



**DEPARTMENT OF THE ARMY**  
NORTH ATLANTIC DIVISION, US ARMY CORPS OF ENGINEERS  
FORT HAMILTON MILITARY COMMUNITY  
301 GENERAL LEE AVENUE  
BROOKLYN, NEW YORK 11252-6700

CENAD-RBT

07 JUN 2013

MEMORANDUM FOR Commander, Norfolk District, (CENAO-EC/Mr. Byrne), 803 Front Street, Norfolk, VA 23510-1011

SUBJECT: Review Plan Approval for Atlantic Intracoastal Waterway (AIWW) Bridge Replacement at Deep Creek, Chesapeake, VA – Revised Plan

1. References:

a. Memorandum, CENAD-RBT, 14 Dec 2012, subject: Review Plan Approval for Atlantic Intracoastal Waterway (AIWW) Bridge Replacement at Deep Creek, Chesapeake, VA.

b. EC 1165-2-214, Change 1, Water Resources Policies and Authorities – Civil Works Review Policy, 15 Dec 2012.

2. The enclosed Review Plan for the Atlantic Intracoastal Waterway (AIWW) Bridge Replacement at Deep Creek, Chesapeake, VA has been prepared in accordance with Reference 1.b. The Review Plan has been revised to include a Modified Type II Independent External Peer Review (IEPR) (Safety Assurance Review). The proposed bridge will replace the existing bridge that carries George Washington Highway (U.S. Route 17) across the AIWW Dismal Swamp Canal. The project scope includes the design and construction of the new Deep Creek Bridge and its associated roadways and intersections. The proposed bridge will replace the existing one to meet the current AASHTO design standards and address the inefficient operation conditions associated with narrow roadways, increased traffic volumes, and traffic delays. Other features of the project associated with the bridge and roadways include, but are not limited to, abutments, supporting piers, pile foundation, fender system, mechanical and electrical systems, and an operator's control house.

3. The project will undergo District Quality Control (DQC) review, Agency Technical Review (ATR), and a Modified Type II IEPR (Safety Assurance Review). NAD Business Technical Division will be the Review Management Organization (RMO) for the ATR. The USACE Bridge Safety Program Technical Focus Team at MVP will be the RMO for the Modified Type II IEPR (SAR).

4. The enclosed revised Review Plan for the AIWW Bridge Replacement at Deep Creek, Chesapeake, VA is approved. The Review Plan is subject to change as circumstances require, consistent with study development under the Project Management Business Process. Subsequent revisions to this Review Plan or its execution will require new written approval from this office.

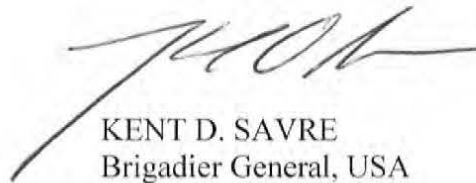
CENAD-RBT

SUBJECT: Review Plan Approval for Atlantic Intracoastal Waterway (AIWW) Bridge Replacement at Deep Creek, Chesapeake, VA – Revised Plan

5. In accordance with Reference 1.b, Appendix B, Paragraph 6, this approved Review Plan shall be posted on your district website for public review and comment. The plan will also be posted on NAD's website for review and comment.

6. The Point of Contact for this action is Alan Huntley, 347-370-4664 or e-mail Alan.Huntley @usace.army.mil.

Encl  
as



KENT D. SAVRE  
Brigadier General, USA  
Commanding

CF (w/ encl):  
CECW-CE (C. Westbrook)  
CEMVP-EC-D (P. Sauser)  
CENAO-EC-EG (R. Dridge)  
CENAD-BTD (T. Tam)

# REVIEW PLAN

FOR

Atlantic Intracoastal Waterway (AIWW) Bridge Replacement

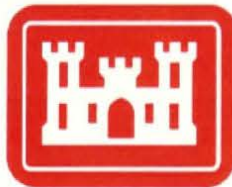
at Deep Creek Project

(Engineering and Design Phase)

Deep Creek Chesapeake, Virginia

PN22400

PREPARED BY:



Geo Environmental Section,  
Norfolk District U.S. Army Corps of Engineers  
Fort Norfolk, 803 Front Street Norfolk, VA 23510

