

**United States of America
Federal Energy Regulatory Commission**

**Application for Preliminary Permit
for the
Gibson Dam Hydroelectric Project**

**Submitted By:
Gibson Dam Hydroelectric Company, LLC
3633 Alderwood Ave. Bellingham WA 98225**

April 3, 2007

INITIAL STATEMENT

**BEFORE THE FEDERAL ENERGY REGULATORY
COMMISSION**

Application for Preliminary Permit

1. Gibson Dam Hydroelectric Company, LLC “Applicant” applies to the Federal Energy Regulatory Commission “FERC” for a preliminary permit for the proposed Gibson Dam Hydroelectric Project “Project”, as further described in the attached exhibits. This application is made in order that the Applicant may secure and maintain priority of application for a FERC license for the Project under Part I of the Federal Power Act while obtaining the data and performing the acts required to determine the feasibility of the Project and to support a development application for a FERC license.

The Applicant was issued a preliminary permit for the Project by the FERC on April 20, 2004 (FERC Project No. 12478), and the permit expired on April 2, 2007. Applicant completed substantial work during the term of the permit by obtaining data and performing the acts required to determine the feasibility of the Project to support a development application for a FERC license.

The Applicant is submitting this application for a preliminary permit in order to maintain priority of application while completing the remaining work required to finalize and submit a development application for a FERC license. Applicant anticipates a development application would be completed by the Applicant and submitted to the FERC within the next 120 days.

2. The Applicant has been active in Project investigations, and Stakeholder consultation under the Alternative Licensing Process, since a Preliminary Permit was issued on April 20, 2004, including the following activities:
 - Completion of a Project Feasibility Study including hydrology, energy generation, power market, design concepts and costs. Completed in November, 2004.
 - Distribution of an Initial Consultation Document (ICD, GDHC, 2005) describing the Project, the licensing process and preliminary environmental information, on February 15, 2005.

- Initial Consultation Meetings (a technical agency meeting and a public meeting) and a site visit held in Helena, Fairfield and at the Project site on March 28 and 29, respectively, 2005.
- Completion of a Transmission System Load Flow Analysis from the Project to Bole Substation. Completed in July, 2005.
- Study Planning for potentially-affected fish and wildlife, water quality and cultural resources, including distribution of draft water quality and cultural resource study plans. Consultation on those plans occurred at an inter-agency meeting held on September 1, 2005 in Helena and a teleconference held on October 4, 2005.
- Distribution of Scoping Document 1, on October 18, 2005.
- Submission to FERC and consulting agencies of a request to utilize the Alternative Licensing Procedures (ALP) for Project licensing on November 23, 2005. The ALP process was approved by the FERC on February 7, 2006.
- Distribution of a revised version of Scoping Document 1, on March 7, 2006.
- Public Scoping meeting and site visit were held on April 11, 2006 and an agency Scoping meeting was held on April 12, 2006, with requests for comments on the revised SD1 and proceedings of the meeting.
- Applicant held additional public informational meetings in Helena on June 12, 2006 and in Great Falls on June 13, 2006. A site visit was also held at the Project site on June 13, 2006.
- Submit integration application to Northwestern Energy August 17, 2006.
- E-mail distribution of draft fishery impact discussion sent for comments on October 18, 2006.
- E-mail distribution of draft water quality discussion sent for comments on November 1, 2006.
- Teleconference to discuss fishery impacts and potential mitigation (including GDHC, USFS, and MFWP) conducted on December 19, 2006.
- E-mail distribution of draft recreation resources discussion sent for comments December 22, 2006.
- Distribution of draft transmission line visual and aesthetic resource evaluation January 15, 2007.
- Distribution of Scoping Document 2, on February 9, 2007 with comments received through March 9, 2007.

Additional information on work performed on the Project to date by the Applicant can be found on the Applicant's Project website,

www.gibsonhydro.com. Project correspondence documents can also be viewed on the FERC's website, e-library section, for FERC Project P-12478.

The licensing coordinator from the FERC assigned to the Project was Mr. Matt Cutlip, FERC, Portland Regional Office, 101 S.W. Main Street, Suite 905, Portland, OR 97204. (503)552-2762 ph.

3. The location of the Project is:

State:	Montana
County:	Teton and Lewis & Clark
Township:	Township 21N, Range 9W
Nearby town:	Augusta
Stream or other body of water:	North Fork of the Sun River

4. The exact name and business address of the Applicant is as follows:

Gibson Dam Hydroelectric Company, LLC
3633 Alderwood Ave.
Bellingham, WA 98225
Telephone: (360) 738-9999
Fax: (360) 733-3056

The exact name and business address of each person authorized to act as agent for the Applicant in this application is:

Steven C. Marmon
Project Manager
Gibson Dam Hydroelectric Company, LLC
3633 Alderwood Ave.
Bellingham, WA 98225

Nicholas E. Josten
Licensing Consultant
2742 Saint Charles Ave.
Idaho Falls, ID 83404

5. Gibson Dam Hydroelectric Company, LLC is a domestic corporation and is not claiming preference under section 7(a) of the Federal Power Act.

6. The proposed term of the requested permit is thirty-six months.

7. The Project would be located at an existing dam (Gibson Dam), on the North Fork of the Sun River in Teton and Lewis & Clark Counties, Montana. Gibson Dam is owned by the United States Department of the Interior, Bureau of Reclamation “Reclamation” and operated and maintained by the Greenfields Irrigation District “GID” through formal agreement with Reclamation. GID is 50% owner and member of Applicant.

Teton County, P.O. Box 610, Choteau, MT 59422

Lewis & Clark County, 316 North Park Avenue, Helena, MT 59601

Greenfields Irrigation District, P.O. Box 157, Fairfield, MT 59436-0157

Steven C. Marmon being duly sworn, deposes and says that he has read the foregoing Application for Preliminary Permit by Gibson Dam Hydroelectric Company, LLC and that the content of this Application are true to the best of his knowledge.

Subscribed and sworn this 29th day of March, 2007.

By: St. Marmon
Steven C. Marmon
Agent for Gibson Dam Hydroelectric Company, LLC

STATE OF WASHINGTON,
County of Whatcom

Subscribed and sworn to before me this 29th day of March, 2007.

