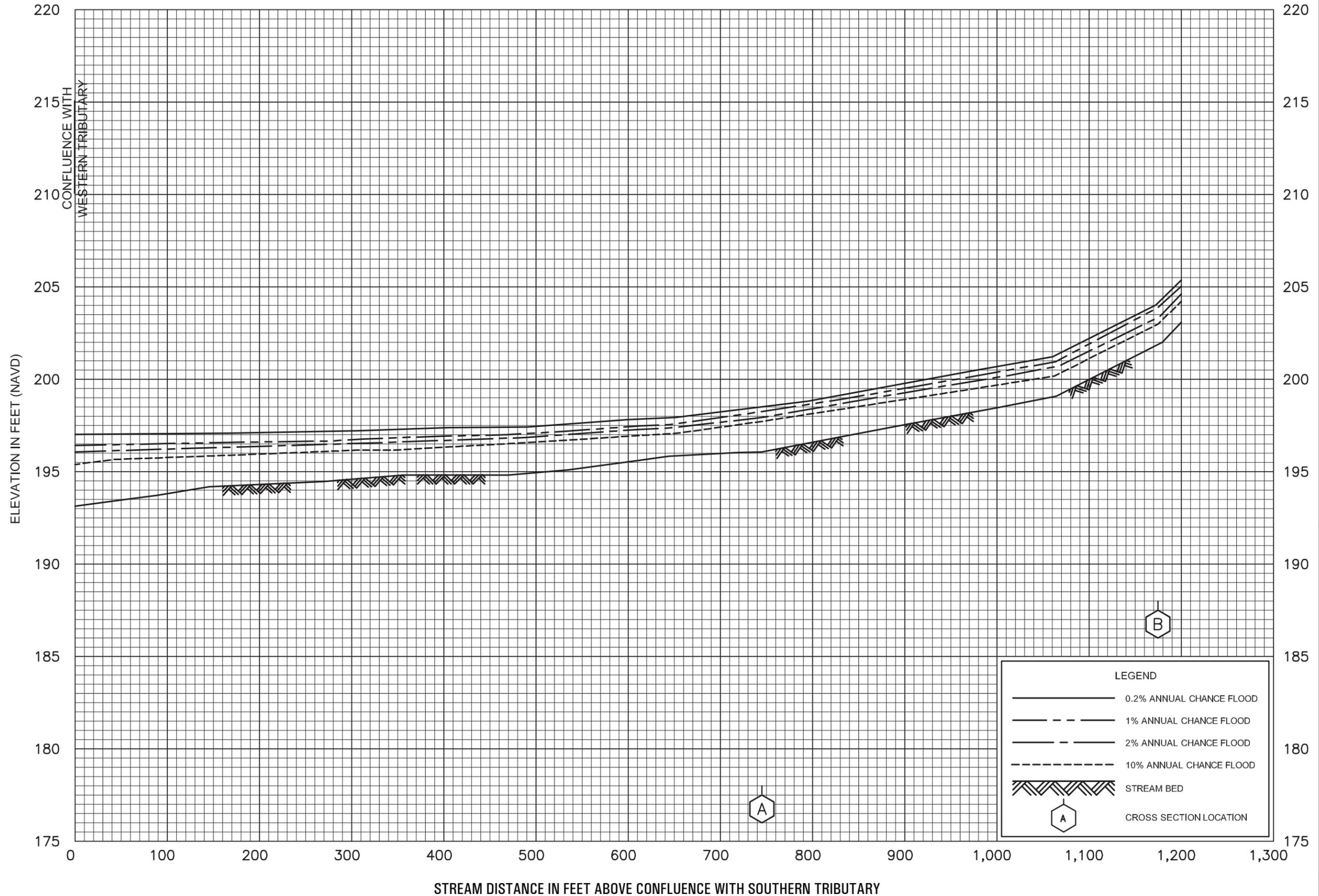
FLOOD PROFILES

WEST DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

486P

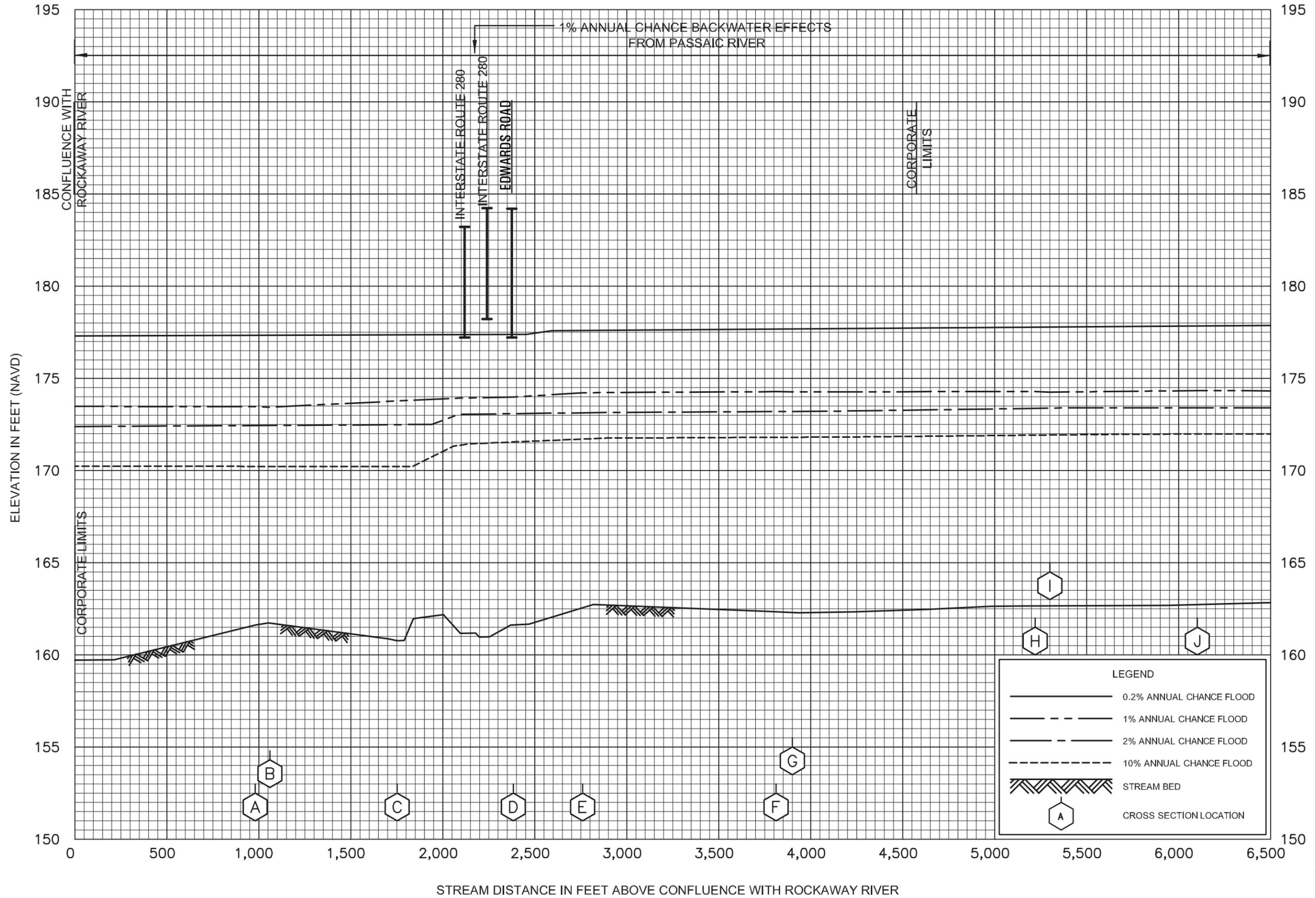


LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- - - 1% ANNUAL CHANCE FLOOD
- · - · 2% ANNUAL CHANCE FLOOD
- · - · 10% ANNUAL CHANCE FLOOD
- ▨ STREAM BED
- ⬡ A CROSS SECTION LOCATION

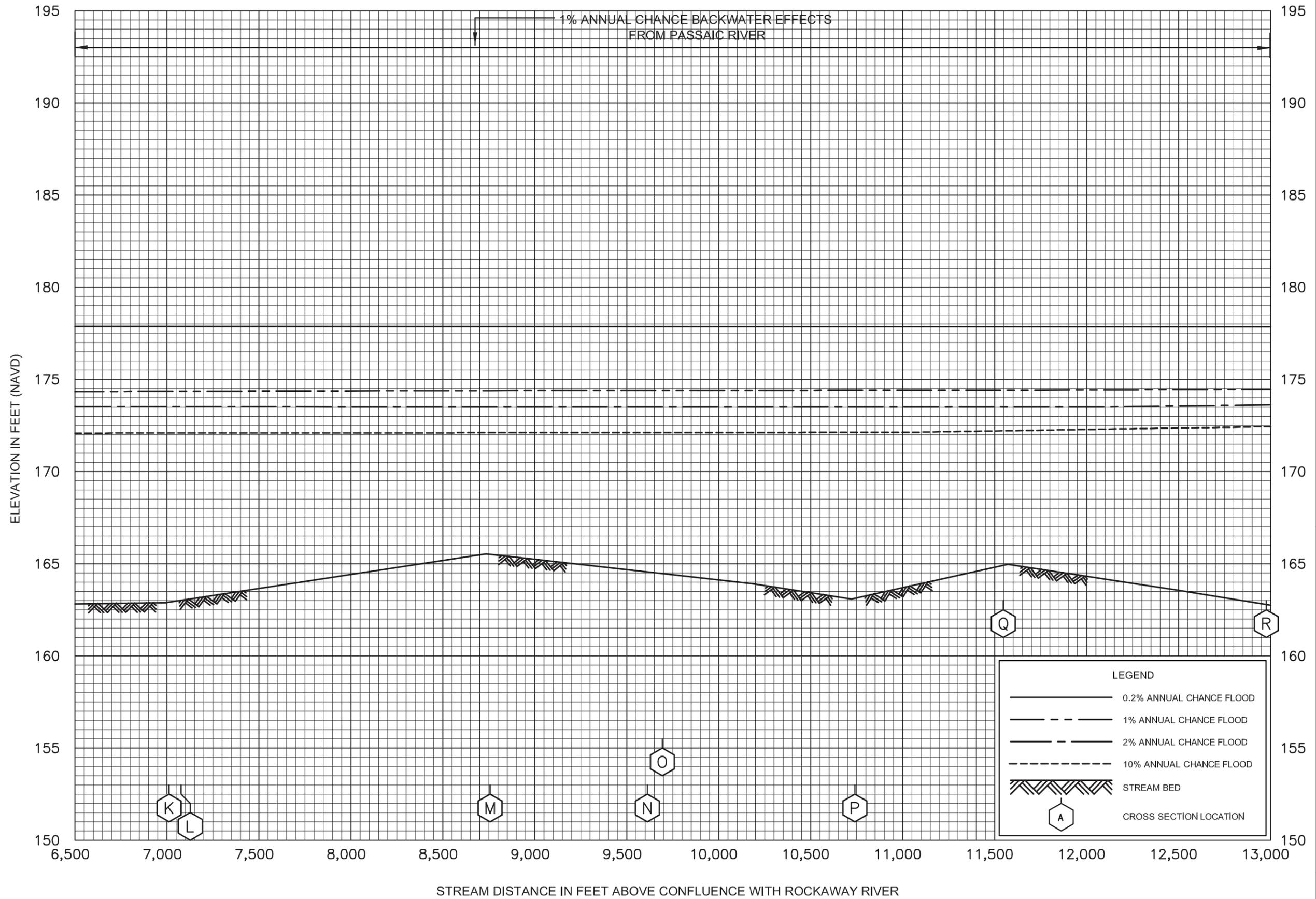
FEDERAL EMERGENCY MANAGEMENT AGENCY
MORRIS COUNTY, NJ
 (ALL JURISDICTIONS)

FLOOD PROFILES
 WESTERN TRIBUTARY



FLOOD PROFILES
WHIPPANY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
MORRIS COUNTY, NJ
(ALL JURISDICTIONS)



