



**DEPARTMENT OF THE ARMY**  
U.S. ARMY CORPS OF ENGINEERS, SOUTH ATLANTIC DIVISION  
60 FORSYTH STREET SW, ROOM 10M15  
ATLANTA, GEORGIA 30303-8801

CESAD-RBT

MEMORANDUM FOR COMMANDER, CHARLESTON DISTRICT

SUBJECT: Review and Approval of the Review Plan for the Charleston Harbor CAP  
204 Implementation Phase, Charleston County, SC

1. References:

- a. Memorandum, CESAC-EO, 19 July 2018, subject as above.
  - b. 1165-2-217, Water Resources Policies and Authorities Review Policy for Civil Works, 28 February 2018.
2. The Review Plan (RP) submitted by the Charleston District for the design of the placement of dredged material from Charleston Harbor has been reviewed by the South Atlantic Division (SAD) and is hereby approved in accordance with reference 1.b above.
3. SAD concurs with the District's RP recommendation that outlines the requirements for District Quality Control (DQC) and the Biddability, Constructability, Operability, Environmental and Sustainability (BCOES) Review. We also concur with the District Chief of Engineering and conclusions in the RP that a Type II Independent External Peer Review (IEPR) of the subject project is not required. The recommendation to exclude Type II IEPR is based on reference 1.b Risk Informed Decision Process as presented in the RP. Documents to be reviewed include plans, specifications, and a design documentation report.
4. The District should take steps to post the approved RP to its website and provide a link to CESAD-RBT. Before posting to the website, the names of Corps/Army employees should be removed. Subsequent significant changes to this RP, such as scope or level of review changes, should they become necessary, will require new written approval from this office.
5. The SAD point of contact is [REDACTED]
- [REDACTED]

# **REVIEW PLAN**

**Charleston Harbor Section 204 Project  
Charleston, South Carolina  
Implementation Phase**

**Charleston District**

**P2: 450947**

**MSC Approval Date: 23 July 2018  
Last Revision Date: 30 July 2018**



**US Army Corps  
of Engineers®**

**REVIEW PLAN**

**Charleston Harbor Section 204 Project  
Charleston, South Carolina  
Implementation Phase**

**TABLE OF CONTENTS**

**1. PURPOSE AND REQUIREMENTS..... 3**

**2. PROJECT INFORMATION ..... 3**

**3. DISTRICT QUALITY CONTROL (DQC) ..... 4**

**4. AGENCY TECHNICAL REVIEW (ATR) ..... 4**

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

**6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)..... 5**

**7. POLICY AND LEGAL COMPLIANCE REVIEW ..... 6**

**8. MODEL CERTIFICATION AND APPROVAL..... 6**

**9. PROJECT DELIVERY TEAM DISCIPLINES..... 6**

**10. REVIEW SCHEDULES AND COSTS ..... 6**

**11. REVIEW PLAN POINTS OF CONTACT ..... 7**

## 1. PURPOSE AND REQUIREMENTS

- a. Purpose.** This Review Plan (RP) defines the scope and level of peer review for the Charleston Harbor Continuing Authorities Program (CAP) Section 204 Project, located in Charleston, South Carolina. The related documents are Implementation Documents that consist of the Plans and Specifications (P&S) and the Design Documentation Report (DDR) for the construction of the Recommended Plan. The Recommended Plan is the placement of 660,000 cubic yards (CY) of dredged material on Crab Bank during the deepening construction of the Charleston Lower Harbor (Post 45 construction).
- b. References**
- (1) Engineering Regulation (ER) 1110-2-1150, Engineering and Design for Civil Works Projects, 31 Aug 1999
  - (2) ER 1110-1-12, Engineering and Design Quality Management, 21 Jul 2006
  - (3) Engineering Circular (EC) 1165-2-217, Civil Works Review, February 2018
  - (4) ER 415-1-11, Biddability, Constructability, Operability, Environmental and Sustainability (BCOES) Review, 1 Jan 2013
  - (5) Charleston Harbor CAP 204 Detailed Project Report, March 2018
  - (6) Charleston Harbor CAP 204 Project Management Plan (PMP)
- c. Requirements.** This RP was developed in accordance with EC 1165-2-216, 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 outlines three general levels of review applicable to the Implementation Documents addressed by this Review Plan: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and states that a Biddability, Constructability, Operability, Environmental and Sustainability Review shall be included in the Review Plan.
- d. Review Plan Approval and Updates.** The South Atlantic Division (SAD) Commander is responsible for approving this RP. The Commander's approval reflects vertical team input (involving District, Division, and HQUSACE members) as to the appropriate scope and level of review. Like the Project Management Plan (PMP), the Review Plan is a living document and may change as the project progresses. The Charleston District is responsible for keeping the Review Plan up to date. Minor changes to the Review Plan since the last Major Subordinate Command (MSC) Commander approval will be documented in an attachment. Significant changes to the Review Plan (such as changes to the scope and/or level of review) shall be approved by the MSC Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commander's approval memorandum, will be posted on the Charleston District's webpage. The latest Review Plan will be provided to the home MSC.
- e. Review Management Organization (RMO).** SAD is designated as the RMO. The RMO, in cooperation with the vertical team, will determine/select/approve the ATR team members. Charleston District may assist SAD with management of the ATR and development of the "charge to reviewers."

