

**ATTACHMENT K: FLOOD STUDY – HANSEN  
CREEK**

April 26, 2024

# **GOLDENEYE ENERGY STORAGE, LLC**

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## **Goldeneye Energy Storage Project**

Flood Study – Hansen Creek at Minkler Road

25080 Minkler Road, Skagit County, Washington

**PROJECT NUMBER:**

180161

**PROJECT CONTACT:**

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**PHONE:**

513-390-1742



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## *Flood Study – Hansen Creek at Minkler Road*

**PREPARED FOR:** GOLDENEYE BATTERY STORAGE, LLC

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## ACRONYMS AND ABBREVIATIONS

cfs	cubic feet per second
FPS	feet per second
ft	feet
POWER	POWER Engineers, Inc.
Project	Goldeneye Energy Storage Project
USGS	Unites States Geological Survey

## 1.0 INTRODUCTION

The purpose of the Goldeneye Energy Storage Project (Project) is to improve the capacity and reliability of the local electrical grid by providing battery storage for power generated during off-peak demand hours. POWER Engineers, Inc. (POWER) reviewed the existing and proposed hydrologic and hydraulic conditions contributing to the 100-year peak flow rate and 100-year water surface elevation at the Project site. The proposed Project includes two new battery storage pads, and excavation of a new stormwater basin. The Project, including fill placement for pad construction, is proposed to occur within the Federal Emergency Management Agency 100-year Zone A floodplain of Hansen Creek at Minkler Road in Skagit County, Washington. The purpose of this study is to estimate the impact on the 100-year hydraulic conditions in the Hansen Creek floodplain as a result of the proposed Project.

### 1.1 Project Data

**Address:** 25080 Minkler Road, Skagit County, Washington

**Coordinates (Degrees lat./long.):** 48.5079917°, -122.2030028°

**Parcel ID:** 40030

**Parcel Zoning:** Ag-NRL

**Flood Insurance Rate Maps Number:** 5301510255D

## 2.0 DESIGN BASIS

### 2.1 Hydrology

POWER estimated the 100-year peak flow rate in Hansen Creek using United States Geological Survey (USGS) StreamStats. StreamStats estimates the drainage area's basin characteristics and generates peak-flow statistics for point specific stream location data. The StreamStats hydrology study results are summarized in Table 1. Appendix B includes the full StreamStats Report.

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TABLE 1 HYDROLOGICAL DATA

CREEK NAME	TRIBUTARY AREA (SQUARE MILES)	100-YEAR PEAK FLOW RATE (CFS)
Hansen Creek	9.64	1,180

CFS = cubic feet per second.

## 2.2 Hydraulic Analysis

### 2.2.1 Stream Characteristics

POWER modeled the existing hydraulic characteristics of the creek from a field topographic survey of the site. The proposed characteristics are from a composite of the existing elevations and proposed grading contours. The stream centerline location and stream bank limits were determined using the survey data and stream cross-sections were taken perpendicular to the flow path. Digital Terrain Models of the existing and composite-proposed ground elevations, and the river cross sections, and centerline and top of bank geometry were imported as river stations into HEC-RAS functionality in Autodesk Civil 3D River Analysis software. Separate Manning’s ‘n’ roughness coefficients were assigned to the main flow channel and overbank areas based on a review of aerial imagery. The figures in Appendix C include the site survey, site plan, proposed grading plan, and centerline cross section locations. A summary of the Manning’s ‘n’ values used are found in Table 2.

TABLE 2 MANNING’S ‘n’ VALUE DETERMINATION

CROSS SECTION AREA	MANNING’S ‘N’ VALUE
Stream Channel	0.04
Overbank Areas	0.10

### 2.2.2 Backwater Effects

POWER’s data review discovered a Hansen Creek-Minkler Road Bridge Design WA402214 Project summary completed in 2016. At the Project site, Hansen Creek experiences flooding as a result of the downstream Skagit River flooding. Backwater from the Skagit River creates a 100-year water surface elevation at the site of 61.3 feet as depicted in the culvert design cross section in the Bridge Design summary document. Appendix D contains the Bridge Design document.

From the Project summary POWER assumed a downstream water surface elevation of 61.3 feet as the end condition for all model runs in this report.

## 3.0 RESULTS

The 100-year floodplain limits as delineated by POWER and represented in this report, are approximate and based on flow data obtained through the USGS Stream Stats application, topographic survey data of the existing ground, and surface data representing the proposed changes to the site, and hydraulic analysis using HEC-RAS. This Project includes a net fill of approximately 56,700- cubic yards in the floodplain. Results of the analysis are reasonable with no observed anomalies. Based on the results, the 100-year water surface elevation at the site is not expected to rise an appreciable amount.

A summary of the results is found in Table 3. The complete model results can be found in Appendix E.

**TABLE 3 HEC-RAS RESULTS**

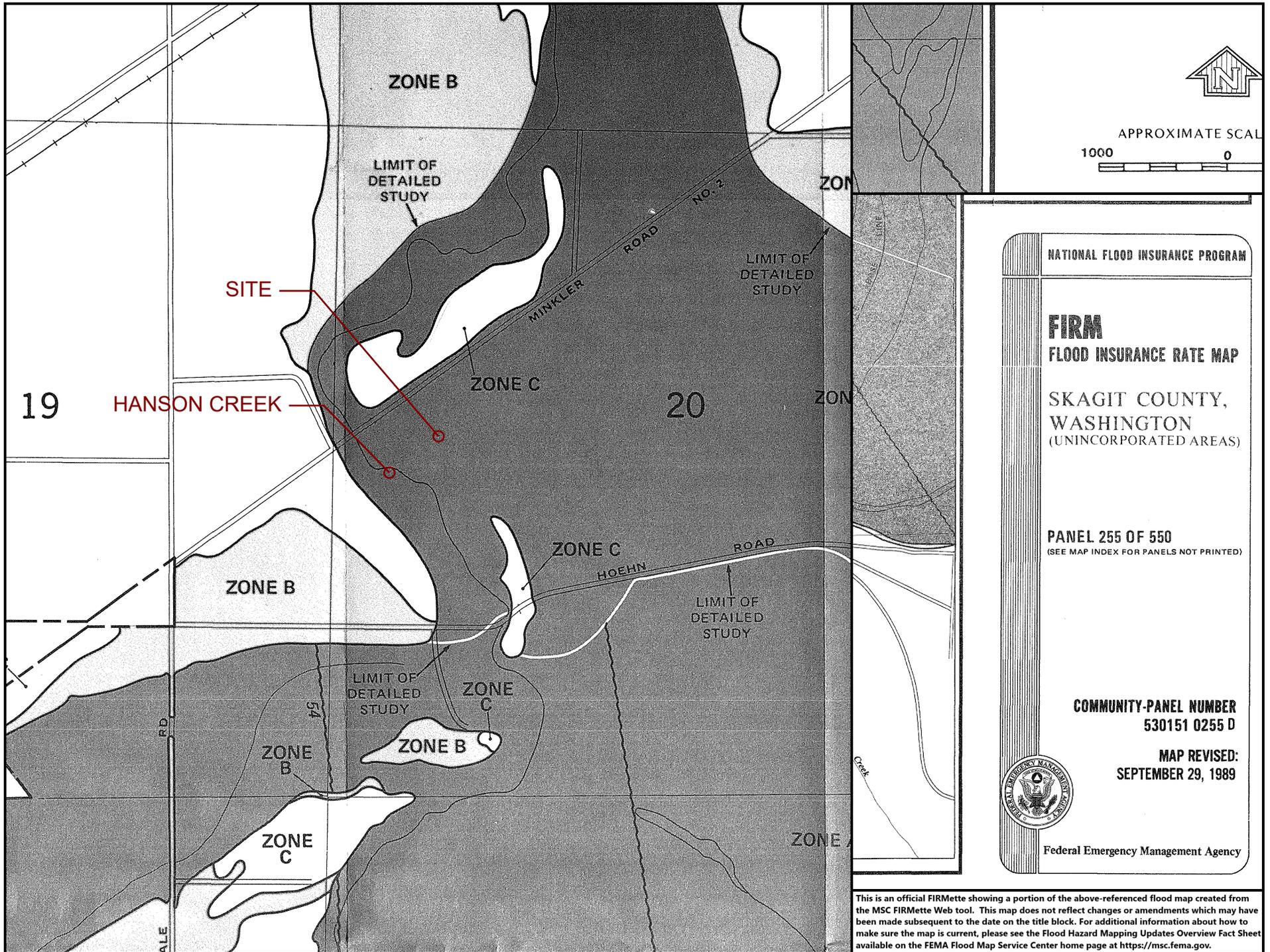
RIVER STATION	EXISTING WATER SURFACE ELEVATION (FT)	EXISTING CHANNEL VELOCITY (FPS)	PROPOSED WATER SURFACE ELEVATION (FT)	PROPOSED CHANNEL VELOCITY (FPS)	PROPOSED CHANGE IN WATER SURFACE ELEVATION (FT)
120	61.286	1.98	61.315	1.99	0.029
119	61.313	1.55	61.343	1.55	0.030
118	61.318	1.45	61.349	1.44	0.031
117	61.311	1.51	61.264	2.33	-0.047
116	61.314	1.53	61.339	0.96	0.025
115	61.324	1.23	61.341	0.91	0.017
114	61.325	1.22	61.341	0.91	0.016
113	61.331	1.07	61.339	0.92	0.008
112	61.336	0.96	61.342	0.85	0.006
111	61.338	0.89	61.342	0.84	0.004
110	61.337	0.87	61.340	0.86	0.003
109	61.336	0.88	61.334	0.94	-0.002
108	61.338	0.81	61.330	1.02	-0.008
107	61.326	1.01	61.300	1.41	-0.026
106	61.327	0.97	61.301	1.38	-0.026
105	61.327	0.96	61.301	1.36	-0.026
104	61.327	0.94	61.307	1.21	-0.020
103	61.326	0.96	61.305	1.25	-0.021
102	61.322	1.01	61.307	1.17	-0.015
101	61.300	1.29	61.300	1.24	0.000

fps = feet per second; ft = feet.

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# APPENDIX A FLOOD INSURANCE RATE MAP NO. 5301510255D



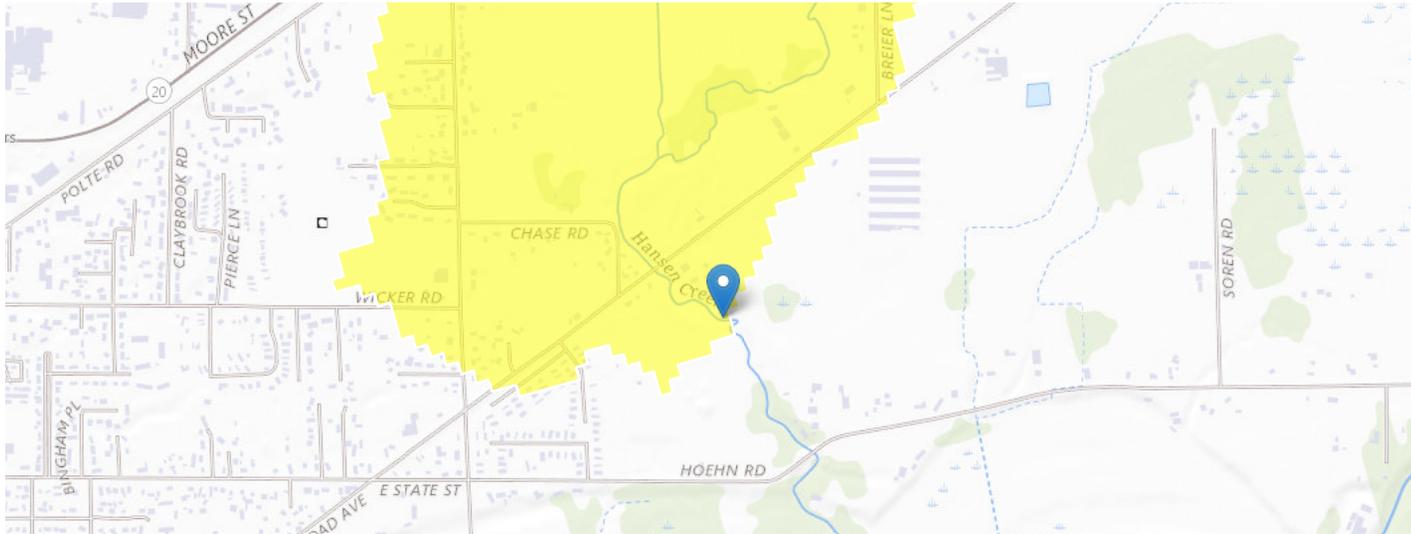
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## APPENDIX B    STREAMSTATS REPORT

# StreamStats Report

Region ID: WA  
 Workspace ID: WA20230204231313943000  
 Clicked Point (Latitude, Longitude): 48.50667, -122.20159  
 Time: 2023-02-04 16:13:36 -0700



[+ Collapse All](#)

## Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	9.64	square miles
PRECPRIS10	Basin average mean annual precipitation for 1981 to 2010 from PRISM	70	inches

## Peak-Flow Statistics

Peak-Flow Statistics Parameters [Peak Region 3 2016 5118]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	9.64	square miles	0.08	2610
PRECPRIS10	Mean Annual Precip PRISM 1981 2010	70	inches	33.2	168

## Peak-Flow Statistics Flow Report [Peak Region 3 2016 5118]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	PIu	ASEp
50-percent AEP flood	382	ft <sup>3</sup> /s	194	753	43.2
20-percent AEP flood	588	ft <sup>3</sup> /s	292	1180	44.4
10-percent AEP flood	728	ft <sup>3</sup> /s	357	1480	45.6
4-percent AEP flood	906	ft <sup>3</sup> /s	427	1920	48.1
2-percent AEP flood	1040	ft <sup>3</sup> /s	476	2270	50.5
1-percent AEP flood	1180	ft <sup>3</sup> /s	530	2630	51.8
0.5-percent AEP flood	1320	ft <sup>3</sup> /s	571	3050	54.2
0.2-percent AEP flood	1510	ft <sup>3</sup> /s	626	3640	57.7

*Peak-Flow Statistics Citations*

**Mastin, M.C., Konrad, C.P., Veilleux, A.G., and Tecca, A.E., 2016, Magnitude, frequency, and trends of floods at gaged and ungaged sites in Washington, based on data through water year 2014 (ver 1.1, October 2016): U.S. Geological Survey Scientific Investigations Report 2016-5118, 70 p. (<http://dx.doi.org/10.3133/sir20165118>)**

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

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USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.12.0

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

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## APPENDIX C    SITE DRAWINGS

**GENERAL EXCEPTIONS**

- A. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION, OR CLAIMING POSSESSION, NOT SHOWN BY THE PUBLIC RECORDS.  
(NOT PLOTTABLE, NO INFORMATION PROVIDED)
- B. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND.  
(AS SHOWN, PER SIGNIFICANT OBSERVATIONS)
- C. EASEMENTS, PRESCRIPTIVE RIGHTS, RIGHTS-OF-WAY, LIENS OR ENCUMBRANCES, OR CLAIMS THEREOF, NOT SHOWN BY THE PUBLIC RECORDS.  
(NOT PLOTTABLE, NO INFORMATION PROVIDED)
- D. ANY LIEN, OR RIGHT TO A LIEN, FOR CONTRIBUTIONS TO EMPLOYEE BENEFIT FUNDS, OR FOR STATE WORKERS' COMPENSATION, OR FOR SERVICES, LABOR, OR MATERIAL HERETOFORE OR HEREAFTER FURNISHED, ALL AS IMPOSED BY LAW, AND NOT SHOWN BY THE PUBLIC RECORDS.  
(NOT SURVEY RELATED)
- E. TAXES OR SPECIAL ASSESSMENTS WHICH ARE NOT YET PAYABLE OR WHICH ARE NOT SHOWN AS EXISTING LIENS BY THE PUBLIC RECORDS.  
(NOT SURVEY RELATED)
- F. ANY LIEN FOR SERVICE, INSTALLATION, CONNECTION, MAINTENANCE, TAP, CAPACITY, OR CONSTRUCTION OR SIMILAR CHARGES FOR SEWER, WATER, ELECTRICITY, NATURAL GAS OR OTHER UTILITIES, OR FOR GARBAGE COLLECTION AND DISPOSAL, NOT SHOWN BY THE PUBLIC RECORDS.  
(NOT SURVEY RELATED)
- G. UNPATENTED MINING CLAIMS, AND ALL RIGHTS RELATING THERETO.  
(NOT PLOTTABLE, NO INFORMATION PROVIDED)
- H. RESERVATIONS AND EXCEPTIONS IN UNITED STATES PATENTS OR IN ACTS AUTHORIZING THE ISSUANCE THEREOF.  
(NOT PLOTTABLE, NO INFORMATION PROVIDED)
- I. INDIAN TRIBAL CODES OR REGULATIONS, INDIAN TREATY OR ABORIGINAL RIGHTS, INCLUDING EASEMENTS OR EQUITABLE SERVITUDES.  
(NOT PLOTTABLE, NO INFORMATION PROVIDED)
- J. WATER RIGHTS, CLAIMS OR TITLE TO WATER.  
(NOT PLOTTABLE, NO INFORMATION PROVIDED)
- K. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I—REQUIREMENTS ARE MET.  
(NOT PLOTTABLE, NO INFORMATION PROVIDED)

**SPECIAL EXCEPTIONS**

1. AS TO ANY PORTION OF SAID LAND NOW, FORMERLY OR IN THE FUTURE COVERED BY WATER: QUESTIONS OR ADVERSE CLAIMS RELATED TO (1) LATERAL BOUNDARIES OF ANY TIDELANDS OR SHORELANDS; (2) SHIFTING IN COURSE, BOUNDARY OR LOCATION OF THE BODY OF WATER; (3) RIGHTS OF THE STATE OF WASHINGTON IF THE BODY OF WATER IS OR WAS NAVIGABLE; AND (4) PUBLIC REGULATORY AND RECREATIONAL RIGHTS (INCLUDING POWERS OF THE USA) OR PRIVATE RIPARIAN RIGHTS WHICH LIMIT OR PROHIBIT USE OF THE LAND OR WATER.  
(NOT PLOTTABLE, NO INFORMATION PROVIDED)
2. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:  
GRANTED TO: BONNEVILLE POWER ADMINISTRATOR  
PURPOSE: ELECTRIC TRANSMISSION AND/OR DISTRIBUTION LINE  
RECORDING DATE: AUGUST 23, 1946  
RECORDING NO.: 39262  
(AS SHOWN)
3. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:  
GRANTED TO: PACIFIC NORTHWEST PIPELINE CORP.  
PURPOSE: OIL PIPELINE  
RECORDING DATE: JUNE 16, 1956  
RECORDING NO.: 535903  
(NOT PLOTTABLE, DESCRIPTION NOT PROVIDED)
4. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:  
GRANTED TO: PUGET SOUND POWER & LIGHT COMPANY  
PURPOSE: ELECTRIC TRANSMISSION AND/OR DISTRIBUTION LINE  
RECORDING DATE: MAY 27, 1959  
RECORDING NO.: 580924  
(AS SHOWN)
5. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:  
GRANTED TO: PUGET SOUND POWER & LIGHT COMPANY  
PURPOSE: ELECTRIC TRANSMISSION AND/OR DISTRIBUTION LINE  
RECORDING DATE: JUNE 3, 1960  
RECORDING NO.: 59311  
(AS SHOWN)
6. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:  
GRANTED TO: PUBLIC UTILITY DISTRICT NO. 1 OF SKAGIT COUNTY  
PURPOSE: WATER LINE  
RECORDING DATE: DECEMBER 5, 1961  
RECORDING NO.: 615236  
(AS SHOWN)
7. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:  
GRANTED TO: UNITED STATES OF AMERICA  
PURPOSE: ELECTRIC TRANSMISSION AND/OR DISTRIBUTION LINE  
RECORDING DATE: AUGUST 5, 1963  
RECORDING NO.: 639206  
(AS SHOWN)
8. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:  
GRANTED TO: SKAGIT COUNTY  
PURPOSE: TEMPORARY EASEMENT  
RECORDING DATE: MARCH 20, 2013  
RECORDING NO.: 201303200100  
(DOES NOT AFFECT SUBJECT PROPERTY)
9. TITLE NOTIFICATION - SPECIAL FLOOD HAZARD AREA, INCLUDING THE TERMS, COVENANTS AND PROVISIONS THEREOF  
RECORDING DATE: MARCH 16, 20188  
RECORDING NO.: 201803160123  
(NOT PLOTTABLE, DESCRIPTION NOT PROVIDED)
10. THE PROPERTY MAY BE SUBJECT TO THE SKAGIT COUNTY RIGHT-TO-MANAGE NATURAL RESOURCE LANDS DISCLOSURE, SKAGIT COUNTY CODE SECTION 14.38, WHICH STATES:  
"THIS DISCLOSURE APPLIES TO PARCELS DESIGNATED OR WITHIN 1 MILE OF DESIGNATED AGRICULTURAL LAND OR DESIGNATED OR WITHIN 1/4 MILE OF RURAL RESOURCE, FOREST OR MINERAL RESOURCE LANDS OF LONG-TERM COMMERCIAL SIGNIFICANCE IN SKAGIT COUNTY. A VARIETY OF NATURAL RESOURCE LAND COMMERCIAL ACTIVITIES OCCUR OR MAY OCCUR IN THE AREA THAT MAY NOT BE COMPATIBLE WITH NON-RESOURCE USES AND MAY BE INCONVENIENT OR CAUSE DISCOMFORT TO AREA RESIDENTS. THIS MAY ARISE FROM THE USE OF CHEMICALS, OR FROM SPRAYING, PRUNING, HARVESTING OR MINERAL EXTRACTION WITH ASSOCIATED ACTIVITIES, WHICH OCCASIONALLY GENERATES TRAFFIC, DUST, SMOKE, NOISE, AND ODOR. SKAGIT COUNTY HAS ESTABLISHED NATURAL RESOURCE MANAGEMENT OPERATIONS AS A PRIORITY USE ON DESIGNATED NATURAL RESOURCE LANDS, AND AREA RESIDENTS SHOULD BE PREPARED TO ACCEPT SUCH INCOMPATIBILITIES, INCONVENIENCES OR DISCOMFORT FROM NORMAL NECESSARY NATURAL RESOURCE LAND OPERATIONS WHEN PERFORMED IN COMPLIANCE WITH BEST MANAGEMENT PRACTICES AND LOCAL, STATE, AND FEDERAL LAW.  
IN THE CASE OF MINERAL LANDS, APPLICATION MIGHT BE MADE FOR MINING-RELATED ACTIVITIES INCLUDING EXTRACTION, WASHING, CRUSHING, STOCKPILING, BLASTING, TRANSPORTING AND RECYCLING OF MINERALS. IF YOU ARE ADJACENT TO DESIGNATED NR LANDS, YOU WILL HAVE SETBACK REQUIREMENTS FROM DESIGNATED NR LANDS."  
(NOT PLOTTABLE, DESCRIPTION NOT PROVIDED)

11. PROPERTY TAXES, WHICH ARE A LIEN NOT YET DUE AND PAYABLE, INCLUDING ANY ASSESSMENTS COLLECTED WITH TAXES TO BE LEVIED FOR THE YEAR 2022.  
(NOT SURVEY RELATED)  
YEAR: 2021  
TAX ACCOUNT NO.: P40030 / 350520-2-006-0000  
LEVY CODE: 1335  
ASSESSED VALUE-LAND: \$200,400.00  
ASSESSED VALUE-IMPROVEMENTS: \$455,300.00
12. GENERAL AND SPECIAL TAXES AND CHARGES, PAYABLE FEBRUARY 15, DELINQUENT IF FIRST HALF UNPAID ON MAY 1, SECOND HALF DELINQUENT IF UNPAID ON NOVEMBER 1 OF THE TAX YEAR (AMOUNTS DO NOT INCLUDE INTEREST AND PENALTIES):  
GENERAL AND SPECIAL TAXES:  
BILLED: \$7,738.98  
PAID: \$7,738.98  
UNPAID: \$0.00  
(NOT SURVEY RELATED)
13. LIABILITY, IF ANY, FOR PERSONAL PROPERTY TAXES PURSUANT TO RCW 84.56.070 WHEREIN NO SALE CAN BE MADE WITHOUT PREPAYMENT OF SAID TAX, INCLUDING ADVANCE TAX FOR THE FOLLOWING CALENDAR YEAR. THE PERSONAL PROPERTY ADVANCE TAX REQUEST HAS BEEN PROVIDED ALONG WITH THIS COMMITMENT.  
PLEASE NOTE: THE SKAGIT COUNTY TREASURER WILL NOT PROCESS ANY CONVEYANCE DOCUMENT ON ANY PROPERTY WHERE THEY DETERMINE PERSONAL PROPERTY TAXES ARE DUE OR ADVANCE TAXES REQUIRED, WITHOUT THE PAYMENT OF THOSE TAXES. THIS PROCESS MUST BE COMPLETED BEFORE THE PROPOSED DEED OR ANY QUIT CLAIM DEED IS PRESENTED FOR RECORDATION.  
(NOT SURVEY RELATED)
14. CITY, COUNTY OR LOCAL IMPROVEMENT DISTRICT ASSESSMENTS, IF ANY.  
(NOT SURVEY RELATED)
15. ANY UNRECORDED LEASEHOLDS, RIGHT OF VENDORS AND HOLDERS OF SECURITY INTERESTS ON PERSONAL PROPERTY INSTALLED UPON THE LAND AND RIGHTS OF TENANTS TO REMOVE TRADE FIXTURES AT THE EXPIRATION OF THE TERMS.  
(NOT PLOTTABLE, NO INFORMATION PROVIDED)
16. A DEED OF TRUST TO SECURE AN INDEBTEDNESS IN THE AMOUNT SHOWN BELOW.  
AMOUNT: \$452,000.00  
DATED: OCTOBER 3, 2017  
TRUSTOR/GRANTOR: JOHN F. GRINDER AND STEPHANIE M. GRINDER, HUSBAND AND WIFE  
TRUSTEE: CHICAGO TITLE COMPANY OF WASHINGTON  
BENEFICIARY: MORTGAGE ELECTRONIC REGISTRATION SYSTEMS INC. AS NOMINEE FOR UMPQUA BANK  
RECORDING DATE: APRIL 22, 2019  
RECORDING NO.: 201904220052  
(NOT SURVEY RELATED)

Line #	Length	Direction
L1	28.19	N47° 24' 14"W
L2	55.77	N73° 12' 13"W
L3	37.05	N21° 19' 01"W
L4	110.31	N05° 35' 23"W
L5	46.40	N27° 07' 27"W
L6	44.49	N65° 57' 09"W
L7	66.52	S59° 41' 04"W
L8	43.01	S77° 22' 33"W
L9	44.88	N64° 26' 37"W
L10	51.11	N53° 17' 03"W
L11	49.21	N49° 17' 17"W

**FLOOD ZONE CLASSIFICATION**

SAID DESCRIBED PROPERTY IS LOCATED WITHIN AN AREA DESIGNATED AS "ZONE A" (AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND HAZARD FACTORS NOT DETERMINED) BY THE U.S. DEPARTMENT OF HOME LAND SECURITY, ON FLOOD INSURANCE RATE MAP NO. 530151025SD (DATED SEPTEMBER 29, 1989), COUNTY OF SKAGIT, STATE OF WASHINGTON, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PREMISE IS SITUATED.

