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

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SUBJECT: Canaveral Harbor Section 203 (WRDA 1986) Navigation Study, Brevard County, Florida

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress the final feasibility report and environmental assessment on navigation improvements for Canaveral Harbor, Brevard County, Florida. It is accompanied by the reports of the Canaveral Port Authority (CPA), and the endorsements of the Jacksonville District Engineer and the South Atlantic Division Engineer. These reports were prepared by the CPA under the authority granted by Section 203 of Water Resources Development Act (WRDA) of 1986 (P.L. 99-662), which allows non-Federal interests, such as the CPA, to undertake feasibility studies of proposed harbor projects and submit them to the Secretary of the Army. This report constitutes the final report submitted to the Secretary as described in Section 203 of WRDA 1986.

2. The report recommends authorizing a project that will contribute to the economic efficiency of commercial navigation, provide greater safety for the operations of commercial and naval vessels, and increase the operational effectiveness of the national defense missions of the U.S. Army, U.S. Navy, and U.S. Air Force. The recommended plan increases the nominal depth of the federal channel to -44 feet mean lower low water (mllw) for the inner channel and -46 feet mllw for the outer channel (middle and outer reach), widens the federal channel to a width of 500 feet, increases the diameters of two turning circles, and widens the bend widener in the entrance channel. Widening the federal channel requires removal of 8 acres of U. S. Air Force property. The U. S. Air Force concurs with this action. Environmental impacts of the recommended plan are minor, short-term impacts, which, in coordination with the appropriate resource agencies, do not require mitigation. Effects on Threatened and Endangered species have been addressed through special measures and conditions. A portion of the material excavated for the project will be beneficially used as fill or for containment dike improvements. The remaining dredged material is suitable for placement in the U. S. Environmental Protection Agency designated Canaveral Ocean Dredged Material Disposal Site (ODMDS).

3. The reporting officers recommend the most economical plan analyzed, which is the plan that has the greatest net economic benefits of all plans considered. At the request of the non-Federal sponsor, plans greater in depth and width were not analyzed due to financial and logistical constraints[1]. The recommended plan is described in terms of outer, middle, and inner reaches, the Middle Turning Basin and west access channels, and the West Turning Basin. The outer reach is oriented on roughly a northwest-southeast alignment. The remainder of the channels is oriented in a generally east-west alignment. Various cuts comprise the outer, middle, and inner reaches. The recommended plan consists of widening the main ship channel from the harbor entrance inland to the West Turning Basin and West Access Channel, from its current authorized

[1] This plan is recommended under the Categorical Exemption to the NED Plan provision of ER 1105-2-100 (Paragraph 3-2.b.(10)).

width of 400 feet to 500 feet. In addition to widening, deepening of the existing Federal project and expansion of turning basins is recommended in the following reaches (all depths mllw):

a. Outer Reach, Cut 1A: deepen from -44' to -46' for a length of 11,000';

b. Outer Reach, Cut1B: deepen from -44' to -46' depth for a length of 5,500';

c. Outer Reach, Cut 1: deepen from -44' to -46' for the 5,300' long portion of Cut 1 that is seaward of buoys 7/8 (Station 0+00 to Station 53+00). The remainder of Cut 1 from buoys 7/8 to the apex of the channel turn, a length of 7,200', would also be deepened from -44' to -46';

d. New 203 Turn Widener: deepen to -46' X 23.1 acres (irregular shaped area) bounded to the north and northeast by the Civil Turn Widener and Outer Reach, Cut1;

e. US Navy Turn Widener: deepen from -44' to -46' X 7.7 acres (triangular shaped area) bounded by outer and middle reaches to the north and northeast and the Civil Turn Widener to the southwest;

f. Civil Turn Widener: deepen from -41' to -46' X 15.6 acres (irregular shaped area) bounded to the north and northeast by the middle reach and the US Navy Turn Widener;

g. Middle Reach: deepen from -44' to -46' for a length of 5,658'. The middle reach extends from the apex of the channel turn westward to the western boundary of the Trident access channel;

h. Inner Reach, Cut 2 and Cut 3: deepen from -40' to -44' for a length of 3,344';

i. Middle Turning Basin: expand and deepen to encompass 68.9 acres to a project depth of -43' and a turning circle diameter of 1422';

j. West Access Channel (east of Station 260+00): deepen from -39' to -43' for a length of 1,840'; and

k. West Turning Basin and West Access Channel (west of Station 260+00): expand the turning circle diameter from 1,400' to 1,725' X 141 acres at a depth of -35'.

