

Review Plan

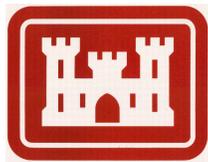
For

Atlantic Coast of New York

East Rockaway Inlet to Rockaway Inlet

Coastal Storm Risk Management Project

Implementation Documents



**US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT**

MSC Approval Date: Pending

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1. PURPOSE AND REQUIREMENTS

a. Purpose.

This Review Plan defines the scope and level of review for the implementation documents for the initial construction of the East Rockaway Inlet to Rockaway Inlet, Atlantic Shore Front, Coastal Storm Risk Management Project. Implementation documents include plans and Specifications (P&S), Design Documentation Report (DDR), and cost estimate.

b. References

- (1) Engineering Circular (EC) 1165-2-217, Review Policy for Civil Works, 20 Feb 18
- (2) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 11
- (3) Engineering Regulation (ER) 1110-1-12, Quality Management, 20 Sep 06
- (4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 07
- (5) ER 415-1-11, Biddability, Constructability, Operability, Environmental and Sustainability (BCOES) Reviews, 1 Jan 13

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 outlines four general levels of review: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. In addition to these levels of review, decision documents are subject to cost engineering review and certification (per EC 1165-2-217) and planning model certification/approval (per EC 1102-2-412).

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

a. The RMO is responsible for managing the overall peer review effort described in this Review Plan. The RMO for implementation documents is the Major Subordinate Command (MSC), while for a decision document is the appropriate Planning Center of Expertise (per EC 1165-2-209). Therefore the RMO for the peer review of the P&S, DDR, and cost estimate described in this Review Plan is the North Atlantic Division.

b. The RMO will coordinate with the Civil Works Cost Engineering and Agency Technical Review Mandatory Center of Expertise (MCX) to ensure the appropriate expertise is included on the review teams to assess the adequacy of cost estimates, construction schedules and contingencies.

3. PROJECT INFORMATION

a. Implementation Documents.

This Review Plan has been prepared for the Design Documentation Report (DDR), plans and specifications (P&S), and cost estimate for the East Rockaway Inlet to Rockaway Inlet, Atlantic Shore Front, Coastal Storm Risk Management Project. The purpose of these documents is to provide a record of final design. Approval of these implementation documents is at the District Command level.

b. Project Description.

The Atlantic Shoreline planning reach of the study area extends the full length of the Rockaway Peninsula, from Rockaway Inlet on the west, to Beach 19th Street on the east. The Rockaway Peninsula is a narrow strip of land in the Atlantic Coastal Plain, stretching along the western end of the South Shore of Long Island. Located in Queens County, New York, it is approximately 11 miles in length, averages less than 0.75 miles in width, and is about 7 square miles total. Jamaica Bay forms the northern border of the peninsula. The recommended plan provides for reduction of storm damages from coastal erosion and flooding through storm protective reinforced dune, beach berm and dune, construction of new groins, and modifying existing groins.

This Review Plan will be programmatic to include all contracts for the East Rockaway Inlet to Rockaway Inlet, Atlantic Coast of New York, Coastal Storm Damage Reduction Project, but the three separate contract plans and specification packages will be delivered to the ATR team at separate times. The project will be constructed under the following multiple construction contracts:

- (1) *Groin Contract* – 14 new groins and 5 groin modifications. The Western groin field consists of 12 new groins from B. 145th Street to B. 92nd Street and 1 groin modification at B. 149th Street. The Eastern groin field consists of 2 new groins, one at B. 52nd Street and the other at B. 32nd Street, and 4 groin modifications between B. 45th Street and B. 36th Street.

Target schedule award of Spring 2020

- (2) *Beachfill and Reinforced Dune Contract* – approximately 2.3 MCY of beach berm and dune. A taper berm extends approximately 4,500 ft west of B. 149th Street. A berm, including advanced nourishment, and dune extend from B. 149th Street to B. 17th Street. The dune and berm both taper from B. 17th Street to the eastern project limit near B. 9th Street. The construction of the reinforced dune consists of sheetpile, concrete cap and armor stones from B. 149th St. to B. 9th St. This contract will include the demolition of existing cross overs that intersect the reinforced dune.

Target schedule award of Winter 2021

- (3) *Crossovers Contract* – construction of approximately 80 existing crossovers within the project boundaries, and this contract will include the construction of proposed new timber crossover structures.

