BUREAU OF RECLAMATION

Review Guidelines for Design Activities Performed by Non-Reclamation Entities

U.S. Department of the Interior

April 2026

Mission Statements

The U.S. Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; honors its trust responsibilities or special commitments to American Indians, Alaska Natives, Native Hawaiians, and affiliated Island Communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Cover Image – Friant-Kern Middle Reach Capacity Correction Project (Bureau of Reclamation).

Review Guidelines for Design Activities Performed by Non-Reclamation Entities

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U.S. Department of the Interior **April 2026**

Acronyms and Abbreviations

A/E	Architect-Engineer
ALARP	as low as reasonably practicable
ASCE	American Society of Civil Engineers
ASTM	American Society for Testing and Materials
BOD	Basis of Design
CMAR	Construction Manager at Risk
CM/GC	Construction Manager/General Contractor
CUI	Controlled Unclassified Information
D&S	Directives and Standards
DB	Design-Build
DBB	Design-Bid-Build
DEC	Design, Estimating, and Construction
DS	Design Summary
DSAT	Dam Safety Advisory Team
DSC	
EOR	Engineer of Record
FAR	Federal Acquisition Regulation
FEMA	Federal Emergency Management Agency
FER	Field Exploration Request
FHWA	Federal Highway Administration
Guidelines	Review Guidelines for Design Activities performed by non-Reclamation Entities
HVAC	heating, ventilation, and air conditioning
IDIQ	Indefinite Delivery, Indefinite Quantity
IMH	Information Management Handbook
Log	Design Review Comment-Response Log
LOPP	Lease of Power Privilege
O&M	operation and maintenance
OM&R	operation, maintenance, and replacement
PE	Professional Engineer
PM	Project Manager
PMP	Project Management Plan
Reclamation	Bureau of Reclamation
RFI	Request for Information
RM	Reclamation Manual
SA	Service Agreement
SME	subject matter expert
SOP	Standard Operating Procedures
SOW	Statement of Work
TM	Technical Memorandum
TSC	Technical Service Center
UFC	United Facilities Criteria
USC	United States Code

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1.0 Introduction

Many factors should be considered when selecting a designer for water resources and hydropower infrastructure. The Bureau of Reclamation's (Reclamation) facilities and operations present unique challenges that do not exist across all sectors of engineering design. Therefore, Reclamation maintains design and construction capabilities for efficient maintenance and development of project infrastructure, to respond to emergencies, and to provide technical assistance in support of the agency's mission in accordance with Reclamation Manual (RM) Policy FAC P03, *Design Activities*. Even so, there are certain types of infrastructure that could be better suited for non-Reclamation Architect-Engineering (A/E) designs. Reclamation should retain expertise for, and focus on, designs for our most critical assets and allow less critical assets to be designed by non-Reclamation engineers. Projects that require a Level 1 or 2 review within section 3.3 of these guidelines are good candidates for A/E designs.

These Review Guidelines for Design Activities Performed by Non-Reclamation Entities (Guidelines) were developed to aid Reclamation's review of design activities performed by non-Reclamation entities for Reclamation assets or designs that impact Reclamation assets. These Guidelines are also intended as a framework to determine the level of review (level of effort) and the Reclamation office(s) responsible for the review. There are many avenues in which Reclamation would be in the position to review a design prepared by a non-Reclamation Engineer of Record (EOR) and examples of this are shown in figure 1.

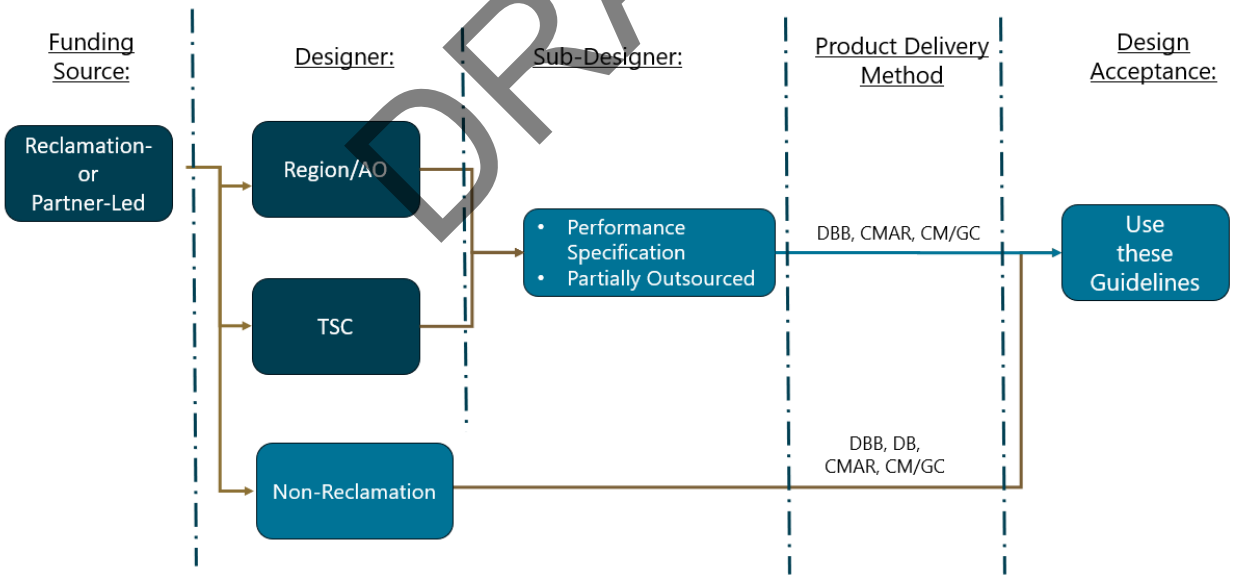

Figure 1.—Schematic of how designs may be prepared by non-Reclamation Engineer of Record (Project delivery methods are defined below in section 1.2.4).

Reclamation's review of design packages from non-Reclamation design teams include designs performed in planning stages (e.g., Preliminary, Appraisal, and Feasibility), Final Design stage (30, 60, 90, 100% Designs and revisions to designs), and construction stage (submittals of performance specified contractor designs, modifications to non-Reclamation designs, and as-built revisions). These Guidelines are intended to be used as a starting point to communicate Reclamation's expectations to non-Reclamation designers and to inform Reclamation technical reviewers. Each design review project shall include a Project Management Plan (PMP) that outlines the final scope of a given review, as every project is unique.

1.1 Objectives

The objective of these Guidelines is to establish a framework for consistent and transparent design reviews by Reclamation for non-Reclamation design partners. All instances of designs by others in which Reclamation has an ownership or financial interest, whether partner-led or Reclamation initiated contracts with external A/E firms, require government oversight and review as outlined within figure 1. Projects may involve construction of new assets or modifications and interfaces to existing assets and can be either congressionally authorized Reclamation projects or non-authorized projects. These Guidelines apply to all methods of project delivery when the EOR is non-Reclamation. The scope of the review is dependent on Reclamation's ownership responsibility and the criticality of the asset being designed.

When reviewing designs performed by others, the primary goal is to ensure public safety and that Reclamation's assets are protected and overall needs are met. The depth of a review depends on Reclamation's role regarding title ownership of the asset and the criticality of the asset as defined in section 3.3. In no case is Reclamation performing a Peer Review or Technical Approval review as defined on FAC 03-03 as the design entity (e.g., EOR) is liable for the technical adequacy of the design.

The main purposes of a review are to:

1. Confirm that Reclamation's overall needs are met
2. Ensure public safety and protection of Reclamation facilities and operations
3. Verify that the A/E design team has selected and is using the appropriate design standards, codes, and design criteria (e.g., national or Reclamation standards and guidelines)

1.2 Authorities, Policies, Directive and Standards

The following sections describe pertinent Federal Reclamation statutes and related follow-on components in the Reclamation Manual's[1] (RM) Policies and Directives and Standards (D&S) that Reclamation and external partners should be familiar with when developing contracts for performing design activities. These items will build the foundation upon which the design review is conducted.

