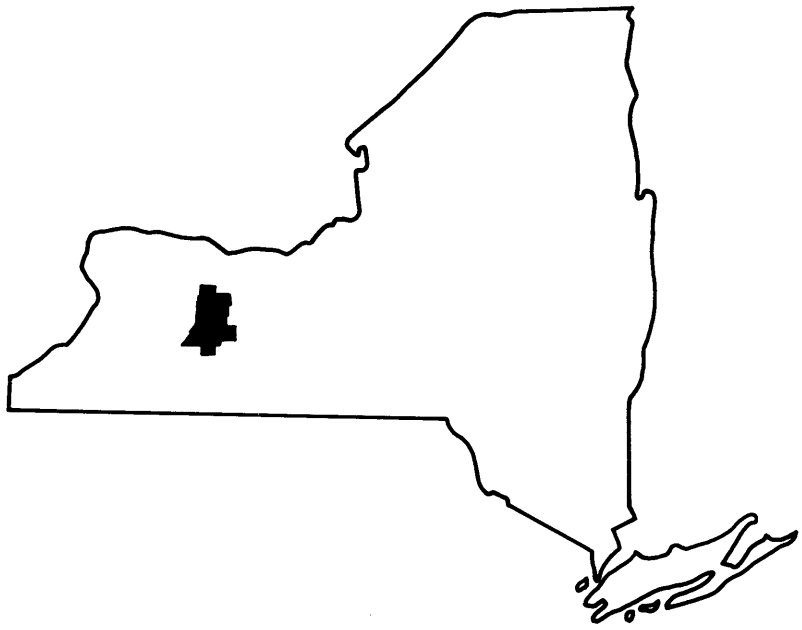
FLOOD INSURANCE STUDY

TOWN OF LEICESTER, NEW YORK
LIVINGSTON COUNTY



JULY 20, 1981

federal emergency management agency

COMMUNITY NUMBER - 361285

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FLOOD INSURANCE STUDY
TOWN OF LEICESTER, NEW YORK

1.0 INTRODUCTION

1.1 Purpose of Study

The purpose of this Flood Insurance Study is to investigate the existence and severity of flood hazards in the Town of Leicester, Livingston County, New York, and to aid in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. Initial use of this information will be to convert Leicester to the regular program of flood insurance by the Federal Emergency Management Agency (FEMA). Further use of the information will be made by local and regional planners in their efforts to promote sound land use and flood plain development.

1.2 Coordination

The purpose of the Flood Insurance Study was explained at a Consultation and Coordination Officer's (CCO) meeting on July 27, 1976, attended by representatives of the Town of Leicester, the FEMA, and the New York State Department of Environmental Conservation (DEC), the study contractor for this community.

A search for basic data was made at all levels of government. The U. S. Geological Survey (USGS) was contacted and provided information utilized in this study. Information regarding flow data was acquired from USGS gaging stations.

Technical data on the Genesee River were coordinated with the U. S. Army Corps of Engineers (COE), Buffalo District.

On April 11, 1978, a meeting was held with officials of the Town of Leicester to obtain additional local opinions on the course of the study.

The final CCO meeting was held on December 5, 1979, when the final draft of the Flood Insurance Study was presented for further local comment. The meeting was attended by town officials, representatives of the FEMA and the study contractor, and a number of concerned citizens.

1.3 Authority and Acknowledgements

The source of authority for this Flood Insurance Study is the National Flood Insurance Act of 1968, as amended.

The hydrologic and hydraulic analyses for this study were prepared by the New York State Department of Environmental Conservation for the Federal Emergency Management Agency, under Contract No. H-3845. This work, which was completed in June 1978, covered all significant flooding sources in the Town of Leicester.

2.0 AREA STUDIED

2.1 Scope of Study

This Flood Insurance Study covers the incorporated area of the Town of Leicester, Livingston County, New York. The portion of the Letchworth State Park which lies in the southwestern corner of the town was not studied in the study. Also, the Village of Leicester was not included in this study. The area of study is shown on the Vicinity Map (Figure 1).

The Genesee River was studied in detail for a distance of about 11.09 miles. The Genesee is the main drainage course in the Town of Leicester, extending from the northeastern corner of town in a meandering course south and southwest, forming part of the town boundary line.

Beards Creek empties into the Genesee River at a location northeast of Cuylerville, within the Town of Leicester. Thence it proceeds upstream south and then west to a point about 3,500 feet south of Cuylerville. Beards Creek then flows west to River Road (County Route 37). A total length of 14,700 feet on Beards Creek was studied in detail. The Tributary to Beards Creek proceeds upstream in a southern and then western direction. A total length of 1,980 feet of the tributary was studied by detailed methods. The areas studied by detailed methods were selected with priority given to all known flood hazard areas and areas of projected development and proposed construction for the next five years, through June 1983.

Proceeding northwest, Beards Creek was studied by approximate methods for a distance of 6,700 feet. Continuing upstream across State Highway 64, the Tributary to Beards Creek was studied by approximate methods for a length of 1,500 feet beyond the limit of detailed study. Approximate methods of analysis were used to study those areas having low development potential and minimal flood hazards as identified at the initiation of the study. The scope and methods of study were proposed to and agreed upon by the FEMA.

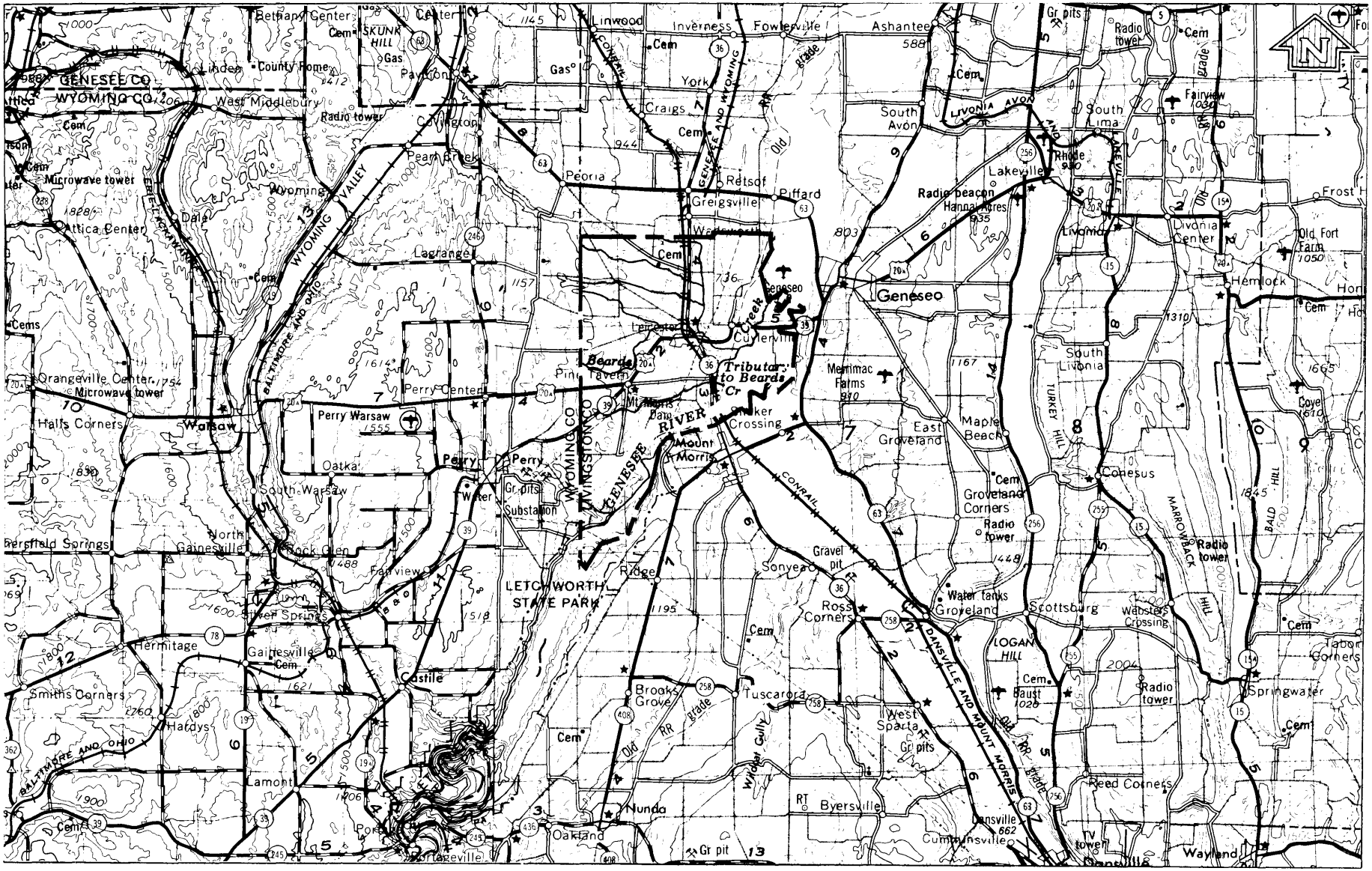


FIGURE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF LEICESTER, NY
(LIVINGSTON CO.)

