
ADDENDUM NO. 2

Date of Addendum: November 6, 2020

REVISED Bid Due Date: November 17, 2020

Time Bid is Due: 2:00 pm

Location of Bid Opening: City of Thompson Falls
City Hall
108 Fulton Street
Thompson Falls, MT 59873

Owner: City of Thompson Falls

Engineer: Great West Engineering, Inc.
2501 Belt View Avenue
Helena, MT 59604
Phone: (406) 449-8627
Fax: (406) 449-8631



The following corrections, clarifications, and/or alterations to the plans and specifications for the project are as much part and parcel of the said plans and specifications as if included therein and supersede said plans and specifications in accordance with the order of precedence outlined in SM-01010 of Section 00950: Standard Modifications to MPWSS.

Bidders are required to acknowledge receipt of all Addenda on the Bid Form and failure to do so may result in disqualification. This Addendum consists of 9 pages plus attachments.

GENERAL

See attached updated plan holder list, **Bid Form** and attachments referenced herein.

The bids may be hand-delivered or mailed to the location indicated in Section 00100, but the bid will be publicly opened and read aloud. The following conference bridge for all interested parties to listen to the bid opening is 406.998.1109, Conference code: 486198.

CONTRACT DOCUMENTS

1. Section 00100 Invitation to bid:
 - a. **Revise bid date to be November 17, 2020.** Replace the first paragraph with the following:

Separate sealed bids for the construction of the City of Thompson Falls Wastewater System Improvements Project will be received by the City of Thompson Falls at 108 Fulton Street, Thompson Falls, MT 59873 until 2:00 PM on local time on November 17th, 2020 and then publicly read aloud.

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2. Section 00400 – Bid Form
 - a. **Replace Section 00400- Bid Form in its entirety.** Below is an outline of the revisions to the Bid Form.
 - i. Changes to the Bid Form Section 5.01 include the following:
 1. Change Bid Item 120 “Estimated Quantity to 30,450”
 2. Remove and Replace Bid Item 121 with the following:
 - a. Description: Concrete Removal and Replacement for Retaining Wall
 - b. Estimated Quantity: 13
 - c. Unit: EA
 3. Change Bid Item 138 “Estimated Quantity to 26,100”
 4. Add the following Bid Item 148 – Water Main Crossing
 - a. Description: Water Main Crossing
 - b. Estimated Quantity: 34
 - c. Unit: EA
 5. Add the following Bid Item 149 – Landscaping Wall Replacement
 - a. Description: Landscaping Wall Replacement
 - b. Estimated Quantity: 28
 - c. Unit: EA
 6. Change Bid Item 408 (Additive Alternate #3) “Estimated Quantity to 1”.
 3. Section 00800 – Supplementary Conditions to the Standard General Conditions
 - a. Remove SC-4.01.A in its entirety and replace with the following:
 - i. Amend the last sentence of Paragraph 4.01.A by striking out the following words:

In no event will the Contract Times commence to run later than May 1st 2021.
 4. Section 00900 – SP – 27- Work Within Montana Rail Link Right-of-Way
 - a. After the last sentence in item 5 add the following:

No separate payment will be made for flagging. The cost of furnishing a flagger as determined by MRL’s Road Master will be the Contractors responsibility and the Contractor shall figure the cost of such work into applicable bid items.
 5. Section 00900 – SP-40 Service Requirements
 - a. Add the following to the end of the first paragraph: Existing systems (septic tanks, cess pools, etc.) cannot and shall not be abandoned until the sewer service connection is made, tested, and accepted.
 6. Section 00910 –SP-45 Sludge Pumping and Storage Plan
 - a. Add the following paragraph after the last paragraph:

Should the Contractor remove sludge via dredge, the dredge must be a floating dredge pump. The Contractor shall provide dredge passes across the

entire floor area of each lagoon cell that will have sludge removed via dredge. The Contractor must provide documentation in the form of reports or daily logs documenting the coverage areas. The Contractor is responsible for performing sludge measurements “sludge judging”, before sludge dredging and post dredging, indicating settled sludge and water depths, following the completion of the dredge passes. Sludge measurements shall encompass the entire lagoon floor using a minimum of 10 sample locations in each cell. The Contractor is responsible for demonstrating an average sludge depth of 6-inches or less for 80% of the samples. No single sample shall exceed 8-inches in depth. The Contractor shall provide additional dredge passes as necessary, and in locations required, to demonstrate this criterion is satisfied.

The Contractor shall provide submittals of the planned dredging and dewatering operations in accordance with Section 01300 for review prior to starting work.

7. Section 00910 –SP-46 Sludge Disposal Plan

- a. Remove the last sentence and replace with:
~~No additional contract time will be allowed for any sludge disposal option.~~ If the remainder of the project is substantially complete and Contractor has decided to dry sludge up to the 24 months allowed by EPA, then an additional 14 calendar days will be added to the Contractor time for Additive Alternate #4 – Sludge Disposal.

8. Section 00910 –SP-61 Sewer Service Site Rehabilitation

- a. Remove in its entirety and replace with the following:
All sewer services will be backfilled to match the existing conditions. A minimum of 2-inches of topsoil shall be replaced under lawn, sod, seeding or other landscaped areas and a minimum of 2-inches of crushed subbase under areas of concrete or asphalt as shown in the details. Trees, shrubs, sod etc. do not need to be replaced within 6 ft either side of the pipe. Gravel, asphalt, grass seed (on areas with existing grass), fencing and any damaged yard irrigation repairs need to be replaced within 6 ft either side of the pipe centerline.

9. Section 00910 –SP-68 Sewer Manholes with Monolithic Base

- a. Add the following SP-68 Sewer Manholes with Monolithic Base:
All manholes included in the Base Bid only may have a monolithic base with a minimum base length of 4'-10”, the contractor must submit shop drawings and documents to Engineer/Owner. Manholes in Additive Alternate #1 “Gravity Sewer and Ferry St. Lift Station” and Additive Alternative #2 “Gravity Sewer Replacement” are to have a base section as detailed in Section 009500 Standard Modifications to MPWSS Drawing No. 02720-3 and as outlined in the Drawings and Contract Documents, a monolithic base will not be accepted for the above noted Additive Alternates.

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10. Wage Rates – Davis Bacon Wage Rates were updated 10 days prior to the bid opening date, replace Davis Bacon Wage Rates with the attached updated Davis Bacon Wage Rates (MT 20200078).
11. Section 01275 – Measurement and Payment
- a. Remove Section 4.1.E.2.f – “Furnishing and installation existing water main crossing adjustments as needed” in its entirety.
12. Section 01275 – Measurement and Payment
- a. Remove and replace Section 4.1.W: SERVICE LINE SURFACE RESTORATION with the following:
 - 4.1.W: Bid Item No. 120 & 225 SERVICE LINE SURFACE RESTORATION
 1. Description: This item includes the surface restoration for all sewer service installations.
 2. Work Required: Work required under this section includes, but not limited to the following:
 - a. All labor, tools, equipment, materials, royalties, and incidentals necessary to complete the work as specified;
 - b. Backfill trench to match existing condition;
 - c. Restoring, reseeding, and fertilizing any disturbed areas if the area was previously seeded;
 - e. Furnish and install 2-inches of topsoil in areas where seeding or landscaping is to be replaced;
 - f. Removing and replacing yard fencing as necessary to install mains and services;
 - g. Furnish and install 2-inches of crushed subbase under areas of concrete or asphalt as shown in details;
 - h. Reconnect irrigation lines that are disturbed during sewer service installation and septic abandonment; and
 - i. Asphalt replacement shall be completed.
 3. Unit of Measurement: Lineal Foot
 4. Measurement: Measurement for SERVICE LINE SURFACE RESTORATION will be made per lineal foot measured along the centerline of the trench excavation.
 5. Payment: Payment for the SERVICE LINE SURFACE RESTORATION will be made at the contract unit price bid per lineal foot. The limits for payment extend 6 feet either side of the trench excavation centerline. Areas disturbed outside of the payment limits must be restored at the Contractor’s expense.
13. Section 01275 – Measurement and Payment
- a. Part 4.1.X.: Bid Items No. 121 – CONCRETE REMOVAL AND REPLACEMENT replace 4.1.X. with the following:
 1. Description: This item includes the surface restoration for trench excavations in landscaping/retaining concrete walls, or similar areas as necessary for the installation of new sewer main and service lines as indicated on the Drawings and Contract Documents.

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2. Work Required: Work required under this section includes but is not limited to the following:
 - a. Removing and disposing of existing concrete;
 - b. Restoring any disturbed retaining walls;
 - c. Neatly saw cutting the edges of concrete wall removal before patching;
 - d. Furnishing and installing all base and leveling courses as specified as may be required in the field;
 - e. Furnishing concrete mix design;
 - f. Furnishing and installing forms needed for retaining wall;
 - g. Furnishing and installing concrete;
 - h. Furnishing and installing fiber mesh or rebar required by the wall and drawings and specifications;
 - i. Furnish all required testing; and
 - j. All labor, tools, equipment, materials, royalties, and incidentals necessary to complete the work specified.
 3. Unit of Measurement: EACH
 4. Measurement: Measurement for CONCRETE REMOVAL AND REPLACEMENT will be made by numeral count.
 5. Payment: Payment for CONCRETE REMOVAL AND REPLACEMENT made at the contract unit price bid per each.

14. Section 01275 – Measurement and Payment

- a. Part 4.1.GG: Bid Item No. 135 SIDEWALK REMOVAL AND REPLACEMENT, Remove and replace 4.1.GG.1 with the following:
 1. Description: This item shall meet the requirements of Section 02529 of the MPW Standard Specification and 00950 of the Contract Documents and be constructed to the sizes and locations shown on the drawings, and also include surface restoration for trench excavation in sidewalks, driveways and other miscellaneous concrete as necessary for the installation of new sewer main and service lines as indicated on the Drawings and Contract Documents.
- b. Add the following to 4.1.GG.2
 - l. Neatly saw cutting the edges of concrete removal before patching;
 - m. Furnishing and installing fiber mesh or rebar as required;
 - n. Furnishing all required testing;

15. Section 01275 – Measurement and Payment

- a. Add the following measurement and payment item:
 - 4.1.VV: Bid Item No. 148 WATER MAIN CROSSINGS
 1. Description: This item includes furnishing and installing new sewer main at water main crossings and the associated adjustments, pipe, flowable fill, and materials needed for sewer main installation at water main crossings as indicated on the Drawings and in the Contract Documents.

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2. Work Required: Work required under this section includes, but not limited to the following:
 - a. Excavation, backfill, and compaction;
 - b. Dewatering, sheeting, and shoring required for installation;
 - c. Furnishing and installing all fittings, pipe, connection to existing main and disinfecting pipe required for water main adjustments at crossing;
 - e. Furnishing and installing all transition gaskets, couplings and adapters for existing water main and sewer main;
 - f. Furnishing and installing all fittings and pipe required for sewer main installation meeting minimum vertical separation as outlined in the Drawings and Contract Documents;
 - g. Furnishing and installing flowable fill at crossing as required by the Drawings and Contract Documents;
 - h. Furnishing and installing pipe bedding;
 - i. All labor, tools, equipment, materials, royalties, and incidentals necessary to complete the work as specified.
 3. Unit of Measurement: Each
 4. Measurement: Measurement for WATER MAIN CROSSINGS will be made by numeral count.
 5. Payment: Payment for the WATER MAIN CROSSINGS will be made at the contract unit price bid per each.
5. Section 01275 – Measurement and Payment
- a. Add the following measurement and payment item:
 - 4.1.WW: Bid Item No. 149 LANDSCAPING WALL REPLACEMENT
 1. Description: This item includes the restoration of landscaping rock walls for sewer service installations.
 2. Work Required: Work required under this section includes, but not limited to the following:
 - a. Restoring any disturbed landscape walls;
 - b. Neatly replacing landscaping rock walls and all required materials (wire, grout, support, baskets, etc.) to restore to existing or better condition;
 - c. All labor, tools, equipment, materials, royalties, and incidentals necessary to complete the work as specified;
 3. Unit of Measurement: Each
 4. Measurement: Measurement for LANDSCAPING WALL REPLACEMENT will be made by numeral count.
 5. Payment: Payment for the LANDSCAPING WALL REPLACEMENT will be made at the contract unit price bid per each.

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6. Section 02615 – Piping, Valves & Accessories
 - a. Remove and replace Part 2.1.A with the following:
All valves and accessories shall be designed for working pressures of 250 psi. All flanged end connections shall conform with ANSI B16.1/16.42 for Class 125/Class150.
 - b. Part 2.3.B: Flanges shall conform to ANSI B16.1, Class 125.

 7. Section 02535 – Factory-Built Above Ground Submersible Pump Package
 - a. Section 2.8.A replace the first sentence with the following: Mix Flush Valve: Each factory-built above ground submersible pump package shall have one pump be equipped with a Flygt Model 4907 Flush Valve, or equal, which automatically flushes the sump during initial operation of the pump.

 8. Section 02536 – Grinder Pump Stations
 - a. Replace Section 2.2.F.2 with the following:
Each grinder pump station shall also include one separate check valve for installation in the 1.5” SDR11 HDPE service lateral between the grinder pump station and the sewer force main.

 9. Section 02668 – Sludge
 - a. Attached are field measurements and lab results referenced in Specification 02668 that were conducted on 10/17/2019. As noted in the specifications the results are for informational purposes only and will not be utilized to determine final acreages for land application or estimated quantities of sludge. Contractor is responsible for conducting additional sludge sampling as required by the Specifications.

 10. Section 11905 – Ultraviolet Disinfection Equipment - Performance
 - a. No on-line UVT Monitor is required to be supplied and installed.
 - b. Change the number of On-line UVT monitors from 1 to 0 in the table listed in Section 2.3.A.

 11. Section 11906 – Ultraviolet Disinfection Equipment
 - a. No on-line UVT Monitor is required to be supplied and installed.
 - b. Remove Section 2.2.Q

DRAWINGS

1. Sheet C1

- a. Note 4 shall be removed and replaced with the following:
Exposed/Above grade ductile iron pipe shall be lined according to MPWSS 02730 and Section 00950 and coated according to specification 09800.
- b. Note 5 shall be removed and replaced with the following:
Buried ductile iron pipe shall be lined and coated according to MPWSS 02730 and Section 00950. Corrosion protection of buried ductile iron pipe must be provided in accordance with AWWA C105.

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- c. Note 15 shall be removed and replaced with the following:
Sewer Services that require a grinder pump have 1.5" SDR11 HDPE pressure pipe service line.
 - d. Forcemain Table replace 2nd row with the following:
~~PVC DR 165 see specification 2730 (MPWSS)~~ "PVC DR 26 - See Specification 2730 (MPWSS)"
2. Sheet C83
 - a. Detail 1 Note 3 - Add the following at the end of note 3:
Access lid to be an aluminum access hatch. Contractor to shall submit access hatch submittal for precast manhole option.
 - b. Add note 4: Contractor to place 2 pipe bollards on the north side of lift station and valve vault. Final placement location will be determined in the field by Owner/Engineer.
 3. Sheet S6
 - a. Polishing Reactor grating to be bar grating, replace "FRP Grating" with "Bar Grating" in Note 2 under "Keyed Note".
 4. Replace Sheets as listed below:
 - a. Remove and replace Sheet G1 - Cover
 - i. Revisions as noted in revision description table
 - b. Remove and replace Sheet C57 - Lift Station #1 Plan
 - i. Light Pole Base detail reference has been added.
 - c. Remove and replace Sheet C59 - Lift Station #2 Plan
 - i. Light Pole Base detail reference has been added.
 - d. Remove and replace Sheet C76 - Existing Main Lift Station Site Plan
 - i. Light Pole Base detail reference has been added.
 - e. Remove and replace Sheet C82 - Ferry Street Lift Station Site Plan
 - i. Light Pole Base detail reference has been added.
 - f. Remove and replace Sheet C95 - Proposed Lagoon Site & Process Piping Layout
 - i. Reference added for clarification on lagoon pipe to be 12" PVC (DR32.5 or DR25), HDPE (DR13.5), or DIP.
 - g. Remove and replace Sheet C96 - Proposed Aeration Piping Layout
 - i. Lagoon Treatment Material & Equipment List note 8 added to clarify 6" HDPE or DI Air piping as shown on the plan sheet.
 - h. Remove and replace Sheet C107 - Lagoon Cell 2b Effluent Line & Multi-Level Takeoff
 - i. Lagoon Cell 2b Multi-level takeoff piping to be DIP and remove concrete encasement as noted on replacement sheet C107.
 - i. Remove and replace Sheet C115 - Civil Standard Details
 - i. Detail 2 - Light Pole Base has been added.
 - j. Remove and replace Sheet P11 - Air Diffuser Assembly & Installation Detail
 - i. Clarification for Diffuser Installation lateral connection has been added to detail.