By: Masimbaashe Phillip Dzrowa
Notary Public in and for the State of Washington
My commission expires on 12-19-09
Recorded in Whatcom County



EXHIBIT I

DESCRIPTION OF THE PROJECT

1. PROJECT ELEMENTS

A. **INTAKE:** The Project would utilize the existing diversion and intake at Gibson Dam and Reservoir. Gibson Dam is an existing concrete arch dam owned by Reclamation and is located on the North Fork of the Sun River approximately 17 miles west of Augusta, Montana. The dam was constructed in 1929 and is 199-ft in height with a crest length of 960-ft and a hydraulic head of 195-ft. Two existing “upper power penstocks” were installed during initial construction to facilitate future hydroelectric development at the dam. The Applicant has elected to not use these upper power penstocks due to structural and environmental concerns with their use. The existing penstocks emanating from the valve house at the base of the dam would be modified and utilized to deliver water to the powerhouse.

B. **CONDUIT:** Two existing 72-inch diameter steel penstocks (jet flow pipes) emanating from the existing valve house at the base of the dam would be modified to extend through the powerhouse located approximately 60-ft directly downstream of the valve house. Once in the powerhouse, the jet flow pipes would bifurcate to each of the four turbine units. The design of the Project would maintain the availability of the two existing 72-inch conduits at the base of the dam for making releases for purposes independently of the powerhouse. Access to the discharge ends of the modified 72-inch outlet conduits would be maintained for Reclamation for maintenance and inspection purposes. Provisions to provide safe access would be incorporated into any modifications considered by the Applicant. Reclamation would retain control, operation, timing and amount of water released from the reservoir. The Project would operate in a run-of-the-river mode.

Suitable bypass flows (up to 200 cfs) would be provided during the construction phase so as to prevent excessive fluctuations in river flow. Figure 5 in Exhibit IV, includes a drawing of the proposed water bypass, cofferdam construction, and dewater plan. Similarly, provisions would be made for automated, instantaneous river flow restoration during events when the power plant malfunctions or goes off-line for repairs or because of emergencies.

C. **POWERHOUSE:** The proposed powerhouse location would be constructed near the base of the dam approximately 60-ft downstream from the existing valve house. The approximate dimensions of the new building would be

80-ft by 120-ft. The substructure would be constructed of reinforced concrete, and the superstructure would be constructed of both reinforced concrete and metal siding and roof. The powerhouse would include four generating units with a total combined installed capacity of approximately 15,000 kilowatts. Access to the powerhouse would be via existing roads.

A control house and maintenance building would be constructed approximately 1,400-ft downstream of the dam near other existing Reclamation facilities. The maintenance building would house some of the powerhouse controls, spare parts for the turbine/generators and transmission line, as well as equipment and tools for Project maintenance. This enables the powerhouse to have a smaller footprint. The building would be used to house personnel during construction, and during overhaul and maintenance of the Project.

2. RESERVOIRS

Gibson Dam impounds a reservoir (Gibson Reservoir) with a surface area of approximately 1,420 acres with a storage capacity of approximately 99,000 acre-ft at a normal maximum water surface elevation of 4,724-ft. The reservoir discharges through an outlet works and over a drop inlet spillway (during flood conditions). Reclamation determines the discharge flow regime year round and the Project would operate in a run-of-the-river mode. The Project would not alter the amount or timing of irrigation water stored or released from any reservoir, and would not alter flows in the Sun River below Gibson Dam, but would merely utilize existing flows to generate power.

3. PRIMARY TRANSMISSION LINE

The Project transmission line would be approximately 35 miles in length and would include both a 34.5 kV overhead and underground segment as well as a 69 kV overhead segment. For discussion purposes, the line is described below in two sections; the first section is the line inside the Forest Boundary, and the second section is the line outside the Forest Boundary. The section inside the Forest Boundary is approximately 5 miles long and the section outside the Forest Boundary is approximately 30 miles long.

The section inside the Forest Boundary would generally follow Forest Development Road 108, and the existing 7.2 kV overhead distribution line. The section would include about one mile of underground and four miles of overhead 34.5 kV line. In an effort to prevent dual lines inside the Forest Boundary, the existing 7.2 kV distribution line would be overbuilt by the 34.5 kV line in overhead sections, and relocated to a shared trench with the 34.5 kV line in the proposed underground locations. Approximately 37 existing wood poles in the

canyon would be removed or relocated to provide a visual improvement that would serve as additional mitigation for any visual impacts of the Project transmission line. The Applicant intends to coordinate with the local utility (Sun River Electric Cooperative) to avoid dual lines inside the Forest Boundary. Details of the section within the Forest Boundary are shown on the maps included in Exhibit IV.

The preferred route for the section outside the Forest Boundary is yet to be determined. In general the 34.5 kV line would extend underground approximately four miles generally east from the Forest Boundary. At this point a 34.5/69 kV step-up substation would be constructed. From the substation, a 69 kV overhead line would continue east to an interconnection point near Fairfield or Choteau. Several alternative routes have been presented by the Applicant to date, and other more favorable alternative routes may be identified as development continues. The Applicant intends to continue discussions of all alternative routes in more detail with Project stakeholders in an effort to select a preferred route outside the Forest Boundary to the interconnection point.

Sun River Electric Cooperative, P.O. Box 217, Fairfield, MT 59436, owns and operates distribution lines in close vicinity to the Project.

Northwestern Energy, 40 East Broadway Street, Butte, MT 59701, owns and operates distribution and transmission lines in close vicinity to the Project.

4. TURBINES AND GENERATORS

The design head of the proposed Project is approximately 165-ft and the proposed generation capacity is 15 megawatts. Annual energy production is estimated to be 50 gigawatt hours per year. The quantity and configuration of generating equipment is included in Exhibit IV.

5. LANDS OF THE U.S. GOVERNMENT

The lands around Gibson Dam and Reservoir are owned by the United States of America (Lewis & Clark National Forest) and administration of these lands is delegated to both Reclamation and the United States Department of Agriculture, Forest Service "USFS". All lands, withdrawn and acquired, needed for the operation and maintenance of Gibson Dam and Reservoir, and other project works associated with the Sun River Project are administered by Reclamation to the extent necessary for such operation. Administration of Federal lands surrounding Gibson Dam and Reservoir used for recreation and other National Forest purposes is delegated to the USFS. Reclamation has primary administration over the areas

actually occupied by its structures and works and the areas required to administer, maintain, operate and protect these structures and works.

The preferred route and configuration of the transmission line outside the Forest Boundary is undetermined at this time. However, the cross-country route east of Sun Canyon would likely cross several federal land parcels managed by the United States Department of the Interior, Bureau of Land Management “BLM”.