APPROXIMATE SCALE

4 0 4 8 12 MILES

VICINITY MAP

2.2 Community Description

The Town of Leicester (originally spelled and still pronounced "Lester") is situated on the western side of the Genesee River in western Livingston County, in western New York State. The town is bordered on the south by the Town of Mount Morris, on the east by the Town of Geneseo, and on the north by the Town of York, all in Livingston County; and on the west by the Towns of Covington, Perry and Castile, all in Wyoming County.

The Town of Leicester was named for the son of Oliver Phelps, one of two land speculators who purchased most of what is now New York State west of Seneca Lake from the Commonwealth of Massachusetts in 1788. The principal settlement in the town was located on high ground west of the Genesee River and adjacent to Beards Creek. Originally called Moscow, it is now the Village of Leicester. The hamlet of Cuylerville to the east marks the site of what once was the capital (then known as Little Beard's Town) of the Seneca Indian Nation of the Iroquois Confederacy. A large canning factory operates within the town on State Highway 36 near the Genesee River (Reference 1).

The population of the Town of Leicester (excluding the Village of Leicester) was reported to be 1,431 persons in 1970, an increase of 404 over the 1960 census figure. Further growth is anticipated (Reference 2).

The northern part of the Town of Leicester is situated in the Erie-Ontario Lowland of western New York State. The southern portion of the town is on the northern edge of the Appalachian Plateau. The area is crossed from west to east by a surface drainage pattern of streams, all of which drain into the Genesee River (Reference 3).

Elevations in the town range from 1,100 feet in the south-westerly portion to less than 600 feet along the Genesee River.

Soils in the town include extremely fertile Genesee fine sandy loams in the Genesee River Valley and a broad variety of fine silt loams and sandy loams in the upland areas. Soils are derived by glacier action from bedrock formations of nearly horizontal layers of limestone and interbedded shales and sandstones (Reference 4).

The town has moderately severe winters and short mild summers. Mean daily temperatures range from 23 degrees Fahrenheit (°F) in February to 69°F in July. Average annual precipitation is 26 inches, of which about 13 inches is runoff (Reference 5).

The Town of Leicester covers an area of about 33.4 square miles, of which 62 percent is reported to be in active agriculture. An additional 21 percent of the town is brushland or forest (Reference 6).

2.3 Principal Flood Problems

The principal flooding sources in the town are the Genesee River and Beards Creek. Except for the small hamlet of Cuylerville on Beards Creek and a few houses along State Highway 20A, there is little development in the flood plains of these streams at the present time.

Heavy rainfall, especially that which occurs in the spring and combines with snowmelt, has frequently caused high water and local flooding. Figures 2, 3, and 4 show areas of possible flooding in Leicester, with the projected elevations of the 100- and 500-year floods.

A recent severe flood resulted from Tropical Storm Agnes in June 1972. The magnitude of this flood ranged from that of a 10-year storm at Rochester, New York, downstream of Leicester, to that of a 60-year storm at the Jones Bridge gage, in Geneseo. This storm produced the largest discharge recorded in this area--17,500 cubic feet per second (cfs) (Reference 7).

2.4 Flood Protection Measures

Construction of the Mount Morris Dam on the Genesee River in the Town of Mount Morris was authorized by the Flood Control Act of 1944 and was completed in 1952 by the COE. From 1865 to 1950, the Genesee River Valley experienced major flooding on the average of once in every seven years. The Mount Morris Dam has significantly reduced the threat of flood disaster, and flooding in the lower basin is not as severe as in the upper basin. It is estimated that since it began operating, the project has prevented overall damages estimated at $245 million, $210 million of which would have been caused by Tropical Storm Agnes. The COE estimates that had the dam not been in operation during Agnes, the water-surface elevation of the Genesee River would have risen an additional 12 to 18 feet in the Leicester area (References 7 and 8).

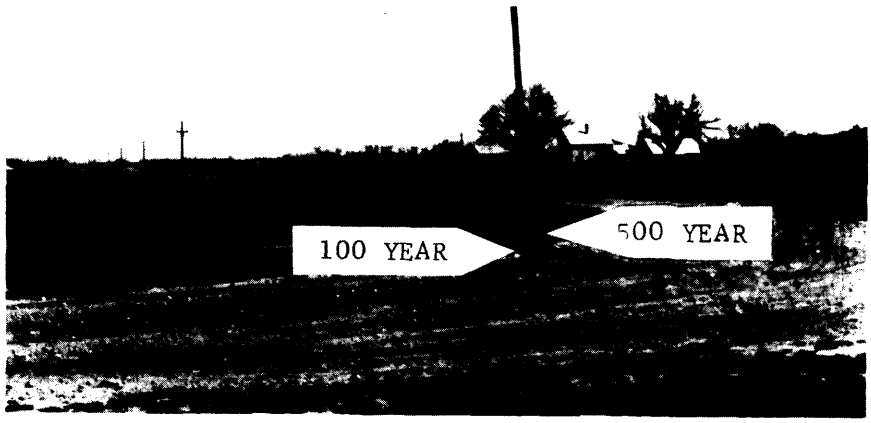


Figure 2 - At Dutch Corners and Perry Road, Town of Leicester, projected 100- and 500-year flood elevations on the Genesee River.

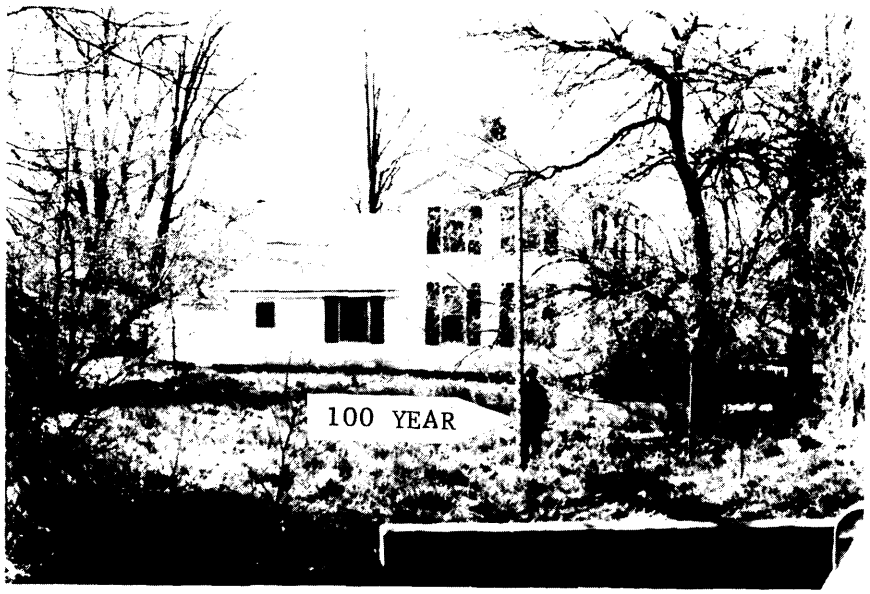


Figure 3 - At River Road bridge, Town of Leicester, projected 100-year flood elevation on Beards Creek.