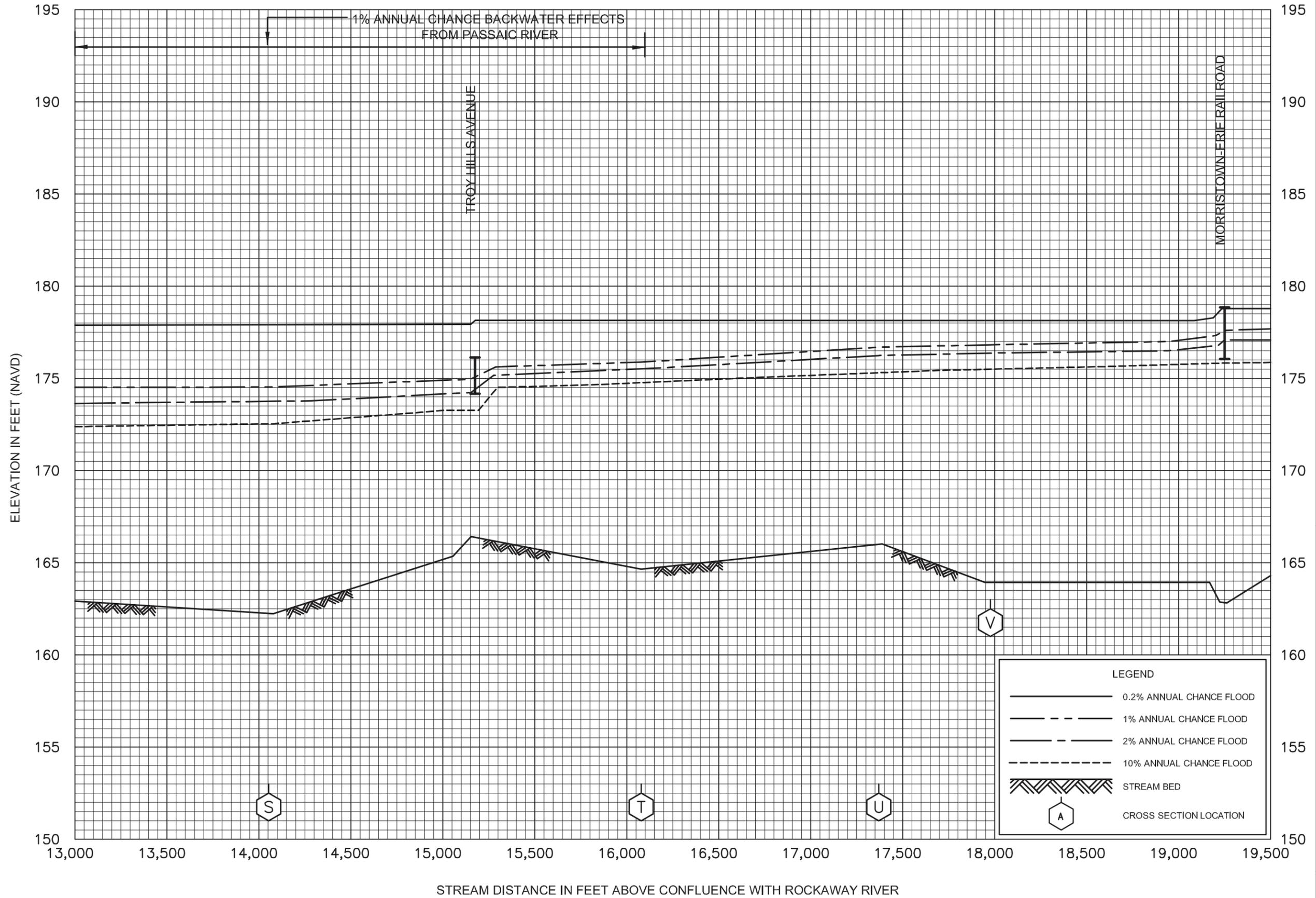
FLOOD PROFILES

WHIPPANY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

490P



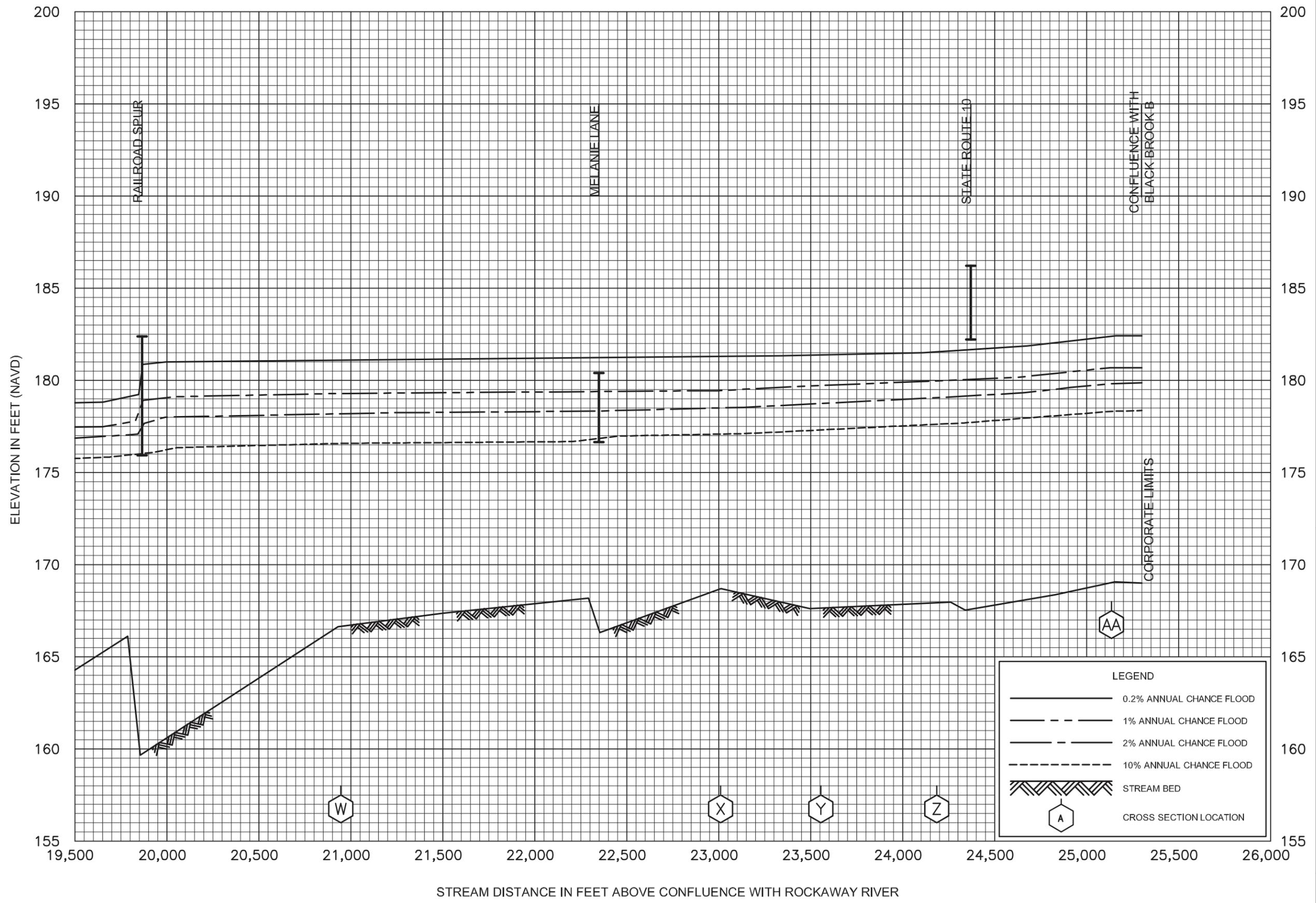
FLOOD PROFILES

WHIPPANY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

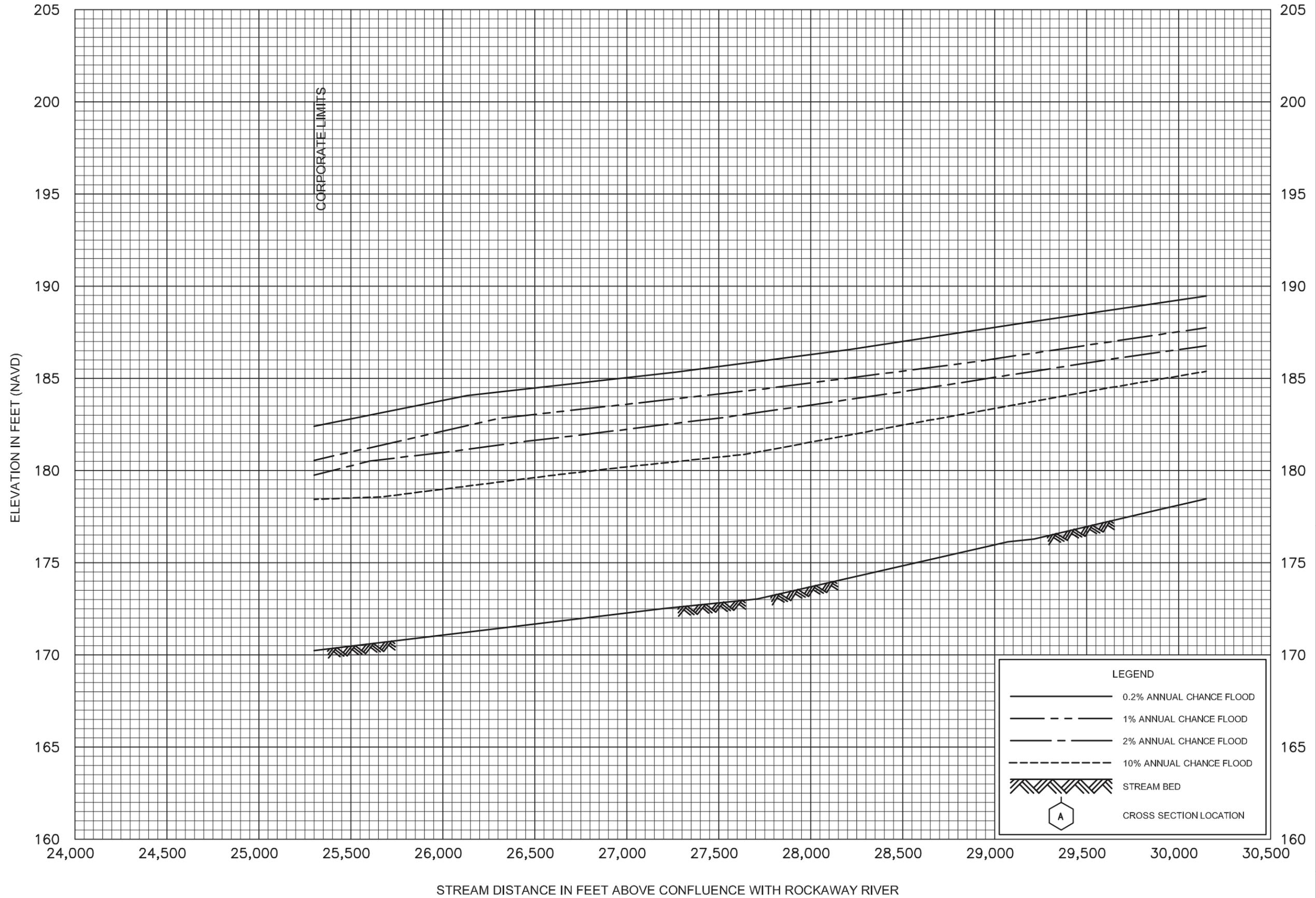
491P



FLOOD PROFILES
WHIPPANY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

492P



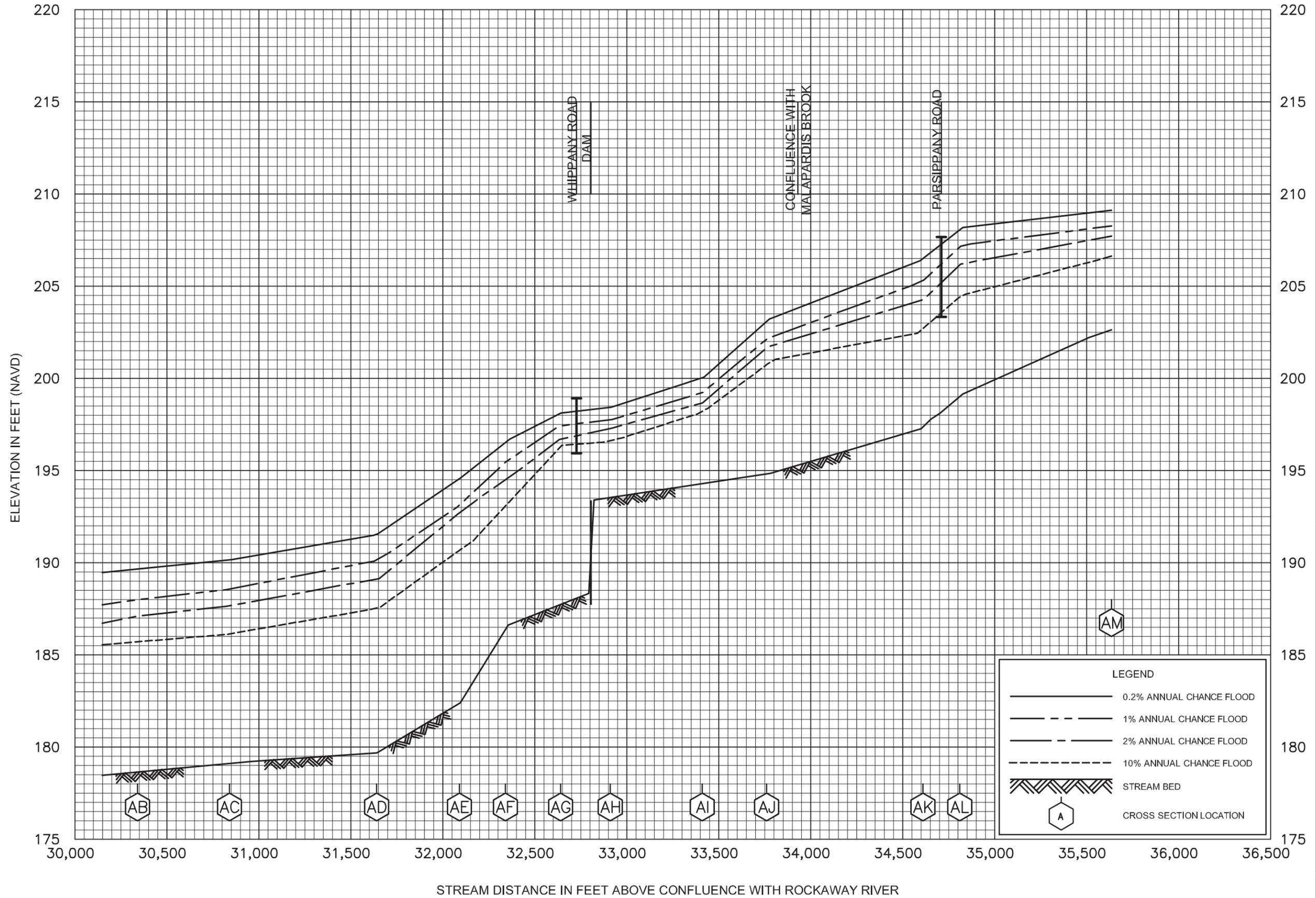
FLOOD PROFILES

WHIPPANY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

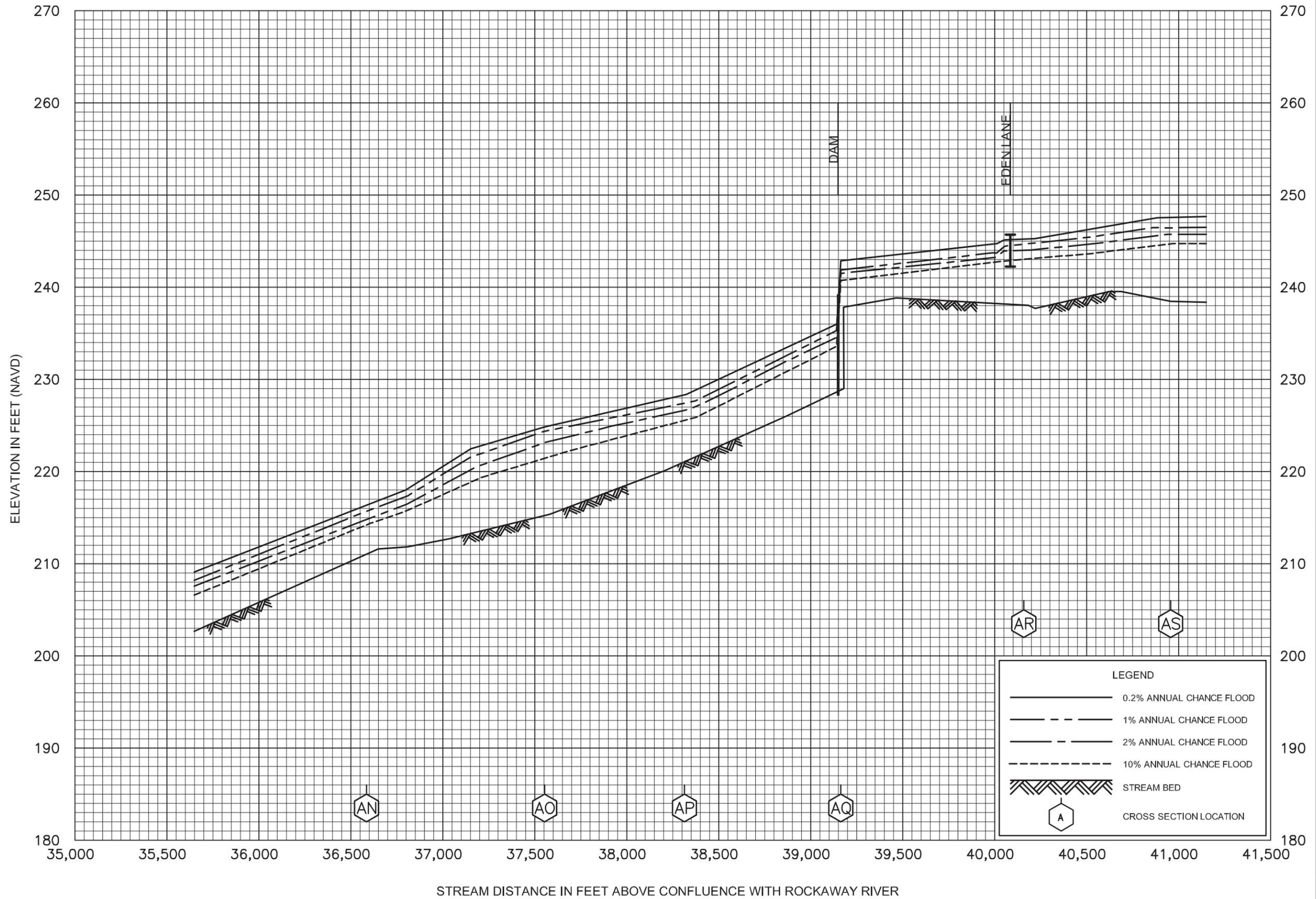
493P



FLOOD PROFILES
WHIPPANY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

494P



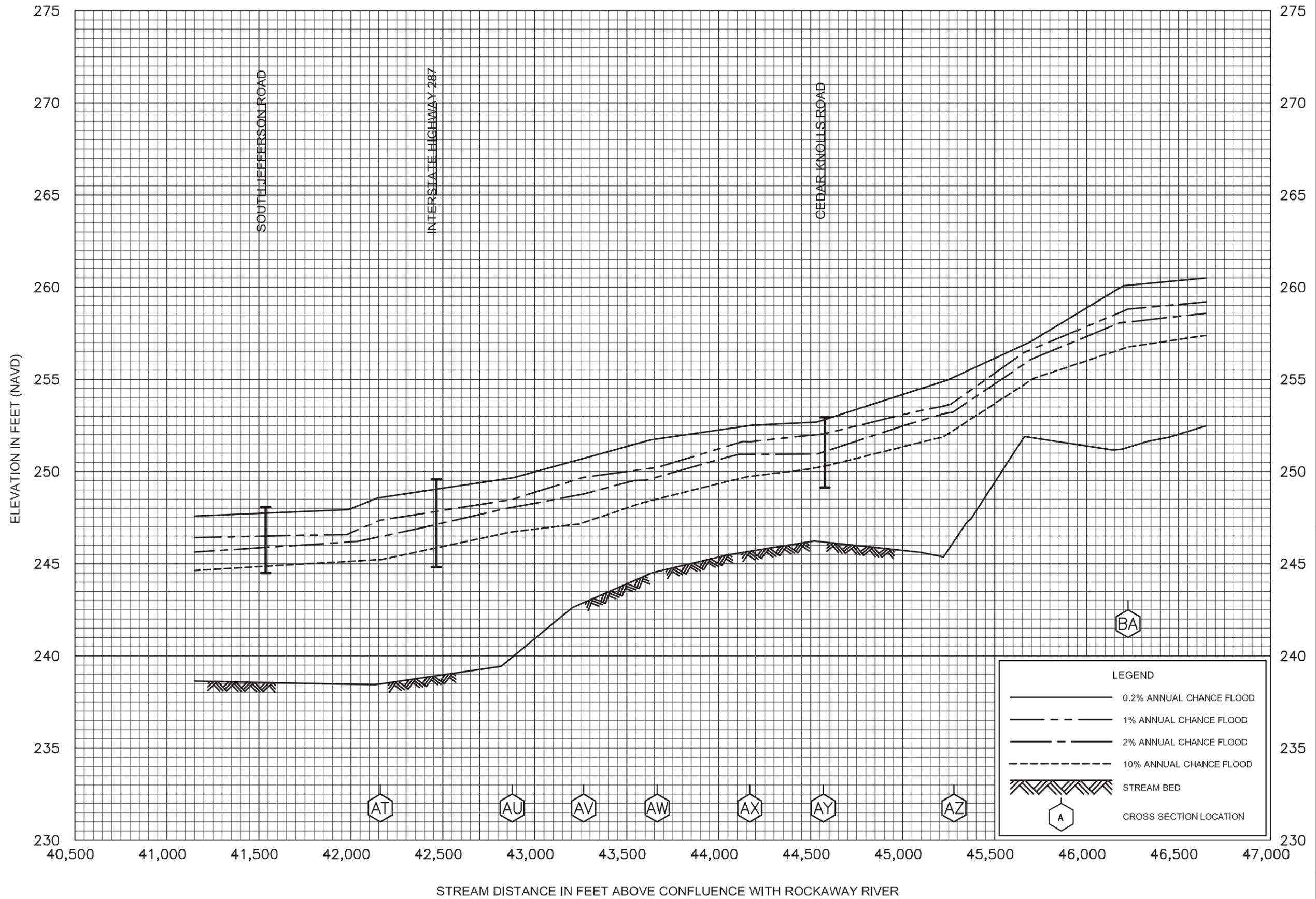
FLOOD PROFILES

WHIPPANY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

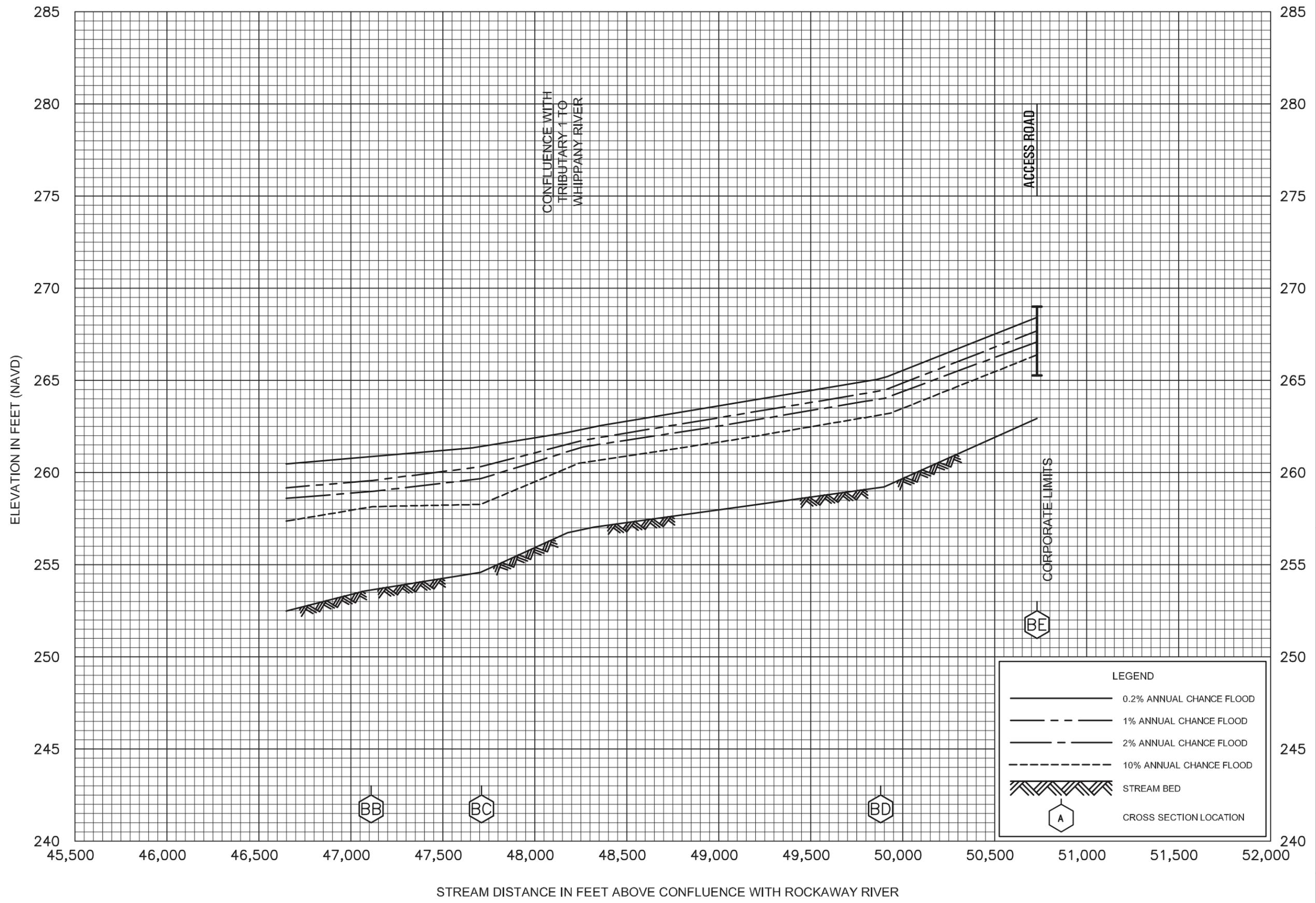
495P



FLOOD PROFILES
WHIPPANY RIVER

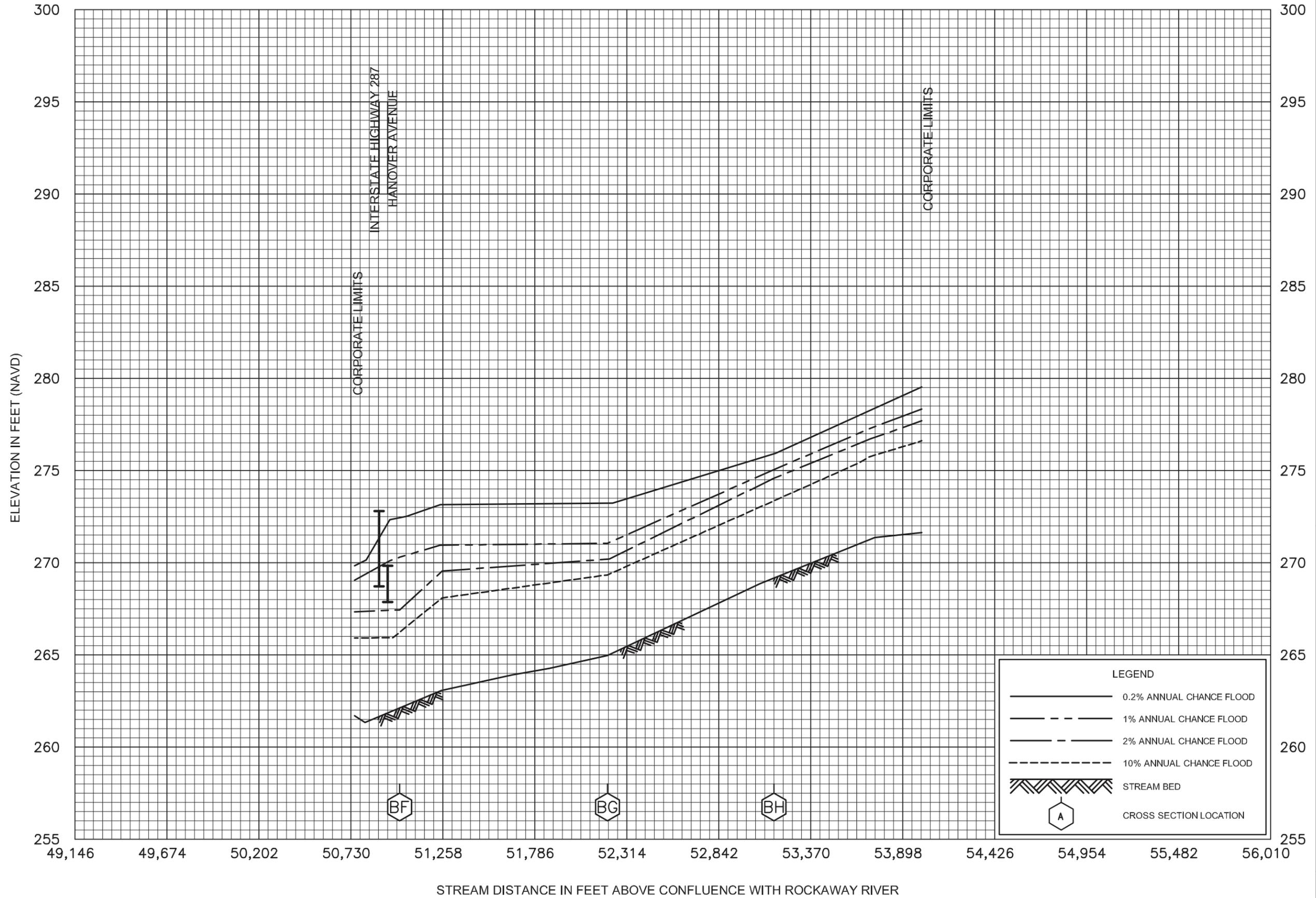
FEDERAL EMERGENCY MANAGEMENT AGENCY
MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

