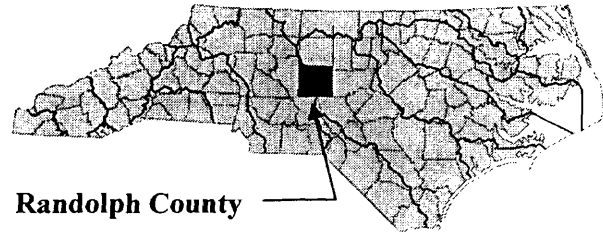


FLOOD INSURANCE STUDY

A Report of Flood Hazards in

RANDOLPH COUNTY, NORTH CAROLINA

AND INCORPORATED AREAS



Community Name	Community Number	River Basin
Archdale, City of	370273	Cape Fear/Yadkin
Asheboro, City of	370196	Cape Fear/Yadkin
Franklinville, Town of	370197	Cape Fear
Liberty, Town of	370582	Cape Fear
Ramseur, Town of	370198	Cape Fear
Randleman, City of	370199	Cape Fear/Yadkin
Randolph County (Unincorporated Areas)	370195	Cape Fear/Yadkin
Seagrove, Town of	370613	Cape Fear/Yadkin
Trinity, City of	370625	Cape Fear/Yadkin



VOLUME 4 OF 4

January 2, 2008

**Federal Emergency Management Agency
State of North Carolina**

**Flood Insurance Study Number
37151CV004A**

www.fema.gov and www.ncfloodmaps.com



FOREWORD

This countywide Flood Insurance Study (FIS) Report was produced through a unique cooperative partnership between the State of North Carolina and the Federal Emergency Management Agency (FEMA). The State of North Carolina has implemented a long-term approach to floodplain management to decrease the costs associated with flooding. This is demonstrated by the State's commitment to map floodplain areas at the state level. As a part of this effort, the State of North Carolina has joined with FEMA in a Cooperating Technical State (CTS) agreement to produce and maintain this FIS Report and the accompanying digital Flood Insurance Rate Map (FIRM) for North Carolina.

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 repository. It is advisable to contact the community repository for any additional data.

Part of this FIS may be revised by the Letter of Map Revision process, which does not involve republication or redistribution of the FIS. It is, therefore, the responsibility of the user to consult with community officials and to check the community repository to obtain the most current FIS components.

The following is a list of the publication dates of this Countywide FIS Report starting with the initial Report accompanying the North Carolina Statewide FIRM:

January 2, 2008

This FIS has been produced as part of the North Carolina Floodplain Mapping Program. Randolph County, North Carolina, falls under the administrative jurisdiction of Region IV of the Federal Emergency Management Agency (FEMA). Questions concerning this FIS may be directed to the North Carolina Floodplain Mapping Program at www.ncfloodmaps.com, the FEMA Map Assistance Center by calling the toll-free information line at 1-877-FEMA MAP (1-877-336-2627), or by contacting the FEMA Regional Office at the following address:

FEMA, Federal Insurance and Mitigation Administration
Koger Center - Rutgers Building
3003 Chamblee Tucker Road
Atlanta, Georgia 30341
(770) 220-5400

Table of Contents

Volume 1 – January 2, 2008

<u>Section</u>	<u>Page</u>
Section 1.0 — Introduction	1
1.1 The National Flood Insurance Program	1
1.2 Purpose of this Flood Insurance Study	1
1.3 FIS Components	2
Flood Insurance Rate Map	2
Flood Insurance Study Report	2
Flood Profiles	2
Section 2.0 — Floodplain Management Applications	3
2.1 Floodplains	3
2.2 Floodways	3
2.3 Base Flood Elevations	4
2.4 Watershed Characteristics	4
Drainage Area	5
Soil Permeability and Infiltration	5
Soil Moisture Conditions	5
Channel and Floodplain Geometry	5
Channel and Floodplain Roughness	5
Data Validity and Reliability	6
Developmental and Topographic Changes Over Time	6
Erosion, Deposition, and Debris Flow	6
Meandering and Lateral Migration	6
Section 3.0 — Insurance Applications	7
Section 4.0 — Area Studied	9
4.1 Basin Characteristics	9
Cape Fear River Basin	9
Yadkin River Basin	9
4.2 Principal Flood Problems	11
4.3 Historic Flood Elevations	12
4.4 Flood Protection Measures	13
4.5 Scope of Study	14
Section 5.0 — Engineering Methods	35
5.1 Hydrologic Analyses	35
Pre-Countywide Analyses	35
Revised Analyses for Countywide FIS	35
5.2 Hydraulic Analyses	96
Pre-Countywide Analyses	96
Revised Analyses for Countywide FIS	97

Table of Contents

Volume 1 - continued

<u>Section</u>	<u>Page</u>
Section 6.0 — Mapping Methods	105
6.1 Vertical and Horizontal Control	105
Vertical Datum	105
Vertical Control Monuments.....	106
Horizontal Datum and Control.....	107
6.2 Base Map.....	107
6.3 Floodplain and Floodway Delineation	109
Floodplain Delineation.....	109
Floodway Delineation	109
Section 7.0 — Revising the FIS	111
7.1 Letters of Map Amendment and Letters of Map Revision - Based on Fill	111
7.2 Letters of Map Revision	112
7.3 Physical Map Revisions	112
7.4 Contracted Restudies	112
7.5 Map Revision History	113
Section 8.0 — Study Contracting and Community Coordination	117
8.1 Authority and Acknowledgments.....	117
8.2 Consultation Coordination Officer’s Meetings/Scoping Meetings	118
Section 9.0 — Guide to Additional Information.....	123
Section 10.0 — Bibliography and References	125

Table of Contents

Volume 1 - continued

Tables

Table 1—Jurisdictions in Randolph County	2
Table 2—Flood Zone Designations.....	7
Table 3—Historic Flood Elevations.....	13
Table 4—Flood Protection Measures.....	14
Table 5—Flooding Sources Studied by Detailed Methods: Revised or Newly Studied	15
Table 6—Flooding Sources Studied by Detailed Methods: Redelineated	17
Table 7—Flooding Sources Studied by Detailed Methods: Limited Detailed	18
Table 8—Summary of Discharges	37
Table 9—Gage Information	96
Table 10—Roughness Coefficients.....	97
Table 12—Datum Conversion Locations and Values	105
Table 14—Community Map History.....	115
Table 15—Authority and Acknowledgments.....	117
Table 16—Consultation Coordination Officer’s Meetings	118
Table 17—Scoping Meetings	120
Table 18—Additional Information.....	123

Figures

Figure 1—Floodway Schematic.....	4
Figure 2—North Carolina’s State Plane Coordinate System	108

Volume 2 – January 2, 2008

Table 11—Limited Detailed Flood Hazard Data	1
Table 13—Floodway Data	97

Volume 3 – January 2, 2008

Flood Profiles

Caraway Creek	Profiles 01P-08P
Cedar Fork Creek	Profiles 09P-20P
Deep River	Profiles 21P – 29P
Hasketts Creek	Profiles 30P – 36P
Hasketts Creek Tributary 1	Profile 37P
Little Polecat Creek	Profiles 38P – 43P
Little Polecat Creek Tributary 1	Profiles 44P – 46P
Little Polecat Creek Tributary 2	Profile 47P
Little Polecat Creek Tributary 3	Profiles 48P – 49P
Little Polecat Creek Tributary 4	Profiles 50P – 51P
Little Polecat Creek Tributary 5	Profiles 52P – 53P

Table of Contents

Volume 3 – continued

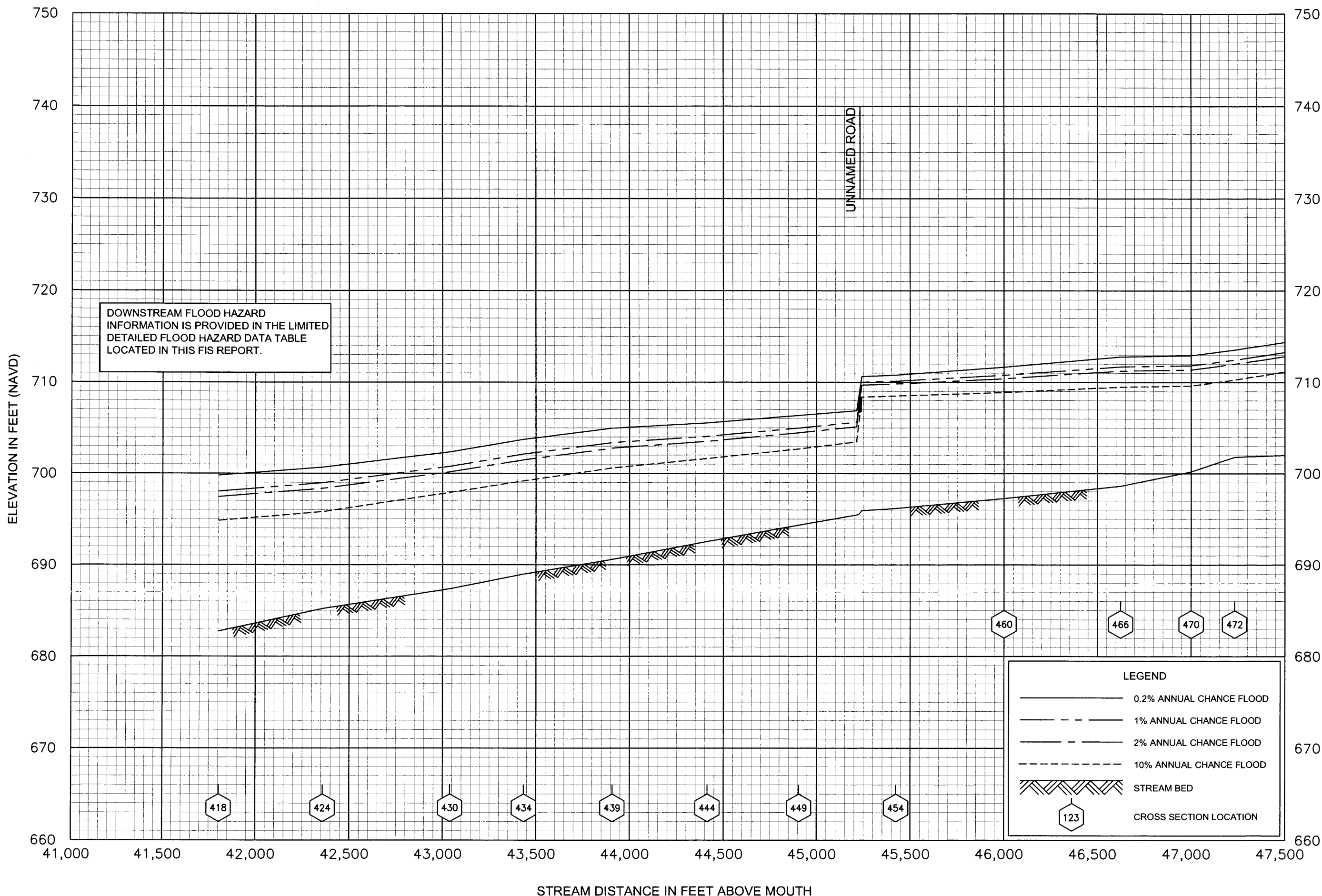
Flood Profiles

Little Uwharrie River	Profiles 54P – 62P
Long Branch	Profiles 63P – 66P
Mill Creek (into Deep River)	Profiles 67P – 74P

Volume 4 – January 2, 2008

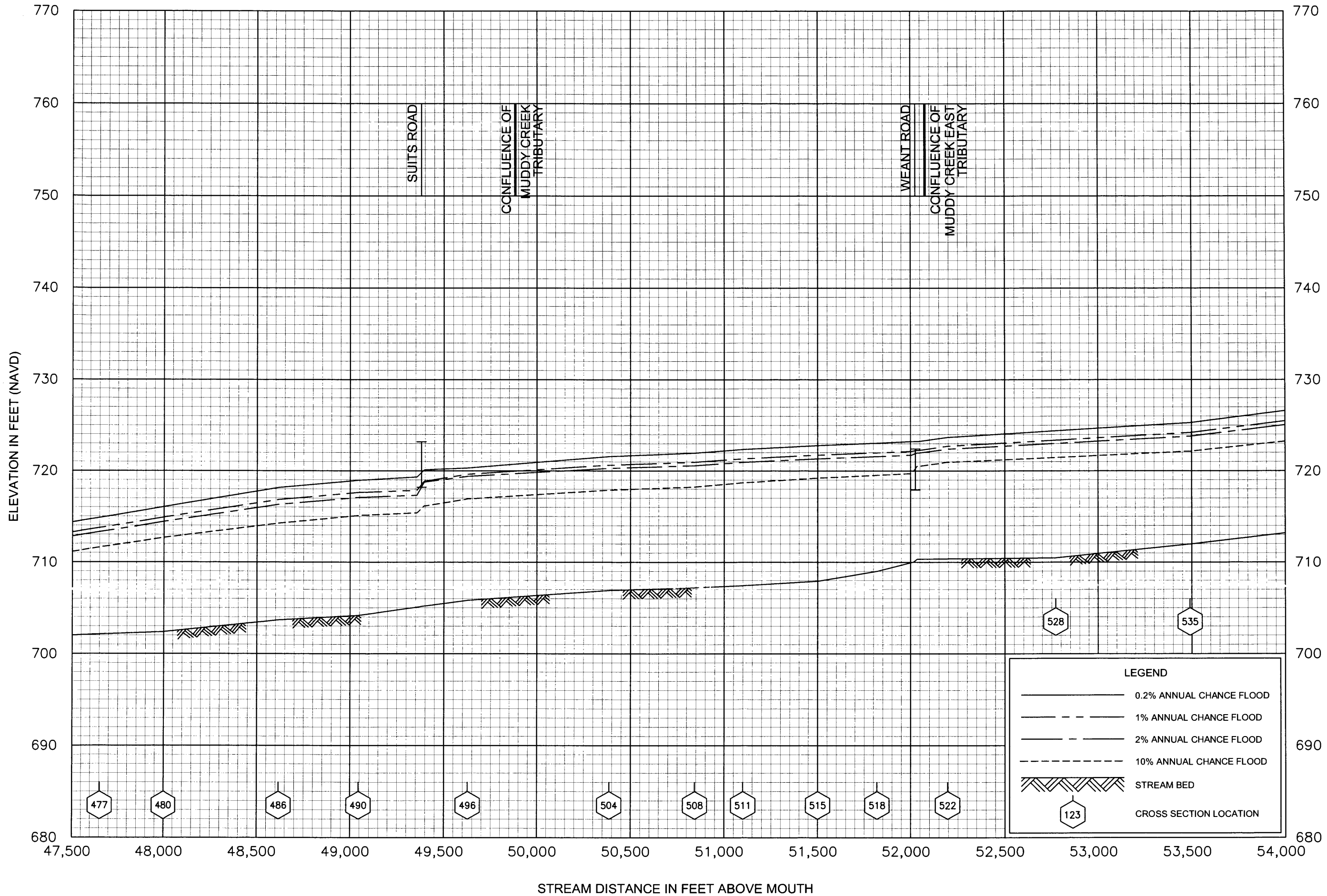
Flood Profiles

Muddy Creek	Profiles 75P – 81P
Muddy Creek East Tributary	Profiles 82P – 84P
Muddy Creek West Tributary	Profiles 85P – 86P
Penwood Branch	Profiles 87P – 88P
Penwood Branch Tributary	Profile 89P
Polecat Creek	Profiles 90P – 99P
Polecat Creek Tributary 4	Profiles 100P–101P
Polecat Creek Tributary 5	Profile 102P
Polecat Creek Tributary 6	Profiles 103P–104P
Polecat Creek Tributary 7	Profile 105P
Richland Creek	Profiles 106P–107P
Taylor's Creek	Profiles 108P–112P
Uwharrie River	Profiles 113P–118P
Uwharrie River Tributary 10	Profiles 119P–120P
Uwharrie River Tributary 11	Profiles 121P–122P
Vestal Creek	Profiles 123P–124P
Vestal Creek Tributary 1	Profiles 125P–129P
Vestal Creek Tributary 2	Profile 130P
Vestal Creek Tributary 3	Profile 131P