The contact at the Reclamation is the Office of the Secretary, United States Department of the Interior, Bureau of Reclamation, Office of Environmental Policy and Compliance, Denver Federal Center, Building 56, Room 1003, P.O. Box 25007 (D-108), Denver, CO 80225-0007.

The contact at the USFS is the Regional Forester, United States Department of Agriculture, Forest Service, Region One, Northern Region, 200 East Broadway, Missoula, MT 59802.

The contact at the BLM is the State Director, United States Department of the Interior, Bureau of Land Management, State Office, 5001 Southgate Drive, Billings, MT 59101.

There are no known areas within the Project boundary that are included in or have been designated for study for inclusion in the National Wild and Scenic Rivers. There are no areas within the proposed Project boundary that are under the provisions of the Wilderness Act that have been designated as wilderness area, or designated as wilderness study area. Gibson Dam has been determined eligible for the National Register of Historic Places.

6. PUBLIC INTEREST

A FERC license (FERC Project No. 6863) was issued for a new hydroelectric facility at Gibson Dam on December 8, 1989. Due to a poor power market at the time, the project was not constructed and the license was subsequently surrendered.

A FERC preliminary permit (FERC Project No. P-11817) for a proposed hydroelectric development at Gibson Dam was issued to Universal Electric Power on October 30, 2000. The preliminary permit expired in October, 2003 with minimal study work completed by the applicant.

A FERC preliminary permit (FERC Project No. P-12478) for a proposed hydroelectric development at Gibson Dam was issued to the Applicant on April 20, 2004. The Applicant completed substantial work during the term of the

preliminary permit prior to the permit's expiration on April 2, 2007. The Applicant intends to continue the pre-application work on the Project and to submit a development application to the FERC.

Development of renewable hydroelectric energy at an existing dam will displace an equal amount of fossil fuel energy and result in less atmospheric impact. The public interest will be served if minimal land is disturbed, visual impacts are minimized as practical, and if the Project is deemed economically justifiable.

EXHIBIT II

STUDY PLAN & WORK SCHEDULE

1. GENERAL

A. PREVIOUS STUDIES: Various studies for power generation development at Gibson Dam were conducted in the mid 1980's by Grisdale Hill Company in application for a FERC license. These studies, in addition to the information contained in Grisdale Hill's FERC order issuing license, would likely be useful. In addition, various others studies have been conducted by resource agencies in recent years including water quality, water quantity, fisheries, cultural resources, botanical, and wildlife, among others. These recent studies would likely also be very useful in preparing a development application for the Project.

B. TRANSMISSION STUDY: Emphasis would be placed in completing the investigation of a transmission integration line route, voltage, and configuration to economically interconnect to the existing transmission grid with the least amount of visual impacts, as practical, to the area. The Applicant has experienced difficulties obtaining "site control" status as required by the FERC's new "Small Generator Integration Procedures (SGIP)". The Applicant submitted an interconnection application to Northwestern Energy (local transmission provider) in August 17, 2006; however, Northwestern denied the application on the grounds that a FERC preliminary permit is not evidence of site control. In addition, the SGIP does not allow a deposit in lieu of site control, as allowed in the FERC's "Large Generator Integration Procedures". Absent qualifying site control status has inhibited the Applicant's ability to obtain an integration study and report for the Project from Northwestern Energy. The lack of such integration study has complicated the Applicant's ability to determine a preferred and technically feasible interconnection point and associated costs, and has created significant delays in the Applicant's pre-application work to date. The Applicant intends to continue working with the FERC staff to satisfy the "site-control" issue, and finalize the preferred integration location. Direction from FERC staff regarding how the Project could obtain "site control" relating to the SGIP would be greatly appreciated.

C. ENVIRONMENTAL STUDIES: Emphasis would be placed on completing studies and reports on water quality, fisheries, wildlife, botanical, visual aesthetics, and cultural resources to be incorporated into the Project's development application as outlined in the Applicant's Scoping Document Two, dated February 2007.

D. HYDROLOGY: The Applicant has completed a hydrology and energy generation study for the Project.

E. ECONOMIC EVALUATION: The Applicant has completed an economic evaluation of the Project and would continue to update the results as new information is obtained.

F. PHYSICAL WORK: No new roads or permanent structures are to be constructed for the purpose of conducting studies. On-site work may include water sampling, cultural resource field investigations, botanical field investigations, and land survey work. Approval for access to conduct such fieldwork would be sought from the applicable landowner prior to beginning the work.

2. WORK PLAN FOR NEW DAM CONSTRUCTION:

New dam construction is not proposed for this Project. Further, soil and rock exploration at the powerhouse site is not proposed because subsurface data in close vicinity to Gibson Dam is available from Reclamation.

EXHIBIT III COSTS AND FINANCING

1. ESTIMATED COSTS OF WORK DESCRIBED IN EXHIBIT 2

The Applicant has expended approximately \$500,000 for work completed to date for pre-application work on the Project. It is anticipated an additional \$100,000 will be required to complete the development application for submittal to the FERC.

2. SOURCE OF FUNDS

Sources of financing for pre-application work would be from members of the Applicant.

3. MARKET FOR POWER GENERATED

In general, the power market in the Western United States has shown a positive upward price movement in recent years with most utility integrated resource plans forecasting energy and capacity shortfalls in the near future.

4. USE OF ENERGY BY APPLICANT

The Applicant does not plan to use any of the energy output from the Project except for station service as required.

EXHIBIT IV MAP OF PROJECT

1. PROJECT MAPS

Attached to this Exhibit IV are the following preliminary maps and drawings:

Figure 1 Project Vicinity Map.

Figure 2 Project Boundary and Features.

Figure 3 Powerhouse Floor Plan.

Figure 4 Powerhouse Detail Section.

Figure 5 Water Bypass, Cofferdam & Dewater Plan.

Figure 6 Transmission Route in Sun Canyon.

Figure 7 Digital Renderings of Powerhouse.

Figure 8 Photos of Typical Substation & Transmission Pole.

The exact transmission line route and design parameters are undetermined at this time and are therefore not shown on the maps extending to an interconnection point to the east near Choteau or Fairfield. The legal description is: Montana, Principal Meridian, T21N, R9W, sec4 – UTM Zone 12.

