Anderson~Montgomery
CONSULTING ENGINEERS

ADDENDUM NO. 3

Project: City of Whitefish Wastewater Treatment Plant Improvements Project - 2019

Owner: City of Whitefish

418 E. 2nd Street,
Whitefish, MT 59937-0158

Engineer: Anderson-Montgomery Consulting Engineers

1064 N. Warren
Helena, MT 59601

Date of Addendum: October **23**, 2019
Bid Opening Date: November **19**, 2109 at 2:00 p.m. **(per Addendum #3)**

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

TECHNICAL SPECIFICATIONS:

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

1. **Division 0, Section 00 11 16, Page 1:**

   Separate sealed bids for construction of the Whitefish Wastewater Treatment Plant Improvements Project 2019 will be received by the City of Whitefish, Attn: Craig Workman, P.E., Director of Public Works, 418 E. 2nd Street, Whitefish, MT 59937-0158 until 2:00 p.m. local time on Tuesday, ~~October 29~~ ~~November 5~~ **November 19**, 2019, and then publicly opened and read aloud.

   Contractors are cautioned that this bid date will not be extended further.

2. **Division 0, Section 00 45 13 – Bidder Qualifications Form C-451**

   Foundation Stabilization Subcontractor is hereby added to the list. Contractors shall write in the name of their Foundation Stabilization specialty subcontractor below "OTHERS (PLEASE SPECIFY)".

3. **Division 0, Section 00 95 10 – Special Provisions 26 and 49**

   SP26 – Plan of Operation: item l: De-commissioning of the existing flocculating clarifier and Cells ~~#2 and #3~~ **#1 and #2**

   SP49 – Plant Decommissioning: Upon completion and successful startup of the new treatment facilities it will be necessary for the contractor to remove the remaining wastewater effluent in Treatment Cells ~~2 & 3~~ **1 & 2** by pumping……..

4. **Division 8, Section 08 33 36 – Overhead Coiling Service Door**

2.02 – Wayne Dalton Model 800ADV is an acceptable alternate to the door specified. All other provisions of this specification are in full effect.

5. Division 9, Section 09 90 02 – High-Performance Painting & Coating

3.07.C – System No. 1: Sherwin-Williams (SW) Hi-Solids Polyurethane, 3-5 mils DFT also acceptable as topcoat

3.07.C – System No. 1: SW product for primer coat shall be Macropoxy ~~646~~ **5500**

3.07.C – System No. 1: SW product for topcoat shall be ~~Macropoxy 646~~ **Acrolon Ultra**

3.07.K – System No. 9: Tnemec product for primer and topcoat shall be Series ~~6~~ **1026**

3.07.M – System No. 11: SW product for primer coat shall be ~~Core-Cote FRE~~ **Dura-Plate 2300 Water Based Epoxy Resurfacer, 60-120 DFT**

3.07M – System No. 11: SW product for topcoat shall be ~~Core-Cote SC~~ **SW Dura-Plate 6000 Reinforced Epoxy, 60-80 DFT**.

3.07.O – System No. 13: SW product for primer coat shall be ~~Corobond 300 resurfacer~~ **Dura-Plate 2300 Water Based Epoxy Resurfacer**

3.07.O – System No. 13: General Polymers 3741 Novo-Flo Epoxy is acceptable as topcoat.

6. Division 31, Section 31 66 00 – Special Foundations

3.01 SITE VISIT

A. Site visits are necessary in order to be aware of conditions at the work site.

1. Pre Bid Site Visit: Prior to submitting a bid price for the rigid inclusion program, the RI Contractor shall visit the site ~~during the project prebid meeting~~ to identify readily visible conditions in order to account for them in the bid.

7. Division 32 – Section 32 32 16 – Redi-Rock Retaining Wall

2.01.M Preapproved Manufacturers. *Add the following:*

2. Manufacturers of ReCon Precast Modular Block Retaining Wall units: ReCon Wall Systems, Inc. 7600 West 27th St. St. Louis Park, MN 55426.

8. Division 40, Section 40 27 00 – Process Piping

2.06.A – All high density polyethylene pipe shall be DR ~~11~~ **17** unless specified otherwise, conforming to ANSI D-2239

2.06.B – All HDPE pipe to have standard ~~ductile~~ iron pipe size ~~(DIPS)~~ **IPS** dimensions.

9. **Division 46, Section 46 66 56 – UV Disinfection System, Section 1.04 - Page 1:**

   Trojan has been pre-approved to supply its TrojanUVSigna® disinfection equipment as an alternate under Section 46 66 56. All pre-qualification measures have been satisfied and all other portions of this specification remain in full effect.

PROJECT DRAWINGS:

1. **Sheet C1-1**

   The 3" HDPE NPW pipe shall be encased in flowable fill where installed within 10' horizontal of the existing potable water pipe. Revised Sheet C1-1 is attached.

2. **Sheet C6-3:**

   The 21" SDR26 PVC TDW pipe identified is herein changed to 21" PS115 PVC. Revised Sheet C6-3 is attached.

3. **Sheet C6-4:**

   The 21" SDR26 PVC TDW pipe identified is herein changed to 21" PS115 PVC. Also, the 14" HDPE is DR 17. Revised Sheet C6-4 is attached.

4. **Sheet C7-12 and C7-15 *Clarification:***

   Sheet C7-12 indicates the supernatant pipe and VFA pipe are ductile iron whereas Sheet C7-15 indicates these pipes are SDR26 PVC. Both of these pipes are SDR26 PVC that will transition to ductile iron outside of the Biosolids Basin penetration (see Detail 1 on Sheet C7-3) and 2' outside of the Biosolids Basin Level Control Structure (similar to Section B on Sheet M7-4, see notes 6 and 7).

5. **Sheet A7-0**

   Overhead door 203e identified in the Door Schedule for Grit Building is hereby eliminated.

6. **Sheet A8-1**

   Details 1, 2, 3 and 4: Change all images of the wall-mounted toilets **to floor-mounted** toilets. Floor-mounted toilets comport with the mechanical drawings.

   Room Finish Schedule: All bases, ceilings and walls in the: Electrical; U/V; Blower; Pump; Grit Wash and Grit Building Work Area shall be sealed concrete in accordance with Specification Section 09 90 00 – 2.07 and 2.08.

   A revised Sheet A8-1 is attached.

7. **Sheet S2-2**

   The Foundation Plan Notes are revised as per SKS-5 attached.

8. **Sheet S3-15 – Detail 5: 20" HDPE Pipe Support:**

This detail is replaced by that shown on attached Sheet SKS-3 – Pipe Support

9. Sheet S4-2

The Foundation Plan Notes are revised as per SKS-6 attached.

10. Sheet S4-6 – Roof Drains and HVAC Openings in MPB Roof Framing Plan:

The roof drain penetrations and HVAC openings immediately east of Section "D" are modified according to attached Sheet SKS-2 – Revisions to Main Process Building Roof Framing Plan

11. Sheet S4-12 – Detail 2:

This detail is replace by that shown on attached Sheet SKS4 – Typical Grade Beam to Rigid Inclusion Connection

12. Sheet S5-2 – Detail 1

Detail 1 on Sheet S5-2 is revised as per SKS-7 attached.

13. Sheet S6-1 – Detail 1

Detail 1 on Sheet S6-1 is revised as per SKS-8 attached.

14. Sheet S9-4 – Detail 3: New Opening in Basement Wall of Adm. Bldg.

The new opening into the crawlspace under the new conference room (currently occupied by the two alum tanks) will be relocated from the south wall to the north end of the west wall. Attached Sheet SKS-1 defines the new location for the crawl space access.

15. Sheet M3-1 – Reactor Basins Mechanical Plan:

Corrections and updates have been made to this sheet: reactor basin numbering; and Drain Sump callouts. The revised Sheet M3-1 is attached.

16. Sheet M3-2 – Reactor Basin Sections:

~~20"~~ HDPE PIPE SUPPORT 5 / S3-15
(TYP OF 8)

17. Sheet M3-7 – Section B:

- The 8" PVC Influent Header vent is mis-identified as 4".
- The 6" HDPE Influent Lateral is herein changed to 6" PVC.

18. Sheet M3-8 – Section C:

- The 8" PVC Influent Header vent is mis-identified as 4".
- The 6" HDPE Influent Lateral is herein changed to 6" PVC.

19. Sheet M3-16 – Detail 4 – Aeration Header Connection

The 8" Sch. 10 SS 90° Bend (Welded – FL) is shown in black. It should be shown in blue as these are supplied by AASI in their equipment package.

20. Sheet M5-5 – Section A

The Disconnect/Junction Box (Typ. Of 3) called out for the SBB's and WLC Basin are identified in Detail 1, Sheet M3-35

21. Sheet E0-5

See revisions made to Detail 3 - Main Lift Station PLC Control One-Line Diagram. Revised Sheet E0-5 attached.

22. Sheet E0-11

See revisions made to Electrical Site Plan. Revised Sheet E0-11 attached. Note the utility provider (not the Contractor) will be responsible for relocating all high-voltage line to the existing transformer south of the existing clarifier.

GENERAL INFORMATION, CLARIFICATIONS and BIDDER QUESTIONS:

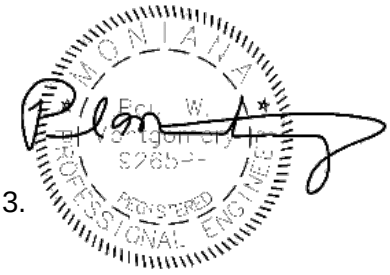
- The area west of the treatment facility can be utilized as a laydown yard provided it is reasonably well maintained, secured from the public and properly restored after the project is complete. See attached figure AD3-1.
- Some onsite materials may be available to the contractor as imported embankment for construction of the Biosolids Basin dike as well as the westerly access road. Suitability of this material has not been established. See attached figure AD3-1 for what onsite materials the Contractor may utilize if suitable for embankment.
- To provide some insight into groundwater characteristics within the footprint of the new reactor basins, the bottom of excavation for the old clarifier (directly north of the existing Administration Building was surveyed. The elevation was determined to be **3017.06**.
- **Sheet M3-31 – Detail 1:** It is important to emphasize that the Filtrax Control Units are supplied by AASI but the NEMA 4X heated enclosures are supplied by the Contractor. This is pointed out on Sheet M3-31 but not on Electrical Drawing Sheet E3-2.
- Geopier Northwest (800 W. Main Street, Boise, ID 83702 – 208-559-1578) has been pre-approved as a Pier Installation Company under Section 31 66 00-1.05 of the project specifications.
- Malcolm Drilling (791 S. Gladiola Street, Salt Lake City, UT 84104 – 801-972-1126) has been pre-approved as a Pier Installation Company under Section 31 66 00-1.05 of the project specifications.
- The City's hydraulic model suggests that the fire hydrant at the wastewater plant will flow between 850 and 900 gpm, depending upon demand within the City. Contractors are advised to test the hydrant if more precise flow is needed.
- Air hose reels called out on Sheets M2-27 and M4-27 shall be the Reelcraft®Model 7850 OLP with 50' of ½" hose and hose stop, or approved equal.
- 480V power conductors for valve actuators will be allowed in the cable trays provided all

are adequately shielded. 480V feeders and motor loads must be placed in conduit.

- Fire extinguishers in accordance with Specification Section 10 44 16 shall be provided and located as follows:
    - Grit Building: Wash Room (1); Work Room (1)
    - Main Process Building: Pump Room (1); Blower Room (1); UV (1); Electrical Room (1)
    - Administration Building: Control Room (1); Lab (1); Work Room (1); Kitchen (1)
- Duo-Gard Translucent Wall Systems Series 3500 are approved substitutions under Specification Section 08 45 00 – 2.01
- Rigid Inclusion Contractor (Malcolm Drilling, Inc.) Questions and Engineer's Responses dated 10/22/19 are attached.

