

DEPARTMENT OF THE ARMY US ARMY CORPS OF ENGINEERS SOUTH ATLANTIC DIVISION 60 FORSYTH STREET SW, ROOM 10M15 ATLANTA, GA 30303-8801

REPLY TO ATTENTION OF

1 3 NOV 2013

CESAD-RBT

MEMORANDUM FOR COMMANDER JACKSONVILLE DISTRICT (CESAJ-EN-QC/

SUBJECT: Approval of the Review Plan for Canaveral Harbor Widening and Deepening, Section 408 Review of Final Plans, Specifications and Design, Brevard County, Florida

1. References:

a. Memorandum, CESAJ-EN-QC, 4 November 2013, subject: CESAJ-EN Endorsement of Review Plan for Canaveral Harbor Widening and Deepening, 408 Review of Final Plans, Specifications and Design, Brevard County, Florida (Enclosure).

b. EC 1165-2-214, Civil Works Review, 15 December 2012.

2. The enclosed Review Plan for Canaveral Harbor Widening and Deepening, Section 408 Review of Final Plans, Specifications and Design prepared by the Canaveral Port Authority, endorsed by the Jacksonville District and submitted for approval by reference 1.a, has been reviewed by this office and is approved in accordance with reference 1.b above.

3. We concur with the conclusion in the Review Plan and the District Chief of Engineering that a Type II Independent External Peer Review (IEPR) is not required on this harbor widening and deepening project. The primary basis for our concurrence is that the failure or loss of the features associated with this harbor widening and deepening project do not pose a significant threat to human life.

4. The District should take steps to post the Review Plan to its web site and provide a link to CESAD-RBT. Before posting to the web site, the names of Corps/Army employees should be removed. Subsequent significant changes to this Review Plan, should they become necessary, will require new written approval from this office.

5. The SAD point of contact is

DONALD E. JACKSON, JR. Brigadier General, USA Commanding

Encl



DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT CORPS OF ENGINEERS P.O. BOX 4970 JACKSONVILLE, FLORIDA 32232-0019

CESAJ-EN-QC

REPLY TO ATTENTION OF

November 4, 2013

MEMORANDUM FOR Commander, South Atlantic Division (CESAD-RBT)

SUBJECT: CESAJ-EN Endorsement of Review Plan for Canaveral Harbor Widening and Deepening, 408 Review of Final Plans, Specifications and Design, Brevard County, Florida

1. CESAJ-EN has reviewed the Review Plan (RP) for Canaveral Harbor Widening and Deepening, 408 Review of Final Plans, Specifications and Design (dated October 2013), and concurs that this RP provides for an adequate level of peer review and complies with the current peer review policy requirements outlined in EC 1165-2-214 "Civil Works Review", dated 15 December 2012.

2. This RP was prepared by the Canaveral Port Authority, reviewed by Jacksonville District and the South Atlantic Division, and all review comments have been satisfactorily resolved.

The design for this project is under development by an external A-E firm for the Canaveral Port Authority and the A-E will perform Quality Checks and internal QC on all products they develop. This RP outlines two levels of review: Canaveral Port Authority's A-E Quality Control and Agency Technical Review. The review plan defines the scope and level of the Jacksonville District's Agency Technical Review. To that end, this RP identifies the most important skill sets required for each level of review and the objectives of each review, thus setting the appropriate scale and scope of review for the Project.

3. CESAJ-EN endorses this document to be approved by the MSC Commander. Upon approval of the RP, please provide a copy of the MSC Commander's approval memorandum.

FOR THE COMMANDER:



Encl: Endorsed RP

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REVIEW PLAN

For

CANAVERAL HARBOR WIDENING & DEEPENING 408 REVIEW OF FINAL PLANS & SPECIFICATIONS AND DESIGN

Brevard County, Florida

Jacksonville District

November 2013

THE INFORMATION CONTAINED IN THIS REVIEW PLAN IS DISTRIBUTED SOLELY FOR THE PURPOSE OF PREDISSEMINATION PEER REVIEW UNDER APPLICABLE INFORMATION QUALITY GUIDELINES. IT DOES NOT REPRESENT AND SHOULD NOT BE CONSTRUED TO REPRESENT ANY AGENCY DETERMINATION OR POLICY.

