

MAINE STATE LEGISLATURE

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SEVENTY-NINTH LEGISLATURE

SENATE

NO. 154

In Senate, Mar. 4, 1919.

. Communication from Secretary of State transmitting report of Joint Bridge Commission, Kittery Interstate Bridge.

Tabled by Senator Davies of Cumberland and 1,000 copies ordered printed.

P. F. CRANE, Secretary.

STATE OF MAINE

IN THE YEAR OF OUR LORD ONE THOUSAND
NINE HUNDRED AND NINETEEN

To the Honorable Senate and House of Representatives:

I have the honor to transmit, herewith, the report of Joint Bridge Commission appointed by the legislature of New Hampshire and by the legislature of Maine to investigate the question of an interstate highway or free bridge between Portsmouth, New Hampshire, and Kittery, Maine.

Very respectfully yours,

FRANK W. BALL,

Secretary of State.

REPORT OF JOINT BRIDGE COMMISSION APPOINTED BY THE LEGISLATURE OF NEW HAMPSHIRE AND BY THE LEGISLATURE OF MAINE TO INVESTIGATE THE QUESTION OF AN INTERSTATE HIGHWAY OR FREE BRIDGE BETWEEN PORTSMOUTH, NEW HAMPSHIRE, AND KITTERY, MAINE.

To the Legislatures of New Hampshire and Maine:

The legislature of Maine, by chapter 82 of the resolves of 1917, approved April 6, 1917, authorized the State Highway Commission, under direction of the governor and council, to act in conjunction with any department or commission authorized by the state of New Hampshire in making surveys, plans and estimates for an interstate bridge across the Piscataqua river between Kittery, Maine, and Portsmouth, New Hampshire.

The legislature of New Hampshire, by chapter 246, acts of 1917, approved April 18, 1917, appointed His Excellency Honorable Henry W. Keyes, Honorable Jacob H. Gallinger and Honorable Calvin Page a commission to act with the State Highway Commission of Maine, and conferred upon them powers and duties similar to those set forth for the highway commission of Maine.

Upon request of His Excellency, Henry W. Keyes, governor of New Hampshire, a meeting of the two commissions was held in Portsmouth, New Hampshire, on October 10, 1917. The two commissions proceeded to organize a joint commission

and elected the Honorable late Jacob H. Gallinger, United States Senator from New Hampshire, as chairman, and Paul D. Sargent, chief engineer of the Maine State Highway Commission, as secretary.

The commission first proceeded to familiarize themselves with the history of the present toll-bridge between Portsmouth, New Hampshire, and Kittery, Maine, and for this purpose consulted a report of the bridge commissioners of the state of New Hampshire to the legislature dated December 31, 1906. We quote from that report as follows:

“The Portsmouth bridge crosses the Piscataqua river, a little above the Kittery Navy Yard from Portsmouth, N. H., to Kittery, Me. It has been in existence as a toll-bridge about eighty-five years, and was originally chartered in three states, viz:

“First. By the state of New Hampshire in 1819.

“Second. By the state of Massachusetts in 1820.

“Third. By the state of Maine in 1821; very soon after Maine became a state of the Union.

“The bridge has been operated as a toll-bridge ever since that time by the ‘Proprietors of the Portsmouth bridge.’

“In 1841 the ‘Eastern Railroad in New Hampshire’ acquired the ownership of its capital stock and of the bridge, and operated it for about twenty years for the tracks of their railroad, and as a highway, maintaining it, and collecting tolls for all passengers and traffic over it for all purposes, except by the railroad trains

“About 1880 the Boston & Maine Railroad absorbed the Eastern Railroad in New Hampshire, and succeeded to the ownership, use and control of the Portsmouth bridge, and has since used it as a railroad bridge, and a toll-bridge for passengers and traffic.

“It is the only bridge connecting New Hampshire and Maine at this point, and for all the lower reach of the Piscataqua. The only other means of communication here between New Hampshire and Maine is by boat, regular or chance, plying between Portsmouth and the navy yard, or by a ferry run by the Atlantic Shore Line.

“This bridge is in two sections, or divisions and extends from Portsmouth to Noble’s Island, 500 feet, thence over the main channel to Kittery, 1,650 feet, making the whole length 2,150 feet, by 40 feet in width.

“It is an ordinary open, railed, wooden bridge, on piles, having a draw, and originally cost \$40,000 in days when such constructions were much less expensive than now.

