



REPLY TO  
ATTENTION OF

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

CEPOD-PDC

6 Dec 12

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

SUBJECT: Review Plan Approval for the Hanapepe River Flood Risk Management Repair Project Plans and Specifications Package, Island of Kauai, 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 Hanapepe River Flood Risk Management Repair Project Plans and Specifications Package, Island of Kauai, Hawaii, Honolulu District, U.S. Army Corps of Engineers.

2. The enclosed Review Plan (reference 1.b.) for the Hanapepe River, Island of Kauai, Hawaii, flood risk management repair project plans and specifications package was prepared IAW references 1.a. The Pacific Ocean Division Civil Works Division was the lead office to execute this Review Plan. This plan does not include 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](mailto:Russell.K.Iwamura@usace.army.mil).

Encl

  
GREGORY J. GUNTER  
Colonel, EN  
Acting Commander

**REVIEW PLAN**

**Hanapepe River Flood Risk Management Repair Project  
Kauai, Hawaii**

**For  
Plans and Specifications for Construction Contract (Repair of Existing Project)**

**U.S. Army Corps of Engineers, Honolulu District**



**MSC Approval Date:** 6 December 2012  
**Last Revision Date:** 29 November 2012



**US Army Corps  
of Engineers** ®

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**REVIEW PLAN**

**Hanapepe River Flood Risk Management Repair Project, Kauai, Hawaii  
Plans and Specifications for Construction Contract (Repair of Existing Project)**

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## 1. PURPOSE AND REQUIREMENTS

**a. Purpose.** The purpose of this Review Plan is to document the scope and level of peer review for the Hanapepe River Flood Risk Management (FRM) Repair Project, Kauai, Hawaii plans and specifications package. The project is currently under construction.

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

### b. References

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

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

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

(4) Hanapepe River Flood Risk Management Repair Project Management Plan (PMP), draft dated October 2012.

(5) USACE Pacific Ocean Division (POD) Quality Management Plan, December 2010.

(6) 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, implementation documents are subject to cost engineering review, certification (per EC 1165-2-209), and the Value Management Plan requirements in the Project Management Business Process 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 implementation documents is typically either the home Major Subordinate Command (MSC) or the Risk Management Center (RMC), depending on the level of review. The RMO for the peer review effort described in this Review Plan is POD, the home MSC.

POD will coordinate with the Cost Engineering Directory of Expertise (DX), as needed, 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 Hanapepe River FRM project was originally authorized by the Flood Control Act of 22 December 1944 (Public Law 534, 78th Congress) and provides the community protection from periodic flooding of the river. The proposed repairs are authorized under Public Law (PL) 84-99. Under PL 84-99, the Chief of Engineers, acting for the Secretary of the Army, is authorized to undertake activities including disaster preparedness, Advance Measures, emergency operations (Flood Response and Post Flood Response), rehabilitation of flood control works threatened or destroyed by flood, protection or repair of federally authorized shore protective works threatened or damaged by coastal storm, and provisions of emergency water due to drought or contaminated source.

**b. Decision and Implementation Documents.** A Project Information Report (PIR) was completed and approved by POD in 2011. Plans and specifications were developed for the construction of the project in Summer 2012. The POH Commander approved the plans and specifications to proceed into construction. Construction contract was awarded in Summer 2012.

**c. Project Sponsor.** The County of Kauai is the non-Federal Sponsor for this project and is responsible for operating and maintaining the project.

**d. Project Location.** The Hanapepe River FRM repair project is located in Hanapepe on the island of Kauai. Hanapepe River and its tributaries drain an area of 27 square miles of the south central side on the Island of Kauai (See Figure 1). The river flows adjacent to Hanapepe Town into Hanapepe Bay.

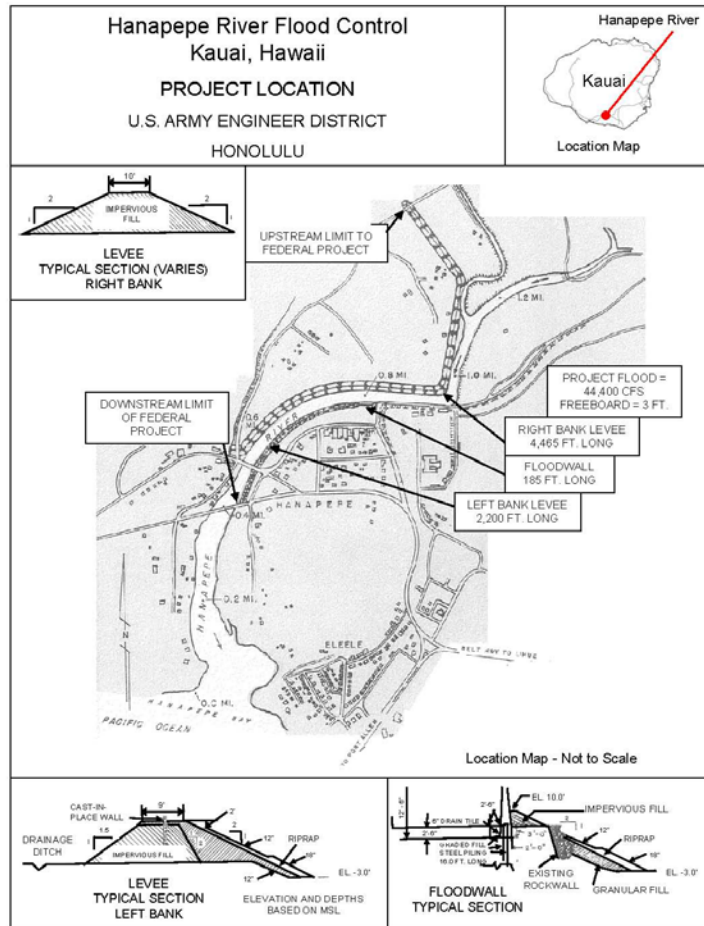
**e. Study/Project Description.** The project consists of a floodwall atop a levee 2,200 feet long and an I-Wall 185 feet long on the left bank commencing at the new Kauai Belt Highway Bridge located about 0.4 mile above the river mouth and extending to the cliffs at the northeast corner of the town of Hanapepe; and riprap-lined earth fill levee 4,465 feet long on the right bank commencing at the old highway bridge about one-half mile above the river mouth and extending upstream to high ground.