Latitude: 47.6032°N,
Longitude: 112.7609°W

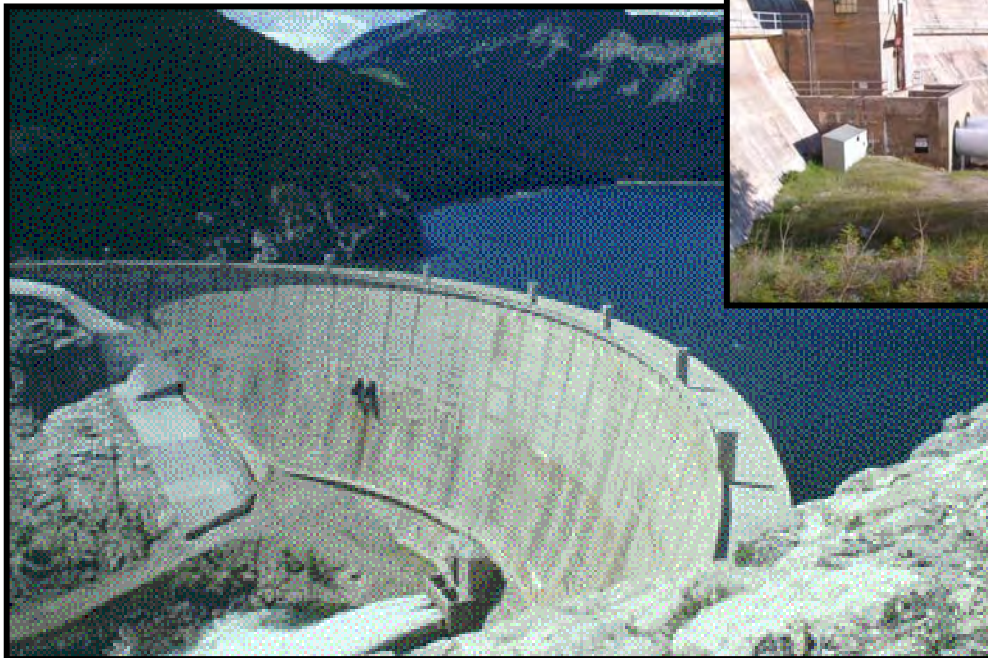
