



DEPARTMENT OF THE ARMY
SOUTH ATLANTIC DIVISION, CORPS OF ENGINEERS
ROOM 10M15, 60 FORSYTH ST., S.W.
ATLANTA, GA 30303-8801

REPLY TO
ATTENTION OF:

CESAD-RBT

1 June 2011

MEMORANDUM FOR COMMANDER, JACKSONVILLE DISTRICT (CESAJ-EN-T/
[REDACTED])

SUBJECT: Approval of the Review Plan for Periodic Nourishment Implementation Documents for Fort Pierce Beach Shore Protection Project, St. Lucie County, Florida

1. References:

a. Memorandum, CESAJ-EN-T, 27 May 2011, Subject: Approval of the Review Plan for Periodic Nourishment Implementation Documents for Fort Pierce Beach Shore Protection Project, St. Lucie County, Florida (Enclosure).

b. EC 1165-2-209, Civil Works Review Policy, 31 January 2010.

c. WRDA 2007 H. R. 1495 Public Law 110-114, 8 November 2007.

2. The enclosed Review Plan for Periodic Nourishment Implementation Documents for Fort Pierce Beach Shore Protection Project, St. Lucie County, Florida dated 27 May 2011 submitted by reference 1.a, has been reviewed by this office and is approved in accordance with reference 1.b.

3. We concur with the conclusion of the District Chief of Engineering that Type II Independent External Peer Review (Type II IEPR) is not required for this rehabilitation/renourishment of the Pierce Beach Shore Protection Project. The project does not have the factors that need addressing to assure public health, safety, and welfare as stipulated in Section 2035 Safety Assurance Review, WRDA 2007 H. R. 1495 Public Law 110-114.

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.

5. The SAD point of contact is [REDACTED].

Encl


CHRISTOPHER T. SMITH, P.E.
Chief, Business Technical Division



REPLY TO
ATTENTION OF

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

CESAJ-EN-T

27 May 2011

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

SUBJECT: Approval of Review Plan for Periodic Nourishment Implementation Documents for Fort Pierce Beach Shore Protection Project, St. Lucie County, Florida

1. References.

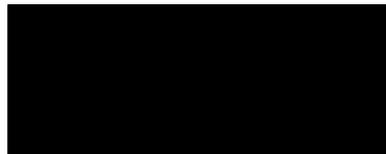
- a. EC 1165-2-209, Civil Works Review Policy, 31 January 2010
- b. WRDA 2007 H. R. 1495 Public Law 110-114, 08 Nov 07

2. I hereby request approval of the enclosed Review Plan and concurrence with the conclusion that Type II Independent External Peer Review (IEPR) of this project is not required. The Type II IEPR determination is based on the EC 1165-2-209 Risk Informed Decision Process as presented in the Review Plan. Approval of this plan is for the Periodic Nourishment Implementation Documents. The Review Plan complies with applicable policy, provides Agency Technical Review and has been coordinated with the CESAD. It is my understanding that non-substantive changes to this Review Plan, should they become necessary, are authorized by CESAD.

3. The district will post the CESAD approved Review Plan to its website and provide a link to the CESAD for its use. Names of Corps/Army employees are withheld from the posted version, in accordance with guidance.

FOR THE COMMANDER:

Encl



REVIEW PLAN

**For
Periodic Nourishment
Implementation Documents**

**For
Fort Pierce Beach
Shore Protection Project**

St. Lucie County, Florida

Jacksonville District

27 May 2011

THE INFORMATION CONTAINED IN THIS REVIEW PLAN IS DISTRIBUTED SOLELY FOR THE PURPOSE OF PREDISSEMINATION PEER REVIEW UNDER APPLICABLE INFORMATION QUALITY GUIDELINES. IT HAS NOT BEEN FORMALLY DISSEMINATED BY THE U.S. ARMY CORPS OF ENGINEERS, JACKSONVILLE DISTRICT. IT DOES NOT REPRESENT AND SHOULD NOT BE CONSTRUED TO REPRESENT ANY AGENCY DETERMINATION OR POLICY.



**US Army Corps
of Engineers ®**

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of review activities for the Fort Pierce Beach Shore Protection. The review activities consist of District Quality Control (DQC) and Agency Technical Review (ATR). The project is in the Periodic Nourishment Phase and the related documents are Implementation Documents that consist of Plans and Specifications (P&S) and a Design Documentation Report (DDR). Upon approval, this review plan will be included into the Project Management Plan as an appendix to the Quality Management Plan.

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, 21 Jul 2006
- (3). WRDA 1986 Public Law 99-662 (Project Authorization)
- (4). EC 1165-2-209, Civil Works Review Policy, 31 January 2010
- (5). Project Management Plan, Fort Pierce BEC, 113090, 8/20/07

c. Requirements. This review plan was developed in accordance with EC 1165-2-209, 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 U.S. Army Corps of Engineers (USACE) decision, implementation, and operations and maintenance documents and work products. The EC outlines three levels of review: District Quality Control, Agency Technical Review, and Independent External Peer Review.