November 2012

Revised: May 2013

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## REVIEW PLAN

### 1 PURPOSE AND REQUIREMENTS

#### 1.1. PURPOSE

The purpose of this Review Plan is to establish a seamless review process to ensure that credible and appropriate reviews are performed in high quality during the design and construction phases of the Atlantic Intracoastal Waterway (AIWW) Bridge Replacement project (also referred to as the Deep Creek Bridge Replacement). The Review Plan was developed in accordance with the US Army Corps of Engineers' (USACE's) Civil Works Review Policy (EC 1165-2-209), dated 31 January 2010, which outlines various levels and types of reviews required for Civil Works projects. The scope and levels of reviews appropriate for the project are defined herein.

#### 1.2. REFERENCES

- a. Engineering Circular (EC) 1165-2-214, *Civil Works Review Policy*, 15 December 2012
- b. Engineering Regulation (ER) 1110-1-12, *Quality Management*, 30 September 2006
- c. ER 1110-2-1150, *Engineering and Design for Civil Works Projects*, 31 August 1999
- d. URS Atlantic Intracoastal Waterway Bridge Replacement – Deep Creek, Basis of Design, 31 May 2010

#### 1.3. REVIEW PROCESS REQUIREMENTS

The Review Plan, as intended by EC 1165-2-209, establishes the procedures for ensuring the quality and credibility of U.S. Army Corps of Engineers (USACE) engineering and design documents and construction through multiple levels of reviews. Per EC 1165-2-209, the following levels of reviews are applicable for the project:

- a. District Quality Control (DQC)
- b. Agency Technical Review (ATR)
- c. Independent External Peer Review (IEPR)/Safety Assurance Review (SAR)

In addition to these three levels of reviews, the project documents are subject to Bidability/Constructability/Operability/Environmental (BCOE) review, policy and legal compliance review, and cost engineering review.

## 2 REVIEW MANAGEMENT ORGANIZATION (RMO) AND THEIR ROLES & RESPONSIBILITIES

### 2.1. NORTH ATLANTIC DIVISION (NAD)

Since this project is not a Dam Safety Modifications and Levee Safety Modification projects, the Review Management Organization (RMO) for the ATR shall be the USACE North Atlantic Division (NAD) Business Technical Division (BTD).

NAD is responsible for:

- Reviewing and approving the Review Plan,
- Selecting the ATR team for this project and its reaches/features,
- Providing input into selection of IEPR team for this project,
- Assisting in developing the “Charge” for each of the ATR and IEPR teams, and
- Overseeing the ATR and IEPR and ensuring that reviews are properly conducted.

### 2.2. USACE Bridge Safety Program Technical Focus Team (MVP)

The RMO for the Modified Type II IEPR shall be MVP.

MVP is responsible for:

- Reviewing the Review Plan,
- Selecting the IEPR team for this project and its reaches/features,
- Assisting in developing the “Charge” for each of the IEPR teams, and
- Overseeing the IEPR and ensuring that reviews are properly conducted.

Points of Contact are listed in Appendix A.

## 3 PROJECT INFORMATION

### 3.1. DECISION / IMPLEMENTATION DOCUMENT

Section 10001 of WRDA 2007 authorized the AIWW Bridge Replacement at Deep Creek in Chesapeake, Virginia. The Chief of Engineer’s Report for the project was approved by the USACE Headquarters on March 3, 2003.

### 3.2. SITE LOCATION & DESCRIPTION

The project site is located at Deep Creek in the City of Chesapeake, Virginia. The proposed new bridge will replace the existing bridge that carries George Washington Highway (U.S. Route 17) across the AIWW Dismal Swamp Canal. The project site location is shown in Figure 1.

The current two-lane, 20-foot-wide, single leaf bascule bridge opened to traffic in 1934. The existing bridge spans over the DSC and it provides a 55-foot wide horizontal clearance with unobstructed overhead clearance across the DSC when it is fully open. The original bridge design capacity of 15-ton is well below of the current American Association of the State Highway Officials (AASHTO) design standard for a two-lane bridge. The minimum current design standard requires a 30-foot-wide roadway and a design load of 36-tons for a two-lane bridge.



