

**Appendix A** Correspondence



## Department of Energy

Golden Field Office  
1617 Cole Boulevard  
Golden, Colorado 80401-3305

August 13, 2010

Mr. Guy "Bub" Robbins, Superintendent  
United States Department of the Interior  
Bureau of Indian Affairs  
Yakama Agency  
Post Office Box 632  
Toppenish, Washington 98948

Dear Mr. Robbins:

This correspondence is in response to your October 23, 2009, letter to Ms. Lizana Pierce, U.S. Department of Energy, Tribal Energy Program, requesting that the Bureau of Indian Affairs (BIA)-Yakama Agency be granted Lead Agency Status in the preparation of the Environmental Assessment (EA) for the Drop 4 Hydroelectric Project being proposed by Yakama Power. We agree that the task of completing an EA for this project will be complex and that the BIA-Yakama Agency is in a unique position of accomplishing this task due to its familiarity with the area and the technical resources available.

We concur that the BIA-Yakama Agency assume the NEPA-Lead Agency role in the preparation of the EA for the Drop 4 Hydroelectric Project and that the U.S. Department of Energy, Energy Efficiency and Renewable Energy, be a cooperating agency working with the BIA-Yakama Agency. If you have any questions or require additional information, please contact Lizana Pierce at (303) 275-4727.

Sincerely,

A handwritten signature in blue ink, appearing to read "Carol Battershell".

Carol Battershell  
Executive Director for Field Operations (Acting)

cc: Lizana Pierce, TEP Project Manager  
Steve Blazek, DOE GFO  
Gary Hartman, DOE ORO





61220 Highway 97, Toppenish, WA office (509) 865-7697

P.O. Box 1279, Toppenish, WA 98948 Fax (509) 865-7698

Date: November 16, 2010  
To: Johnson Meninick, Cultural Resource Program Manager  
From: Steve Rigdon, Yakama Power Generation Manager  
Subject: Drop 4 Soil Pit Test for Low-Head Hydro Project

The Yakama Nation is proposing to install an inflow turbine at Drop 4 on the Wapato Irrigation Project (WIP) main canal to generate approximately one megawatt of hydroelectric power. The project is located two miles southwest of Harrah, near the intersection of Harrah Drain and McDonald Roads. There is a 20-foot drop on the main canal and the site has the potential to produce one megawatt of renewable hydro electrical power that will not drastically influence fishery issues. Yakama Power on behalf of the Yakama Nation is requesting a cultural resource and archaeological surveys at Drop 4 (map attached).

The initial step of the project is to conduct a soil test to determine how much civil work will be needed to build the facility. There will need to be three test pits to fully cover the project area. The material that will be disturbed is fill material from the canal bank that was used during the main canal construction. The test pit could be 15 to 20 ft deep and it would be ideal in the area where the powerhouse draft tube will be. However, we are not thinking this depth would be appropriate immediately adjacent or in the upper canal embankments. The intake structure test pit can be 10 to 12 ft deep, and a few feet shallower if we can dig this test pit in the dewatered upper canal bottom, say 25 to 40 ft upstream from the existing drop structure.

The lower canal should be dried out right now and it may be possible to dig a shallow test pit next to the existing concrete drop structure and expose a short section of the drop structure spread footing so we know what the existing structure is founded on. Then we can correlate to the deeper test pit at the proposed end of the powerhouse draft tube. This would give us good information as the new powerhouse will be founded at about the same elevation as the existing concrete drop structure.

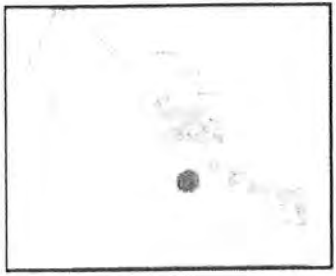
Once the tests are finished the engineering design will allow us to know if we will continue with this project or not. We will fill the test soil pits and reclaim the site to best of our ability. Would your staff be available to join our staff and consultants during the soil disturbance activities and monitor for archaeological and cultural resources? We would appreciate a Cultural Resource Committee Action with the standard protection measures and guidance stating so. We appreciate your cooperation concerning this matter.

Cc Phil Rigdon  
Connie Lewis  
Kate Valdez  
Debra Johnson & Fulcrum Environmental

RECEIVED NOV 17 2010



Map Center: Range 18 Township: 10 Section 4



Scale: 1 inch = 100 feet  
Legend:  
Water  
Road  
Field  
Drainage  
Elevation: 1000 - 1500 feet  
Map Date: 10/15/2010

WWW.YAKIMAP.COM  
Yakima County GIS  
128 N 2nd Street  
Yakima WA 98901  
(509)574-2992



Scale: 0 50 100 Feet





**Culture Committee Action  
F.Y. 2011  
Official Action**

**DATE:** 01-14-11

**TOPIC:** Yakama Power Drop 4 Phase I

**ACTION REQUESTED:** For the Culture Committee to approve the Cultural Resources Survey Report for Phase I of the Drop 4 Project, Proposed by Yakama Power.

**FORMAL ACTION TAKEN:** Culture Committee Approval of the Cultural Resources Survey Work Completed for Phase I of Drop 4 Project.

**DECISION:** APPROVED  DISAPPROVED ( ) TABLED ( )

**VOTE:** TOTAL 4 FOR 3 AGAINST 0 ABSTAINED 0

Members		Committee Activity			
		Roll Call	Motion	Second	Vote
Lavina Washines	Chairperson	Present			
Ruth Jim	Secretary	Present	ij		
Sam Jim Sr.	Member	Present		Sr.	for
Gerald Lewis	Member	P			for
	Ex Officio:				

**OTHERS PRESENT:** \_\_\_\_\_

**CERTIFICATION:** *Lavina Washines*  
CHAIRPERSON 01-19-11

**COMMITTEE ACTION NUMBER:** 033 2011

Distribution:  
Copies:

Original Committee File  
Committee Members  
Tribal Chairman  
Department/Program



UNITED STATES GOVERNMENT

*memorandum*

8 July 2011

**From:** Rocco Clark, Jr., Natural Resource Specialist (Environmental Coordinator)

**To:** IDT Members

**Subject:** IDT Agenda **Tuesday, July 19<sup>th</sup>, 2011**  
**Wildlife Annex Conference Room**

**9:00 AM to 9:45AM**                      **Drop 4 (Connie Lewis)**

**9:46 AM to 10:00 AM**                      **Solar Power (Rick Mains – Proposed Tenant)**

**9:46 AM to 12:00 PM**                      **Timber Sale Planning**

- Lakebeds III
- Pinegrass Ridge III
- East Satus
- Dry Creek South
- Panther Creek III
- Tepee Creek II
- Kinney Creek II
- Upper McCreedy Creek – Not Initiated Yet

\*Presale Foresters, Roads, Silviculturists, Archaeologists, Range, Soils, Cultural Resources, Fisheries, Water Resources, and Wildlife Program Representatives please prepare a written status report on each logging unit you are assigned and provide 20 copies for handouts at the meeting.

Thank You for your participation in IDT.

## **UPDATE : July 19, 2011-Yakama Nation Hydropower Project**

Background-YN DNR received a grant from the Department of Energy under the Renewable Energy Deployment in Indian Country grant program for \$1,099,461 which requires a 100% match from YN.

Goal: Construct a 1 megawatt low-head hydropower plant at Drop 4 on the Wapato Irrigation Project.

Project Team: Connie Lewis, DNR Energy Program, Chad Begay, Yakama Power Engineer, Steve Ridgon, Yakama Power Generation Manager,

Progress to Date: DOE approved Phase I-NEPA Compliance and granted BIA-Yakama Agency Lead Agency. A July 31, 2011 deadline set for completion of Phase I.

*September 2010* - Project presented to IDT.

*October 2010* -The IDT Site Field Trip to Drop 4. Fulcrum Environmental Engineer contracted to complete the EA.

*March 10, 2011* - Three soil samples were collected at 10 foot depths on Drop 4 to test for geotechnical report. Testing will include Natural Moisture Content, Sieve Analysis, Atterberg Limits, Triaxial Shear, Consolidated-Undrain w/Pore Pressure Measurements, Flexible Wall Permeability, Sample Trimming, Relative Density and Final reporting. The test results will be incorporated to refine the estimate for constructability for Drop 4 Project.

*June 8, 2011* - Department of Interior Division of Energy and Mineral Development awarded the YN Hydropower Project \$94,000 for EA, geotechnical report and other pre-construction activities.

*June 2011* - Requested a six month extension for Phase I because the geotechnical report is not completed.

*July 2011* - Contract with NAES Power Contractors to perform soil sample tests and provide the geotechnical report was reviewed and approved by Office of Legal Counsel. Contract is on Tribal Administrators desk for her review and approval.

### NEXT STEPS:

1. Follow DOE approved Task Narrative for NEPA Compliance (attached)
2. Fulcrum will complete EA using information from the Geotechnical Report.

Yakama Nation Hydropower Project  
National Environmental Protection Act Compliance  
Task Narrative

Task		Responsible Party	Status
I-Project Scoping and Community Outreach Plan		Yakama Nation	
1.1	Request assistance from Bureau of Indian Affairs (BIA) Interdisciplinary Team (IDT).	Connie Lewis, YN DNR	Request made and approved by BIA Superintendent
1.2	Request for Contract Proposals for the completion of an Environmental Assessment.	Connie Lewis, YN DNR	Completed
1.3	Select and negotiate contract terms with environmental engineering company.	Connie Lewis, Ray Wiseman, Steve Rigdon and Ken Jamison(Yakama Power)	Completed
1.4	Request IDT agenda item for monthly meeting.	Connie Lewis, YN DNR	Completed
1.5	Prepare preliminary scoping package for IDT, make available 1-2 weeks before IDT meeting. Include enough preliminary information to solicit relevant comments.	Selected Environmental Engineering Contractor	Completed 10/17/10
1.6	Scoping meeting with IDT and EA contractor to discuss proposed project alternatives. Start identification of issues and identify preferred alternative.	Rocco Clark, BIA Environmental Coordinator	Completed
1.7	Arrange IDT tour of Drop 4, Wapato Irrigation Project and discuss alternatives including the no-action alternative.	Rocco Clark, BIA Environmental Coordinator	Completed 10/22/10
2. Geotechnical Study		NAES Power Contractors	Contract signed on 03/03/11
2.1	Collect soil samples at the Drop 4 site location	NAES Power Contractors	Completed on 03/10/11
2.2	Test soil samples and return results to YN.	NAES Power Contractors	Pending
3. Complete Draft EA		Selected Engineering Contractor (Fulcrum)	Completed
3.1	Acquire and review existing relevant information, studies, documents, etc.	Fulcrum Environmental Engineers	Pending
3.2	Prepare draft Environmental Assessment. Include preliminary alternatives and conceptual design information, location, footprint, potential impacts.	Fulcrum Environmental Engineers	
3.3	Review of draft EA by IDT and comments submitted to EA contractor prior to public meeting.	Connie Lewis, IDT, other program staff, and affected public	
3.4	Request letter of "no-effect", Informal Consultation, or Formal Consultation for Endangered Species Act compliance.	Gina King, YN-Wildlife Program writes letter for Superintendent's signature	
3.5	Request Archeological and Cultural Resource surveys for National Historic Preservation Act, Section 106 compliance.	Connie Lewis, YN DNR	
3.6	Request Yakama Nation Cultural Committee Action after Archeological and Cultural Resource surveys have been completed.	Connie Lewis, YN DNR and Kate Valdez-YN THPO	
4. Public meeting preparation and presentation			
4.1	Schedule public meeting	Connie Lewis, Selected Engineering Contractor, Rocco Clark	
4.2	Initiate public meeting, provide draft EA, discuss issues, and identify additional issues and concerns.	Connie Lewis, YN DNR and Yakama Power Staff	





UNITED STATES GOVERNMENT

*memorandum*

8 November 2011

**From:** Rocco Clark, Jr., Natural Resource Specialist (Environmental Coordinator)

**To:** IDT Members

**Subject:** IDT Agenda **Tuesday, November 15<sup>th</sup>, 2011**  
**Wildlife Annex Conference Room**

**08:30 AM to 09:00 AM** Camas Patch Restoration – Mr. Ryan DeKnikker

**09:01 AM to 09:15 AM** Drop 4 Status Update – Ms. Connie Lewis

**09:16 AM to 09:45 AM** Corn Ground Pile Facility – Mr. Rick Mains

**09:46 AM to 11:30 AM** Timber Sale Planning

- Lakebeds III
- East Satus
- Panther Creek III
- Tepee Creek II
- Kinney Creek II
- Upper McCreedy Creek
- Clearwater Creek
- Hagerty Butte III

**11:31 AM to 12:00 PM** Mountain Pine Beetle (Salvage) – Mr. William Schuster

\*Presale Foresters, Roads, Silviculturists, Archaeologists, Range, Soils, Cultural Resources, Fisheries, Water Resources, and Wildlife Program Representatives please prepare a written status report on each logging unit you are assigned and provide 20 copies for handouts at the meeting.

Thank You for your participation in IDT.

**ROCCO J. CLARK, JR., NATURAL RESOURCE SPECIALIST (ENVIRONMENTAL COORDINATOR)**

**NATURAL RESOURCES – SOILS & ENVIRONMENTAL SECTION**

**YAKAMA AGENCY – BUREAU OF INDIAN AFFAIRS**

**IDT MEETING SUMMARY ON 11-15-2011**

The summary will comprise of specific points discussed at the IDT (see below).