FLOOD PROFILES
MUDDY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



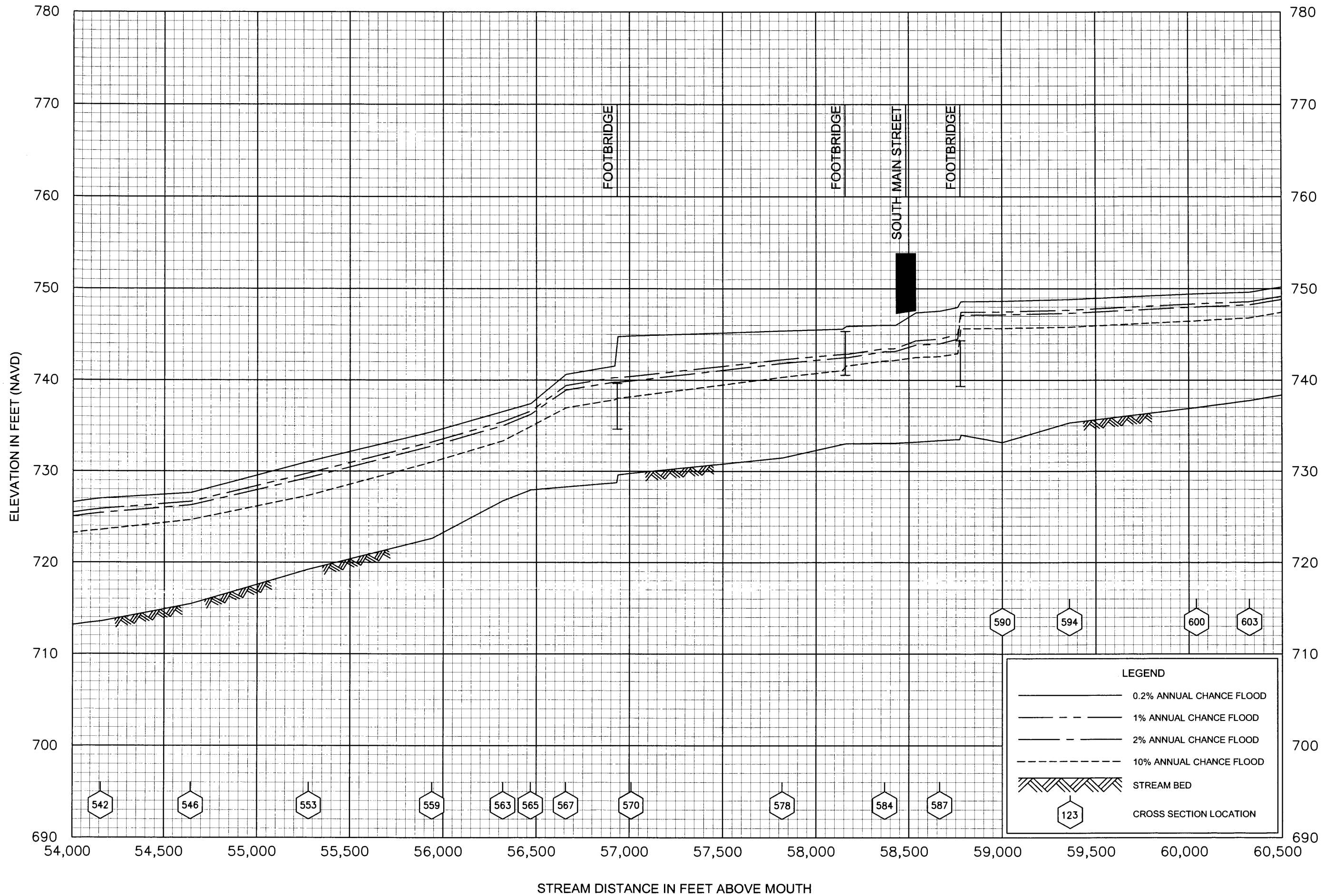
FLOOD PROFILES

MUDDY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

76P

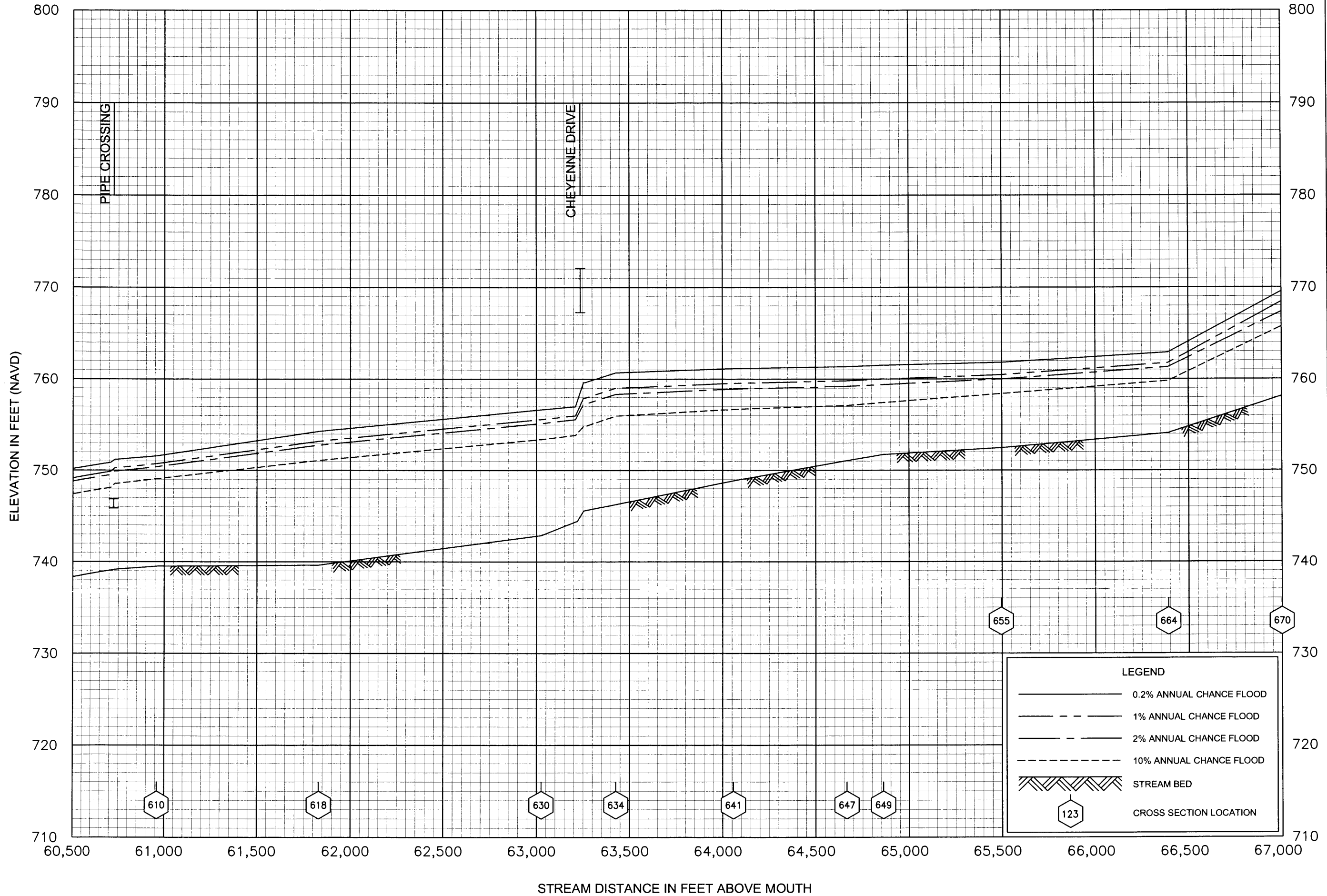


FLOOD PROFILES

MUDDY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



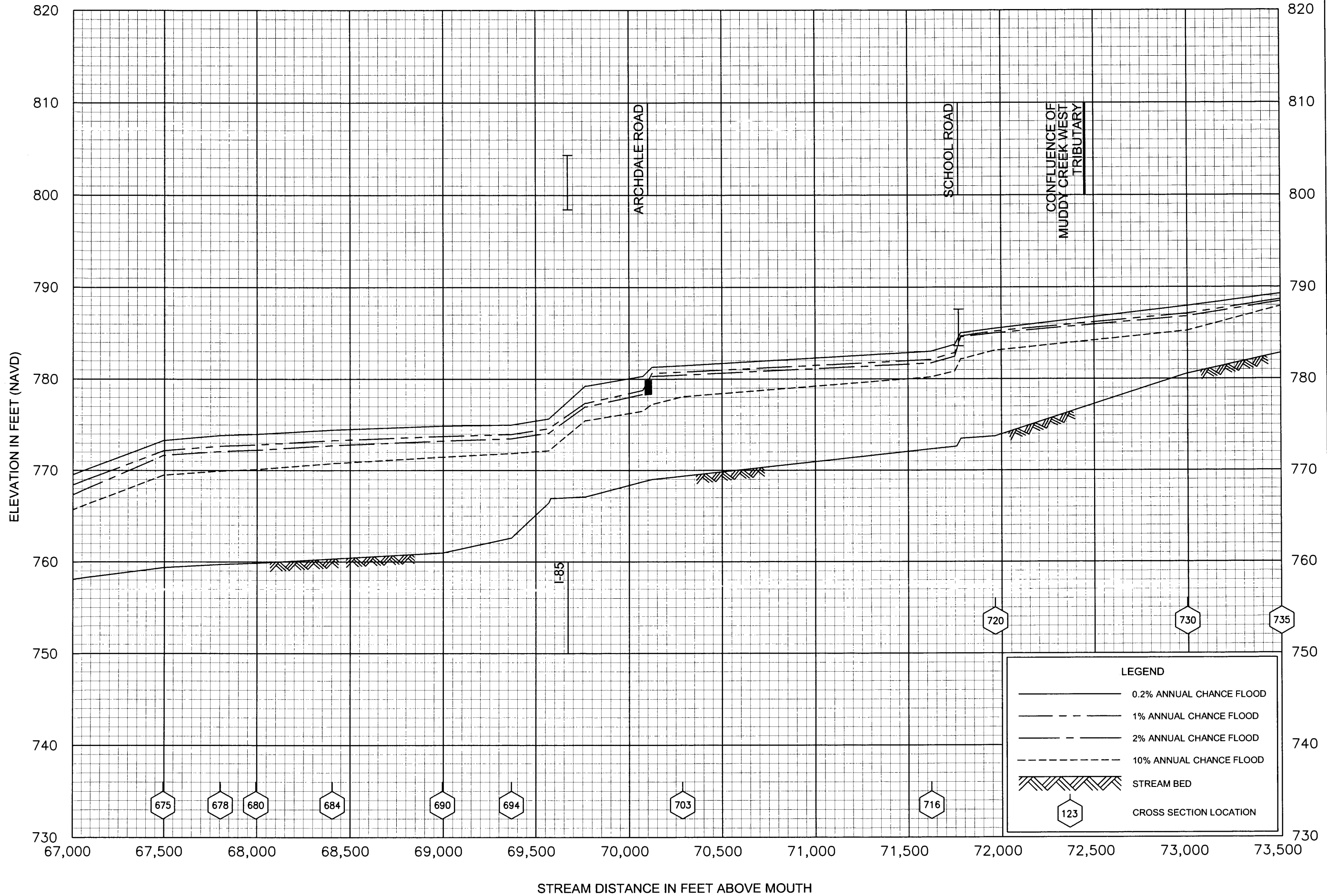
FLOOD PROFILES

MUDDY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

78P



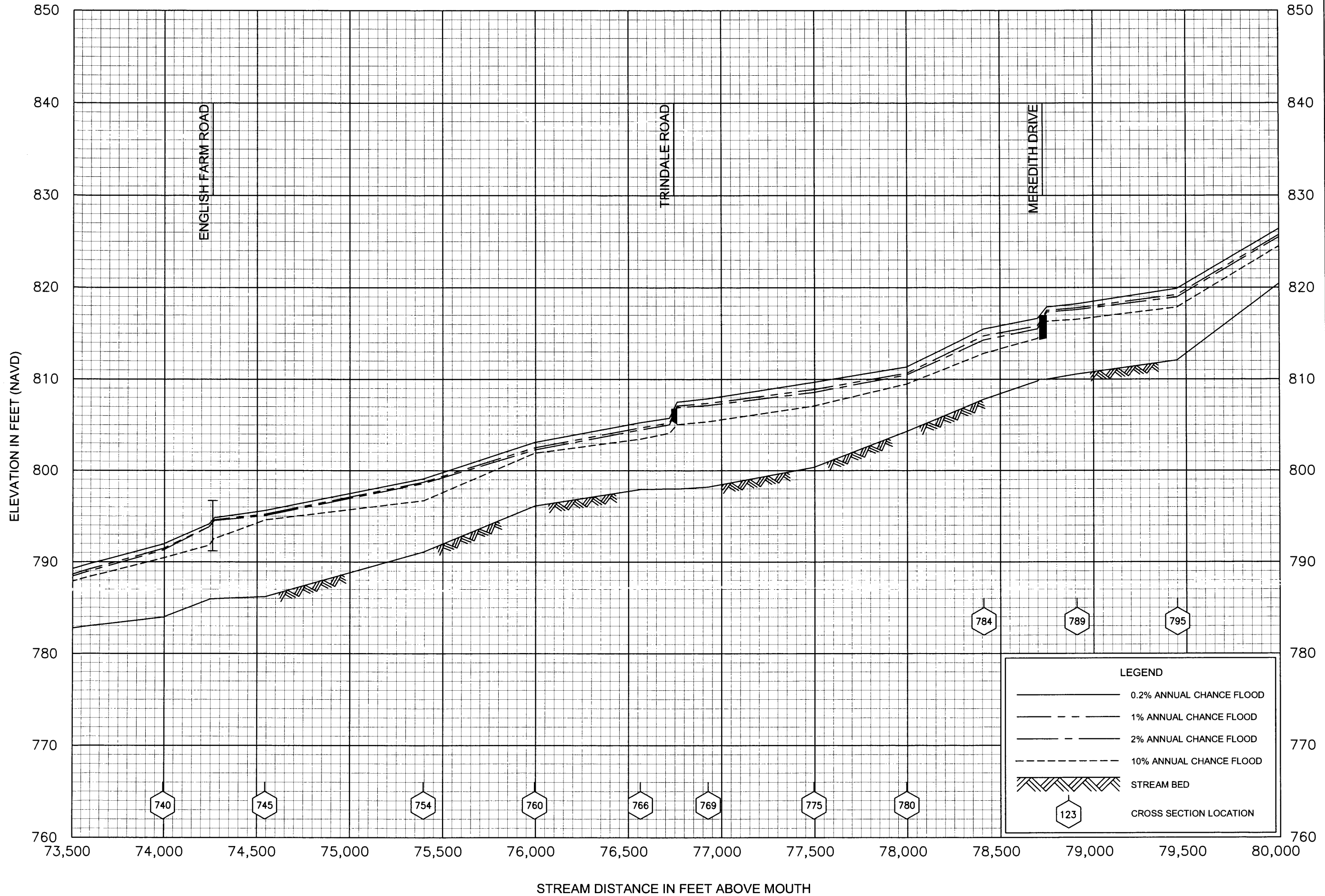
FLOOD PROFILES

MUDDY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

**RANDOLPH COUNTY, NC
AND INCORPORATED AREAS**

79P

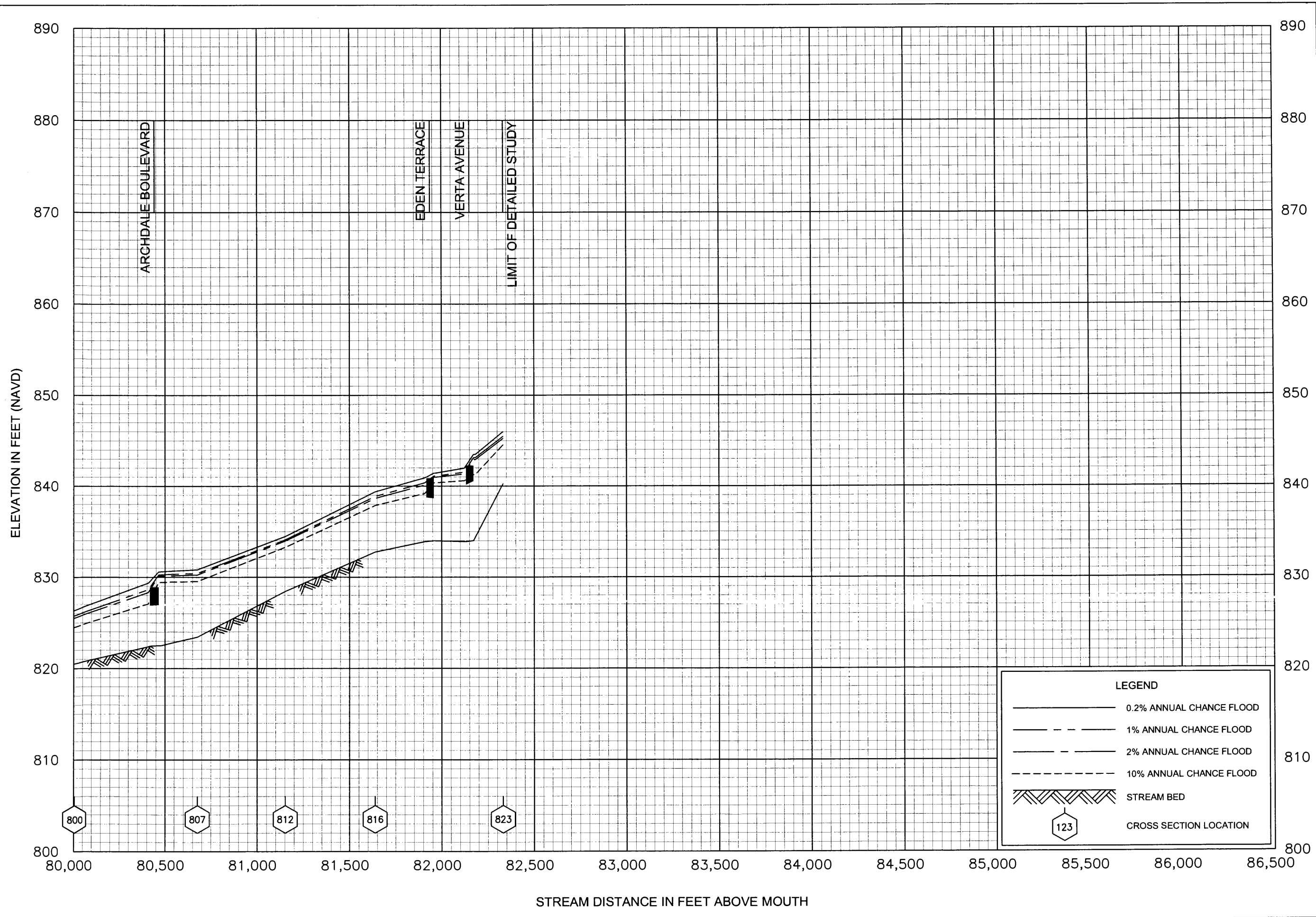


FLOOD PROFILES

MUDDY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

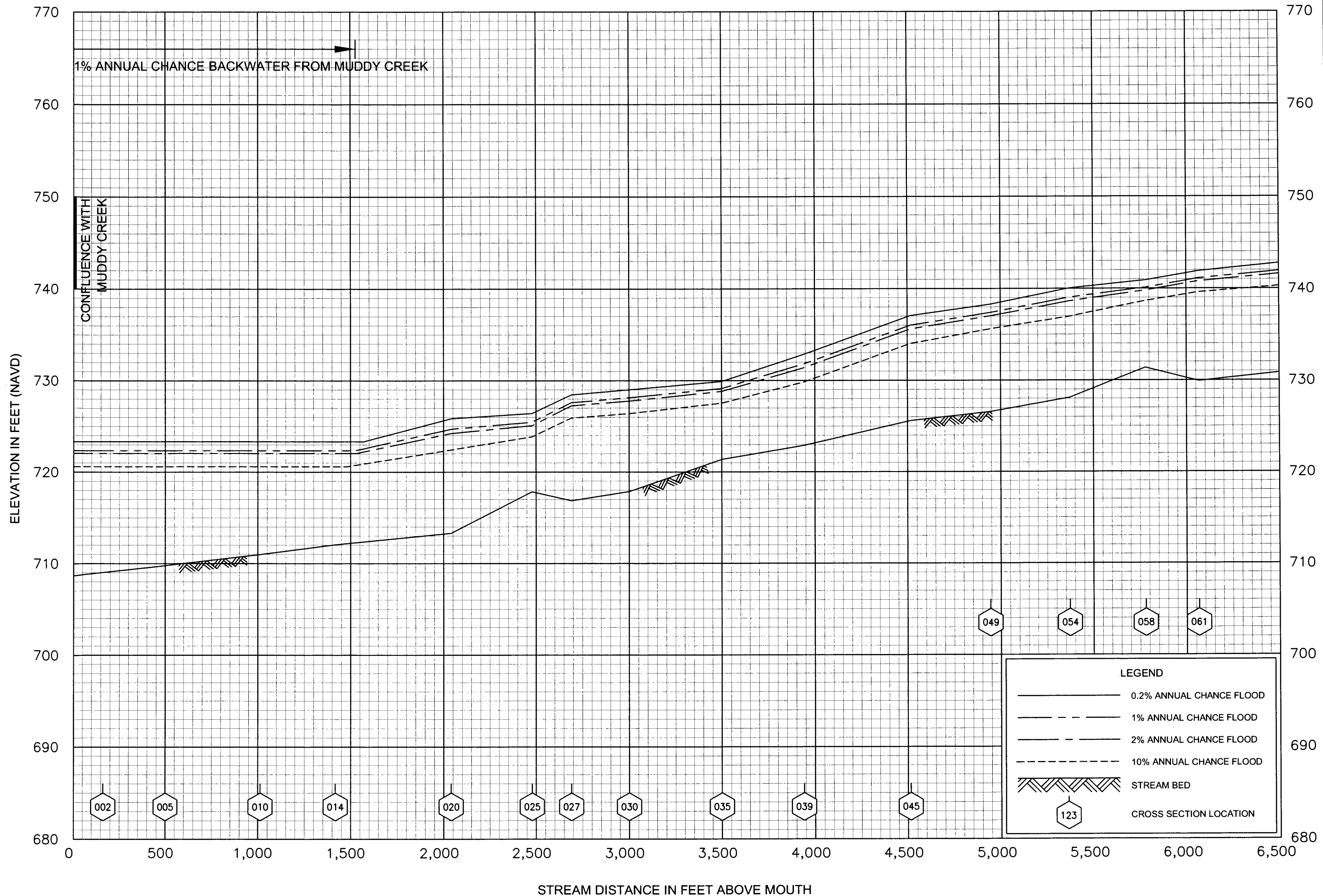
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



FLOOD PROFILES
MUDDY CREEK

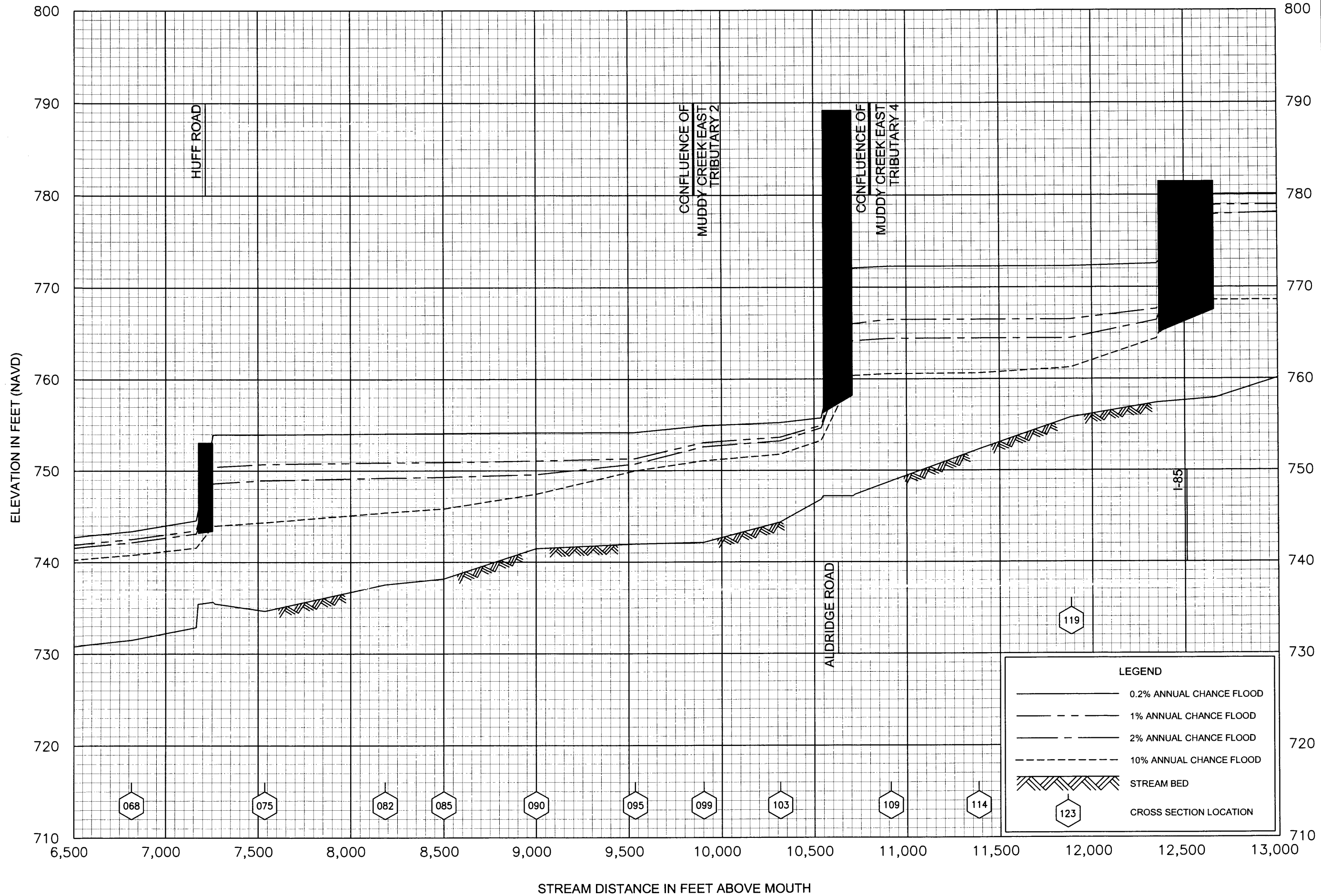
FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

81P



FLOOD PROFILES
MUDDY CREEK EAST TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

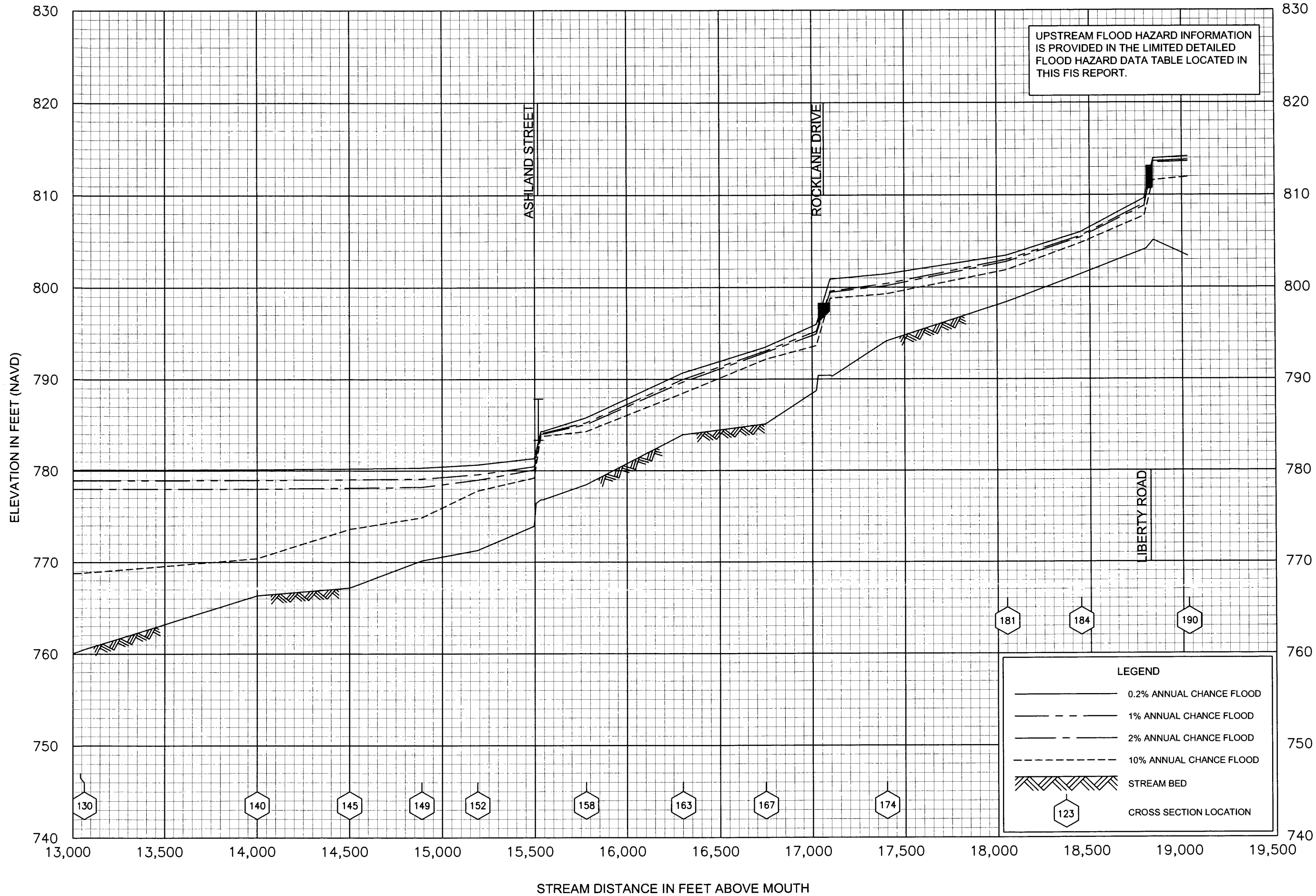


FLOOD PROFILES

MUDDY CREEK EAST TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

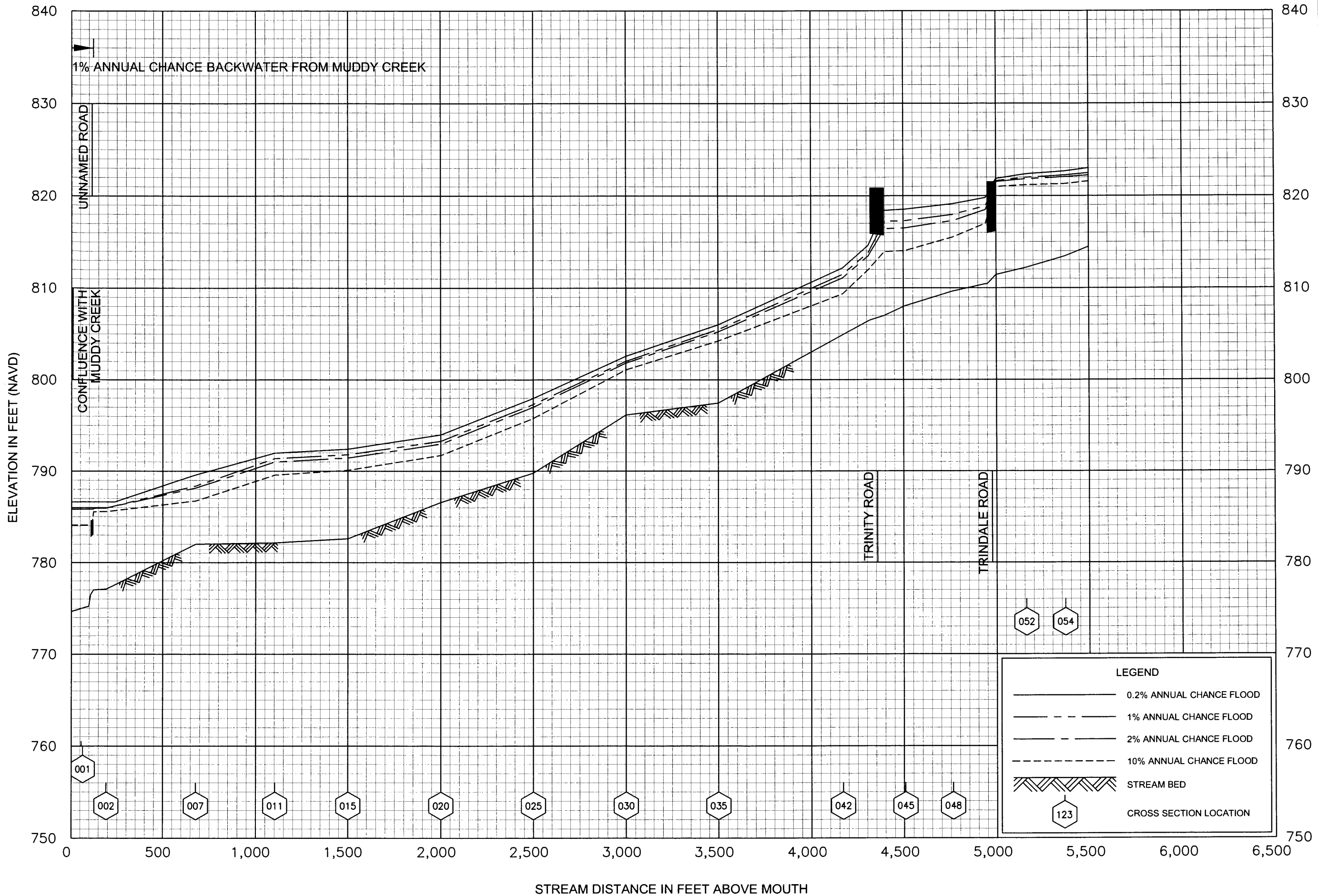


FLOOD PROFILES

MUDDY CREEK EAST TRIBUTARY

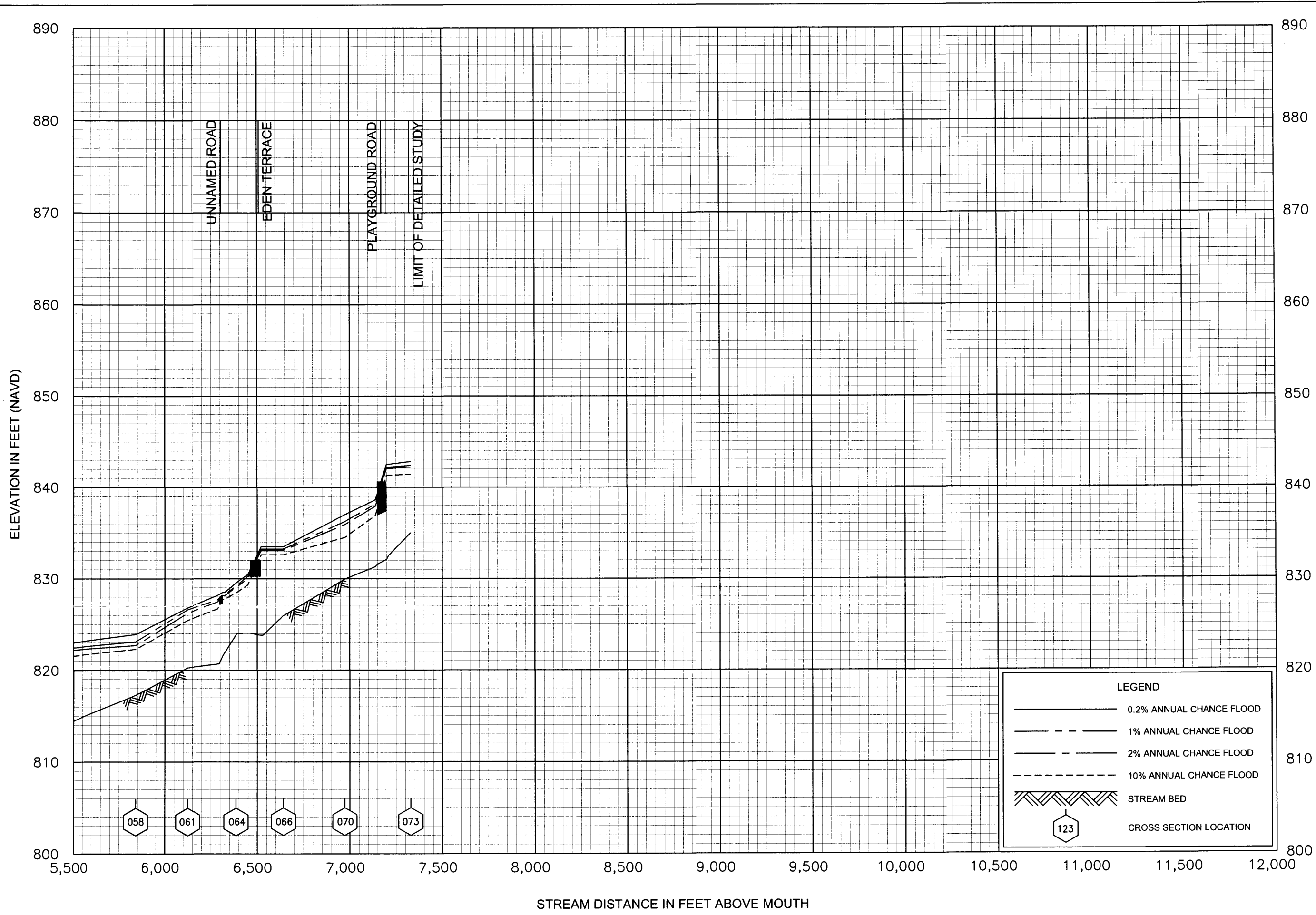
FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