496P



FEDERAL EMERGENCY MANAGEMENT AGENCY
MORRIS COUNTY, NJ
 (ALL JURISDICTIONS)

FLOOD PROFILES
 WHIPPANY RIVER



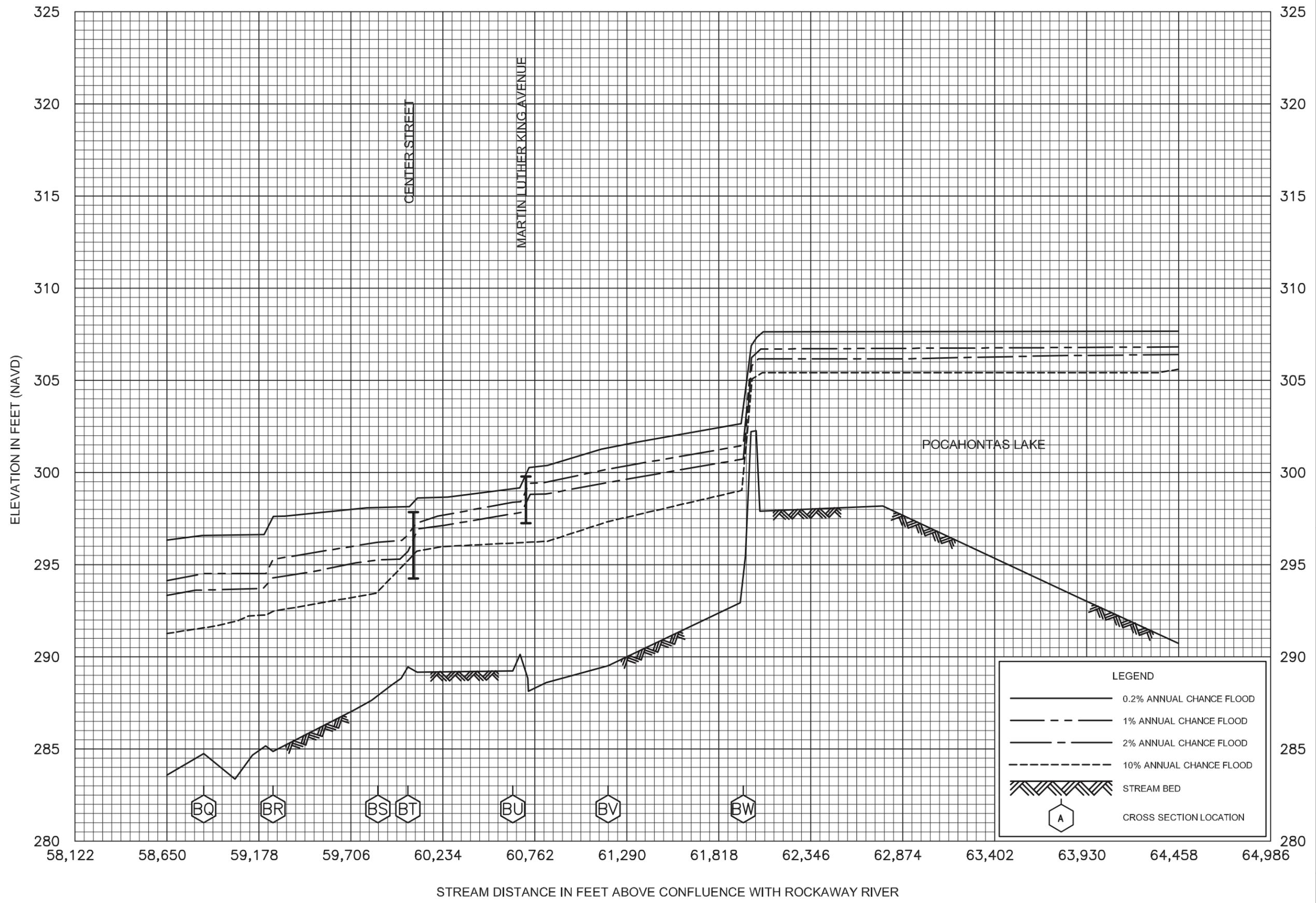
FLOOD PROFILES

WHIPPANY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

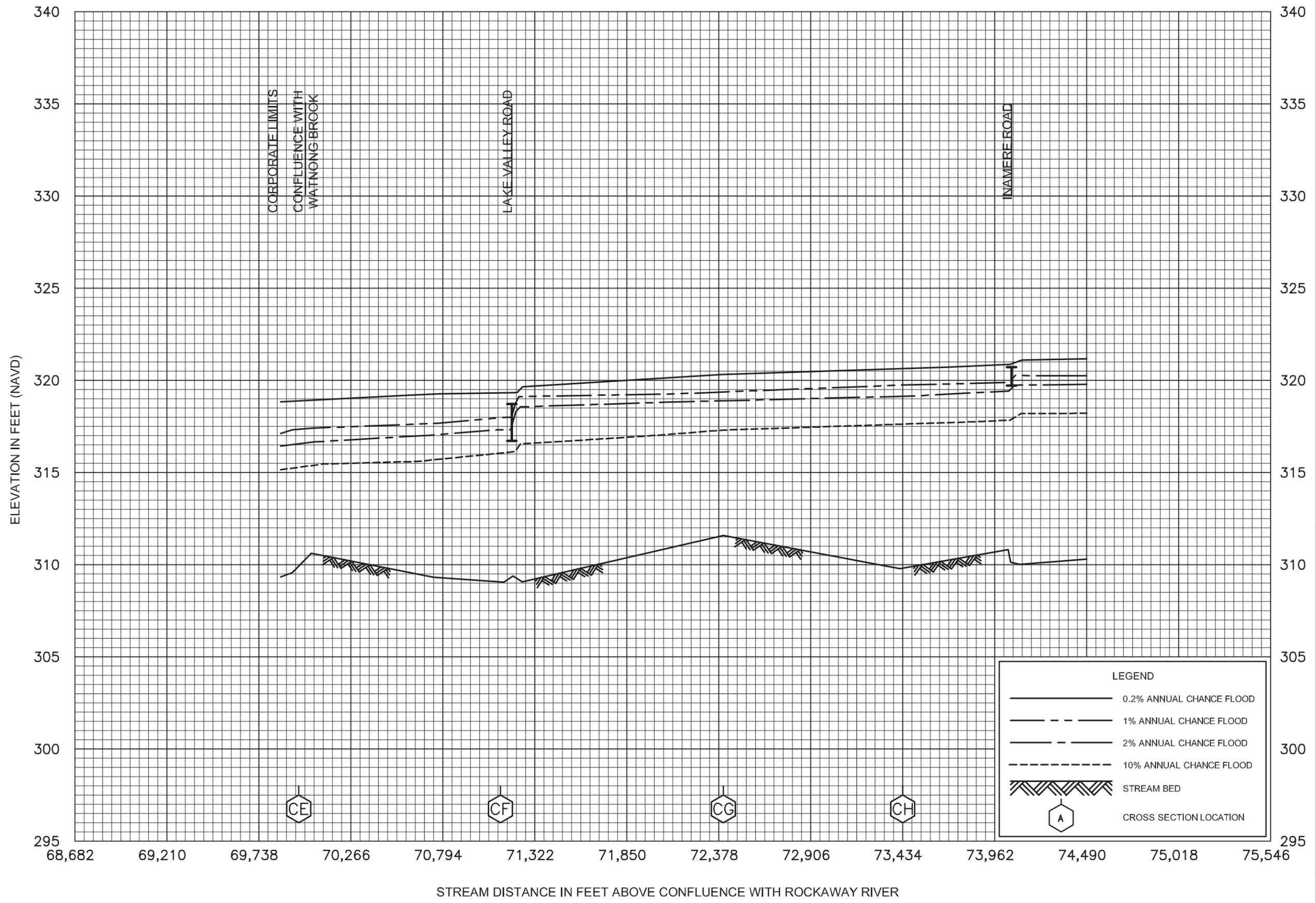
498P



FLOOD PROFILES
WHIPPANY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

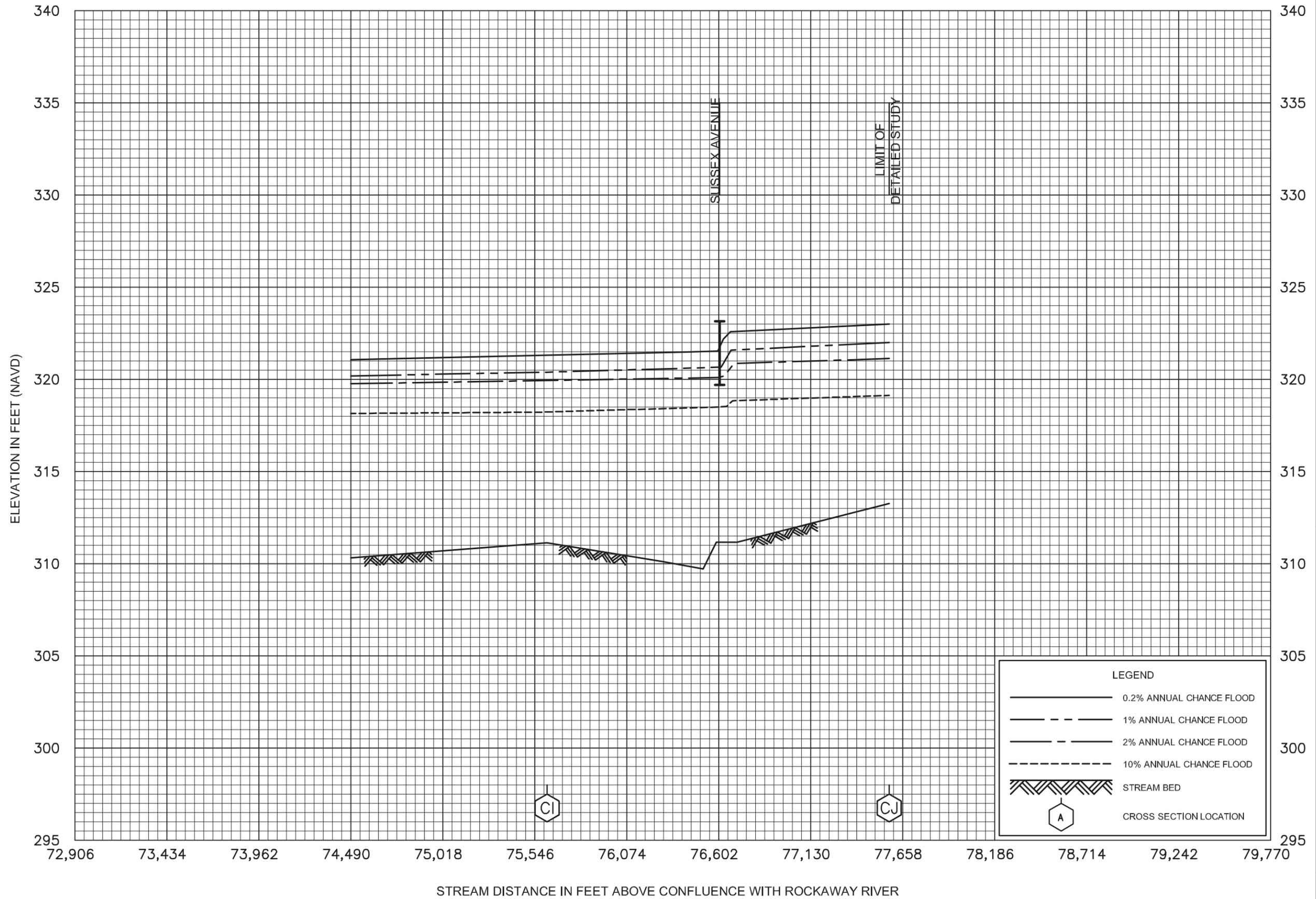
500P



FLOOD PROFILES
WHIPPANY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

502P



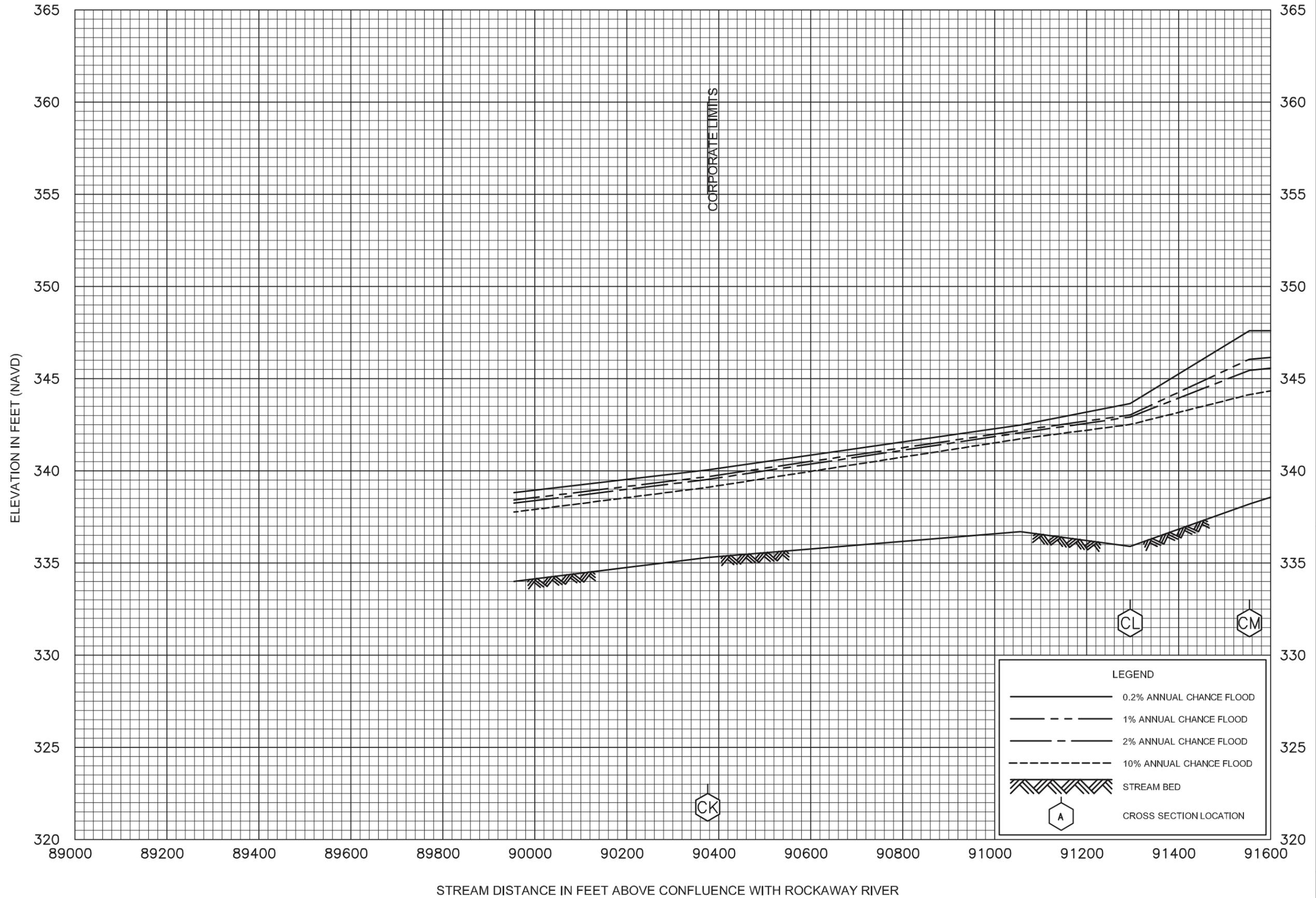
FLOOD PROFILES

WHIPPANY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

503P



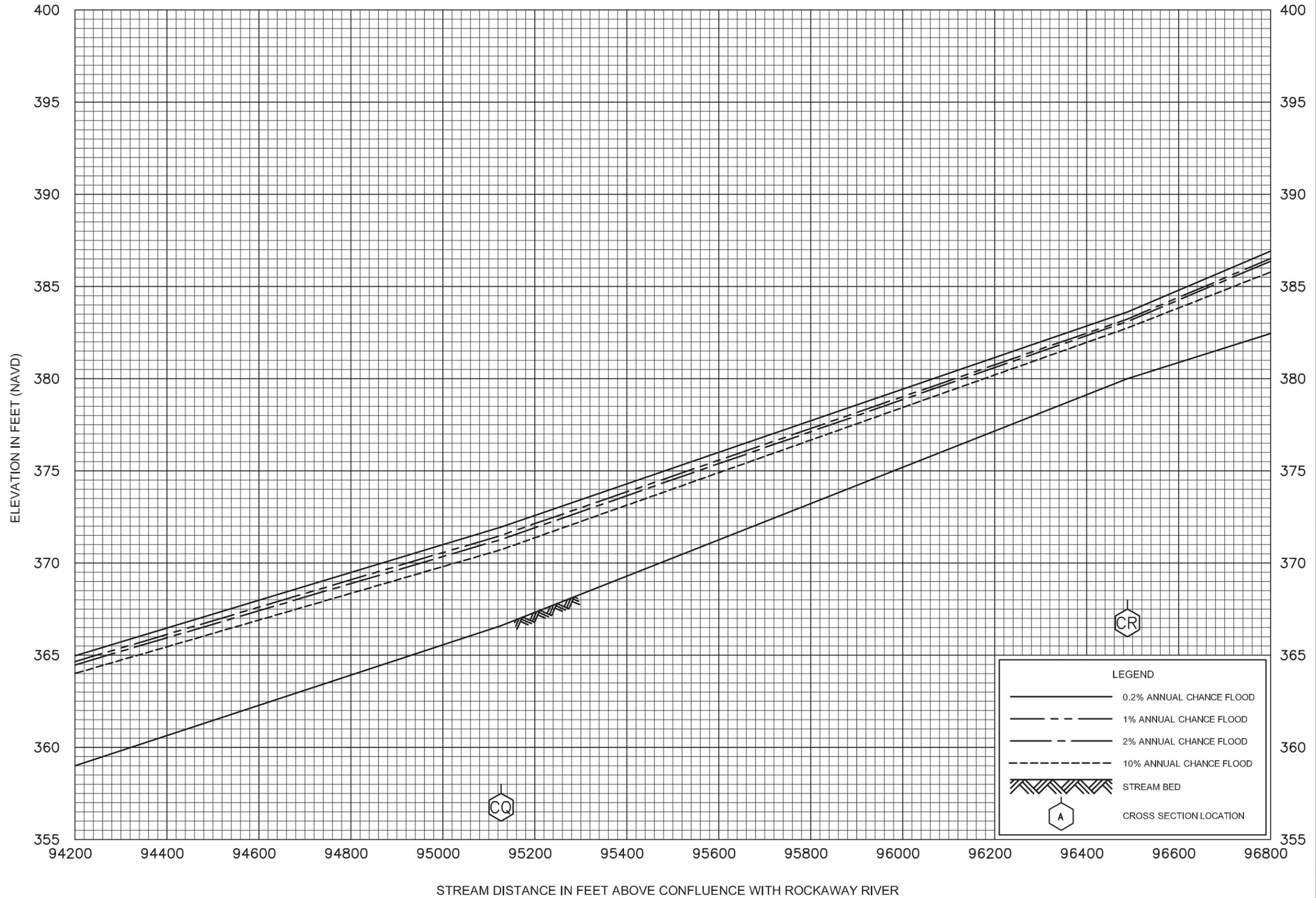
FLOOD PROFILES