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of review activities for the Canaveral Harbor Widening and Deepening project, a major modification of the Federal project by the sponsor, Canaveral Port Authority (CPA), under authority of 33 USC 408. As discussed below, the review activities consist of a quality control effort conducted by CPA and their A-E, CH2MHILL and an Agency Technical Review (ATR), which will also include a review of the Biddability, Constructability, Operability, Environmental, and Sustainability (BCOES) aspects of the project. Also as discussed below, an Independent External Peer Review (IEPR) is not recommended. The documents covered by this Review Plan are Plans and Specifications (P&S) and a Design Documentation Report (DDR) are the implementation documents. Upon approval, this review plan will be included in the Section 408 approval request package.

b. References.

- (1). ER 1110-2-1150, Engineering and Design for Civil Works Projects, 31 Aug 1999
- (2). ER 1110-1-12, Engineering and Design Quality Management, 31 March 2011
- (3). EC 1165-2-214, Civil Works Review Policy, 15 December 2012

c. Requirements. This review plan was developed in accordance with EC 1165-2-214, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for review of all Civil Works projects from initial planning through design, construction, and Operation, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R). The EC provides the procedures for ensuring the quality and credibility of USACE decision, implementation, and operations and maintenance documents and other work products. The EC outlines five levels of review: District Quality Control, Agency Technical Review, BCOES Review, Independent External Peer Review and Policy and Legal Review. Refer to the EC for the definitions and procedures for the five levels of review.

d. Review Management Organization (RMO). The Review Management Organization (RMO) for the applicable review efforts addressed in this Review Plan is the South Atlantic Division.

2. PROJECT INFORMATION AND BACKGROUND

a. Existing Federal Project. The existing Federal navigation project at Port Canaveral was authorized by the Rivers and Harbors Acts of 2 March 1945 and 23 October 1962, and Sections 101, 114, and 117 of the Water Resources Development Act (WRDA) of 30 October 1992. The Federal navigation project consists of four channel segments that lead to the three turning basins and terminate at the Barge Canal. The O&M project includes maintenance of an entrance channel to 41 feet deep and 400 feet wide; an inner channel to 40 feet and 400 feet wide; a 1200 foot diameter turning basin down to 39 feet deep; a channel 39 feet deep and 400 feet wide for an 1800 foot length; enlargement of barge channel to 12 feet deep and 125 feet wide to the Intracoastal Waterway; a channel extension 31 feet by 300 feet by 1,500 feet dredged west of turning basin; a barge lock 90 feet wide and 600 feet long west of the harbor dike; and two entrance jetties to the 12-foot contour. The length of the existing project is approximately 11.5 miles. In addition, the entrance channel and part of the inner channel have been deepened to 44 feet for the Navy's TRIDENT Project.

b. Proposed Modifications. The local sponsor, CPA, has prepared and submitted a Section 203 Feasibility Study for widening and deepening various reaches of the authorized Federal channel. A Chief of Engineers report recommending authorization by Congress of the most economical plan as presented in this report was submitted on 25 Feb 2013. The project is awaiting authorization. Features of this plan are shown in Figures 1 and 2 and include widening and deepening in the following reaches:

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

b. Outer Reach, Cut 1B: deepen from -44' to -46' 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. The remainder of Cut 1 from buoys 7/8 to the apex of the channel turn, a length of 7,200', deepened from -44' to -46'.

d. US Navy Turn Widener: deepen an estimated 7.7 acres from -44' to -46' (triangular shaped area) bounded by outer and middle reaches to the north and northeast and the civil turn widener to the southwest.

