



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
SOUTH ATLANTIC DIVISION
60 FORSYTH STREET SW, ROOM 10M15
ATLANTA, GA 30303-8801

CESAD-RBT

19 June 2012

MEMORANDUM FOR COMMANDER, MOBILE DISTRICT (CESAM-EN/
GARY W. WHIGHAM)

SUBJECT: Approval of the Review Plan for the Water and Sewer Project at Big Hill Acres,
Jackson County, Mississippi, WRDA 1992 Section 219 Project

1. References:

a. Memorandum, CESAM-EN-HH, 15 March 2012, subject: Review Plan – Section 219
Environmental Infrastructure, Water and Sewer Project at Big Hill Acres, Jackson County
(Enclosure).

b. EC 1165-2-209, Civil Works Review Policy, 31 January 2010.

2. The Review Plan for the for Design and Implementation Phase (Implementation Documents) for
the Water and Sewer Project at Big Hill Acres, Jackson County, Mississippi dated March 2012
submitted by reference 1.a has been reviewed by this office. As a result of this review, minor
changes were coordinated with your staff. The attached Review Plan with the changes
incorporated is hereby approved in accordance with reference 1.b above

3. We concur with the conclusion of the District Chief of Engineering that Type II Independent
External Peer Review (Type II IEPR) is not required for this Environmental Infrastructure
Project. The primary basis for the concurrence that a Type II IEPR is not required is the
determination that the failure of this project would not pose a significant threat to human life.

5. The District should take steps to post the Review Plan to its web site and provide a link to
CESAD-RBT. Before posting to the web site, the names of Corps/Army employees should be
removed.

6. The SAD point of contact is Mr. James Truelove, CESAD-RBT, 404-562-5121.

FOR THE COMMANDER:

Encl


CHRISTOPHER T. SMITH, P.E.
Chief, Business Technical Division



DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

REPLY TO
ATTENTION OF

CESAM-EN-HH

15 March 2012

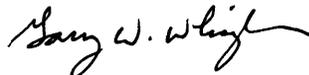
MEMORANDUM FOR CDR, SOUTH ATLANTIC DIVISION ATTN: CESAD-RBT
(MR. CHRISTOPHER SMITH)

SUBJECT: Review Plan – Section 219 Environmental Infrastructure, Water and Sewer Project
at Big Hill Acres, Jackson County, Mississippi.

1. A copy of the subject report is enclosed for review and approval.
2. The Review Plan (RP) was prepared in accordance with EC-1165-2-209 and has been by approved by the SAM Chief of Engineering.
3. If you have any questions, please call Thomas Smith, Project Manager, at (251) 690-3270 or Alou Rice, Project Engineer, at (251) 694-3798.

FOR THE COMMANDER:

Encl


GARY W. WHIGHAM
Acting Chief, Engineering Division

REVIEW PLAN

Section 219 Water Resources Development Act (WRDA) of 1992

JACKSON COUNTY ENVIRONMENTAL INFRASTRUCTURE

WATER AND SEWER PROJECT

P2 # 113485

COMMUNITY OF BIG HILL ACRES, JACKSON COUNTY, MISSISSIPPI

Mobile District

MARCH 2012

THE INFORMATION CONTAINED IN THIS REVIEW PLAN IS DISTRIBUTED SOLELY FOR THE PURPOSE OF PREDISSEMINATION PEER REVIEW UNDER APPLICABLE INFORMATION QUALITY GUIDELINES. IT HAS NOT BEEN FORMALLY DISSEMINATED BY THE U.S. ARMY CORPS OF ENGINEERS, MOBILE DISTRICT. IT DOES NOT REPRESENT AND SHOULD NOT BE CONSTRUED TO REPRESENT ANY AGENCY DETERMINATION OR POLICY.



