City of Ketchum

CITY COUNCIL MEETING AGENDA MEMO

Meeting Date:	May 5, 2025	Staff Member/Dept:	Ben Whipple – Public Works

Agenda Item: Warm Springs Preserve Master Plan Update

Recommended Motion:

Motion 1: "I move to award the Warm Springs Preserve Restoration Project Package 1 – Restoration Contract 25110 to Aqua Terra Restoration, LLC"

Motion 2: "I move to award the Warm Springs Preserve Restoration Project Package 2 – Irrigation Contract 25111 to Western State Reclamation, LLC"

Motion 3: "I move to award the Warm Springs Preserve Restoration Project Package 3 – Paving and Grading Scope Contract 25115 to Conrad Brothers Construction"

Motion 4: "I move to authorize the Memorandum of Approval between the City of Ketchum and Warm Springs Ranch Homeowners Association"

Reasons for Recommendation:

- Through an extensive qualification period and bid process the awardees to these packages have thoroughly worked with staff to ensure we are set up to provide the community with the funded features from our Warm Springs Master Plan.
- Community donations support 66.2% of total project cost
- Bureau of Reclamation grant supports 28.5% of total project cost
- Streets, Water/Wastewater CIP supports 5.8% of total project Cost
- The restoration package aims to reestablish the floodplain ecosystem while allowing access for visitors to observe and appreciate the natural habitat.
- The irrigation package scope will replace a heavily aged and inefficient legacy system to drastically reduce water consumption and automate the majority of the ongoing irrigation operations.
- The paving scope aims to bring the Warm Springs Preserve entrance road into the City road system and will greatly reduce the amount of ongoing maintenance required in maintaining the current gravel road in the summer and plowing it in the winter.
- Staff has confirmed funding for the proposed scope packages and remains eager to raise dedicated funds for the Welcome Building to complete the Warm Springs Master Plan
- Early on Staff recognized that the project would likely need to be phased due to trajectory of construction cost. Staff looks to continue fundraising efforts for funding the Welcome Building for construction in Fall 2025
- Staff has and continues to work closely with the Warm Spring Ranch HOA to ensure alignment and understanding of the planned work ahead. This agreement supports the WSP project work that boarders the Warm Springs Ranch properties

Policy Analysis and Background (non-consent items only):

Sustainability Impact:

This project has a very positive impact on the City's sustainability goals stated in the Warm Springs Master Plan. Including but not limited to large reduction in water usage, restoration of natural habitat.

Financial Impact:

None OR Adequate funds exist in account:	Adequate donations and grants exist to fund the initial phase of Warm Springs Master Plan. City CIP will accommodate the $315k to bring the entrance road and building into City infrastructure system.

Attachments:

1. Warm Springs Preserve Budget Summary
2. Warm Springs Preserve Bid/Site Drawings
3. Warm Springs Preserve Irrigation Bid/Site Drawings
4. Purchase Order 25110 – Aqua Terra Restoration LLC
5. Purchase Order 25111 – Western States Reclamation
6. Purchase Order 25115 – Conrad Brothers Construction
7. Memorandum of Understanding 25-002 – Warm Springs Ranch HOA

Warm Springs Preserve

Sources

		% of Total Sources
City Funds		
Water/Wastewater Infrastructure	152,319	5.3%
Streets (General CIP)	163,131	
Donations Received City	1,301,149	66.2%
Donations Received/Committed WRLT	2,639,787	
BOR Grant	1,700,000	28.5%
Total Sources	**5,956,386**	
Uses		
Package 1 (Restoration)	3,254,137	
Package 2 (Irrigation)	1,320,447	
Package 3 (Building Utilities/Paving)	467,693	
Other Amenities (Furishings/Trails)	711,980	
Total Uses	**5,754,257**	
Net Surplus/(Need)	**202,129**	
Adds		
Welcome Building/Maintenance Facility	888,985	
Additional Amenities	295,994	
Net Surplus/(Need) With Adds	**(982,850)**	

95% CONSTRUCTION DOCUMENTS FOR

WARM SPRINGS PRESERVE

KETCHUM, IDAHO

Issued: 02/17/25

PROJECT NARRATIVE

Warm Springs Preserve, a former golf course now preserved by the Ketchum community, offers a unique opportunity to enhance the landscape and restore critical ecosystems. The City of Ketchum developed a Vision Plan in 2022-2023, which outlines key restoration and infrastructure improvements needed for the Preserve. This plan, approved by the Ketchum City Council in April 2023, includes floodplain restoration, ADA-compliant trail upgrades, new irrigation systems, a small 1,000 SF restroom and storage building, and improvements to access and parking areas, all in alignment with the property's deed of transfer requirements. This construction procurement package is divided into three primary scopes of work: 1) floodplain restoration, fairway improvements and preserve amenities, 2) the replacement of the irrigation system and 3) a new bathroom/storage building with associated utilities and drive.

Package #1: Stream Restoration, Landscaping, Bridge & Culverts : This section involves approximately 10 acres of restoration, including the creek and floodplain area, the 6 acre middle terrace, and the 8 acre upper fairway. The key elements of the proposed restoration design include earthworks and grading, the construction of a new pilot channel, relocated pond, and in-channel stream alterations, with a focus on enhancing the natural floodplain functions, reconfiguring the creek channel, and adding large woody debris, constructed riffles, and native plantings. These modifications aim to restore the natural functions of the river, floodplain, and riparian zone, enhance fish habitats, and ensure long-term ecological stability by using native species and soils, while minimizing disturbance to sensitive areas. The floodplain area also includes trails and a boardwalk. The fairway areas will integrating new ADA soft surface trails and park amenities, such as seating areas and signage. The installation of park amenities, including the owner-provided benches and signage, will be completed in coordination with the restoration work.

Package #2: Irrigation: This section covers the complete replacement of the existing irrigation system throughout the Preserve. The new system will be designed to support the restored landscape and ensure efficient water use across the floodplain, middle terrace, and upper fairway areas. The new irrigation system will be integrated with the restored ecosystem and designed to minimize environmental impact while maintaining optimal landscape health.

Package #3: Utilities, Welcome Building & Parking Lot: This section includes the construction of a new restroom and storage building, utilities installation, and paving for access roads and parking areas. The new building will meet the needs of park visitors and serve as an integral part of the Preserve's infrastructure. Utilities for the site, including water and electricity, will be installed to support the new restroom and storage facilities. The work also includes paving for new access roads, parking lots, and trailheads, ensuring ease of access to all areas of the Preserve while adhering to ADA accessibility guidelines.

LEGAL DESCRIPTION

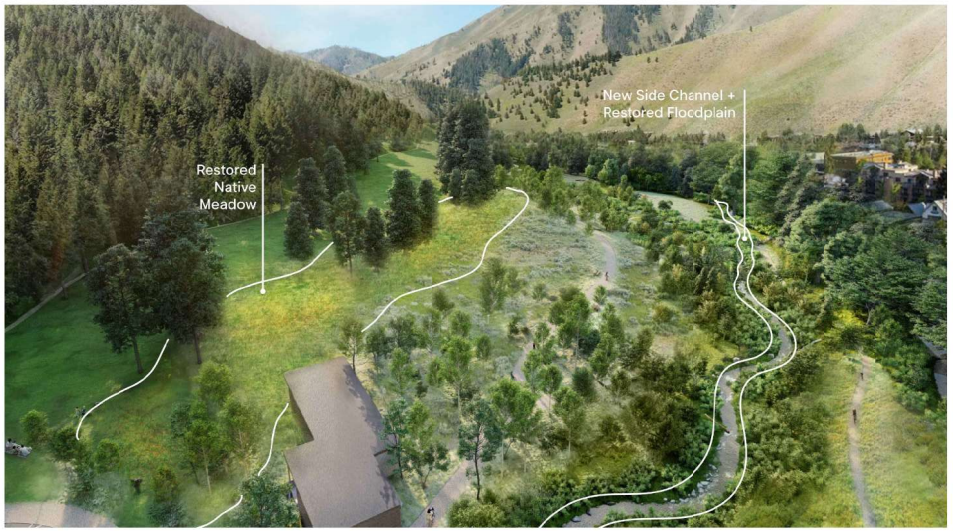
WARM SPRINGS RANCH RESORT PUD BLK 2 IN CODE AREA 003002
ADDRESS: 201-311 BALD MOUNTAIN RCAD, KETCHUM, ID 83340

PROJECT LOT COVERAGE

Total Square Footage of Warm Springs Preserve = 5,623,930 SF (129.1 acres)
(Lot Coverage of Building and Parking Lot 0.2%)

VICINITY MAP
NOT TO SCALE

N



ILLUSTRATIVE SITE PERSPECTIVE

TEAM NAMES + CONTACTS

OWNER
CITY OF KETCHUM, IDAHO
PO BOX 2315 191 5TH ST
KETCHUM, IDAHO 83340
CONTACT | BEN WHIPPLE
EMAIL | BWHIPPLE@KETCHUMIDAHO.ORG

LANDSCAPE ARCHITECTURE
SUPERBLOOM
750 PENNSYLVANIA ST
DENVER, COLORADO 80203
WWW.SUPERBLOOM.NET
CONTACT| STACY PASSMORE
EMAIL | STACY@SUPERBLOOM.NET
PHONE | 720.310.0255

FLOODPLAIN & RESTORATION ENGINEER
RIO APPLIED SCIENCE & ENGINEERING
3380 WEST AMERICANA TERRACE, SUITE 390, BOISE, ID 83706
CONTACT | ROB RICHARDSON
PHONE | 208.559.4615

ARCHITECTURE
MICHAEL DOTY ASSOCIATES
371 WASHINGTON AVE NORTH
KETCHUM, ID 83340
CONTACT | MICHAEL DOTY, AIA
PHONE | 208.726.4228

CIVIL ENGINEERING
GALENA-BENCHMARK ENGINEERING
3380 WEST AMERICANA TERRACE, SUITE 390, BOISE, ID 83706
CONTACT | PHOEBE JOHANNESSEN P.E.
EMAIL | PHOEBE@GALENA-BENCHMARK.COM
PHONE | 208.726.9516 EXT.116

RESTORATION PLANTING
INTERMOUNTAIN AQUATICS
ADDRESS:
1499 S 600 W
REXBURG, ID 83401
CONTACT | JEFF KLAUSSMAN
EMAIL | JEFF@NORTHFORKNATIVEPLANTS.COM
PHONE | 208.354.3691

MEP ENGINEER
IMEG
4943 NORTH 29TH EAST
IDAHO FALLS, ID 83401
CONTACT | JUSTIN JUDY
EMAIL | JUSTIN.R.JUDY@IMEGCORP.COM
PHONE | 208.552.9874

STRUCTURAL ENGINEER
MORELL ENGINEERING
P.O. Box 2401
Ketchum, ID 83340
CONTACT | MATT MORELL
EMAIL | MORELLENGINEERING@COX.NET
PHONE | 208.726.2844

IRRIGATION
BAER DESIGN GROUP, LLC
10674 N SAGE HOLLOW WAY
BOISE, ID 83714
CONTACT | GREG BAER
EMAIL | GREG@BAERDG.COM
PHONE | 208.859.1980

GEOTECHNICAL ENGINEER
STEVE BUTLER & ASSOCIATES
208 SPRUCE AVENUE NORTH
KETCHUM, ID 83340
CONTACT | STEVE BUTLER
EMAIL | SVGEOTECH@GMAIL.COM
PHONE | 208.720.6432

SUPERBLOOM

750 PENNSYLVANIA ST,
DENVER, CO 80203
720.440.2668

DATE:	2025.01.14
PROJECT NO.	WSP

SUBMITTAL NO.	DATE
1 DESIGN REVIEW #1	11/27/23
2 FLOODPLAIN REVIEW	01/05/24
3 90% CD SET	10/11/24
4 DRAFT 95% CD SET	01/14/25
5 95% CD SET	02/17/25

NOTES:
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PROJECT:
WARM SPRINGS PRESERVE
201-311 BALD MOUNTAIN RD.
KETCHUM, ID