FLOOD PROFILES
MUDDY CREEK WEST TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

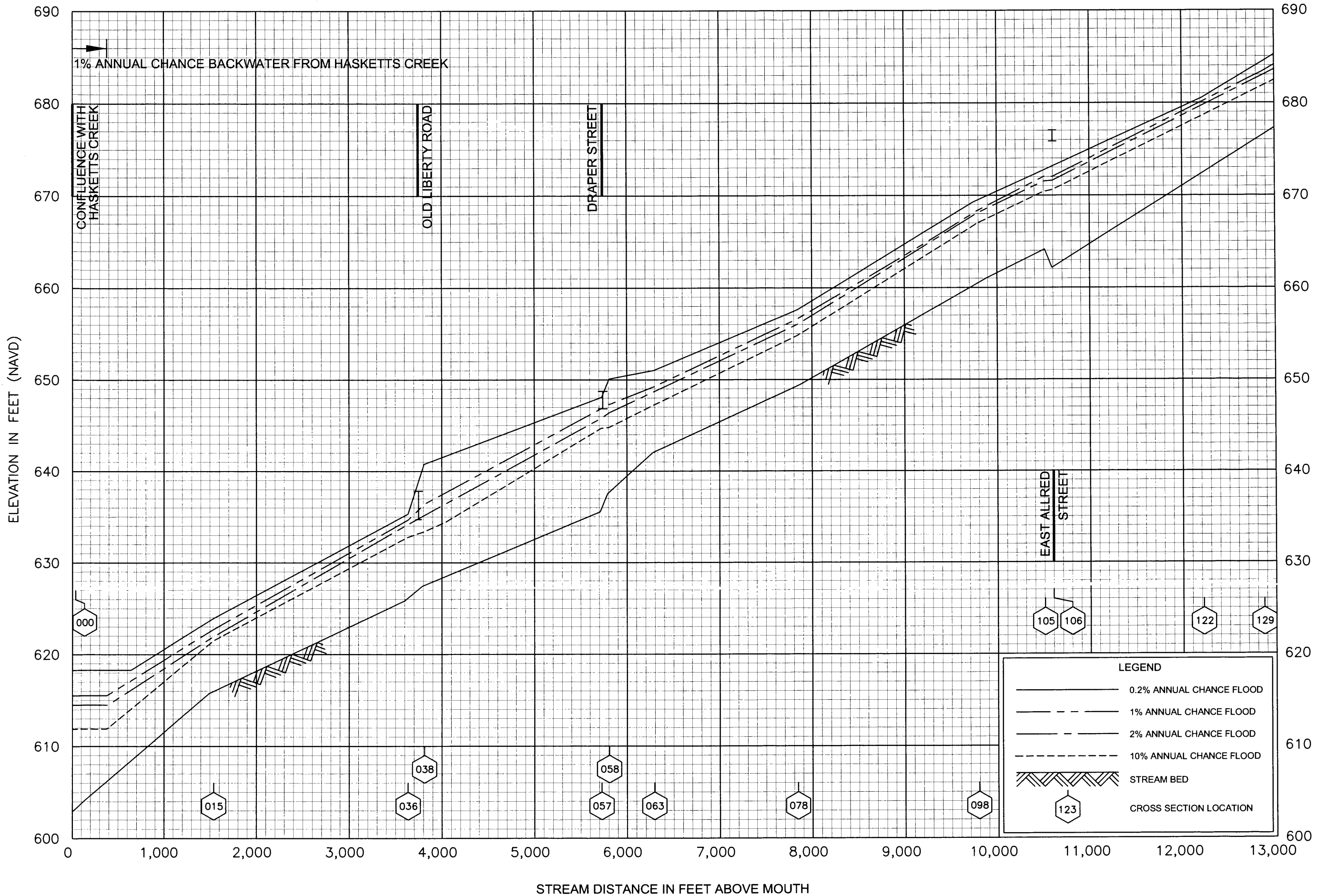


FLOOD PROFILES

MUDDY CREEK WEST TRIBUTARY

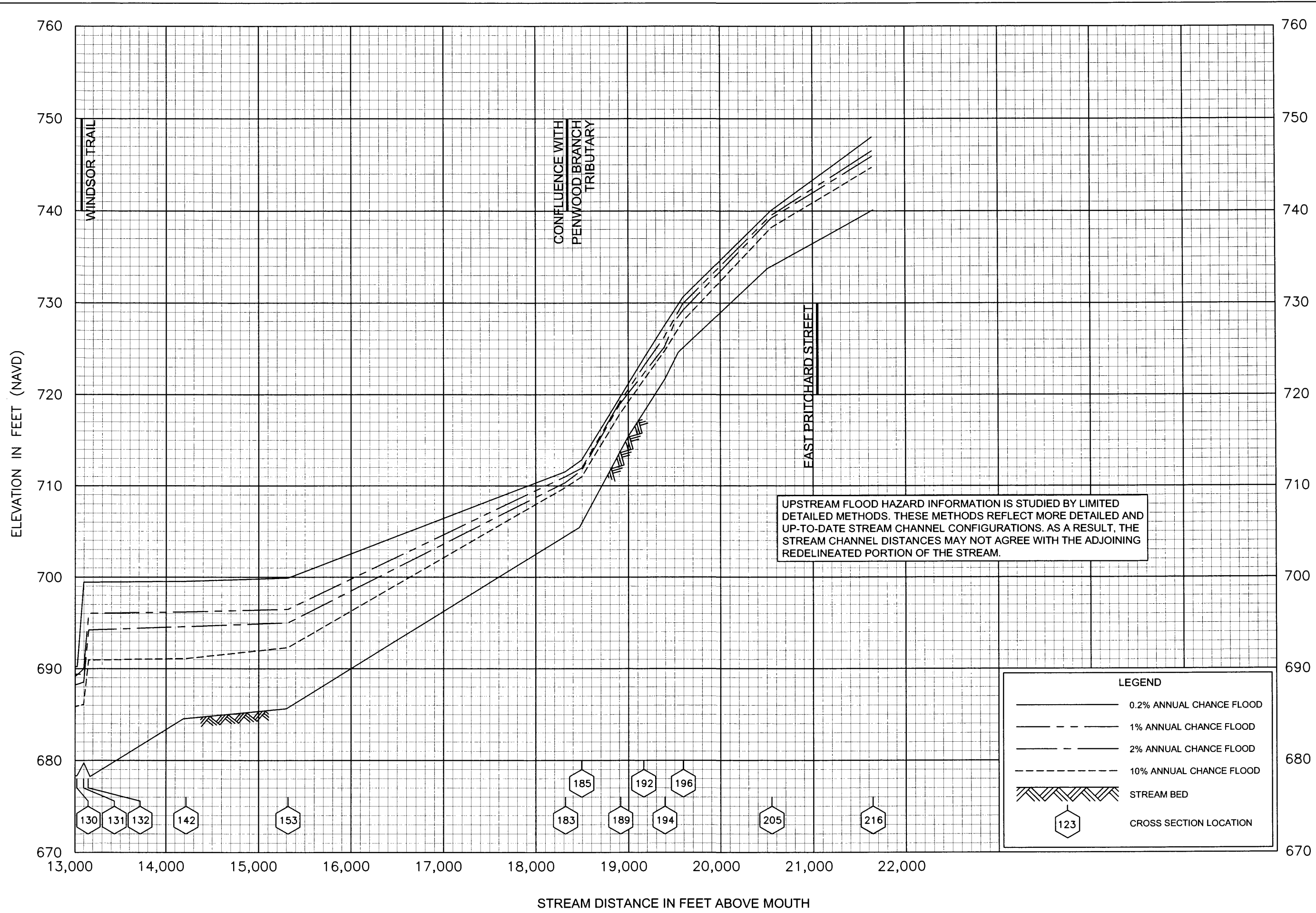
FEDERAL EMERGENCY MANAGEMENT AGENCY

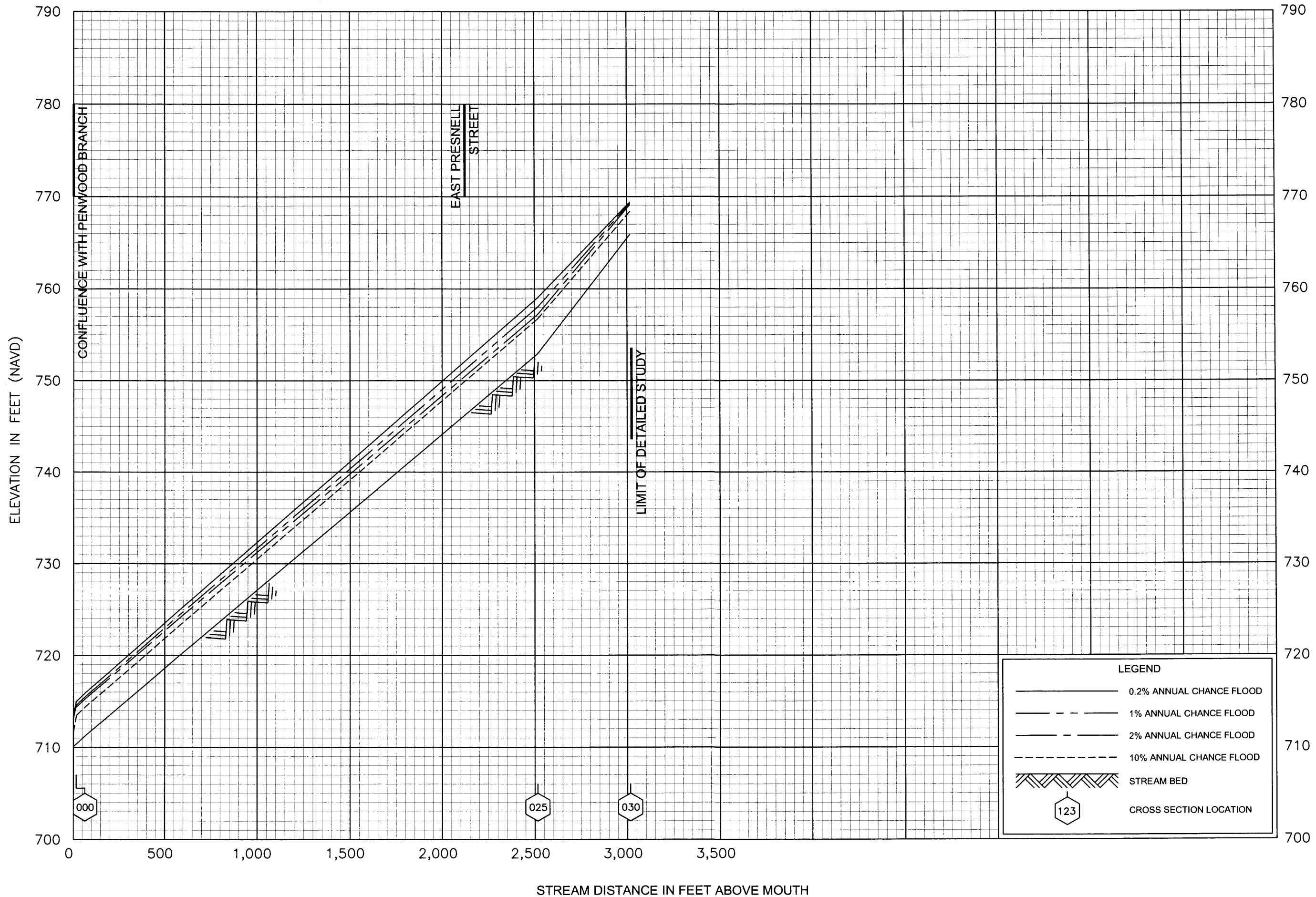
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



FLOOD PROFILES
 PENWOOD BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY
 RANDOLPH COUNTY, NC
 AND INCORPORATED AREAS



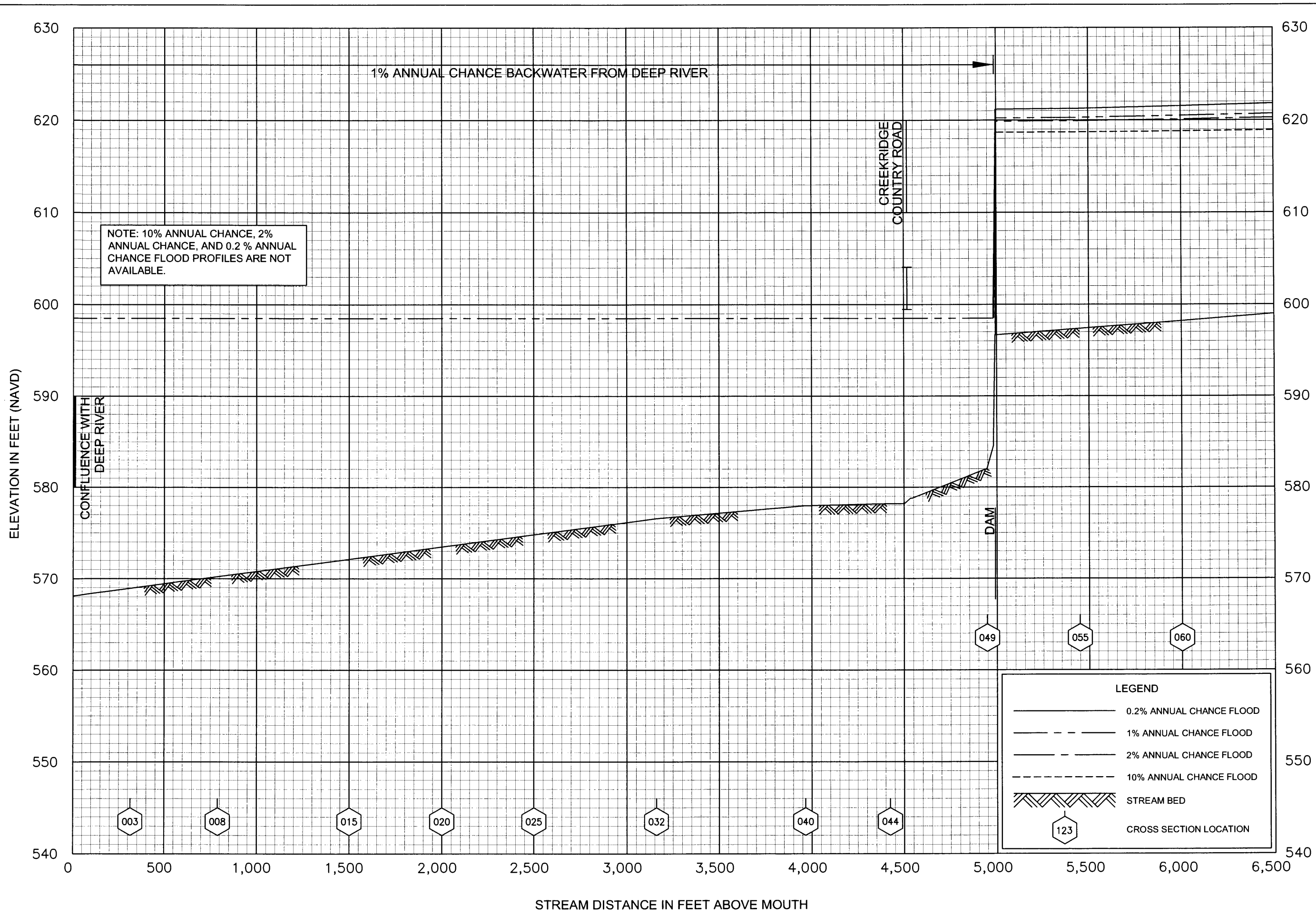


FLOOD PROFILES

PENWOOD BRANCH TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

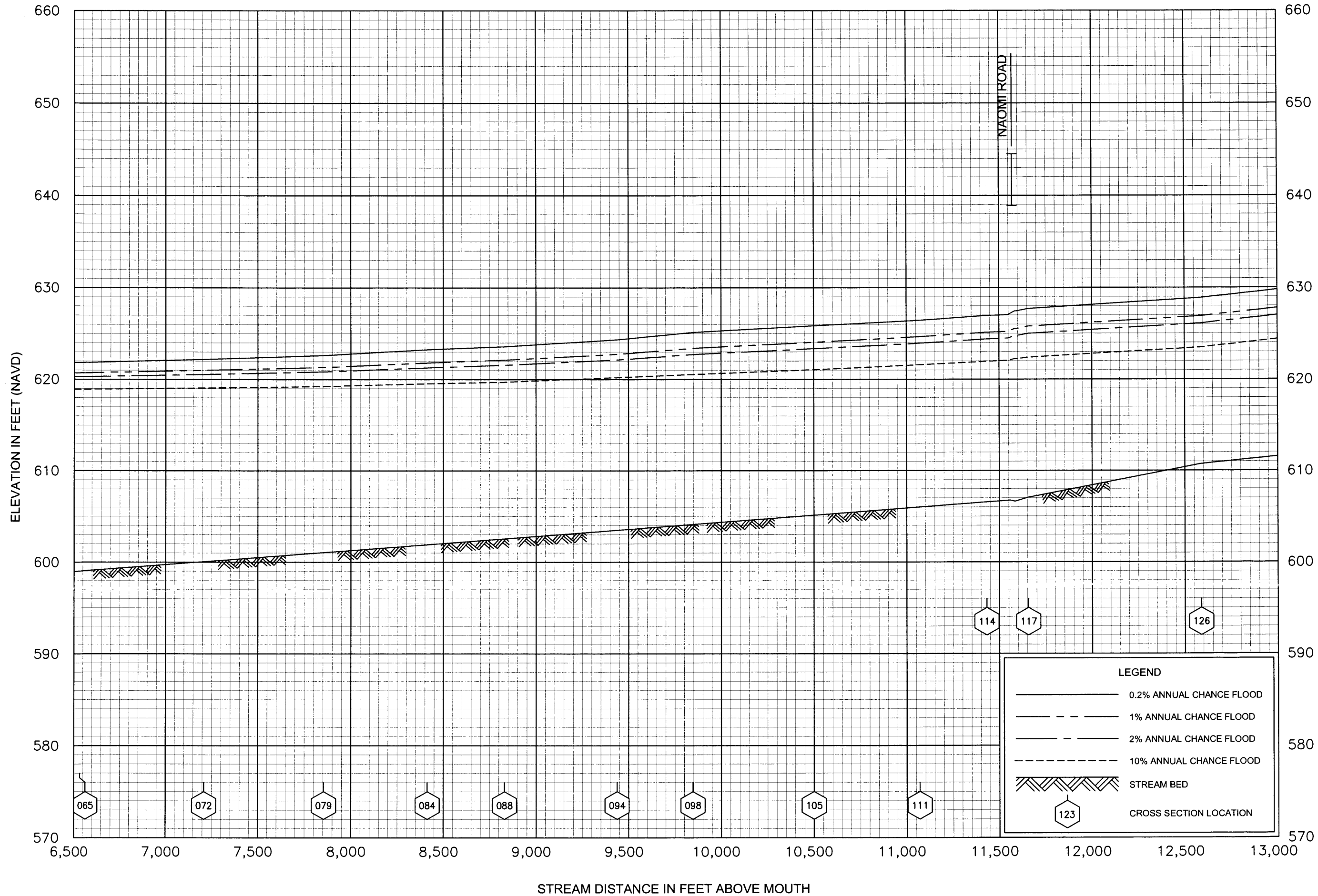


FLOOD PROFILES

POLECAT CREEK

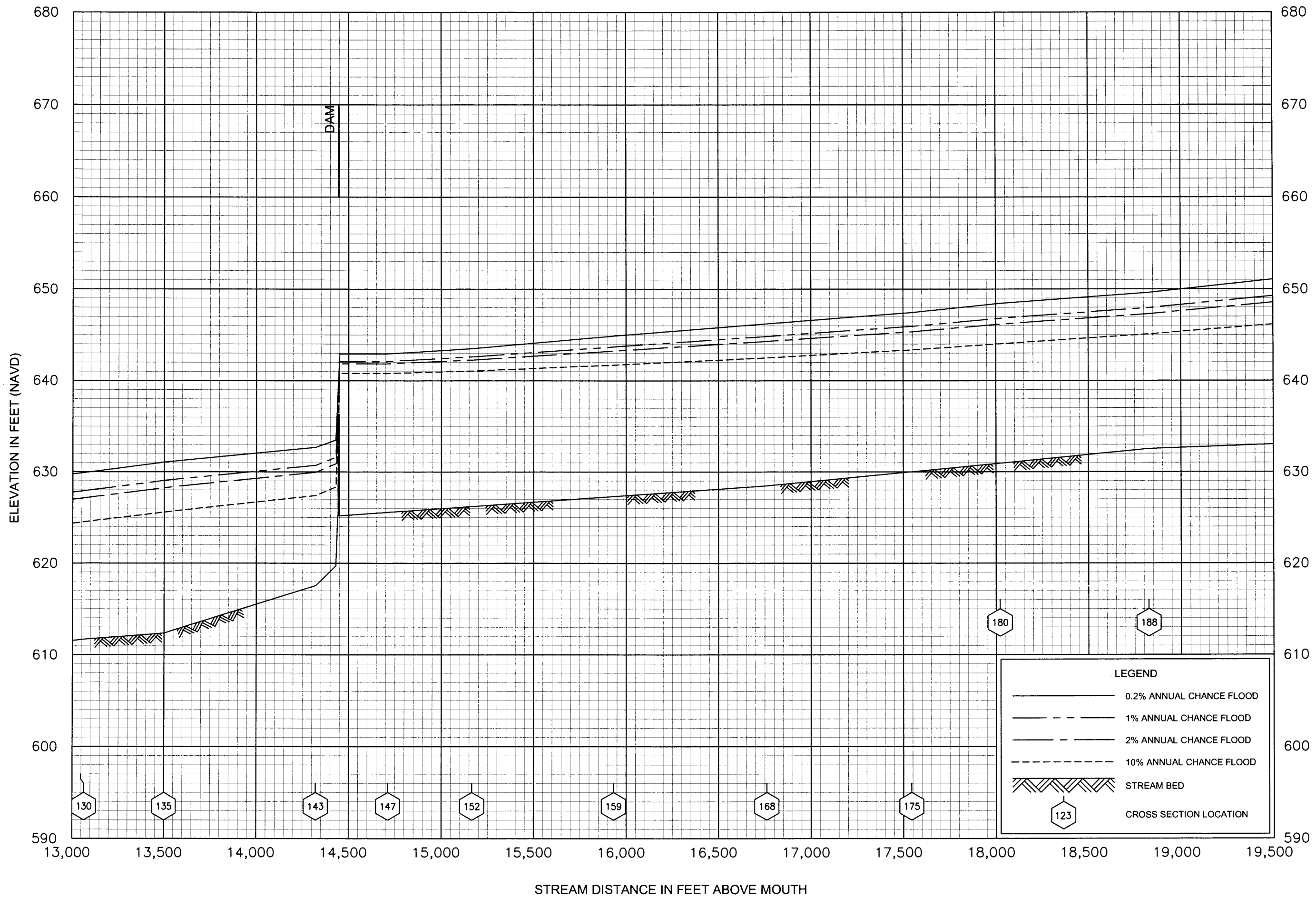
FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



