VESTAL FLOOD DAMAGE REDUCTION PROJECT

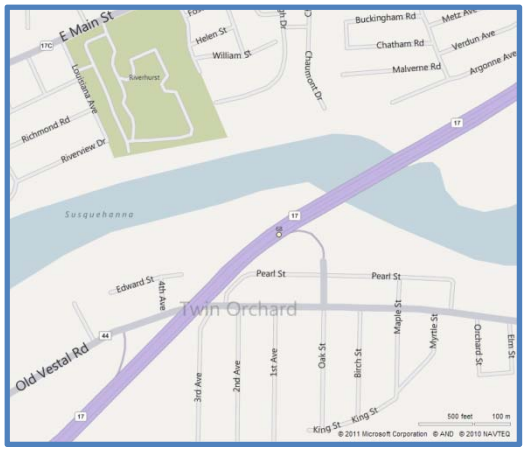
Department of Environmental Conservation

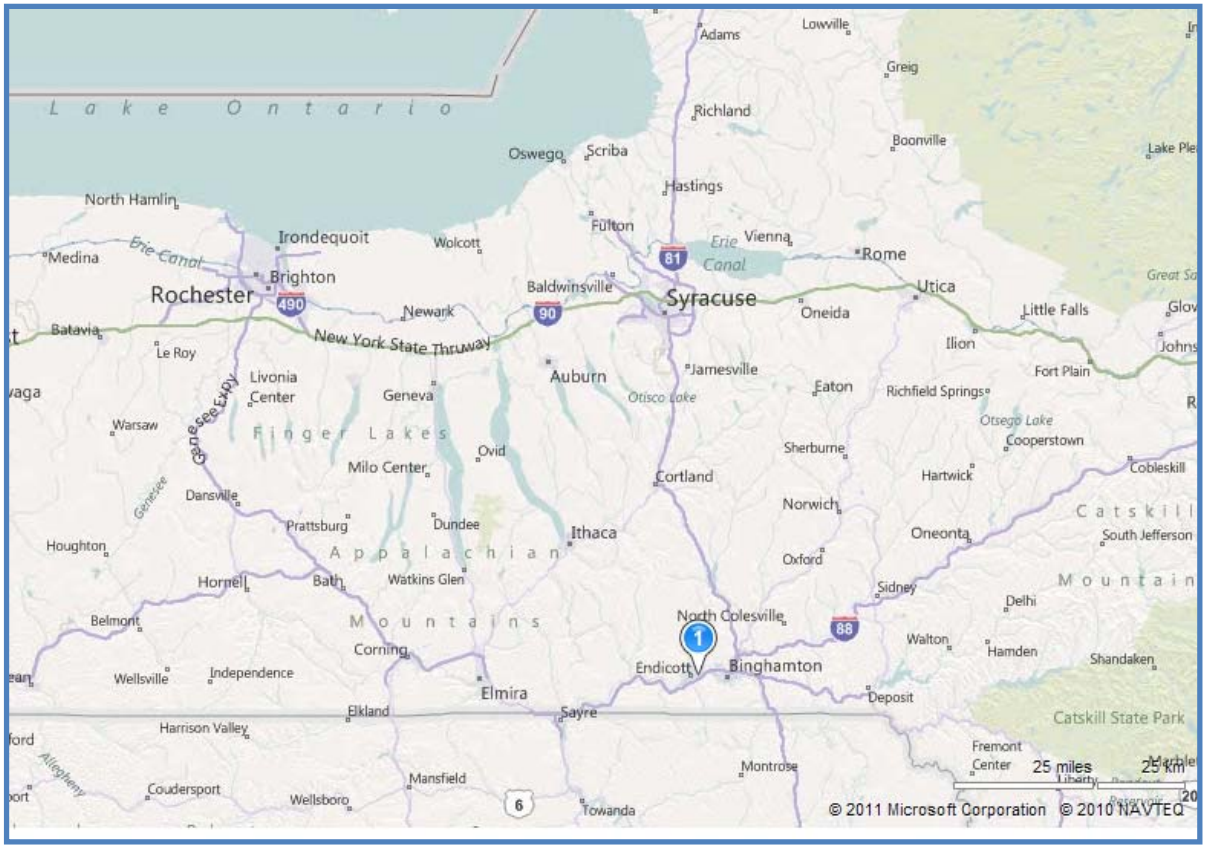
Operated and Maintained by: ***New York State***

Region 7 Counties: Broome, *Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga, Tompkins*

PROJECT LOCATION

The project is located on the left bank of the Susquehanna River, in the community of Twin Orchards, in the Town of Vestal, Broome County, New York.