ATTACHMENTS:

- Sheet C1-1 - Revised
- Sheet C6-3 - Revised
- Sheet C6-4 – Revised
- Sheet A8-1 - Revised
- SKS-3 – Sheet S3-15 Detail 5 – Pipe Support
- SKS-2 – Sheet S4-6 – Roof Drain and HVAC
- SKS-1 - Revision to Admin. Bldg. Foundation Plan and Detail 3.
- SKS-4 – Revision to Sheet S4-12
- SKS-5 – Revision to Sheet S2-2
- SKS-6 – Revision to Sheet S4-2
- SKS-7 – Revision to Sheet S5-2
- SKS-8 – Revision to Sheet S6-1
- Sheet M3-1 – Revision to Reactor Basin Mechanical Plan
- Sheet E0-5 – Revised
- Sheet E0-11 - Revised
- Figure AD3-1 – Potential onsite borrow materials and laydown yard.
- Malcolm Questions and Engineer's Responses



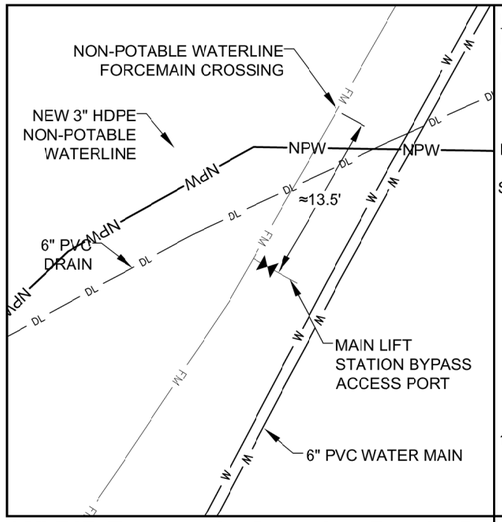
M3-1 contains proprietary information -not included in website version of Addendum #3.

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

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

Office: (406)-449-3303, Fax (406)-449-3304
Paul@a-mce.com

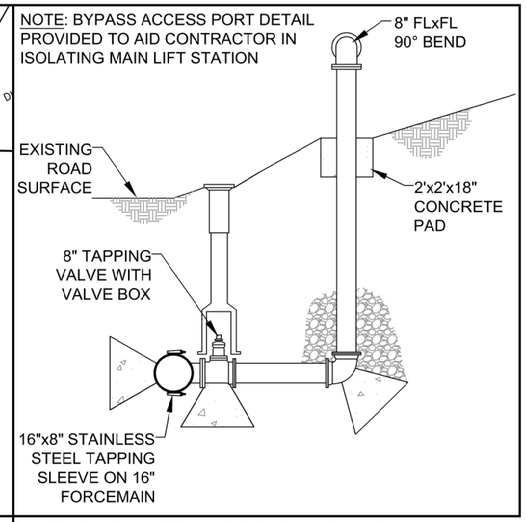
END OF ADDENDUM NO. 3



16" DIP Forcemain Crossing Detail

1 C1-1

NO SCALE



Existing Main Lift Station Bypass Access Port

NO SCALE

NOTES :

1. FORCEMAIN DEPTH MUST BE VERIFIED - MEASURE DOWN VALVE BOX TO DETERMINE DEPTH
2. NON-POTABLE WATER FORCEMAIN CROSSING IS APPROXIMATELY 13.5' FROM FORCEMAIN BYPASS STAND PIPE.
3. FORCEMAIN BYPASS DETAIL INCLUDED FOR REFERENCE ONLY - DETAIL IS FROM THE 2007 CLARIFIER PROJECT

Main Lift Station Screening Site Plan

SCALE 15 7.5 0 15 30 Feet

VERIFY SCALES

BAR SCALE IS ONE INCH ON FULL SIZE DRAWING.

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

Revision	Date	By
Draft	8-9-19	SA
Draft	9-5-19	SA
Final	9-27-19	SA
Add. #3	10-22-19	SA

Revision: Addendum #3
Plot Scale: 1:2
Drawn By: A.Eckhart, P.E.
Drawn By: G.Lesofski
Drawn By: A.Wargo, P.E.
Approved By: S.Anderson, P.E.
Checked By: P.Montgomery, P.E.
Checked By: B.Koenig, P.E.
Designed By: S.Anderson, P.E.

Engineer
Anderson~Montgomery CONSULTING ENGINEERS
1064 N. Warren
Helena, Mt 59601

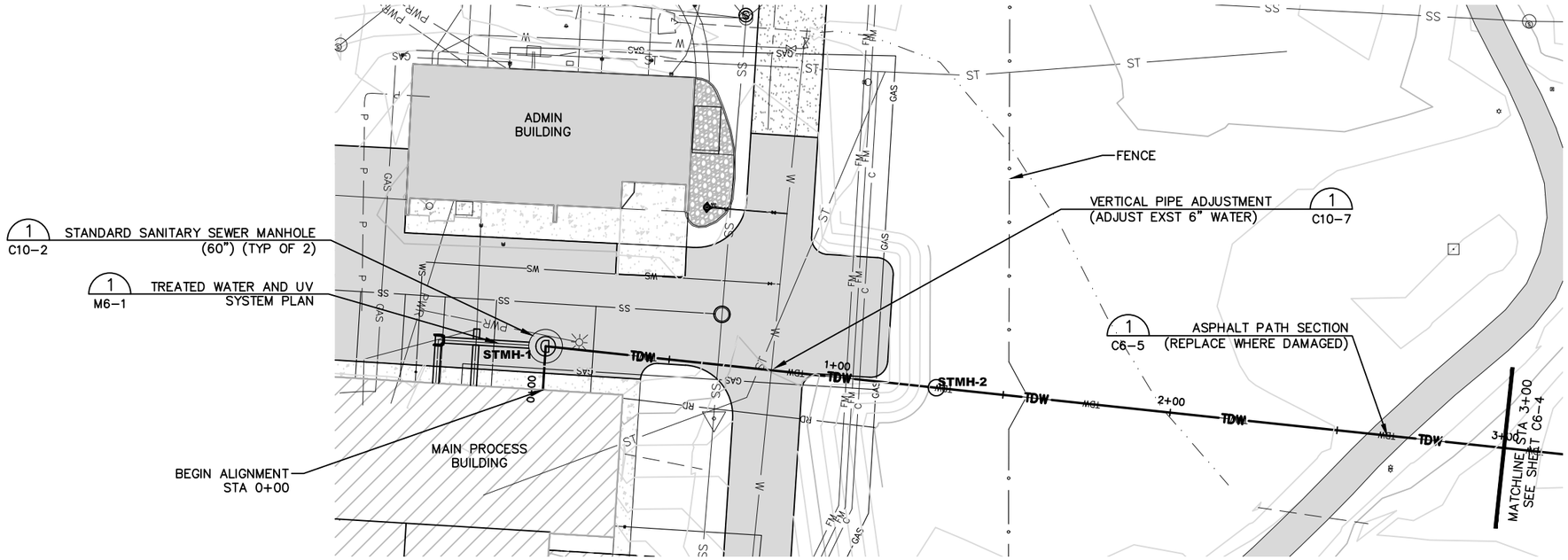
CONFIDENTIAL SUBJECT TO NON DISCLOSURE AGREEMENT

Owner: City of Whitefish, Montana

Project Title: Whitefish WWTP Improvements Project

Sheet Title: **Main Lift Station Screening Site Plan**

Sheet: **C1-1**

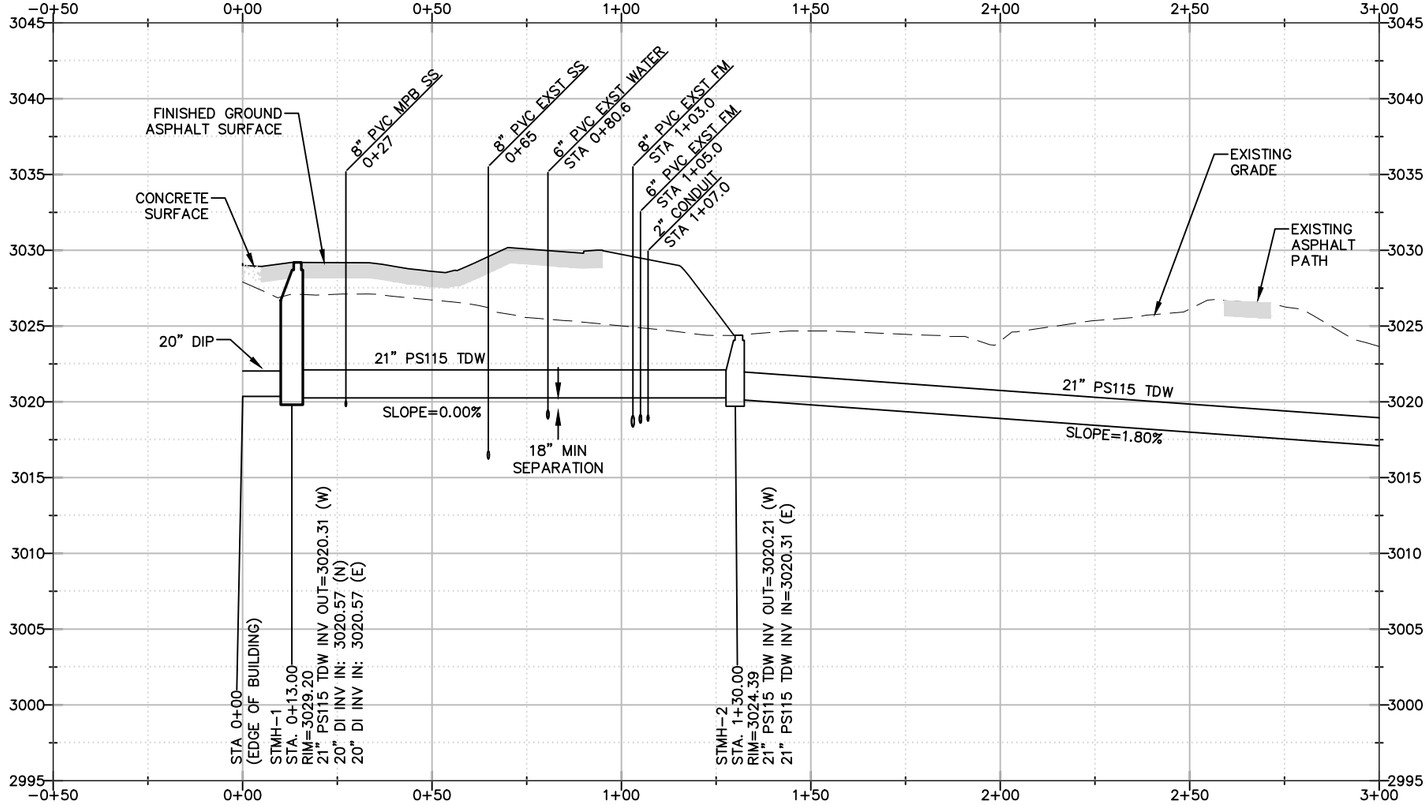


CONSTRUCTION NOTE:

1. PORTIONS OF AN ABANDONED TREATED WATER OUTFALL MAY BE ENCOUNTERED ALONG THE NEW ALIGNMENT. REMOVE AND DISPOSE OF WITHIN 6 FEET OF NEW TREATED WATER PIPING WHERE ENCOUNTERED.

TREATED WATER OUTFALL PLAN AND PROFILE

1 C-11, C4-1, M4-1, M6-1



HORIZONTAL
20 0 20 40
(SCALE IN FEET)

VERTICAL
5 0 5 10
(SCALE IN FEET)

VERIFY SCALES
BAR SCALE IS ONE INCH ON FULL SIZE DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

Scott Anderson 7978PE
REGISTERED PROFESSIONAL ENGINEER
STATE OF MONTANA

Revision	Date	By
Draft	8-9-19	SA
Draft	9-5-19	SA
Final	9-27-19	SA
Add #2	10-10-19	SA
Add #3	10-16-19	SA

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Plot Scale: 1:2
Drawn By: A.Eckhart, P.E.
Drawn By: G.Lesofski
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Approved By: S.Anderson, P.E.
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Checked By: B.Koenig, P.E.
Designed By: S.Anderson, P.E.