CITY OF KETCHUM

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SHEET TITLE:
COVER

SHEET NO.:
G0.00

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CHECKED BY:	DL, SP, TK

CONTENTS

PACKAGE #1: RESTORATION, LANDSCAPING, BRIDGE & CULVERTS

PACKAGE #2: IRRIGATION

PACKAGE #3: UTILITIES, WELCOME BUILDING BUILDING & PARKING LOT

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1 DESIGN REVIEW #1	11/21/23
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3 90% CD SET	10/11/24
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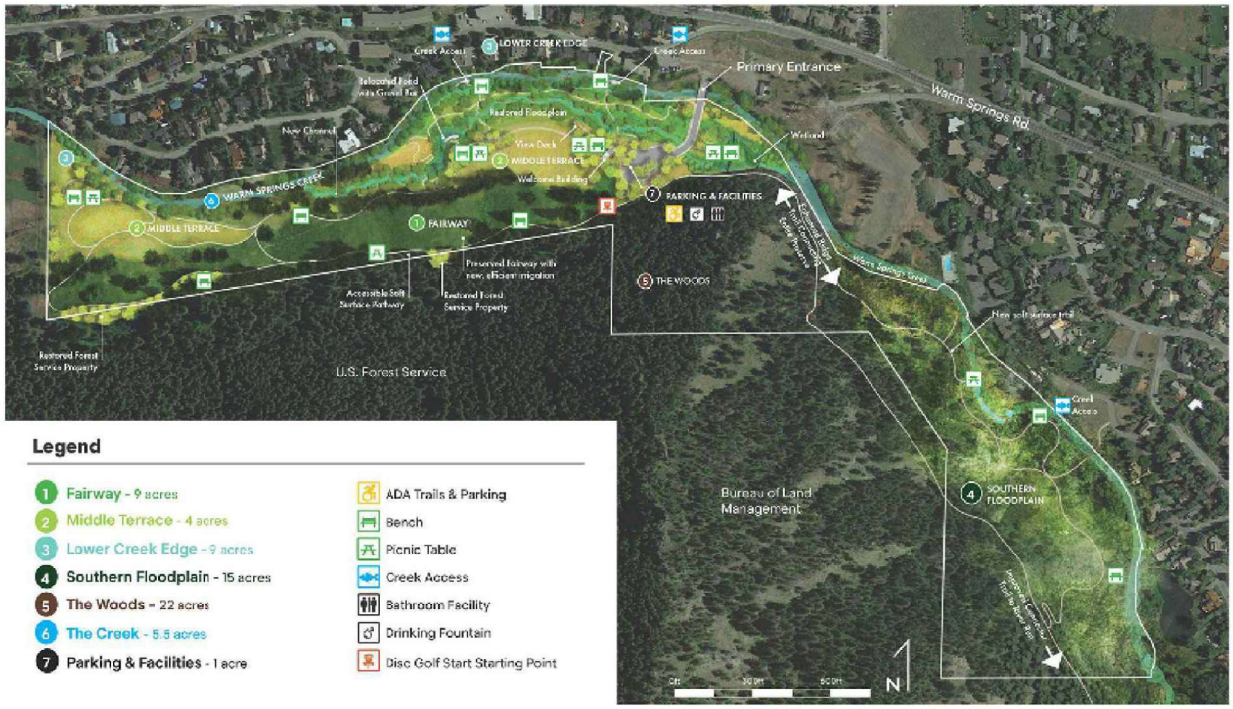

Legend

1. Fairway - 9 acres
2. Middle Terrace - 4 acres
3. Lower Creek Edge - 9 acres
4. Southern Floodplain - 15 acres
5. The Woods - 22 acres
6. The Creek - 5.5 acres
7. Parking & Facilities - 1 acre

- ADA Trails & Parking
- Bench
- Picnic Table
- Creek Access
- Bathroom Facility
- Drinking Fountain
- Disc Golf Start Starting Point

ILLUSTRATIVE SITE PLAN

SCALE: NTS

BUILDING ENTRANCE ILLUSTRATIVE RENDERING

ACCESSIBLE TRAILS ILLUSTRATIVE RENDERING

FLOODPLAIN FOOTBRIDGE ILLUSTRATIVE RENDERING

NOTES:

1. RENDERINGS PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY TO CONVEY GENERAL DESIGN AESTHETIC. THESE ARE NOT FOR CONSTRUCTION PURPOSES. PLEASE REFER TO HARDLINED DRAWINGS AND DETAILS FOR THIS INFORMATION.

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1 DESIGN REVIEW #1	11/11/24
2 FLOODPLAIN REVIEW	01/08/24
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5 95% CD SET	02/17/25

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ILLUSTRATIVE RENDERINGS

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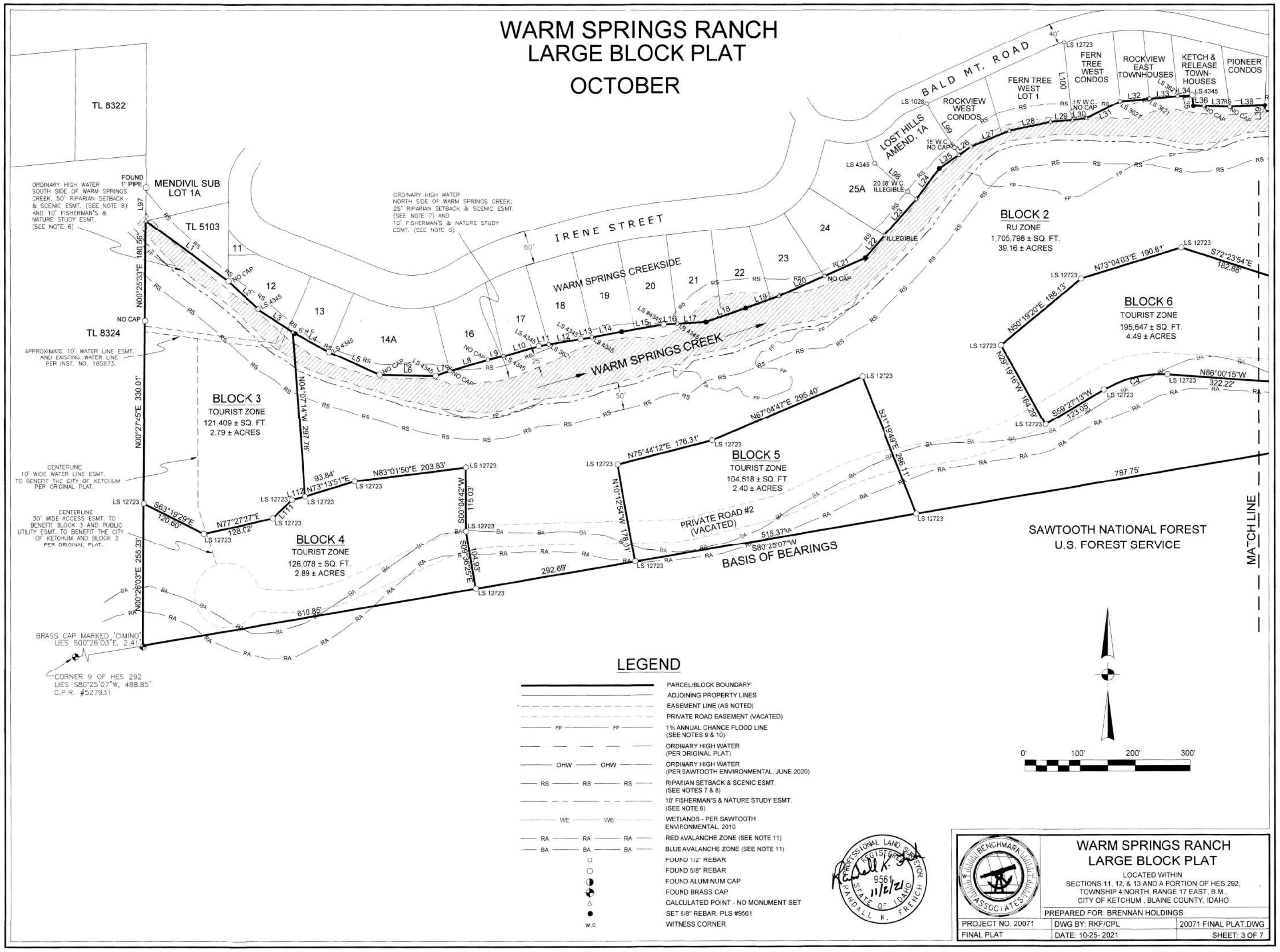

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1	DESIGN REVIEW #1	11/17/23
2	FLOODPLAIN REVIEW	01/05/24
3	90% CD SET	10/11/24
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5	95% CD SET	02/17/25

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SURVEY - ENLARGEMENT 1

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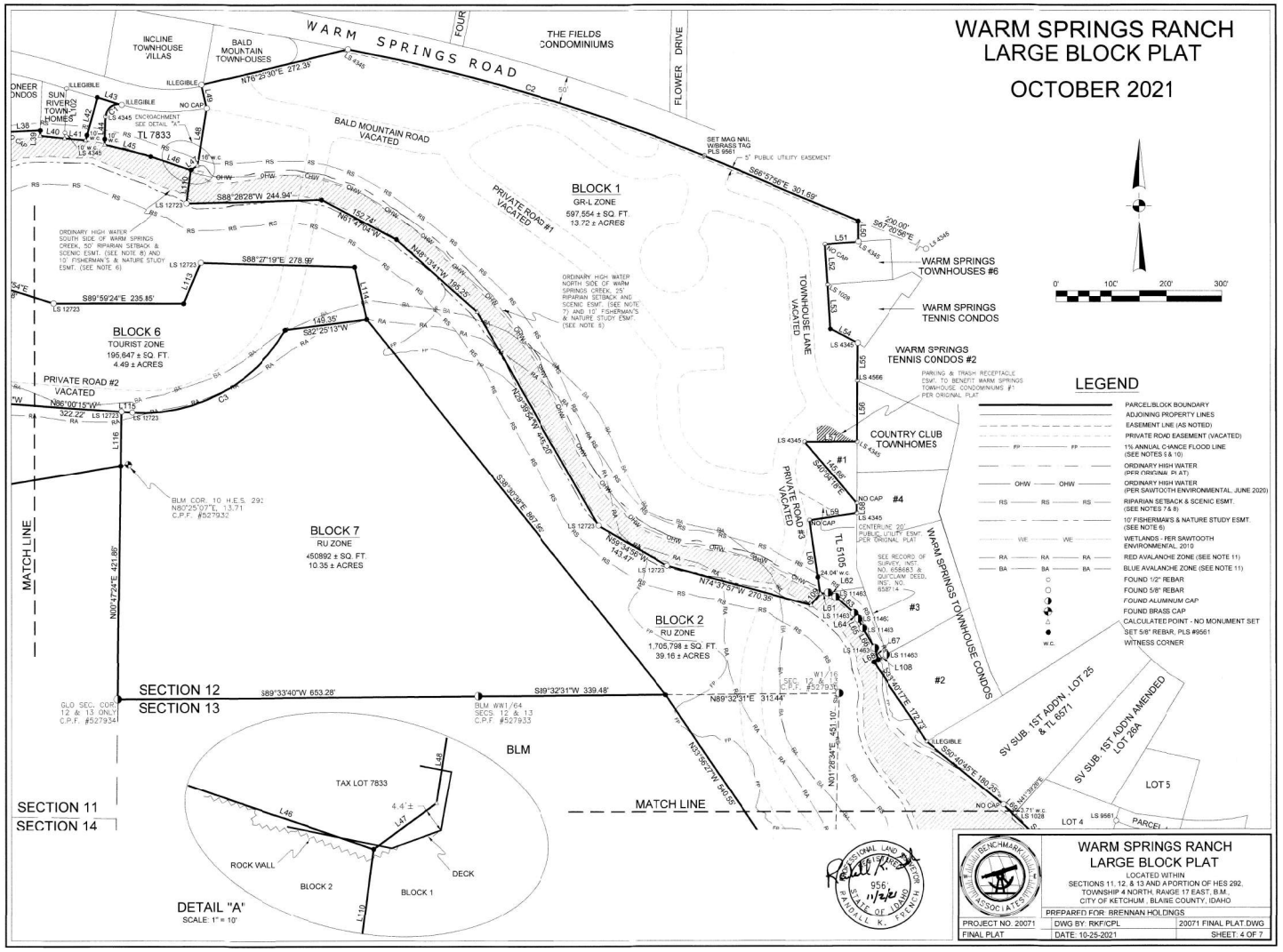