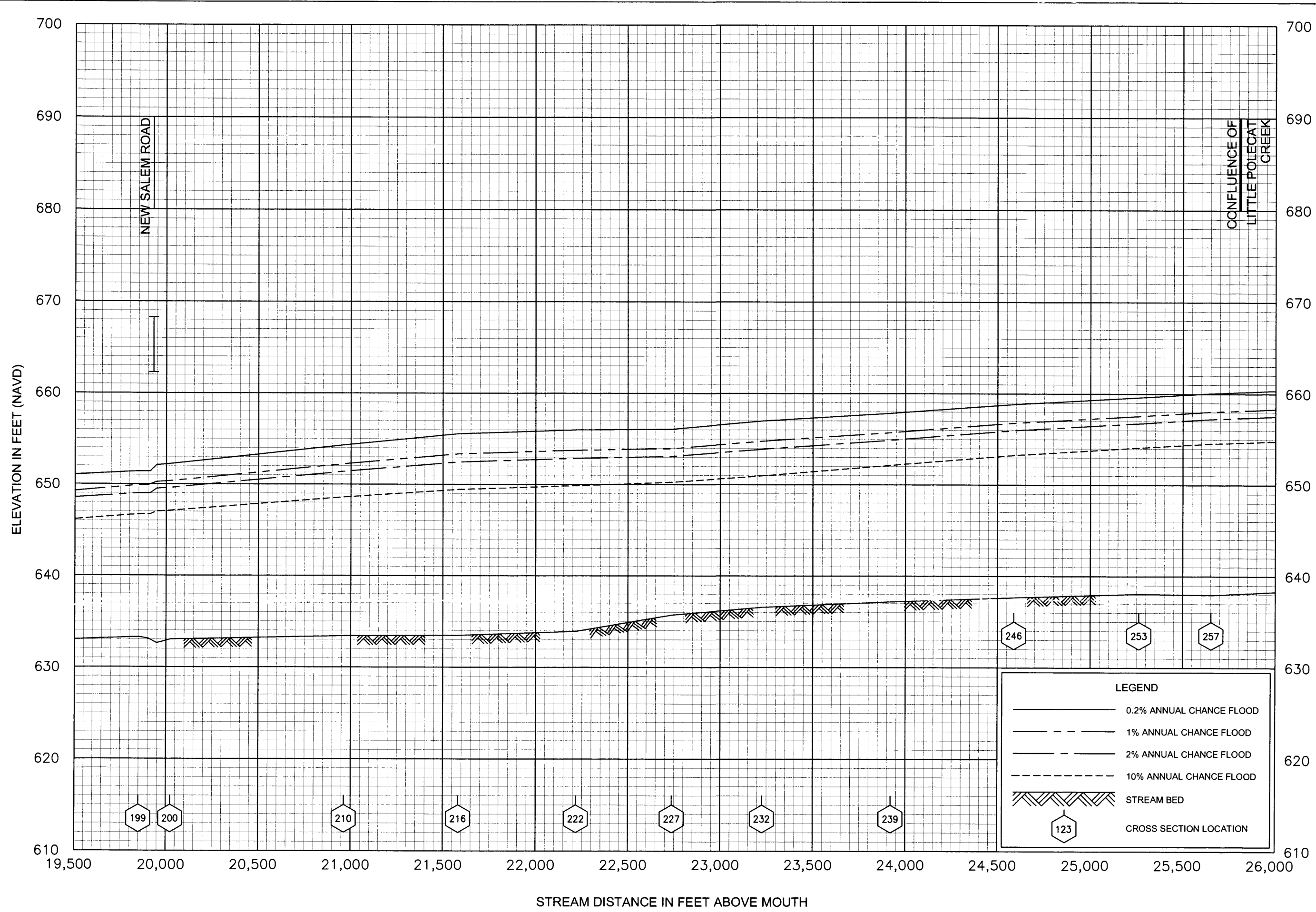
FLOOD PROFILES
POLECAT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



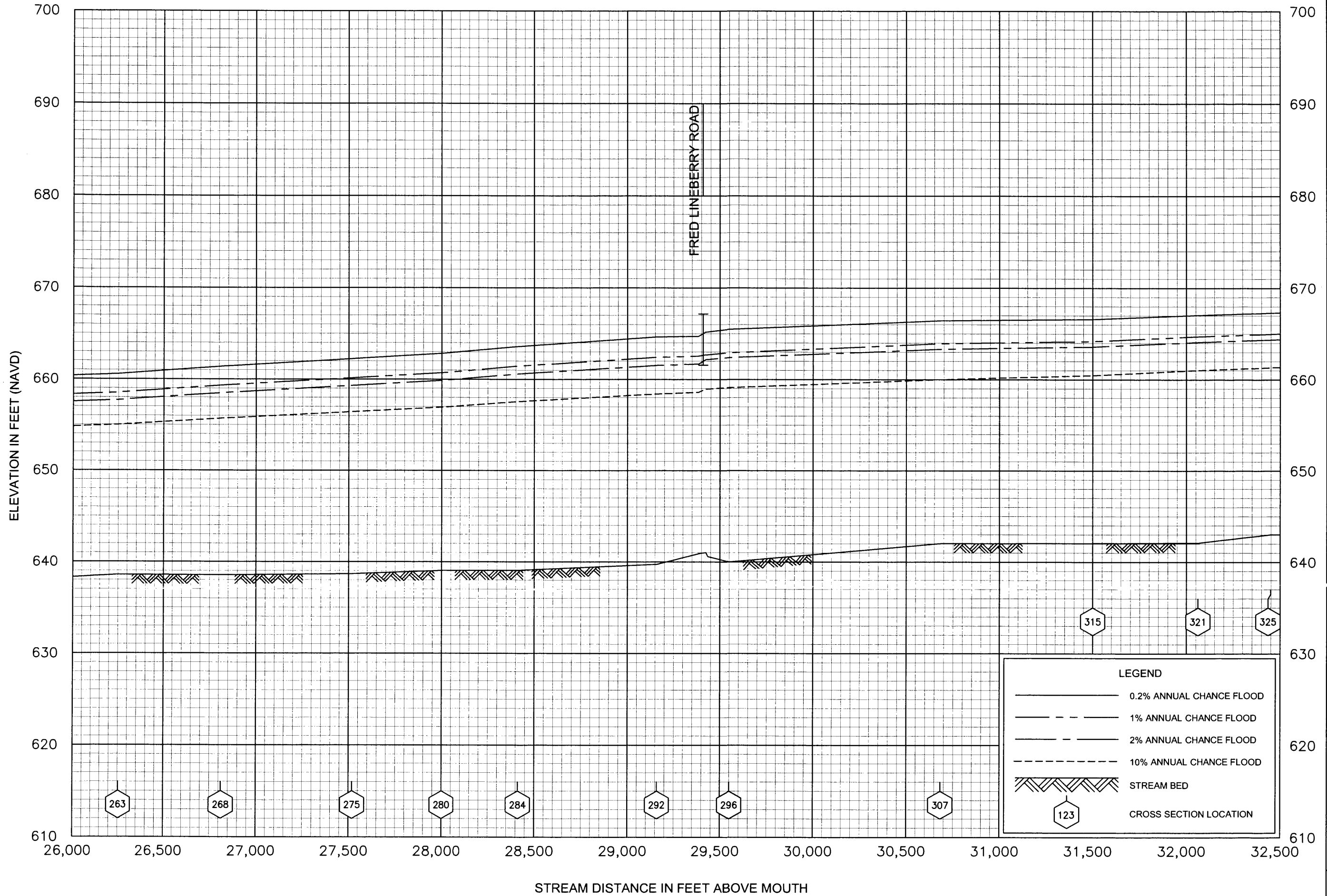
FLOOD PROFILES
POLECAT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

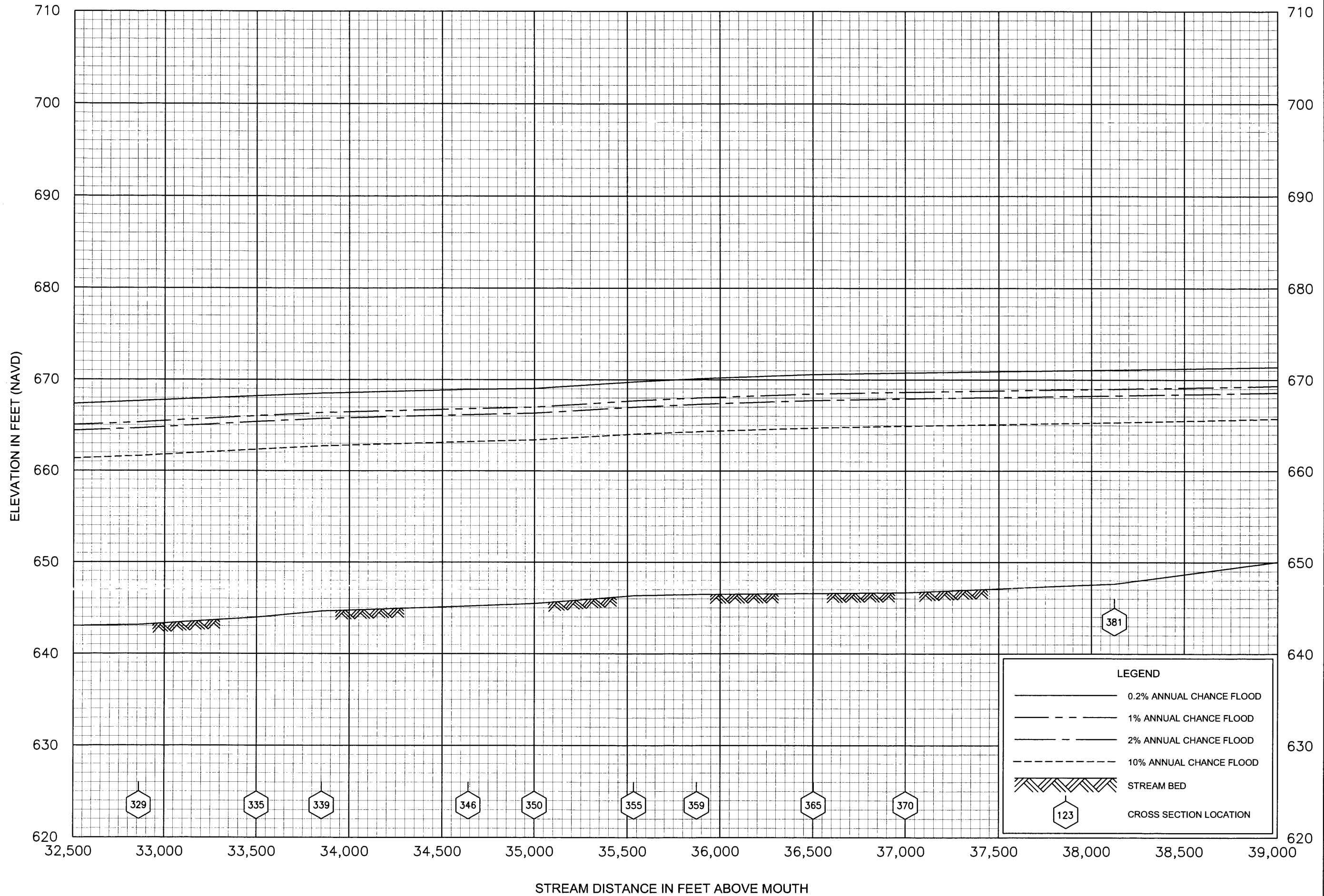


FLOOD PROFILES
POLECAT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

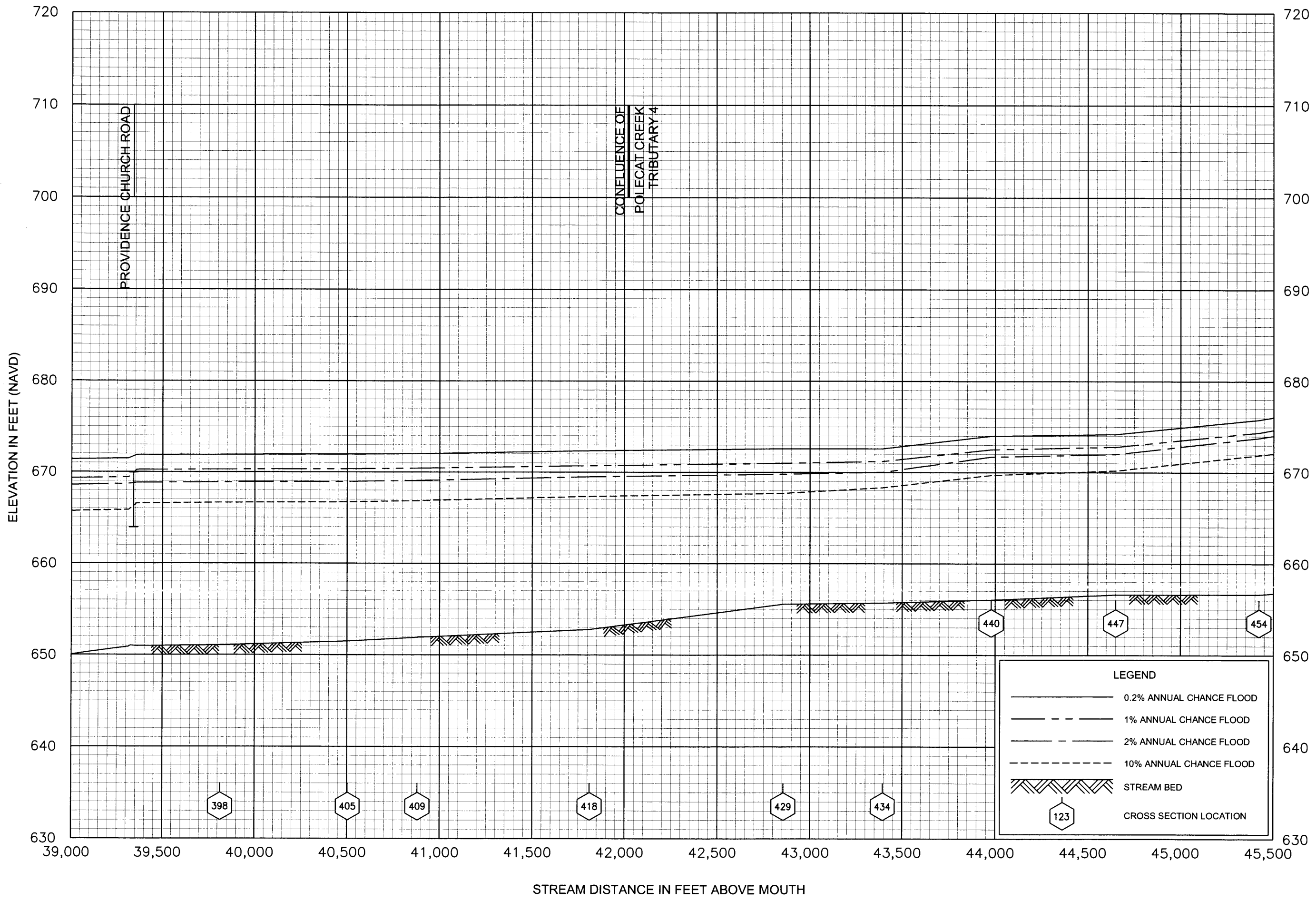


FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
 AND INCORPORATED AREAS



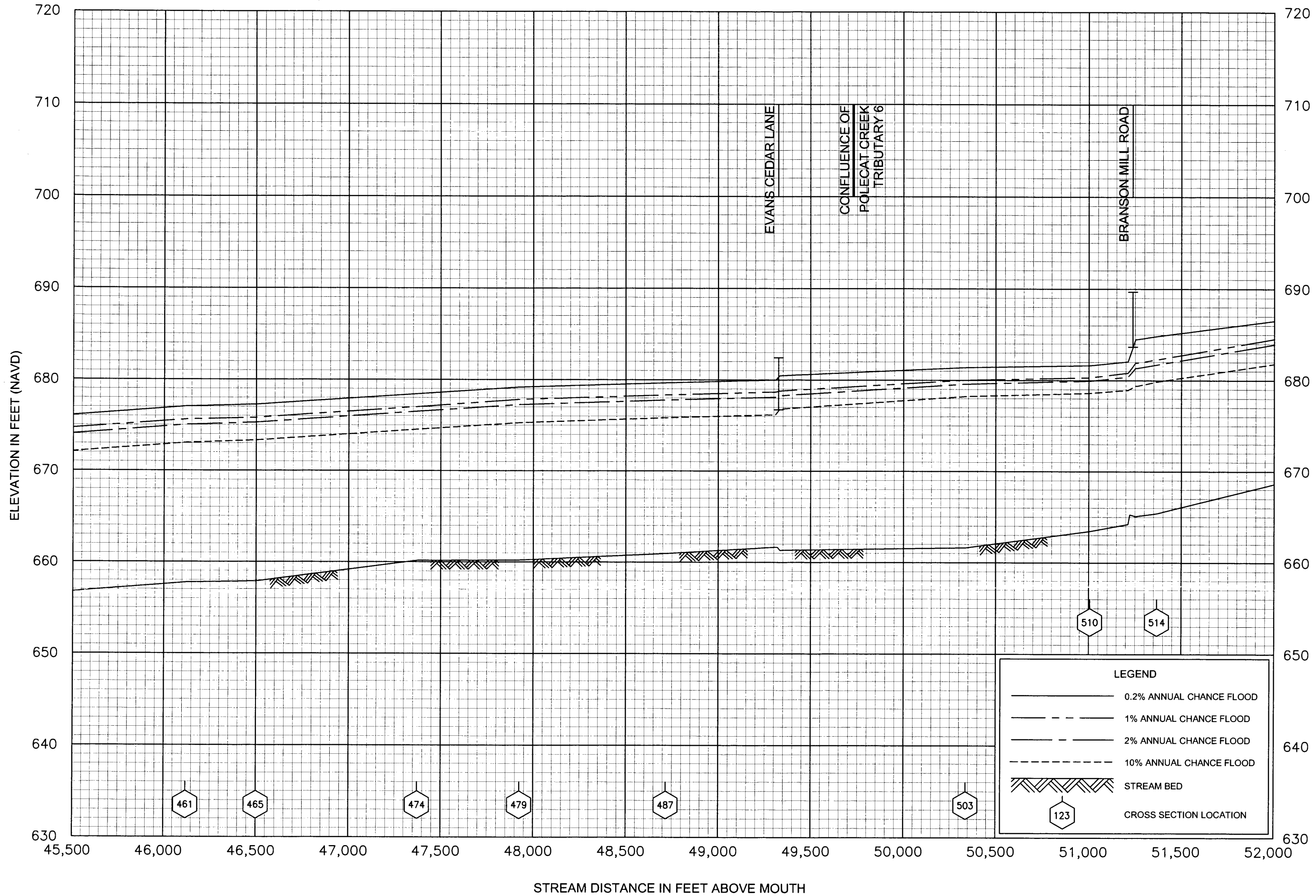
FLOOD PROFILES
POLECAT CREEK

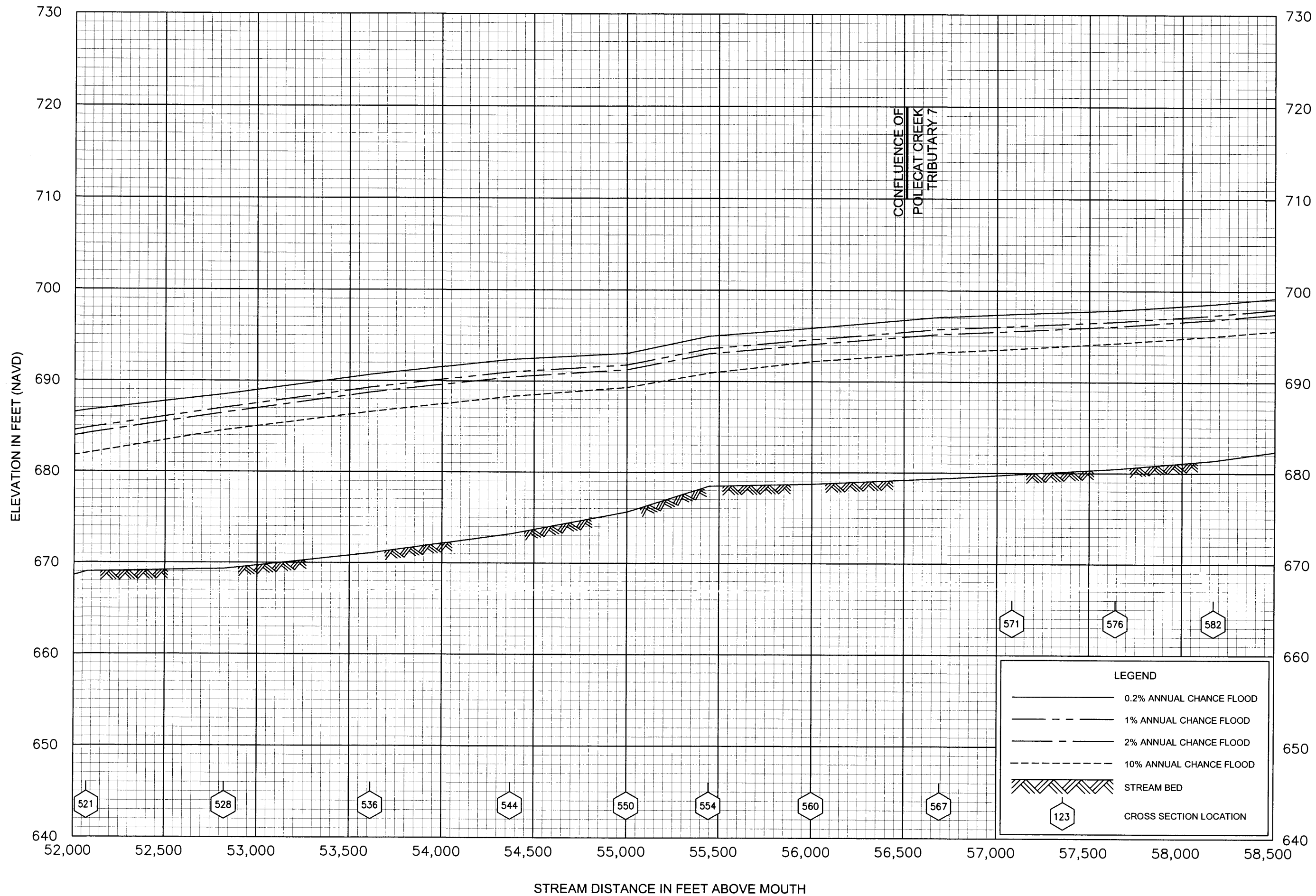
FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



FLOOD PROFILES
POLECAT CREEK

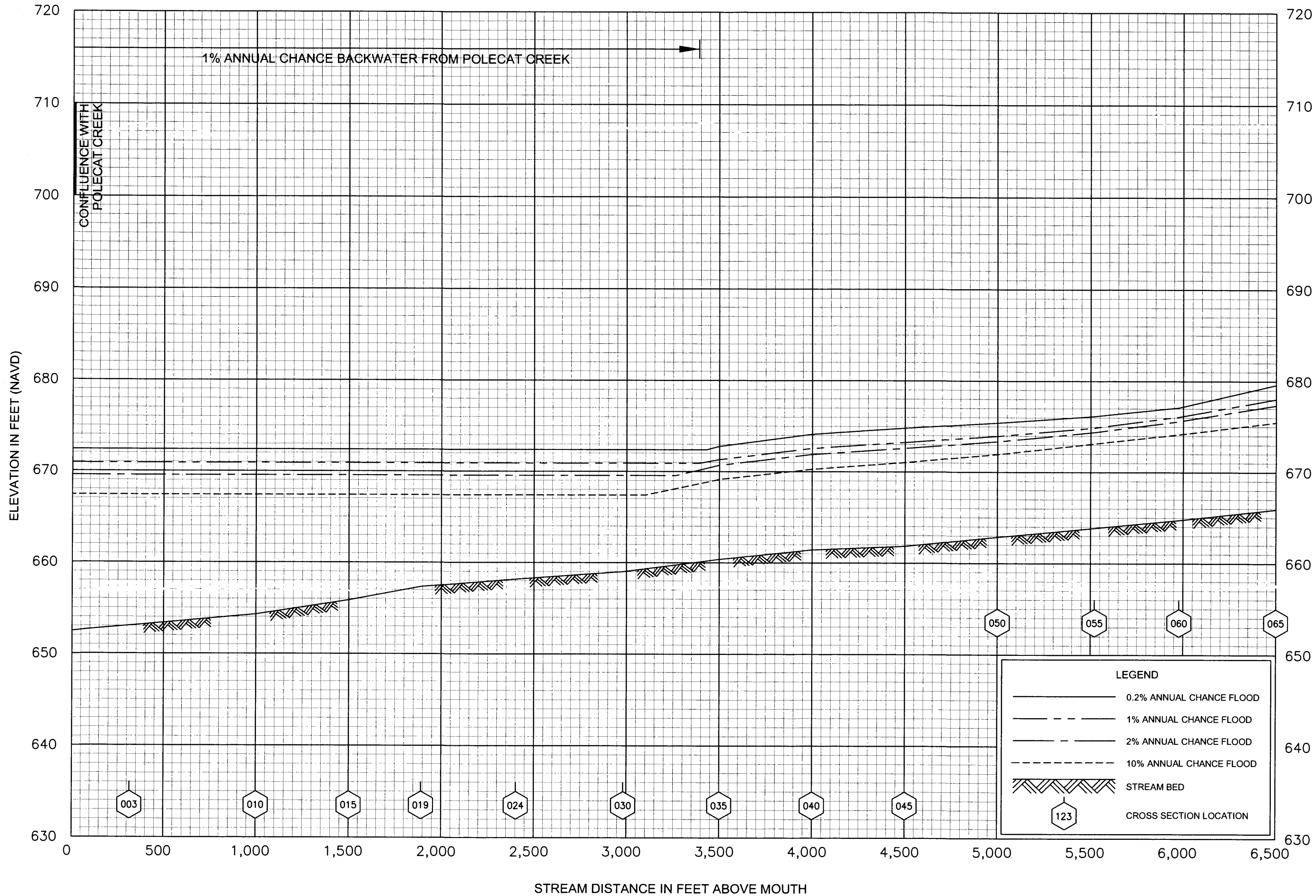
FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS





FLOOD PROFILES
POLECAT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
 AND INCORPORATED AREAS

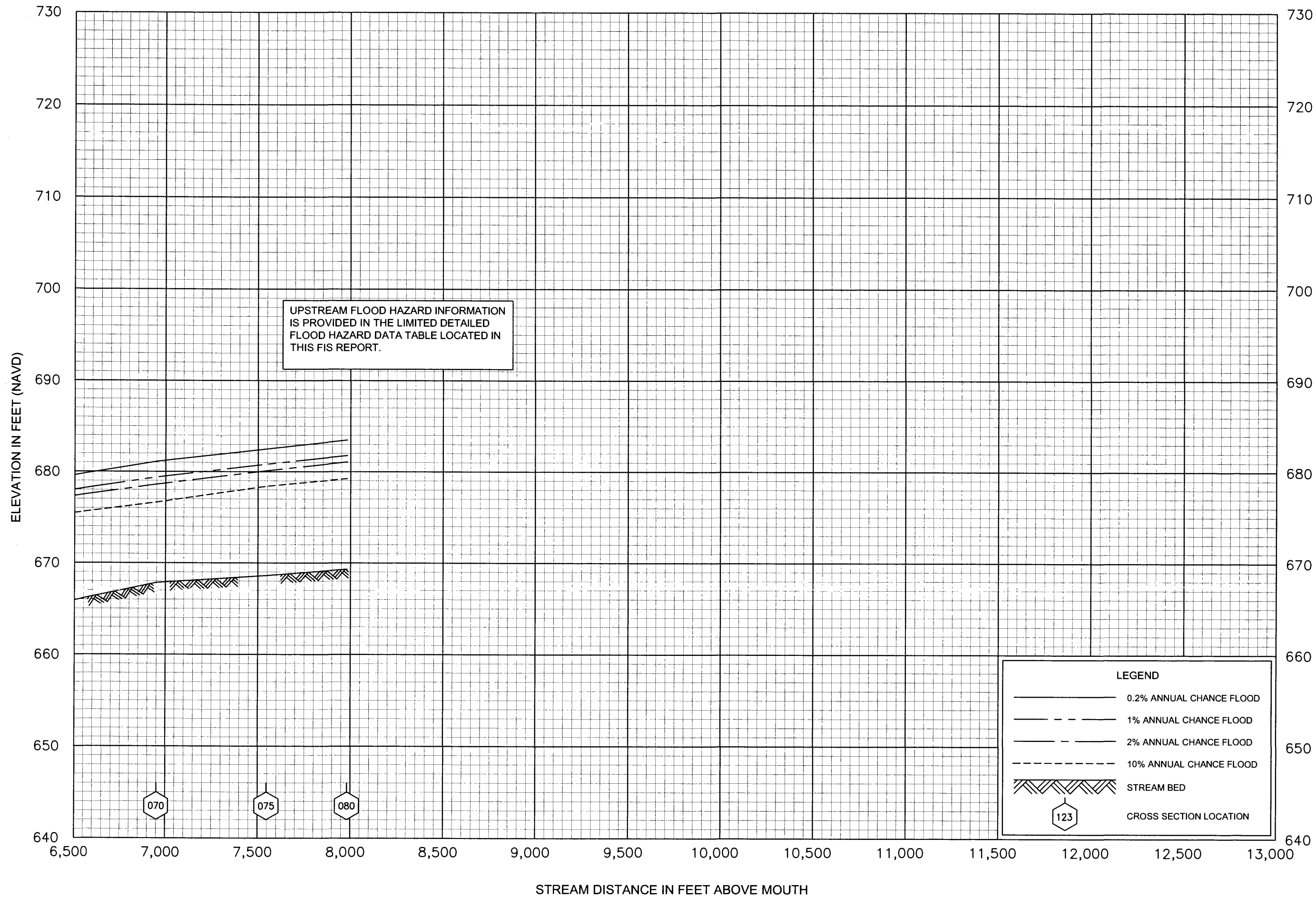


FLOOD PROFILES

POLECAT CREEK TRIBUTARY 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



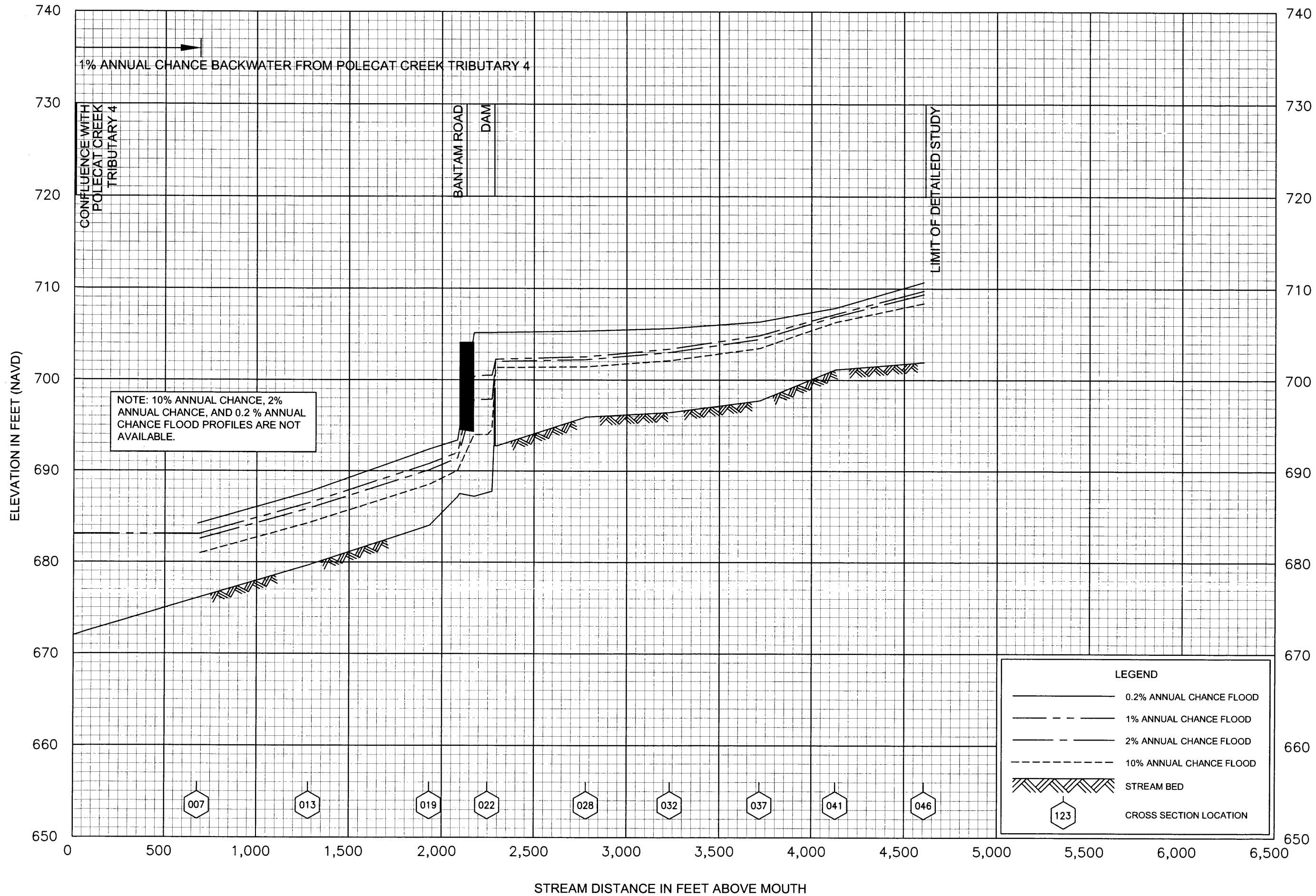
UPSTREAM FLOOD HAZARD INFORMATION IS PROVIDED IN THE LIMITED DETAILED FLOOD HAZARD DATA TABLE LOCATED IN THIS FIS REPORT.

LEGEND

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

FLOOD PROFILES
POLECAT CREEK TRIBUTARY 4

FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



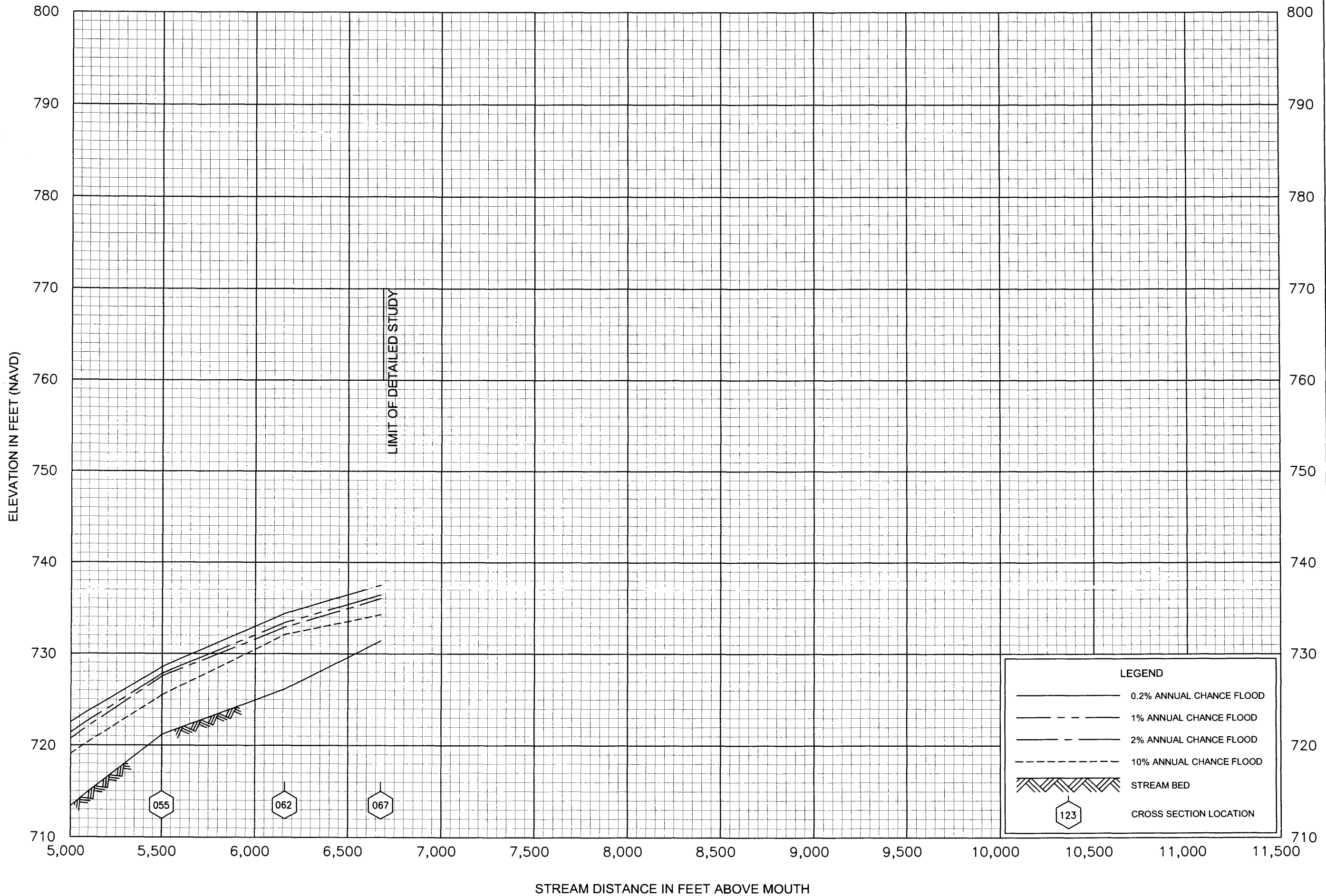
FLOOD PROFILES

POLECAT CREEK TRIBUTARY 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

102P

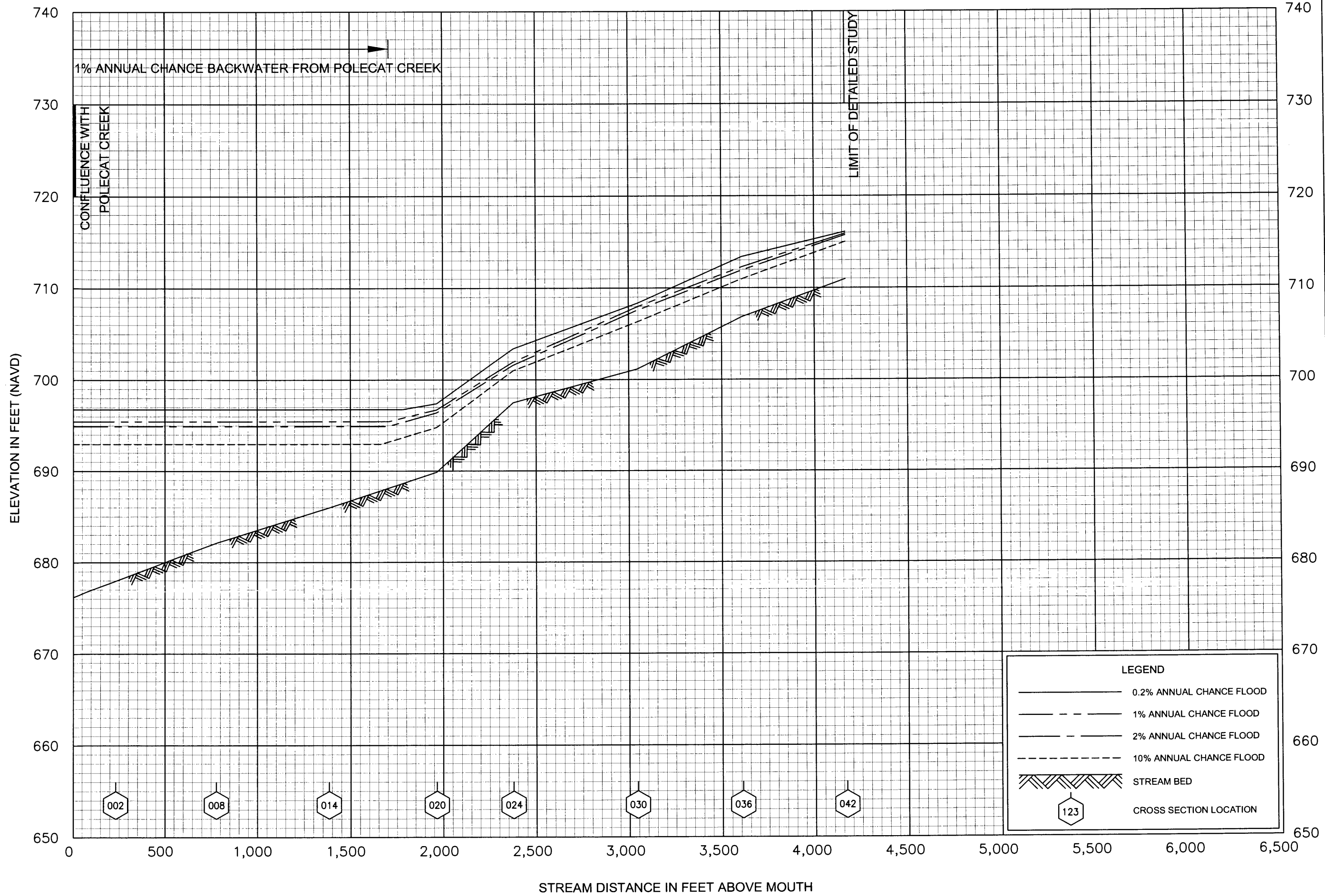


FLOOD PROFILES

POLECAT CREEK TRIBUTARY 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

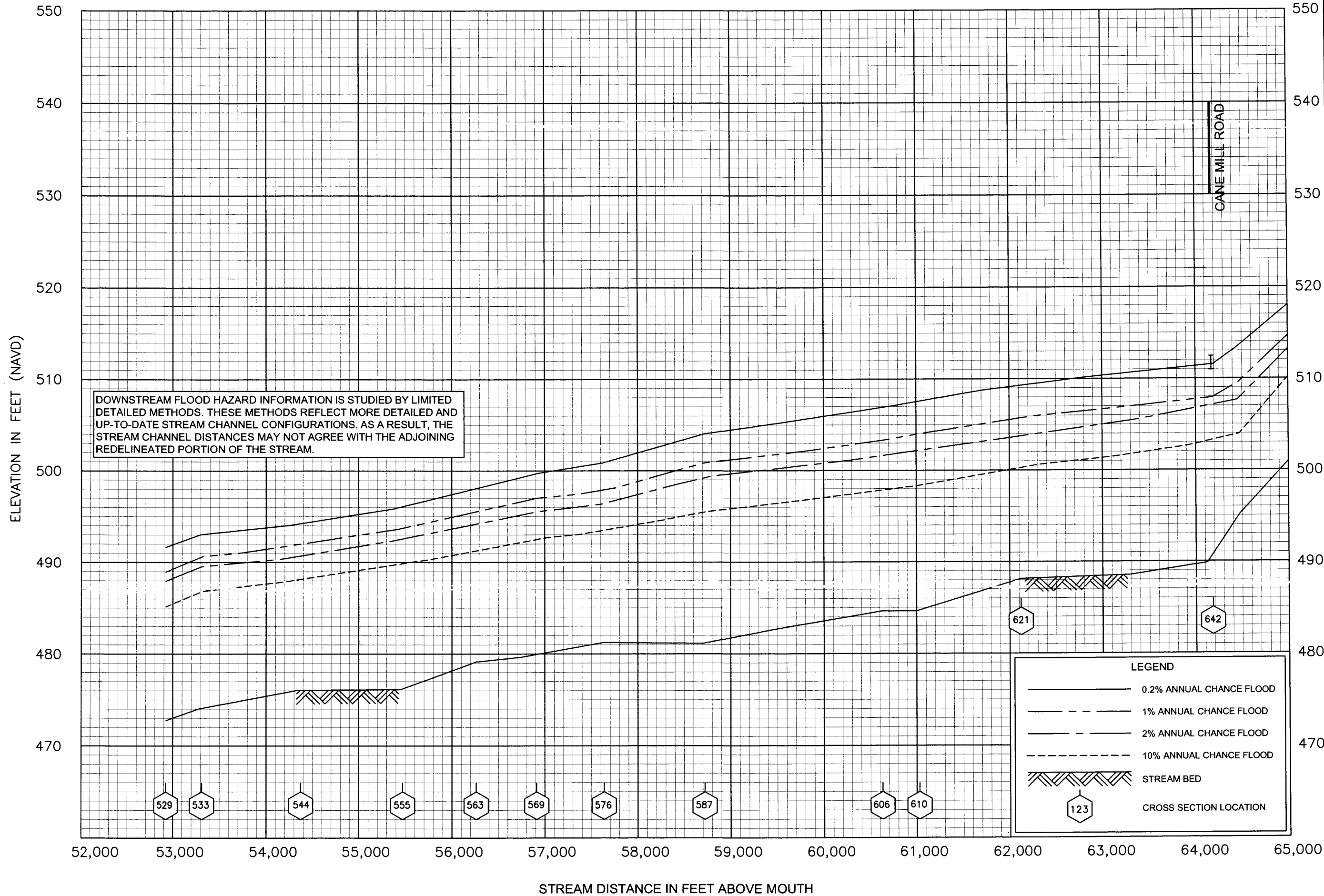


FLOOD PROFILES

POLECAT CREEK TRIBUTARY 7

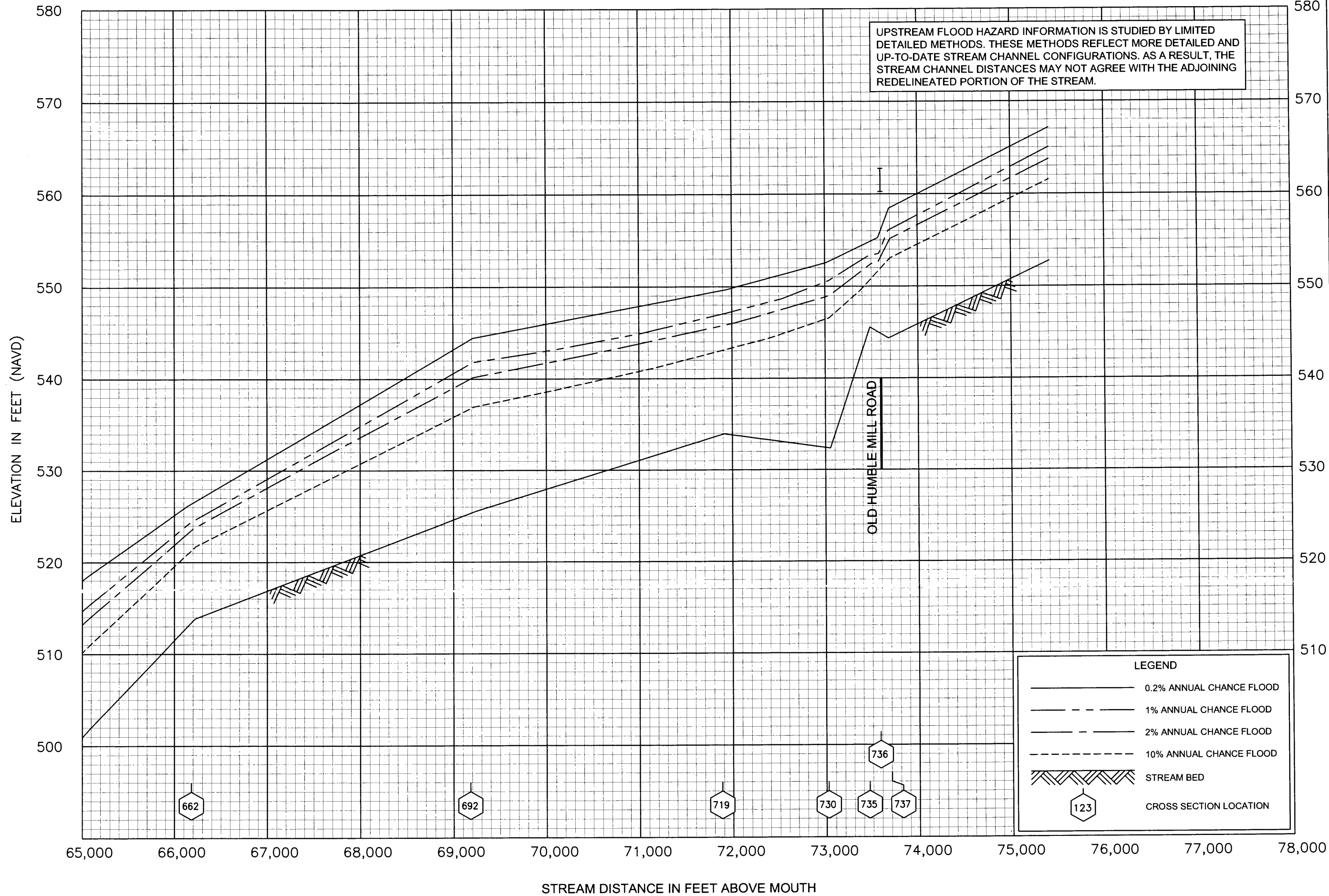
FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



