

# ENGINEERING CONSIDERATIONS AND INSTRUCTIONS FOR FIELD PERSONNEL

## *ENGINEERING CONSIDERATIONS AND INSTRUCTIONS FOR FIELD PERSONNEL (ECIFP) INSTRUCTIONS PAGE*

- 1.0 PURPOSE: The ECIFP is a narrative that forms an information bridge between designers, design build preparers and construction personnel who administer the construction contract for both design build and design bid build projects. The completed ECIFP will convey risk elements identified during the design, design assumptions of critical project features, and initial project coordination of the PDT to construction field personnel who oversee construction projects. The ECIFP is a live document and shall be reviewed at each milestone during design review meetings as a separate document for design/bid/build projects or as a separate deliverable during development of design/build packages, resulting in a final ECIFP with the intent to reduce time and cost growth during the construction phase of a project.
- 2.0 FORMAT AND CONTENT: The ECIFP is a required submittal during the solicitation development phase of a design build project or a design bid build project per Engineering Regulations (ER's) and USACE policy documents. The design build RFP preparers or design bid build Designers of Record (DOR) for each discipline shall complete the applicable sections of the ECIFP. This effort shall be coordinated by the PE/A. Referencing only the drawings, specifications, or design analysis with no indication of risk or criticality is not acceptable. The Risk Register must be included in the ECIFP.
- 3.0 FINAL ECIFP: The final ECIFP verbiage shall be completed by the Designer of Record (DOR)' and/or RFP preparers. The Project Engineer/Architect (PE/A) must coordinate the ECIFP deliverable and will provide to the Project Manager and Project Stakeholders as a separate deliverable. The PE/A will provide the final version with any subsequent attachments to the construction field engineer and will present the ECIFP at the Hard Stop 2 meeting.
- 4.0 ATTACHMENTS: Supply additional documentation as an attachment to explain and clarify any risk features and/or critical project features identified in the ECIFP. Include the project risk register (if applicable) as an attachment.

### ***Note to the Author of ECIFP***

*The following is a template of an ECIFP document for a project. The template includes instructions to the author, boilerplate text, and fields that should be replaced with the information specific to the project.*

1. *Blue italicized text enclosed in square brackets ([text]) provides instructions to the document author, or describes the intent, assumptions and context for content included in this document.*
2. *Replace all text enclosed in the square brackets with the correct information.*
3. *Before submission of the first draft of this document, delete this "Instructions Page" and all instructions to the author, which appear throughout the document as blue italicized text enclosed in square brackets. In addition, delete the Sections of the Work Instructions.*

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*[Project Name and Location]*

*[P2#]*

*[Project Type (D/B or D/B/B)]*

*[Contract Vehicle (full & open, set aside, MATOC, etc), note if project was fully designed by others]*

Version 0.0 *[Note: 0.0 is the original version. If the ECIFP is revised, the first revision is 1.0 and the "Version History" table is filled out. The second revision is 2.0 and so on.]*

Date *[mm/dd/yyyy]*

## Revision History

*[Provide information on how the development and distribution of the ECIFP Report was controlled and tracked. Use the table below to provide the revision number, the author implementing the revision, the date of the revision, the name of the person approving the revision, the date that particular revision was approved, and a brief description of the reason for creating the revision.]*

Revision No.	Implemented By	Revision Date	Approved By	Approval Date	Description of Reason
1.0	<i>[Author name]</i>	<i>[mm/dd/yyyy]</i>	<i>[Name]</i>	<i>[mm/dd/yyyy]</i>	<i>[Reason]</i>

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## PROJECT FEATURES AND SUMMARY

*[Enter a brief description of project features and intended operation. Unique design, construction, or features (such as in-the wet details) should be thoroughly covered.]*

*[Include the following. What is the overall intent of the project? How does this project interface with other existing, on-going or planned projects?]*

*[Include the following. What does success look like? What is the most important or high risk feature of the project that if not addressed from the beginning and followed through on the project, will significantly impact time and cost of the project?]*

## POINT OF CONTACT INFORMATION

*[Provide contact information for the appropriate design POC, including the DOR for each discipline. The POC should be the Design PE/A for design/bid/build contracts or the RFP preparer or design/build contracts.]*

Name	E-mail Address	Telephone Number
<i>[Name]</i>	<i>[E-mail address]</i>	<i>[Telephone #]</i>

## DESIGN AND DESIGN BUILD CONSIDERATIONS

*[The intent of this information is to for construction personnel to identify and understand critical parameters used so that designers and design build preparation teams may be notified should field conditions differ from assumptions.]*

*The information in this section shall be organized by discipline and include risks and assumptions in the format as noted below. With multi-disciplines contributing to the ECIFP document, the PE/A will coordinate with the PDT for both design build and design/bid/build projects to prepare the ECIFP document. The following format should be used.*

**3.1 Discipline #1** *[These disciplines will include, but are not limited to, Structures, Civil, Electrical, Mechanical, Geotechnical, Architectural, etc. Each discipline may include the following, as appropriate - critical design criterion, design assumptions, material requirements, key tolerances, critical areas, Fracture Critical Members (FCM), testing requirements, restrictions to contractor, restrictions to operations, special security features, and all special details of the project shall be presented in sufficient detail to enable construction personnel to identify and properly inspect critical construction items.]*

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**3.1.1 Residual Risks** *[What features of work could not be fully explored or designed during the design phase? What features of work were not fully coordinated or agreed up on? What are the recommended mitigation strategies for these issues?]*