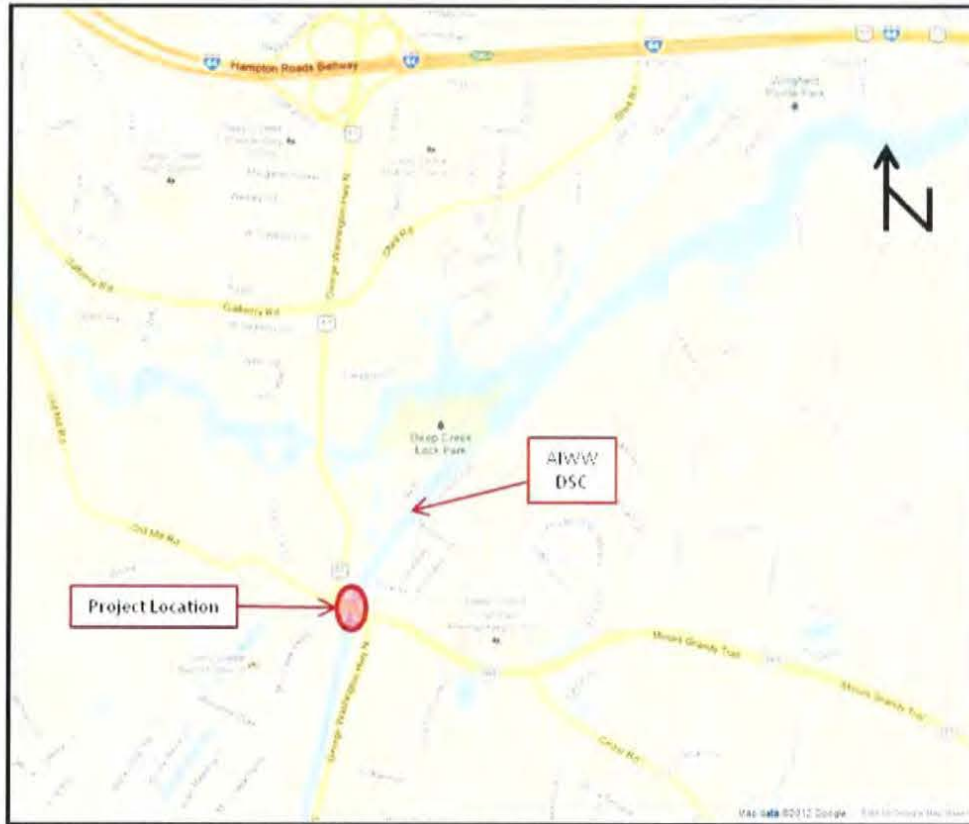


Figure 1 – Deep Creek Bridge Replacement Project Location Map.

### 3.3. PROJECT SCOPE / CRITICAL FEATURES

The project scope includes the design and construction of the new Deep Creek Bridge and its associated roadways and intersections. The proposed bridge will replace the existing one to meet the current AASHTO design standards and address the inefficient operation conditions associated with narrow roadways, increasing traffic volumes, and traffic delays. The new bascule bridge design includes 5 traffic lanes for a total road width of 66-feet and pedestrian sidewalks on both sides of the bridge. The 5 traffic lanes will be carried on two leafs; 3 westbound lanes on the north leaf and 2 eastbound lanes on the south leaf. The horizontal clearance between the fenders will be 60 feet for marine traffic, with unlimited vertical clearance above the channel for the full 60-foot width when the bridge is in its open position. In the closed position, the minimum vertical clearance above the normal water elevation will be 4-feet. Other features of the project associated with the bridge and roadways include, but are not limited to, abutments, supporting piers, pile foundation, fender system, mechanical and electrical systems, and operator's control house.

### 3.4. PROJECT HISTORY

In 2002, the design of the project initially proceeded with two designers: the USACE Norfolk District leading the approach roadways design effort and URS leading the bridge replacement design effort. The design of both aspects of the project was suspended from 2003 to 2009 due to lack of funding. In 2009, the project was revived with URS taking the sole lead on both the approach roadways and bridge replacement design.

When the project was suspended in 2003, both the bridge and approach roadways designs were marked as final design. However, the project milestone was brought down to 75% design when it was revived in 2009. This was done largely to allow additional review opportunities for the new Project Delivery Team (PDT). The project milestone reached its 100% design submittal in April of 2010. However, the project management decided to once again retract the project milestone due to project management change and to allow for more thorough review process. At the time of this Review Plan, the project status stands at 90% design re-submittal pending from URS.