**Camas Patch Restoration (Ryan DeKnikker)**

- Mr. DeKnikker provided the following updates (power point presentation)
  - Project proposed start will be June 2012 (summer)
- IDT recommended to consult with Mr. Fred Ike on structures
- No paper copy documents distributed to the IDT

**Drop 4 Status Update (Connie Lewis and Peggy Williamson)**

- Ms. Lewis provided the following updates
  - Proposed project waiting on geotechnical work (soil samples)
- Ms. Williamson provided the following updates
  - Ms. Williamson will provide more information for the IDT to evaluate and assess to complete resource comments on the proposed project. The proposed project EA with IDT comments will have a close to final EA prepared for the next IDT meeting in December.
- Mr. Edwin Lewis requested a WIP permit be obtained
- No paper copy documents distributed to the IDT

**Corn Ground Pile Facility (Rick Mains and Nathan Larsen)**

- Mr. Mains provided the following updates
  - Proposed project with tenant (Nathan Larsen) to expand capacity of current operation on fee land onto trust property to serve the expanding needs of corn storage.
  - The facility will use approximately 5.5 acres for storage.
  - The site will have an asphalt surface, piles will be covered by tarp, electrical building will be on-site, fans will dry the corn, and fuel will not be stored on property, potable water for employees.
- IDT recommended the following
  - Permit from WIP be obtained
  - Zoning be addressed with Mr. Virgil James – change of use
- Paper copy of map distributed to the IDT.

## **Timber Sale Planning**

### **Hagerty Butte III (Rob Mallery for Tia Beavert – BIA Presales)**

- Mr. Mallery provided the following updates
  - Need resource reports
- Mr. Jeff Deardorff gave brief description of the silviculture
- Field trip scheduled to the logging unit for 8am December 5<sup>th</sup>, 2011
- Paper copy of the status update distributed to the IDT

### **Clearwater Creek (Lindsay Maldonado – BIA Presales)**

- Mr. Maldonado provided the following updates
  - Mr. Maldonado read the IDT meeting matrix for the Clearwater Creek logging unit which included Reference (Chapter, Section and Page per MEAs), Alternative A (No Harvest), and Alternative B – timber harvest, tractor and skyline (Areas for MEAs, General Forest, Alpine, Safety Corridor, Riparian and OG, Non Harvest Entry MEAs, deferral areas)
- Ms. Trudy Pinkham gave notice to IDT that the “Roadless” topic determined by tribal council timber committee will be revisited.
- IDT recommended and provided the following
  - The topic of “roadless” stay as a standalone issue as determined from tribal council timber committee.
  - Mountain goat winter area is likely in the Alpine MEA (primarily roadless area).
  - Bull trout likely in Trappers Creek
  - Concern with work on roads
  - Engineering will use funds from couple timber sales for the roads (Mount Adams Road and Potato Hill Road)
  - Recommended for IDT to provide written response on the issue of “Roadless” (Alpine MEA that is primarily roadless) as a standalone (Issue Number 7)
- IDT site visit scheduled 8am October 26<sup>th</sup>, 2011.
- Maps when provided will be routed to the IDT.
- Paper copy of the Clearwater Creek logging unit status distributed to the IDT.

### **Lakebeds III (Lindsay Maldonado – BIA Presales)**

- Mr. Maldonado provided the following updates
  - Mr. Dave Shaw of OST assisting on research of the US97 and BPA ROW issues relating to the safety concern and liability.
- Mr. Mark Nuetzmann and Mr. Jeff Deardorff will work together with regards to the Section 7 consultation (formal or informal)
- Paper copy of the Lakebeds III logging unit October 18<sup>th</sup>, 2011 Memorandum distributed to the IDT.

### **Panther Creek III (Lindsay Maldonado – BIA Presales)**

- Mr. Maldonado provided the following updates
  - Timber cruising 90% completed

- Consultation will depend upon entry into Spotted Owl habitat (formal or informal)
- Paper copy of the Panther Creek III logging unit distributed to the IDT.

#### **East Satus (Lindsay Maldonado – BIA Presales)**

- Mr. Maldonado provided the following updates
  - Mr. Dave Shaw of OST assisting on research of the US97 and BPA ROW issues relating to the safety concern and liability.
  - Need final reports (deadline will be next month – mid month)
  - Consultation will be Informal – Biological Evaluation
- Paper copy of the East Satus logging unit status distributed to the IDT.

#### **Tepee Creek II (Robert Mallery – BIA Presales)**

- Mr. Deardorff stated the riparian needs harvesting
- No paper copy of the Tepee Creek II logging unit status distributed to the IDT.

#### **Kinney Creek (Robert Mallery – BIA Presales)**

- Mr. Mallery provided the following updates
  - Likely formal consultation
- Ms. Merrilie Gunnier - Archaeology report target completion is next spring
- Ms. Yvonne Colfax - Concern with which roads will be utilized
- Ms. Fred Ike – Engineering 60% complete
- No paper copy of the Kinney Creek logging unit status distributed to the IDT.

#### **Upper McCreedy Creek (Jon Sampson – BIA Presales)**

- Mr. Jon Sampson provided the following updates
  - Read status update
- Discussion on consultation
- Mr. Eric Joliffe briefly discussed the silviculture prescription (patch cuts)
- Wet areas being negotiated
- Request from IDT to check a section (west side of LU) which used to be primitive area
- Paper copy of the Upper McCreedy logging unit distributed to the IDT

#### **Pinegrass Ridge III LU – Handoff Meeting (Jon Sampson – BIA Presales)**

- IDT resources gave TSOs issues of concern
- Mountain Goat Buffer – 3 options being presented to tribal council for determination

#### **Mountain Pine Beetle – Salvage (William Schuster – BIA Forestry)**

- Mr. Schuster provided the following updates
  - MPB information (plus maps) when obtained will be forwarded to the IDT
  - Working on transferring funds to the IDT resources
  - Harvesting lodge pole in the Sheep Butte LU

#### **Other**

- Ms. Gunnier and Mr. Deardorff provided status briefs to the IDT



UNITED STATES GOVERNMENT

*memorandum*

14 June 2012

**From:** Rocco Clark, Jr., Natural Resource Specialist (Environmental Coordinator)

**To:** IDT Members

**Subject:** IDT Agenda

**Tuesday, June 19<sup>th</sup>, 2012**  
**Wildlife Annex Conference Room**

**08:30 AM to 09:30 AM**      **Bonneville Power Administration**

- Project 1: North Bonneville – Midway Tower 75/4 Relocation – Access Road Improvement
- Project 2: Wautoma Ostrander Surface Impairment Work

**09:31 AM to 10:00 AM**      **Drop 4 Project**

**10:01 AM to 12:00 PM**      **Timber Sale Planning**

- Lakebeds III
- Panther Creek III
- Tepee Creek II
- Kinney Creek II
- Upper McCreedy Creek
- Hagerty Butte III
- Sheep Butte II
- Clearwater Creek - Will not be discussed until Dr. BJ Howerton, NWRO NEPA Specialist Reviews for Recommendation to Yakama Agency Superintendent

\*Presale Foresters, Roads, Silviculturists, Archaeologists, Range, Soils, Cultural Resources, Fisheries, Water Resources, and Wildlife Program Representatives please prepare a written status report on each logging unit you are assigned and provide 20 copies for handouts at the meeting.

Thank You for your participation in IDT.





UNITED STATES GOVERNMENT

*memorandum*

12 December 2011

**From:** Rocco Clark, Jr., Natural Resource Specialist (Environmental Coordinator)

**To:** IDT Members

**Subject:** IDT Agenda **Tuesday, December 20<sup>th</sup>, 2011**  
**Wildlife Annex Conference Room**

**08:30 AM to 9:15 AM** Drop 4 Project – Ms. Connie Lewis & Ms. Peggy Williamson

**09:16 AM to 10:00 AM** Legends Casino Expansion Project - Mr. Ray Spencer  
Environmental Review

**10:01 AM to 11:30 AM** Timber Sale Planning

- Lakebeds III
- East Satus
- Panther Creek III
- Tepee Creek II
- Kinney Creek II
- Upper McCreedy Creek
- Hagerty Butte III
- Sheep Butte II – Initiated November 10<sup>th</sup>, 2011

**11:31 AM to 12:00 PM** Mountain Pine Beetle (Salvage) – Mr. William Schuster

\*Presale Foresters, Roads, Silviculturists, Archaeologists, Range, Soils, Cultural Resources, Fisheries, Water Resources, and Wildlife Program Representatives please prepare a written status report on each logging unit you are assigned and provide 20 copies for handouts at the meeting.

Thank You for your participation in IDT.

**ROCCO J. CLARK, JR., NATURAL RESOURCE SPECIALIST (ENVIRONMENTAL COORDINATOR)**

**NATURAL RESOURCES – SOILS & ENVIRONMENTAL SECTION**

**YAKAMA AGENCY – BUREAU OF INDIAN AFFAIRS**

**IDT MEETING SUMMARY ON 12-20-2011**

The summary will comprise of specific points discussed at the IDT (see below).

**Drop 4 Status Update (Ms. Connie Lewis and Ms. Peggy Williamson)**

- Ms. Lewis and Ms. Williamson provided the following updates
  - Department of Energy is a cooperating agency with information forwarded for their review and comment
  - Proposed project waiting on geotechnical work (soil samples)
  - Environmental Assessment is only draft form, resource reports are needed once Ms. Williamson provides more information.
  - Permits required (FERC, WIP, etc...)
- IDT had concerns and comments
  - Is a Biological Assessment needed (Fisheries)?
  - What consultation will be needed (no effect, informal, formal)? YN Fisheries will complete documentation determining the consultation.
  - Goal to get ESA fish out of Harrah Drain into Toppenish Creek (idea of implementing a fish screen)
  - Concern with stabilization of the banks (soil saturation)
  - Landowners affected by the project
  - YN & WIP Memorandum of Agreement
  - Under what water quality standards (State, Tribal, or US EPA)
- Paper copies and CD of the Draft Environmental Assessment distributed to the IDT

**Legends Casino Expansion Project (Mr. Ray Spencer and Mr. Frank Whitefoot)**

- Mr. Spencer and Ms. Whitefoot provided the following updates on Legends Casino addressing comments received by YN Water Resources (Yvonne Colfax)
  - Hotel will be a six story not a five story
  - A multi-story (3 story) parking garage will be implemented in the first phase of the project
  - Front of house square footage increase – justification will be incorporated within the EA document (Environmental Review)
  - Engineering Shop square footage increase – justification will be incorporated within the EA document
  - Disruption will be evident for the various departments due to the remodels and construction of the project

- Childcare facility square footage increase – justification will be incorporated within the EA document
- Project Need will be changed and modified to fit the original intent of the project
- Sewer Source Summary with the MBR and the Task Force comprised to resolve the issues with mitigation measures developed – The MBR Task Force has been evaluating the failed effluent infiltration bed with short term and long term mitigation measures. The short term resolution identified by the MBR Task Force is to route effluent in excess or irrigation needs to the City of Toppenish’s WWTP. The longer term solution currently being evaluated by the MBR Task Force is discharging excess effluent to Wanity Slough under a National Pollutant Discharge Elimination System (NPDES) permit. Short Term discharge is to the Wapato Irrigation Project ditch located south of the treatment plant.
- Stormwater Summary – Legends will address the issue of a storm water management plan (sand oil separator) with regards to the parking garage and the project.
- Air Quality – Requesting the air quality within the building be addressed. The expansion with larger gaming area with current gaming machines will be placed into the new gaming area, which the Events Center was not built as a smoking gaming area. More fresh air intakes will be implemented into the expansion area.
- Tribal Council approved for Legends Casino to use the International 2006 Standards
- Potable Water – Recently, a water well was installed to an approximate depth of 425 feet on the site to provide potable and fire suppression water. The system design was augmented by a water storage tank that interconnects with the Yakama Nation Facilities system such that potable water can be supplied by either system to any of the interconnected system consumers. The potable water will be pumped with regards to the proposed hotel.
- Paper copies and CD of the Draft Environmental Assessment (Environmental Review) distributed to the IDT

### **Timber Sale Planning**

#### **Clearwater Creek, Lakebeds III, Panther Creek III, East Satus, and Sheep Butte II (Lindsay Maldonado – BIA Presales)**

- Mr. Robert Mallery informed the IDT Mr. Maldonado is sick
- Paper copy of status updates on the logging units have been distributed to the IDT.

#### **Tepee Creek II and Kinney Creek II (Robert Mallery – BIA Presales)**

- No change
- Paper copy of the status updates on the logging units have been distributed to the IDT.

#### **Upper McCreedy Creek (Jon Sampson – BIA Presales)**

- Mr. Jon Sampson provided the following updates

- OGMEA (2) – already existing (demonstrated on new sale map)
- West end boundary of sale has been cleaned up
- Waiting on information from fisheries to proceed on working on the riparian's
- Paper copy and updated map of the Upper McCreedy logging unit distributed to the IDT

**Hagerty Butte III (Tia Beavert – BIA Presales)**

- Ms. Beavert provided the following updates
  - Need resource reports
  - Tribal fee property identified on the sale map
- Paper copy of the Hagerty Butte III status update distributed to the IDT

**Mountain Pine Beetle – Salvage (William Schuster – BIA Forestry)**

- No status update – Mr. Schuster did not attend the IDT meeting

**Peggy Williamson**

---

**From:** Clark, Rocco <rocco.clarkjr@bia.gov>  
**Sent:** Thursday, February 16, 2012 3:03 PM  
**To:** Connie J. Lewis; Peggy Williamson; Steve Rigdon  
**Cc:** Connie Lewis (yakaree@yakama.com)  
**Subject:** Wapato Drop 4 Proposed Hydroelectric Project

FYI

---

**From:** Stephen Lewis@fws.gov [mailto:Stephen.Lewis@fws.gov]  
**Sent:** Thursday, February 16, 2012 2:57 PM  
**To:** Clark, Rocco  
**Subject:** Wapato Drop 4 Proposed Hydroelectric Project

Rocco-

I'm the hydropower rep for USFWS in north central WA and had a few questions regarding the subject project:

- When will BIA file for an exemption with FERC?
- What is the deadline for filing comments on the subject EA?

