

REVIEW PLAN

**For
Periodic Nourishment
Implementation Documents**

**For
Duval County
Beach Erosion Control Project**

Duval County, Florida

Jacksonville District

9 November 2010

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**US Army Corps
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1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of review activities for the Duval County Beach Erosion Control project. 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, Duval County BEC, 113170

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.

2. PROJECT INFORMATION AND BACKGROUND

Duval County is located on the northeast coast of Florida about 340 miles north of Miami. The project includes the 10-mile segment extending from the St. Johns River south to the Duval County – St. John’s County line. The project was authorized in 1965 by Public Law 89-298 (Rivers and Harbors Act). The authorized project provided for a protective beach with a level 60 feet wide berm at 11 feet above mean low water along 53,000 feet of shore between the St. Johns River and the Duval – St. Johns County line.

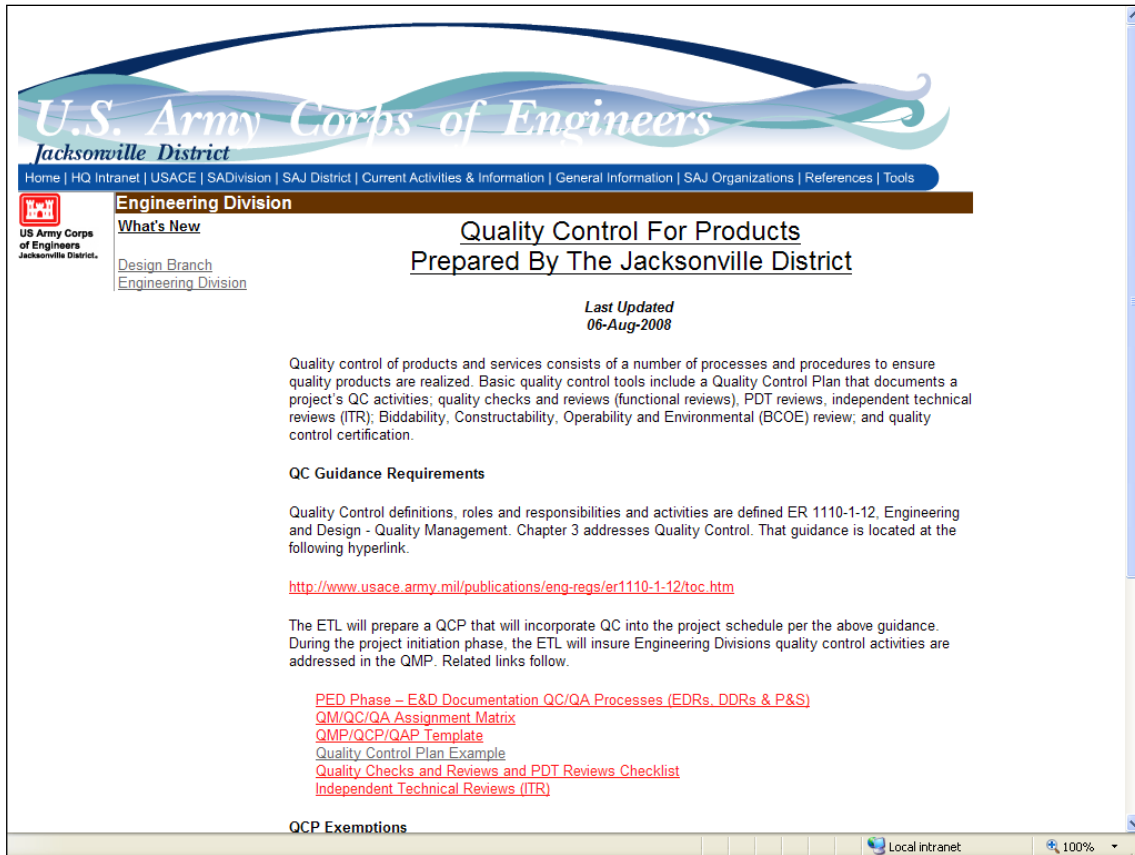
Initial fill of the project was completed between May 1978 and October 1980, using 2.9 million cubic yards of sand from an offshore borrow area about 7.5 miles east of Hanna Park. The recommended plan provided for periodic nourishment at four-year intervals using a volume of sand to match expected erosion losses so that the design project beach width would be maintained. Since the initial construction, the project has been renourished 5 times using predominantly the same offshore borrow area. The current event scheduled for FY 2011 will be the 6th renourishment and will utilize the same borrow area.

In addition, maintenance dredging material from Jacksonville Harbor has been placed on the beaches south of the St. John’s River entrance channel (the downdrift side). The addition of the maintenance material at regular intervals provides for mitigation of the effects of the inlet on normal sand migration and in general, is in addition to the normal renourishment cycle of the beach. Placement of maintenance material has extended the life of historic fills in the area of maintenance placement directly south of the inlet. This has had the effect of not requiring renourishment on the northern portion of the project at every renourishment.

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. Agency Technical Review (formally called Independent Technical Review), quality checks and reviews, supervisory reviews, Project Delivery Team (PDT) reviews are required by the ER and those items are embodied into the CESAJ EN Procedures Portal which can be viewed at the following hyperlink. The subject project DDR and P&S will be prepared by the Jacksonville District using the SAJ procedures and will undergo DQC. The related procedures for in-house products are located at the following hyperlink. A related screen shot is below.

<https://intranet.saj.usace.army.mil/~rwp/QCForProducts.htm>



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 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).

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 will be from outside SAD and should have experience with Navigation and/or Shore Protection Projects and have performed ATR Team Leader duties. 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.

d. Type II Independent External Peer Review (IEPR), USACE Risk Management Center Operational Procedures. The USACE Risk Management Center (RMC) is designated as the Review Management Organization (RMO) for Type II IEPR. The South Atlantic Division (SAD) will coordinate with the RMC and the Coastal and Storm Damage Reduction Planning Center of Expertise as needed on the Type II IEPR determination. The RMC is a technical center within the USACE Institute for Water Resources. Additional information about the RMC can be viewed at the following web site.

<http://www.iwr.usace.army.mil/index.php>

6. MODEL CERTIFICATION AND APPROVAL

This Beach Erosion Control Project does not use any engineering models that have not been approved for use by USACE.

7. BUDGET AND SCHEDULE

a. Project Milestones.

Complete Pre-Final Submittals - 28 Oct 10

District Quality Control - 29 Oct 10- 4 Nov 10

ATR 7 Dec 10 - 21 Dec 10

BCOE – Jan 11

Advertisement - 20 - 24 Jan 11

b. ATR Estimated Cost. The ATR will be conducted 7Dec10-21Dec10. 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.

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