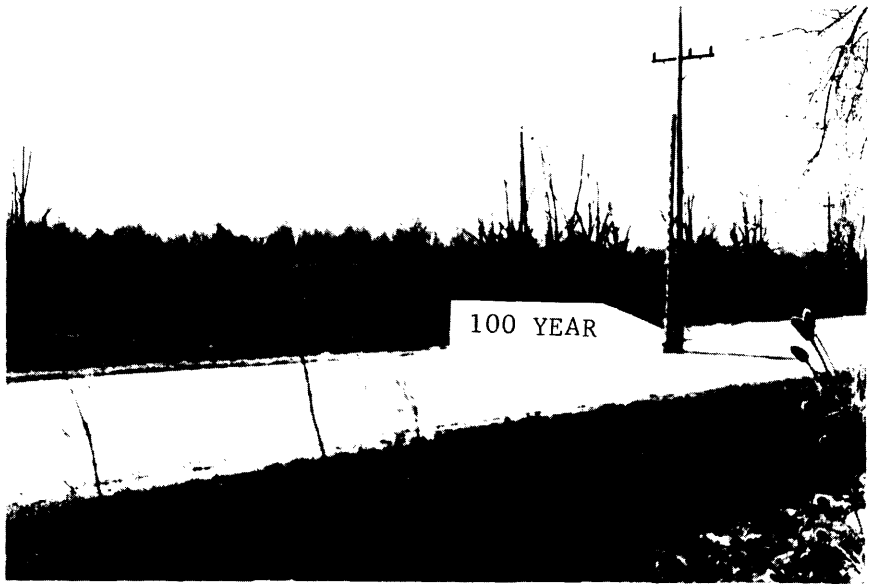


Figure 4 - At River Road, Town of Leicester, projected 100-year flood elevation on Tributary to Beards Creek. (The 500-year flood elevation would be 0.1 foot higher than the 100-year).

3.0 ENGINEERING METHODS

For the flooding sources studied in detail in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Floods having recurrence intervals of 10, 50, 100, and 500 years have been selected as having special significance for flood plain management and for flood insurance premium rates. The analyses reported here reflect current conditions in the watersheds of the flooding sources.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for floods of the selected recurrence intervals for each flooding source studied in detail in the community.

The Genesee River was analyzed in detail in the Flood Insurance Studies for the Towns of Geneseo and Mount Morris, New York (References 9 and 10). In these studies, data came from two gaging stations, at Jones Bridge Road within the Town of Geneseo and at U. S. Route 20, and from outflow hydrographs for Mount Morris Dam within the Town of Mount Morris. Only records from those years during which the dam has been operative have been used. Data for the Jones Bridge gage and for the dam were available from 1952 to the present; for the Avon gage, records are available from 1956 to the present. Flood discharges of various frequencies at these gaging stations were obtained by a log-Pearson Type III analysis (Reference 11). The results of these analyses were adopted for use in the present study.

Beards Creek is an ungaged stream. An exceedence interval-discharge curve for the creek and its tributary was developed using a regional analysis by the USGS (Reference 12).

A summary of drainage area-peak discharge relationships for the streams studied in detail is shown in Table 1, "Summary of Discharges."

TABLE 1 - SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs) 10-YEAR	50-YEAR	100-YEAR	500-YEAR
GENESEE RIVER					
At Jones Bridge Road	1,417	13,355	16,390	17,680	20,920
Upstream of Mount Morris	1,075	11,460	13,540	14,390	16,430
BEARDS CREEK					
At confluence with Genesee River	49.9	3,160	4,300	4,800	6,000
TRIBUTARY TO BEARDS CREEK					
At confluence with Beards Creek	2.5	320	430	480	600

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of the flooding sources studied in detail were carried out to provide estimates of the elevations of floods of the selected recurrence intervals along each of these flooding sources.

Above-water cross section information was obtained photogrammetrically. Below-water cross sections were obtained by field measurement and all bridges and culverts were surveyed to obtain necessary elevation data and structural geometry. The baseline used for horizontal control was also obtained by field survey.

Cross sections were located at close intervals above and below bridges, at natural control sections along the stream length and at significant changes in ground relief and land use or land cover.

For the streams studied in detail, water-surface elevations were calculated using the COE HEC-2 step-backwater computer program (Reference 13), which is in general use for unobstructed flow conditions. The slope/area method was the technique used to determine starting water-surface elevations for all streams studied in detail.

Roughness coefficients (Manning's "n") were assigned on the basis of on-site field inspections and ground-level photographs. These photographs were compared with USGS calibrated photographs, taking into consideration channel conditions, overbank vegetation and land use (Reference 14). The "n" values for the channel area of the Genesee River ranged from 0.040 to 0.062. The overbank "n" values ranged from 0.100 to 0.200. For Beards Creek, the channel "n" was 0.035; the overbank "n" was 0.065. The channel "n" values for the Tributary to Beard Creek ranged from 0.020 to 0.035, and the overbank "n" was 0.065.

For the portions of streams studied by approximate methods, USGS flood height-drainage area curves for the 100-year flood were utilized (Reference 15). Drainage areas were developed at selected locations using detailed topographic maps (Reference 16). Estimates of discharges and slopes and a field view of each stream were also employed to obtain approximate flooding data.

Flood profiles were drawn showing computed water-surface elevations to an accuracy of 0.5 foot for floods of the selected recurrence intervals. Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway is computed (Section 4.2), selected cross-section locations are also shown on the Flood Boundary and Floodway Map (Exhibit 3).

All elevations used in this study are referenced to the National Geodetic Vertical Datum of 1929 (NGVD), formerly referred to as Sea Level Datum of 1929. Locations of the elevation reference marks used in the study are shown on the maps.

The hydraulic analyses for this study are based on the effects of unobstructed flow. The flood elevations shown on the profiles are valid only if hydraulic structures remain unobstructed, and dams and other flood control structures operate properly and do not fail.

4.0 FLOOD PLAIN MANAGEMENT APPLICATIONS

A prime purpose of the National Flood Insurance Program is to encourage state and local governments to adopt sound flood plain management programs. Each Flood Insurance Study, therefore, includes a flood boundary map designed to assist communities in developing sound flood plain management measures.

4.1 Flood Boundaries

In order to provide a national standard without regional discrimination, the 100-year flood has been adopted by the FEMA as the base flood for purposes of flood plain management measures. The 500-year flood is employed to indicate additional areas of flood risk in the community. For each stream studied in detail, the boundaries of the 100- and 500-year floods have been delineated using the flood elevations determined at each cross section; between cross sections, the boundaries were interpolated using topographic maps at a scale of 1:2,400 with a contour interval of 5 feet (Reference 17). In cases where the 100- and 500-year flood boundaries are close together, only the 100-year boundary has been shown.

The 100-year flood boundaries for the approximate-study streams were delineated using detailed topographic maps at a scale of 1:24,000 with a contour interval of 10 feet (Reference 16), estimates of discharges and slopes, and field surveys.

The boundaries of the 100- and 500-year floods are shown on the Flood Boundary and Floodway Map (Exhibit 3). Small areas within the flood boundaries may lie above the flood elevations and, therefore, may not be subject to flooding. Owing to limitations of the map scale and lack of detailed topographic data, such areas are not shown.

4.2 Floodways

Encroachment on flood plains, such as artificial fill, reduces the flood-carrying capacity, increases the flood heights of streams, and increases flood hazards in areas beyond the encroachment itself. One aspect of flood plain management involves balancing the economic

gain from flood plain development against the resulting increase in flood hazard. For purposes of the Flood Insurance Program, the concept of a floodway is used as a tool to assist local communities in this aspect of flood plain management. Under this concept, the area of the 100-year flood is divided into a floodway and a floodway fringe. The floodway is the channel of a stream plus any adjacent flood plain areas that must be kept free of encroachment in order that the 100-year flood can be carried without substantial increases in flood heights. Minimum standards of the FEMA limit such increases in flood heights to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this report are presented to local agencies as minimum standards that can be adopted or that can be used as a basis for additional studies.