POH completed improvements to the left and right banks in 1959 and 1963, respectively, and completed additional improvements to raise the height of the levees and constructed the floodwalls in 1966. The County of Kauai operates and maintains the project. Approximately 859 homes and commercial buildings are currently protected by the project. To date, the project has prevented more than \$23.7 million in projected damages.

In 2008, heavy rains and flooding eroded a 1,100-foot reach of the right bank. A second storm in 2010 further damaged the right bank beyond that of the 2008 storm. In 2012, POH received funding under the PL 84-99 Rehabilitation and Inspection Program to repair the service road,

which is also known as a “bench”, portion of the project that protects the levee. There are no repairs necessary to the levee itself. Construction completion is scheduled for the middle of Federal Fiscal Year 2013.

**Figure 1: Hanapepe FRM Repair Project Location Map**



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Estimated Construction Cost: Estimated construction cost for the project is \$1.8 million.

**f. Factors Affecting the Scope and Level of Review.** The objective is to restore the existing FRM project by repairing the bench protecting the levees so that the project provides the originally intended protection to the surrounding community. Because of the limited project scope, no alternative design or project formulation plan was required or considered. In its current disrepair, if the bench continues to fail, the levees of the Hanapepe FRM project are susceptible to additional damage from smaller events and the surrounding community is at risk to flood damages. This repair activity will allow the FRM project to perform as originally intended and does not provide any upgrades or changes to its purpose. Based on more detailed analysis conducted during the development of the detailed design for the project after the Project Information Report (PIR) was completed, the Project Delivery Team (PDT) determined that life



safety issues were no longer an issue for the project. Mr. Michael Wong, Chief of Civil Works Technical Branch, Engineering and Construction Division, recommended that no life safety issues were associated with the repair of the bench. Mr. Todd Barnes, Chief of Engineering and Construction, concurred with this determination. Although a plans and specifications package was required, the design scope was limited to identifying contract requirements and satisfying National Environmental Policy Act (NEPA) requirements to initiate repairs. Because the repair activities fall within the categorical exclusion at 33 CFR 230.9(b), NEPA documentation was not required.

**g. In-Kind Contributions.** Products and analyses provided by non-Federal sponsors as work-in-kind services are subject to DQC, ATR, and IEPR. There are no in-kind contributions for this project.

#### **4. DISTRICT QUALITY CONTROL (DQC)**

All implementation 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 the POH and POD.

**a. Documentation of DQC.** Consistent with the POH Quality Manual, DQC was documented using the POH DQC review table. When all comments were addressed and back checked, the DQC lead signed a DQC certification in compliance with the POH Quality Manual and maintained in the project files.

Dr. Checks<sup>sm</sup> was used to monitor and track review comments and subsequent actions from the design review and biddability, constructability, operability, and environmental (BCOE) review of the plans and specifications package. A BCOE certification document signed by the POH Chief of Engineering and Construction Division and the Chief of Construction Branch was forwarded to the Contracting Officer, and a copy furnished to the Project Manager (PM).

**b. Products to Undergo DQC.** The following products were subject to DQC:

- Plans and Specifications Package; and,
- Categorical Exclusion Documentation.

**c. Required DQC Expertise.** The following expertise was needed for DQC:

- Environmental Protection Specialist;
- Real Estate Specialist;
- Cost Engineer;

- Hydrology and Hydraulic Engineer;
- Geotechnical Engineer; and
- Civil/Structural Engineer.

