DEPARTMENT OF THE ARMY
PACIFIC OCEAN DIVISION, U.S. ARMY CORPS OF ENGINEERS
FORT SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF

CEPOD-PDC

06 DEC 2012

MEMORANDUM FOR COMMANDER HONOLULU ENGINEER DISTRICT (CEPOH-PP-C/CINDY BARGER), BUILDING 230, FORT SHAFTER, HI 96858-5440

SUBJECT: Review Plan Approval for the Hawaii Water Management Irrigation System Improvements Waiahole Reservoir, Island of Oahu, Hawaii

1. References:

a. Engineering Circular 1165-2-209, Civil Works Review Policy, 31 January 2010, and Change 1, 31 January 2012.

b. Review Plan for the Hawaii Water Management Irrigation System Improvements Waiahole Reservoir, Island of Oahu, Hawaii, Preconstruction Engineering and Design Phase, Honolulu District, U.S. Army Corps of Engineers.

2. The enclosed Review Plan (reference 1.b.) for the Hawaii Water Management Irrigation System Improvements Waiahole Reservoir Preconstruction Engineering and Design Phase was prepared IAW references 1.a. The Pacific Ocean Division Civil Works Division is the lead office to execute this Review Plan. This Review Plan includes Type II Independent External Peer Review.

3. I approve this Review Plan. It is subject to change as circumstances require, consistent with project development under the Project Management Business Process. Subsequent revisions to this Review Plan or its execution will require new written approval from this office.

4. The point of contact for this memorandum is Mr. Russell Iwamura, Senior Economist, Civil Works Integration Division, at 808-835-4625 or email Russell.K.Iwamura@usace.army.mil.

Encl

GREGORY J. GUNTER
Colonel, EN
Acting Commander

REVIEW PLAN

HAWAII WATER MANAGEMENT IRRIGATION SYSTEM IMPROVEMENTS
WAIAHOLE RESERVOIR, ISLAND OF OAHU, HAWAII

Preconstruction Engineering & Design Phase

U.S. Army Corps of Engineers, Honolulu District

MSC Approval Date: 6 December 2012
Last Revision Date: 6 December 2012

US Army Corps
of Engineers ®

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REVIEW PLAN

HAWAII WATER MANAGEMENT IRRIGATION SYSTEM IMPROVEMENTS WAIAHOLE RESERVOIR, ISLAND OF OAHU, HAWAII

Preconstruction Engineering & Design Phase

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This review plan defines the scope and level of peer review for the Hawaii Water Management Irrigation System Improvements, Waiahole Reservoir, Island of Oahu, Hawaii. This project is in the Preconstruction Engineering & Design (PED) phase. An Engineering Documentation Report (EDR) and Environmental Assessment (EA) are being developed. The U.S. Army Corps of Engineers (USACE) Pacific Ocean Division (POD) Commander is the approval authority for the EDR and EA. Plans and specifications packages are also being developed and are covered by this review plan as well.

This review plan was developed using the National Planning Center of Expertise (PCX) review plan template dated 15 June 2011.

b. References.

(1) Engineer Circular (EC) 1165-2-209, Civil Works Review Policy, 31 January 2012.

(2) EC 1105-2-412, Assuring Quality of Planning Models, 31 March 2011.

(3) Engineer Regulation (ER) 1110-1-12, Quality Management, 30 September 2006.

(4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 November 2007.

(5) Hawaii Water Management Irrigation System Improvements, PED Phase Project Management Plan (PMP), May 2012.

(6) USACE POD Quality Management Plan, December 2010.

(7) USACE Honolulu District (POH) Civil Works Review Policy (ISO CEPOH-C_12203), 1 November 2010.

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 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) and the Value Management Plan requirements in the Project Management Business Process (PMBP) Reference 8023G and the ER 11-1-321, Change 1.

2. 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 PCX or the Risk Management Center (RMC), depending on the primary purpose of the decision document. For this particular project, the RMC felt it more appropriate for POD to serve as the RMO. The RMO for the peer review effort described in this Review Plan is POD.

