



**ADDENDUM NO. 1**

**Project:** Flathead Lake Biological Station Replace Sewer Treatment System

**Owner:** State of Montana

**Engineer:** Anderson-Montgomery Consulting Engineers  
1064 N. Warren  
Helena, MT 59601

**Date of Addendum:** February 28<sup>th</sup>, 2024

**Bid Opening Date:** March 13<sup>th</sup>, 2024 at 2:00 p.m.

The following corrections, clarifications, and/or alterations to the specifications for the project are as such a part and parcel of said plans and specifications as if included therein.

**TECHNICAL SPECIFICATIONS:**

**Modification to Language in Specification** (~~stricken~~ language removed, **bold underline** language inserted):

**1. Division 46, Section 46 53 49 – Membrane Biological Reactor, Section 1.05 B. 1.**

Delete the table in the specification section 1.05 B. 1. in its entirety and replace with the following table.

Influent wastewater general characteristics:

<b>Parameter</b>	<b>Value</b>	<b>Unit</b>
Ave. Day Flow	5,513	gpd
Max Month	10,439	gpd
Peak Day	28,150	gpd
Avg. BOD Load	10.12	lb/d
Avg. TSS Load	33.10	lb/d
Avg. TN Load	1.84	lb/d
Avg. TP Load	0.37	lb/d
Max Month BOD Load	13.59	lb/d
Max Month TSS Load	6.05	lb/d
Max Month TN Load	2.02	lb/d
Max Month TP Load	2.7	lb/d
Alkalinity	220	mg/l
WW Temperature	>10	°C
FOG	<10	mg/l

Based on new flow data provided by the Flathead Lake Biological Station for 2023.

**PROJECT DRAWINGS:**

1. **Sheet G-5**

The influent design criteria has been modified based on new flow data provided by the Flathead Lake Biological Station for 2023. Revised Sheet G-5 with the proper influent design criteria is attached.

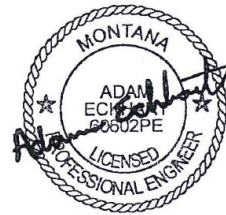
**Please Remember To Note Receipt Of This Addendum On The Bid Form. Failure To Do So Will Result In Disqualification.**

Issued By: **ANDERSON-MONTGOMERY, 1064 N. WARREN, HELENA, MT 59601,**  
**Adam Eckhart, P.E., Project Manager**



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**END OF ADDENDUM NO. 1**

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DESIGN INFLUENT WASTEWATER CHARACTERISTICS

Design Year	2043	
Current Average Daily Flow	4,240	GPD
Design Average Daily Flow	5,513	GPD
Design Max Month	10,439	GPD
Design Peak Day	28,150	GPD
Average BOD Load	10.12	lb/day
Average TSS Load	33.10	lb/day
Average TN Load	1.84	lb/day
Average TP Load	0.37	lb/day
Max Month BOD Load	13.59	lb/day
Max Month TSS Load	6.05	lb/day
Max Month TN Load	2.02	lb/day
Max Month TP Load	2.70	lb/day

REGULATORY EFFLUENT STANDARDS

BOD <sub>5</sub>	30	mg/L
Total Suspended Solids	30	mg/L
E. Coli	32	og/100 mL
Effluent Total Phosphorous	0.12	mg/L
Effluent Total Nitrogen	9.18	mg/L
Daily Max Effluent Chlorine	0.019	mg/L

\* Total Phosphorus Load Limit - 2 lb/yr at Design ADF  
 Total Nitrogen Load Limit - 154 lb/yr at Design ADF

**SUMMARY OF PROJECT IMPROVEMENTS**

(Not all-inclusive)

**Lift Station Building**

- New Influent Pumps
- New Effluent Pumps
- New Controls
- Rehabilitate Building Interior

**Package Membrane Bioreactor Treatment Facility**

- Primary Settling Tank
- Equalization Tank
- Sludge Storage Tank
- Screening
- 2 Membrane Cassettes
- Aeration Blowers
- Chemical Addition
- Flow Meters
- Control System

**Asphalt Access Road and Parking Area**

**Access Sidewalk to the Package Plant**

**Site Landscaping**

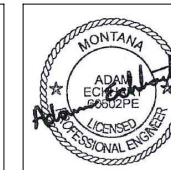
**Forcemain Extension to the Package Plant Equipment**

**Potable Water Extension to the Package Plant**

**Effluent Sanitary Sewer Extension to the Lift Station**

**Re-Route Gravel Access to Zoology**

**Emergency Generator**



Revision	Date	By
Draft	8-7-23	AE
Final	2-5-24	AE
Add. #1	2-28-24	AE

Revision	Addendum #1
Plot Scale	1:2
Drawn By	A. Eckhart, P.E.
Approved By	A. Eckhart, P.E.
Checked By	P. Montgomery, P.E.
Designed By	A. Eckhart, P.E.



Owner  
  
**Flathead Lake Biological Station**

Project Title  
  
**Replace Sewer Treatment System**  
  
 A/E  
 #2016-01-01-02

Sheet Title  
  
**Design Criteria**

Sheet  
  
**G-5**