



May 1, 2020

Mr. Jeff Alexander  
REHLM Staff  
United States Department of Agriculture  
Forest Service  
1249 South Vinnell Way, Suite 200  
Boise, ID 83709

*RE: Elmore County Board of County Commissioners South Fork Boise River Diversion*

Dear Mr. Alexander,

The following is a description and summary of the work proposed for the South Fork Boise River Diversion Project proposed by the Elmore County Board of County Commissioners as part of application SF-299.

## **INTRODUCTION**

Elmore County Board of County Commissioners (County or Owner) is seeking to put to beneficial use their water right permit to pump up to 200 cubic feet per second (cfs) from Anderson Ranch Reservoir with delivery to Little Camas Reservoir. The water right permit is designated as No. 63-34348. The County will be responsible for operating and maintaining the proposed project. Campbell Law, Chtd was hired for legal aspects associated with this project. SPF Water Engineering, LLC (Engineer or SPF) was hired as engineering consultants to execute the preliminary design and permitting assistance for the project.

The South Fork Boise River Diversion (Project) was discussed with Forest Service staff on a number of occasions. As a result, three SF-299 applications were submitted to the US Forest Service on the dates of July 27, 2017, October 1, 2018, and October 9, 2018. The purpose of this current application is to provide an overall 'Plan of Development' in order to move forward with facility improvements to satisfy the water right permit.

## **PURPOSE AND NEED**

The project will consist of pumping up to 200 cfs of water from Anderson Ranch Reservoir to Little Camas Reservoir. The following list describes the proposed facilities required for this purpose:

- Pump Station – located at Anderson Ranch Reservoir at the northwest quarter section of Section 7 of Township 1S, Range 8E of Forest Service property. The above ground pump station will be equipped with twelve, 2,000 horsepower pump/motors. Each pump/motor will extend a shaft down a wet well vault or pump can approximately 80-feet in depth. An 80-inch diameter suction line or multiple smaller diameter suction lines will extend horizontally from the wet well vault/can assemblies into the Anderson Ranch Reservoir approximately 400-linear feet (LF).

- Substation Upgrades – existing substation located at the base of Anderson Ranch Dam and owned by Bonneville Power Administration (BPA) to be upgraded.
- Power Distribution Upgrades – existing or new overhead power distribution lines from the BPA Substation to a new Transformer Yard will provide 20 Mega Volt Amp (MVA) of power for the proposed pump station.
- Transformer Yard – will be located along the existing access road from Anderson Ranch Dam to the proposed pump station. Approximately 12 transformers will be installed in this proposed yard with an approximate yard area of 50 by 150 feet.
- Conveyance Alignment – located from the proposed pump station at Anderson Ranch Reservoir across the properties of Forest Service, Camas Cattle LLC property, and back into Forest Service property at Little Camas Reservoir. The alignment covers property within Sections 7, 8, and 9 of Township 1S, Range 9E.

The alignment will consist of approximately 13,500 LF of 78-inch diameter pipe. The material will vary along the alignment based upon pressure. Cement mortar lined and coated (CML&C) steel pipe will be used for areas where pressures are over 350 psi, and steel pipe or reinforced fiberglass pipe (FRP) used for pressures under 350 psi.

Various appurtenances will be included along the pipeline for general system operation and maintenance. Combination air release and air vacuum valves (AR/AV) will be located at all high points and spaced along long inclined sections. Access points, or manways will also be located at these same locations. A blowoff and drain assembly will be added to the one low point found mid-way along the corridor.

The pipeline will convert to a trapezoidal channel approximately 1,040 LF from the terminus at Little Camas Reservoir to the last high point in the alignment. The channel will be concrete lined and equipped with energy dissipation. A culvert is planned to convey water under Camas Reservoir Road (Trail 160/160E).

An overall map of the proposed facilities is included as part of the plan drawings found as an attachment to this letter.

## **RIGHT-OF-WAY LOCATION**

Topographic survey along the existing access road near Anderson Ranch Reservoir, pump station, and along the alignment was performed from mid-November to mid-December 2019. A bathymetry survey was subsequently performed at Anderson Ranch Reservoir near the end of December 2019. The bathymetry survey captured topography below water levels at the time of the survey. These surveys were performed prior to the winter season in anticipation of snow and precipitation making the area inaccessible for field work. Collection of ground elevations were the focus of this survey effort. No boundary information was collected during the field survey period.

It is understood that final easements will be monumented after pipeline construction. A boundary survey will be performed to locate section corners and to set monuments to finalize the easements on Camas Cattle LLC property. Legal descriptions for the temporary and

permanent easements through Camas Cattle LLC property are included in the Appendix of this letter.

Additional surveys are anticipated for design of the distribution power lines from the existing substation to proposed pump station. It is also anticipated that boundary surveys will be required for Forest Service permits. Surveys will be grouped together and consolidated when possible for budgetary purposes.

The pipeline will cross a canal owned by Mountain Home Irrigation District (MHID), which will be either tunneled or open-cut trenched depending on the time of construction and MHID requirements.

## **FACILITY DESIGN FACTORS**

The system was designed to capture a wide range of water elevations at the Anderson Ranch Reservoir. The intake (suction) line is proposed to pump over a 60-foot range of water surface elevations from full reservoir pool (4,195 feet) to 60-feet below full pool (4,135-feet). In addition, it is understood that the high-water level of the reservoir may increase by 6-feet with 3-feet of freeboard. This was considered in the pump station and pipeline hydraulics.

Pumps will overcome dynamic and static pressure experienced in the pipeline. The pipeline in general and where possible, will be buried with a minimum of 4-feet of cover unless exceptions to terrain occur. The alignment will traverse over two topographical high point areas with a valley in-between. The pipeline will be buried deeper at the second high point, to create the highest pipeline elevation at the first topographical high point. This approach will protect more of the pipeline from hydraulic transients (surge or water hammer) when the pumps turn on and especially when they abruptly shut off, like in a power outage.

The pump intake structure will be screened to prevent unintentional removal or harm of aquatic life. Due to the depths of the suction line when a full pool elevation is achieved, an active air screening system will be employed at the intake. Active air screening (as opposed to passive types) typically perform with minimal maintenance issues.

Pressures in the pipeline will range from 435 psi to 15 psi. As stated previously, CML&C steel pipe will be used for higher pressure areas and FRP is proposed for the lower pressure lengths.

Both temporary construction and permanent easements from Camas Cattle LLC will be granted. The permanent easement will cover a 100-foot width, generally centered over the pipeline. Temporary easement widths will vary from 400-feet to 950-feet along the alignment with larger sections of easement occurring in areas with flat topography. These larger widths are anticipated for equipment and material storage yards during construction.

Geotechnical investigations will be performed along the alignment to determine soil parameters along with suitability of trenching and backfilling. Due to the large amount of rock outcroppings witnessed during the site walk, it is assumed that imported or manufactured (crushed) materials will be required for pipe bedding around and backfill above the pipe. At the current level of design, the pipeline was aligned (horizontally and vertically) to avoid the

visible rock areas, minimize excessive high/low grade deviations, and to balance the cut and fill anticipated during construction.

The design approach was to balance the cut/fill material as much as possible to limit the amount of import material and subsequently cost to the project. Excess material excavated for the pipe trench area will be displaced over the entire alignment, at the pump station pad, and in areas where fill is needed (local depressions) to level low point areas from the profile. This will eliminate a certain number of appurtenances, such as blowoffs and AV/AR's.

## **GOVERNMENT AGENCIES INVOLVED**

The Owner of the proposed project is Elmore County Board of County Commissioners (County or Owner). They are the local government entity that will be responsible for operating and maintaining the proposed project. They have the power to assess taxes to fund improvements or service debt.

The improvements will directly encroach into the USDA Forest Service property at two locations. One location at Anderson Ranch Reservoir and a second location at Little Camas Reservoir. Indirectly, encroachment into the Bureau of Reclamation's (BOR) facilities will occur along the access road to the pump station that extends into Anderson Ranch Reservoir, and the substation operated by BPA/Idaho Power Company. Both areas are anticipated to trigger some involvement by BOR and USFS.

## **CONSTRUCTION OF THE FACILITIES**

The means and methods of construction are determined by the contractor. They dictate the type of equipment, working teams, manner and time of use of these items that will affect how the facilities are constructed. Another larger factor that will play into construction is the seasonal variations in precipitation (rain, snow) that will occur. Construction of the pipeline could occur at most dry periods of the year. The best time for constructing the pump suction line will be during times the reservoir level is low. At this level of design, we anticipate that the construction can span over the course of a couple of years due to seasonal factors. The following provides a brief overview of assumptions and anticipated events.

Construction can be separated into four groups that can potentially act independently of the other: Power Supply, Suction Line, Pump Station, and Conveyance Pipeline. The potential for how each can be constructed independently of the other is described as follows. In general, work can be performed for each group without the shut-down or detouring of public roadways. The project area occurs mainly within federal or private property that can be isolated from public activities. In general, each group would require mobilization, excavation, minor grading/restoration, testing, and demobilization.

Refer to the attached set of Plans as an aid to visualize the scope of the project.

### Power Supply (To be confirmed by Idaho Power)

Power distribution lines, pump station transformer yard, and BPA substation upgrades will be coordinated and constructed under the authority of Idaho Power Company (IPCO). Distribution



line upgrades from the BPA Substation below Anderson Ranch Dam will more than likely be installed overhead. Secondary power supplies from the transformer yard to the pump station will be buried where feasible due to its close proximity to the reservoirs edge.

Where possible, IPCO will either upgrade their existing distribution line, or build a new distribution line for the project. Should a new distribution line or upgrade be required, additional poles may be required along with tree removal to facilitate construction.

The distribution line would be routed to a proposed transformer yard in order to convert the power to a lower voltage usable by the Pump Station. This transformer yard will also require clearing and grading for a useable pad that could support the proposed 12 transformers and access for operations and maintenance.

The power supply from the transformer yard would continue east toward the Pump Station. Based upon the aesthetics and proximity of the Distribution Main to the reservoir, IPCO initially envisioned that this main would be buried when economically feasible. Therefore, trenching would occur along the existing access road to construct a conduit duct bank from the transformer yard to the Pump Station.

Multiple construction crews could be assembled to accommodate each of these power components. And, each crew could work simultaneously and independently of the other as equipment, material, and space allowed.

#### Pump Station

Construction of the Pump Station will require multiple disciplines during the course of installation. Much of this effort can occur in parallel. The initial stages of constructing the pump station would be the more critical as it serves as the foundation for the rest of the station.

The initial stage includes the suction line and wet well vault/pump cans that will capture flows as low as elevation 4,135. Constructing at this elevation will require Anderson Ranch Reservoir water levels to be near depleted or the use of coffer dams and underwater construction tactics. In any event, this work will be pursued during periods of low water, which usually occurs near the fall/winter months. Due to seasonal changes, the construction window could be shortened by winter conditions and freezing temperatures and not just the springtime when water levels increase.

The platform to the pump station can commence once footings, suction line, and vault/cans are assembled. This stage will see a larger work force on-site as various trades (mechanical, electrical, instrumentation and controls, builders, etc.) would be required. This stage could potentially occur at any time of the year pending weather conditions.

#### Conveyance Pipeline

Construction of the Conveyance Pipeline could consist of several crews depending on the project schedule. Multiple crews could conceivably work simultaneously at different locations along the pipeline alignment. One crew could be dedicated for clearing/grubbing the alignment where rocks, trees and shrubs are prevalent. In steep sloped areas, a crew could work on

grading a bench for pipe laying. Another crew could focus on trenching, pipe laying, backfill, and compaction.

Dedicated crews would also utilize specific construction equipment for each task. The equipment anticipated overall includes backhoes, loaders, excavators, dozers, articulated trucks, delivery trucks, welders, concrete trucks and pumpers, boring equipment, pressure testing equipment, and construction crew vehicles. Determination of the size of the specific equipment and work force is also pending the construction means/methods and availability. The area is free from other utilities such that size and weight limitations do not appear to be a factor. Terrain and suitability of the equipment will be a major deciding factor.

Construction access to the alignment will occur in several areas including the following:

- Northwesterly terminus end – access from Forest Service Road 134A. This will also be the same access point for the Pump Station.
- Easterly terminus end – access from Camas Reservoir Road/Forest Service Road 160.
- Additional Access – through private property along the road the parallels the Mountain Home Irrigation District Canal, and along Forest Service Road 134C.

## **RESOURCE VALUES AND ENVIRONMENTAL CONCERNS**

Based upon the Forest Plan Map 2010 Updates, the Project area has the following designations:

Management Prescription Category – Pump Station and Pipeline are mainly within “Non-Forest System Lands”. Portions near Little Camas Reservoir are within category 6.1 “Restoration and Maintenance Emphasis with Shrubland and Grassland Landscapes.” Area near Anderson Ranch Reservoir is listed as category 4.2 “Roaded Recreation.” Both areas are within the water’s boundary category 3.1 “Passive Restoration and Maintenance of Aquatic, Terrestrial, and Hydrologic Resources.” Power upgrades at the BPA substation occur within category R: “Recreation” and 4.2 “Roaded Recreation.”

Construction of the facilities will be temporary with short-term ground disturbance. Air and noise disturbances will be attributed to equipment used for excavation, trenching, transport of rock and soils within the project boundary, and transport of installation material associated with piping, pumps, motors, bedding material, building supplies, etc. The project will not generate re-occurring emissions once construction is complete. The site may trigger infrequent maintenance activities related to the pump station and pipeline appurtenances. This may result in vehicle trips to the station prior to start-up and during operation. Under the water right permit, the County has the right to pump “flood” water. This means the pump station would typically be limited to pumping in late spring. Trips would be insignificant compared to trip-generating land-uses such as a residential community.

The pipeline will be primarily covered with small sections above grade due to natural topography fluctuations. Power facilities will be routed in similar areas as existing power lines when possible and a portion of the lower voltage lines could be buried. The pipeline and power facilities are not within public road areas that will be viewed by the general public. Portions of the pump station will be above ground and located in a cove area of the Anderson Ranch

Reservoir. The site would require removal of an informal recreational camp site. The pump station will be visible from the immediate area adjacent to the Anderson Ranch Dam. The pump station will be obscured from view from the easterly and remaining portion (majority) of the reservoir.

The pump station will be accessed at the terminus end of Forest Service Road 134A. Area surrounding the above ground facility will be fenced for vandalism protection and general public safety. A pump suction line will extend from this station into the reservoir's pool approximately 400 LF. The elevation of this line will be set 60-feet below the existing high-water level of the reservoir. It will not be easily accessible when the reservoir is full. It may daylight when reservoir levels subside or during drought periods.

## **STABILIZATION AND REHABILITATION**

Construction of the facilities will occur within permitted areas of Forest Service and easement areas of private property. Access directly from a public roadway is not anticipated for the Project. Multiple access areas to the facilities will be dependent upon the terrain at any particular point of the Project. Construction may require temporary access points to specific areas from existing Forest Service trail roads. No changes to the trail roads are anticipated.

Construction for the linear portion of the project will require trenching and grading to occur for pipe installation. This will require clearing and grubbing of the construction work area, removal of rock, soil material, trees, and shrubs. Removed trees and shrubs will be placed in a location approved by the Forest Service or removed from Forest Service property if required.

Best Management Practices (BMP's) will be employed to stabilize recently constructed sloped and trenched areas. BMP's associated with seeding grasses acceptable to the Forest Service will be performed to mitigate erosion and slope failures. Trees and large shrubs are not anticipated to be replanted to allow adequate access for maintenance in the future.

## **OPERATION AND MAINTENANCE**

Access paths to the facilities used or created during construction will remain where feasible. This will allow the Owner to maintain and operate the facilities over time. Adequate area surrounding the facilities is preferred for accessibility. Trees and boulders will not remain or be replaced within 50 feet of either side of the pipeline. Access roads would be limited to native soil or compacted gravel, preferably used from excavated trench material. No pavement or oiled roads are anticipated.

The existing access road from Anderson Ranch Reservoir Dam will be widened to accommodate construction equipment and materials. Construction, as well as maintenance of the pump station may also utilize barges and boats for access.

A permanent 100-foot wide easement approximately centered over the pipeline will be requested from Forest Service and the private property owner. A temporary construction easement will also be requested for the pipeline where space is available. This temporary easement area will support construction and staging and stock piling of equipment and

materials. Larger temporary easement areas will be located along the easterly section of the Project where grades are fairly “flat” and accessible by most vehicles.

Industrial wastes will not be generated due to the operation and maintenance of the Project. Construction activities will require the use of diesel fuel to run equipment. Toxic substances associated with the on-going operation of the facilities are not anticipated.

Specifications for the project bid package will require that the Contractor submit for approval a fire control and contingency plan in the case of hazards that may occur during construction.

## **TERMINATION AND RESTORATION**

Construction of the proposed facilities will require the mobilization of equipment, removal of trees, rock removal, grading, concrete construction, trenching and compaction, and demobilization. Vehicles and temporary equipment not intended to constitute the main facilities noted previously will be removed from the Project site. The intent of installing the structures is to modify the existing conditions with the least amount of disturbance as possible. The more grading, clearing, and excavation performed to the site and corridor adds cost to the Project. Minimizing impact to the site is preferred from an aesthetic and economic perspective.

Access areas to the facilities used during construction will remain post-construction where feasible. This will allow the owner(s) to maintain and operate the facilities over time. Adequate area surrounding the facilities is preferred for accessibility. Access roads would be limited to compacted soils and gravel, preferably used from excavated trench material.

