

Appendix D

Draft Exhibit F Project Drawings

Application for New License
Major Project – Existing Dam

Exhibit F
General Design Drawings
Security Level: Public

Narrows Hydroelectric Project
FERC Project No. 1403



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None.

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EXHIBIT F

GENERAL DESIGN DRAWINGS

1.0 Introduction

The Yuba County Water Agency (YCWA or Licensee) has prepared this Exhibit F, General Design Drawings, as part of its Application for a New License Major Project – Existing Dam – (FLA) from the Federal Energy Regulatory Commission (FERC or Commission) for the Narrows Hydroelectric Project (Project), FERC Project Number (No.) 1403. This exhibit is prepared in conformance with Title 18 of the Code of Federal Regulations (C.F.R.), Subchapter B (Regulations under the Federal Power Act), Part 4 (Licenses, Permits, Exemptions and Determination of Project Costs), Subpart F and, as applicable, Part 16 (traditional process). In particular, this exhibit conforms to the regulations in 18 C.F.R. Section 4.51(g), which directs an applicant to 18 C.F.R. Section 4.41(g), which describes the contents of Exhibit F, General Design Drawings, and Section 4.41(g) references Section 4.39, Specifications for maps and drawings. This Draft Exhibit F also serves to fulfill the requirements of 18 C.F.R. Section 5.6(d)(2). This Exhibit F provides plans, elevation, profiles, and sections for all existing Project facilities and describes any changes to existing Project facilities that YCWA proposes under the new license. As a reference, 18 C.F.R. Section 4.41(g) and Section 4.39 state:

18 C.F.R. § 4.41(g): Exhibit F consists of general design drawings of the principal project works described under paragraph (b) of this section (Exhibit A) and supporting information used as the basis of design. If the Exhibit F submitted with the application is preliminary in nature, applicant must so state in the application. The drawings must conform to the specifications of § 4.39.

- (1) The drawings must show all major project structures in sufficient detail to provide a full understanding of the project, including:
 - (i) Plans (overhead view);
 - (ii) Elevations (front view);
 - (iii) Profiles (side view); and
 - (iv) Sections.
- (2) The applicant may submit preliminary design drawings with the application. The final Exhibit F may be submitted during or after the license process and must show the precise plans and specifications for proposed structures. If the project is licensed on the basis of preliminary designs, the applicant must submit the final Exhibit F for Commission approval prior to the commencement of any construction of the project.
- (3) Supporting design report. The applicant must furnish, at a minimum, the following supporting information to demonstrate that existing and proposed structures are safe and adequate to fulfill their stated functions, and must submit such information in a separate report at the time the application is filed. The report must include:
 - (i) An assessment of the suitability of the site and the reservoir rim stability based on geological and subsurface investigations, including investigations of soils and rock borings and tests for the evaluation of all foundations and construction materials sufficient to determine the location and type of dam structures suitable for the dam site;
 - (ii) Copies of all boring logs, geology reports and laboratory tests reports;
 - (iii) An identification of all borrow areas and quarry sites and an estimate of required quantities and suitable construction material;

- (iv) Stability and stress analyses for all major structures and critical abutment slopes under all probable loading conditions, including seismic and hydrostatic forces induced by water loads up to the Probable Maximum Flood as appropriate; and
 - (v) The basis for determination of seismic loading and the Spillway Design Flood in sufficient detail to permit independent staff evaluation.
- (4) The applicant must submit two copies of the supporting design report described in paragraph (g)(3) of this section at the time preliminary and final design drawings are submitted to the Commission for review. If the report contains preliminary drawings, it must be designated a “Preliminary Supporting Exhibit Report.”

18 C.F.R. § 4.39: Specifications for maps and drawings. All required maps and drawings must conform to the following specifications, except as otherwise prescribed in this chapter:

