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

CESAD-RBT

28 OCT 2013

MEMORANDUM FOR COMMANDER JACKSONVILLE DISTRICT (CESAJ-EN-QC/ [redacted])

SUBJECT: Approval of the Review Plan for Lido Key, Hurricane and Strom Damage Reduction Beach Nourishment Project, Sarasota County, Florida

1. References:

a. Memorandum, CESAJ-EN-QC, 13 September 2013, subject: Approval of Review Plan for Beach Renourishment, Hurricane and Storm Damage Reduction (HSDR) for Lido Key, Sarasota County, Florida (Enclosure).

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

2. The Review Plan for the Implementation Documents for the nourishment of the Lido Key Hurricane and Storm Damage Reduction submitted by reference 1.a. has been reviewed by this office. As a result of this review, minor changes were coordinated with your staff. The enclosed Review Plan with the coordinated changes incorporated is hereby approved in accordance with reference 1.b above.

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 beach nourishment effort. The primary basis for the concurrence that a Type II IEPR is not required is the determination that the failure or loss of this beach nourishment project would 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 [redacted]

Encl [redacted]

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

REPLY TO
ATTENTION OF

CESAJ-EN-QC

13 September 2013

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

SUBJECT: Approval of Review Plan for Beach Renourishment, Hurricane and Storm Damage Reduction (HSDR) for Lido Key, Sarasota County, Florida

1. References.

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

b. WRDA 2007 H. R. 1495 Public Law 110-114, 08 November 2007

2. I hereby request approval of the enclosed Review Plan and concurrence with the conclusion that Type II Independent External Peer Review (IEPR) of the subject project is not required. The recommendation to exclude Type II IEPR is based on the EC 1165-2-214 Risk Informed Decision Process as presented in the Review Plan.

The scope of this review plan addresses the Periodic Nourishment Implementation Documents which include Plans, Specifications and Design Documentation Report (DDR). 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 will be withheld from the posted version, in accordance with guidance.

FOR THE COMMANDER:

[redacted]

Encl

PROJECT REVIEW PLAN

For

Preconstruction, Engineering and Design Phase Implementation Documents

For

Beach Nourishment
Lido Key Hurricane and Storm Damage Reduction Project

Sarasota County, Florida

Project P2 Number: 116680

Jacksonville District

Date of Review Plan Approval: 28 October 2013

Date of Last Review Plan Revision: 15 March 2019

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 Lido Key Hurricane and Storm Damage Reduction (HSDR) in Sarasota County, Florida. As discussed below, the review activities consist of a District Quality Control (DQC) effort, an Agency Technical Review (ATR), and a Biddability, Constructability, Operability, Environmental, and Sustainability (BCOES) Review. Also, as discussed below, an Independent External Peer Review (IEPR) is not recommended. The project is in the Pre-Construction, Engineering and Design (PED) phase. The implementation documents to be reviewed are Plans and Specifications (P&S) and a Design Documentation Report (DDR). Upon approval, this review plan will be included into the Project Management Plan (PMP) for this project as an appendix to the Quality Management Plan (QMP).

b. References

(1). ER 1110-2-1150, Engineering and Design for Civil Works Projects, 31 August 1999

(2). ER 1110-1-12, Engineering and Design Quality Management, 31 March 2011

(3). EC 1165-2-217, Civil Works Review, 20 February 2018

(4). ER 415-1-11, Biddability, Constructability, Operability, Environmental, and Sustainability (BCOES) Review, 1 January 2013

(5). SAJ EN QMS 02611, SAJ Quality Control of In-House Products: Civil Works PED", 4 December 2017

(6). River and Harbor Act of 1970 (84 Stat. 1819), WRDA of 1986, WRDA 1999 (Project Authorization)

(7). Project Management Plan, Lido Key Hurricane and Storm Damage Reduction Project, Sarasota County, FL, P2 Number 116680

c. Requirements

This Review Plan was developed in accordance with EC 1165-2-217, 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 other work products. The EC outlines five levels of review: DQC, ATR, IEPR, BCOES, and a Policy and Legal Review.

d. Review Plan Approval and Updates

The South Atlantic Division (SAD) Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input as to the appropriate scope and level of review. Like the PMP, the Review Plan is a living document and may change as the project progresses. The Jacksonville District (SAJ) 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 Attachment A. Significant changes to the Review Plan, such as changes to the scope and/or level of review, should be re-approved by the SAD Commander following the process used for initially approving the plan. The latest version of

the Review Plan, along with the Commanders' approval memorandum, will be posted on SAJ's Review Plan public webpage. The latest Review Plan will be provided to SAD.

e. Review Management Organization

SAD is designated as the Review Management Organization (RMO). The RMO, in cooperation of the vertical team, will approve the ATR team members. SAJ will assist SAD with management of the ATR and development of the charge to reviewers.