WHIPPANY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

504P



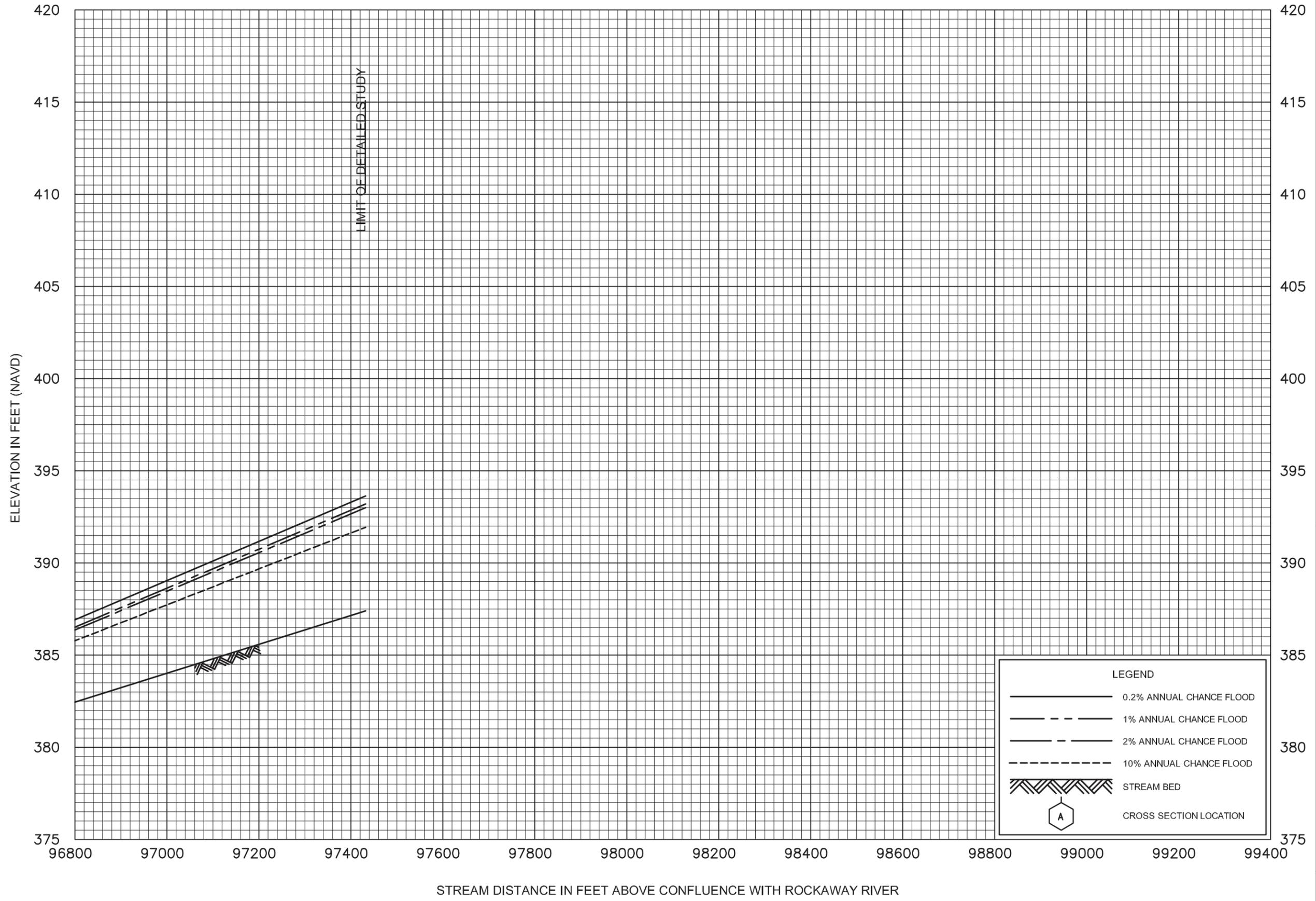
FLOOD PROFILES

WHIPPANY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

506P



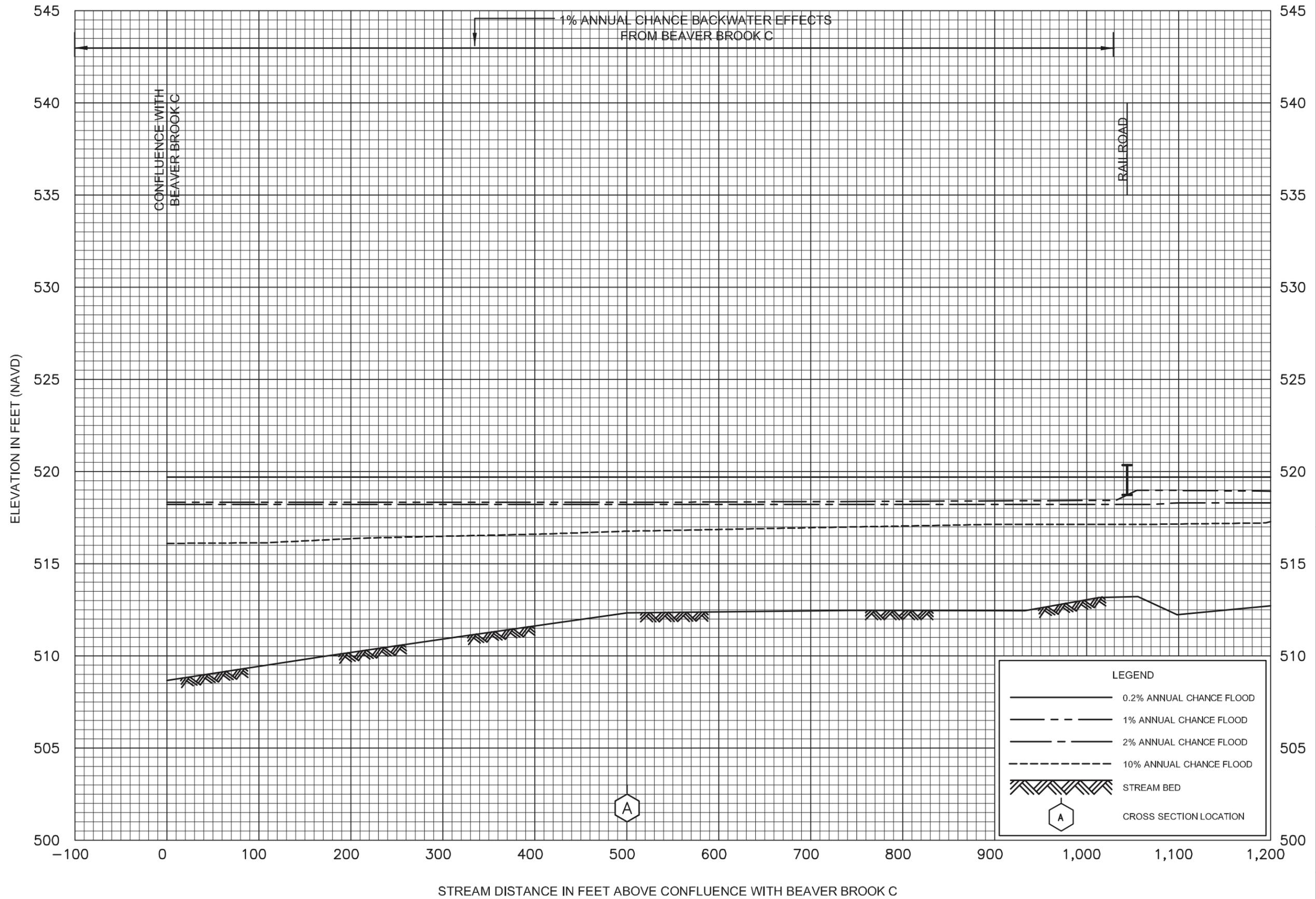
FLOOD PROFILES

WHIPPANY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

507P



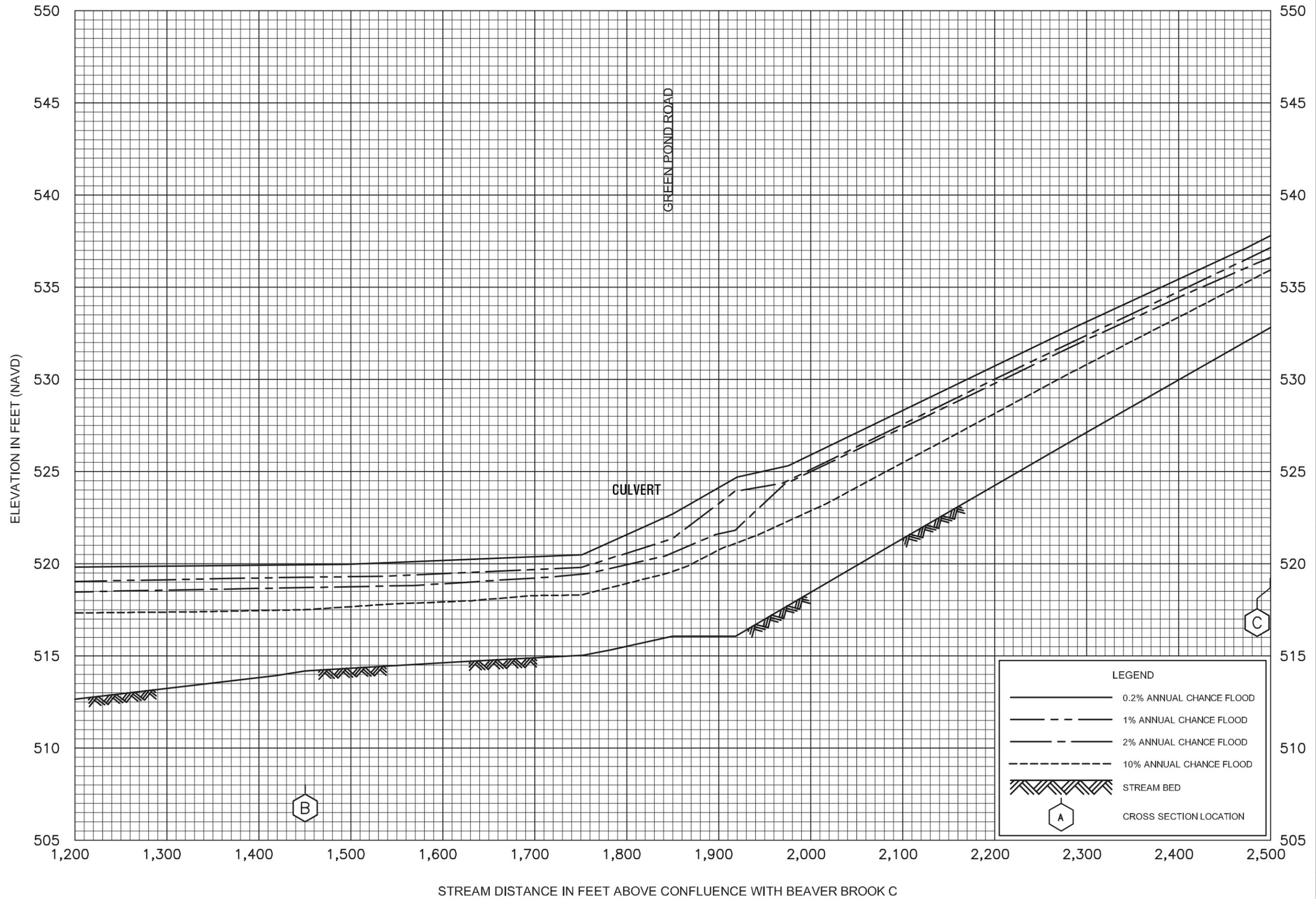
FLOOD PROFILES

WHITE MEADOW BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

508P



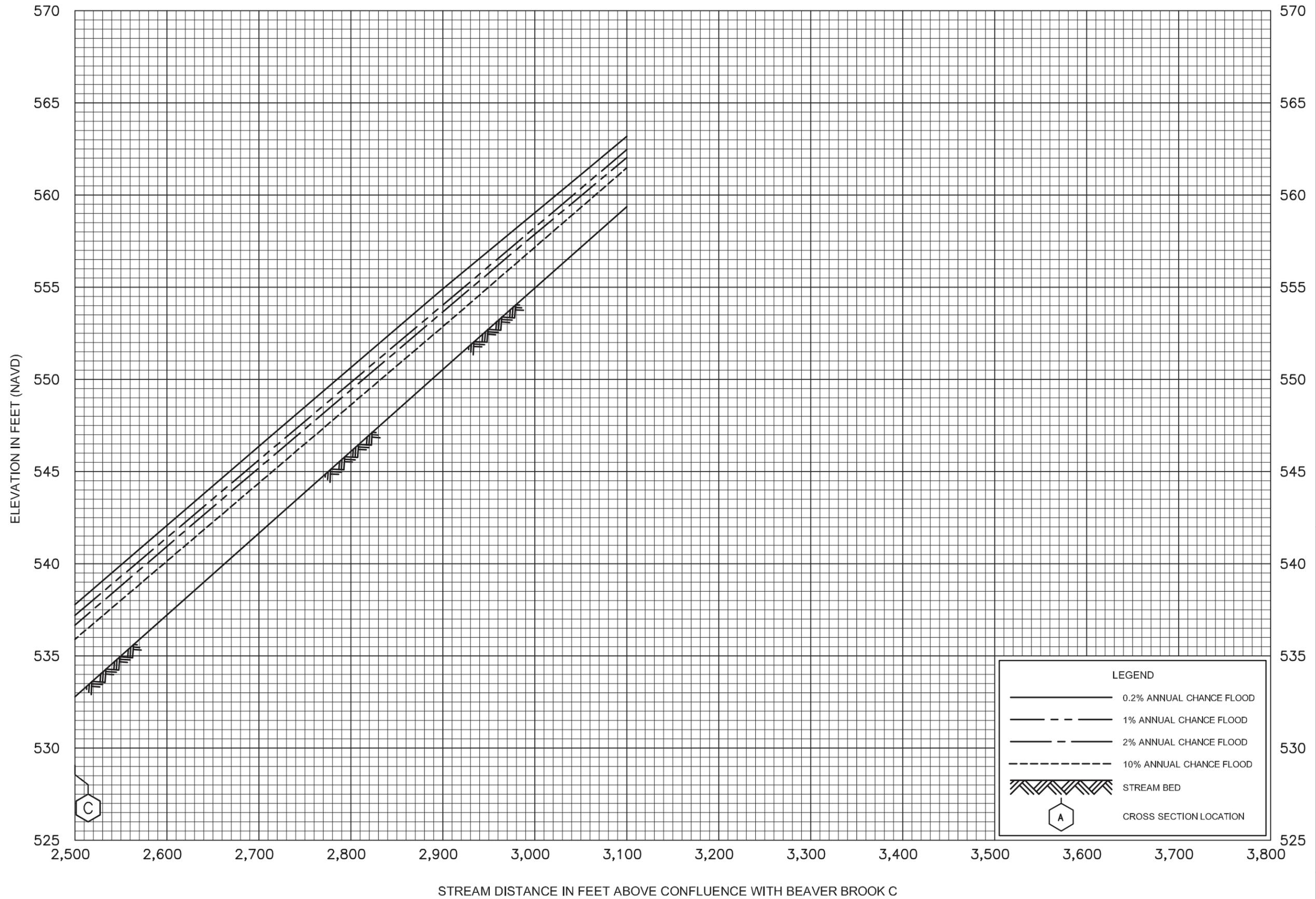
FLOOD PROFILES

WHITE MEADOW BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

509P



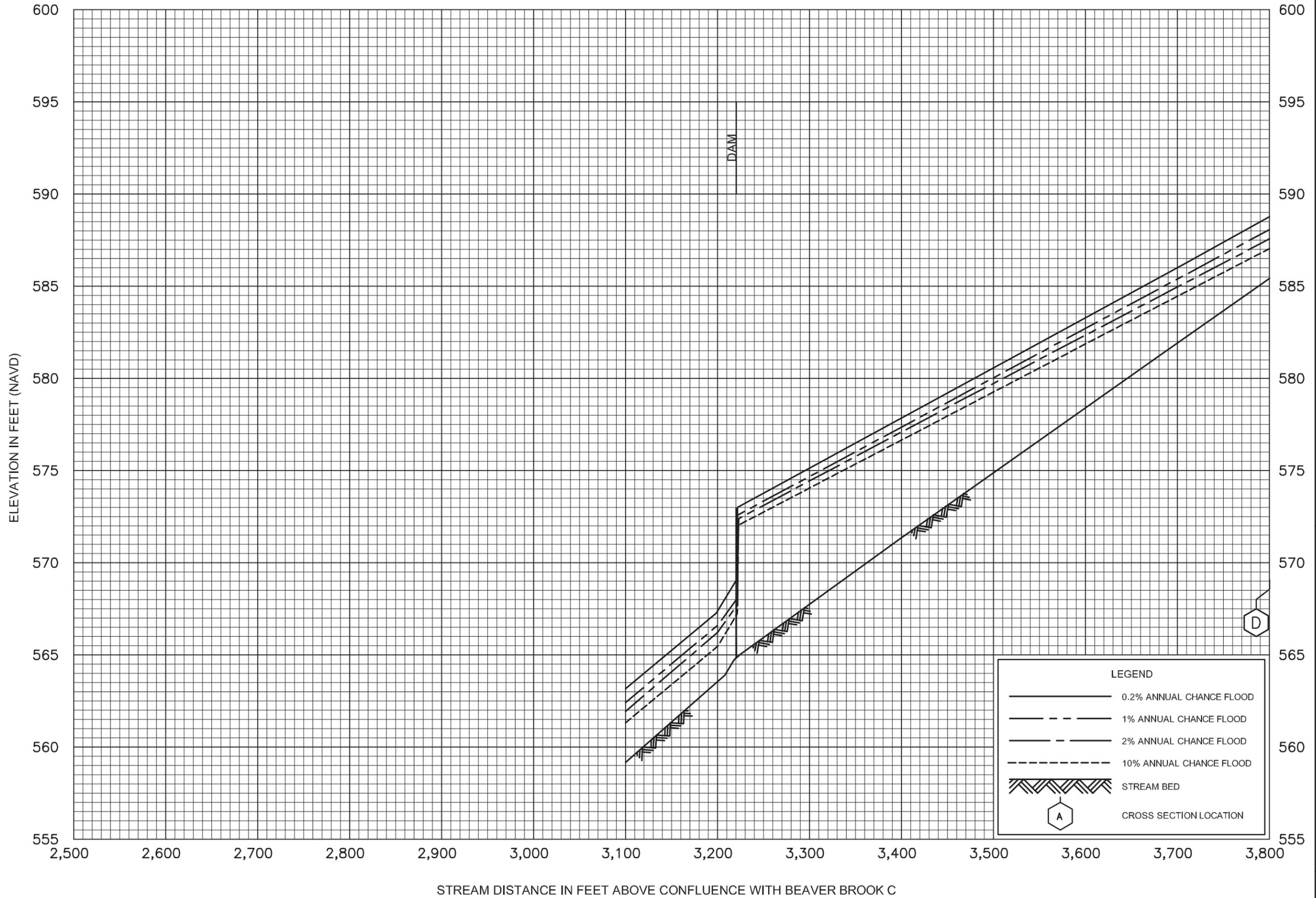
FLOOD PROFILES

WHITE MEADOW BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

510P