1.2.1 Authorities

Depending on whether the proposed project assets are an authorized Reclamation project or a non-authorized project, see the related authority defined in pertinent RM Policies and D&S listed below.

1.2.2 Policies

CMP P05	Reclamation Value Program
FAC P02	Decisions Related to Dam Safety Issues
FAC P03	Performing Design and Construction Activities
FAC P09	Cost Estimating
FAC P10	Independent Oversight of Design, Cost Estimating, and Construction
IRM P01	Information Management and Technology Cybersecurity Program
IMH	Information Management Handbook

1.2.3 Directive and Standards

CMP 06-01	Reclamation Value Program
CMP 09-01	Water and Related Resources Appraisal and Special Studies
CMP 09-02	Water and Related Resources and Feasibility Studies
CMP 09-04	Planning for Major Rehabilitation and Replacement of Existing Assets
CMP 10-02	Fee-for-Services Business Practices for Technical Services Work
CMP 10-03	Workload Distribution Practices for Technical Services Work
CMP 10-04	Collaboration with Customers Regarding Technical Services Required for Work on Existing Bureau of Reclamation Facilities
CMP 10-05	Substantial Changes on Transferred Works
CMP 11-01	Title Transfer for Reclamation Project Facilities
FAC 03-01	Maintenance of Design and Construction Technical Capabilities
FAC 03-02	Construction Activities

[1] Source: https://www.usbr.gov/recman/

FAC 03-03	Design Activities
FAC 04-08	Lease of Power Privilege (LOPP) Processes, Responsibilities, Timelines, and Charges
FAC 09-01	Cost Estimating
FAC 09-02	Construction Cost Estimates and Project Cost Estimates
FAC 09-03	Representation and Referencing of Cost Estimates in Bureau of Reclamation Documents Used for Planning, Design, and Construction
FAC 10-01	Identifying Design, Cost Estimating, and Construction Projects
IRM 04-01	Radio Communications Program
PEC 05-02	Contracts for the Transfer of Operation, Maintenance, and Replacement Responsibilities for Federal Facilities
SLE 02-01	Identifying and Safeguarding Controlled Unclassified Information (CUI)
RCD 05-01	Information Management

1.2.4 Definitions

The following is a list of standard terminology and definitions to ensure the Reclamation review team and the non-Reclamation design team are consistent and transparent in describing all parties when developing contract documents and performing reviews of designs.

- **Non-Reclamation Design Team:** An A/E firm's, manufacturer's, subcontractor's, or contractor's technical team made up of various architectural and/or engineering disciplines retained to provide planning-level, final design, and/or construction level designs for a project.
- **Reclamation Design Review Team:** A Reclamation technical services team made up of Reclamation employees that review the non-Reclamation design team's deliverables.
- **Authorized Project Feature:** A feature of an Authorized Reclamation Project, such as a dam, spillway, powerplant, canal, pumping plant, or water treatment plant.
- **Authorized Reclamation Project:** Water supply or water delivery project constructed or administered by Reclamation under Federal Reclamation laws authorized by Congress for Reclamation to construct and operate.
- **Construction Manager at Risk (CMAR) or Construction Manager/General Contractor (CM/GC):** A project delivery method where a contractor is retained early in the design phase to provide input on constructability, scheduling, pricing and then is responsible for constructing the design once complete.
- **Customer (Partner):** A water user or electric utility which has an active repayment, water service, or power service contract with Reclamation; an electric utility which has an active contract with a Federal power marketing agency for energy and/or capacity from a Reclamation owned hydropower facility; or a non-Federal operating entity (e.g., a joint powers authority) which has assumed responsibility on behalf of multiple water users, via a contract with Reclamation, for operating and maintaining (O&M) a Reclamation project or features thereof (see RM D&S CMP 10-04 *Collaboration with*

Customers Regarding Technical Services Required for Work on Existing Bureau of Reclamation Facilities for further discussion). This document uses the term "Partner" to describe customers as defined herein.

- **Dam Safety Advisory Team (DSAT):** An independent group of experienced senior engineers and scientists from Reclamation's Technical Service Center (TSC), and specialists from other disciplines on an as-needed basis to address specific issues. This team reviews key findings and decisions from Modification Decision Analysis studies, Corrective Action studies, and modification designs.
- **Designer of Record:** Synonymous with Engineer of Record, the person responsible for the technical adequacy of their design and authorized to sign, stamp, and seal the specification package design documents. The role also ensures compliance with all contract requirements and local codes. The Designer of Record typically establishes and oversees the design Quality Assurance program.
- **Design-Bid-Build (DBB):** The traditional delivery method where design and construction are solicited separately with two contracts and two contractors. This method is addressed in detail in Federal Acquisition Regulation (FAR) Part 36[2] *Construction and Architect-Engineer Contracts* Subpart 36.2 *Special Aspects of Contracting for Construction*.
- **Design-Build (DB):** A project delivery method that combines design and construction in a single contract with one contractor.
- **Federal Acquisition Regulation (FAR):** A set of rules regarding government procurement in the United States.
- **Federal Appropriation:** A law of Congress that provides an agency with spending authority. An appropriation allows the agency to incur obligations and to make payments from the U.S. Treasury for specified purposes.
- **Lease of Power Privilege (LOPP):** A LOPP is a contractual authorization issued by Reclamation to a non-Federal entity to use a Reclamation facility for electric power generation consistent with Reclamation project purposes (see RM D&S FAC 04-08 *Lease of Power Privilege [LOPP] Processes, Responsibilities, Timelines, and Charges* for further discussion).
- **LOPP Applicant:** A LOPP Applicant is a non-governmental or quasi-governmental entity.
- **Non-Authorized Project:** Water supply or water delivery project constructed or administered by others for a third party to construct and operate and not under Federal Reclamation laws nor authorized by Congress.

[2] Source (accessed February 1, 2024): https://www.acquisition.gov/far/part-36

- **Non-Reclamation Design Partners:** Other government agencies, customers, partners, or individuals working with Reclamation to prepare designs or provide regulatory reviews of designs (see *Bureau of Reclamation's Information Management Handbook* [IMH], U.S. Department of the Interior, April 2023) [3]. This definition extends to contractors hired by Reclamation or by these agencies, irrigation districts, or individuals to assist in design-related activities.
- **Progressive Design-Build:** A variation of design-build that uses a "two-phase design-build" selection procedure. A limited number of offerors (normally limited to five or fewer) are selected during Phase One to submit detailed proposals for Phase Two. This method is addressed in detail in FAR 36 *Construction and Architect-Engineer Contracts* Subpart 36.3 *Two-Phase Design-Build Selection Procedures*.
- **Project Manager (PM):** The person assigned by the Reclamation Program Office to achieve project objectives and to deliver the project on schedule, within budget, and to the appropriate scope. This is often a staff member of the field office, area office, or regional office and is trained in formal PM practices.
- **Reclamation Manual (RM):** The RM consists of a series of Policies and D&S. Collectively, these releases assign program responsibility and establish and document Reclamation-wide methods of doing business. All requirements in the RM are mandatory for Reclamation employees.
- **Reserved Works:** Those facilities owned by Reclamation where Reclamation has retained responsibility for carrying out O&M activities.
- **Service Agreement (SA):** A SA documents the mutually agreed-upon scope, schedule, project risk, and budget for a specific package of engineering and/or other technical services needed by the Reclamation Program Office and to be performed by the Reclamation service provider. The agreement reflects all or part of the work identified in the Statement of Work (SOW) and documents a commitment by the service provider to execute the work as indicated, within the agreed-upon schedule and budget, as well as a commitment by the Program Office to fund that work (see RM D&S CMP 10-02 *Fee-for-Service Business Practices for Technical Services Work*).
- **Stakeholders:** A broad term generally used to describe any or all project beneficiaries which includes the repayment entity, operating entity and/or any other organization or public interest that benefit from the project.
- **Technical Services Work:** Technical services work means engineering and other services including, but not limited to, concept engineering; data collection and analysis; formulation of alternatives; value engineering/analysis studies; engineering designs, drawings, and specifications; cost estimating; hydrologic, geologic, seismic, environmental, social, economic, and cultural analyses; construction management (i.e., technical support for procurement of construction services, construction contract

[3] Source (accessed February 1, 2024): https://intra.usbr.gov/eimt/servicestrat/img.html

administration, inspection, engineering support, and completion of final construction reports, including as-built drawings); and commissioning/post-construction monitoring (see RM D&S CMP P10, *Bureau of Reclamation's Business Model for Managing Technical Services* for further discussion).