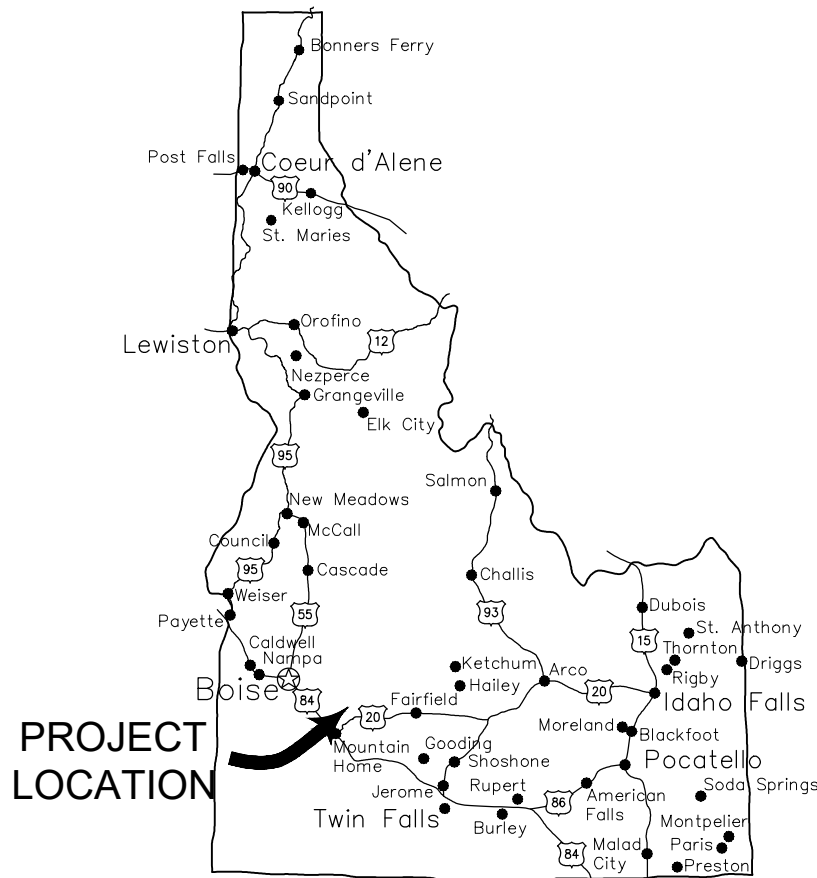
Restoration to steep graded areas will be performed to prevent erosion using best management practices (BMP's). Due to the steep terrain within the Forest Service property, stabilization of the surface would be a priority for hillside and facility protection.

## **Appendix**

Project Design Plans (with Overall Facility Map)

Legal Descriptions for Temporary and Permanent Easements through Camas Cattle, LLC  
Property

SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS  
ELMORE COUNTY 2020



LOCATION MAP

NOT TO SCALE

PROJECT TEAM

OWNER

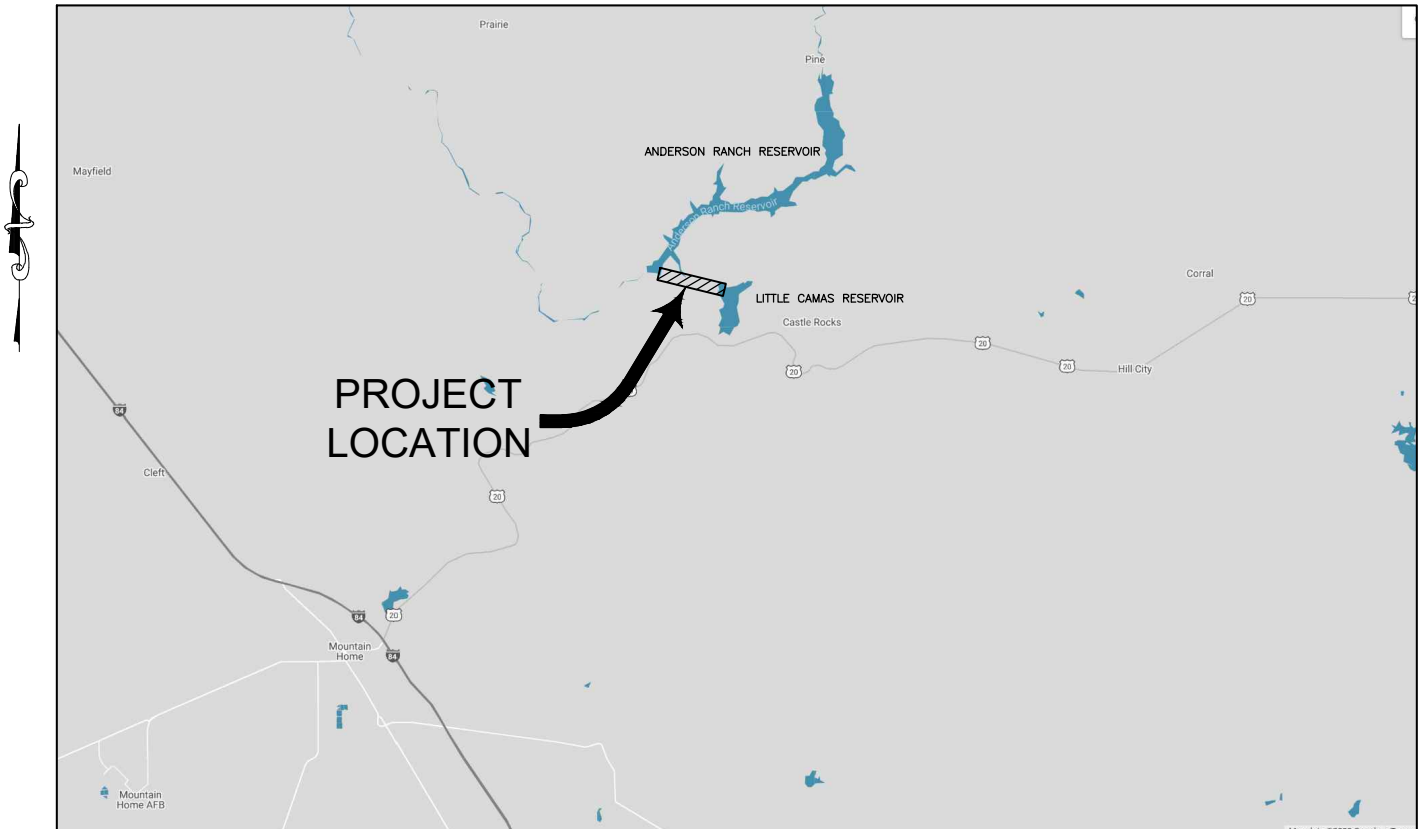
ELMORE COUNTY COMMISSIONERS  
ATTN: BUD CORBUS, DISTRICT 1  
150 SOUTH 4TH EAST  
MOUNTAIN HOME, ID 83647  
(208) 587-2129 EXT. 505  
EMAIL: budcorbus@gmail.com

SURVEYOR

JJ HOWARD CONSULTING:  
ERIC HOWARD, P.L.S.  
5983 W STATE ST.  
BOISE, ID 83703  
(208) 846-8937  
EMAIL: erich@howardeng.com

CIVIL ENGINEER

SPF WATER ENGINEERING  
ATTN: MIKE BOECK, P.E.  
300 E MALLARD DR, SUITE 350  
BOISE, ID 83706  
PHONE: (208) 383-4140  
EMAIL: mboeck@spfwater.com



VICINITY MAP

NO SCALE

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C201	PLAN & PROFILE STA 10+00 TO 21+00
C202	PLAN & PROFILE STA 21+00 TO 35+00
C203	PLAN & PROFILE STA 35+00 TO 49+00
C204	PLAN & PROFILE STA 49+00 TO 63+00
C205	PLAN & PROFILE STA 63+00 TO 77+00
C206	PLAN & PROFILE STA 77+00 TO 91+00
C207	PLAN & PROFILE STA 91+00 TO 98+00
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C209	PLAN & PROFILE STA 112+00 TO 126+00
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SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS

COVER

PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

REVISIONS	DATE	DESCRIPTION
ITEM	DATE	DESCRIPTION
A	04/27/20	10% REVIEW PLAN SET

VERIFY SCALE	0 1/2 1
BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.	
PROJECT:	1188.0033
DESIGNED:	JL/SM/HW
DRAWN:	JL/SM/HW
CHECKED:	MB/JL

G001



300 East Mallard Drive, Suite 350  
Boise, Idaho 83706  
Tel (208) 383-4140 Fax (208) 383-4156

GENERAL NOTES:

1.

THE "CONTRACTOR" AS REFERENCED IN THESE PLANS SHALL REFER TO THE COMPANY OR PERSON PERFORMING THE INSTRUCTED WORK. IF THE OWNER CHOOSES TO PERFORM ALL OR A PORTION OF THE WORK, THEY SHALL ASSUME THE DUTIES OF THE CONTRACTOR FOR THAT TASK.
2.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION MEETING WITH THE OWNER AND ENGINEER. AT THE MEETING, THE DIVISIONS OF LABOR AND CONSTRUCTION TASKS SHALL BE CLEARLY REVIEWED AND CONFIRMED AS THEY RELATE TO THE CONSTRUCTION PLANS AND AWARDED CONTRACTS. THE ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR GAPS OR OVERLAP IN CONSTRUCTION.
3.

CONSTRUCTION SHALL BE PER THE LATEST VERSION OF THE ISPWC OR THE CONSTRUCTION PLANS AND SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
4.

CONTRACTOR SHALL FURNISH ALL MATERIALS NOT SUPPLIED BY OWNER AND INSTALL EVERYTHING REQUIRED TO PROVIDE COMPLETE AND OPERABLE FACILITIES AS SHOWN HEREIN. IF THERE IS AN OMISSION ON THE PLANS, SUCH OMISSION SHALL NOT BE CONSTRUED TO MEAN THAT THE CONTRACTOR IS NOT REQUIRED TO FURNISH OR PROVIDE EVERYTHING THAT IS NECESSARY TO PROVIDE COMPLETE AND OPERABLE FACILITIES.
5.

ANY CHANGES TO THE DESIGN AS SHOWN IN THESE CONSTRUCTION DRAWINGS MUST BE REVIEWED AND APPROVED BY THE ENGINEER BEFORE CHANGES ARE MADE. THIS INCLUDES CHANGES REQUESTED BY THE OWNER'S REPRESENTATIVE AND SUBCONTRACTORS.
6.

ANY CHANGES MADE WITHOUT PRIOR APPROVAL ARE AT THE CONTRACTORS RISK AND IF NOT APPROVED THE CONTRACTOR SHALL BE RESPONSIBLE TO CORRECT OR REDO WORK AS DIRECTED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE CONTRACT.
7.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING MONUMENTS, OTHER SURVEY MARKERS, STREET SIGNS, UTILITIES, IRRIGATION LINES, PAVEMENT, TREES, FENCES, AND ANY OTHER IMPORTANT OBJECTS ON OR ADJACENT TO THE JOB SITE AS DETERMINED BY THE OWNER'S REPRESENTATIVE OR ENGINEER.
8.

CONTRACTOR SHALL CONTACT IDAHO'S DIGLINE 1-800-342-1585 TO MARK AND IDENTIFY UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
9.

CONTRACTOR SHALL LEGALLY DISPOSE OF ALL EXCESS MATERIAL. TRASH MUST BE DISPOSED OF LEGALLY OFF SITE.
10.

ALL "OR EQUAL" ITEMS ARE SUBJECT TO REVIEW AND APPROVAL OF THE ENGINEER.
11.

CONTRACTOR SHALL PROVIDE, MAINTAIN, AND BE RESPONSIBLE FOR ALL EROSION AND SEDIMENT CONTROL STRUCTURES AND PRACTICES AND MEET THE REQUIREMENTS OF ANY AGENCY HAVING JURISDICTION.
12.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAYING ALL FEES ASSOCIATED WITH THE WORK ILLUSTRATED ON THESE PLANS.
13.

UPON THE COMPLETION OF WORK, THE CONTRACTOR SHALL PROVIDE A SET OF RECORD DRAWINGS TO THE OWNER.
14.

CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE OWNER'S REPRESENTATIVE PRIOR TO, DURING, AND AT THE COMPLETION OF CONSTRUCTION ACTIVITY.
15.

IF WITHIN ONE (1) YEAR FROM THE DATE OF COMPLETION, THE PIPELINE AND ALL APPURTENANCES OR ANY PART THEREOF INSTALLED AS NEW SHALL PROVE TO BE DEFECTIVE IN INSTALLATION, MATERIAL, OR WORKMANSHIP THE CONTRACTOR SHALL WARRANT REPLACEMENT OR REPAIR TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT NO EXPENSE TO THE OWNER.
16.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN AS AN APPROXIMATE LOCATION ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. CONTRACTOR SHALL CONTACT PROPERTY OWNERS TO GAIN INFORMATION ON PRIVATE UTILITIES.
17.

ALL CONTRACTORS WORKING WITHIN THE PROJECT BOUNDARIES ARE RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE SAFETY LAWS OF ANY APPLICABLE JURISDICTIONAL BODY.
18.

CONTRACTOR SHALL PROVIDE, MAINTAIN, AND BE RESPONSIBLE FOR TRAFFIC CONTROL PERSONNEL AND DEVICES.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) NOTES:

1.

CONTRACTOR SHALL PROVIDE, MAINTAIN, AND BE RESPONSIBLE FOR ALL SWPPP STRUCTURES, PRACTICES, AND PLANS TO MEET ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS FOR WATER QUALITY AND EROSION AND SEDIMENT CONTROL.
2.

CONTRACTOR SHALL UTILIZE SWPPP BEST MANAGEMENT PRACTICES (BMPs) PER THE IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY CATALOG OF STORMWATER BMPs FOR IDAHO CITIES AND COUNTIES IN CONJUNCTION WITH ANY LOCAL AMENDMENTS OR REQUIREMENTS.
3.

CONTRACTOR TO PRESERVE EXISTING VEGETATION AND MINIMIZE THE AREAS DISTURBED BY CONSTRUCTION ACTIVITY.
4.

ANY DEWATERING ACTIVITIES SHOULD MEET ALL APPLICABLE REQUIREMENTS AND DEWATERING FLOWS SHALL NOT BE DISCHARGED INTO RECEIVING WATERS WITHOUT THE CONTRACTOR OBTAINING THE APPROPRIATE APPROVALS AND PERMITS.
5.

SWEEPING OF PAVED ROADS SHALL BE CONDUCTED AS NECESSARY TO KEEP PAVED SURFACES CLEAN.
6.

CONTRACTOR SHALL PROVIDE INLET PROTECTION TO ALL CULVERTS, INLETS, CANALS, AND SUB-SURFACE DRAINS.
7.

CONTRACTOR IS RESPONSIBLE FOR PROVIDING A SWPPP AND FILING A NOTICE OF INTENT.

PIPELINE CONSTRUCTION NOTES:

1.

THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE PIPELINE TESTING. TESTING SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATION 33 14 11 PIPELINE GENERAL REQUIREMENTS. THE ENGINEER OR DESIGNATED REPRESENTATIVE WILL BE PRESENT FOR THE TESTING.
2.

CONTRACTOR SHALL USE PIPE BEDDING MATERIAL PER SPECIFICATIONS 31 23 33 EXCAVATION, TRENCHING & BACKFILL.
3.

CONTRACTOR SHALL USE TRENCH BACKFILL MATERIAL PER DETAILS ON SHEET C500.
4.

PIPELINE SHALL HAVE A MINIMUM COVER DEPTH AS SPECIFIED IN THE PROFILE SHEETS.
5.

INSTALL PIPE WITH UNIFORM SLOPES AND STRAIGHT ALIGNMENTS WHERE POSSIBLE, AVOID LOCALIZED HIGH AND LOW POINTS (TYP).
6.

DO NOT ATTEMPT TO DEFLECT PIPE AT JOINT MORE THAN WHAT IS SPECIFIED BY THE MANUFACTURER OR BY MORE THAN THE WHAT PROJECT DRAWINGS SHOW. CHOOSE WHICHEVER IS MORE STRINGENT.
7.

INSTALL THRUST BLOCKS FOR ALL PIPE FITTINGS AND ACCESSORIES WHERE SHOWN IN THE PROJECT PLAN AND DETAIL SHEETS.
8.

FINISHED GRADE OF THE PIPELINE SHALL BE EQUAL OR GREATER THAN EXISTING GRADE WITH A MINIMUM OF 4- FEET OF COVER IN MOST AREAS.

PIPELINE DESIGN CRITERIA AND ASSUMPTIONS

1.

SOURCE WATER: ANDERSON RANCH RESERVOIR
2.

PIPELINE LENGTH & MATERIAL: ±900-FT STEEL, ±12,600-FT FRP
3.

PIPELINE DESIGN CAPACITY PER SECTION: 200-CFS (89,767-GPM)
4.

