**REVIEW PLAN**

Lynnhaven Jetties CAP Section 107 Feasibility Study, Virginia Beach, Virginia

Detailed Project Report

Norfolk District

**MSC Approval Date:** Pending

**Last Revision Date:** Draft Completed on 10/12/12



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1. **PURPOSE AND REQUIREMENTS**
	1. **Purpose.** This Review Plan defines the scope and level of peer review for the Lynnhaven Jetties CAP Section 107 Feasibility Study, Virginia Beach, VA
	2. **Applicability.** This review plan is based on the model National Programmatic Review Plan for Section 1135 project decision documents, which is applicable to projects that do not require Independent External Peer Review (IEPR), as defined in ER 1165-2-209 Civil Works Review Policy. A Section 1135 project does not require IEPR if ALL of the following specific criteria are met:

• The project does not involve a significant threat to human life/safety assurance;

• The total project cost is less than $45 million;

• There is no request by the Governor of an affected state for a peer review by independent experts;

• The project does not require an Environmental Impact Statement (EIS),

• The project is not likely to have significant economic, environmental, and/or social effects to the Nation;

• The project/study is not likely to have significant interagency interest;

• The project/study is not likely highly controversial;

• The decision document is not likely to contain influential scientific information or be a highly influential scientific;

• The information in the decision document or proposed project design is not likely to be based on novel methods, involve the use of innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices; and

• The project has not been deemed by the USACE Director of Civil Works or Chief of Engineers to be controversial nature.

If any of the above criteria are not met, the model National Programmatic review plan is not applicable and a study specific review plan must be prepared by the home district, coordinated with the National Planning Center of Expertise for Inland Navigation (PCXIN) and approved by the home MSC in accordance with EC 1165-2-209.

Applicability of the model National Programmatic Review Plan for a specific project is determined by the home MSC. If the MSC determines that the model plan is applicable for a specific study, the MSC Commander may approve the plan (including exclusion from IEPR) without additional coordination with the ECO-PCX or Headquarters, USACE. The initial decision as to the applicability of the model plan should be made no later than the Federal Interest Determination milestone (as defined in Appendix F of ER 1105-2-100, F-10.e.1) during the feasibility phase of the project. In addition, the home district and MSC should assess at the Alternatives Formulation Briefing (AFB) whether the initial decision on the use of the model plan is still valid or if a project specific review plan should be developed based on new information. If a project specific review plan is required, it must be approved prior to execution of the Feasibility Cost Sharing Agreement (FCSA) for the study.

This review plan does not cover implementation products. A review plan for the design and implementation phase of the project will be developed prior to approval of the final decision document in accordance with EC 1165-2-209.

* 1. **References**
		1. Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 Jan 2010
		2. EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011
		3. Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
		4. ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
		5. *PMP for study*
	2. **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 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 1165-2-209) and planning model certification/approval (per EC 1105-2-412).
1. **REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION**

The RMO is responsible for managing the overall peer review effort described in this Review Plan. The RMO for decision documents is typically either a Planning Center of Expertise (PCX) or the Risk Management Center (RMC), depending on the primary purpose of the decision document. The RMO for the peer review effort described in this Review Plan is Larry Cocchieri.

The RMO will coordinate with the Cost Engineering Directory of Expertise (DX) to ensure the appropriate expertise is included on the review teams to assess the adequacy of cost estimates, construction schedules and contingencies.

1. **STUDY INFORMATION**
	1. **Decision Document.** This review plan is being prepared for the Lynnhaven Jetties CAP Section 107 Detailed Project Report (DPR). The DPR contains the findings and recommendations resulting from the Feasibility study. The DPR is approved by the home MSC and does not require Congressional authorization. An Environmental Assessment will be prepared along with the DPR in accordance with the National Environmental Policy Act (NEPA).
	2. **Study/Project Description.** This is a CAP Section 107 Feasibility Study for navigation improvements, jetties in this particular study, on the Lynnhaven Inlet in Virginia Beach, Virginia. The Lynnhaven Inlet is an existing Federal navigation channel originally authorized by the River and Harbor Act of 23 October 1962, as amended, and later by the Water Resources development Act of 1986. The existing navigation project consists of an entrance channel 10 feet deep and 150 feet wide from that depth in the Chesapeake Bay to a mooring and turning basin 10 feet deep, 1,250 feet long, and 700 feet wide in Lynnhaven Bay; a channel 9 feet deep and 90 feet wide from the mooring and turning basin to Broad Bay, via the Long Creek-Broad Bay Canal; and a channel 6 feet deep and 90 feet wide through the Narrows connecting Broad and Linkhorn Bays. A 1,660 foot side channel 8 feet deep and 100 feet wide connecting into Long Creek. The Lynnhaven Inlet project area is shown on the attached map.