- **Technical Service Center (TSC):** The TSC is Reclamation's engineering and science organization, providing specialized services to protect public safety and support the efficient operation of Reclamation projects and facilities. The TSC Director is responsible for establishing, maintaining, or identifying design criteria and engineering and technical standards for all Reclamation design work. These criteria and standards are prepared, reviewed, and approved with input from Reclamation offices, industry organizations, and water and power customers.
- **Title Transfer:** Public Law 116-9, Title VIII, Subtitle A (43 United States Code [U.S.C.] 2902, et seq.), authorizes Reclamation to transfer title of certain Federal facilities to non-Federal entities (e.g., customer) upon the completion of payment of all capital costs. Facilities not eligible for title transfer under 43 U.S.C. 2902, et seq. may only be transferred following specific authorization of the title transfer by the United States Congress. The transfer of title divests Reclamation of responsibility for the operation, maintenance, replacement (OM&R), management, regulation of, and liability for Federal interests in lands and project facilities (see RM D&S CMP 11-01 *Title Transfer for Reclamation Project Facilities* for further discussion). The transfer of title of dams will also result in a change in regulatory oversight and associated requirements, usually to the state jurisdiction for dam safety requirements.
- **Transferred Works:** A Reclamation project facility where the OM&R responsibility of a facility is transferred to a non-Federal entity (e.g., customer, third-party water authority, etc.) under the provisions of a formal O&M transfer contract per RM D&S PEC 05-02 *Contracts for the Transfer of Operation, Maintenance, and Replacement Responsibilities for Federal Facilities*. A transfer of O&M contract does not transfer title and Reclamation retains title to the facility.

2.0 Roles and Responsibilities

2.1 Reclamation Designs

Reclamation designs can be led by a Region or Area office design group, or by the TSC. Reclamation initiates contracts with external A/E firms for smaller designs or discrete parts of larger projects as needed to fill gaps in capability or capacity. These contracts are typically administered through an Indefinite Delivery, Indefinite Quantity (IDIQ) A/E services contacting mechanism that is resolicited every 5 years.

2.2 Reclamation Partners/Customers

In a Partner-lead project, Reclamation's partners are typically the entity that enters into the A/E design contract with the private company. Reclamation's goal is to empower our partners to perform designs in the most efficient way possible while managing risks to Reclamation assets. While Reclamation aims to self-perform designs for complex high-risk facilities (see Category A Structures in table 1), capacity and schedule considerations may result in non-Reclamation entities performing designs for all structure categories.

Reclamation Regions have the responsibility under FAC P03 to vet and approve designers to ensure that only qualified entities are retained to perform designs for Reclamation assets. In addition to other non-technical requirements, the Partner shall submit qualifications demonstrating the design entity has proven technical and engineering expertise to complete the intended design. This should include capabilities in the technical disciplines needed and a list of equivalent projects successfully completed.

2.3 Engineer of Record

Requirements for design activities performed by others is specified in FAC 03-03. The primary requirements are that the design entity is responsible for the technical adequacy of the design and that the designs are prepared by professional engineers. The role for these responsibilities within the engineering community is more commonly referred to as the Engineer of Record (EOR). American Society of Civil Engineers (ASCE) defines the EOR as a licensed Professional Engineer (PE) in responsible charge of the design, who seals, signs, and dates the project documents, ensuring overall structural integrity and compliance with codes and standards. The EOR holds legal responsibility for the design's safety, often overseeing delegated components. In short, the EOR is the "single person who is solely responsible for engineering design" for a project.

The EOR is responsible for submitting a complete design review package to the Reclamation Project Manager. The EOR ensures the design package is properly reviewed internally before submission and is responsible for resolving all review comments prior to the next review package. For complex projects the EOR will likely attend Design Review Team meetings and support the execution of parallel activities identified in section 5.0.

2.4 Reclamation Regional/Area Offices

This section is intended to outline the roles and responsibilities for the Reclamation Region or Area Office that is responsible for direct communication with the Partner on a Partner funded design project. This is the office responsible for all project management activities and for the successful delivery of the project that include, but not limited to, the following:

- Establishing agreements with the Partner and the Design Review Team.
- Review and approve the design entities' qualifications.
- Schedule and facilitate all coordination meetings between the EOR and the Design Review Team.
- Communicating Design Review comments and ensuring resolution of comments.
- Coordinate parallel activities with the Partner and other Reclamation Offices

There are additional requirements if the project is Reclamation funded and the office executing the funding selects a non-Reclamation designer. If the Reclamation office is funding the design selects to outsource the design due to lack of capacity, that office is also responsible for leading the contract development, administering the contract, and potentially performing the duties of the Design Review Team. If the originating Reclamation office does not have the capabilities to perform the duties of the Design Review Team, they can request assistance from other Reclamation technical service providers based on available capabilities and capacity, or contract with a third party A/E reviewer to provide those services.

2.5 Reclamation Program Offices

2.5.1 Dam Safety Office

If a design is impacting an existing Reclamation High Hazard Dam as determined by the Regional Office, Area Office, or Design Review Team, the Dam Safety Office shall be notified. All designs that impact a High Hazard Dam require a risk neutrality evaluation as required within Reclamation's Public Protection Guidelines (Reclamation 2022a). The role and responsibility of the Dam Safety Office is to participate in a risk neutrality study and coordinate decisions to approve, or conditionally approve, the proposed design and construction in accordance with FAC P02 *Decision Related to Dam Safety Issues.* The scope of a risk neutrality study varies depending on project complexity and its impact on the existing facility; however, the primary goals of the study are:

- To determine whether the failure and incident risks associated with the proposed modifications or operational changes are as low as reasonably practicable or ALARP
- To identify potential changes – also referred to as Conditions of Approval – in the proposed design, construction, or reoperation that are needed to make the risks ALARP
- To conclude that the proposal cannot be made ALARP

If a design is for a new High Hazard Dam that will be owned by Reclamation, consultation with the Dam Safety Office should be done during Planning design. Reclamation prefers to be the EOR for High Hazard Dam design and limit non-Reclamation designs to early stages of design only (e.g., Planning, Appraisal, or Feasibility).

2.5.2 Power Resource Office

If a design impacts hydropower production at a Reclamation-owned facility, consultation with the Reclamation Power Resource Office should commence during Planning. Reclamation prefers to be the EOR for complex hydropower projects and limit non-Reclamation designs to early stages of design only (e.g., Planning, Appraisal, or Feasibility) for highly critical and complex hydropower features.

2.6 Reclamation Design Review Team

The Reclamation Design Review Team is formed in accordance with RM D&S CMP 10-03, *Workload Distribution Practices for Technical Services Work*. These Guidelines are to be used to identify the level of review required and complement CMP 10-03 to establish which Reclamation office should be expected to perform the review.

The Design Review Team is responsible for performing a level of review commensurate with the requirements in section 3.3 of these Guidelines and is ultimately responsible for accepting the designs as described below.

The Design Review Team may be led by an Area Office, Regional Office, or Technical Service Center as described below.

2.6.1 Review Comments

The Design Review Team's comments and the Non-Reclamation Design Partners' responses to comments shall be documented. Reviewers should use the A/E Review Comment-Response Log template presented in appendix B. The A/E Review Comment-Response Log includes a column with drop down menu by rows that includes rating each comment correspondence. Comments are categorized as one of the following: Fatal Flaw, LOPP, High, Medium, or Low in importance as described within appendix B.

If there are Fatal Flaw or LOPP comments which introduce an unacceptable level of risk to the project, the Design Review Team may request the contracting entity to require a resubmittal of a design package.