The floodways presented in this study were computed on the basis of equal conveyance reduction from each side of the flood plains. The results of these computations are tabulated at selected cross sections for each stream segment for which a floodway is computed (Table 2).

As shown on the Flood Boundary and Floodway Map (Exhibit 3), the floodway widths were determined at cross sections; between cross sections, the boundaries were interpolated. In cases where the boundaries of the floodway and the 100-year flood are either close together or collinear, only the floodway boundary has been shown. A portion of the floodway computed for the Genesee River lies outside the corporate limits.

The area between the floodway and the boundary of the 100-year flood is termed the floodway fringe. The floodway fringe thus encompasses the portion of the flood plain that could be completely obstructed without increasing the water-surface elevation of the 100-year flood by more than 1.0 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to flood plain development are shown in Figure 5.

Near the mouths of streams studied in detail, floodway computations are made without regard to flood elevations on the receiving water body. Therefore, "With Floodway" elevations presented in Table 2 for certain downstream cross sections of Beards Creek and Tributary to Beards Creek are lower than the regulatory flood elevations in that area, which must take into account the 100-year flooding due to backwater from other sources.

5.0 INSURANCE APPLICATION

In order to establish actuarial insurance rates, the FEMA has developed a process to transform the data from the engineering study into flood insurance criteria. This process includes the determination of reaches, Flood Hazard Factors (FHFs), and flood insurance zone designations for each flooding source affecting the Town of Leicester.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FT.)	SECTION AREA (SQ. FT.)	MEAN VELOCITY (F.P.S.)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (FEET)
Genesee River								
A	56.309[1]	871[3]	8,816	2.01	559.4	559.4	560.3	0.9
B	57.288[1]	2,914[3]	18,243	0.97	560.3	560.3	561.2	0.9
C	58.712[1]	3,680[3]	19,122	0.92	561.1	561.1	562.0	0.9
D	61.142[1]	2,131[3]	12,500	1.41	563.2	563.2	564.2	1.0
E	62.473[1]	2,969[3]	14,815	1.10	564.4	564.4	565.4	1.0
F	63.259[1]	1,196[3]	8,497	2.08	565.7	565.7	566.6	0.9
G	63.542[1]	1,500[3]	12,979	1.11	566.0	566.0	566.9	0.9
H	64.373[1]	218[3]	3,748	3.84	566.5	566.5	567.4	0.9
I	65.390[1]	250[3]	3,647	3.95	568.2	568.2	568.9	0.7
J	66.517[1]	240[3]	3,410	4.22	570.4	570.4	571.0	0.6
K	67.085[1]	307[3]	4,143	3.47	571.6	571.6	572.1	0.5
L	67.134[1]	318[3]	3,825	3.76	571.8	571.8	572.2	0.4
M	67.318[1]	447[3]	5,207	2.76	572.2	572.2	572.6	0.4
N	67.396[1]	339[3]	3,405	4.23	587.3	587.3	587.3	0.0
Beards Creek								
A	320[2]	87	1,359	3.5	561.6	561.5[4]	561.7	0.2
B	1,870[2]	120	1,851	2.6	562.1	561.6[4]	562.1	0.5

[1] Miles above mouth
[2] Feet above confluence with Genesee River
[3] This width extends beyond corporate limits
[4] Elevation computed without consideration of backwater effects from Genesee River

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF LEICESTER, NY
(LIVINGSTON CO.)

FLOODWAY DATA

GENESEE RIVER AND BEARDS CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FT.)	SECTION AREA (SQ. FT.)	MEAN VELOCITY (F.P.S.)	REGULATORY (NGVD)	WITHOUT FLOODWAY (NGVD)	WITH FLOODWAY (NGVD)	INCREASE (FEET)
Beards Creek (continued)								
C	3,090[1]	95	1,453	3.3	562.5	561.6[3]	562.2	0.6
D	4,290[1]	106	1,573	3.1	563.0	561.7[3]	562.4	0.7
E	4,540[1]	352	3,185	1.5	563.1	562.2[3]	562.9	0.7
F	5,940[1]	891	3,083	1.6	563.5	562.4[3]	563.1	0.7
G	8,640[1]	508	1,405	3.4	564.7	563.6[3]	564.2	0.6
H	10,440[1]	652	2,116	2.3	566.3	566.3	567.3	1.0
I	10,980[1]	586	1,743	2.4	566.9	566.9	567.8	0.9
J	11,170[1]	360	849	4.9	571.4	571.4	572.0	0.6
K	11,520[1]	194	1,385	3.0	575.0	575.0	575.4	0.4
L	12,280[1]	213	938	4.5	575.2	575.2	575.8	0.6
M	13,430[1]	435	1,156	3.6	576.9	576.9	577.9	1.0
N	14,730[1]	547	1,235	3.4	580.6	580.6	580.9	0.3
Tributary to Beards Creek								
A	350[2]	27	65	7.3	566.8	566.1[4]	566.1	0.0
B	640[2]	38	186	2.6	568.8	568.8	568.8	0.0
C	1,980[2]	77	223	2.2	568.8	568.8	569.4	0.6

[1] Feet above confluence with Genesee River
[2] Feet above confluence with Beards Creek
[3] Elevation computed without consideration of backwater effects from Genesee River
[4] Elevation computed without consideration of backwater effects from Beards Creek

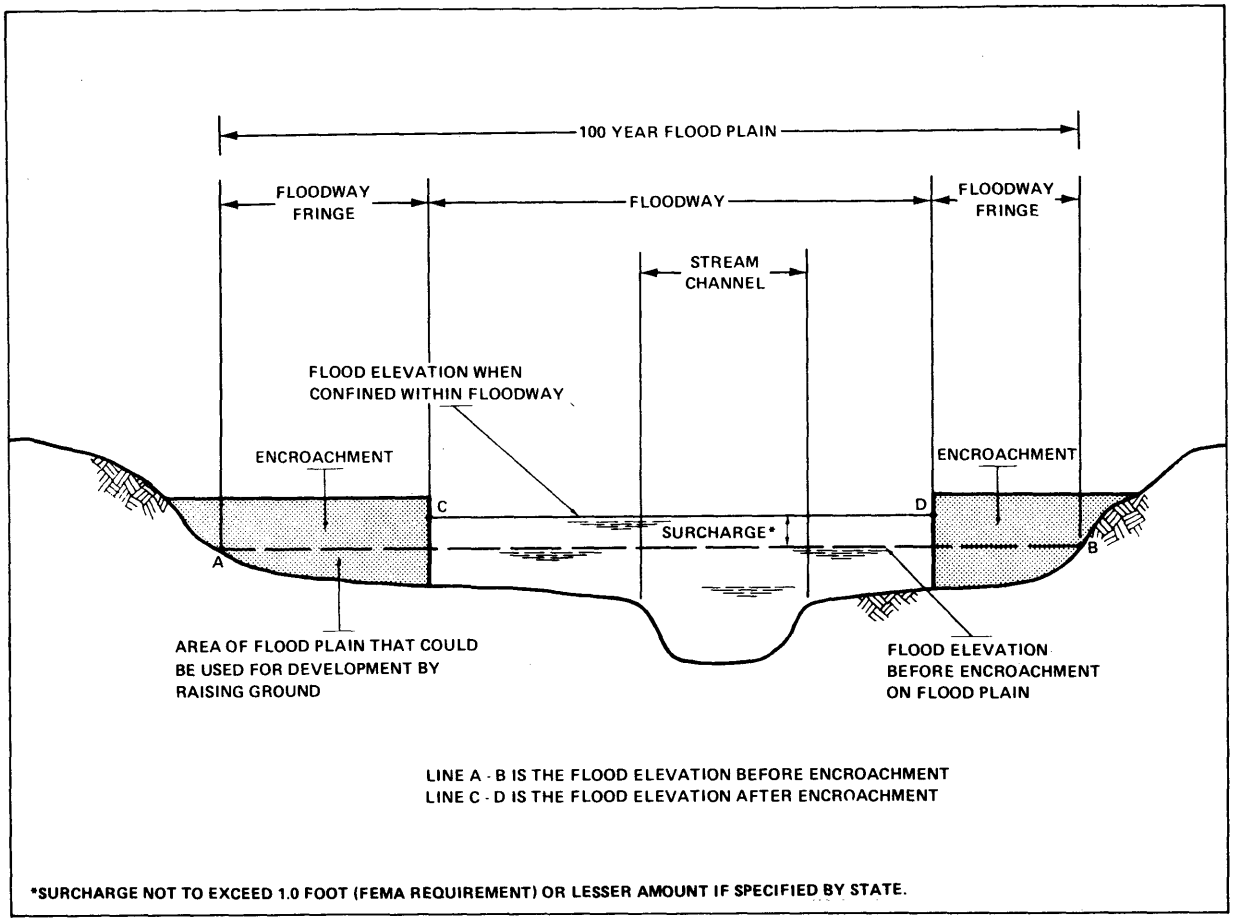
TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF LEICESTER, NY
(LIVINGSTON CO.)