Target schedule award of Spring 2023

4. DISTRICT QUALITY CONTROL (DQC)

All implementation documents will undergo DQC. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). The home district (NAN) will manage the DQC.

a. Documentation of DQC and BCOES Reviews.

DQC and BCOES will be documented through the use of DrCheckssm and a DQC report, which will be signed by all reviewers.

b. Products to Undergo DQC and BCOES.

All applicable documents will undergo DQC and BCOES reviews.

c. Required DQC Expertise.

DQC and BCOES will be performed by staff in the Home District that are not involved in the development of implementation documents. Additional Quality Control will be performed by the Project Delivery Team during the course of completing the design.

5. AGENCY TECHNICAL REVIEW (ATR)

ATR is mandatory for all implementation documents. The objective of ATR is to ensure consistency with established criteria, guidance, procedures, and policy. The ATR will assess whether the analyses presented are technically correct and comply with published USACE guidance, and that the document explains the analyses and results in a reasonably clear manner. 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. The ATR team lead will be from outside the home MSC.

a. Products to Undergo ATR.

The products that will undergo ATR include the DDR and Plans and Specifications.

b. Required ATR Team Expertise.

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works implementation documents and conducting ATR. The lead should also have the necessary

	skills and experience to lead a virtual team through the ATR process. The ATR lead may also serve as a reviewer for a specific discipline (such as civil engineering).
Coastal Engineer	Team member will be a licensed expert in the field of coastal engineering, specifically in beachfill, groin and/or seawall design and construction.
Structural Engineer	Team member will be a licensed expert in the field of structural engineering; preferably with expertise in beach crossover structures and seawall design
Civil Engineer	Team member will be an expert in the field of civil engineering; preferably with expertise in beach crossover layouts/design criteria

c. Documentation of ATR.

DrCheckssm review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment will normally include:

- (1) The review concern – identify the product’s information deficiency or incorrect application of policy, guidance, or procedures;
- (2) The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not be properly followed;
- (3) The significance of the concern – indicate the importance of the concern with regard to its potential impact on the plan components, efficiency (cost), effectiveness (function/outputs), implementation responsibilities, safety, Federal interest, or public acceptability; and
- (4) The probable specific action needed to resolve the concern – identify the action(s) that the reporting officers must take to resolve the concern.

In some situations, especially addressing incomplete or unclear information, comments may seek clarification in order to then assess whether further specific concerns may exist.

The ATR documentation in DrCheckssm will include the text of each ATR concern, the PDT response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes the district, PCX, MSC, and HQUSACE), and the agreed upon resolution. If an ATR concern cannot be satisfactorily resolved between the ATR team and the PDT, it will be elevated to the vertical team for further resolution in accordance with the policy issue resolution process described in ER 1110-1-12. Unresolved concerns can be closed in DrCheckssm with a notation that the concern has been elevated to the vertical team for resolution.

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 organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions;
- Identify and summarize each unresolved issue (if any); and
- Include a copy of each ATR comment, the PDT response, a brief summary of the pertinent points in the follow on discussion, including any vertical coordination, and the agreed upon resolution.

ATR will be certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR Lead will prepare a Statement of Technical Review certifying that the issues raised by the ATR team have been resolved (or elevated to the vertical team). A Statement of Technical Review should be completed for the implementation documents. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

An IEPR may be required for implementation documents under certain circumstances. 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. A risk-informed decision, as described in EC 1165-2-217, is made as to whether an IEPR is appropriate. IEPR panels will consist of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of areas of expertise suitable for the review being conducted. There are two types of IEPR:

- **Type I IEPR.** Type I IEPRs are managed outside the USACE and are conducted on project studies. Type I IEPR panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analysis, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in the evaluation of environmental impacts of proposed projects, and biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address all underlying engineering, economics, and environmental work, not just one aspect of the study. For decision documents where a Type II IEPR (Safety Assurance Review) is anticipated during project implementation, safety assurance shall also be addressed during the Type I IEPR per EC 1165-2-217.
- **Type II IEPR.** Type II IEPRs, or Safety Assurance Reviews (SAR), are managed outside the USACE and are conducted on design and construction activities for hurricane, storm, and flood risk management projects or other projects where existing and potential

hazards pose a significant threat to human life. Type II IEPR panels will conduct reviews of the design and construction activities prior to initiation of physical construction and, until construction activities are completed, periodically thereafter on a regular schedule. The reviews shall consider the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health safety and welfare.

a. Decision on IEPR.