Thanks ahead of time!

S-

\*\*\*\*\*

Stephen T. Lewis  
Hydropower and Energy Coordinator  
U.S. Fish and Wildlife Service  
Central Washington Field Office  
215 Melody Lane, Suite 119  
Wenatchee, WA 98801  
phone: (509) 665-3508 Ext. 14  
fax: (509) 665-3523  
e-mail: [Stephen.Lewis@fws.gov](mailto:Stephen.Lewis@fws.gov)





61220 Highway 97, Toppenish, WA office (509) 865-7697

P.O. Box 1279, Toppenish, WA 98948 Fax (509) 865-7698

Date: April 24, 2012

To: Johnson Meninick, Cultural Resource Program Manager

From: Steve Rigdon, Yakama Power Generation Manager *SR*

Subject: Drop 4

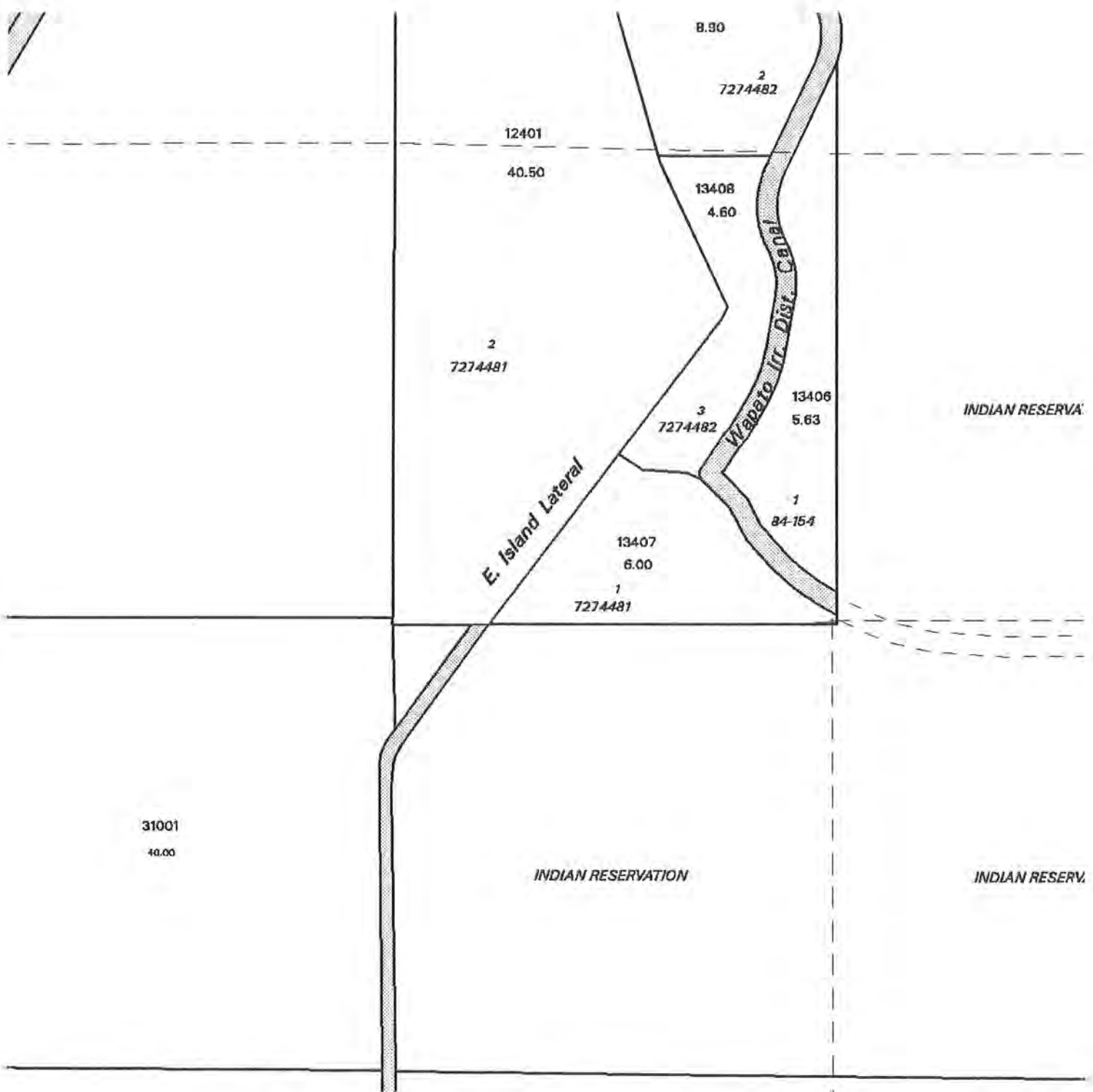
The Yakama Nation is proposing to install an inflow turbine at Drop 4 on the Wapato Irrigation Project (WIP) main canal to generate approximately one megawatt of hydroelectric power. The project is located two miles southwest of Harrah, near the intersection of Harrah Drain and McDonald Roads. There is a 20-foot drop on the main canal and the site has the potential to produce one megawatt of renewable hydro electrical power. Yakama Power on behalf of the Yakama Nation is requesting a cultural resource and archaeological survey at Drop 4 (maps attached and aerial photo).

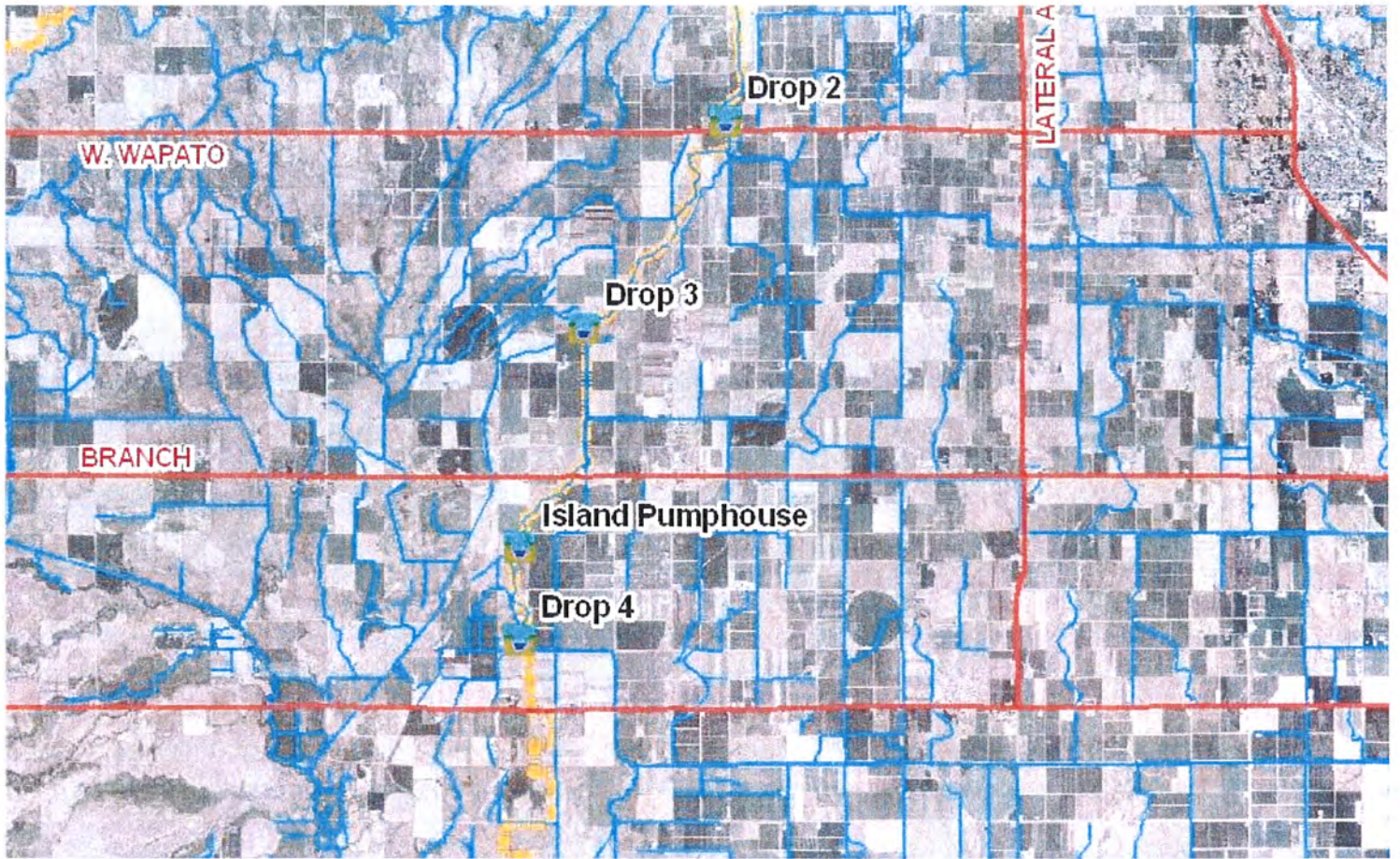
We have completed the initial step of the project, conducting a soil test to determine how much civil engineering work will be needed to build the facility. Your Cultural Resource Program monitored that activity. We have a design packet and want to complete the EA. The DNR Energy Program has funding to pay for your staff's survey and report. We are requesting the Cultural Resource Program survey and report on the low-head hydro development project for Drop 4.

We appreciate your cooperation concerning this matter.

Cc Phil Rigdon  
 Connie Lewis  
 Kate Valdez  
 Fulcrum Environmental

RECEIVED MAY 18 2012



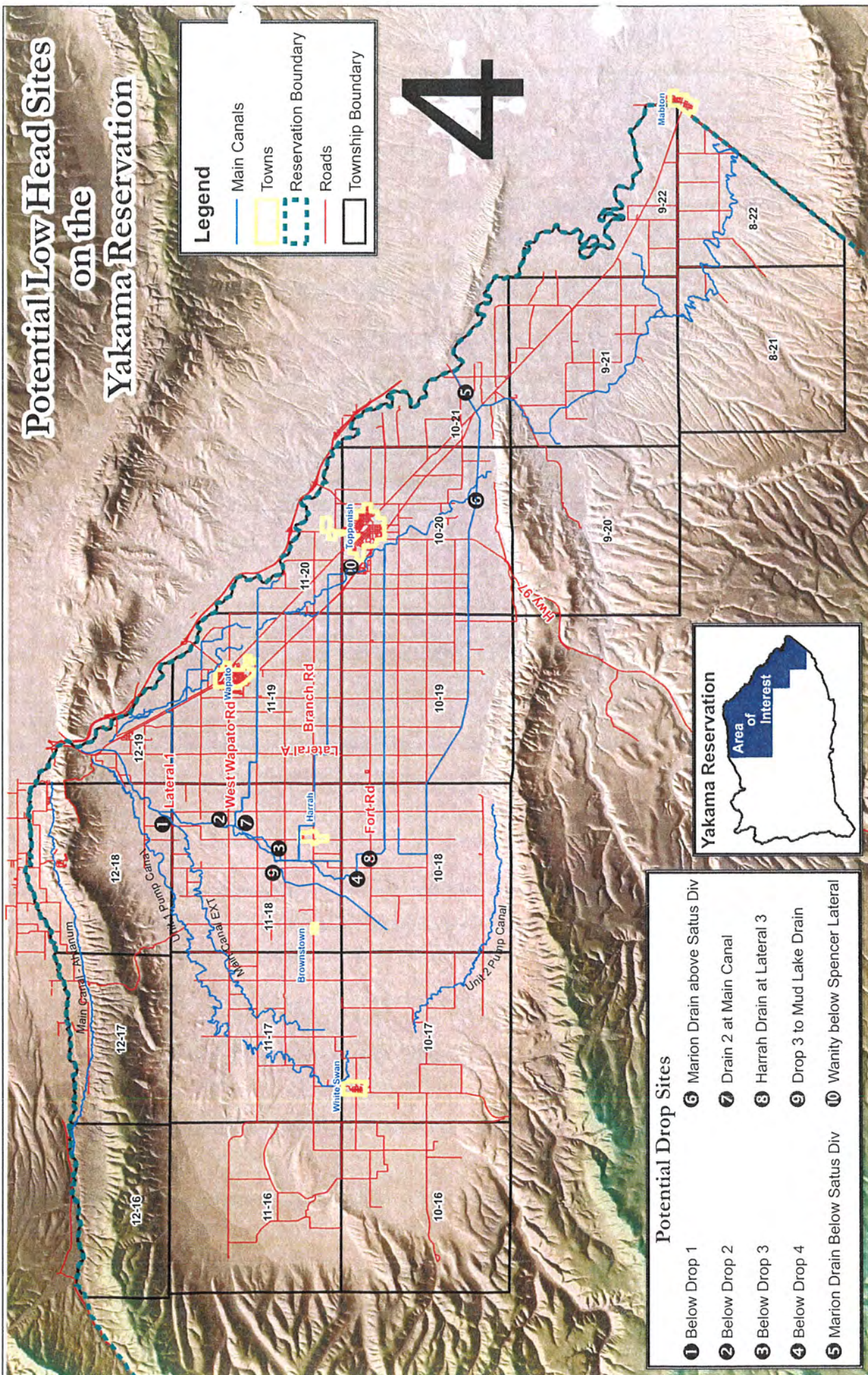




# Potential Low Head Sites on the Yakama Reservation

- Legend**
-  Main Canals
  -  Towns
  -  Reservation Boundary
  -  Roads
  -  Township Boundary

# 4



- Potential Drop Sites**
- 1** Below Drop 1
  - 2** Below Drop 2
  - 3** Below Drop 3
  - 4** Below Drop 4
  - 5** Marion Drain Below Satus Div
  - 6** Marion Drain above Satus Div
  - 7** Drain 2 at Main Canal
  - 8** Harrah Drain at Lateral 3
  - 9** Drop 3 to Mud Lake Drain
  - 10** Wanity below Spencer Lateral





Lay Down Area  
and Construction  
Area





**United States Department of the Interior**  
**Bureau of Indian Affairs**  
Yakama Agency  
P.O. Box 632  
Toppenish, WA 98948



IN REPLY REFER TO:  
4500 Natural Resources  
Environmental

May 30, 2012

Fulcrum Environmental Consulting  
Ms. Peggy Williamson, CHMM  
406 North 2<sup>nd</sup> Street  
Yakima, Washington 98901

RE: Drop 4 Project – Environmental Assessment

Dear Ms. Williamson:

Per our conversation, I have completed a response regarding the Department of Energy's (DOE) comments on the Draft Drop 4 Environmental Assessment (EA). In review of the DOE comments with regards to conformance of the project with Bureau of Indian Affairs (BIA) Land Use Plan, the following response has been provided below.