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SURVEY - ENLARGEMENT 2

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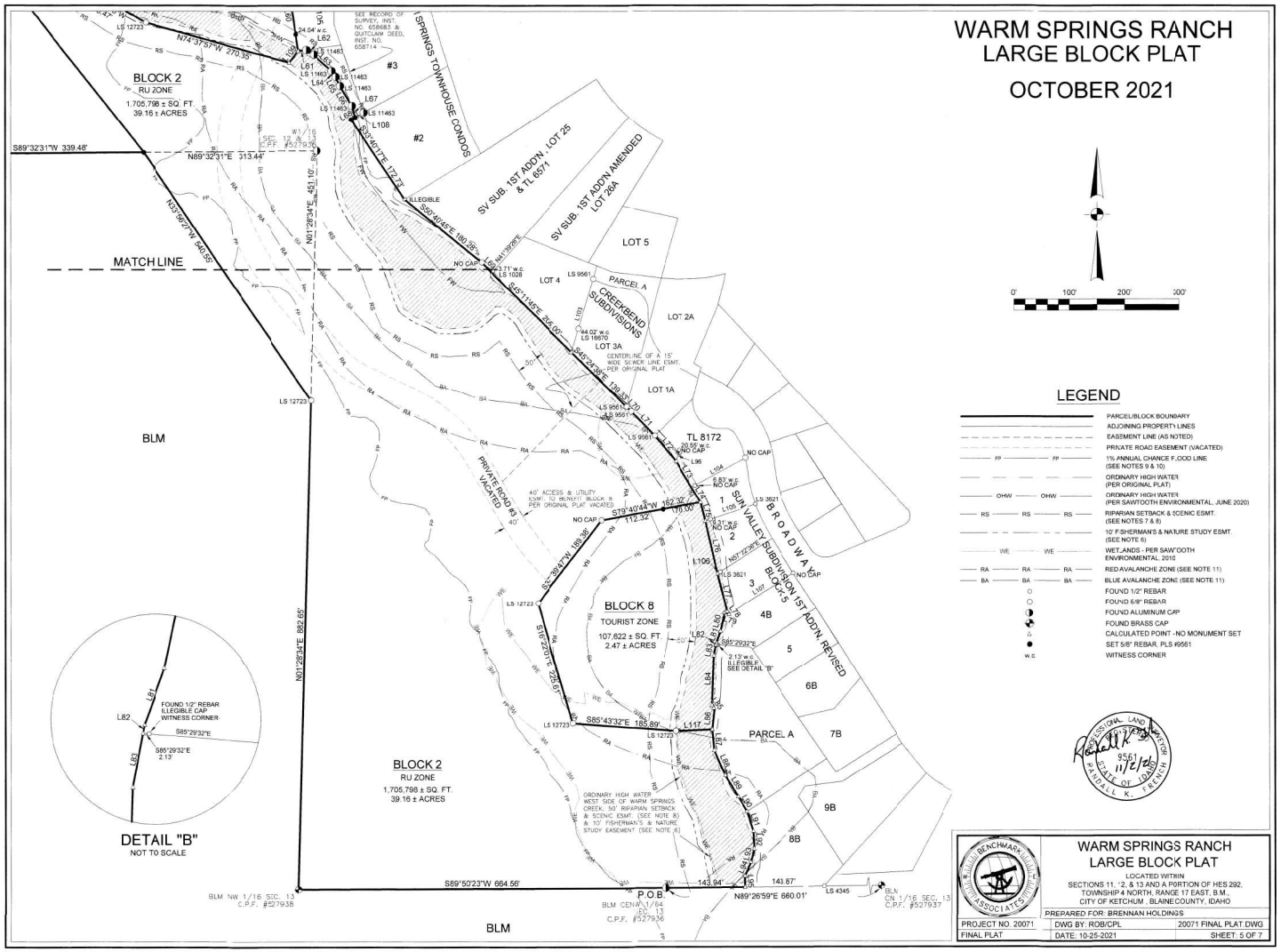

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SURVEY - ENLARGEMENT 3

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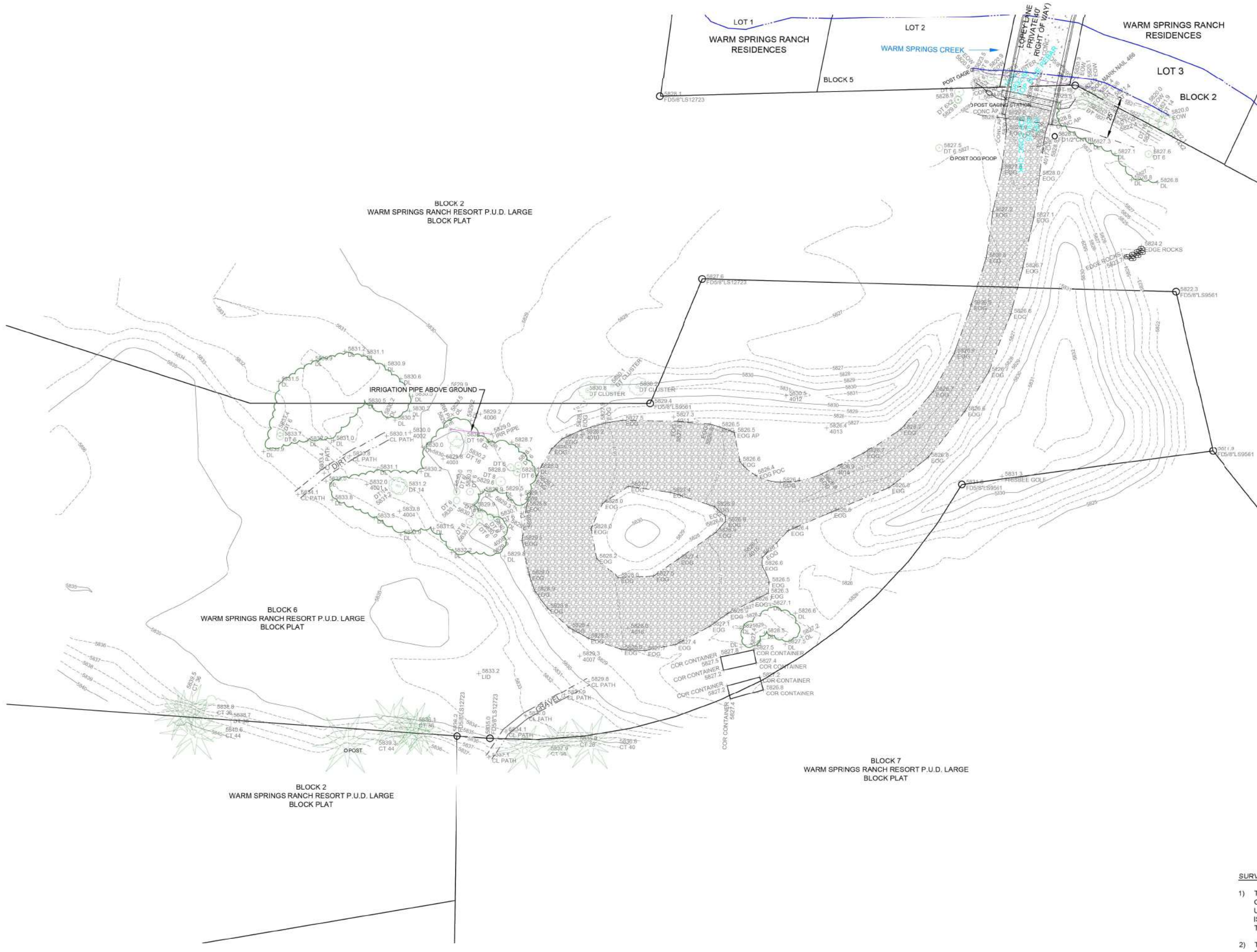

N

0 30 60 Feet

LEGEND

- Blaine County GIS Parcel Data
- EOW = Edge of Water (Surveyed 10/6/2023)
- Mean High Water
- 25' Riparian Setback from Mean High Water
- Concrete
- Gravel
- Corner Container (Moveable)
- Remains of Old Golf Cart Path
- 1' Contour Interval
- 5' Contour Interval
- Top Back of Riprap
- DL = Dripline of Trees
- FD1/2" = Found 1/2" Rebar
- FD5/8" = Found 5/8" Rebar
- Large Rock (Approximate - Not Measured)
- DT = Deciduous Tree
- CT = Coniferous Tree

AP = Angle Point
CHK = Survey Check shot
CL = Centerline
CONC = Concrete
COR = Corner
EOG = Edge of Gravel
FD = Found
GB = Grade Break
IRR = Irrigation
POC = Point on Curve

SURVEY NARRATIVE & NOTES:

1) THE PURPOSE OF THIS MAP IS TO SHOW TOPOGRAPHIC FEATURES BASED ON FIELD WORK GATHERED ON 10/06/2023 FOR SITE DESIGN AND THE CONTENT IS RELATIVE TO THE INTENDED USE. UNAUTHORIZED CHANGES OR ADDITIONS TO THE EXISTING DATA SHOWN ON THIS MAP IS STRICTLY PROHIBITED. ANY USES OF THIS MAP BEYOND THE STATED PURPOSE REQUIRES THE AUTHORIZATION OF PHILLIPS LAND SURVEYING, PLLC.

2) THIS MAP DOES NOT CONSTITUTE A BOUNDARY SURVEY. THE BLAINE COUNTY GIS PARCEL DATA INFORMATION IS SHOWN FOR REFERENCE ONLY. IF BOUNDARY RESOLUTION IS REQUIRED, IT SHALL BE ADDITIONAL SCOPE.

3) HORIZONTAL CONTROL: IDAHO STATE PLANE NAD83, CENTRAL ZONE, IN US SURVEY FOOT, CONVERTED TO GROUND DISTANCES FROM BLAINE COUNTY GIS CONTROL POINT "FLOWER".

4) VERTICAL CONTROL: NAVD 1988. PROJECT BENCHMARK IS THE TOP OF CONCRETE AT THE SOUTHERLY CENTERLINE OF THE BRIDGE DECK, ELEVATION = 5830.25', MARKED WITH AN INKED "X". A SECONDARY BENCHMARK AND CHECK SHOULD BE THE TOP OF THE BLUE PAINTED REBAR ON THE SOUTHWEST SIDE OF THE BRIDGE, ELEVATION 5832.84'.

5) UNDERGROUND UTILITIES ARE NOT SHOWN. VISIBLE ABOVE GROUND APPURTENANCES WERE LOCATED. DIGLINE OR PRIVATE UNDERGROUND UTILITY LOCATING SERVICE SHOULD BE CONTACTED PRIOR TO ANY EXCAVATION.

6) IRRIGATION CONTROL BOXES WERE NOT LOCATED AS A PART OF THIS SURVEY.

7) TREES UNDER THE DIAMETER OF SIX INCHES (6") WERE NOT LOCATED AS A PART OF THIS SURVEY. STUMPS AND FALLEN TREES WERE NOT LOCATED AS A PART OF THIS SURVEY.

A TOPOGRAPHIC MAP SHOWING
A PORTION OF BLOCKS 2, 6, & 7,
WARM SPRINGS RANCH RESORT P.U.D.
LARGE BLOCK PLAT
LOCATED WITHIN SECTION 11 & 12, T.4 N., R.17 E., B.M.,
CITY OF KETCHUM, BLAINE COUNTY, IDAHO
PREPARED FOR THE CITY OF KETCHUM

PHILLIPS LAND SURVEYING, PLLC
HAILEY, IDAHO
Phone: (208) 720 - 3760
Email: pls16670.id@gmail.com

NO	DATE	BY	REVISIONS

DRN: MEP
CHK: MEP
PM: MEP
DATE: 10/25/23
JOB #: 2023-72

REUSE OF DRAWINGS
This map, or any portion thereof shall not be used on any Project or extensions of this Project except by agreement in writing with Phillips Land Surveying, PLLC