4. Project Cost Breakdown Based on October 2012 Prices.

a. Project First Cost. The estimated project first cost is $40,240,000, which includes the cost of constructing the general navigation features and the value of lands, easements, rights-of-way and relocations (LERR) estimated as follows: $40,136,000 for channel modifications and

dredged material placement and $104,000 for the administrative costs of obtaining LERRs. There is no environmental mitigation required due to short term impacts.

b. Estimated Federal and non-Federal Shares. The estimated Federal and non-Federal shares of the project first cost are $28,652,000 and $11,588,000, respectively, as apportioned in accordance with the cost sharing provisions of Section 101 of WRDA 1986, as amended (33 U.S.C. 2211), as follows:

(1) The cost for dredging to a depth in excess of 20 feet, but not in excess of 45 feet will be shared at a rate of 75 percent by the Government and 25 percent by the non-Federal sponsor. Accordingly, the Federal and non-Federal shares of the costs in this zone are estimated to be $25,783,000 and $8,615,000, respectively. The cost for dredging in excess of 45 feet will be shared at a rate of 50 percent by the Government and 50 percent by the non-Federal sponsor. Accordingly, the Federal and non-Federal shares of the costs in this zone are estimated to be $2,870,000 and $2,870,000, respectively.

(2) In addition to the costs outlined in sub-paragraph (1) above, the project first cost includes administrative costs for LERR estimated at $104,000. The administrative costs include project real estate planning, review, and incidental costs between the U.S. Air Force and the U.S. Army Corps of Engineers (USACE). This cost will be a non-Federal cost. Credit is given for the incidental costs borne by the non-federal sponsor for LERR per Section 101 of WRDA 1986.

c. Additional 10 Percent Payment. In addition to the non-Federal sponsor's estimated share of the total first cost of constructing the project in the amount of $11,588,000, pursuant to Section 101(a)(2) of WRDA 1986, as amended, the non-Federal sponsor must pay an additional 10% of the costs of general navigation features of the project, $4,013,700, in cash over a period not to exceed 30 years, with interest. The value of the administrative costs for lands, easements, rights-of-way and relocations provided by the Federal sponsor under Section 101(a)(3) of WRDA 1986 as amended ($103,300) will be credited toward this payment, which results in a net 10% General Navigation Features (GNF) requirement of $3,910,400.

d. Operations and Maintenance Costs. Additional costs of operation and maintenance for this recommended plan, over and above the costs to operate and maintain the existing Federal project, are estimated to be $633,000 annually. In accordance with Section 101(b)(1) of WRDA 1986, as amended (33 U.S.C. 2211(b)(1))), the non-Federal sponsor will be responsible for an amount equal to 50 percent of the excess of the cost of operation and maintenance of the project over the cost of which would be incurred for operation and maintenance for the depth in excess of 45 feet. The excess annual cost attributable to operation and maintenance for the depth in excess of 45 feet is $364,000, with the non-Federal sponsor responsible for $182,000. Therefore the Federal share of the incremental annual maintenance cost is estimated to be $451,000.

e. Associated Costs. Estimated associated costs of $3,251,000 include $364,000 in non-Federal costs associated with development of local service facilities (including dredging of berthing areas) and $2,886,000 for navigation aids (a U.S. Coast Guard expense).

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 the cost of constructing the (GNF) construction costs and the value of LERRs provided under Section 101(a)(3) of WRDA 1986, as amended (33 U.S.C. 221(A)(3)). Accordingly, as set forth in paragraph 4.a. above, based on October 2012 prices, the estimated project first cost for these purposes is $40,240,000 with a Federal share of $28,652,000 and a non-Federal share of $11,588,000.

5. Based on October 2012 price levels, a 3.75-percent discount rate, and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be $2,647,000. The average annual equivalent benefits are estimated to be $5,393,000. The average annual net benefits are $2,747,000. The benefit-to-cost ratio for the recommended plan is 2.0.

6. In accordance with the Corps Engineering Circular EC 1165-2-212 on sea level change, the study performed an analysis of three Sea Level Rise (SLR) rates, a baseline estimate representing the minimum expected sea level change, an intermediate estimate, and a high estimate representing the maximum expected sea level change. The results of calculations from the project completion in 2014 through 2064 indicate that sea-level change estimates over a 50-year life of the project range from 0.120 meters (0.39 ft) for the low rate of change scenario, to 0.245 m (0.80 ft) for the intermediate rate scenario, and 0.653 m (2.14 ft) for the high rate scenario. Sea-level rise at these rates will have little or no impacts related to the proposed navigation improvements.

In accordance with the Corps Engineering Circular EC 1165-2-209 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 (DQC), Agency Technical Review (ATR), Policy and Legal Compliance Review, Cost Engineering Directory of Expertise (DX) Review and Certification, and Model Review and Approval. Given the project uses standard economic analyses, has a cost estimate of less than $45 million; does not represent a threat to health and safety; is not controversial; and has not had a request for Independent External Peer Review (IEPR) from a Governor or the head of a Federal or State agency, I have granted an exclusion from the requirement to conduct a Type I IEPR.

7. Washington level review indicates that the plan recommended by the reporting officers is technically sound, environmentally and socially acceptable, and on the basis of congressional directives, economically justified. The plan complies with all essential elements of the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Land Related Resources Implementation Studies. The recommended plan complies with other administration and legislative policies and guidelines. 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. Accordingly, I recommend that navigation improvements for Canaveral Harbor be authorized in

accordance with the reporting officer's recommended plan at an estimated cost of $40,240,000 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. This recommendation is subject to the non-Federal sponsor agreeing to comply with all applicable Federal laws and policies including that the non-Federal sponsor must agree with the following requirements prior to project implementation.