**US Army Corps
of Engineers®
Mobile District**

REVIEW PLAN

**JACKSON COUNTY ENVIRONMENTAL INFRASTRUCTURE
WATER AND SEWER PROJECT
COMMUNITY OF BIG HILL ACRES, JACKSON COUNTY, MISSISSIPPI**

TABLE OF CONTENTS

<u>ITEM</u>	<u>PAGE NUMBER</u>
1. PURPOSE.....	1
2. DESCRIPTION OF PROJECT	1
3. DESCRIPTION OF WORK FOR REVIEW	5
4. BACKGROUND	5
5. PROJECT DELIVERY TEAM	6
6. LEVELS OF REVIEW	6
7. DISTRICT QUALITY CONTROL.....	6
8. AGENCY TECHNICAL REVIEW	6
Disciplines Required For Review	7
9. INDEPENDENT EXTERNAL PEER REVIEW	8
10. REVIEW ORGANIZATION MANAGEMENT.....	8
11. POLICY AND LEGAL COMPLIANCE	8
12. REVIEW SCHEDULE AND COSTS	8
13. PUBLIC PARTICIPATION	9
14. MAJOR SUBORDINATE COMMAND (MSC) APPROVAL	9

REVIEW PLAN

**JACKSON COUNTY ENVIRONMENTAL INFRASTRUCTURE
WATER AND SEWER PROJECT
COMMUNITY OF BIG HILL ACRES, JACKSON COUNTY, MISSISSIPPI**

TABLE OF CONTENTS (CONTINUED)

LIST OF FIGURES

<u>FIGURE NO.</u>	<u>DESCRIPTION</u>	<u>PAGE NUMBER</u>
1	Location Map.....	2
2	Locality Map.....	3
3	Project Area Map.....	4

LIST OF ATTACHMENTS

ATTACHMENT 1	Team Roster
ATTACHMENT 2	Acronyms and Abbreviations
ATTACHMENT 3	A-E Contractor Statement of Technical Review

REVIEW PLAN

JACKSON COUNTY ENVIRONMENTAL INFRASTRUCTURE WATER AND SEWER PROJECT COMMUNITY OF BIG HILL ACRES, JACKSON COUNTY, MISSISSIPPI

1. PURPOSE

The purpose of this Review Plan (RP) is to describe the technical review process for the Jackson County Environmental Infrastructure Water and Sewer Project at Big Hill Acres in Jackson County, Mississippi. The RP is a living document and may change as the project progresses. A Project Management Plan (PMP) is also under development for this Project. This RP shall be an appendix to the PMP when completed.

U.S. Army Corps of Engineers (Corps) review guidance for studies and projects conducted under Section 219 of the Water Resources Development Act (WRDA) of 1992, as amended, is contained in Engineer Circular (EC) 1165-2-209, Civil Works Review Policy, dated 31 Jan 2010. EC 1165-2-209 provide procedures for ensuring the quality and credibility of the Corps decision documents through an independent review process. It complies with Section 515 of Public Law (P.L.) 106-554 (referred to as the “Information Quality Act”); and the Final Information Quality Bulletin for Peer Review by the Office of Management and Budget (referred to as the “OMB Peer Review Bulletin”). It also provides guidance for the implementation of Section 2034 of WRDA 2007 (P.L. 110-114).

2. DESCRIPTION OF PROJECT

The residents of the Big Hill Acres community of Jackson County, Mississippi currently have no centralized sewer service and limited available potable water supply. See figure 1 for location map. This project will address the water and sewer needs of the 855 residences and platted lots that cover 2,400 acres. It’s important to note that no construction will occur until the NEPA process has been completed. Also, in accordance with the PPA, the Corps will advertise and award the project and provide construction oversight.

The planned potable water supply, distribution, and service system includes a 1,000 gallon per minute (gpm) water well with gas chlorination disinfection treatment system, a 250,000 gallon elevated water storage tank, various lengths of water line and valves ranging in size from $\frac{3}{4}$ inch up to 10 inch, fire hydrants and all other system support appurtenances necessary to provide a complete and operating water supply system. See figure 2 for the project site map for the proposed water system layout. The planned low pressure wastewater collection project includes household grinder pump units, 5 sewage lift stations, various force main and valve sizes ranging from 1-1/2 inch up to 12 inch, air release valves, and all other system support appurtenances to provide a complete and operating sewer system. This also includes connection to the existing Regional Wastewater pumping station that will convey the collected wastewater to the West Jackson County Regional Wastewater Treatment Plant (WWTP) for treatment and disposal. See figure 3 for the project site map of the proposed sewer system layout.