Engineer
Anderson~Montgomery CONSULTING ENGINEERS
1064 N. Warren
Helena, Mt 59601
RPA

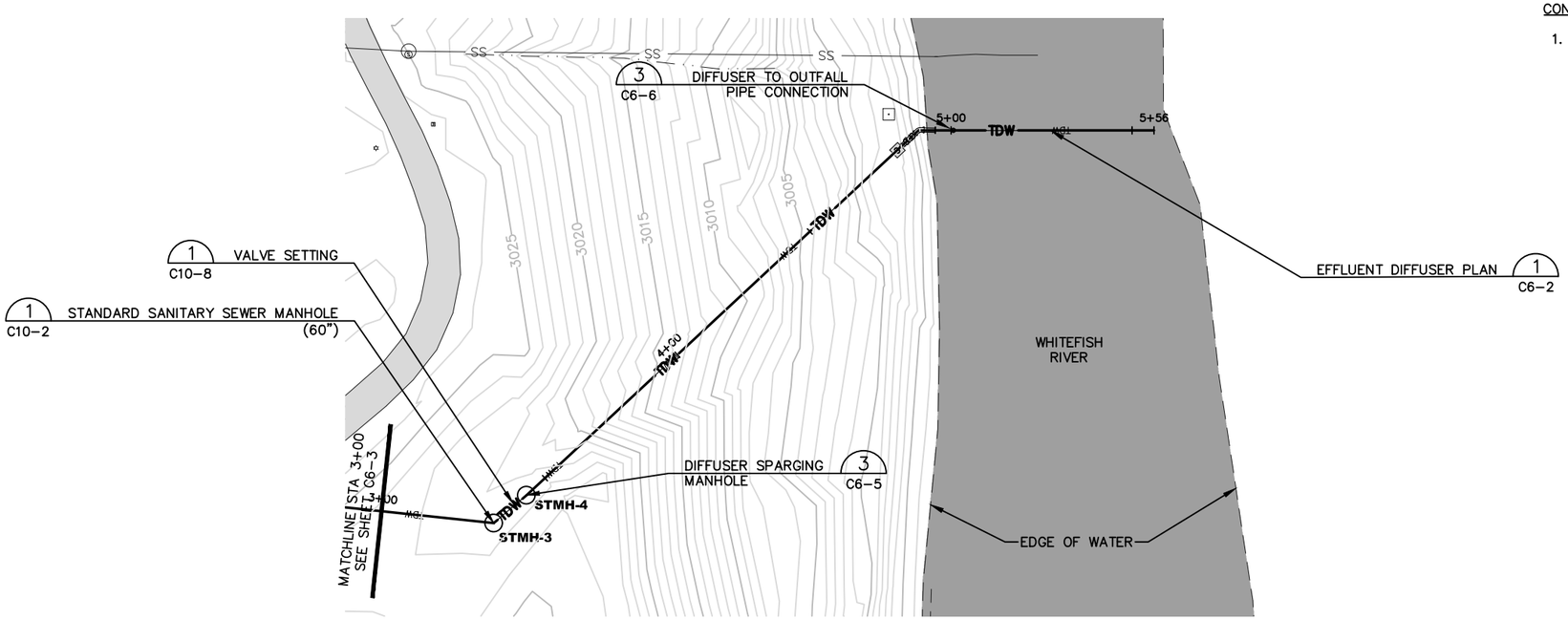
CONFIDENTIAL SUBJECT TO NON DISCLOSURE AGREEMENT

Owner: City of Whitefish, Montana

Project Title: Whitefish WWTP Improvements Project

Sheet Title: **Treated Water Outfall Plan And Profile**

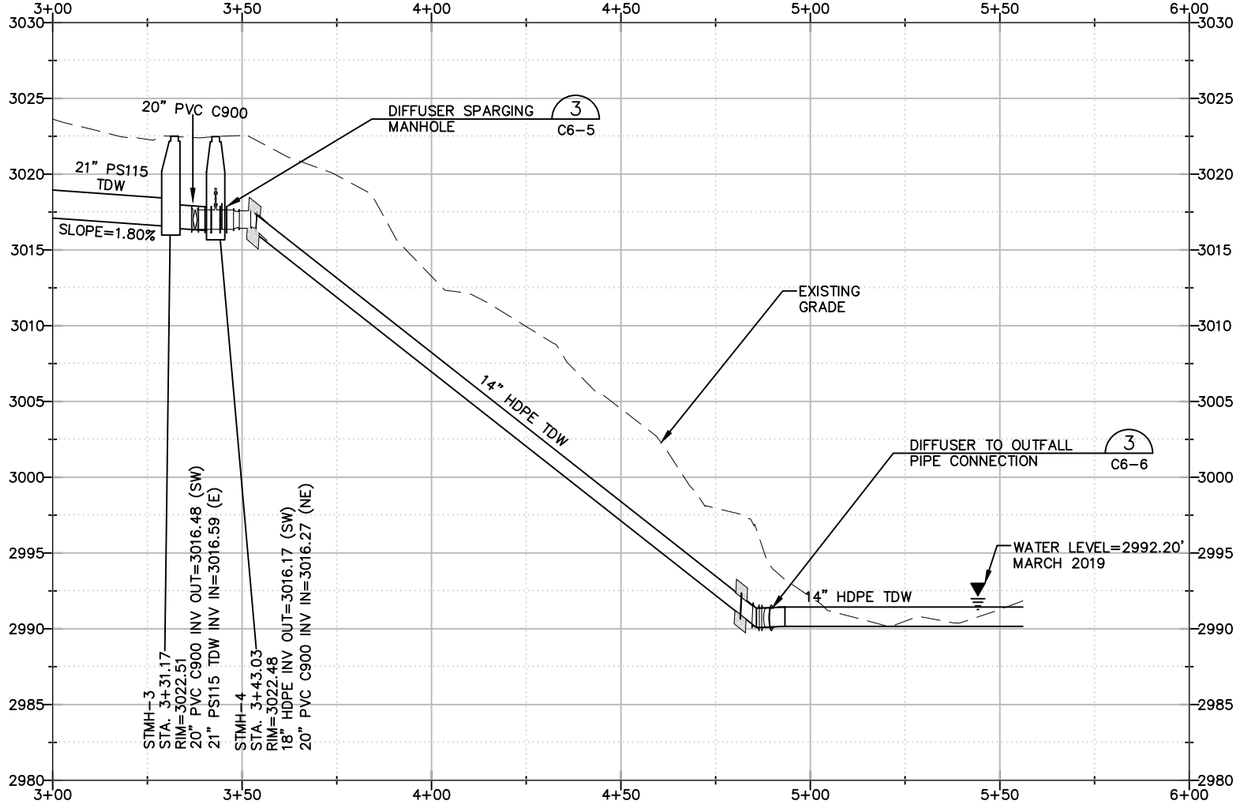
Sheet: **C6-3**



TREATED WATER OUTFALL PLAN AND PROFILE

1
C-11, M4-1, M6-1

SCALE: 1"=20'-0"



CONSTRUCTION NOTE:

1. PORTIONS OF AN ABANDONED TREATED WATER OUTFALL MAY BE ENCOUNTERED ALONG THE NEW ALIGNMENT. REMOVE AND DISPOSE OF WITHIN 6 FEET OF NEW TREATED WATER PIPING WHERE ENCOUNTERED.

N

HORIZONTAL
20 0 20 40
(SCALE IN FEET)

VERTICAL
5 0 5 10
(SCALE IN FEET)

VERIFY SCALES
BAR SCALE IS ONE INCH ON FULL SIZE DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

MONTANA
Scott Anderson
7978PE
REGISTERED PROFESSIONAL ENGINEER

Revision	Date	By
Draft	8-9-19	SA
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Engineer
Anderson~Montgomery
CONSULTING ENGINEERS
1064 N. Warren
Helena, Mt 59601
RPA

CONFIDENTIAL
SUBJECT TO NON
DISCLOSURE
AGREEMENT

Owner
City of Whitefish, Montana

Project Title
Whitefish WWTP Improvements Project

Sheet Title
Treated Water Outfall Plan And Profile

Sheet
C6-4

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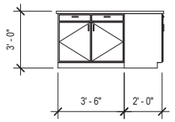
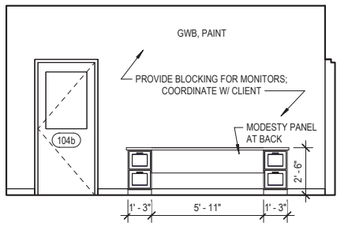
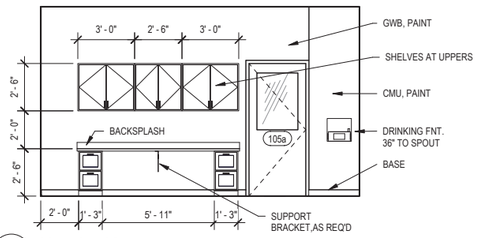


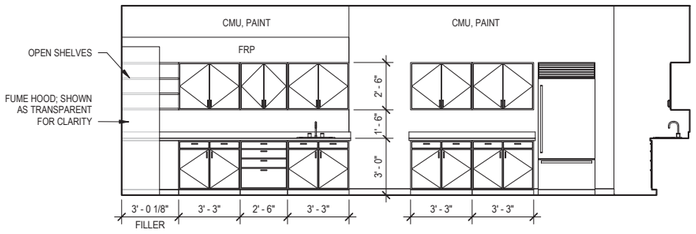
13 A8-1 **LAB ISLAND**
1/4" = 1'-0"



12 A8-1 **CONTROL ROOM 104 - W**
1/4" = 1'-0"



11 A8-1 **CONTROL ROOM 104 - E**
1/4" = 1'-0"



10 A8-1 **LAB 107 - S**
1/4" = 1'-0"

ROOM FINISH SCHEDULE

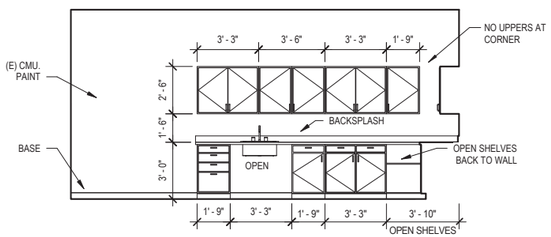
Room #	Room Name	Floor Finish	Base Finish	Ceiling Finish	Wall Finishes				Comments
					North Wall	East Wall	South Wall	West Wall	
ADMIN._BLDG									
101	GARAGE	-	-	-	-	-	-	-	NO FINISH WORK (EXCEPT PAINT DOORS PNT-3)
102	WORK ROOM	EPOXY	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-1	PATCH WALLS AND CEILING AS REQ'D
103	OFFICE	RESILIENT FLOORING	RB-1	PNT-1	PNT-1	PNT-1	PNT-2	PNT-1	FLOOR PREP FOR NEW FLOORING; PNT-2 APPLIED TO EXT FACE OF OFFICE WALLS
104	CONTROL ROOM	RESILIENT FLOORING	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2	FLOOR PREP FOR NEW FLOORING
105	CONFERENCE ROOM	CPT	RB-1	PNT-1	PNT-1	PNT-2	PNT-1	PNT-1	
106	KITCHEN	RESILIENT FLOORING	RB-1	PNT-1	PNT-2 / FRP	PNT-2 / FRP	PNT-2 / FRP	PNT-2 / FRP	
107	LAB	RESILIENT FLOORING	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-2 & FRP APPLIED OVER ALL RED/PINK GLAZED BLOCK; PAINT STAIRWELL PNT-1
108	TOILET	RESILIENT FLOORING	RB-1	PNT-1	PNT-2 / FRP	PNT-2 / FRP	PNT-2 / FRP	PNT-2 / FRP	PNT -2 & FRP APPLIED OVER ALL RED/PINK GLAZED BLOCK
SBR SLAB									
201	ELECTRICAL	SEALED CONC	-	SEALED CONC	SEALED CONC	SEALED CONC	SEALED CONC	SEALED CONC	
202	U/V	SEALED CONC	-	SEALED CONC	SEALED CONC	SEALED CONC	SEALED CONC	SEALED CONC	
203	BLOWER ROOM	SEALED CONC	-	SEALED CONC	SEALED CONC	SEALED CONC	SEALED CONC	SEALED CONC	
204	TOILET	SEALED CONC	RB-1	GWB @ 10'-0"	PNT-2 / FRP	PNT-2 / FRP	SEALED CONC / FRP	PNT-2 / FRP	PNT-2 & FRP APPLIED TO INT & EXT FACES OF TOILET RM WALLS
205	PUMP ROOM	SEALED CONC	-	SEALED CONC	SEALED CONC	SEALED CONC	SEALED CONC	SEALED CONC	
GRIT SLAB									
301	GRIT WASH	SEALED CONC	-	SEALED CONC	SEALED CONC	SEALED CONC	SEALED CONC	SEALED CONC	
302	WORK AREA	SEALED CONC	-	SEALED CONC	SEALED CONC	SEALED CONC	SEALED CONC	SEALED CONC	
303	TOILET	SEALED CONC	RB-1	GWB @ 10'-0"	PNT-2 / FRP	PNT-2 / FRP	SEALED CONC / FRP	PNT-2 / FRP	PNT-2 & FRP APPLIED TO INT & EXT FACES OF TOILET RM WALLS

