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David L. Narver, Jr.
Jobsite

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H. L. Dietze

Marine Railway - Memo O/S 7582 dated 2-19-54

March 2, 1954

With regard to the subject memorandum we wish to make the following comments in answer to your questions.

1. The piling under the gantry rail are located on 5-foot centers. We have been advised by the Crane Hoist Engineering Corp. that the loading for a 75-ton gantry crane is 62.5 tons for each of the four legs. Each leg is supported on two wheels which are located 3 feet apart with the trucks spaced 20 feet on center along each rail. Assuming that the trucks of the second gantry will not come any closer than 20 feet from the first gantry, the present wood piling will take such a load. It would be necessary, however, to construct a new wood beam reinforced with steel on which the gantry crane rail would be placed. We were advised by Dames & Moore that based on the pile driving data each pile should support 20 tons.

2. In order to spread the 62.5 tons over four piles, the existing rail girder must be strengthened, and it is recommended that the 12" x 12" immediately beneath the 80-pound rail be replaced by a 14" x 16" O.P. girder, flanked either side with a 15" x 33.9# steel channel, bolted through the timber with two staggered lines of 3/4" bolts, each line 15" on center.

3. Mr. Mason, president of Crane Hoist Engineering Corp., has advised me that the existing 25-ton gantry cannot be modified to take a 75-ton load.

4. Mr. Mason also advised me that the cost of a 75-ton gantry crane, with same characteristics as the existing crane, would be approximately $100,000.

You will note that the load on each leg of 62.5 tons for a 75-ton gantry crane may seem exessive. This load is based on the assumption that the maximum load is lifted in the position nearest the gantry crane rail.

Original signed by
H. L. DIETZE

H. L. Dietze
Project Engineer

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cc: Resident Engineer JS
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