* * * * *

“It may not be unimportant to remark here that the original charter of this bridge contains no clause that the legislature may alter or amend it. The charter reserves no such right, and therefore is perpetual, it being necessary, as we view the law, to have such rights received expressly, as they have been generally since 1831, in order to invest the legislature with authority to amend or change without the consent of the proprietors. This indicates the protection these ancient charters can, and

probably would, claim against any action of the public which should not meet with their acquiescence.”

At this meeting Mr. Page referred to a decision in the seventeenth New Hampshire reports, page 200, Dover vs. the Portsmouth Bridge Company, in which more or less historical data in connection with the bridge are found.

The commission learned at this meeting from a representative of the Boston & Maine Railroad, owners of the present toll bridge, that the Railroad Company had in contemplation the construction of a new bridge to take the place of the present structure. In fact, the railroad company has made considerable preliminary investigation with respect to possible sites for a bridge between Portsmouth and Kittery and would be glad to lay such information as they have in their possession before this commission. It was accordingly decided to hold a meeting at the offices of the Boston & Maine Railroad on October 26 for the purpose of looking over data in the possession of the railroad company.

The commission at this meeting of October 10 made a personal inspection of various possible sites for a bridge between Portsmouth and Kittery.

At the meeting of the commission in Boston on October 26 the chief engineer of the Boston & Maine Railroad laid before the commission tentative schemes for a new bridge across the Piscataqua river. The one which seems the most feasible from the point of view of the railroad company is for a new bridge a few hundred feet south of the present structure. This

scheme contemplates a double-deck bridge to accommodate railroad and highway traffic, the highway traffic to take the upper floor of the structure. The design of the approaches to the highway portion of the bridge is very bad, being on a five per cent grade with sharp curves. The commission decided that this scheme would be entirely unfeasible for highway purposes. It was pointed out by one of the representatives of the Boston & Maine Railroad that their charter granted the right to the Toll Bridge Company to build and maintain a bridge across the Piscataqua river at any place on the margin of said river between Rindge's wharf and the town of Newington, and that should a bridge be located within those limits it would be necessary to purchase from the railroad company their franchise to build on such location.

After coming to this conclusion the commission discussed possible sites for locating a bridge to accommodate the highway traffic between Portsmouth and Kittery and between Maine and New Hampshire, and were of unanimous opinion that the only site which would fulfill the requirements would be a location south of Rindge's wharf on the New Hampshire shore from Brewery wharf in Portsmouth, crossing the southern end of Badger's Island, and thence to the Maine shore to connect with New Armory street in Kittery.

This location leaves the New Hampshire shore a short distance from the business center of the city of Portsmouth and is the most direct line between Portsmouth and the navy yard in Kittery upon which it is possible and practical to construct

a bridge. A considerable portion of the business of Portsmouth comes from the navy yard. Practically ninety per cent, of the employees of the yard live in the city of Portsmouth and a large amount of government supplies are handled between Portsmouth and the navy yard. For a full statement with respect to this point, reference is made to report of Admiral C. J. Boush, commandant of the Portsmouth Navy Yard, to the secretary of the navy under date of November 30, 1918, which appears later in this report.

A bridge at this location will accommodate the interstate traffic between Maine and New Hampshire better than any other possible site viewed by the commission.

At this meeting the question of making an engineering study for a bridge at this site was discussed. It was deemed unwise at the present time to expend a large amount of money for engineering investigation work, and it was finally concluded that the engineering department of the State Highway Commission of Maine should proceed to collect such data as is available and to make a design and estimate for a bridge at this location.

The above work was undertaken on the basis just outlined and tentative plans and estimates were prepared during the summer of 1918. Data with respect to foundation conditions were secured from the United States District Engineer's office at Portland, Maine, and of course are only general. It must be clearly borne in mind that no special soundings, borings or investigation of any kind have been made as to the character of the river bottom. Consequently, estimates are general but are

believed to be sufficient to meet any conditions which may exist. However, the item for contingencies in these figures is very small as no worse foundation difficulties can be encountered than have been anticipated. It being uncertain as to the character of the traffic or other conditions that federal government and the navy yard might deem wise to provide for, the heaviest possible loading, even including a train of loaded coal cars, has been provided for. This provides a bridge sufficiently strong to carry the heaviest type of ordnance or equipment that could be handled at the navy yard. The bridge has been designed to carry the most modern type of bridge floor construction. Based on the prices of labor and material that existed in the summer of 1918, it is apparent that this bridge would cost somewhat less than three million dollars, but this figure is being steadily reduced owing to the falling tendency of the labor and material market.