The RMO will coordinate with the Cost Engineering 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. STUDY INFORMATION

a. Authority. The Hawaii Water Management Irrigation System Improvements is authorized under Section 1(a)(4) of the Consolidated Appropriations Act of 2001 (Public Law 106-554, Appendix D, Chapter 5 (114 STAT 2763A-190)), which authorized and directed use of $2 million of appropriated Construction General funds to initiate design and construction of the project. The 905(b) Report was approved by Headquarters USACE on 12 February 2003 allowing implementation of design and construction of repairs and rehabilitation of publicly owned irrigation systems to the extent of the funds appropriated.

b. Decision Document. An EDR and EA are being developed for this project. The POD Commander is the approval authority.

c. Project Sponsor. The non-Federal Sponsor for this project is the State of Hawaii Department of Agriculture.

d. Study/Project Description. The EDR will include documentation of the engineering, environmental and institutional analyses and public involvement activities necessary to implement improvements to the Waiahole Irrigation System located at the Waiahole Ditch Irrigation System in the central part of the Island of Oahu, Hawaii.

The Waiahole Ditch Irrigation System is a transmission system that uses surface and groundwater to irrigate farmlands in leeward and central Oahu. The Waiahole Ditch opened in 1916 and is owned by the State of Hawaii. The total length of the system is approximately 26 miles and consists mostly of tunnels. Water is collected both as surface water and from tunnels in the Koʻolau Mountains. After collection, the water is transported through tunnels and ditches and stored in reservoirs for diversified agriculture (3000 acres) and pineapple (2000 acres) irrigation. Increased use of water is expected with the expansion of diversified agriculture. In addition, water from the Waiahole Ditch is increasingly being used to restore water to Windward Oahu streams, which will result in a reduction of the available water in the system. Larger reservoirs are required to store water during cool and wet weather so that the water can be used when demands are high. This project will provide increased water storage capacity by enlarging

reservoirs and lining reservoirs to reduce water losses and leakage in the system. This project will make the following improvements to the system:

(1) Reservoir 155 is an earthen-filled structure built in 1916. It is approximately 22 feet deep and has a storage capacity of 12 million gallons (mgal) of water. Reservoir 155 will be excavated to increase its storage capacity and lined to reduce seepage losses. Repairs will also be made to the overflow channel and a new sediment trap and inlet screen will be constructed.

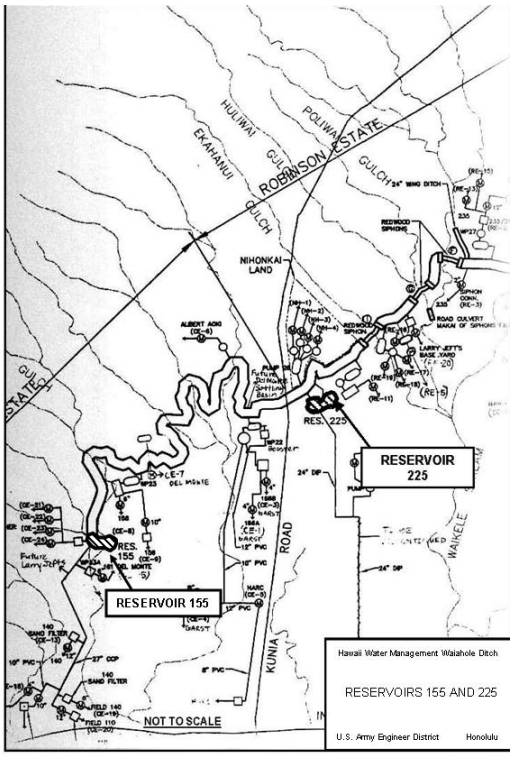
(2) Reservoir 225 is an earthen-filled structure built during the later 1920s. It is approximately 15 feet deep and has a storage capacity of 9.5 mgal of water. Reservoir 225 will be excavated to increase its storage capacity and lined to reduce seepage losses. A new sediment basin will be constructed in the reservoir and a new debris screen will be installed at the reservoir inlet.

In accordance with the Hawaii Dam Safety Act of 2007, the State of Hawaii Department of Land and Natural Resources (DLNR) has jurisdiction over the enlargement, repair, and alteration of Reservoir 155, and other jurisdictional dams, in order to protect the health, safety, and welfare of the citizens of the State of Hawaii by reducing the risk of failure of the dams and reservoirs. POH and the non-Federal sponsor are coordinating closely with DLNR to ensure that all proposed modifications are consistent with state law.

