

REPORT OF THE OF SECRETARY OF WAR  
Washington, d. C., January 31, 1858

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14. KALAMAZOO RIVER, MICHIGAN

Under the same authority as in the case of the next preceding harbor, I caused a survey to be made of the mouth of Kalamazoo river in September, 1856. The map projected from that survey, marked G No. 51, was forwarded to the Topographical Bureau with my annual report for 1857. A copy of it is in the archives of the United States Senate.

It shows the nature of the improvement which is desired by the people of the neighboring counties. The report and estimates in this case will be found printed in Senate (Ex .) Doc. No. 42, of the 35th Congress, 1st session at pp 99 and 100

I beg leave to renew the estimate there given in detail, amounting to \$64,099.63

Brevet Lieutenant Colonel James D. Graham,  
major of Topographical Engineers

See pages 99 and 100 of Senate Ex .) Doc. No. 42, of the 35th Congress, 1st session.

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RECAPITULATION OF THE ESTIMATES

*Amount of the estimated cost of the completion of the several lake harbor improvements on the northern and northwestern lakes under the superintendence of Brevet Lieutenant Colonel James D. Graham, major of Topographical Engineers together with the sums asked the first year towards that object.*

Name and nature go work	Required.	Sum Asked.
14 Kalamazoo river Michigan Pier construction close piling and dredging	\$64,099.63.	32,049.81

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35TH CONGRESS HOUSE OF REPRESENTATIVES 1st Session Ex Doc No 23

LAKE MICHIGAN HARBORS OF  
LETTER FROM THE SECRETARY OF WAR  
COMMUNICATING

The last annual report of Lieutenant Colonel J.D. Graham on the harbors of Lake Michigan.

JANUARY 11, 1858, - Referred to the Committee on Commerce and ordered to be printed.

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Map G, No 51, The mouth of Kalamazoo river Michigan from survey made in September 1856

That in relation to Kalamazoo river Michigan, is shown on the accompanying map marked G, No. 51, drawn on the same scale as the other [1/2400 or 200 feet to 1 inch]. The survey here was also made by the same gentleman [assistant, Mr John R. Mayer], between the 2d and 10th of September, 1856 when on the same expedition.

# 14 KALAMAZOO RIVER, MICHIGAN

This river enters Lake Michigan nineteen (19) miles north of the mouth of South Black river, and nine (9) miles south of the mouth of Black river proper. (See the 11th harbor, ante.)

As any map of the State of Michigan will show, this river is about two hundred miles long, following its sinuosities. It has its source in Hillsdale county, Michigan, and its general course is about W.N.W. Its general depth for eight miles from its mouth is eight (8) to twelve (12) feet.

It is navigable at all seasons for boats of 50 to 60 tons as high up as Allegan, a distance of about forty (40) miles.

It flows through the counties of Hillsdale, Jackson, Calhoun Kalamazoo, and Allegan. There is great water power for manufacturing establishments on this river, and a rich surrounding country for agriculture.

The great impediment to business in the navigation is the shoal at its mouth, which prevents the passage between the river and Lake Michigan of vessels drawing more than five feet of water.

It is very desirable that a depth of full eight (8) feet should be secured over or through this shoal at all times.

For this purpose two rows of close piling of piles 1 foot square and ten feet apart, with the intermediate spaces filled with plank piles of white oak four (4) inches thick, and the whole bound together by longitudinal caps and stringers, to be placed just above the mouth of the river as is drawn in red dotted lines upon the map and two parallel piers projecting from the mouth of the river into the lake, as is also drawn in red dotted lines upon the map, with a channel way between them two hundred and fifty (250) feet wide, would, I would suggest be sufficient.

The channel, being thus confined to a uniform bed of the width represented, would afford scour enough to keep down the shoals when once dredged away, at least with the aid of a moderate degree of annual dredging.

Here the piers are drawn of equal length, being each 736 feet long, requiring for each pier 23 cribs, or for both piers 46 cribs, each 32 feet long, 20 feet wide, and 8 feet high from the bottom to the water surface, or 13 feet high from the bottom to the flooring at top. These cribs will be similar in all respects as those proposed in the preceding case for South Black river, which were estimated to cost \$1,153.81.

At this rate, the 46 cribs for Kalamazoo will cost ..... \$53,075.26

There will be for both sides of the river 2,610 lineal feet

of close piling at \$3 per foot ..... 7,830.00

For dredging 25,555 cubic yards of sand to give a channel 8 feet

deep throughout from that present depth in the river to the

same in Lake Michigan at 12 1/2 cents per cubic yard. ....3,194.37

Amount required for the improvement at the mouth of

Kalamazoo river, Michigan ..... \$64,099 63