PRIMARY DELIVERY POINTS & RISE: STA. (LITTLE CAMAS RESERVOIR)

SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS

GENERAL NOTES

PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

REVISIONS		DATE
ITEM	DESCRIPTION	
A	10% REVIEW PLAN SET	04/27/20

VERIFY SCALE	
<div><div>0</div><div>1/2</div><div>1</div></div>	
BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.	
PROJECT:	1188.0033
DESIGNED:	JL/SM/HW
DRAWN:	JL/SM/HW
CHECKED:	MB/JL

G002



SPF WATER  
ENGINEERING

300 East Mallard Drive, Suite 350  
Boise, Idaho 83706  
Tel (208) 383-4140 Fax (208) 383-4156

EXISTING FEATURES LEGEND (TYP)

_____	P/L	_____	PROPERTY LINE
_____	RW	_____	RIGHT-OF-WAY
_____	EG	_____	EDGE OF GRAVEL
_____	EP	_____	EDGE OF PAVEMENT
_____	X	_____	FENCE
_____	F/O	_____	FIBER OPTIC
_____	G	_____	GAS
_____	GIRR	_____	GRAVITY IRRIGATION
_____	PIRR	_____	PRESSURIZED IRRIGATION
_____	HGL	_____	HYDRAULIC GRADE LINE
_____	SD	_____	STORM DRAIN
_____	SS	_____	SANITARY SEWER
_____	TOB	_____	TOP OF BANK
_____	TOE	_____	TOE
_____	OHP	_____	OVERHEAD POWER
_____	UP	_____	UNDERGROUND POWER
_____	UT	_____	UNDERGROUND TELEPHONE
_____	W	_____	WATER

PROPOSED FEATURES LEGEND (TYP)

_____	EG	_____	EDGE OF GRAVEL
_____	EP	_____	EDGE OF PAVEMENT
_____	X	_____	FENCE
_____	F/O	_____	FIBER OPTIC
_____	FILL	_____	FILL LIMITS
_____	G	_____	GAS
_____	GIRR	_____	GRAVITY IRRIGATION
_____	PIRR	_____	PRESSURIZED IRRIGATION
_____	HGL	_____	HYDRAULIC GRADE LINE
_____	SD	_____	STORM DRAIN
_____	SS	_____	SANITARY SEWER
_____	W	_____	WATER
_____	TOB	_____	TOP OF BANK
_____	OHP	_____	OVERHEAD POWER
_____	UP	_____	UNDERGROUND POWER
_____	⌵	_____	FIRE HYDRANT
_____	⊗	_____	WATER VALVE

ABBREVIATIONS

APPROX.	APPROXIMATE	MIN	MINIMUM
BTM.	BOTTOM	N	NORTH
CAV	COMBINATION AIR VALVE	NE	NORTHEAST
CF	CUBIC FEET	N.I.C.	NOT-IN-CONTRACT
DIA.	DIAMETER	PVC	POLYVINYL CHLORIDE
E	EAST	R	RADIUS
ELEV.	ELEVATION	S	SOUTH
EP	EDGE OF PAVEMENT	SD	STORM DRAIN, STANDARD DRAWING
EX	EXISTING	SF	SQUARE FEET
FG	FINISH GRADE	STA	STATION
FL	FLOWLINE	TA	TOP ASPHALT
FRP	FIBERGLASS REINFORCED PIPE	TBC	TOP BACK CURB
HP	HIGH POINT	TC	TOP CONCRETE
IE	INVERT ELEVATION	TOW	TOP OF WALL
ISPMC	IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	TP	TOP PAVER
LF	LINEAR FEET	TYP	TYPICAL
LP	LOW POINT	W	WEST
MAX	MAXIMUM		

SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS

LEGENDS & ABBREVIATIONS

PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

REVISIONS		DATE
ITEM	DESCRIPTION	
A	10% REVIEW PLAN SET	04/27/20

VERIFY SCALE	
<div><div></div><div>0</div><div>1/2</div><div>1</div></div>	
BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.	
PROJECT:	1188.0033
DESIGNED:	JL/SM/HW
DRAWN:	JL/SM/HW
CHECKED:	MB/JL

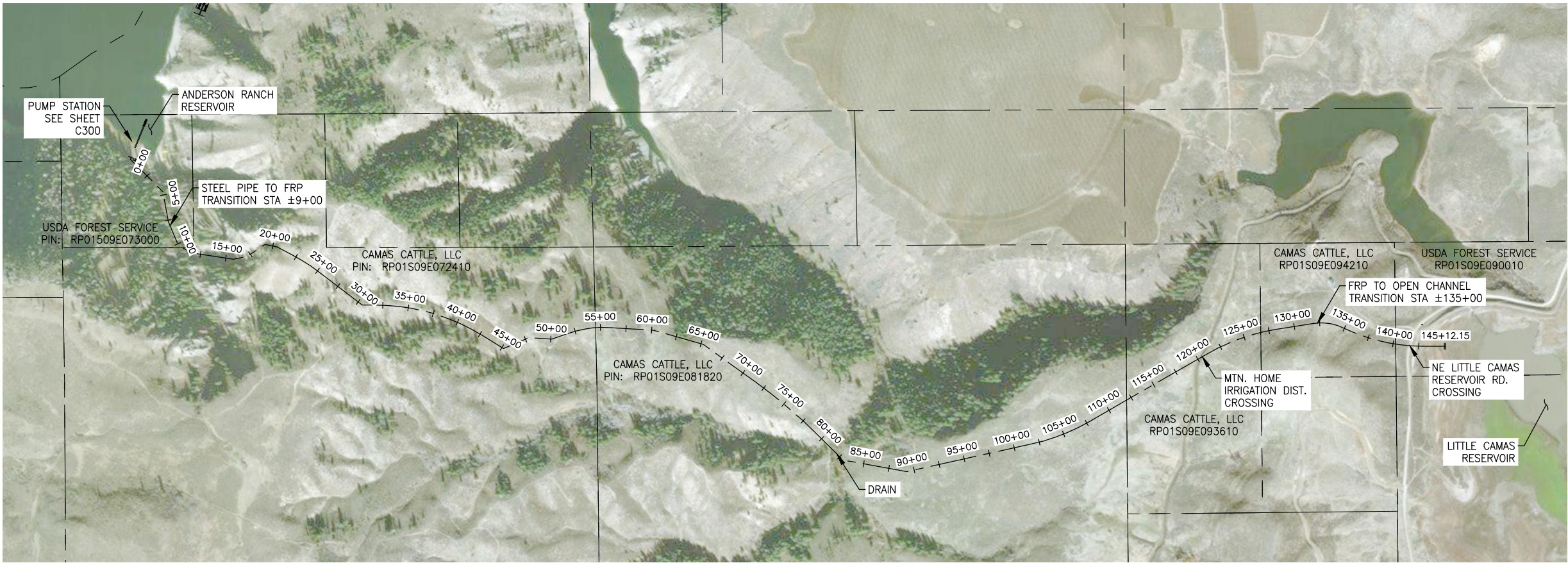
G003



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Path: C:\Temp\Elmore County\2020 A Filename: SFBR\_10\_C100 Plot date: Apr 27, 2020--04:18:20pm CAD User: HWhite.  
Xref Filename: | PropertyLines | X-SITE | Pump Station | X-TITLE | SFBR\_10\_PP |



PIPELINE NOTES

1. TRENCHING (CUT) BCY – ±59,000

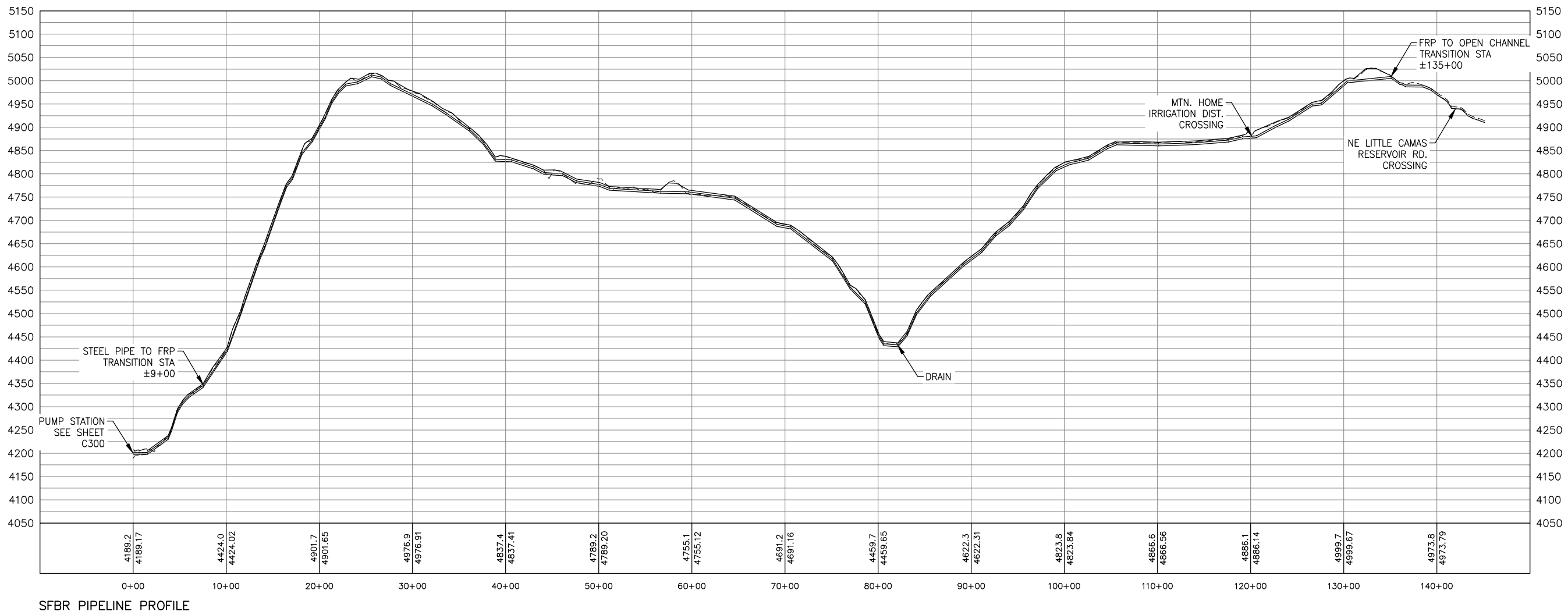
2. FINISHED GRADE (CUT) BCY – ±24,000

3. FINISHED GRADE (FILL) BCY – ±24,000

PUMP STATION SITE NOTES

1. FINISHED GRADE (CUT) BCY – ±8

2. FINISHED GRADE (FILL) BCY – ±86,000



SPF WATER  
ENGINEERING

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SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS

SITE PLAN

PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

REVISIONS	DATE
ITEM	DESCRIPTION
A	10% REVIEW PLAN SET

VERIFY SCALE  
  
BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.

PROJECT: 1188.0033

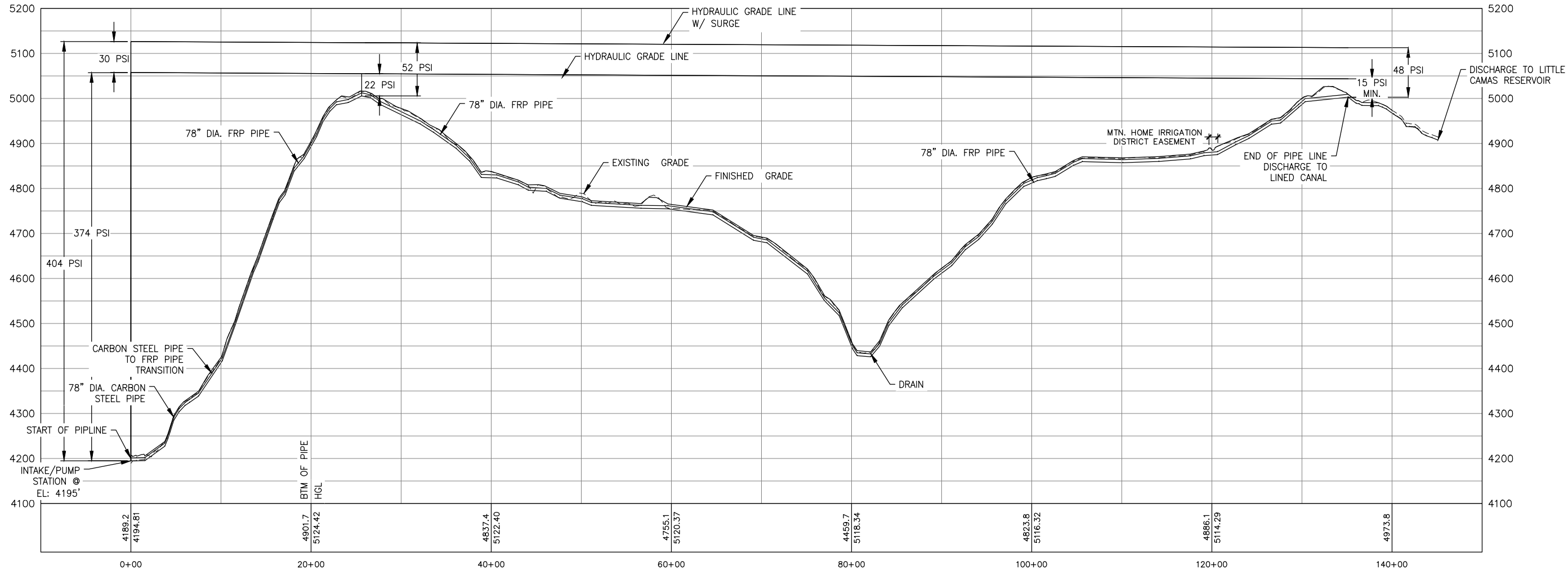
DESIGNED: JL/SM/HW

DRAWN: JL/SM/HW

CHECKED: MB/JL

C100

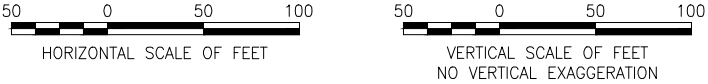
Path: C:\Temp\Elmore County\2020 A File\Name: SFBR\_10\_HGL\_2.0 Plot date: Apr 27, 2020-05:54:45pm CAD User: HWhite.  
Xref Filename: | PropertyLines | X-SITE | Pump Station | X-TITLE | SFBR\_10\_PP |



SFBR PIPELINE PROFILE

NOTE:  
INTAKE @ 4195' ACCOUNTS FOR 60' BELOW  
MEASURED WATER SURFACE ELEVATION, 6'  
FOR DAM ALTERATION & 3' FOR FREEBOARD

HYDRAULIC PROFILE AT 200 CFS



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SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS

PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

REVISIONS	DATE	DESCRIPTION
ITEM	04/27/20	
A		10% REVIEW PLAN SET

VERIFY SCALE

BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.

PROJECT: 1188.0033  
DESIGNED: JL/SM/HW  
DRAWN: JL/SM/HW  
CHECKED: MB/JL

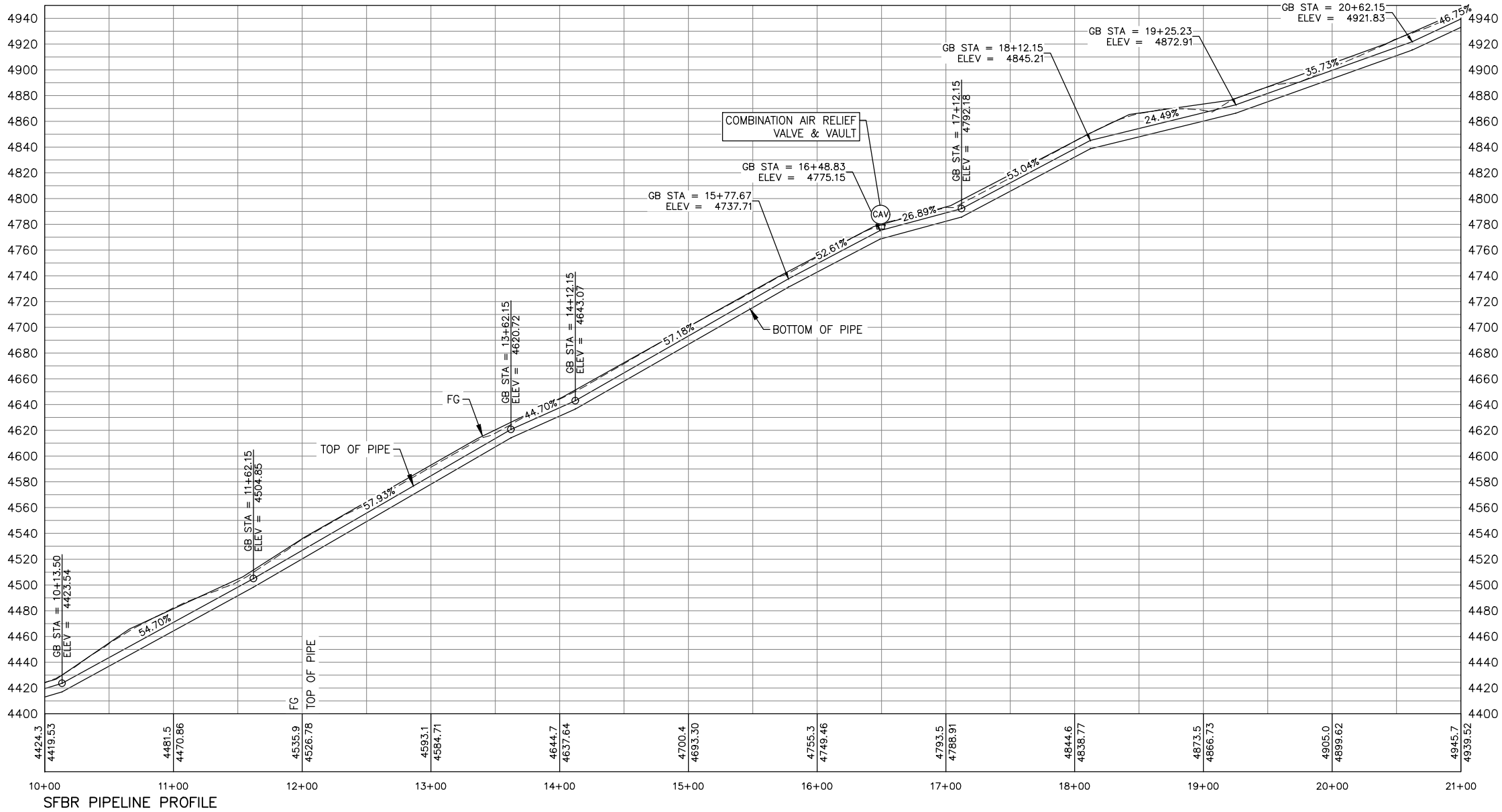
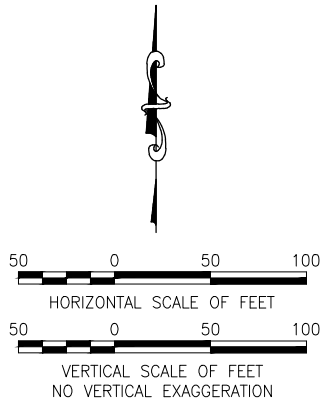
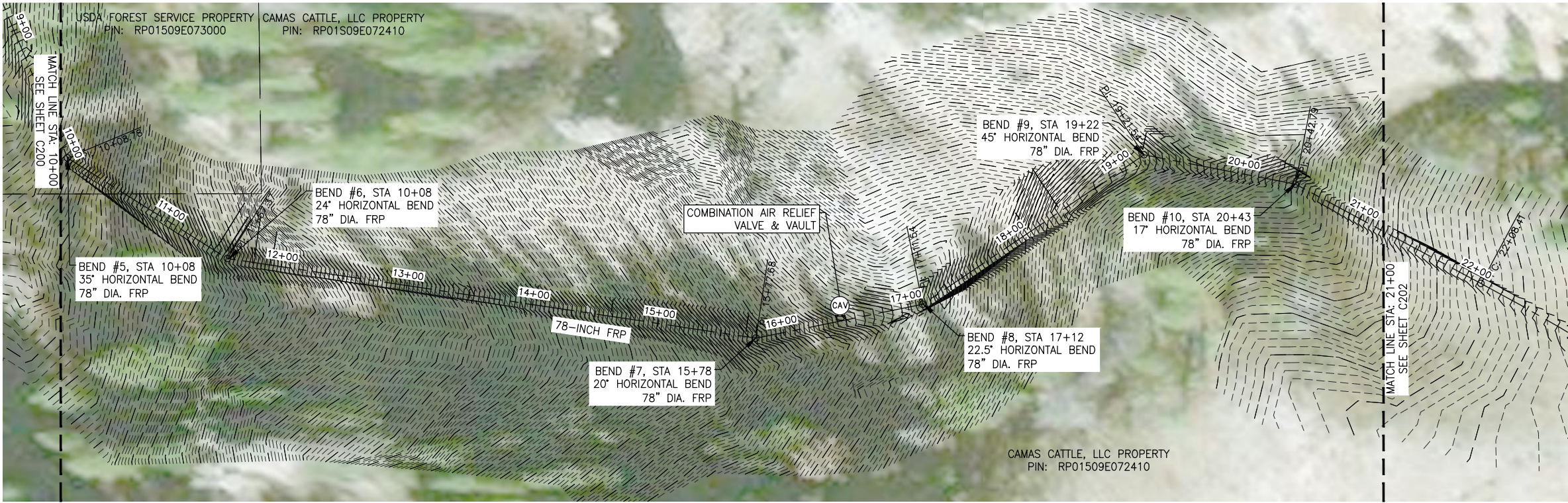
C101