The Design Team shall respond to comments in the appropriate field(s) of the A/E Review Comment-Response Log and return the log to Reclamation. The Design Review Team will review the responses and identify for each comment: "Acknowledged – No Further Action Required" or "Comment is Still Open."

The Design Review Team will verify the Design Team properly addressed the comments from previous design packages. During the 100% Design, all comments and responses shall be substantially completed and resolved. Failure to properly address and resolve comments may

result in the Design Review Team not accepting the design, thereby preventing the design from moving forward to construction. Documentation of various comments and resolutions should be kept in the official project records.

2.6.2 Design Acceptance Process

RM D&S FAC 03-03 *Design Activities* Paragraph 6.E.1 states in part:

1. "If the design meets Reclamation's criteria for preparation by a registered architect or engineer, the entity shall sign the written specifications and drawings in accordance with the provisions of [FAC 03-03], including designation of the signer's registration status.
2. Reclamation reviewer registered in the appropriate engineering/architecture discipline reviewing the work will sign the drawing as "Accepted" in a Reclamation title block or the A/E title block when signature lines are provided. In accordance with FAC 03-03 this acceptance signifies Reclamation's overall needs are met. Reclamation professionals are not to provide technical approval of the designs."

3.0 Types of Architect-Engineer (A/E) Review

3.1 General Review Process

Reclamation performs design reviews for a broad spectrum of projects ranging from complex designs for new dam construction to a small modification to a canal turnout pipe. These Guidelines are intended to streamline projects by better aligning technical review requirements with project complexity.

3.2 Determining Project Complexity

The following information will help inform the level of effort for Reclamation's technical review based on project complexity for projects that are designed by non-Reclamation entities. While there are many factors that contribute to project complexity, for the purposes of these Guidelines the type of feature being designed is considered the most important factor. The three structure categories are defined below. Table 1 identifies the category assigned for various assets within Reclamation's inventory:

- **Category A:** These structures pose a hazard to the public if they were to fail and/or would have devastating economic impacts to Customers or other stakeholders. Also included in this category are designed that have specialized engineering requirements.

- **Category B:** These assets would have no significant impact to public safety if they were to fail but may result in some modest to low economic impacts to customers or other stakeholders.
- **Category C:** These assets would have no significant impact to public safety if they were to fail and the economic impacts to customers or other stakeholders would be minimal.

Table 1.—Structure categories for design review

Asset Class	Feature Criticality	Cat.
Dam	High Hazard	A
	Significant Hazard	B
	Low Hazard	B
Levees	Urbanized	A
	Rural	C
Water Conveyance	Large canal (> 1,000 cfs)	A
	Small canal (< 1,000 cfs)	C
	Control Structures	B
	Cross Drainage Structures	C
	Turnouts	C
	Pipeline (> 36 inches)	A
	Pipeline (< 36 inches)	C
Pumping Plants**	Occupancy Risk Category III or IV	A
	Occupancy Risk Category II	B
	Occupancy Risk Category I	C
Hydropower Plants and Pump Generating Plants**	Occupancy Risk Category III or IV	A
	Occupancy Risk Category II	B
Water Treatment Plants	Occupancy Risk Category III or IV	A
	Occupancy Risk Category II	B
Transmission	Interconnect	*
	Transmission Line	*
	Distribution line	*
	Switchyard	B
	Substation	B
	Generator Step-up Transformer	B
Buildings and Other Structures**	Occupancy Risk Category III or IV	A
	Occupancy Risk Category II	B
	Occupancy Risk Category I	C

Asset Class	Feature Criticality	Cat.
Fish Structures	Fishway	A
	Fish Screen	A
	Fish Hatchery/Rearing	C
	Fish Barrier	A
	Fish Collection	A
Communication	Communication Sites	C
Water Wells	Extraction Well	C
	Injection Well	C
	Monitoring Well	C
Transportation	Public Road	B
	Access Road	C
	Unimproved Road	C
	Public Parking	C
	Administrative Parking Lot	C
	Unimproved Parking Area	C
	Spillway Bridges	A
	Type 1 Bridge	B
	Type 2 Bridge	B
	Type 3 Bridge	C
	Bridge Crossing	C
Recreation	Boat Ramps	C
	Trails	C
	Sites	C

* Reclamation does not maintain the core capabilities to review designs for this feature type. A third-party firm will need to be contracted to perform the review of the design packages.

**Occupancy Risk Category as defined in Table 1604.5-Risk Category of Buildings and Other Structures, Chapter 16 Structural Design, 2024 IBC International Building Code.

3.3 Level of Review

The level of review for designs prepared by non-Reclamation designers varies in scope and complexity and can be determined using a combination of table 1 and figure 2. Regardless of the level of review, the goal is to always ensure that Reclamation's needs are met as owners of the asset. It should be noted that an A/E design review does not include the responsibilities of a design checker, technical approver, or peer reviewer as outlined in FAC 03-03. The EOR is responsible for fulfilling these roles. The most stringent criteria for both ownership and structure type should be used when selecting the level of review. For instance, a new asset is being constructed and Reclamation will initially hold title but the long-term plans are to transfer title of the asset to the partner, Reclamation title ownership should be used to determine the review level. A similar example could be used for structure type. For instance, if a canal design is prepared and some reaches fall in Category A while other reaches fall in Category B, Category A should be used to determine the level of review. Finally, if Reclamation transfers title of an asset, Reclamation no longer needs to review modification designs for that asset unless Reclamation becomes a financial contributor to the modification.

The following are general descriptions outlining the depth and breadth of the reviews.

- **Level 1:** These reviews are most likely performed at the Area Office and on occasion at the Regional Office. Discipline specific subject matter experts (SME) are not necessarily a requirement. The documents specified in table 2 are reviewed to ensure all proper design codes and standards are referenced and followed.
- **Level 2:** These reviews are most likely performed at the Regional Office, Area Office, and on occasion at the TSC. Discipline specific SMEs are preferred to ensure all proper design codes and standards are referenced and followed. The review also identifies issues that could prevent or impact the asset from functioning as intended or conditions that could be considered unsafe.
- **Level 3:** These reviews are the highest level of review and discipline specific SMEs are a requirement due to the criticality of the asset and the potential impact to the public. These reviews are often performed at the TSC due to TSC's multidisciplinary SME structure. The review emphasizes constructability, safety, geotechnical and structural feasibility, environmental constraints, and alignment with project requirements.

Not only does the review ensure proper design codes and standards are referenced and followed but also ensures the design is technically sound and meets specialized requirements deemed necessary for Reclamation.

The level of review is straightforward to identify when a non-Reclamation design is performed for the entire package. However, ambiguity exists when only portions of a design are performed by others. This circumstance occurs when a design is outsourced for only one discipline due to capacity or capability issues and Reclamation designs the rest of the package, or when a performance-based specifications for one piece of the design is specified in a larger design

package. The level of review in these cases can span the whole spectrum of review levels. Reclamation must identify the desired level of review based on the risks of the project and clearly communicate the level of review internally and to the non-Reclamation designer.