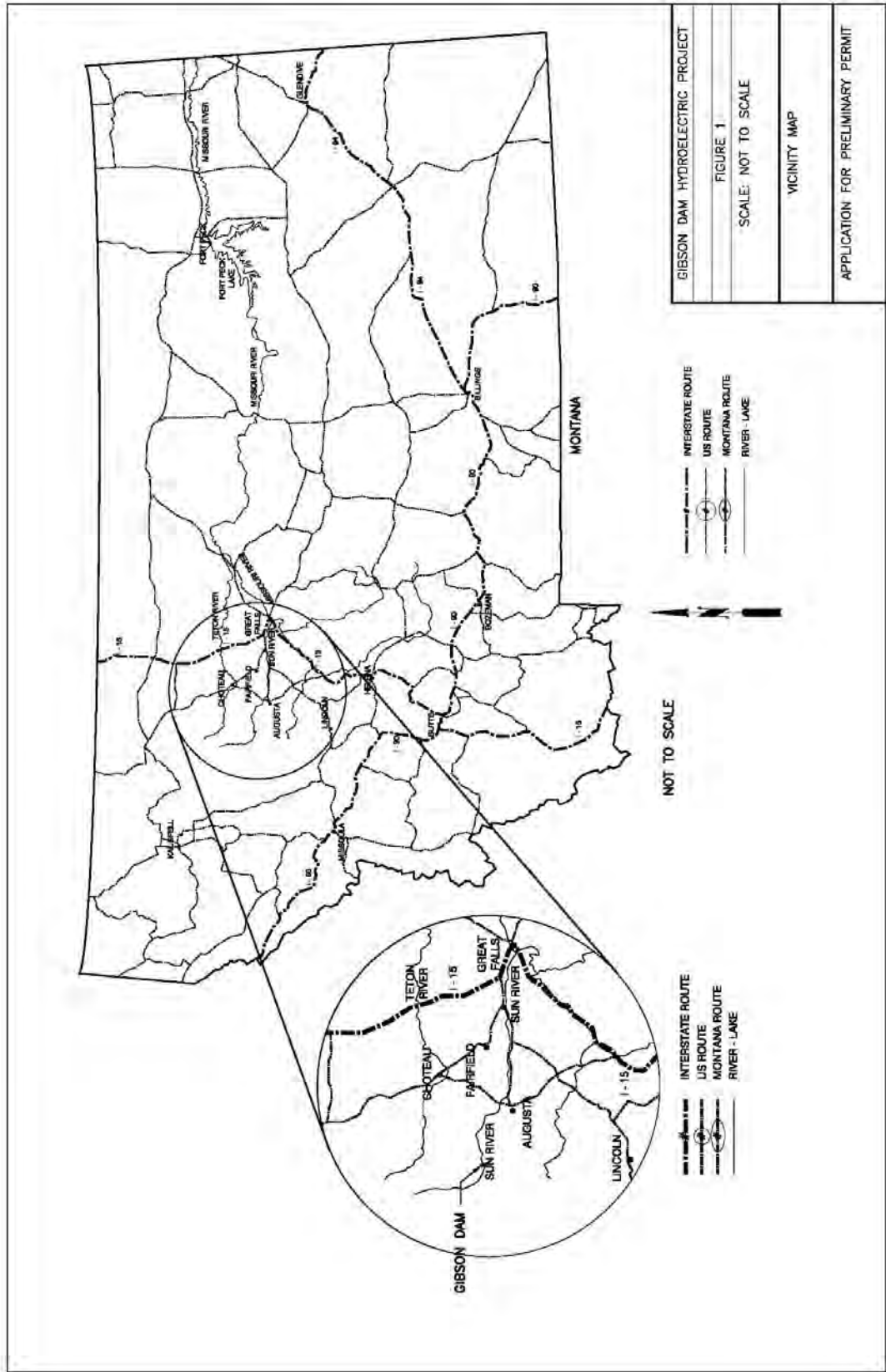
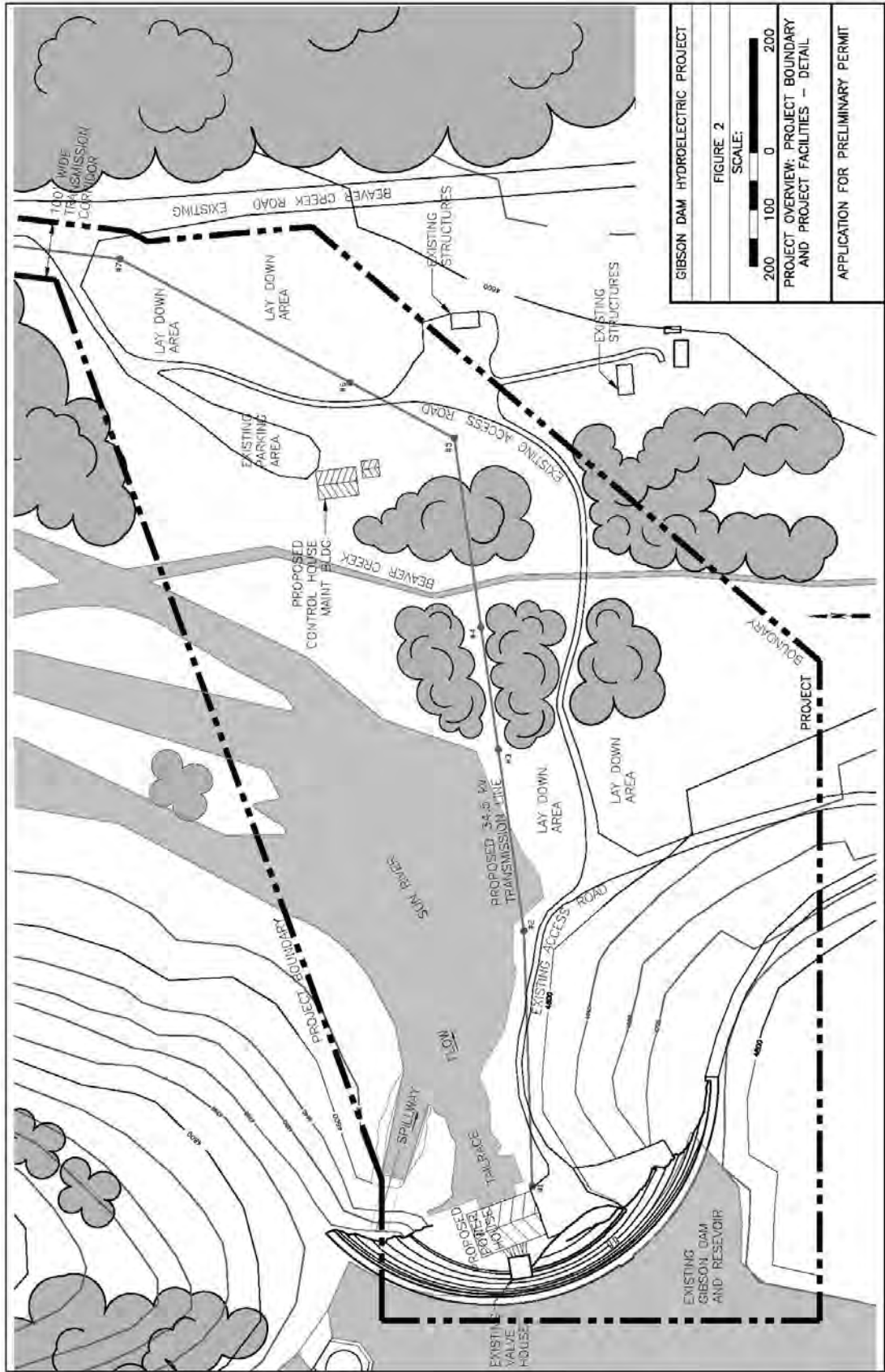
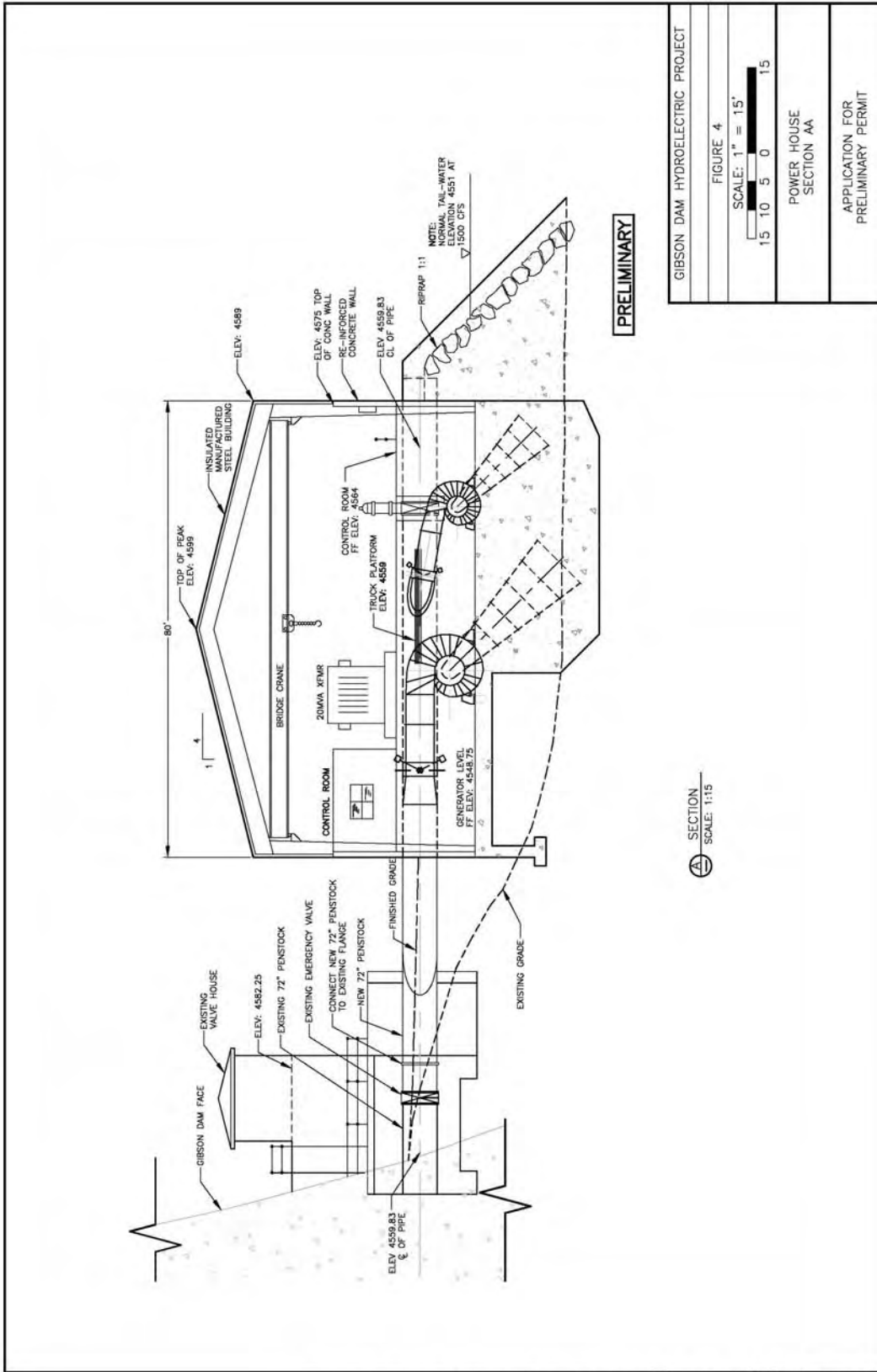


