



DEPARTMENT OF THE ARMY
CHIEF OF ENGINEERS
2600 ARMY PENTAGON
WASHINGTON, DC 20310-2600

DAEN

MAR 16 2016

SUBJECT: Craig, Alaska, Navigation Improvements Project

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on navigation improvements in the vicinity of Craig, Alaska. It is accompanied by the report of the district and division engineer. This report was prepared in partial response to Section 204 of the Flood Control Act of 1948 and a resolution by the Committee on Public Works of the House of Representatives, adopted 2 December 1970. Section 204 of the Flood Control Act of 1948 authorized and directed the Chief of Engineers to determine the advisability of improvements in the interest of navigation in Alaska. The study resolution requested a review of the report of the Chief of Engineers on Rivers and Harbors in Alaska, published as House Document 414, 83rd Congress, and other pertinent reports, with a view to determine whether any modifications of the recommendations contained therein are advisable. Preconstruction engineering and design activities, if funded, would be continued under the authority provided by the resolution cited above.

2. The reporting officers recommend authorizing a project to improve navigation access at Craig, Alaska. Based on an economic evaluation of alternative plan costs and economic benefits, alternative 2b was identified as the plan that reasonably maximizes net national economic development benefits consistent with protecting the Nation's environment. The project consists of approximately 1,900 feet of breakwater protecting a 10.1-acre mooring basin.

a. The breakwater has two sections with a 300-foot breakwater extending from the northwest tip of Craig Island and a 1,600-foot long breakwater in an "L" shape. This configuration provides protection from southerly long-period swell and northerly short-period waves and provides 3 feet of water for fish passage during 95 percent of tides commensurate with National Marine Fisheries Service recommendations for essential fish habitat. The breakwaters are constructed of rock fill with armor stones that average about 1 ton. The breakwaters would have side slopes of 1V on 1.5H and a crest width of 7 feet at elevation 18 feet NAVD88.

b. Construction of the recommended plan includes placement of 208,000 cubic yards of associated rock for the breakwaters and installation of floats sufficient to provide moorage to 145 vessels ranging from 20 feet to 140 feet in length.

c. Determination has been made that no compensatory mitigation is needed as there are no impacts to significant resources.

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3. Project Costs Breakdown based on October 2015 Prices.

a. Project First Cost. The estimated project first cost is \$32,317,000, which includes the cost of constructing the General Navigation Features (GNF) and the lands, easements, rights-of-way, and relocations (LERR) estimated as follows: \$32,291,000 for GNF; \$26,000 for the value of LERR (except utility relocations) provided by the non-federal sponsor; and, as applicable if the project involves a deep draft harbor.

b. Estimated federal and non-federal shares. The estimated federal and non-federal shares of the project first cost are \$29,062,000 and \$3,255,000 respectively, as apportioned in accordance with cost sharing provisions of Section 101 of the Water Resources Development Act (WRDA) of 1986, as amended (33 U.S.C. 2211), as follows:

(1) The cost of GNFs less than 20 feet Mean Lower Low Water will be shared at a rate of 90 percent by the government and 10 percent by the non-federal sponsor.

(2) The entire \$26,000 for LERR is eligible for credit.

c. Additional 10 Percent Payment. In addition to the non-federal sponsor's estimated share of the total first cost of construction of the project in the amount of \$3,229,000, pursuant to Section 101 of WRDA 1986, as amended, the non-federal sponsor must pay an additional 10 percent of the costs for GNFs of the project, \$3,229,000, in cash over a period not to exceed 30 years, with interest. The value of LERR will be credited toward this payment.

d. Operations and Maintenance Costs. Operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) of the project after construction will have average annual federal costs of \$39,000. There are no anticipated federal costs associated with maintaining the launch area or non-federal OMRR&R costs associated with the local service facilities.

e. Local Service Facilities. The associated cost for local service facilities is approximately \$4,128,000, which consists of demolishing an existing pier and piles and constructing gangways and floats. Aids to Navigation were calculated at \$18,000 and are an associated federal cost. These costs are 100 percent non-federal and are not included in the project first costs, although they are considered in the total construction costs of \$36,463,000 for purposes of economic analysis.

f. Authorized Project Cost and Section 902 Calculation. The project first cost, for the purposes of authorization and calculating the maximum cost of the project pursuant to Section 902 of WRDA 1986, as amended, includes estimates for GNF construction costs, the value of LERR provided under Section 101(a)(3) of WRDA 1986, as amended. Accordingly, as set forth in paragraph 3(a) above, based on an October 2015 Price Level, the estimated project first cost for these purposes is \$32,317,000 with a federal share of \$29,062,000 and a non-federal share of \$3,255,000.

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4. Based on October 2015 price levels, a 3.125-percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be \$1,536,000, including OMRR&R. Equivalent annual National Economic Development (NED) benefits are estimated at \$1,897,000, for a benefit to cost ratio of 1.24 to 1 with average annual net benefits amounting to \$361,000.

5. Risk and uncertainty were evaluated for economic costs and sea level rise. In accordance with the Corps Engineering Circular on sea level change the study analyzed three sea level rise rates; low (baseline), intermediate, and high. The baseline, intermediate, and high sea level rise values at the end of the 50-year period of analysis were projected to be -0.04 ft., 0.43 ft., and 1.93 ft., respectively. In general, regional sea level rise (baseline, intermediate, and high) will not affect channel availability or the function of the project which is designed for overtopping.