PROFESSIONAL LAND SURVEYOR, LICENSED 16670, 10/31/2023, STATE OF IDAHO, MARK E. PHILLIPS

1 OF 1

SUPERBLOOM

750 PENNSYLVANIA ST,
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720.440.2668

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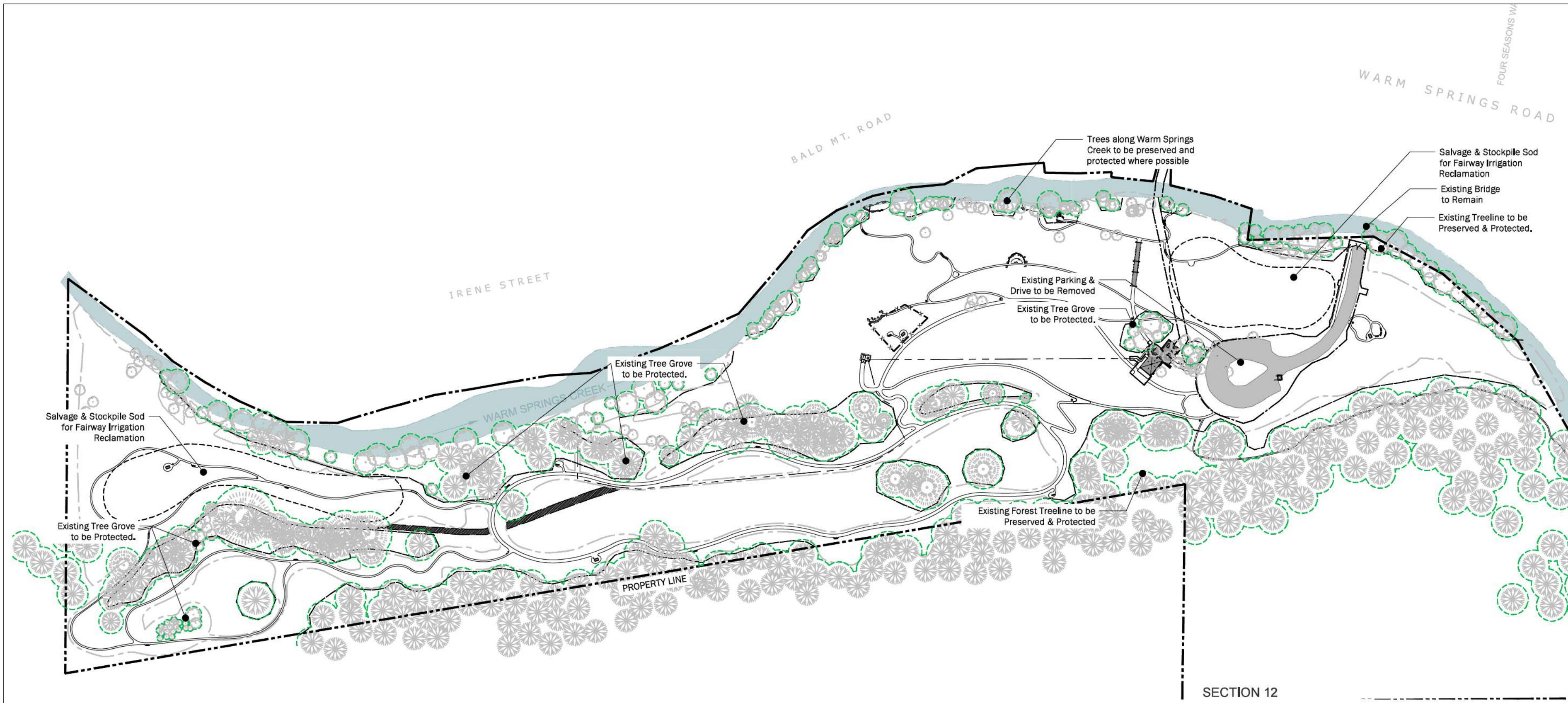
PROJECT:
WARM SPRINGS PRESERVE
201-311 BALD MOUNTAIN RD, KETCHUM, ID
CITY OF KETCHUM

NOT FOR CONSTRUCTION
FINAL "ISSUED FOR CONSTRUCTION" DRAWINGS TO BE ISSUED UPON FINAL PERMIT APPROVALS

SHEET TITLE:
SURVEY - EXIST. PARKING AREA ENLARGEMENT

SHEET NO.:
G0.06

DRAWN BY: MP, TK, HC, KL
CHECKED BY: DL, SP, TK



LEGEND

EXISTING TREE TO REMAIN
PROTECT FROM DAMAGE DURING CONSTRUCTION. REVIEW BEST PROTECTION METHODS WITH LANDSCAPE ARCHITECT AND OWNER PRIOR TO CONSTRUCTION.

TREE PROTECTION ZONE

TREE PROTECTION FENCE - TYPE 1
PROTECT TREES FROM DAMAGE DURING CONSTRUCTION. SEE DETAIL.

TREE PROTECTION FENCE - TYPE 2
PROTECT TREES FROM DAMAGE DURING CONSTRUCTION. SEE DETAIL.

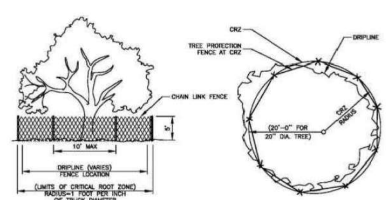
EXISTING TREE TO BE REMOVED
THE PROJECT TEAM WILL REVIEW AND IDENTIFY WITH THE OWNER HOW TO REUSE OR RELOCATE ANY TREES THAT NEED TO BE REMOVED DUE TO CONSTRUCTION ACTIVITIES.

PROPERTY LINE

NOTES

1. THE PROJECT SITE DOES NOT HAVE A PROFESSIONAL SURVEY OF EXISTING TREES. THE LOCATIONS INDICATED ON THIS PLAN ARE ESTIMATIONS BASED ON AERIAL IMAGERY ONLY. **ALL EXISTING TREE LOCATIONS SHOULD BE FIELD VERIFIED AND TAGGED FOR APPROVAL BEFORE REMOVAL OR RELOCATION.**
2. THE PROJECT DESIGN INTENT IS TO REUSE ANY TREES REMOVED IN NEW WAYS ONSITE IN THE RESTORATION. IN THE COMING MONTH(S) THE PROJECT TEAM AND OWNER WILL CONDUCT A SITE WALK AND FIELD SURVEY TO DEVELOP A SPECIFIC STRATEGY FOR EACH TREE.
3. PRIMARY TREE SPECIES LOCATED ONSITE ARE DOUGLAS FIR (Pseudotsuga menziesii), COTTONWOOD (Populus trichocarpa) AND ASPEN (Populus tremula).
4. INSTALLATION OF TREE PROTECTION AND EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PER PLAN BEFORE ANY GRADING, DEMOLITION, OR OTHER DISTURBANCE IS PERFORMED; RE: GRADING PLANS AND CIVIL DRAWINGS.
5. ANY REQUIRED TRENCHING SHOULD BE ROUTED IN A MANNER THAT MINIMIZES ROOT DAMAGE. REVIEW WITH LANDSCAPE ARCHITECT PRIOR TO COMMENCING WORK.
6. SEE FIRE MITIGATION PLAN APPROVED BY BLAINE COUNTY FIRE MARSHALL THAT MAY REQUIRE ADDITIONAL TREE THINNING OR PRUNING.
7. TREES SHALL NOT BE CUT BACK OR PRUNED UNLESS INDICATED ON FIRE MITIGATION PLAN.
8. THE TREE/ROOT PROTECTION ZONE SHOULD BE IRRIGATED SUFFICIENTLY WITH CLEAN, POTABLE WATER TO KEEP THE TREE IN GOOD HEALTH AND VIGOR BEFORE, DURING, AND AFTER CONSTRUCTION. THIS MAY MEAN DEEPLY SOAKING THE GROUND PERIODICALLY. SUBMIT SCHEDULE FOR TRUCK WATERING DURING THE CONSTRUCTION PERIOD.
9. NO CONSTRUCTION STAGING OR DISPOSAL OF CONSTRUCTION MATERIALS OR BYPRODUCTS IS ALLOWED WITHIN THE TREE/ROOT PROTECTION ZONE.
10. CONTRACTOR TO SUBMIT CONSTRUCTION PHASING & STAGING PLAN TO MINIMIZE DISTURBANCE TO EXISTING CONDITION TO OWNER FOR APPROVAL PRIOR TO COMMENCING WORK.
11. THE CONTRACTOR MUST SUBMIT A TREE, VEGETATION, AND SOIL PROTECTION PLAN (TVSPP) IN ACCORDANCE WITH THE CITY OF KETCHUM'S STANDARDS. ALL TREES NOT IDENTIFIED FOR REMOVAL MUST BE PROTECTED. NOTE AND PHOTOGRAPH CONDITIONS AND MATERIALS FOR REVIEW BY LANDSCAPE ARCHITECT.

Tree Protection Fence



0 50' 100' 200' N
SCALE: 1"=100'

SUPERBLOOM

750 PENNSYLVANIA ST,
DENVER, CO 80203
720.440.2668

DATE: 2025.01.14
PROJECT NO. WSP

SUBMITTAL NO.		DATE
1	DESIGN REVIEW #1	11/17/23
2	FLOODPLAIN REVIEW	01/05/24
3	90% CD SET	10/11/24
4	DRAFT 95% CD SET	01/14/25
5	95% CD SET	02/17/25

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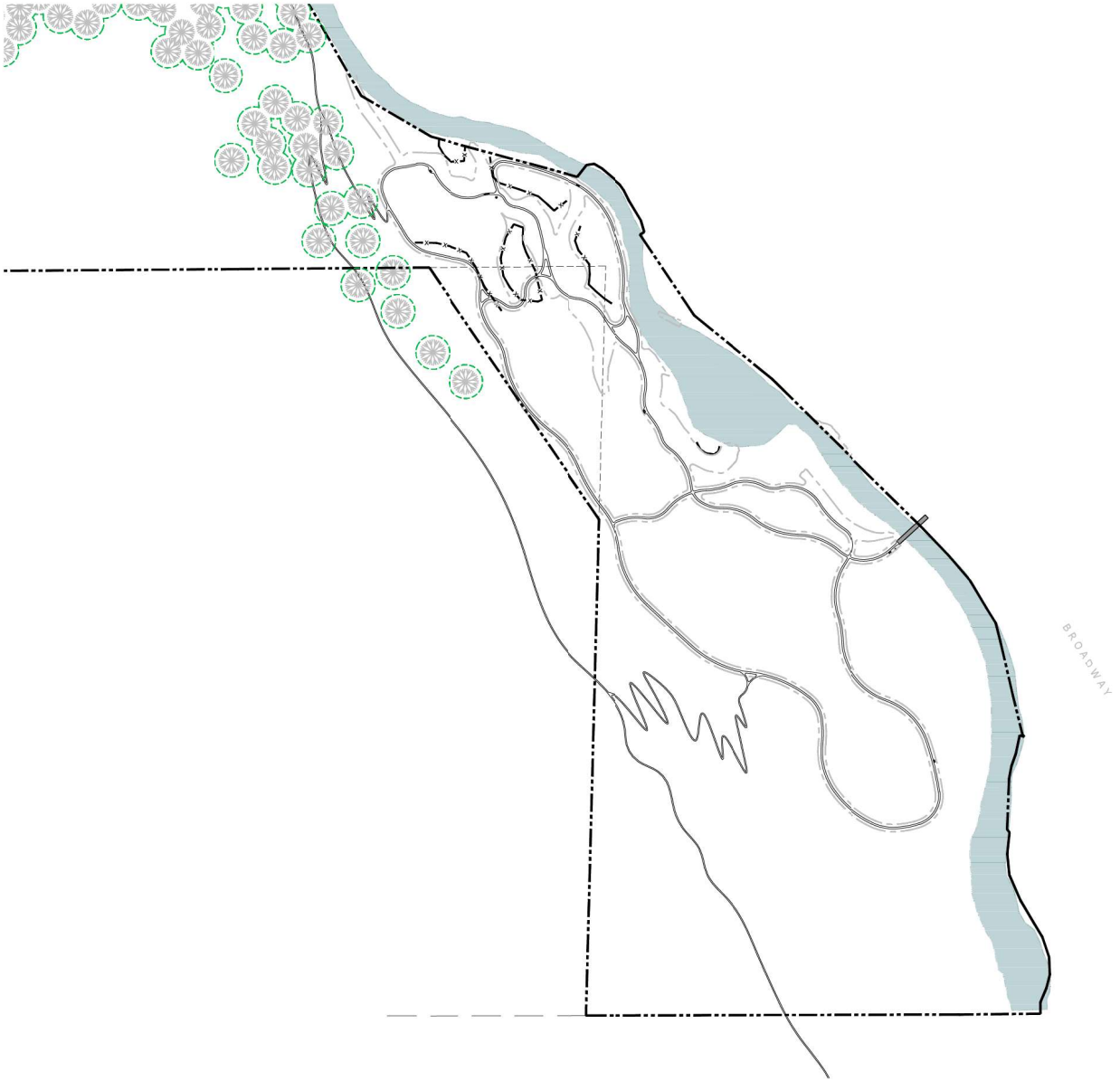
PROJECT:
WARM SPRINGS PRESERVE
201-311 BALD MOUNTAIN RD.
KETCHUM, ID
CITY OF KETCHUM

NOT FOR CONSTRUCTION
FINAL "ISSUED FOR CONSTRUCTION" DRAWINGS TO BE ISSUED UPON FINAL PERMIT APPROVALS

SHEET TITLE:
DEMOLITION & TREE PROTECTION PLAN 1

SHEET NO.:
G0.07

DRAWN BY: MP, TK, HC, KL
CHECKED BY: DL, SP, TK



LEGEND

- EXISTING TREE TO REMAIN
  PROTECT FROM DAMAGE DURING CONSTRUCTION. REVIEW BEST PROTECTION METHODS WITH LANDSCAPE ARCHITECT AND OWNER PRIOR TO CONSTRUCTION.
- TREE PROTECTION ZONE
- TREE PROTECTION FENCE - TYPE 1
  PROTECT TREES FROM DAMAGE DURING CONSTRUCTION. SEE DETAIL.
- TREE PROTECTION FENCE - TYPE 2
  PROTECT TREES FROM DAMAGE DURING CONSTRUCTION. SEE DETAIL.
- EXISTING TREE TO BE REMOVED
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- PROPERTY LINE

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0 50' 100' 200' N

SCALE: 1"=100'