(1) District Quality Control (DQC). DQC is the review of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). It is managed in the home district and may be conducted by staff in the home district as long as they are not doing the work involved in the study, or overseeing contracted work that is being reviewed. Basic quality control tools include a Quality Management Plan providing for seamless review, quality checks and reviews, supervisory reviews, Project Delivery Team (PDT) reviews, etc. Additionally, the PDT is responsible for a complete reading of the report to assure the overall integrity of the report, technical appendices and the recommendations before approval by the District Commander. The Major Subordinate Command (MSC)/District quality management plans address the conduct and documentation of this fundamental level of review.

(2) Agency Technical Review (ATR). ATR is an in-depth review, managed within USACE, and conducted by a qualified team outside of the home district that is not involved in the day-to-day production of the project/product. The purpose of this review is to ensure the proper application of clearly established criteria, regulations, laws, codes, principles and professional practices. The ATR team reviews the various work products and assures that all the parts fit together in a coherent whole. ATR teams will be comprised of senior USACE personnel (Regional Technical Specialists (RTS), etc.), and may be supplemented by outside experts as appropriate. To assure independence, the leader of the ATR team shall be from outside the parent MSC.

(3) Type II Independent External Peer Review (IEPR). IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. In accordance with Section 2035 of Water Resources Development Act (WRDA) of 2007 and EC 1165-2-209, a Type II IEPR (Safety Assurance Review (SAR)) shall be conducted on design and construction activities for hurricane and storm risk management and flood risk management projects, as well as other projects where existing and potential hazards pose a significant threat to human life prior to initiation of physical construction and periodically thereafter until construction activities are completed. IEPR should occur on a regular schedule sufficient to

inform the Chief of Engineers on the adequacy, appropriateness, and acceptability of the design and construction activities for the purpose of assuring public health, safety, and welfare.

d. Review Management Organization (RMO). The South Atlantic Division (SAD) is designated as the RMO. The RMO is responsible for managing the review activities described in this Review Plan.

2. PROJECT INFORMATION AND BACKGROUND

Fort Pierce Beach is located in St. Lucie County on Hutchinson Island on the east coast of Florida. Fort Pierce Beach is about 120 miles north of Miami and about 225 miles south of Jacksonville, Florida. St. Lucie County has 21.5 miles of Atlantic Ocean coastline. The authorized project extends southerly from the south jetty at the entrance to the Fort Pierce Harbor Federal navigation project for a distance of 1.3 miles to include Surfside Park at its southern limit, this equates to Florida Department of Environmental Protection (DEP) Monuments R34 – R41. The project was authorized by the Rivers and Harbors Act of 1965. The authorized project provided for a protective beach with a level 50-foot-wide berm, over 1.3 miles, at an elevation of 10.0 feet MLW along 1.3 miles of shore south of the Ft. Pierce Inlet.

Initial construction was completed in 1970. The project authorization provided for the restoration of 1.3 miles of shoreline south of Fort Pierce Inlet and for periodic nourishment as needed for a period of ten years following initial construction. 718,000 cubic yards (cy) of fill from an offshore borrow area was placed on the shoreline extending from the south jetty at Fort Pierce Inlet, along the northern end of Hutchinson Island, to the southern boundary of Surfside Park. Data at that time indicated that the project would require periodic nourishment at average intervals of about 5 years. The Section 934 report dated May 1995 optimized the renourishment interval at 7 years, with 259,700 cy being provided for each event. The first nourishment was performed in 1980, adding 346,000 cubic yards of material, and the second nourishment was performed in 1999, adding 908,000 cubic yards of material. The third nourishment took place in 2003, adding 723,000 cy of material. The project was renourished again in 2004, 2007 and 2009. An LRR was approved in 2006 that justified a two year renourishment interval for the remainder of the project life and adjusted the cost sharing to reflect the Section 111 issue noted below.

A Section 111 report (Harbor Mitigation) was completed in 1982, which defined the damage to the shoreline immediately south of Fort Pierce Inlet attributable to the Federal Navigation project at Fort Pierce. The report disclosed that the combined effects of the jetties and the required maintenance dredging of the Federal Navigation project at Fort Pierce Inlet is responsible for about sixty percent of the erosion that has occurred along 6,800 feet of shoreline immediately south of the inlet.