**SURVEYOR'S CERTIFICATION**

CERTIFIED TO:  
GOLDFINCH ENERGY STORAGE, LLC  
THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 5, 8, 10, 13, 15, 16, 18, AND 20 OF TABLE A THEREOF.  
THE FIELD WORK WAS COMPLETED ON MARCH 29, 2022.

**NOTES TO OPTIONAL TABLE A ITEMS:**

1. AS TO ITEM 2, AS SHOWN ON MAP.
2. AS TO ITEM 3, AS SHOWN ON MAP.
3. AS TO ITEM 4, AS SHOWN ON MAP.
4. AS TO ITEM 5, AS SHOWN ON MAP.
5. AS TO ITEM 8, NO ADDITIONAL IMPROVEMENTS WERE OBSERVED.
6. AS TO ITEM 10, AS SHOWN ON MAP, NO DESIGNATIONS WERE MADE BY CLIENT.
7. AS TO ITEM 13, AS SHOWN ON MAP.
8. AS TO ITEM 15, AS SHOWN ON MAP.
9. AS TO ITEM 16, NO EARTH MOVING WORK OR CONSTRUCTION AT THE TIME OF SURVEY.
10. AS TO ITEM 17, NO CHANGES IN STREET RIGHT OF WAY LINES.
11. AS TO ITEM 18, NO DOCUMENTS WERE PROVIDED OR OBTAINED.
12. AS TO ITEM 20,

**LEGAL DESCRIPTION:**

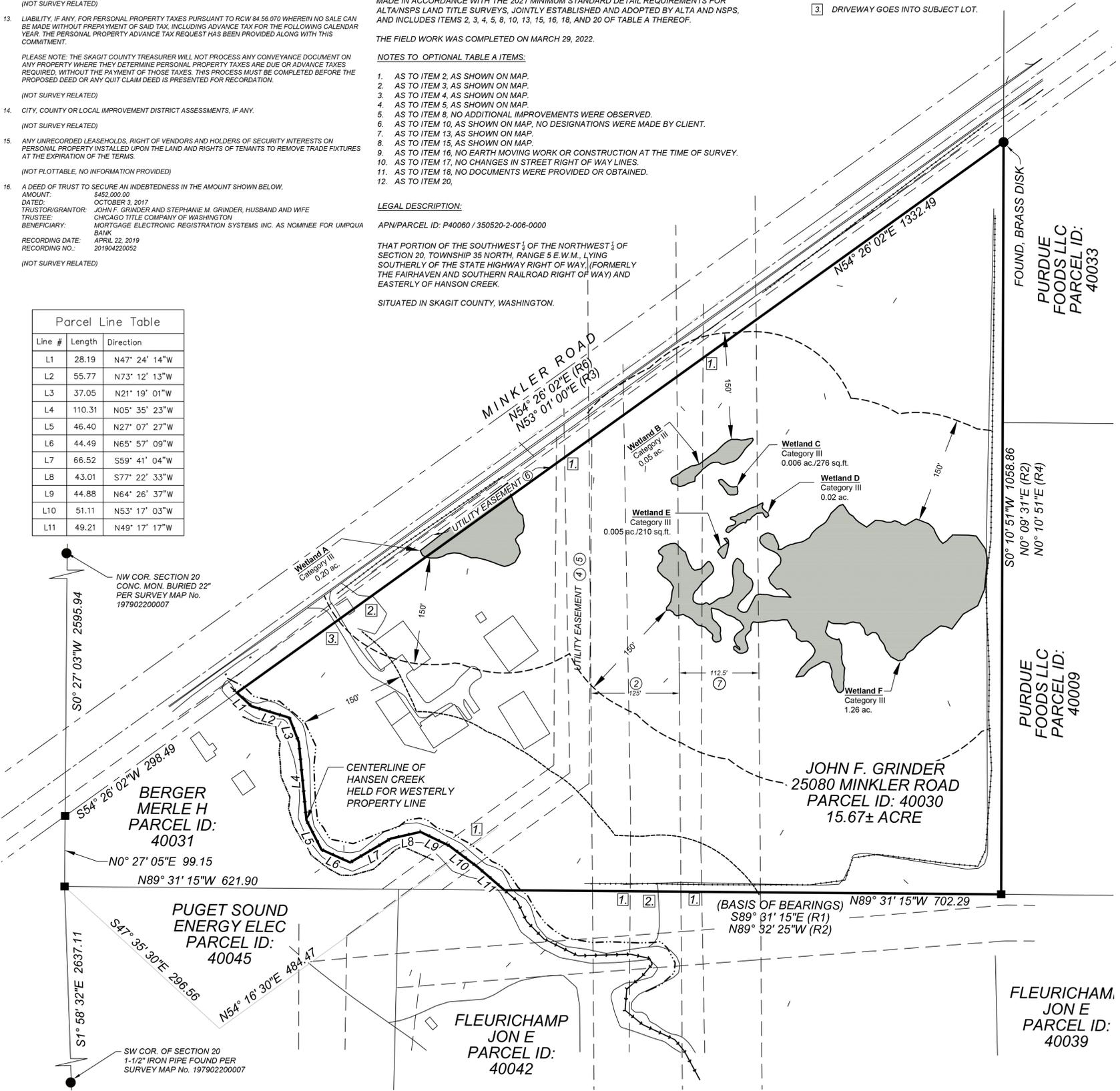
APN/PARCEL ID: P40060 / 350520-2-006-0000  
THAT PORTION OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 20, TOWNSHIP 35 NORTH, RANGE 5 E.W.M., LYING SOUTHERLY OF THE STATE HIGHWAY RIGHT OF WAY, (FORMERLY THE FAIRHAVEN AND SOUTHERN RAILROAD RIGHT OF WAY) AND EASTERLY OF HANSON CREEK.  
SITUATED IN SKAGIT COUNTY, WASHINGTON.

**BASIS OF BEARINGS**

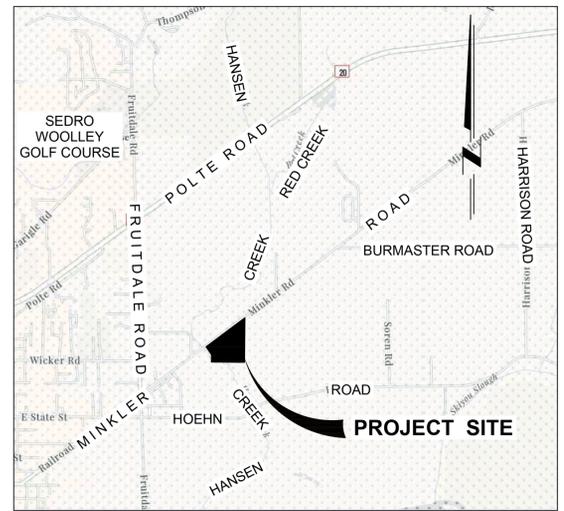
THE SECTION LINE BETWEEN THE WEST 1/4 CORNER AND THE CENTER OF SECTION 20, AS SHOWN ON RECORD SURVEY MAP NO. 197902200007, IN THE CITY OF SEDRO-WOOLLEY, COUNTY OF SKAGIT, STATE OF WASHINGTON, BEING S 89° 31' 15" E.

**SIGNIFICANT OBSERVATIONS**

1. OVERHEAD LINE GOES INTO SUBJECT LOT.
2. DRAINAGE DITCH GOES INTO SUBJECT LOT.
3. DRIVEWAY GOES INTO SUBJECT LOT.



**ALTA/NSPS LAND TITLE SURVEY**  
25080 MINKLER ROAD  
PORTION OF THE SOUTHWEST 1/4 OF SECTION 20, TOWNSHIP 35 NORTH, RANGE 5 E. W.M., LYING SOUTHERLY OF THE STATE HIGHWAY RIGHT OF WAY, (FORMERLY THE FAIRHAVEN AND SOUTHERN RIGHT OF WAY) AND EASTERLY OF HANSON CREEK.  
CITY OF SEDRO-WOOLLEY, COUNTY OF SKAGIT, STATE OF WASHINGTON  
PARCEL ID: 40030  
TITLE REPORT COMMITMENT NO: 620050645  
DATED JANUARY 19, 2022 AT 8:00 A.M.  
CHICAGO TITLE COMPANY OF WASHINGTON



- LEGEND**
- INDICATES SEARCHED NOTHING FOUND
  - INDICATES FOUND MONUMENT
  - INDICATES STREAM
  - - - INDICATES STREAM BUFFER
  - - - INDICATES WETLANDS BUFFER

- SURVEY NOTES**
1. SITE IS FOR LEASE PURPOSES
  2. ELEVATIONS ARE REFERRED TO: NAVD88 (GEOID18).
  3. BOUNDARY IS INFORMATIONAL ONLY AND NOT TO BE USED FOR SALES OR SUBDIVISION.
  4. REGARDING OPTIONAL TABLE A ITEM 15: CERTAIN FEATURES HEREON, INCLUDING SOME UTILITY POLES AND LINES, PAVED, GRAVEL, AND OR DIRT ROADS, STRUCTURES, AND OTHER PLANIMETRIC FEATURES WERE LOCATED USING AIRBORNE LASER SCANNING, AND MAY HAVE ERRORS IN PRECISION OF 0.3' OR MORE; HOWEVER, ALL PROPERTY WERE LOCATED USING CONVENTIONAL SURVEY EQUIPMENT AND PROCEDURES, AND ARE THEREFORE WITHIN ACCURACY STANDARD DETAIL REQUIREMENTS.

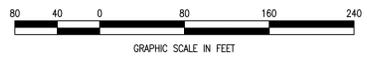
- (R1) INDICATES RECORD DATA PER SURVEY MAP NO. 197902200007.  
(R2) INDICATES RECORD DATA SURVEY MAP 201412300029.  
(R3) INDICATES RECORD DATA PER RIGHT OF WAY MAP NO. 1922  
(R4) BEARINGS AND DISTANCES ARE CALCULATED BASED ON EXISTING PHYSICAL EVIDENCE AND GROUND CONDITIONS.

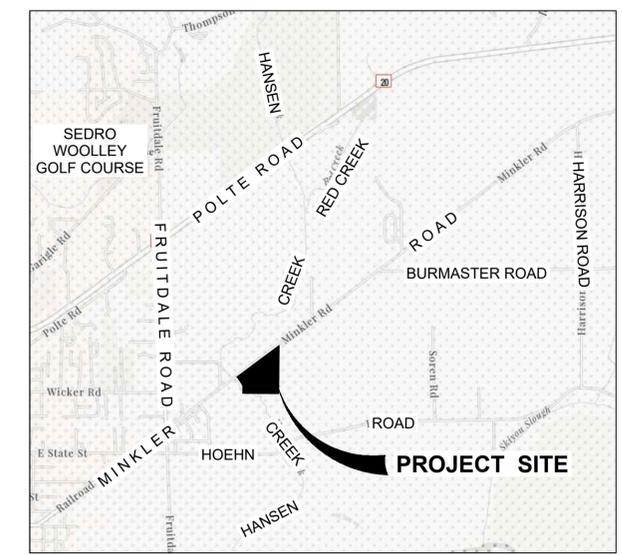


JAMES M. POWERS, RPLS, CFedS, CP  
Licensed Professional Land Surveyor  
Washington License No. 20100534  
Expiration Date: 9/7/2024

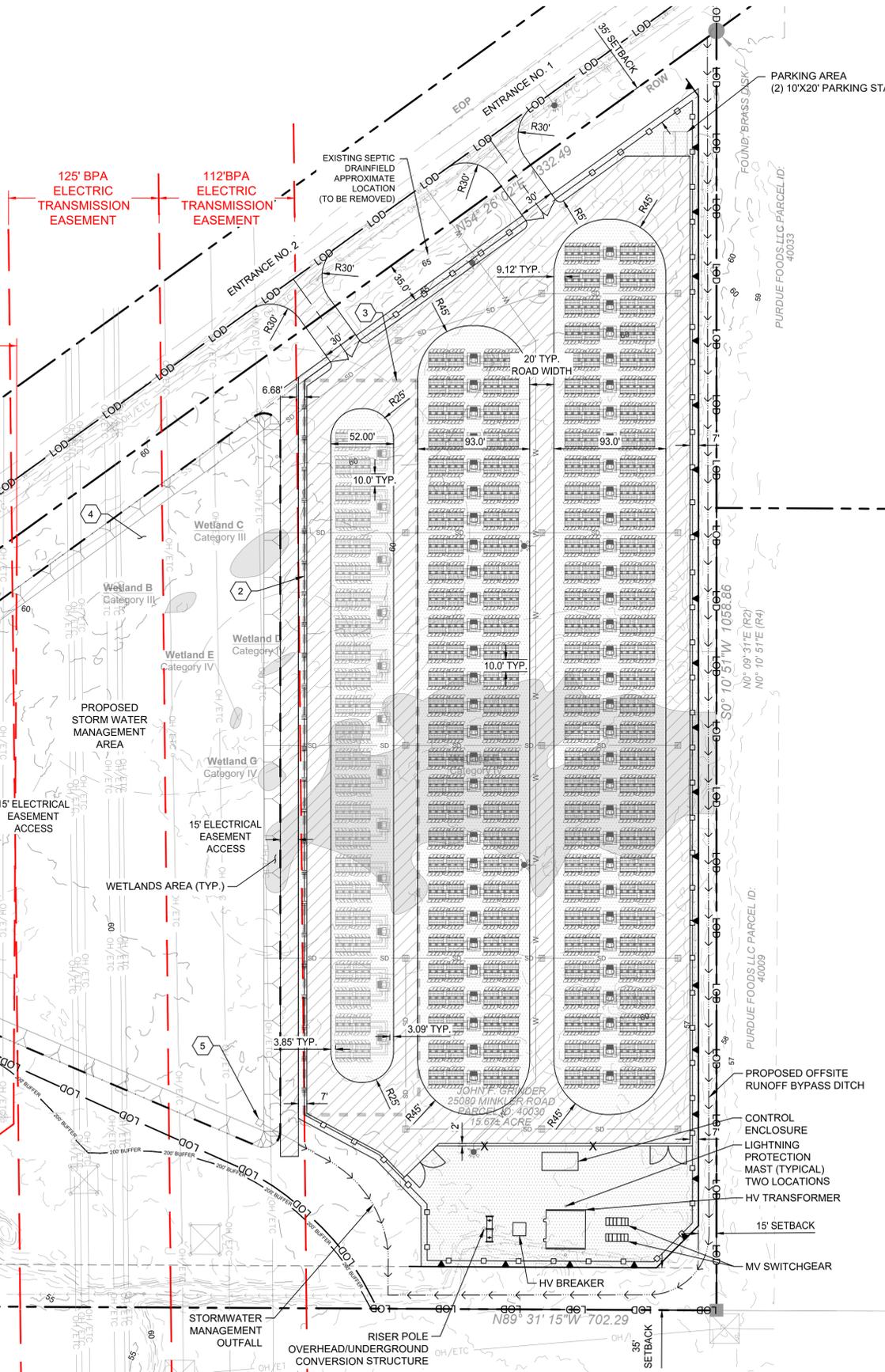
RED PLAINS SURVEYING COMPANY  
1917 S HARVARD AVENUE  
OKLAHOMA CITY, OK 73128  
PH.: 405-603-7842

DUDEK  
605 THIRD STREET  
ENCINITAS, CA 92024  
PH.: 706-942-5147



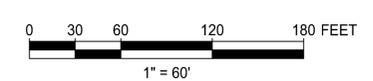


- KEY NOTES**
- 1 16' HIGH SOLID WALL FENCE
  - 2 14' HIGH SOLID WALL FENCE
  - 3 1.3 ACRE TEMPORARY CONSTRUCTION LAYDOWN AREA
  - 4 DETENTION POND PER THE WASHINGTON STATE DEPARTMENT OF ECOLOGY, STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON (SWMMWW)
  - 5 OUTLET CONTROL STRUCTURE PER SWMMWW



- SITE PLAN NOTES**
- THE BOUNDARY AND BASIS OF BEARING USED IN THIS SITE PLAN IS BASED ON THE ALTA SURVEY BY DUDEK DATED 09/26/2022.
  - PROPOSED FEATURES SHOWN IN EXISTING EASEMENTS WILL BE DISCUSSED WITH THE APPROPRIATE PARTIES DURING THE PERMITTING PROCESS.
  - THE PROJECT SITE IS LOCATED WITHIN THE FEMA MAP PANEL 530151 0255D FIRM FLOOD ZONE A, INDICATING AN AREA OF THE 100-YEAR FLOOD WITHOUT A DETERMINED BASE FLOOD ELEVATION.
  - PROJECT SITE INFORMATION:  
 25080 MINKLER ROAD  
 CITY OF SEDRO-WOOLLEY  
 COUNTY OF SKAGIT  
 STATE OF WASHINGTON  
 PARCEL ID: 40030  
 PARCEL ZONING: Ag-NRL  
 STREET SETBACK: 35'  
 INTERIOR SETBACK: 15'  
 REAR SETBACK: 35'
  - BATTERY CABINET EQUIPMENT COUNTS REPRESENT A 5 YEAR INITIAL OVERBUILD BASED ON 365 CYCLES PER YEAR AND 800MWH AT POI.
  - PROJECT PERIMETER FENCING IS 12 FEET IN HEIGHT UNLESS OTHERWISE NOTED.
  - BESS SITE DISTURBANCE AREA = 13.2 ACRES
  - DRIVEWAY ENTRANCES SHALL CONFORM TO THE CURRENT EDITION OF THE SKAGIT COUNTY ROAD STANDARDS MANUAL.

- LEGEND**
- PROPERTY BOUNDARY LINE
  - OH/ETC — EXISTING OVERHEAD ELECTRICAL LINES
  - - - EASEMENT LINE
  - - - SETBACK LINE
  - ● PROPERTY CORNERS
  - ⊕ EXISTING POWER POLE
  - ⊠ EXISTING POWER STRUCTURE
  - × × × PROPOSED CHAIN-LINK FENCE
  - □ □ PROPOSED 12' HIGH SOLID WALL FENCE
  - ▬▬▬ PROPOSED 14' OR 16' HIGH SOLID WALL FENCE
  - ▨ PROPOSED BESS UNITS
  - ⊞ MV TRANSFORMER
  - ⊞ FUTURE MV AUGMENTATION
  - BESS BATTERY ENERGY STORAGE SYSTEM
  - ▨ ROAD SURFACING
  - ▨ GRAVEL SURFACING
  - - - TEMPORARY CONSTRUCTION LAYDOWN AREA
  - ⊕ PROPOSED FIRE HYDRANT
  - W — PROPOSED WATER LINE
  - SD — PROPOSED STORM DRAIN LINE
  - ⊞ PROPOSED STORM DRAIN CATCHBASIN
  - PROPOSED FLOW LINE
  - PROPOSED RETAINING WALL
  - PROPOSED STORMWATER MANAGEMENT AREA
  - - - 50 - - - EXISTING 5' MAJOR CONTOUR
  - - - 51 - - - EXISTING 1' MINOR CONTOUR
  - LOD — LIMITS OF DISTURBANCE



NW COR. SECTION 20  
CONC. MON. BURIED 22"  
PER SURVEY MAP No.  
197902200007

30° 27' 03" W 2595.94

554° 26' 02" W 298.49

BERGER MERLE H  
PARCEL ID:  
40031

CENTERLINE OF HANSEN CREEK  
HELD FOR WESTERLY PROPERTY  
LINE

N0° 27' 05" E 99.15

N89° 31' 15" W 621.90

THIS DRAWING WAS PREPARED BY POWER ENGINEERS, INC. FOR A SPECIFIC PROJECT, TAKING INTO CONSIDERATION THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING OR ANY INFORMATION CONTAINED IN THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH POWER AND POWER'S CLIENT IS GRANTED.

**PRELIMINARY**  
NOT FOR CONSTRUCTION

REV	ISSUED FOR INFORMATION	DATE	DRN	DSGN	CKD	APPD
A	ISSUED FOR INFORMATION	4/24/24	BTB	BTB	TJG	TWH
REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD

DSGN  
DRN  
CKD

SCALE: 1" = 60'

FOR 22x34 DWG ONLY



GOLDENEYE BATTERY STORAGE, LLC	JOB NUMBER	REV
GOLDENEYE BESS PROJECT 200MW/800MWH BESS	180161	A
PRELIMINARY SITE PLAN	DRAWING NUMBER	C1-1

STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
CB-01	RIM = 62.00 INV OUT = 58.94
CB-02	RIM = 62.01 INV IN = 58.37 INV OUT = 58.37
CB-03	RIM = 62.00 INV IN = 57.80 INV OUT = 57.80
CB-04	RIM = 62.00 INV OUT = 58.21
CB-05	RIM = 62.00 INV IN = 57.65 INV OUT = 57.65
CB-06	RIM = 62.00 INV IN = 57.09 INV OUT = 57.09
CB-07	RIM = 62.00 INV OUT = 58.23
CB-08	RIM = 62.00 INV IN = 57.66 INV OUT = 57.66
CB-09	RIM = 62.00 INV IN = 57.09 INV OUT = 57.09
CB-10	RIM = 62.00 INV OUT = 58.22
CB-11	RIM = 62.00 INV IN = 57.65 INV OUT = 57.65
CB-12	RIM = 62.00 INV IN = 57.09 INV OUT = 57.09

STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
CB-13	RIM = 62.00 INV OUT = 58.39
CB-14	RIM = 62.00 INV IN = 57.82 INV OUT = 57.82
CB-15	RIM = 62.00 INV IN = 57.19 INV OUT = 57.19
OUT-01	RIM = 58.17 INV IN = 56.50
OUT-02	RIM = 59.25 INV IN = 56.50
OUT-03	RIM = 59.25 INV IN = 56.50
OUT-04	RIM = 58.17 INV IN = 56.50
OUT-05-CTL	RIM = 60.00 INV OUT = 56.50
OUT-06	RIM = 58.04 INV IN = 56.38

**ESTIMATED QUANTITIES**

\*QUANTITIES LISTED ARE ESTIMATES ONLY. CONTRACTORS TO CALCULATE THEIR OWN BID QUANTITIES. ESTIMATE QUANTITIES ARE IN BANK CUBIC YARDS WITH NO ALLOWANCE FOR SHRINK OR SWELL.