SUPERBLOOM
750 PENNSYLVANIA ST,
DENVER, CO 80203
720.440.2668

DATE: 2025.01.14
PROJECT NO. WSP

SUBMITTAL NO. DATE

1	DESIGN REVIEW #1	11/11/24
2	FLOODPLAIN REVIEW	01/08/24
3	90% CD SET	10/11/24
4	DRAFT 95% CD SET	01/24/25
5	95% CD SET	02/17/25

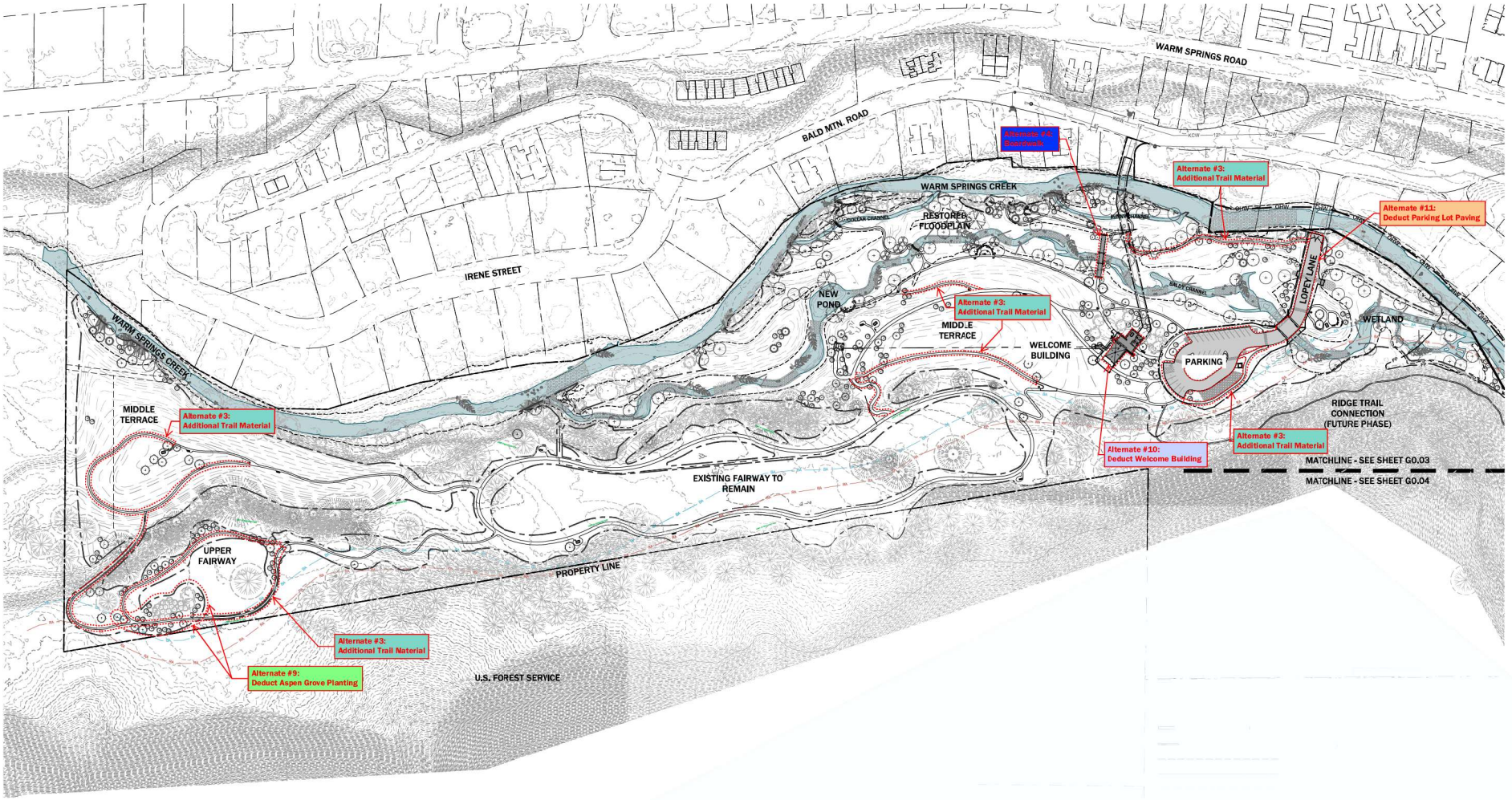
PROJECT:
WARM SPRINGS PRESERVE
201-311 BALD MOUNTAIN RD.
KETCHUM, ID
CITY OF KETCHUM

NOT FOR CONSTRUCTION
FINAL ISSUED FOR CONSTRUCTION DRAWINGS TO BE ISSUED UPON FINAL PERMIT APPROVALS

SHEET TITLE:
DEMOLITION & TREE PROTECTION PLAN 2

SHEET NO.:
G0.08

DRAWN BY: MP, TK, HC, KL
CHECKED BY: DL, SP, TK



SUPERBLOOM
750 PENNSYLVANIA ST,
DENVER, CO 80203
720.440.2668

DATE: 2024.11.11
PROJECT NO. WSP

SUBMITTAL NO.	DATE
1 DESIGN REVIEW #1	11/17/23
2 FLOODPLAIN REVIEW	01/05/24
3 90% CD SET	10/11/24
4 95% CD SET	11/11/24

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PROJECT:
WARM SPRINGS PRESERVE
201-311 BALD MOUNTAIN RD.
KETCHUM, ID
CITY OF KETCHUM

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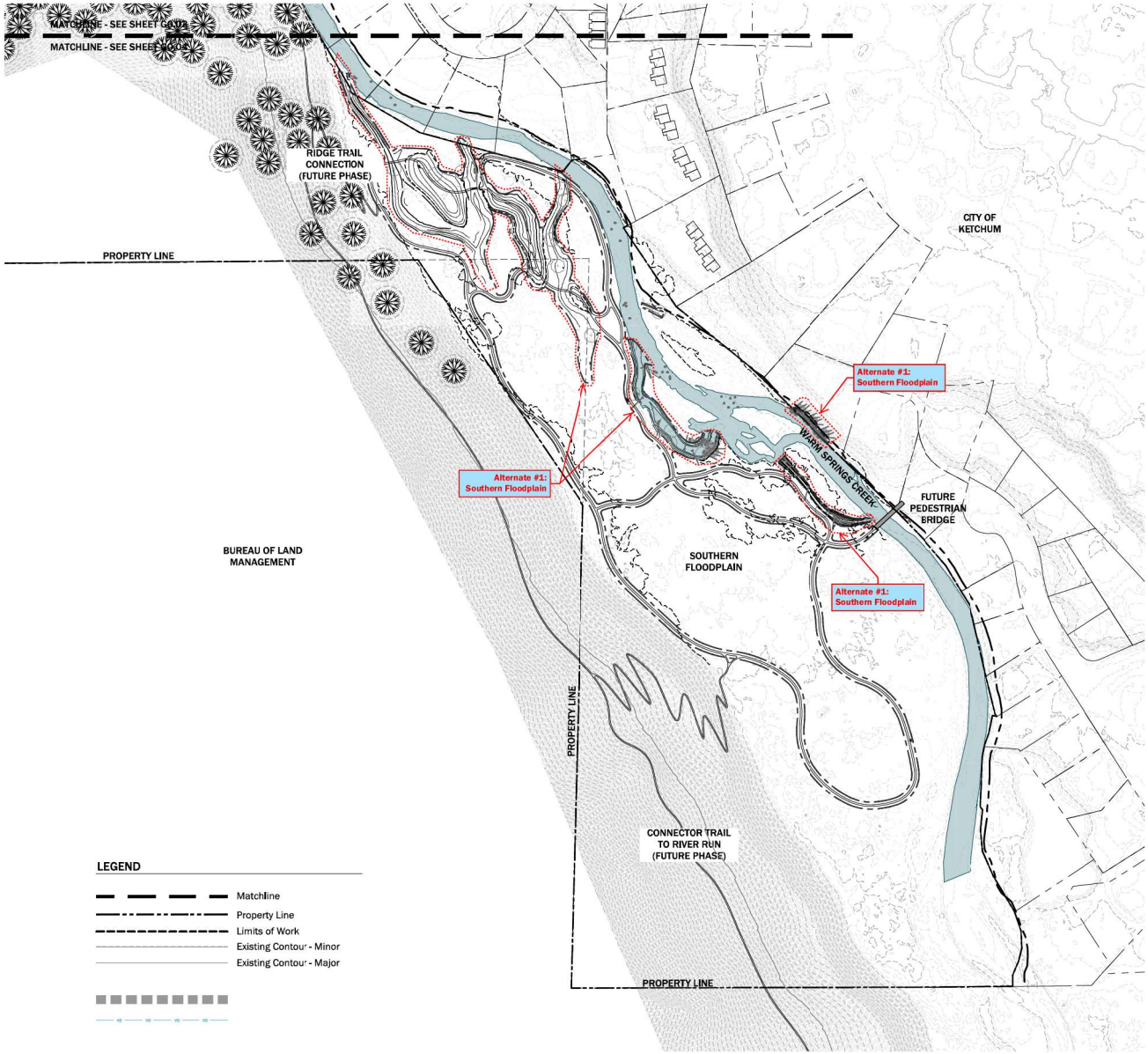
FINAL ISSUED FOR CONSTRUCTION DRAWINGS TO BE ISSUED UPON FINAL PERMIT APPROVALS

SHEET TITLE:
OVERALL SITE PLAN 1

SHEET NO.:
G0.09

DRAWN BY: MP, TK, HC, KL
CHECKED BY: DL, SP, TK



0 50' 100' 200' N

SCALE: 1"=100'

SUPERBLOOM
750 PENNSYLVANIA ST,
DENVER, CO 80203
720.440.2668

DATE: 2024.11.11
PROJECT NO. WSP

SUBMITTAL NO.	DATE
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WARM SPRINGS PRESERVE
201-311 BALD MOUNTAIN RD.
KETCHUM, ID
CITY OF KETCHUM

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SHEET TITLE:
OVERALL SITE PLAN 2

SHEET NO.:
G0.10

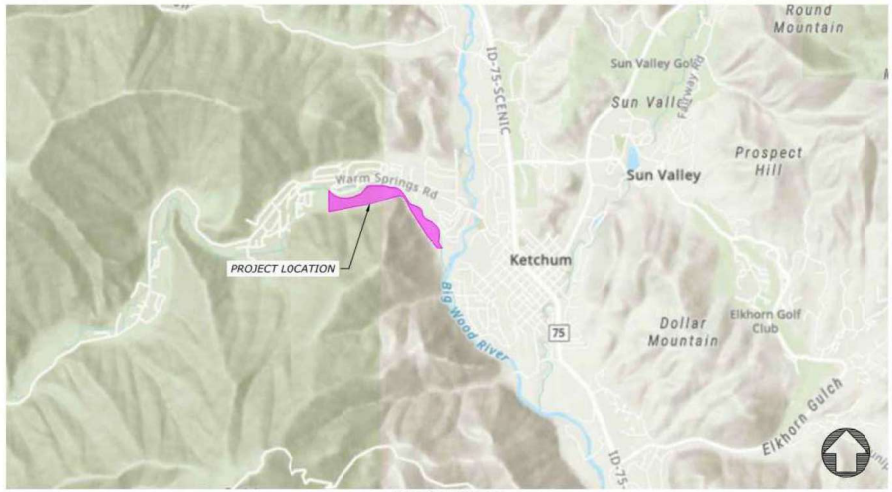
DRAWN BY: MP, TK, HC, KL
CHECKED BY: DL, SP, TK

WARM SPRINGS PRESERVE STREAM & FLOODPLAIN ENHANCEMENT DESIGN SET

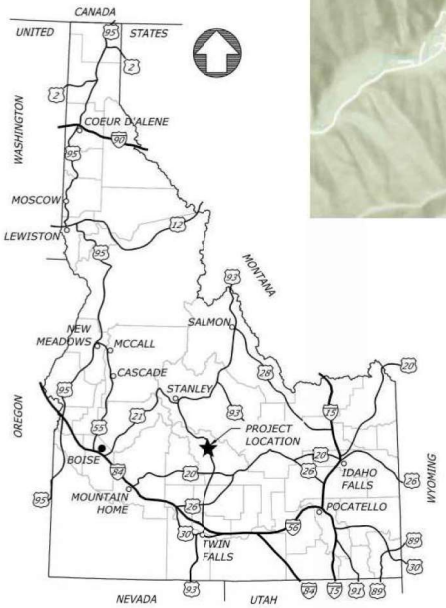
WARM SPRINGS CREEK, KETCHUM, ID
95% DESIGN DRAWINGS