ROOM FINISH NOTES

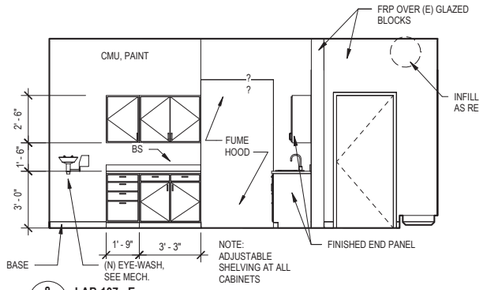
1. PROVIDE FINISHED END PANEL ON ALL EXPOSED CABINET FACES.
2. PROVIDE LEVEL 4 FINISH AT ALL NEW PAINTED DRYWALL LOCATIONS

ROOM FINISH LEGEND

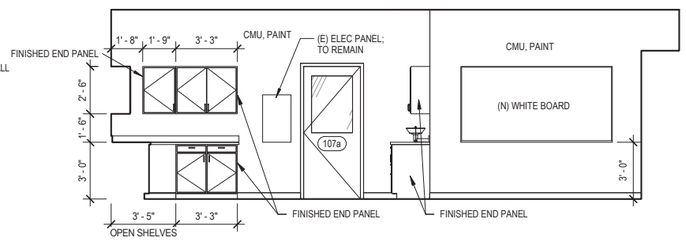
CONC	CONCRETE	
FRP	FIBER REINFORCED PANEL	
GWB	GYPSUM WALL BOARD	LEVEL 4 FINISH PAINTED
PNT-1	WHITE PAINT	SHERWIN-WILLIAMS XXXX
PNT-2	ACCENT PAINT	SHERWIN-WILLIAMS XXXX
PNT-3	DOOR FRAME PAINT	SHERWIN-WILLIAMS XXXX
RB-1	RUBBER BASE	



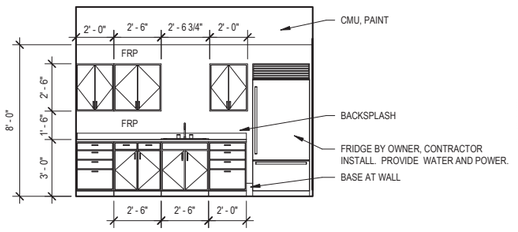
9 A8-1 **LAB 107 - W**
1/4" = 1'-0"



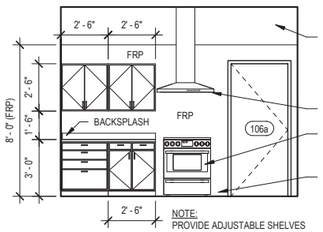
8 A8-1 **LAB 107 - E**
1/4" = 1'-0"



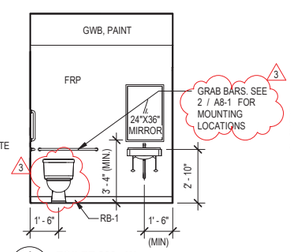
7 A8-1 **LAB 107 - N**
1/4" = 1'-0"



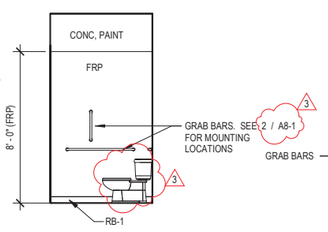
6 A8-1 **KITCHEN 106 - S**
1/4" = 1'-0"



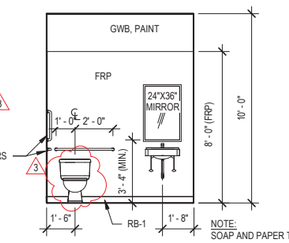
5 A8-1 **KITCHEN 106 - N**
1/4" = 1'-0"



4 A8-1 **TOILET 303 - W**
1/4" = 1'-0"

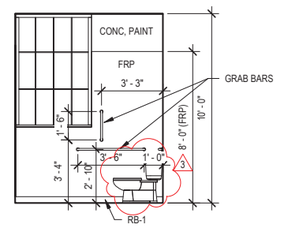


3 A8-1 **TOILET 303 - S**
1/4" = 1'-0"



NOTE:
SOAP AND PAPER TOWEL BY OWNER

2 A8-1 **TOILET 204 - W**
1/4" = 1'-0"



1 A8-1 **TOILET 204 - S**
1/4" = 1'-0"

Revision	Date	By
Draft	8-9-19	SD
Draft	9-5-19	SD
Final	9-27-19	SD
ADD#3	10-22-19	SD

Revision: ADD#3
Plot Scale: 1:2
Drawn By: S. Dean, Architect
Drawn By: B. Jackson, PD
Checked By: S. Dean, Architect
Designed By: S. Dean, Architect
Designed By: B. Jackson, PD
Project Number: 19-05

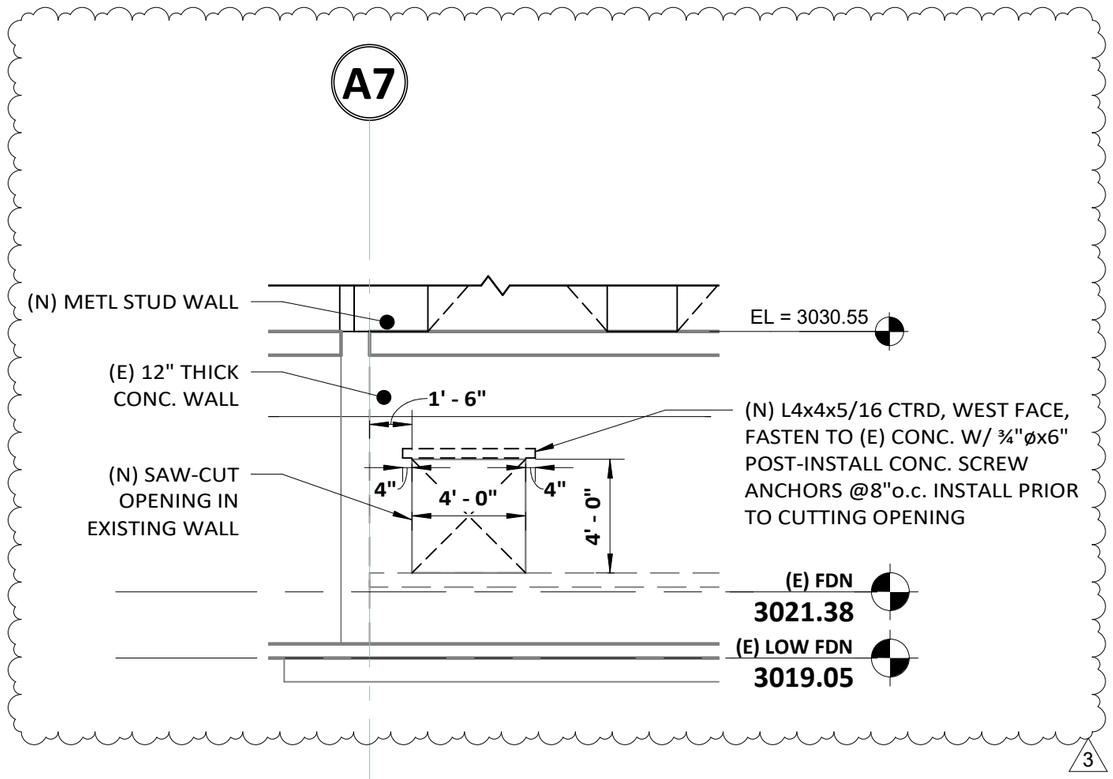
Engineer
Anderson~Montgomery CONSULTING ENGINEERS
1064 N. Warren
Helena, Mt 59601
RPA
Comma-Q Architecture

Owner: City of Whitefish, Montana

Project Title: Whitefish WWTP Improvements Project

Sheet Title: **Interior Schedule & Elevations**

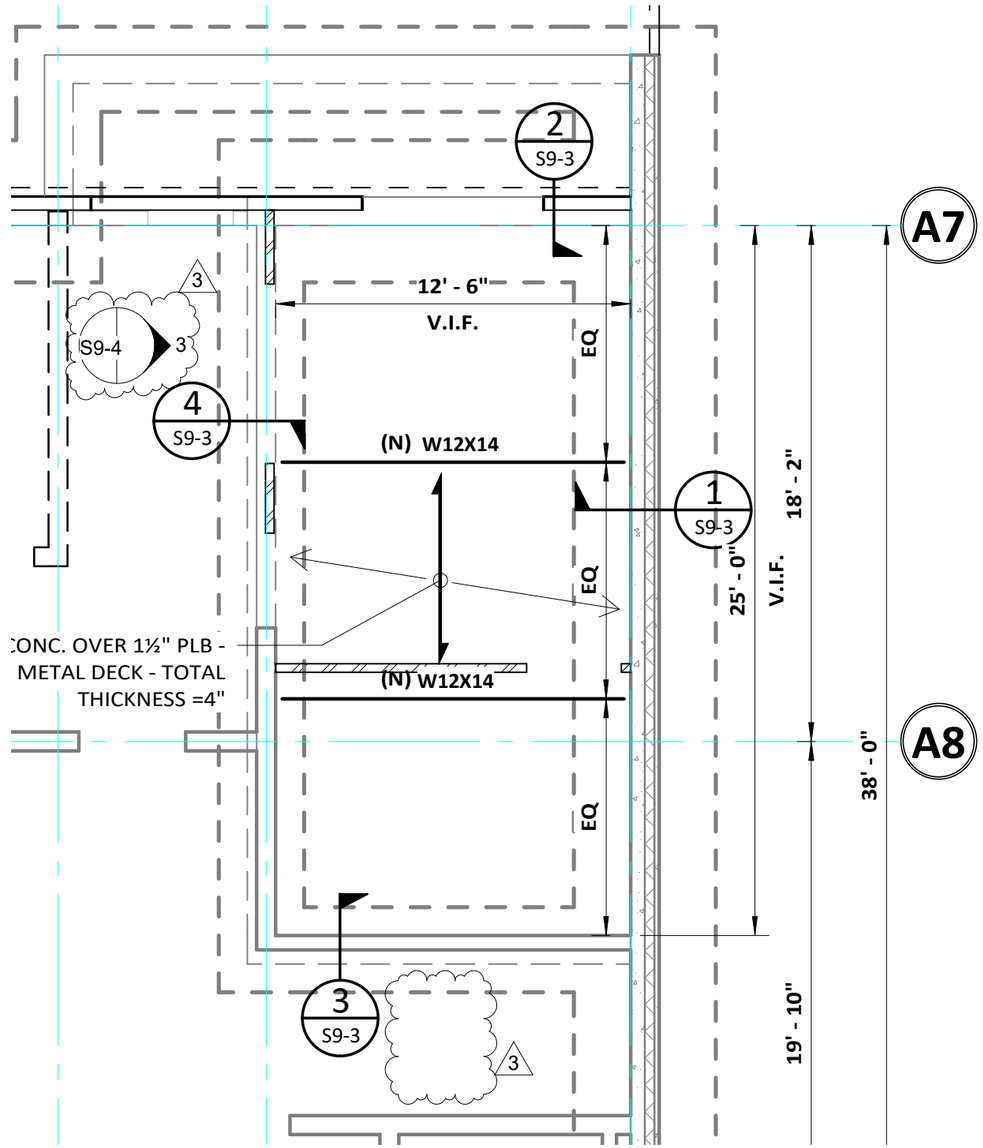
Sheet: **A8-1**



NEW OPENING IN BASEMENT WALL OF ADM BLDG

3

SCALE: 3/16" = 1'-0"



ADMINISTRATION BUILDING MAIN FLOOR FRAMING PLAN

1

SCALE: 3/16" = 1'-0"

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Suite 4
Bozeman, MT 59718
(406) 284-2110