### 3.5. PROJECT DELIVERY TEAM (PDT)

<u>Project Manager</u>	Doug Martin – USACE NAO
<u>Design Team Leader</u>	Sarah Taylor – USACE NAO
<u>Lead Designer</u>	URS, Inc. Virginia Beach, VA
<u>USACE Technical Support Team</u>	
Structural Engineering	USACE NAO Structural Section
Civil Engineering	USACE NAO Civil Section
Geotechnical Engineering	USACE NAO Geo-Environmental Section
Environmental Engineering	USACE NAO Geo-Environmental Section
Mechanical Engineering	USACE NAO Mech-Elec Section
Electrical Engineering	USACE NAO Mech-Elec Section

Names of the USACE Technical Support Team members will be listed in Appendix A as the individuals are identified by their respective section chiefs.

### 3.6. LOCAL SPONSOR

The City of Chesapeake, Virginia is the non-federal (local) sponsor of the proposed project and has been engaged in previous design documents review processes. The project's local sponsor will continue to be engaged in the future reviews of pending design documents.



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

DQC is an internal review process of basic science and engineering work products focused on ensuring their quality and credibility. It is managed by the home district, the Norfolk District, in accordance with the Quality Management Engineering Regulation (ER 1110-12) and the project's Quality Management Plan (QMP).

All work products, i.e. design documentation report, calculations, plans, and specifications, will require DQC to 1) verify that the appropriate engineering concepts and assumptions are being used; 2) assure that quality checks are being performed by the designers, and 3) ensure that all relevant USACE guidelines and regulations are being applied.

DQC of the pending design documents will be performed by the USACE PDT Technical Support Team.

#### **5. AGENCY TECHNICAL REVIEW (ATR)**

ATR is an in-depth review undertaken to ensure the quality and credibility of the project's science and engineering information. ATRs will be managed within USACE and conducted by a qualified team from outside of the home district that is not involved in the day-to-day production of the project. The purpose of ATR is to ensure proper application of established criteria, regulations, laws, codes, principles and professional practices.

ATR team members will be comprised of senior USACE personnel with appropriate technical expertise in the subject matter, and may be supplemented by outside experts as appropriate. For the previous design products that were produced prior to EC1165-2-209 publication, the Norfolk District had engaged the USACE Transportation Directory of Expertise (DX) which is located within the Northwest Division (NWD) in Omaha to provide ATR reviews. In these reviews, the NWD Transportation DX was the lead ATR agency and it engaged the USACE Omaha District's Structural Engineering Section for ATR of the bridge aspect of the design. It was recommended by the Norfolk District, and concurred by the NAD, to maintain the same ATR team to perform reviews of the upcoming design documents. ~~However, NAD recommended that the final review include the NAP, Regional Center of Expertise for Bridge Inspection and Evaluation.~~

##### **ATR Team:-**

USACE Transportation Directory of Expertise (DX), Northwest Division (NWD)  
USACE Philadelphia District (NAP) Regional Center of Expertise for Bridge Inspection and Evaluation :-

The above ATR team may expand to include additional disciplines as the ATR lead and the RMO (NAD) see it appropriate.

#### **6. INDEPENDENT EXTERNAL TECHNICAL REVIEW (IEPR)**

##### **6.1. TYPE I IEPR (DECISION DOCUMENTS)**

EC 1165-2-209 states that the Type I IEPR is required "except for only those cases where the submittal of the final decision document package had been forwarded to HQUSACE prior to 22 August 2008" (Page 16, Paragraph 17). The Chief of Engineer's Report for the Deep Creek Bridge Replacement project was approved by HQUSACE on 3 March, 2003. Since the decision document package of this project was approved prior to the specified date, Type I IEPR is not warranted.