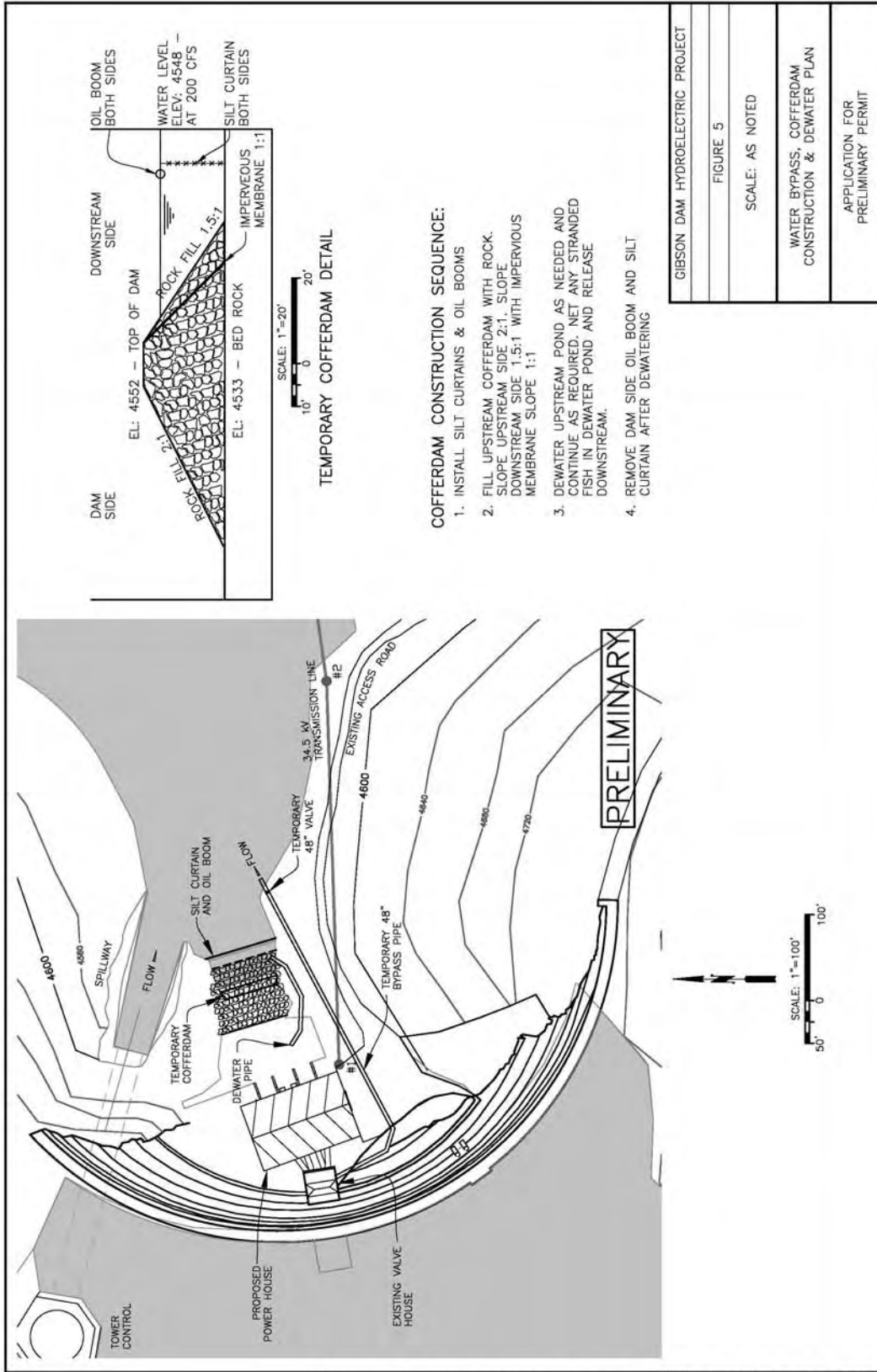
Photo of Gibson Dam & Reservoir from Reclamation website.