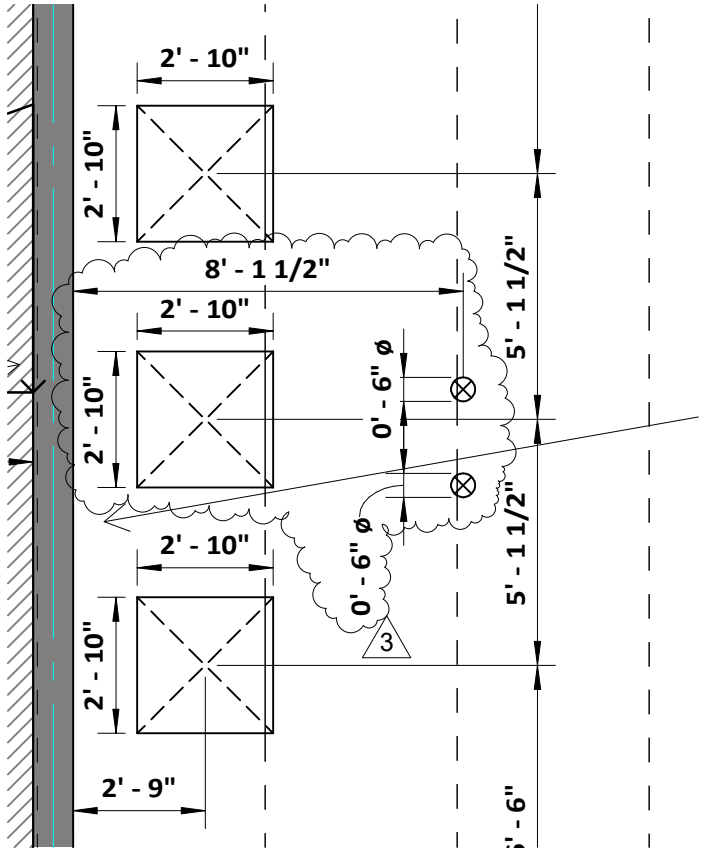
DESIGNED BY	MTM
DATE	10-18-19
DRAWN BY	ECS
ORIGINAL SHEET/DETAIL No.	1/S9-1 & 3/S9-4
CHECKED BY	MTM

PROJECT TITLE
Whitefish WWTP Improvements Project

SHEET TITLE
Revisions to Administration Building Foundation Plan and Detail 3

SKS

SKS-1



MAIN PROCESS BUILDING WEST

ROOF FRAMING PLAN

1

SCALE: 1/4" = 1'-0"

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PROJECT TITLE
Whitefish WWTP Improvements Project

DATE
10/21/19

SKETCH TITLE
Revisions to Main Process Building Roof Framing Plan

ORIGINAL SHEET/DETAIL No.
1/S4-6

MTM
DESIGNED BY

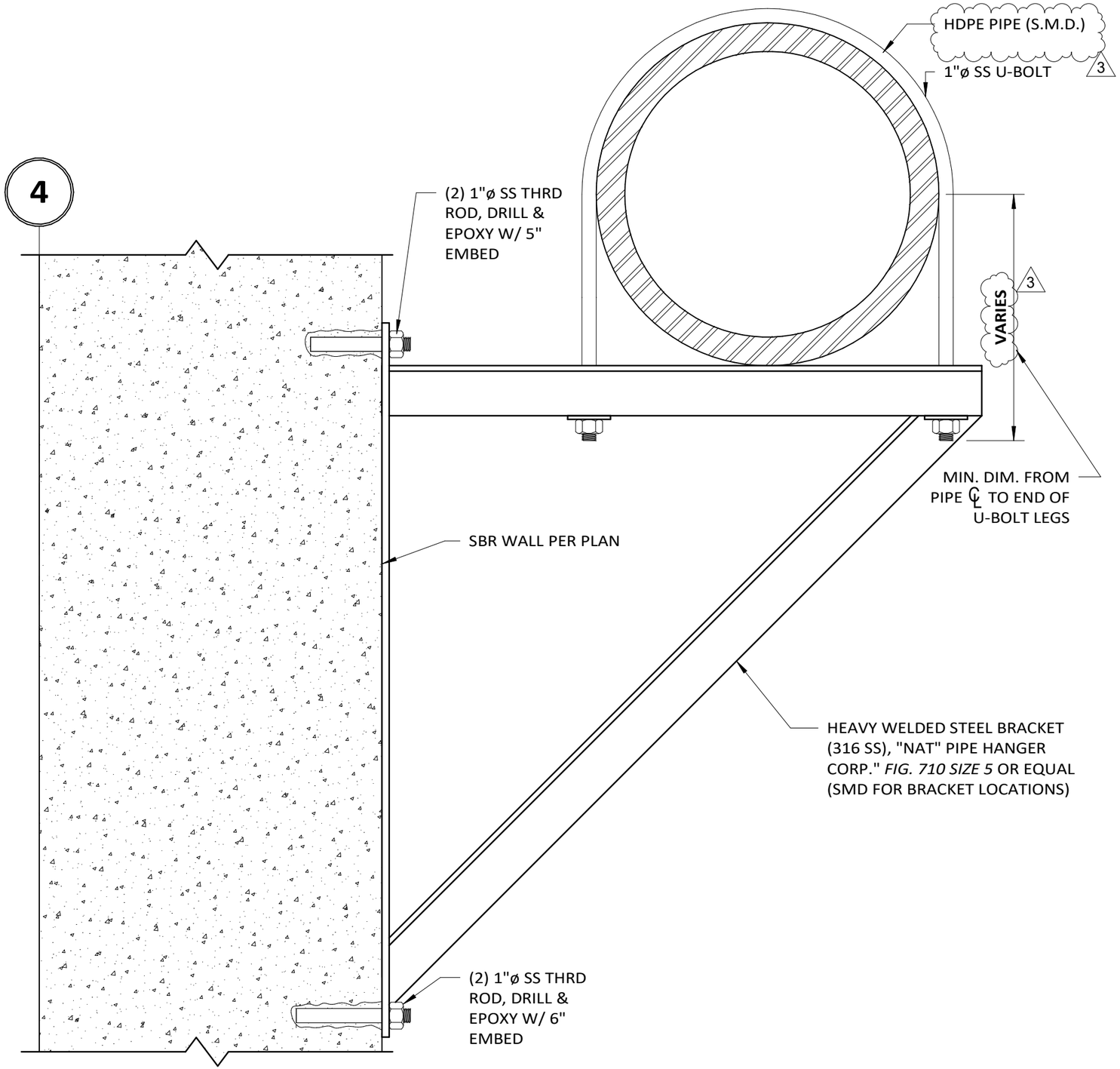
ECS
DRAWN BY

MTM
CHECKED BY

SKS

SKS-2

4



HDPE PIPE SUPPORT

5

SCALE: 1 1/2" = 1'-0"

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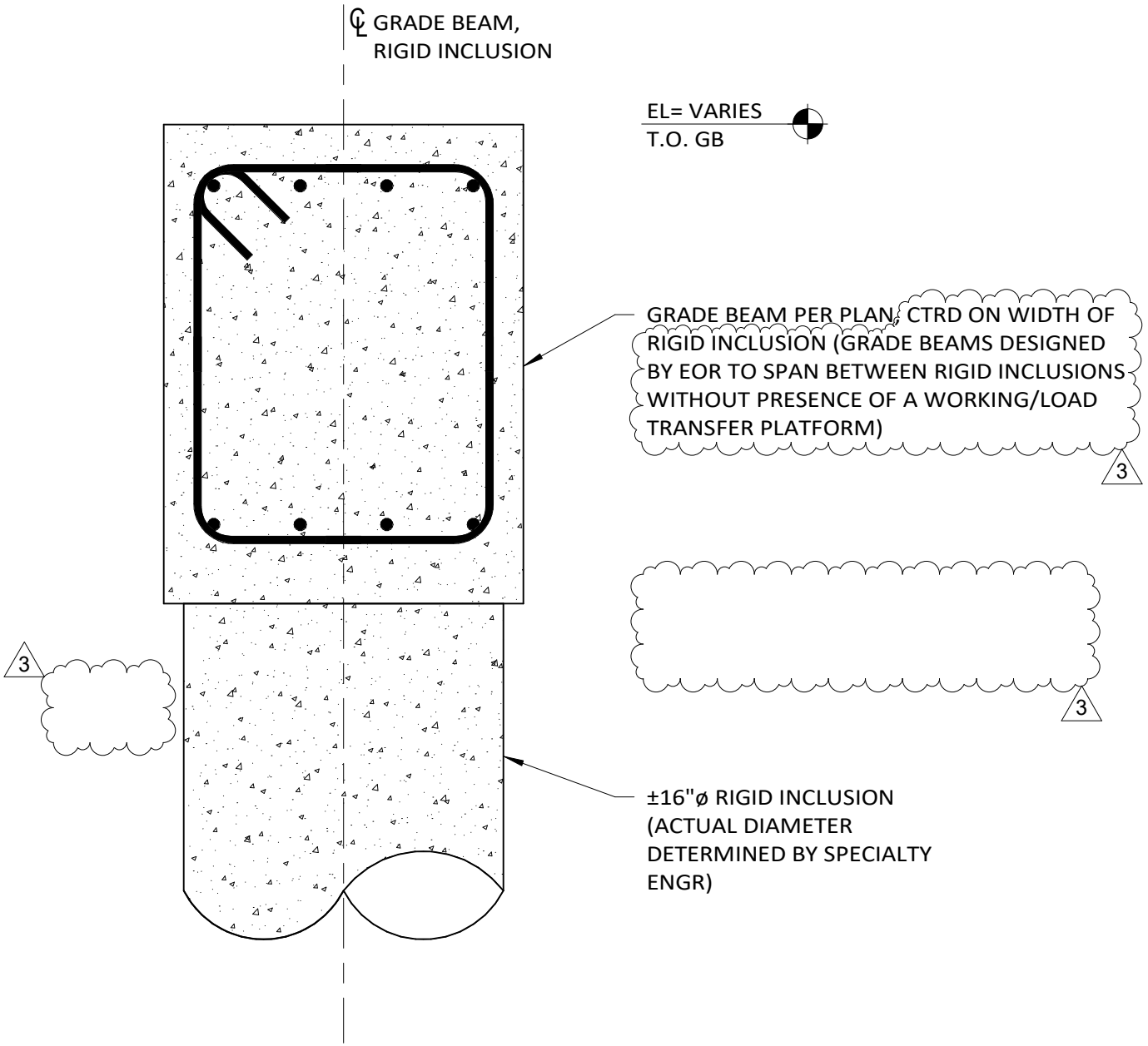
DESIGNED BY	MTM
DRAWN BY	ECS
CHECKED BY	MTM
DATE	10-21-19
ORIGINAL SHEET/DETAIL No.	5/S3-15

PROJECT TITLE
Whitefish WWTP Improvements Project

SHEET TITLE
Revisions to Detail 5

SKS

SKS-3



TYPICAL GRADE BEAM-TO-RIGID INCLUSION CONNECTION

2

SCALE: 1 1/2" = 1'-0"

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PROJECT TITLE
Whitefish WWTP Improvements Project

DATE
10/22/19

SKETCH TITLE
Revisions to Detail 2

ORIGINAL SHEET/DETAIL No.
2/S4-12

TJH DESIGNED BY
ECS DRAWN BY
MTM CHECKED BY

SKS

SKS-4

FOUNDATION PLAN NOTES:

1. SEE S1-1 THRU S1-3 FOR GENERAL STRUCTURAL NOTES, LEGENDS, ABBREVIATIONS.
2. FOUNDATIONS BEAR ON COMPACTED STRUCTURAL FILL (SEE DETAILS S1-3) WHICH IN TURN BEAR ON SUBGRADE SOIL IMPROVEMENTS CONSISTING OF RIGID INCLUSIONS PER SPECIFICATIONS. FOUNDATION AND SLAB LOADS ARE INDICATED ON 3/S2-2 AND SHALL BE THE MINUM LOADS USED FOR DESIGNING THE SOIL IMPROVEMENTS SYSTEM.
3. REFERENCE S10 SERIES SHEETS FOR TYPICAL DETAILS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR UNDERSTANDING AND APPLYING DETAILS FROM THESE SHEETS, AS THEY ARE GENERALLY NOT REFERENCED ON PLANS BUT APPLY.
4. SEE ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS FOR DIMENSIONS NOT INDICATED.
5. GRIDS ARE LOCATED AT THE OUTSIDE FACE OR CENTERLINE OF CONCRETE/PRECAST WALL AS SHOWN, U.N.O.
6. THICKEN SLAB-ON-GRADE FOR A DISTANCE OF 12-INCHES FROM ALL SIDES OF PIPE PENETRATIONS AS FOLLOWS:
   A. 8" DIA. = 10" THICK
   B. LARGER THAN 8" DIA. = 12" THICK.
7. DRILL & EPOXY EA LONG. FTG REINF. BAR TO WALL W/ 6" MIN. EMBED.