CLARIFICATION(S)

1. Contractor to obtain all insurances for Railroad as outlined in Section 00800 & MRL documents in Appendix B.
2. Ductile Iron piping interior and outside coatings are to be as outlined in Section 00950 – Section 02730.2.D.1.b & Section 02730.2.D.1.c
3. Sheet C93 Clarification:
 - a. Note 4 - Influent splitter box and associated piping to be abandoned in place. Lines shall be capped and filled with flowable fill. *This includes Cell 1 and 2 existing influent lines leaving the splitter box.*
4. The ALN Series Aluminum Access Hatch called out in the plans is to be a 30" x 30" access hatch.

End of Addendum No. 2

SECTION 00400

BID FORM

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ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

City of Thompson Falls

108 Fulton Street

Thompson Falls, Montana 59873

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum, Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work, and including all American Iron and Steel requirements.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the ~~Supplementary Conditions~~ Special Provisions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the ~~Supplementary Conditions~~ Special Provisions, especially with respect to Technical Data in such reports and drawings.

- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

**CITY OF THOMPSON FALLS
WASTEWATER IMPROVEMENTS PROJECT
BASE BID SHEETS**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
101	Mobilization	1	LS	\$	\$
102	Exploratory Excavation	110	HR	\$	\$
103	Imported Backfill	4,500	CY	\$	\$
104	12" PVC Gravity Sewer Mains	3,665	LF	\$	\$
105	8" PVC Gravity Sewer Mains	17,900	LF	\$	\$
106	Standard Manholes	97	EA	\$	\$
107	4" PVC Sewer Service Connect at Main	292	EA	\$	\$
108	4" PVC Sewer Service Lines	29,750	LF	\$	\$
109	4" PVC Sewer Service Connection to Existing	262	EA	\$	\$
110	PVC Sewer Service Cleanout	565	EA	\$	\$
111	6" PVC Sewer Service Connection at Main	4	EA	\$	\$
112	6" PVC Sewer Service Lines	215	LF	\$	\$

**CITY OF THOMPSON FALLS
WASTEWATER IMPROVEMENTS PROJECT
BASE BID SHEETS**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
113	6" PVC Sewer Service Connection to Existing	4	EA	\$	\$
114	Abandon Existing Septic Tanks	298	EA	\$	\$
115	Grinder Pump Service Connection to Existing	29	EA	\$	\$
116	Grinder Pump Service Unit	30	EA	\$	\$
117	Pressure Service Connection at Main	29	EA	\$	\$
118	Pressure 1.5" HDPE Pressure Sewer Service Line	3800	LF	\$	\$
119	Stub Out to Vacant Lot	30	EA	\$	\$
120	Service Line Surface Restoration	30,450	LF	\$	\$
121	Concrete Removal and Replacement for Retaining Walls	13	EA	\$	\$
122	Main Lift Station Emergency Backup Generator	1	EA	\$	\$
123	Lift Station #1	1	EA	\$	\$
124	Lift Station #2	1	EA	\$	\$
125	Lift Station #1 Emergency Backup Generator	1	EA	\$	\$
126	Lift Station #2 Emergency Backup Generator	1	EA	\$	\$

**CITY OF THOMPSON FALLS
WASTEWATER IMPROVEMENTS PROJECT
BASE BID SHEETS**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
127	6" Forcemain	5,100	LF		
				\$	\$
128	6" Forcemain Fittings	31	EA		
				\$	\$
129	Forcemain Air Release Valve and vault	3	EA		
				\$	\$
130	4" PVC Water Service	225	LF		
				\$	\$
131	Connect to Existing Water Main	1	EA		
				\$	\$
132	2" Water Service Line	1,250	LF		
				\$	\$
133	4" Gate Valve with Valve Box	1	EA		
				\$	\$
134	4" Water Line Fittings	2	EA		
				\$	\$
135	Sidewalk Removal and Replacement	870	SF		
				\$	\$
136	Curb and Gutter Removal and Replacement	200	LF		
				\$	\$
137	Rock Hammer	1,850	HR		
				\$	\$
138	Type A Surface Restoration (AC)	26,100	LF		
				\$	\$
139	Type A Surface Restoration (AC) -Water Main Replacement Areas	3,190	LF		
				\$	\$
140	Type B Surface Restoration (Agg)	1,900	LF		
				\$	\$

**CITY OF THOMPSON FALLS
WASTEWATER IMPROVEMENTS PROJECT
BASE BID SHEETS**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
141	Type C Surface Restoration (Open)	2,000	LF	\$	\$
142	WWTP Improvements	1	LS	\$	\$
143	6" Forcemain – Partial Replacement	275	LF	\$	\$
144	Sludge Removal	1	LS	\$	\$
145	Remove and Dispose of Existing Manholes	1	EA	\$	\$
146	Traffic Control	1	LS	\$	\$
147	Pressure Sewer Line Cleanout	2	EA	\$	\$
148	Water Main Crossing	34	EA	\$	\$
149	Landscaping Wall Replacement	28	EA	\$	\$

TOTAL Bid Price (Base Bid)

\$

**TOTAL Estimated
Base Bid Price \$**

_____ **(Figures)**

_____ **(Words)**

**CITY OF THOMPSON FALLS
WASTEWATER IMPROVEMENTS PROJECT
ADDITIVE ALTERNATE #1 – GRAVITY SEWER AND FERRY ST. LIFT STATION**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
201	Mobilization	1	LS		
				\$	\$
202	Exploratory Excavation	10	HR		
				\$	\$
203	8" PVC Gravity Sewer Mains	240	LF		
				\$	\$
204	12" PVC Gravity Sewer Mains	815	LF		
				\$	\$
205	Standard Manholes	7	EA		
				\$	\$
206	4" PVC Sewer Service Connection at Main	12	EA		
				\$	\$
207	4" PVC Sewer Service Lines	860	LF		
				\$	\$
208	4" PVC Sewer Service Connect to Existing	12	EA		
				\$	\$
209	PVC Sewer Service Cleanout	16	EA		
				\$	\$
210	Grinder Pump Service Connection to Existing	3	EA		
				\$	\$
211	Grinder Pump Service Unit	3	EA		
				\$	\$
212	Pressure Service Connection at Main	3	EA		
				\$	\$
213	1.5-Inch HDPE Pressure Sewer Service Line	285	LF		
				\$	\$
214	Triplex Grinder Pump Lift Station	1	LS		
				\$	\$

**CITY OF THOMPSON FALLS
WASTEWATER IMPROVEMENTS PROJECT
ADDITIVE ALTERNATE #1 – GRAVITY SEWER AND FERRY ST. LIFT STATION**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
215	Triplex Grinder Pump Station Backup Emergency Generator	1	EA	\$	\$
216	1.5" HDPE Pressure Forcemain (Ferry St. Forcemain)	305	LF	\$	\$
217	Connect to Existing Manhole	1	EA	\$	\$
218	Connect to Existing Main	1	EA	\$	\$
219	Cut Plug and Abandon Existing Main	2	EA	\$	\$
220	Type A Surface Restoration (AC)	275	LF	\$	\$
221	Type B Surface Restoration (Agg)	205	LF	\$	\$
222	Type C Surface Restoration (Open)	880	LF	\$	\$
223	Abandon Manholes	7	EA	\$	\$
224	Traffic Control	1	LS	\$	\$
225	Service Line Restoration	880	LF	\$	\$

TOTAL Additive Alternate #1 Bid Price (Base Bid) \$ _____
(Figures)

TOTAL Estimated Additive Alternate #1 Base Bid Price \$ _____
(Words)

**CITY OF THOMPSON FALLS
WASTEWATER IMPROVEMENTS PROJECT
ADDITIVE ALTERNATE #2 – GRAVITY SEWER REPLACEMENT**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
301	Mobilization	1	LS		
				\$	\$
302	Exploratory Excavation	10	HR		
				\$	\$
303	8" PVC Gravity Sewer Main	500	LF		
				\$	\$
304	6" PVC Gravity Sewer Main	10	LF		
				\$	\$
305	4" PVC Gravity Sewer Main	10	LF		
				\$	\$
306	Standard Manholes	5	EA		
				\$	\$
307	Connect Existing Services to Main	11	EA		
				\$	\$
308	Sewer Service Connect to Existing	11	EA		
				\$	\$
309	Connect to Existing Main	3	EA		
				\$	\$
310	Cut Plug and Abandon	2	EA		
				\$	\$
311	Type A Surface Restoration (AC)	510	LF		
				\$	\$
312	Traffic Control	1	LS		
				\$	\$

TOTAL Additive Alternate #2 Bid Price (Base Bid)

\$

(Figures)

**TOTAL Estimated
Additive Alternate #2
Base Bid Price**

\$

(Words)

**CITY OF THOMPSON FALLS
WASTEWATER IMPROVEMENTS PROJECT
ADDITIVE ALTERNATE #3 – FORCEMAIN REPLACEMENT**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
401	Mobilization	1	LS		
				\$	\$
402	Exploratory Excavation	10	HR		
				\$	\$
403	Restrained Joint Carrier Pipe	150	LF		
				\$	\$
404	Steel Casing Pipe	150	LF		
				\$	\$
405	Abandonment of Existing Forcemain	1	LS		
				\$	\$
406	6" Forcemain	3,610	LF		
				\$	\$
407	Forcemain Fittings	10	EA		
				\$	\$
408	Forcemain Air Release Valve Vault	1	EA		
				\$	\$
409	Type A Surface Restoration (AC)	1120	LF		
				\$	\$
410	Type B Surface Restoration (Agg)	2170	LF		
				\$	\$
411	Type C Surface Restoration (Open)	170	LF		
				\$	\$
412	Cut, Plug and Abandon	1	EA		
				\$	\$
413	Traffic Control	1	LS		
				\$	\$

TOTAL Additive Alternate #3 Bid Price (Base Bid) \$ _____
(Figures)

TOTAL Estimated Additive Alternate #3 Base Bid Price \$ _____
(Words)

**CITY OF THOMPSON FALLS
WASTEWATER IMPROVEMENTS PROJECT
ADDITIVE ALTERNATE #4 – SLUDGE DISPOSAL**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
501	Mobilization	1	LS	\$	\$
502	Sludge Disposal	1	LS	\$	\$

TOTAL Additive Alternate #4 Bid Price (Base Bid) \$ _____
(Figures)

TOTAL Estimated Additive Alternate #4 Base Bid Price \$ _____
(Words)

5.02 Bidder acknowledges that:

- A. Bid Unit Prices have been computed in accordance with Article 13 of the General Conditions;
- B. Each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item;
- C. Estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents;

- D. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices;
- E. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum;
- F. Discrepancies between words and figures will be resolved in the favor of words; and
- G. The Owner reserves the right to reject any or all Bids.

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages and payments to Owner for Unscheduled Employment of the Engineer.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
 - A. Required Bid security;
 - B. ~~List of Proposed Subcontractors;~~
 - C. ~~List of Proposed Suppliers;~~
 - D. ~~List of Project References;~~
 - E. Evidence of authority to do business in the state of the Project ~~or a written covenant to obtain such license within the time for acceptance of Bids;~~
 - F. Contractor's License No.: [REDACTED] ~~[or] Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;~~
 - G. Required Bidder Qualification Statement with supporting data within seven (7) days;
 - H. If Bid amount exceeds \$10,000, signed Compliance Statement (RD 400-6). Refer to specific equal opportunity requirements set forth in Paragraph 18.10 of the General Conditions;
 - I. If Bid amount exceeds \$25,000, signed Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions (AD-1048);
 - J. If Bid amount exceeds \$100,000, signed RD Instruction 1940-Q, Exhibit A-1, Certification for Contracts, Grants, and Loans; and

ARTICLE 8 – DEFINED TERMS

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

By:
[Signature] _____

[Printed name] _____
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

Bidder's Montana Contractor's License No.: _____

END OF SECTION



ANALYTICAL SUMMARY REPORT

October 29, 2019

Great West Engineering
PO Box 4817
Helena, MT 59604-4817

Work Order: H19100373
Project Name: Thompson Falls WW

Energy Laboratories Inc Helena MT received the following 8 samples for Great West Engineering on 10/17/2019 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H19100373-001	Composite	10/16/19 15:00	10/17/19	Solid	Metals by ICP/ICPMS, Total Mercury in Solid By CVAA Ammonia as N, KCL Extract Nitrate as N, KCL Extract Nitrogen, Total Kjeldahl Percent Moisture Total Metals Digestion by SW3050B Mercury Digestion by SW7471B KCL Soil Extract ASA33-3 TKN prep E351.2 Solids Content Soil Preparation USDA1
H19100373-002	1	10/16/19 15:00	10/17/19	Sludge	Bacteria, Fecal Coliform-sludge Solids Content
H19100373-003	2	10/16/19 15:00	10/17/19	Sludge	Same As Above
H19100373-004	3	10/16/19 15:00	10/17/19	Sludge	Same As Above
H19100373-005	4	10/16/19 15:00	10/17/19	Sludge	Same As Above
H19100373-006	5	10/16/19 15:00	10/17/19	Sludge	Same As Above
H19100373-007	6	10/16/19 15:00	10/17/19	Sludge	Same As Above
H19100373-008	7	10/16/19 15:00	10/17/19	Sludge	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:



CLIENT: Great West Engineering
Project: Thompson Falls WW
Work Order: H19100373

Report Date: 10/29/19

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.



LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Great West Engineering
Project: Thompson Falls WW
Lab ID: H19100373-001
Client Sample ID: Composite

Report Date: 10/29/19
Collection Date: 10/16/19 15:00
Date Received: 10/17/19
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	96.1	wt%		0.2		D2974	10/22/19 11:56 / iej
Solids, Total	3.74	wt%		0.01		A2540 G	10/18/19 10:06 / stp
CHEMICAL CHARACTERISTICS							
Nitrogen, Kjeldahl, Total as N	28200	mg/kg-dry	D	2000		E351.2	10/24/19 12:50 / eli-b
NUTRIENTS							
Ammonia as N, KCL Extract	1410	mg/kg-dry	D	100		ASA33-7	10/28/19 16:06 / kmd
Nitrate as N, KCL Extract	12	mg/kg-dry		3		ASA33-8	10/28/19 09:58 / kmd
3050 EXTRACTABLE METALS							
Arsenic	8.8	mg/kg-dry		0.9		SW6020	10/22/19 16:23 / dck
Cadmium	2.2	mg/kg-dry		0.6		SW6020	10/22/19 16:23 / dck
Chromium	29	mg/kg-dry		3		SW6020	10/22/19 16:23 / dck
Copper	497	mg/kg-dry		3		SW6020	10/22/19 16:23 / dck
Lead	34	mg/kg-dry		4		SW6020	10/22/19 16:23 / dck
Molybdenum	5.4	mg/kg-dry		0.8		SW6020	10/22/19 16:23 / dck
Nickel	19	mg/kg-dry		1		SW6020	10/22/19 16:23 / dck
Selenium	2	mg/kg-dry		2		SW6020	10/22/19 16:23 / dck
Zinc	806	mg/kg-dry		8		SW6010B	10/22/19 19:05 / sld
METALS, TOTAL							
Mercury	0.46	mg/kg-dry		0.050		SW7471B	10/25/19 10:07 / ber

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Great West Engineering
Project: Thompson Falls WW
Lab ID: H19100373-002
Client Sample ID: 1

Report Date: 10/29/19
Collection Date: 10/16/19 15:00
Date Received: 10/17/19
Matrix: Sludge

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MICROBIOLOGICAL							
Bacteria, Fecal Coliform, as Received	<91	CFU/g	H			A9222 Dmod	10/17/19 14:53 / tmj
Bacteria, Fecal Coliform, Dry Basis	<1100	CFU/g	H			A9222 Dmod	10/17/19 14:53 / tmj
PHYSICAL CHARACTERISTICS							
Solids, Total	8.03	wt%		0.01		A2540 G	10/18/19 10:06 / stp

Report Definitions:

RL - Analyte reporting limit.	MCL - Maximum contaminant level.
QCL - Quality control limit.	ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.	



LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Great West Engineering
Project: Thompson Falls WW
Lab ID: H19100373-003
Client Sample ID: 2

Report Date: 10/29/19
Collection Date: 10/16/19 15:00
Date Received: 10/17/19
Matrix: Sludge

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MICROBIOLOGICAL							
Bacteria, Fecal Coliform, as Received	2400	CFU/g	H			A9222 Dmod	10/17/19 14:53 / tmj
Bacteria, Fecal Coliform, Dry Basis	47000	CFU/g	H			A9222 Dmod	10/17/19 14:53 / tmj
PHYSICAL CHARACTERISTICS							
Solids, Total	5.11	wt%		0.01		A2540 G	10/18/19 10:06 / stp

Report Definitions:

RL - Analyte reporting limit.	MCL - Maximum contaminant level.
QCL - Quality control limit.	ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.	



LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Great West Engineering
Project: Thompson Falls WW
Lab ID: H19100373-004
Client Sample ID: 3

Report Date: 10/29/19
Collection Date: 10/16/19 15:00
Date Received: 10/17/19
Matrix: Sludge

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MICROBIOLOGICAL							
Bacteria, Fecal Coliform, as Received	<91	CFU/g	H			A9222 Dmod	10/17/19 14:53 / tmj
Bacteria, Fecal Coliform, Dry Basis	<2200	CFU/g	H			A9222 Dmod	10/17/19 14:53 / tmj
PHYSICAL CHARACTERISTICS							
Solids, Total	4.09	wt%		0.01		A2540 G	10/18/19 10:06 / stp

Report Definitions:

RL - Analyte reporting limit.	MCL - Maximum contaminant level.
QCL - Quality control limit.	ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.	



LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Great West Engineering
Project: Thompson Falls WW
Lab ID: H19100373-005
Client Sample ID: 4

Report Date: 10/29/19
Collection Date: 10/16/19 15:00
Date Received: 10/17/19
Matrix: Sludge

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MICROBIOLOGICAL							
Bacteria, Fecal Coliform, as Received	<91	CFU/g	H			A9222 Dmod	10/17/19 14:53 / tmj
Bacteria, Fecal Coliform, Dry Basis	<1500	CFU/g	H			A9222 Dmod	10/17/19 14:53 / tmj
PHYSICAL CHARACTERISTICS							
Solids, Total	6.03	wt%		0.01		A2540 G	10/18/19 10:06 / stp

Report Definitions:

RL - Analyte reporting limit.	MCL - Maximum contaminant level.
QCL - Quality control limit.	ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.	



LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Great West Engineering
Project: Thompson Falls WW
Lab ID: H19100373-006
Client Sample ID: 5

Report Date: 10/29/19
Collection Date: 10/16/19 15:00
Date Received: 10/17/19
Matrix: Sludge

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MICROBIOLOGICAL							
Bacteria, Fecal Coliform, as Received	<91	CFU/g	H			A9222 Dmod	10/17/19 14:53 / tmj
Bacteria, Fecal Coliform, Dry Basis	<2900	CFU/g	H			A9222 Dmod	10/17/19 14:53 / tmj
PHYSICAL CHARACTERISTICS							
Solids, Total	3.15	wt%		0.01		A2540 G	10/18/19 10:06 / stp

Report Definitions:

RL - Analyte reporting limit.	MCL - Maximum contaminant level.
QCL - Quality control limit.	ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.	



LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Great West Engineering
Project: Thompson Falls WW
Lab ID: H19100373-007
Client Sample ID: 6

Report Date: 10/29/19
Collection Date: 10/16/19 15:00
Date Received: 10/17/19
Matrix: Sludge

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MICROBIOLOGICAL							
Bacteria, Fecal Coliform, as Received	<91	CFU/g	H			A9222 Dmod	10/17/19 14:53 / tmj
Bacteria, Fecal Coliform, Dry Basis	<1000	CFU/g	H			A9222 Dmod	10/17/19 14:53 / tmj
PHYSICAL CHARACTERISTICS							
Solids, Total	8.91	wt%		0.01		A2540 G	10/18/19 10:06 / stp

Report Definitions:

RL - Analyte reporting limit.	MCL - Maximum contaminant level.
QCL - Quality control limit.	ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.	



LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Great West Engineering
Project: Thompson Falls WW
Lab ID: H19100373-008
Client Sample ID: 7

Report Date: 10/29/19
Collection Date: 10/16/19 15:00
Date Received: 10/17/19
Matrix: Sludge

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MICROBIOLOGICAL							
Bacteria, Fecal Coliform, as Received	<91	CFU/g	H			A9222 Dmod	10/17/19 14:53 / tmj
Bacteria, Fecal Coliform, Dry Basis	<4224	CFU/g	H			A9222 Dmod	10/17/19 14:53 / tmj
PHYSICAL CHARACTERISTICS							
Solids, Total	2.15	wt%		0.01		A2540 G	10/18/19 10:06 / stp

Report Definitions:

RL - Analyte reporting limit.	MCL - Maximum contaminant level.
QCL - Quality control limit.	ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.	



QA/QC Summary Report

Prepared by Helena, MT Branch

Client: Great West Engineering

Work Order: H19100373

Report Date: 10/29/19

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 G									Batch: R149018
Lab ID: H19100373-001ADUP	Sample Duplicate					Run: SOIL DRYING OVEN 2_19101			10/18/19 10:06
Solids, Total	3.79	wt%	0.01				1.2	20	
Lab ID: H19100373-008ADUP	Sample Duplicate					Run: SOIL DRYING OVEN 2_19101			10/18/19 10:06
Solids, Total	2.20	wt%	0.01				2.0	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by Helena, MT Branch

Client: Great West Engineering

Work Order: H19100373

Report Date: 10/29/19

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASA33-7							Analytical Run: FIA203-HE_191028E		
Lab ID: ICV	Initial Calibration Verification Standard								
Ammonia as N, KCL Extract	1.03	mg/kg	0.50	103	90	110			10/28/19 15:58
Lab ID: CCV	Continuing Calibration Verification Standard								
Ammonia as N, KCL Extract	0.514	mg/kg	0.50	103	90	110			10/28/19 16:11
Lab ID: CCB	Continuing Calibration Blank								
Ammonia as N, KCL Extract	-0.0123	mg/kg	0.50			0.05			10/28/19 16:13
Method: ASA33-7							Batch: 48487		
Lab ID: MB-48487	Method Blank								
Ammonia as N, KCL Extract	0.6	mg/kg	0.1						Run: FIA203-HE_191028E 10/28/19 16:01
Lab ID: LCS-48487	Laboratory Control Sample								
Ammonia as N, KCL Extract	5.20	mg/kg	0.50	90	70	130			Run: FIA203-HE_191028E 10/28/19 16:02
Lab ID: H19100373-001ADUP	Sample Duplicate								
Ammonia as N, KCL Extract	1320	mg/kg-dry	130				6.4		Run: FIA203-HE_191028E 10/28/19 16:08 20
Lab ID: H19100373-001AMS	Sample Matrix Spike								
Ammonia as N, KCL Extract	3660	mg/kg-dry	140	87	90	110			Run: FIA203-HE_191028E 10/28/19 16:10 S

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



QA/QC Summary Report

Prepared by Helena, MT Branch

Client: Great West Engineering

Work Order: H19100373

Report Date: 10/29/19

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASA33-8							Analytical Run: FIA203-HE_191028B		
Lab ID: ICV	Initial Calibration Verification Standard								
Nitrate as N, KCL Extract	0.968	mg/kg	1.0	97	90	110			10/28/19 09:52
Lab ID: CCV	Continuing Calibration Verification Standard								
Nitrate as N, KCL Extract	0.460	mg/kg	1.0	92	90	110			10/28/19 10:02
Lab ID: CCB	Continuing Calibration Blank								
Nitrate as N, KCL Extract	-0.000900	mg/kg	1.0						10/28/19 10:03
Method: ASA33-8							Batch: 48487		
Lab ID: MB-48487	Method Blank								
Nitrate as N, KCL Extract	0.3	mg/kg	0.1						Run: FIA203-HE_191028B 10/28/19 09:56
Lab ID: LCS-48487	Laboratory Control Sample								
Nitrate as N, KCL Extract	3.02	mg/kg	1.0	97	70	130			Run: FIA203-HE_191028B 10/28/19 09:57
Lab ID: H19100373-001ADUP	Sample Duplicate								
Nitrate as N, KCL Extract	14.5	mg/kg-dry	2.6				22		Run: FIA203-HE_191028B 10/28/19 09:59 30
Lab ID: H19100373-001AMS	Sample Matrix Spike								
Nitrate as N, KCL Extract	121	mg/kg-dry	2.8	85	80	120			Run: FIA203-HE_191028B 10/28/19 10:01

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by Helena, MT Branch

Client: Great West Engineering

Work Order: H19100373

Report Date: 10/29/19

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: D2974									Batch: R148918
Lab ID: H19100434-001ADUP	Sample Duplicate					Run: SOIL DRYING OVEN 2_19102			10/22/19 11:56
Moisture	14.7	wt%	0.20				0.7	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by Helena, MT Branch

Client: Great West Engineering

Work Order: H19100373

Report Date: 10/29/19

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E351.2							Analytical Run: SUB-B329730		
Lab ID: ICV	Initial Calibration Verification Standard								
Nitrogen, Kjeldahl, Total as N	9.81	mg/L	0.50	98	90	110			10/24/19 11:00
Lab ID: CCV	Continuing Calibration Verification Standard								
Nitrogen, Kjeldahl, Total as N	9.87	mg/L	0.50	99	90	110			10/24/19 12:49
Lab ID: CCV	Continuing Calibration Verification Standard								
Nitrogen, Kjeldahl, Total as N	10.3	mg/L	0.50	103	90	110			10/24/19 13:05
Method: E351.2							Batch: B_138433		
Lab ID: LCS-138433	Laboratory Control Sample								
Nitrogen, Kjeldahl, Total as N	766	mg/kg	100	80	70	130			Run: SUB-B329730 10/24/19 12:46
Lab ID: H19100373-001A	Sample Duplicate								
Nitrogen, Kjeldahl, Total as N	29900	mg/kg-dry	2100				5.6	30	Run: SUB-B329730 10/24/19 12:51
Lab ID: H19100373-001A	Sample Matrix Spike								
Nitrogen, Kjeldahl, Total as N	49200	mg/kg-dry	2100	101	70	130			Run: SUB-B329730 10/24/19 12:52
Lab ID: B19101904-001ADUP	Sample Duplicate								
Nitrogen, Kjeldahl, Total as N	914	mg/kg	100				17	30	Run: SUB-B329730 10/24/19 13:07

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by Helena, MT Branch

Client: Great West Engineering

Work Order: H19100373

Report Date: 10/29/19

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6010B									Analytical Run: ICP2-HE_191022B
Lab ID: ICV	Initial Calibration Verification Standard								10/22/19 09:25
Zinc	0.792	mg/L	0.010	99	90	110			
Lab ID: CCV	Continuing Calibration Verification Standard								10/22/19 09:29
Zinc	2.47	mg/L	0.010	99	90	110			
Lab ID: ICB	Continuing Calibration Blank								10/22/19 09:33
Zinc	0.000310	mg/L	0.010						
Lab ID: ICSA	Interference Check Sample A								10/22/19 09:40
Zinc	0.00606	mg/L	0.010		0	0			
Lab ID: ICSAB	Interference Check Sample AB								10/22/19 09:44
Zinc	1.01	mg/L	0.010	101	80	120			
Lab ID: CCV	Continuing Calibration Verification Standard								10/22/19 19:19
Zinc	2.45	mg/L	0.010	98	90	110			
Lab ID: CCB	Continuing Calibration Blank								10/22/19 19:23
Zinc	0.000260	mg/L	0.010						
Method: SW6010B									Batch: 48479
Lab ID: MB-48479	Method Blank								Run: ICP2-HE_191022B
Zinc	ND	mg/kg	0.6						10/22/19 17:09
Lab ID: LFB-48479	Laboratory Fortified Blank								Run: ICP2-HE_191022B
Zinc	47.8	mg/kg	1.0	97	80	120			10/22/19 17:13
Lab ID: LCS1-48479	Laboratory Control Sample								Run: ICP2-HE_191022B
Zinc	438	mg/kg	3.2	95	77.8	122.2			10/22/19 17:17
Lab ID: H19100351-001ADIL	Serial Dilution								Run: ICP2-HE_191022B
Zinc	27.4	mg/kg	14		0	0			10/22/19 18:02 10 N
Lab ID: H19100351-001APDS	Post Digestion/Distillation Spike								Run: ICP2-HE_191022B
Zinc	245	mg/kg	3.0	89	75	125			10/22/19 18:05
Lab ID: H19100351-001AMS	Sample Matrix Spike								Run: ICP2-HE_191022B
Zinc	71.0	mg/kg	2.9	94	75	125			10/22/19 18:09
Lab ID: H19100351-001AMSD	Sample Matrix Spike Duplicate								Run: ICP2-HE_191022B
Zinc	72.5	mg/kg	2.9	98	75	125	2.0	20	10/22/19 18:13

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.



QA/QC Summary Report

Prepared by Helena, MT Branch

Client: Great West Engineering

Work Order: H19100373

Report Date: 10/29/19

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Method: SW6020							Analytical Run: ICPMS205-H_191022C			
Lab ID: ICV	Initial Calibration Verification Standard								10/22/19 15:52	
Arsenic	0.0586	mg/L	0.0010	98	90	110				
Cadmium	0.0297	mg/L	0.0010	99	90	110				
Chromium	0.0592	mg/L	0.0010	99	90	110				
Copper	0.0607	mg/L	0.0010	101	90	110				
Lead	0.0585	mg/L	0.0010	98	90	110				
Molybdenum	0.0563	mg/L	0.0010	94	90	110				
Nickel	0.0600	mg/L	0.0010	100	90	110				
Selenium	0.0578	mg/L	0.0010	96	90	110				
Lab ID: ICSA	Interference Check Sample A								10/22/19 15:55	
Arsenic	4.33E-05	mg/L	0.0010							
Cadmium	4.79E-05	mg/L	0.0010							
Chromium	0.000220	mg/L	0.0010							
Copper	-0.000175	mg/L	0.0010							
Lead	9.22E-05	mg/L	0.0010							
Molybdenum	0.799	mg/L	0.0010	100	70	130				
Nickel	0.000266	mg/L	0.0010		0	0				
Selenium	2.46E-05	mg/L	0.0010							
Lab ID: ICSAB	Interference Check Sample AB								10/22/19 15:57	
Arsenic	0.0105	mg/L	0.0010	105	70	130				
Cadmium	0.0100	mg/L	0.0010	100	70	130				
Chromium	0.0204	mg/L	0.0010	102	70	130				
Copper	0.0198	mg/L	0.0010	99	70	130				
Lead	8.65E-05	mg/L	0.0010		0	0				
Molybdenum	0.806	mg/L	0.0010	101	70	130				
Nickel	0.0203	mg/L	0.0010	101	70	130				
Selenium	0.00963	mg/L	0.0010	96	70	130				
Lab ID: CCB	Continuing Calibration Verification Standard								10/22/19 16:35	
Arsenic	0.0516	mg/L	0.0010	103	90	110				
Cadmium	0.0508	mg/L	0.0010	102	90	110				
Chromium	0.0513	mg/L	0.0010	103	90	110				
Copper	0.0519	mg/L	0.0010	104	90	110				
Lead	0.0505	mg/L	0.0010	101	90	110				
Molybdenum	0.0508	mg/L	0.0010	102	90	110				
Nickel	0.0522	mg/L	0.0010	104	90	110				
Selenium	0.0504	mg/L	0.0010	101	90	110				
Lab ID: CCB	Continuing Calibration Blank								10/22/19 16:40	
Arsenic	-2.26E-05	mg/L	0.0010							
Cadmium	-1.07E-05	mg/L	0.0010							
Chromium	1.79E-07	mg/L	0.0010							
Copper	-0.000243	mg/L	0.0010							
Lead	2.46E-05	mg/L	0.0010							