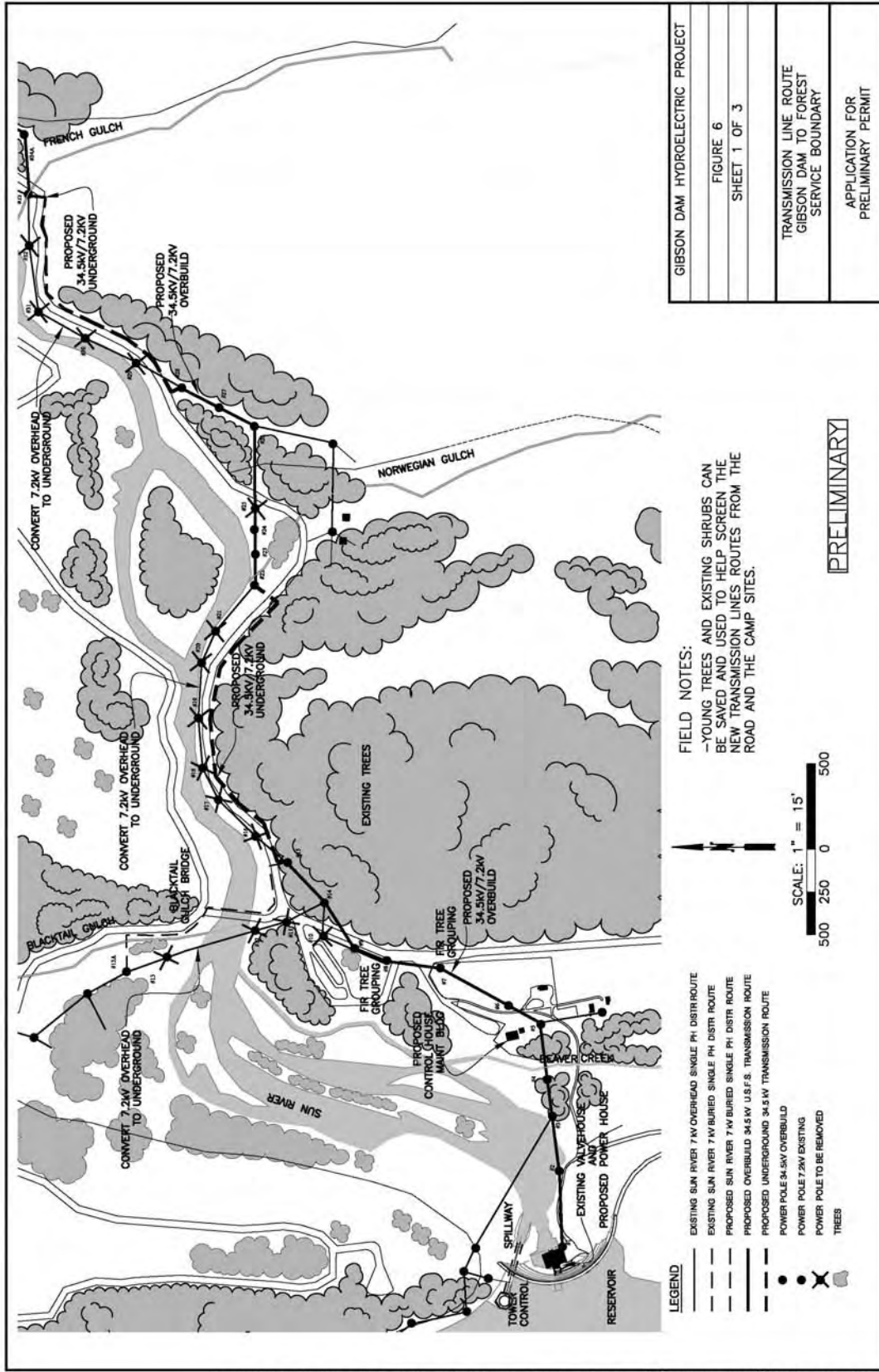




Time: 11:55:3 Date: 02/09/2007 Scale: 1"=15' Drawing File: PROJECT\HYDR\412W\300\412W-301 POWER HOUSE.DWG (mhb)

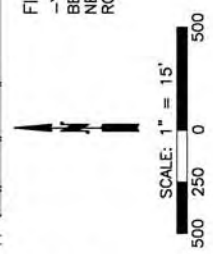


GIBSON DAM HYDROELECTRIC PROJECT
FIGURE 5
SCALE: AS NOTED
WATER BYPASS, COFFERDAM CONSTRUCTION & DEWATER PLAN
APPLICATION FOR PRELIMINARY PERMIT



GIBSON DAM HYDROELECTRIC PROJECT
FIGURE 6
SHEET 1 OF 3
TRANSMISSION LINE ROUTE GIBSON DAM TO FOREST SERVICE BOUNDARY
APPLICATION FOR PRELIMINARY PERMIT

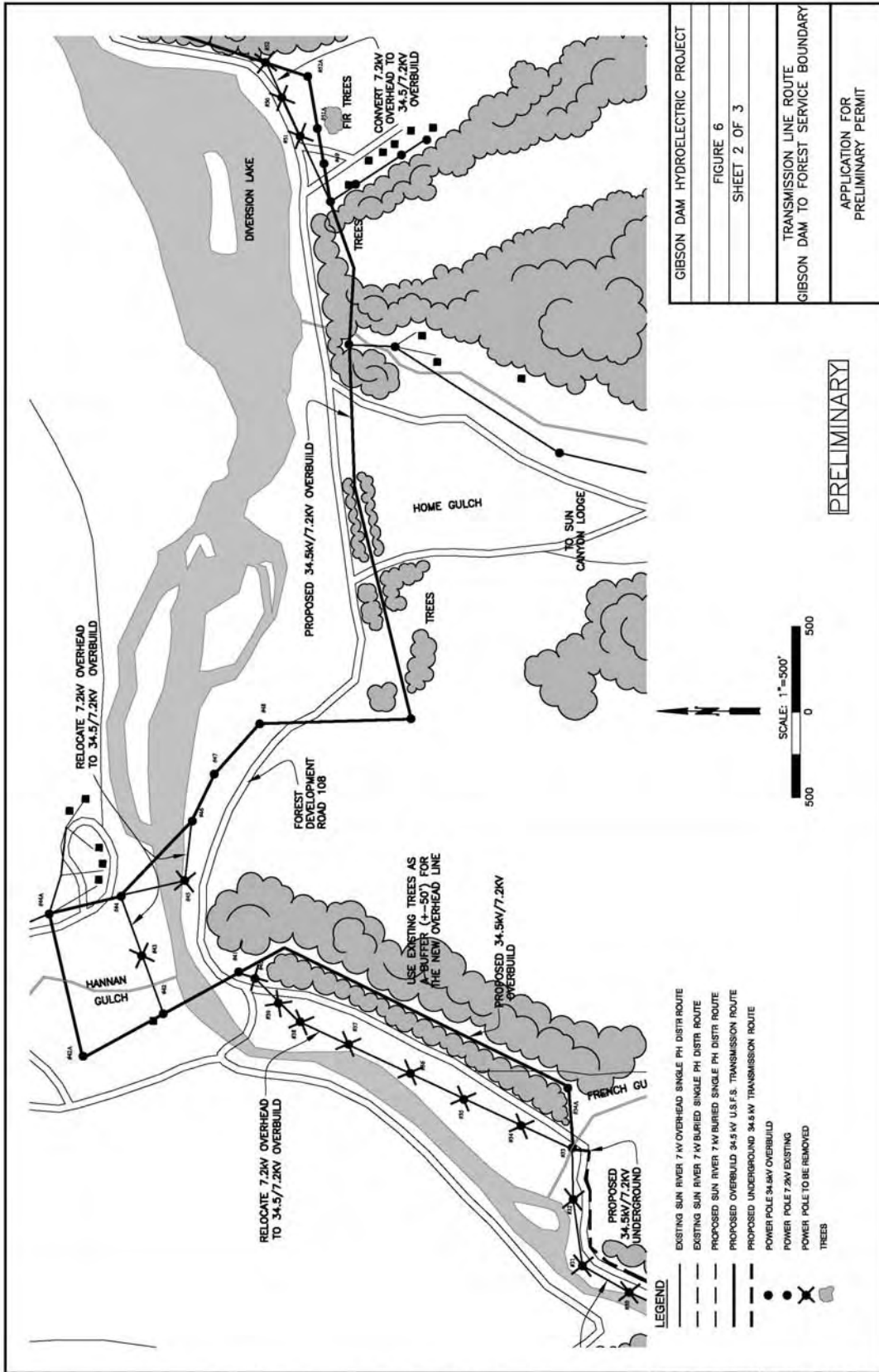
FIELD NOTES:
 -YOUNG TREES AND EXISTING SHRUBS CAN BE SAVED AND USED TO HELP SCREEN THE NEW TRANSMISSION LINES ROUTES FROM THE ROAD AND THE CAMP SITES.