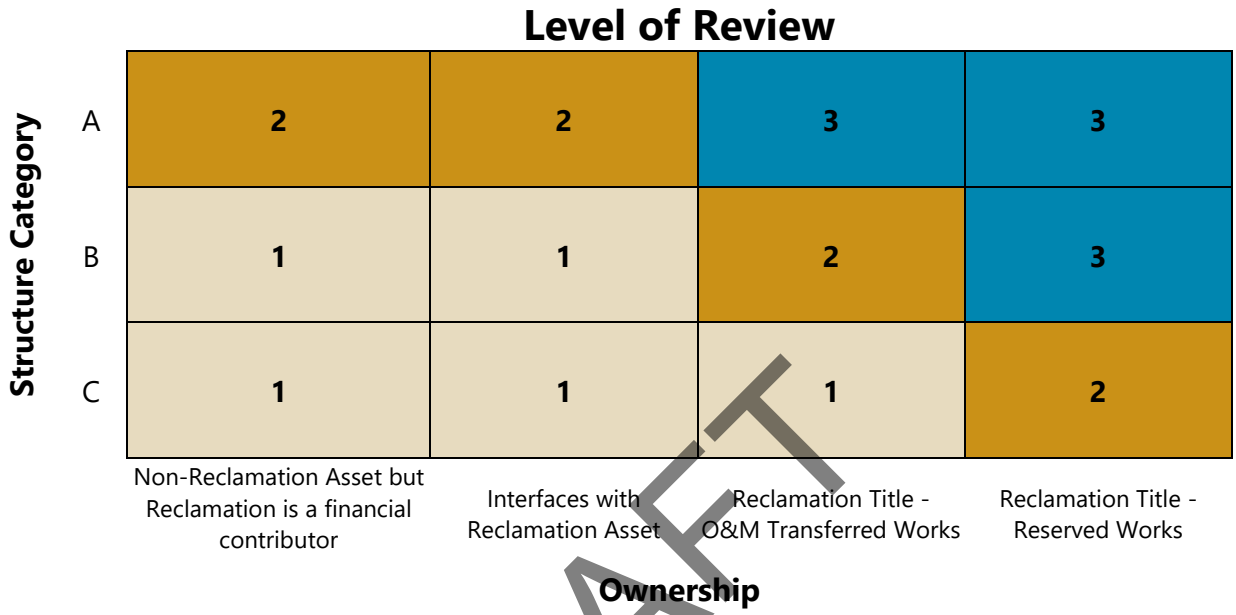

Figure 2.—Level of design review based on project complexity.

3.3.1 Examples

Level 1 Review Example

- **Design Description:** Security Response Force Training Center facility operators would like to install a concrete pad within their shooting range. The training center is owned by Reclamation, and the facility manager hires an A/E design firm to design concrete pad.
- **Asset class:** Structural building component
- **Structure Category:** C
- **Ownership:** Reclamation asset
- **Level of Review:** 1

Level 1 Review Example

- **Design Description:** A large canal (> 3,000 cfs) that is owned by Reclamation, with O&M responsibilities transferred to a local water authority is experiencing localized flooding on the downstream side of a canal cross drainage structure. The water authority has retained an A/E to design drainage improvements and installation of a pump station to collect and discharge the drainage into a higher graded drainage ditch.

- **Asset class:** Cross Drainage Structure
- **Structure Category:** C
- **Ownership:** Reclamation asset
- **Level of Review:** 1

Level 2 Review Example

- **Design Description:** Reclamation has shared ownership of a bridge that requires rehabilitation. Reclamation obtains Federal Highway Administration (FHWA) funding for the rehabilitation and elects to hire an A/E to design the rehabilitation.
- **Asset class:** Bridge
- **Structure Category:** B
- **Ownership:** Reclamation asset (joint owned: Reclamation, FHWA, and Caltrans)
- **Level of Review:** 2

Level 3 Review Example

- **Design Description:** One of Reclamation partners would like to develop a pump storage facility. The project is funded by the partner but Reclamation will own title to the facility once constructed. The structure will involve a complex pumping-hydro power generating plant and three embankment dams to store water.
- **Asset class:** Dam/Hydropower/Pumping Plant
- **Structure Category:** A
- **Ownership:** Reclamation asset
- **Level of Review:** 3

3.4 Submittal Content

To ensure the design package is suitable for review and ready to advance into subsequent project phases, all submittals must demonstrate completeness, technical quality, and full conformance with the applicable design codes, standards, and agency requirements. The package should present a coherent, well-coordinated set of documents that clearly communicate the design intent, support verification of engineering assumptions and calculations, and provide sufficient detail to evaluate constructability, safety, and compliance. The deliverables Reclamation will review for each level of design review is specified in table 2. Reclamation ultimately needs to accept the design when complete. For simple Level 1 reviews the final 100% Design may be sufficient to review. Reclamation's experience suggests that for complex Level 3 reviews, early final design milestone reviews at 30, 60, 90% can help streamline a project and prevent rework. The typical timeline for completion of the deliverables identified in table 2 can be found in Reclamation's Final Design Process Guidelines (Reclamation 2022b).

Table 2.—Required deliverables for design reviews

Design Phase	Level of Review		
	1	2	3
Appraisal	• Appraisal Design Report	• Appraisal Design Report	• Appraisal Design Report
Feasibility	• Feasibility Design Report	• Feasibility Design Report	• Feasibility Design Report • Geologic Exploration Plan • Geologic Data Reports • Geologic Characterization Report • Technical Memorandums
Final Design	• Basis of Design • Drawings • Specifications • Cost Estimate	• Basis of Design • Geologic Characterization Report • Technical Memorandums • Design Summary • Designers Operating Criteria • Drawings • Specifications • Cost Estimate	• Basis of Design • Geologic Exploration Plan • Geologic Data Reports • Geologic Characterization Report • Technical Memorandums • Design Summary • Designers Operating Criteria • Cost Estimate • Drawings • Specifications
Construction	• Record Drawings • Certificate of Substantial Completion	• Contract Modifications • Record Drawings • Technical Record of Construction • Certificate of Substantial Completion • As-Built Drawings	• Critical Submittals • RFI/Change Orders impacting design • Contract Modifications • Foundation Approvals • Technical Record of Construction • Record Drawings • Certification of Substantial Completion • As-Built Drawings

3.5 Expected Review Timelines

Reclamation's design review team's strive to provide timely reviews for its partners. Complete, sound, packages are essential to quick review durations. Once the package has been confirmed to be complete, Reclamation is committed to providing review comments within 60 days. Reclamation can provide more timely reviews with coordination from the project partner and on-time delivery of the design review package. If a design review package submittal date slips, there is often a delay in the agreed upon review time that exceeds a day-for-day slip due to availability of technical resources.

The TSC is now using a Work Initiation Process and Workload Resource Tracker Tool to allow for advanced planning and scheduling of staff from each technical discipline needed on a project. This agile approach to resourcing allows for more efficient use of staff and to ensure faster and reliable response times. This approach is dependent on early engagement and agreed upon schedules from all parties. Partner-led projects should allow for adequate time for Service Agreements and Project Management Plan document development and should clearly identify the risks associated with A/E missed deadlines.

3.6 Explanation of Required Deliverables

Appraisal Design Report: A report that presents the scope, magnitude, essential plan, and features of construction alternatives in accordance with CMP 09-01.

Feasibility Design Report: A report that presents the scope, magnitude, essential plan, and features of construction alternatives with sufficient detail to support selection of a preferred alternative and project authorization or approval for construction in accordance with General Guidelines for Preparation of Feasibility Design Reports (Reclamation 2008).

Basis Of Design (BOD): A document that records the principles, assumptions, rationale, criteria, and considerations used to make design decisions. The BOD contains narrative descriptions, design criteria (e.g., codes, standards, and environmental loads), calculation methodologies, and, for systems like HVAC and lighting, reasons for equipment selection. The BOD is updated at each phase of planning and design.

Certification of Substantial Completion: A document prepared by the EOR certifying that the project was constructed in accordance with specifications and is sufficiently complete to be commissioned for its intended purpose.

Geologic Exploration Plan: A document developed to collect required surface and subsurface geologic and engineering design data for design. Investigations shall conform to Reclamation guidelines(Reclamation 1998a) and American Society for Testing and Materials (ASTM) standards when applicable.

Geologic Data Reports: A document summarizing geologic investigations and available geologic and engineering data to be relied upon for design. These reports generally describe explorations details along with physical and engineering properties of materials observed and tested. Reports shall conform to Reclamation guidelines (Reclamation 1998b) and ASTM standards when applicable

Geologic Characterization Report: A document that presents interpretations of the surface, subsurface and test data related to the engineering design. Geologic interpretation may include characterization of geologic or engineering conditions anticipated to be encountered during construction; and defining geologic contacts and changes in site geology across the project area that would form the basis of engineering design and cost estimating. Interpretation may include constructability concerns related to problem materials that may not be compatible with design foundations, control of water during construction, slope stability, geologic hazards, etc. The report shall clearly differentiate between the reporting of data and the authors' professional interpretation and opinions. Reports shall conform to Reclamation guidelines (Reclamation 1998b) and ASTM standards when applicable

Geotechnical Baseline Reports: A document prepared to manage construction risks associated with complex geotechnical design and construction projects. This document is a single contractual interpretation of the subsurface conditions for bidders to provide a common basis for the bids and to administer the Differing Site Conditions (DSC) clause in the contract by defining an assumed baseline condition to compare to actual site conditions.

