



DEPARTMENT OF THE ARMY
US ARMY ENGINEER DIVISION, SOUTHWESTERN
1100 COMMERCE STREET, SUITE 831
DALLAS TX 75242-1317

REPLY TO
ATTENTION OF

CESWD-PDS-P (1105)

MEMORANDUM FOR Commander, Galveston District

SUBJECT: Review Plan for Gulf Intracoastal Waterway, Vicinity of Port Isabel, Texas

1. References:

- a. EC 1105-2-410, 22 August 2008, Review of Decision Documents.
- b. Memorandum, CECW-CP, 30 March 2007, subject: Peer Review Process.
- c. Addendum to Reference 1.b., CECW-CP, September 2008, subject: Supplemental Information for the Peer Review Process.

2. The review plan for the subject study, enclosed, has been reviewed and cleared for approval by the Inland Navigation Planning Center of Expertise. It has been prepared in accordance with the referenced guidance, and public comments received will be incorporated into the plan as the study progresses. It is not anticipated to require Independent External Peer Review.

3. I hereby approve this review plan, which is subject to change as study circumstances require, consistent with study development under the Project Management Business Process. Subsequent substantial revisions to this plan or its execution will require new written approval from this office.

4. If you have questions or need further information, please contact Jo Ann M. Duman, CESWD-PDS-P, at (469) 487-7065.

Encl

ANTHONY C. FUNKHOUSER
Colonel, EN
Commanding

CF:
CESWG-PE-PL (Laird)

PROJECT REVIEW PLAN

**GULF INTRACOASTAL WATERWAY
VICINITY OF PORT ISABEL, TEXAS
OPERATIONS AND MAINTENANCE DISCRETIONARY AUTHORITY
DECISION DOCUMENT**

**U.S. Army Corps of Engineers
Galveston District**

July 2009

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**GULF INTRACOASTAL WATERWAY
VICINITY OF PORT ISABEL, TEXAS
OPERATIONS AND MAINTENANCE DISCRETIONARY AUTHORITY
DECISION DOCUMENT
PROJECT REVIEW PLAN**

1. PURPOSE

Pursuant to Engineering Circular (EC) 1165-2-209, "Civil Works Review Policy," EC 1105-2-410, "Review of Decision Documents," EC 1105-2-408, "Peer Review of Decision Documents," Office of Management and Budget's "Final Information Quality Bulletin for Peer Review," and the 30 May 2007 memorandum from Major General Don Riley, USACE Director of Civil Works, a Project Review Plan (RP) has been updated from the originally approved Gulf Intracoastal Waterway (GIWW), Texas, Vicinity of Port Isabel Navigation Project, Section 216 RP dated October 2007. The original RP was approved for this project under the Section 216 Authority as a feasibility study and as such, underwent agency technical review (ATR) during the feasibility scoping meeting (FSM) process. As a result of the preliminary screening, it was apparent that the feasible alternative for the project was going to be a slight bend easing between the Long Island swing bridge and the Queen Isabella Memorial Bridge. Considering the small scale of the project, it was decided to request continuing the project under the Operations and Maintenance Discretionary Authority (memo dated 22 April 2008).

This RP presents the process for District Quality Control (DQC), and Agency Technical Review (ATR) that will be implemented as part of the GIWW, Texas, Vicinity of Port Isabel Navigation Project, Operations and Maintenance Discretionary Authority Decision Document and Environmental Assessment (EA). These processes are essential to improving the quality of the products that we produce. The Project Management Plan (PMP) for the study will be amended to include this RP since the RP is considered a component of the PMP.

2. APPLICABILITY

The document provides the RP for the GIWW, Texas, Vicinity of Port Isabel Navigation Project, Operations and Maintenance Discretionary Authority Decision Document. It identifies the ATR process for all work conducted as part of the study, including in-house, non-Federal sponsor, and contract work efforts.