The Bureau of Indian Affairs of Yakama Agency does not have a land use plan for the Yakama Nation, but has worked together on various land use planning across the Yakama Reservation (Wapato Irrigation Project, Yakama Nation Zoning, Yakama Nation Water Code, etc...). As the Yakama Nation is a sovereign nation by treaty with the United States Government, "Treaty with the Yakamas", (12 Stat. 951), with a reservation set aside for the use of the Yakama Nation. The Yakama Nation has its own Zoning Regulations administered by the Zoning Administration Program, which oversees and manages the land use planning for the Yakama Reservation.

If you have any further questions please call to the attention of Rocco Clark, Jr., Natural Resource Specialist (Environmental Coordinator) at 509-865-2255, extension 4195.

Sincerely,

Rocco Clark, Jr., Natural Resource Specialist  
Yakama Agency





**Culture Committee Action  
F.Y. 2012  
Official Action**

**DATE:** 06-05-2012

**TOPIC:** Yakama Power Drop 4 Projec

**ACTION REQUESTED:** For the Culture Committee to approve the Cultural Resources Survey Report for the Drop 4 Hydro-power Project, Proposed by Yakama Power.

**FORMAL ACTION TAKEN:** Culture Committee Approval of the Cultural Resources Survey Work Completed for Drop 4 Hydro-power Project.

**DECISION:** APPROVED (x) DISAPPROVED ( ) TABLED ( )

**VOTE:** TOTAL 4 FOR 3 AGAINST 0 ABSTAINED 0

Members		Committee Activity			
		Roll Call	Motion	Second	Vote
Ruth Jim	Chairperson	<i>present</i>			
Gerald Lewis	Secretary	<i>P</i>		<i>GL</i>	<i>for</i>
Sam Jim Sr.	Member	<i>Praspat</i>	<i>GR</i>		<i>for</i>
Vivian "Babs" George	Member	<i>P</i>			<i>for</i>
	Ex Officio:				<i>for</i>

**OTHERS PRESENT:** \_\_\_\_\_

**CERTIFICATION:** *[Signature]* 6/12/12  
CHAIRPERSON

**COMMITTEE ACTION NUMBER:** 047 2012

Distribution:  
Copies:

Original Committee File  
Committee Members  
Tribal Chairman  
Department/Program



Confederated Tribes and Bands  
of the Yakama Nation

Established by the  
Treaty of June 9, 1855

## MEMORANDUM

TO: Ruth Jim, Chairwoman

THROUGH: Philip Rigdon, Deputy Director, DNR *MR*

FROM: Kate Valdez, Tribal Historic Preservation Officer *KV*

DATE: June 5, 2012

SUBJECT: Yakama Power Drop 4 Project

---

I have reviewed the report for the Yakama Power Drop 4 Phase Project by Cultural Resource Program Archaeologists Jillian Taylor and Cultural Resource Program Archaeologist Technician, Randell Corpuz.

The project area is 1.3 acres, where a pedestrian survey of the area was completed. A majority of the project area has fill material. No cultural resources were identified within the project area. Therefore I concur with the recommendation to move forward with the project as planned, with monitoring taking place if any ground disturbing activities occur in the area adjacent to the drop that is not fill material.

If you concur with the report and recommendations, a Committee Action is attached for approval.

If you have any questions regarding this memo please feel free to contact me at ext. 4840.

Cc: THPO Files

**Appendix B** Senate Bill 6693



S 6693.

with in the project for which a water supply of four hundred  
cubic feet **IN THE SENATE OF THE UNITED STATES.** shall receive appro-  
priation of **May 2. (Calendar Day May 6, 1912.** amount of said storage

Mr. Jones introduced the following bill, which was read twice  
and referred to the Committee on Indian Affairs.

the extent of seventy thousand acres additional, more or less,  
shall bear the proportionate cost for providing said  
storage waters in the river, except that provided for in the  
preceding paragraph, which cost shall be a charge against

**A B I L L.**

To provide water for irrigating lands on the Yakima Indian Res-  
ervations as excavation, Washington, land for other purposes.

Be it enacted by the Senate and House of Representatives of

atives of the United States of America in Congress assembled, less,  
That for the purpose of constructing storage reservoirs to have been  
impound flood waters of the Yakima River to provide one  
thousand five hundred cubic feet of water per second of time  
at the reservation gates for the irrigation of one hundred and  
twenty thousand acres, more or less, on the Yakima Indian  
Reservation, there is hereby appropriated, out of any money in  
the Treasury not otherwise appropriated, the sum of one  
million six hundred thousand dollars, or so much thereof as may be  
necessary, to be expended in said works, by the Recla- water  
nation Service.

Sec. 2. That the lands within the project on the  
Yakima Indian Reservation, owned by Indians in fee or

1 otherwise, to the extent of thirty-two thousand acres, esti-  
2 mated to be necessary for the support of Indians allotted  
3 within the project for which a water supply of four hundred  
4 cubic feet per second of time is required, shall receive water  
5 free of any and all cost or charge on account of said storage  
6 works.

7 Sec. 3. ~~That~~ other lands under Indian ownership to  
8 the extent of seventy thousand acres additional, more or less,  
9 shall bear the proportionate acreage cost for providing said  
10 storage waters in the river, except that provided for in the  
11 preceding paragraph, which cost shall be a charge against  
12 said lands, to be paid on such terms and under such regula-  
13 tions as the Secretary of the Interior shall prescribe.

14 Sec. 4. That the claims for water of the owners of  
15 the remaining area of eighteen thousand acres, more or less,  
16 of irrigable Indian land, the Indian title to which has been  
17 extinguished shall be equitably adjusted by the Secretary of  
18 the Interior: Provided, That any payments by owners of  
19 said lands on account of said storage works shall be deposited  
20 in the Treasury to the credit of the United States.

21 Sec. 5. That the owners of irrigable lands within  
22 the project shall pay the proportionate cost of the distribu-  
23 tion and drainage systems upon such terms as may be fixed by  
24 the Secretary of the Interior; Provided, That no water  
25 ~~shall~~ shall be furnished as herein provided for until the owners of

3.

- 1 deeded or sold lands, and Indians holding lands in fee bene-
- 2 fitted thereby shall have agreed to pay such proportionate
- 3 share, such payments when received to be a part of the tribal
- 4 funds of the Yakima Indians

SUBJECT: .....

SUPERVISING ENGINEER'S OFFICE

PORTLAND, OREGON.

JUN 17 1912

DEPARTMENT OF THE INTERIOR  
UNITED STATES RECLAMATION SERVICE

*Senate Bill*

PORTLAND, ORE., June 15, 1912.

Consulting Engineer to Supervising Engineer

North Yakima, Washington.

Subject: Copies of Senate Bill 6693.

1. Your letter of May 23rd is at hand stating that three type-written copies of ~~recent~~ *Senate* Bill 6693 had been sent to my office by mistake.

2. Just at present I can find only one copy, which however, I take pleasure in sending you herewith. Should you have any spare copies later on, I will be pleased to receive one for my files.

-----  
Encls.1

*L. O. Henry*

Mr. Henry:

Printed copies of the bill have now been received. Your copy returned herewith with thanks.

*Chas. H. Swigart*

YAKIMA  
PUBLIC LIBRARY



*Yakima Indians - Irrigation*

FRED LOCKLEY  
4227 S. E. STARK STREET  
PORTLAND, OREGON

Local history

July 24, 1941

Librarian  
Public Library  
Yakima, Washington

Dear Librarian:

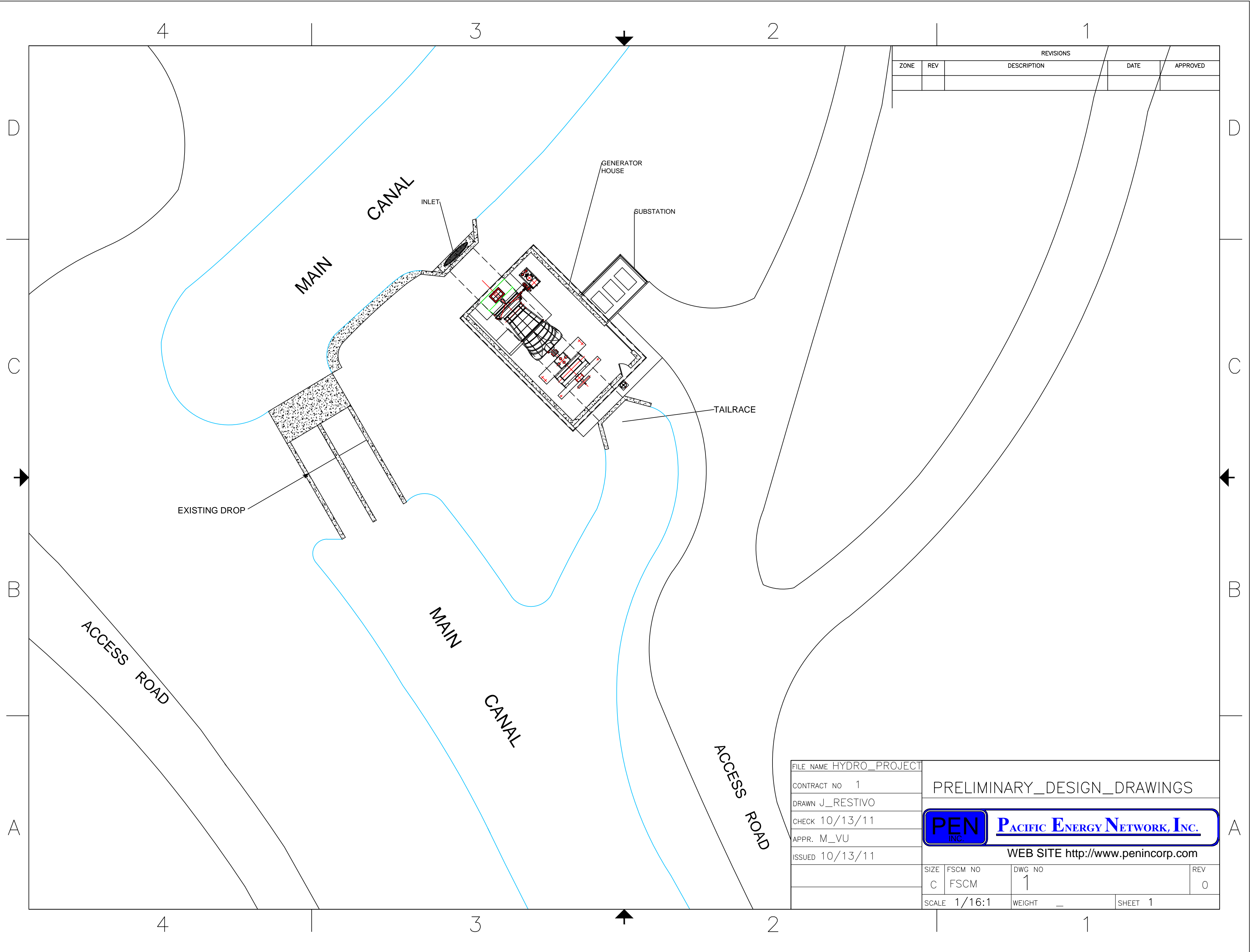
In looking over my papers, I ran across a letter dated May 6th, 1912, about your part of the country, so I am sending it to you for your files, as it may come in handy some day for research work. I am sending it with my compliments.