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PROJECT TITLE
Whitefish WWTP Improvements Project

DATE
10/22/19

SKETCH TITLE
Revisions to Grit Building Foundation Plan Notes

ORIGINAL SHEET/DETAIL No.
S2-2

TJH DESIGNED BY
ECS DRAWN BY
MTM CHECKED BY

SKS

SKS-5

FOUNDATION PLAN NOTES:

1. SEE S1-1 THRU S1-3 FOR GENERAL STRUCTURAL NOTES, LEGENDS, ABBREVIATIONS.
2. FOUNDATIONS BEAR ON SUBGRADE SOIL IMPROVEMENTS CONSISTING OF RIGID INCLUSIONS PER SPECIFICATIONS. FOUNDATION LOADS ARE INDICATED ON S4-3 AND S4-4 AND SHALL BE THE MINUM LOADS USED FOR DESIGNING THE SOIL IMPROVEMENTS SYSTEM. 3
3. THE SUGGESTED SPACING OF RIGID INCLUSIONS SUPPORTING GRADE BEAMS ON SHEET S4-3 AND S4-4 ARE ACCOMPANIED BY AN ESTIMATED ALLOWABLE BEARING LOAD TO EACH RIGID INCLUSION. CONCRETE GRADE BEAM DESIGN, INCLUDING THICKNESSES AND REINFORCING, ARE BASED ON THE MAXIMUM RIGID INCLUSION SPACING SHOWN. RIGID INCLUSIONS LOCATED BENEATH GRADE BEAMS SHALL BE CENTERED BENEATH THE BEAM AND SPACED AT A MAXIMUM DISTANCE AS SHOWN. 3 3
4. RIGID INCLUSION LAYOUT SHALL BE DONE IN A MANNER TO AVOID UNDERGROUND PIPING - PIPING PLACEMENT TAKES PRECEDENCE AND CANNOT BE RELOCATED. SEE MECHANICAL DRAWNINGS FOR PIPING LAYOUT.
5. RIGID INCLUSIONS SUPPORTING THE MAIN PROCESS BUILDING SLAB (AND ASSOCIATED WORKING/LOAD TRANSFER PLATFORM) ARE TO BE DESIGNED TO SUPPORT THE SELF-WEIGHT OF THE SLAB AND EQUIPMENT PADS, IN ADDITION TO THE LIVE LOAD SPECIFIED IN THE BASIS OF DESIGN SECTION ON S1-2. 3
6. REFERENCE S10 SERIES SHEETS FOR TYPICAL DETAILS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR UNDERSTANDING AND APPLYING DETAILS FROM THESE SHEETS, AS THEY ARE GENERALLY NOT REFERENCED ON PLANS BUT APPLY.
7. SEE ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS FOR DIMENSIONS NOT INDICATED.
8. GRIDS ARE LOCATED AT THE OUTSIDE FACE OR CENTERLINE OF CONCRETE/PRECAST WALL AS SHOWN, U.N.O.
9. THICKEN SLAB-ON-GRADE FOR A DISTANCE OF 12-INCHES FROM ALL SIDES OF PIPE PENETRATIONS AS FOLLOWS:
   A. 8" DIA. = 10" THICK
   B. LARGER THAN 8" DIA. = 12" THICK.

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PROJECT TITLE
Whitefish WWTP Improvements Project

DATE
10/22/19

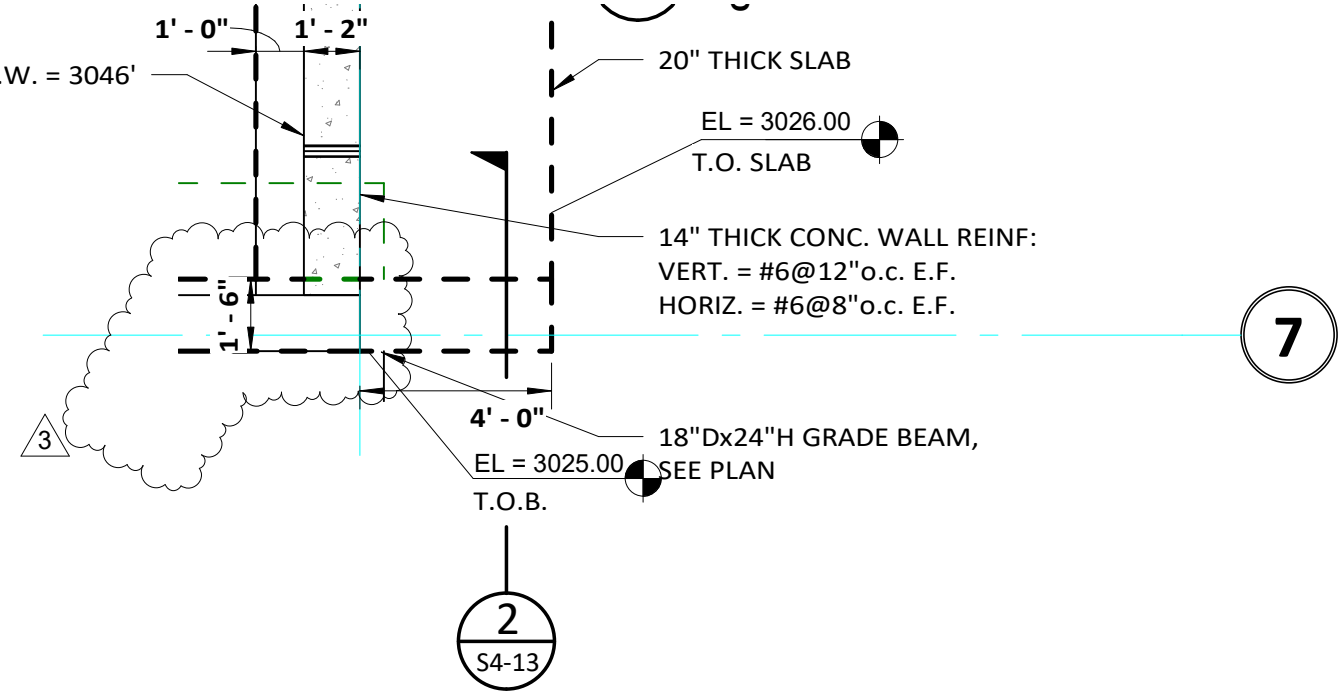
SKETCH TITLE
Revisions to Main Process Building Foundation Plan Notes

ORIGINAL SHEET/DETAIL No.
S4-2

TJH DESIGNED BY
ECS DRAWN BY
MTM CHECKED BY

SKS

SKS-6



SLUDGE BUFFER BASIN FOUNDATION PLAN

1

SCALE: 1/4" = 1'-0"

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PROJECT TITLE
Whitefish WWTP Improvements Project

DATE
10/22/19

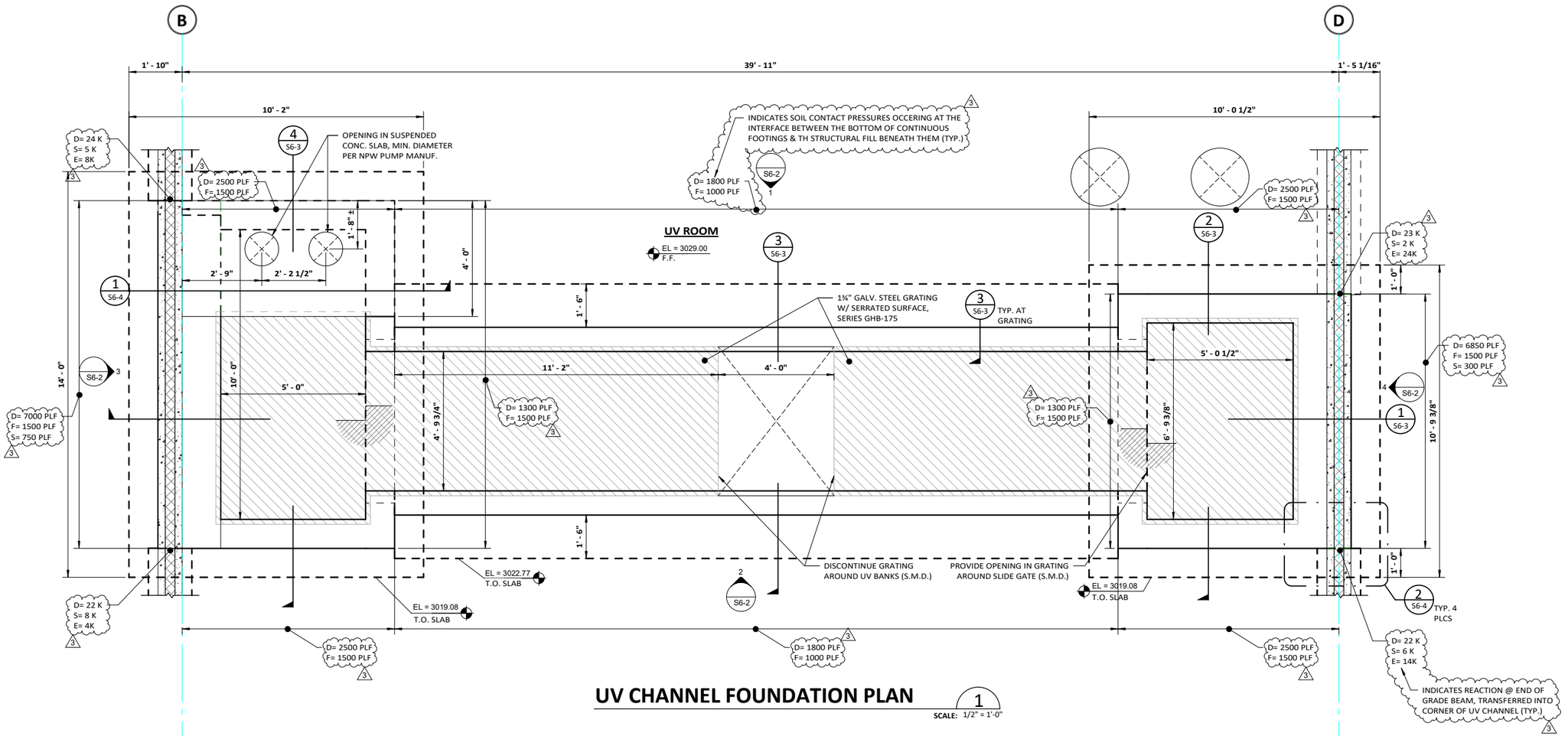
SKETCH TITLE
Revisions to Sludge Buffer Basin Foundation Plan

ORIGINAL SHEET/DETAIL No.
1/S5-2

TJH DESIGNED BY
ECS DRAWN BY
MTM CHECKED BY

SKS

SKS-7



UV CHANNEL FOUNDATION PLAN

1

SCALE: 1/2" = 1'-0"

RPA
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Bozeman, MT 59718
(406) 284-2110