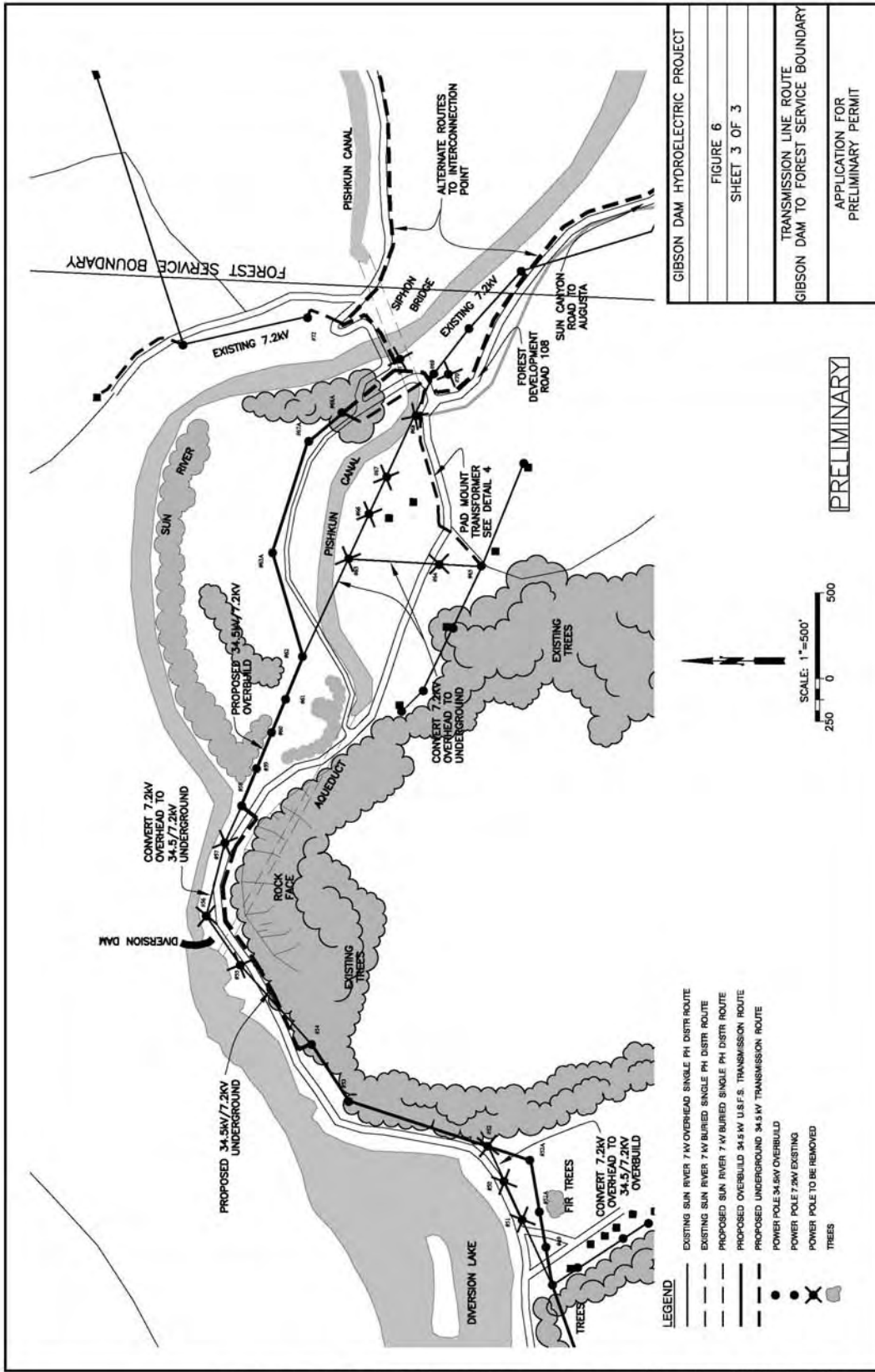
PRELIMINARY

- LEGEND**
- EXISTING SUN RIVER 7.2KV OVERHEAD SINGLE PH DISTRI ROUTE
 - EXISTING SUN RIVER 7.2KV BURIED SINGLE PH DISTRI ROUTE
 - PROPOSED SUN RIVER 7.2KV BURIED SINGLE PH DISTRI ROUTE
 - PROPOSED OVERBUILD 34.5KV U.S.F.S. TRANSMISSION ROUTE
 - PROPOSED UNDERGROUND 34.5KV TRANSMISSION ROUTE
 - POWER POLE 34.5KV OVERBUILD
 - POWER POLE 7.2KV EXISTING
 - ✕ POWER POLE TO BE REMOVED
 - ☼ TREES

Time: 11:29:37 Date: 1/9/2007 Scale: 1"=15' Drawing File: PROJECT\H090\12W\900\920 Eagle Plot\12W-920 Forestry Study.dwg (m3)



Title: 11-29-07 Date: 1/9/2007 Scale: 1"=500' Drawing File: PROJECT\HYDRO\12M\900\920 Eng\Point\12M-920 Forestry Study.dwg(DWG) (m)



Time: 11:29:37 Date: 1/9/2007 Scale: 1=1175 Drawing File: PROJECT\HRO\12M\900\920 Eagle Point\12M-920 Forestry Study.dwg (mg)



FIGURE 7. Digital renderings of proposed powerhouse.



FIGURE 8-A. Photo of typical substation similar to the Project substation to be located approximately four miles east of the Forest Boundary.



FIGURE 8-B. Photo of typical 69kV vertical wood pole construction similar to the Project 69 kV transmission line. (photo does not include 7.2 kV under-build)