e. Civil turn widener: Deepen an estimated 15.6 acres from -41' to -46' (irregular shaped area) bounded to the north and northeast by the middle reach and the US Navy turn widener.

f. New turn widener: deepen an estimated 23.1 acres to -46' (irregular shaped area) bounded to the north and northeast by the civil turn widener and Cut 1 of the outer reach. To maintain the sediment trap's design capacity, it is proposed that the trap be deepened consistent with the new channel depth, and slightly expanded to the south.

g. Middle reach: deepen from -44' to -46' for a length of 5,658' and widen from 400' to 500' for a length of 2,282'. 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' and widen from 400' to 500' for a length of 3,344'. This includes relocation of existing shoreline revetment between the Middle and Trident Turning Basins and relocation of ancillary upland infrastructure.

i. Trident Access Channel and Trident Basin: With exclusive use by US Navy, the Trident Access channel connects the middle reach to the Trident basin. Existing dimensions are 44' project depth throughout an irregularly shaped area to remain as is, except at the southern boundary of the existing Trident Access channel, where the new 100' north side channel widener will consume a portion of the Trident Access channel.

j. Middle Turing Basin: expand and deepen to encompass 68.9 acres to a project depth of -43' and a turning circle diameter of 1,422'. The existing -39' federal project provides a turning circle diameter of 1,200'.

k. West Access Channel: deepen from -39' to -43' and widen from 400' to 500' for a length of 1,840'.

I. West Turning Basin and West Access Channel (west of Station 260+00): expand the existing federally authorized turning circle from 1,400' diameter to 1,725'.



Figure 1 - Recommended Plan East of Trident Basin



Figure 2 - Recommended Plan West of Trident Basin

c. Design and Construction of Proposed Modifications. Design is being performed by CH2MHILL under contract to the CPA who will be responsible for construction of these proposed modifications. The design and construction work is being performed at no additional cost to USACE; however, the CPA may seek Federal reimbursement in the future. Assumption of operation and maintenance costs are being addressed in a 204(f) Agreement with USACE. Implementation documents include plans and specifications and design documentation similar to that found in USACE Design Documentation reports. The construction is divided into two contracts:

<u>Package 1: Upland and Minor Marine Works</u> - CPA advertised this contract in Aug 2013 and received bids on 16 Sep 2013. Award of this contract was made to GLF Construction Corporation on 19 Sep 2013. While the scope of work involves features outside of the footprint of the Federally authorized project, work under this contract, such as removal of revetment stone around the Trident channel, could indirectly impact the Federal project due to the close proximity of these features to the Federal right of way.

<u>Package 2: Dredging Works</u> – Bid documents will be released for bid on November 6, 2013. Bid opening is December 3, 2013.

3. CANAVERAL PORT AUTHORITY QUALITY CONTROL

Quality control during design and preparation of the implementation documents by the sponsor's A-E, CH2MHILL, follows procedures as documented in the "Project Quality Management Plan, Canaveral Harbor Navigation Improvements" and attached as Appendix A. The procedures followed are similar to those that are followed by USACE personnel when performing District Quality Control (DQC) as outlined in EC 1165-2-214 and, therefore, serve as an equivalent function.

4. AGENCY TECHNICAL REVIEW

a. Scope. Agency Technical Review (ATR) is undertaken to "ensure the quality and credibility of the government's scientific information" in accordance with EC 1165-2-214 and ER 1110-1-12. An ATR of the Final (100%) Plans and Specifications and design documentation for the two contract packages discussed in para. 2.c is deemed necessary based on the following responses to the risk-informed decision questions from EC 1165-2-214, para. 15:

- (1) Does it include any design (structural, mechanical, hydraulic, etc)? Response: Yes, the project includes widening and deepening of the existing Federal channel. In addition demolition and replacement revetments and other marine structures in Canaveral Harbor are necessary to accommodate widening and deepening of the Federal channel. An anchored, steel sheet pile wall will be constructed and new navigation aids will be installed.
- (2) Does it evaluate alternatives? Response: No.
- (3) Does it include a recommendation? Response: No.
- (4) Does it have a formal cost estimate? Response: No. Construction of this project is the responsibility of the local sponsor.
- (5) Does it have or will it require a NEPA document? Response: Yes, a Section 404 permit is being obtained and a Final Environmental Assessment was performed as part of the Section 203 Feasibility Study.