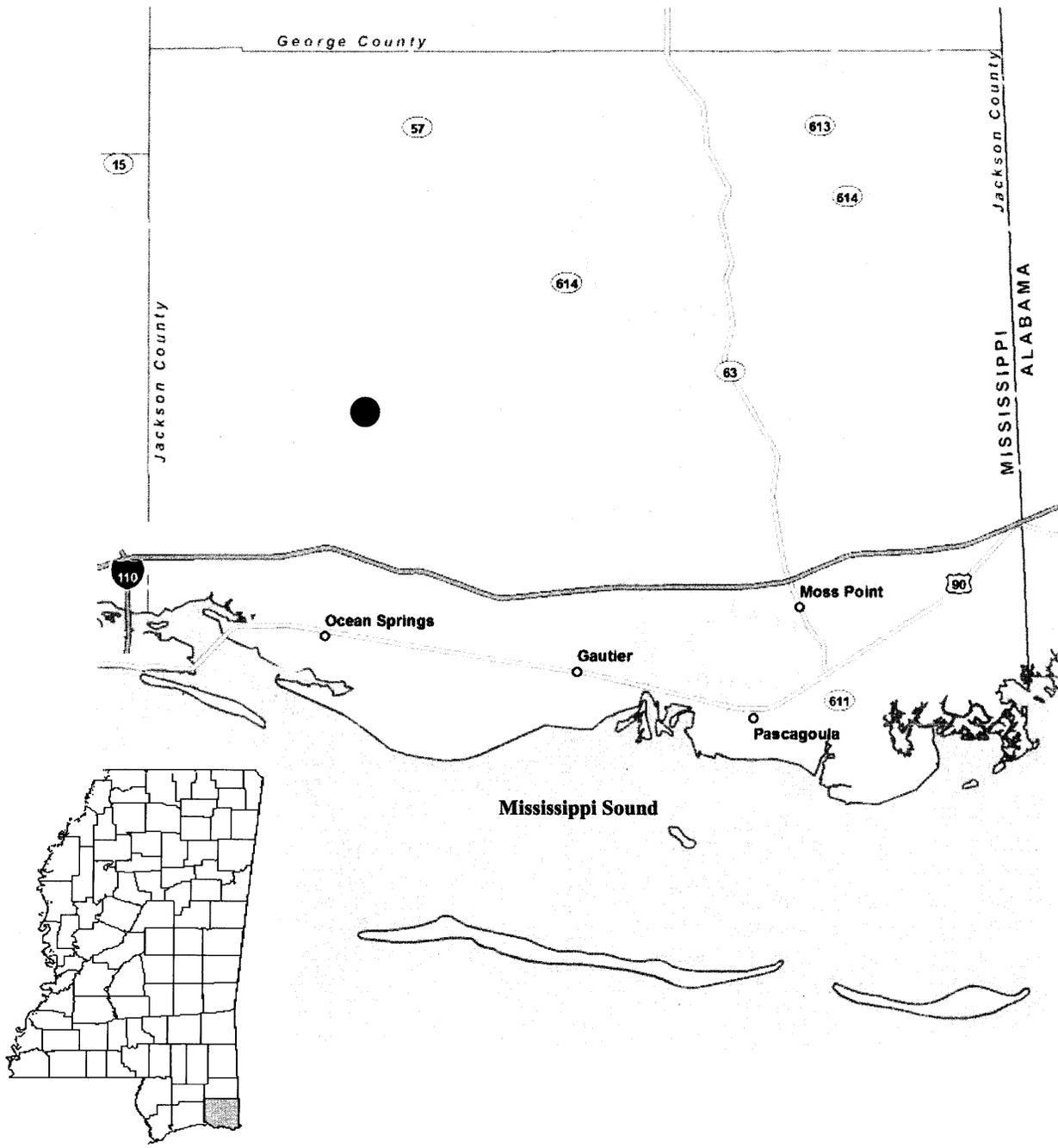


Figure 1 - Location Map (red dot indicates project location)