PROJECT DESCRIPTION

The extent of each unit of work is as follows:

Unit No. 1, Westover, Part 1

The community of Westover, in the Town of Union, which lies to the south of the Erie Railroad is designated Unit No. 1, Westover, Part 1. The local protection extends from the Erie Railroad embankment northeast of the junction of Fifth Street with Endwell Street, and continues in a southerly direction along the right bank of Little Choconut Creek approximately 750 feet to New York Route 17C which is spanned by a stoplog structure, (closure structure No. X-1), which is 68' 1" long and 6' 6" high.

The levee continues 1,050 feet downstream from New York Route 17C to a single track railroad siding which is spanned by a stoplog structure, (closure No. X-2), which is 21' 1 ¾" long and 9' 6" high. The improvement in this area consists of a 145 c.f.s. storm water pumping station, clearing and snagging of Little Choconut Creek, and straightening of the channel. From the railroad siding the levee continues 908 feet downstream to a concrete flood wall and "I" wall 39 feet long and then to a second railroad siding where a second stoplog structure, (closure structure No. X-3), which is 21' 1 ¾" long and 10' high, crosses the siding.

From the downstream side of the second stoplog structure the improvement consists of 223 feet of concrete flood wall extending to high ground. A ring levee was constructed around the Johnson City Water Company plant. This starts on high ground 20 feet east of Camden Street and south of Elbon Street and extends west 182 feet crossing Camden Street which was raised, and then continues in the following directions: south 213 feet, southeast 119 feet, northeast 136 feet, then east 85 feet, where it ties into high ground.

The improvement on the west side of the Westover community starts from high ground at the west end of Onondaga Street and consists of 2,545 feet of levee across New York Route 17C, which was raised to pass over the levee to high ground at the Erie Railroad embankment. The improvement also includes two steel sheet pile cutoffs passing through the Conrail at station 0+00 and station 73+31.5.

PROJECT DESCRIPTION (continued)

Unit No. 1, Westover, Part 2

The improvement north of the Conrail which encompasses the Oakdale community is identified as Unit 1, Westover, Part 2. The improvement consists of 3,336 feet of levee closure on the east side extending from the railroad along the right bank of Little Choconut and Finch Hollow Creeks to high ground near Harry L road, and 2,833 feet of levee on the west side extending from the railroad north to high ground.

The improvement also consists of relocating the channels of Little Choconut and Finch Hollow Creeks on the east side of the improvement, and relocating unnamed brooks on the west side of improvements. Drainage structures have been provided.

Unit No. 2, Vestal, Part 1

The improvement for the community of Vestal is identified as Unit No, 2, Vestal, Part 1. The local protection works extend from high ground along the right bank of the Big Choconut Creek to New York Route 17, a distance of 3,500 feet, then to and along the embankment of the Conrail Railroad, a distance of 1,300 feet, then across the railroad and an open field to and along the left bank of the Susquehanna River to New York State Route 26 (Bridge Street), a distance of 2,300 feet, then 2,300 feet upstream along the river to high ground including 165 feet of natural high ground.

The improvements also include one single track railroad stoplog structure, (closure structure No. X-5), which is 22' 4 ½" long and 4' 9" high, one highway closure at Front Street, (closure structure No. X-4), which is 49' 3" long and 3' high, and the clearing and snagging of Big Choconut Creek from the upstream end of the project to the Susquehanna River.

A steel truss highway bridge over Big Choconut Creek at Front Street was raised approximately 5 feet and abutments capped in order to allow the highway to be raised five feet over the levee. Two access roads were provided: one to the north of the levee starting at station 45+00 to provide access over the levee and the other from Pump Station Road into ponding area No. 2.

PROJECT DESCRIPTION (continued)

Unit No. 2, Vestal, Part 2

The improvement for the community of Twin Orchards is designated Unit No. 2, Vestal, Part 2. The protective works extend from high ground at the Conrail Railroad a distance of approximately 6,300 feet around the east end of the community and then downstream along the left bank of the Susquehanna River to a closure with high ground.

Willow Run was diverted at the Conrail Railroad, and a new diversion channel was constructed extending along the toe of the levee from the existing culvert under the railroad to the Susquehanna River, a distance of 2,182 feet. Vestal Road was raised approximately 10.5 feet to pass over the levee. A 6-foot by 18-foot concrete box culvert was constructed to permit the diversion channel to pass under Vestal Road. Where the levee ties into the railroad, a cutoff was provided consisting of steel sheet piling with concrete cap. Drainage structures through the levee provide for gravity discharge.