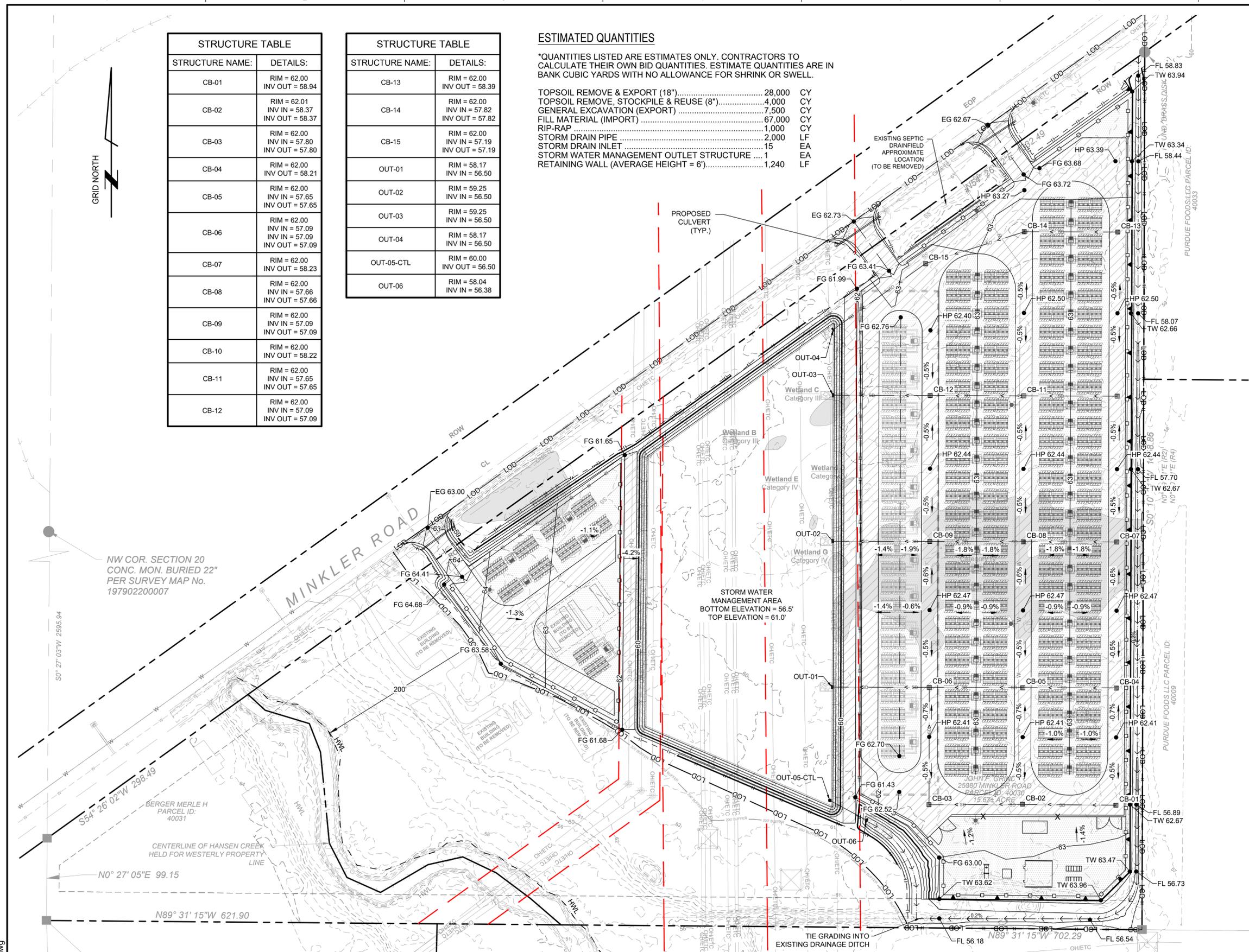
TOPSOIL REMOVE & EXPORT (18")	28,000	CY
TOPSOIL REMOVE, STOCKPILE & REUSE (8")	4,000	CY
GENERAL EXCAVATION (EXPORT)	7,500	CY
FILL MATERIAL (IMPORT)	67,000	CY
RIP-RAP	1,000	CY
STORM DRAIN PIPE	2,000	LF
STORM DRAIN INLET	15	EA
STORM WATER MANAGEMENT OUTLET STRUCTURE	1	EA
RETAINING WALL (AVERAGE HEIGHT = 6')	1,240	LF

**GRADING NOTES**

- EXISTING AND PROPOSED CONTOURS ARE SHOWN AT 1' INTERVALS.
- ALL CUT & FILL SLOPES SHALL BE AT 3:1 UNLESS NOTED OTHERWISE.
- THE TOP LAYER OF UNSUITABLE ORGANIC TOPSOIL MATERIAL WITHIN THE GRADING LIMITS SHALL BE STRIPPED TO A MINIMUM DEPTH OF EIGHTEEN (18) INCHES AND DISPOSED OF OFF SITE.
- FOR GEOTECHNICAL INFORMATION REFER TO THE GEOTECHNICAL ENGINEERING REPORT AND PRELIMINARY PERCOLATION EVALUATION PREPARED BY TERRA-GEO.
- FOR DESIGNATED TRAFFIC AREAS REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL SUBGRADE PREPARATION AND RECOMMENDATIONS.
- GROUNDWATER SEEPAGE WAS OBSERVED IN ALL BORINGS AND TEST PITS BETWEEN 5'-10" BELOW THE EXISTING SURFACE.
- GRADING IS BASED ON THE ASSUMED BASE FLOOD ELEVATION(BFE) OF 61.3'. FOUNDATIONS SHALL BE AT LEAST 1.0' ABOVE BFE.
- RESULTS FROM THE SITE FLOOD STUDY COMPLETED BY POWER ENGINEERS HAS SHOWN THE PROPOSED DEVELOPMENT HAS NOT INCREASED THE WATER SURFACE ELEVATION OF THE BFE MORE THAN ONE FOOT AT ANY POINT.
- TOTAL DISTURBANCE AREA = 575,000 S.F. / 13.20 ACRES.
- THE STORMWATER MANAGEMENT POND IS TO BE BUILT IN ACCORDANCE WITH THE CURRENT EDITION OF THE WASHINGTON STATE DEPARTMENT OF ECOLOGY, STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON (SWMWW).

**LEGEND**

- PROPERTY BOUNDARY LINE
- PARCEL LINES
- OH/ETC EXISTING OVERHEAD POWER
- ASSUMED SETBACK LINE
- ⊙ EXISTING POWER POLE
- ⊠ EXISTING POWER LINE STRUCTURE
- ▬ RETAINING WALL
- ▬ STORM DRAIN PIPE
- STORM DRAIN INLET
- ⊗ CHAIN-LINK FENCE
- 8' PRECAST PANEL FENCE
- ▨ PROPOSED BATTERY ENCLOSURE UNITS
- ▩ MV TRANSFORMER
- ▩ FUTURE AUGMENTATION BESS UNITS
- ▩ BESS BATTERY ENERGY STORAGE SYSTEM
- ▨ ROAD SURFACING
- ▨ GRAVEL SURFACING
- ▨ RIPRAP
- 60' EXISTING MAJOR CONTOUR
- 59' EXISTING MINOR CONTOUR
- 60' MAJOR CONTOUR
- 59' MINOR CONTOUR
- ▬ -1.0% GRADING SLOPE ARROW
- FLOW LINE
- DAYLIGHT LINE
- LOD DISTURBANCE LIMITS
- TW TOP OF WALL
- FL FLOW LINE
- FG FINISHED GRADE
- EG EXISTING GRADE



NW COR. SECTION 20  
CONC. MON. BURIED 22"  
PER SURVEY MAP No.  
197902200007

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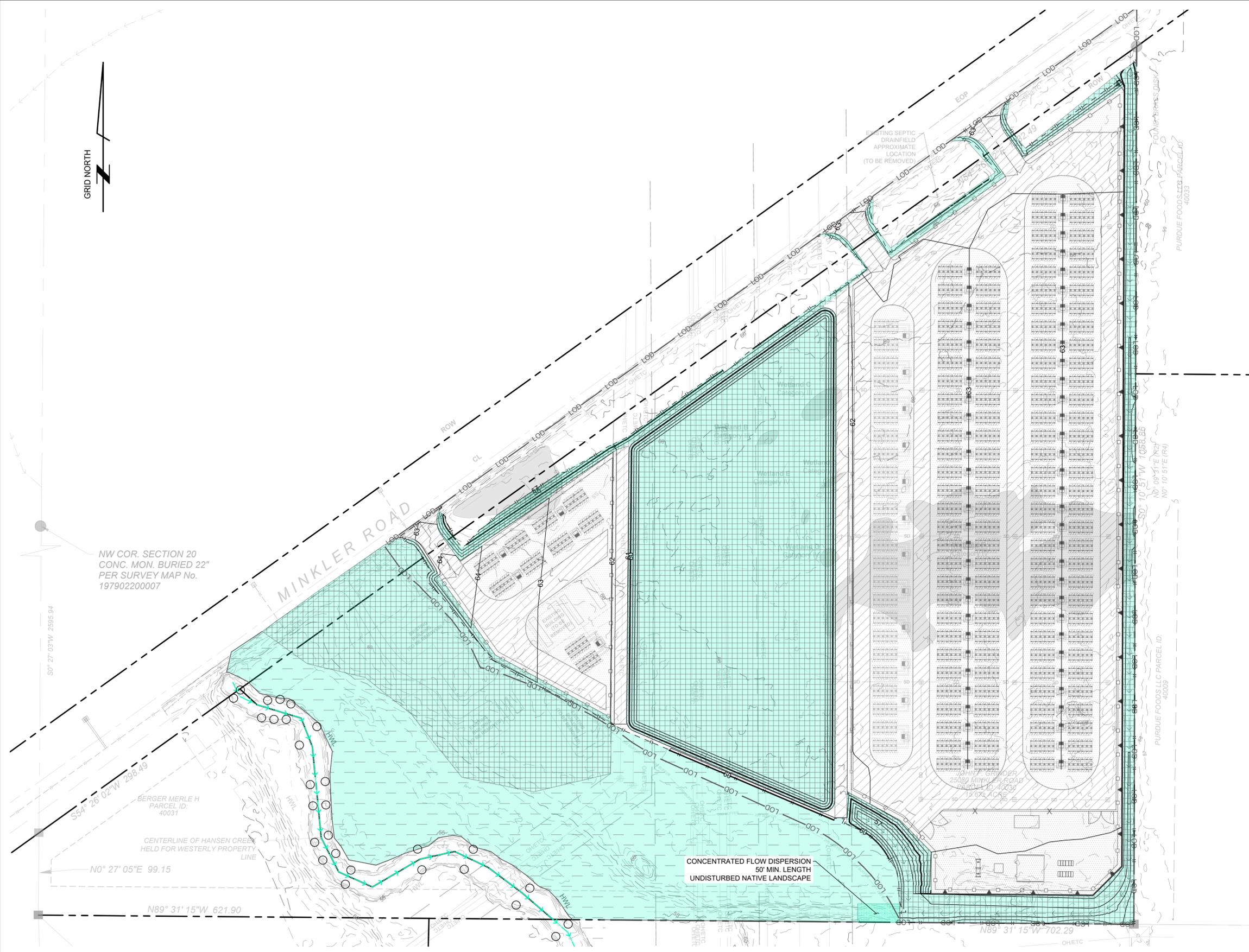
**PRELIMINARY**  
NOT FOR CONSTRUCTION

REV	ISSUED FOR INFORMATION	DATE	DRN	DSGN	CKD	APPD
A	ISSUED FOR INFORMATION	4/24/2024	BTB	BTB	TJG	TWH
REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD

DSGN	
DRN	
CKD	
SCALE:	1" = 60'
FOR 22x34 DWG ONLY	



GOLDENEYE BATTERY STORAGE, LLC	JOB NUMBER	REV
GOLDENEYE BESS PROJECT 200MW/800MWH BESS	180161	A
PRELIMINARY GRADING PLAN	DRAWING NUMBER	C2-1



- LEGEND**
- PROPERTY BOUNDARY LINE
  - PARCEL LINES
  - OH/ETC EXISTING OVERHEAD POWER
  - SETBACK LINE
  - ⊙ EXISTING POWER POLE
  - ⊠ EXISTING POWER LINE STRUCTURE
  - RETAINING WALL
  - STORM DRAIN PIPE
  - STORM DRAIN INLET
  - CHAIN-LINK FENCE
  - 8' PRECAST PANEL FENCE
  - ▨ PROPOSED BATTERY ENCLOSURE UNITS
  - ⊞ MV TRANSFORMER
  - ▨ FUTURE AUGMENTATION BESS UNITS
  - ▨ BESS BATTERY ENERGY STORAGE SYSTEM
  - ▨ ROAD SURFACING
  - ▨ GRAVEL SURFACING
  - ▨ RIPRAP
  - 60 EXISTING MAJOR CONTOUR
  - 59 EXISTING MINOR CONTOUR
  - 60 MAJOR CONTOUR
  - 59 MINOR CONTOUR
  - FLOW LINE
  - DAYLIGHT LINE
  - LOD BESS YARD LIMITS OF DISTURBANCE LINE
  - STREAM RESTORATION AREA
  - ▨ CONCENTRATED FLOW DISPERSION (UNDISTURBED NATIVE LANDSCAPE)
  - ▨ DISTURBED AREAS (RESTORE NATIVE TOPSOIL TO MIN DEPTH 8")
  - ▨ CLEARED AREA DISPERSION (UNDISTURBED NATIVE LANDSCAPE)

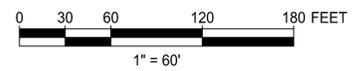


NW COR. SECTION 20  
CONC. MON. BURIED 22"  
PER SURVEY MAP No.  
197902200007

BERGER MERLE H  
PARCEL ID:  
40031

CENTERLINE OF HANSEN CREEK  
HELD FOR WESTERLY PROPERTY  
LINE

CONCENTRATED FLOW DISPERSION  
50' MIN. LENGTH  
UNDISTURBED NATIVE LANDSCAPE



GE\_REV\_A\_FLD-1\_LID-1.dwg

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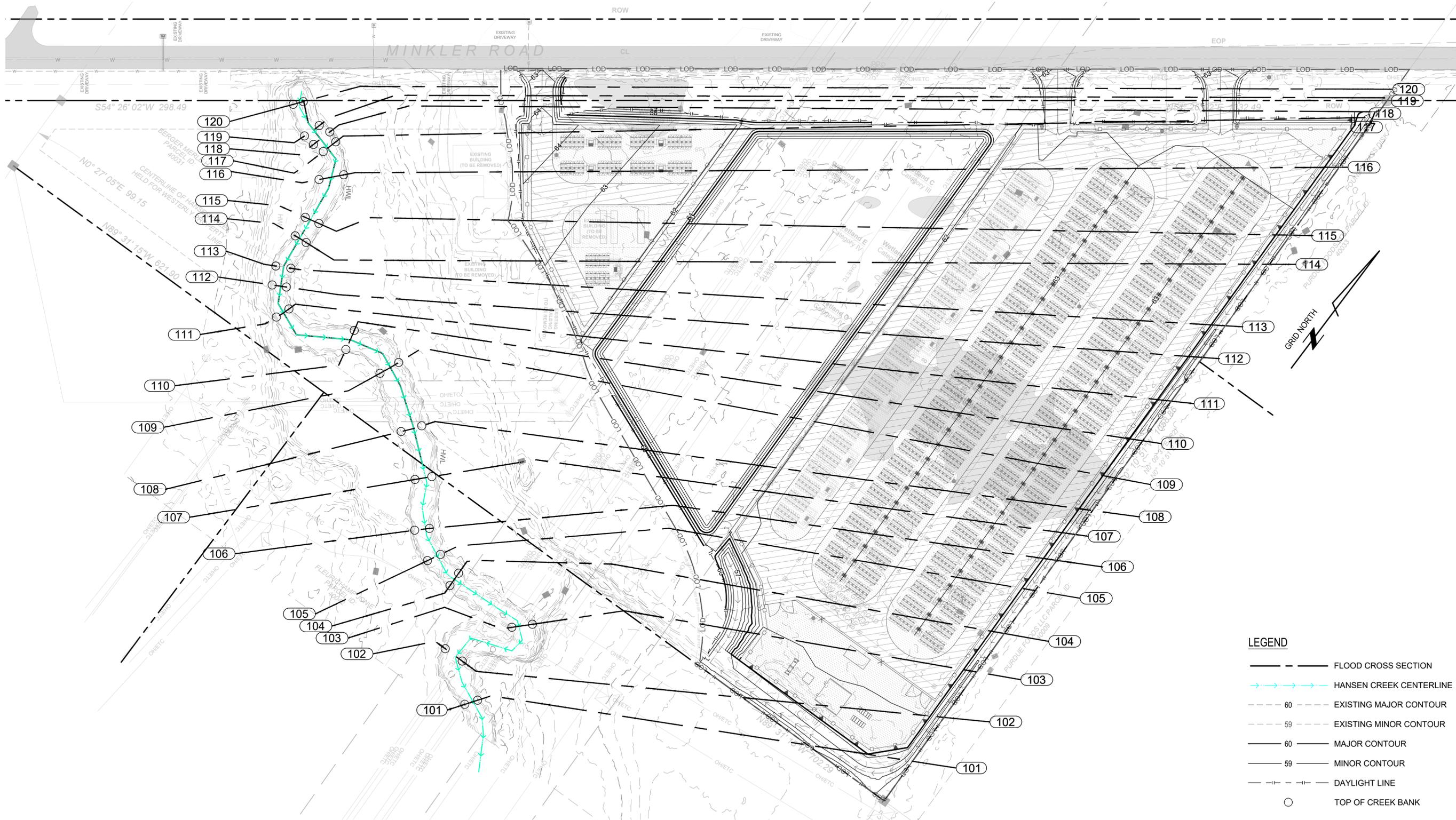
**PRELIMINARY**  
NOT FOR CONSTRUCTION

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A	ISSUED FOR INFORMATION	4/26/2024	BTB	BTB	SMT	TWH

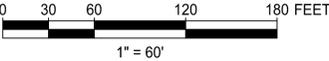
DSGN	
DRN	
CKD	
SCALE:	1" = 60'
FOR 22x34 DWG ONLY	



GOLDENEYE BATTERY STORAGE, LLC	JOB NUMBER	REV
GOLDENEYE BESS PROJECT 200MW/800MWH BESS	180161	A
LID TECHNIQUES PLAN	DRAWING NUMBER	LID-1



- LEGEND**
- FLOOD CROSS SECTION
  - HANZEN CREEK CENTERLINE
  - 60 --- EXISTING MAJOR CONTOUR
  - 59 --- EXISTING MINOR CONTOUR
  - 60 --- MAJOR CONTOUR
  - 59 --- MINOR CONTOUR
  - DAYLIGHT LINE
  - TOP OF CREEK BANK



GE\_REV\_A\_FLD.dwg

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**PRELIMINARY**  
NOT FOR CONSTRUCTION

REV	ISSUED FOR INFORMATION	DATE	DRN	DSGN	CKD	APPD
A	ISSUED FOR INFORMATION	4/26/2024	BTB	MH	SMT	TWH
	REVISIONS	DATE	DRN	DSGN	CKD	APPD

DSGN	
DRN	
CKD	
SCALE:	1" = 60'
FOR 22x34 DWG ONLY	



GOLDENEYE BATTERY STORAGE, LLC  
GOLDENEYE BESS PROJECT  
200MW/800MWH BESS  
FLOOD CROSS SECTIONS MAP

JOB NUMBER	180161	REV	△
DRAWING NUMBER	FLD-1		

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**APPENDIX D    HANSEN CREEK-MINKLER ROAD BRIDGE DESIGN  
WA402214**

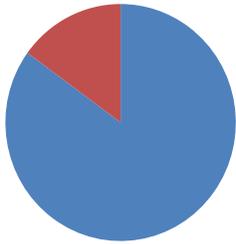
# Hansen Creek - Minkler Road Bridge Design

WA402214

COMPLETED IN 2016

**Project Manager:** Jeff McGowan/Shane Oden  
**Designer:** CivilTech

**Final Project Cost:** \$ 268,432



## Project Funding

- Drainage Utility
- SRFB

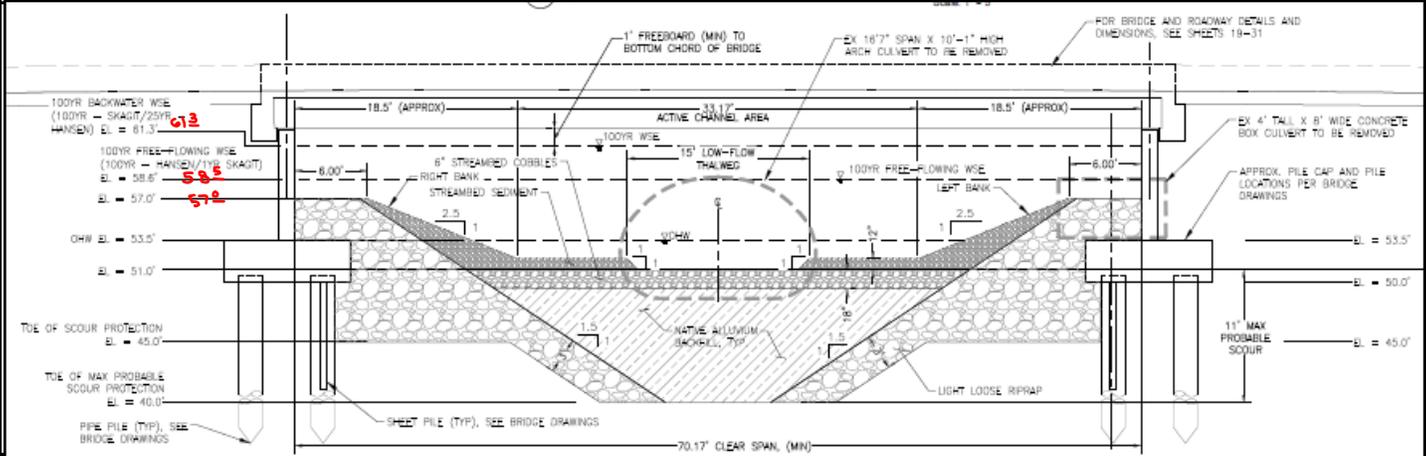
## DESCRIPTION

Skagit County and its project partners have recently finalized design plans to move Hansen Creek from its current straightened and leveed channel location to a more meandering channel to the west. This project would increase the instream habitat in Reach 5 from approximately 155,200 to 208,000 square feet to 92,800 square feet. This new channel will provide excellent habitat that will be utilized by Chinook, Coho, Pink, Steelhead, Chum salmon, Cutthroat and Bull Trout.

The new route of the creek was outlined in the 2002 Hansen Creek Watershed Management Plan. The Skagit River System Cooperative, along with Puget Sound Energy, has acquired all the parcels needed to make this project a reality. Hydraulic modeling has shown that the Minkler Road culvert is currently a constriction to flow.

Herrera Environmental Inc. has done extensive hydraulic modeling of the Reach 5 and lower Red Creek watersheds. A wider opening provided by a new bridge will eliminate this hydraulic constriction, which is essential as the proposed project will divert additional flood flows down the creek channel.