2. PROJECT INFORMATION

a. Project Location

The project is located on Lido Key, a 2.4 mile long barrier island on the Gulf of Mexico in Sarasota County, Florida. The island is approximately 45 miles south of Tampa, Florida.

b. Project Authorization

(1). A hurricane and storm damage reduction project for Lido Key, Florida was authorized by the December 31, 1970 River and Harbor act which provided for beach restoration of 1.2 miles of the mid-section of Lido Key's Gulf of Mexico shoreline and for periodic nourishment on an as-needed basis. Federal participation was limited to an initial period of 10 years. The city of Sarasota completed the northern portion of the project in 1970 without Federal participation. The project was never completed and was subsequently de-authorized in House Document 91-320 on January 1, 1990 in accordance with the provisions of Section 1001(b)(1) of the 1986 Water Resources Development Act.

(2). A general investigative study of the project was undertaken in response to Resolution, Docket 2458, adopted September 14, 1995 by the Committee on Transportation and Infrastructure, U.S. House of Representatives.

(3). A Reconnaissance Phase Assessment was prepared in January 1997. Recommendations resulting from this assessment included a hurricane and storm damage reduction project along a 9,100-foot segment of Lido Key extending from Florida Department of Environmental Protection (FDEP) monuments R-35 to R-44.

(4). Section 364 of Water Resources Development Act (WRDA) 1999 reauthorized the project as follows:

Each of the following projects is authorized to be carried out by the Secretary, if the Secretary determines that the project is technically sound, environmentally acceptable, and economically justified, as appropriate:

A) IN GENERAL – The project for shore protection, Lido Key Beach, Sarasota, Florida, authorized by section 101 of the River and Harbor Act of 1970 (84 Stat. 1819) and de-authorized under section 1001(b) of the Water Resources Development Act of 1986 (33 U.S.C. 579a(b)), at a total cost of $5,200,000, with an estimated Federal cost of $3,380,000 and an estimated non-Federal cost of $1,820,000.

B) PERIODIC NOURISHMENT – The Secretary may carry out periodic nourishment for the project for a 50-year period at an estimated average annual cost of $602,000, with an estimated annual Federal cost of $391,000 and an estimated annual non-Federal cost of $211,000.

c. Current Project Description

This will be the first time the project is constructed by the Federal Government as described in the authorization above. The project consists of the nourishment of approximately 1.6 miles of shoreline on Lido Key using beach compatible material. Placement area will occur between Florida Department of Environmental Protection (FDEP) R-monuments R-34.5 and R-44. The fill template design includes a berm crest elevation of +4.0 feet NAVD88 and a sloped berm section down to +2.0 feet NAVD88 at a slope of 1' vertical to 100' horizontal (100 (v:h)). The foreshore berm has a slope of 1:10 (v:h). Big Sarasota Pass and ebb shoal is the primary sand source and is split over three cuts (B, C and D). The cut depths at each of the borrow areas will be to a maximum allowable depth of -13.5 feet NAVD.

The project is also constructing two shore-perpendicular groin structures at the south end of the fill area to stabilize beach fill and lengthen the time required between nourishment events. The two groins will maintain the minimum 80 foot beach design width and allow sand to bypass downdrift due to optimized lengths and porosity. The first structure will extend 170 feet (crest length) from the existing seawall near R-42.5. The second structure will extend 345 feet (crest length) seaward from the existing seawall near R-43.2. The design crest width of the groins is 9 feet with a varied design depth and a side slope of 1V:1.5H. Adding the front slopes and 5-foot scour aprons at the end of each structure yields total lengths along the foundations of 187 feet and 362 feet, respectively.

d. Public Participation

SAJ's Corporate Communications Office continually keeps the effected public informed on SAJ projects and activities. The approved Review Plan will be posted on SAJ's Review Plan public webpage. Any comments or questions regarding the Review Plan will be addressed by SAJ.

e. Civil Works Cost Engineering Mandatory Center of Expertise Certification

The cost related documents associated with this contract do not require external peer review or certification. Therefore, no additional review requirements will be executed by the Cost Engineering Mandatory Center of Expertise (MCX) for the implementation documents addressed by this Review Plan.

3. DISTRICT QUALITY CONTROL

DQC activities for DDRs and P&S are stipulated in ER 1110-1-12, Engineering & Design Quality Management and SAJ EN QMS 02611. The project DDR and P&S will be prepared by the Jacksonville District using ER 1110-1-12 procedures and will undergo District Quality Control. SAJ EN QMS 02611 defines DQC as the sum of two reviews, Discipline Quality Control Review (DQCR) and Product Quality Control Review (PQCR). Product Quality Control Review Certification is the DQC Certification and will precede ATR.