The work will follow the guidelines set forth in ER 1110-2-1150 (Engineering and Design for Civil Works Projects), ER 1110-1-12 (Quality Management), and ER 200-2-2 (Procedures for Implementing the National Environmental Policy Act (NEPA)).

See Figure 1 for the locations of Reservoir 155 and Reservoir 225.

Figure 1: Hawaii Water Management Waiahole Reservoir Location Map



e. Construction Costs. The cost of construction is anticipated to be less than $45 million.

f. Factors Affecting the Scope and Level of Review. As improvements to reservoirs, there are potential life safety issues due to the potential for the reservoirs to fail during a flood event, which could place residents downstream at risk. Consequently, an IEPR is anticipated to be required for this project. Consistent with EC 1165-2-209, Mr. Todd Barnes, POH Chief of Engineering and Construction, concurs with the assessment that there are potential life safety issues at this stage in project development. If life safety issues are able to be minimized as the designs are developed in more detail, POH will seek an exclusion from IEPR requirements.

The project does not meet any other of the conditions for an IEPR:

- The estimated cost of construction is less than $45 million;

- There has been no request by the Governor of Hawai‘i for a peer review by independent experts;

- The project is not anticipated to involve significant public dispute as to the size, nature, or effects of the project;

- The project is not anticipated to involve significant public dispute as to the economic or environmental costs or benefits of the project;

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

- The project design is not anticipated to involve the use of innovative materials or techniques, require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule;

- The project is not likely to contain influential scientific information or be a highly influential scientific assessment;

- The project is not anticipated to have more than negligible adverse impacts on scarce or unique cultural, historic or tribal resources;

- The project is not anticipated to have substantial adverse impact on fish and wildlife species or their habitat, prior to implementation of mitigation;

- The project is not anticipated to have more than negligible adverse impacts on species listed as endangered or threatened or to the designated critical habitat of such species, under the Endangered Species Act of 1963 as amended (ESA), prior to implementation of mitigation; and

- The project does not have significant interagency interest.

g. In-Kind Contributions. Products and analyses provided by the non-Federal sponsor as work-in-kind services are subject to DQC, ATR, and IEPR. The non-Federal sponsor is not proposing work-in-kind contributions as part of this project.

4. 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 PMP. POH shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manuals of POH and POD.

a. Documentation of DQC. Consistent with the POH Quality Manual, DQC will be documented using the POH DQC review table. When all comments have been addressed and back checked, the DQC lead will sign a DQC certification in compliance with the POH Quality Manual. The DQC comments and responses will be provided for the ATR team at each review.

b. Products to Undergo DQC. The following products will be subject to DQC:

(1) The draft and final EDR and EA;

(2) The draft and final plans and specifications; and,

(3) The draft and final EA decision.

c. Required DQC Expertise. Because the project is a single purpose project with a discrete scale, it is anticipated that the team may be limited in size, having individuals address multiple expertise requirements. The following expertise is needed for DQC.

- Hydrology and Hydraulic Engineer;
- Civil Engineer with expertise in dams and reservoirs;
- Geotechnical Engineer with expertise in dams and reservoirs; and
- Environmental specialist with expertise in NEPA, Clean Water Act (CWA) Section 404 (b)(1) alternatives analysis and the National Historic Preservation Act (NHPA). The project is not anticipated to have an effect on species listed under ESA.

5. AGENCY TECHNICAL REVIEW (ATR)

ATR is mandatory for all decision and implementation 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 POD, and is conducted by a qualified team from outside POH 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 POD.

a. Products to Undergo ATR. Because the project is single purpose and discrete in scale, it is anticipated that ATR is needed on the draft reports only. Based on the ATR of the draft reports and coordination with POD, POH will consider additional ATR reviews of future documents as necessary. The products to undergo ATR include the draft EDR and EA and the draft plans and specifications package.

b. Required ATR Team Expertise. The following ATR expertise is required for this project. Because the project is single purpose and discrete in scale, individuals may address multiple expertise requirements. The RMO will identify the final make-up of the ATR team and identify the ATR team leader in consultation with the Project Manager (PM), vertical team and other appropriate centers of expertise. Once identified, the ATR team members for this study and a brief description of their credentials will be added in Attachment 1.

