SEVENTY-SIXTH LEGISLATURE

HOUSE NO. 656

House of Representatives, March 25, 1913.

Reported by Mr. Butler from Committee on Ways and Bridges, and ordered printed under joint rules.

W. R. ROIX, Clerk.

STATE OF MAINE

RESOLVE in favor of the reconstruction of the easterly span of the Old Town-Milford Bridge.

Resolved, That the sum of sixty-two thousand four hun-
2 dred dollars ($62,400.00) be appropriated for the recon-
3 struction of the easterly span of the Old Town-Milford
4 bridge; said construction to be under the direct supervision
5 of the state highway department, on the location as recom-
6 mended by the committee appointed to investigate the same.

STATEMENT OF FACTS, ON THE EASTERLY OLD TOWN BRIDGE, ACROSS THE PENOBSCOT RIVER.

A report was rendered on this bridge dating back to November 14, 1910, and February 3, 1911, by E. E. Greenwood. The bridge was then reported as in bad condition and the matter was reported to the 1911 Legislature, but no definite action was taken.

The municipal authorities of the city of Old Town threatened to close the bridge, considering it dangerous to travel and some action should be taken by the State immediately. Accordingly, a meeting of the Governor and Council, together with W. H. Norris, engineer of the Maine Central Railroad, E. E. Greenwood, of Skowhegan, and the highway commissioner, met at Old Town, on October 17, 1912, for the purpose of examining both the easterly and westerly span of the bridges across the river. As a result of that investigation the westerly bridge was ordered reconstructed on November 11, 1912, and a contract was entered into with the Penn Bridge Company of Beaver Falls, Pa., for a steel bridge, and with Hartwell and Connors, of Old Town, for the concrete work, and the Governor and Council further instructed that repairs be made on the easterly span, as it was generally considered and also by the engineers that this should be done without delay. Repairs were accordingly made, costing approximately $1,700.00. The bridge was in such bad condition that it was found necessary even to strengthen it temporarily to make it a single-track bridge, so that at the present time only one team can cross the bridge at one time.

The bridge was stripped of all unnecessary dead load, including roof, side-boards and every part which did not add to the strength of the structure, so that the bridge is considered safe temporarily.

After an examination of the location of the bridge together with a possible location above the Maine Central Railroad bridge, it was the unanimous opinion of the engineers that it would be advisable to change the location to a point above the

railroad bridge, thereby avoiding two grade crossings of the Maine Central Railroad; consequently, under authority from the Governor and Council, dated November 11, 1912, a survey was made of that site and I am prepared to make a report of the engineer, E. E. Greenwood. Following is a copy of his report.

Attached is copy of the report of Walter H. Norris, bridge engineer for the M. C. R. R. Company.

Skowhegan, Me., Jan. 11, 1913.

P. L. Hardison, Esq.,
State Highway Commissioner,
Augusta, Maine.

Dear Sir:

Enclosed herewith is estimate of cost of highway bridge over east channel of river at Old Town, and on new site above railroad bridge.

This estimate assumes that we use practically the same span lengths as those of the railroad bridge and extend their piers and abutments for the highway bridge.

I have estimated for the same width and capacity bridge as that now being built over the west channel.

In the estimate for the approaches I have provided for grading the entire approach on the Island end and for about 80 feet from the end of the bridge on the east end. It would cost $500 or $600 more to extend the new road to a connection with the old road.

E. E. GREENWOOD,
Civil Engineer.

ESTIMATE OF COST OF EAST BRIDGE, OLD TOWN, MAINE, ON NEW SITE ABOVE RAILROAD BRIDGE.

30-ft. roadway, two sidewalks, 6 ft. and 4½ ft. wide.
Class "A."

700 cu. yds. abutment masonry @ $10	$7,000 00
750 cu. yds. pier masonry @ $12	9,000 00
Superstructure, 3 spans	34,000 00
Approaches, 7,000 cu. yds. fill @ 60c	4,200 00
Engineering, 5%	2,700 00
	$56,900 00

E. E. GREENWOOD,
Civil Engineer.

STATE OF MAINE.