Type I IEPR is not applicable as per EC 1165-2-217, Civil Works Review Policy, since the East Rockaway Inlet to Rockaway Inlet, Atlantic Coast of New York, Coastal Storm Damage Reduction Project is in the Preconstruction, Engineering, and Design Phase (PED). This project is unique since it is both in PED and Feasibility phases at the same time, but this Review Plan will focus strictly on the PED phase, and therefore, Type I IEPR is still not applicable.

Type II Independent External Peer Review, Safety Assurance Review, is required by EC 1165-2-217 for hurricane and storm risk management and flood risk management projects, as well as other projects where potential hazards pose a significant threat to human life. Based on a risk informed decision, Attachment 4, there is not a significant risk to human life.

b. Products to Undergo IEPR. Not applicable.

c. Required IEPR Panel Expertise. Not applicable.

d. Documentation of IEPR. Not applicable.

7. POLICY AND LEGAL COMPLIANCE REVIEW

All implementation documents will be reviewed for their compliance with law and policy. DQC and ATR facilitate the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of results in implementation documents.

8. COST ENGINEERING DIRECTORATE OF EXPERTISE (DX) REVIEW AND CERTIFICATION

The District, through the RMO, will coordinate with the Cost Engineering DX located in Walla Walla District to determine what level of review is necessary and to identify the appropriate reviewer. The DX will provide the Cost Engineering certification.

9. MODEL CERTIFICATION AND APPROVAL

Not applicable since the East Rockaway Inlet to Rockaway Inlet, Atlantic Shore Front, Coastal Storm Risk Management Project is in the Preconstruction, Engineering and Design Phase and this relates to the use of certified or approved models for planning activities.

10. REVIEW SCHEDULES AND COSTS

a. ATR Schedule and Cost.

The schedule and costs budgeted for ATR reviews are as follows:

90% Plans & Specifications:

- (1) *Groin Contract* – July 2019, \$20,000
- (2) *Beachfill Contract & Reinforced Dune* – November 2019, \$25,000
- (3) *Crossovers Contract* – January 2020, \$5,000

b. IEPR Schedule and Cost. Not applicable.

c. Model Certification/Approval Schedule and Cost. Not applicable.

11. PUBLIC PARTICIPATION

There will be no public meetings prior to the start of the construction contract.

12. REVIEW PLAN APPROVAL AND UPDATES

The North Atlantic Division Commander, or his representative, is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving district, PCX (RMO), MSC (RMO), and HQUSACE members) as to the appropriate scope and level of review for the implementation documents. Like the PMP, the Review Plan is a living document and may change as the engineering and design progresses. The home district is responsible for keeping the Review Plan up to date. Significant changes to the Review Plan (such as changes to the scope and/or level of review) should be re-approved by the MSC 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 the Home District's webpage. The latest Review Plan should also be provided to the PCX (RMO).

13. REVIEW PLAN POINTS OF CONTACT

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

- Ralph LaMoglia, P.E., NAD, RMO Lead, 347-370-4599
- Dan Falt, NAN, PPMD Project Manager, 917-790-8614
- Jamal Sulayman, NAN, EN Technical Manager, 917-790-8299

ATTACHMENT 1: TEAM ROSTERS

PDT

Name	Role	Phone Number	E-mail Address
Dan Falt	Project Manager	x-8614	Daniel.T.Falt@usace.army.mil
Jamal Sulayman	EN Technical Manager	x-8299	Jamal.A.Sulayman@usace.army.mil
David Yang	Coastal Engineer	x-8270	David.W.Yang@usace.army.mil
Suzana Rice	Coastal Engineer	x-8374	Suzana.S.Rice@usace.army.mil
Joseph Diehl	Structural Engineer	x-8218	Joseph.Diehl@usace.army.mil
Shahid Shaikh	Civil Engineer	x-8066	Shahid.Shaikh@usace.army.mil
Kaitlyn Eng	Cost Engineer	x-8545	Kaitlyn.A.Eng@usace.army.mil
Daria Mazey	Planning Lead	x-8031	Daria.S.Mazey@usace.army.mil
Kate Alcoba	Environmental	x-8216	Catherine.J.Alcoba@usace.army.mil