- (a) Each original map or drawing must consist of a print on silver or gelatin 35mm microfilm mounted on Type D (3 1/4” by 7 3/8”) aperture cards. Full-sized prints of maps and drawings must be on sheets no smaller than 24 by 36 inches and no larger than 28 by 40 inches. A space five inches high by seven inches wide must be provided in the lower right hand corner of each sheet. The upper half of this space must bear the title, numerical and graphical scale, and other pertinent information concerning the map or drawing. The lower half of the space must be left clear. Exhibit G drawings must be stamped by a Registered Land Surveyor. If the drawing size specified in this paragraph limits the scale of structural drawings (exhibit F drawings) described in paragraph (c) of this Section, a smaller scale may be used for those drawings. Potential applicants or licensees may be required to file maps or drawings in electronic format as directed by the Commission.
- (b) Each map must have a scale in full-sized prints no smaller than one inch equals 0.5 miles for transmission lines, roads, and similar linear features and no smaller than one inch equals 1,000 feet for other project features, including the project boundary. Where maps at this scale do not show sufficient detail, large scale maps may be required. Each map must show:
 - (1) True and magnetic meridians;
 - (2) State, county, and town lines; and
 - (3) Boundaries of public lands and reservations of the United States [see 16 U.S.C. 796 (1) and (2)], if any. If a public land survey is available, the maps must show all lines of that survey crossing the project area and all official subdivisions of sections for the public lands and reservations, including lots and irregular tracts, as designated on the official plats of survey that may be obtained from the Bureau of Land Management, Washington, D.C., or examined in the local land survey office; to the extent that a public land survey is not available for public lands and reservations of the United States, the maps must show the protractions of townships and section lines, which, if possible, must be those recognized by the Federal agency administering those lands.
- (c) Drawings depicting details of project structures must have a scale in full-sized prints no smaller than:
 - (1) One inch equals 50 feet for plans, elevations, and profiles; and
 - (2) One inch equals 10 feet for sections.
- (d) Each map or drawing must be drawn and lettered to be legible when it is reduced to a print that is 11 inches on its shorter side. Following notification to the applicant that the application has been accepted for filing [see §4.31(c)], prints reduced to that size must be bound in each copy of the application which is required to be submitted to the Commission or provided to any person, agency, or other entity.
- (e) The maps and drawings showing project location information and details of project structures must be filed in accordance with the Commission’s instructions on submission of Critical Energy Infrastructure Information in §§388.112 and 388.113 of subchapter X of this chapter.

Besides this introductory material, this Exhibit F includes four sections. Section 2.0 provides a list of all existing design drawings needed to show all major Project structures in sufficient detail

to provide a full understanding of the Project. These include plan, elevation, and section profiles. Section 3.0 addresses the requirement for a supporting design report. Section 4 states any changes to Project facilities proposed by YCWA at this time, and Section 5.0 includes a list of references cited in this exhibit.

All elevation data in this exhibit is in United States Department of Commerce, National Oceanic and Atmospheric Administration, National Geodetic Survey Vertical Datum of 1929 (NGVD 29), unless otherwise stated.

2.0 Existing General Design Drawings

The existing FERC license includes four general design drawings that were approved by the Commission in an order dated May 2, 2019. The drawings are listed in Table 2.0-1. The drawings are not refiled here but included by reference. The drawings can be found on FERC's eLibrary at Accession # 20190530-4007.

Table 2.0-1. List of Exhibit F General Design Drawings for the Narrows Hydroelectric Project.

Exhibits F Drawing Number in Existing License	Exhibit F Drawing Name	FERC-Assigned Drawing Number
F-1, Sheet 1 of 4	Plan Profile and Sections	P-1403-26
F-2, Sheet 2 of 4	Plans of Powerhouse	P-1403-27
F-3, Sheet 3 of 4	Elevations of Powerhouse	P-1403-28
F-4, Sheet 4 of 4	Elevations at Powerhouse	P-1403-29

In accordance with Sections 5.30 and 4.32(k) of FERC's regulations and in light of heightened national security concerns, FERC and YCWA treat Exhibit F drawings, and the Project single-line electrical diagrams, as Critical Energy Infrastructure Information (CEII) under Section 388.112 of FERC's regulations because they contain detailed design information about existing critical infrastructure that relates details about the generation of electrical energy, and could be useful to a person planning an attack on critical infrastructure. Therefore, YCWA is not filing the drawings as Public information. Procedures for the public to obtain access to CEII may be found at 18 C.F.R. Section 388.113. Requests for access should be made to FERC's CEII Coordinator.

3.0 Supporting Design Report for Existing Facilities

The Project does not include any dams or reservoirs. FERC's San Francisco Regional Office inspects the Project periodically and no safety issues have been identified. YWA believes a supporting design report is not required for this Project relicensing.

4.0 YCWA's Proposed Changes to Existing Project Facilities, Features and Boundary

At this time, YCWA does not propose any changes to the existing Project facilities or Project boundary. YCWA reserves its right to propose changes as the relicensing proceeds.

5.0 Literature Cited

None.