Path: C:\Temp\Elmore County\2020 A Filename: SFBR\_10\_PP Plot date: Apr 27, 2020--05:28:50pm CAD User: HWhite.  
Xref Filename: | Property Lines | X-SITE | Pump Station | X-TITLE | SFBR\_10\_PP |



SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS

PLAN & PROFILE STA 10+00 TO 21+00

PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

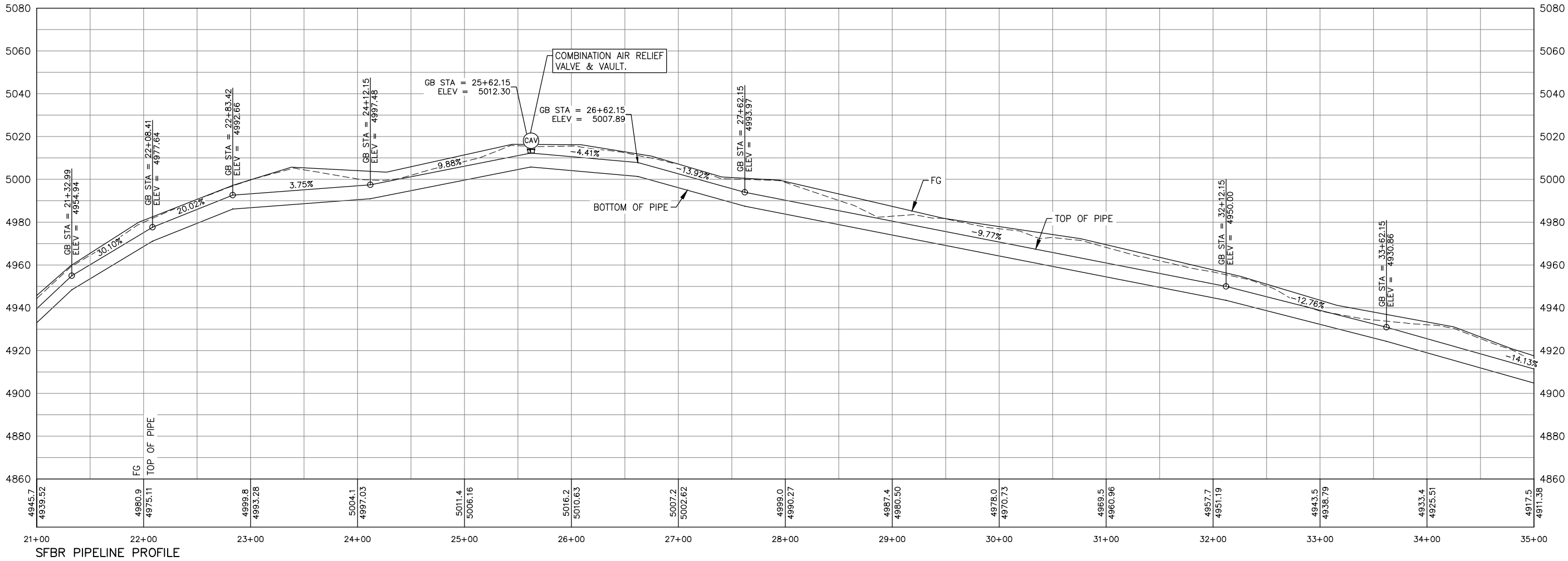
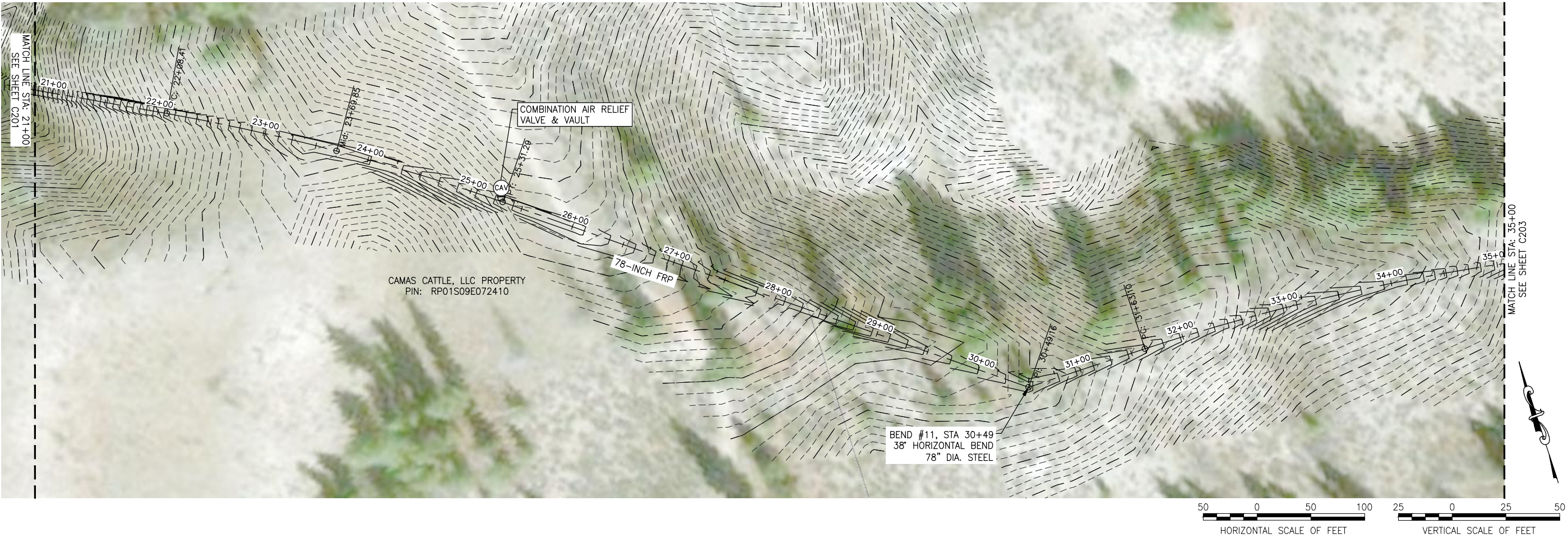
REVISIONS		DATE
ITEM	DESCRIPTION	
A	10% REVIEW PLAN SET	04/27/20

VERIFY SCALE	0 1/2 1
BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.	
PROJECT:	1188.0033
DESIGNED:	JL/SM/HW
DRAWN:	JL/SM/HW
CHECKED:	MB/JL

C201



Path: C:\Temp\Elmore County\2020 A File\Name: SFBR\_10\_PP Plot date: Apr 27, 2020-05:29:46pm CAD User: HWhite.  
Xref Filename: | PropertyLines | X-SITE | Pump Station | X-TITLE | SFBR\_10\_PP |



SPF WATER  
ENGINEERING

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SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS

PLAN & PROFILE STA 21+00 TO 35+00

REVISIONS	
ITEM	DESCRIPTION
A	10% REVIEW PLAN SET

DATE	
04/27/20	

VERIFY SCALE

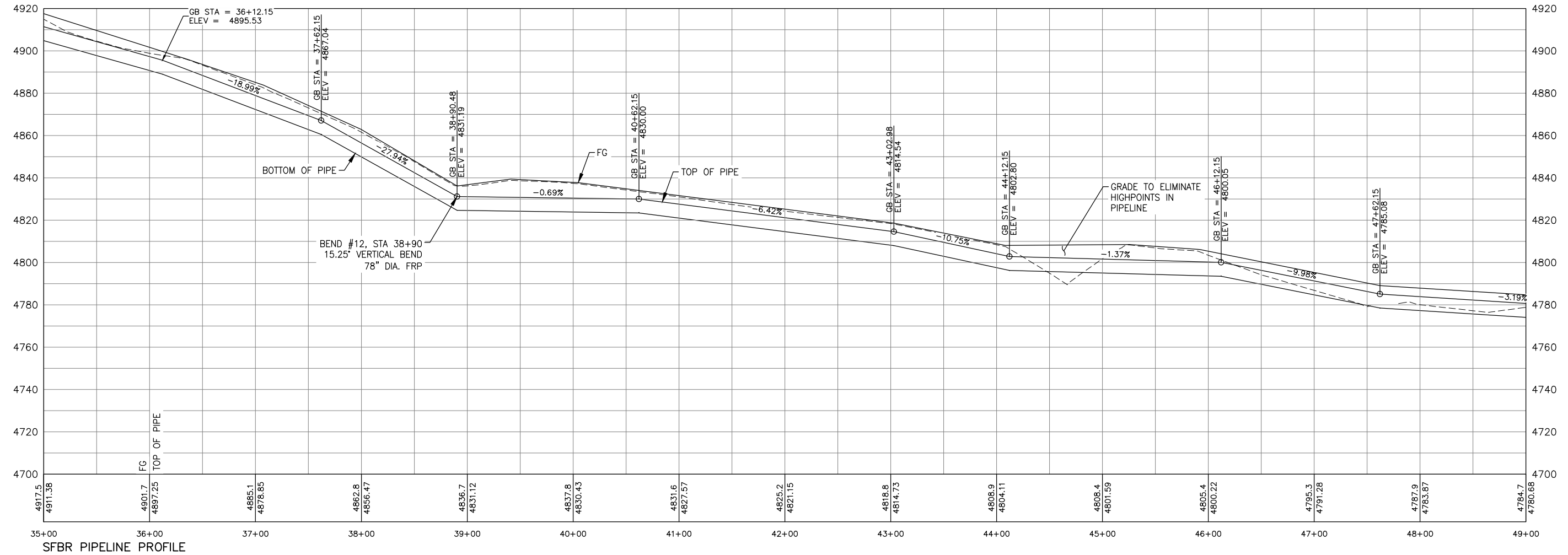
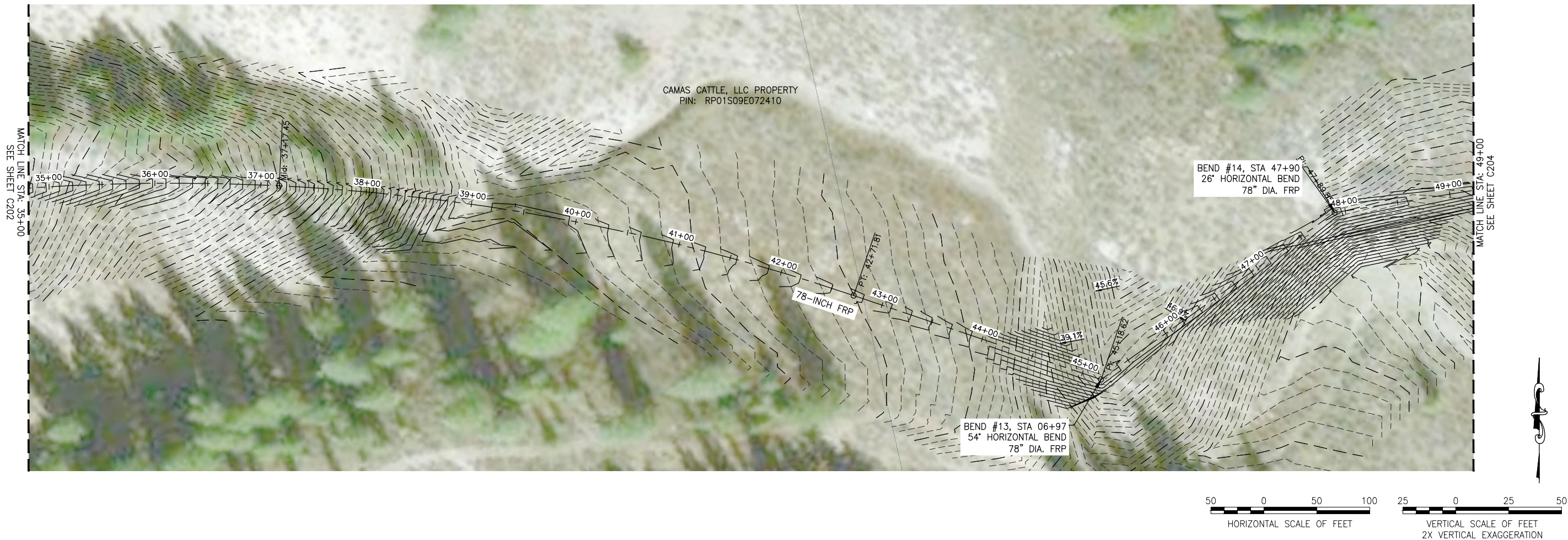
BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.


PROJECT: 1188.0033  
DESIGNED: JL/SM/HW  
DRAWN: JL/SM/HW  
CHECKED: MB/JL

C202



Path: C:\Temp\Elmore County\2020 A Filename: SFBR\_10\_PP Plot date: Apr 27, 2020-05:30:31pm CAD User: HWhite.  
Xref Filename: | PropertyLines | X-SITE | Pump Station | X-TITLE | SFBR\_10\_PP |





SPF WATER  
ENGINEERING

300 East Mallard Drive, Suite 350  
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SOUTH FORK BOISE RIVER DIVERSION

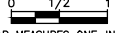
ELMORE COUNTY COMMISSIONERS

PLAN & PROFILE STA 35+00 TO 49+00

PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

ITEM	REVISIONS	DESCRIPTION	DATE
A	10%	REVIEW PLAN SET	04/27/20

VERIFY SCALE



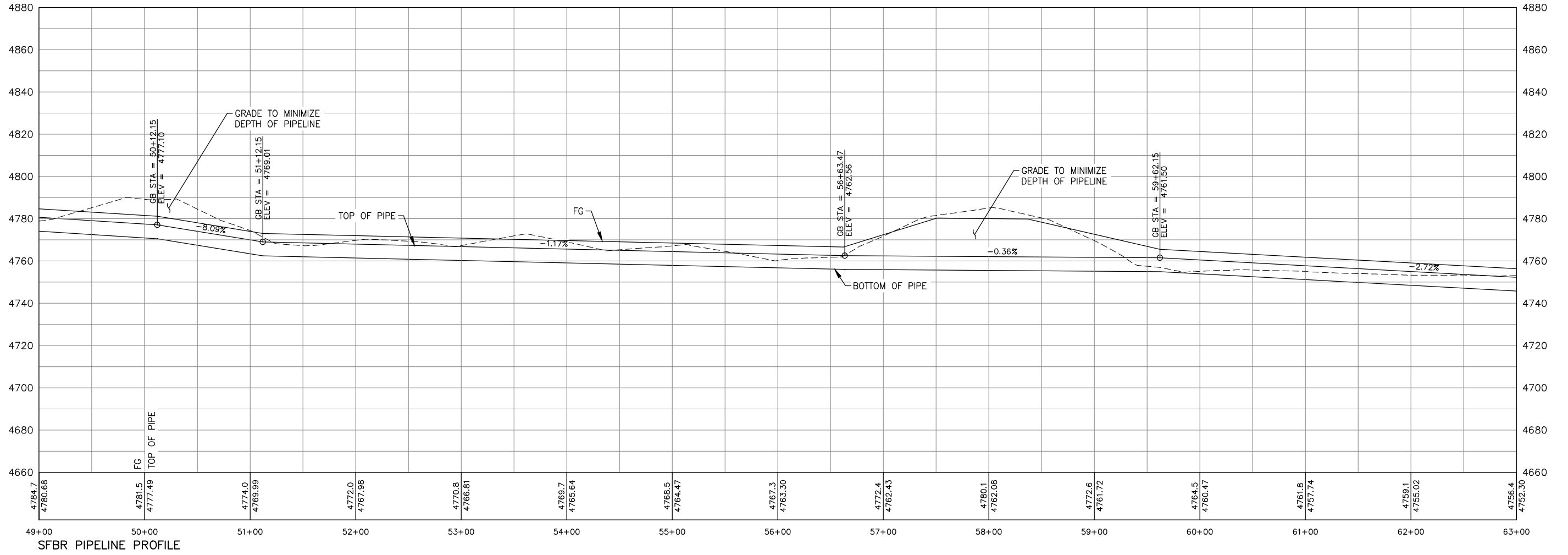
BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.