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by Helena, MT Branch

Client: Great West Engineering

Work Order: H19100373

Report Date: 10/29/19

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020							Analytical Run: ICPMS205-H_191022C		
Lab ID: CCB	Continuing Calibration Blank						10/22/19 16:40		
Molybdenum	1.05E-05	mg/L	0.0010						
Nickel	-1.54E-05	mg/L	0.0010						
Selenium	1.57E-05	mg/L	0.0010						
Method: SW6020							Batch: 48479		
Lab ID: MB-48479	Method Blank						Run: ICPMS205-H_191022C 10/22/19 16:09		
Arsenic	ND	mg/kg	0.3						
Cadmium	ND	mg/kg	0.2						
Chromium	ND	mg/kg	1						
Copper	ND	mg/kg	1						
Lead	ND	mg/kg	2						
Molybdenum	ND	mg/kg	0.3						
Nickel	ND	mg/kg	0.4						
Selenium	ND	mg/kg	0.8						
Lab ID: LCS1-48479	Laboratory Control Sample						Run: ICPMS205-H_191022C 10/22/19 16:11		
Arsenic	205	mg/kg	1.0	102	82.2	118.3			
Cadmium	154	mg/kg	1.0	103	80.5	119.5			
Chromium	187	mg/kg	1.1	103	72	128.6			
Copper	221	mg/kg	1.1	98	74.2	125.8			
Lead	362	mg/kg	1.6	109	73.6	126.7			
Molybdenum	217	mg/kg	1.0	105	73.8	126.7			
Nickel	172	mg/kg	1.0	103	73.1	126.3			
Selenium	169	mg/kg	1.0	100	77.5	121.9			
Lab ID: LFB-48479	Laboratory Fortified Blank						Run: ICPMS205-H_191022C 10/22/19 16:14		
Arsenic	50.0	mg/kg	1.0	101	80	120			
Cadmium	25.3	mg/kg	1.0	103	80	120			
Chromium	49.1	mg/kg	1.1	99	80	120			
Copper	50.8	mg/kg	1.1	103	80	120			
Lead	50.3	mg/kg	1.5	102	80	120			
Molybdenum	48.6	mg/kg	1.0	99	80	120			
Nickel	50.1	mg/kg	1.0	102	80	120			
Selenium	46.1	mg/kg	1.0	93	80	120			
Lab ID: H19100351-001ADIL	Serial Dilution						Run: ICPMS205-H_191022C 10/22/19 16:21		
Arsenic	2.98	mg/kg	1.6		0	0	10		N
Cadmium	ND	mg/kg	1.0		0	0	10		
Chromium	9.25	mg/kg	5.1		0	0	10		N
Copper	6.58	mg/kg	5.2		0	0	10		N
Lead	7.92	mg/kg	7.3		0	0	10		N
Molybdenum	ND	mg/kg	1.5		0	0	10		
Nickel	7.93	mg/kg	2.0		0	0	10		N
Selenium	ND	mg/kg	3.6		0	0	10		

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.



QA/QC Summary Report

Prepared by Helena, MT Branch

Client: Great West Engineering

Work Order: H19100373

Report Date: 10/29/19

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020							Batch: 48479		
Lab ID: H19100351-001APDS1	Post Digestion/Distillation Spike			Run: ICPMS205-H_191022C			10/22/19 16:26		
Arsenic	14.0	mg/kg	1.0	95	75	125			
Cadmium	12.1	mg/kg	1.0	101	75	125			
Chromium	20.0	mg/kg	1.0	96	75	125			
Copper	17.7	mg/kg	1.0	96	75	125			
Lead	19.7	mg/kg	1.5	102	75	125			
Molybdenum	12.3	mg/kg	1.0	102	75	125			
Nickel	18.9	mg/kg	1.0	97	75	125			
Selenium	11.5	mg/kg	1.0	96	75	125			
Lab ID: H19100351-001AMS	Sample Matrix Spike			Run: ICPMS205-H_191022C			10/22/19 16:28		
Arsenic	50.8	mg/kg	1.0	99	75	125			
Cadmium	24.6	mg/kg	1.0	101	75	125			
Chromium	58.4	mg/kg	1.0	102	75	125			
Copper	54.7	mg/kg	1.1	99	75	125			
Lead	58.0	mg/kg	1.5	103	75	125			
Molybdenum	46.0	mg/kg	1.0	94	75	125			
Nickel	56.4	mg/kg	1.0	101	75	125			
Selenium	44.1	mg/kg	1.0	90	75	125			
Lab ID: H19100351-001AMSD	Sample Matrix Spike Duplicate			Run: ICPMS205-H_191022C			10/22/19 16:30		
Arsenic	50.4	mg/kg	1.0	98	75	125	0.8	20	
Cadmium	25.5	mg/kg	1.0	105	75	125	3.3	20	
Chromium	59.6	mg/kg	1.0	105	75	125	2.0	20	
Copper	55.4	mg/kg	1.1	101	75	125	1.4	20	
Lead	59.0	mg/kg	1.5	106	75	125	1.8	20	
Molybdenum	47.2	mg/kg	1.0	97	75	125	2.5	20	
Nickel	56.4	mg/kg	1.0	101	75	125	0.0	20	
Selenium	45.7	mg/kg	1.0	94	75	125	3.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by Helena, MT Branch

Client: Great West Engineering

Work Order: H19100373

Report Date: 10/29/19

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Method: SW7471B								Analytical Run: HGCV202-H_191025A		
Lab ID: ICV	Initial Calibration Verification Standard									
Mercury	0.0010	mg/kg	0.50	101	90	110			10/25/19 09:55	
Lab ID: CCV	Continuing Calibration Verification Standard									
Mercury	0.0026	mg/kg	0.50	103	90	110			10/25/19 09:57	
Lab ID: CCB	Continuing Calibration Blank									
Mercury	-5.2E-05	mg/kg	0.50						10/25/19 09:59	
Lab ID: CCV	Continuing Calibration Verification Standard									
Mercury	0.0026	mg/kg	0.50	103	90	110			10/25/19 10:26	
Lab ID: CCB	Continuing Calibration Blank									
Mercury	-5.1E-05	mg/kg	0.50						10/25/19 10:28	
Method: SW7471B								Batch: 48551		
Lab ID: MB-48551	Method Blank									
Mercury	ND	mg/kg	0.004						Run: HGCV202-H_191025A 10/25/19 10:01	
Lab ID: LCS-48551	Laboratory Control Sample									
Mercury	16	mg/kg	0.50	112	62.8	137.9			Run: HGCV202-H_191025A 10/25/19 10:03	
Lab ID: LFB-48551	Laboratory Fortified Blank									
Mercury	0.21	mg/kg	0.50	107	80	120			Run: HGCV202-H_191025A 10/25/19 10:05	
Lab ID: H19100373-001ADIL	Serial Dilution									
Mercury	0.40	mg/kg-dry	0.50		0	0			Run: HGCV202-H_191025A 10/25/19 10:09 10	
Lab ID: H19100373-001AMS	Sample Matrix Spike									
Mercury	1.2	mg/kg-dry	0.50	84	80	120			Run: HGCV202-H_191025A 10/25/19 10:11	
Lab ID: H19100373-001AMSD	Sample Matrix Spike Duplicate									
Mercury	1.1	mg/kg-dry	0.50	74	80	120	7.4	20	Run: HGCV202-H_191025A 10/25/19 10:13 S	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



Work Order Receipt Checklist

Great West Engineering

H19100373

Login completed by: Jessica C. Smith

Date Received: 10/17/2019

Reviewed by: BL2000\rtooke

Received by: JCS

Reviewed Date: 10/21/2019

Carrier name: Hand Del

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on all shipping container(s)/cooler(s)? Yes No Not Present
- Custody seals intact on all sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time?
(Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.) Yes No
- Temp Blank received in all shipping container(s)/cooler(s)? Yes No Not Applicable
- Container/Temp Blank temperature: °C See Comments
- Water - VOA vials have zero headspace? Yes No No VOA vials submitted
- Water - pH acceptable upon receipt? Yes No Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received at 20.0 °C, Cooler 2 at 20.7 °C. 1L glass jar has no ID, date, or time. Used ID, date, and time from COC. No date or time on any 4oz jars. Used date and time from COC. Per discussion with client, the fecal coliform method was changed from the MPN to MF. Sample for Fecal Coliform Bacteria was received past the EPA 8 hr holding time but within the 24 hr holding time allowed by the MT DEQ. JCS 10/17/19



Chain of Custody & Analytical Request Record

www.energylab.com

Account Information (Billing Information)

Company Name: Greenbelt Engineers
 Contact: Ryan Pearson
 Phone: 406-422-1291
 Mailing Address: 2501 Belt View Dr.
 City, State, Zip: Helena MT 59601
 Email: Pearson@greatwaters.com
 Receive Invoice: Hard Copy Email
 Receive Report: Hard Copy Email
 Purchase Order: _____ Quote: _____
 Bottle Order: _____

Report Information (if different than Account Information)

Company Name: _____
 Contact: _____
 Phone: _____
 Mailing Address: _____
 City, State, Zip: _____
 Email: _____
 Receive Report: Hard Copy Email
 Special Report/Formats: LEVEL IV NELAC EDD/EDT (contact laboratory) Other _____

Comments

Page ____ of ____

Project Information

Project Name, PWSID, Permit, etc.: Thompson Falls WW
 Sampler Name: Ryan Sampler Phone: 422-1291
 Sample Origin State: MT EPA/State Compliance: Yes No
 MINING CLIENTS, please indicate sample type:
 If ore has been processed or refined, call before sending.
 Byproduct 11 (e)2 material Unprocessed ore (NOT ground or refined)*

Matrix Codes

- A - Air
- W - Water
- S - Soils/Solids
- V - Vegetation
- B - Bioassay
- O - Other
- DW - Drinking Water

Analysis Requested

See Attached

All turnaround times are standard unless marked as RUSH.
 Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling - See Instructions Page

Sample Identification (Name, Location, Interval, etc.)	Collection		Number of Containers (See Codes Above)	Matrix	Analysis Requested	Signature	Date/Time
	Date	Time					
1 Composite	10/16/14	3:00 PM	1				
2							
3							
4							
5							
6							
7							
8							
9							
10							

Custody Record MUST be signed: Requested by (print): Ryan Pearson Date/Time: 10/17/14 Signature: [Signature]
 Requisitioned by (print): _____ Date/Time: _____ Signature: _____

Shipped By: Hard Cooler ID(s): Yes Custody Seals: Y N C B Intact: Y N Receipt Temp: 17.0 °C Temp Blank: N On Ice: N Payment Type: Cash Amount: \$
 Received by (print): Jessica Smith Date/Time: 10/17/14 Signature: [Signature]
 RECEIVED BY LABORATORY (print): _____ Date/Time: _____ Signature: _____
 Receipt Number (cash/check only): _____

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

BOTTLE ORDER 32063



SHIPPED TO: Great West Engineering

Contact: Ryan Pearson

Order Created by: Wanda Johnson

Shipped From: Helena, MT

Ship Date: 10/15/2019

VIA: PickUp

Phone:

Project: Thompson Falls

Bottle Size/Type	Bottles Per Samp	Method	Tests	Critical Hold Time	Preservative	Notes	Num of Samp
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503 Analysis

1 Liter Clear Glass Wide Mouth	1	E6010.20 SW7471B Visual	Metals by ICP/ICPMS, Total				1
			Mercury in Solid By CVAA				
			Supervisor Review				
			ASAA33-7 Ammonia as N, KCL Extract				
			ASAA33-8 Nitrate as N, KCL Extract				
			ASAA31-3 Total Kjeldahl Nitrogen				
		A2540 G	Solids Content				

(8 Sets)

4 oz Wide Mouth Amber Glass	1	A9221 E	Bacteria, Fecal Coliform - MPN	8.00 hrs			1
		A2540 G	Solids Content				

- HNO3 - Nitric Acid H2SO4 - Sulfuric Acid NaOH - Sodium Hydroxide
- ZnAc - Zinc Acetate HCl - Hydrochloric Acid H3PO4 - Phosphoric Acid

We strongly suggest that the samples are shipped the same day as they are collected.

Material Safety Data Sheets(MSDS) Available @ EnergyLab.com ->Services -> MSDS Sheets
Corrosive Chemicals: Nitric, Sulfuric, Phosphoric, Hydrochloric Acids and Sodium Hydroxide. Zinc Acetate is a skin irritant.

"General Decision Number: MT20200078 10/23/2020

Superseded General Decision Number: MT20190078

State: Montana

Construction Type: Heavy

Counties: Lake, Lincoln, Mineral, Ravalli and Sanders Counties in Montana.

HEAVY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.80 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2020
1	04/03/2020
2	04/24/2020
3	08/07/2020
4	10/23/2020

* ELEC0768-010 07/01/2020

	Rates	Fringes
ELECTRICIAN.....	\$ 32.12	14.43

ENGI0400-009 05/01/2013		

	Rates	Fringes
POWER EQUIPMENT OPERATOR: (Zone 1)		
(1) A-frame truck Crane, oiler (except crane).....	\$ 23.47	10.40
(2) Crane Oiler,Bulldozer, Roller (Dirt and Grade Compaction).....	\$ 23.94	10.40

(3) Mechanic, Scraper.....	\$ 24.34	10.40
(4) Cranes, 25 tons - 44 tons.....	\$ 27.00	11.40
(5) Cranes, 45 tons to and incl. 74 tons.....	\$ 28.00	11.40
(6) Cranes, 75 tons to and incl. 149 tons; Cranes, Whirley (All).....	\$ 29.00	11.40
(7) Cranes, 150 tons to including 250 tons (add \$1.00		
for every 100 tons over 250 tons); Crane, Stiff- Leg or		
Derrick; Helicopter Hoist; Crane, Tower (all)...		
	\$ 30.00	11.40

ZONE DEFINITIONS FOR POWER EQUIPMENT OPERATORS:

The zone hourly rates applicable to each project shall be determined by measuring the road miles over the shortest practical maintained route from the nearest County Court House of the following listed towns to the center of the job:

BILLINGS, BOZEMAN, BUTTE, GREAT FALLS, HELENA, KALISPELL, MISSOULA

- Zone 1: 0 to 30 miles - Base Pay
- Zone 2: 30 to 60 miles - Base Pay + \$3.50
- Zone 3: Over 60 miles - Base Pay + \$5.50

IRON0014-016 07/01/2020

	Rates	Fringes
IRONWORKER: Reinforcing and Structural.....	\$ 29.15	25.95

SUMT2011-054 02/08/2011

	Rates	Fringes
CARPENTER (Form Work Only).....	\$ 24.30	7.80
CARPENTER, Excludes Form Work....	\$ 21.13	7.00
LABORER: Common or General.....	\$ 17.99	5.90
LABORER: Pipelayer.....	\$ 21.81	4.83
LABORER: Landscape and Irrigation.....	\$ 15.14	1.30
OPERATOR: Backhoe.....	\$ 21.44	8.05
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 21.99	8.55
OPERATOR: Excavator.....	\$ 22.94	9.05
OPERATOR: Grader/Blade.....	\$ 24.69	8.40

OPERATOR: Loader (Front End)....\$ 24.20 7.84

TRUCK DRIVER: Dump Truck.....\$ 18.84 5.92

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

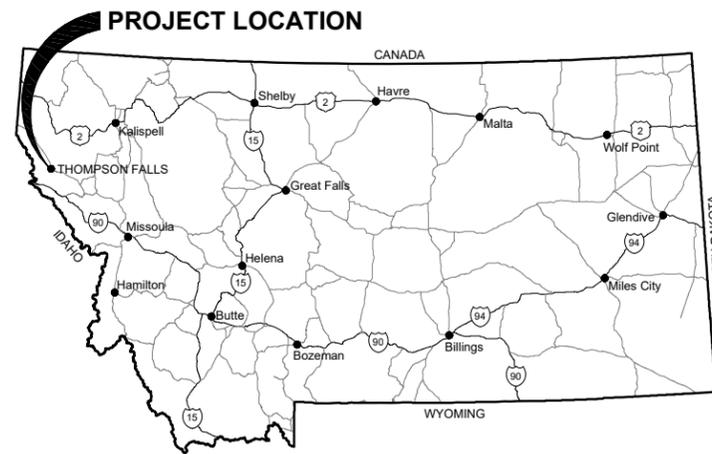
Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