Cordially yours,

*Fred Lockley*

13 tions as excavation, Washington, land for other purposes.  
1 14 Be it enacted by the Senate and House of Representatives  
2 of the United States of America in Congress assembled, that  
3 That for the purpose of constructing storage reservoirs to  
4 impound flood waters of the Yakima River to provide one  
5 thousand five hundred cubic feet of water per second of time  
6 at the reservation gates for the irrigation of one hundred and  
7 twenty thousand acres, more or less, on the Yakima Indian  
8 Reservation, there is hereby appropriated, out of any money in  
9 in the Treasury not otherwise appropriated, the sum of one distribu-  
10 million six hundred thousand dollars, or so much thereof as may be  
11 may be necessary, to be expended in said works by the Recla- water  
12 nation Service. All be furnished as herein provided for until the amount  
13 Sec. 2. That the lands within the project on the  
14 Yakima Indian Reservation, owned by Indians in fee or

## **Appendix C** Project Drawings



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

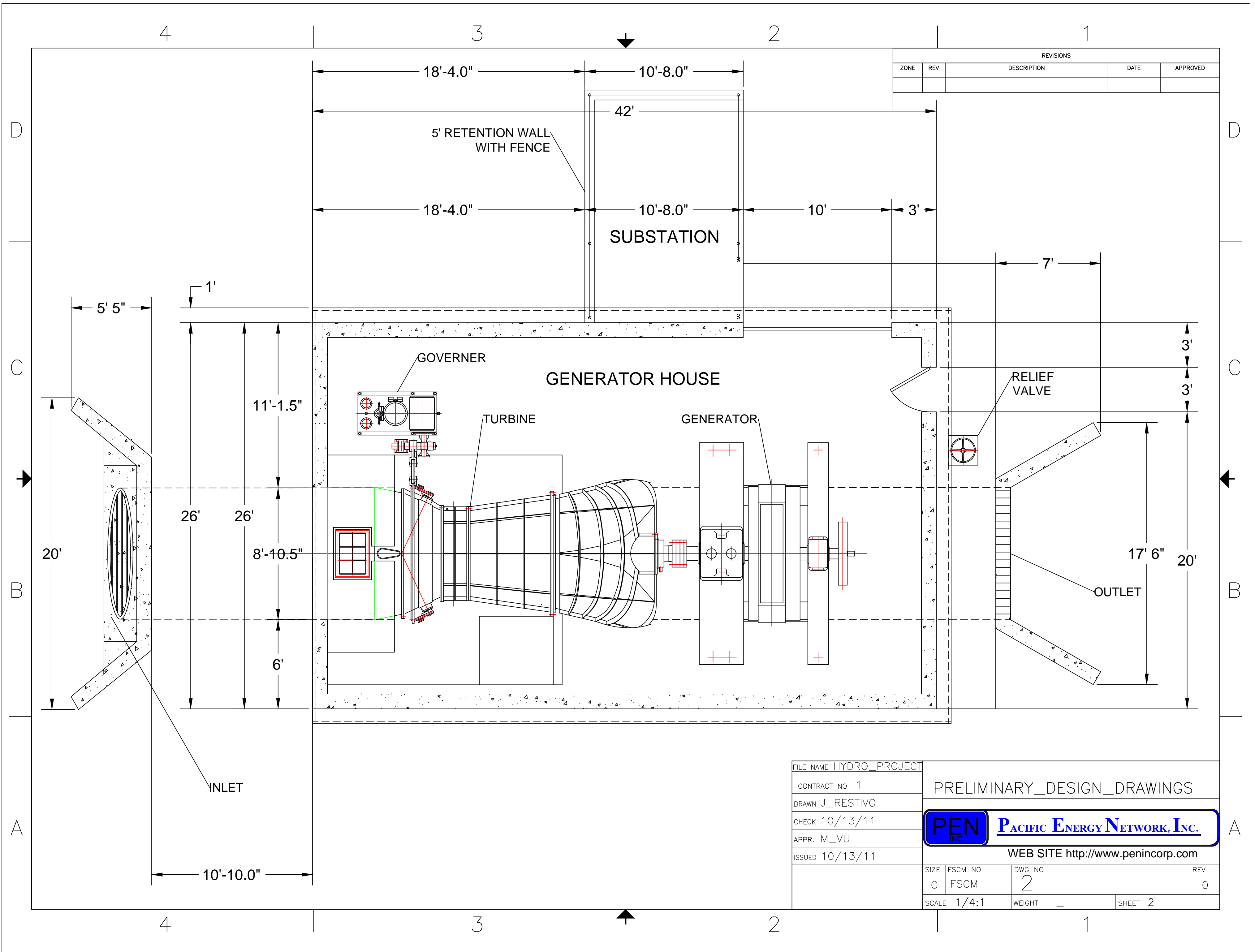
FILE NAME	HYDRO_PROJECT
CONTRACT NO	1
DRAWN	J_RESTIVO
CHECK	10/13/11
APPR.	M_VU
ISSUED	10/13/11

PRELIMINARY\_DESIGN\_DRAWINGS



WEB SITE <http://www.penincorp.com>

SIZE	FSCM NO	DWG NO	REV
C	FSCM	1	0
SCALE	1/16:1	WEIGHT	—
		SHEET	1



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

**GENERATOR HOUSE**

**SUBSTATION**

5' RETENTION WALL WITH FENCE

GOVERNOR

TURBINE

GENERATOR

RELIEF VALVE

OUTLET

INLET

FILE NAME	HYDRO_PROJECT
CONTRACT NO	1
DRAWN	J_RESTIVO
CHECK	10/13/11
APPR.	M_VU
ISSUED	10/13/11

PRELIMINARY\_DESIGN\_DRAWINGS



WEB SITE <http://www.penincorp.com>

SIZE	FSCM NO	DWG NO	REV
C	FSCM	2	0
SCALE	1/4:1	WEIGHT	SHEET 2

4

3

2

1

D

D

C

C

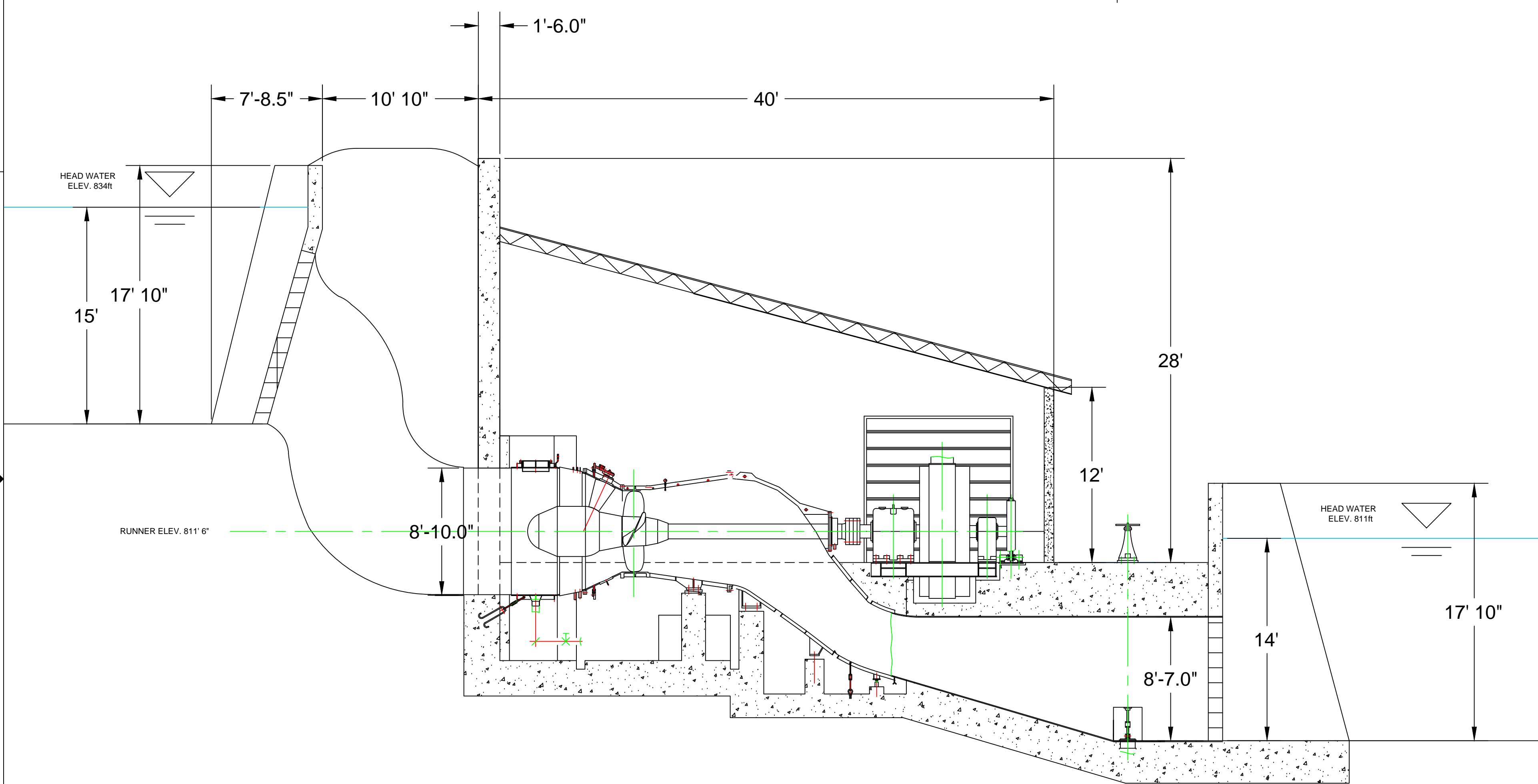
B

B

A

A

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



FILE NAME	HYDRO_PROJECT
CONTRACT NO	1
DRAWN	J_RESTIVO
CHECK	10/13/11
APPR.	M_VU
ISSUED	10/13/11

PRELIMINARY\_DESIGN\_DRAWINGS





SIZE	FSCM NO	DWG NO	REV
C	FSCM	3	0
SCALE	1/4:1	WEIGHT	SHEET 3

**Appendix D** Yakama Nation Engineering Program Report



## Memorandum

Date: April 3, 2009  
To: Ray Wiseman, Yakama Power General Manager  
CC: Connie Lewis, Yakama Nation Energy Specialist  
From: Justin Jacob, Yakama Nation Engineer   
Through: Chane Salois, Yakama Nation Engineering Program Manager   
Subject: Additional 1MW on WIP

Per your request, the Yakama Nation Engineering Program analyzed the Wapato Irrigation Project (WIP) with the goal of producing an additional 1MW of power. The following constraints were given: 1) minimal environmental impacts and 2) proximity to existing WIP power lines. Under the given constraints power production off of the Main Canal at Drain 2, Harrah Drain and Drop 4 deserve further analysis.

Concerning potential environmental impacts, the Drain 2 and Drop 4 sites are unlikely to trigger environmental concerns as long as current WIP operating procedures are not drastically altered to solely serve the purpose of hydropower generation. The Harrah Drain site may trigger some environmental concerns due to the potential existence of steelhead in the drain.

The proposed sites are relatively near the existing WIP 34.5KV power line (according to 1978 WIP maps). The Drain 2 site is at Main Canal station 390+30 and 2700 feet east of the WIP power line on Harrah Road. The Harrah Drain site is at Main Canal station 560+49 and 1300 feet east of the WIP power line on Batali Road. The Drop 4 site is at Main Canal station 688+55 and 1700 feet west of the WIP power line on Harrah Drain Road.

Flow data for these sites was collected and recorded by WIP. Flow data from Drain 2 and Drop 4 is accurate due to the ramp flumes installed at these sites. The flow data at Harrah Drain is less accurate since no reliable measurement structure exists, but the flow data reported is reasonable. Since all proposed sites originate from the same source (Main Canal), the highest daily combined sum of flow was used to determine potential hydropower production. This method was utilized to eliminate outliers that arise during operational transitions within WIP. In short, if an excessive amount of flow was diverted into one of the proposed sites less flow would be available at the other sites.

Available head at Drain 2 and Harrah Drain was determined by measuring the difference in high water marks from the Main Canal to the respective drain. However, to achieve the drop listed for Drain 2, the ramp on the flume must be lowered or replaced with an acoustic doppler. The available head at Drop 4 was previously determined by Harza (1994 Harza Report).

As directed, cross section data was collected for Drain 2. Cross section data was also collected for Harrah Drain. Your staff informed us that no surveying was necessary on Drop 4 because it was available in the Harza Report. When you decide to solicit requests for proposals, please

direct prospective bidders to also view the 1978 WIP maps to assess site preparation, access and construction execution.

The following table illustrates the combined potential hydropower production of the proposed sites. Please note friction losses and plant efficiency will reduce the actual power production of these sites. Additionally, power production will be manipulated by WIP operations and is directly related to the amount of water diverted into the Main Canal at Wapato Dam.