PROJECT:	1188.0033
DESIGNED:	JL/SM/HW
DRAWN:	JL/SM/HW
CHECKED:	MB/JL

C203



Path: C:\Temp\Elmore County\2020 A Filename: SFBR\_10\_PP Plot date: Apr 27, 2020-05:31:19pm CAD User: HWhite.  
Xref Filename: | PropertyLines | X-SITE | Pump Station | X-TITLE | SFBR\_10\_PP |



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**SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS**

PLAN & PROFILE STA 49+00 TO 63+00

PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

ITEM	REVISIONS	DESCRIPTION	DATE
A	10%	REVIEW PLAN SET	04/27/20

VERIFY SCALE

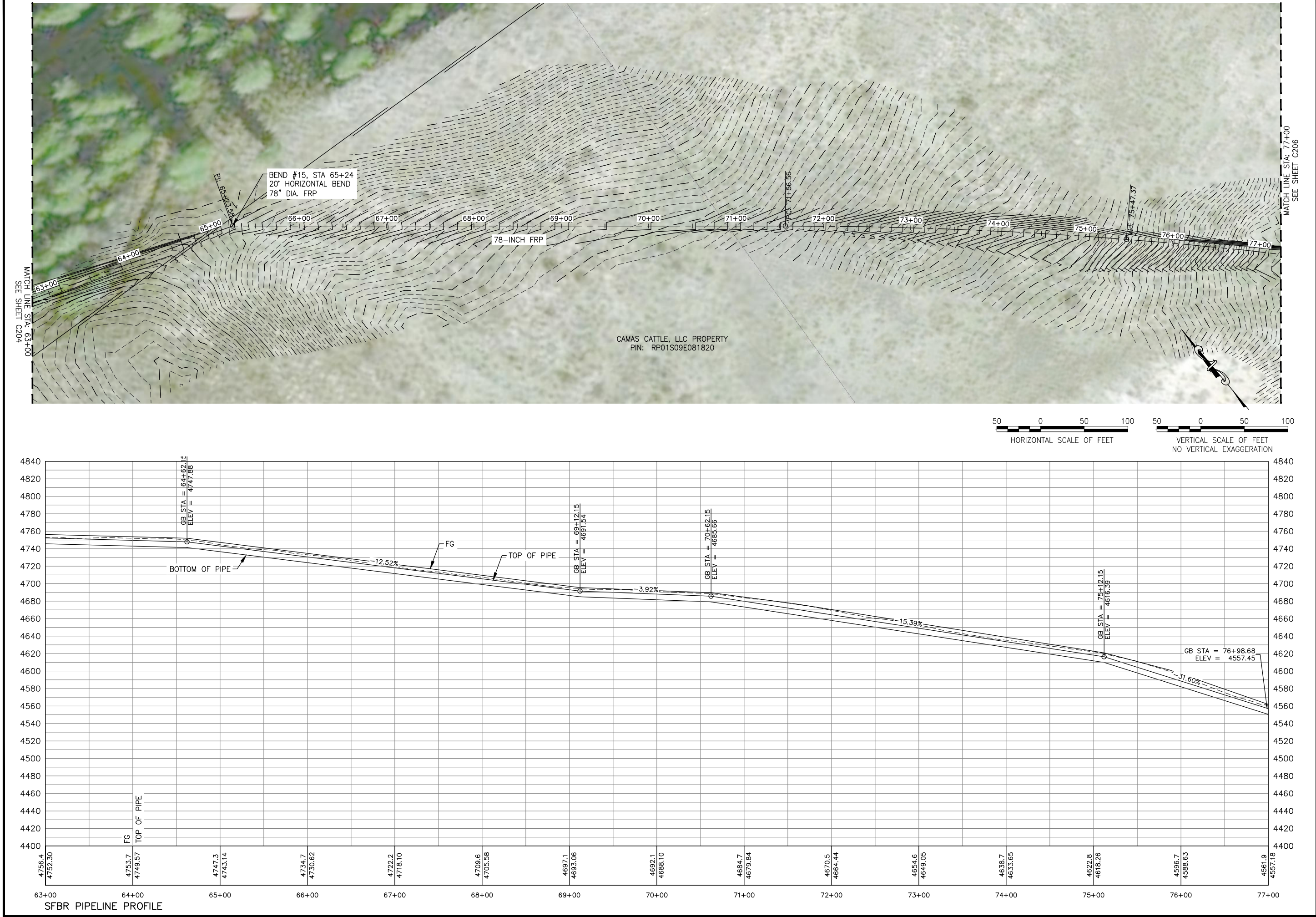
BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.

PROJECT:	1188.0033
DESIGNED:	JL/SM/HW
DRAWN:	JL/SM/HW
CHECKED:	MB/JL

**C204**



Path: C:\Temp\Elmore County\2020 A Filename: SFBR\_10\_PP Plot date: Apr 27, 2020-05:35:10pm CAD User: HWhite.  
Xref Filename: | PropertyLines | X-SITE | Pump Station | X-TITLE | SFBR\_10\_PP |



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SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS

PLAN & PROFILE STA 63+00 TO 77+00

PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

ITEM	REVISIONS DESCRIPTION	DATE
A	10% REVIEW PLAN SET	04/27/20

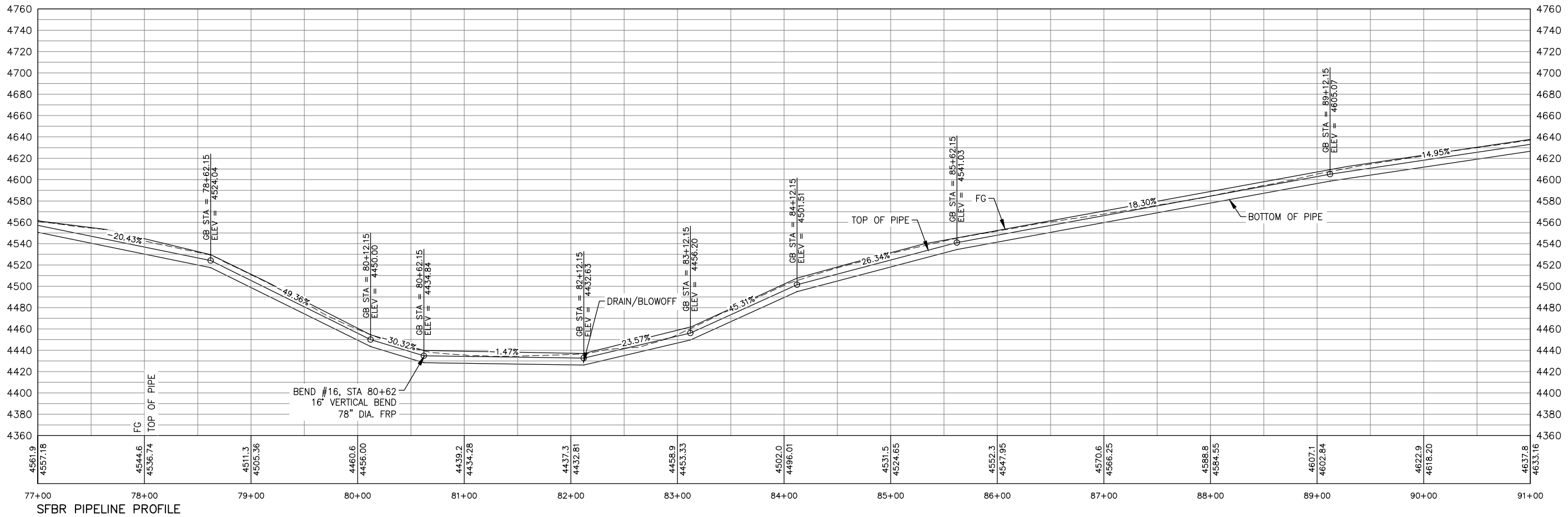
VERIFY SCALE  
0 1/2 1  
BAR MEASURES ONE-INCH  
ON FULL SIZE DRAWING.

PROJECT: 1188.0033  
DESIGNED: JL/SM/HW  
DRAWN: JL/SM/HW  
CHECKED: MB/JL

C205



Path: C:\Temp\Elmore County\2020 A Filename: SFRB\_10\_PP Plot date: Apr 27, 2020--05:36:01pm CAD User: HWhite.  
Xref Filename: | PropertyLines | X-SITE | Pump Station | X-TITLE | SFRB\_10\_PP |



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SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS

PLAN & PROFILE STA 77+00 TO 91+00

REVISIONS	
ITEM	DESCRIPTION
A	10% REVIEW PLAN SET

DATE	
04/27/20	

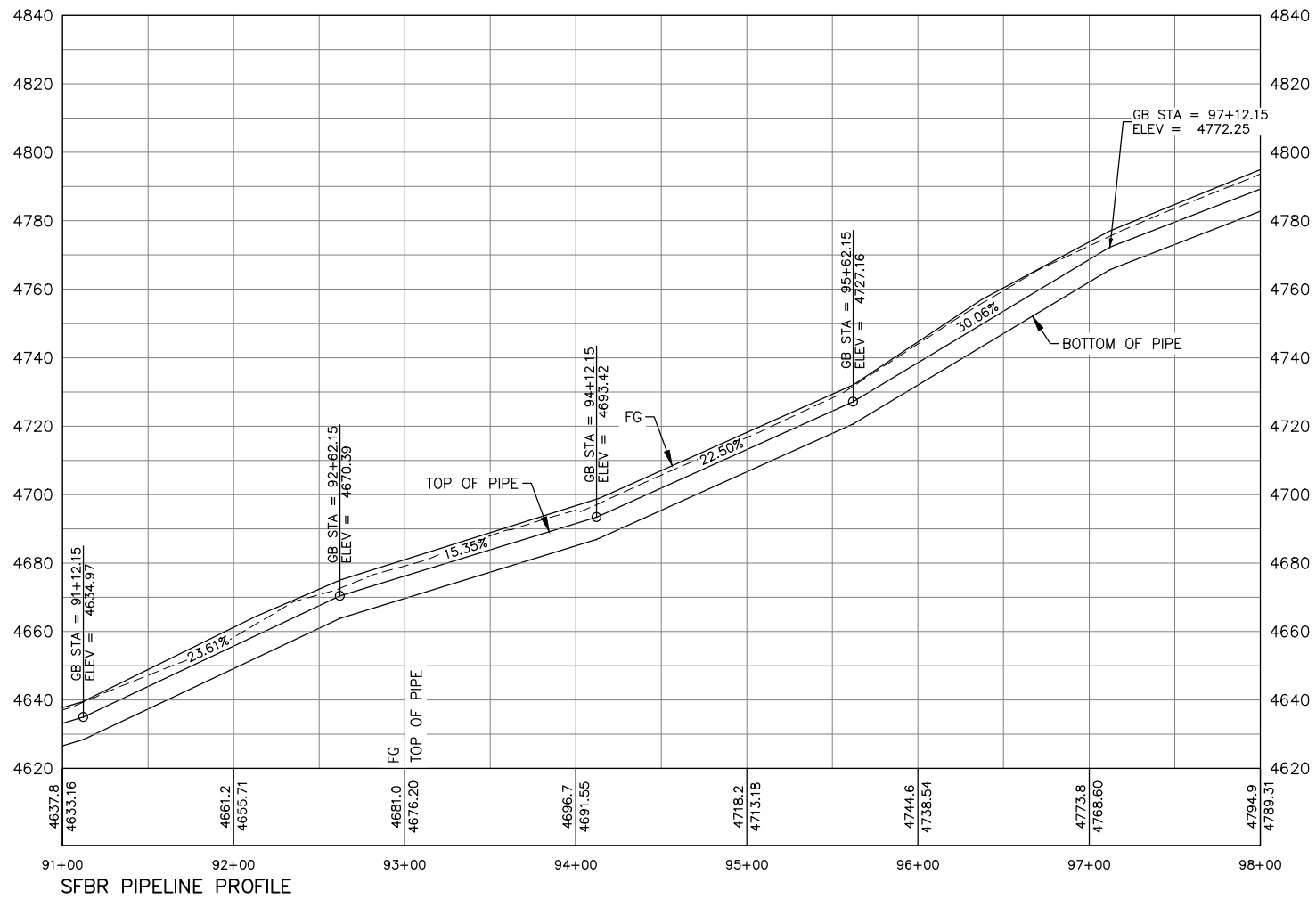
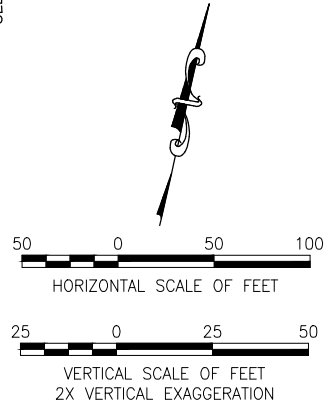
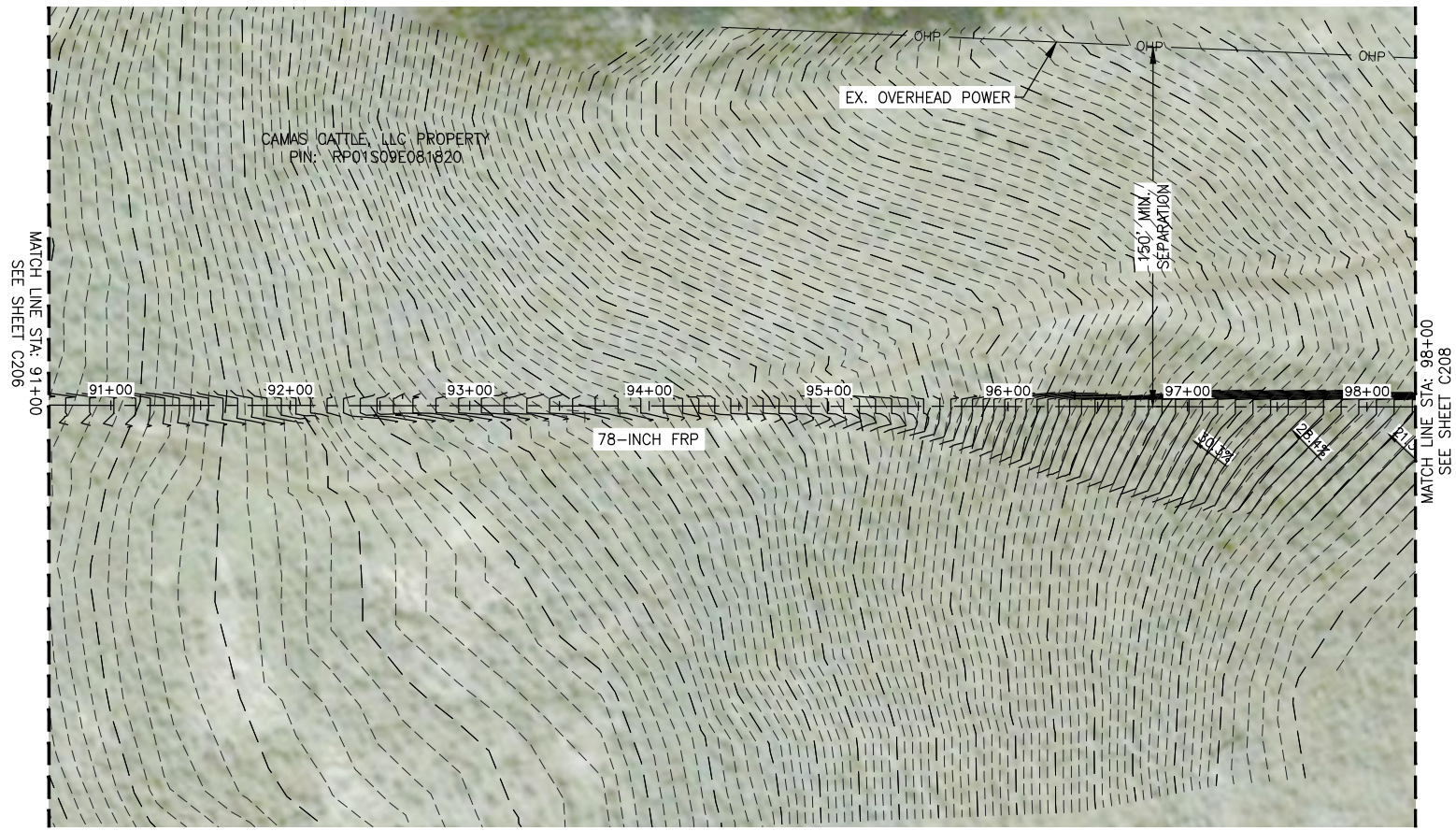
VERIFY SCALE  
0 1/2 1  
BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.

PROJECT: 1188.0033  
DESIGNED: JL/SM/HW  
DRAWN: JL/SM/HW  
CHECKED: MB/JL

C206



Path: C:\Temp\Elmore County\2020 A Filename: SFBR\_10\_PP Plot date: Apr 27, 2020-05:36:47pm CAD User: HWhite.  
Xref Filename: | PropertyLines | X-SITE | Pump Station | X-TITLE | SFBR\_10\_PP |



SPF WATER  
ENGINEERING

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SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS

PLAN & PROFILE STA 91+00 TO 98+00

PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

ITEM	REVISIONS DESCRIPTION	DATE
A	10% REVIEW PLAN SET	04/27/20

VERIFY SCALE  
0 1/2 1  
BAR MEASURES ONE-INCH  
ON FULL SIZE DRAWING.