10-22-19 DATE

ORIGINAL SHEET/DETAIL No. 1/S6-1

T.JH DESIGNED BY

ECS DRAWN BY

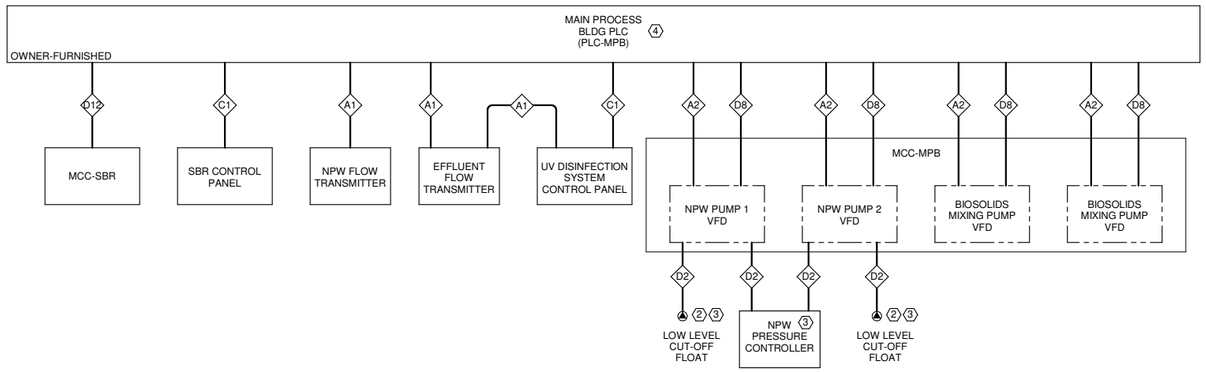
MTM CHECKED BY

PROJECT TITLE
Whitefish WWTP Improvements Project

SHEET TITLE
Revisions to UV Channel Foundation Plan

SKS

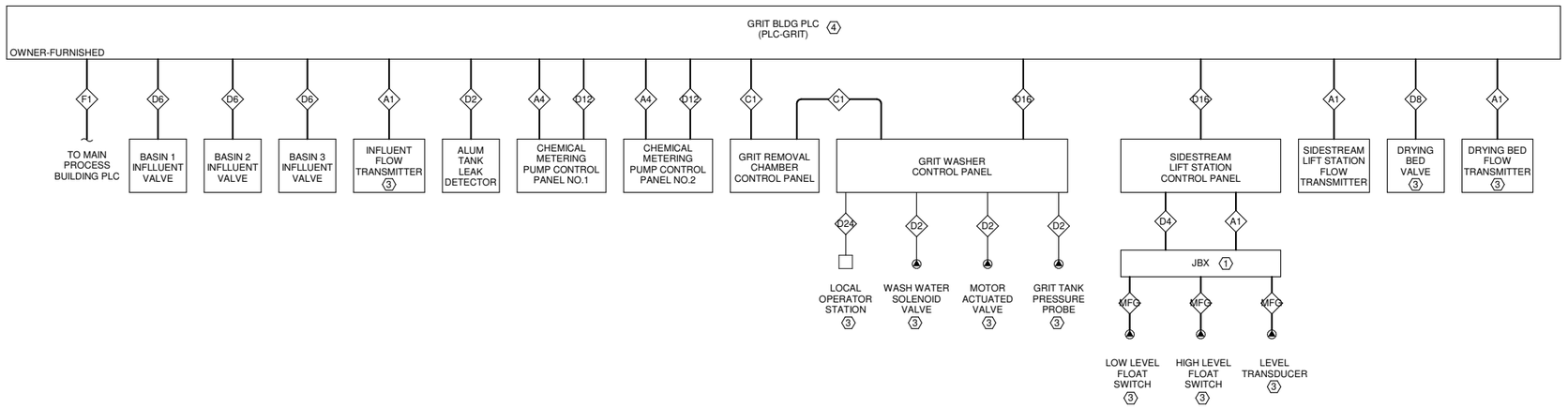
SKS-8
(HALF SCALE)



1 E0-5

MAIN PROCESS BUILDING PLC CONTROL ONE-LINE DIAGRAM

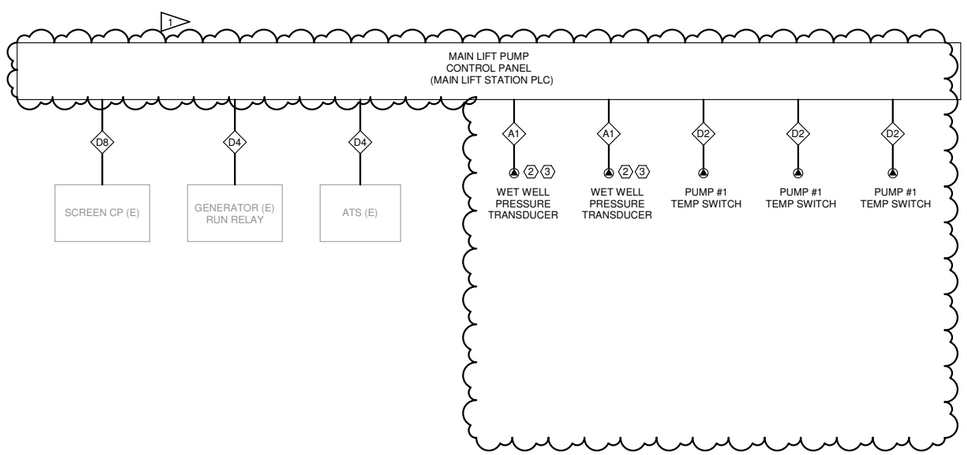
NOT TO SCALE



2 E0-5

GRIT BUILDING PLC CONTROL ONE-LINE DIAGRAM

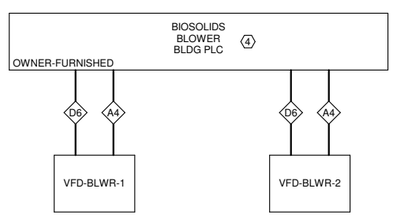
NOT TO SCALE



3 E0-5

MAIN LIFT STATION PLC CONTROL ONE-LINE DIAGRAM

NOT TO SCALE



4 E0-5

BIOSOLIDS BLOWER BUILDING PLC CONTROL ONE-LINE DIAGRAM

NOT TO SCALE

GENERAL NOTES

A. COMPLY WITH LATEST ADOPTED NEC AND APPLICABLE CODES/STANDARDS.

B. SHARED NEUTRALS ARE NOT ALLOWED FOR SINGLE PHASE BRANCH CIRCUITS.

C. MC CABLE IS NOT ACCEPATABLE FOR FEEDERS.

D. SEE PID DRAWINGS FOR ADDITIONAL SCOPE OF WORK NOT SHOWN FOR CLARITY.

SHEET NOTES

1. EC SHALL FURNISH AND INSTALL NEMA 4X SST JUNCTION BOX COMPLETE WITH TERMINAL BLOCKS TO CONNECT LEVEL TRANSDUCER AND HIGH LEVEL FLOAT SWITCH. JUNCTION BOX SHALL BE PROVIDED WITH INTRINSICALLY SAFE BARRIER RELAYS AS REQUIRED.
2. EC SHALL FURNISH AND INSTALL NEMA 4X SST JUNCTION BOX COMPLETE WITH TERMINAL BLOCK TO TRANSITION FROM SUBMERSIBLE FLOAT CABLE TO TRADITIONAL WIRING.
3. COORDINATE LOCATION WITH MECHANICAL DRAWINGS.
4. EC SHALL INSTALL OWNER-FURNISHED PLC AND ALL ASSOCIATED CONDUIT AND WIRE.

MONTANA REGISTERED PROFESSIONAL ENGINEER
BRADY K. JOHNSON
No. 59882 PE
LICENSED PROFESSIONAL ENGINEER

Revision	Date	By
Final	9-27-19	BKJ
1) Add #3	10-22- 19	BKJ

Revision: Addendum #3
Plot Scale: 1/8" = 1'-0"
Drawn By: B. Johnson, PE
Approved By: B. Johnson, PE
Checked By: A. Bronec, PE
Designed By: B. Johnson, PE
Project Number: WFWWTP

Engineer
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1064 N. Warren
Helena, Mt 59601
RPA
CTA®

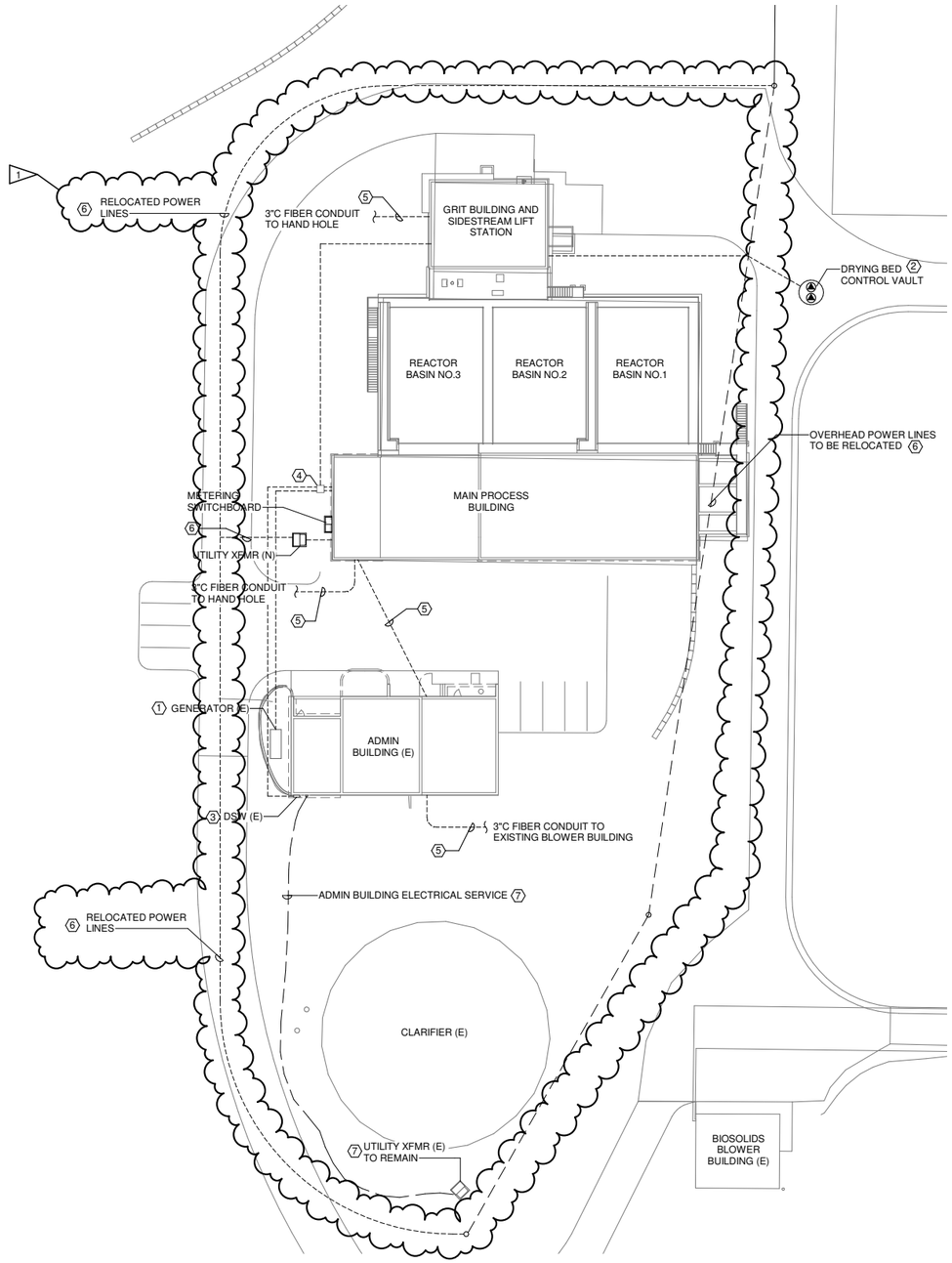
Owner: City of Whitefish, Montana

Project Title: Whitefish WWTP Improvements Project

Sheet Title: **Control One Line Diagrams**

Sheet: **E0-5**

VERIFY SCALES
BAR SCALE IS ONE INCH ON FULL SIZE DRAWING.
0 —— 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.