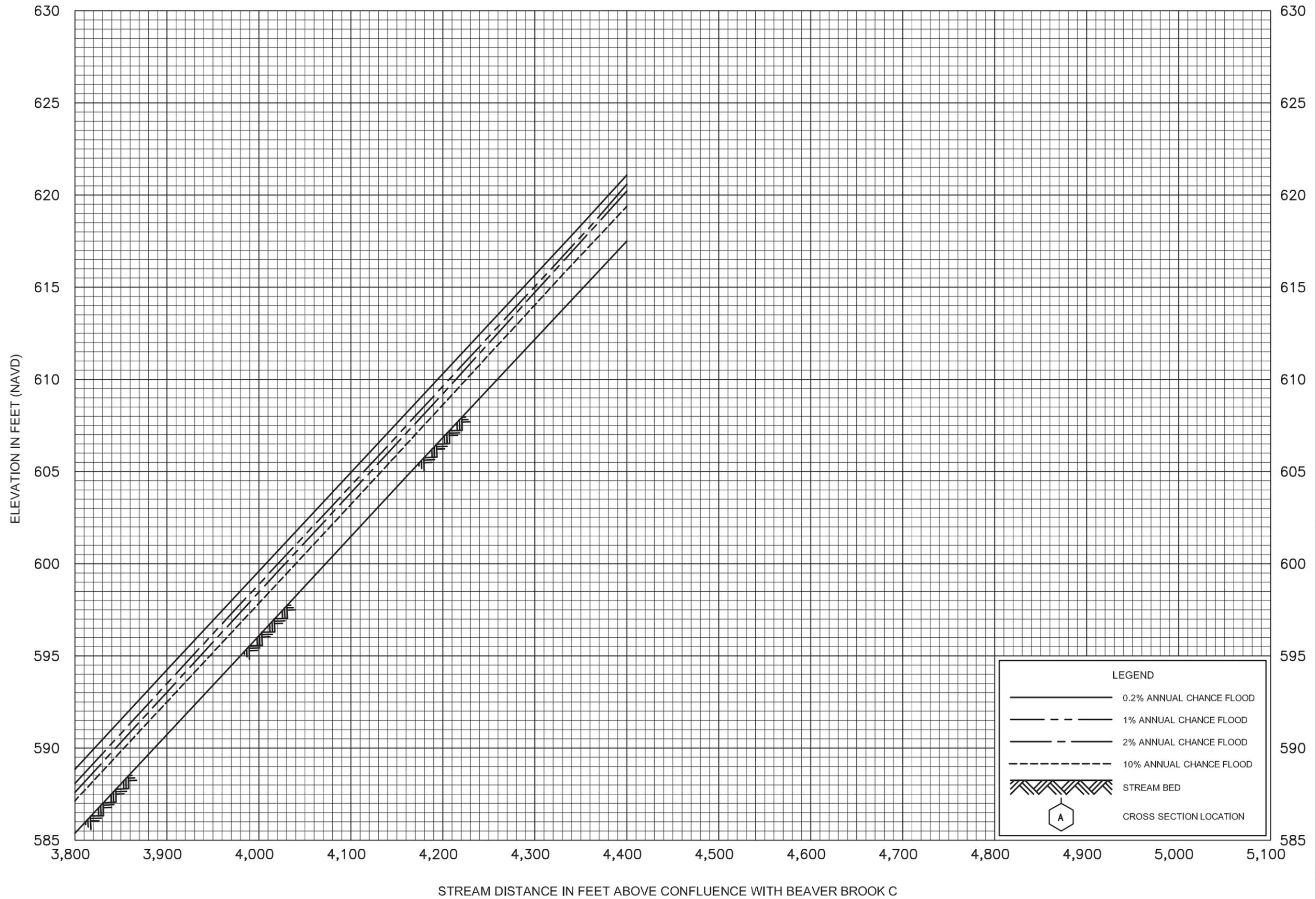
FLOOD PROFILES

WHITE MEADOW BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

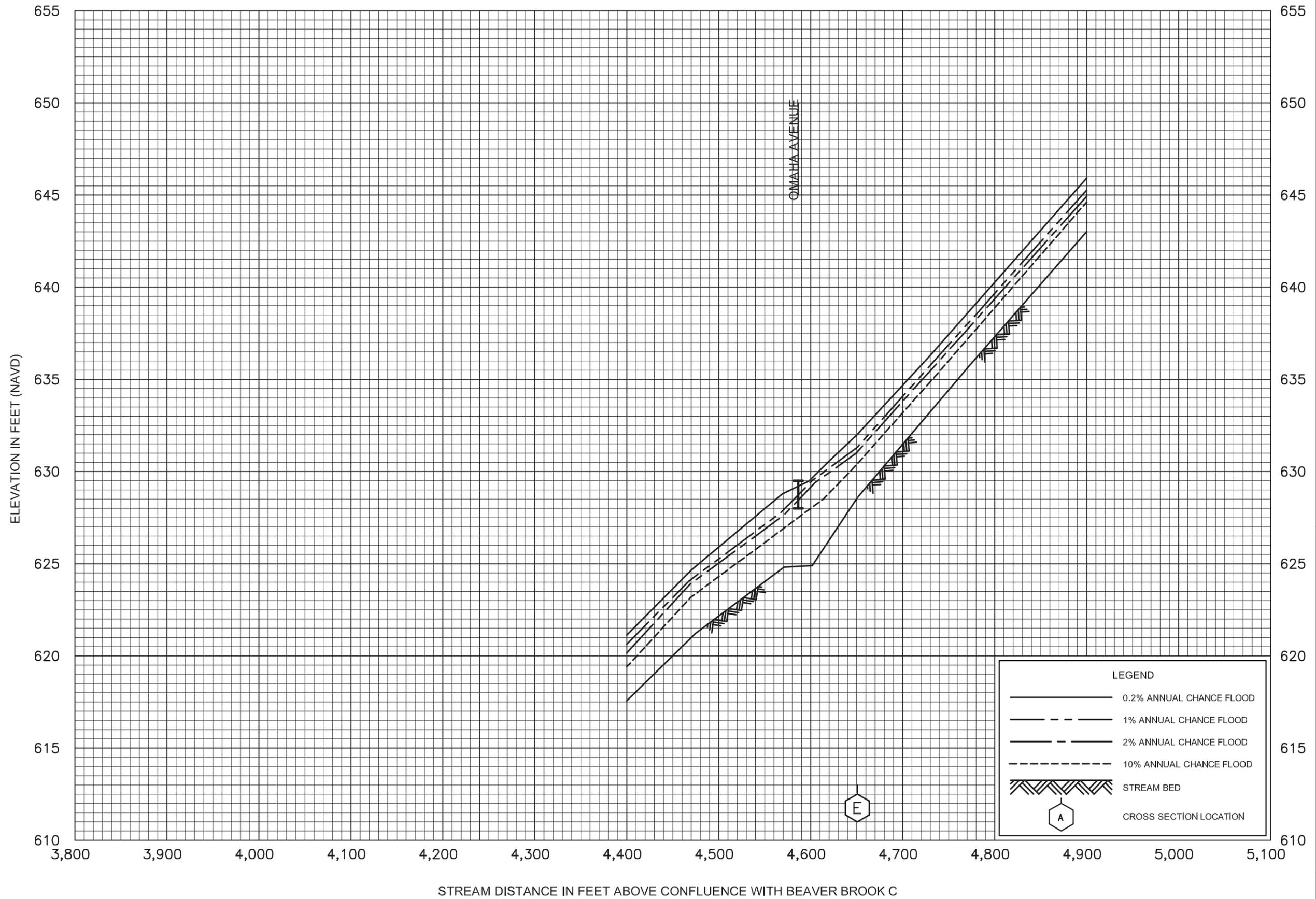
MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

511P



FLOOD PROFILES
WHITE MEADOW BROOK

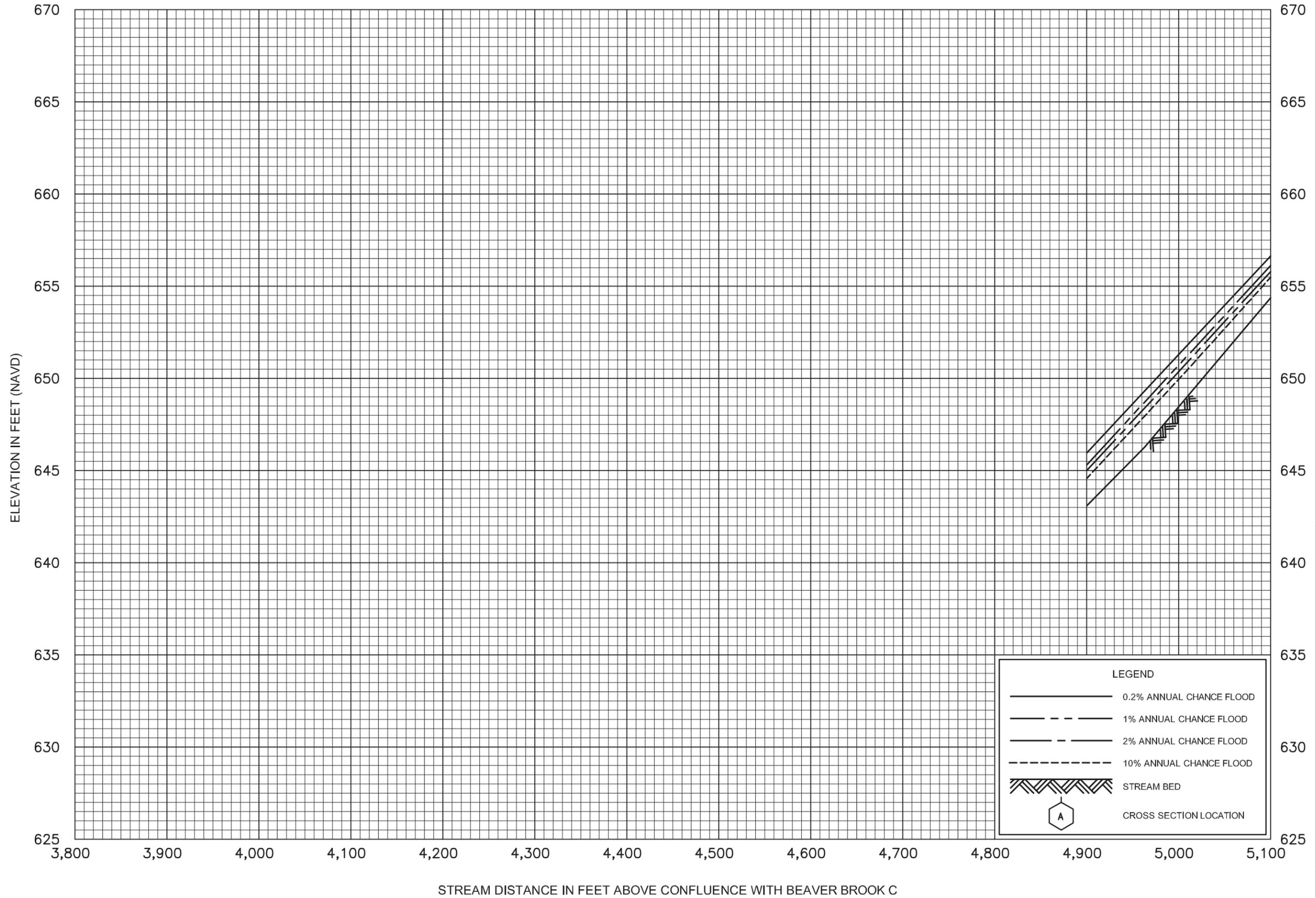
FEDERAL EMERGENCY MANAGEMENT AGENCY
MORRIS COUNTY, NJ
(ALL JURISDICTIONS)



FLOOD PROFILES
WHITE MEADOW BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY
MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

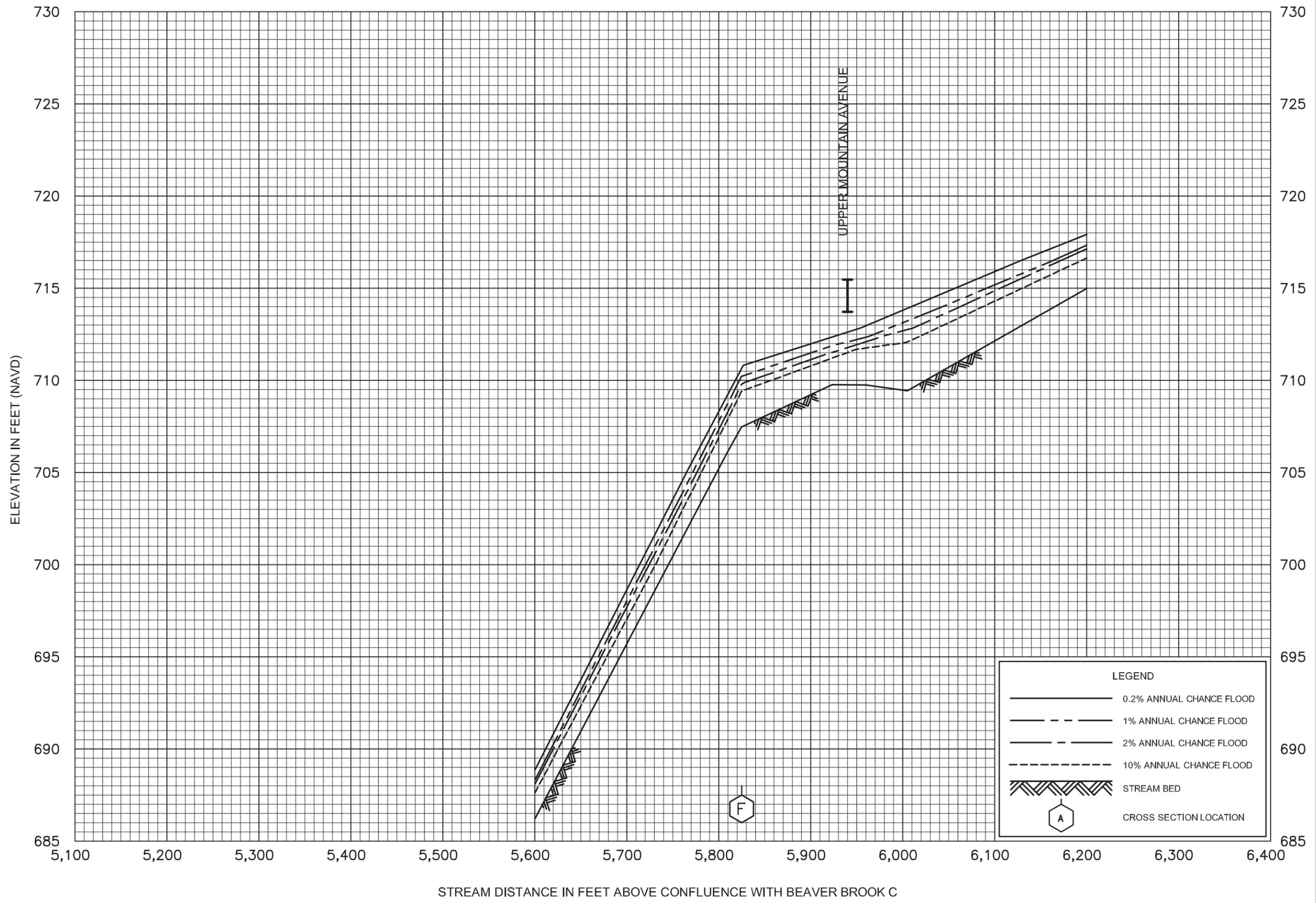
513P



FLOOD PROFILES
WHITE MEADOW BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY
MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