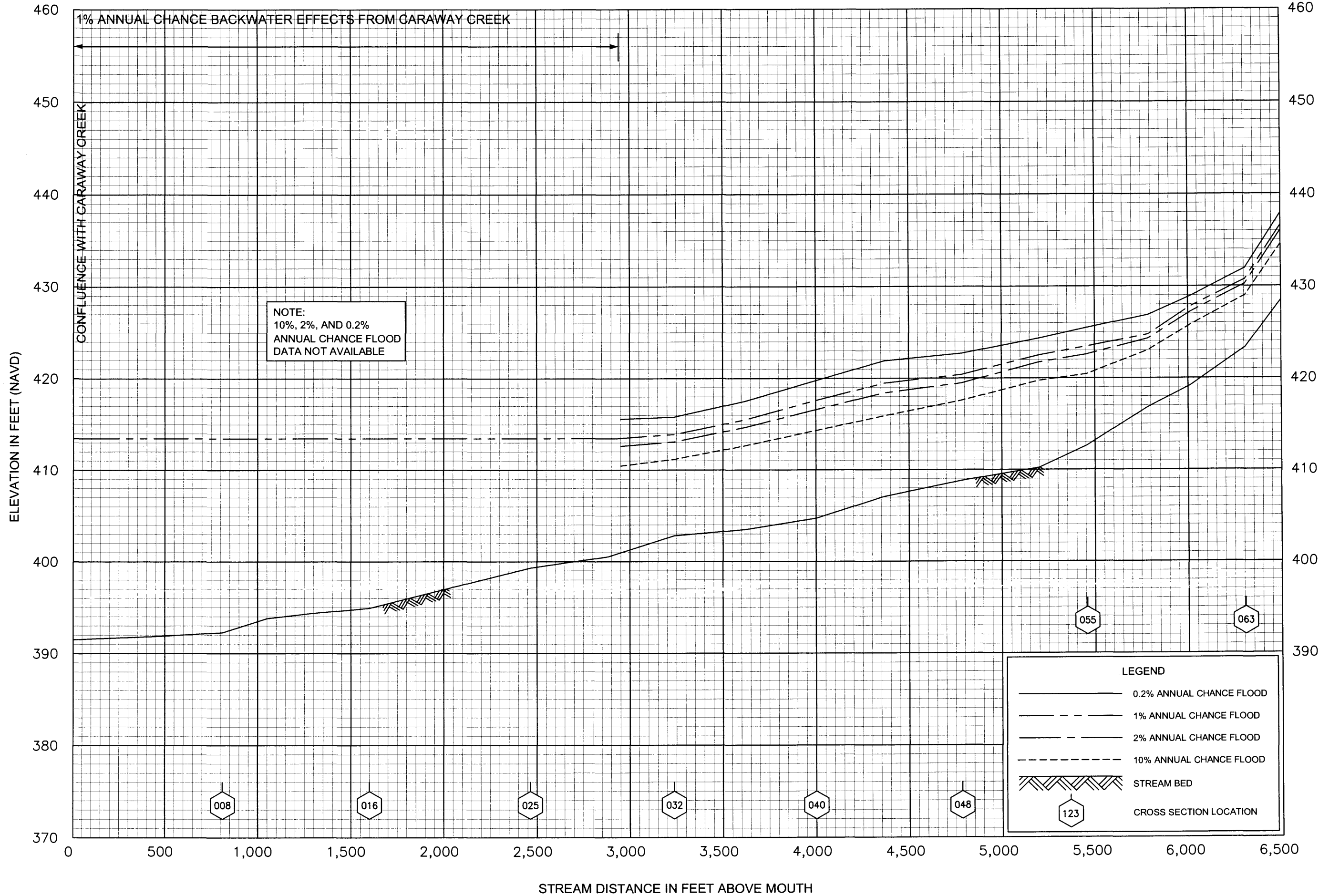
FLOOD PROFILES
 RICHLAND CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
 RANDOLPH COUNTY, NC
 AND INCORPORATED AREAS



FLOOD PROFILES
 RICHLAND CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
 RANDOLPH COUNTY, NC
 AND INCORPORATED AREAS

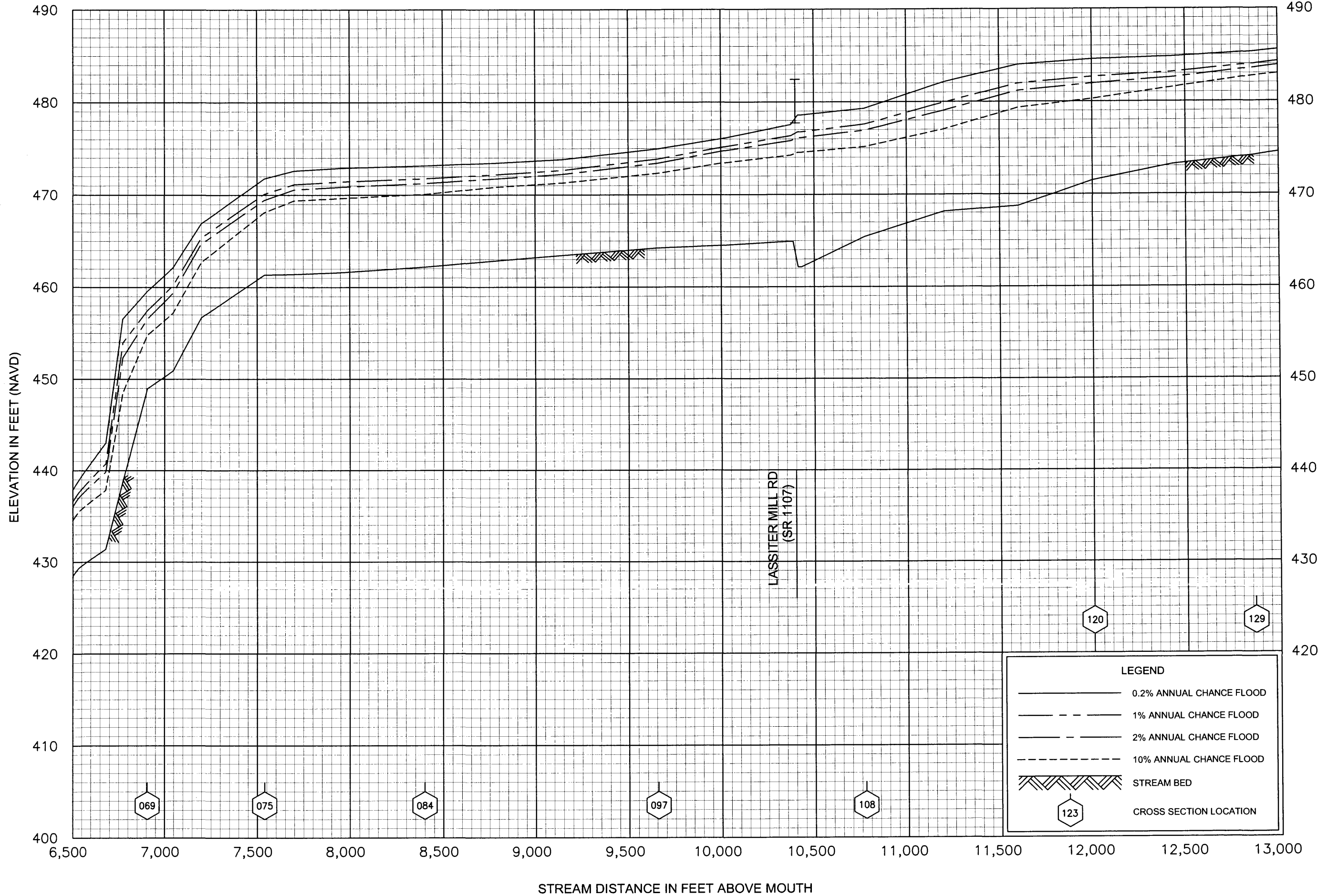


FLOOD PROFILES

TAYLORS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

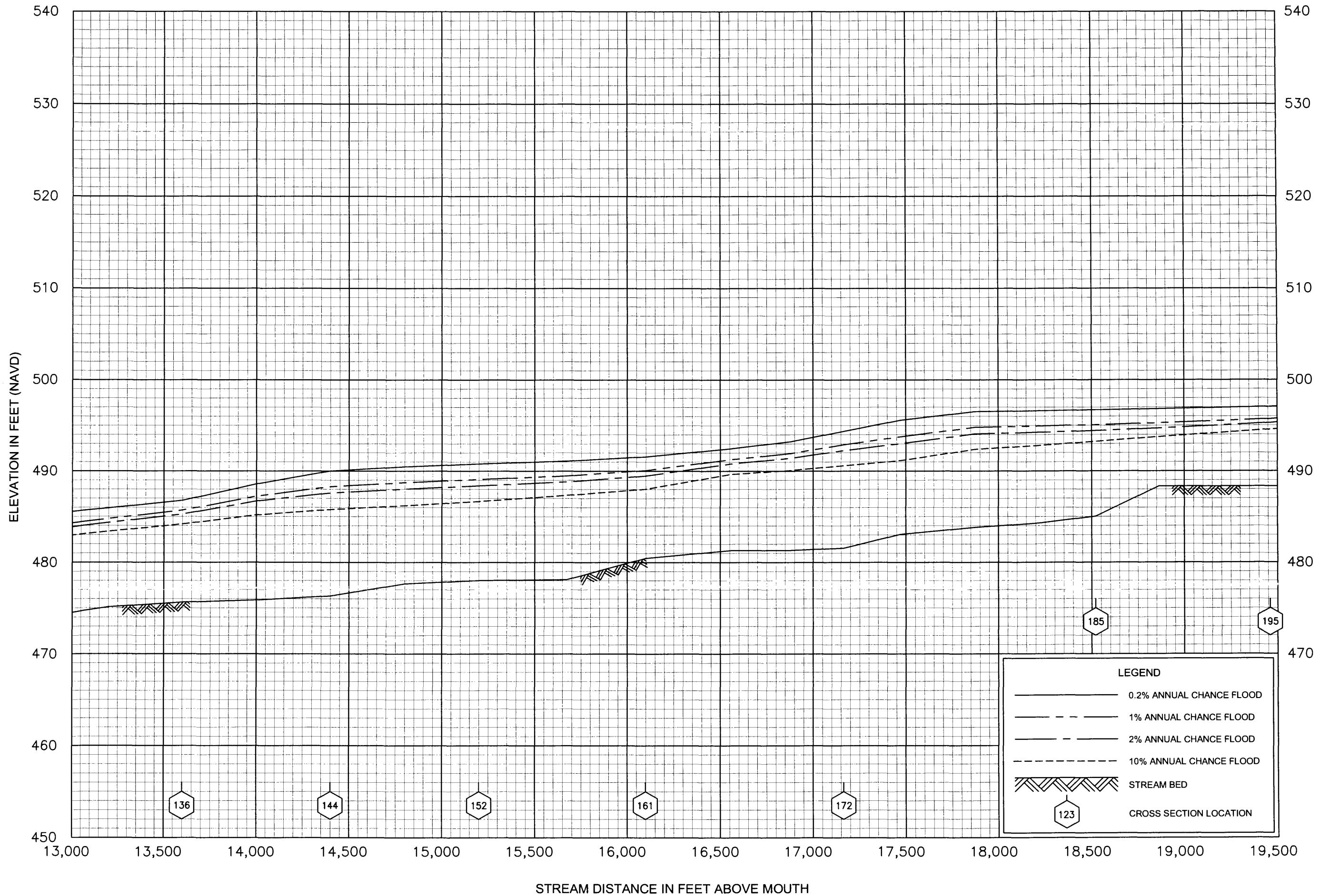


FLOOD PROFILES

TAYLORS CREEK

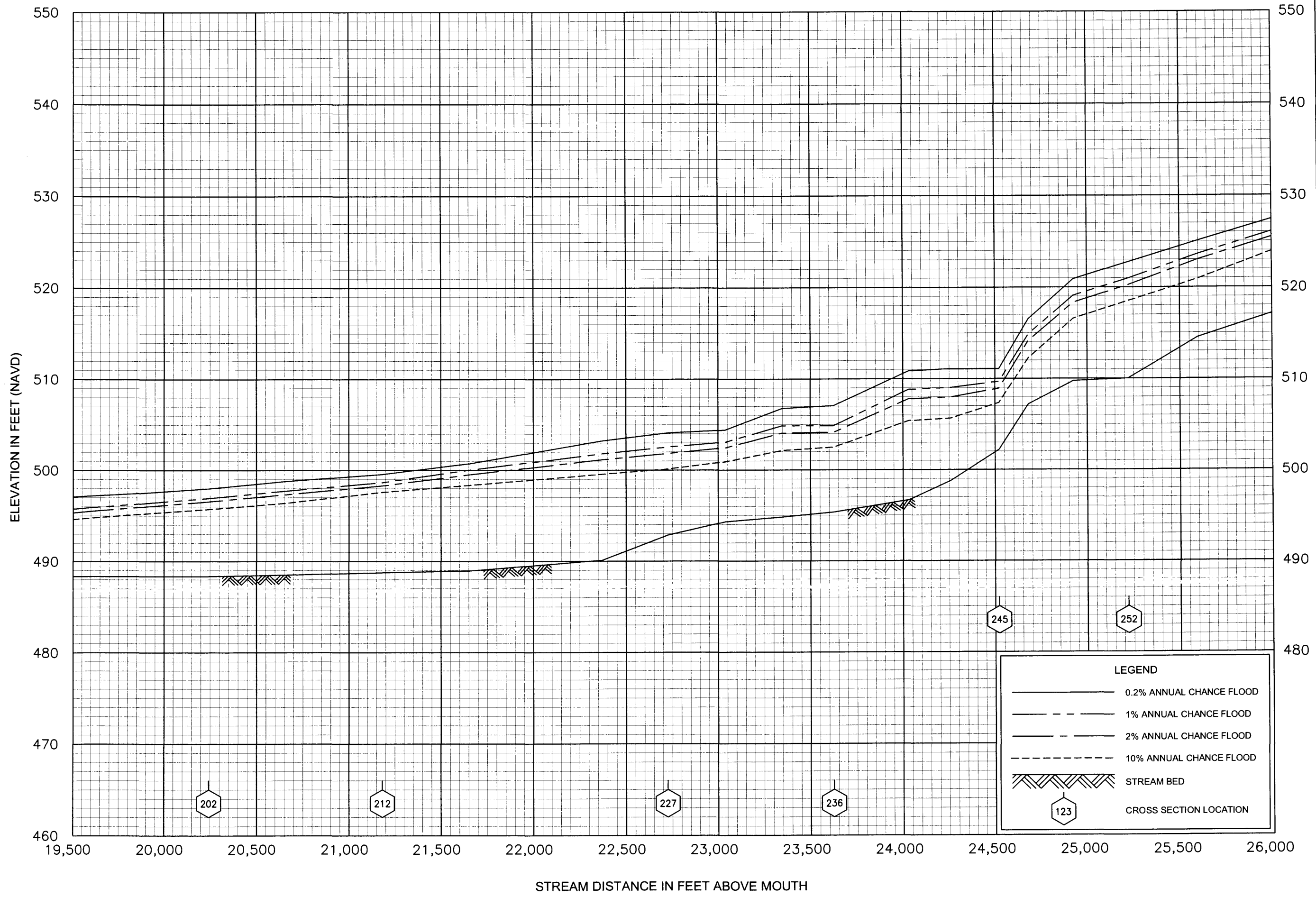
FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS









FLOOD PROFILES
TAYLORS CREEK

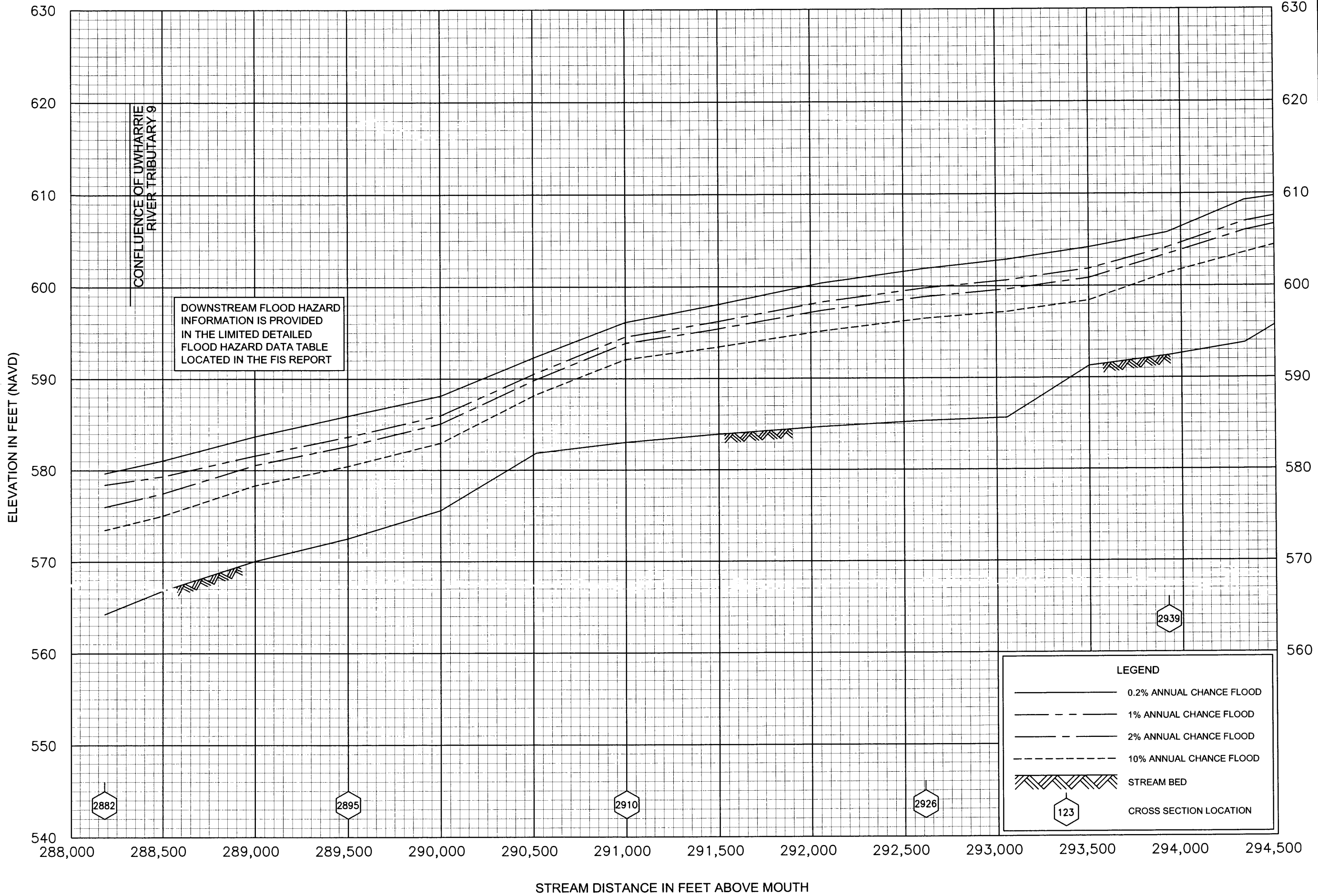
FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



FLOOD PROFILES
TAYLORS CREEK

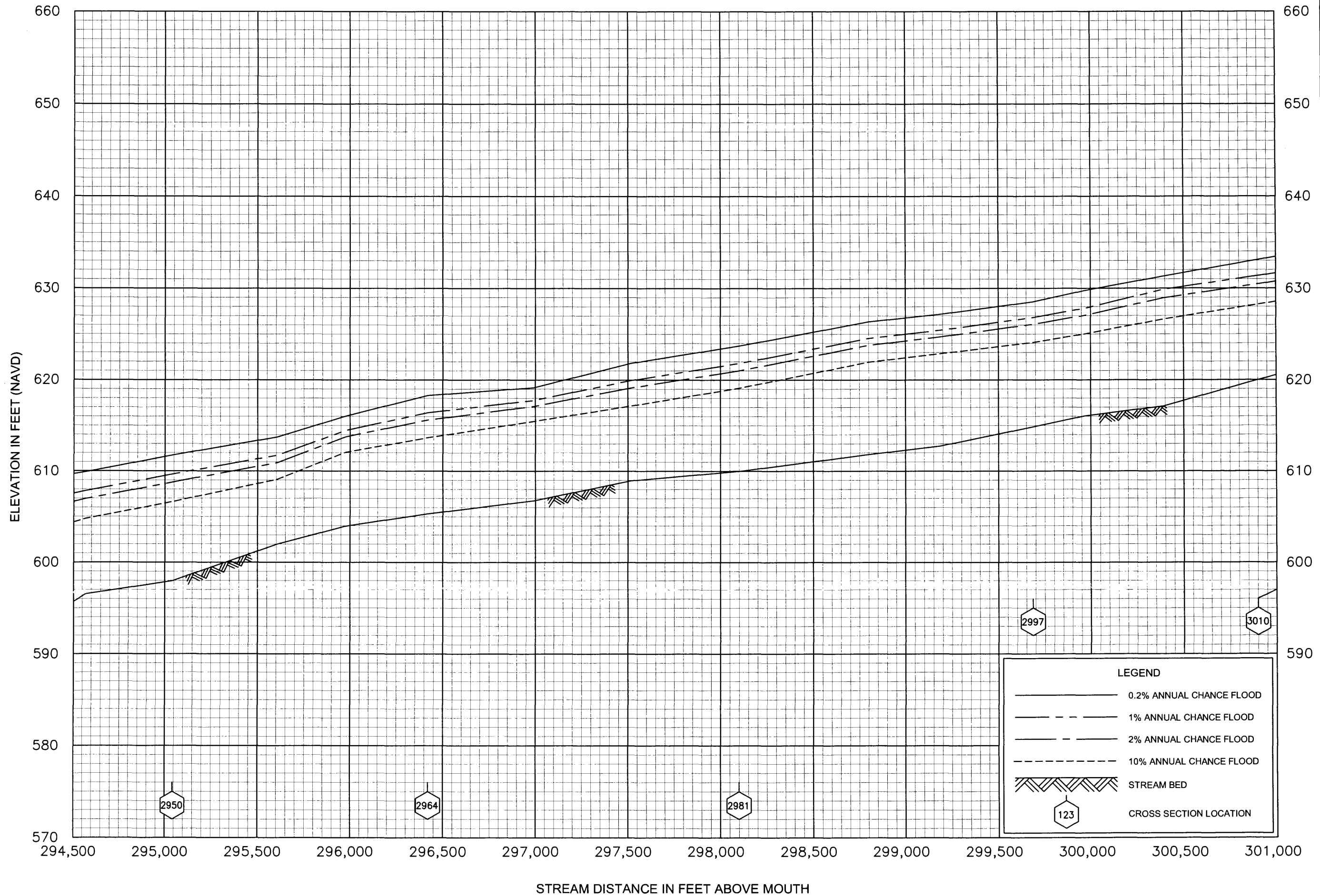
FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

LEGEND	
	0.2% ANNUAL CHANCE FLOOD
	1% ANNUAL CHANCE FLOOD
	2% ANNUAL CHANCE FLOOD
	10% ANNUAL CHANCE FLOOD
	STREAM BED
	CROSS SECTION LOCATION



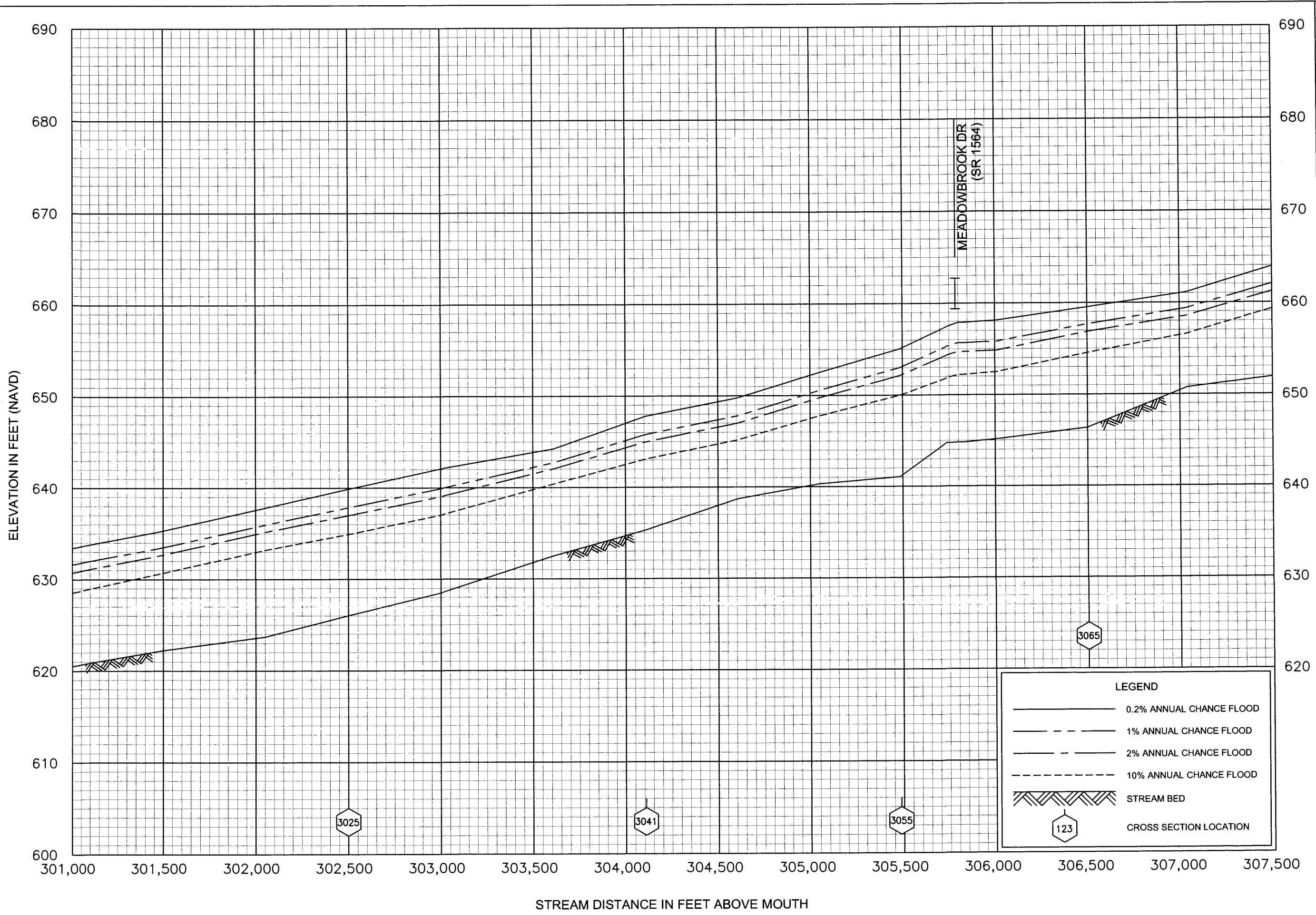
FLOOD PROFILES
UWHARRIE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