## 6.2. TYPE II IEPR (SAFETY ASSURANCE REVIEW)

IEPR is the most independent level of review performed by a qualified team outside of USACE. EC 1165-2-209 states that Type II IEPR is required for “design and construction activities for hurricane and storm risk management and flood risk management projects, *as well as other projects where potential hazards pose a significant threat to human life*” (Page 12, Paragraph a.). Since the event of the bridge failure would pose a threat to human life, a Type II IEPR of the project may be warranted. However, modern bridge design is very well covered by design criteria that leaves little leeway for designer interpretation. **Considering both the potential for loss of life and the fact that bridge design requirements are not open to interpretation, it has been decided that a Modified Type II IEPR (SAR) will be conducted.**

The purpose of Type II IEPR is to ensure the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health, safety, and welfare. IEPR during the engineering & design (E&D) phase of the project will be a holistic review and will consider project-wide consistency and quality in design standards used. Additionally, the review will verify the appropriateness of design assumptions, soundness of models, surveys, investigations, and methods, and will ensure that the design adequately addresses redundancy, resiliency, or robustness with an emphasis on public safety. IEPR during the construction phase will verify that the assumptions made during design remain valid through construction and will ensure that construction monitoring adequately reveal any deviations from assumptions made for performance.

**The Modified Type II IEPR (SAR) will be conducted by a separate bridge designer via contract from the USACE Bridge Safety Program Technical Focus Team at MVP. Type II IEPR review panel members will be composed of independent, recognized experts from outside the USACE in appropriate disciplines, representing a balance of expertise.**

### Anticipated Type II IEPR Review Panel Expertise:

- Geotechnical Engineer – Recognized expert in the field of geotechnical engineering analysis, design, and construction of bridge foundation, subsurface investigations, and soils mechanics.
- Mechanical Engineer – Recognized expert in the field of mechanical engineering with expertise in mechanical systems of bascule bridges.
- Structural Engineer – Recognized expert in the field of structural engineering with expertise in bridge design.
- **Electrical Engineer – Recognized expert in the field of electrical engineering with expertise in bridge electrical systems design.**

## 7. POLICY AND LEGAL COMPLIANCE REVIEW

The USACE Norfolk District Office of Counsel is responsible for legal review of decision and implementation documents and signs a certification of legal sufficiency prior to construction of the project.

## 8. COST ENGINEERING DX REVIEW & CERTIFICATION

The Cost Engineering Directory of Expertise located in the Walla Walla District (NWW) will be engaged to provide the cost engineering review and will provide a certification upon completion of their review.

## **9. MODEL CERTIFICATION & APPROVAL**

EC 1165-2-209 requires certification (for Corps models) or approval (for non-Corps models) of planning models used for all planning activities. Since this project is not in the planning phase, model review and certification are not warranted.

## **10. REVIEW DOCUMENTATION**

### **10.1. DQC AND ATR DOCUMENTATION**

All DQC and ATR review comments to date have been documented in the ProjNet web based document review and checking system (DrChecks). DrChecks facilitates the formal review of project documents by automatically tracking and recording comments and responses on project discussions. Any future review comments during DQC and ATR will continue to be documented in DrChecks. All comments entered into DrChecks program must be addressed by the designers and resolved to the reviewers' satisfaction prior to completing the E&D phase.

### **10.2. IEPR DOCUMENTATION**

Upon completion of IEPR, the review panel will prepare a Review Report that will accompany the publication of the final report for the project. The Review Report will document the following information:

- 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 Scope of Work or "Charge" provided to the reviewers at the beginning of the review by USACE;
- Describe the nature of their review and their findings and conclusions;
- 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.

## **11. REVIEW PRODUCTS AND SCHEDULE**

DQC reviews and ATRs have been performed at each E&D milestone to date and will continue to be performed at pending milestones (90% and Final Design Submittals) until the completion of the E&D phase of the project. Type II IEPR team will be engaged at the 90% and Final submittal milestones of the E&D phase. Products to be reviewed by DQC, ATR, and IEPR teams at each remaining project milestones will include specifications, plans, cost estimate, and design documentation report. Additionally, it is anticipated that IEPR will be performed at the midpoint of construction, prior to final inspection, or at any critical construction decision milestones. A summary of the project's review schedule is shown in Table 1.