(6) Does it impact a structure or feature of a structure whose performance involves potential life safety risks?

Response: No. Widening and deepening of the Federal channel requires the demolition of some existing marine features and construction of a new anchored, steel sheet pile wall. However, the performance of these structures does not involve potential life safety risks.

- (7) What are the consequences of non-performance? Response: The CPA is undertaking this project to accommodate more modern cruise ships and to allow for passage of deeper draft cargo vessels. Without these modifications, port operations would be restricted to those currently associated with the existing Federal project.
- (8) Does it support a significant investment of public monies? Response: No The CPA is funding the design and construction of these modifications. However, there is the possibility that the CPA may seek Federal reimbursement at some future date.
- (9) Does it support a budget request? Response: No. Federal funds are not being requested.
- (10)Does it change the operation of the project? Response: Yes. Widening and deepening allow for a greater and larger variety of cruise and cargo vessels.
- (11)Does it involve excavation, subsurface investigations (drilling or sampling or both), or placement of soil?

Response: Yes. There is widening and/or deepening of all reaches with expansion of turning basins which involve large amounts of dredged excavation.

- (12)Does it affect any special features, such as cultural resources, historic properties, survey markers, etc, that should be protected or avoided? *Response: No.*
- (13)Does it involve activities that trigger regulatory permitting such as Section 404 or stormwater/NPDES related actions?
 Because Voc. Application has been made for a Section 404 permit. Josuance of the

Response: Yes. Application has been made for a Section 404 permit. Issuance of the permit is pending approval of the 408 request.

- (14)Does it involve activities that could potentially generate hazardous wastes and/or disposal of materials such as lead based paints or asbestos? *Response: No.*
- (15)Does it reference use of or reliance on manufacturers' engineers and specifications for items such as prefabricated buildings, playground equipment, etc? *Response: No.*
- (16)Does it reference reliance on local authorities for inspection/certification of utility systems like wastewater, stormwater, electrical, etc? *Response: No.*
- (17)Is there or is there expected to be any controversy surrounding the Federal action associated with the work product? *Response: No.*
- (18)The failure of the project would pose a significant threat to human life. *Response: No.*
- (19)The project involves the use of innovative materials or techniques. *Response: No.*
- (20)The project design lacks redundancy. Response: The project does not require the addition of redundant project features or redundancy design considerations beyond those required of professional certification.
- (21)The project has unique construction sequencing or a reduced or overlapping design construction schedule.

Response: This projects construction activities do not have unique sequencing or a reduced or overlapping design. The installation sequence and schedule has been used successfully by the CPA on other similar works.

The scope of the ATR is to review the plans and specifications and design documentation for Packages 1 and 2 to ensure that:

- features, design assumptions, depths, limits, and environmental requirements specified are in conformance with those as presented in the approved Section 203 Feasibility Study and Final Environmental Assessment and
- design of features whose failure could impact the current and modified Federally authorized project or which could be impacted by future Federal O&M dredging is in accordance with applicable Corps and/or industry standards, and
- 3. biddability and constructability is properly addressed in the P&S to facilitate possible future Federal cost reimbursement.

This ATR is a result of a request from the CPA to modify certain public works under 33 U.S.C. § 408 and will be constrained to 408 issues and project integrity. The design features outlined in the Design package for the 408 request are to be reviewed to determine if the design provides the same level of reliability, constructability and operability as would be expected with a Corps of Engineers design. Modifications to the existing project features are to be assessed to insure technical adequacy. This ATR on the Final Design package will be part of the determination of whether the proposed modifications impair the project function, negatively impact the Federal interest, or impede the ability of the project to meet its authorized purposes. Thus this ATR will be a part of the Corps 408 approval/disapproval process. This Review is being labeled as a Agency Technical Review in that the intent of the review is based on the purpose of an ATR as defined in the EC 1165-2-214 which is to insure the quality and credibility of the scientific information associated with the project as well as insuring the project complies with the law and existing US Army Corps of Engineers policy.