Technical Memorandum (TM): A document that communicates focused technical information on a specific engineering, scientific, or research topic. It documents analyses, assumptions, alternatives, decisions, or results for internal or external use and may serve as either a standalone record or supporting documentation for other project deliverables.

Design Summary: A document that summarizes the technical rationale for the completed design and specifications. Building on the BOD developed earlier in the project, it documents the governing design criteria, codes and standards, key assumptions, and major design decisions that shaped the final design. It also serves as a document that comprehensively summarizes all the TMs prepared for the design.

Designers' Operating Criteria: A document that describes the designers' philosophy and key considerations for successful, effective operation and maintenance of the facility. It outlines the intended functional approach of the design, including important operating assumptions, system interactions, and maintenance considerations, and serves as a resource to support development of the facility's Standing Operating Procedures (SOPs).

Cost Estimate: A cost estimate represents the probable cost of a project or program based on the known scope, location, duration, and level of project definition at the time the estimate is prepared to sufficiently to construct the project. Because an estimate is a judgment of future cost, it inherently includes uncertainty, and the final actual cost may differ from the estimated cost. Accordingly, cost estimates should be developed using appropriate quality control, sound

estimating practices, and risk-informed evaluation commensurate with the stage of design in accordance with FAC 09-01. Reclamation policy requires Feasibility-level cost estimate to support seeking construction funding authorization from Congress and for determining economic feasibility and preferred plan selection for a project and preparation and refinement of project and construction cost estimates throughout the project lifecycle, from preliminary investigation through final design and construction, with each estimate developed to a level of detail appropriate for its intended purpose and use.

Drawing: A graphical depiction (with notes as required) of a site, feature, object, or concept which is produced to convey engineering, scientific, or other technical information. Signatory requirements and drafting requirements for Reclamation drawings are described in FAC 03-03.

Specifications: Construction specifications are detailed written instructions that describe the materials, products, workmanship, and quality standards required to complete a construction project and need to be prepared in accordance with FAC 03-03. The written specifications format needs to comply with Reclamation Specifications Format which is a *Guideline for Preparing Specifications* (Reclamation 2024) and can be provided by the Reclamation point of contact. If the Partner solicits and issues the construction contract, the design specifications do not need to follow Reclamation Specification Format.

As-built Drawing: A specific revision to a contract drawing that documents actual details and conditions of constructed features after completion of a construction contract.

4.0 Design Requirements

4.1 General Design Requirements

Designers shall apply sound engineering judgment, applicable national codes and standards, and site-specific and project-specific considerations to develop designs that protect the public's investment and safety. The most current editions of applicable national codes and standards shall be used to the extent they are consistent with Reclamation Design Standards. Applicable Reclamation Design Standards by asset category are identified in appendix A. Reclamation Design Standards may supplement or, where appropriate, supersede provisions of national and local codes and standards to address the unique requirements of Reclamation water and power infrastructure. All Reclamation design work, whether performed by the TSC, Regional or Area Offices, or an A/E firm, shall conform to the applicable Reclamation Design Standards.

The EOR is responsible for identifying and applying the appropriate codes and standards, including Reclamation Design Standards, which are available on the TSC website[4].

[4] https://www.usbr.gov/tsc/techreferences/designstandards-datacollectionguides/designstandards.html

4.1.1 Reclamation Design Standards

Reclamation Design Standards establish the technical requirements and processes for preparing designs, documents, and reports for Reclamation work. Their use supports the development and improvement of Reclamation facilities in a manner that protects public health, safety, and welfare, recognizes stakeholder needs, and provides lasting value and functionality. Reclamation design activities, whether performed by Reclamation or by others on Reclamation's behalf, shall be carried out in accordance with applicable Reclamation design criteria and standards, as well as approved national codes and standards, except as otherwise authorized under Reclamation requirements. Non-Reclamation design team shall be familiar with Reclamation Design Standards[5].

4.1.2 Reclamation Design Guidelines

Reclamation Design Guidelines provide recommended methods, practices, and supporting information to assist in the planning, investigation, and design of Reclamation facilities. Unlike Reclamation Design Standards, guidelines do not establish mandatory requirements, but instead inform engineering judgment by identifying approaches, considerations, and data relevant to the specific project. In practice, guidelines supplement applicable Reclamation Design Standards, national codes and standards, and project-specific requirements to support the development of technically sound and well-documented designs[6].

4.2 Dam Safety Design Requirements

Designs to new or modified high hazard dams have additional requirements beyond compliance with Reclamation Design Standards and are based on As Low As Reasonably Practical (ALARP) principles as defined in Reclamation's *Public Protection Guidelines for Dam Safety* (Reclamation 2022a). ALARP principles are used to evaluate the design for construction risks and the risk neutrality for long term operations.

Requirements for External, third-party reviews, from subject matter experts for new dam or modifications to dams are described in the *Dam Safety Federal Guidelines* (Federal Emergency Management Agency [FEMA] 2023). The need for an external review is determined on a case-by-case basis, depending on the degree of the hazard, size of dam, site geology, and complexity of the design. Reclamation will determine the need for external review early in the design process in collaboration with the project Partners.

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[5]Reclamation Design Standards Reclamation Design Standards | Technical Service Center | Bureau of Reclamation
[6] Reclamation Design Manuals and Standards Manuals & Guidelines | Technical Service Center | Bureau of Reclamation

4.3 Lease of Power Privilege (LOPP)

Directive and Standard, FAC 04-08 *Lease of Power Privilege (LOPP) Processes, Responsibilities, Timelines, and Charges* require the LOPP contract to include technical aspects of project construction, operations, maintenance, and removal. Design reviews will evaluate designs per the LOPP contract.

5.0 Parallel Activities

Responsible design and project management for Reclamation funded or owned projects includes additional requirements to ensure safety, reliability, operational functionality, constructability, and costs efficient alternatives for Reclamation's water and power users. The following are parallel activities that typically fall outside the scope of the technical design but are activities that need to be performed by Reclamation's Area Office, Regional Offices, or through a contract that contains these items:

- Value Planning and Value Engineering
- Realty (real estate/right of ways)
- Permits
- Environmental
- Cultural
- Historical
- Tribal lands and archeology
- Acquisition planning
- Funding
- Standing Operating Procedures (SOPs)
- Construction management planning

Non-Reclamation design entities should plan to coordinate these efforts with the primary contact in Reclamation's leading Regional or Area Office.

6.0 Construction Review Team Responsibilities

The EOR may or may not hold the overall responsibilities for construction management as outlined in FAC 03-02 *Construction Activities* but is responsible for technical support during construction. Typical responsibilities of the EOR include approval of required technical submittals, review and approval of Requests for Information (RFIs) and Change Orders, routine

coordination with the contractor, review of daily reports and inspection documentation, foundation approvals, design modifications, and final review of As-Built drawings. The responsibility for review/approval of the As-Built drawings remains with the construction engineer in the program office as specified in FAC 03-03. The Construction Management entity is responsible for understanding and ensuring implementation of the design intent, maintaining technical coordination between design and construction, and managing the construction staff to ensure compliance with the specifications.

The Design Review Team provides essential technical stewardship for Reclamation during the construction, confirming that the project is built in strict accordance with the approved design and industry standards. Document review in construction is largely for awareness purposes but becomes essential when there is a technical change to the approved design. The documents to review are shown in table 2 for the various level of design review efforts. If an RFI or Change Order results in a change to the design or an acknowledgement of a change condition, the RFI or Change Order needs to be reviewed and approved by the Design Review Team. Depending on the criticality of the structure, the Design Review Team may want to be onsite for the EOR foundation approvals. The onsite presence allows for a better understanding and alignment of the contractors' methods, materials, and workmanship with the design specifications and observed geologic/site conditions.