PROJECT: 1188.0033

DESIGNED: JL/SM/HW

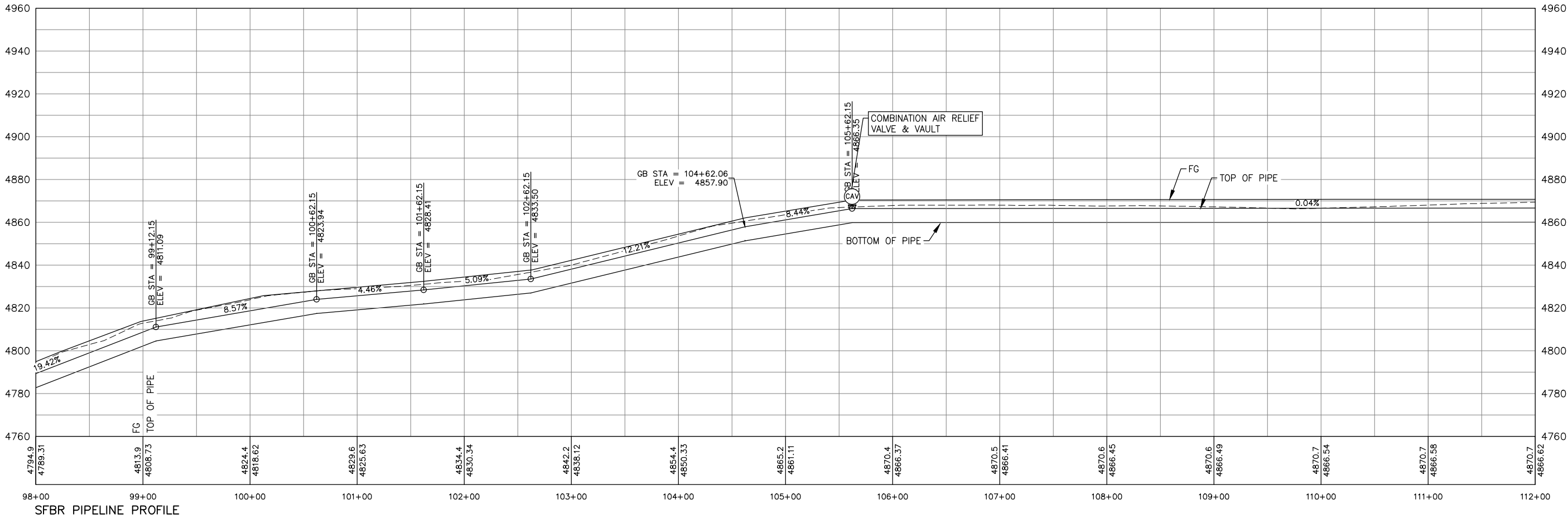
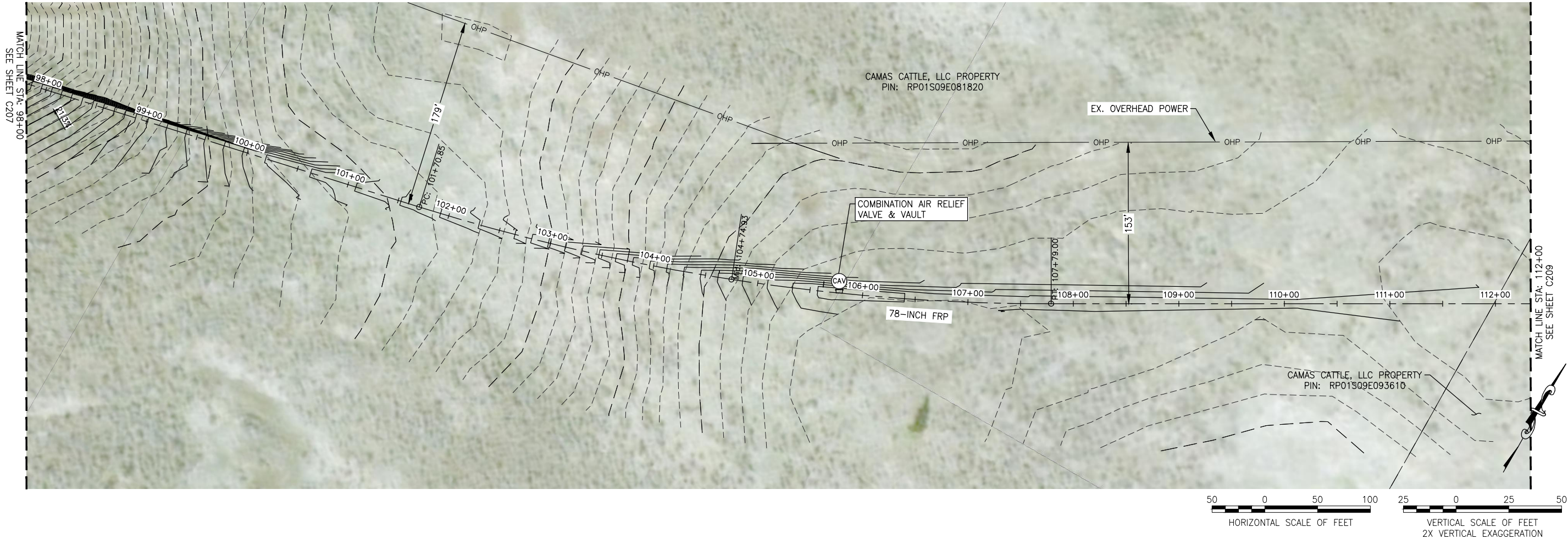
DRAWN: JL/SM/HW

CHECKED: MB/JL

C207



Path: C:\Temp\Elmore County\2020 A Filename: SFRB\_10\_PP Plot date: Apr 27, 2020-05:37:30pm CAD User: HWhite.  
Xref Filename: | PropertyLines | X-SITE | Pump Station | X-TITLE | SFRB\_10\_PP |



SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS

PLAN & PROFILE STA 98+00 TO 112+00

PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

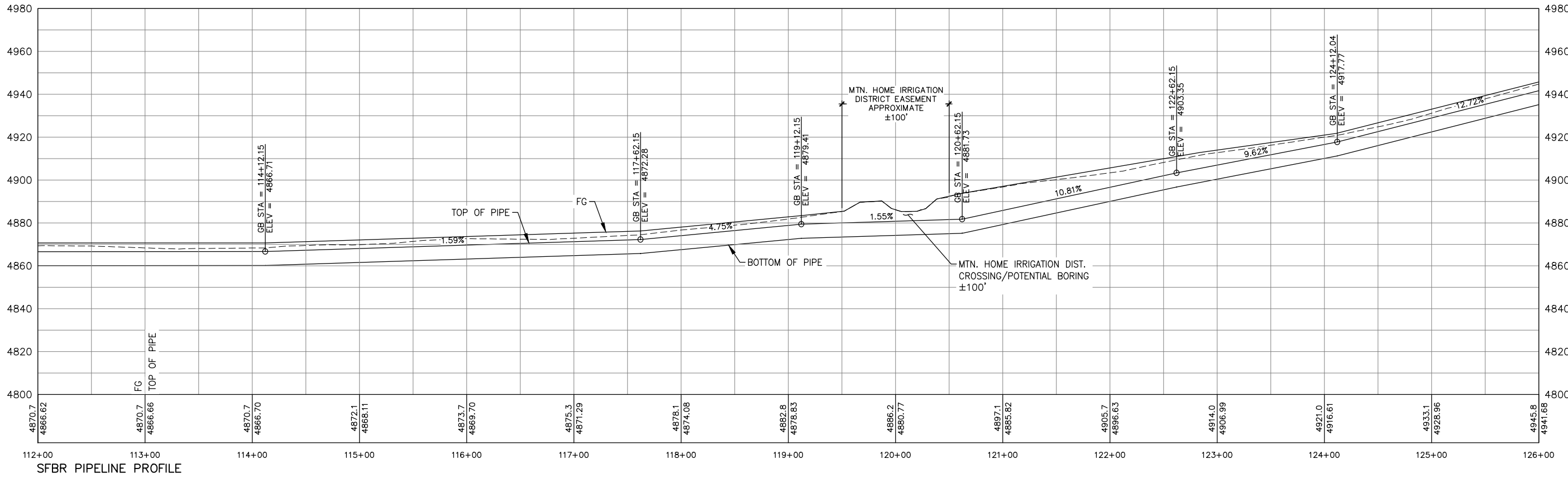
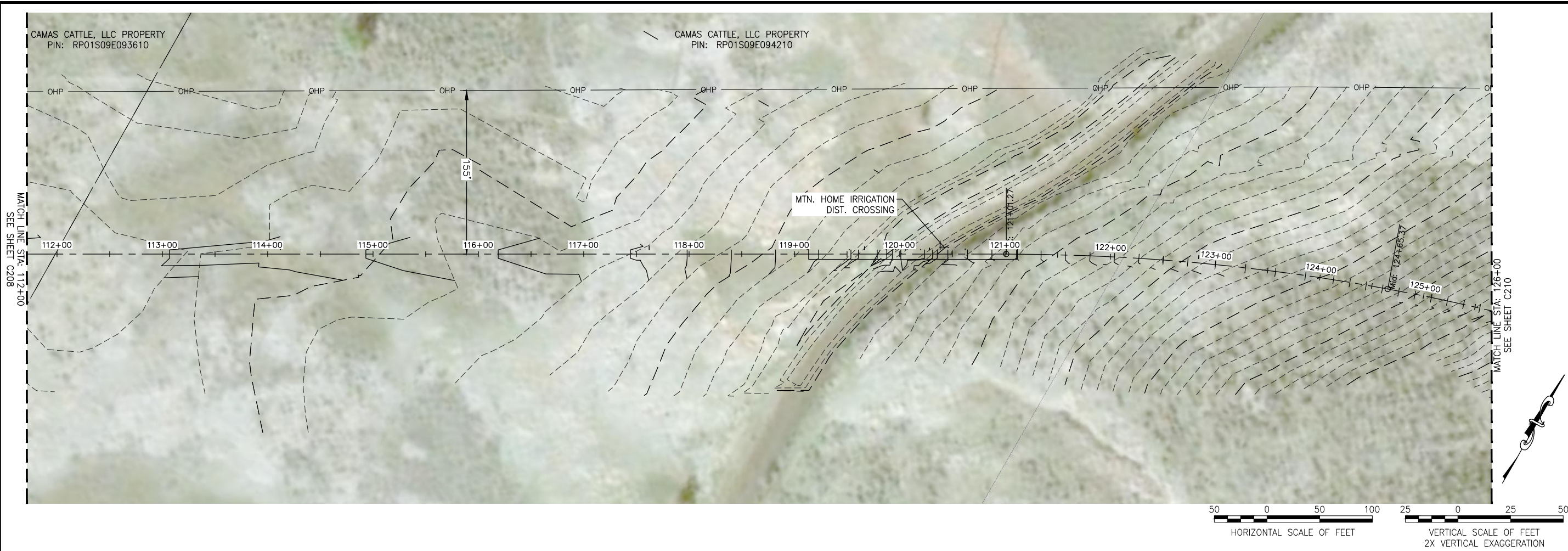
ITEM	REVISIONS		DATE
	DESCRIPTION	PLAN SET	
A	10% REVIEW		04/27/20

VERIFY SCALE	
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BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.	
PROJECT:	1188.0033
DESIGNED:	JL/SM/HW
DRAWN:	JL/SM/HW
CHECKED:	MB/JL

C208



Path: C:\Temp\Elmore County\2020 A Filename: SFBP\_10\_PP Plot date: Apr 27, 2020-05:38:13pm CAD User: HWhite.  
Xref Filename: | PropertyLines | X-SITE | Pump Station | X-TITLE | SFBP\_10\_PP |



SPF WATER  
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SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS

PLAN & PROFILE STA 112+00 TO 126+00

PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

ITEM	REVISIONS	DESCRIPTION	DATE
A	10%	REVIEW PLAN SET	04/27/20

VERIFY SCALE

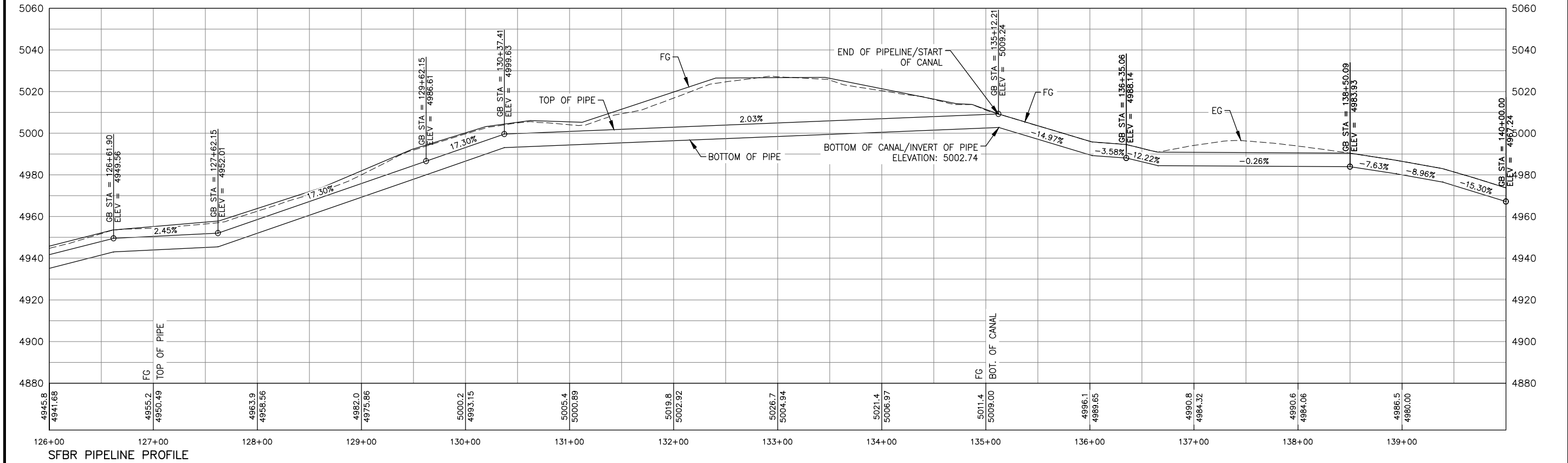
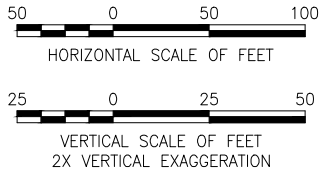
BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.

PROJECT:	1188.0033
DESIGNED:	JL/SM/HW
DRAWN:	JL/SM/HW
CHECKED:	MB/JL

C209



Path: C:\Temp\Elmore County\2020 A Filename: SFBR\_10\_PP Plot date: Apr 27, 2020-05:38:55pm CAD User: HWhite.  
Xref Filename: | PropertyLines | X-SITE | Pump Station | X-TITLE | SFBR\_10\_PP |



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SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS

PLAN & PROFILE STA 126+00 TO 140+00

REVISIONS	
ITEM	DESCRIPTION
A	10% REVIEW PLAN SET

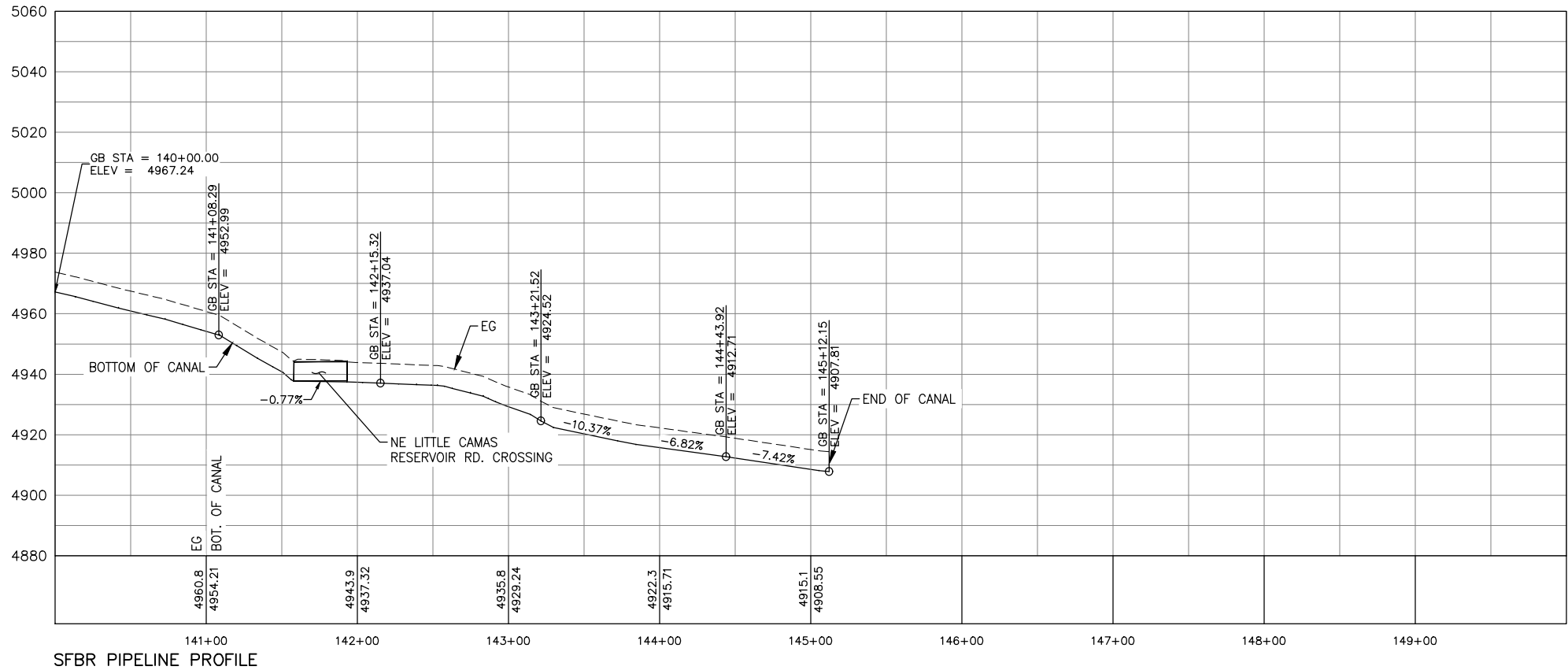
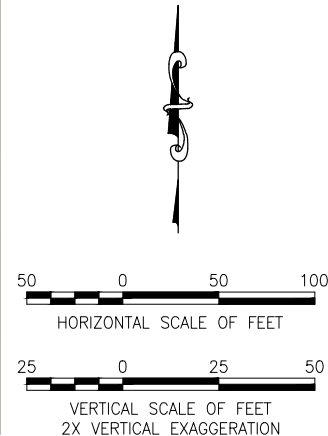
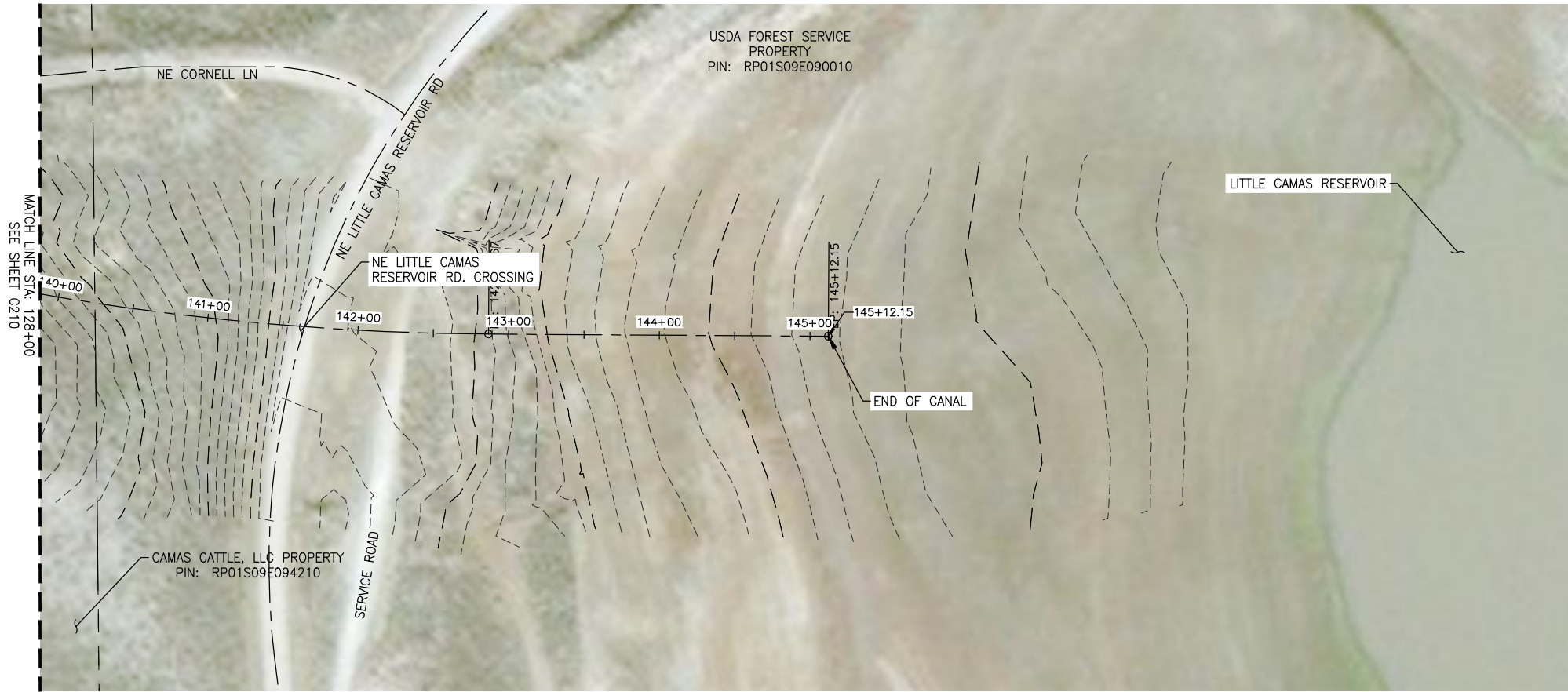
VERIFY SCALE

BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.

PROJECT:	1188.0033
DESIGNED:	JL/SM/HW
DRAWN:	JL/SM/HW
CHECKED:	MB/JL

C210

Path: C:\Temp\Elmore County\2020 A Filename: SFBR\_10\_PP Plot date: Apr 27, 2020-05:39:35pm CAD User: HWhite.  
Xref Filename: | PropertyLines | X-SITE | Pump Station | X-TITLE | SFBR\_10\_PP |



SFBR PIPELINE PROFILE

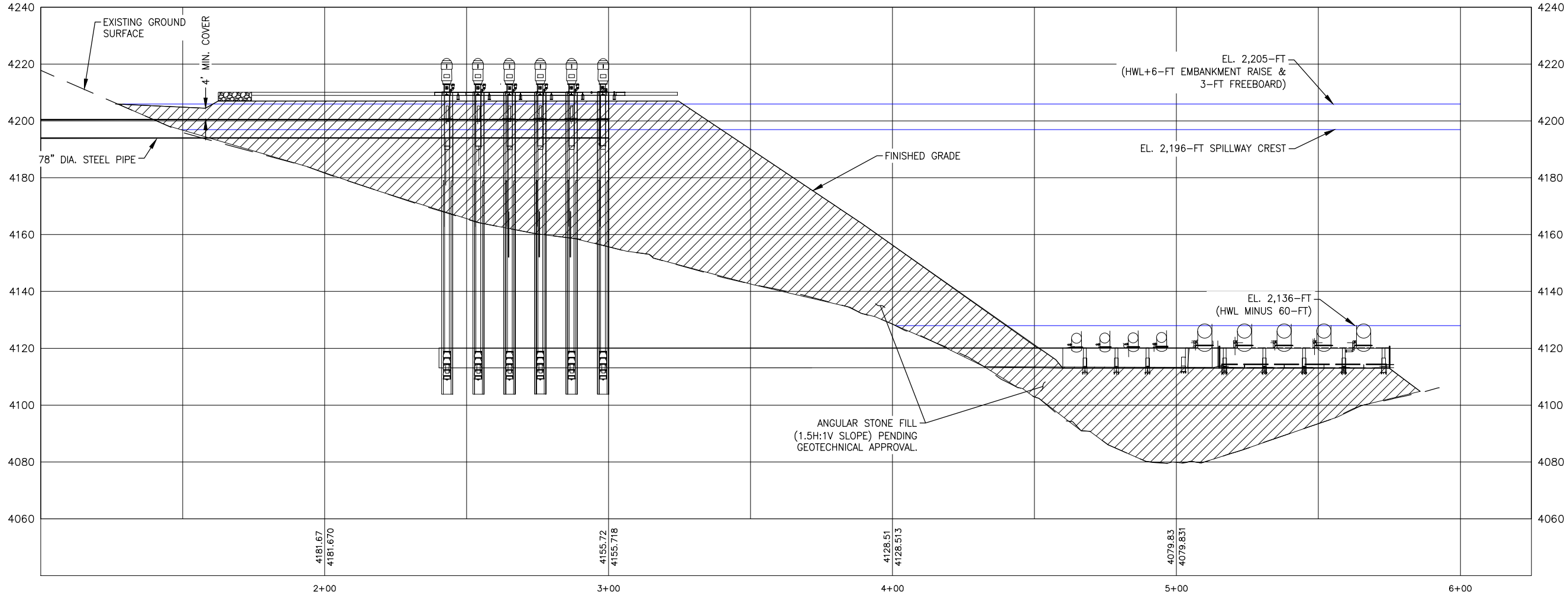
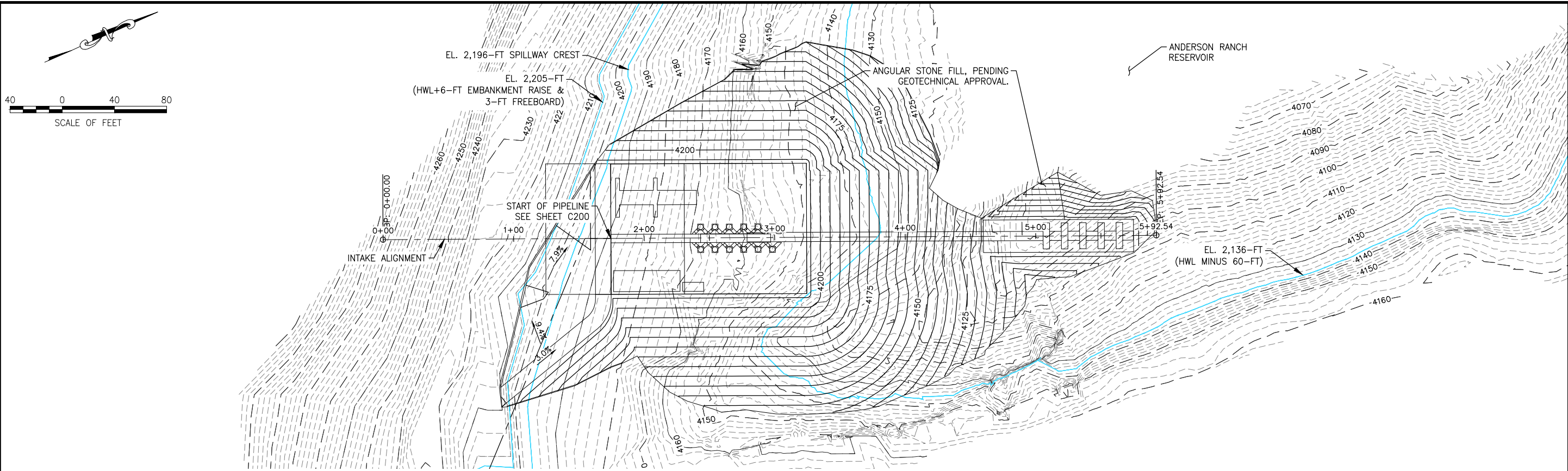
PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

REVISIONS		DATE
ITEM	DESCRIPTION	
A	10% REVIEW PLAN SET	04/27/20

VERIFY SCALE 0 1/2 1 BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.	
PROJECT:	1188.0033
DESIGNED:	JL/SM/HW
DRAWN:	JL/SM/HW
CHECKED:	MB/JL



Path: C:\Temp\Elmore County\2020 A Filename: Pump Station Plot date: Apr 27, 2020-05:21:33pm CAD User: HWhite.  
Xref Filename: | SFRB\_10\_PP | X-TITLE |



INTAKE PROFILE

SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS

PUMP STATION PLAN & PROFILE

PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

REVISIONS	DATE	DESCRIPTION
ITEM	DATE	DESCRIPTION
A	04/27/20	10% REVIEW PLAN SET

VERIFY SCALE	0 1/2 1
BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.	
PROJECT:	1188.0033
DESIGNED:	SM/MB
DRAWN:	SM
CHECKED:	MB

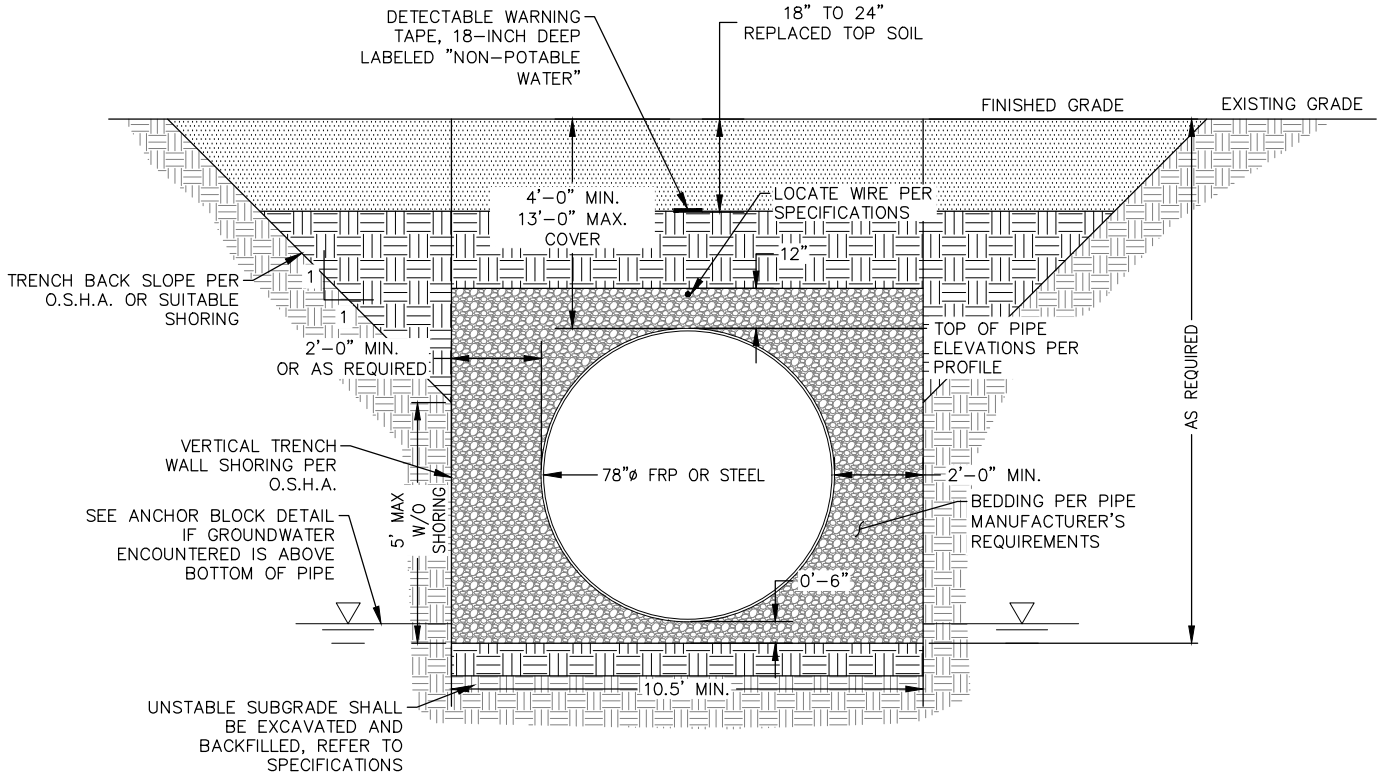
C300



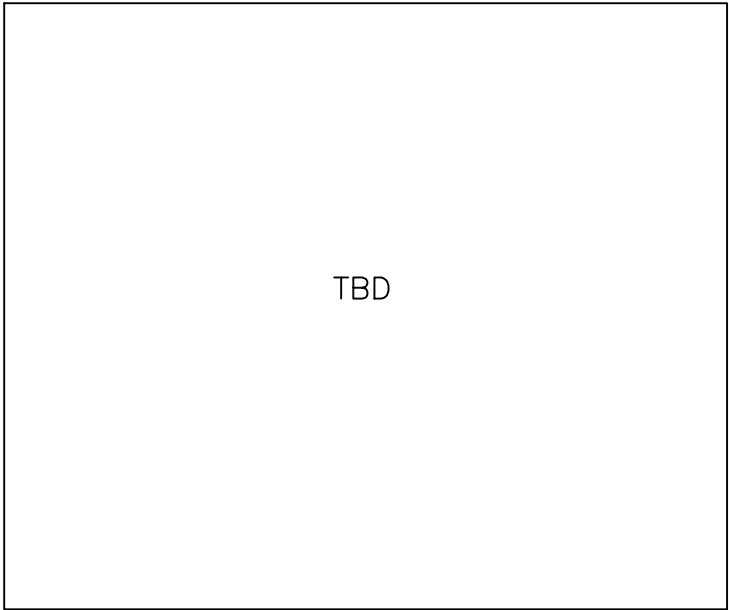
300 East Mallard Drive, Suite 350  
Boise, Idaho 83706  
Tel (208) 383-4140 Fax (208) 383-4156

Path: C:\Temp\Elmore County\2020 A Filename: DETAILS\_S FORK BOISE RIVER DIVERSION Plot date: Apr 27, 2020--05:54:12pm CAD User: HWhite.