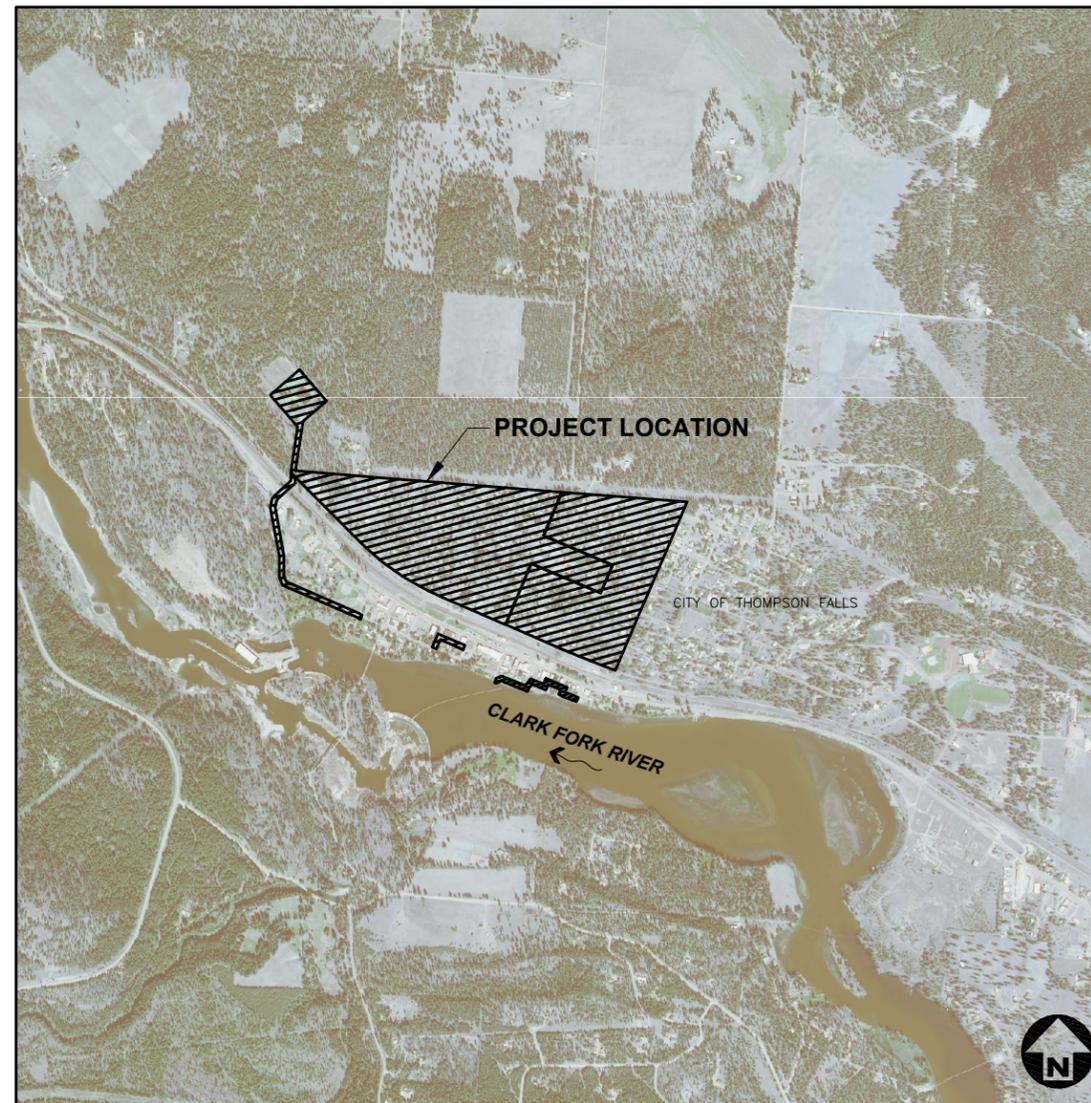
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END OF GENERAL DECISION"

CITY OF THOMPSON FALLS, MONTANA WASTEWATER SYSTEM IMPROVEMENTS CONSTRUCTION PLANS



SECTIONS 6, 7 & 8, TOWNSHIP 21 NORTH, AND RANGE 29 WEST



NOT TO SCALE

SEISMIC PROVISIONS PURSUANT TO 7 CFR § 1792.103 ARE USED IN THE DESIGN OF ALL BUILDINGS IN ACCORDANCE WITH THE 2012 INTERNATIONAL BUILDING CODE.

PLANS PREPARED BY:



Ritter Engineering

DNRC: RRG-18-1679
DNRC: RRG-20-1738
TSEP: MT-TSEP-CG-21-175
RD: Wastewater FY18 Phase 1, CFDA #10.760
RD: Wastewater FY18 Phase 2, CFDA #10.760
SRF: C303706

NO.	REVISION DESCRIPTION	BY	DATE	SET NO.
△1	REVISED PER DEQ COMMENTS (C1, C80, C82, C83, C115, P3, M1, M6 & M7)	LMW	9-24-20	
△2	ADDENDUM NO. 2 (SHEETS C57, C59, C76, C82, C95, C96, C107, C115 & P11)	LMW	11-5-20	
△3				
△4				
△5				
△6				

SHEET NO.
G1
1 OF 192

PLANS PREPARED FOR:

MARK SHEETS, MAYOR
CITY OF THOMPSON FALLS, MONTANA



APPROVED BY:

CARRIE GARDNER, P.E.
GREAT WEST ENGINEERING



SUSAN HAYES, P.E.
GREAT WEST ENGINEERING



QA/QC BY:

AMY DEITCHLER, P.E.
GREAT WEST ENGINEERING



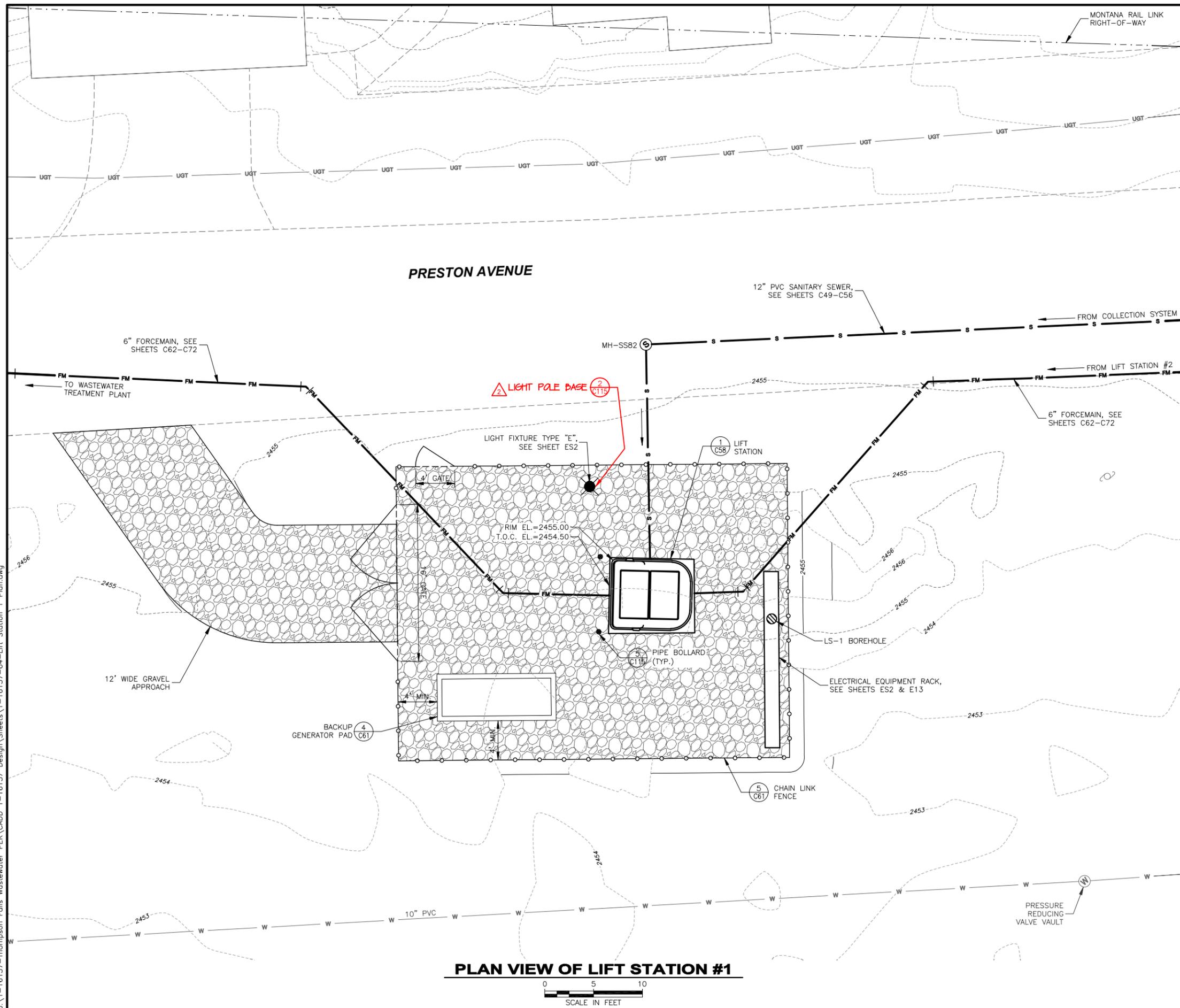
CRAIG POZEGA, P.E.
GREAT WEST ENGINEERING



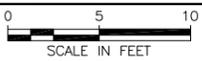
GWE PLANS PREPARED BY:

LISA WALTON
PAUL STETSON
RYAN PEARSON, EI

J:\1-16137-Thompson Falls Wastewater PER\CADD 1-16137 Design\Sheets\1-16137-64-Lift Station 1 Plan.dwg



PLAN VIEW OF LIFT STATION #1



GENERAL NOTES:

- UTILITY INFORMATION SHOWN ON THE DRAWINGS IS APPROXIMATE AND MAY BE INCOMPLETE. FOR ACCURATE LOCATION, THE CONTRACTOR SHALL CONTACT, PRIOR TO EXCAVATION, THE UTILITIES UNDERGROUND LOCATION CENTER: 1-800-424-5555
- SEE ELECTRICAL SHEETS FOR INFORMATION ON ELECTRICAL EQUIPMENT RACK.
- ENSURE ALL PANELS ON GENERATOR CAN BE OPENED FULLY. GENERATOR LOCATION IS PRELIMINARY AND CAN BE FIELD ADJUSTED.
- BACKUP GENERATOR DIMENSIONS ARE 11.15'(L)x3.80'(W)x8.00'(H). BACKUP GENERATOR PAD TO BE A MINIMUM OF 6" WIDER THAN THE GENERATOR ON ALL SIDES.
- ALL WORK WITHIN MONTANA RAIL LINK (MRL) RIGHT-OF-WAY MUST FOLLOW REQUIREMENTS OF THE MRL PERMIT. REFERENCE APPENDIX B IN THE PROJECT MANUAL.

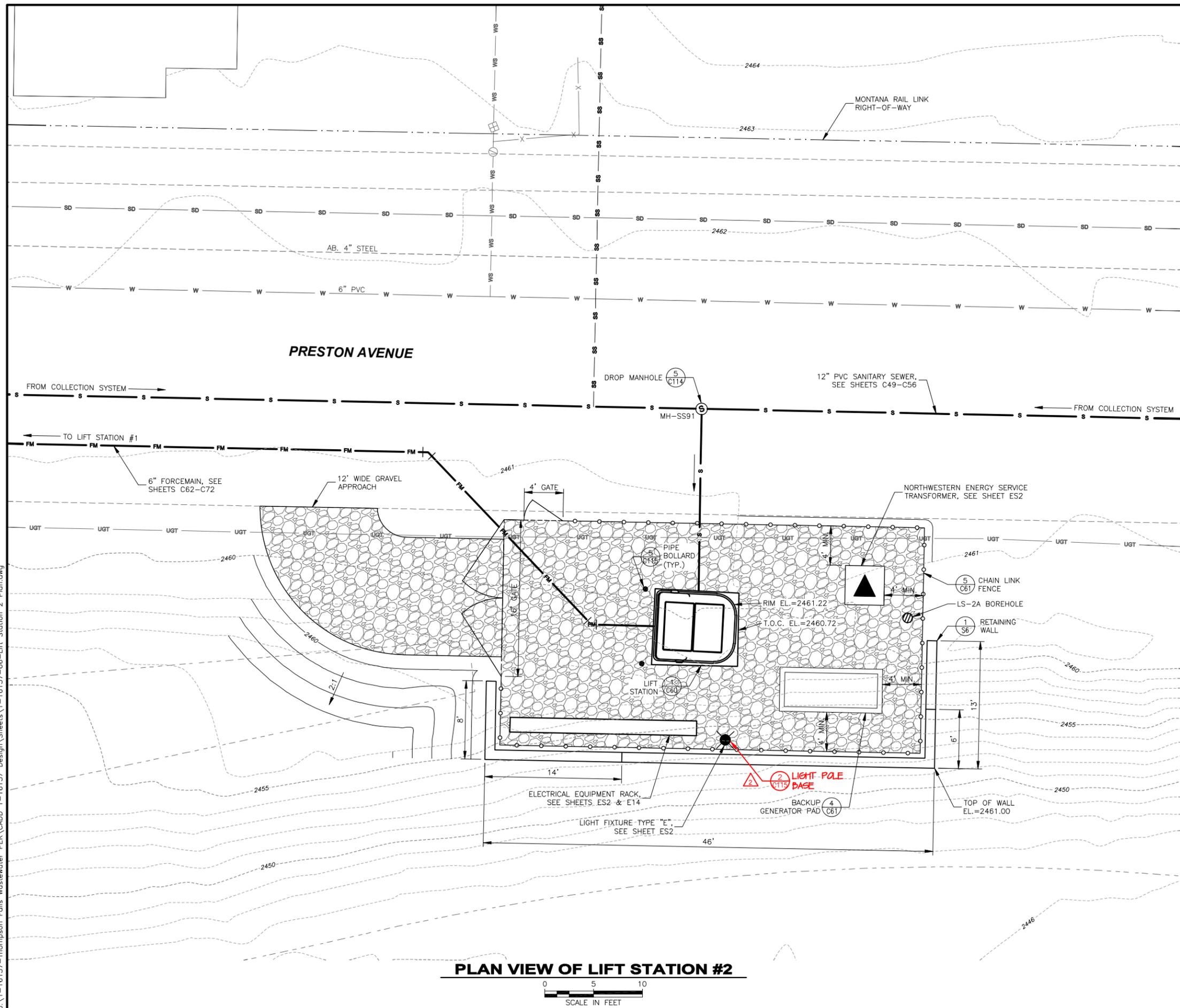
NO.	REVISION DESCRIPTION	BY	DATE
2	ADDENDUM NO. 2	LMW	11-5-20

PROJECT:	1-16137
DESIGNED:	CAG, SKH
DRAWN:	LMW
CHECKED:	CRP, AMD
APPROVED:	CAG, SKH
DATE:	AUGUST 25, 2020

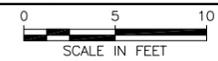


CITY OF THOMPSON FALLS, MONTANA
WASTEWATER SYSTEM IMPROVEMENTS
 LIFT STATION #1 PLAN

J:\1-16137-Thompson Falls Wastewater PER\CADD\1-16137-Design\Sheets\1-16137-66-Lift Station 2 Plan.dwg



PLAN VIEW OF LIFT STATION #2



GENERAL NOTES:

- UTILITY INFORMATION SHOWN ON THE DRAWINGS IS APPROXIMATE AND MAY BE INCOMPLETE. FOR ACCURATE LOCATION, THE CONTRACTOR SHALL CONTACT, PRIOR TO EXCAVATION, THE UTILITIES UNDERGROUND LOCATION CENTER:
UNDERGROUND LOCATION CENTER
1-800-424-5555
- SEE ELECTRICAL SHEETS FOR INFORMATION ON ELECTRICAL EQUIPMENT RACK.
- ENSURE ALL PANELS ON GENERATOR CAN BE OPENED FULLY. GENERATOR LOCATION IS PRELIMINARY AND CAN BE FIELD ADJUSTED.
- BACKUP GENERATOR DIMENSIONS ARE 9.50'(L)x3.5'(W)x7.00'(H). BACKUP GENERATOR PAD TO BE A MINIMUM OF 6" WIDER THAN GENERATOR ON ALL SIDES.
- ALL WORK WITHIN MONTANA RAIL LINK (MRL) RIGHT-OF-WAY MUST FOLLOW REQUIREMENTS OF THE MRL PERMIT. REFERENCE APPENDIX B IN THE PROJECT MANUAL.