## CURRENT



## SKAGIT COUNTY



## SITE SPECIFIC MAP



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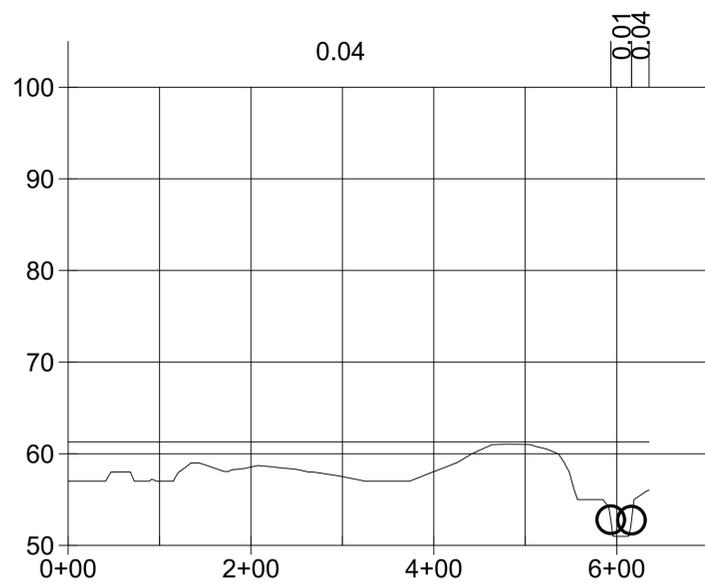
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## APPENDIX E MODEL RESULTS

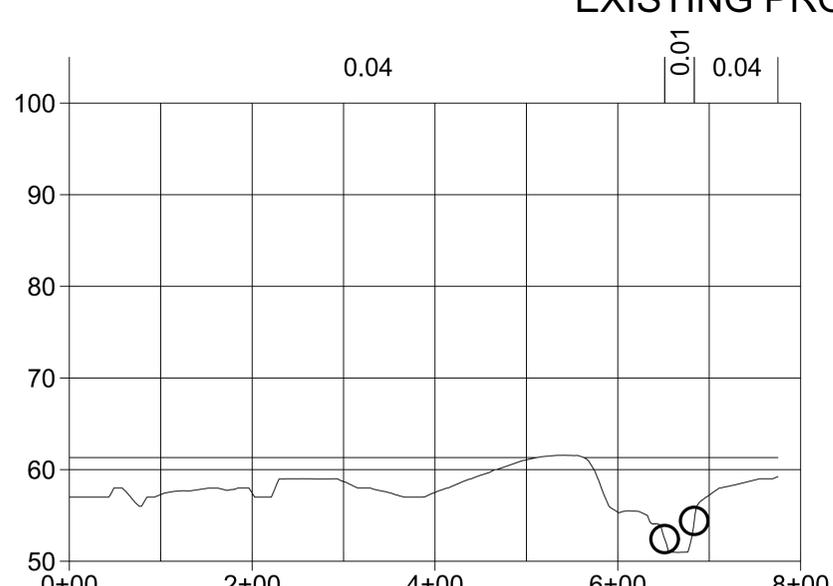
**PRELIMINARY FLOOD ANALYSIS RESULTS**

Model	River Station	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Elev. Diff
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(ft)
Ex	120	100-YEARS	1180.00	52.00	61.29		61.39	0.00	3.18	1559.90	1021.53	0.19	
Ex	119	100-YEARS	1180.00	52.00	61.31		61.38	0.00	2.59	1922.57	985.17	0.16	
Ex	118	100-YEARS	1180.00	52.00	61.32		61.38	0.00	2.45	2041.04	971.86	0.15	
Ex	117	100-YEARS	1180.00	52.00	61.31		61.38	0.00	2.61	1898.20	938.61	0.16	
Ex	116	100-YEARS	1180.00	52.00	61.31		61.37	0.00	2.33	1910.18	1075.89	0.14	
Ex	115	100-YEARS	1180.00	52.00	61.32		61.37	0.00	2.30	2468.55	1112.60	0.14	
Ex	114	100-YEARS	1180.00	52.00	61.33		61.37	0.00	2.37	2524.98	1106.19	0.14	
Ex	113	100-YEARS	1180.00	52.00	61.33		61.36	0.00	2.14	2749.58	1051.15	0.13	
Ex	112	100-YEARS	1180.00	52.00	61.34		61.36	0.00	1.98	2843.80	1011.21	0.13	
Ex	111	100-YEARS	1180.00	52.00	61.34		61.36	0.00	1.82	3025.22	1004.67	0.11	
Ex	110	100-YEARS	1180.00	51.66	61.34		61.36	0.00	1.77	3282.58	998.04	0.10	
Ex	109	100-YEARS	1180.00	51.00	61.34		61.36	0.00	1.71	3226.30	995.64	0.10	
Ex	108	100-YEARS	1180.00	51.00	61.34		61.36	0.00	1.52	3329.24	1025.79	0.09	
Ex	107	100-YEARS	1180.00	51.00	61.33		61.36	0.00	1.91	2746.77	890.14	0.11	
Ex	106	100-YEARS	1180.00	51.00	61.33		61.35	0.00	1.84	2725.96	799.88	0.11	
Ex	105	100-YEARS	1180.00	51.00	61.33		61.35	0.00	1.84	2616.95	802.18	0.11	
Ex	104	100-YEARS	1180.00	51.00	61.33		61.35	0.00	1.85	2850.82	842.12	0.11	
Ex	103	100-YEARS	1180.00	51.00	61.33		61.35	0.00	1.78	2831.49	755.56	0.10	
Ex	102	100-YEARS	1180.00	50.98	61.32		61.35	0.00	1.90	2692.27	723.72	0.11	
Ex	101	100-YEARS	1180.00	50.98	61.30	55.80	61.35	0.00	2.50	2233.15	635.40	0.14	
Prop	120	100-YEARS	1180.00	52.00	61.32		61.42	0.00	3.18	1522.05	943.77	0.19	0.029
Prop	119	100-YEARS	1180.00	52.00	61.34		61.41	0.00	2.58	1893.79	928.47	0.15	0.030
Prop	118	100-YEARS	1180.00	52.00	61.35		61.41	0.00	2.43	2027.55	918.21	0.14	0.031
Prop	117	100-YEARS	1180.00	52.00	61.26		61.40	0.00	3.34	900.23	544.78	0.20	-0.047
Prop	116	100-YEARS	1180.00	52.00	61.34		61.37	0.00	1.76	2368.12	544.93	0.10	0.025
Prop	115	100-YEARS	1180.00	52.00	61.34		61.37	0.00	1.87	2517.80	588.94	0.11	0.017
Prop	114	100-YEARS	1180.00	52.00	61.34		61.36	0.00	1.92	2590.48	623.39	0.12	0.016
Prop	113	100-YEARS	1180.00	52.00	61.34		61.36	0.00	1.93	2538.23	604.11	0.12	0.008
Prop	112	100-YEARS	1180.00	52.00	61.34		61.36	0.00	1.82	2579.10	618.11	0.12	0.006
Prop	111	100-YEARS	1180.00	52.00	61.34		61.36	0.00	1.75	2664.58	638.95	0.11	0.004
Prop	110	100-YEARS	1180.00	51.66	61.34		61.36	0.00	1.76	2827.48	638.54	0.10	0.003
Prop	109	100-YEARS	1180.00	51.00	61.33		61.36	0.00	1.79	2597.01	621.71	0.10	-0.002
Prop	108	100-YEARS	1180.00	51.00	61.33		61.36	0.00	1.76	2334.34	642.87	0.10	-0.008
Prop	107	100-YEARS	1180.00	51.00	61.30		61.36	0.00	2.37	1688.26	507.04	0.14	-0.026
Prop	106	100-YEARS	1180.00	51.00	61.30		61.35	0.00	2.31	1616.11	416.98	0.13	-0.026
Prop	105	100-YEARS	1180.00	51.00	61.30		61.35	0.00	2.31	1503.30	435.06	0.14	-0.026
Prop	104	100-YEARS	1180.00	51.00	61.31		61.35	0.00	2.19	1958.80	544.78	0.13	-0.020
Prop	103	100-YEARS	1180.00	51.00	61.31		61.35	0.00	2.11	1959.12	490.93	0.12	-0.021
Prop	102	100-YEARS	1180.00	50.98	61.31		61.35	0.00	2.10	2185.02	559.41	0.12	-0.015
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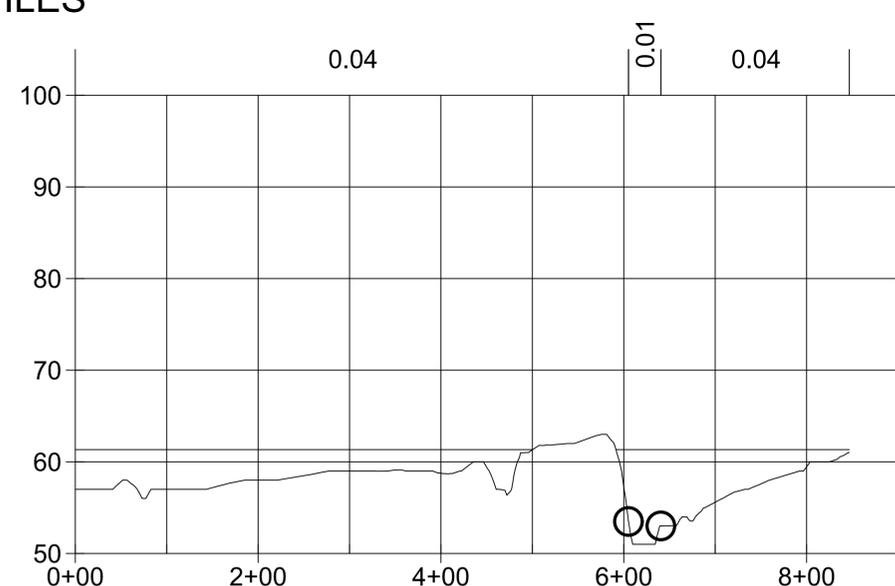
EXISTING PROFILES



101



102

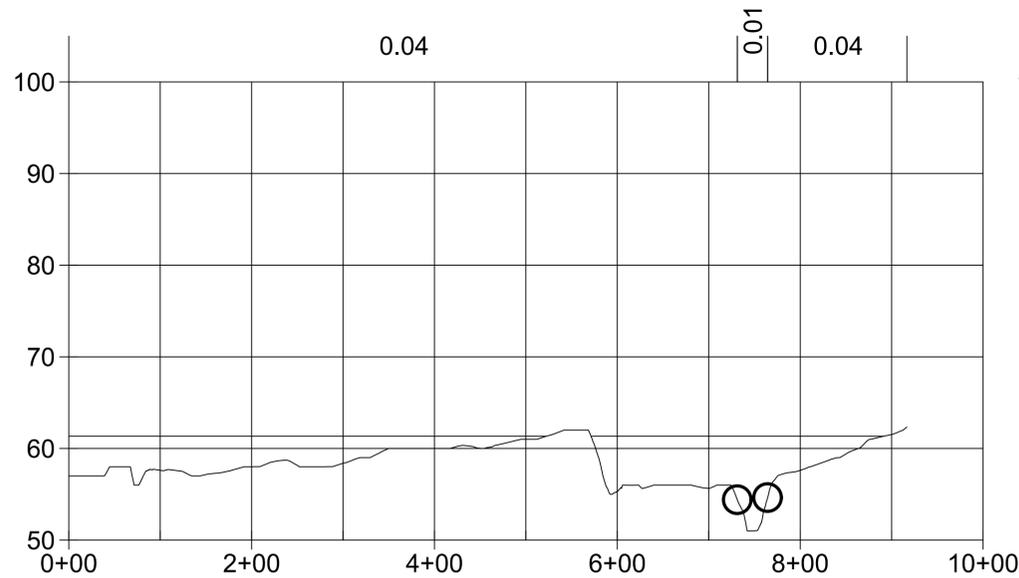


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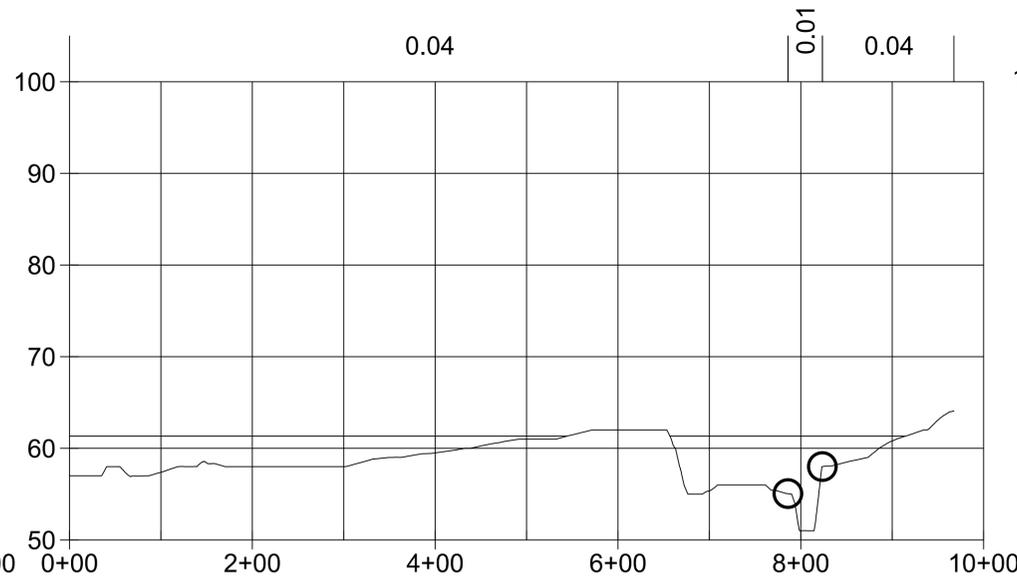
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Computed Water Surface = 61.30 ft

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Flow Discharge = 1180.00 cfs  
Computed Water Surface = 61.32 ft

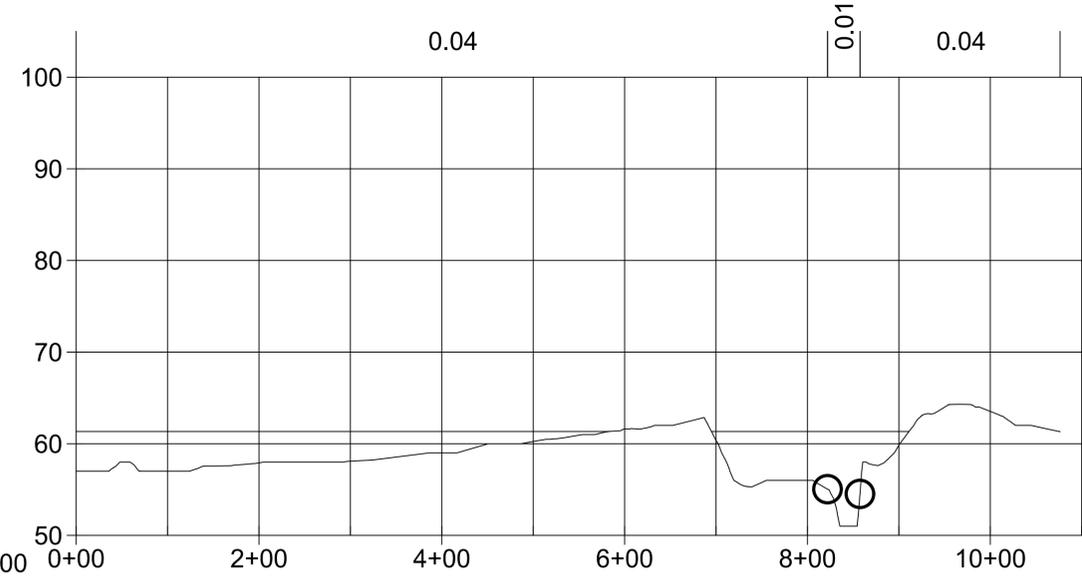
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104



105



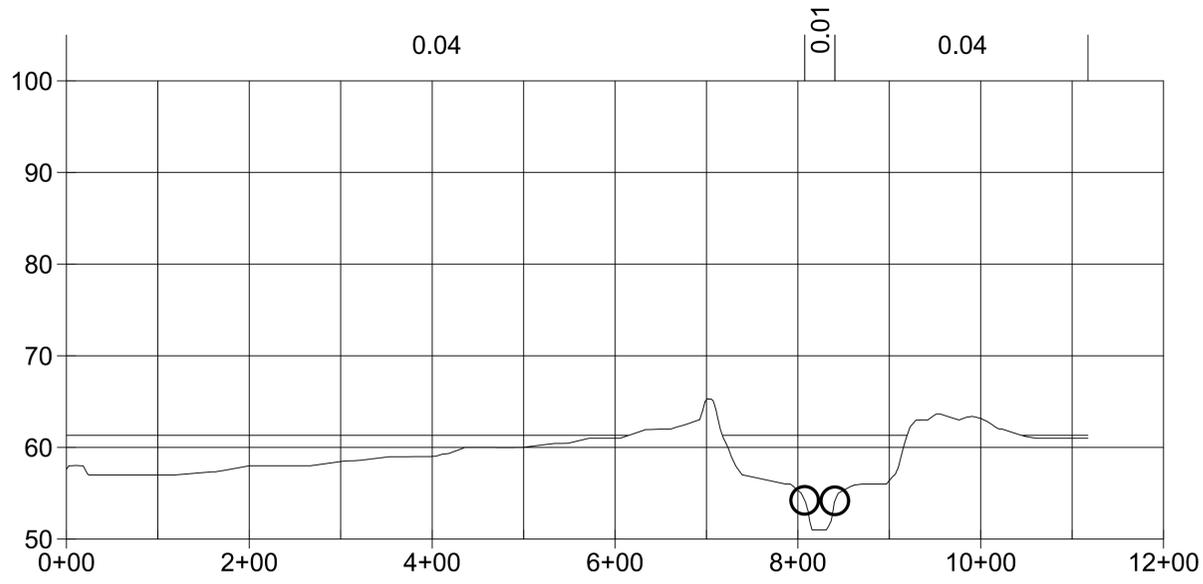
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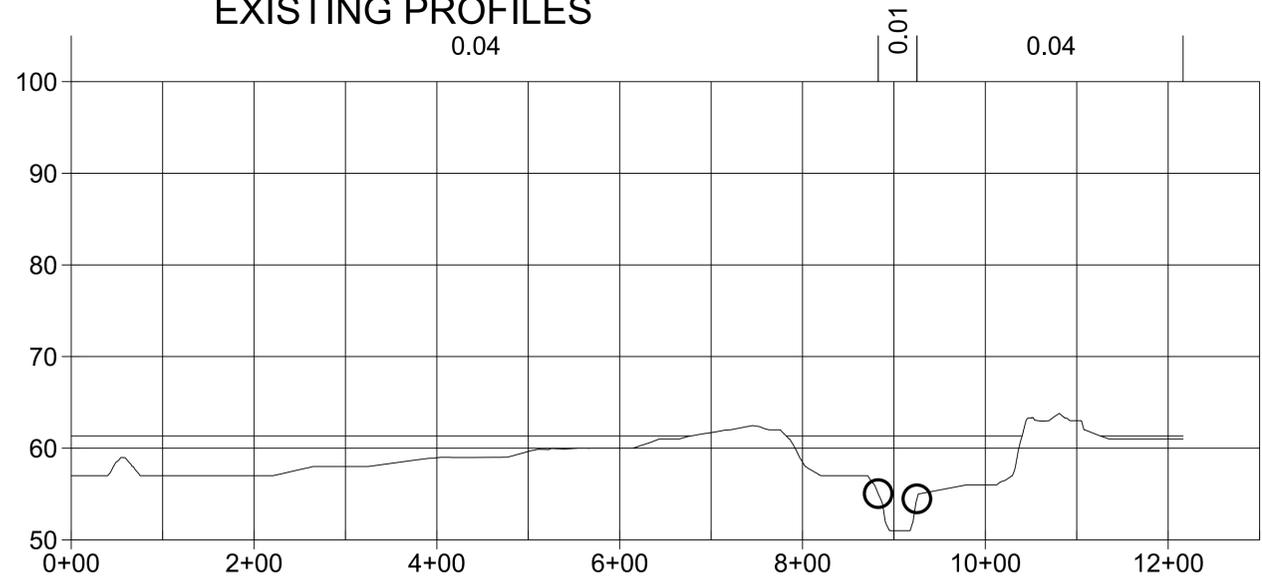
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EXISTING PROFILES



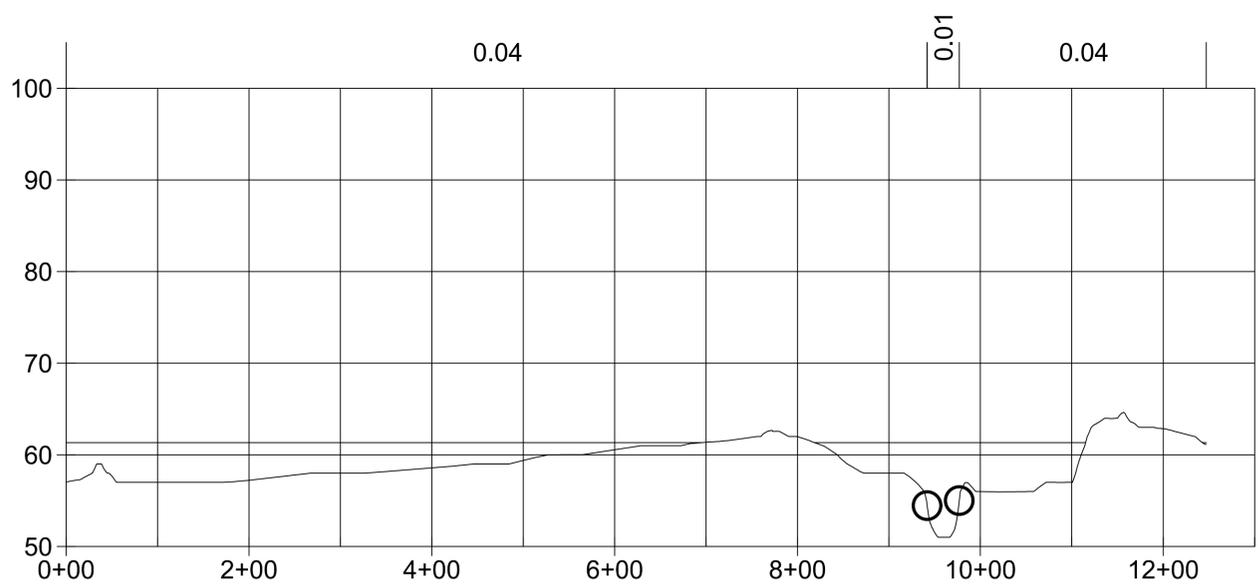
107

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Computed Water Surface = 61.33 ft