## 2. PROJECT INFORMATION

- a. Project Location and Name.** Charleston Harbor is situated at the confluence of the Ashley, Wando, and Cooper Rivers. It is 14 square miles in area and lies approximately at the midpoint along the South

Carolina Coast. Adjacent municipalities include the Cities of Charleston, North Charleston, and Mount Pleasant, as well as Sullivan's, James, and Morris Islands. Crab Bank is a harbor island located in the Charleston Lower Harbor.

- b. Project Authorization.** Continuing Authorities Program (CAP) Section 204, Beneficial Uses of Dredged Material, WRDA 1992 (PL 102-580), as amended.
- c. Current Project Description.** The recommended plan is a one-time placement of approximately 660,000 cubic yards of Post 45 dredged material within the historic footprint of Crab Bank to create a total of approximately 80 acres of island, with approximately 28 acres two feet above mean high water available for nesting brown pelicans. This Review Plan addresses the P&S and the DDR for the Optional amendment planned for the Lower Harbor construction contract
- d. Public Participation.** The Charleston District Corporate Communications Office continually keeps the affected public informed on Charleston District projects and activities. There are no planned activities, public participation meetings or workshops that are expected to generate issues to be addressed by the review teams. The project review plan will be posted on the Charleston District Internet. Any comments or questions regarding the review plan will be addressed by the Charleston District.
- e. In-Kind Contributions.** Products and analyses provided by non-Federal sponsors as in-kind services are subject to review. To date, the NFS has not identified any in-kind sponsor contributions that could affect this review plan or related reviews.

### **3. DISTRICT QUALITY CONTROL (DQC)**

District Quality Control and Quality Assurance activities for the project implementations documents are stipulated in ER 1110-1-12, Engineering & Design Quality Management. The P&S and DDR will be prepared by the Charleston District using ER 1110-1-12 procedures and will undergo District Quality Control.

- a. Documentation of DQC.** In compliance with EC 1165-2-217, the Charleston District will conduct a full district quality control assessment. The DQC will include quality checks and reviews, and PDT reviews. All work products and reports, evaluations, and assessments shall undergo necessary and appropriate District Quality Control/Quality Assurance (DQC). The DQC will cover all contract products and any in-kind services provided by the local sponsor.
- b. Required DQC Expertise.** The desired expertise for the DQC will be determined by the District Engineering and Planning Chiefs and may be augmented from District staff outside of the Charleston District. The Chiefs will ensure personnel have adequate experience to complete the DQC.
- c. DQC Lead.** The DQC lead for this effort is the same as the DQC design reviewer.

### **4. AGENCY TECHNICAL REVIEW (ATR)**

The objective of ATR is to ensure consistency with established criteria, guidance, procedures, and policy. ATR is managed within USACE by the designated RMO and is conducted by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. ATR teams will be comprised of senior USACE personnel and may be supplemented by outside experts as appropriate.