**Table 1 – Proposed Review Schedule for the Deep Creek Bridge Replacement Project\***

<b>Project Milestone</b>	<b>DQC Review – USACE Norfolk District</b>	<b>ATR – USACE DX, Philadelphia District, Walla Walla District,</b>	<b>City of Chesapeake Review</b>	<b>Type II IEPR – TBD</b>
75% Bridge and Roadway Design Submittal	9 Nov 2009 – 7 Dec 2009	9 Nov 2009 – 7 Dec 2009	9 Nov 2009 – 7 Dec 2009	Not Performed
90% Bridge and Roadway Design Submittal	15 Feb 2010 – 15 Mar 2010	15 Feb 2010 – 15 Mar 2010	15 Feb 2010 – 15 Mar 2010	Not Performed
100% Bridge and Roadway Design Submittal	26 Apr 2010 – 10 May 2010	26 Apr 2010 – 10 May 2010	26 Apr 2010 – 10 May 2010	Not Performed
90% Bridge and Roadway Design Re-submittal	Pending	Pending	Pending	Pending
Final Bridge and Roadway Design Submittal	Pending	Pending	Pending	Pending

\*Table 1 will be updated once the pending review dates and IEPR reviewers are identified.

IEPR review schedule during construction will be determined upon completion of the E&D phase and prior to the start of construction. The Review Plan will be updated accordingly.

**12. REVIEW COSTS**

Tentative review cost estimate is shown below:

ATR .....	3 Agencies x 2 Reviews x \$5,000/Review .....	\$30,000
IEPR .....	4 Disciplines x 2 Reviews x \$10,000/Review.....	\$80,000

**13. PUBLIC PARTICIPATION**

A public information meeting for the Deep Creek Bridge Replacement project was held on December 14, 2009. No public comments were generated at this meeting.

Although no additional public meeting is planned, public may still request information and inquire about this project through Norfolk District’s web page (<http://www.nao.usace.army.mil>). Basic project description and contact information of the project is accessible to the public by searching for terms “Deep Creek” or “AIWW Deep Creek Bridge” on Norfolk District’s website.

## APPENDIX A

### >> PDT and Review Team Rosters and Contact Information <<

**Project Manager**

**Name:** Doug Martin  
**Organization:** USACE NAO – Civil Works Projects Section  
**Contact Information:** 757-201-3538

**Review Management Organization (RMO) / Major Subordinate Command (MSC)**

**Name:** Thomas Tam  
**Organization:** USACE North Atlantic Division (NAD)  
**Contact Information:** 347-370-4596

**Project Delivery Team Roster & Contact Information**

Role	Name	Organization		Phone
Project Manager	Doug Margin	USACE NAO	Civil Works Projects Section	757-201-3538
Design Team Leader	Sarah Taylor	USACE NAO	Design Management Section	757-201-7478
Lead Designer	Burt Matteson	URS Corp.	Virginia Beach, VA	757-499-4224
<b>USACE Technical Support Team</b>				
Structural Engineer	TBD	USACE NAO	Structural Section	
Civil Engineer	TBD	USACE NAO	Civil Section	
Geotechnical Engineer	Marcus Kim	USACE NAO	Geo-Environmental Section	757-201-7267
Environmental Engineer	Jeremy Pinalto	USACE NAO	Geo-Environmental Section	757-201-7849
Mechanical Engineer	TBD	USACE NAO	Mech-Elec Section	
Electrical Engineer	TBD	USACE NAO	Mech-Elec Section	

**ATR Team Roster & Contact Information**

<b>Role</b>	<b>Name</b>	<b>Organization</b>		<b>Phone</b>
Lead ATR	Heather Smith	USACE NWO	Transportation DX	402-995-2406
Lead ATR -Alternate	Danny Klima	USACE NWO	Transportation DX	402-995-2203
ATR	Adrian Kollias	USACE NWO	Structural Engineer; Regional CX (NAP)	215-656-6646

**IEPR Roster & Contact Information**

<b>Role</b>	<b>Name</b>	<b>Organization</b>		<b>Phone</b>
RMO POC	Phil Sauser	CEMVP-EC-D		651-290-5722
Geotechnical Engineer	TBD	TBD		
Mechanical Engineer	TBD	TBD		
Structural Engineer	TBD	TBD		
Electrical Engineer	TBD	TBD		



# APPENDIX B Review Certifications Example Templates

Attachment C-1

**STATEMENT OF TECHNICAL REVIEW**

**COMPLETION OF QUALITY ASSURANCE REVIEW AND AGENCY  
TECHNICAL REVIEW**

The District has completed the *(type of product)* of *(project name and location)*. Notice is hereby given that (1) a Quality Assurance review has been conducted as defined in the Quality Assurance Plan and (2) an agency technical review that is appropriate to the level of risk and complexity inherent in the project, has been conducted as defined in the project's Quality Management Plan. During the agency technical review, 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 result, including whether the product meets the customer's needs consistent with law and existing Corps policy. The review also assessed the DQC documentation and made the determination that the DQC activities employed appear to be appropriate and effective. The agency technical review was accomplished by *(A-E)*. All comments resulting from QA and ATR have been resolved.