NO.	REVISION DESCRIPTION	BY	DATE
2	ADDENDUM NO. 2	LMW	11-5-20

PROJECT: 1-16137	DESIGNED: CAG, SKH	DRAWN: LMW	CHECKED: CRP, AMD	APPROVED: CAG, SKH	DATE: AUGUST 25, 2020
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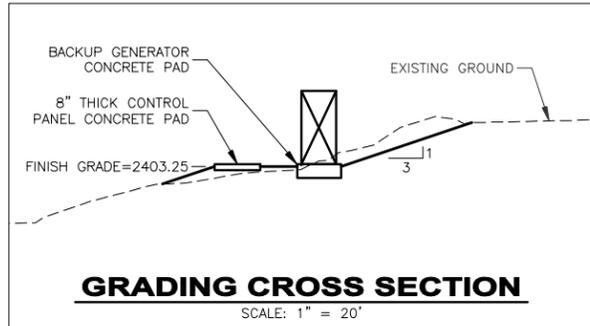
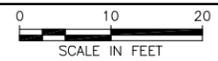


CITY OF THOMPSON FALLS, MONTANA
WASTEWATER SYSTEM IMPROVEMENTS
LIFT STATION #2 PLAN

J:\1-16137-Thompson Falls Wastewater PER\CADD 1-16137 Design\Sheets\1-16137-83-MAIN LIFT STATION.dwg



PLAN VIEW OF EXISTING MAIN LIFT STATION SITE



- GENERAL NOTES:**
- UTILITY INFORMATION SHOWN ON THE DRAWINGS IS APPROXIMATE AND MAY BE INCOMPLETE. FOR ACCURATE LOCATION, THE CONTRACTOR SHALL CONTACT, PRIOR TO EXCAVATION, THE UTILITIES UNDERGROUND LOCATION CENTER:
UNDERGROUND LOCATION CENTER
1-800-424-5555
 - BASE BID WORK INCLUDES BACKUP GENERATOR, ADDITIONAL CONTROL PANEL, LIFT STATION SITE WORK AND FENCE.
 - ADDITIVE ALTERNATE NO. 1 INCLUDES SEWER MAIN INSTALLATION.
 - BACKUP GENERATOR DIMENSIONS ARE 11.15'(L)x3.80'(W)x8.00'(H). BACKUP GENERATOR PAD TO BE A MINIMUM OF 6" WIDER THAN GENERATOR ON ALL SIDES.
 - SEE SHEET ES3 FOR MORE INFORMATION ON ELECTRICAL EQUIPMENT.

NO.	REVISION DESCRIPTION	BY	DATE
2	ADDENDUM NO. 2	LMW	11-5-20

PROJECT:	1-16137
DESIGNED:	CAG, SKH
DRAWN:	LMW
CHECKED:	CRP, AMD
APPROVED:	CAG, SKH
DATE:	AUGUST 25, 2020

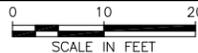


CITY OF THOMPSON FALLS, MONTANA
WASTEWATER SYSTEM IMPROVEMENTS
EXISTING MAIN LIFT STATION SITE PLAN

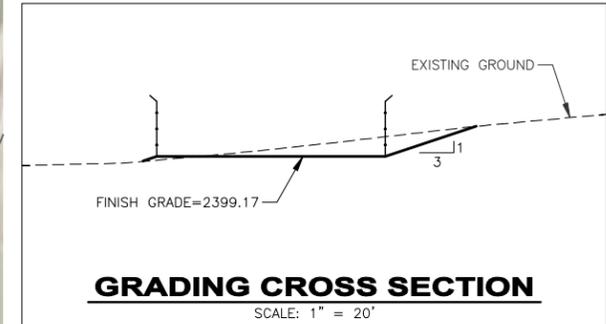
J:\1-16137-Thompson Falls Wastewater PER\CADD 1-16137 Design\Sheets\1-16137-89-FERRY LIFT STATION.dwg



PLAN VIEW OF FERRY STREET LIFT STATION



***ALL WORK THIS SHEET
ADDITIVE ALTERNATE
NO. 1**



GENERAL NOTES:

1. UTILITY INFORMATION SHOWN ON THE DRAWINGS IS APPROXIMATE AND MAY BE INCOMPLETE. FOR ACCURATE LOCATION, THE CONTRACTOR SHALL CONTACT, PRIOR TO EXCAVATION, THE UTILITIES UNDERGROUND LOCATION CENTER:

UNDERGROUND LOCATION CENTER
1-800-424-5555
2. SEE SHEET C81 FOR MORE INFORMATION ON SEWER MAIN REPLACEMENT.
3. THE BACKUP GENERATOR FOR THE FERRY STREET LIFT STATION IS A PORTABLE GENERATOR PROVIDED BY THE CITY.
4. SEE SHEET ES3 FOR MORE INFORMATION ON ELECTRICAL EQUIPMENT & SERVICE TRANSFORMER.

NO.	REVISION DESCRIPTION	BY	DATE
1	REVISED PER DEQ COMMENTS	LMW	9-24-20
2	ADDENDUM NO. 2	LMW	11-5-20

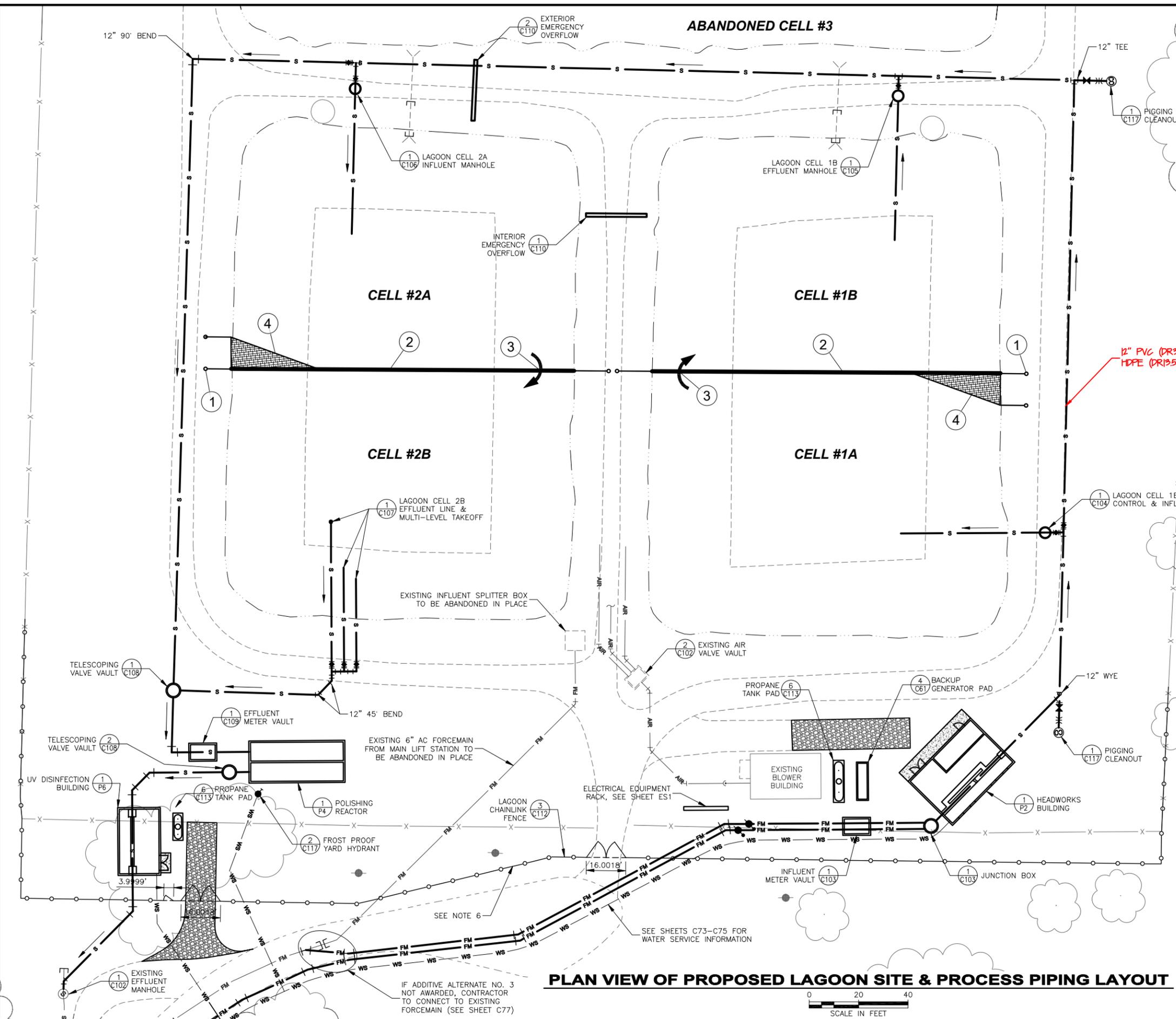
PROJECT:	1-16137
DESIGNED:	CAG, SKH
DRAWN:	LMW
CHECKED:	CRP, AMD
APPROVED:	CAG, SKH
DATE:	AUGUST 25, 2020



CITY OF THOMPSON FALLS, MONTANA
WASTEWATER SYSTEM IMPROVEMENTS
FERRY STREET LIFT STATION SITE PLAN

SHEET NO.
C82
89 OF 192

J:\1-16137-Thompson Falls Wastewater PER\CADD 1-16137 Design\Sheets\1-16137-102-PROPOSED LAGOONS.dwg

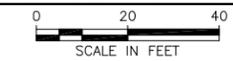


- GENERAL NOTES:**
- SEE SHEET C93 FOR EXISTING LAGOON SYSTEM AND DEMOLITION PLAN. MANY OF THE EXISTING SEWER INFLUENT AND EFFLUENT LINES AND AIR LINES TO BE REMOVED OR ABANDONED IN PLACE NOT SHOWN FOR CLARITY.
 - EXISTING AND PROPOSED CONTOURS NOT SHOWN FOR CLARITY. SEE SHEET C97 FOR GRADING PLAN.
 - SEE SHEET C96 FOR PROPOSED AERATION PIPING LAYOUT.
 - SEE SHEETS C98-C101 FOR INFORMATION ON LAGOON COVERS AND HYDRAULIC BAFFLES.
 - SEE SHEET P11 FOR AIR DIFFUSER ASSEMBLY AND INSTALLATION DETAILS.
 - CONTRACTOR TO REMOVE EAST END OF FENCING AND EXTEND FENCE AS SHOWN, INCLUDING (2) 16' NEW GATES AND (1) 4' NEW GATE. APPROXIMATELY 510 L.F. OF NEW FENCING REQUIRED. CONTRACTOR TO ALSO REPLACE APPROXIMATELY 139 L.F. OF FENCING ALONG THE NORTH AND SOUTH ENDS OF THE PROPERTY AFTER GRADING HAS BEEN COMPLETED. CONTRACTOR TO VERIFY FINAL LINEAL FEET QUANTITY AFTER GRADING AND SITE WORK IS COMPLETE.
 - FINAL PROPANE TANK SIZE TO BE CONFIRMED WITH LOCAL UTILITY. TANK AND PROPANE SHALL BE BILLED DIRECTLY TO THE CITY. CONTRACTOR IS RESPONSIBLE FOR ARRANGING INSTALLATION AND DELIVERY OF THE TANK AND FIRST DELIVERY OF PROPANE.
 - SEE SHEET ES1 FOR WWTP ELECTRICAL SITE PLAN.
 - SEE SHEET P1 FOR LAGOON OPERATIONAL SEQUENCE SCHEMATIC.
 - SEE APPENDIX A FOR INFORMATION ON TERRACON, INC. BORING LOGS.

LAGOON TREATMENT MATERIAL AND EQUIPMENT LIST, SHEET C95:

- BAFFLE ANCHOR (TYP.).
- HYDRAULIC BAFFLE (TYP. OF 2).
- BAFFLE PORTHOLE (TYP.).
- BAFFLE REVERSE MITER (TYP. OF 2).

PLAN VIEW OF PROPOSED LAGOON SITE & PROCESS PIPING LAYOUT



PROJECT: 1-16137	DESIGNED: CAG, SKH	DRAWN: LMW	CHECKED: CRP, AMD	APPROVED: CAG, SKH	DATE: AUGUST 25, 2020
BY: LMW	DATE: 11-5-20	REVISION DESCRIPTION			
NO. 2	ADDENDUM NO. 2				

2601 BELT VIEW DRIVE
HELENA, MT 59601
(406) 448-8627

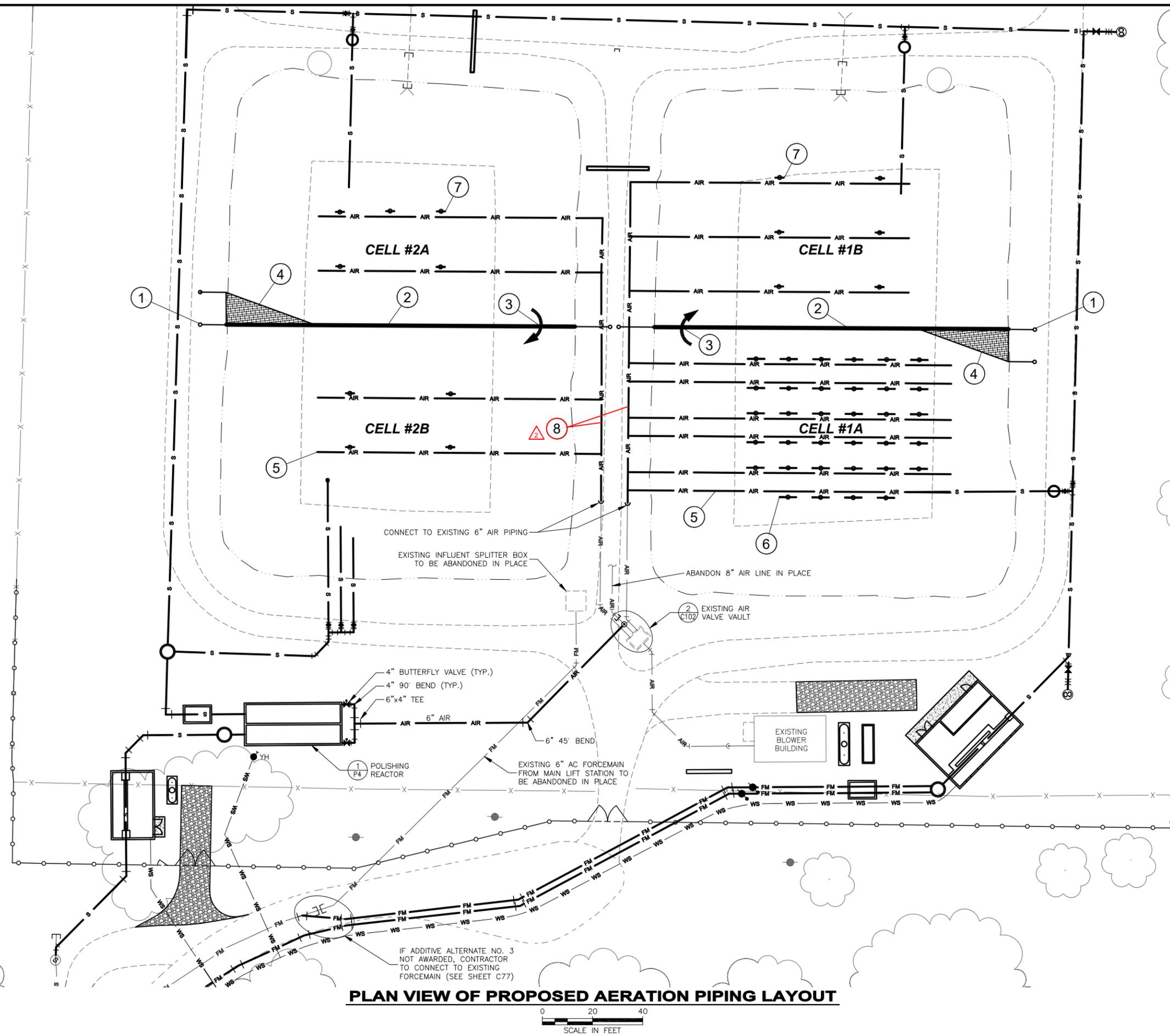
CITY OF THOMPSON FALLS, MONTANA

WASTEWATER SYSTEM IMPROVEMENTS

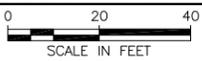
PROPOSED LAGOON SITE & PROCESS PIPING LAYOUT

SHEET NO.
C95
102 OF 192

J:\1-16137-Thompson Falls Wastewater PER\CADD 1-16137 Design\Sheets\1-16137-103-PROPOSED AERATION.dwg



PLAN VIEW OF PROPOSED AERATION PIPING LAYOUT



GENERAL NOTES:

- SEE SHEET C93 FOR EXISTING LAGOON SYSTEM AND DEMOLITION PLAN. MANY OF THE EXISTING SEWER INFLUENT AND EFFLUENT LINES AND AIR LINES TO BE REMOVED OR ABANDONED IN PLACE. NOT SHOWN FOR CLARITY.
- EXISTING AND PROPOSED CONTOURS NOT SHOWN FOR CLARITY. SEE SHEET C97 FOR GRADING PLAN.
- SEE SHEET C95 FOR PROPOSED PROCESS PIPING LAYOUT.
- SEE DETAIL 2, SHEET C102 FOR CONNECTING TO EXISTING CELL 3 AIR LINE AND DIVERTING TO POLISHING REACTOR.
- LEAVE 6" AIR PIPING IN PLACE WHERE BURIED, REPLACE ABOVE GRADE 6" AIR PIPING PER LAGOON TREATMENT MANUFACTURER DRAWINGS.
- SEE NOTE 2 AND DETAIL 1, SHEET C93 FOR INFORMATION REGARDING ABANDONMENT OF 2" AIR LATERALS WHICH PENETRATE THE LINER IN CELLS 1 AND 2.
- ABANDON IN PLACE BURIED 8" AIR PIPING TO CELL 3. REMOVE AND DISPOSE OF ALL ABOVE GRADE AIR PIPING TO CELL 3.
- SEE PROCESS SHEET P11 FOR MORE INFORMATION ON AERATION PIPING FOR THE EXISTING CELLS 1 AND 2. ENSURE NEW INLET/OUTLET PIPING AND NEW AERATION LATERALS DO NOT INTERFERE WITH EACH OTHER.
- SEE APPENDIX A FOR INFORMATION ON TERRACON, INC. GEOTECHNICAL BORING LOGS.