The current set of Plans and Specs for the 7th Periodic Renourishment will involve approximately 500,000 cubic yards of fill obtained from the Capron Shoals borrow area and placed along the 1.3 mile beach project. This is the same plan that has been used in the past. Recent May 2011 surveys are being used to verify the volume of material needed to bring the project back to full design. The Project will be subject to a “turtle window” and all construction is scheduled to be completed by 30 April 2012 prior to nesting season. Extensions to 30 May are possible if sought. Due to the offshore distance of the borrow area, this is typically done with a Hopper dredge.

3. DISTRICT QUALITY CONTROL

District Quality Control and Quality Assurance activities for implementation documents (DDR and P&S) are stipulated in ER 1110-1-12, Engineering & Design Quality Management. The subject project DDR and P&S will be prepared by the Jacksonville District using the SAJ procedures and will undergo DQC. DQC Certification will be verified by the Agency Technical Review Team.

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 1165-2-209 and ER 1110-1-12. An ATR will be performed on the P&S and DDR intermediate and pre-final submittals.

ATR will be conducted by individuals and organizations that are external to the Jacksonville District. The ATR Team Leader is a Corps of Engineers employee outside the South Atlantic Division. The required disciplines and experience are described below.

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

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

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organization affiliations, and include a short paragraph on both the credentials and relevant expertise of each reviewer;
- Include the charge to the reviewer;
- Describe the nature of their review and their findings and conclusions;
- 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.

b. ATR Disciplines. As stipulated ER 1110-1-12, ATR members will be sought from the following sources: regional technical specialists (RTS); appointed subject matter experts (SME) from other districts; senior level experts from other districts; Center of Expertise staff; experts from other USACE commands; contractors; academic or other technical experts; or a combination of the above. The ATR Team will be comprised of the following disciplines; knowledge, skills and abilities; and experience levels.

Geotechnical Engineering and Engineering Geology. The team member should be a registered professional. Experience needs to encompass geologic and geotechnical analyses that are used to support the development of Plans and Specifications for navigation and shore protection projects.

Civil Engineering/Dredging Operations. The team member should be a registered professional engineer with dredging operations and/or civil/site work project experience that includes dredging and disposal operations, embankments, channels, revetments and shore protection project features.

NEPA Compliance. The team member should have experience in NEPA compliance activities and preparation of Environmental Assessments and Environmental Impact Statements for navigation or shore protection projects.

ATR Team Leader. The ATR Team Leader should have experience with Navigation and/or Shore Protection Projects. ATR Team Leader may be a co-duty to one of the review disciplines.

5. INDEPENDENT EXTERNAL PEER REVIEW

a. General. EC 1165-2-209 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 Pre-construction, 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 the Corps of Engineers.

b. Type I Independent External Peer Review (IEPR) Determination. A Type I IEPR is associated with decision documents. No decision documents are addressed/covered by this Review Plan. A Type I IEPR is not applicable to the implementation documents covered by this Review Plan.

c. Type II Independent External Peer Review (IEPR) Determination (Section 2035). This shore protection project does not trigger WRDA 2007 Section 2035 factors for Safety Assurance Review (termed Type II IEPR in EC 1165-2-209) and therefore, a review under Section 2035 is not required. The factors in determining whether a review of design and construction activities of a project is necessary as stated under Section 2035 along with this review plans applicability statement follow.

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

This project will perform a periodic nourishment that will re-establish a beach. The beach is designed to protect structures through its sacrificial nature and is continually monitored and renourished in accordance with program requirements and constraints. Failure or loss of the beach fill will not pose a significant threat to human life.

In addition, the prevention of loss of life within the project area from hurricanes and severe storms is via public education about the risks, warning of potential threats and evacuations before hurricane landfall.

- (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 beach fill design is in accordance with the USACE Coastal Engineering Manual. The manual does not employ the concept of redundancy for beach fill design.

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

This project's construction does not have unique sequencing or a reduced or overlapping design. The installation sequence and schedule has been used successfully by the Corps of Engineers on other similar works.

6. MODEL CERTIFICATION AND APPROVAL

This project does not use any engineering models that have not been approved for use by USACE.

7. BUDGET AND SCHEDULE

a. Project Milestones.

District Quality Control – 23Jun11

Agency Technical Review – 24 Jun 11- 31Jun11

BCOE/Owner Review – 24 Jun 11- 08 Jul 11

Advertisement – 08 Aug 11- 02 Sep 11

b. ATR Estimated Cost. The ATR will be conducted 04 May 11- 18 May 11. It is envisioned that each reviewer will be afforded 24 hours review plus 4 hours for coordination. The estimated cost range is \$10-15,000.

8. POINTS OF CONTACT

Per guidance, the names of the following individual will not be posted on the Internet with the Review Plan. Their titles and responsibilities are listed below.

Jacksonville District POCs:

Review Plan, ATR and QM Process,

[Redacted Name]

Project Information (PM) & (ETL),

[Redacted Name]

[Redacted Name]

South Atlantic Division,

[Redacted Name]