The study area for this Feasibility study is limited to only the entrance channel and turning basin of the existing Lynnhaven inlet project. The non-Federal Sponsor for this study, the city of Virginia Beach, submitted a letter requesting that the Corps investigate the feasibility of constructing jetties on the Lynnhaven Inlet entrance channel where it meets the Chesapeake Bay in order to reduce shoaling in the Federal channel and thereby improve safety for the vessels that navigate it.

During the Feasibility phase, the Norfolk District project delivery team (PDT) will determine whether there is Federal interest in the construction of navigation improvements, in the form of jetties and/or other shoreline structures, on the Lynnhaven Inlet. Once Federal interest has been established, the PDT will compare various measures to include: construction of a single jetty, construction of two jetties (one on either side of the entrance channel), non-structural measures, and no action according to the Planning Guidance Notebook (ER-1105-2-100) and other Corps policies and regulations. The selected plan should reduce shoaling and wave action in the entrance channel and turning basin, thereby making navigation safer and reducing damage to vessels and structures on the existing Federal project.

* 1. **Factors Affecting the Scope and Level of Review.**
* This study is not expected to be challenging. There is a large amount of existing data for the area due to the fact that the study area already is a Federal channel. This study does not present any unusual technical or institutional challenges and most of the PDT members working on the study have experience with the CAP program and Section 107 in particular. There are no social challenges expected to occur during the study and the non-Federal sponsor is eager to participate and familiar with Corps civil works policies and procedures.
* The city of Virginia Beach plans to construct a new bridge over the Lynnhaven Inlet which may affect the design and implementation of a navigation improvement project in the study area, but would not hinder the success of the recommended project. The PDT will take the planned bridge construction into consideration during the study so that the recommended plan has been formulated to account for existing conditions as well as future conditions once the new bridge has been constructed. During the Design and Implementation phase, the project design would need to take into account existing structures as well as any structures in the study area that are associated with the new bridge. Construction of the recommended project may have to be coordinated with the construction of the new bridge. The risks that the new bridge places on the Feasibility and Design and Implementation phases can be reduced or eliminated by working closely with the city so that the construction of the bridge and Corps activities are coordinated to minimize the amount of impact each has on the other.
* This project will not be justified by life safety or have a significant threat to human life or safety. This project, like most CAP projects, is small and limited in scope. The recommended project would be implemented on an existing Federal channel and would not have a significant impact on the environment, public safety, or social justice. Project performance may be affected by sea level change, but not by climate variability.
* There has not been a request by the governor of the State of Virginia for a peer review by independent experts.
* This project is not likely to involve significant public dispute. Implementation of the recommended project would enhance the existing Federal project and improve navigation in the study area.
* The project/study is not likely to involve significant public dispute as to the economic or environmental cost or benefit of the project. The Lynnhaven Inlet is a widely utlilzed and valued Federal navigation project in the city of Virginia Beach, the Tidewater Metropolitan Area, and the state of Virginia. In addition to recreational and commercial fishing vessels, the inlet is also used by harbor pilot boats. The city of Virginia Beach and those who navigate the existing channel are in support of a Corps study and implementation of a project. The project is not expected to significantly impact the environment of the study area and is not likely to involve significant public dispute as to its environmental cost or benefit.
* The information in the decision document or anticipated project design is not likely to be based on novel methods, involve the use of innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices. Jetty design and construction is a fairly routine and does not necessitate the use of complex or innovative techniques.
* The project design is not anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule as this is a small project that does not present any design or engineering complexities**.**
	1. **In-Kind Contributions.** Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR. The sponsor may wish to provide in-kind products and analyses, however, at this early stage of the study process the specific products and analyses have not been established yet. In-kind contributions will be negotiated as a part of the FCSA.
1. **DISTRICT QUALITY CONTROL (DQC)**

All decision documents (including supporting data, analyses, environmental compliance documents, etc.) shall 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 shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manual of the District and the home MSC.