	Drain 2	Harrah Drain	Drop 4	
Highest Combined Sum 7/9/2008, cfs	150	150	431	
Drop, ft	12	18	21	<b>Total kW</b>
Potential Power Production, kW	153	229	767	<b>1149</b>

Potential Hydropower Production at Proposed Sites

Attachments:

Drain 2

- A.1: WIP Map
- A.2: High Water Mark Profile
- A.3: Cross Section at Station 3+30
- A.4: Cross Section at Station 8+25

Harrah Drain

- B.1: WIP Map
- B.2: Plan View with High Water Mark Profile
- B.3: Cross Section at Station 1+38
- B.4: Cross Section at Station 2+31

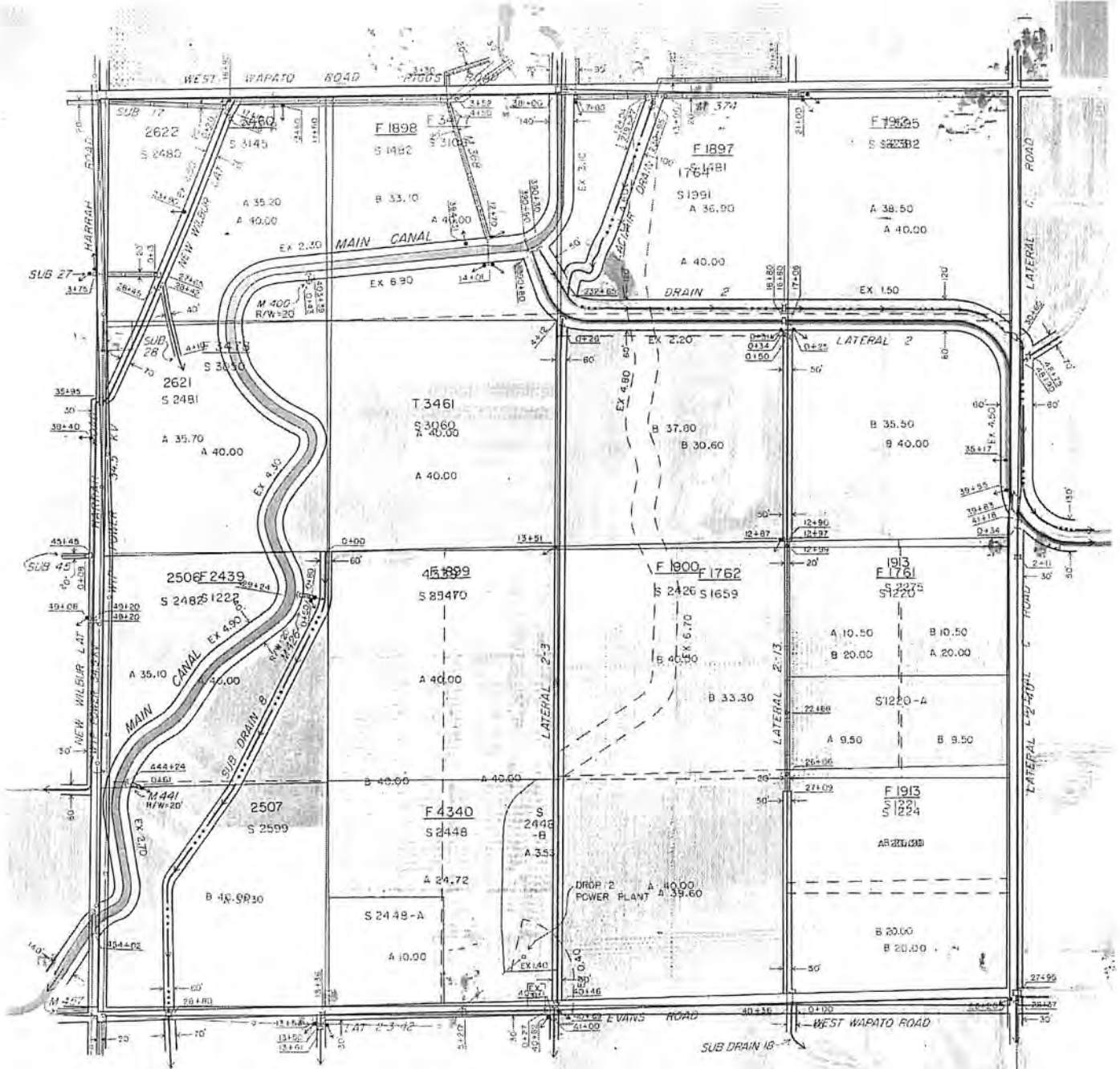
Drop 4

- C.1: WIP Map

Potential Hydropower Generation Summary

- D.1-3: Flow and Potential Hydropower Generation

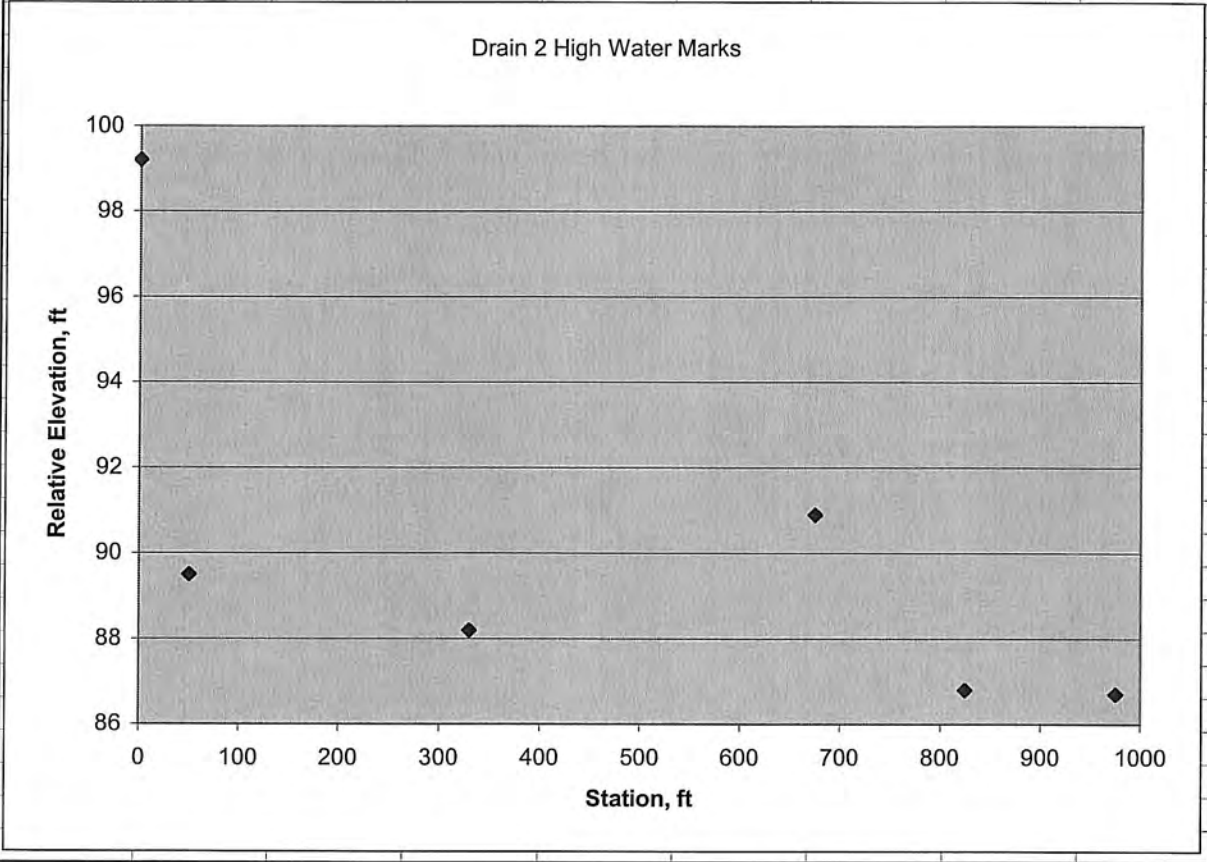


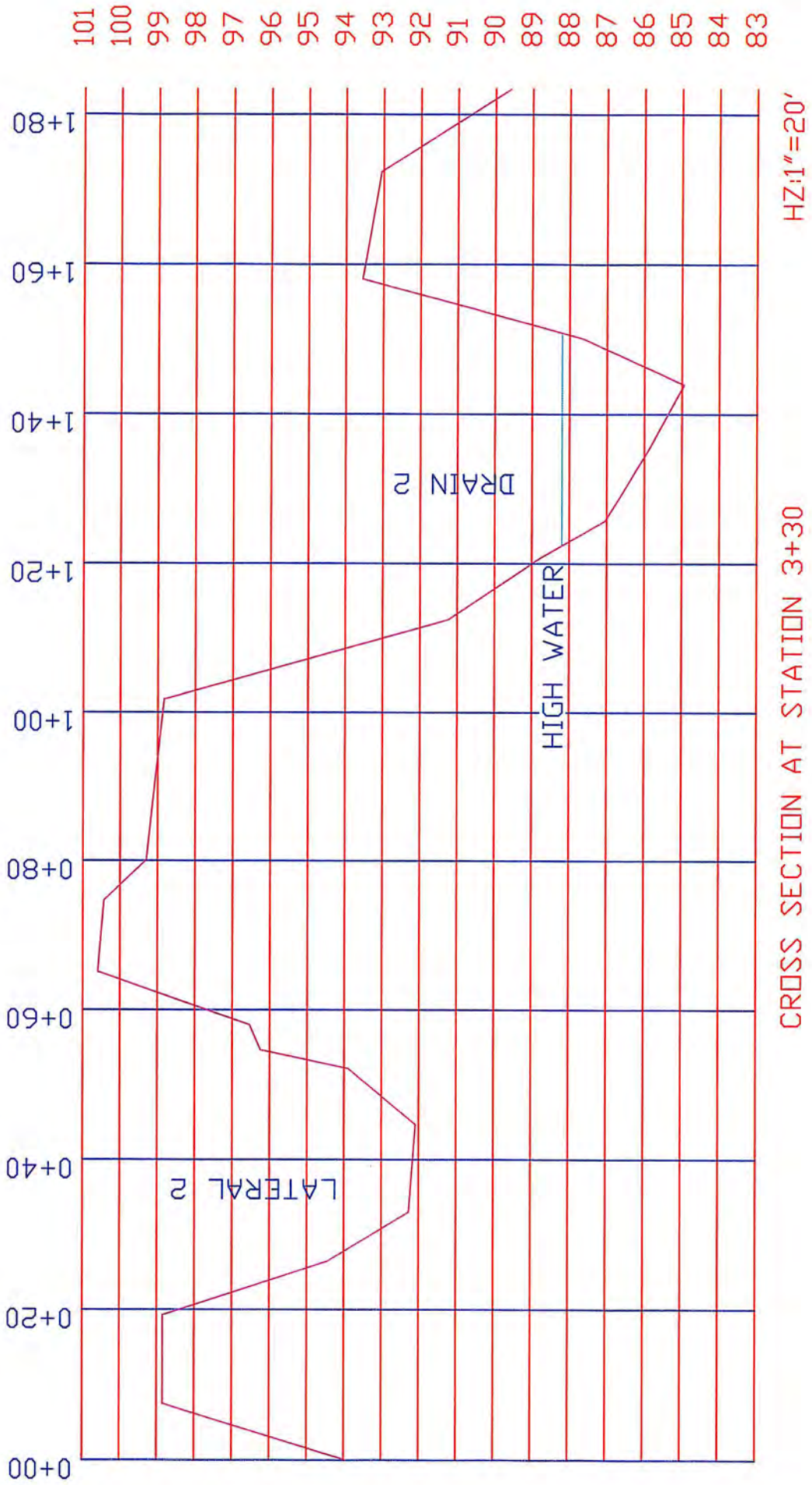


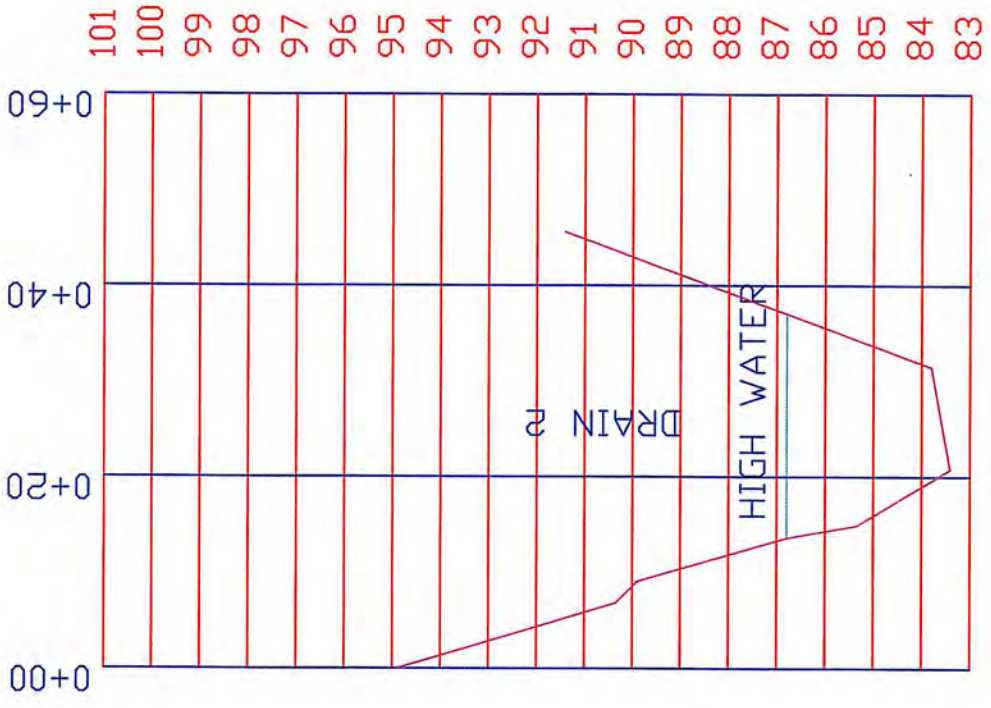
Sec. 14 T. 11 N. R. 18E.  
 Portion of Sec. T. N. R. E.  
 WAPATO IRRIGATION PROJECT  
 YAKIMA INDIAN RESERVATION, WASHINGTON