FLOODWAY DATA

BEARDS CREEK AND TRIBUTARY TO BEARDS CREEK



FLOODWAY SCHEMATIC Figure 5

5.1 Reach Determinations

Reaches are defined as lengths of watercourses having relatively the same flood hazard, based on the average weighted difference in water-surface elevations between the 10- and 100-year floods. This difference does not have a variation greater than that indicated in the following table for more than 20 percent of the reach.

Average Difference Between 10- and 100-Year Floods	Variation
Less than 2 feet	0.5 foot
2 to 7 feet	1.0 foot
7.1 to 12 feet	2.0 feet
More than 12 feet	3.0 feet

The locations of the reaches determined for the flooding sources of the Town of Leicester are shown on the Flood Profiles (Exhibit 1) and are summarized in the Flood Insurance Zone Data Table (Table 3).

5.2 Flood Hazard Factors

The FHF is the FEMA device used to correlate flood information with insurance rate tables. Correlations between property damage from floods and their FHFs are used to set actuarial insurance premium rate tables based on FHFs from 005 to 200.

The FHF for a reach is the average weighted difference between the 10- and 100-year flood water-surface elevations expressed to the nearest 0.5 foot, and shown as a three-digit code. For example, if the difference between water-surface elevations of the 10- and 100-year floods is 0.7 foot, the FHF is 005; if the difference is 1.4 feet, the FHF is 015; if the difference is 5.0 feet, the FHF is 050. When the difference between the 10- and 100-year water-surface elevations is greater than 10.0 feet, accuracy for the FHF is to the nearest foot.

5.3 Flood Insurance Zones

After the determination of reaches and their respective FHFs, the entire incorporated area of the Town of Leicester was divided into zones, each having a specific flood potential or hazard. Each zone was assigned one of the following flood insurance zone designations:

Zone A: Special Flood Hazard Areas inundated by the 100-year flood, determined by approximate methods; no base flood elevations shown or FHFs determined.

Zones A2, A3, A4: Special Flood Hazard Areas inundated by the 100-year flood, determined by detailed methods; base flood elevations shown, and zones subdivided according to FHF.

Zone B: Areas between the Special Flood Hazard Area and the limits of the 500-year flood, including areas of the 500-year flood plain that are protected from the 100-year flood by dike, levee, or other water control structure; also, areas subject to certain types of 100-year shallow flooding where depths are less than 1.0 foot; and areas

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FHF	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10 YR.)	2% (50 YR.)	0.2% (500 YR.)			
Genesee River							
Reach 1	05	-2.1	-0.5	+1.1	020	A4	Varies
Reach 2	05,10	-1.5	-0.4	+0.8	015	A3	Varies
Reach 3	10	-1.1	-0.3	+0.6	010	A2	Varies
Beards Creek							
Reach 1	05	-1.1	-0.2	+0.5	010	A2	Varies
Tributary to Beards Creek							
Reach 1	05	-0.8	-0.3	+0.3	010	A2	Varies

[1]Flood Insurance Rate Map Panel
[2]Weighted average
[3]Rounded to the nearest foot - see map

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF LEICESTER, NY
(LIVINGSTON CO.)

FLOOD INSURANCE ZONE DATA

GENESEE RIVER, BEARDS CREEK AND TRIBUTARY TO BEARDS CREEK

Zone B:	(continued)	subject to 100-year flooding from sources with drainage areas less than 1 square mile. Zone B is not subdivided.
Zone C:		Areas of minimal flooding.
Zone D:		Areas of undetermined but possible flood hazard.

Table 3, "Flood Insurance Zone Data," summarizes the flood elevation differences, FHFs, flood insurance zones, and base flood elevations for the flooding sources studied in detail in the Town of Leicester.

5.4 Flood Insurance Rate Map Description

The Flood Insurance Rate Map for the Town of Leicester is, for insurance purposes, the principal result of the Flood Insurance Study. This map (published separately) contains the official delineation of flood insurance zones and base flood elevation lines. Base flood elevation lines show the locations of the expected whole-foot water-surface elevations of the base (100-year) flood. This map is developed in accordance with the latest flood insurance map preparation guidelines published by the FEMA.

6.0 OTHER STUDIES

The Buffalo District of the COE has developed a flood profile of the Genesee River for the Agnes flood of June 1972, and discharge-frequency relationships for the 10-, 50-, and 100-year floods on the Genesee (Reference 7). The flood profiles developed in this report were based upon the modeling of the stream to the high-water marks resulting from the June 1972 flood.

Flood Insurance Studies have been prepared for the adjacent Towns of Geneseo and Mount Morris, the Village of Mount Morris, and the Town of York (References 9, 10, 18, and 19). Data and analyses used in this study will be coordinated with these other studies to ensure exact agreement across common borders.

This study is authoritative for purposes of the Flood Insurance Program, and the data presented here either supersede or are compatible with previous determinations.

7.0 LOCATION OF DATA

Survey, hydrologic, hydraulic, and other pertinent data used in this study can be obtained by contacting the office of the Insurance and Mitigation Division of the Federal Emergency Management Agency, Regional Director, Region II Office, 26 Federal Plaza, Room 19-100, New York, New York 10278.

8.0 BIBLIOGRAPHY AND REFERENCES

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REACH 1
ZONE A4

CORPORATE LIMITS

CORPORATE LIMITS

CORPORATE LIMITS

ELEVATION IN FEET (NGVD)