Unit No. 3, Endicott

The portion of the project in the Village of Endicott, which is in the Town of Union, is designated Unit No.3, Endicott. The protective works extend from high ground at En Joie Park a distance of 5,500 feet downstream along the right bank of the Susquehanna River to high ground near Badger Avenue.

The improvement consists of 608 feet of levee starting from high ground approximately 190 feet east of South Street in En Joie Park and continuing to the right bank of the Susquehanna River; 997 feet of concrete flood wall adjacent to the Endicott Water Company property and on the landside of the pumping units with riprap fill placed approximately to the height of the existing river bank over the toe of the flood wall and keyed into the existing channel bottom.

2,648 feet of levee was placed starting at the end of the flood wall 170 feet west of Hunt Avenue and extending downstream along the top of the river bank beyond Vestal Avenue Bridge to the foot of Liberty Street, and 1,180 feet I-type wall of steel sheet piling constructed continuing downstream adjacent to River Terrace to high ground 180 feet west of Badger Avenue.

The improvements also included reconstruction of water facilities for the Endicott Water Company, consisting of three existing wells, two combined sanitary and storm-water pumping stations constructed by local interests adjacent to the water company and in Mercereau Park and other appurtenant discharge structures.

PROJECT DESCRIPTION (continued)

Unit No. 4, West Endicott

The improvement for the community of West Endicott, designated Unit No. 4, West Endicott, consists of 7,848 feet of levee starting at high ground west of Nanticoke Avenue along the left bank of Nanticoke Creek across Wendell Street to the overpass of New York Route 17C over the Conrail Railroad with a double track stoplog closure structure, (closure No. X-6), which is 62' 0" long and 6’ $2^{3/8}$” high. 750 feet of dike was placed across the low spot in natural closure starting 500 feet east of the railroad and parallel to New York Route 17C.

The improvement also includes two gravel access roads to extend over the levee, one crossing the levee at station 75+81 and the other at station 84+60. At the upstream end of the unit, 2,500 feet of new channel was constructed for Nanticoke Creek, and the original channel was filled to meet existing ground elevations. Drainage structures were provided for gravity discharge through the levee. A pumping station was constructed by local interests with a 20-inch steel pipe discharge line passing through the levee at station 74+91.

AUTHORIZATION

The project for flood control on the Susquehanna River in the vicinity of Endicott, Johnson City, and Vestal, New York was authorized by an item in section 203 of the Flood Control Act approved September 3rd, 1954 which provides for full monetary authorization and for improvements for the control of destructive flood waters as follows:

“The project for the Susquehanna River in the vicinity of Endicott, Johnson City, and Vestal, New York; is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 500, Eighty-first Congress,…”

PROTECTION PROVIDED

The project has been designed for protection against a flood equivalent to 130 percent of the largest flood of record modified by two existing reservoirs – i.e., 126,000 cubic feet per second, which is equivalent to a stage of 33 feet on the U.S.G.S. gage at Vestal, New York. The freeboard for levees and walls is at least three feet above the water surface for the design flood. No debris clearances have been provided for river bridges in the area; namely Vestal and the Conrail Railroad bridges.

- Unit No. 1 provides protection to the Village of Westover, by means of levees from backwater effect on Little Choconut Creek and from high water on the Susquehanna River.

- Unit No. 2 provides protection to the Vestal and Twin Orchards area, by levees from backwater effect on Big Choconut Creek and from high water on the Susquehanna River.

- Unit No. 3 provides protection to the village of Endicott, by levees and walls from over flow of the Susquehanna River.

- Unit No. 4 provides protection to the West Endicott area in the Town of Union, by means of levees from backwater effect on Nanticoke Creek due to high water on the Susquehanna River.