\_\_\_\_\_  
(Signature)  
QA Review Team Leader

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Signature)  
Project Manager

\_\_\_\_\_  
(Date)

**CERTIFICATION OF QUALITY ASSURANCE REVIEW AND AGENCY  
TECHNICAL REVIEW**

Significant concerns and the explanation of the resolution are as follows:  
*(Describe the major technical concerns, possible impact, and resolution)*

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

\_\_\_\_\_  
(Signature)  
Chief, Engineering Division

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Signature)  
Chief, Planning Division

\_\_\_\_\_  
(Date)

Attachment C-2

**A-E CONTRACTOR STATEMENT OF TECHNICAL REVIEW**

**COMPLETION OF AGENCY TECHNICAL REVIEW**

The A-E Contractor (*A-E Contractor*) has completed the (*type of product*) of (*project name and location*). Notice is hereby given that an agency technical review, appropriate to the level of risk and complexity inherent in the project, has been conducted as defined in the project's Quality Management Plan. During the agency technical review, 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 result, including whether the product meets the customer's needs consistent with law and existing Corps policy. All comments resulting from ATR have been resolved.

\_\_\_\_\_  
(Signature)  
Technical Review Team Leader

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Signature)  
Project Manager, A-E Contractor

\_\_\_\_\_  
(Date)

**CERTIFICATION OF AGENCY TECHNICAL REVIEW**

Significant concerns and the explanation of the resolution are as follows:

*(Describe the major technical concerns, possible impact, and resolution)*

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

\_\_\_\_\_  
(Signature)  
Principal, A-E Contractor

\_\_\_\_\_  
(Date)



CENAO-EC-EG

(Date)

MEMORANDUM FOR Chief, Contracting Office

SUBJECT: Constructability/Biddability Review Comment Certification

Project: *(Project Name)*

1. This is to certify that all constructability comments received as of this date have been reviewed and incorporated into the contract documents as appropriate. A response to each comment is enclosed.
2. Attached to this Certification is the Certification of Independent Technical Review.
3. No additional BCOE comments are anticipated.

SUBMITTED BY:

\_\_\_\_\_  
*(Print Name)*  
*(Title)*

RECOMMENDED BY:

\_\_\_\_\_  
*(Name)*  
Chief, Engineering Branch

RECOMMENDED BY:

\_\_\_\_\_  
*(Name)*  
Acting Chief, Construction Branch

APPROVED BY:

\_\_\_\_\_  
*(Name)*  
Chief, ENGINEERING AND CONSTRUCTION

Attachments:  
Certification of ITR

**Norfolk District  
Engineering Branch  
Quality Assurance Review**

PROJECT: *(Project Name)*

LOCATION: *(Project Location)*

DESIGN TECHNICAL LEAD: *(Name and Title)*

DESIGN ELEMENT	QA REVIEWER	SECTION CHIEF
Geotechnical Engineering	Name:	Name:
	Signature:	Signature:
	Date:	Date:
Cost Engineering	Name:	Name:
	Signature:	Signature:
	Date:	Date:
Civil Engineering	Name:	Name:
	Signature:	Signature:
	Date:	Date:
Construction QA	Name:	Name:
	Signature:	Signature:
	Date:	Date:
Operations	Name:	Name:
	Signature:	Signature:
	Date:	Date:

I certify that an assurance review has been performed. All appropriate review comments have been incorporated. Those comments not incorporated have been adequately addressed to the satisfaction of the reviewer.