FLOOD PROFILES
UWHARRIE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

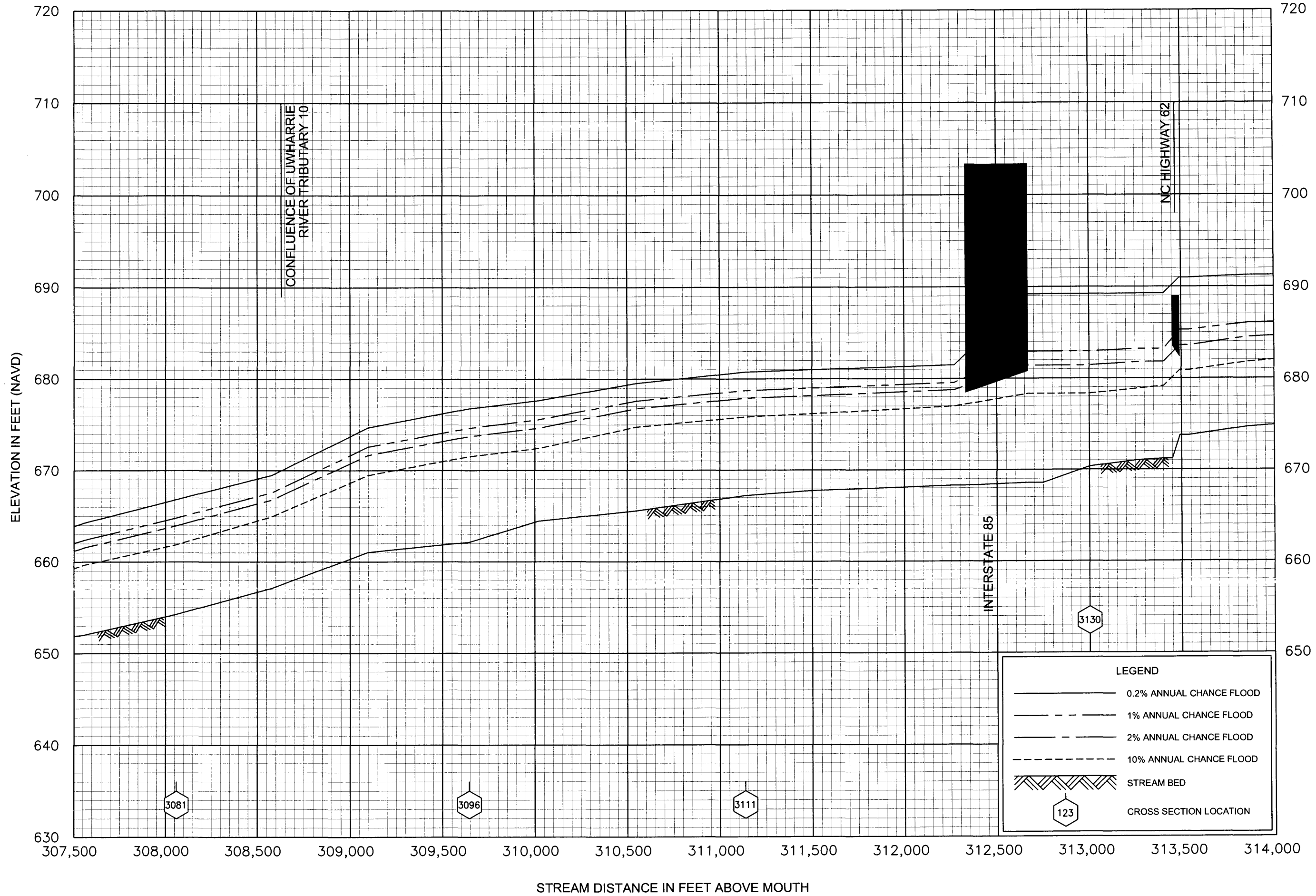


FLOOD PROFILES

UWHARRIE RIVER

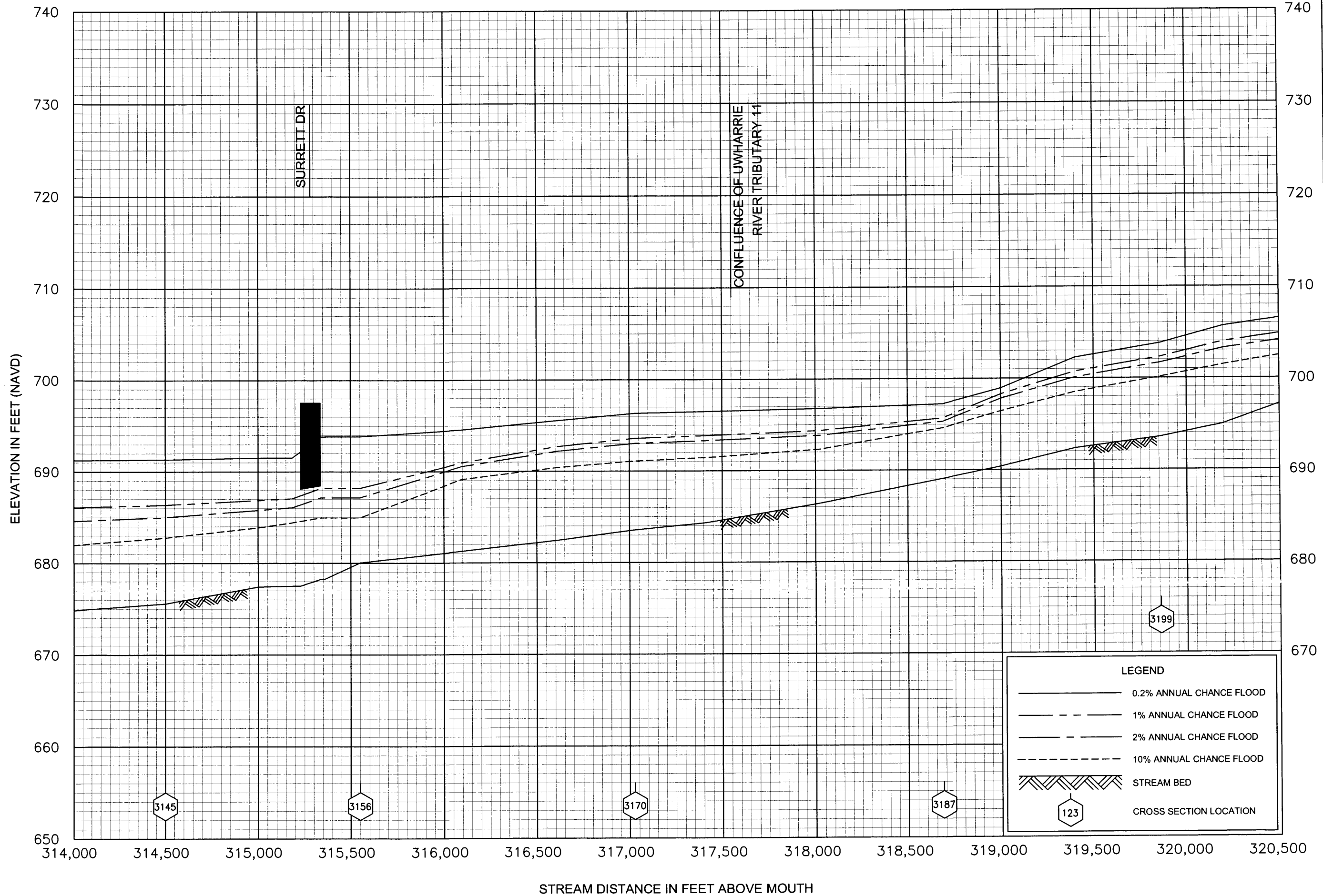
FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