7.0 References

Bureau of Reclamation. 1998a. Engineering Geology Field Manual (Volumes I and II). U.S. Department of the Interior, Bureau of Reclamation, Denver, Colorado.

Bureau of Reclamation. 1998b. Engineering Geology Office Manual. U.S. Department of the Interior, Bureau of Reclamation, Denver, Colorado.

Bureau of Reclamation. September 2008. Feasibility Design Guidelines, General Guidelines for Preparation of Feasibility Design Reports. U.S. Department of the Interior, Bureau of Reclamation, Denver, Colorado.

Bureau of Reclamation. June 2022. Final Design Guidelines for Design-Bid-Build. U.S. Department of the Interior, Bureau of Reclamation, Denver, Colorado.

Bureau of Reclamation. December 2022. Public Protection Guidelines: A Risk Informed Framework to Support Dam Safety Decision-Making. U.S. Department of the Interior, Bureau of Reclamation, Washington, DC.

Bureau of Reclamation. August 2024. Reclamation Specification Format, Guidelines for Preparing Specifications. U.S. Department of the Interior, Bureau of Reclamation.

Federal Emergency Management Agency (FEMA). 2023. Federal Guidelines for Dam Safety FEMA Publication No. P-93. U.S. Department of Homeland Security, Federal Emergency Management Agency, Washington, DC.

Appendix A

Design Standard Requirements

Appendix A: Design Standard Requirements

Table A-1.—Design standards by asset classification

Asset Class	Feature	Design Standard
Dam	Embankment dam	No. 13: *Embankment Dams*
	Concrete dams	No. 2: *Concrete Dams*
	Diversion dams	No. 3: *Water Conveyance Facilities, Fish Facilities, and Roads and Bridges*
	Spillway	No. 14: *Appurtenant Structures for Dams*
	Outlet works	No. 3: *Water Conveyance Facilities, Fish Facilities, and Roads and Bridges* No. 6: *Hydraulic and Mechanical Equipment*
Levees	Urbanized	U.S. Army Corps of Engineers, EM 1110-2-1913 *Design and Construction of Levees*
	Rural	
Water Conveyance	Large canal (> 1,000 cfs)	No. 3: *Canals and Related Structures*
	Small canal (< 1,000 cfs)	
	Control structures	
	Cross drainage structures	
	Turnouts	
	Pipeline (> 36 inches)	
	Pipeline (<36 inches)	
Pumping Plants	Occupancy Risk Category III or IV	No. 4: *Electrical Infrastructure* No. 6: *Hydraulic and Mechanical Equipment* No. 9: *Buildings and Other Structures*
	Occupancy Risk Category II	
	Occupancy Risk Category I	
Hydropower Plants	Occupancy Risk Category III or IV	No. 4: *Electrical Infrastructure* No. 6: *Hydraulic and Mechanical Equipment* No. 9: *Buildings and Other Structures*
	Occupancy Risk Category II	
Water Treatment Plants	Occupancy Risk Category III or IV	No. 9: *Buildings and Other Structures*
	Occupancy Risk Category II	
Buildings and Other Structures	Occupancy Risk Category III or IV	No. 9: *Buildings and Other Structures*
	Occupancy Risk Category II	
	Occupancy Risk Category I	
	Foundations	*Guidelines For Performing Foundation Investigations for Miscellaneous Structures* U.S. Army Corps of Engineers, EM 1110-1-2908, *Rock Foundations* Unified Facilities Criteria (UFC), UFC 3-220-20, *Foundations and Earth Structures* (DM 7.2)

Table A-1.—Design standards by asset classification

Asset Class	Feature	Design Standard
Fish Structures	Fishway	Design Standard No. 3: *Water Conveyance Facilities, Fish Facilities, and Roads and Bridges*
	Fish screen	
	Fish hatchery/rearing	
	Fish barrier	
	Fish collection	
Transportation	Public road	Design Standard No. 3: *Water Conveyance Facilities, Fish Facilities, and Roads and Bridges*
	Access road	
	Unimproved road	
	Public parking	
	Administrative parking lot	
	Unimproved parking area	
	Type 1 bridge	
	Type 2 bridge	
	Type 3 bridge	
	Bridge crossing	
	Retaining structures	Unified Facilities Criteria, UFC 3-220-20, *Foundations and Earth Structures* (DM 7.2) FHWA-IF-99-015, *Ground Anchors and Anchored Systems, Geotechnical Engineering Circular No. 4* FHWA-NHI-10-024 and -025, *Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Slopes, Volumes I and II* Post Tensioning Institute (PTI), PTI DC 35.1–14: *Recommendations for Prestressed Rock and Soil Anchors*

Appendix B

Example Comment-Response Log

Appendix B: Architect-Engineer Review Comment-Response Log

An A/E Review Comment-Response Log (Log), in Microsoft Excel® format, has been developed by Reclamation TSC. This Log has been developed over several years based on various types of reviews. The Log tracks Reclamation A/E Review Team comments and A/E Design Team responses (see the A/E Review Comment-Response Log below for an example). This Log includes an Instructions tab and multiple Percent Review tabs to account for the various stages of review (e.g., 30, 60, 90, 100% complete as deemed appropriate):

- **Instructions Tab** – This tab would be edited by the TSC Team Lead to include a summary of the proposed project "Background" to aid A/E Review Team members with a brief description of the project and important facts. This tab includes a "Document Review Information" table which is a summary that includes: client data, project feature name(s), and A/E design package percent received, comment and response due dates that are used by subsequent percent review tabs. The lower portion of this tab would be edited every time an A/E Design package (i.e., percent complete) arrives and includes a place for the TSC Team Lead to itemize and inventory the A/E Design package(s) (e.g., Report [BOD, Appraisal Design, Feasibility Design], appendices, geotechnical report, calculations, etc.).
- **Percent Complete Review Tab** – These tabs would be edited by the TSC Team Lead to identify the offices reviewing the package and the facilities or sub-feature names. These tabs contain typical headers to track comments and responses during the review process: comment number, percent deign level, facility name, office designation, an area for the original Reclamation comment, and area for the A/E firm response, an area for a Reclamation follow-up comment, and an area for the A/E firm follow-up final back check response.

RM D&S FAC 03-03, *Design Activities* defines comments as "Fatal Flaw." Nevertheless, this designation has been extended to Low, Medium, High, and Fatal Flaw comment priority which is dependent on variables such as ownership (title) of the asset, responsibility for some or all the capital costs, issuance of the specifications package (e.g., procurement, selecting the contractor, and construction support activities). See the section above in the main guideline, entitled "Topics to Consider that Can Affect A/E the Reviews."

Types of Low, Moderate, High, and Fatal Flaws comments with regards to alternatives and information are as follows:

Low (weakness):

- Information is inaccurate but not misleading and can be easily corrected.
- Information is accurate and arrives at correct resolution but is not complete.

- Do not include comments regarding spelling errors on specification packages (i.e., reports, spec sections, and drawings) unless it could result in an error in design interpretation or potentially could be wrongly interpreted by the Contractor and potentially end up in a lawsuit or modification to the construction contract.

Moderate (concern):

- Alternative selected has risk of not meeting requirements and other alternatives with lower risk exist.
- Weakness or defect where risk of long-term failure is suspected.
- Information is inaccurate or misleading.
- Information is not complete enough to evaluate acceptability.