LAGOON TREATMENT MATERIAL AND EQUIPMENT LIST, SHEET C96:

- BAFFLE ANCHOR (TYP.).
- HYDRAULIC BAFFLE (TYP. OF 2).
- BAFFLE PORTHOLE (TYP.).
- BAFFLE REVERSE MITER (TYP. OF 2).
- 4" PE AIR LATERAL (TYP.).
- HIGH RATE DIFFUSER (TYP. 34 CELL 1A).
- LOW RATE DIFFUSER (TYP. 6 CELL 1B, TYP. OF 9 CELLS 2A & 2B).

△ 8" HDPE OR DI AIR PIPING.

NO.	REVISION DESCRIPTION	BY	DATE
2	ADDENDUM NO. 2	LMW	11-5-20

PROJECT:	1-16137
DESIGNED:	CAG, SKH
DRAWN:	LMW
CHECKED:	CRP, AMD
APPROVED:	CAG, SKH
DATE:	AUGUST 25, 2020

CITY OF THOMPSON FALLS, MONTANA

WASTEWATER SYSTEM IMPROVEMENTS

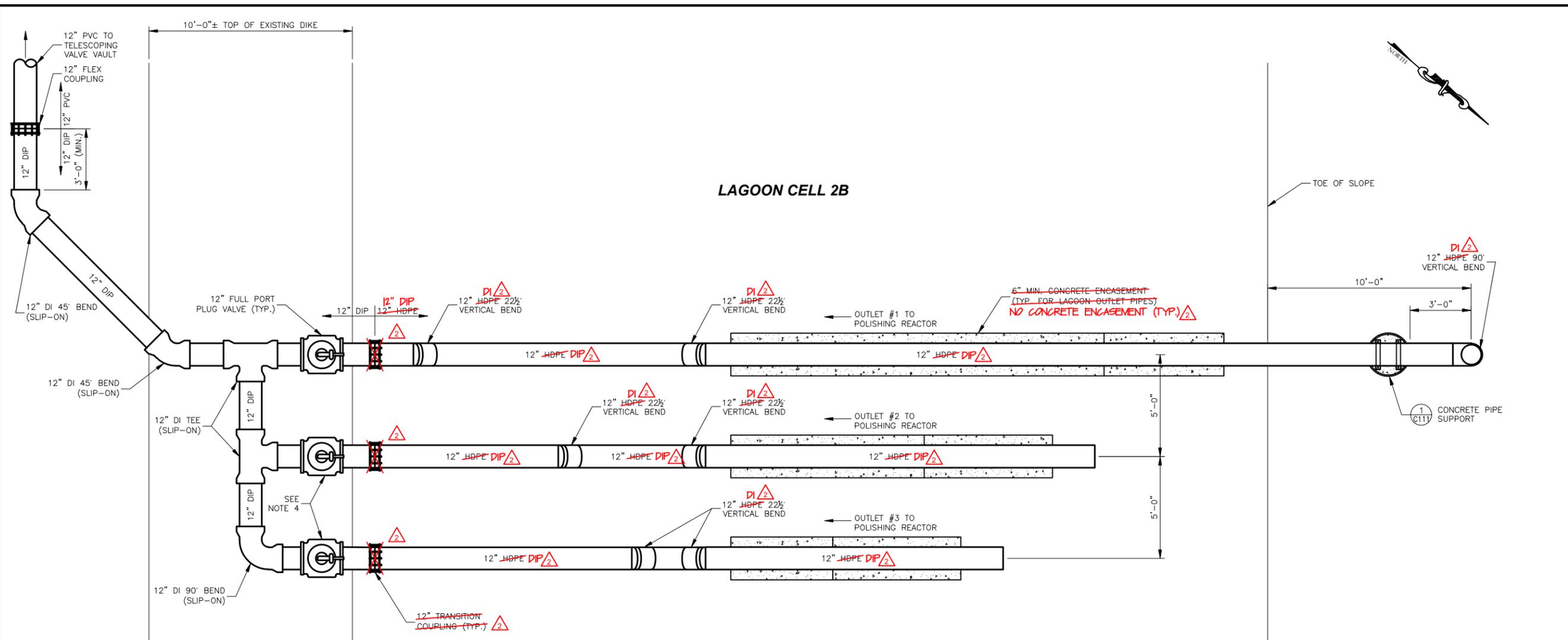
PROPOSED AERATION PIPING LAYOUT

SHEET NO.

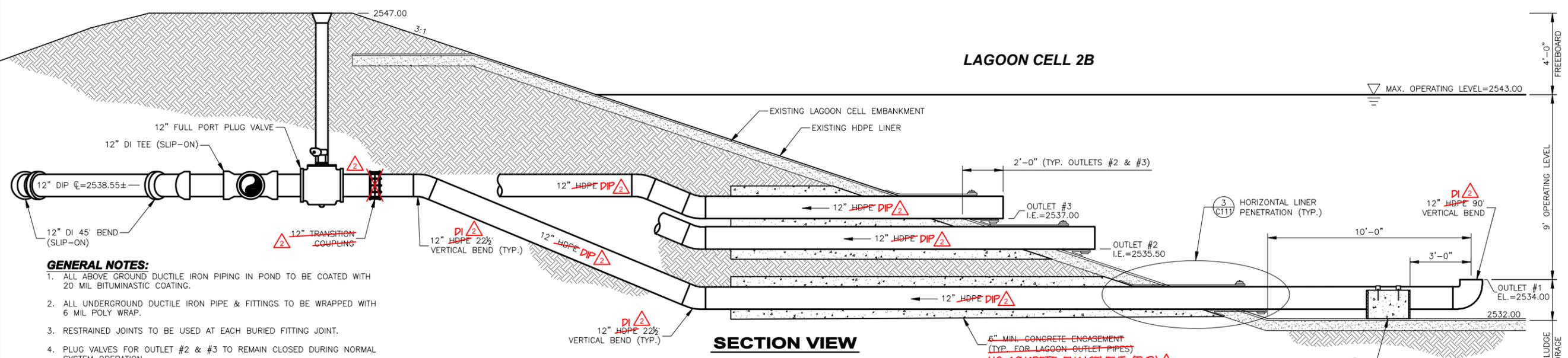
C96

103 OF 192

J:\1-16137-Thompson Falls Wastewater PER\CADD 1-16137 Design\Sheets\1-16137-114-LAGOON EFFLUENT 2.dwg



PLAN VIEW



SECTION VIEW

- GENERAL NOTES:**
1. ALL ABOVE GROUND DUCTILE IRON PIPING IN POND TO BE COATED WITH 20 MIL BITUMINASTIC COATING.
 2. ALL UNDERGROUND DUCTILE IRON PIPE & FITTINGS TO BE WRAPPED WITH 6 MIL POLY WRAP.
 3. RESTRAINED JOINTS TO BE USED AT EACH BURIED FITTING JOINT.
 4. PLUG VALVES FOR OUTLET #2 & #3 TO REMAIN CLOSED DURING NORMAL SYSTEM OPERATION.
 5. OUTLETS #2 & #3 NOT ENTIRELY SHOWN IN PROFILE VIEW FOR CLARITY.

LAGOON CELL 2B EFFLUENT LINE & MULTI-LEVEL TAKEOFF
 SCALE: 3/16" = 1'-0"

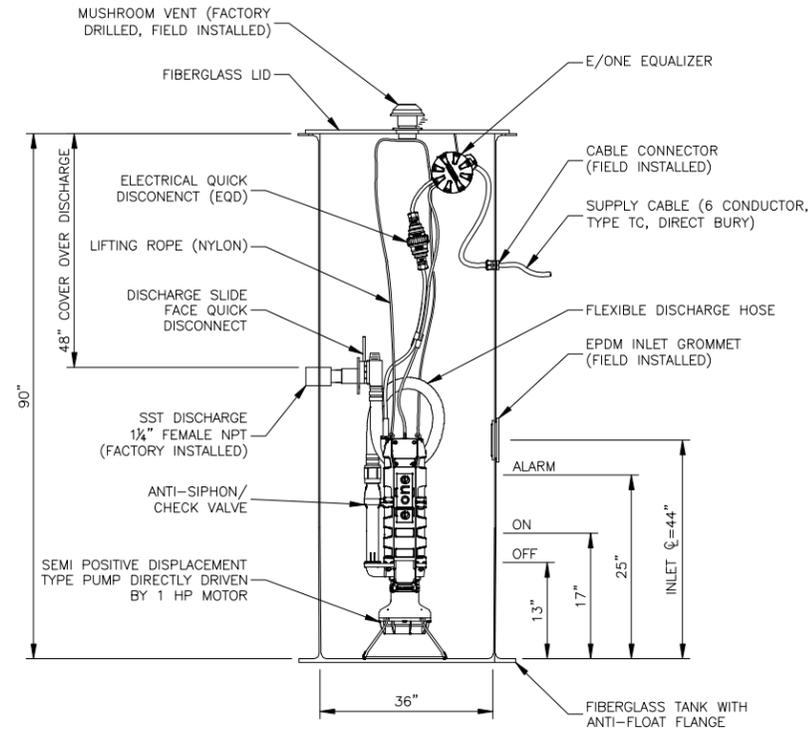
NO.	REVISION DESCRIPTION	BY	DATE
2	ADDENDUM NO. 2	LMW	11-5-20

PROJECT:	1-16137
DESIGNED:	CAG, SKH
DRAWN:	LMW
CHECKED:	CRP, AMD
APPROVED:	CAG, SKH
DATE:	AUGUST 25, 2020



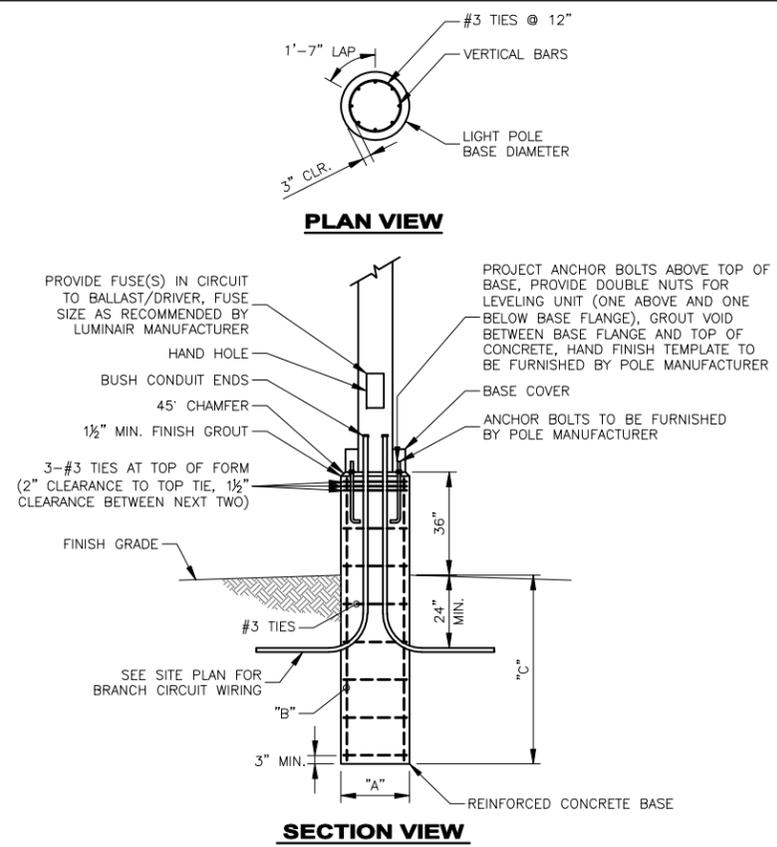
CITY OF THOMPSON FALLS, MONTANA
WASTEWATER SYSTEM IMPROVEMENTS
 LAGOON CELL 2B EFFLUENT LINE & MULTI-LEVEL TAKEOFF

SHEET NO.
C107
 114 OF 192



GENERAL NOTES:
 1. 4" DR35 PIPE INLET (4.22 OUTSIDE DIAMETER).
 2. STATION TO BE USED WITH ONE SENTRY SIMPLEX PANEL.

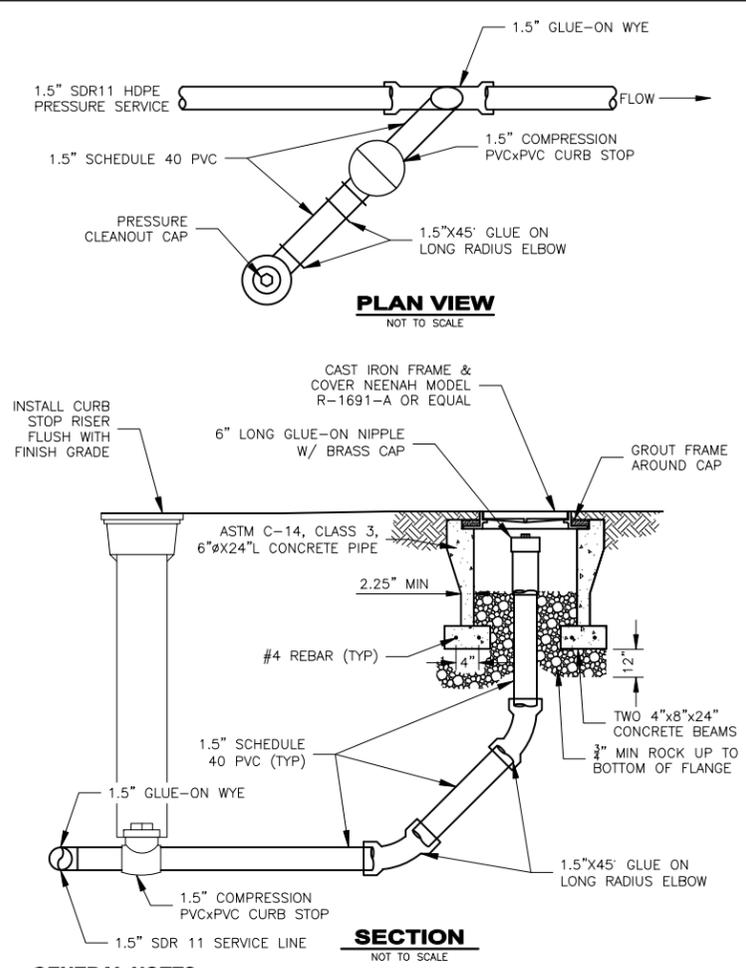
1 GRINDER PUMP STATION
 C115 NOT TO SCALE



GENERAL NOTES:
 1. DIMENSION "A" IS A MINIMUM OF 3" LARGER THAN LARGEST DIMENSION (DIAGONALLY) OF BASE COVER.
 2. RESTRAINED AT BASE: RIGID SURFACE SURROUNDS THE POLE AT THE GROUNDLINE.