FLOOD PROFILES
UWHARRIE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



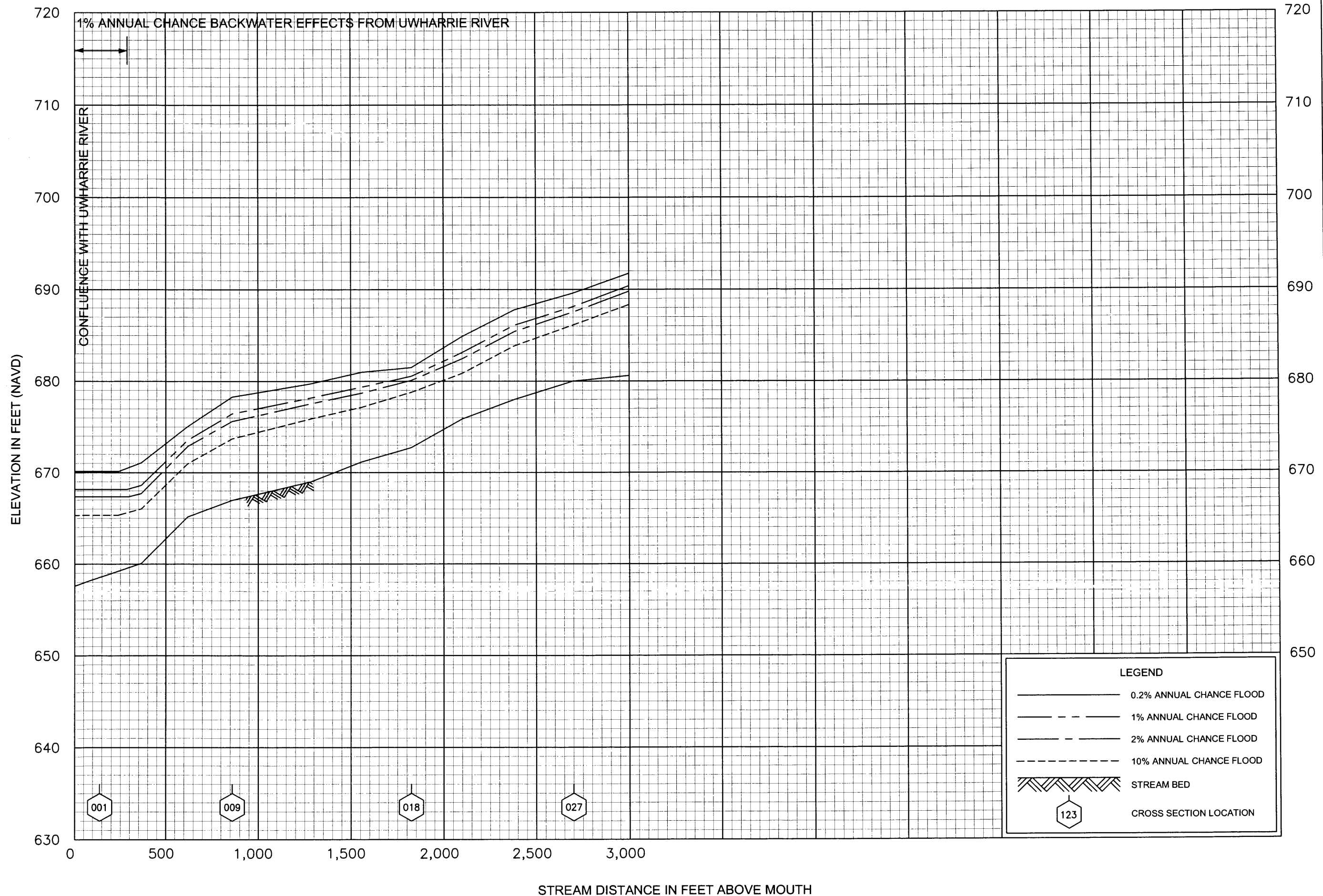
FLOOD PROFILES

UWHARRIE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

117P

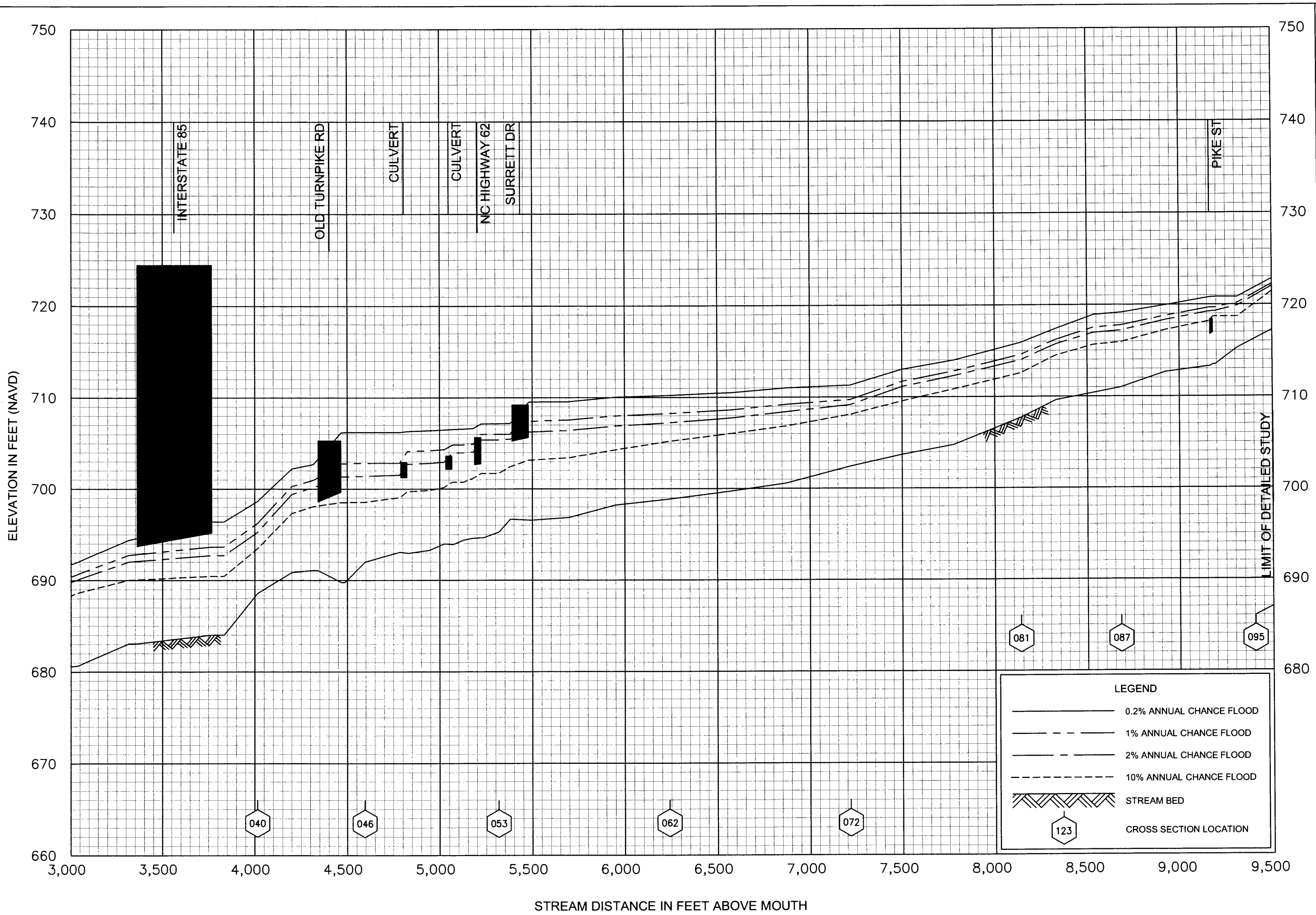


FLOOD PROFILES

UWHARRIE RIVER TRIBUTARY 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



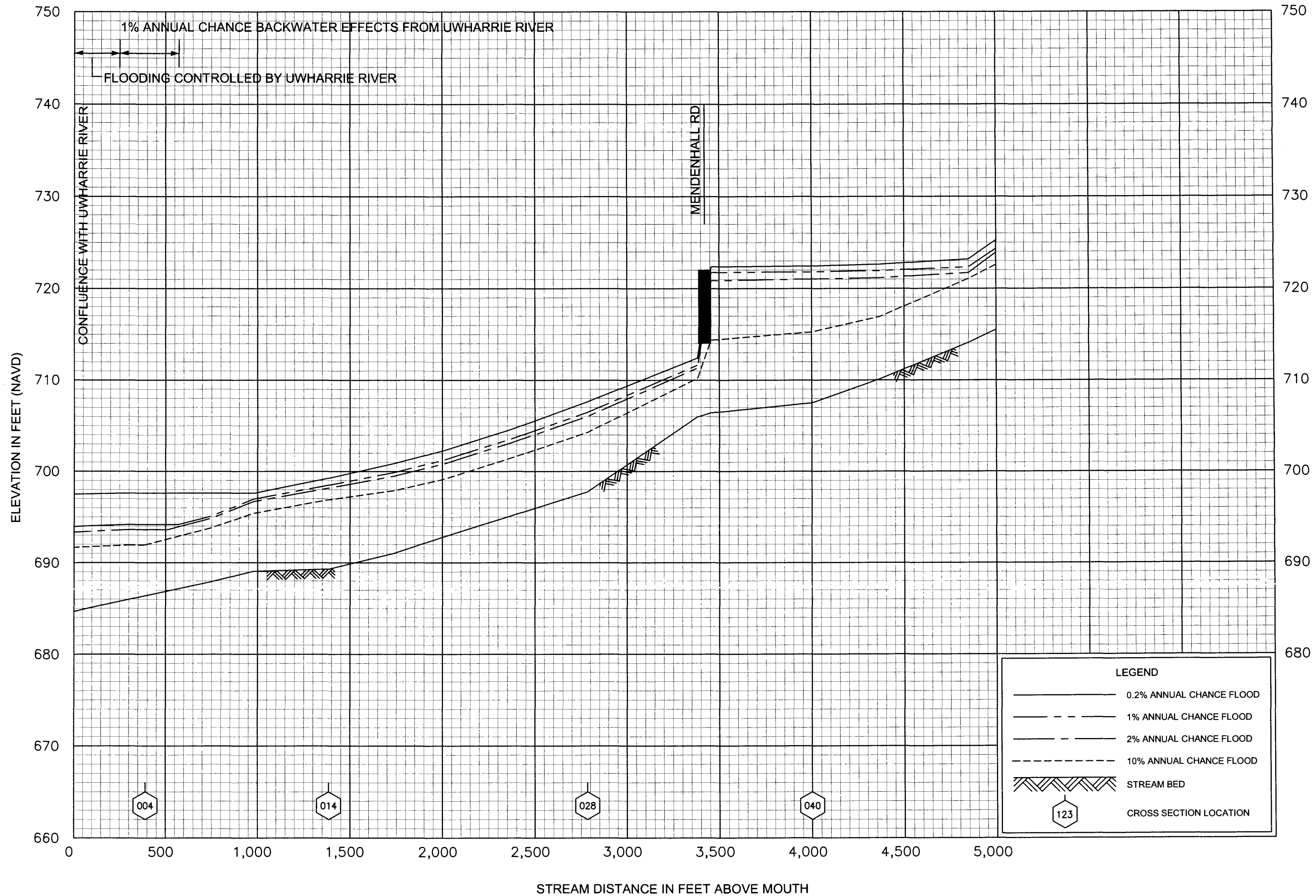
FLOOD PROFILES

UWHARRIE RIVER TRIBUTARY 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

120P

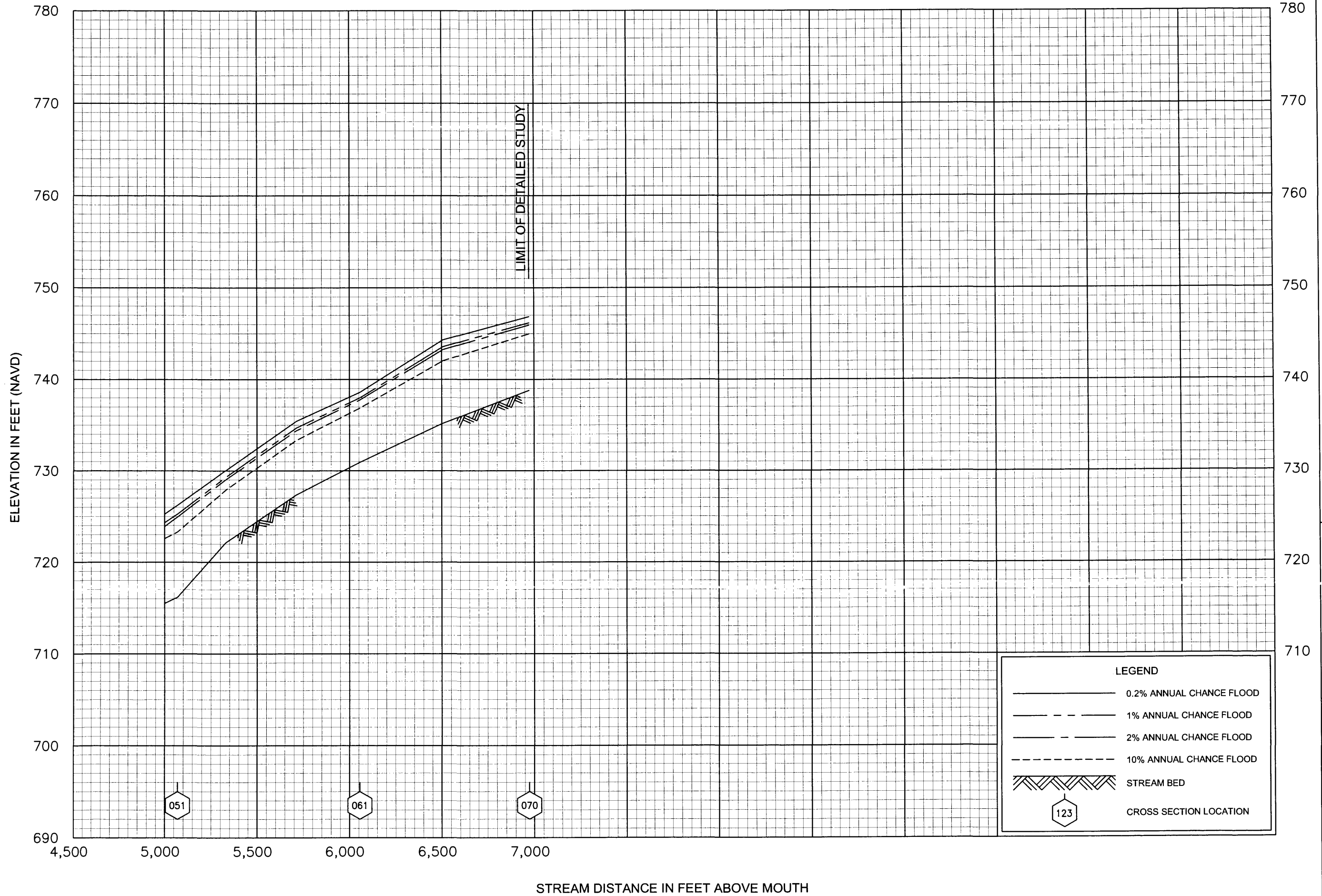


FLOOD PROFILES

UWHARRIE RIVER TRIBUTARY 11

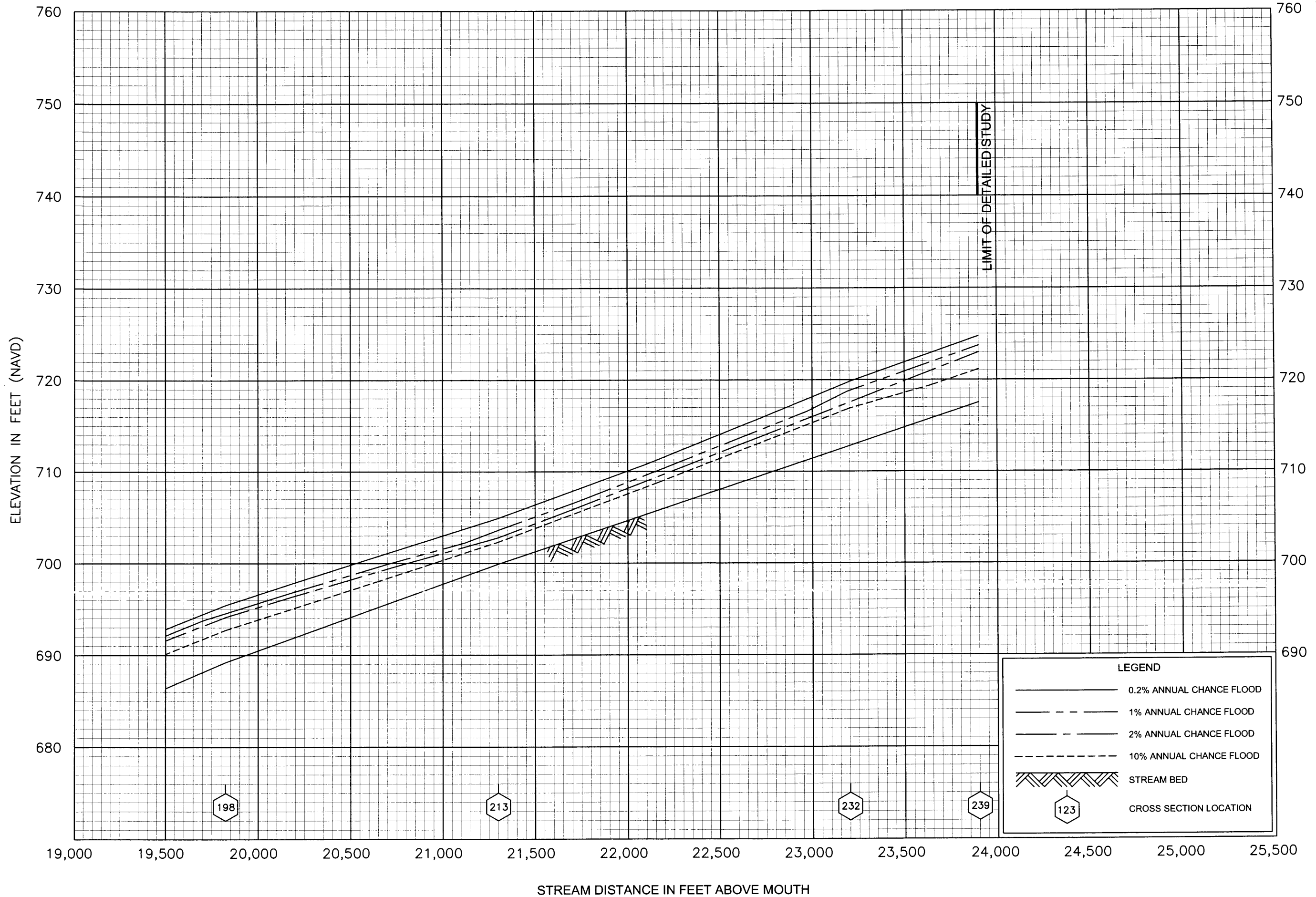
FEDERAL EMERGENCY MANAGEMENT AGENCY

**RANDOLPH COUNTY, NC
AND INCORPORATED AREAS**



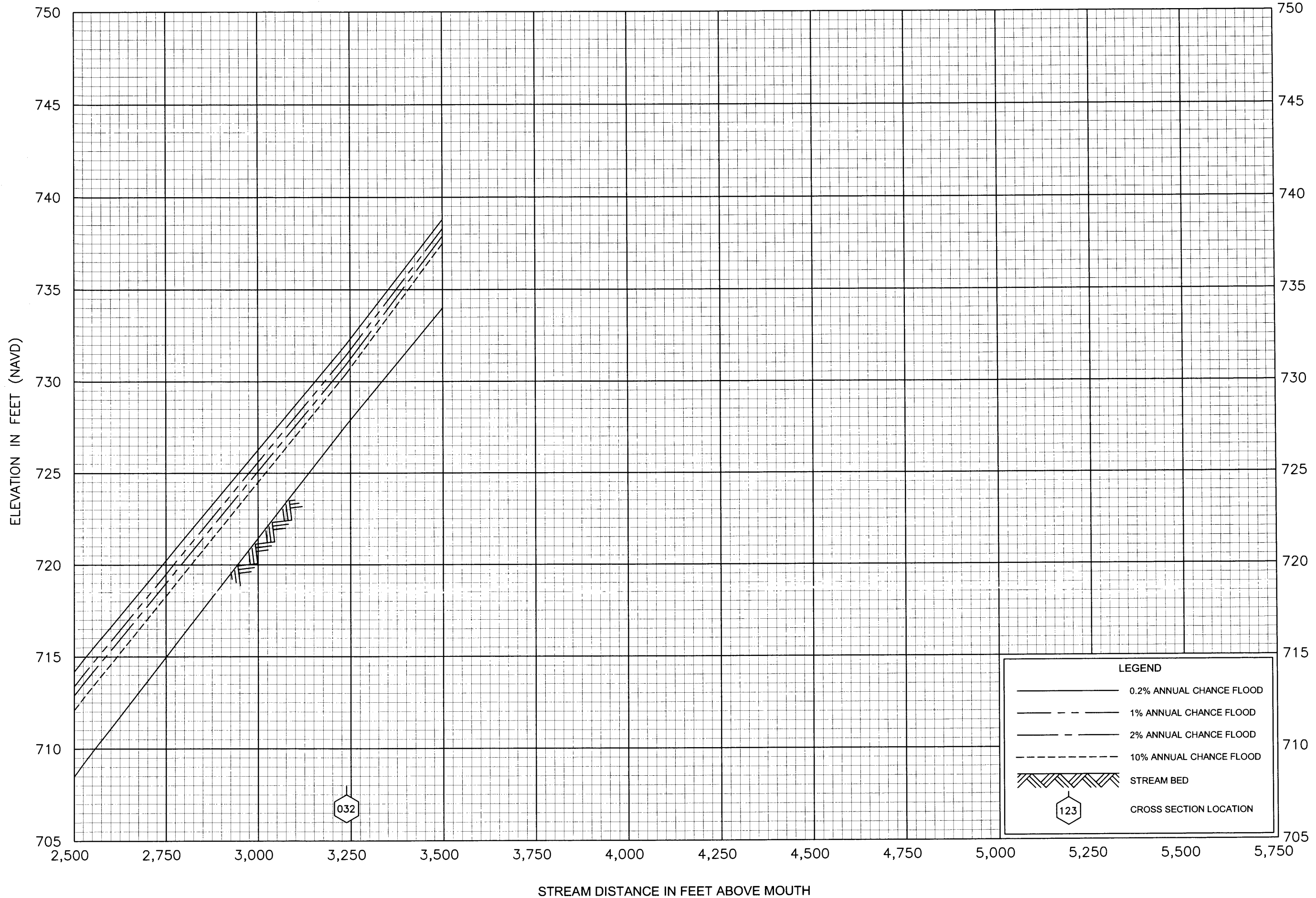
FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



FLOOD PROFILES
VESTAL CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

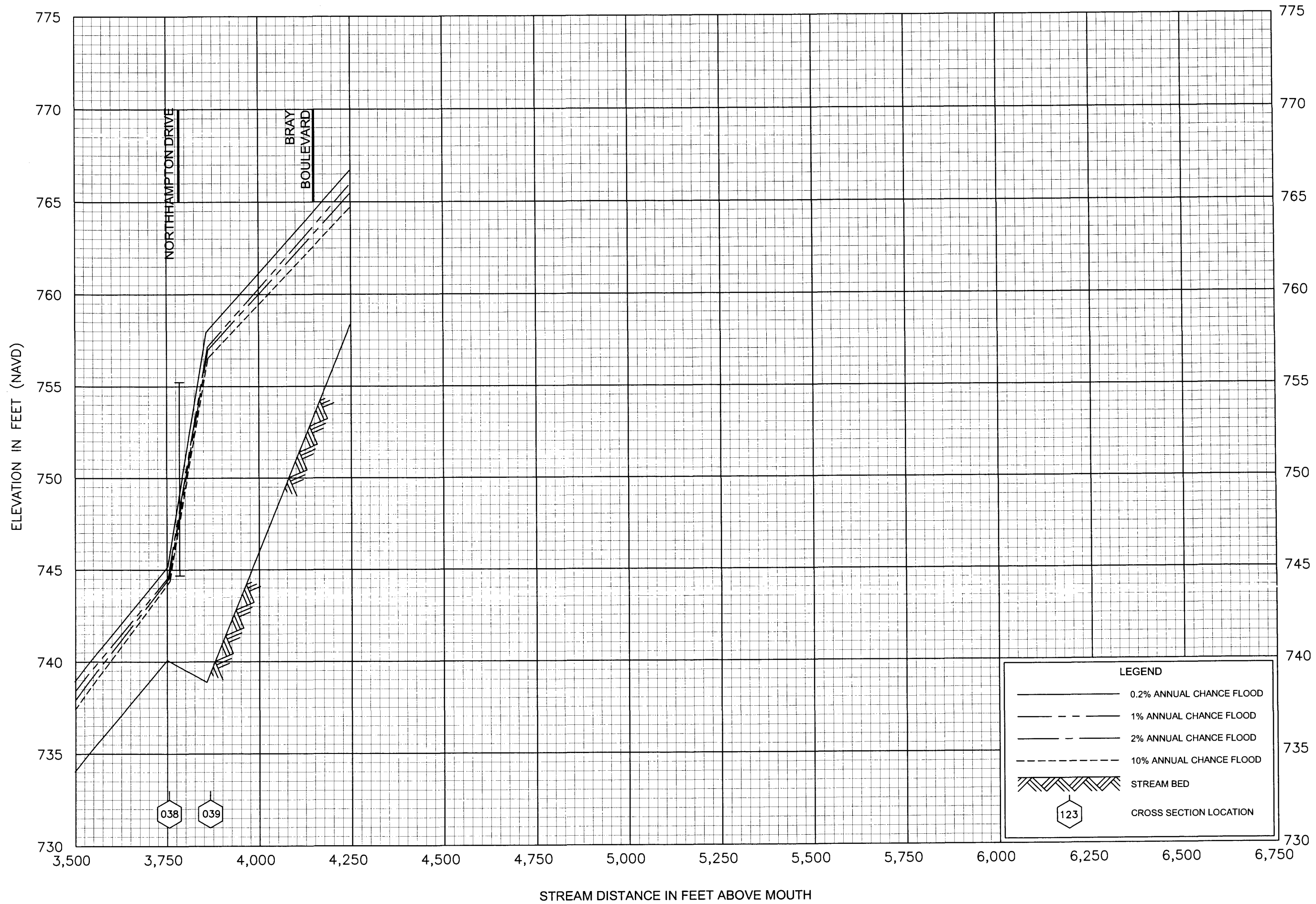


FLOOD PROFILES

VESTAL CREEK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

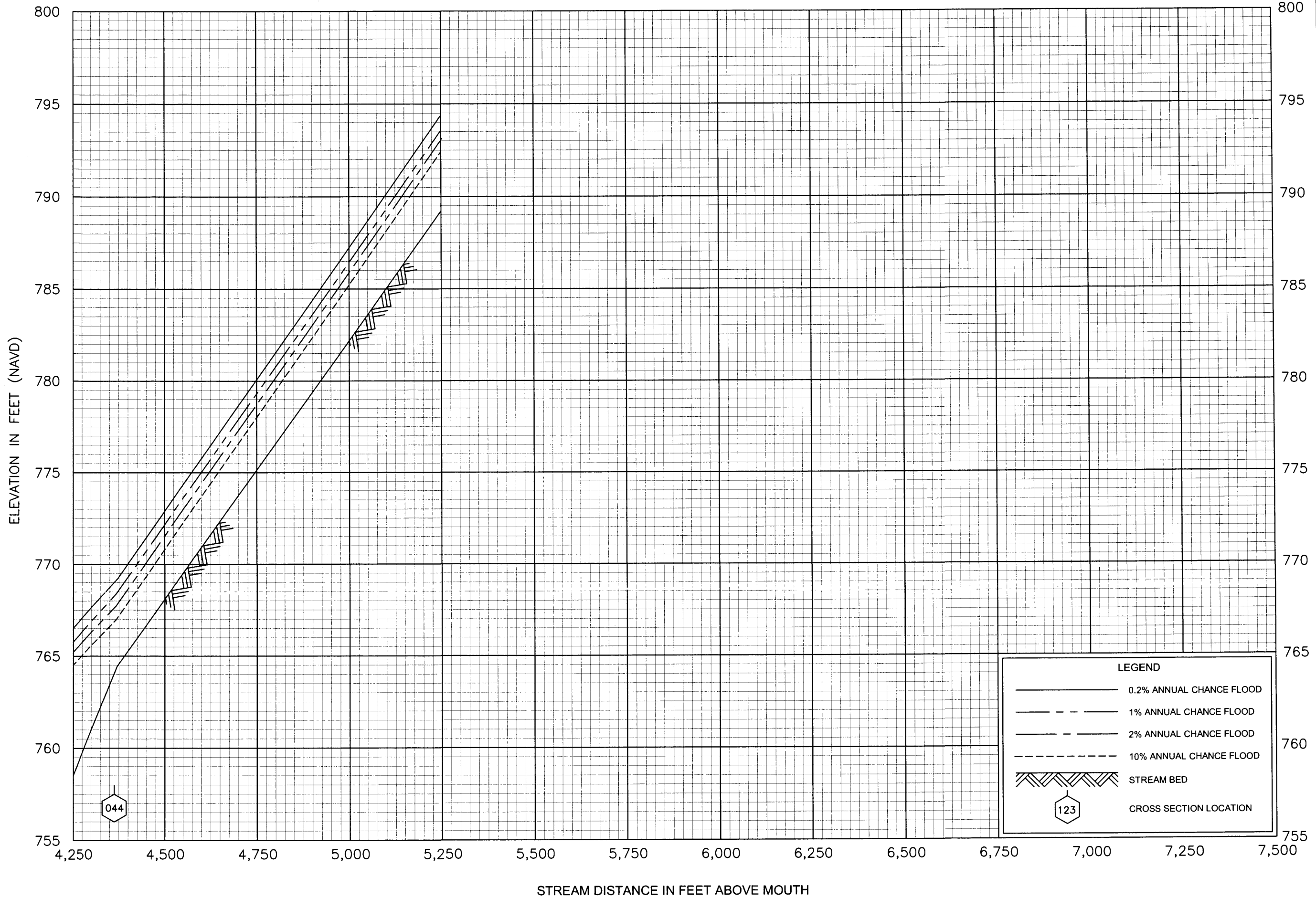


FLOOD PROFILES

VESTAL CREEK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

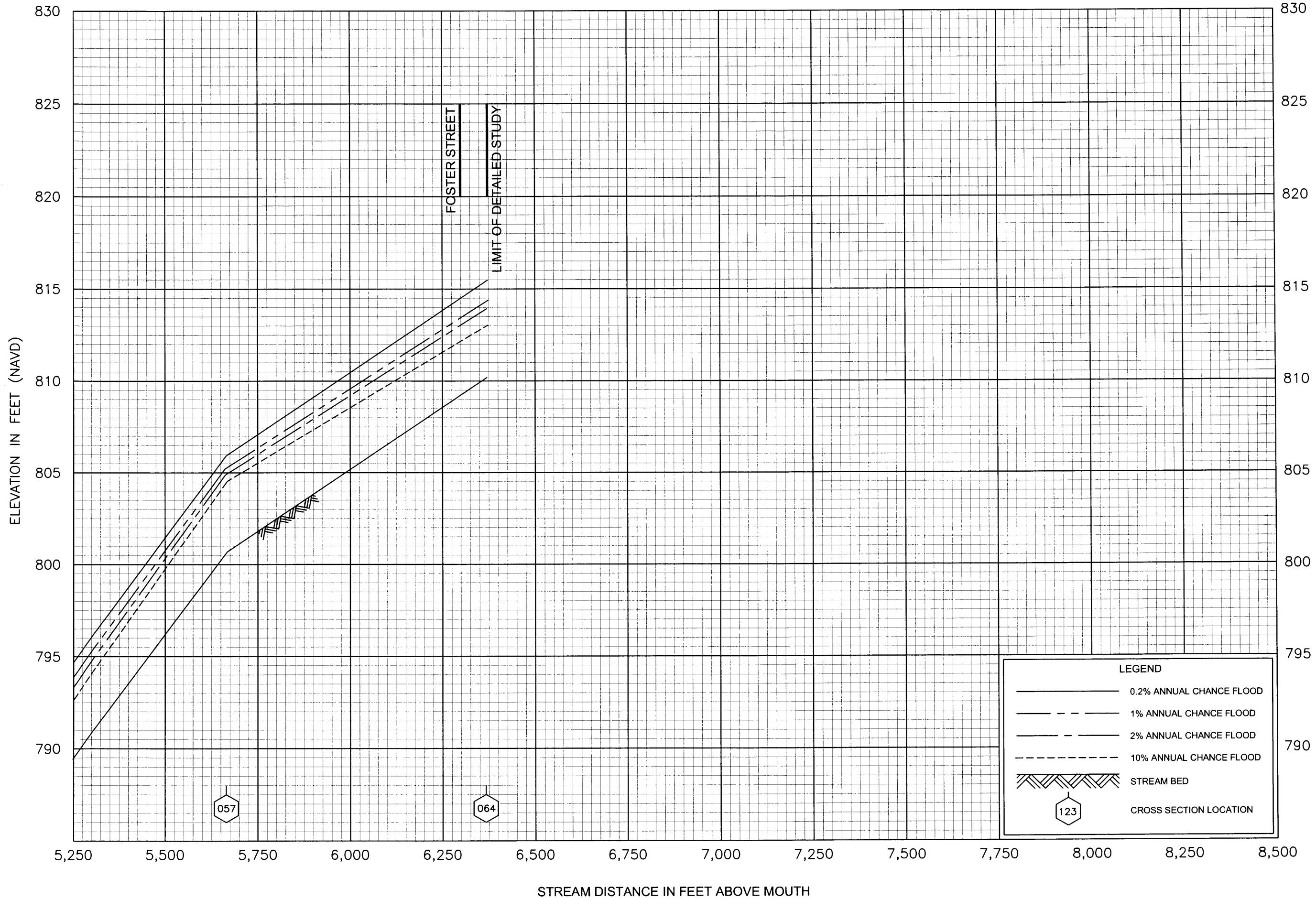


FLOOD PROFILES

VESTAL CREEK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS



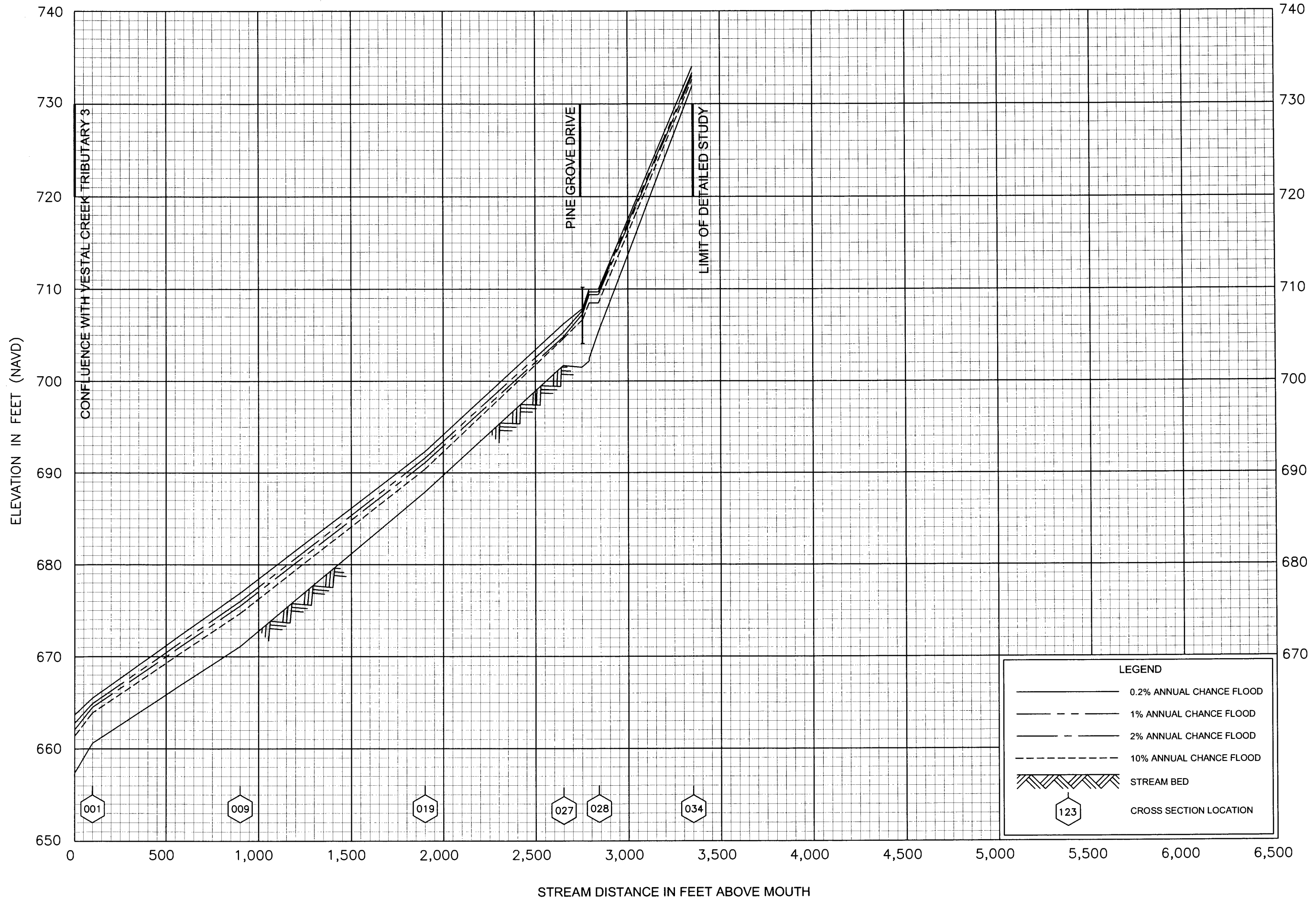
FLOOD PROFILES

VESTAL CREEK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

129P



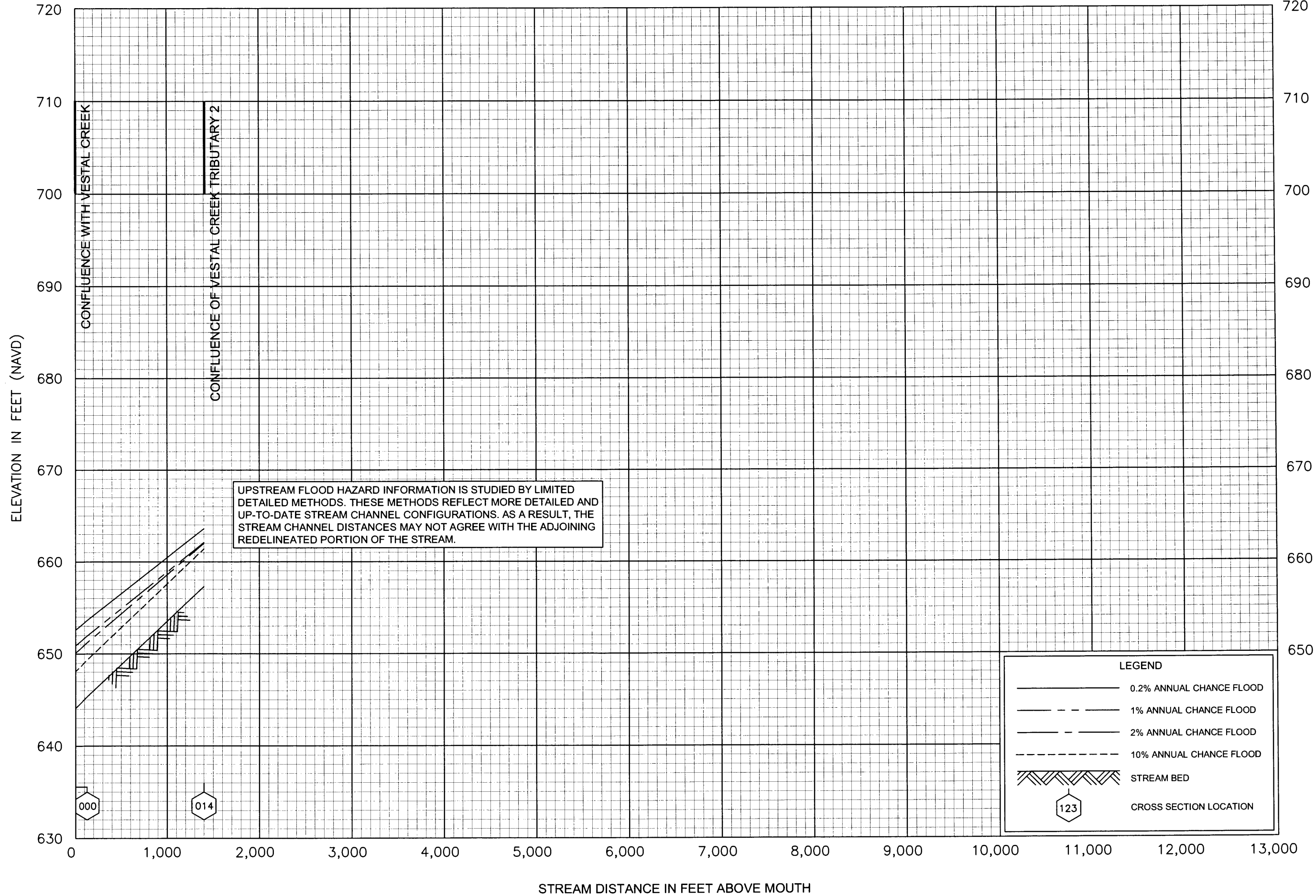
FLOOD PROFILES

VESTAL CREEK TRIBUTARY 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

130P



FLOOD PROFILES

VESTAL CREEK TRIBUTARY 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

RANDOLPH COUNTY, NC
AND INCORPORATED AREAS

131P