3. REFERENCES

EC 1165-2-209 "Civil Works Review Policy" dated 1 July 2009
EC 1105-2-410 "Review of Decisions Documents" dated 22 August 2008
EC 1105-2-408 "Peer Review of Decision Documents" dated 31 May 2005

EC 1105-2-407 “Planning Models Improvement Program: Model Certification” dated 31 May 2005

ER 1105-2-100 “Planning Guidance Notebook,” dated April 2000

Major General Riley Memorandum on Peer Review Process, dated 30 May 2007

EC 1165-2-203 “Technical and Policy Compliance Review” dated 15 October 1996

4. GENERAL

A. Project Description

The Vicinity of Port Isabel Navigation Project is an existing project located on the lower Texas coast between the Queen Isabella Memorial Bridge (formerly the Queen Isabella Causeway) at Port Isabel and the intersection of the GIWW with the Brownsville, Texas Ship Channel and is part of the Gulf Intracoastal Waterway (GIWW) system. The existing GIWW project provides for a 12-foot by 125-foot channel transiting the Laguna Madre with a wider 12-foot by 275-foot section at the curve located between the two bridges before joining the Brownsville Ship Channel. The project area is in the vicinity of Port Isabel and adjacent facilities, encompassing the existing channel and proposed alternative routings around Long Island, connecting to the Brownsville Ship Channel. The project is a fully Federally funded inland navigation project, and as such, there are no products or work-in-kind provided by the non-Federal sponsor, the Texas Department of Transportation (TxDOT).

The GIWW – Vicinity of Port Isabel O&M Discretionary Authority study will result in a decision document that will not require Congressional authorization. The proposed study will address the feasibility of making channel improvements to the existing GIWW system in the vicinity of Port Isabel. The study will also include an Environmental Assessment (EA).

The issue of safe navigation of this reach of the GIWW arose in September 2001 when a northbound four-barge tow hit the Queen Isabella Causeway at night, collapsing portions of the span and resulting in the deaths of eight motorists. As a result of the catastrophic event, the United States Army Corps of Engineers (USACE) Galveston District is investigating whether a modification to the existing channel alignment is necessary and whether commercial navigation benefits produced by modifying or realigning the GIWW in the vicinity of Port Isabel are sufficient to offset the costs and environmental consequences of the proposed changes. After the 2001 accident, TxDOT made several improvements to the bridge and fendering system to help reduce the possibility of another catastrophic accident. An early warning system was installed to alert drivers in the event of a bridge failure. The system is activated when a fiber-optic cable spanning the bridge is broken, setting off red warning lights, lowering gates on the bridge to prevent vehicles from entering, and automatically contacts the US Coast Guard. Improvements were also made to the navigation lights which are attached to the bridge structure over the GIWW. All of the navigation lights were converted to solar power from their original A/C electrical service and the red warning lights on the fender system were replaced and additional ones were added to the recent extension to the fenders. The fenders for the bridge were extended and reinforced. The fender improvements are expected to reduce damages to the bridge, but not reduce the

probability of occurrence of allision since the channel and currents remain the same as prior to the 2001 accident. This O&M Discretionary Project primarily addresses improvements to the GIWW channel that would reduce the probability of bridge allisions.

B. Project Delivery Team

The Project Delivery Team (PDT) is comprised of those individuals directly involved in the development of the decision document. The individual contact information and disciplines of the District PDT are included in Appendix A of this document. All products will undergo ATR.

C. Model Certification

EC 1105-2-407, Planning Models Improvement Program: Model Certification establishes the process and requirements for certification of planning models. This circular is specifically directed to software used in USACE planning studies, to ensure that only high quality software is being used for key planning decisions. Planning models 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. It includes all models used for planning, regardless of their scope or source. This Circular does not cover engineering models used in planning studies, which will be certified under a separate process to be established in the future.