The CPA will:

a. Provide 25 percent of design costs in accordance with the terms of a design agreement entered into prior to commencement of design work for the project;

b. Provide, during the first year of construction, any additional funds necessary to pay the full non-Federal share of design costs;

c. Provide, during the period of construction, a cash contribution equal to the following percentages of the total cost of construction of the general navigation features:

i. Twenty-five percent of the costs attributable to dredging to a depth in excess of 20 feet, but not in excess of 45 feet; plus

ii. Fifty percent of the costs attributable to dredging to a depth in excess of 45 feet;

d. Provide 50 percent of the excess cost of operation and maintenance of the project over that cost which the Federal Government determines would be incurred for operation and maintenance for depths deeper than 45 feet;

e. Pay with interest, over a period not to exceed 30 years following completion of the period of construction of the project, up to an additional 10 percent of the total cost of construction of GNFs. The value of LERRs and deep-draft utility relocations provided by the Sponsor for the GNFs, described below, may be credited toward this required payment. The value of deep-draft utility relocations for which credit may be afforded shall be that portion borne by the Sponsor, but not to exceed 50 percent, of deep-draft utility relocation costs;

f. If the amount of credit equals or exceeds 10 percent of the total cost of construction of the general navigation features, the Sponsor shall not be required to make any contribution under this paragraph, nor shall it be entitled to any refund for the value of LERRs and deep-draft utility relocations in excess of 10 percent of the total cost of construction of the general navigation features;

g. Provide all LERRs and perform or ensure the performance of all relocations and deep-draft utility relocations determined by the Federal Government to be necessary for the construction, operation, maintenance, repair, replacement, and rehabilitation of the general

navigation features (including all LERRs, and deep-draft utility relocations necessary for the dredged material disposal facilities);

h. Provide, operate, maintain, repair, replace, and rehabilitate, at its own expense, the local service facilities 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;

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

j. Give the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the Sponsor owns or controls for access to the project for the purpose of operating, maintaining, repairing, replacing, and rehabilitating the general navigation features;

k. Hold and save the United States free from all damages arising from the construction, operation, maintenance, repair, replacement, and rehabilitation 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;

l. Keep, and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project, for a minimum of 3 years after completion of the accounting for which such books, records, documents, and other evidence is required, to the extent and in such detail as will properly reflect total cost of construction of the general navigation features, and in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and local governments at 32 CFR, Section 33.20;

m. Perform, or cause to be performed, any investigations for hazardous substances as 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, or rights of way that the Federal Government determines to be necessary for construction, operation, maintenance, repair, replacement, or rehabilitation of the general navigation features. However, for lands that the Government determines to be subject to the navigation servitude, only the Government shall perform such investigation unless the Federal Government provides the Sponsor with prior specific written direction, in which case, the Sponsor shall perform such investigations in accordance with such written direction;

n. Assume complete financial responsibility, as between the Federal Government and the Sponsor, for all necessary cleanup and response costs of any CERCLA regulated materials located in, on, or under lands, easements, or rights of way that the Federal Government determines to be necessary for the construction, operation, maintenance, repair, replacement, and rehabilitation of the project;

o. To the maximum extent practicable, perform its obligations in a manner that will not cause liability to arise under CERCLA;

p. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended, and Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, as amended, which provides that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until the Sponsor has entered into a written agreement to furnish its required cooperation for the project or separable element;

q. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987, and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights of way, required for construction, operation, maintenance, repair, replacement, and rehabilitation of the general navigation features, and inform all affected persons of applicable benefits, policies, and procedures in connection with said act;

r. Comply with all applicable Federal and State laws and regulations, including, but not limited to, Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d), and Department of Defense Directive 5500.11 issued pursuant thereto, as well as Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army." The State is also required to comply with all applicable Federal labor standards requirements including, but not limited to, the Davis-Bacon Act (40 USC 3144 et seq.), the Contract Work Hours and Safety Standards Act (40 USC 3701 et seq.), and the Copeland Anti-Kickback Act (40 USC 3145 et seq.);

s. Provide the non-Federal share that portion of the costs of mitigation and data recovery activities associated with historic preservation, that are in excess of 1 percent of the total amount authorized to be appropriated for the project, in accordance with the cost sharing provisions of the agreement;

t. Prevent obstructions of or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) which might reduce the ecosystem restoration, hinder its operation and maintenance, or interfere with its proper function, such as any new development on project lands or the addition of facilities which would degrade the benefits of the project;

u. Do not use Federal funds to meet the Sponsor's share of total project costs unless the Federal granting agency verifies in writing that the expenditure of such funds in authorized;

v. Provide a cash contribution equal to the non-Federal cost share of the project's total historic preservation mitigation and data recovery costs attributable to commercial navigation

that are in excess of 1 percent of the total amount authorized to be appropriated for commercial navigation; and

w. In the case of a deep-draft harbor, provide 50 percent of the excess cost of operation and maintenance of the project over that cost which the Secretary determines would be incurred for operation and maintenance if the project had a depth of 45 feet.

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 the Congress, the State of Florida, the CPA (the non-Federal sponsor), 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