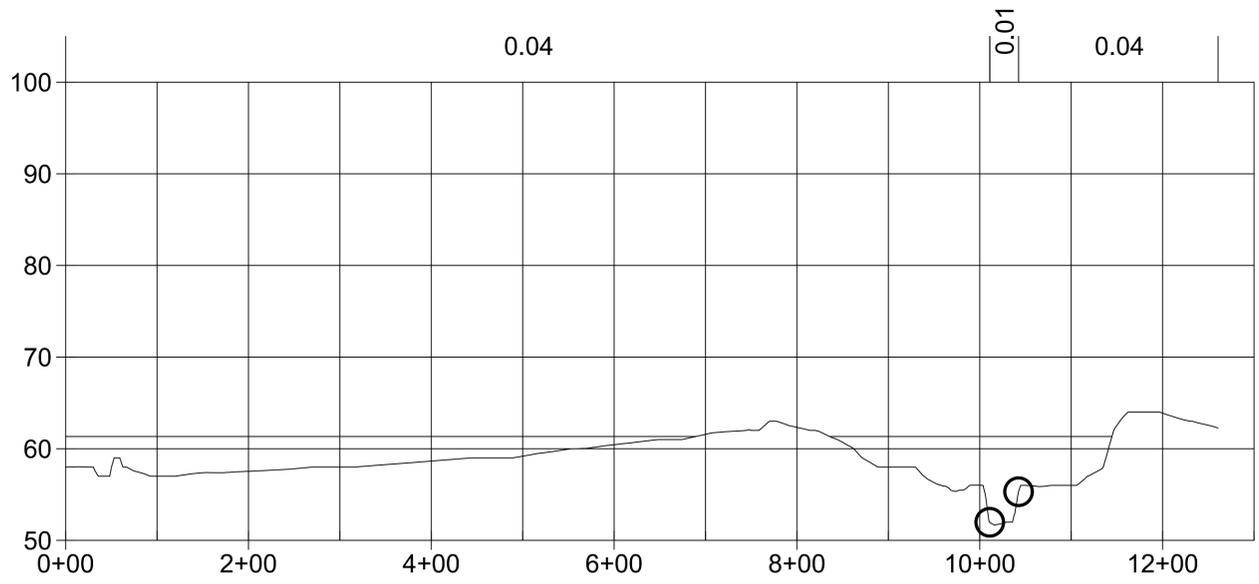
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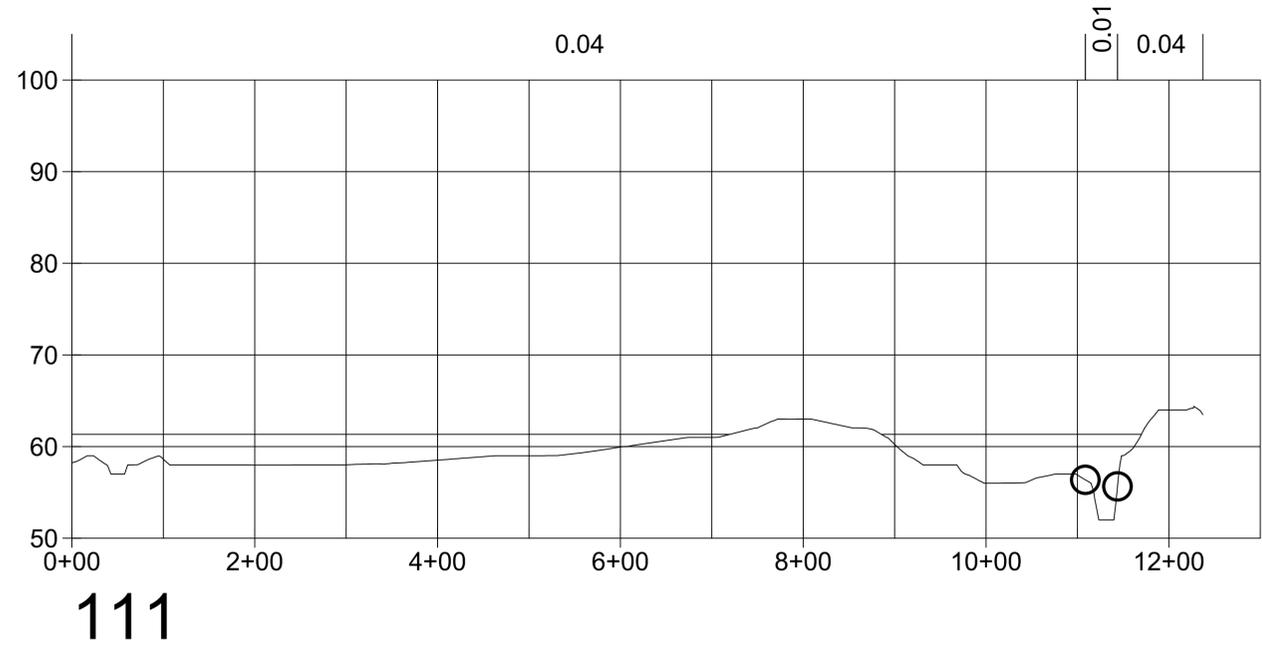
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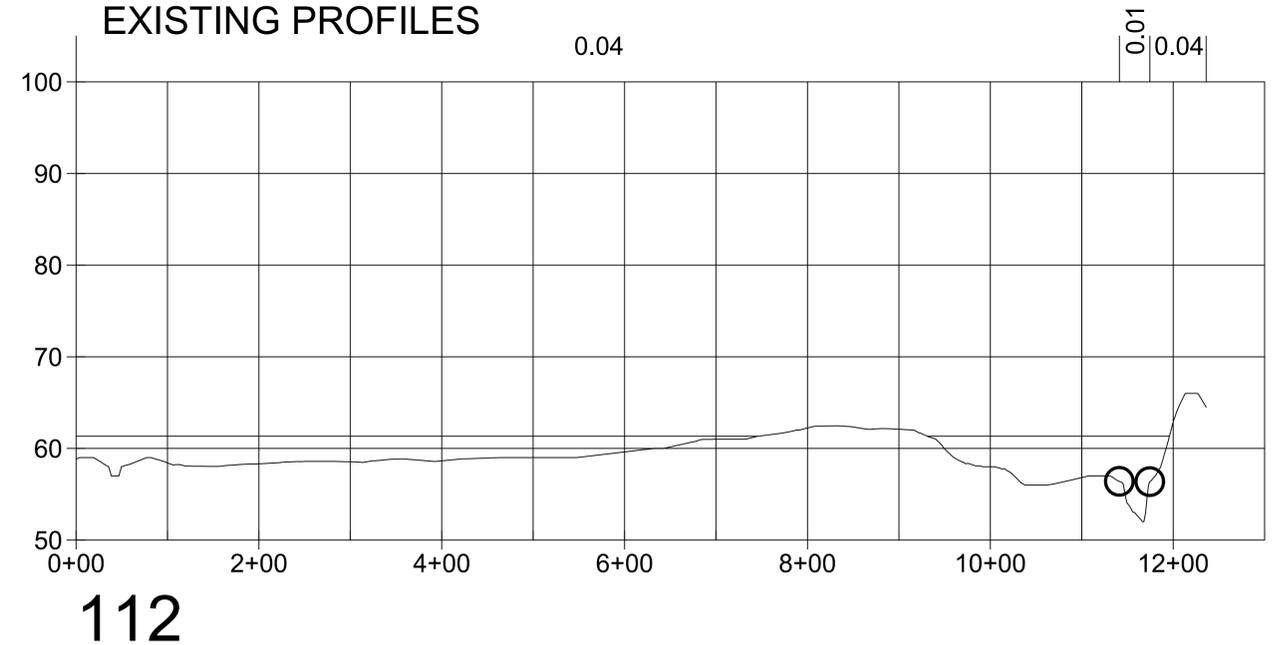


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Computed Water Surface = 61.34 ft



111

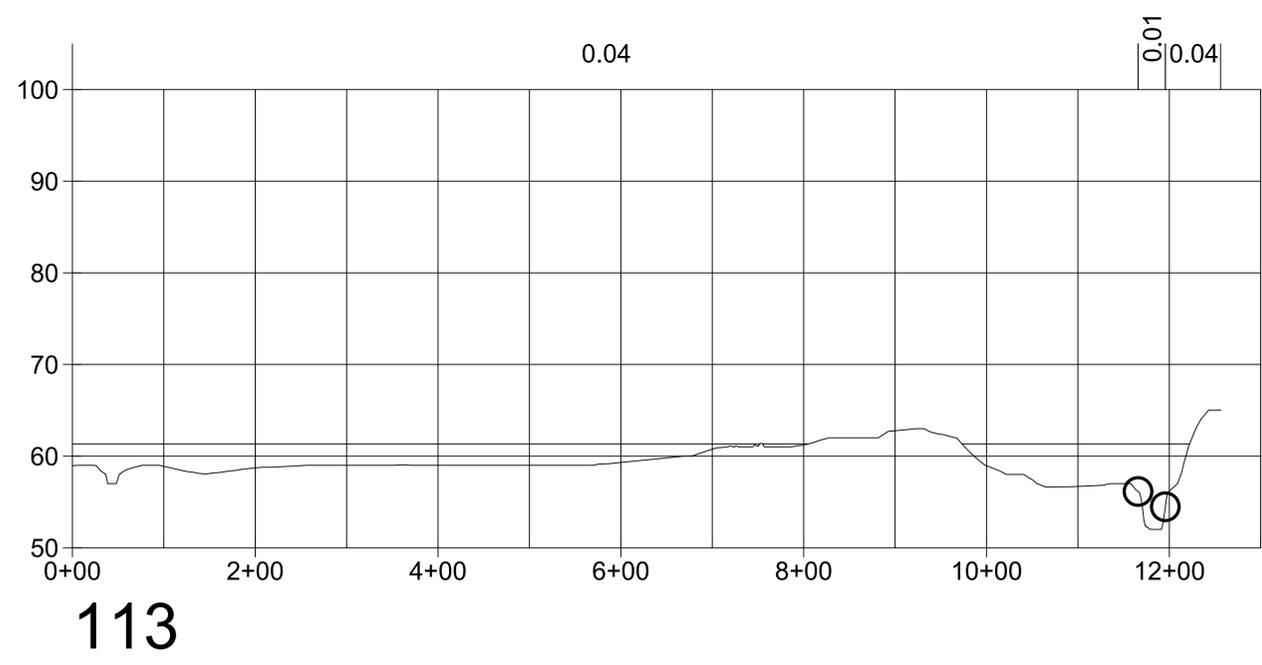


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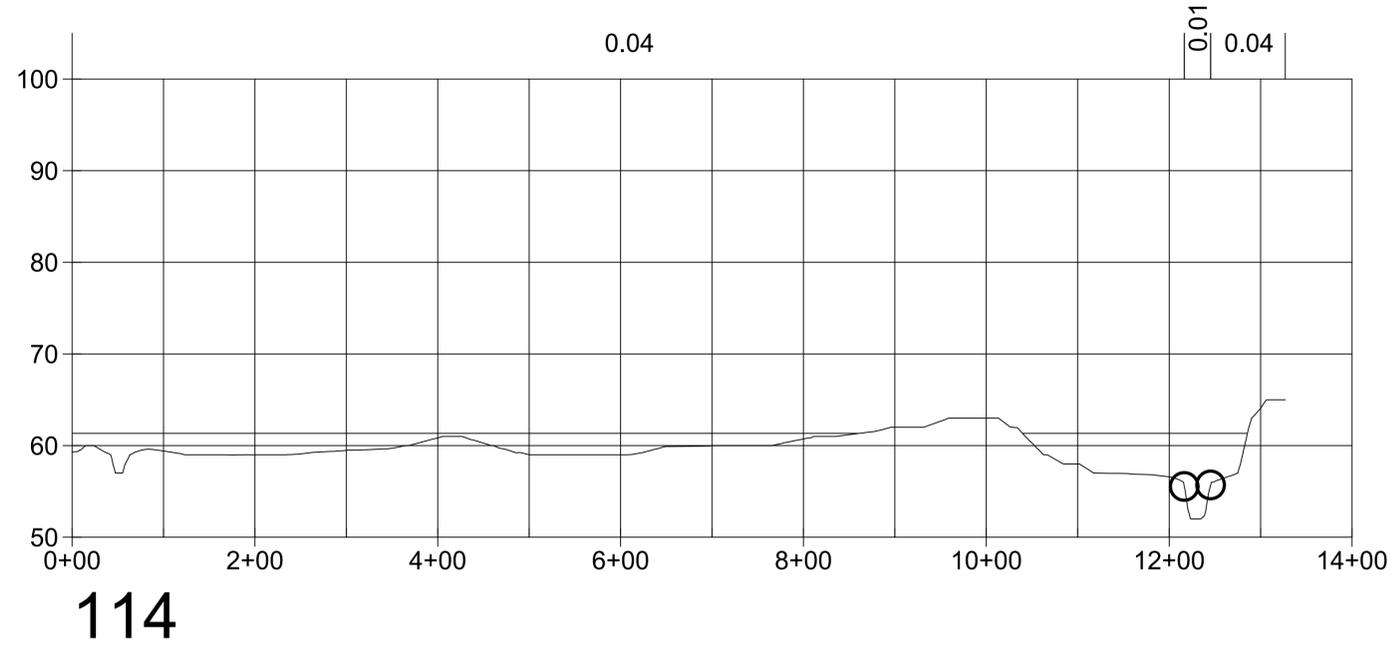
EXISTING PROFILES

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Profile: 100-YEARS  
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 Computed Water Surface = 61.34 ft



113

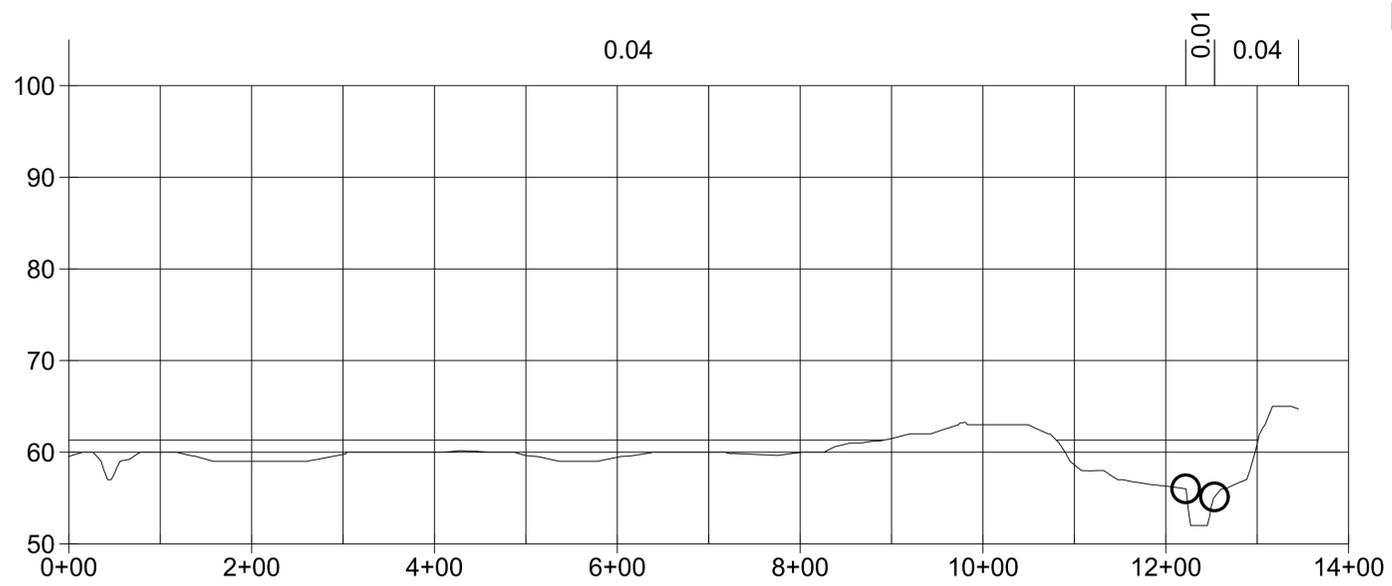


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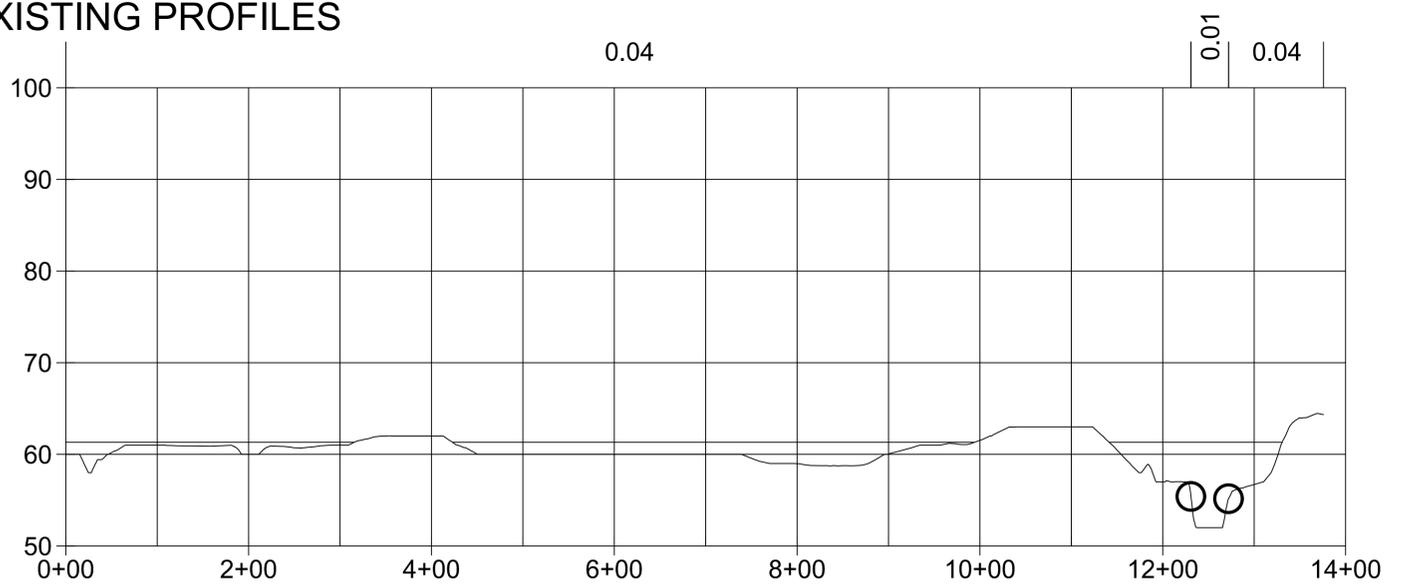
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 Computed Water Surface = 61.33 ft

EXISTING PROFILES



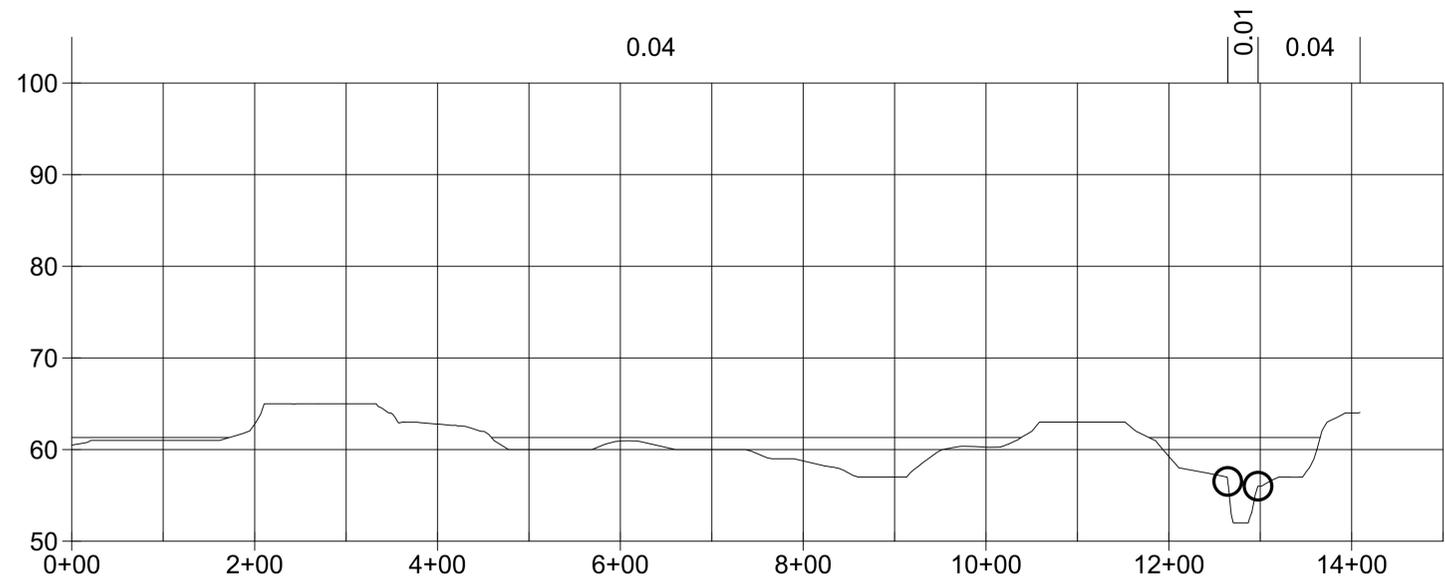
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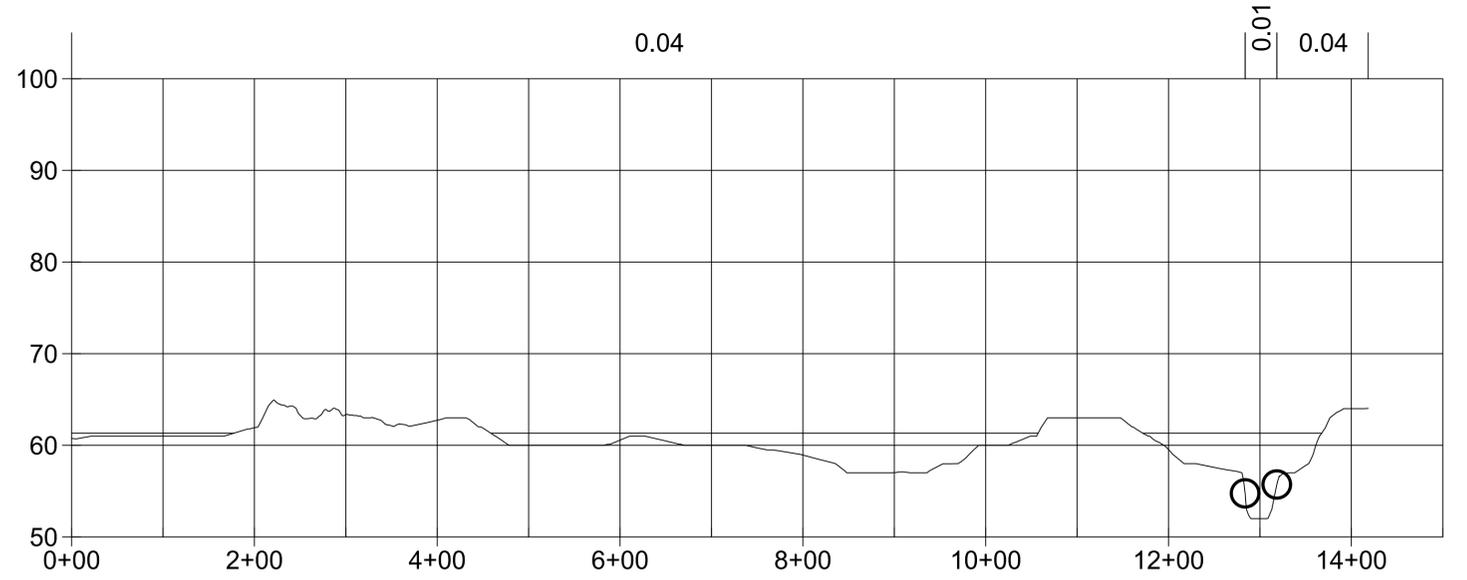
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 Flow Discharge = 1180.00 cfs  
 Computed Water Surface = 61.33 ft

Profile: 100-YEARS  
 Flow Discharge = 1180.00 cfs  
 Computed Water Surface = 61.31 ft