514P



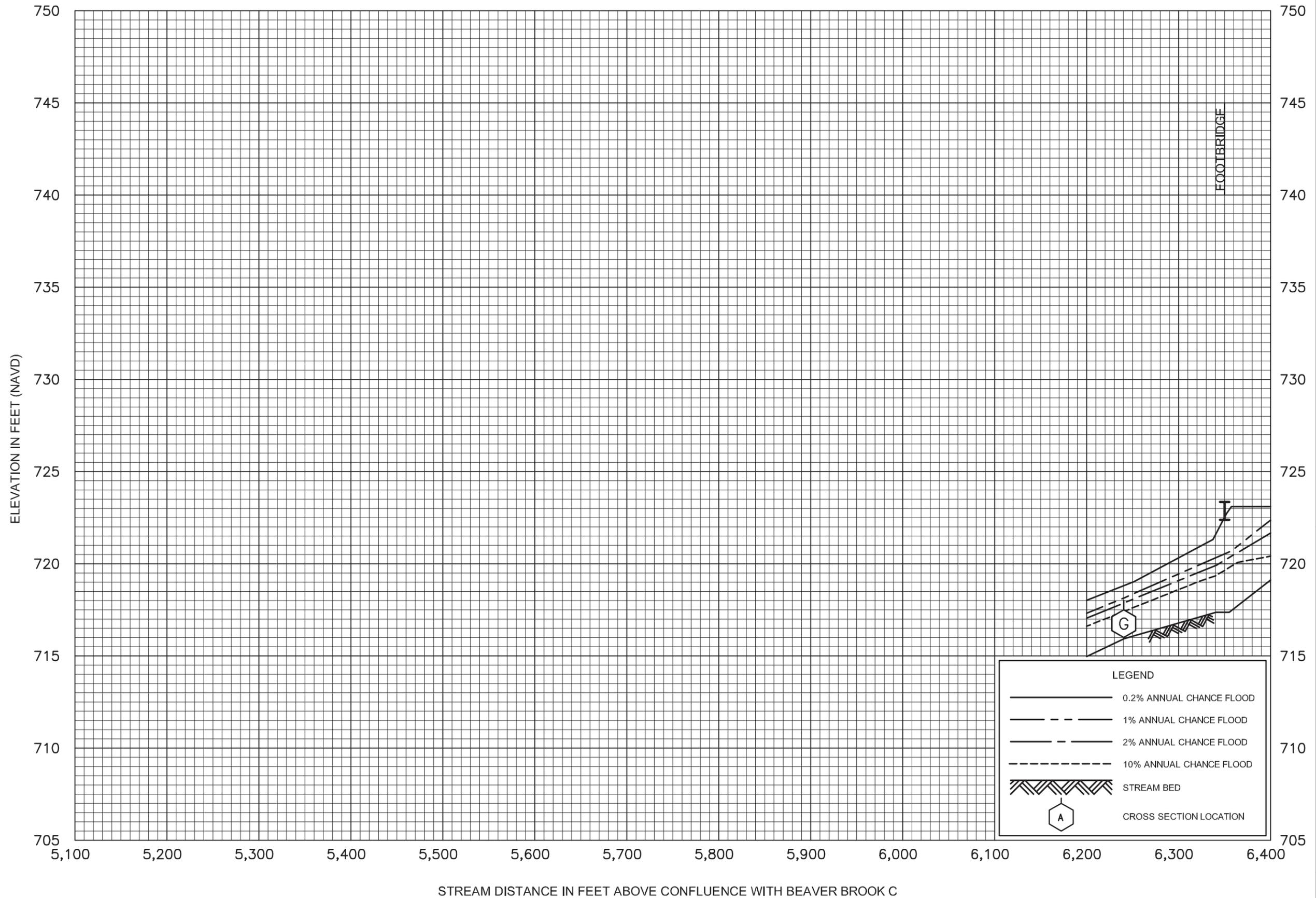
FLOOD PROFILES

WHITE MEADOW BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

516P



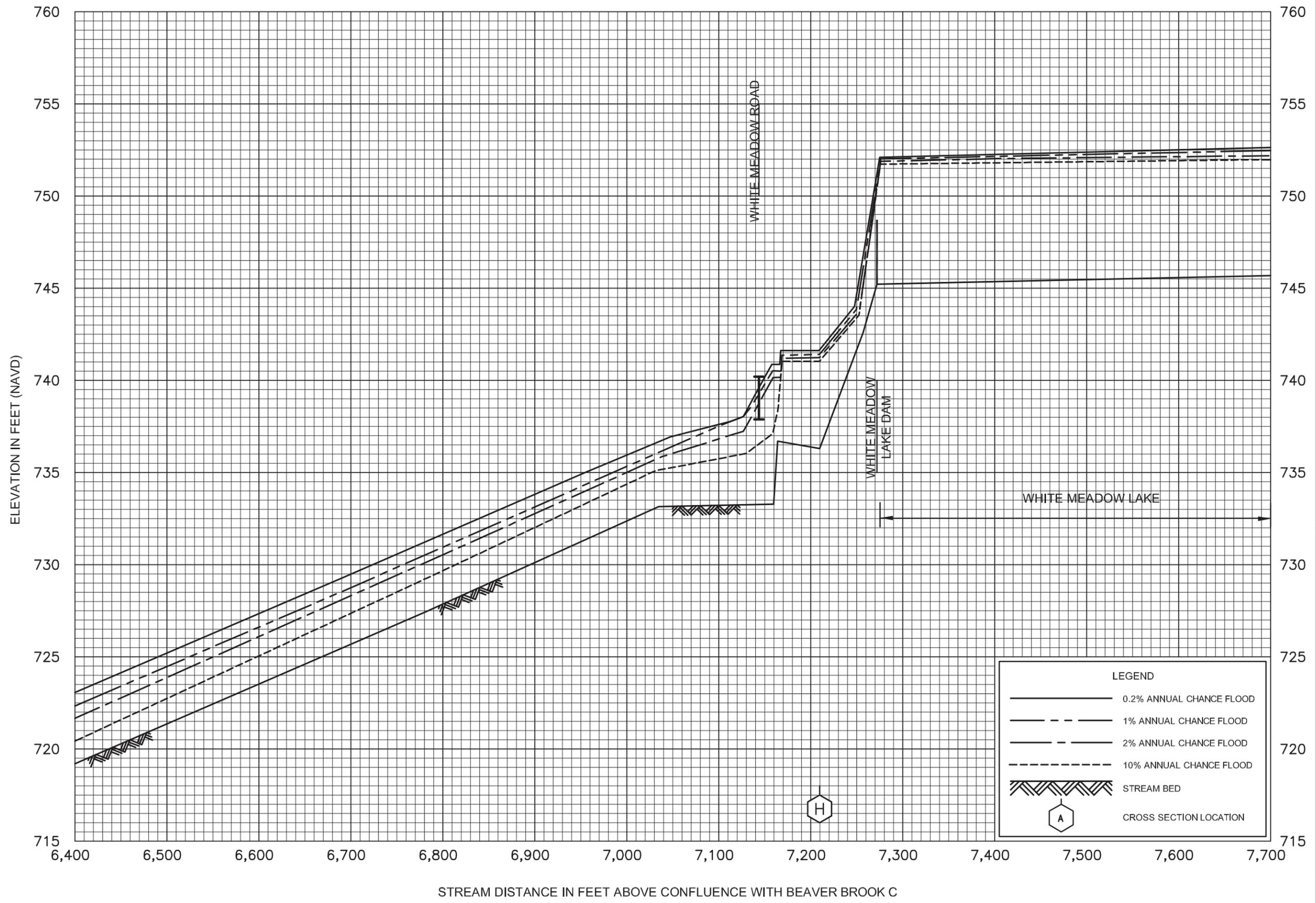
FLOOD PROFILES

WHITE MEADOW BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

517P



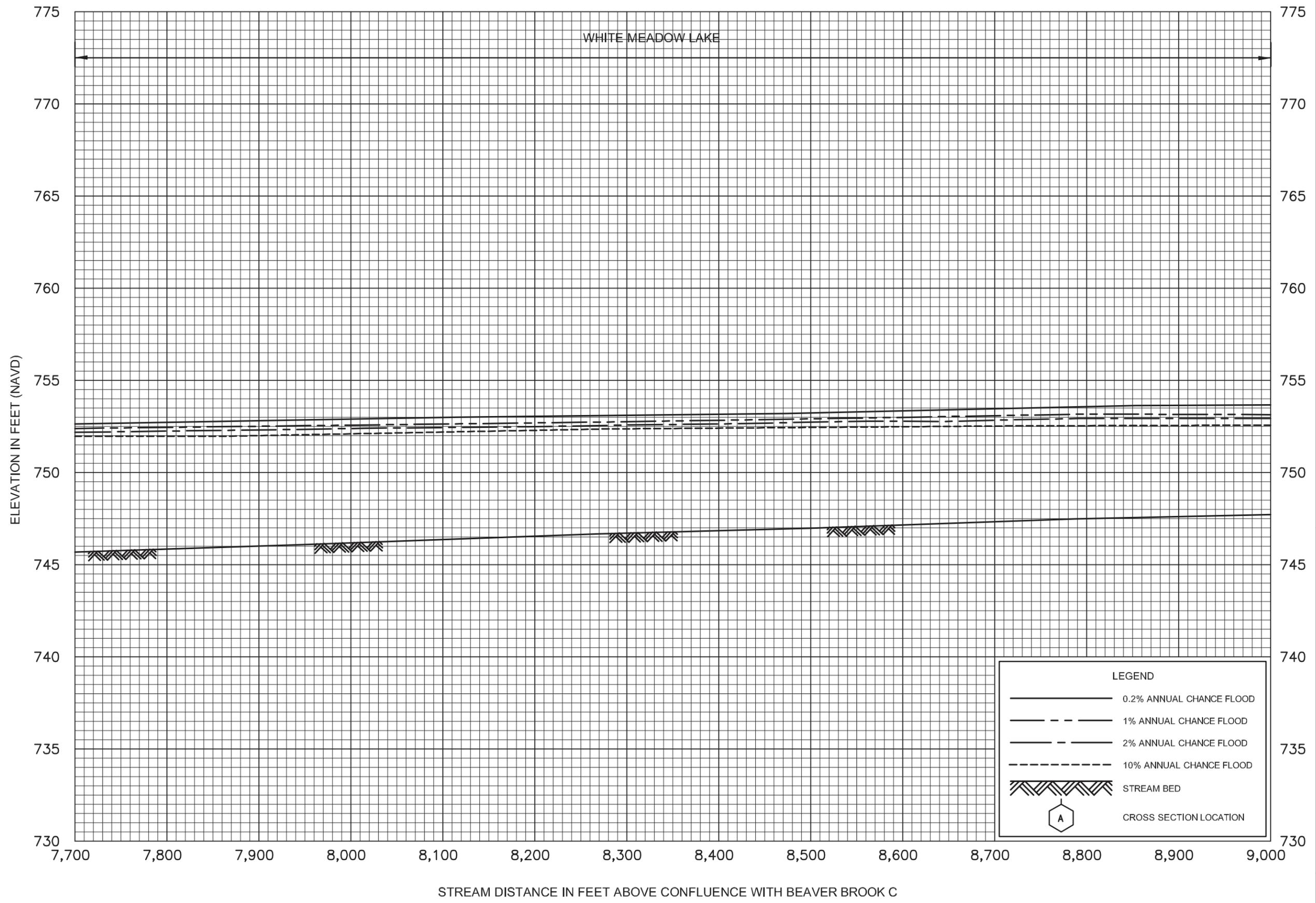
FLOOD PROFILES

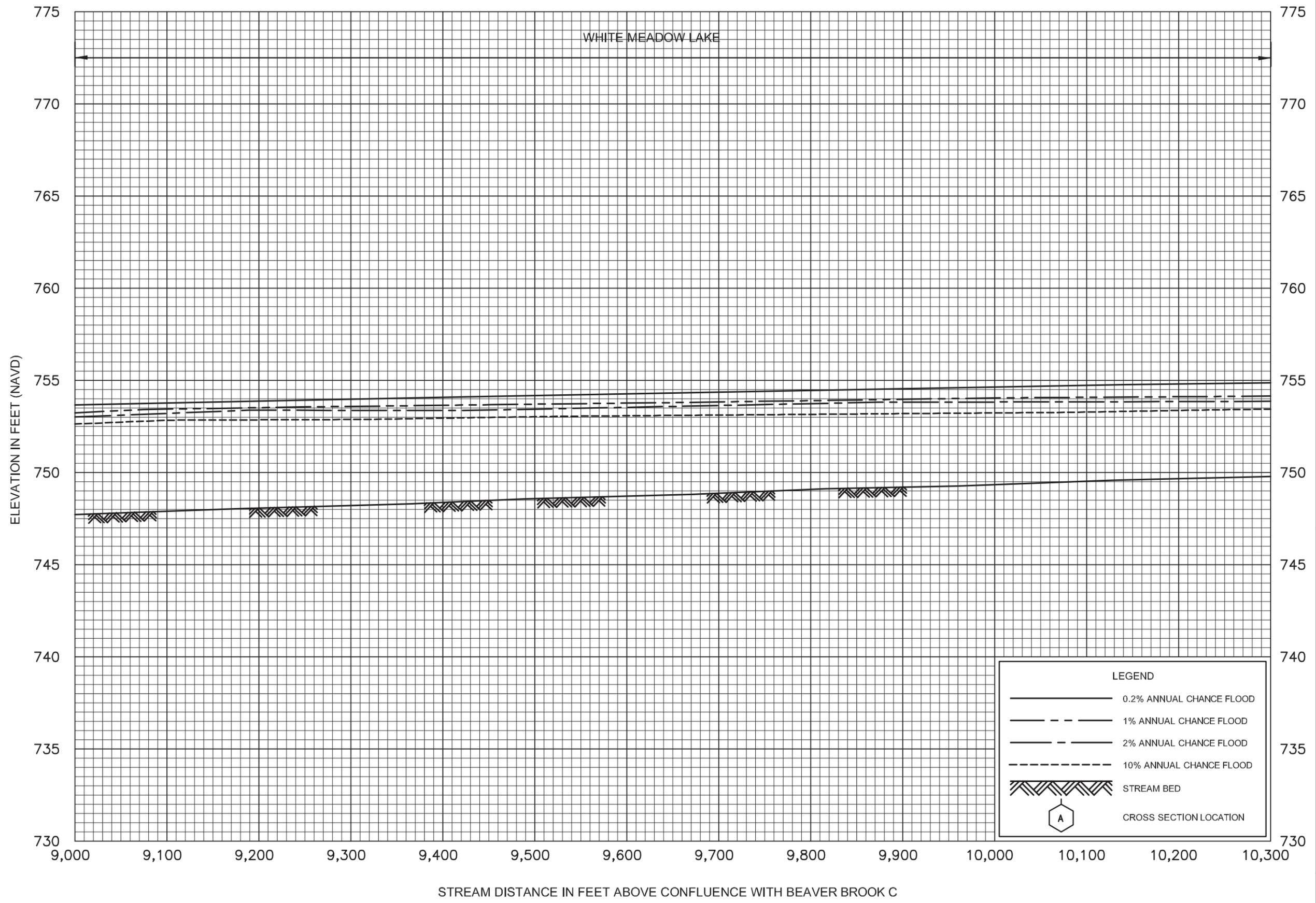
WHITE MEADOW BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