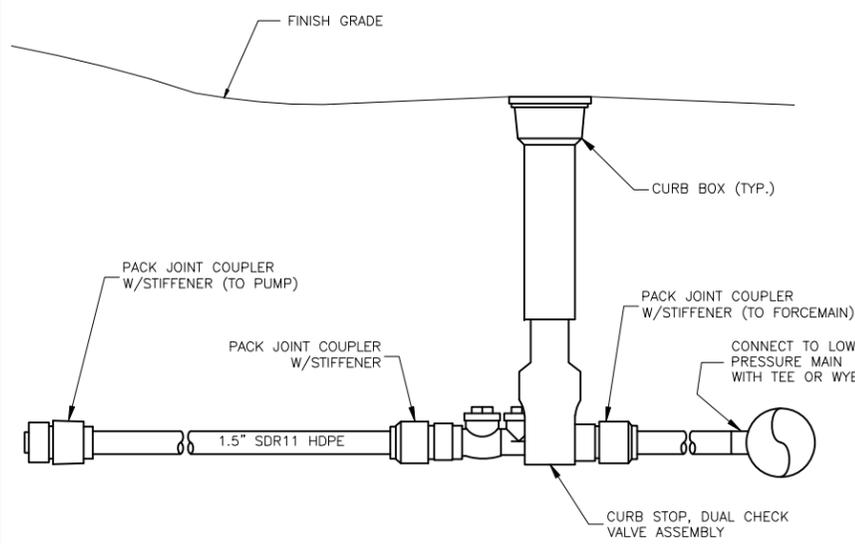
POLE HEIGHT	POLE BASE DIAMETER		VERTICAL BARS		DEPTH BELOW GRADE	
	"A"	"B"	"C"	"D"	RESTRAINED	UNRESTRAINED
20' OR LESS	20"	5-#5	4'-6"	6'-0"		
30'-21'	24"	6-#6	5'-6"	7'-0"		
40'-31'	30"	8-#6	6'-6"	9'-0"		

2 LIGHT POLE BASE
 C115 NOT TO SCALE

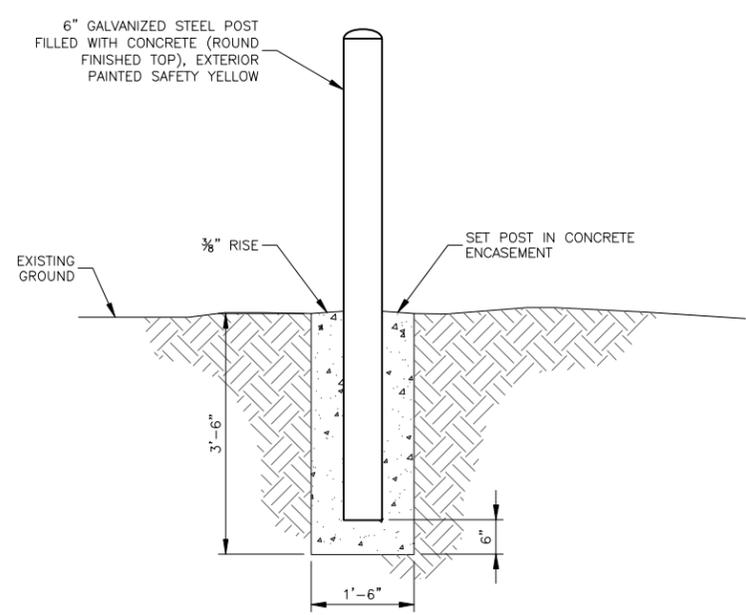


GENERAL NOTES:
 1. ALL PRESSURE SERVICE LINES/CLEANOUTS TO BE RATED FOR AT LEAST 200 PSI.
 2. PRESSURE CLEANOUTS MUST BE CAPABLE OF LAUNCHING A 2 LB/CU-FT POLYFOAM PIG FOR SCOURING THE PIPELINES.

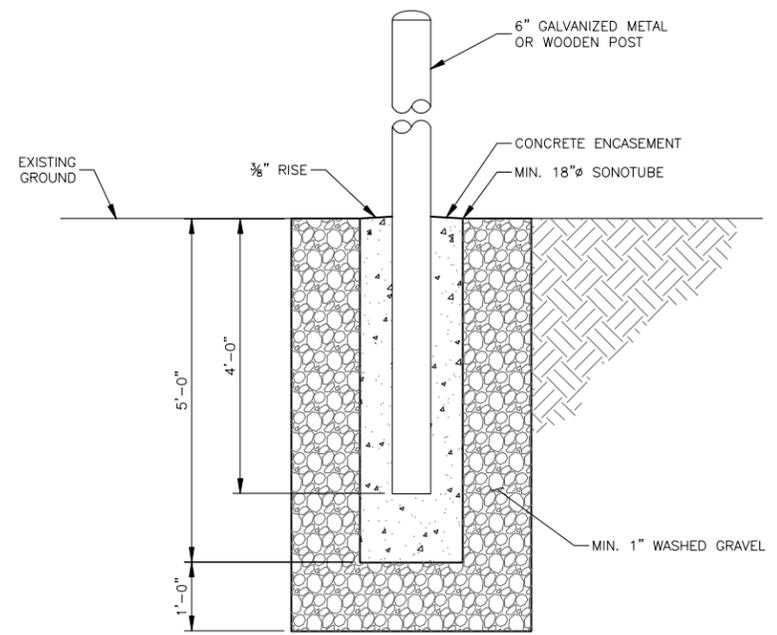
3 1.5" PRESSURE CLEANOUT
 C115 NOT TO SCALE



4 GRINDER PUMP SERVICE CURB STOP & CONNECTION TO LOW PRESSURE FORCEMAIN
 C115 NOT TO SCALE



5 PIPE BOLLARD
 C115 NOT TO SCALE



6 SIGN AND FENCE POST FOOTING
 C115 NOT TO SCALE

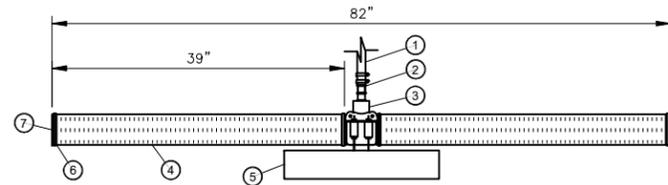
NO.	REVISION DESCRIPTION	BY	DATE
1	REVISED PER DEQ COMMENTS	LMW	9-24-20
2	ADDENDUM NO. 2	LMW	11-5-20

PROJECT: 1-16137
 DESIGNED: CAG, SKH
 DRAWN: LMW
 CHECKED: CRP, AMD
 APPROVED: CAG, SKH
 DATE: AUGUST 25, 2020

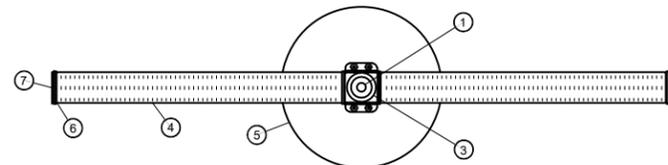
GreatWest engineering
 2601 BELT VIEW DRIVE
 HELENA, MT 59601
 (406) 448-8627

CITY OF THOMPSON FALLS, MONTANA
WASTEWATER SYSTEM IMPROVEMENTS
 CIVIL STANDARD DETAILS

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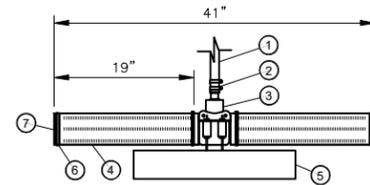


FRONT VIEW

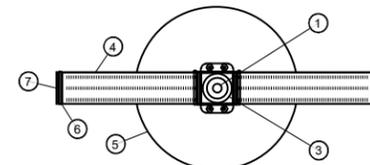


TOP VIEW

HIGH-RATE DIFFUSER
(PROVIDED BY TREATMENT EQUIPMENT SUPPLIER)

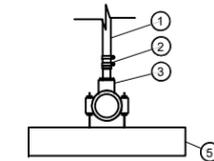


FRONT VIEW



TOP VIEW

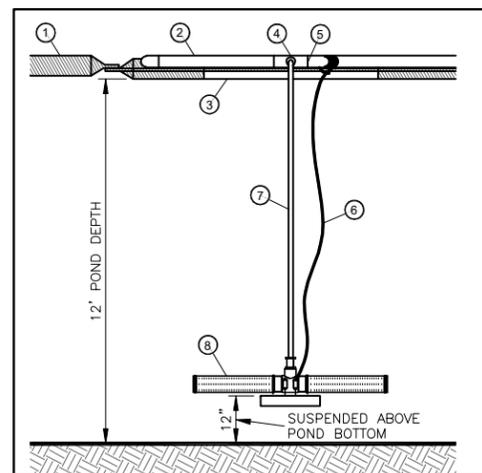
LOW-RATE DIFFUSER
(PROVIDED BY TREATMENT EQUIPMENT SUPPLIER)



SIDE VIEW

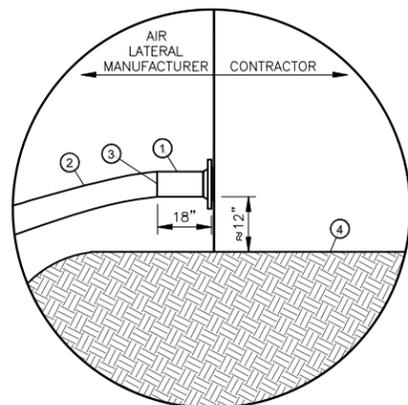
- DIFFUSER LEGEND:**
1. 1/4" EPDM AIR INLET HOSE.
 2. 2- 316 SST HOSE CLAMPS.
 3. ORIFICE ASSEMBLY.
 4. FINE BUBBLE MEMBRANE.
 5. CONCRETE BALLAST.
 6. 316 SST EARLESS HOSE CLAMP (TYP.).
 7. 3" TUBING W/ BUSHING STOP.

1 **DIFFUSER ASSEMBLY DETAILS**
P11 NOT TO SCALE



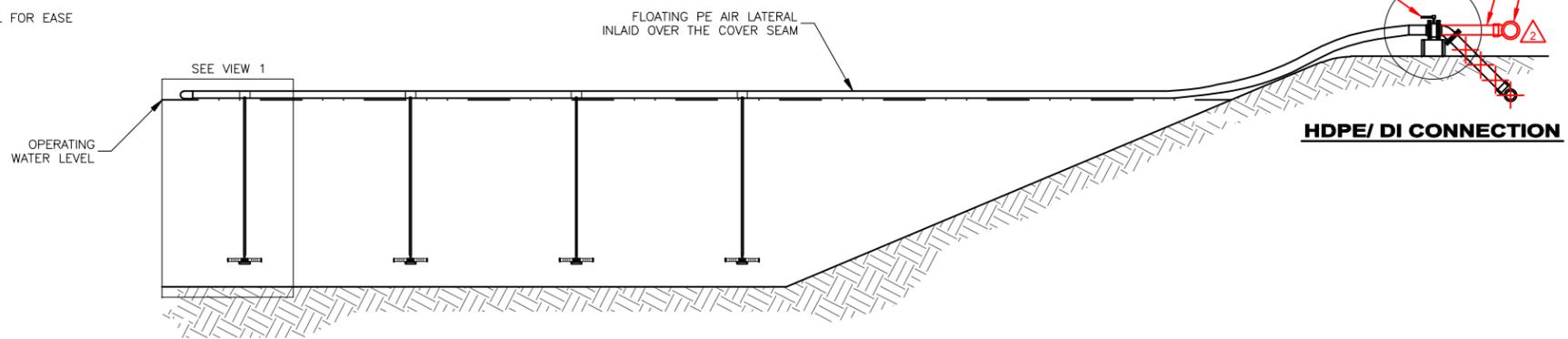
VIEW 1

- AIR LATERAL DIFFUSER ASSEMBLY LEGEND:**
1. LAGOON COVER.
 2. 4" PE AIR LATERAL (SET ALONG COVER SEAM).
 3. DIFFUSER HATCH (INDICATES LOCATION OF DIFFUSERS).
 4. SINGLE OUTLET TEE CONNECTION (4"x1 1/4").
 5. BUTT FUSION WELD.
 6. RETRIEVAL ROPE (WRAPPED AROUND LATERAL FOR EASE OF RETRIEVAL).
 7. 1/4" EPDM HOSE.
 8. SUSPENDED DIFFUSER.

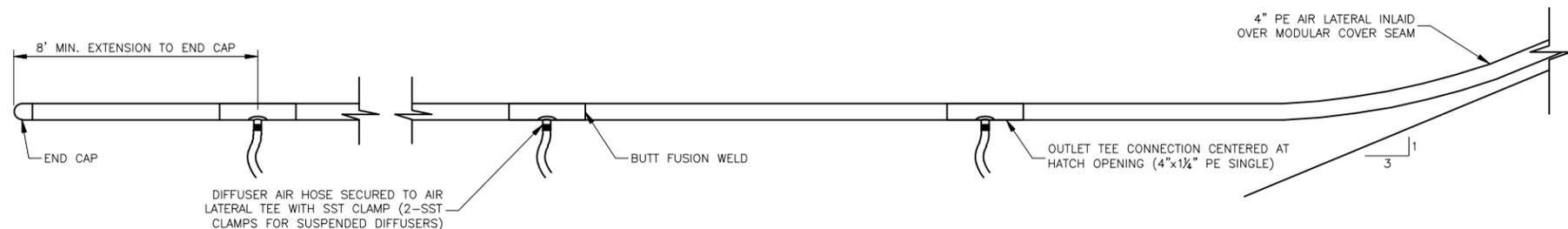


VIEW 2

- AIR LATERAL LEGEND:**
1. PE/DI PIPE ADAPTER.
 2. PE PIPE.
 3. BUTT FUSION WELD.
 4. TOP OF BERM.



SUSPENDED DIFFUSERS (TYP.)
MODULAR COVER NOT SHOWN FOR CLARITY



AIR LATERAL

2 **DIFFUSER INSTALLATION DETAILS**
P11 NOT TO SCALE

- GENERAL NOTES:**
1. LAGOON TREATMENT EQUIPMENT, INSTALLATION INSTRUCTIONS AND DETAILS, INCLUDING THE POLISHING REACTOR MUST BE VERIFIED BY THE MANUFACTURER'S DESIGN SUBMITTAL TO THE CITY AND ENGINEER.

NO.	REVISION DESCRIPTION	BY	DATE
2	ADDENDUM NO. 2	LMW	11-5-20

PROJECT:	1-16137
DESIGNED:	CAG, SKH
DRAWN:	LMW
CHECKED:	CRP, AMD
APPROVED:	CAG, SKH
DATE:	AUGUST 25, 2020



CITY OF THOMPSON FALLS, MONTANA
WASTEWATER SYSTEM IMPROVEMENTS
AIR DIFFUSER ASSEMBLY & INSTALLATION DETAILS

J:\1-16137-Thompson Falls Wastewater PER\CADD 1-16137 Design\Sheets\1-16137-153-AIR DIFFUSER DETAILS.dwg

**PLANHOLDERS LIST
CITY OF THOMPSON FALLS
WASTEWATER SYSTEM IMPROVEMENTS
NOVEMBER 17, 2020**

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Thompson Falls, MT 59873

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bbx@billingsplanroom.com

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mpe@vemcoinc.com

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Fax: 406-457-0226
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Phone: 406-755-5888
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planex@kalcop.com

Spokane Regional Plan Center
209 North Havana
Spokane WA 99202
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Fax: 509-328-7279
projectinfo@plancenter.net

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**PLANHOLDERS LIST
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WASTEWATER SYSTEM IMPROVEMENTS
NOVEMBER 17, 2020**

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**PLANHOLDERS LIST
CITY OF THOMPSON FALLS
WASTEWATER SYSTEM IMPROVEMENTS
NOVEMBER 17, 2020**

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**PLANHOLDERS LIST
CITY OF THOMPSON FALLS
WASTEWATER SYSTEM IMPROVEMENTS
NOVEMBER 17, 2020**

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Dick Anderson Construction

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