The computational models used in the GIWW, Texas, Vicinity of Port Isabel Navigation Project, Operations and Maintenance Discretionary Authority Decision Document have been developed by or for the USACE. Model certification and approval for all identified planning models will be coordinated through the PCX as needed. Project schedules and resources will be adjusted to address this process for certification and PCX coordination. The planning models used are:

- 1) Hydrodynamic Modeling – The US Army Engineer Research and Development Center (ERDC) Coastal Hydraulics Laboratory (CHL) performed a numerical model study, using the TABS-MDS finite element modeling tool, to generate the hydrodynamic solution to support the navigation barge simulator study also performed at ERDC.
- 2) Barge Simulation Analysis – Navigation study performed by ERDC utilizing real-time ship simulation modeling to evaluate the existing conditions and proposed channel improvements to the GIWW alignment.

The following is considered an engineering model and undergoes a different review and approval process for usage. Its certification is not addressed in this Review Plan.

- 1) Mii - cost estimating models

5. REVIEW REQUIREMENTS

A. District Quality Control (DQC)

DQC is the review of basic science and engineering work products focused on fulfilling the project quality requirements defined in the GIWW, Texas, Vicinity of Port Isabel Navigation Project, Operations and Maintenance Discretionary Authority Decision Document PMP. It is managed by the Galveston District and may be conducted by staff in the home district as long as they are not doing the work involved in the study, including contracted work that is being reviewed. Basic quality control tools include a Quality Management Plan (QMP) providing for seamless review, quality checks and reviews, supervisory reviews, PDT reviews, etc. Additionally, the PDT is responsible for a complete reading of the report to assure the overall integrity of the report, technical appendices and the recommendations before approval by the District Commander. For the GIWW - Vicinity of Port Isabel Decision Document, non-PDT members and/or supervisory staff will conduct this review for major draft and final products. It is expected that the Major Subordinate Command (MSC)/District QMP addresses the conduct and documentation of this fundamental level of review. A Quality Control Plan (QCP) is included in the PMP for this study and addresses DQC, which is required for this study. DQC is not addressed further in the Review Plan.

B. Agency Technical Review (ATR)

ATR (which replaces the level of review formerly known as Independent Technical Review [ITR]) is an in-depth review, managed within USACE, and conducted by a qualified team outside of the home district that is not involved in the day-to-day production of a project/product. The purpose of this review is to ensure the proper application of clearly established criteria, regulations, laws, codes, principles and professional practices. The ATR team reviews the various work products and assures that all the parts fit together in a coherent whole. ATR teams will be comprised of senior USACE personnel (Regional Technical Specialists (RTS), etc.), and may be supplemented by outside experts as appropriate. To assure independence, the leader of the ATR team shall be from outside the home MSC. EC 1105-2-408 requires that DrChecks (<https://www.projnet.org/projnet/>) be used to document all ATR comments, responses, and associated resolution accomplished. This PRP outlines the planned approach for meeting this requirement for the GIWW - Vicinity of Port Isabel Decision Document. ATR is required for this study.

C. Independent External Peer Review (IEPR)

This 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. IEPR is generally for feasibility and

reevaluation studies and modification reports with EISs. IEPR is managed by an outside eligible organization (OEO) that is described in Internal Revenue Code Section 501(c) (3), is exempt from Federal tax under section 501(a), of the Internal Revenue Code of 1986; is independent; is free from conflicts of interest; does not carry out or advocate for or against Federal water resources projects; and has experience in establishing and administering IEPR panels. The scope of review will address all the underlying planning, engineering, including safety assurance, economics, and environmental analyses performed, not just one aspect of the project. The GIWW - Vicinity of Port Isabel Operations and Maintenance Discretionary Authority Decision Document does not meet the risk and magnitude criteria. Information presented in the decision document will not be based on novel methods, present complex challenges, nor contain precedent-setting methods or models. The potential for failure or controversy and uncertainties of predictions and outcomes are considered minimal. Costs associated with this project are estimated to be less than five million dollars. For these reasons, an IEPR is not anticipated at this time. If unforeseen issues arise, the need for an IEPR will be reconsidered.

