

E&M Engineers and Surveyors, PC

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Highway Funding Delayed by Presidential Election

by: Roy Pedersen, P.E.

The six year Federal Highway funding bill, Transportation Equity Act for the 21st Century (TEA-21) expired September 30, 2003. A new funding act has not yet been approved and federal funds for highway projects have been kept flowing through 5 short term extensions. The fact that this is a Presidential election year has effectively paralyzed the process.

Republicans and Democrats are all wary of proposing spending bills that the other could criticize them for and swing votes to one side or the other.

Two bills have been proposed. The Senate has proposed a \$318 billion plan, and the House has proposed \$275 billion plan. Experts expect the final approved bill to be about \$300 billion.

The effect this has on local projects is to delay them. We all know of a road or bridge project in our area that is in need of reconstruction. In Springville, we are waiting for the next piece of the 219 four lane to be built. While there are several issues that need to be resolved, the project will not proceed without a funding bill. In Bradford, we are waiting for our four lane bypass to be overhauled, at a cost of \$60 million.

It staggers the mind to contemplate these high costs, but if you take \$300 billion over six years, or \$50 billion per year and say each state gets a prorated share based on population, N.Y and PA stand to get around \$4 billion each year. The Bradford bypass would use 1.5% of one years allocation.

So to bring this around to the election, hopefully you voted. Whichever candidate was elected, we are sure to unstick the process and get our tax dollars flowing down the pipe again.

Some facts were taken from ENR October 2004.

Zoeller Road Bridge Replacement

by Garrett Hacker, Project Engineer

On September 3, 2004, the Zoeller Road bridge in the Town of Alden, Erie County, New York was reopened to traffic after being closed for replacement. E&M Engineers and Surveyors P.C. were the design consultants hired by Erie County Department of Public Works to design the replacement bridge.

The old bridge was an 83 foot single span steel Warren thru truss bridge with 10 foot travel lanes and 2 foot shoulders. The bridge was constructed in 1932 to carry Zoeller Road over the Ellicott Creek. The old structure had shown numerous signs of failure including spalling and crumbling concrete abutments, frozen bearing supports, severely corroded steel bridge beams and damaged bridge rail. The existing bridge was constructed on a straight section of highway with horizontal curves at both approaches.

The replacement bridge is an 87 foot single span adjacent prestressed concrete box beam structure having 10 foot 10 inch travel lanes and 3 foot 7 inch shoulders. To improve site distance, the approach curves to the north and south of the bridge were removed and the new structure was placed on a single 985 foot

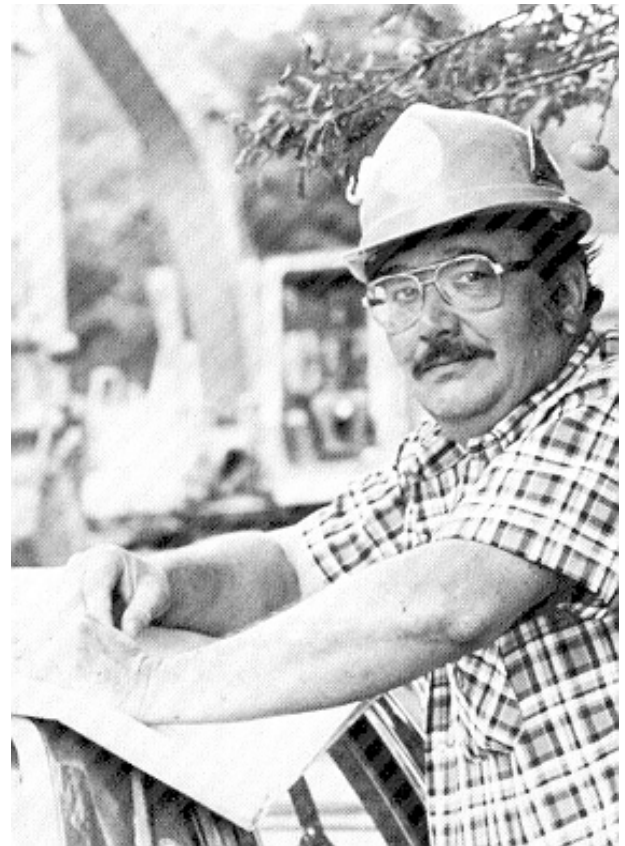
horizontal curve. As a result of the curved bridge alignment a 6 percent superelevation was introduced into the bridge cross section. The new superstructure utilizes eight 39-inch deep by 4 feet wide adjacent prestressed concrete box beams and a 6-inch reinforced concrete deck. The superstructure is supported by new reinforced concrete foundations, abutments, wing walls and back walls.

Stream alignment improvements were made by placing the new abutments on a 15 degree skew with the roadway alignment. This new alignment improves the flow of water through the waterway opening.

The contract for construction was awarded to L.C. Whitford Co, Inc. of Wellsville, the low bidder at \$688,260.00.

A Loss at E&M

All of us at E&M have lost a long time co-worker with the passing of John Simpson.



John was a senior technician and inspector here for over 30 years. He inspected the construction of a great many of our projects all the way from Youngsville, PA to Buffalo, NY. He was a tremendous friend and he will be missed.