Because this project is being designed and constructed by the local sponsor and has not involved USACE-CESAJ staff in the design or previous reviews, the ATR may be conducted by individuals and organizations that are internal to the Jacksonville District. The ATR Team Leader may be a Corps of Engineers employee inside the South Atlantic Division. The required disciplines and experience are described in para. b. As stated in para. 2.c., the cost for design and construction of the proposed modifications is the responsibility of the local sponsor. Therefore, no additional review is required by the Cost Engineering Directory of Expertise (DX) for the implementation documents addressed by this review plan.

ATR comments will be documented in the DrCheckssm model review documentation database. DrCheckssm is a module in the ProjNetsm suite of tools developed and operated at ERDC-CERL (<u>www.projnet.org</u>).

At the conclusion of the ATR effort, the ATR lead will prepare a Review Report summarizing the review. Review Reports will be considered an integral part of the ATR documentation and shall:

- Include a completed ATR certification form modeled after the form shown in EC 1165-2-214, Attachment C-1 and signed by the ATR Team Leader;
- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organization affiliations;

- Describe the nature of their review and their findings and conclusions; including if the comment is considered to be an error, omission, oversight, conflicts within the documents, coordination issues, QA, discrepancies, deficiencies, etc.
- Identify and summarize each unresolved issues (if any); and
- Include a verbatim copy of each reviewers comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

A copy of the Review Report will be furnished to the CPA by the SAJ Project Manager for incorporation in the Section 408 application package prior to submission for USACE approval. Since the CPA has moved out with award of Package 1 – Upland and Minor Marine Works at their own risk, comments made by the ATR team may require modification to an active construction contract by the CPA.

b. ATR Disciplines. As stipulated ER 1110-1-12, ATR members will be identified from key disciplines from the following sources: appointed SME or senior level experts from the responsible district; contractors; academic or other technical experts; or a combination of the above. The ATR Team for this effort will be comprised of the following disciplines; knowledge, skills and abilities; and experience levels.

<u>ATR Team Leader</u>. The ATR Team Leader shall be a registered professional engineer with a minimum of 15 years of experience with navigation projects. ATR Team Leader may be a co-duty to one of the review disciplines.

<u>Civil Engineering/Dredging Operations.</u> The team member shall be a registered professional engineer with a minimum of 7 years of dredging operations and/or civil/site work project experience that includes dredging and disposal operations, embankments, groins, channels, revetments and marine structures.

<u>Structural Engineering.</u> The team member shall be a registered professional engineer with a minimum of 7 years of structural design experience with marine structures including steel sheet pile bulkheads, reinforced concrete, and structural demolition.

<u>Geotechnical Engineering and Engineering Geology.</u> The team member should be a registered professional engineer with a minimum of 7 years experience in geologic and geotechnical analyses used to support the development of plans and specifications for navigation projects and marine structures/revetments.

<u>Construction Engineering.</u> The team member shall be a registered professional engineer with a minimum of 7 years of experience in construction of navigation channels and marine structures. <u>Cost Engineering.</u> The team member shall be a registered professional engineer with a minimum of 7 years of experience in cost engineering and preparation of bid documents for navigation channels and marine structures.

<u>NEPA Compliance</u>. The NEPA compliance reviewer should be a senior environmental resources specialist with 5 years of experience in NEPA compliance activities associated with Navigation projects. Draft or Final NEPA and other environmental documents will be submitted to the ATR team with the design documentation and plans and specifications to aid in performing ATR.