6. In accordance with the Corps Engineering Circular on review of decision documents, all technical, engineering and scientific work underwent an open, dynamic and vigorous review process to ensure technical quality. This included District Quality Control, Agency Technical Review, policy and legal compliance review, and Cost Engineering Directory of Expertise review and certification. Overall the reviews resulted in improvements to the technical quality of the report.

7. Washington level review indicates that the plan recommended by the reporting officers is technically sound, environmentally and socially acceptable, economically justified, and policy compliant. The views of interested parties, including federal, state and local agencies have been considered.

8. I concur in the findings, conclusions, and recommendations of the reporting officers, which identify the NED plan in accordance with applicable laws and policies. Accordingly, I recommend that the cost efficient plan for improved navigation access to Craig, Alaska be authorized in accordance with the reporting officers' recommended plan at an estimated cost of \$32,317,000 with such modifications as in the discretion of the Chief of Engineers may be advisable. My recommendation is subject to cost sharing, financing, and other applicable requirements of federal and state laws and policies, including Section 101 of WRDA 1986, as amended. The non-federal sponsors would provide the non-federal cost share and all LERR. This recommendation is subject to the non-federal sponsors agreeing to comply with all applicable federal laws and policies including that the non-federal sponsors must agree with the following requirements prior to project implementation.

a. Provide, during the periods of design and construction, a cash contribution equal to the following percentages of the total cost of construction of the GNF (which include the construction of land-based and aquatic dredged material disposal facilities that are necessary for the placement of dredged material required for project construction or operation and maintenance and for which a contract for the federal facility's construction or improvement was not awarded on or before October 12, 1996):

- (1) 10 percent of the costs attributable to dredging to a depth not in excess of 20 feet;

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(2) 25 percent of the costs attributable to dredging to a depth in excess of 20 feet but not in excess of 45 feet;

b. Provide all lands, easements, and rights-of-way, including those necessary for the borrowing of material and the disposal of dredged or excavated material, and perform or ensure the performance of all relocations, including utility relocations, all as determined by the Federal Government to be necessary for the construction or operation and maintenance of the GNF, all in compliance with applicable provisions of the Uniform Relocation and Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 U.S.C. 4601-4655) and the regulations contained in 49 C.F.R. Part 24;

c. Pay with interest, over a period not to exceed 30 years following completion of the period of construction of the GNF, an additional amount equal to 10 percent of the total cost of construction of the GNF less the amount of credit afforded by the government for the value of LERR, including utility relocations, provided by the non-federal sponsor for the GNF. If the amount of credit afforded by the government for the value of LERR, including utility relocations, provided by the non-federal sponsor equals or exceeds 10 percent of the total cost of construction of the GNF, the non-federal sponsor shall not be required to make any contribution under this paragraph, nor shall it be entitled to any refund for the value of LERR, including utility relocations, in excess of 10 percent of the total cost of construction of the GNF;

d. Prevent obstructions or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) such as any new developments on project lands, easements, and rights-of-way or the addition of facilities which might reduce the outputs produced by the project, hinder operation and maintenance of the project, or interfere with the project's proper function;

e. Provide, operate, and maintain at no cost to the government, the local service facilities including docks, floats, local access channels, mooring areas, etc.; in a manner compatible with the project's authorized purposes and in accordance with applicable federal and state laws and regulations and any specific directions prescribed by the Federal Government;

f. Hold and save the United States free from all damages arising from the construction or operation and maintenance of the project, any betterments, and the local service facilities, except for damages due to the fault or negligence of the United States or its contractors;

g. Perform, or ensure performance of, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. 9601-9675, that may exist in, on, or under lands, easements, and rights-of-way that the Federal Government determines to be necessary for the construction or operation and maintenance of the GNF. However, for lands, easements, and rights-of-way that the government determines to be subject to the navigation servitude, only the government shall perform such investigation unless the Federal Government provides the non-federal sponsor with

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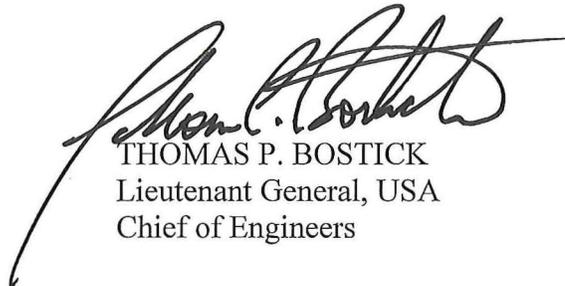
prior specific written direction, in which case the non-federal sponsor shall perform such investigations in accordance with such written direction;

g. Assume complete financial responsibility, as between the Federal Government and the non-federal sponsor, for all necessary cleanup and response costs of any hazardous substances regulated under CERCLA that are located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the construction or operation and maintenance of the GNF; and

h. Agree, as between the Federal Government and the non-federal sponsor, that the non-federal sponsor shall be considered the operator of the local service facilities for the purpose of CERCLA liability, and to the maximum extent practicable, perform its obligations related to the project in a manner that will not cause liability to arise under CERCLA; and

i. Accomplish all removals determined necessary by the Federal Government other than those removals specifically assigned to the Federal Government.

9. The recommendation contained herein reflects the information available at this time and current departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program or the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before it is transmitted to the Congress as a proposal for authorization and implementation funding. However, prior to transmittal to Congress, the sponsor, the state, interested federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.



THOMAS P. BOSTICK
Lieutenant General, USA
Chief of Engineers