PREPARED FOR:
WOOD RIVER LAND TRUST
CORY MCCAFFREY
119 E BULLION STREET
HAILEY, ID 83333
(208) 788-3947

PREPARED BY:
RIO APPLIED SCIENCE & ENGINEERING, LLC
ATTN: JOE YOUNG, PE
3380 WEST AMERICANA TERRACE, SUITE 390
BOISE, ID 83706
(208) 484-4700



VICINITY MAP
Not to scale



KEY MAP
Not to scale

LOCATION MAP
0 500' 1000'

SHEET INDEX

Applied Science & Engineering

WOOD RIVER LAND TRUST

WARM SPRINGS PRESERVE STREAM & FLOODPLAIN ENHANCEMENT DESIGN SET

95% DESIGN DRAWINGS

WOOD RIVER LAND TRUST
WARM SPRINGS CREEK, KETCHUM, ID
BLAINE COUNTY, IDAHO

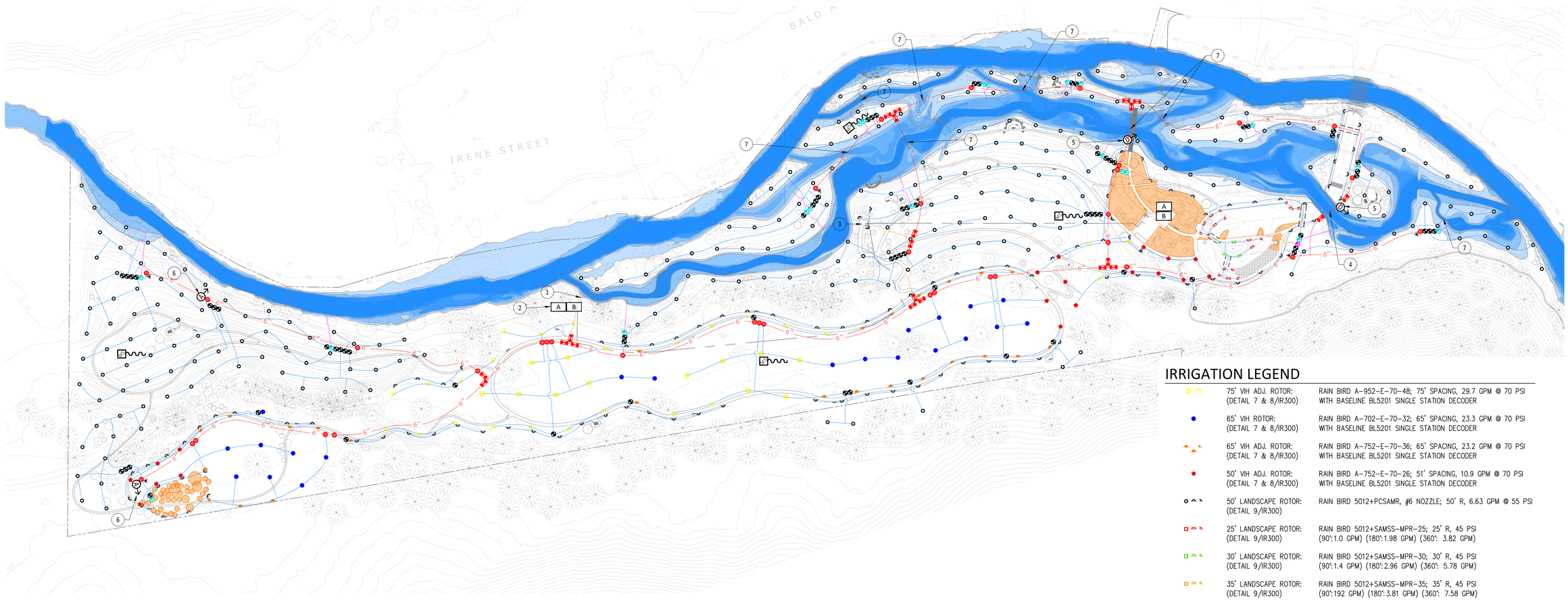
WORKING DRAFT NOT FOR CONSTRUCTION

DATE: 11/6/2024
DESIGNED: ZS,MP, JY
APPROVED: JY

DRAWING NAME
GENERALS

COVER SHEET

DRAWING NO.
G1
SHEET 1 OF 44



IRRIGATION LEGEND

	75' VIH ADJ. ROTOR: (DETAIL 7 & 8/IR300)	RAIN BIRD A-952-E-70-48; 75' SPACING, 29.7 GPM @ 70 PSI WITH BASELINE BL5201 SINGLE STATION DECODER
	65' VIH ROTOR: (DETAIL 7 & 8/IR300)	RAIN BIRD A-702-E-70-32; 65' SPACING, 23.3 GPM @ 70 PSI WITH BASELINE BL5201 SINGLE STATION DECODER
	65' VIH ADJ. ROTOR: (DETAIL 7 & 8/IR300)	RAIN BIRD A-752-E-70-36; 65' SPACING, 23.2 GPM @ 70 PSI WITH BASELINE BL5201 SINGLE STATION DECODER
	50' VIH ADJ. ROTOR: (DETAIL 7 & 8/IR300)	RAIN BIRD A-752-E-70-26; 51' SPACING, 10.9 GPM @ 70 PSI WITH BASELINE BL5201 SINGLE STATION DECODER
	50' LANDSCAPE ROTOR: (DETAIL 9/IR300)	RAIN BIRD 5012+PCSAMR, #6 NOZZLE; 50' R, 6.63 GPM @ 55 PSI
	25' LANDSCAPE ROTOR: (DETAIL 9/IR300)	RAIN BIRD 5012+SAMSS-MPR-25; 25' R, 45 PSI (90°:1.0 GPM) (180°:1.98 GPM) (360°: 3.82 GPM)
	30' LANDSCAPE ROTOR: (DETAIL 9/IR300)	RAIN BIRD 5012+SAMSS-MPR-30; 30' R, 45 PSI (90°:1.4 GPM) (180°:2.96 GPM) (360°: 5.78 GPM)
	35' LANDSCAPE ROTOR: (DETAIL 9/IR300)	RAIN BIRD 5012+SAMSS-MPR-35; 35' R, 45 PSI (90°:192 GPM) (180°:3.81 GPM) (360°: 7.58 GPM)
	QUICK COUPLER VALVE: (DETAIL 5/IR300)	RAIN BIRD 5RC
	2" ELEC. CONTROL VALVE: (DETAIL 16/IR301)	RAIN BIRD 200-PESB-PRS-D WITH BASELINE BL5201 SINGLE STATION DECODER
	1.5" DRIP CONTROL VALVE: (DETAIL 17/IR301)	RAIN BIRD XCZ-150-LCS WITH BASELINE BL5201 SINGLE STATION DECODER
	1" DRIP CONTROL VALVE: (DETAIL 17/IR301)	RAIN BIRD XCZ-100-FLOW WITH BASELINE BL5201 SINGLE STATION DECODER
	LATERAL ISOLATION VALVE (DETAIL 2/IR300)	
	MAINLINE ISOLATION VALVE (DETAIL 1/IR300)	
A	AIR RELIEF VALVE: (DETAIL 4/IR300)	CRISPIN PL10A
D	DRAIN VALVE (DETAIL 3/IR300)	
	BASELINE BL5315 SOIL MOISTURE SENSOR	
SAT	BASELINE 3200 BASELINE BL-3200PSS-CM W/BL-CLOUD-LTE-VZ-P & BL-CM-OMNI	
	2" HDPE 4710 DR13.5	
6"	6" HDPE 4710 DR13.5	
8"	8" HDPE 4710 DR13.5	
	HDPE DR13.5 SLEEVING - INCLUDE TWO (2) 2" CONDUITS AT ALL SLEEVING LOCATIONS FOR COMMUNICATION/ELECTRICAL @ 24" MIN. DEPTH	

DRIP IRRIGATION NOTES

1. ALL PLANTER BEDS ARE TO BE IRRIGATED WITH A NETAFIM TLCV4-12## DRIP IRRIGATION LINE. THE CONTRACTOR IS RESPONSIBLE TO INSTALL THE DRIP SYSTEM AS PER MANUFACTURER'S RECOMMENDATIONS AND THE FOLLOWING REQUIREMENTS:
   A. SHRUBS: DETAIL 19/IR302
   B. TREES: DETAILS 20 & 21/IR302
   C. RIPAIRIAN: DETAIL 18/IR302
   D. ALL ZONES 15 G.P.M. AND UNDER SHALL BE INSTALLED WITH A RAIN BIRD XCZ-100-FLOW DRIP CONTROL ZONE KIT. ENSURE THAT KIT INCLUDES PRESSURE REGULATION AND DIAPHRAGM SCREEN CLEANING SYSTEM. FILTER SHALL BE 150 MESH STAINLESS STEEL SCREEN. INSTALL PER DETAIL 15/IR301.
   E. ALL ZONES 16-50 G.P.M. SHALL BE INSTALLED WITH A RAIN BIRD XCZ-150-LCS DRIP CONTROL ZONE KIT. ENSURE THAT KIT INCLUDES PRESSURE REGULATION AND DIAPHRAGM SCREEN CLEANING SYSTEM. FILTER SHALL BE 120 MESH STAINLESS STEEL SCREEN. INSTALL PER DETAIL 15/IR301.
   F. ALL ZONES SHALL HAVE A MANUAL DRAIN VALVE AT THE END OF EACH SUPPLY/EXHAUST LATERAL, AS NEEDED, TO ALLOW FOR ADEQUATE DRAINAGE FOR WINTERIZATION.
   G. ALL ZONES SHALL INCLUDE AN AIR/VAC RELIEF VALVE AT ALL HIGH POINTS
   H. ALL TUBING IS TO BE STAKED DOWN WITH TLS6 SIX INCH (6") SOIL STAPLES TO PREVENT EXPOSURE OF PIPE THROUGH MULCH.
   I. CONTRACTOR SHALL INSTALL CHECK VALVES ON LATERAL HEADERS EVERY 8' IN ELEVATION CHANGE.
2. THE CONTRACTOR IS RESPONSIBLE TO INSTALL THE DRIP SYSTEM SO THAT THE OPTIMUM AMOUNT OF WATER IS APPLIED TO INSURE THE HEALTH OF ALL PLANT MATERIAL.
3. THE CONTRACTOR IS RESPONSIBLE TO SCHEDULE A MEETING WITH THE LANDSCAPE ARCHITECT, IRRIGATION CONSULTANT AND THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING WITH ANY IRRIGATION INSTALLATION IN ORDER TO REVIEW WORK TO BE DONE. ALL LATERAL LINES FROM VALVES TO HEADERS ARE TO BE BURIED AT MINIMUM DEPTH OF TWELVE INCHES (12"). SIZE AS NECESSARY.
4. ALL DRIP TUBING OUTSIDE OF THE 100 100 YR FLOOD LIMIT SHALL BE BURIED AT A DEPTH OF 3".
5. ALL DRIP TUBING INSTALLED WITHIN THE 100 YR FLOOD ZONE SHALL BE BURIED AT A DEPTH OF 6".
6. AFTER INSTALLATION OF THE IRRIGATION SYSTEM THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE OWNER WITH AS-BUILT DRAWINGS AND INSTRUCTIONS FOR MAINTENANCE OF THE DRIP SYSTEM.
7. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT AFTER INSTALLING DRIP IRRIGATION AND PRIOR TO PLACING MULCH/TOPSOIL FOR INSPECTION.