Table 1: ATR Required Expertise

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 and conducting an 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).
Environmental Resources	The environmental reviewer will have expertise in NEPA, CWA, and dams, reservoirs, and water supply projects. The environmental reviewer will also have expertise in stream habitat restoration as it relates to instream flow conditions.
Cultural Resources	The cultural reviewer will have expertise in NHPA specifically dealing with historic structures and potential archaeological sites.
Hydrology and Hydraulic Engineering	The hydrology and hydraulic engineer will have expertise in dams, reservoirs, and water supply projects. The reviewer will also have familiarity with instream flow conditions for stream habitats.
Geotechnical Engineering	The geotechnical engineer will have expertise in dams and reservoirs.
Civil Engineering	The civil engineer will have expertise in dams and reservoirs.
Cost Engineering	The cost engineer will have expertise in dams, reservoirs, and/or water supply projects.
Construction/Operations	The construction reviewer will have expertise in dams and reservoirs.

c. Documentation of ATR. DrChecks[sm] 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 been 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 where information is incomplete or unclear, comments may seek clarification in order to then assess whether further specific concerns may exist.

The ATR documentation in DrChecks[sm] will include the text of each ATR concern, the Project Delivery Team (PDT) response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes POH, POD and possibly the RMC 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[sm] 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 draft report and final report. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

IEPR may be required for decision and implementation documents under certain circumstances. IEPR is the most independent level of review and is applied 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 to assess whether an IEPR is appropriate. IEPR panels will consist of independent, recognized experts from outside of the USACE in the appropriate disciplines. The IEPR panel will represent 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 by the Outside Eligible Organization (OEO) 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 (SAR)) 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 SAR, is managed by the RMC and is 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. Based on the project's authorization, the project is in the design phase and the focus of the project is developing the plans and specifications to implement the project. Since the project is in implementation, a Type I IEPR is not required. However, Type II IEPR will be conducted on the design and construction activities for this project as it proposes improvements to reservoirs. If the reservoirs fail during a flood event there is a potential life safety issue to residents downstream.

b. Products to Undergo Type II IEPR. The plans and specifications package will undergo Type II IEPR.

c. Required Type II IEPR Panel Expertise. See Table 2 for the expertise required to carry out the Type II IEPR. The IEPR panel members for this study and a brief description of their credentials will be included in Attachment 1 once they are identified.

Table 2: Type II IEPR Required Expertise

IEPR Panel Members/Disciplines	Expertise Required
Engineering	The engineering reviewers will have expertise in hydraulic, civil, and geotechnical engineering as it relates to reservoirs and water supply projects to review the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health safety and welfare.

d. Documentation of Type II IEPR. The review team will prepare a review report. All review panel comments shall be entered as team comments that represent the group and be non-attributable to individuals. The team lead is to seek consensus, but where there is a lack of consensus, note the non-concurrence and why. The report will include an introduction, the composition of the review team, a summary of the review during design, a summary of the review during construction, any lessons learned in both the review process and/or design and construction, and any appendices for supporting analyses and assessments of the adequacy and acceptability of the methods, models, and analyses used.

After receiving a report on a project from the peer review panel, the POH Chief of Engineering, with full coordination with the Chiefs of Construction and Operations, shall consider all comments contained in the report and prepare a written response for all comments and note concurrence and subsequent action or non-concurrence with an explanation. The POH Chief of Engineering shall submit the panel's report and POH's responses to POD for final POD Commander approval and then make the report and responses available to the public on the POH website.

7. POLICY AND LEGAL COMPLIANCE REVIEW

All decision and implementation documents will be reviewed throughout the 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 POD 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.

8. COST ENGINEERING MANDATORY CENTER OF EXPERTISE (MCX) REVIEW AND CERTIFICATION

All decision and implementation documents shall be coordinated with the Cost Engineering MCX, located in the Walla Walla District. The MCX will assist in determining the expertise needed on the ATR team and Type II IEPR teams (if required) and in the development of the

review charge(s). The MCX will also provide the Cost Engineering Certification. The RMO is responsible for coordination with the Cost Engineering MCX.

9. MODEL CERTIFICATION AND APPROVAL

a. Planning Models. 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).

As the project is in PED, no planning models are anticipated to be used to develop the decision document.

b. Engineering Models. 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).