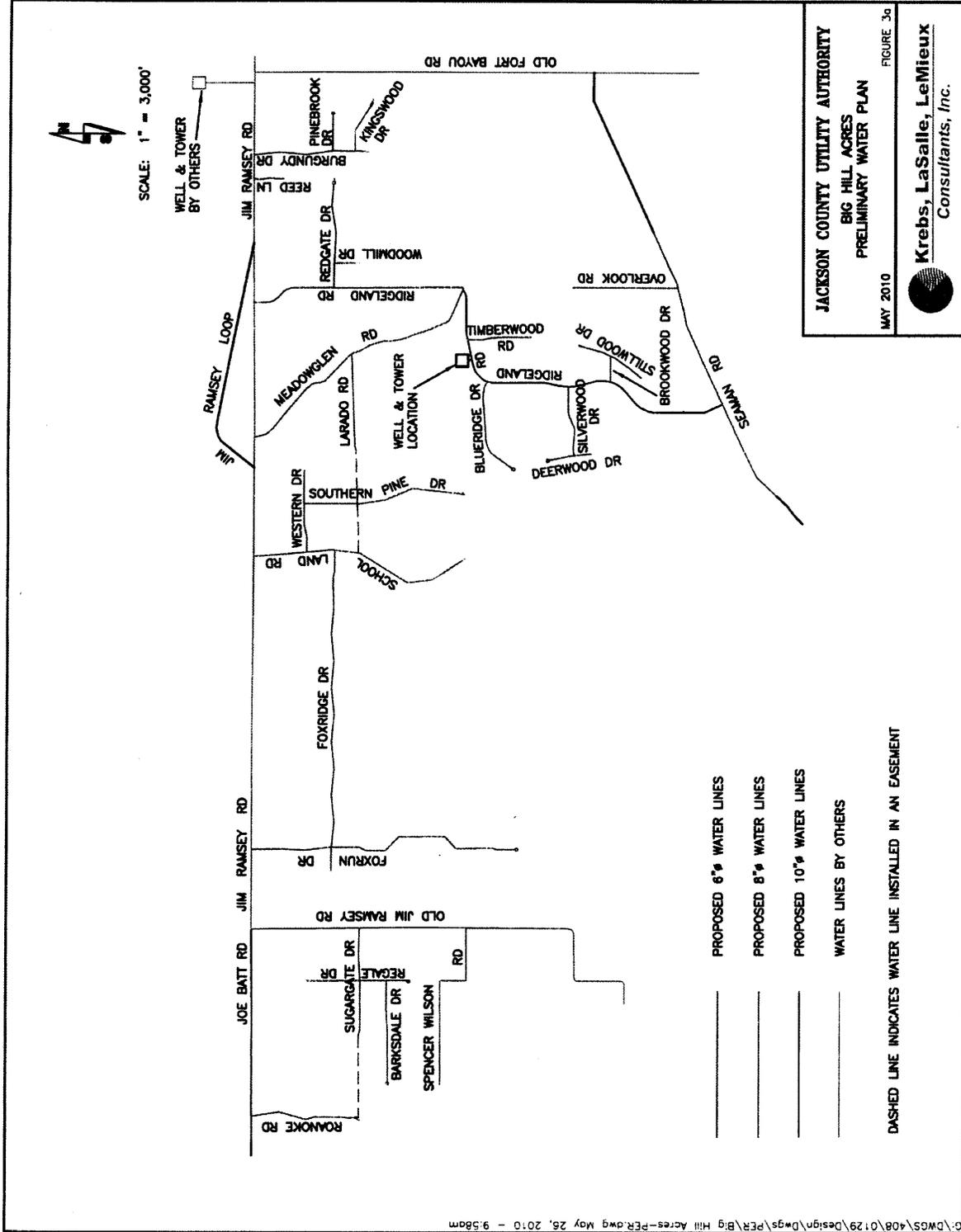


Figure 2 - Project Site Map - Water System

3. DESCRIPTION OF WORK FOR REVIEW

This project consists of the design and construction of the Water and Sewer Project at Big Hill Acres in Jackson County, Mississippi. In accordance with Section 219 of WRDA 1992 guidance, the design will be conducted by an A-E firm as selected by Jackson County, Mississippi (the non-Federal Sponsor) with concurrence from the Corps' Mobile District. Reviews are limited to implementation documents, unless Type II IEPR-Safety Assurance Review (SAR) is deemed applicable. The NEPA documents, state water quality certification, environmental/cultural coordination, and environmental assessment are being conducted in parallel by the Mobile District. A Design Documentation Report (DDR) shall be prepared by the Mobile District. The review plan covers the project life cycle, specifying the level of review to be conducted on project documents. The project documents subject to DQC review are: DDR (and supporting reports, i.e. geotechnical report, hydraulic and hydrologic report, wetland survey, environmental site assessment, etc.); technical plans and specifications; and NEPA/environmental/cultural compliance documentation. In accordance with EC 1165-2-209, the following work products are subject to Agency Technical Review (ATR) as assigned by the MSC: DDR; technical plans and specifications; and NEPA/environmental/cultural compliance documentation.