117

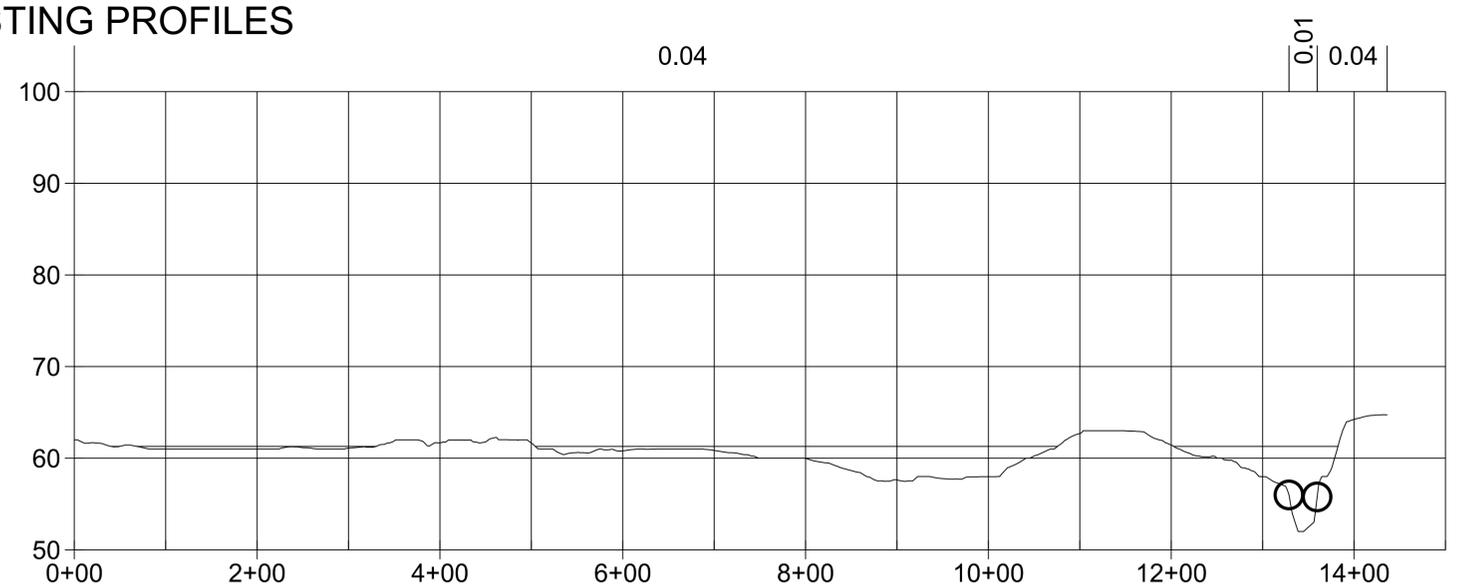
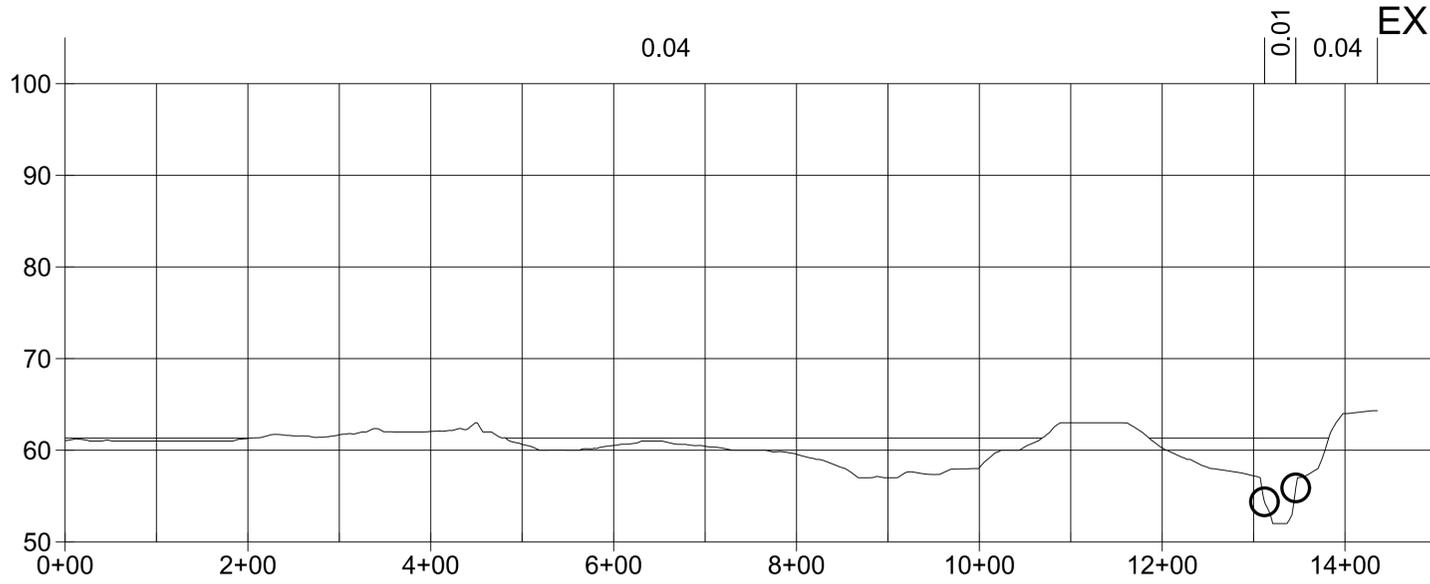


118

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Profile: 100-YEARS  
 Flow Discharge = 1180.00 cfs  
 Computed Water Surface = 61.32 ft

EXISTING PROFILES



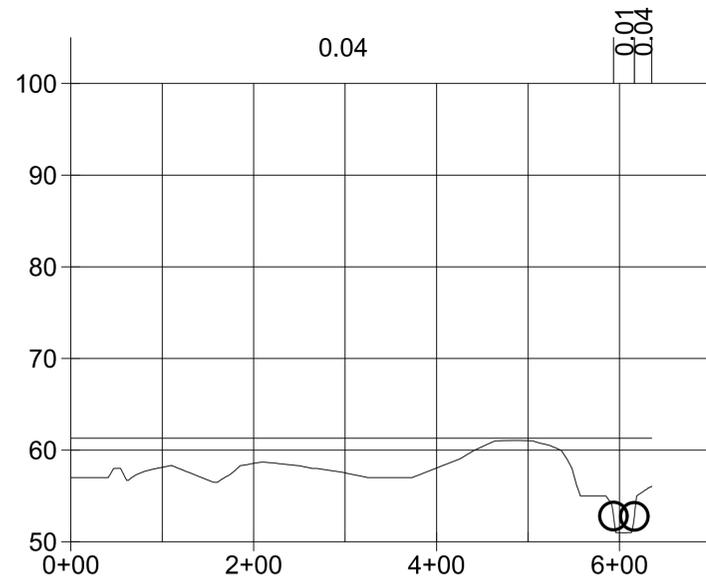
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120

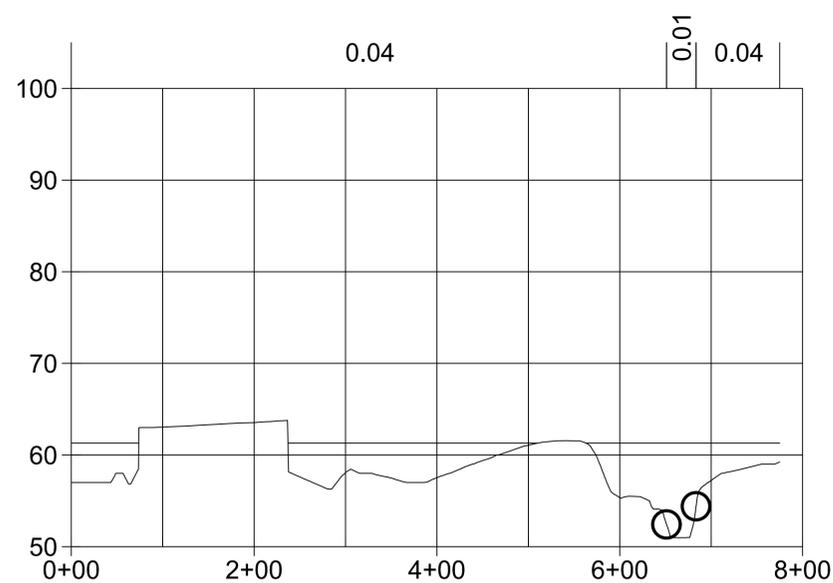
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—— Computed Water Surface = 61.31 ft

Profile: 100-YEARS  
Flow Discharge = 1180.00 cfs  
—— Computed Water Surface = 61.29 ft

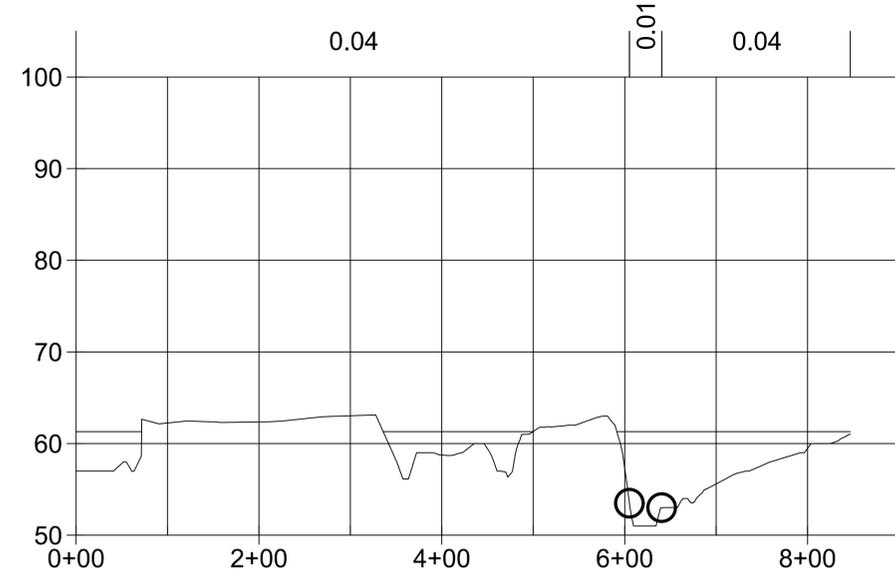
PROPOSED PROFILES



101



102



103

Profile: 100-YEARS

Flow Discharge = 1180.00 cfs

Computed Water Surface = 61.30 ft

Profile: 100-YEARS

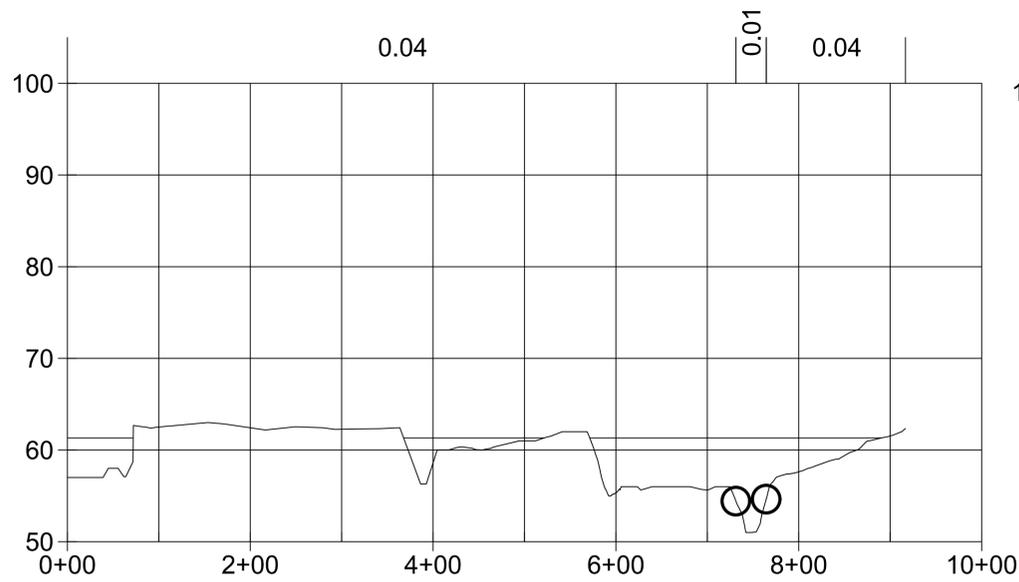
Flow Discharge = 1180.00 cfs

Computed Water Surface = 61.31 ft

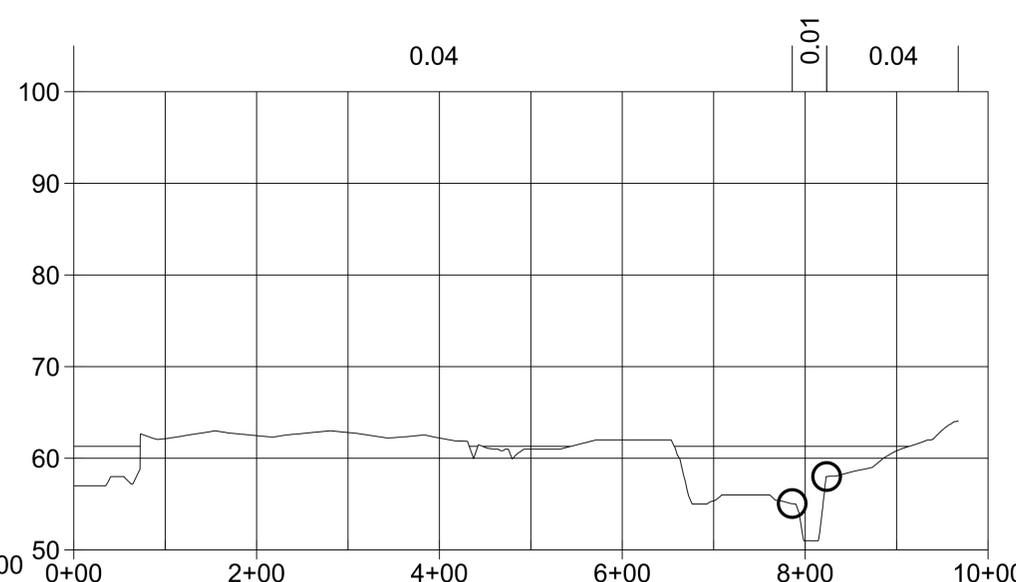
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Flow Discharge = 1180.00 cfs

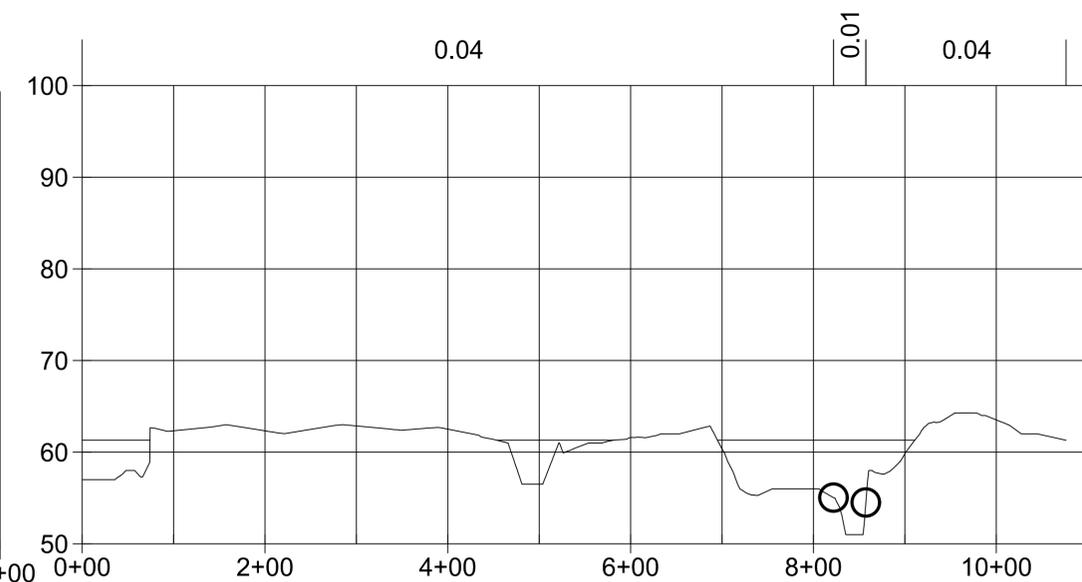
Computed Water Surface = 61.31 ft



104



105



106

Profile: 100-YEARS

Flow Discharge = 1180.00 cfs

Computed Water Surface = 61.31 ft

Profile: 100-YEARS

Flow Discharge = 1180.00 cfs

Computed Water Surface = 61.30 ft

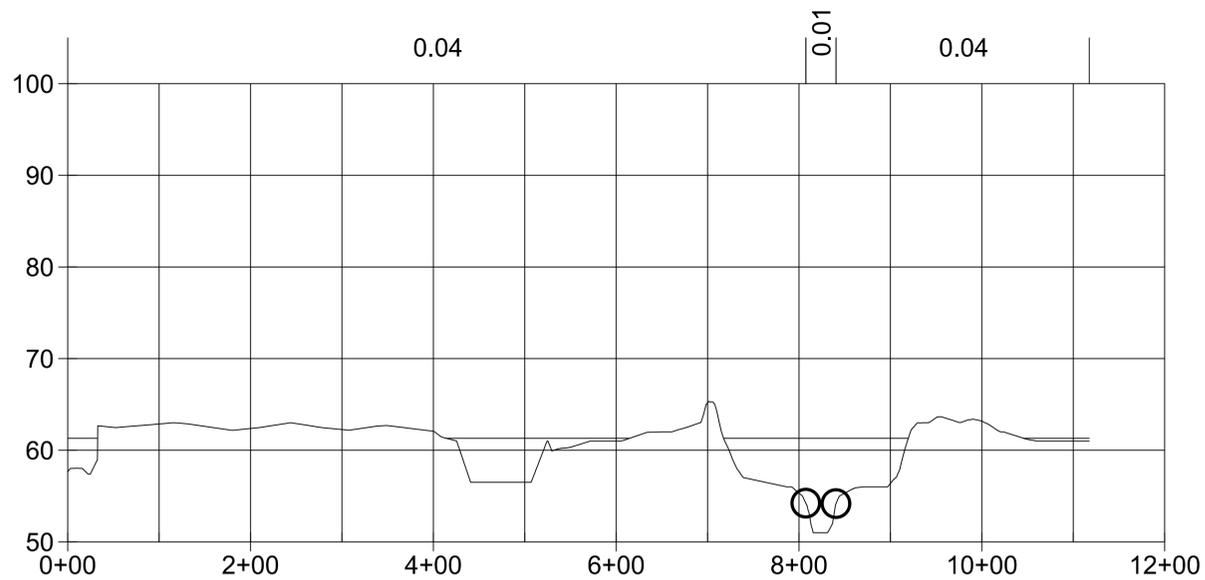
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Flow Discharge = 1180.00 cfs

Computed Water Surface = 61.30 ft

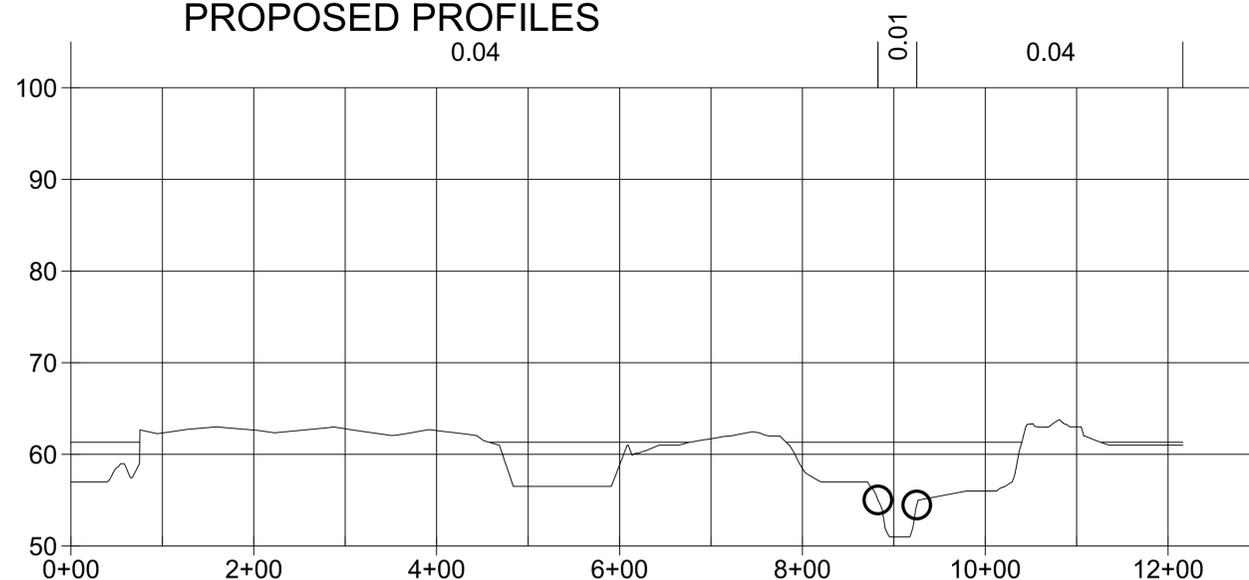
SCALE 1"=1'

PROPOSED PROFILES



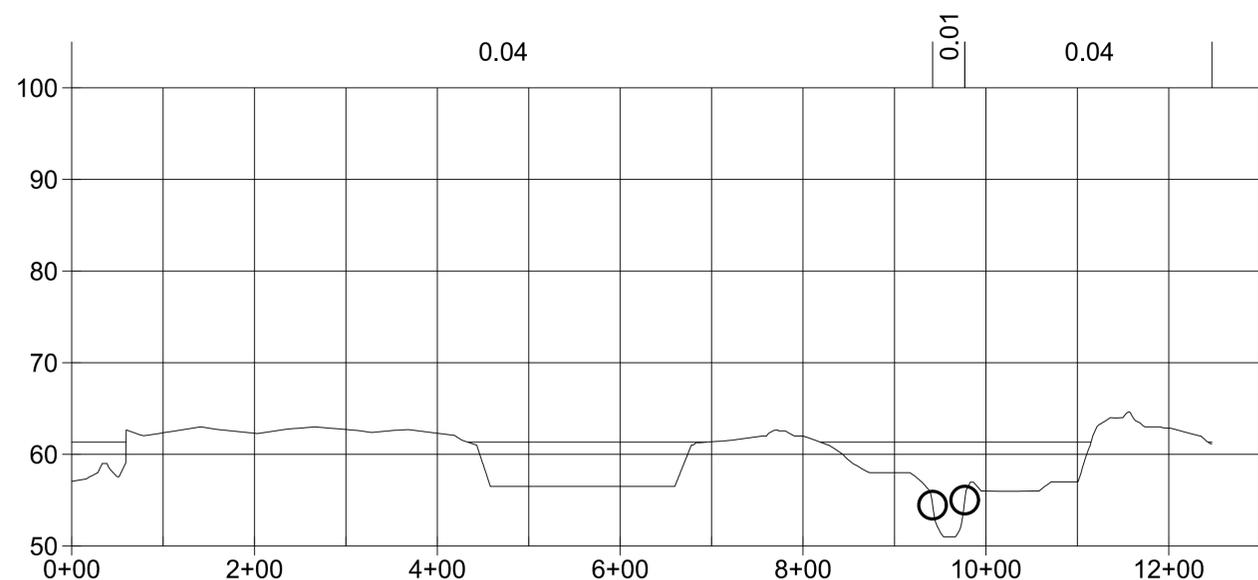
107

Profile: 100-YEARS  
Flow Discharge = 1180.00 cfs  
Computed Water Surface = 61.30 ft



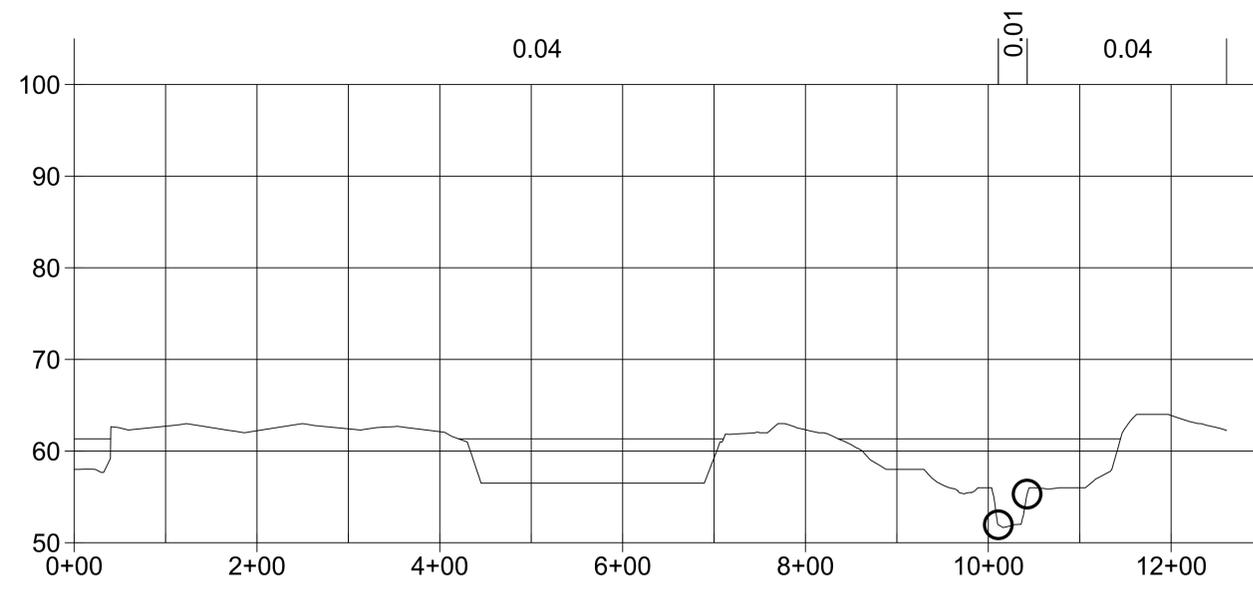
108

Profile: 100-YEARS  
Flow Discharge = 1180.00 cfs  
Computed Water Surface = 61.33 ft