The following engineering models are anticipated to be used in the development of the EDR:

Table 3: Engineering Models and Approval Status

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Approval Status
HEC-RAS 4.0 (River Analysis System)	The Hydrologic Engineering Center's River Analysis System (HEC-RAS) program provides the capability to perform one-dimensional steady and unsteady flow river hydraulics calculations. The program will be used for steady flow analysis to evaluate the future without- and with-project conditions along the Waiahole Stream and its tributaries.	HH&C CoP Preferred Model
Microcomputer Aided Cost Engineering System (MCACES) 2nd	The MCACES MII construction cost estimating software, developed by Building Systems Design, Inc., is a tool used by cost engineers to develop and prepare all USACE Civil Works cost estimates. Using the features in this	Cost Engineering DX Required Model

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Approval Status
Generation (MII)	system, cost estimates are prepared uniformly allowing cost engineering throughout USACE to function as one virtual cost engineering team.	

10. REVIEW SCHEDULES AND COSTS

a. ATR Schedule and Cost. The ATRs for this study will be accomplished in accordance with the cost and schedule in the PMP. As of the approval date of this Review Plan, the ATRs of the various documents are scheduled as follows:

- The Draft EDR/EA and Plans and Specifications review: April 2013.
- Estimated Cost: $50,000

b. Type II IEPR Schedule and Cost. The IEPR for this study will be accomplished in accordance with the cost and schedule in the PMP. As of the approval date of this Review Plan, the IEPR is scheduled as follows:

- Design Review: July 2013.
- Estimated Contract Cost: $150,000.

Pursuant to Section 2034 of Water Resource Development Act (WRDA) of 2007, this amount is 100% federally funded.

- Estimated District and RMO coordination costs: $50,000.

This estimate was developed using the Type I IEPR Standard Operating Procedure table provided by the PCXs. It is anticipated coordination for the Type II IEPR would be of similar cost. This amount is cost-shared between USACE and the non-federal Sponsor.

c. Model Certification/Approval Schedule and Cost. No planning models are proposed for this project development so certification and approval is not required.

11. PUBLIC PARTICIPATION

State and Federal resource agencies may be invited to participate in the review of the EA in accordance with NEPA and 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 public and agency comments.

A Public Involvement Plan (PIP) will be developed for the NEPA process to guide the public participation process. Small group meetings will be conducted as needed to collect specific information relevant to project goals and objectives and provide information to key stakeholders and interest groups relevant to the project goals and objectives. A public meeting will be held during the public review process to seek input on the draft EA.

12. REVIEW PLAN APPROVAL AND UPDATES

The POD Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving POH, POD, and possibly the RMC, 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. POH is responsible for keeping the Review Plan up to date. Minor changes to the review plan since the last POD Commander approval are documented in Attachment 3. Significant changes to the Review Plan (such as changes to the scope and/or level of review) will be re-approved by the POD 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 POH webpage. The latest Review Plan will also be provided to the RMC and POD.

13. REVIEW PLAN POINTS OF CONTACT

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

Honolulu District
Harold Nakaoka
Civil and Public Works Branch
Programs and Project Management Division
U.S. Army Corps of Engineers, Honolulu District
Building 230, CEPOH-PP-C
Ft. Shafter, HI 96858
Telephone: (808) 835-4031

Review Management Organization/Pacific Ocean Division
Mr. Russell Iwamura
U.S. Army Corps of Engineers, Pacific Ocean Division
Building 525, CEPOD-PDC
Ft. Shafter, HI 96858
Telephone: (808) 835-4625

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 *Hawaii Water Management, Waiahole Reservoir, Island of Oahu, Hawaii*. 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 U.S. 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[sm].

SIGNATURE _____ _____

Name Date
ATR Team Leader
Office Symbol/Company

SIGNATURE _____ _____

Name Date
Project Manager
Office Symbol

SIGNATURE _____ _____

Name Date
Architect Engineer Project Manager[1]
Company, location

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.

SIGNATURE _____ _____

Name Date
Chief, Engineering Division
Office Symbol

SIGNATURE _____ _____

Name Date
Chief, Planning Division
Office Symbol

[1] Only needed if some portion of the ATR was contracted

ATTACHMENT 3: REVIEW PLAN REVISIONS

Table 7: Review Plan Revisions

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

Table 8: Standard Acronyms and Abbreviations

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