IN COUNCIL, Nov. 11, 1912.

Ordered:

That the State Commissioner of Highways is hereby authorized and directed to advertise for bids for the reconstruction of the west bridge, between Old Town and Milford, and to proceed with the work of reconstruction as soon as practicable, in accordance with the recommendation of the committee appointed by the Governor to investigate the condition of this and other bridges between the city and town above named.

It is further ordered that the State Commissioner of Highways is hereby authorized and directed to at once proceed with surveys, plans and estimates for the reconstruction of the east bridge, between Old Town and Milford, in accordance with the recommendation of said committee.

The expense of reconstruction of the west bridge and of the surveys, plans and estimates for reconstruction of the east bridge shall be paid from the unexpended balance in the treasury, in accordance with Chapter 224 of the Resolves of 1911.

EDWARD B. WINSLOW.

IN COUNCIL, Nov. 11, 1912.

Read and passed by the Council, and by the Governor approved.

CYRUS W. DAVIS,
Secretary of State.

A true copy, Attest:
J. E. ALEXANDER,
Deputy Secretary of State.

Portland, Maine, October 16, 1912.

Mr. Hardison,
State Highway Commissioner,
Augusta, Me.

Dear Sir:

Yesterday I examined the two bridges at Old Town in compliance with your request of October 14th, and beg to report as follows:

The first bridge visited was the one over the westerly channel. It is a covered spruce single lattice structure, 229 feet long and 23 feet wide, supported at the ends by abutments laid dry. It is divided into three spans of 94 feet, 80 feet and 55 feet respectively, by light framed trestle bent supports which rest on low rock filled cribs.

It is not necessary for me to give the history of the bridge, but I will refer to the fact that a recent flood broke off the bottom chords and lower part of the web system of both trusses.

The present floor is supported on the second lower chord and a new chord was bolted to the web above the floor.

As to the present condition and carrying capacity of the bridge, I will say the framed bents are badly decayed and the caps crushed and broken by the weight of the bridge and are liable to complete failure at any time. The floor beams are shallow and therefore, limber. Under heavy concentrated loads they are over-strained.

The trusses are badly out of line, laterally and vertically. The only bracing between them is inefficient top laterals. There is no bottom lateral bracing whatever. The lack of efficient bracing is accountable for the poor alignment of the trusses.

The trusses, having lost part of their original depth and strength, show decided signs of weakness by the opening of all the joints in the tension chords which are not spliced.

I consider this bridge beyond permanent repair and not worth spending much money on even for temporary repair.

I recommend that the frame bents be renewed and that the roof and side covering be taken off to relieve the bridge of that dead load.

This winter the excess of snow and ice should be removed. Team travel should be limited to a walk.

I further recommend that the bridge be rebuilt not later than next spring.

The bridge over the east channel is 24 feet wide and 340 feet long. Like the first bridge, it is through, spruce, single lattice truss.

The abutments and piers are of split granite laid dry and are in fair condition. The easterly abutment is bulging. All the trusses are in very bad condition. As there is no bottom lateral system of bracing, the trusses, especially on the long span, are very badly out of line. The trusses are very much out of plumb and badly overstrained.

I consider the bridge unfit to carry travel with any margin of safety.

For immediate temporary repairs, I would recommend shortening the spans by putting substantial frame bents under them and re-enforcing the web system near the supports. I would also recommend removing the roof and side covering to relieve the bridge of all load possible.

This bridge should be built without delay.

Yours truly,

WALTER H. NORRIS,
Bridge Engineer.

ESTIMATE OF DAMAGE FOR THE NEW LOCATION.

The estimated amount of damage for acquiring rights of the new location as recommended by committee's report is approximately $7,500.00.

The owners of property along this new location have been approached by Mr. O'Connell and the above amount is as per figures received by him.