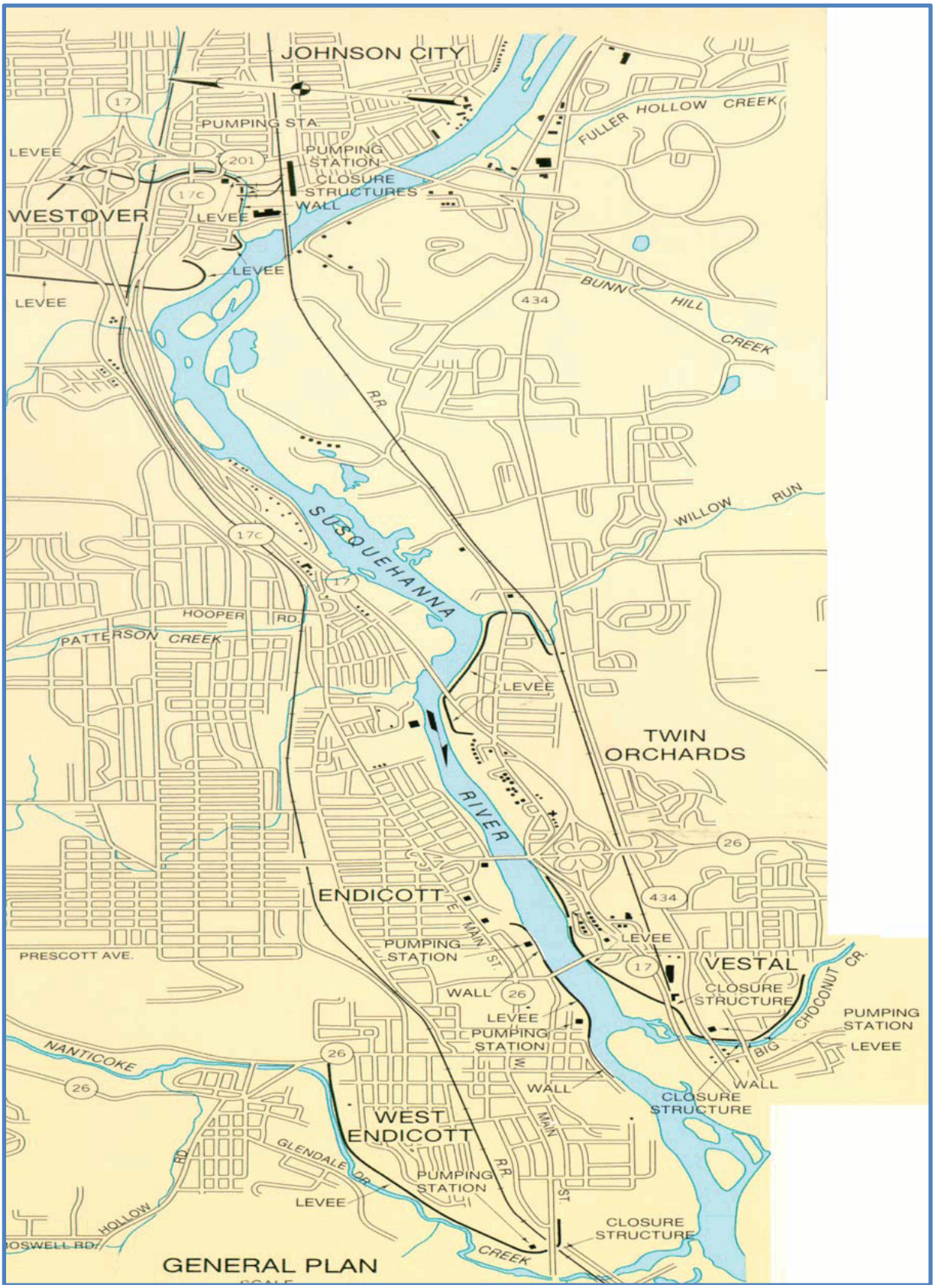
CONSTRUCTION

In planning the comprehensive flood protection for the communities in the vicinity of Endicott, Johnson City, and Vestal, the protective works were divided into four major units, and two of the major units were in turn each divided into two parts. This permitted separate construction contracts to be awarded for each of the subdivisions.

Work Description	Contractor	Date Completed
Unit No. 1, Westover, Part 1	Buck & Donohue, Inc.	August 7th, 1958
Unit No. 1, Westover, Part 2	Buck & Donohue, Inc.	August 15th, 1960
Unit No. 2, Vestal, Part 1	Buck & Donohue, Inc.	December 24th, 1960
Unit No. 2, Vestal, Part 2	James MacInnes Co., Inc.	November 23rd, 1960
Unit No. 3, Endicott	Gasparini Excavating Co.	August 22nd, 1960
Unit No. 4, West Endicott	Endicott Const. Services, Inc.	October 26th, 1960

The cost of new work was $7,034,534 of which $6,034,534 was for new work completed in 1966 and $1,000,000 was for remedial work in 1977. Local cost for the project was $1,442,000.

TWIN ORCHARDS – GENERAL PLAN



TWIN ORCHARDS – BIRD'S EYE VIEW

TWIN ORCHARDS – GENERAL PLAN AND AERIAL MAP OVERLAY