4. AGENCY TECHNICAL REVIEW

a. Risk Informed Decision on Appropriate Level of Review

PED phase implementation documents are being prepared and an ATR of the P&S and DDR documents is required.

b. Agency Technical Review Scope.

ATR is undertaken to "ensure the quality and credibility of the government's scientific information" in accordance with EC 1165-2-217 and ER 1110-1-12. An ATR will be performed on the P&S and DDR pre-final submittals.

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

ATR comments will be documented in the DrChecks^{sm} model review documentation database. DrChecks^{sm} is a module in the ProjNet^{sm} suite of tools developed and operated at ERDC-CERL (www.projnet.org). At the conclusion of ATR, the ATR Team Leader will prepare an ATR Review Report that summarizes the review. An outline for an ATR Review Report is in Attachment C. The report will include at a minimum the Charge to Reviewers, ATR Certification Form from EC 1165-2-217, and the DrChecks^{sm} printout of the comments.

c. ATR Disciplines.

As stipulated ER 1110-1-12, ATR members will be sought from the following sources: regional technical specialists (RTS); subject matter experts (SME) certified in CERCAP; 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.

ATR Team Leader. The ATR Team Leader shall be from outside SAD and shall have a minimum of 15 years of experience with Navigation and/or Shore Protection Projects. ATR Team Leader shall be a co-duty to one of the review disciplines.

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

Construction Management. The team member shall have 7 years of construction management experience with beach nourishment with beach quality material and construction of groins.

Geotechnical Engineering and Engineering Geology. The team member shall be a registered professional engineer with a minimum of 7 years of experience in geologic and geotechnical analyses used to support the development of Plans and Specifications for navigation and shore protection projects with beach nourishment and rock structures.

Environmental Compliance. The team member shall be a senior environmental resources specialist with 5 years of experience in National Environmental Policy Act (NEPA) compliance activities associated with coastal storm damage reduction projects. Draft or Final NEPA and other environmental documents will be submitted to the ATR team with the DDR and Plans and Specifications to aid in performing ATR.

5. BIDDABILITY, CONSTRUCTABILITY, OPERABILITY, ENVIRONMENTAL, AND SUSTAINABILITY 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. This will help to ensure that the Government's contract requirements are clear, executable, and readily understandable by private sector bidders or proposers. It will also help ensure that the construction may be done efficiently and in an environmentally sound manner, and that the construction activities and projects are sufficiently sustainable. Effective BCOES reviews of design and contract 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, ER 415-1-11, and SAJ EN QMS 02611.

6. INDEPENDENT EXTERNAL PEER REVIEW

a. General.

EC 1165-2-217 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 and Construction 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 conducted outside USACE.

b. Type I Independent External Peer Review Determination.

A Type I IEPR is primarily associated with decision documents. A Type I IEPR is not applicable to the implementation documents covered by this Review Plan.

c. Type II Independent External Peer Review Determination.

This project does not trigger WRDA 2007 Section 2035 factors for Safety Assurance Review (termed Type II IEPR in EC 1165-2-217. Therefore, a review under Section 2035 is not required. The factors in determining whether a review of design and construction activities of a project are necessary as stated under Section 2035, along with this Review Plan's applicability statements, are as follows:

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

The project will perform the initial nourishment that will establish an authorized beach section and construct three groins to reduce post-construction erosion losses. The beach is designed to protect structures through its sacrificial nature and is continually monitored and periodically 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.

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

(3) The project design lacks redundancy.

The beach fill design for the project 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 unique construction sequencing or a reduced or overlapping design construction schedule.

Construction schedules do not have unique sequencing and activities are not reduced or overlapped. The construction methods associated with these renourishment contracts have been used successfully by the Corps of Engineers on other similar projects.

Based on the discussion above, the District Chief of Engineering, as the Engineer-In-Responsible-Charge, does not recommend a Type II IEPR of the P&S and DDR.

7. POLICY AND LEGAL COMPLIANCE

The SAJ 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 and supporting environmental documents will be reviewed for legal sufficiency prior to advertisement.

8. MODEL CERTIFICATION AND APPROVAL

This ecosystem restoration project will not use any engineering models that have not been approved for use by USACE.

9. PROJECT DELIVERY TEAM DISCIPLINES

PDT Disciplines
Geotechnical Engineering
Coastal Engineering
Civil Engineering
Environmental Engineering

10. BUDGET AND SCHEDULE

a. Project Schedule.

The project schedule is shown in the table below.