4. BACKGROUND

The community of Big Hill Acres rests in western Jackson County approximately 9 miles NNE of the city of Ocean Springs. The project planning area boundaries are generally Roanoke Road to the west, Joe Batt/Jim Ramsey Road to the north, Old Fort Bayou Road to the east, and Seaman Road to the south (see figure 3). This is a residential area with no commercial or industrial development. There are currently no major water users in this area. Residential structures consist primarily of manufactured housing, with each home serviced by a private water well and individual underground septic tanks. There are concerns that some of the private wells have been contaminated by failing septic tank systems.

The private water wells are fairly shallow and fall short of the standards for public water supply wells. The most reasonable alternative for providing water service is to design and construct a new public water supply, distribution, and service system along with a new potable water production well, gas-chlorination disinfection system, and an elevated water storage tank. This new water distribution system will be a safe, reliable, and adequate water system. Fire hydrants will be installed and the water mains will be large enough to provide required level of fire protection.

Many of the individual underground septic tanks and drain field systems are failing, resulting in the contamination of the nearby private water wells and water ways. The most reasonable alternative for providing sewer service to the residents in the project planning area is to design and construct a new low-pressure sewage collection system. This new system will connect to a planned central lift station to be located in the project area. This central lift station will have sufficient capacity to accommodate Big Hill Acres sewerage flow and convey the material to the WWTP. The new sewage collection system will be safe and reliable. Environmental resources in the area will be better protected than with current individual septic systems.

5. PROJECT DELIVERY TEAM

The Project Delivery Team (PDT) is comprised of those individuals involved directly in the development of the implementation documents. The individual contact information and disciplines of the Mobile District PDT are included in Attachment 1 of this document.

6. LEVELS OF REVIEW

This RP describes the levels of review and the anticipated review process for the various documents to be produced. This RP is a component of the PMP. The levels of review are included in this RP: District Quality Control (DQC) and Agency Technical Review (ATR). Type II IEPR is not required in this paragraph as discussed in the risk informed process in Section 9 below. DrCheckssm review software will be used to document all ATR comments, responses, and associated resolutions accomplished throughout the review process. Comments have been limited to those that are required to ensure adequacy of the product.

7. DISTRICT QUALITY CONTROL

All documents to be produced will undergo District Quality Control/Quality Assurance (DQC/QA). DQC/QA is the review of basic science and engineering work products focused on fulfilling the project quality requirements defined in the PMP. Major Subordinate Command (MSC) and District quality management plans address the conduct and documentation of this fundamental level of review. DQC will be managed by the Corps, Mobile District in accordance with ER 1110-1-12, Engineering & Design Quality Management, EC 1165-2-209 and the District Quality Management Plan. The DQC will utilize DrChecks software to facilitate and document the review. The DQC will include quality checks and reviews, supervisory reviews, PDT reviews, and Biddability, Constructability, Operability and Environmental Review (BCOE) reviews required by ER 1110-1-12. The A-E prepared implementation documents, (Technical Plans and Specifications, DDR, and supporting environmental and technical reports) for this project is classified as Products Prepared by Others. The A-E will perform a Technical Review (TR) and Quality Control (QC); and Mobile District will perform Quality Assurance (QA) per ER 1110-1-12. The A-E Contractor will provide a signed Statement of Technical Review (Attachment 3). Additionally, the PDT is responsible to assure the overall integrity of the documents produced. The DQC review will be completed prior to submitting documents for ATR.

8. AGENCY TECHNICAL REVIEW (ATR)

All documents produced as part of this effort will undergo ATR 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 Corps guidance, that design plans and specifications and supporting analysis are clear, constructible, environmental sustainable, operable and maintainable.