Prepared By:

*(Name)*  
Design Technical Lead  
*(Date)*

## APPENDIX C

### Review Plan Revisions

Date	Description of Change	Para Number
02 May 2013	Revised reference	1.2
02 May 2013	Added RMO input into selection of IEPR team	2.1
02 May 2013	Added MVP as the RMO for Modified Type II IEPR	2.2
02 May 2013	Deleted NAP Bridge RCX from ATR team	5
02 May 2013	Added requirement for modified Type II IEPR	6.2
22 May 2013	Added Electrical Engr to IEPR Review Team	6.2 & Appx A
02 May 2013	Added RMO POC info to IEPR roster	Appx A



ROUTING AND TRANSMITTAL SLIP

Date

22-May-2013

TO:	Initials	Date
1 CENAD-RBT <input checked="" type="checkbox"/> Mr. Bianco	<i>[Signature]</i>	22 May 2013
2 CENAD-PDX Mr. Cocchiari <i>OUT</i>		
3 CENAD-RBM Mr. Mazzola	<i>RM</i>	23 MAY 13
4 CENAD-PDC Ms. Monte	<i>PM</i>	24 May 2013
5 CENAD-PD Mr. Leach	<i>[Signature]</i>	23 May 2013
6 CENAD-DD MAJ Stevens <i>Horrie Lloyd - pls make corrections</i>	<i>Lz</i>	29 May 13 4 June 13
7 CENAD-EX BG Savre		
8 CENAD-RBT		
<input type="checkbox"/> Action	<input type="checkbox"/> File	<input type="checkbox"/> Note and Return
<input checked="" type="checkbox"/> Approval	<input type="checkbox"/> For Clearance	<input type="checkbox"/> Per Conversation
<input type="checkbox"/> As Requested	<input type="checkbox"/> For Correction	<input type="checkbox"/> Prepare Reply
<input type="checkbox"/> Circulate	<input type="checkbox"/> For Your Information	<input type="checkbox"/> See Me
<input type="checkbox"/> Comment	<input type="checkbox"/> Investigate	<input type="checkbox"/> Signature
<input type="checkbox"/> 1 - 6 Coordination	<input type="checkbox"/> Justify	

REMARKS

SUBJECT: Review Plan Approval for Atlantic Intercoastal Waterway (AIWW) Bridge Replacement at Deep Creek, Chesapeake, VA – Revised Plan

1. BACKGROUND

a. The RP was initially approved on 14 Dec 2012. The original RP did not include an Independent External Peer Review (IEPR) Safety Assurance Review (SAR) as the requirement was unclear. The RP has been revised to include a "Modified Type II IEPR (SAR)."

b. EC 1165-2-214 does not include a "Modified Type II IEPR (SAR)" because it primarily addresses flood control CW projects. Instead of assembling a panel of reviewers that "adhere[s] to the National Academy of Science (NAS) Policy on Committee Composition and Balance and Conflicts of Interest," we will have a separate A-E with experience in bridge design review the NAO design. The separate A-E contract will be procured by the USACE Bridge Safety Program Technical Focus Team at MVP (RMO for the SAR). This concept has been approved by HQ Bridge Team (C. Westbrook).

c. The project will undergo District Quality Control (DQC) review, Agency Technical Review (ATR), and a Modified Type II IEPR (Safety Assurance Review). NAD Business Technical Division will be the Review Management Organization (RMO) for the ATR. The USACE Bridge Safety Program Technical Focus Team at MVP will be the RMO for the Modified Type II IEPR (SAR).

d. The proposed bridge will replace the existing bridge that carries George Washington Highway (U.S. Route 17) across the AIWW Dismal Swamp Canal. The project scope includes the design and construction of the new Deep Creek Bridge and its associated roadways and intersections. The proposed bridge will replace the existing one to meet the current AASHTO design standards and address the inefficient operation conditions associated with narrow roadways, increased traffic volumes, and traffic delays. Other features of the project associated with the bridge and roadways include, but are not limited to, abutments, supporting piers, pile foundation, fender system, mechanical and electrical systems, and operator's control house.

2. PURPOSE: To obtain MSC Commander approval of the revised RP.

3. RECOMMENDATION: That the Commander approve the revised RP.

4. Request the Commander's signature on the enclosed memo.

5. After signature, please return to RBT for continued action.

TAB A- Revised RP for AIWW Bridge Replacement at Deep Creek, VA

DO NOT use this form as a RECORD of approvals, concurrence, disposals, clearances, and similar actions

FROM: (Name, org symbol, Agency/Post)

*[Signature]*  
Brian Huntley  
CENAD-RBT

Room No. - Bldg

Cube 132 - Bldg 301

Phone No.

x4664

Locally Produced Exception

OPTIONAL FORM 41