Our Land - Joseph Ellicott and the Grand Survey

By: James A. Nearhood, P.L.S.

In my last article I described the hiring of Joseph Ellicott by the Holland Land Company to be their Chief Surveyor. His duty was to superintend the surveying and subdivision of the 3.3 million acre purchase they had made consisting of all of Western New York.

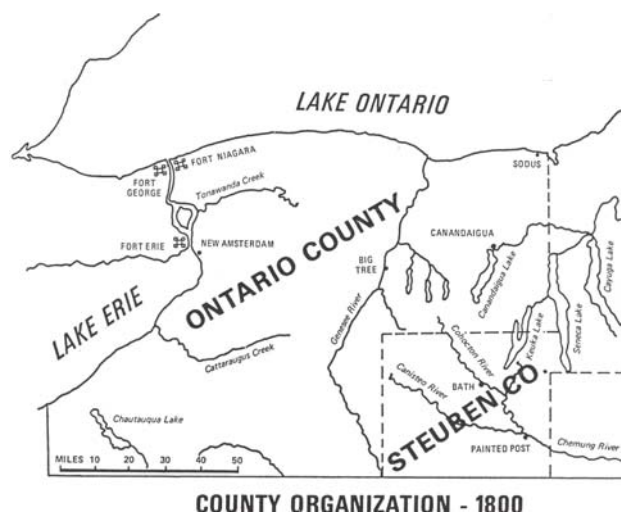
After Ellicott's Fall of 1797 survey of the shore of Lake Ontario, Straits of Niagara and the shore of Lake Erie he concentrated on planning and procurement.

At this time the land was technically still owned by Robert Morris. This required the arrangements to be made with Robert Morris.

Morris's Chief Surveyor was Major Adam Hoops, who then hired August Porter from Connecticut. Porter was well known, had a good reputation and had worked on surveys of large tracts in Central New York.

One Surveyor hired by Joseph Ellicott was his brother Benjamin, who was a Transit Astronomical Engineer, Assistant Survey and Draftsman. Others were Richard M. Stoddard, George Burgess, Ebenezer Carey, Amzi Atwater, Warnham Shepard, John Thompson, John Smedley and George Eggleston.

The Company agent in Philadelphia, Cazenove, then sent two French cartographers (mappers), Haudecour de Jameville and Alexandre Autrechy to help Ellicott. They both started working in the woods in May 1798. Then in July 1798 Major Adam Hoops hired an experienced surveyor Seth Pease to aid in the "Grand Survey". Pease then surveyed and mapped from then to January 1800. He then held the position of company land agent with an office in Mayville.



There are many listings in the area telephone books with these last names and I would assume that many of them could trace their

heritage back to these 1798 surveyors.

William Chazanof said that Joseph was an expert surveyor, painstakingly meticulous and exceptionally industrious, he demanded the same qualities from those who worked with him. He was also plain of habit, frugal in expenditures and orderly in business management. Joseph had the ability to sort out a few worth while goals, concentrate on them and not be distracted by other frivolous endeavors. His younger brother Benjamin was of like single mindedness. I should point out that at this time Joseph never married and neither did Benjamin.

After spending the winter of 1797-1798 planning and organizing a group of men to accomplish goals he again set out for Buffalo Creek in the Spring of 1798. He arrived at the settlement of Buffalo Creek, which he wanted to call New Amsterdam, in March of 1798. It's population of 20 to 25 individuals lived in half a dozen log houses but did have a blacksmith shop and silversmith shop. Joseph's keen eye for good locations told him that the north of Buffalo Creek was the most important position.

One of its most important residents was Asa Ransom, who arrived in 1796 and built a log home near the liberty pole, corner of Main Street and the Terrace. Asa made silver trinkets for trade with the Indians. Asa was to be a great advantage to Joseph in the near future. Joseph lodged with Asa Ransom for a time. Then left some of his outfit at Buffalo Creek for use in the western part of the survey. The rest were taken to Williamsburg, on the Genesee River, where a surveyors' log house had been built. These two points were the first principal stations and depots of the surveyors.

After running the east line of the purchase, Mr. Ellicott spent most of that season, 1798, at Buffalo Creek. "New Amsterdam" as Mr. Ellicott chose to call it. At any one time there were 130 to 150 men working on the survey. They were surveyors, draftsmen, cooks, ax men and camp keepers with enough food, provisions, horses, ox teams, blankets, tents

and equipment to keep it moving for a season from March into December.

The two French cartographers, Jameville and Autrechy were very valuable additions to the expedition. Both worked in the field and in the office drafting.

Haudecour de Jameville's mission was to survey and map the area of the Niagara River between Lake Erie and Lark Ontario. The purpose was to show the feasibility of a canal to be placed mostly in the Niagara River bed. The Niagara Canal Co., chartered on April 2, 1798, was planning to have walls raised for a length of six miles.

Alexandre Autrechy was an exceptional draftsman according to Ellicott who wrote " A business that he performed with great taste and elegance". Autrechy had an artist's eye and embellished his many maps with sketches in his trademark-blue-color. His maps are a part of the cartographic treasures of the early Western New York Frontier.

To be continued....

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