- a. **Risk Informed Decision on Appropriate Level of Review.** An ATR of the P&S and DDR is not required.
  - b. **ATR Scope.** N/A
  - c. **ATR Disciplines.** N/A
  - d. **Documentation of ATR.** N/A
5. **BIDDABILITY, CONSTRUCTABILITY, OPERABILITY, ENVIRONMENTAL, AND SUSTAINABILITY (BCOES) REVIEW.**

The value of a BCOES review is based on minimizing problems during the construction phase through effective checks performed by knowledgeable, experienced personnel prior to advertising for a contract. BCOES requirements must be emphasized throughout the planning and design processes for all programs and projects, including during planning and design. It will also help ensure that the construction will be done efficiently and in an environmentally sound manner, and that the construction activities and documents will reduce risks of cost and time growth, unnecessary changes and claims, as well as support safe, efficient, sustainable operations and maintenance by the facility users and maintenance organization after construction is complete. A BCOES Review will be conducted for this project. Requirements and further details are stipulated in ER 1110-1-12 and ER 415-1-11.

6. **INDEPENDENT EXTERNAL PEER REVIEW (IEPR)**

- 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]. The EC addresses review procedures for both the Planning and the Design and Construction Phases (also referred to in USACE guidance as the Feasibility and the Preconstruction Engineering and Design Phases). The EC defines Section 2035 Safety Assurance Review (SAR), Type II Independent External Peer Review (IEPR). The EC also requires Type II IEPR be managed and conducted outside USACE.
- b. **Decision on Type I IEPR.** A Type I IEPR is typically associated with decision documents. A Type I IEPR is not applicable to the implementation documents (P&S and DDR) covered by this Review Plan.
- c. **Decision on Type II IEPR.** This navigation project does not trigger WRDA 2007 Section 2035 factors for Safety Assurance Review (termed Type II IEPR in EC 1165-2-214); therefore, a review under Section 2035 is not required. The factors in determining whether a Type II IEPR review of design and construction activities of a project is necessary are based on the EC 1165-2-214 Type II IEPR Risk Informed Decision Process. The following EC 1165-2-214 risk decision criteria are followed by a statement that forms the basis for the Type II IEPR determination.

- (1) The failure of the project would pose a significant threat to human life.

*This project consists of channel dredging and failure of the navigation channel will not pose a significant threat to human life.*

(2) The project involves the use of innovative materials or techniques.

*This project will utilize methods and procedures used by the Corps of Engineers on other similar works.*

(3) The project design lacks redundancy.

*The concept of redundancy does not apply to channel dredging and placement projects.*

(4) The project has unique construction sequencing or a reduced or overlapping design construction schedule.

*The construction sequence and schedule for this project have been used successfully by the Corps of Engineers on other similar works. Construction schedules do not have unique sequencing and activities are not reduced or overlapped.*

Therefore, the District Chief of Engineering, as the Engineer-In-Responsible-Charge, does not recommend a Type II IEPR Safety Assurance Review of these P&S and DDR.

**7. POLICY AND LEGAL COMPLIANCE REVIEW**

The Charleston District Office of Counsel reviews all contract actions for legal sufficiency in accordance with Engineer Federal Acquisition Regulation Supplement 1.602-2 responsibilities. The subject implementation documents will be reviewed for legal sufficiency prior to advertisement.

**8. MODEL CERTIFICATION AND APPROVAL**

The project does not propose the use of any engineering or planning models that have not been certified or approved for use by USACE.

**9. PROJECT DELIVERY TEAM DISCIPLINES**

<b>Discipline/Expertise</b>
Project Manager
Navigation Design
Construction Management
Engineering Lead
Engineering, Coastal
Environmental, NEPA
Contracting
Counsel
Real Estate

**10. REVIEW SCHEDULES AND COSTS**

**a. Project Milestones.**

Task	Estimated Finish
Entrance Channel Deepening and Extension	
Draft P&S and DDR	AUG-2018
DQC Review	AUG-2018
BCOES Certification	AUG-2018
Optional Item Exercised	TBD -2019

**b. DQC Cost.** Funds will be budgeted to execute DQC, as outlined above, and the estimated costs is

[REDACTED]

**11. REVIEW PLAN POINTS OF CONTACT**

Public questions and/or comments on this review plan can be directed to the following points of contact:

- Charleston District Project Manager, (843) 329-8142

[REDACTED]