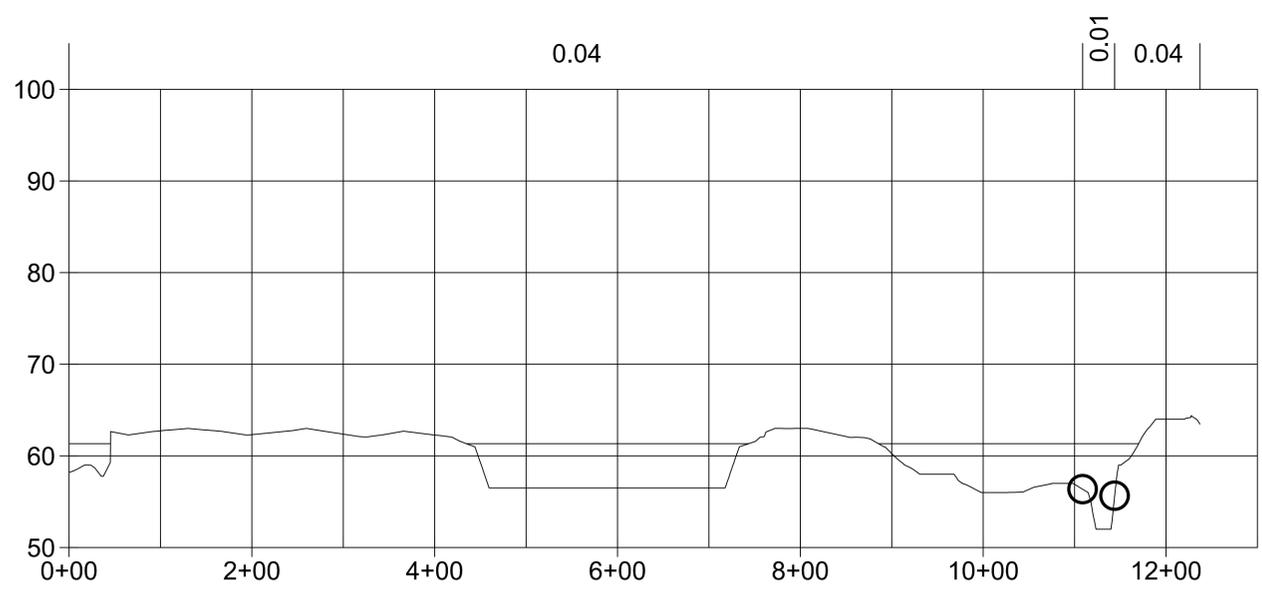
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Profile: 100-YEARS  
Flow Discharge = 1180.00 cfs  
Computed Water Surface = 61.33 ft

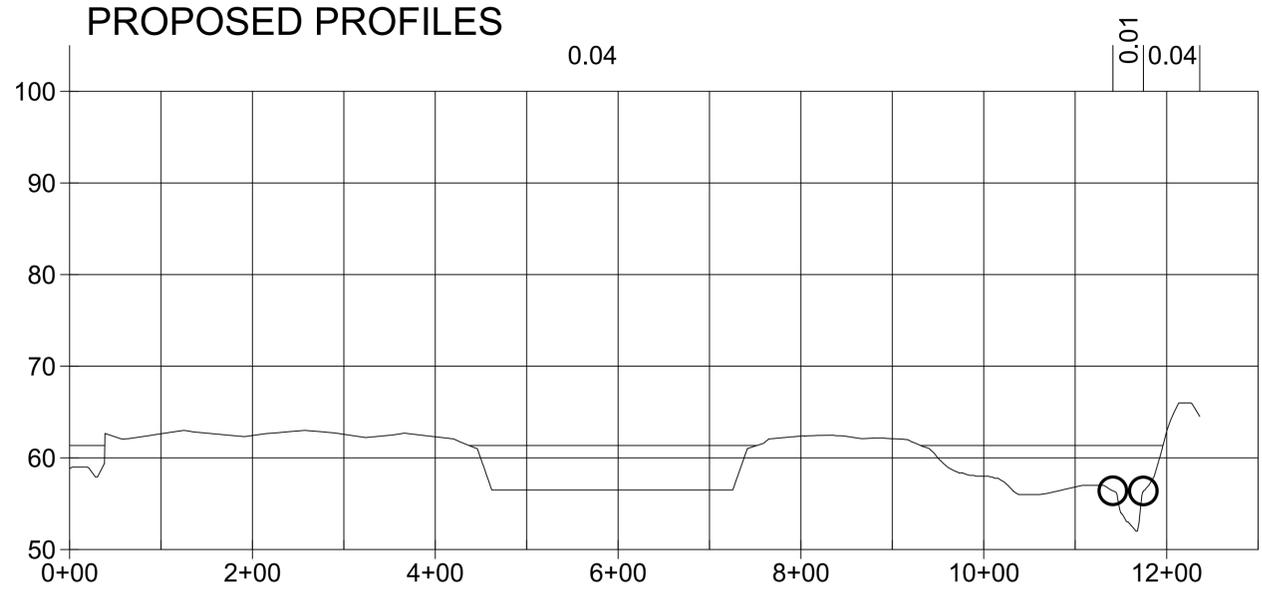


110

Profile: 100-YEARS  
Flow Discharge = 1180.00 cfs  
Computed Water Surface = 61.34 ft



111

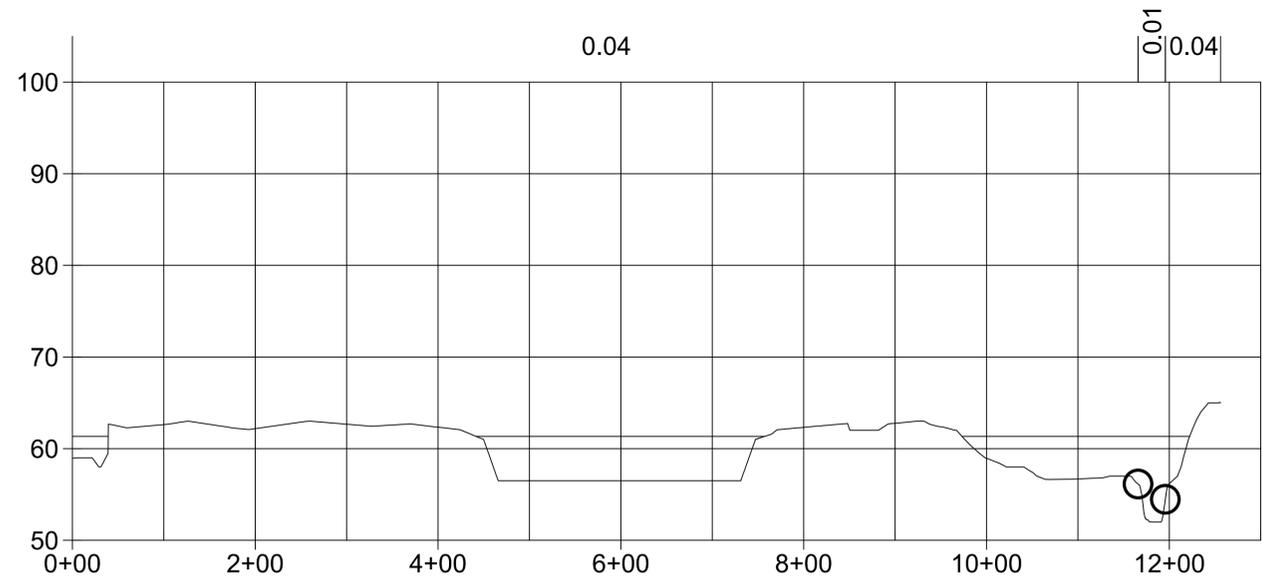


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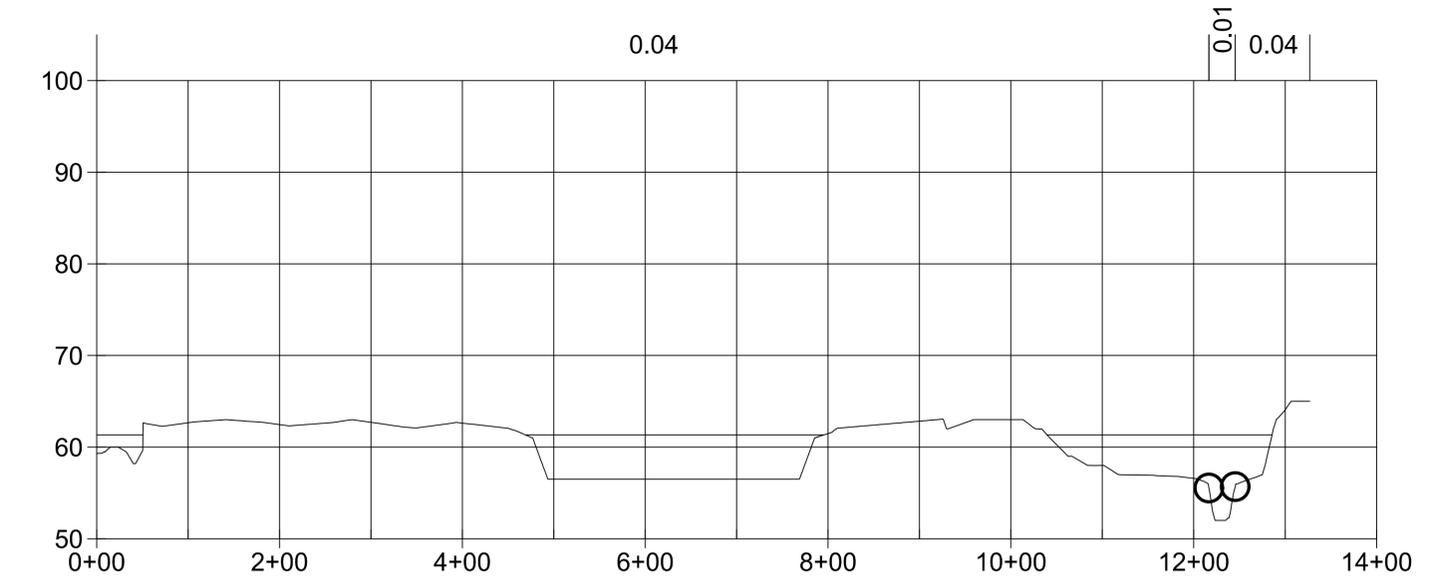
PROPOSED PROFILES

Profile: 100-YEARS  
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 Computed Water Surface = 61.34 ft

Profile: 100-YEARS  
 Flow Discharge = 1180.00 cfs  
 Computed Water Surface = 61.34 ft



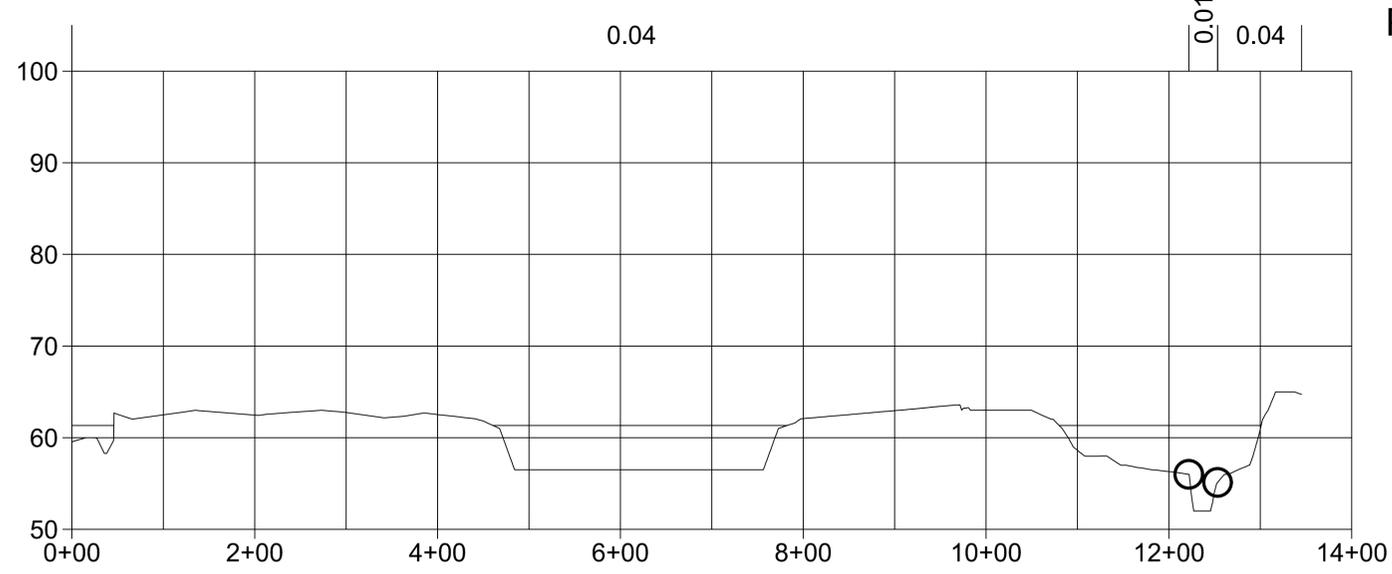
113



114

Profile: 100-YEARS  
 Flow Discharge = 1180.00 cfs  
 Computed Water Surface = 61.34 ft

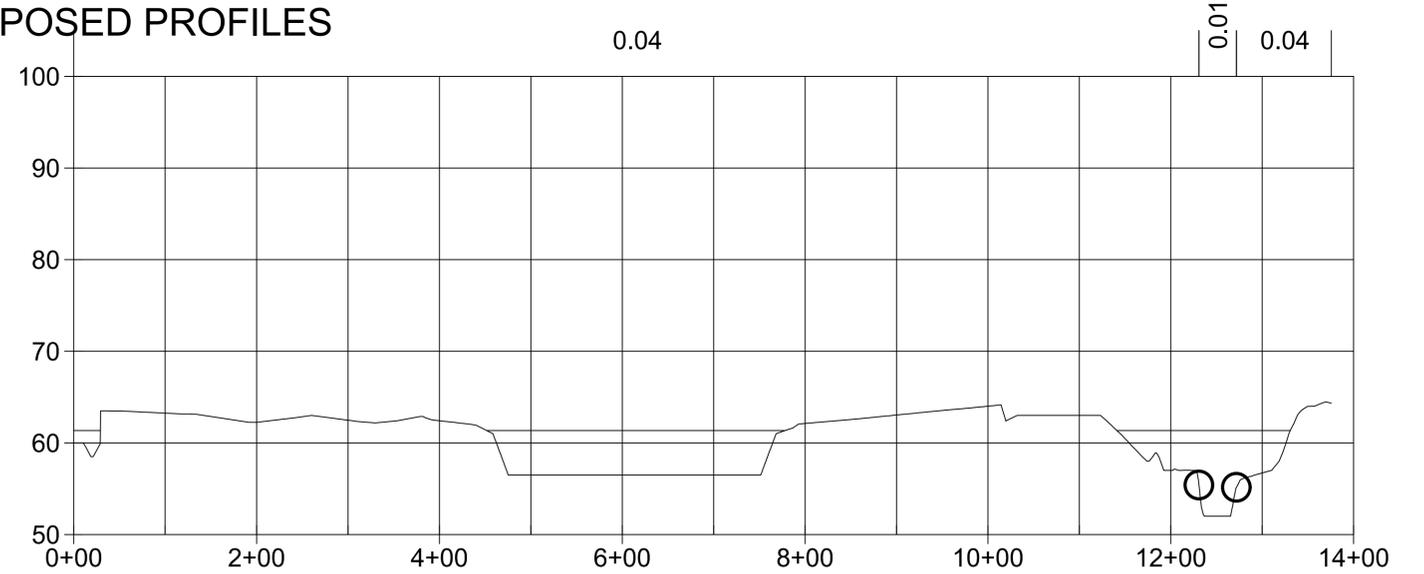
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 Flow Discharge = 1180.00 cfs  
 Computed Water Surface = 61.34 ft



115

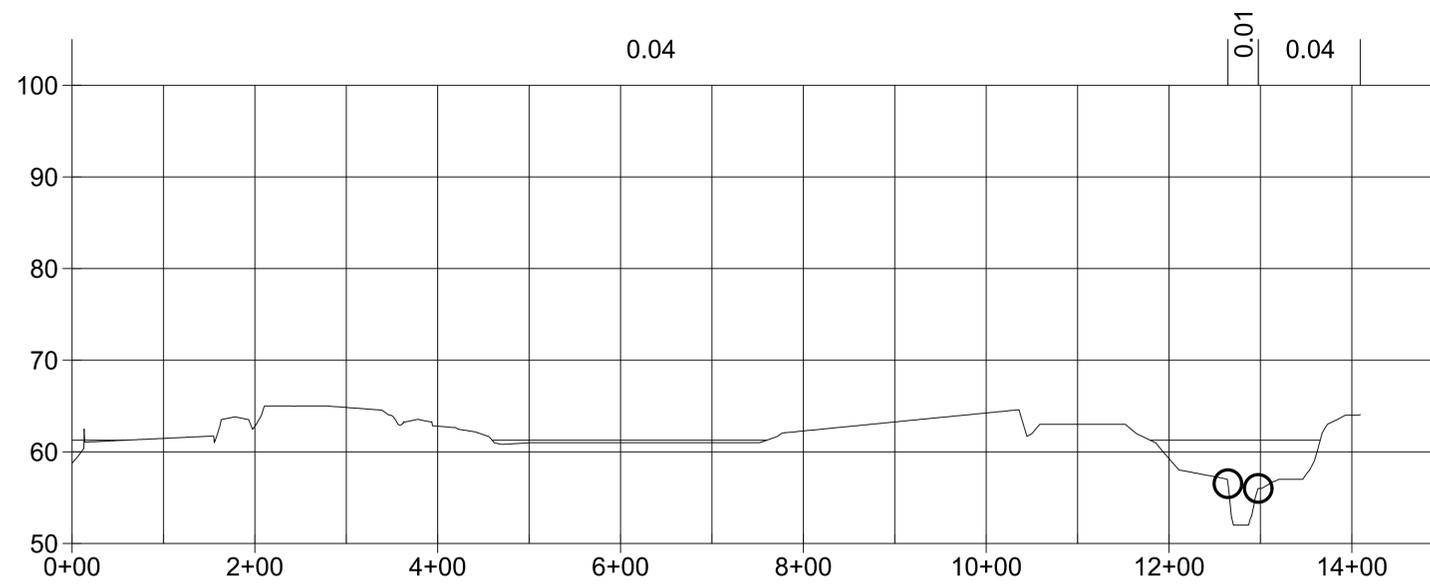
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 Flow Discharge = 1180.00 cfs  
 Computed Water Surface = 61.34 ft

PROPOSED PROFILES



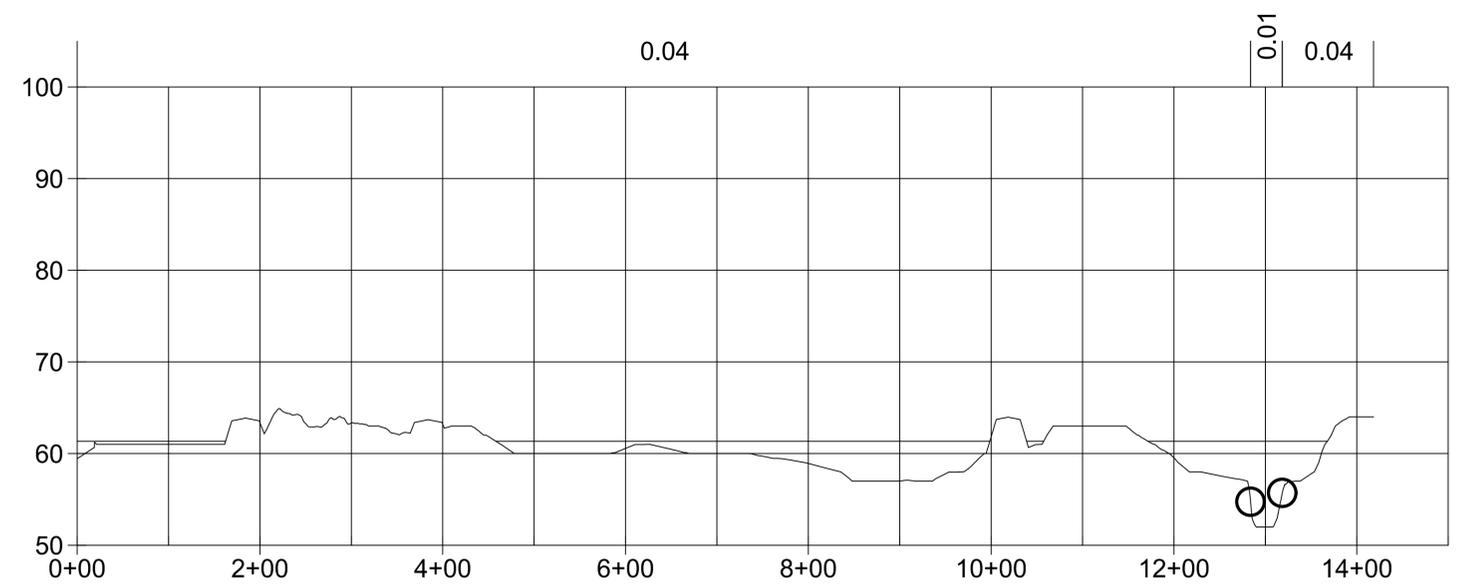
116

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 Flow Discharge = 1180.00 cfs  
 Computed Water Surface = 61.34 ft



117

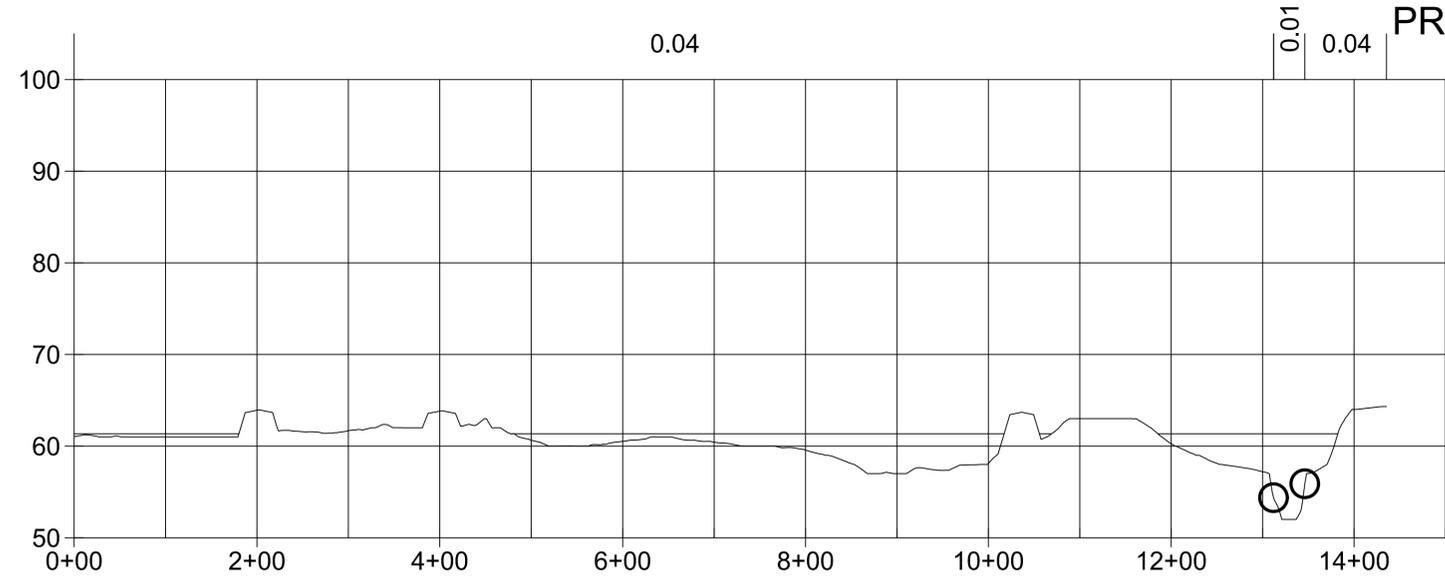
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118

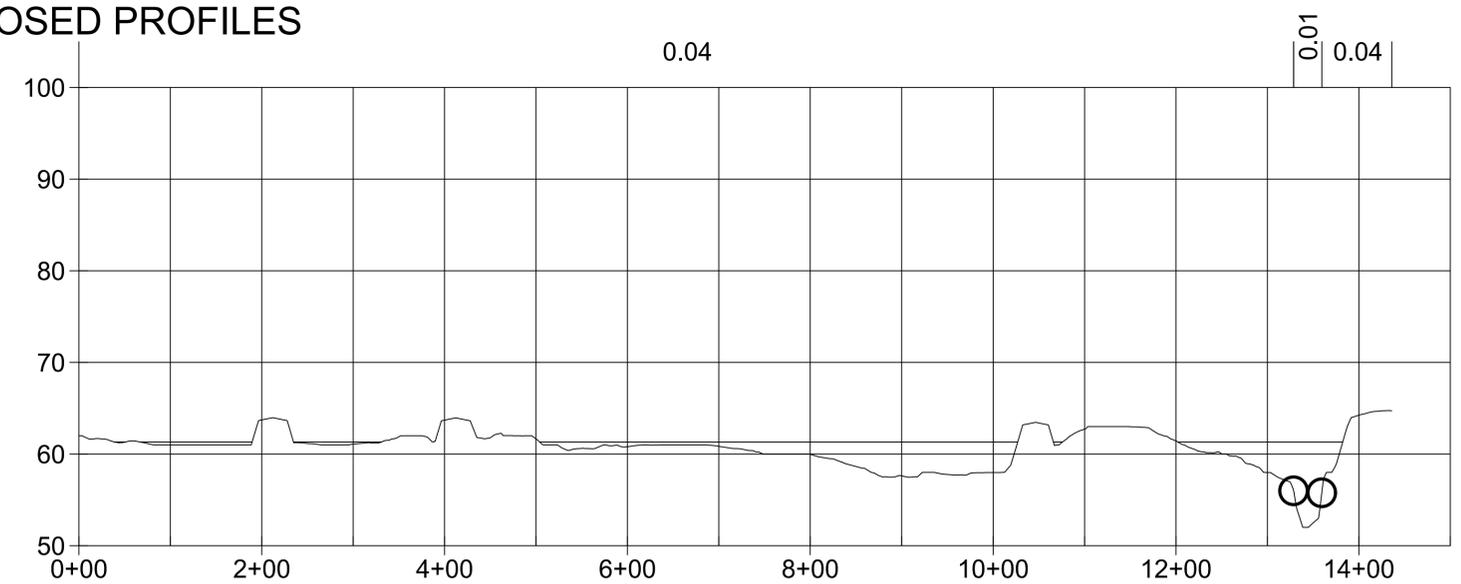
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 Flow Discharge = 1180.00 cfs  
 Computed Water Surface = 61.35 ft

PROPOSED PROFILES



119

Profile: 100-YEARS  
Flow Discharge = 1180.00 cfs  
—— Computed Water Surface = 61.34 ft



120

Profile: 100-YEARS  
Flow Discharge = 1180.00 cfs  
—— Computed Water Surface = 61.32 ft

## **APPENDIX F    HABITAT IMPACT ASSESSMENT**

**MEMORANDUM**

**DATE:** April 26, 2024

**SUBJECT:** Goldeneye Energy Storage Project – Habitat Impact Assessment

**MESSAGE****Habitat Impact Assessment Checklist**

Section: Southwest Quarter of Section 20

Township: 35 North

Range: 5 E. W.M.