D. Policy and Legal Compliance Review

In addition to the technical reviews described above, decision documents will be reviewed throughout the study process for their compliance with law and policy. These reviews culminate in Washington-level 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 Chief of Engineers. Guidance for policy and legal compliance reviews is addressed further in Appendix H, ER 1105-2-100. The technical review efforts addressed in this Circular are to augment and complement the policy review processes by addressing compliance with published Army policies pertinent to planning products, particularly policies on analytical methods and the presentation of findings in decision documents. DQC and ATR efforts are to include the necessary expertise to address compliance with published planning policy. Counsel will generally not participate on ATR teams, but may at the discretion of the district or as directed by higher authority. When policy and/or legal concerns arise during DQC or ATR efforts that are not readily and mutually resolved by the PDT and the reviewers, the district will seek issue resolution support from the MSC and HQUSACE in accordance with the procedures outlined in Appendix H, ER 1105-2-100. IEPR teams are not expected to be knowledgeable of Army and administration policies, nor are they expected to address such concerns. An IEPR team should be given the flexibility to bring important issues to the attention of decision makers. Legal reviews will be conducted concurrent with ATR of the preliminary, draft, and final feasibility report and environmental impact statement.

E. Safety Assurance Review

WRDA 2007, Section 2035, Safety Assurance Review, requires all projects addressing flooding or storm damage reduction to undergo a safety assurance review during design and construction activities. This safety assurance review will address the adequacy, appropriateness, and acceptability of the design and construction activities for the purpose of

assuring public health, safety, and welfare. The GIWW, Vicinity of Port Isabel, Texas, Draft O&M Discretionary Authority Decision Document is an inland navigation improvement project and does not address flooding or storm damage reduction, and does not meet risk and magnitude criteria that would necessitate performing an IEPR. Information presented in the decision document will not be based on novel methods, present complex challenges, nor contain precedent-setting methods or models. The potential for failure or controversy and uncertainties of predictions and outcomes is considered minimal. If unforeseen issues arise, the need for a Safety Assurance Review will be reconsidered.

The Texas Department of Transportation has already made several improvements to the bridge's lighting and fendering systems. The project is expected to result in a single bend easing project at the curve just south of the Queen Isabella Memorial Bridge and the potential installation of a current meter at the bridge.

F. Planning Center of Expertise (PCX) Coordination

This project is an inland navigation project. Pursuant to EC 1105-2-408, the District will coordinate with the Inland Navigation Planning Center of Expertise (PCXIN) in the Great Lakes and Ohio River Division (LRD) Planning Center located in Huntington, West Virginia, as the lead PCX to organize teams to perform the reviews at various stages throughout the study. This PCX is responsible for the accomplishment and quality of ATR for this study. The ATR Team Lead will coordinate with Cost Engineering Directory of Expertise at Walla Walla for ATR of the Mii estimate, construction schedules, and contingencies.

6. REVIEW PROCESS AGENCY TECHNICAL REVIEW (ATR)

A. General

The ATR process will be conducted throughout the study process. Once the ATR team has been identified, copies of PDT meeting notes will be provided to ATR team for information. ATR participation in PDT meetings on a quarterly basis (at a minimum) will be recommended.

As part of the QCP for the GIWW - Vicinity of Port Isabel Decision Document, an ATR team will be formed to perform periodic reviews of the study efforts, including the project assumptions, analyses, and calculations, as needed throughout the planning study process.

The ATR team will meet with PDT members on a quarterly basis or as needed. These quarterly meetings will be documented as required by EC 1165-2-203. Coordination throughout the study will be accomplished through individual contact between the PDT and the ATR team. The ATR will focus on the following:

- Review of the planning study process,
- Review of the methods of analysis and design of the alternatives and recommended plan,

- Compliance with program and NEPA requirements, and
- Completeness of study and support documentation

More detailed ATR information is found in the Plan Formulation and Evaluation Section of the PMP.