* 1. **Documentation of DQC.** District quality control will be documented in a Technical and Legal Review Certification which will be provided to the ATR team with the draft report.

* 1. **Products to Undergo DQC.** The draft Detailed Project Report and accompanying appendices as well as the Environmental Assessment will undergo DQC prior to the ATR.
	2. **Required DQC Expertise.** The draft Detailed Project Report and accompanying appendices as well as the Environmental Assessment will be reviewed by the entire PDT. In addition, each PDT member will have a technical reviewer, someone in their field of expertise who has not had any involvement in the study, review the products as well.

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

ATR is mandatory for all decision documents(including supporting data, analyses, environmental compliance documents, etc.). 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 for the public and decision makers. 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.

* 1. **Products to Undergo ATR.** The draft Detailed Project Report and accompanying appendices as well as the Environmental Assessment will undergo ATR before submission to NAD for final approval.
	2. **Required ATR Team Expertise.** The ATR team will be comprised of individuals that have not been involved in the development of the decision document and will be chosen based on expertise, experience, and/or skills. The members will roughly mirror the composition of the PDT. It is anticipated that the ATR team will consist of 6-7 members. The ATR team members will be identified by the PCXIN at the earliest possible date. The cost engineering expert on the team shall be coordinated with CENWW – Cost Estimating Directory of Expertise.

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| **ATR Team Members/Disciplines** | **Expertise Required** |
| ATR Lead | The ATR lead should be a senior professional with extensive experience in preparing Civil Works decision documents—especially those prepared under CAP and in 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 planning, economics, environmental resources, etc). |
| Planning | The Planning reviewer should be a senior water resources planner with experience in navigation studies—especially those conducted under the CAP program. |
| Economics | The economics reviewer should be a senior water resources planner with experience in navigation studies and have a thorough understanding of economic analysis procedures, especially those relating to the identification and evaluation of benefits for CAP navigation studies. |
| Environmental Resources | The Environmental Resources reviewer should be a senior environmental resources professional with experience in coastal navigation, preparing decision documents for CAP navigation studies, and the production of Environmental Assessments for coastal navigation projects. They should also be experienced in the cultural resource coordination necessary for this type of study. |
| Hydrology and Hydraulic/Coastal Engineering | The hydrology and hydraulic/coastal engineering reviewer will be an expert in the field and have a thorough understanding of sediment transport in an open channel system. They should also have experience with hydrodynamic modeling—specifically the Surface-Water Management System (version 11.0) and structural construction techniques, especially with respect to jetty construction. The reviewer should also have experience in coastal processes as they relate to navigation.  |
| Operations | The operations reviewer will be an expert in the field and have a thorough understanding of coastal open channel systems. |
| Cost Engineering | The Cost Engineering reviewer should be a senior cost engineer certified by the Cost Engineering Directory of Expertise (DX), located in the Walla Walla District. |

* 1. **Documentation of ATR.** DrChecks 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 selection, recommended 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 DrChecks 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, RMO, 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 either ER 1110-1-12 or ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns can be closed in DrChecks 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 verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

ATR may 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, based on work reviewed to date, for the AFB, draft report, and final report. A sample Statement of Technical Review is included in Attachment 2.

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

IEPR may be required for decision documentsunder 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 1165-2-209, is made as to whether 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 IEPR reviews 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 1165-2-209.
* Type II IEPR. Type II IEPR, or Safety Assurance Review (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.
	1. **Decision on IEPR.** Based on the information and analysis provided in this review plan, the project covered under this plan is excluded from IEPR because it does not meet any mandatory IEPR triggers and does not warrant IEPR based on a risk informed analysis. If any of the criteria outlined in paragraph 1(b) are not met, the model National Programmatic Review Plan is not applicable and a study specific review plan must be prepared by the home district, coordinated with the appropriate PCX, and approved by the home MSC in accordance with EC 1165-2-209.

* 1. **Products to Undergo Type I IEPR.** Not-Applicable
	2. **Required Type I IEPR Panel Expertise.** Not-Applicable
	3. **Documentation of Type I IEPR.** Not-Applicable
1. **POLICY AND LEGAL COMPLIANCE REVIEW**

All decision documents will be reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate in determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the home MSC Commander. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in decision documents.