Parcel Number: 40030

Related Permit: Special Use Permit

Site Address: 25080 Minkler Road  
Skagit County, Washington

Project Description: The proposed Goldeneye Energy Storage Project (Project) includes two new battery storage pads, roadside channel widening, and excavation of a new stormwater basin.

Distance of Project to nearest Waterbody: 200 feet to Hansen Creek

1. What is the current land use adjacent to the nearest waterbody? (*residential, agricultural, forestry, etc*)

Residential east of Hansen Creek. Utility substation on the west side of Hansen Creek

2. What type of vegetation is between your project and the nearest waterbody? (*forest, shrub, grass, etc*)

Grass, shrubs, small trees, and forest

3. What type of vegetation will be removed from your project site?

Grass, shrubs, and small trees

4. How much new impervious surface will your project create onsite? (*driveway, parking, roof*)

*area, etc)*

10.1 acres

5. Does your project include any excavation? If so, how much? (*in cubic yards*)

40,000

6. Does your project include placement of fill material? If so, how much (*in cubic yards*)

67,000

7. Please describe how your project has been designed to have no effect on runoff filtration.

Runoff from newly disturbed and impervious surfaces will be conveyed to a new stormwater basin via sheet flow or an underground storm drain network. The basin is designed to provide extended detention of the stormwater runoff volume. Detention in the basin will provide residence time for the settling of suspended solids out of the retained water. Settlement of suspended solids in the extended detention facility is designed to remove particulates at the same efficiency as the predeveloped natural vegetal ground covering.

8. Please describe how your project has been designed to have no effect on flood storage.

The project includes the placement of approximately 5.5-feet of fill in the floodplain. A hydrologic and hydraulic analysis has been completed to estimate the impacts of the Project on the 100-year base flood elevation. The Project has no impact on flood water elevations.

9. Please describe how your project has been designed to have no effect on flood conveyance.

The owner will construct a stormwater basin to allow for flood storage to compensate for a portion of the storage reduction resulting from proposed fill. Affects to Flood elevations and flow velocities are anticipated to be negligible.

10. Will your project introduce any nutrients or contaminants to the nearby waterbody? (*fertilizers, storm water runoff, etc*)

The battery site will be unmanned and composed entirely of crushed rock and pavement surfacing.

11. Please describe how your project has been designed to have no effect on shade along or over any nearby streams.

There will be no construction within the 200-foot stream buffer for Hansen Creek.

12. Please describe how your project has been designed to have no effect on wildlife habitat.

There will be no construction within the 200-foot stream buffer for Hansen Creek.

Disturbed areas that are not stabilized with stone or pavement will be tilled to an eight-inch depth to restore the natural topsoil and vegetative conditions to the natural pre-construction condition.

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# PLANNING & DEVELOPMENT SERVICE

1800 Continental Place • Mount Vernon, WA 98273  
Inspections 360.416.1330 • Office 360.416.1320

## Floodplain Development Permit Submittal Checklist

### **Approved before Floodplain permit application:**

- Lot Certification**
  - Approved and recorded under Auditor File # \_\_\_\_\_; OR
  - Approved Lot Certification or RUE, File # \_\_\_\_\_ (recording fee will be applied)

### **Submitted before or with a Floodplain permit application:**

- Floodplain Permit Application and Fees** Completed and signed.
- Ownership Certificate**
  - **Needed only if** application not signed by property owner.
- Critical Areas Review and Fees**
  - CAO floodplain checklist
  - CAO number PL \_\_\_\_\_
- Site/Drainage Plan** 2 copies, 8 1/2 x 11" (11 x 17", max)
  - See the enclosed example. Plan **must** include all 12 items to be complete.
- Low Impact Development (LID) Checklist**
- Habitat Impact Assessment checklist**
- Access Permit Application**
  - \_\_\_ Existing - Permit Number \_\_\_\_\_; **OR,**
  - \_\_\_ Private Road (no permit required); **OR,**
  - \_\_\_ State Road (permit from DOT); **OR,** \_\_\_ County Road (permit required).

**Application Fee:** \_\_\_\_\_  
**Special Flood Hazard Area Title Notice Fee:** \_\_\_\_\_

*Application will expire 6 mo from this date:*

Accepted by \_\_\_\_\_

Permit Number \_\_\_\_\_

Zoning / Setbacks \_\_\_\_\_

Flood Plain/Floodway \_\_\_\_\_

Notes:



**Skagit County Planning & Development Services**  
 1800 Continental Place Mount Vernon WA 98273  
 Inspections (360)336-9306 Office (360)336-9410 Fax (360)336-9416

## Floodplain Development Permit Application

**Owner:** John F. Grinder ?  
 Mailing Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_

**Applicant/Contact:** Stuart Toraason  
 Mailing Address: 11733 Chesterdale Road  
 City: Cincinnati State: OH Zip: 45246  
 Phone: 513-326-1504 Fax: 208-288-6199  
 Email: stuart.toraason@powereng.com

**Site Address:** 25080 Minkler Rd.y  
 City: Skagit County Zip: 98284  
 Parcel: 40030 Sec: 20 Twp: 35N Rng: 5 E. W.M.

**Will there be imported fill?** Yes \_\_\_\_\_ **If so,**  
 Roads/driveways 67,000 cu. yards  
 Pads for building support \_\_\_\_\_ cu. yards  
 Backfill/landscaping \_\_\_\_\_ cu. yards

**Will there be excavation and removal from parcel?**  
 All sources and areas 10,300 cu. yards

**Complete Project Description:** \_\_\_\_\_  
 The proposed project includes two new battery storage pads, and excavation of a new stormwater basin. A portion of the project, including fill placement for pad construction, is proposed to occur within the Federal Emergency Management Agency (FEMA) 100-year floodplain of Hansen Creek in Skagit County, Washington.  
 \_\_\_\_\_

**Is residential construction intended?** No \_\_\_\_\_ **If so,**  
 New \_\_\_\_\_ sq.ft. Garage \_\_\_\_\_ sq. ft.  
 Unfinished \_\_\_\_\_ sq.ft. Carport \_\_\_\_\_ sq. ft.  
 Addition \_\_\_\_\_ sq.ft. Deck \_\_\_\_\_ sq. ft.  
 Remodel \_\_\_\_\_ sq.ft. Repair \_\_\_\_\_ sq. ft.  
 Other – Describe \_\_\_\_\_ sq. ft.  
 Foundation lineal feet \_\_\_\_\_ sq. ft.

**Is commercial construction intended?** No \_\_\_\_\_ **If so,**  
 New \_\_\_\_\_ sq. ft. Addition \_\_\_\_\_ sq. ft.  
 Remodel \_\_\_\_\_ sq. ft. Repair \_\_\_\_\_ sq. ft.

**Will there be new impervious surfaces?** Yes \_\_\_\_\_ **If so,**  
 Roads/driveways 336,300 sq. ft.  
 Buildings \_\_\_\_\_ sq. ft.  
 Patios/other 101,500 sq. ft.

I certify that all of the property subject to this application is either in exclusive ownership of the applicant or that the applicant has submitted the application with the consent of all owners of the property. I certify that the information provided in this application is true and correct and I understand this information will be relied upon during review and decision making. I grant permission to field staff to enter the property.

**Owner/Agent:** \_\_\_\_\_ **Date:** \_\_\_\_\_

# OWNERSHIP CERTIFICATION

I, \_\_\_\_\_, hereby certify that I am the **major property owner** or officer of the corporation owning property described in the attached application, and I have familiarized myself with the rules and regulations of Skagit County with respect to filing this application for a \_\_\_\_\_ and that the statements, answers and information submitted presents the argument on behalf of this application and are in all respects true and correct to the best of my knowledge and belief.

Parcel # \_\_\_\_\_ Application # \_\_\_\_\_

Site Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Phone: (\_\_\_\_\_) \_\_\_\_\_

Signature(s):

\_\_\_\_\_  
\_\_\_\_\_

for: \_\_\_\_\_  
(corporation or company name, if applicable)

STATE OF WASHINGTON        )  
  ) ss.  
COUNTY OF SKAGIT        )

On this day personally appeared before me \_\_\_\_\_, known to be the individual(s) described in and who executed the within and foregoing instrument, and acknowledged that they signed the same as their free and voluntary act and deed, for the uses and purpose therein mentioned.

Given under my hand and official seal this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

Notary's Signature \_\_\_\_\_

Notary Public in and for the State of Washington residing at \_\_\_\_\_.

My Commission Expires \_\_\_\_\_



## Site Plan Requirement Checklist

Site plan must be prepared on 8 1/2" x 11" *or* 11" x 17" paper.

**\*The first 7 requirements of the Drainage Plan may be met by utilizing a third copy of this site plan.**

- **1. Title Block**  
Indicate applicant's name, site address, Assessor's Tax Account # and Property ID # (P#) for the subject property.
- **2. Scale**  
Indicate map scale. Use any appropriate scale and note it on your site plan. Example - Scale: 1" = 40'
- **3. North Arrow**  
Show an arrow indicating the ↑ NORTH direction.
- **4. Property Boundaries/Easements**  
Show property lines and all easements (*utility, drainage, dike, access, railroad, etc.*). Indicate site dimensions and names of adjacent roads.
- **5. Driveway**  
Show entire length and width of driveway in feet. Indicate grade of driveway in percent (%) of slope. Turnouts are required every 300 feet. To create a turnout the road shall be widened to 20 feet in width for a distance of 30 feet in length to allow for vehicles to pull over and allow emergency vehicles to proceed.
- NA □ **6. Building Footprint**  
Show location, dimensions and setbacks of all existing and proposed buildings or structures. If this project includes an addition, please clearly show the addition different from the existing building. Identify each building by its use (*residence, garage, etc.*). Indicate roof overhang lines and any decks, porches or retaining walls.
- **7. Impervious Surface**  
Indicate the amount of **new** impervious area. Impervious areas include the square footage of new building roof area, parking area, patios and any new driveway.
- **8. Setbacks**  
Indicate the building setbacks from all property lines with a dashed line. Include shoreline setbacks when applicable.
- NA □ **9. Approved Water Source, Well Location or Water Lines**  
Indicate the drinking water supply (*existing and/or proposed, public or individual*). Show all rainwater collection systems, private well(s), public water mains and water supply pipes to all buildings.
- NA □ **10. On-Site Septic System Location or Sewer Lines**  
Indicate method of sewage disposal: Private septic - show existing and proposed on-site sewage system(s). Include drainfield replacement area(s). (Tanks are required to be 50' and drainfields 100' from a well.) Public sewer - indicate location of sewer main and private pipes to building.
- NA □ **11. Propane**  
Show the location of the propane tank (if any).
- **12. Slope**  
Indicate slope (elevation change) of building site. Use contour lines or arrows to show direction and percent (%) of slope(s). Identify any erosion or landslide areas as well as any potential unstable slopes greater than 15%.  
**Percentage % of slope = Rise (drop in height) divided by Run (distance) multiplied by 100.**

### **OTHER FEATURES TO INCLUDE ON YOUR SITE PLAN IF APPLICABLE:**

- NA □ **•Shorelines**  
For shoreline properties, show the ordinary high water mark (OHWM) and setbacks from OHWM to all structures, including neighbor's, within 300 feet from both side property lines.
- NA □ **•Dike District**  
Show both measurements from the water ward side and the landward side of the dike and distance to project.

**See Example**



## Low Impact Development in Special Flood Hazard Areas

Permit # \_\_\_\_\_ Applicant: \_\_\_\_\_

All projects in Skagit County flood areas must incorporate Low Impact Development (LID) techniques. Listed below are fundamental LID measures and minimum guidelines. Some LID techniques may not be suited for your site, for help in determining what techniques are feasible for your site, refer to the websites at the end of the next page or to our common LID feasibility information sheets **Please indicate the proposed methods for each section. Be sure to include the method option by the applicable corresponding numbered item.** (i. ii. lii...)

After completing this checklist, please indicate all proposed LID techniques for this site along with all applicable Temporary Erosion and Sedimentation Control (TESC) methods on the site drainage plan.

### **Section 1) ROOF RUNOFF: \*Infiltration, Dispersion, or Rainwater Catchment systems** \*base must be 12" above seasonal high water table

Check here if there are no new, or replaced roof areas

- A**  **Downspout Dispersion (Splash blocks or pads)** – With a minimum 50 foot vegetated flowpath measured from the splashblock to the downstream property line, structure, slope over 15%, stream, wetland, or other impervious surfaces.
- On undisturbed native landscape (*areas that are still forest or prairie*)
  - On amended landscape areas (*consists of tilled or scarified soils to a minimum of 8" and provided with the organic content needed to restore the topsoil to native conditions and re-vegetated*)
- B**  **Downspout Infiltration Drywell** – At least 4' in diameter well of drain rock, with 1' of suitable cover material and deep enough to contain capacity as determined by site soil type (*one drywell for up to 1,000 square feet of roof area*).
- In coarse sands and cobbles – 60 cubic feet of rock ( $\approx 2 \frac{1}{4}$  cubic yards)
  - In medium sand – 90 cubic feet of rock ( $\approx 3 \frac{1}{2}$  cubic yards)- **Ecology does not validate finer soils**
- C**  **Downspout Infiltration Trench** – A below grade trench, 2' wide, 2' deep filled 18" with drain rock and 6 inches of suitable cover material, minimum length per 1,000 square feet of roof determined by soil type, indicate as follows:
- In coarse sands and cobbles – 20 lineal feet per 1,000 square feet of roof area
  - In medium sand – 30 lineal feet per 1,000 square feet of roof area
  - In fine sand, loamy sand – 75 lineal feet per 1,000 square feet of roof area
  - In sandy loam – 125 lineal feet per 1,000 square feet of roof area
  - In loam – 190 lineal feet per 1,000 square feet of roof area
- D**  **Downspout Dispersion Trench** – A perforated drain in a rock filled trench. Minimum 18" deep, 24" wide and 10 feet long per 700 square feet of roof. A level overflow outlet disperses to adjacent vegetated surface, with a minimum flow path of 25 feet between outlet overflow and any property line, structure, stream, wetland, or impervious surface.
- On undisturbed native landscape (*areas that are still forest or prairie*)
  - On amended landscape areas (*consists of tilled or scarified soils to a minimum of 8" and provided with the organic content needed to restore the topsoil to native conditions and re-vegetated*)
- E**  **Rain garden/Bioretention** – Roof runoff is conveyed through pipes or open ditches to an on-site facility for infiltration. Sized and/or designed as indicated below.
- Rain garden sized per Rain Garden Handbook for Western Washington
  - Rain garden sized per GSI-Calc
  - Engineered bioretention facility
- F**  **Downspout rainwater catchment system** – Storage tanks or cisterns sized to handle annual rainfall amounts for annual re-use. Overflow runoff must also be considered.

Continue to next page...

**Section 2) HARD SURFACES: Gravel, Concrete, Asphalt, etc.**  Check if no new or replaced hard (impervious) surfaces

- A**  **Sheet flow Dispersion** – Surface runoff flows un-concentrated to adjacent vegetated surface with a minimum flowpath of 10 feet for up to 20 feet of hard surface, provide an additional 10 feet for each additional surface up to 20 feet
- On undisturbed native landscape (*areas that are still forest or prairie*)
  - On amended landscape areas (*consists of tilled or scarified soils to a minimum of 8" and provided with the organic content needed to restore the topsoil to native conditions and re-vegetated*)
- B**  **Concentrated flow dispersion** – Surface runoff diverted by berms, ditches, or other conveyance methods to a vegetated area with a flowpath of at least 50 feet between the discharge point and any property line, structure, steep slope, stream, lake, wetland, or other impervious surface.
- On undisturbed native landscape (*areas that are still forest or prairie*)
  - On amended landscape areas (*consists of tilled or scarified soils to a minimum of 8" and provided with the organic content needed to restore the topsoil to native conditions and re-vegetated*)
- C**  **Rain garden/Bioretenion** – Surface runoff conveyed through pipes or ditches to an on-site facility for infiltration.
- Rain garden sized per Rain Garden Handbook for Western Washington
  - Rain garden sized per GSI-Calc
  - Engineered bioretention facility
- D**  **Permeable Pavement** – Allows infiltration below grade through pavers, porous concrete or asphalt, or grid systems
- Below grade infiltration rate per Low Impact Development Technical Guidance Manual
  - Under-drains conveyed to drainage facility

**Section 3) DISTURBED AREAS: From Clearing, Grading, Construction, Stockpiling, Utilities, Equipment, Vehicles, etc.**

- A**  Areas disturbed from construction or grading activities are tilled or scarified to a depth of 8" and provided the organic content needed to restore the topsoil to native conditions.
- B**  Interior work, work within existing impervious areas etc., no ground disturbance
- C**  Converted to "cleared areas" and LID incorporated as indicated in section 4 below
- D**  No areas disturbed from clearing, grading, construction, stockpiling, utilities, equipment or vehicles, etc.

**Section 4) CLEARED AREAS: Native areas converted to yard or pasture**  Check here if no new cleared areas

- A**  **Cleared area dispersion** – Stormwater runoff from cleared areas of up to 25 feet sheet flows through at least 25 feet of vegetated surface that is less than 15% slope and meets one of the following:
- On undisturbed native landscape (*areas that have never been developed such as forest or prairie*)
  - On amended landscape areas (*consists of tilled or scarified soils to a minimum of 8" and provided with the organic content needed to restore the topsoil to native conditions and re-vegetated*)
  - And*  1 additional foot of dispersion area is provided for each 3 feet of additional area cleared (250' max)
- B**  **Rain garden** – Surface runoff is directed to an on-site facility for infiltration.
- Rain garden sized per Rain Garden Handbook for Western Washington
  - Rain garden sized per GSI-Calc

**Section 5) CHECKLIST COMPLETENESS:**

All sections including locations, slopes, and lengths are shown on the drainage/TESC site plan submitted.

Each lettered option chosen (A, B, C...) also indicates subsequent Roman numeral choice. (I, II, III)

If any other form of low impact development is proposed in addition to, or in lieu of the above common techniques, please indicate on your site plan. Design guidelines and feasibility criteria can also be found in the **Stormwater Management Manual for Western Washington**: <http://www.ecy.wa.gov/programs/wq/stormwater/manual.html>

**Low Impact Development Technical Guidance Manual**: [http://www.psp.wa.gov/LID\\_manual.php](http://www.psp.wa.gov/LID_manual.php)

**Rain Garden Handbook**: <https://fortress.wa.gov/ecy/publications/publications/1310027.pdf>

**Information about your soil type available at the Web Soil Survey site**: <http://websoilsurvey.nrcs.usda.gov/app/>

Check here if this is part of a larger development that has an existing engineered infiltration facility designed to include this phase of construction.

**Refer to attached Habitat Assessment Impact Memorandum**



Planning & Development Services

**Habitat Impact Assessment Checklist**

Pursuant to Skagit County Code 14.24 and 14.34

This checklist is for all development proposals within the Special Flood Hazard Area (SFHA) or 100-year floodplain. It is used to help project proponents and the County determine when a project needs further analysis regarding potential adverse effects on Endangered Species as required by the Endangered Species Act (ESA).

Planning & Development Services staff can provide technical assistance in answering the following questions.

Section: 20 Township: 35N Range: 5E Parcel Number: 40030 Related Permit: Special Use Permit

Site Address: 25080 Minkler Rd, Sedro-Woolley, Skagit County, WA

Project Description: Battery storage

Name of nearest waterbody: Hansen Creek

Distance of project to nearest waterbody: 25-feet

1) What is the current land use adjacent to the nearest waterbody? (*residential, agricultural, forestry, etc*)

**Refer to attached Habitat Assessment Impact Memorandum**

2) What type of vegetation is between your project and the nearest waterbody? (*forest, shrub, grass, etc*)

\_\_\_\_\_

3) What type of vegetation will be removed from your project site?

\_\_\_\_\_

4) How much new impervious surface will your project create onsite? (*driveway, parking, roof area, etc*)

\_\_\_\_\_

5) Does your project include any excavation? If so, how much? (*in cubic yards*)

\_\_\_\_\_

6) Does your project include placement of fill material? If so, how much (*in cubic yards*)

\_\_\_\_\_

7) Please describe how your project has been designed to have no effect on runoff filtration.

\_\_\_\_\_

\_\_\_\_\_

8) Please describe how your project has been designed to have no effect on flood storage.

\_\_\_\_\_

\_\_\_\_\_

9) Please describe how your project has been designed to have no effect on flood conveyance.

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10) Will your project introduce any nutrients or contaminants to the nearby waterbody? (*fertilizers, storm water runoff, etc*)

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11) Please describe how your project has been designed to have no effect on shade along or over any nearby streams.

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12) Please describe how your project has been designed to have no effect on wildlife habitat.

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I understand that if the information on this form is later determined to be incorrect, the project or activity may be subject to conditions or denial as necessary to meet the requirements of SCC 14.24 or SCC 14.34.

\_\_\_\_\_  
Applicant's Signature

\_\_\_\_\_  
Date