5. BIDDABILITY, CONSTRUCTABILITY, OPERABILITY, ENVIRONMENTAL, AND SUSTAINABILITY (BCOES) REVIEW

A separate BCOES review will not be conducted. However, with the potential for request by the CPA for future cost reimbursement by the Federal government, BCOES concerns will be addressed during the ATR with the team membership expanded to provide adequate coverage.

6. INDEPENDENT EXTERNAL PEER REVIEW

a. General. EC 1165-2-214 provides implementation guidance for both Sections 2034 and 2035 of the Water Resources Development Act (WRDA) of 2007 (Public Law (P.L.) 110-114). Sections 2034 and 2035 call for peer review procedures for both the Planning and the Design and Construction phases. The EC terms the Section 2034 Independent Peer Review, Type I Independent External Peer Review and the Section 2035 Safety Assurance Review, Type II Independent External Peer Review.

b. Type I Independent External Peer Review (IEPR) Determination (Section 2034). Type I IEPR is generally for decision documents. No decision documents or other applicable Section 2034 products are addressed by this Review Plan. Therefore Type I IEPR is not applicable to the implementation documents addressed by this Review Plan.

c. Type II Independent External Peer Review (IEPR) Determination (Section 2035). The Canaveral Harbor 408 Modification does not trigger WRDA 2007 Section 2035 factors for Safety Assurance Review and, therefore, the District Engineering Chief does not recommend a Type II IEPR review under Section 2035 and/or EC 1165-2-214 be performed for this project. The factors which are stated under Section 2035 and EC 1165-2-214 are used in determining whether a Safety Assurance Review of design and construction activities is warranted. These factors and their applicability to this project are as follows:

The failure of the project would pose a significant threat to human life.

The project will perform deepening and widening of an existing Federal channel. Failure of this project will not pose a significant threat to human life.

The project involves the use of innovative materials or techniques.

The project will utilize standard methods and procedures used by the Corps of Engineers on other similar channel construction projects.

The project design lacks redundancy.

The concept of redundancy is not applicable to channel dredging projects.

The project has unique construction sequencing, or a reduced, or overlapping design construction schedule.

The expected construction sequencing and schedule are not unique and are similar to those that have been used successfully by the Corps of Engineers on other channel dredging projects.

7. POLICY AND LEGAL COMPLIANCE

The Canaveral Port Authority Counsel reviews all contract actions for legal sufficiency in accordance with Florida Law. The subject implementation documents and supporting environmental documents will be reviewed for legal sufficiency prior to advertisement. Once approved, the Canaveral Port Authority will post the applicable documents for viewing by the public.

8. SCHEDULE AND BUDGET

Below table summarizes the ATR review start dates identified as part of the review:

	Start	Finish
Draft Review Plan submitted to SAD		10/15/2013
SAD Review of Draft Review Plan	10/16/2013	10/23/2013
SAD comments incorporated into Final Review Plan	10/23/2013	10/24/2013
Review Plan submitted to CPA for concurrence and		
approval	10/25/2013	10/29/2013
Final Review Plan submitted to SAD for approval		11/05/2013
SAJ submits Charge to Reviewers, ATR team resumes, and		
bios to SAD for approval	11/05/2013	11/06/2013
ATR Review		
CPA provides review documentation to SAJ		10/30/2013
ATR Kickoff Meeting		11/06/2013
Review period	11/06/2013	11/13/2013
Review Comment Evaluation	11/14/2013	11/18/2013
Comments backchecked by ATR Team	11/18/2013	11/20/2013
ATR Team Leader prepares Review Report	11/21/2013	11/22/2013
ATR Certification		11/25/2013

b. ATR Review Cost. The cost for ATR will range from \$15,000 to \$20,000.

9. POINTS OF CONTACT

Canaveral Port Authority, South Atlantic Division, and Jacksonville District points of contact names, titles, and responsibilities are listed below. Per guidance, the names of the following individuals will not be posted on the Internet with the Review Plan.