**3.1.2 Assumptions** *[What assumptions were made in order to complete the design?]*

**3.2 Discipline #2**

**3.3 Discipline #3**

**3.4 Discipline #4**

## SPECIFICATION CONSIDERATIONS

*[Critical product and performance specifications shall be explained to enable field personnel to properly inspect critical items. These may include:*

- 1. Explanation of all special emphasis items required for shop drawings.*
- 2. Deviations and tolerances from the specification requirements shall be discussed.*
- 3. Identify all paragraphs with special emphasis items and include an explanation.*
- 4. List any special instructions for submittals not included in submittal register.*
- 5. List specifications that will be reviewed by an AE (if applicable) and in-house staff for both design bid projects and design build projects*

*The report should not be a reiteration of specification requirements.]*

## UTILITY / PERMIT INFORMATION

***[All utility connections, easements, ROW's, Right of Entry, encroachments, SWPP's, Real Estate – 404's, environmental issues, and city/state agreements, etc. must be identified during design and listed in this paragraph. If utility connections include coordination with private or public entities, include in this paragraph. Specific instructions are listed as follows.]***

*[List all utility connections required for the project with a POC (name and phone number) for each coordinating utility. Identify who has the lead and required actions during construction. List actions required by the contractor or government in order to complete all service agreements which may include: allow utilities access to the site, extend service to the site, make connections or pay connection fees. If this information is in the Design Analysis and/or specifications, then reference it here.*

*List all permit requirements and any necessary action by the contractor or government to complete. Identify who has the lead and required actions during construction. Provide the status of all permits such as applications made, approvals received or requested, and fee requirements or fees paid, etc. If this information is in the Design Analysis and/or specifications then reference it here with the applicable section and paragraph number.*

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*List any jurisdictions (with name and phone number of POC) that will be needed by the contractor for support or coordination. These may include: DPW, Security, NEC, NEPA, city/county/state. Identify who has the lead and required actions during construction. If this information is in the Design Analysis then reference it here.]*

## QUALITY ASSURANCE (QA)

*[Guidance by the design engineer or design build preparer shall be provided to identify key areas needing verification review and important areas that the construction field personnel should pay particular attention to.*

*Include any feature of work that has a complexity that would warrant additional or special quality assurance activities such as sustainability, environmental abatement, commissioning, security accreditation, etc.*

*Identify all critical QA testing needed to verify QC testing is working.  
Identify which submittals will be reviewed by CDMQ, AE, and/or ED in house]*

## RECOMMENDED SITE VISITS BY DESIGN PERSONNEL

*[The designers and design build RFP preparers are responsible for identifying the critical construction activities where on-site attendance of personnel would be beneficial. Each critical construction activity shall also include the corresponding number of days advance notification that is required by field personnel to ensure personnel are available. In addition, a list of engineering disciplines to be represented at each site visit shall be indicated.*

*Construction shall coordinate and schedule these visits with the responsible discipline at the appropriate time. When the PE/A and members of the PDT visit a construction contract site, a minimum of a verbal out-brief shall be given to on-site construction personnel prior to departing the site, and a written, follow-up trip report shall be prepared, provided to construction and documented in the project file.*

*The frequency of the site visits by engineering disciplines involved should be based upon actual construction schedules and activities, and project complexity.*

*Include Partnering and/or the pre-construction meeting and which team members will attend Partnering if Partnering is required by the contract, and/or the pre-construction meeting.]*

## ADVERTISEMENT

*[Include a narrative on the roles and responsibilities of the DOR and design build RFP preparers, PDT, and stakeholders during the advertisement period. The narrative may include how Bidder Inquiries are addressed, amendment review process and who is involved, SSEB member if applicable, etc.]*

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## DESIGN/BUILD ROLES AND RESPONSIBILITIES FOR ENGINEERING DIVISION

- 1.1 XXX *[list AE or IH PDT]* will be utilized to review the design submittals. The Engineering Division POC is *[list PE/A]*.
- 1.2 A post construction award meeting between the Project Engineer/Architect and Construction Field Office will occur to discuss roles and responsibilities.
- 1.3 Louisville District *[List the section managing the design. All COR's for design reside in ED-MA or ED-MR]* will provide the following functions during the design phase.
  - 1.3.1 Review and approval of the Design Quality Control Plan.
  - 1.3.2 Review and acceptance of the Design Phase Schedule.
  - 1.3.3 Setup of DrChecks for RFP Compliance Reviews.
  - 1.3.4 RFP Compliance Reviews: Coordination and resolution of design issues.
  - 1.3.5 If an AE prepared RFP, coordination between USACE, AE, and Stakeholder as necessary.
  - 1.3.6 Coordination of Release for Construction Memo.
  - 1.3.7 Review and acceptance of design pay estimates.
  - 1.3.8 Aggressive Schedule Management for the Design Phase.

## HARD STOP 2 (HS-2)

The hard stop 2 meeting will occur after construction contract award. At the Final Review meeting, include an agenda for the HS-2 meeting with a list of topics, short discussion on roles & responsibilities, and who will present the topics at the HS-2 meeting. At a minimum the agenda must include the following:

- ECIFP
- Funding for DDC/S&A
- Extensions of design submittals and roles & responsibilities
- Submittals and roles & responsibilities
- 1354
- RFI process, roles & responsibilities
- Risk Register
- Construction Phase Services
- Design/RFP Preparer support
- Commissioning support – if applicable

ATTACHMENTS *[List any attachments (submittal register) and include the Risk Register as an attachment]*