## 5. AGENCY TECHNICAL REVIEW (ATR)

ATR is generally mandatory for all implementation documents (including supporting data, analyses, environmental compliance documents, etc.), however, there is some flexibility when it comes to PL 84-99 documents according to the Risk Management Center (RMC). 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 POD 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. Factors Considered in Determining ATR Review.** Based on discussions with Mr. Tom Bishop of the RMC on 28 November 2012, ATRs are not mandatory for PL 84-99 projects if the home District adequately addresses the ATR questions within EC 1165-2-209, Section 15, and if the District's Chief of Engineering and Construction Division confirms that life safety issues are minimal. As discussed in Section 3.f., the POH Chief of Engineering and Construction Division made this determination for the Hanapepe FRM Repair Project. An ATR was not conducted on the plans and specifications package for the project based on that determination and the following factors:

- The limited nature of the work to be done. The project involves rehabilitating/repairing portions of the existing Hanapepe FRM project damaged in the 2008 storms back to its pre-storm state.
- Design does not involve modification of any features from its original configuration. Therefore, although the project includes a design, the design is very limited and only reflects restoration of damaged features back to its as-built conditions.
- No alternatives were evaluated for this project.
- No recommendations were included in the documents.
- The plans and specifications were developed inhouse to support the construction contract. There was no formal cost estimate required for the plans and specifications. A cost

estimate was included in the Project Information Report (PIR) that underwent ATR. An independent government estimate was required as part of the construction contract.

- The activities to repair the Hanapepe River FRM Project fall within the categorical exclusion at 33 CFR 230.9(b). Consequently, and because there were no extraordinary circumstances that dictated the need to prepare an environmental assessment or environmental impact statement, NEPA documentation was not required for the Hanapepe River FRM Repair Project.

- The project is repairing an existing FRM project to pre-storm conditions. The repair will not impact the project further and will not impact any other structure or feature of the structure whose performance involves potential life risks.

The POH Chief of Engineering and Construction concurred with the determination that there were no potential life safety issues related to the construction of this project.

- There would have been no immediate consequences from non-performance. The original structure was performing as formulated. Non-performance of this repair project would result in the structure remaining in its current state of disrepair and makes it more susceptible to additional damages from future storms.

- The project does not support a budget request.
- There is no change in the operation of the facility or function.
- No special features are affected.
- There is no reliance on local authorities for inspection/certification of utility systems.
- There has been no controversy surrounding the Federal action associated with the repair.
- Ground disturbance is involved in creating the wetland ponds within the project area. However, the ground disturbance has minimal impact on the surrounding area.
- There are no special features, such as cultural resources, in the study area to be protected and avoided.

- The activities were exempted from the Clean Water Act (CWA) Section 404. As such, the activities did not require the need for a CWA Section 401 Water Quality Certification (WQC) and a Section 402 National Pollutant Discharge Eliminations Systems (NPDES) permit. However, the best management practices followed the WQC and NPDES guidelines and the project was coordinated with the State of Hawaii, Department of Health. The BCOE confirmed that all permits were in place and were acceptable.

- The project does not involve activities that could potentially generate hazardous wastes and/or disposal of materials such as lead based paints or asbestos.
- The project does not reference use of or reliance on manufacturers' engineers and specifications for items such as prefabricated buildings, playgrounds, etc.

- b. Products to Undergo ATR.** Not applicable.
- c. Required ATR Team Expertise.** Not applicable.
- d. Documentation of ATR.** Not applicable.

## 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 an 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 factors discussed in Section 5.a., especially the District Chief of Engineering and Construction Division's confirmation that there are no significant life safety issues of concern, this project also does not warrant a Type II IEPR.

- b. Products to Undergo Type II IEPR.** Not applicable.
- c. Required Type II IEPR Panel Expertise.** Not applicable.
- d. Documentation of Type II IEPR.** Not applicable.

## **7. POLICY AND LEGAL COMPLIANCE REVIEW**

All documents will be reviewed throughout the study process for their compliance with law and policy. 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 implementation documents.

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

All implementation documents that undergo ATR or IEPR 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. POD is responsible for coordination with the Cost Engineering DX. There was no coordination with the Cost Engineering DX for this project because the plans and specifications package did not require ATR or Type II IEPR.

## **9. REVIEW SCHEDULES AND COSTS**

- a. ATR Schedule and Cost.** Not applicable.
- b. Type II IEPR Schedule and Cost.** Not applicable.

## **10. PUBLIC PARTICIPATION**

During the preparation of the Plans and Specifications for the repairs to the Hanapepe FRM project, no formal public meetings are scheduled to be held. However, the County of Kauai and key stakeholders will be updated on the activities of the project.

## **11. 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 RMC members) as to the appropriate scope and level of review for the 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 POD and the RMC.

## **12. 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  
Fort Shafter, HI 96858  
Telephone: (808) 835-4031

### Review Management Organization

Mr. Russell Iwamura  
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Fort Shafter, HI 96858  
Telephone: (808) 835-4625

**ATTACHMENT 2: REVIEW PLAN REVISIONS**

**Table 2: Review Plan Revisions**

<b>Revision Date</b>	<b>Description of Change</b>	<b>Page / Paragraph Number</b>

**ATTACHMENT 3: ACRONYMS AND ABBREVIATIONS**

**Table 3: Standard Acronyms and Abbreviations**

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