Realizing that the federal government have a commanding interest in the location and carrying capacity of a bridge at this point, a hearing was arranged with the secretary of the navy early in December 1918. As a result of this hearing the secretary expressed himself as being in sympathy with the project, and arrangements were made for laying the whole matter before the naval affairs committee of the House of Representatives.

At this hearing, which was attended by representatives of the joint commission, Secretary Daniels made a very splendid statement as to the interest of the navy department in this project. The secretary presented to the committee a report

from Admiral C. J. Boush, Commandant, Portsmouth Navy Yard, which so well explains the government's interest in the construction of a new bridge that the report is reproduced herewith :

United States Navy Yard,
Portsmouth, N. H., November 30, 1918.

“From: Commandant.

To: Secretary of the Navy.

Subject: Proposed free highway bridge between Portsmouth,
N. H., and Kittery, Me.

References: (a) Department's letter 7940-488, Nov. 18, 1918.

(b) Proposed interstate bridge between Ports-
mouth, N. H., and Kittery, Me.

1. In compliance with instructions contained in reference (a) the commandant has communicated with the secretary of the highway commission and recommends the site proposed in reference (b), inclosed herewith, for the following reasons :

It will reduce the distance between the navy yard entrance and Portsmouth to one mile, which should relieve the navy yard of any concern as to transportation of passengers.

2. The actual saving in money to the navy is impossible to determine. There will be some direct savings that can be figured, but there are many indirect savings and advantages that manifestly can only be guessed at or very roughly estimated.

3. By the existing Boston & Maine Railroad toll-bridge the distance between Market square, Portsmouth, N. H., and the navy yard is slightly over two miles. This distance will be

practically cut in half by the route over the proposed free highway bridge.

4. The direct savings to the navy in tolls and truckage are estimated to be as follows, the figures taken being the averages of past expenditures :

Cost of tolls for industrial and supply department, and also marine barracks and naval prison, teams and trucks per annum.....	\$1,148 64
Savings in expense of delivering material by local contractors to the navy yard, per annum.....	1,620 00
	<hr/>
	2,768 64

This saving is effected by the elimination of tolls and by the shorter haul. It has been taken as 50 per cent of the cost of past deliveries, which is considered to be a conservative figure.

Saving in cost of operation of navy trucks and automobiles to and from Portsmouth (including tolls for same, which have been placed under item one) (due directly to the shorter haul, and is figured on the basis of the actual cost of operation per mile) per annum.....	\$2,361 84
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Total direct saving due to elimination of tolls and due to shorter haul for supplies, etc., per annum	5,130 48
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5. In addition to the foregoing there will be indirect savings and disadvantages as follows :

Savings in railroad fares to yard employees.—At present there are something over 2,000 employees that come from the city of Portsmouth to the navy yard by train, the distance being too far at present to walk. There are, also, something over 500 that come by gasoline launches. It is considered a conservative estimate to say that at least three-quarters of these employees would walk from Portsmouth to their work in the navy yard if a free bridge were provided, making the distance between Portsmouth and the navy yard only about one mile. On a peace basis, it is considered that there will still be in the neighborhood of 2,000 men taking the train and about 520 taking the boats. The fare by train is about $5\frac{1}{2}$ cents each way, or 11 cents round trip. Assuming that three-quarters of these employees will walk if there is a free highway bridge, as proposed, the saving in railroad and boat fares to the employees will amount to more than \$64,000 per annum. In addition to this, numbers of employees come by automobile across the toll-bridge. A very important point in this connection is the increased satisfaction and contentment on the part of the working force of the navy yard which, in itself, has a vital bearing upon the general efficiency of the work. It is understood that the employees have for some time been endeavoring to obtain free transportation from Portsmouth to the navy yard. The saving to the government by such increased satisfaction and contentment will, no doubt, be large, but it is impossible to estimate it. This yard has always had more or less difficulty in obtaining an adequate working force, and this is believed to be due in part to its isola-

tion. Furthermore, during severe weather in the winter, much time is lost, due to delays and stoppages of transportation by rail and water, particularly so during the past winter. This results in decided loss to the navy yard work, and this would be eliminated by the free bridge as proposed. The advantage to the employees, themselves, is considered a point of great importance in the consideration of the construction of this bridge, and this works indirectly to the advantage of the government also.