DQC Team

Name	Role	Phone Number	E-mail Address
Arun Heer	Coastal Engineering	x-8263	Arun.K.Heer@usace.army.mil
Kevin Whorton	Civil Engineering	x-8065	Kevin.a.whorton@usace.army.mil
Mukesh Kumar	Cost Engineer	x-8421	Mukesh.Kumar@usace.army.mil

ATR Team*

Name	Role	Review District
Witold Kluza	Civil engineer ATR lead	Chicago
Jeff Fuller, P.E.	Hydraulic Engineer	Chicago
David Force	Structural engineer	Chicago

*All resumes will be reviewed and approved by the MSC prior to initiating any ATR.

Vertical Team

Name	Role	Phone Number	E-mail Address
Anthony Ciorra, P.E.	NAN PPMD Coastal Projects Chief	917-790-8208	Anthony.Ciorra@usace.army.mil
Peter Weppler	NAN-PL, Environmental Analysis Branch Chief	917-790-8634	Peter.M.Weppler@usace.army.mil
Andre Chauncey	NAN-EN, Civil Resources Branch Chief	917-790-8353	Andre.T.Chauncey@usace.army.mil
Encer Shaffer	NAN-EN, Design Branch Chief	917-790-8360	Encer.R.Shaffer@usace.army.mil
Mukesh Kumar	NAN-EN, Cost Engineering Branch Chief	917-790-8421	Mukesh.Kumar@usace.army.mil
Steven Weinberg	NAN-EN, Engineering Management, Civil Works Section Chief	917-790-8391	Steven.R.Weinburg@usace.army.mil

ATTACHMENT 2: STATEMENT OF AGENCY TECHNICAL REVIEW

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for Contract 1: DDR, Plans and Specs, and Cost Estimate for the Long Beach Island, NY project. The ATR was conducted as defined in the project’s approved Review Plan to comply with the requirements of EC 1165-2-217. 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, 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.

Signature & Date _____
TBD
ATR Team Leader
District

Signature & Date _____
Daniel Falt
Project Manager
CENAN-PP-C

CERTIFICATION OF AGENCY TECHNICAL REVIEW

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

Signature & Date

Michael Rovi, P.E.

Chief, Engineering Division

CENAN-EN

Signature & Date

Alan Huntley, P.E., PMP

Chief, Business Technical Division

CENAD-RBT

ATTACHMENT 3: ACRONYMS AND ABBREVIATIONS

<u>Term</u>	<u>Definition</u>	<u>Term</u>	<u>Definition</u>
AFB	Alternative Formulation Briefing	NED	National Economic Development
ASA(CW)	Assistant Secretary of the Army for Civil Works	NER	National Ecosystem Restoration
ATR	Agency Technical Review	NEPA	National Environmental Policy Act
CSDR	Coastal Storm Damage Reduction	O&M	Operation and maintenance
DPR	Detailed Project Report	OMB	Office and Management and Budget
DQC	District Quality Control/Quality Assurance	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DX	Directory of Expertise	OEO	Outside Eligible Organization
EA	Environmental Assessment	OSE	Other Social Effects
EC	Engineer Circular	PCX	Planning Center of Expertise
EIS	Environmental Impact Statement	PDT	Project Delivery Team
EO	Executive Order	PAC	Post Authorization Change
ER	Ecosystem Restoration	PMP	Project Management Plan
FDR	Flood Damage Reduction	PL	Public Law
FEMA	Federal Emergency Management Agency	QMP	Quality Management Plan
FRM	Flood Risk Management	QA	Quality Assurance
FSM	Feasibility Scoping Meeting	QC	Quality Control
GRR	General Reevaluation Report	RED	Regional Economic Development
Home District/MSD	The District or MSD responsible for the preparation of the decision document	RMC	Risk Management Center
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMO	Review Management Organization
IEPR	Independent External Peer Review	RTS	Regional Technical Specialist
ITR	Independent Technical Review	SAR	Safety Assurance Review
LRR	Limited Reevaluation Report	USACE	U.S. Army Corps of Engineers
MSC	Major Subordinate Command	WRDA	Water Resources Development Act

**ATTACHMENT 4: MFR ON RISK INFORMED ASSESSMENT OF SIGNIFICANT THREAT TO HUMAN LIFE BY
CENAN, ENGINEERING DIVISION**