The ATR team will consist of the individuals that represent the significant disciplines involved in the accomplishment of the work. ATR will be managed within the Corps and conducted by senior Corps personnel outside of the Mobile District that are not involved in the day-to-day production of the project. DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. The documents to be reviewed are the DDR, and technical plans and specifications. The PDT/A-E will evaluate comments in DrChecks and revise materials as necessary. The ATR leader will be from outside the MSC, and must complete a statement of technical review for all final products and final documents. By signing the ATR certification, the district leadership certifies policy compliance of the document and also that the DQC activities were sufficient and documented.

Disciplines Required for Review. At a minimum, the following disciplines should be represented on the ATR team with at least five years experience except as noted:

Discipline	Required Expertise
Structural Engineer	Team member must have design experience with projects requiring vertical construction. This includes a thorough understanding of steel and concrete considerations.
Civil Engineer	Team member must have design experience with and be familiar with the requirements for horizontal construction. This includes a thorough understanding of site drainage and grading considerations, earthwork quantities, demolition plans, etc.
Civil or Mechanical Engineer (water & wastewater specialist)	Team member(s) must design experience with and extensive knowledge of water and waste water systems. Including treatment processing principles, closed system pumping, safe drinking water act requirements, feedback and loop requirements for process control.
Geotechnical Engineer	Team member must have design experience static and dynamic load bearing capability of soils and foundations. This includes geotechnical evaluation of structure foundations.
Electrical Engineer	Team member(s) must have design experience requiring knowledge of and specification of motor control systems, digital control systems, programmable logic control and data acquisition management, exterior and interior electrical power, and emergency power connections.
ATR Leader	Team member should have minimum expertise such as having led prior ATRs, etc. The ATR lead may also have been a senior ATR reviewer on a similar type project within the past 5 years. ATR Team Leader can also serve as one of the review disciplines in addition to team leader duties.
NEPA Compliance Specialist	The team member should have 10 or more years of experience in NEPA compliance and preparing and coordinating EA's and EIS's on District projects, including preparation of the environmental portions of project reports. Team member should also be able to execute and evaluate compliance with environmental law such as the Endangered Species Act, Coastal Zone Management Act, Migratory Bird Treaty Act, and Marine Mammal Protection Act.

9. INDEPENDENT EXTERNAL PEER REVIEW

Independent External Peer Review (IEPR) is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of the Corps is warranted. Based on criteria contained in EC 1165-2-209, the District Chief of Engineering, as the Engineer-In-Responsible-Charge, does not recommend a Type II IEPR Safety Assurance Review. The project purpose is not hurricane and storm risk management or flood risk management, and the project does not have potential hazards that pose a significant threat to human life. Innovative materials or novel engineering methods will not be used. Redundancy, resiliency, or robustness is not required for design. Also, the project has no unique construction sequencing, or a reduced or overlapping design construction schedule.

10. REVIEW MANAGEMENT ORGANIZATION

It is the responsibility of the Review Management Organization (RMO) to assign the ATR team and to ensure that lead is outside the home Major Subordinate Command (MSC); to manage the ATR and develop and prepare a “charge” to the ATR team. The RMO for this project is the South Atlantic Division (SAD) as the MSC for this region. Mobile District will assist SAD with management of the ATR and development of the “charge”.

11. POLICY AND LEGAL COMPLIANCE

The National Environmental Policy Act (NEPA) compliance is required for the construction of this project. This will include consideration of no adverse impacts to the environment. NEPA documentation will be prepared and coordinated by Mobile District in parallel with the preparation of construction plans and specifications. The Corps will ensure compliance as part of the design review and project coordination process and no construction will occur prior to the completion of the NEPA process, BCOE certification, state water quality certification, and the satisfaction of other applicable local permit requirements. All contract documents and supporting environmental documents shall be reviewed by the SAM Office of Counsel prior to final contract award. Draft NEPA and environmental documents shall be submitted to the ATR team with the DDR and Technical Plans and Specifications to aid in ATR review.