MARCH 1978

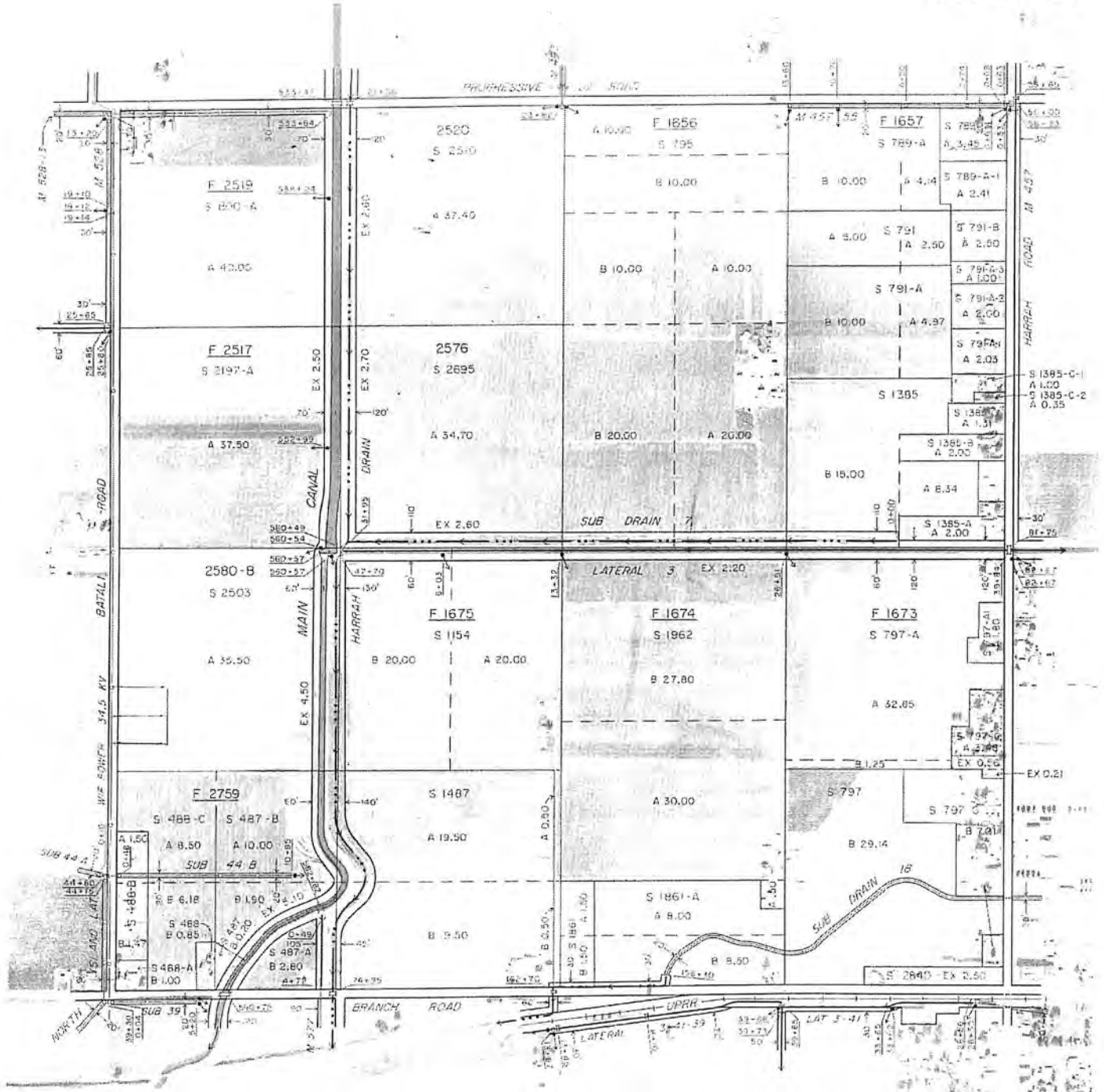
STA	HW Mark	Mark Quality	Note					
0	99.2	Strong	Two 5' x 5' Headgates					
50	89.5	Weak	Second Energy Dissipater					
330	88.2	Weak						
675	90.9	Strong	Ramp Flume					
825	86.8	Strong						
975	86.7	Strong						
Channel Unsteady for first 500ft								
Potential Drop 12ft								







CROSS SECTION AT STATION 8+25  
 HZ:1"=20'

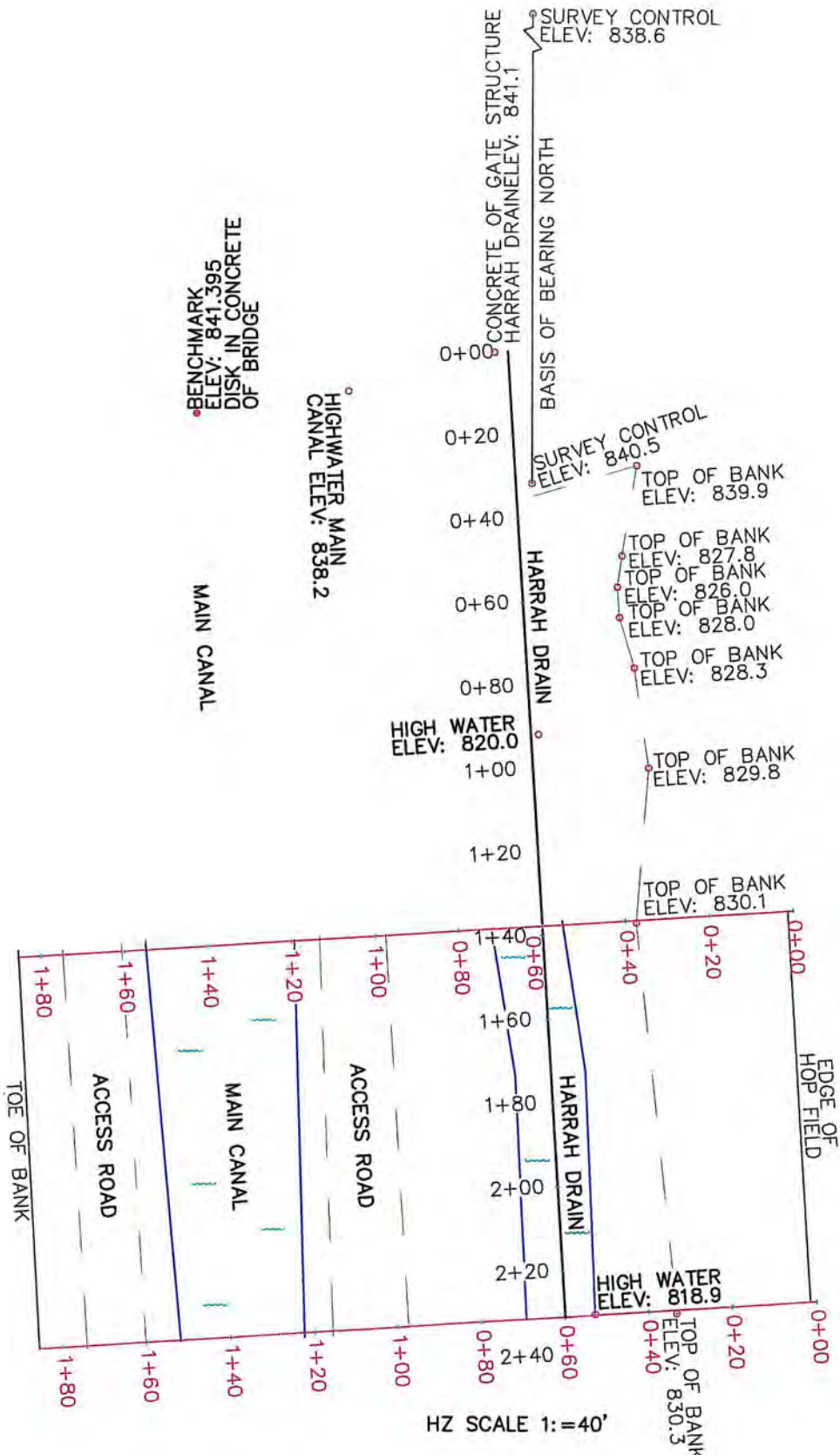


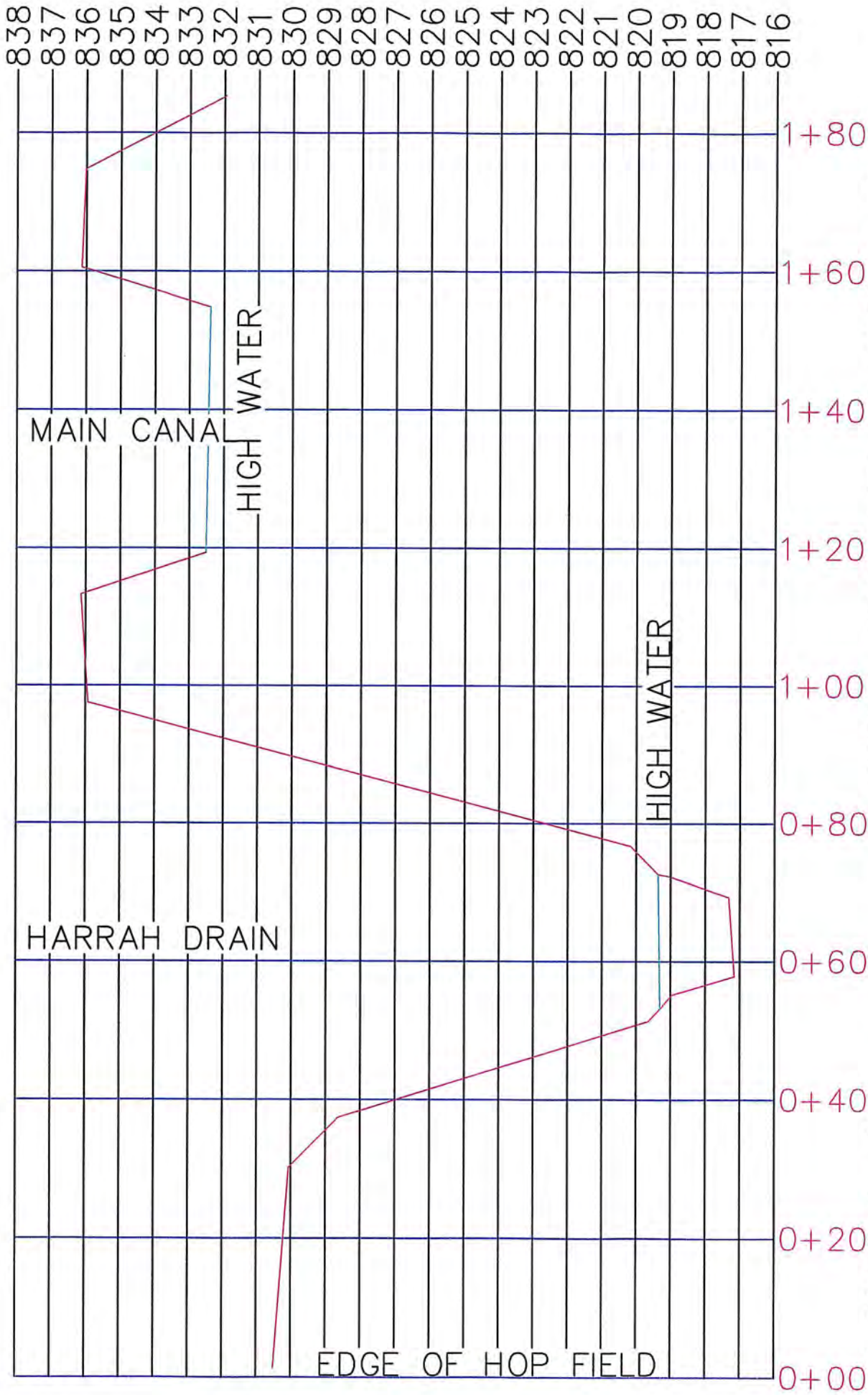
Sec. 27 T. 11 N. R. 18 E.  
Portion of Sec. T. N. R. E.  
WAPATO IRRIGATION PROJECT  
YAKIMA INDIAN RESERVATION, WASHINGTON