1. **COST ENGINEERING DIRECTORY OF EXPERTISE (DX) REVIEW AND CERTIFICATION**

All decision documents shall be coordinated with the Cost Engineering DX, located in the Walla Walla District. The DX will assist in determining the expertise needed on the ATR team and Type I IEPR team (if required) and in the development of the review charge(s). The DX will also provide the Cost Engineering DX certification. The RMO is responsible for coordination with the Cost Engineering DX.

1. **MODEL CERTIFICATION AND APPROVAL**

EC 1105-2-412 mandates the use of certified or approved models for all planning activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. Planning models, for the purposes of the EC, are defined as any models and analytical tools that planners use to define water resources management problems and opportunities, to formulate potential alternatives to address the problems and take advantage of the opportunities, to evaluate potential effects of alternatives and to support decision making. The use of a certified/approved planning model does not constitute technical review of the planning product. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

EC 1105-2-412 does not cover engineering models used in planning. The responsible use of well-known and proven USACE developed and commercial engineering software will continue and the professional practice of documenting the application of the software and modeling results will be followed. As part of the USACE Scientific and Engineering Technology (SET) Initiative, many engineering models have been identified as preferred or acceptable for use on Corps studies and these models should be used whenever appropriate. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

* 1. **Planning Models.** Planning models are not anticipated to be used in the development of the decision document.
	2. **Engineering Models.** The following engineering models are anticipated to be used in the development of the decision document:

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| --- | --- | --- |
| **Model Name and Version** | **Brief Description of the Model and How It Will Be Applied in the Study** | **Approval Status** |
| Surface-Water Modeling System (SMS), Version 11.0 | The Surface Water Modeling System (SMS) is a comprehensive environment for one- and two-dimensional models dealing with surface water applications. Hydrodynamic models include CMS-Flow, TABS (RMA2, RMA4), FESWMS, ADCIRC, and TUFLOW. The hydrodynamic models cover a range of applications including river flow analysis, rural and urban flooding, estuary and inlet modeling, and modeling of large coastal domains. Additional functionalities include advection/diffusion (RMA4) and sediment transport (FESWMS). Wave models in SMS include CMS-Wave, STWAVE, BOUSS2D, and CGWAVE and include both spectral and wave transformational models. The Particle Tracking Model (PTM) tracks particles added to the water column to help evaluate sediment transport and environmental impacts. For the Lynnhaven Jetties 107 study, the model will help determine which alternative will prevent shoaling in the federal channel based on existing data. | Approved, CoP Preferred |

1. **REVIEW SCHEDULES AND COSTS**
	1. **ATR Schedule and Cost.** Following the determination of Federal interest approval at the MSC level, a schedule will be developed for the study and this review plan updated appropriately to reflect the estimated dates for ATR, Draft and Final Reports, and other major milestones. As this is a CAP study, ATR cost is expected to be on the lower end of the range since the DPR should require a less involved review than a larger GI study.
	2. **Type I IEPR Schedule and Cost.** Not-Applicable
	3. **Model Certification/Approval Schedule and Cost.** Not-Applicable, none of the models used in this study need certification or approval.
2. **PUBLIC PARTICIPATION**

State and Federal agencies may be invited to participate in the study covered by this review plan as partner agencies or as technical members of the PDT, as appropriate. Agencies with regulatory review responsibilities will be contacted for coordination as required by applicable laws and procedures. The ATR team will be provided copies of any public and agency comments that result from public review of the decision document and EA.

The non-Federal sponsor will be given the opportunity to review the decision document and EA and provide comments. Once the Detailed Project Report is approved by the home MSC and is considered final, it will available for distribution to the public.

1. **REVIEW PLAN APPROVAL AND UPDATES**

The North Atlantic Division Commander is responsible for approving this Review Plan. The Commander’s approval reflects vertical team input (involving district, MSC, RMO, and HQUSACE members) as to the appropriate scope and level of review for the decision document. Like the PMP, the Review Plan is a living document and may change as the study progresses. The home district is responsible for keeping the Review Plan up to date. Minor changes to the review plan since the last MSC Commander approval are documented in Attachment 3. 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, should be posted on the Home District’s webpage. The latest Review Plan should also be provided to the RMO and home MSC.