DRIP LAYOUT SCHEMATIC

TREE AND SHRUB DRIP RING, Details 19, 20 & 21/IR3.02
LATERAL SERVICE WITH HEADER TO SHRUB DRIP ZONES

RIPARIAN DRIP OUTLINE, Detail 18/IR3.02
LATERAL SERVICE WITH HEADER TO RIPARIAN DRIP ZONES

GENERAL NOTES

1. EXISTING SITE PLAN WAS CREATED BY SUPERBLOOM.
2. DESIGN IS BASED ON 500 GPM @ 105 PSI.
3. ALL NEW IRRIGATION MATERIAL NOTED ON THIS PLAN IS TO BE CONTRACTOR PROVIDED, CONTRACTOR INSTALLED.
4. ALL VIH ROTORS WILL BE GPS'D BY BAER DESIGN GROUP (BDG). BDG MAY ADJUST LOCATION OF MATERIALS IN THE FIELD AS NECESSARY TO FIT SITE CONDITIONS. CONTRACTOR SHALL SCHEDULE STAKING A MINIMUM OF 10 DAYS IN ADVANCE. MINIMUM OF THREE HOLES SHALL BE STAKED PER VISIT.
5. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES (PRIVATE AND PUBLIC) PRIOR TO CONSTRUCTION. ANY DAMAGE TO MARKED UTILITIES SHALL BE REPAIRED AT NO COST TO THE OWNER.
6. COORDINATE WITH ALL OTHER PLAN SHEETS PRIOR TO AND DURING CONSTRUCTION.
7. CONTRACTOR WILL PAY FOR AND ACQUIRE ALL PERMITS REQUIRED AS PART OF THIS PROJECT.
8. ALL ROCK OR DEBRIS LARGER THAN 2" BROUGHT TO THE SURFACE FROM TRENCHING SHALL BE REMOVED FROM THE BACKFILL.
9. ALL SPLICES TO BE INSTALLED IN 10" ROUND VALVE BOX WITH BLACK FLUSH LID MARKED "ELEC".
10. ALL COMMUNICATION WIRE SHALL BE 12-2 OR 14-2 MAXI CABLE PER ELECTRICAL PLAN.
11. ALL ELECTRICAL WIRE ABOVE FINISH GRADE SHALL BE INSTALLED IN RIGID SCH 40 PVC CONDUIT.
12. ALL MULTI-STRAND ELECTRICAL WIRES SHALL BE TAPPED TOGETHER IN TEN FOOT INTERVALS OR LESS.
13. ALL INSTALLATION SHALL MEET OR EXCEED NATIONAL, STATE AND LOCAL CODES.
14. CONTRACTOR SHALL MAINTAIN DAILY RECORDS AND MODIFICATIONS OF WORK NOTED ON AN IRRIGATION AS-BUILT.
15. CONTRACTOR SHALL ACCOMPANY CURRENT IRRIGATION AS-BUILT WITH EACH PAYMENT APPLICATION MONTHLY.
16. THE ENTIRE INSTALLED SYSTEM SHALL INCLUDE MINIMUM A ONE YEAR WARRANTY FROM THE DATE OF FINAL ACCEPTANCE. ALL DEFECTS IN MATERIAL OR LABOR SHALL BE REPAIRED BY THE CONTRACTOR IN A TIMELY MANNER AND AT NO COST TO THE OWNER. PLANT MATERIAL LOST DUE TO LACK OF URGENCY ON A WARRANTY ITEM SHALL BE REPLACED TO EQUAL OR GREATER VALUE AT NO COST TO THE OWNER.
17. ALL MATERIALS SHALL BE THOSE SPECIFIED NEW IN BOX AND WITHOUT FLAWS OR DEFECTS OF ANY KIND.
18. NO SUBSTITUTIONS WILL BE ALLOWED WITHOUT WRITTEN APPROVAL PRIOR TO BID.
19. THE IRRIGATION SYSTEM IS DESIGNED TO PROVIDE MAXIMUM EFFICIENCY AND DISTRIBUTION UNIFORMITY. IF THE CONTRACTOR IS REQUIRED TO MAKE FIELD ADJUSTMENTS, NOTIFY THE IRRIGATION CONSULTANT IMMEDIATELY FOR FURTHER EVALUATION.

IRRIGATION KEYNOTES

1. INSTALL IRRIGATION PUMP STATION ADJACENT TO EXISTING POND. EXACT LOCATION TO BE DETERMINED ON SITE. COORDINATE WITH ELECTRICAL FOR POWER SERVICE.
2. INSTALL TWO IRRIGATION CONTROLLERS ON PEDESTAL NEAR IRRIGATION PUMP STATION AND MAINLINE. CONNECT TO 120V GFCI POWER SUPPLY PROVIDED BY ELECTRICAL.
3. EXTEND MAINLINE TO FUTURE POND AND IRRIGATION PUMP STATION LOCATION.
4. BRIDGE CROSSING.
5. INSTALL DRAIN VALVE AT LOW POINT. PLUMB DISCHARGE TO CREEK. PROVIDE RIP RAP TO PREVENT EROSION IF REQUIRED.
6. INSTALL AIR RELIEF VALVE AT HIGH POINT. FIELD ADJUST EXACT LOCATION AS REQUIRED.
7. CREEK CROSSING - SEE DETAIL 13/IR301.
8. RIPARIAN DRIP ZONE - INSTALL ELECTRIC VALVE, HEADER/LATERAL PIPING AND DRIP TUBING TO PROVIDE UNIFORM IRRIGATION APPLICATION TO PLANTINGS WITHIN THE RIPARIAN ZONES.

0 20 40
Scale 1" = 20'-0"

BAER DESIGN GROUP, LLC
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SUPERBLOOM
750 PENNSYLVANIA ST,
DENVER, CO 80203
720.440.2668

DATE: November 17, 2023
PROJECT NO. WSP

SUBMITTALS		DATE
1	DESIGN REVIEW	11/17/23
2		
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PROJECT
WARM SPRINGS PRESERVE
BALD MOUNTAIN RD.
KETCHUM, ID
CITY OF KETCHUM AND WRLT

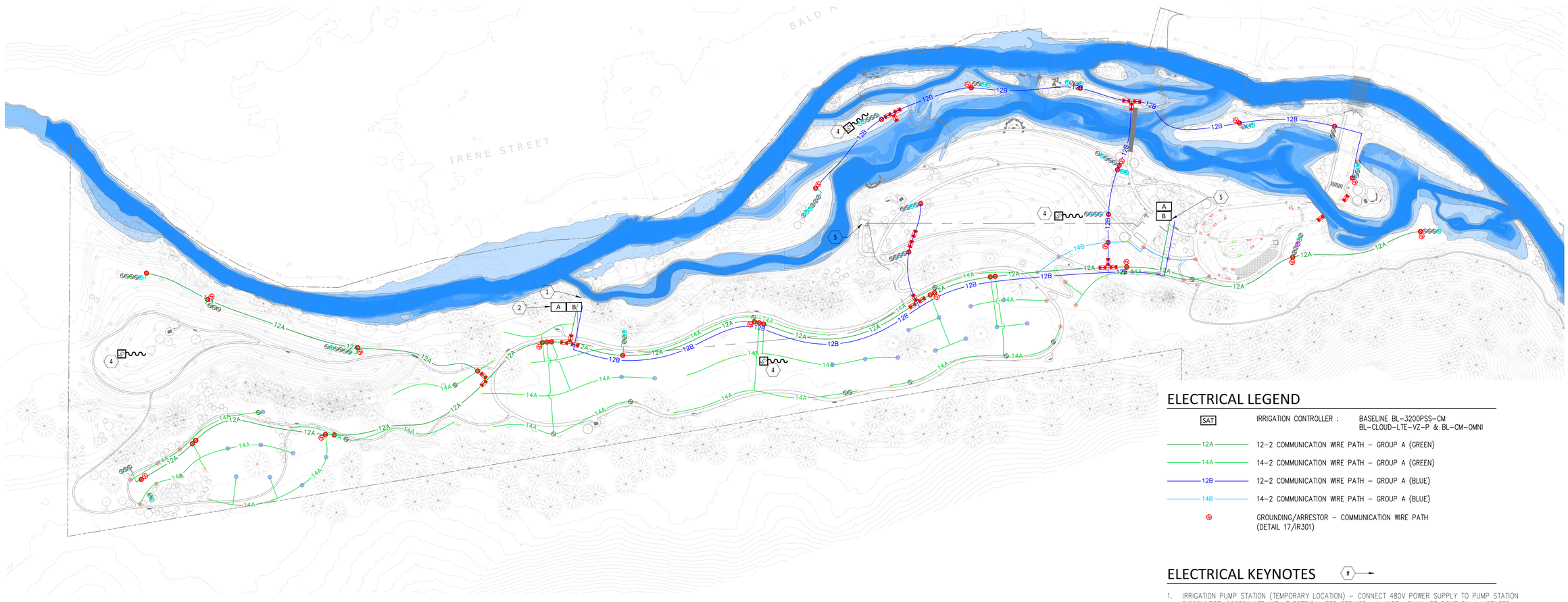
IRRIGATION - PLUMBING PLAN

STATE OF IDAHO
GREG P. BAER
11/26/2024
LA-16635
LICENSED LANDSCAPE ARCHITECT

SCALE: AS NOTED

IR100

DRAWN BY: GB
CHECKED BY: GB



ELECTRICAL LEGEND

SAT	IRRIGATION CONTROLLER : BASELINE BL-3200PSS-CM BL-CLOUD-LTE-VZ-P & BL-CM-OMNI
12A	12-2 COMMUNICATION WIRE PATH - GROUP A (GREEN)
14A	14-2 COMMUNICATION WIRE PATH - GROUP A (GREEN)
12B	12-2 COMMUNICATION WIRE PATH - GROUP A (BLUE)
14B	14-2 COMMUNICATION WIRE PATH - GROUP A (BLUE)
	GROUNDING/ARRESTOR - COMMUNICATION WIRE PATH (DETAIL 17/IR301)

ELECTRICAL KEYNOTES

1. IRRIGATION PUMP STATION (TEMPORARY LOCATION) - CONNECT 480V POWER SUPPLY TO PUMP STATION DISCONNECT. COORDINATE WITH ELECTRICAL FOR SERVICE. ALL WORK SHALL BE DONE BY A LICENSED ELECTRICIAN.
2. COORDINATE AND PROVIDE FOR A 120V POWER, 20 AMP GFCI POWER SERVICE FOR TWO IRRIGATION CONTROLLERS NEAR PUMP STATION.
3. IRRIGATION PUMP STATION (FINAL LOCATION) - CONNECT 480V POWER SUPPLY TO PUMP STATION DISCONNECT. COORDINATE WITH ELECTRICAL FOR SERVICE. ALL WORK SHALL BE DONE BY A LICENSED ELECTRICIAN.
4. INSTALL MOISTURE SENSOR IN LOCATION THAT BEST REPRESENTS THE OVERALL MICRO CLIMATE OF EACH SPECIFIC PLANTING ZONE. EXACT LOCATION TO BE DETERMINED BY DESIGN TEAM AND CLIENT.
5. EXTEND IRRIGATION COMMUNICATION WIRE TO PROPOSED BUILDING FOR FUTURE.

0 20 40
Scale 1" = 20'-0"

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PROJECT

WARM SPRINGS PRESERVE

BALD MOUNTAIN RD.
KETCHUM, ID

CITY OF KETCHUM AND WRLT

IRRIGATION - ELECTRICAL PLAN

STATE OF IDAHO
GREG P. BAER
11/26/2024
LA-16635
LICENSED LANDSCAPE ARCHITECT

SCALE: AS NOTED

IR200

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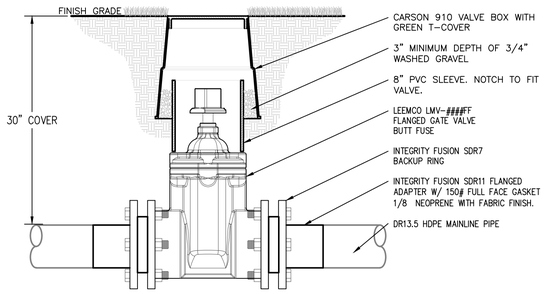
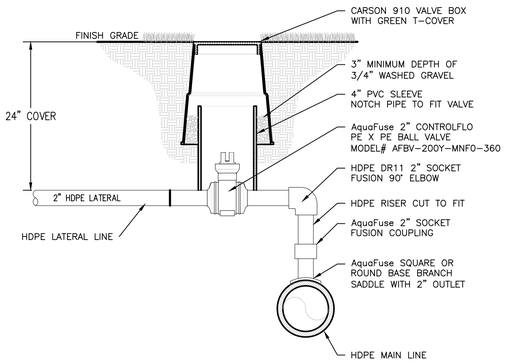
CHECKED BY: GB



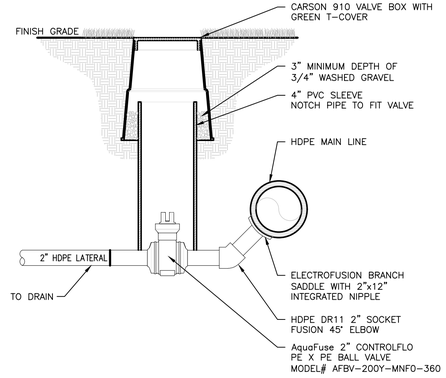
1 Mainline Gate Valve - HDPE

NTS



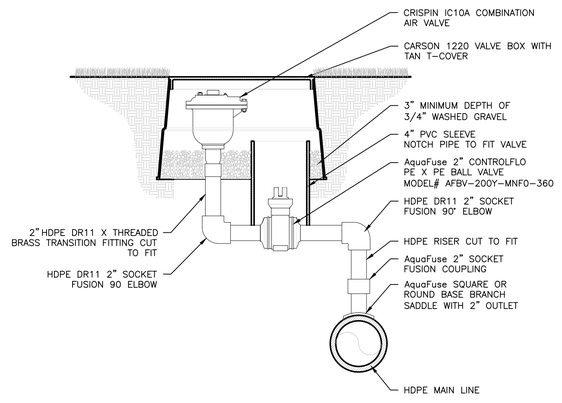
2 2" Lateral Isolation Valve Assembly

NTS



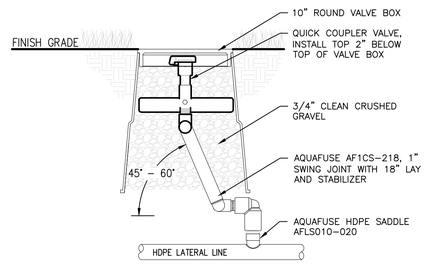
3 Manual Drain/Lake Fill

NTS



4 Air/Vac Valve Assembly

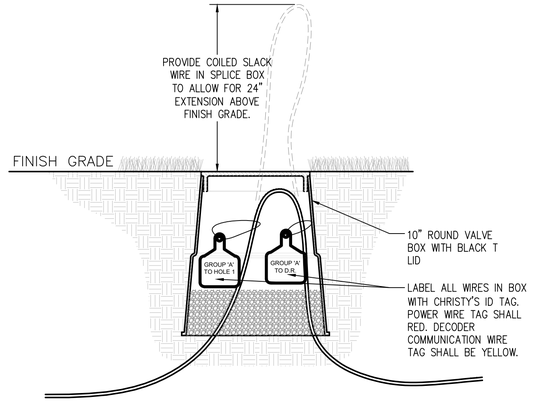
NTS



NOTE:
1. ACME O-RING SEALED THREADS ARE TO BE FINGER TIGHTENED AND "BACKED OFF" ONE FULL ROTATION BEFORE INSTALLATION.