570
560
550
540
530
520
510

56.2 56.4 56.6 56.8 57.0 57.2 57.4 57.6 57.8 58.0 58.2 58.4 58.6 58.8

STREAM DISTANCE IN MILES ABOVE MOUTH

A B C

LEGEND

- 500 YEAR FLOOD
- 100 YEAR FLOOD
- 50 YEAR FLOOD
- 10 YEAR FLOOD
- STREAM BED
- CROSS SECTION LOCATION

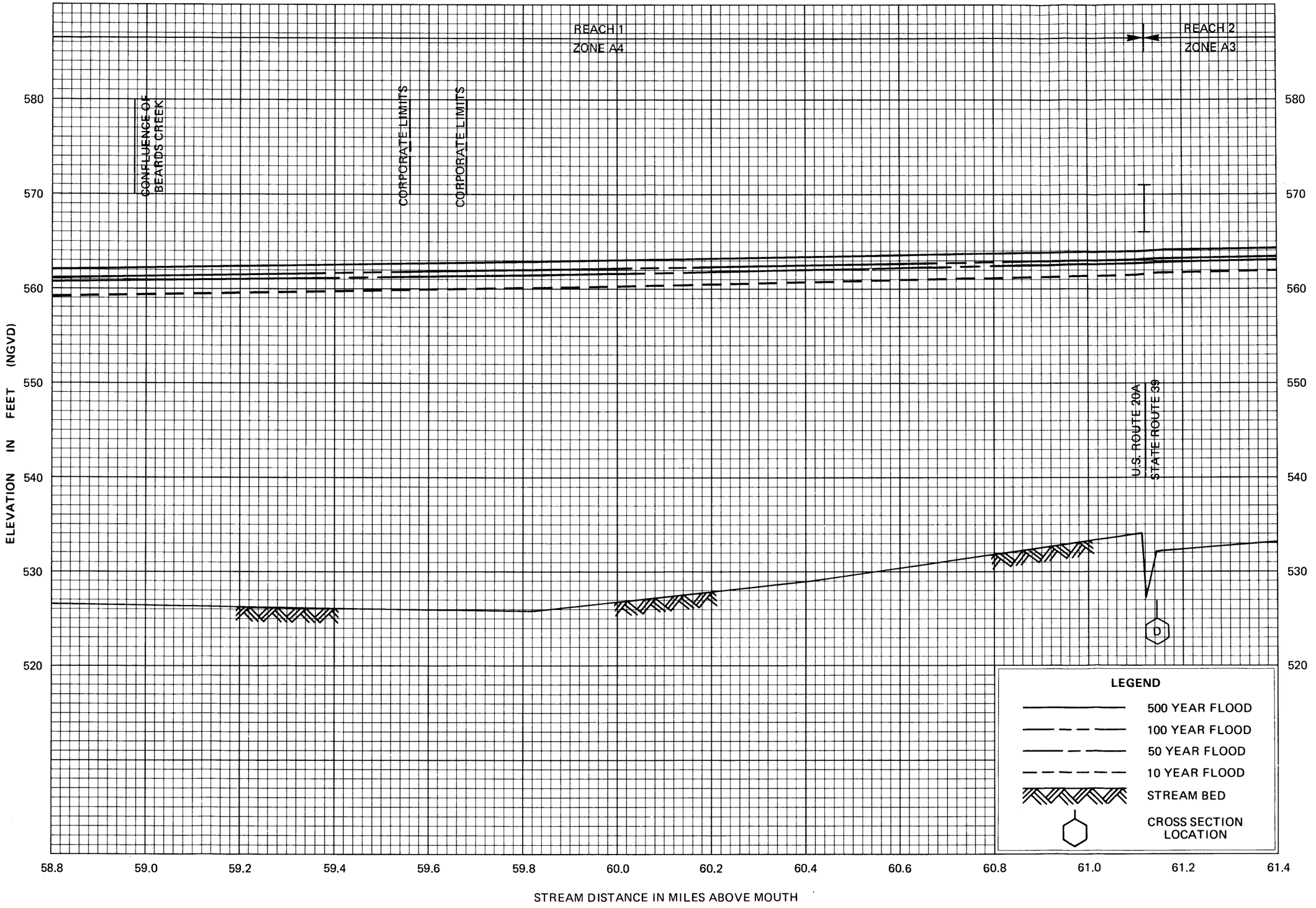
FLOOD PROFILES

GENESEE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF LEICESTER, NY
(LIVINGSTON CO.)

01P



FLOOD PROFILES

GENESEE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF LEICESTER, NY
(LIVINGSTON CO.)

02P

REACH 2
ZONE A3

CORPORATE LIMITS

CORPORATE LIMITS

ELEVATION IN FEET (NGVD)

570
560
550
540
530

570
560
550
540
530

61.4 61.6 61.8 62.0 62.2 62.4 62.6 62.8 63.0 63.2 63.4 63.6 63.8 64.0

STREAM DISTANCE IN MILES ABOVE MOUTH

E

F

G

LEGEND

500 YEAR FLOOD
100 YEAR FLOOD
50 YEAR FLOOD
10 YEAR FLOOD
STREAM BED
CROSS SECTION LOCATION

FLOOD PROFILES

GENESEE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF LEICESTER, NY
(LIVINGSTON CO.)

03P

REACH 2
ZONE A3

CORPORATE LIMITS

CORPORATE LIMITS

CORPORATE LIMITS

CORPORATE LIMITS

ELEVATION IN FEET (NGVD)

580
570
560
550
540

H

I

L

LEGEND

500 YEAR FLOOD
100 YEAR FLOOD
50 YEAR FLOOD
10 YEAR FLOOD
STREAM BED
CROSS SECTION LOCATION

64.0 64.2 64.4 64.6 64.8 65.0 65.2 65.4 65.6 65.8 66.0 66.2 66.4 66.6

STREAM DISTANCE IN MILES ABOVE MOUTH

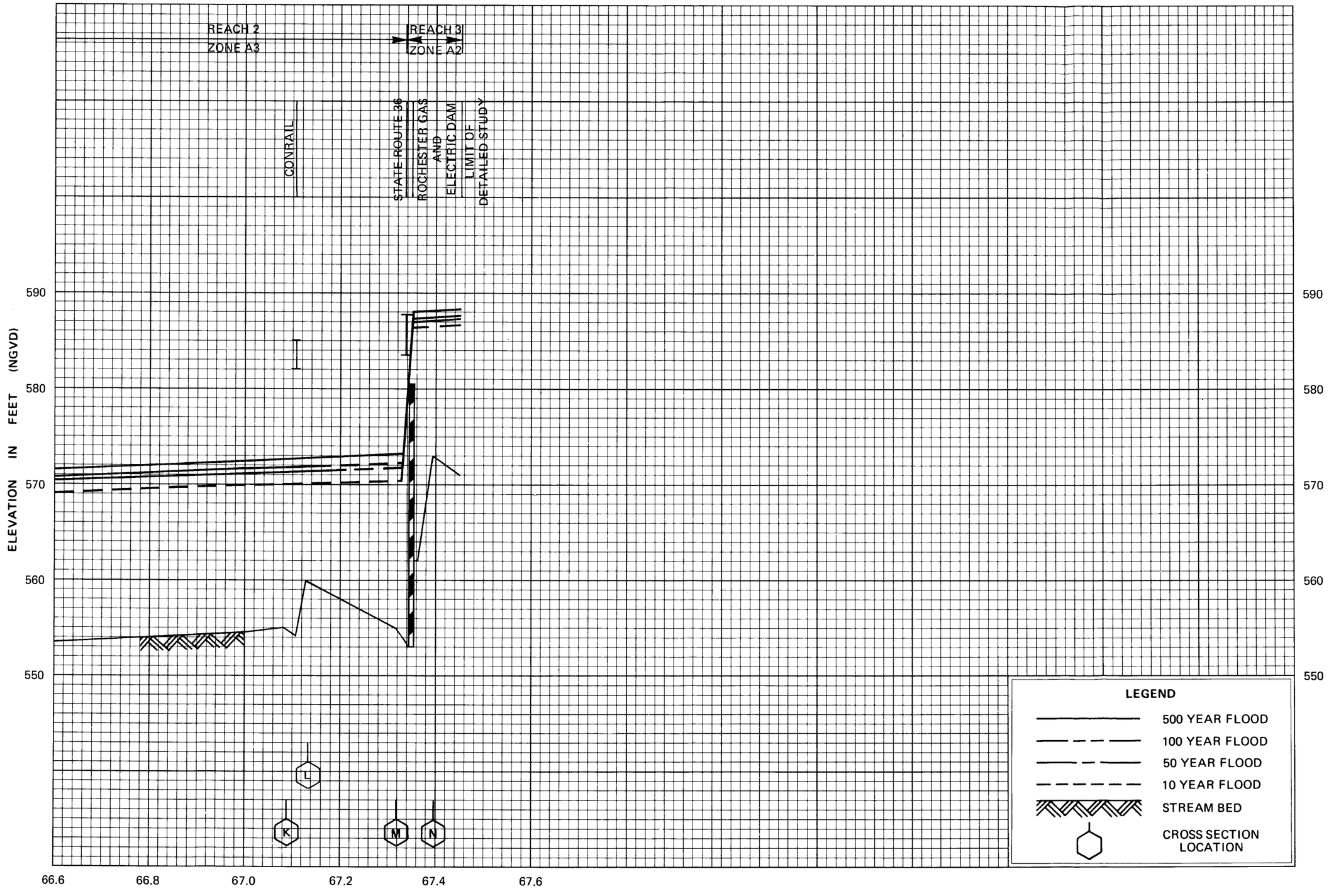
FLOOD PROFILES

GENESEE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF LEICESTER, NY
(LIVINGSTON CO.)