1. **REVIEW PLAN POINTS OF CONTACT**

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

* Norfolk District POC: Rachel Haug, Project Planner (757-201-7589)
* Home MSC POC: Joe Forcina, North Atlantic Division (347-370-4584)
* RMO POC: Larry Cocchieri, North Atlantic Division (347-370-4571)

**ATTACHMENT 1: TEAM ROSTERS**

**Table 1. Members of the Project Delivery Team (1)**

|  |  |  |
| --- | --- | --- |
| **Name** | **Discipline** | **Organization** |

#### Project Manager

|  |  |  |
| --- | --- | --- |
| Kristin Mazur/Audrey Cotnoir | Project Manager | CENAO-WR-OD |

### Technical Specialists

|  |  |  |
| --- | --- | --- |
| Rachel Jones | PTTL (2)/Plan Formulation | CENAO-WR-PR |
| John Haynes | Social/Cultural Resources | CENAO-WR-PE |
| Andrew Bazzle | Economics | CENAO-WR-PR |
| Michelle Hamor | Flood Plain Management | CENAO-WR-PF |
| Dave Schulte | Environmental | CENAO-WR-PE |
| Alicia Farrow | Hydraulics and Hydrology | CENAO-EC-EH |
| Jeff Swallow | Geographic Information System | CENAO-WR-OG |
| Phillip Wunderly | Geo-Environmental | CENAO-EC-EG |
| David Parsons | Real Estate | CENAO-RE-A |
| Mike Hall | Cost Engineering | CENAO-EC-EE |
| David Linn | Survey | CENAO-WR-ON-S |
| Pam Spaugy | Public Affairs | CENAO-PA |
| TBD | Programs | CENAO-PM-R |
| Kyle Guess | Counsel | CENAO-OC-R |
| Katie Damico | Regulatory | CENAO-WR-REG |
| TBD | Agency Technical Review | TBD |
| Dr. Julie Rosati | Coastal Inlets Research- ERDC | CEERD-HF-CI |

1. Other PDT members may be added as warranted

(2) PTTL – Planning Technical Team Leader

**Sponsor**

|  |
| --- |
| City of Virginia Beach, VA |

**Table 2. Vertical Team**

|  |  |
| --- | --- |
| **Vertical Team Member** | **Role** |
| Larry Cocchieri | RMO |
| Joe Forcina | MSC |
| Cathy Shuman | RIT |

**ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECSION DOCUMENTS**

**COMPLETION OF AGENCY TECHNICAL REVIEW**

The Agency Technical Review (ATR) has been completed for the *<type of product>* for *<project name and location>*. The ATR was conducted as defined in the project’s Review Plan to comply with the requirements of EC 1165-2-209. 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 DrCheckssm.

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| *SIGNATURE* |  |  |
| *Name* |  | Date |
| ATR Team Leader |  |  |
| *Office Symbol/Company* |  |  |

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| *SIGNATURE* |  |  |
| *Name* |  | Date |
| Project Manager |  |  |
| *Office Symbol* |  |  |

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| --- | --- | --- |
| *SIGNATURE* |  |  |
| *Name* |  | Date |
| Architect Engineer Project Manager1 |  |  |
| *Company, location* |  |  |

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| --- | --- | --- |
| *SIGNATURE* |  |  |
| *Name* |  | Date |
| Review Management Office Representative |  |  |
| *Office Symbol* |  |  |

**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.

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| *SIGNATURE* |  |  |
| *Name* |  | Date |
| Chief, Engineering Division |  |  |
| *Office Symbol* |  |  |

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| --- | --- | --- |
| *SIGNATURE* |  |  |
| *Name* |  | Date |
| Chief, Planning Division |  |  |
| *Office Symbol* |  |  |

1 Only needed if some portion of the ATR was contracted

**ATTACHMENT 3: REVIEW PLAN REVISIONS**

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| --- | --- | --- |
| **Revision Date** | **Description of Change** | **Page / Paragraph Number** |
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NOTE: Revisions to the Review Plan since it was last approved by the MSC Commander should be documented in Attachment 3. Significant changes (such as a change in the level or scope of review) require re-approval by the MSC Commander following the process used for initially approving the plan. DELETE THIS TEXT BOX BEFORE FINALIZING THE REVIEW PLAN.

**ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS**

NOTE: This attachment is optional. If included, it should define the acronyms used in the Review Plan. Acronyms used in this template or that might typically be used in a review plan (to be modified as necessary for specific review plans) are provided in the table below. DELETE THIS TEXT BOX BEFORE FINALIZING THE REVIEW PLAN.

| **Term** | **Definition** | **Term** | **Definition** |
| --- | --- | --- | --- |
| 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/MSC | The District or MSC 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 |
|  |  |  |  |