518P





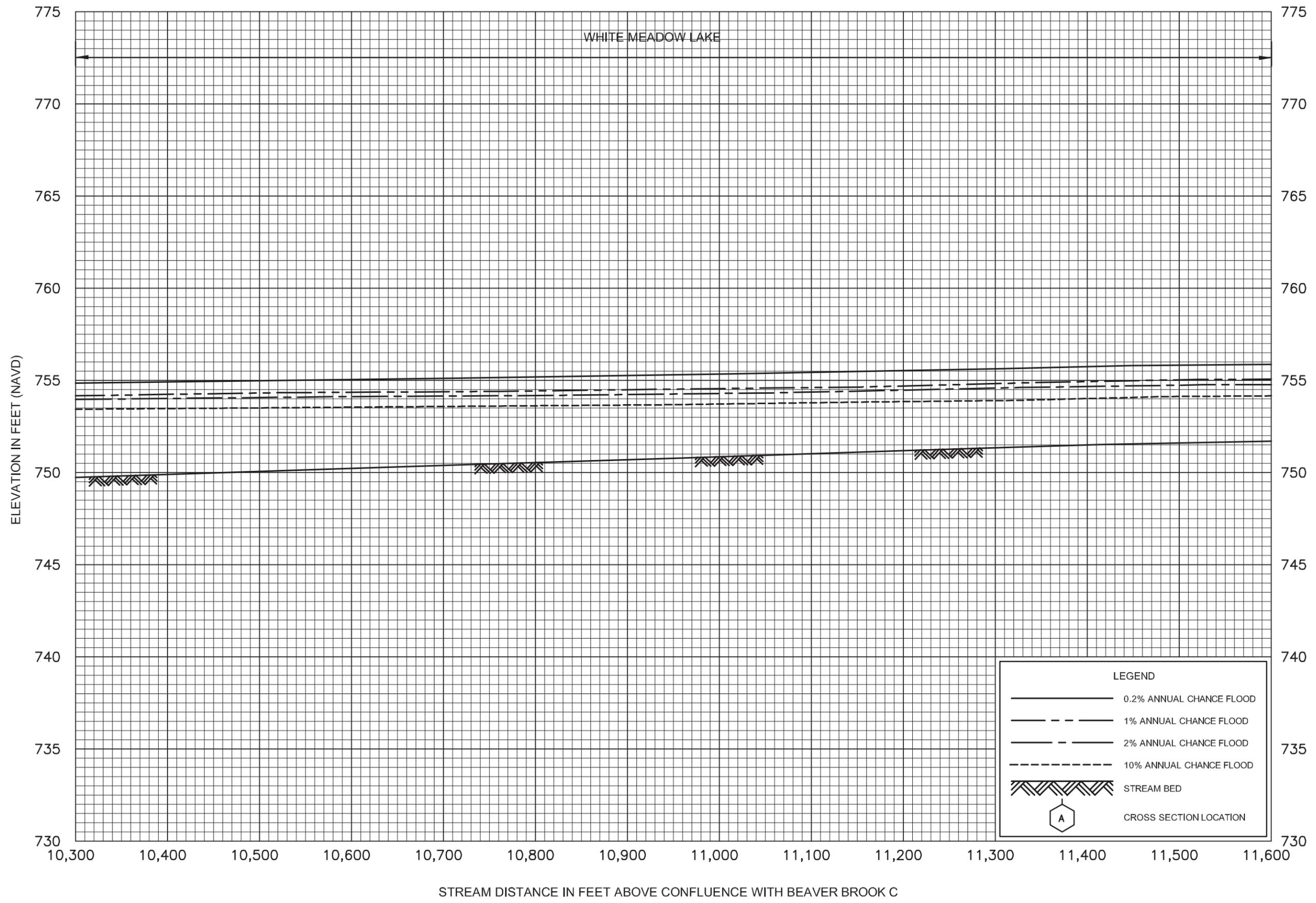
FLOOD PROFILES

WHITE MEADOW BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

520P



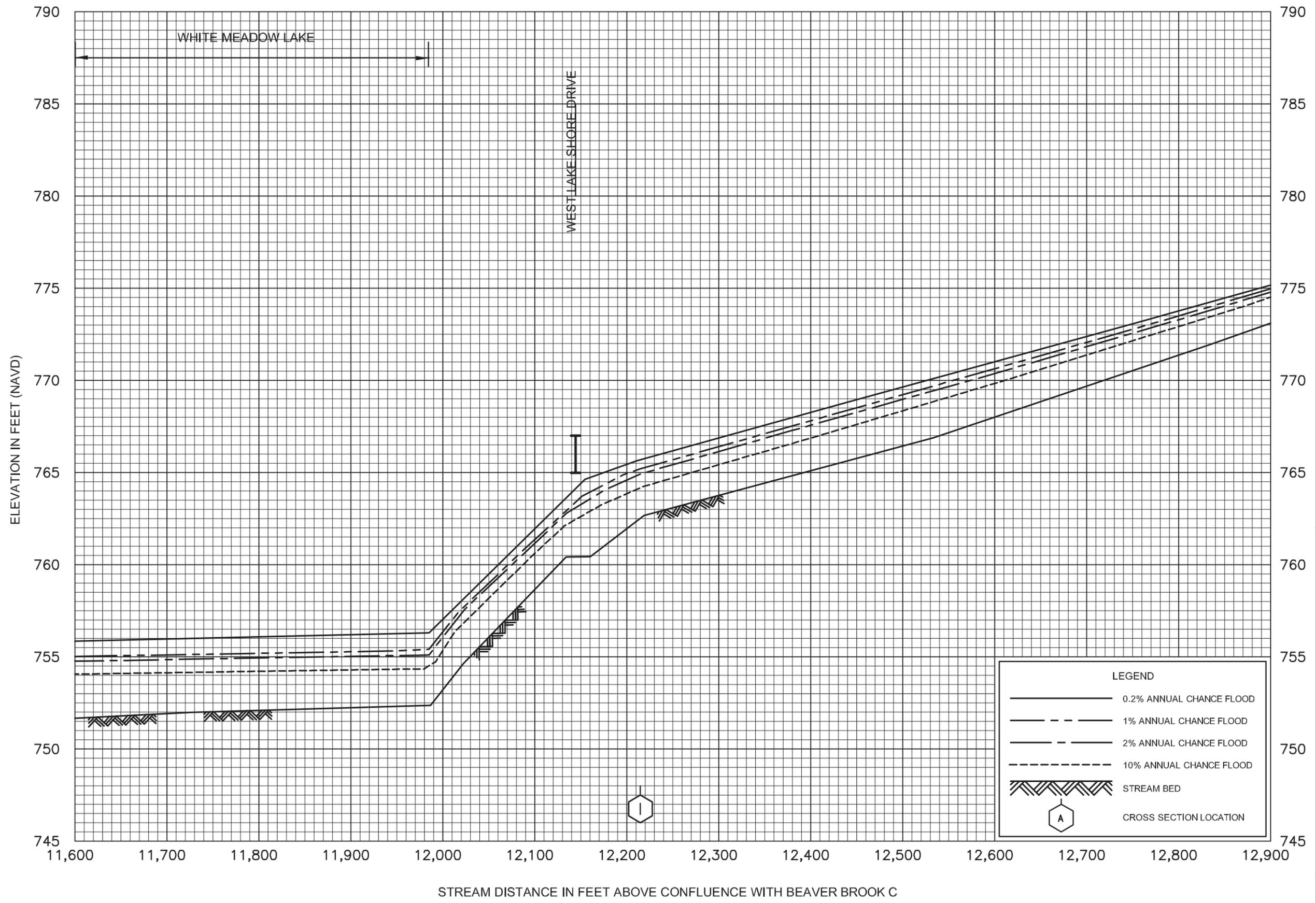
FLOOD PROFILES

WHITE MEADOW BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

521P



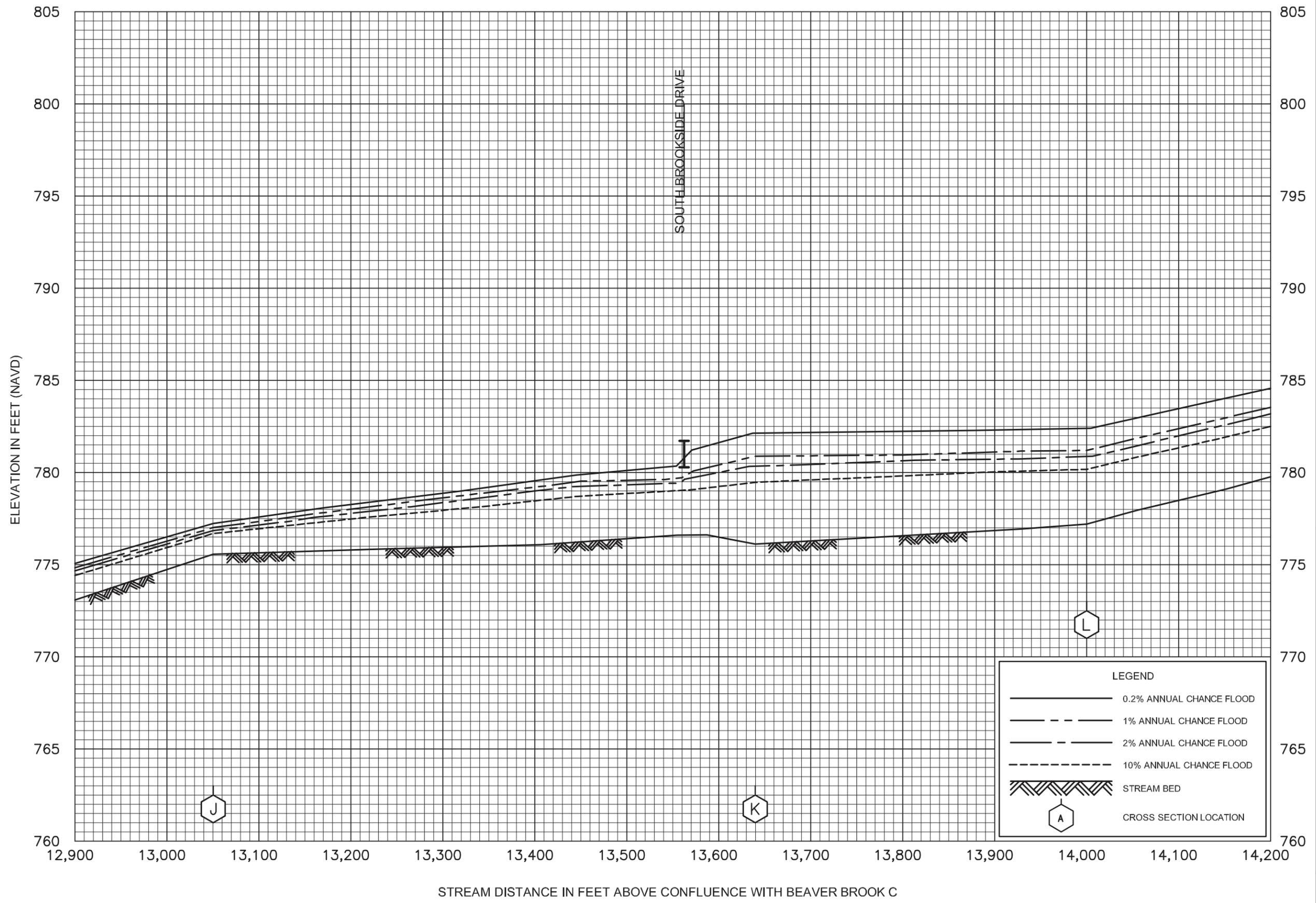
FLOOD PROFILES

WHITE MEADOW BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

522P



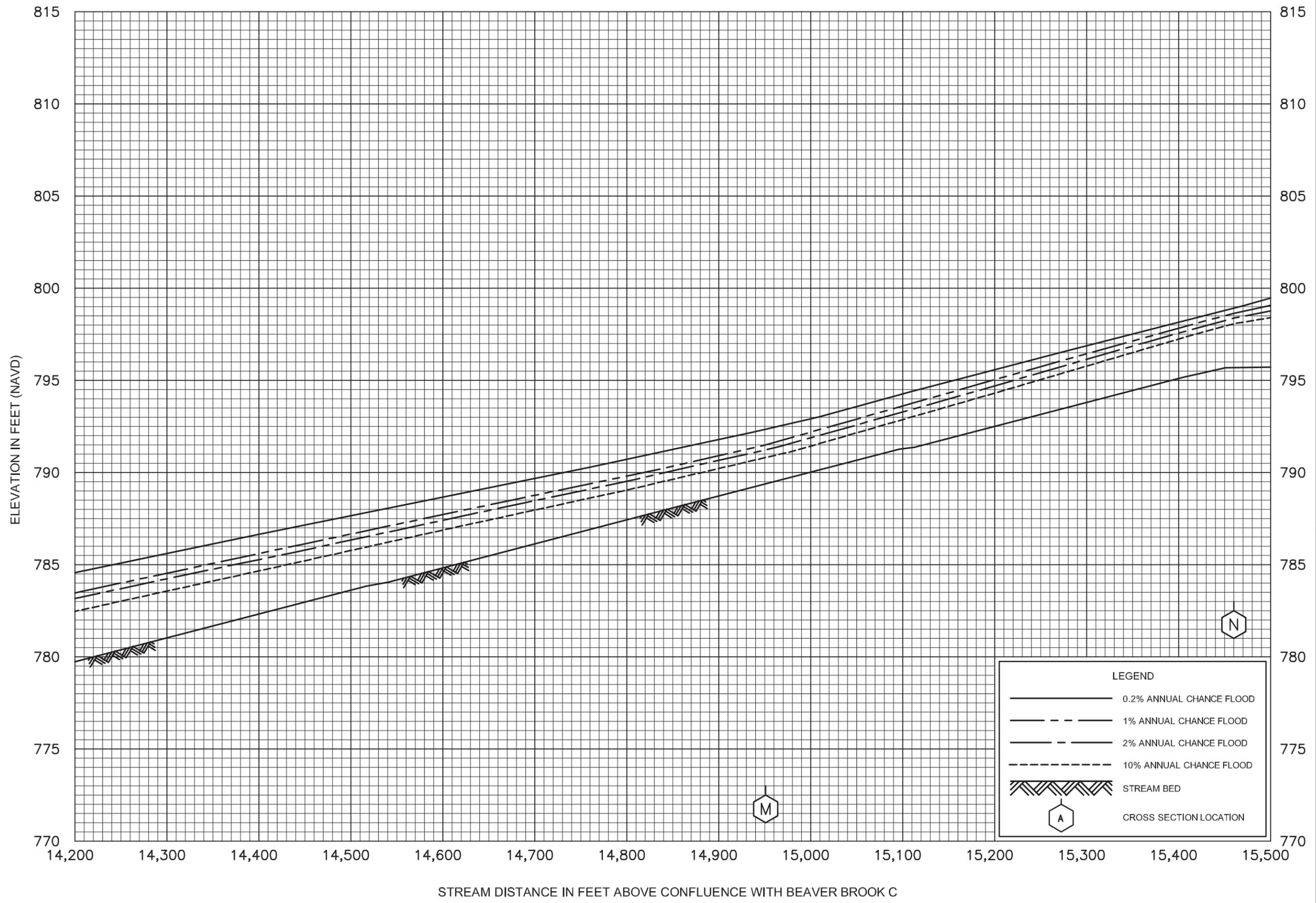
FLOOD PROFILES

WHITE MEADOW BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

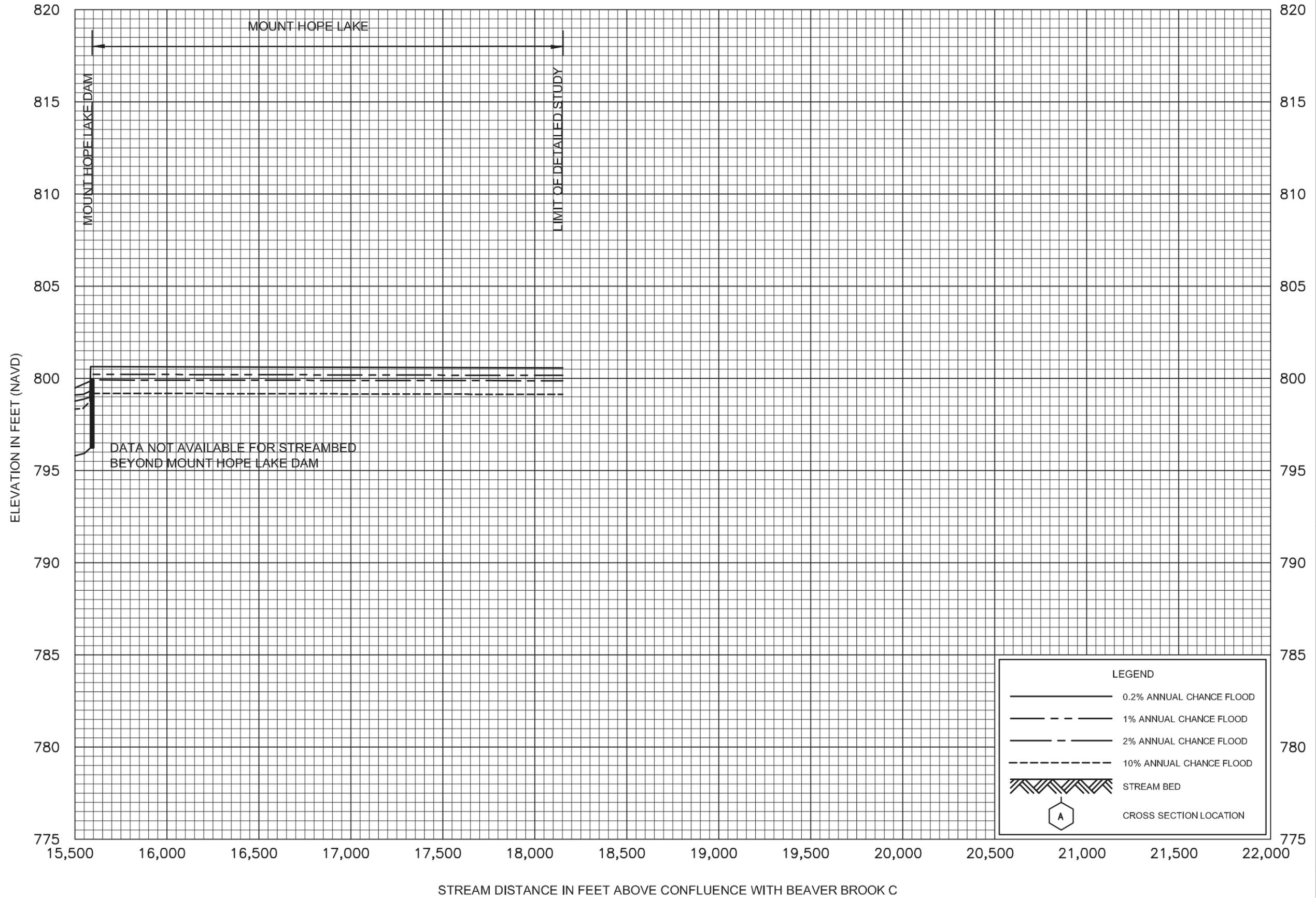
MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

523P



FLOOD PROFILES
WHITE MEADOW BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY
MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

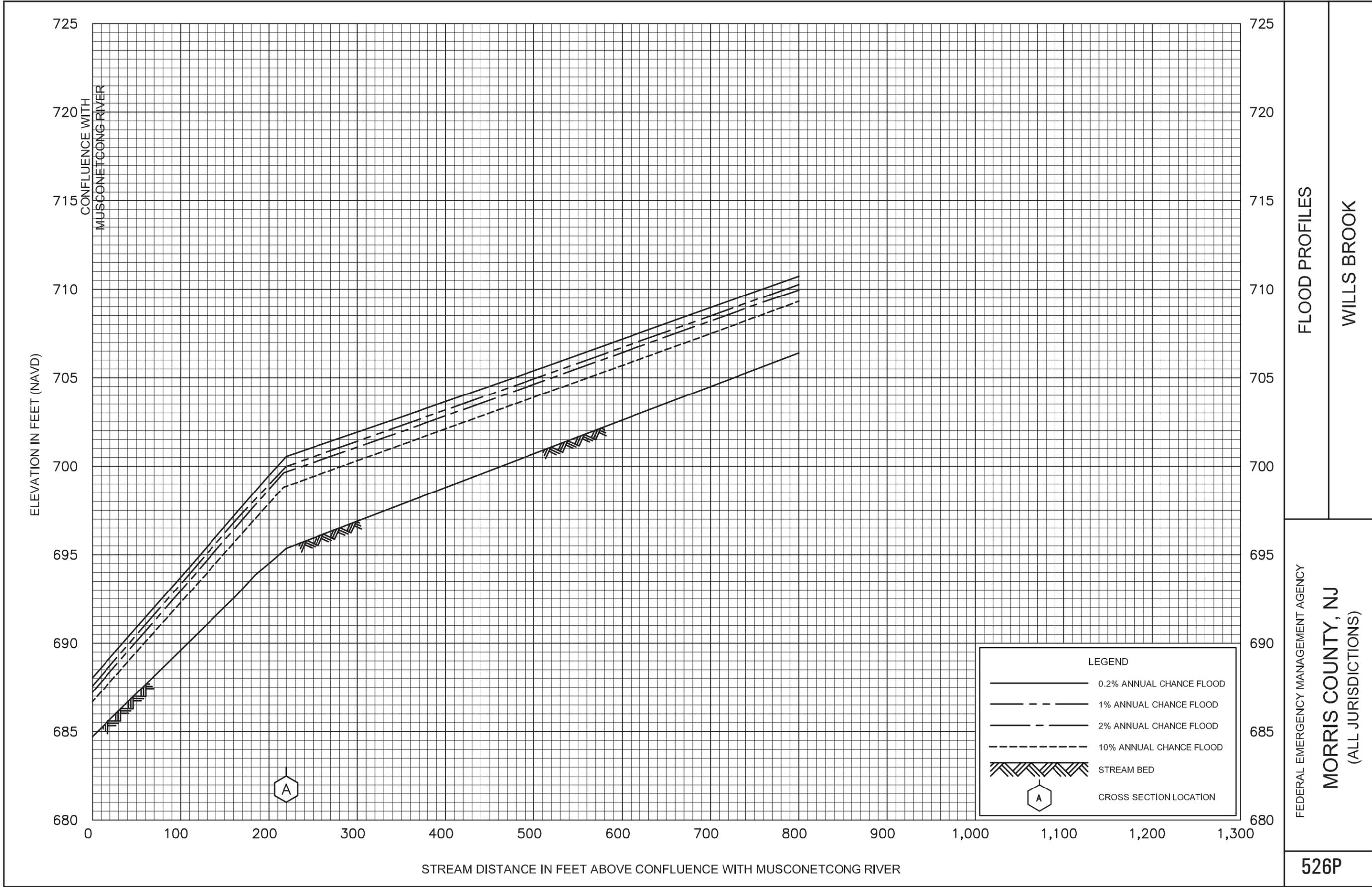


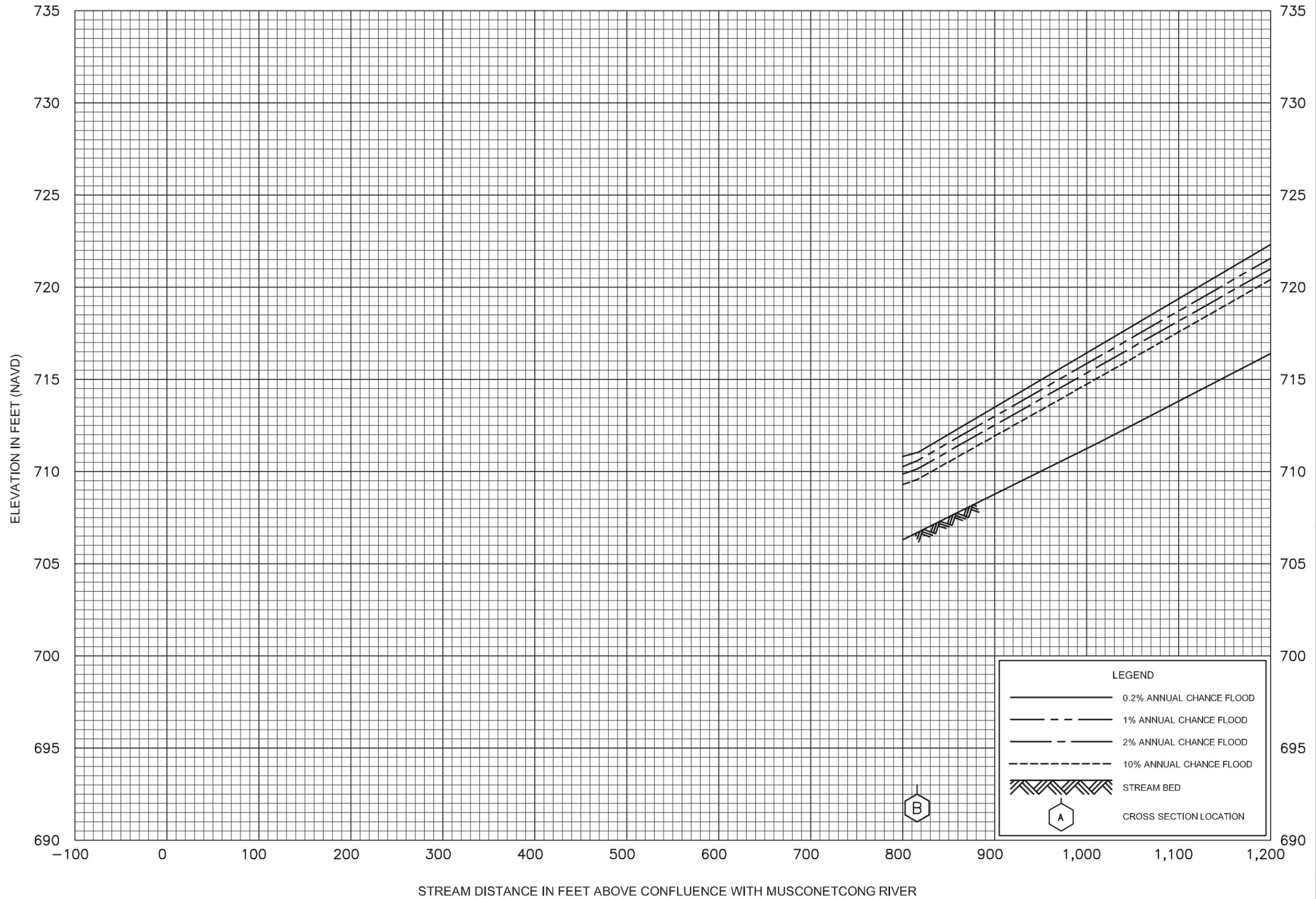
FLOOD PROFILES

WHITE MEADOW BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)