High (issue):

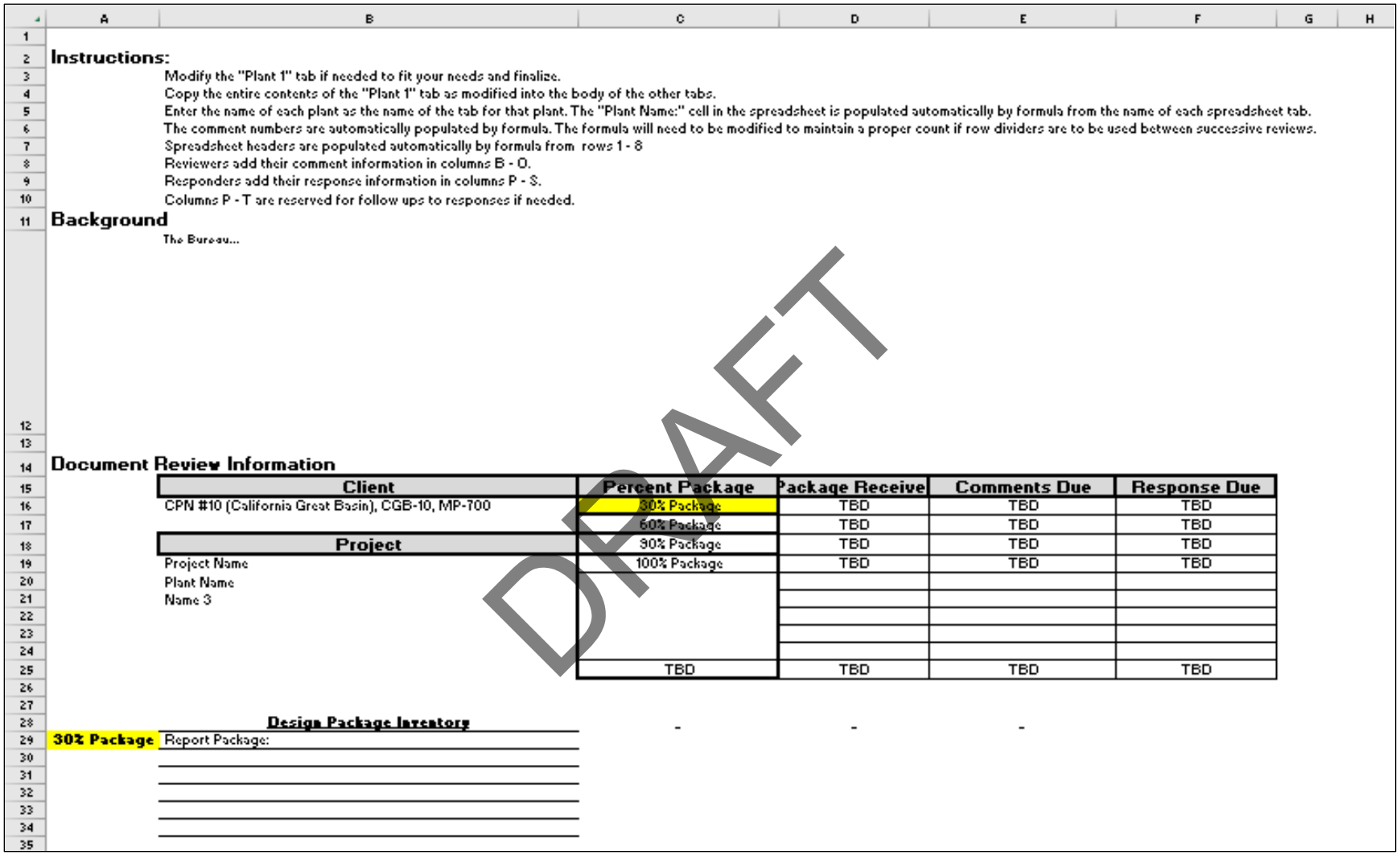
- Public and employee safety is at an elevated risk level.
- Information critical to the success of the design is not included.
- Negatively affects or encumbers Reclamation facilities and/or operations performing as intended.

Fatal Flaw (fatal):

- Life threatening to public and employee safety.
- Improvement impairs construction, operation, or maintenance of Reclamation asset.
- Information provided does not meet requirements of the A/E firm contract with the Reclamation Program Office or customer.
- Critical weakness or defect where risk of failure is unacceptable.

Lease of Power Privilege:

- A comment that violates RM D&S requirements in FAC 04-08.



Instructions:

Modify the "Plant 1" tab if needed to fit your needs and finalize.
Copy the entire contents of the "Plant 1" tab as modified into the body of the other tabs.
Enter the name of each plant as the name of the tab for that plant. The "Plant Name:" cell in the spreadsheet is populated automatically by formula from the name of each spreadsheet tab.
The comment numbers are automatically populated by formula. The formula will need to be modified to maintain a proper count if row dividers are to be used between successive reviews.
Spreadsheet headers are populated automatically by formula from rows 1 - 8
Reviewers add their comment information in columns B - O.
Responders add their response information in columns P - S.
Columns P - T are reserved for follow ups to responses if needed.

Background

The Bureau...

Document Review Information

Client	Percent Package	Package Receive	Comments Due	Response Due
CPN #10 (California Great Basin), CGB-10, MP-700	30% Package	TBD	TBD	TBD
	60% Package	TBD	TBD	TBD
Project	90% Package	TBD	TBD	TBD
Project Name	100% Package	TBD	TBD	TBD
Plant Name				
Name 3				
	TBD	TBD	TBD	TBD

Design Package Inventory

30% Package	Report Package:	-	-	-

Figure B-1.—Example Comment-Response Log – instructions tab.

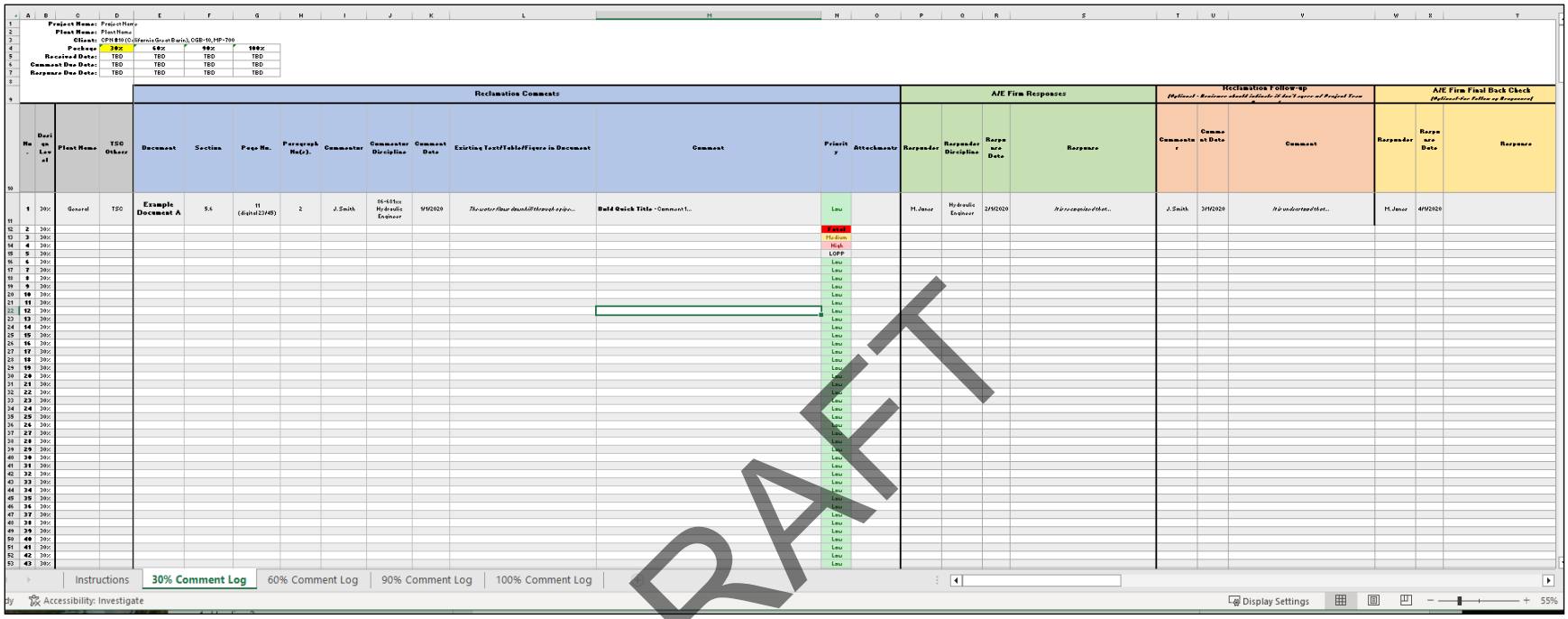


Figure B-2.—Example Comment-Response Log – percent complete tab.