04P



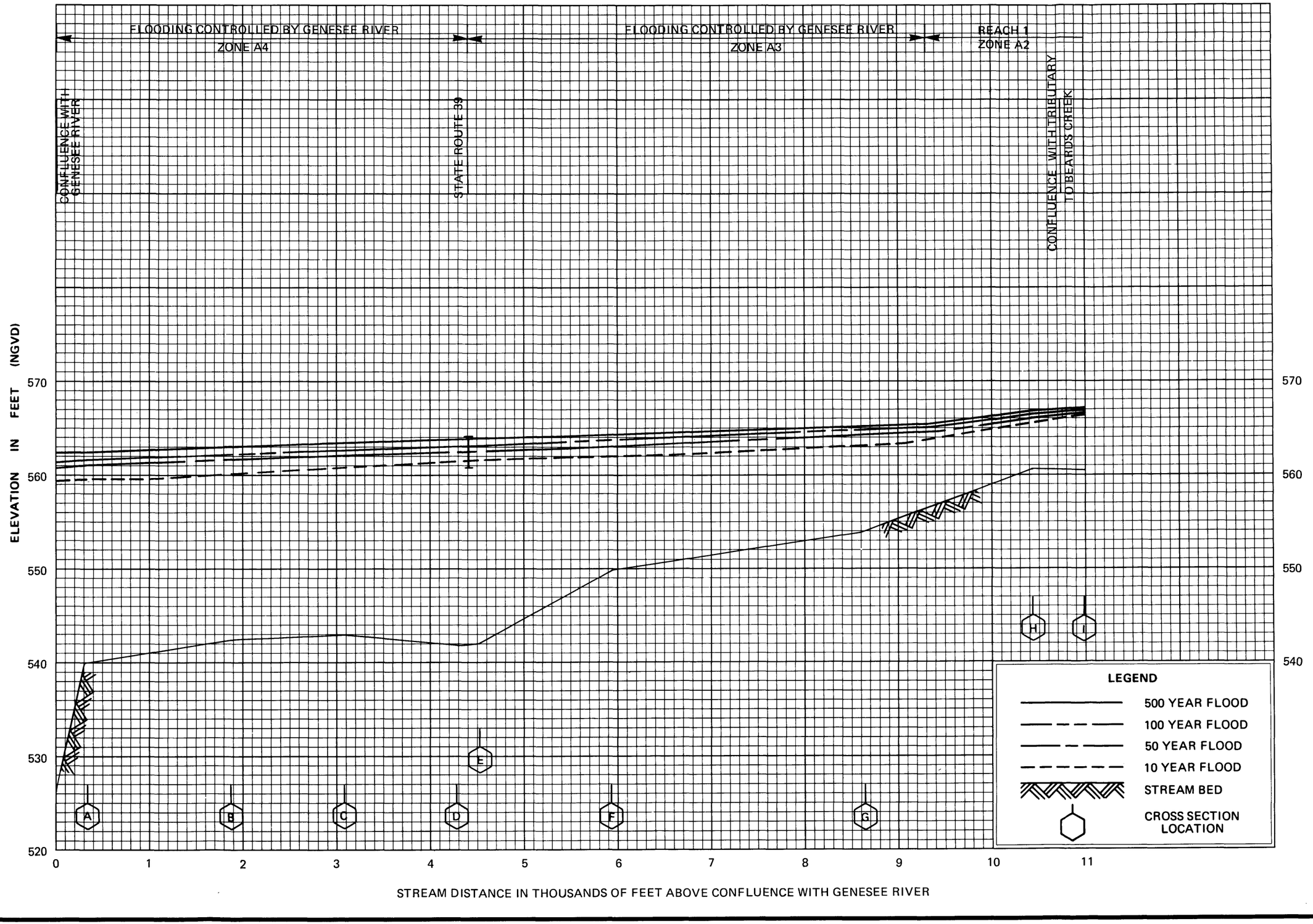
FLOOD PROFILES

GENESEE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF LEICESTER, NY
(LIVINGSTON CO.)

05P



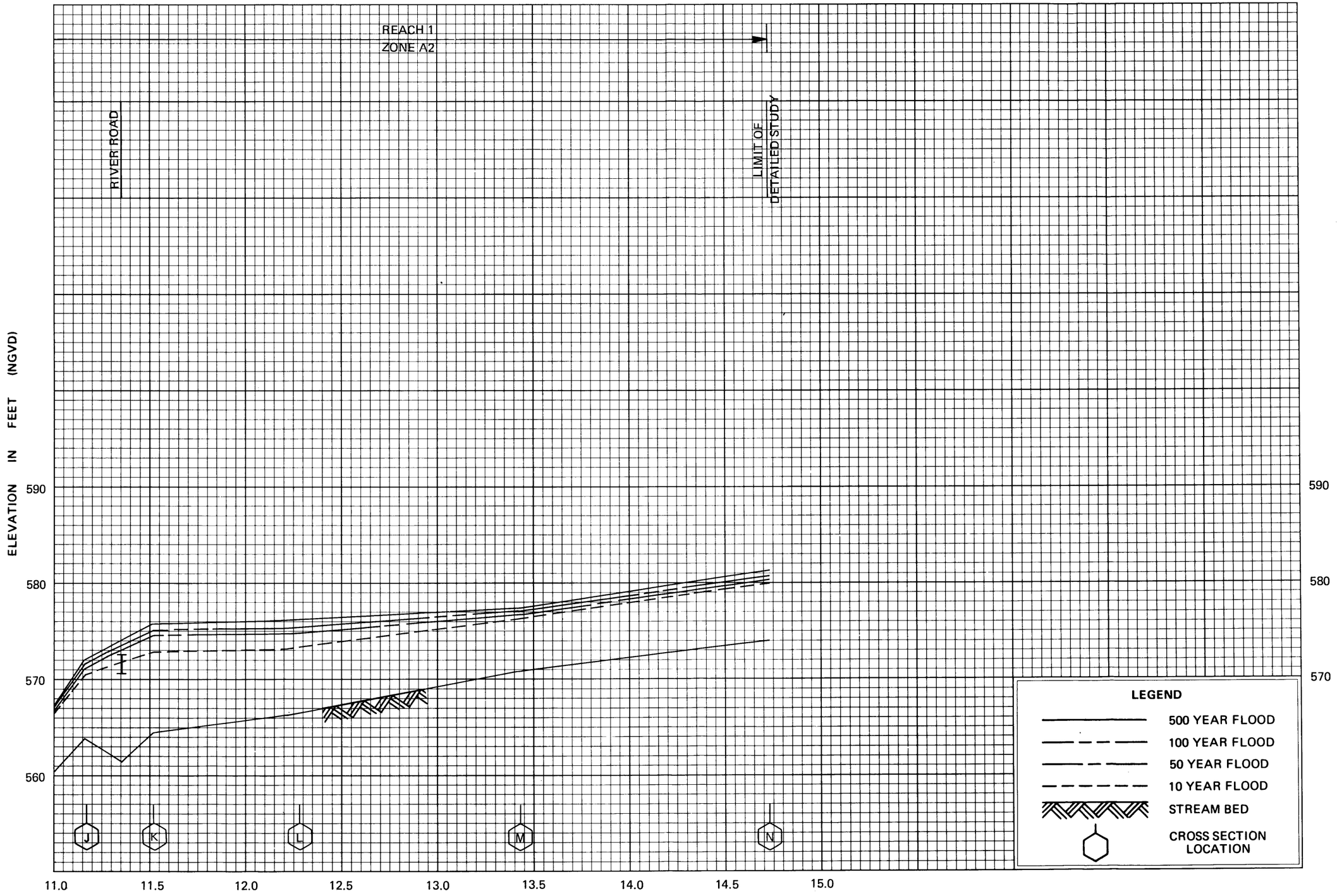
FLOOD PROFILES

BEARDS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF LEICESTER, NY
(LIVINGSTON CO.)