B. ATR Team

The ATR is best conducted by experienced peers within the same discipline who are not directly involved with the development of the study or project being reviewed. Management of ATR reviews are conducted by professionals outside of the home district. For planning feasibility-level studies the ATR is managed by the appropriate Planning Center of Expertise (PCX) with appropriate consultation with the allied Communities of Practice such as engineering and real estate. The Inland Navigation PCX is responsible for identifying the ATR team members. The Galveston District can provide suggestions on possible reviewers. The ATR team members will reside outside the Galveston District with the ATR team leader from outside the Southwestern Division. The ATR team has been identified and the names and disciplines of the ATR team will be included in Appendix A of this document.

It is anticipated that the review team will consist of nine reviewers, one from each of the following disciplines: engineering design, hydraulics and hydrology, economics, environmental, real estate, plan formulation, operations and cost engineering. A brief description of the disciplines required for the ATR team are identified below:

1. Engineering Design – the reviewer(s) should have extensive knowledge of channel design for navigation studies
2. Hydraulics and Hydrology – the reviewer(s) should have extensive knowledge of hydrodynamic and ship simulation models/studies.
3. Economics – the reviewer should have a strong understanding of economic models or studies relative to inland navigation (e.g. the GIWW).
4. Environmental – the reviewer(s) should have strong background in coastal ecosystems (e.g. hypersaline, lagoonal, wind-tidal flat system) and Texas environmental laws and regulations.
5. Real Estate – the reviewer should have knowledge in reviewing RE Plans for feasibility studies (e.g. navigation servitude).
6. Plan Formulation – the reviewer(s) should have a strong knowledge in current planning policies and guidance related to planning studies.
7. Operations - the reviewer should have a strong knowledge in current operations of inland draft navigation projects.

8. Cost Engineering – the reviewer should have a strong knowledge of the cost estimating practices for inland draft navigation projects.

C. Review Cost

The cost for ATR is estimated to be \$25,000.

D. Review Schedule

<u>TASK</u>	<u>Proposed Start Date</u>
Update of Project Review Plan	May 2009
Coordinate with MSC and post on website	July 2009
PCX identifies ATR team	July 2009
Review of Models	TBD
ATR review of decision documents	July 2009
ATR Certification of Draft Report	August 2009
Public Review of Draft Report	September 2009
ATR Certification of Final Report	December 2009

7. PROJECT REVIEW PLAN

The components of the PRP were developed pursuant to the requirements of EC 1105-2-408 and EC 1105-2-410.

A. General Information

The decision documents that will undergo peer review are the Operations and Maintenance Discretionary Authority Decision Document (including Economic Appendix), Environmental Assessment, and Engineering Appendix. No sponsor in-kind products are expected to be prepared.

B. Scientific Information

The final decision document (and supporting documentation) is anticipated to contain standard engineering, environmental and economic analyses and information; therefore no influential scientific information is likely to be contained in any of the documentation.

C. Timing

The peer review process began in January 2008 with the initiation of the ATR team and review of the FSM package materials during the initial plan formulation phase of the study when it was being pursued as a Section 216 Feasibility Study. The ATR team members for the Section 216 Feasibility Study are identified in Appendix A.

D. Public Comment

A Public Involvement Plan will be formulated to ensure public involvement throughout the feasibility study process. Public review of the EA is scheduled for September – October 2009. Public comments and responses will be provided in the Draft EA with responses.

<u>TASK</u>	<u>START DATE</u>	<u>FINISH DATE</u>
Public Scoping Meeting	January 31, 2007	January 31, 2007
Public Involvement Plan	TBD	TBD
Public Review of Report & EA	September 2009	October 2009

E. Dissemination of Public Comments

Proceedings from all public meetings and comments received during public review will be included in the final versions of the EA with responses included.

F. Points of Contact

Questions about this Review Plan may be directed to Mr. Seth Jones, Galveston District PDT Planning contact at (409) 766-3068 or seth.w.jones@usace.army.mil