MARCH 1978

B.1

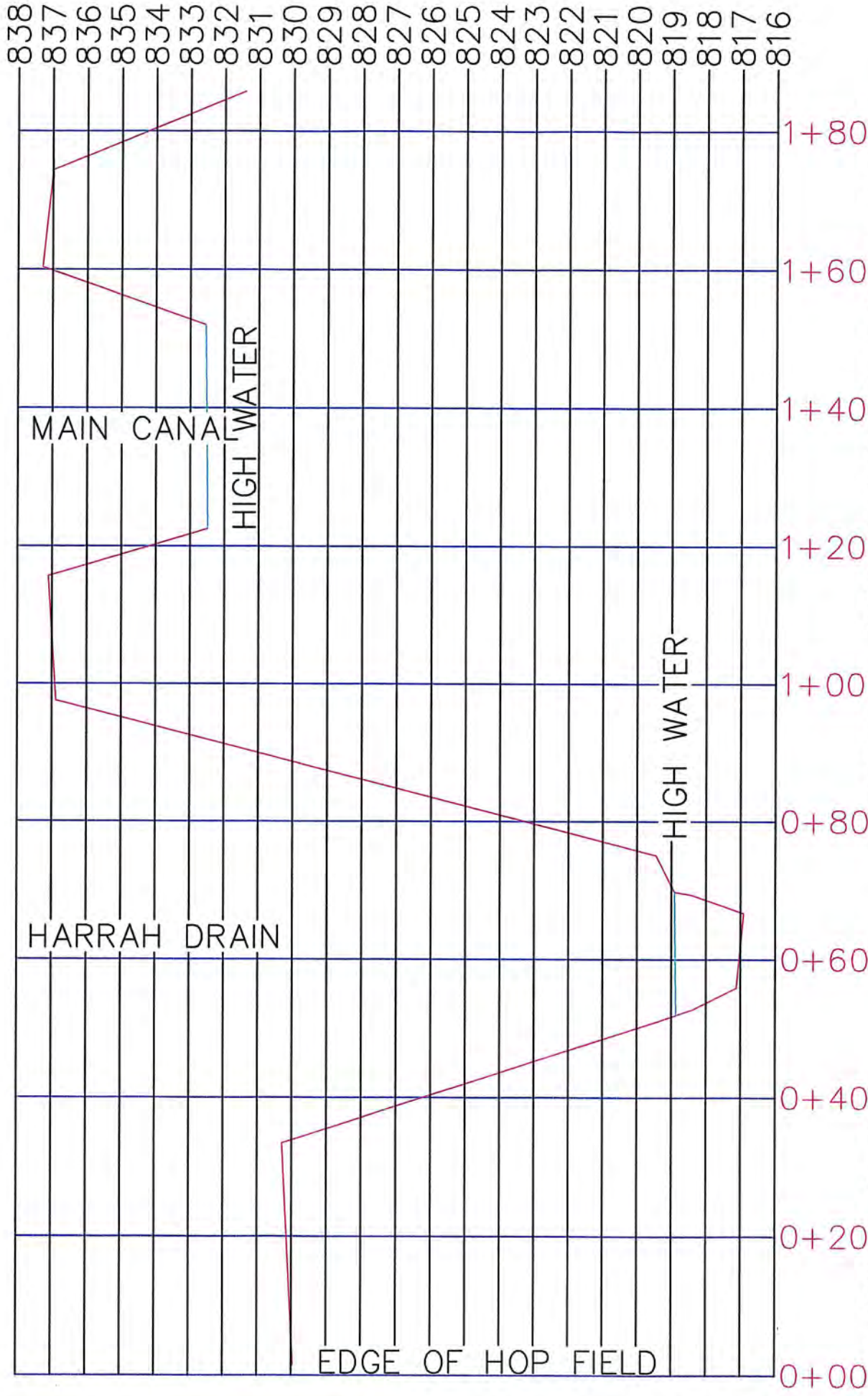






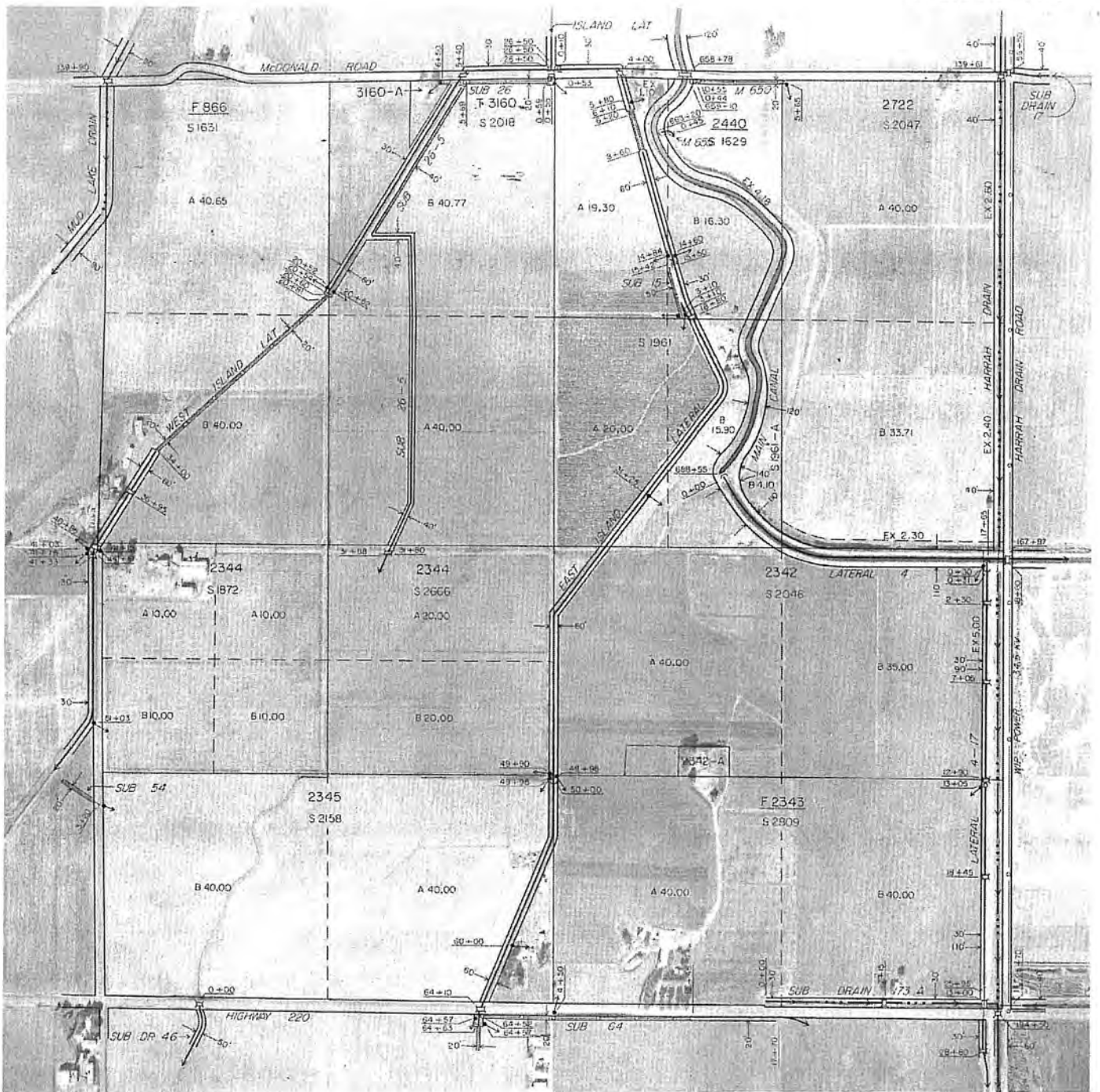
HZ SCALE 1: =20'  
 \* APPROX. CENTERLINE OF HARRAH DRAIN  
 CROSS SEC. OF STATION 1+38, STATION FROM HARRAH DRAIN GATE FACING S.  
 ELEVATIONS BASED ON BENCHMARK ELEVATION OF 841.395 ON MAIN CANAL





HZ SCALE 1: = 20'  
 \* APPROX. CENTERLINE OF HARRAH DRAIN  
 CROSS SEC. OF STATION 2+31, STATION FROM HARRAH DRAIN GATE FACING S.  
 ELEVATIONS BASED ON BENCHMARK ELEVATION OF 841.395 ON MAIN CANAL





**Sec. 4 T. 10 N. R. 18 E.**  
**Portion of Sec. T. N. R. E.**  
**WAPATO IRRIGATION PROJECT**  
**YAKIMA INDIAN RESERVATION, WASHINGTON**

MARCH 1978



C.1

Flow and Potential Hydropower Generation

		Drain 2, cfs	Harrah Drain, cfs	Drop 4, cfs	Combined Flow, cfs				
Prime & Clean	3/21/2008	200	100	0	300				
April	4/1/2008	52	75	43	170				
	4/2/2008	0	75	68	143				
	4/3/2008	0	70	59	129				
	4/4/2008	0	80	140	220				
	4/5/2008	0	100	104	204				
	4/8/2008	0	100	106	206				
	4/9/2008	50	80	153	283				
	4/10/2008	55	110	213	378				
	4/14/2008	55	110	214	379				
	4/15/2008	72	20	215	307				
	4/16/2008	77	110	243	430				
	4/17/2008	77	110	240	427				
	4/18/2008	76	110	219	405				
	4/20/2008	77	110	202	389				
	4/21/2008	77	110	202	389				
	4/22/2008	107	110	260	477				
	4/23/2008	107	110	255	472		Drain 2	Harrah DR	Drop 4
	4/24/2008	107	110	205	422	Drop, ft	12	18	21
	4/25/2008	107	100	263	470	Days	30	30	30
	4/28/2008	107	100	261	468	Flow Avg, cfs	62	95	187
4/30/2008	107	105	253	465	April MWh	46	105	239	
May	5/1/2008	107	105	254	466				
	5/2/2008	108	105	290	503				
	5/5/2008	108	80	288	476				
	5/6/2008	108	80	285	473				
	5/7/2008	108	50	301	459				
	5/8/2008	108	50	302	460				
	5/9/2008	108	130	321	559				
	5/12/2008	107	130	325	562				
	5/13/2008	107	130	319	556				
	5/14/2008	108	130	333	571				
	5/15/2008	108	130	313	551				
	5/16/2008	108	50	306	464				
	5/19/2008	108	30	319	457				
	5/20/2008	108	30	320	458				
	5/23/2008	107	130	319	556		Drain 2	Harrah DR	Drop 4
	5/27/2008	108	130	330	568	Drop, ft	12	18	21
	5/28/2008	108	130	325	563	Days	31	31	31
	5/29/2008	108	130	328	566	Flow Avg, cfs	108	99	311
	5/30/2008	107	130	328	565	May MWh	82	112	412
		6/2/2008	108	130	333	571			
6/5/2008		108	130	331	569				
6/6/2008		109	130	329	568				
6/9/2008		109	130	326	565				
6/10/2008		109	130	328	567				
6/11/2008		109	130	331	570				
6/12/2008		109	130	329	568				

Flow and Potential Hydropower Generation

June	6/13/2008	130	130	319	579				
	6/19/2008	109	50	355	514				
	6/20/2008	111	100	398	609				
	6/23/2008	111	100	399	610				
	6/24/2008	133	130	420	683				
	6/25/2008	133	130	418	681		Drain 2	Harrah DR	Drop 4
	6/26/2008	132	130	418	680	Drop, ft	12	18	21
	6/27/2008	132	130	419	681	Days	30	30	30
	6/28/2008	132	130	432	694	Flow Avg, cfs	119	122	372
	6/30/2008	131	130	431	692	June MWh	87	134	476
July	7/1/2008	129	130	330	589				
	7/2/2008	127	130	330	587				
	7/3/2008	127	130	328	585				
	7/4/2008	132	130	418	680				
	7/7/2008	132	130	425	687				
	7/8/2008	134	130	425	689				
	7/9/2008	150	150	431	731				
	7/10/2008	150	150	423	723				
	7/11/2008	149	130	416	695				
	7/13/2008	151	130	422	703				
	7/14/2008	151	130	434	715				
	7/15/2008	150	130	425	705				
	7/16/2008	150	130	416	696				
	7/17/2008	150	130	417	697				
	7/18/2008	150	130	422	702				
	7/20/2008	148	130	425	703				
	7/21/2008	148	130	420	698				
	7/22/2008	149	130	413	692				
	7/23/2008	149	130	410	689				
	7/24/2008	149	130	411	690		Drain 2	Harrah DR	Drop 4
7/27/2008	150	130	412	692	Drop, ft	12	18	21	
7/28/2008	150	130	412	692	Days	31	31	31	
7/29/2008	140	130	416	686	Flow Avg, cfs	144	132	408	
7/31/2008	140	130	417	687	July MWh	109	149	541	
August	8/1/2008	159	130	437	726				
	8/4/2008	159	150	401	710				
	8/5/2008	159	150	399	708				
	8/6/2008	134	130	343	607				
	8/7/2008	134	130	342	606				
	8/8/2008	132	130	365	627				
	8/9/2008	143	145	338	626				
	8/11/2008	143	145	338	626				
	8/12/2008	147	145	325	617				
	8/14/2008	147	145	322	614				
	8/15/2008	147	145	320	612				
	8/16/2008	145	145	321	611				
	8/18/2008	145	145	315	605				
	8/25/2008	144	145	313	602		Drain 2	Harrah DR	Drop 4
	8/26/2008	144	145	283	572	Drop, ft	12	18	21
	8/27/2008	136	5	254	395	Days	31	31	31
8/28/2008	43	50	275	368	Flow Avg, cfs	134	123	329	
8/29/2008	42	30	226	298	Aug MWh	101	139	435	

Flow and Potential Hydropower Generation

September	9/2/2008	40	15	236	291				
	9/3/2008	41	15	225	281				
	9/4/2008	41	15	222	278				
	9/5/2008	53	4	235	292				
	9/8/2008	53	4	246	303				
	9/9/2008	53	4	242	299				
	9/12/2008	53	4	243	300				
	9/13/2008	33	4	217	254				
	9/15/2008	33	4	250	287				
	9/16/2008	33	4	260	297				
	9/17/2008	33	4	260	297				
	9/18/2008	33	4	243	280				
	9/19/2008	33	4	242	279				
	9/22/2008	33	4	258	295				
	9/23/2008	33	4	259	296		Drain 2	Harrah DR	Drop 4
	9/25/2008	33	4	260	297	Drop, ft	12	18	21
	9/26/2008	32	75	196	303	Days	31	31	31
9/29/2008	32	75	202	309	Flow Avg, cfs	38	17	237	
9/30/2008	32	75	202	309	Sep MWh	29	19	313	
October	10/1/2008	32	75	200	307		Drain 2	Harrah DR	Drop 4
	10/2/2008	0	4	175	179	Drop, ft	12	18	21
	10/10/2008	13	4	159	176	Days	15	15	15
	10/14/2008	14	75	140	229	Flow Avg, cfs	15	47	163
	10/15/2008	14	75	141	230	Oct MWh	5	26	104
									Combined MWh
						Drain 2	Harrah DR	Drop 4	
					Combined Monthly Potential, MWh	458	685	2521	3663