06P



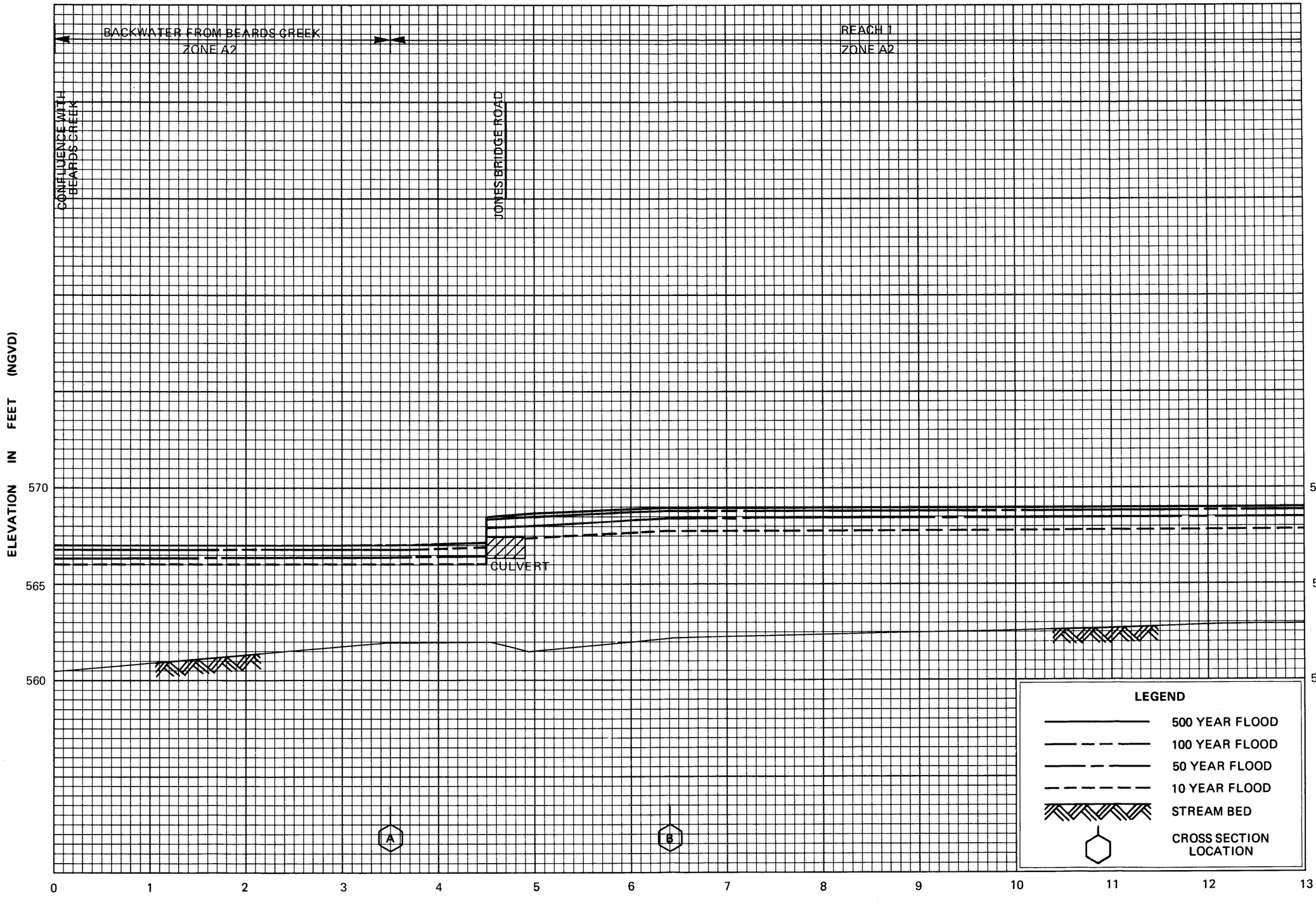
FLOOD PROFILES

BEARDS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF LEICESTER, NY
(LIVINGSTON CO.)

07P



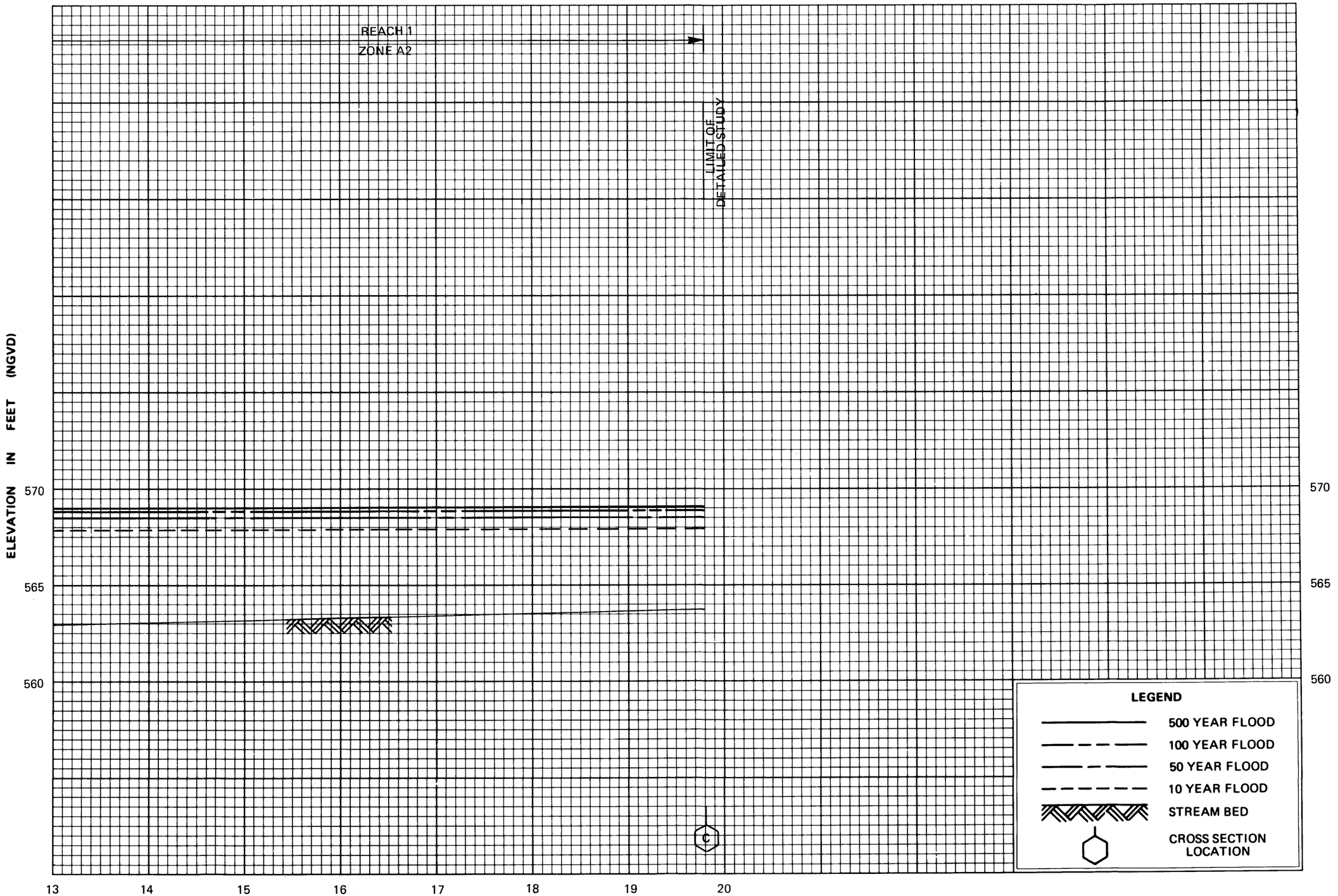
FLOOD PROFILES

TRIBUTARY TO BEARDS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF LEICESTER, NY
(LIVINGSTON CO.)

08P



FLOOD PROFILES

TRIBUTARY TO BEARDS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF LEICESTER, NY
(LIVINGSTON CO.)

09P