12. REVIEW SCHEDULE AND COSTS

The cost for DQC and ATR is estimated to be approximately \$10,000 and \$20,000.00, respectively. The documents to be reviewed and scheduled dates for review are as follows:

Milestone	Review	Schedule Dates
Design Kickoff	DQC	20 May 2011 (A)
Design Draft Report 35%	DQC	12 Jan 2012 (A)
Design Interim Report 65%	DQC	15 Apr 2012

Design Final Report	DQC	15 Jun 2012
Final Design	ATR	30 Jun 2012

13. PUBLIC PARTICIPATION

The RP will be made accessible to the public through the Mobile District website link <http://www.sam.usace.army.mil/>. Public review of the RP can begin as soon as it is approved by the Division Commander and posted by the Mobile District. Comments made by the public will be available to the review team. Public and interagency review for the Environmental Assessment (EA) will be conducted in accordance with NEPA, as outlined in ER 1105-2-100.

The Jackson County Utility Authority hosted two public meetings to solicit comments and relate information. The Mobile District also attended in these meetings. The Jackson County Utility Authority manages the regional water and waste water systems contained within Jackson county including collaborative interaction with state, and federal agencies, as to install and maintain sustainable water and waste water services.

14. MAJOR SUBORDINATE COMMAND (MSC) APPROVAL

The MSC Commander is responsible for approving the RP as prepared by the Mobile District, including by delegation within the MSC. The Commander's approval reflects vertical team input as to the appropriate scope and level of review for the documents for review. Like the PMP, the RP is a living document and may change as the project progresses. Significant changes to the Review Plan (such as changes to the scope and/or level of review) must be re-approved by the MSC Commander following the process used for initially approving the review plan. . The latest version of the Review Plan, along with the MSC Commanders' approval memorandum, should be posted on the Home District's webpage. The latest Review Plan should also be provided to the RMO and home MSC.

ATTACHMENT 1 – TEAM ROSTER

Product Delivery Team Members

Discipline (POC)	Name	Office/Agency
Project Manager	TOm Smith	CESAM-PM-CM
Project Architect/ Engineer (PAE)	Alou Rice	CESAM-EN-GE
Structural Engineer	Mike Thompson	CESAM-EN-DA
Site Engineer	Joe Long	CESAM-EN-DA
Geotech Engineer	Mark Green	CESAM-EN-GG
Cost Estimator	Gary Payton	CESAM-EN-E
Environmental Team	Linda Brown	CESAM-PD-EC
Environmental Engineer	Alou Rice	CESAM-PD-GE
Cultural Resources	Joe Giliberti	CESAS-PD-EI
Real Estate Planner	Ed Blocher	CESAM-RE-P
Cathodic Protection	Mike Wallace	CESAM-EN-DE
Electrical Engineer	Greg Hall	CESAM-EN-DE
Construction Division	George Burge	CD-SC
Contractor, Project Manager	Mike Hattaway	GEC KREBS-LASALLE
Sponsor	John McKay	JACKSON COUNTY BOARD OF SUPERVISORS
Sponsor	Tommy Fairfield	JACKSON COUNTY UTILITY AUTHORITY

ATTACHMENT 2 - ACRONYMS AND ABBREVIATIONS

Term	Definition
ATR	Agency Technical Review
BCOE	Biddability, Constructability, Operability and Environmental Review
BMPs	Best Management Practices
CORPS	U.S. Army Corps of Engineers
DQC	District Quality Control
DQC/QA	District Quality Control/Quality Assurance
EA	Environmental Assessment
EC	Engineer Circular
EIS	Environmental Impact Statement
ER	Engineer Regulation
HQUSACE	Headquarters, U.S. Army Corps of Engineers
IEPR	Independent External Peer Review
ITR	Independent Technical Review
MCACES	Micro-Computer Aided Cost Estimating System
MGD	Million Gallons Per Day
MSC	Major Subordinate Command
NEPA	National Environmental Policy Act
OMB	Office and Management and Budget
PDT	Project Delivery Team
PMP	Project Management Plan
PPA	Project Partnership Agreement
QA	Quality Assurance
QC	Quality Control
RMO	Review Management Organization
RP	Review Plan
SAR	Safety Assurance Review
SCADA	Supervisory Control and Data Acquisition
TR	Technical Review
WIP	Watershed Improvement Plan
WRDA	Water Resources Development Act