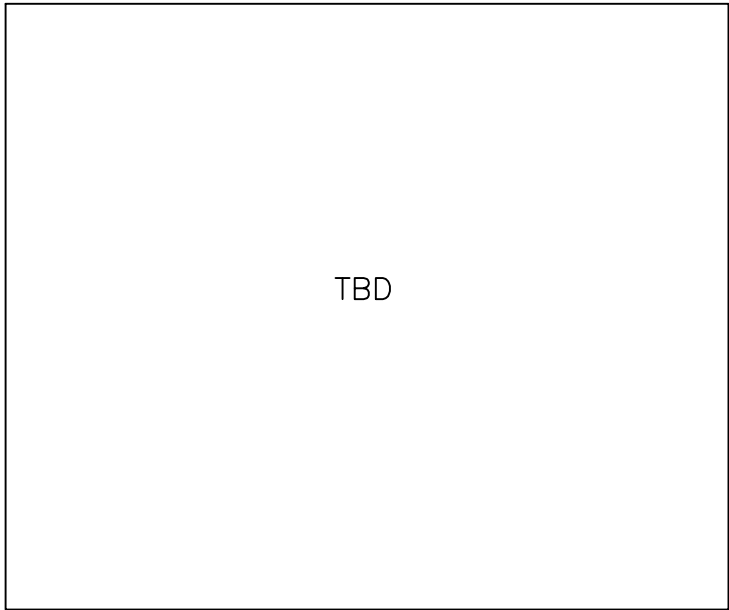
Xref Filename: | X-TITLE |



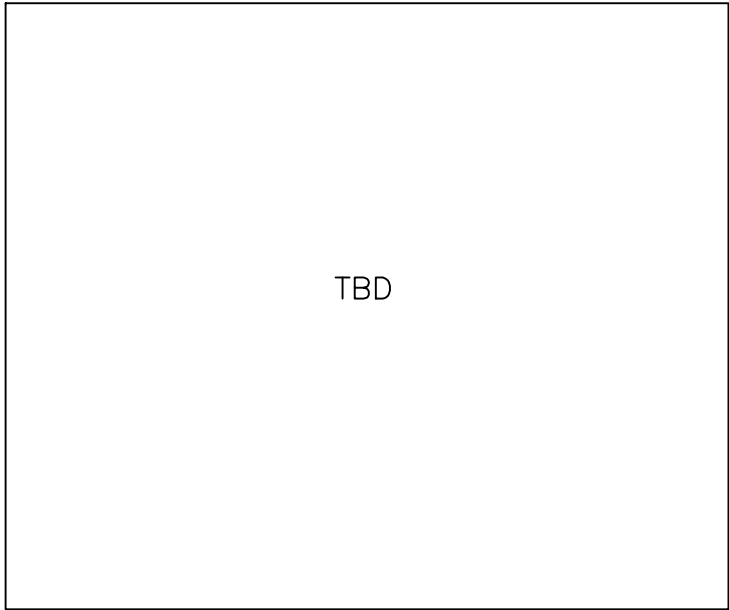
1 TRENCH DETAIL — PER PLAN & PROFILE  
NOT TO SCALE



3 CANAL SECTION DETAIL — PER PLAN & PROFILE  
NOT TO SCALE



2 CAV VAULT — PER PLAN & PROFILE  
NOT TO SCALE



4 DRAIN/BLOWOFF DETAIL — PER PLAN & PROFILE  
NOT TO SCALE

SOUTH FORK BOISE RIVER DIVERSION  
ELMORE COUNTY COMMISSIONERS

CIVIL DETAILS

PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

REVISIONS		DATE
ITEM	DESCRIPTION	
A	10% REVIEW PLAN SET	04/27/20

VERIFY SCALE	
0	1
BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.	
PROJECT:	1188.0033
DESIGNED:	JL/SM/HW
DRAWN:	JL/SM/HW
CHECKED:	MB/JL

C500







PRELIMINARY PIPELINE EASEMENT

FOR A

IRRIGATION PIPELINE

A 100 foot wide pipeline easement located 50 feet on either side of the following described line. Easement is located in portions of section 7, 8 and 9, Township 1 South, Range 9 East, Boise Meridian, Elmore County, Idaho:

Commencing at a point marking the approximate intersection of said pipeline and the Southeasterly Boundary of Government Lot One Section Seven having a Modified State Plane West Zone 1103 Ground Coordinate, Northing 614,932.07 and Easting 2,707,876.87. Said Modified State Plane Coordinate has an Origin of North 599,673.95 and East 2,707,045.90 with a Combination Factor of 0.999709066667, said coordinate also being the POINT OF BEGINNING;

Thence S.57°50'44"E. a distance of 95.60 feet to a point;

Thence S.81°25'43"E. a distance of 420.30 feet to a point;

Thence N.78°28'44"E. a distance of 133.86 feet to a point;

Thence N.55°58'44"E. a distance of 210.00 feet to a point;

Thence S.79°01'16"E. a distance of 121.25 feet to a point;

Thence S.61°51'12"E. a distance of 165.62 feet to a point;

Thence along a tangent curve to the right a distance of 322.88 feet, said curve having a radius of 2000.00 feet, a delta of 9°14'59", and a long chord bearing S.57°13'42"E. a distance of 322.53 feet to a point;

Thence S.52°36'13"E. a distance of 517.88 feet to a point;

Thence N.89°43'44"E. a distance of 113.93 feet to a point;

Thence along a tangent curve to the right a distance of 1108.71 feet, said curve having a radius of 2000.00 feet, a delta of 31°45'44", and a long chord bearing S.74°23'24"E. a distance of 1094.57 feet to a point;

Thence S.58°30'32"E. a distance of 246.81 feet to a point;

Thence N.67°11'23"E. a distance of 271.23 feet to a point;

Thence S.86°20'46"E. a distance of 219.75 feet to a point;

Thence N.71°04'36"E. a distance of 185.17 feet to a point;

Thence along a tangent curve to the right a distance of 389.16 feet, said curve having a radius of 1000.00 feet, a delta of  $22^{\circ}17'50''$ , and a long chord bearing  $N.82^{\circ}13'31''E.$  a distance of 386.71 feet to a point;

Thence  $S.86^{\circ}37'34''E.$  a distance of 432.74 feet to a point;

Thence  $S.74^{\circ}11'00''E.$  a distance of 506.91 feet to a point;

Thence  $S.54^{\circ}08'07''E.$  a distance of 632.99 feet to a point;

Thence along a tangent curve to the right a distance of 781.62 feet, said curve having a radius of 5000.00 feet, a delta of  $8^{\circ}57'24''$ , and a long chord bearing  $S.49^{\circ}39'25''E.$  a distance of 780.82 feet to a point;

Thence  $S.45^{\circ}10'43''E.$  a distance of 356.63 feet to a point;

Thence  $S.79^{\circ}47'55''E.$  a distance of 632.85 feet to a point;

Thence  $N.77^{\circ}32'01''E.$  a distance of 1243.19 feet to a point;

Thence along a tangent curve to the left a distance of 608.15 feet, said curve having a radius of 2000.00 feet, a delta of  $17^{\circ}25'20''$ , and a long chord bearing  $N.68^{\circ}49'21''E.$  a distance of 605.81 feet to a point;

Thence  $N.60^{\circ}06'41''E.$  a distance of 1322.27 feet to a point;

Thence along a tangent curve to the right a distance of 728.21 feet, said curve having a radius of 2000.00 feet, a delta of  $20^{\circ}51'42''$ , and a long chord bearing  $N.70^{\circ}32'32''E.$  a distance of 724.20 feet to a point;

Thence  $N.80^{\circ}58'23''E.$  a distance of 357.24 feet to a point;

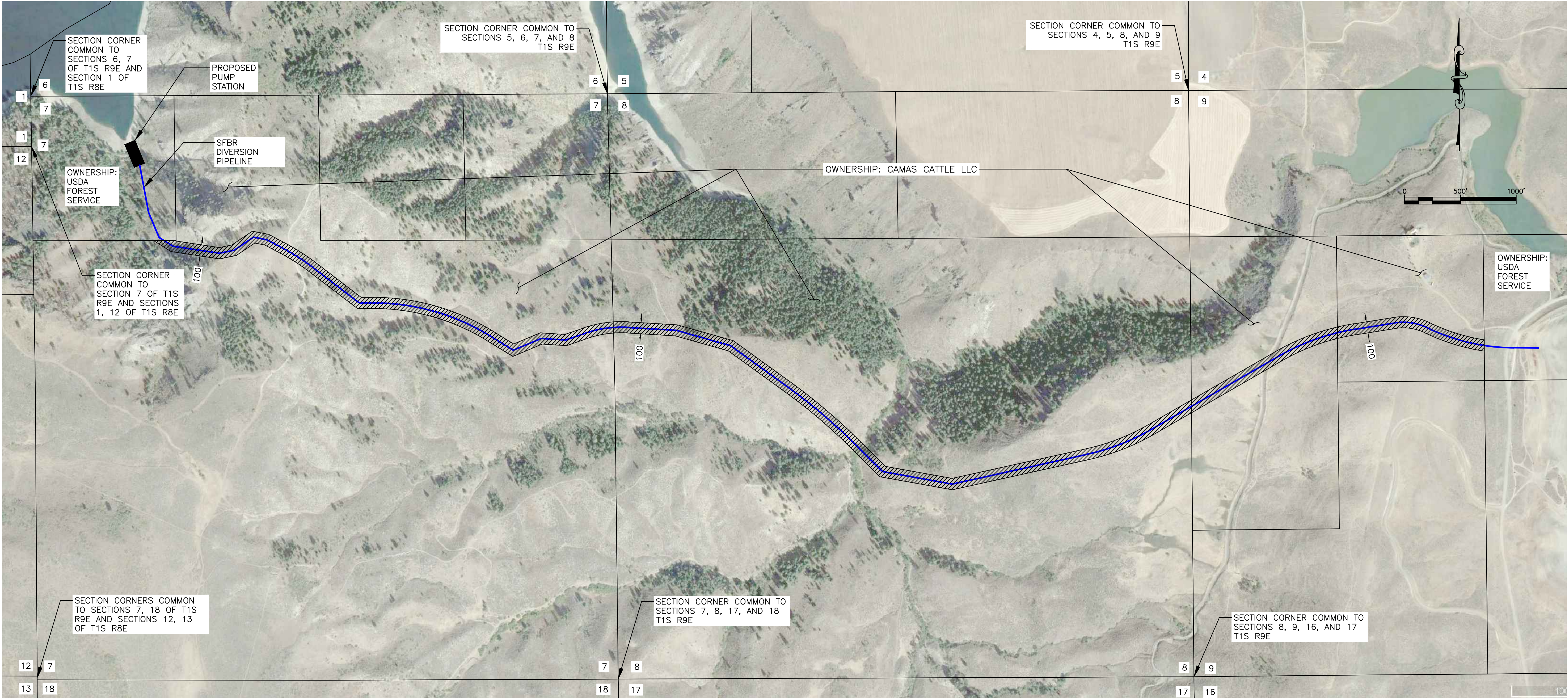
Thence along a tangent curve to the right a distance of 303.19 feet, said curve having a radius of 500.00 feet; a delta of  $34^{\circ}44'34''$ , and a long chord bearing  $S81^{\circ}39'20''E.$  a distance of 298.56 feet to a point;

Thence along a tangent curve to the left a distance of 534.47 feet, said curve having a radius of 1800.00 feet; a delta of  $17^{\circ}00'46''$ , and a long chord bearing  $S.72^{\circ}47'26''E.$  a distance of 532.51 feet to the POINT OF ENDING. Said point of ending has a Modified State Plane West Zone 1103 Ground Coordinate of Northing 613,992.15 and Easting 2,719,701.06.

Said easement extends or terminates on the Southeasterly Boundary line of said Government Lot One Section Seven and the Easterly Boundary of West 1/2 of Section Nine.







LEGEND

- PROPOSED PIPELINE
- 100' PIPELINE EASEMENT

NOTES

- EASEMENTS SHOWN BASED UPON PROJECT FACILITIES AS PART OF THE 10% DESIGN PHASE.
- MONUMENTATION AND FIELD SURVEY TO BE PERFORMED AFTER CONSTRUCTION PER PROFESSIONAL SURVEY BOARD RULES.

REVISIONS		DATE
ITEM	DESCRIPTION	
A	FOR LEGAL DESCRIPTION/AGREEMENTS	2/18/20

VERIFY SCALE	
0 1/2 1	
BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.	
PROJECT:	1188.0033
DESIGNED:	DK/MB
DRAWN:	DK
CHECKED:	BH



PRELIMINARY TEMPORARY CONSTRUCTION EASEMENT

FOR A

IRRIGATION PIPELINE

A Temporary Construction Easement is located in portions of section 7, 8 and 9, Township 1 South, Range 9 East, Boise Meridian, Elmore County, Idaho:

Commencing at a point marking the approximate intersection of said pipeline and the Southeasterly Boundary of Government Lot One Section Seven having a Modified State Plane West Zone 1103 Ground Coordinate, Northing 614,932.07 and Easting 2,707,876.87. Said Modified State Plane Coordinate has an Origin of North 599,673.95 and East 2,707,045.90 with a Combination Factor of 0.999709066667, said coordinate also being the POINT OF BEGINNING;

Thence N.89°54'19"E. a distance of 107.63 feet to a point;

Thence N.00°49'39"W. a distance of 147.51 feet to a point;

Thence N.74°27'28"E. a distance of 735.65 feet to a point;

Thence S.59°38'26"E. a distance of 1277.65 feet to a point;

Thence S.74°33'18"E. a distance of 1283.11 feet to a point;

Thence N.87°07'45"E. a distance of 1821.94 feet to a point;

Thence S.52°06'06"E. a distance of 1753.28 feet to a point;

Thence S.63°22'57"E. a distance of 781.45 feet to a point;

Thence N.66°19'24"E. a distance of 2163.04 feet to a point;

Thence N.62°51'48"E. a distance of 1150.37 feet to a point;

Thence N.87°47'03"E. a distance of 1760.93 feet to a point;

Thence S.00°37'30"E. a distance of 625.24 feet to a point;

Thence S.87°47'03"W. a distance of 1743.57 feet to a point;

Thence S.53°49'51"W. a distance of 1792.59 feet to a point;

Thence S.74°27'59"W. a distance of 1272.98 feet to a point;

Thence N.71°47'03"W. a distance of 1127.34 feet to a point;

Thence N.45°50'53"W. a distance of 374.46 feet to a point;

Thence N.52°06'06"W. a distance of 1435.01 feet to a point;

Thence S.87°07'45"W. a distance of 1759.33 feet to a point;

Thence N.64°27'11"W. a distance of 408.38 feet to a point;

Thence N.74°33'18"W. a distance of 1057.04 feet to a point;

Thence N.66°15'30"W. a distance of 134.47 feet to a point;

Thence N.59°38'26"W. a distance of 833.27 feet to a point;

Thence S.76°15'48"W. a distance of 274.33 feet to a point;

Thence N.84°10'10"W. a distance of 701.99 feet to a point;

Thence N.51°01'26"W. a distance of 247.06 feet to a point;

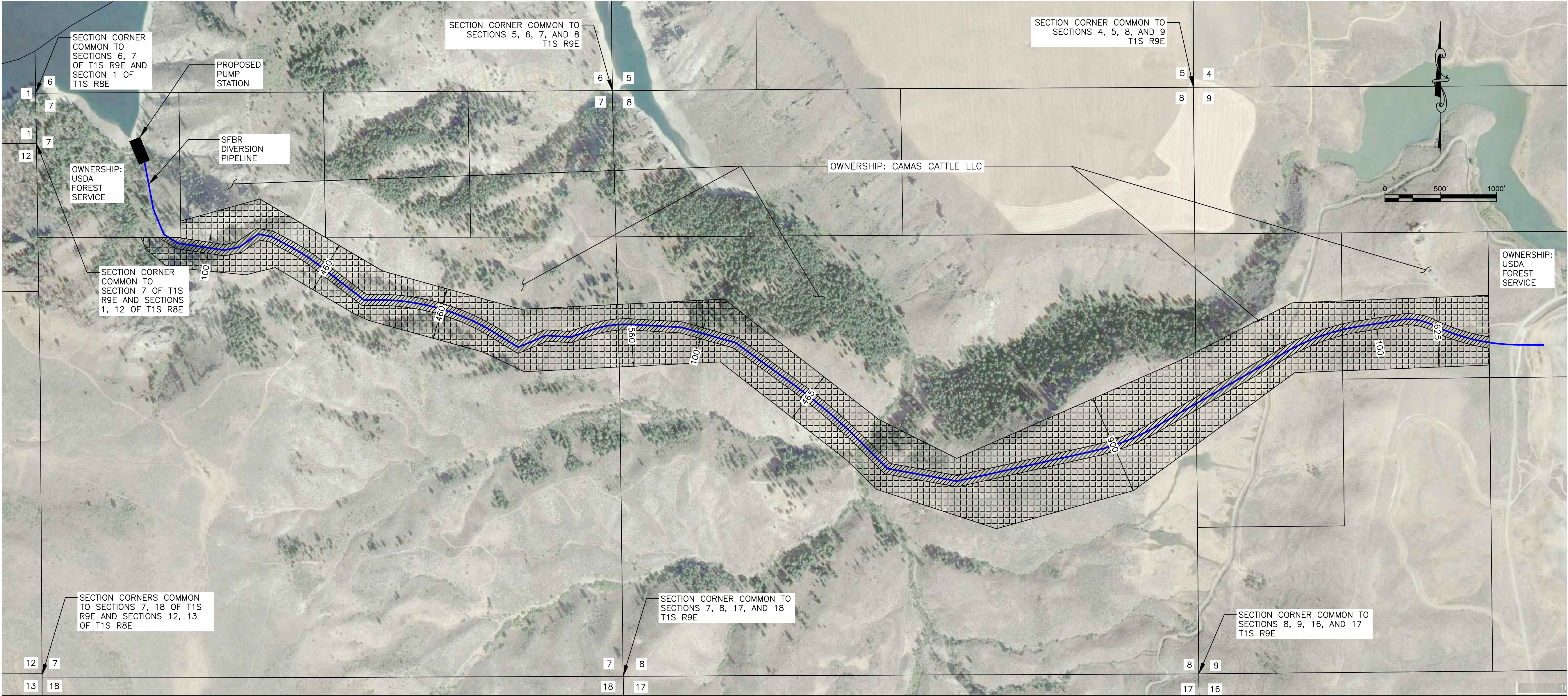
Thence N.22°46'16"W. a distance of 116.12 feet to a point;

Thence N.89°54'19"E. a distance of 249.75 feet to a point also being the POINT OF BEGINNING.

Said easement extends or terminates on the Southeasterly Boundary line of said Government Lot One Section Seven and the Easterly Boundary of West 1/2 of Section Nine.







- LEGEND**
- PROPOSED PIPELINE
  - 100' PIPELINE EASEMENT
  - TEMPORARY CONSTRUCTION EASEMENT (WIDTH VARIES)

- NOTES**
- EASEMENTS SHOWN BASED UPON PROJECT FACILITIES AS PART OF THE 10% DESIGN PHASE.
  - MONUMENTATION AND FIELD SURVEY TO BE PERFORMED AFTER CONSTRUCTION PER PROFESSIONAL SURVEY BOARD RULES.

PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

REVISIONS		DATE
ITEM	DESCRIPTION	
A	FOR LEGAL DESCRIPTION/AGREEMENTS	2/18/20

VERIFY SCALE	
BAR MEASURES ONE-INCH ON FULL SIZE DRAWING.	
PROJECT:	1188.0033
DESIGNED:	DK/MB
DRAWN:	DK
CHECKED:	BH