1 / E0-11 SITE PLAN

1" = 30'-0"

NORTH REF

GENERAL NOTES

A. COMPLY WITH LATEST ADOPTED NEC AND APPLICABLE CODES/STANDARDS.

B. SHARED NEUTRALS ARE NOT ALLOWED FOR SINGLE PHASE BRANCH CIRCUITS.

C. PROCESS AND HVAC EQUIPMENT LOCATIONS ARE APPROXIMATE. COORDINATE FINAL LOCATION WITH MECHANICAL AND HVAC DRAWINGS.

(#) SHEET NOTES

1. EXISTING GENERATOR SHALL BE REUSED. EC SHALL FURNISH AND INSTALL CONDUIT AND WIRE BETWEEN EXISTING GENERATOR AND NEW ATS LOCATION.
2. EC SHALL FURNISH AND INSTALL WIRE AND CONDUIT TO THE DRYING BED CONTROL VALVE AND FLOW METER. SEE CONTROL ONE LINE DIAGRAM FOR CONDUIT AND WIRE REQUIREMENTS. SEE MECHANICAL AND CIVIL DRAWINGS FOR EXACT LAYOUT AND LOCATION OF THE DRYING BED CONTROL VAULT.
3. EXISTING SERVICE DSW SHALL BE REUSED TO RESUPPLY EXISTING ADMIN BUILDING MDP. EC SHALL FURNISH AND INSTALL CONDUIT AND WIRE BETWEEN DSW AND NEW SOURCE.
4. EC SHALL FURNISH AND INSTALL ELECTRICAL HANDHOLE AT CORNER OF MAIN PROCESS BUILDING.
5. SEE SHEETS C-26 AND 1/E10-3 FOR ADDITIONAL FIBER CONDUITS TO BE PROVIDED BY E.C.
6. PROPOSED BURIED POWER CABLE ROUTING, INCLUDING RELOCATION OF OVERHEAD LINES AND PRIMARY CONDUCTORS TO NEW TRANSFORMER, SHALL BE COORDINATED WITH AND APPROVED BY THE UTILITY. (1)
7. EC SHALL COORDINATE THE REMOVAL OF EXISTING ADMIN BUILDING ELECTRICAL SERVICE WITH THE UTILITY. EXISTING TRANSFORMER SHALL REMAIN AND CONTINUE TO SUPPLY BIOSOLIDS BLOWER BUILDING.

VERIFY SCALES

BAR SCALE IS ONE INCH ON FULL SIZE DRAWING.

0 —— 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

MONTANA REGISTERED PROFESSIONAL ENGINEER
BRANDT JOHNSON
No. 59882 PE
LICENSED PROFESSIONAL ENGINEER

Revision	Date	By
Final	9-27-19	BKJ
1) Add #3	10-22- 19	BKJ

Revision: Addendum #3
Plot Scale: As indicated
Drawn By: B. Johnson, PE
Approved By: B. Johnson, PE
Checked By: A. Bronec, PE
Designed By: B. Johnson, PE
Project Number: WFWWTP

Engineer
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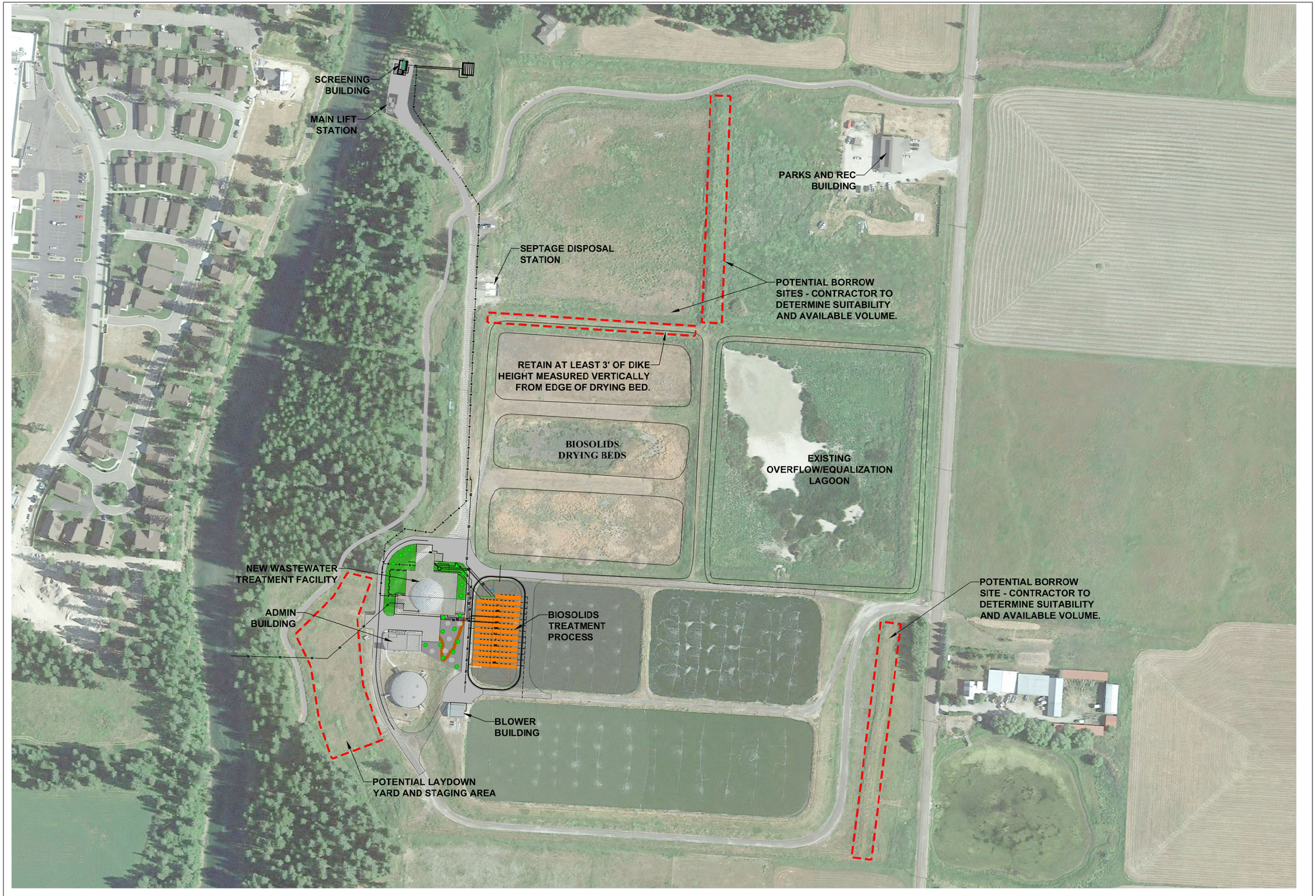
Helena, Mt 59601
RPA
CTA®

Owner: City of Whitefish, Montana

Project Title: Whitefish WWTP Improvements Project

Sheet Title: **Site Plan**

Sheet: **E0-11**



MONTANA
Scott Anderson
7978PE
REGISTERED PROFESSIONAL ENGINEER

Revision	Date	By
Draft	8-9-19	SA
Draft	9-5-19	SA
Firal	9-27-19	SA

Revision: Final
Plot Scale: 1:2
Drawn By: A.Eckhart, P.E.
Drawn By: G.Lesofski
Drawn By: A.Wargo, P.E.
Approved By: S.Anderson, P.E.
Checked By: P.Montgomery, P.E.
Checked By: B.Koenig, P.E.
Designed By: S.Anderson, P.E.

Engineer
Anderson~Montgomery
CONSULTING ENGINEERS
1064 N. Warren
Helena, Mt 59601

RPA

CONFIDENTIAL SUBJECT TO NON DISCLOSURE AGREEMENT

Owner
City of Whitefish, Montana

Project Title
Whitefish WWTP Improvements Project

Sheet Title
Construction Site Plan

Sheet
Fig. AD3-1

X:\Adam\Whitefish\WWTP\Design Drawings\Site Plan – Construction.dwg SAVED:10/16/19 PRINTED:10/16/19 BY:ADAM

Anderson~Montgomery

Montgomery, Paul <paul@a-mce.com>

Whitefish WWTP - Addendum 3 SKS's and Malcolm Drilling RFI response

Tyler Hessler <thessler@rpa-hln.com> Tue, Oct 22, 2019 at 5:04 PM
To: "paul@a-mce.com" <paul@a-mce.com>
Cc: "scott@a-mce.com" <scott@a-mce.com>, Brad Koenig <BKoenig@rpa-hln.com>, Matt Miller <mmiller@rpa-hln.com>

Paul,

Please see attached for Addendum 3 structural sketches. Let us know if you want these in a different format, and we can revise accordingly and re-send.

Our responses to the Malcolm Drilling RFI are below in RED. I believe these responses will answer Swank's question as well, regarding depth of structural fill (basically, the depth of structural fill is dependent on where the RI engineer places RI elevations, and how thick he/she makes the working/load transfer platform, so we don't know what the depth of structural fill will be until we have the RI design).

1. Does the Owner plan to have additional geotechnical investigations performed such as SPTS, CPTS? Borings 1 &2 are roughly 300' away from where the new structure will be constructed and there is considerable variation between the two borings. No additional testing to be performed by the Owner. Contractors should note that CPT results for two holes bracketing the site are included in Appendix C.

2. With respect to the absence of rigid inclusions beneath new structure, our experience is that extremely soft soil such as those exhibiting "weight-of-hammer" behavior during testing are likely undergoing consolidation and settlement even without the placement of the new structures. If this is the case, it is essentially impossible to anticipate the performance for any new structures over such soils without rigid inclusions or Augercast piles"
   The slabs are intended to be supported by rigid inclusion subgrade soils improvements (applies to Grit Building, Basins, and Main Process Building slabs).
3. Given the uncertainty of the ground improvement areas and potential concerns for differential settlement if slab treatment is excluded, can we get confirmation for the areas in question?

    - Main Process – Foundation and Slab Treatment? 1) Pump Room - Foundation notes does not specify Slab treatment but mentions footing to bear on RI soil improvements but #3 in the foundation notes (S4-2) mentions footings and slab design is based on maximum RI inclusions as shown. S4-8 Pump Room detail has a note Rigid inclusion Subgrade Improvements But not shown on S4-2. 2) Blower Room - Foundation notes does not specify Slab treatment but mentions footing to bear on RI soil improvements but #3 in the foundation notes (S4-2) mentions footings and slab design is based on maximum RI inclusions as shown. S4-8 Blower Room detail has a note Rigid inclusion Subgrade Improvements But not shown on S4-2. 3) UV Room – Slab and Foundation treatment? 4) Electrical Room – Slab and Foundation treatment?
      The maximum spacing of the rigid inclusions supporting the MPB grade beams, and the corresponding estimated service-level bearing load to each rigid inclusion, are specified on sheets S4-3 and S4-4. The rigid inclusions (size, spacing, layout, and top of RI elevations) and associated working/load transfer platform supporting the slab are to be designed to support the self-weight of the slab and equipment pads, in addition to the live load specified in the Basis of Design section on sheet S1-2. Foundation Plan Notes on S4-2 have been revised to clarify.

    - Grit Building - Foundation and Slab treatment? Foundation notes does not specify Slab treatment but mentions foundations bear on structural fill which in turn bears on subgrade soil improvements consisting of RI's. Multiple drawings (S2-1, S2-4) show RI's in a way we assume an 7' 6" spacing to treat the slab and footings.

Design of RI's (size, spacing, layout, and top of RI elevations) is to be performed by the RI specialty engineer, to provide a modulus of subgrade reaction k=150pci (per 3/S2-2). Requirement for soil improvement beneath Grit Building slab has been clarified in a revision to Foundation Plan Notes on S2-2. Additionally, 1/S6-1 has been revised to provide soil contact loads for UV Channel Foundation support, for design of RI's.

4. Will Geotech EOR provide a minimum RI treatment depth design criteria such "RI's will need to go 10 ft. into the sand below the clay or to refusal whichever is first".
5. Will the EOR accept RI ground improvement system disconnected to structure in lieu of RIs tied to or in direct contact with specified footings with steel reinforcement. (refer to Plan sheets S4-8, S4-10, S4-12, S4-13).
   Top of RI elevations are per RI specialty engineer. Grade beams are conservatively designed to clear span between individual RI's at assumed spacing shown on sheet S4-3 and S4-4. If working/load transfer platform is capable of transmitting specified reactions from bottom of grade beams to top of RI's, as determined by the specialty engineer, the RI's are not required to be in direct contact with the grade beams. Detail 2/S4-12 has been revised to remove the reinforcing extending from top of RI into bottom of grade beam.
6. Will the EOR accept RI's at the same elevation with transfer pad or shall it be as shown as in example on S6-3?
   The RI's shown in S6-3 support the UV Channel. The EOR will not take exception to RI elevations determined to be acceptable by the RI specialty engineer (as indicated in the approved sealed subgrade soil improvements shop drawings and calculations). We anticipate that the RI's will be lower at the UV Channel than at the rest of the project, due to the depth of the UV Channel relative to the adjacent slab and grade beam elevations. It is the responsibility of the General Contractor and RI installer to coordinate the top of RI elevations; at GC and RI installer's option (if acceptable to RI specialty engineer), RI's supporting UV Channel may be partially excavated and saw-cut to desired elevation to limit or eliminate steps in top of RI elevations during initial RI installation.

Thanks,

Tyler

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