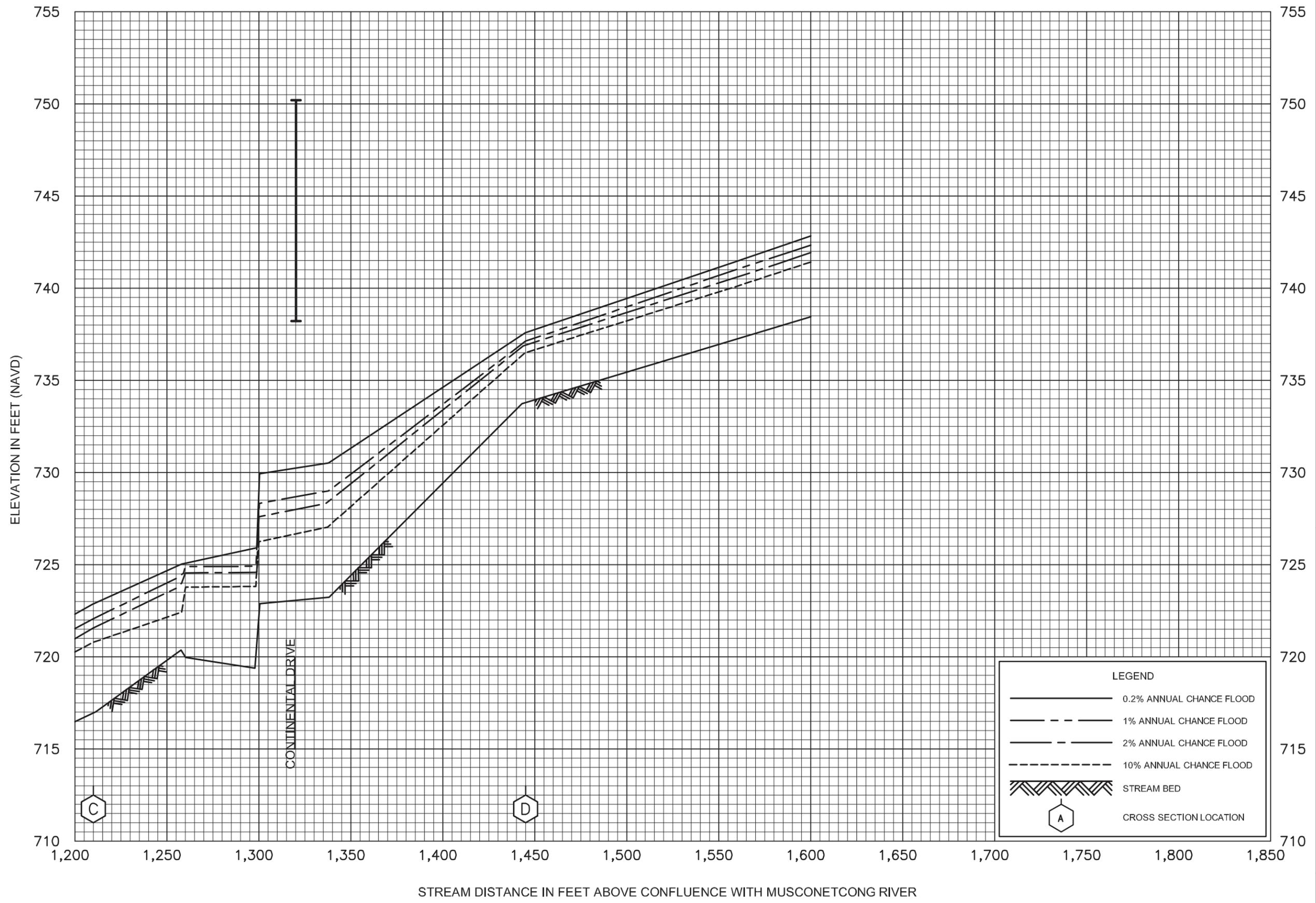
FLOOD PROFILES

WILLS BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

527P



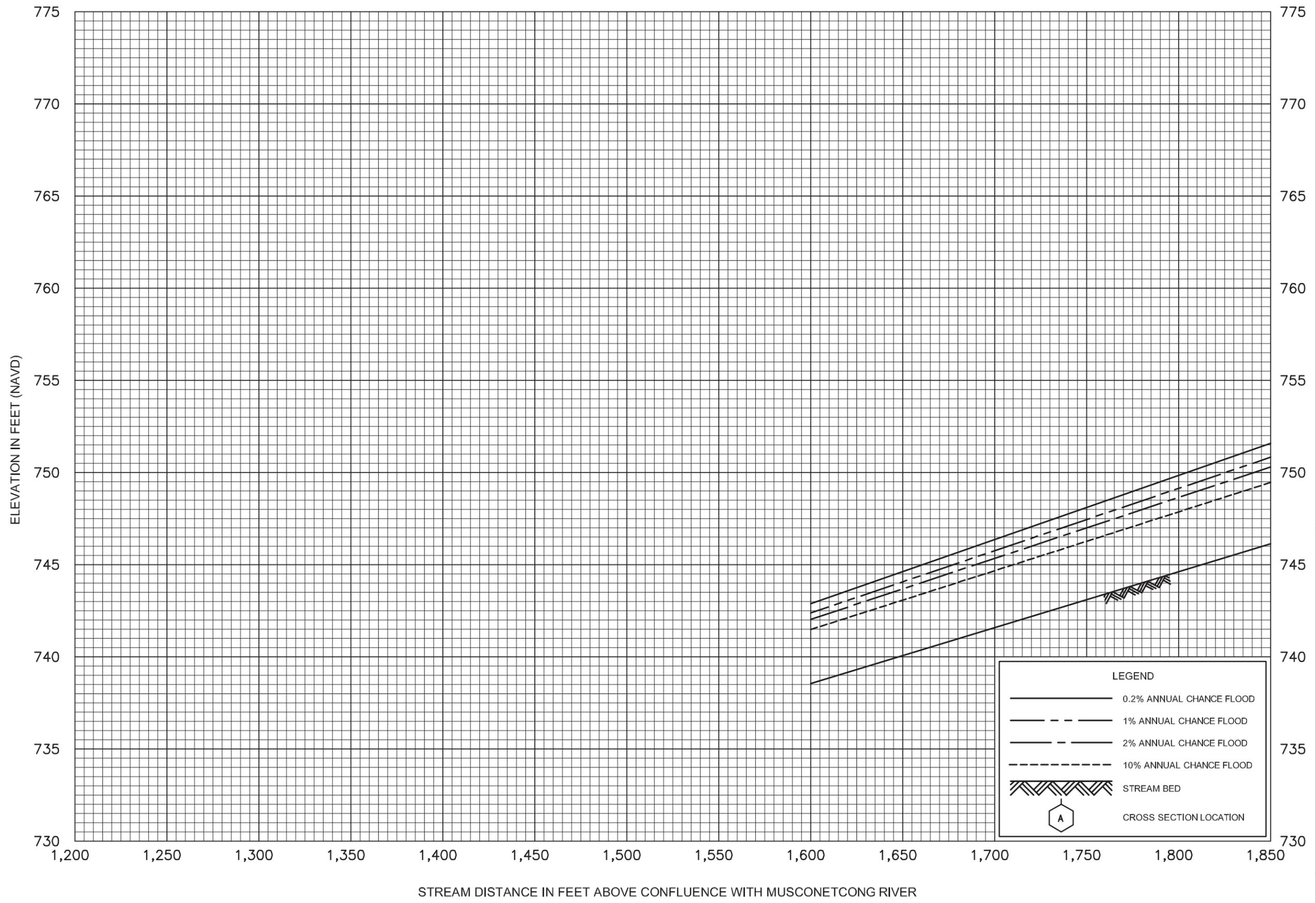
FLOOD PROFILES

WILLS BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

528P



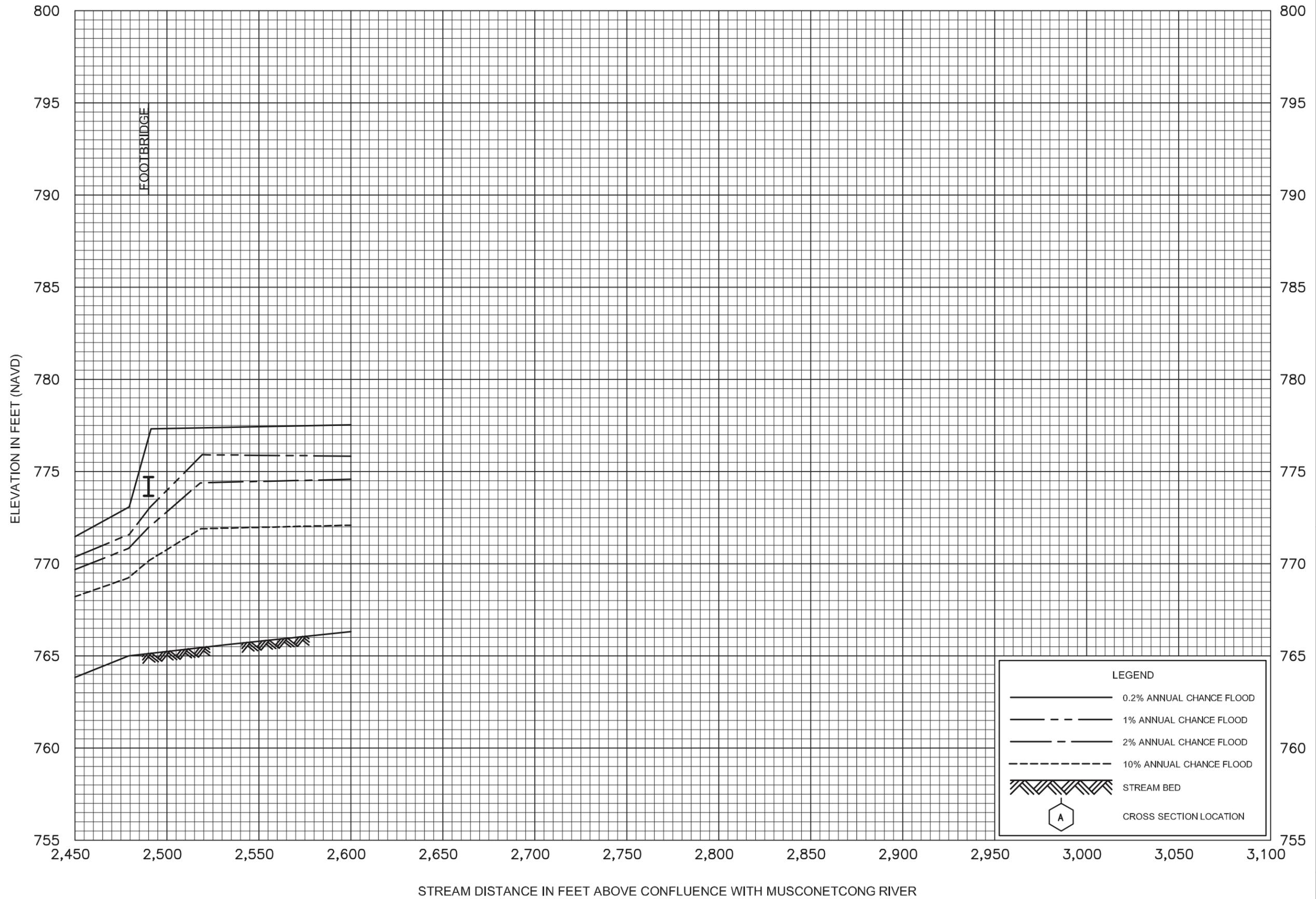
FLOOD PROFILES

WILLS BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

529P



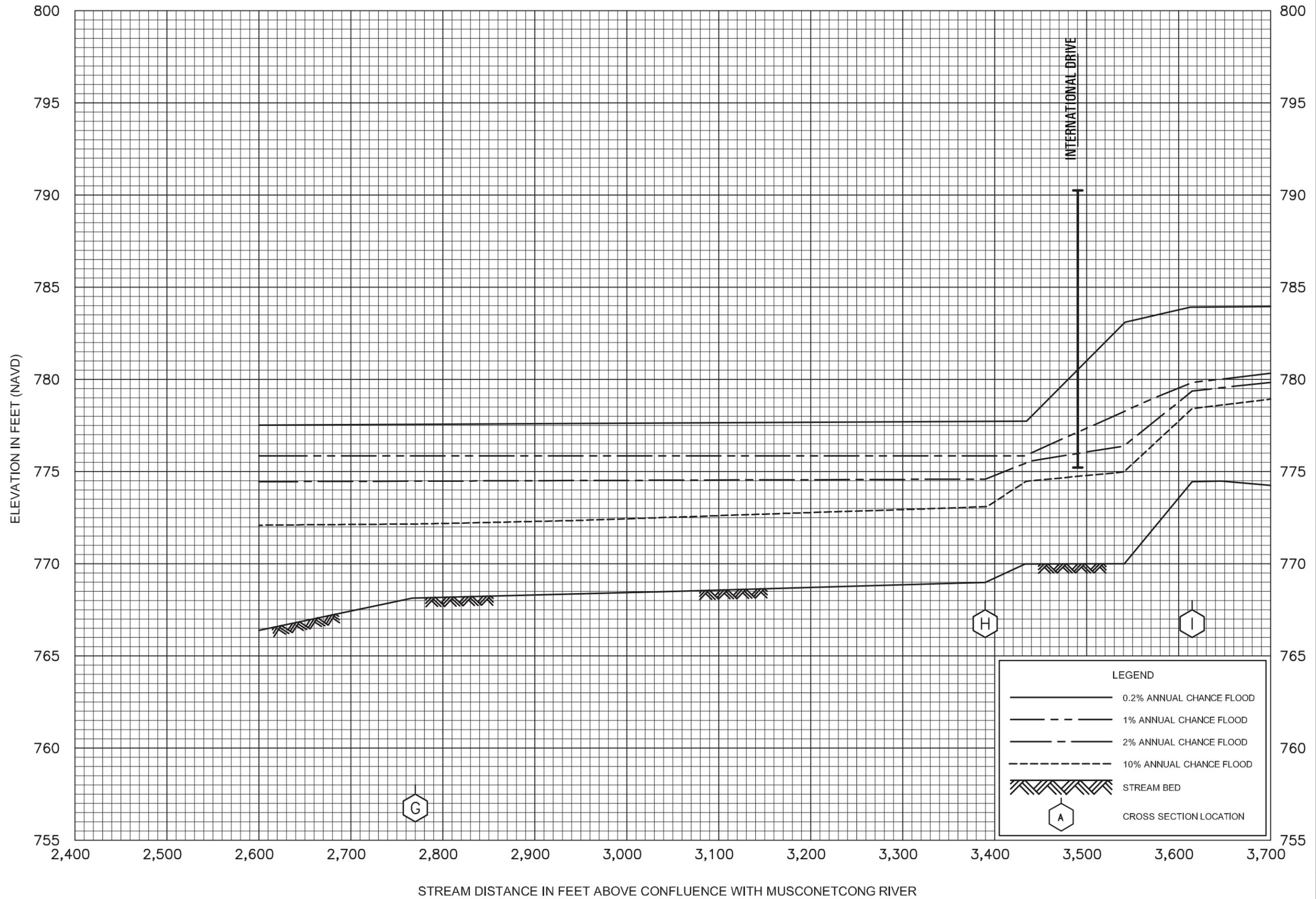
FLOOD PROFILES

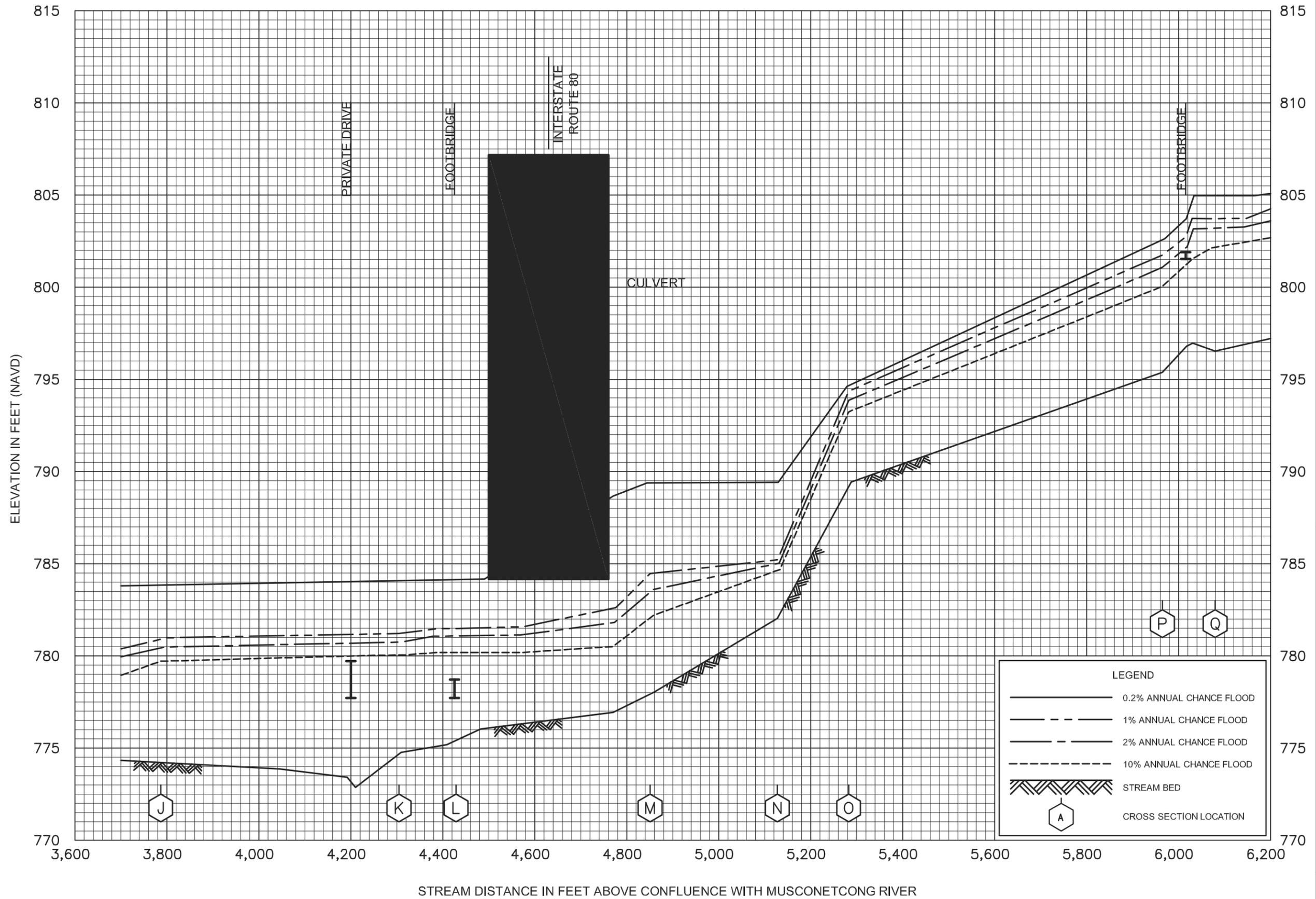
WILLS BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

531P

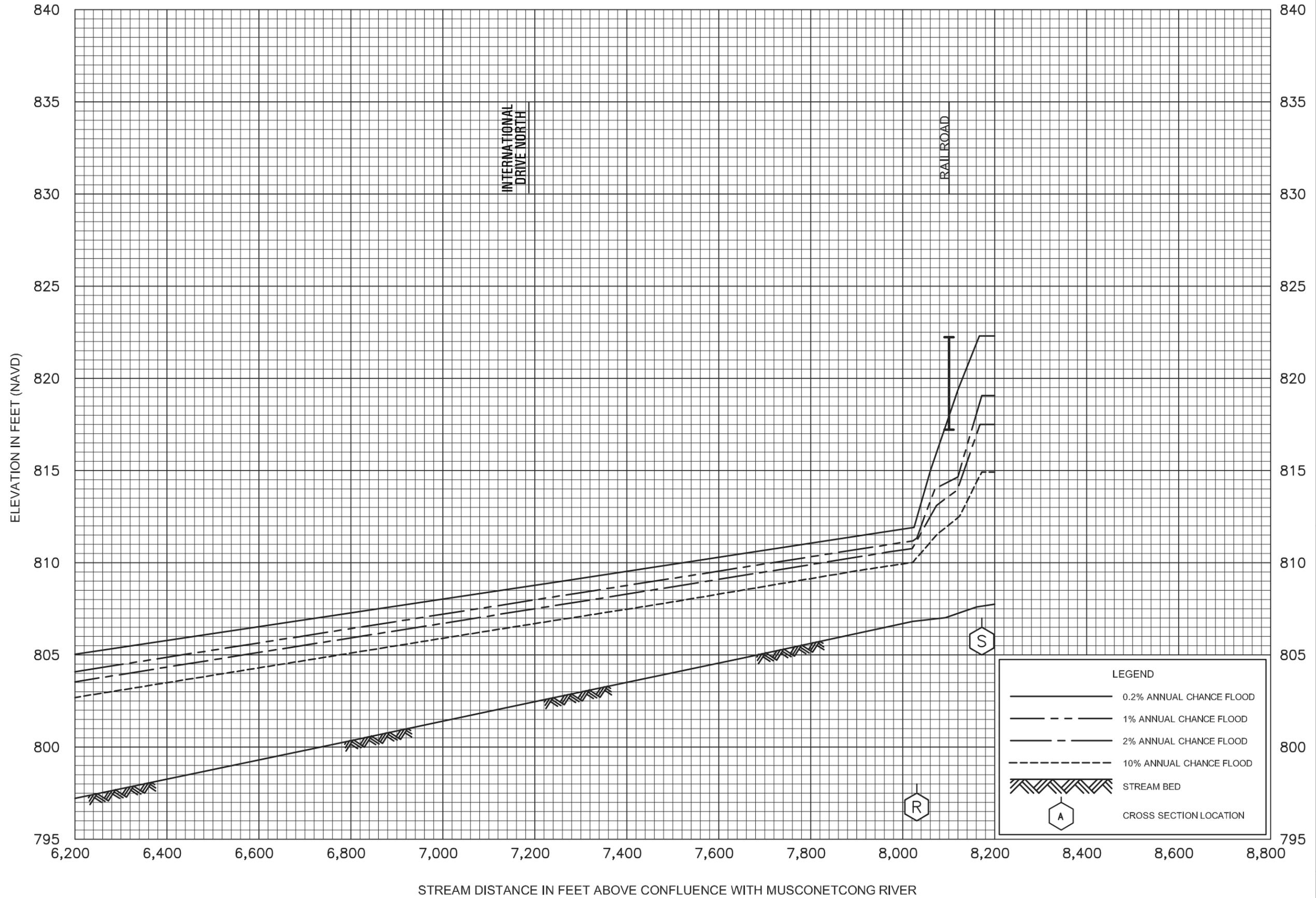




FLOOD PROFILES
WILLS BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY
MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

533P



FLOOD PROFILES

WILLS BROOK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MORRIS COUNTY, NJ
(ALL JURISDICTIONS)

534P