Task	Start Date	End Date
Draft P&S Start and Completed	01-Oct-2018	14-Dec-2018
DQCR Review & Certification	14-Dec-2018	24-Jan-2019
PQCR Review & Certification	24-Jan-2019	05-Mar-2019
ATR Review Certification	25-Feb-2019	05-Apr-2019
BCOE Review & Certification	05-Apr-2019	06-May-2019
Advertisement	06-May-2019	05-Jun-2019
Award / NTP	05-Jul-2019	16-Jul-2019

* SAJ EN QMS 02611 defines DQC as the sum of DQCR and PQCR.

b. ATR Cost.

Funds will be budgeted for an ATR as outlined above. It is envisioned that each reviewer will be afforded 36 hours for the review plus 8 hours for coordination. The estimated cost range for the ATR is $35,000-$40,000.

ATTACHMENT A: APPROVED REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number
15 March 2019	Updated References, Project Information, and Project Schedule Sections with the current project information and references. Various grammatical/formatting corrections were also made through the document based on recent feedback from SAD on similar review plans.	1(b.), 2, and 10(a.)

ATTACHMENT B: PARTIAL LIST OF ACRONYMS AND ABBREVIATIONS

Acronyms	Defined
AFB	Alternatives Formulation Briefing
ATR	Agency Technical Review
BCOES	Biddability, Constructability, Operability, Environmental, and Sustainability Review
CAP	Continuing Authorities Program
CERCAP	Corps of Engineers Reviewer Certification and Access Program
CY	Cubic Yards
DDR	Design Documentation Report
DQC	District Quality Control
DQCR	Discipline Quality Control Review
EC	Engineering Circular
EA	Environmental Assessment
ER	Engineering Regulation
ERDC-CERL	Engineer Research and Development Center – Construction Engineering Research Laboratory
ESA	Endangered Species Act
ETL	Engineering Technical Lead
FDEP	Florida Department of Environmental Protection
FONSI	Findings of No Significant Impacts
FSCA	Feasibility and Cost Sharing Agreement
FY	Fiscal Year
GRR	General Reevaluation Report
IEPR	Independent External Peer Review
LPP	Locally Preferred Plan
MCX	Mandatory Center of Expertise
MLLW	Mean Low Low Water
MSC	Major Subordinate Command
NAS	National Academy of Sciences
NEPA	National Environmental Policy Act
ODMDS	Ocean Dredged Material Disposal Site
OMB	Office of Management and Budget
OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
P&S	Plans and Specifications
PED	Preconstruction Engineering and Design
PDT	Project Delivery Team
PM	Project Manager
PMP	Project Management Plan

Acronyms	Defined
PPA	Project Partnering Agreement
PQCR	Product Quality Control Review
QA	Quality Assurance
QCP	Quality Control Plan
QMP	Quality Management Plan
QMS	Quality Management System
RMC	Risk Management Center
RMO	Review Management Organization
RP	Review Plan
RTS	Regional Technical Specialist
SAJ	South Atlantic Jacksonville District Office
SAD	South Atlantic Division Office
SAR	Safety Assurance Review (also referred as Type II IEPR)
SME	Subject Matter Expert
USACE	U.S. Army Corps of Engineers
WRDA	Water Resources and Development Act

ATTACHMENT C

ATR REPORT OUTLINE AND COMPLETION OF AGENCY TECHNICAL REVIEW

Lido Key Hurricane and Storm Damage Reduction (HSDR) in Sarasota County, Florida

Review of Plans and Specifications (P&S), Design Documentation Report (DDR)

ATR REPORT OUTLINE (Unneeded items, such as ATR Team Member Disciplines that are not identified as needed in the Review Plan, shall be deleted from the ATR Report.)

1. Introduction:
2. Project Description:
3. ATR Team Members:

   ATR Team Leader.

   Geotechnical Engineering and Engineering Geology.

   Civil Engineering/Dredging Operations.

   Construction Management.

   Environmental Compliance.

4. ATR Objective:
5. Documents Reviewed:
6. Findings and Conclusions:
7. Unresolved Issues:

Enclosures:

1. ATR Statement of Technical Review
2. ATR Comments (DrChecks)

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) for Lido Key Hurricane and Storm Damage Reduction (HSDR) in Sarasota County, Florida, including the design documents, plans and specifications and DDR. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-217 and ER 1110-1-12. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrChecks.

_____ _____

NAME Date
ATR Team Leader

_____ _____

NAME Date
Project Manager

_____ _____

NAME Date
Review Management Office Representative

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: *Describe the major technical concerns and their resolution.*

As noted above, all concerns resulting from the ATR of the project have been fully resolved.

_____ _____

NAME Date
Chief, Engineering Division
SAJ-EN