Elimination of ladder track recently authorized within the navy yard.—The problem of adequate transportation for navy yard employees has within the past two years been particularly serious. This has been the subject of several communications with the navy department, and there have been many conferences with the Boston & Maine Railroad officials in an effort to solve the problem which has, at best, been solved only with fair satisfaction. In order to accommodate the Boston & Maine trains within the yard, a ladder track has recently been authorized along Goodrich avenue, at an estimated cost of \$20,000. This can be immediately eliminated if the proposed highway bridge is to be constructed at an early date.

Fire protection.—The fire protection of the navy yard is not adequate, and this has been the subject of much correspondence with the navy department. The proposed highway bridge would make the Portsmouth fire department readily accessible for fighting fire in the navy yard. It is possible that at some time this would prevent the loss of much money and property to the navy.

Unreliability and dangerous condition of existing toll-bridge.—The existing toll-bridge is of wood construction, and it is considered hardly safe to count upon it as a permanent bridge. Last winter a portion of it was carried away by ice, and the whole bridge was saved only with the greatest difficulty and by the assistance of the navy yard tug and men from the yard. Traffic was interrupted while the bridge was in danger of being carried away and also while repairs were being made. This same thing is likely to happen again. In fact, it is possible that the whole bridge might be carried away. A similar bridge a few miles above it was partly destroyed by the ice, and it required several months to replace it. Should the existing toll-bridge be carried away, a serious interference with the work of the yard would result.

Advantages to enlisted men of ships at the yard.—Under existing conditions yard transportation to and from the city of Portsmouth is very unsatisfactory, except on the morning and evening trains for the yard employees, which are not available for enlisted men. Enlisted men have to take either gasoline launches or an unsatisfactory trolley line, connecting with a steamer which crosses the river. This is not only inconvenient for them, but it involves cost to them in getting to and from Portsmouth. A free bridge would be of distinct advantage to them.

Reduced ferry launch service.—Owing to the unsatisfactory and difficult transportation to and from Portsmouth, an elaborate ferry launch schedule is necessary between the navy

yard and the city of Portsmouth. The ferry launch is used by the enlisted men of this station and the officers and others living in the navy yard and also by some of the employees, such as clerical and drafting forces, foremen, etc. It is also used for yard workmen and employees on night shifts and when other forms of transportation are not available. The ferry launches are, however, limited in their capacity and are not available to the large body of yard employees as a whole nor to the numbers of enlisted men from ships at the yard. The whole cost of water transportation is averaging about \$39,615 per annum. It is estimated that about \$32,000 of this is for the ferry launches. It is considered that if a free highway bridge were available, the ferry schedule could be materially reduced if not entirely abandoned, and a corresponding direct saving to the navy would be effected.

6. It is understood that the proposed new bridge is to be of substantial construction on concrete piers and will be constructed at a height of about 50 feet above the water. This would be a considerable asset during peace and might be a very vital factor during war and the possible damage to or destruction of the existing old wooden bridge. Furthermore, the delays on the old bridge, due to the frequency of the draw being open, would be largely eliminated by the new bridge, which will be considerably higher above the water.

7. The commandant is of the opinion that a new highway bridge such as is proposed would be of great advantage to the

navy yard and its work, although the actual saving in money cannot definitely be determined. The potential advantages of such a bridge would be very great. The swift currents in the Piscataqua river make water transportation difficult and dangerous.

C. J. BOUSH.”

The outcome of this hearing was a recommendation by the secretary that the government ought to participate in the construction of this bridge to the extent of one-third of its cost. Members of the committee then informed the representatives of the bridge commission that the government could not undertake legislation looking toward an appropriation until Congress has before it a definite proposition from the two states as to exactly what they will do by way of appropriations.

Conclusions and Recommendations.—This commission is prepared to state as a result of its study of this question that the present bridge between Portsmouth, New Hampshire, and Kittery, Maine, is obsolete and entirely inadequate and unsuited for present day traffic. It is a menace to the travelling public. We believe that every statement set forth in the report of Admiral Boush is equally applicable to the general traffic using this bridge. We believe that a careful compilation of statistics as to general highway traffic crossing the present bridge would indicate a much larger saving to the general public than Admiral Boush's report indicates will accrue to the federal government by reason of having a free bridge.

We recommend that the legislature of each state appropriates

the sum of five hundred thousand dollars, to be available during the years of 1919 and 1920, for the purpose of constructing a new highway or interstate bridge to be of modern construction.

CALVIN PAGE, Chairman,

HENRY W. KEYES,

L. H. SHATTUCK,

P. J. DEERING,

W. M. AYER,

FRANK A. PEABODY,

Joint Bridge Commission of Maine and New Hampshire.

February 12, 1919.