5 Quick Couple Valve Assembly

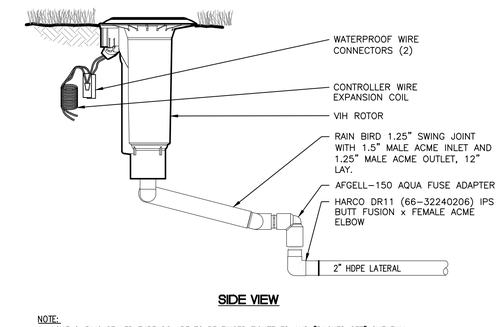
NTS



NOTES:
1. ALL TAG IDENTIFICATIONS SHALL BE TRANSFERRED TO IRRIGATION AS-BUILT.
2. ALL 24 VOLT WIRING SHALL BE SPLICED WITH 3M DBY/4 SPLICE KIT.
3. ALL 120/240 VOLT WIRING SHALL BE SPLICED WITH UL APPROVED 3M RESIN PACK.

6 Splice Box

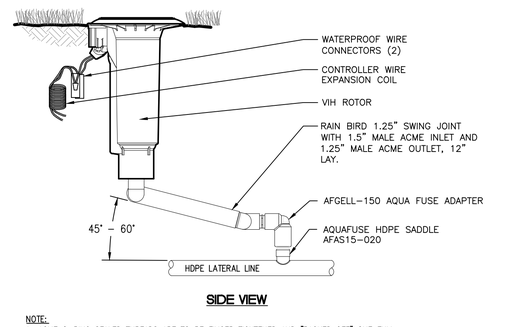
NTS



NOTE:
1. ACME O-RING SEALED THREADS ARE TO BE FINGER TIGHTENED AND "BACKED OFF" ONE FULL ROTATION BEFORE INSTALLATION.

7 VIH Rotor - End Lateral

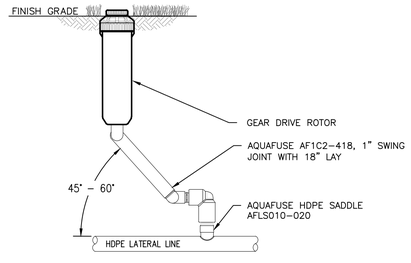
NTS



NOTE:
1. ACME O-RING SEALED THREADS ARE TO BE FINGER TIGHTENED AND "BACKED OFF" ONE FULL ROTATION BEFORE INSTALLATION.

8 VIH Rotor - Mid Lateral

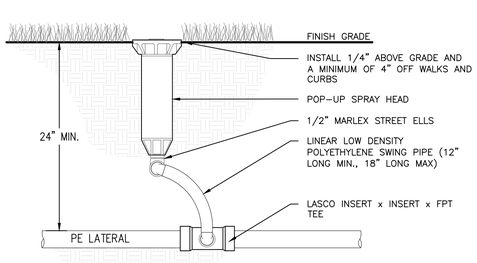
NTS



NOTE:
1. ACME O-RING SEALED THREADS ARE TO BE FINGER TIGHTENED AND "BACKED OFF" ONE FULL ROTATION BEFORE INSTALLATION.

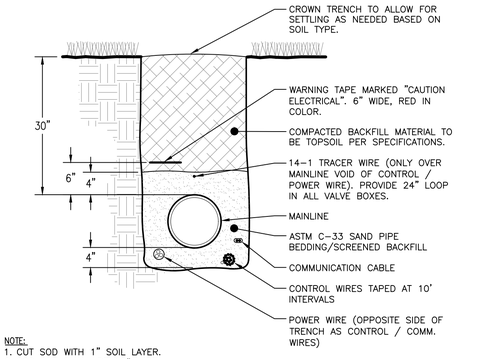
9 Gear Driven Rotor

NTS



10 MP Rotator/Spray Head

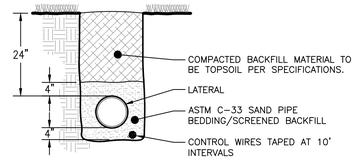
NTS



NOTE:
1. CUT SOD WITH 1" SOIL LAYER.
2. SOD CUT SHALL BE 18" WIDE.
3. CUT SOD SHALL BE ROLLED AND WATERED TO KEEP MOIST AND SHALL BE REPLACED WITHIN 48 HOURS OF CUT.
4. CROWN CENTER OF TRENCH 2" TO ALLOW FOR SETTLING.
5. TOP DRESS SOD SEAMS PULLING AWAY FROM EDGE WITH APPROVED TOP DRESSING MATERIAL.
6. PLACE AND COMPACT BACKFILL IN 6" LIFTS.
7. COMPACT BACKFILL WITH PNEUMATIC TAMPER WITH MAX 6"x6" FOOT.
8. COMPACTION TO MATCH UNDISTURBED ADJACENT SOILS.
9. TOP 6" SOIL PROFILE TO MATCH ADJACENT UNDISTURBED SOIL PROFILE.

11 Mainline Trench Section

NTS



12 Lateral Trench Section

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NOTES:

PROJECT

WARM SPRINGS PRESERVE

BALD MOUNTAIN RD.
KETCHUM, ID

CITY OF KETCHUM AND WRLT

IRRIGATION - DETAILS

STATE OF IDAHO
GREG P. BAER
LICENSED LANDSCAPE ARCHITECT
11/26/2024
LA-16635

SCALE: AS NOTED

IR300

DRAWN BY: GB
CHECKED BY: GB

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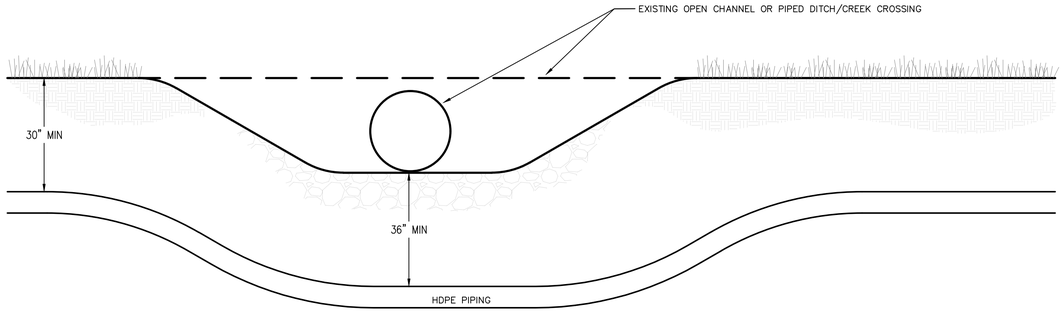
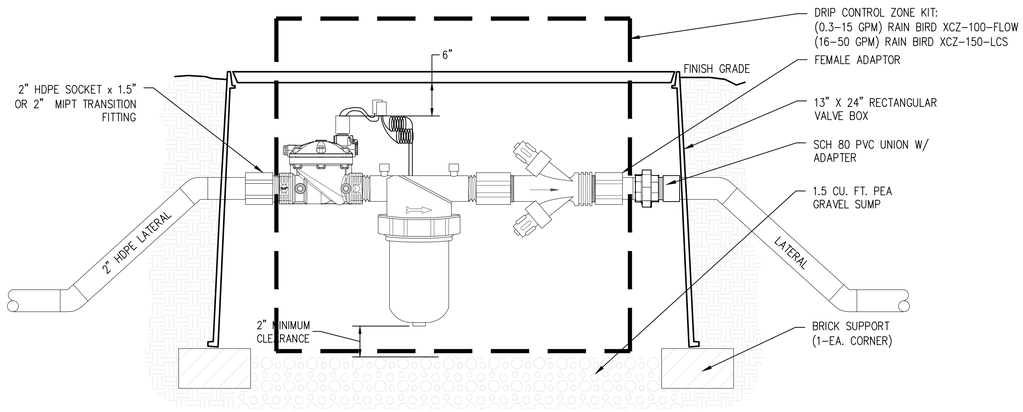


MINIMUM ALLOWABLE RADIUS OF HDPE PIPE	
DR RATING	DEFLECTION RADIUS
DR 9 OR LOWER	20X THE O.D.
DR 13.5	25X THE O.D.
DR 21	27X THE O.D.
DR 21 OR GREATER	100X THE O.D.

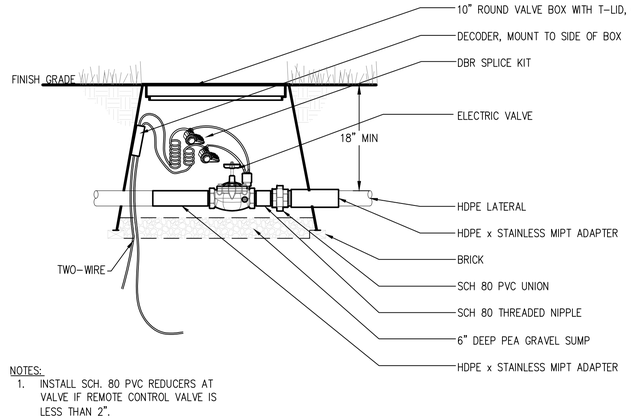
13 Creek/Depression Crossing

NTS



14 Pipe Deflection Chart

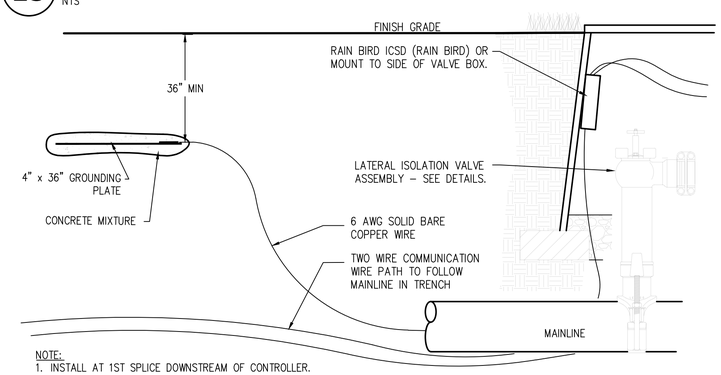
NTS



NOTES:
1. INSTALL SCH. 80 PVC REDUCERS AT VALVE IF REMOTE CONTROL VALVE IS LESS THAN 2".

15 1" & 1.5" Drip Control Zone Valve Assembly

NTS



NOTE:
1. INSTALL AT 1ST SPLICE DOWNSTREAM OF CONTROLLER.
2. INSTALL ONE EVERY 450'.
3. INSTALL IN ROUGH OR OUT OF PLAY AREAS.
4. INSTALL ON EVERY SPUR IN EXCESS OF 50' OR GREATER.
5. INSTALL AT ALL DEAD-ENDS.
6. GROUNDING SHALL BE TESTED WITH A MEGGER BY CONTRACTOR AND CERTIFIED TO MEET ASIC MINIMUM CODE OF 10 OHMS TO GROUND, OR MANUFACTURERS MINIMUM REQUIREMENTS.
7. CONTRACTOR TO PROVIDE TEST RESULTS TO IRRIGATION CONSULTANT FOR SIGN OFF.

16 Pipe Deflection Chart

NTS

17 Two Wire Path Grounding Assembly

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PROJECT
WARM SPRINGS PRESERVE
BALD MOUNTAIN RD.
KETCHUM, ID
CITY OF KETCHUM AND WRLT

IRRIGATION - DETAILS

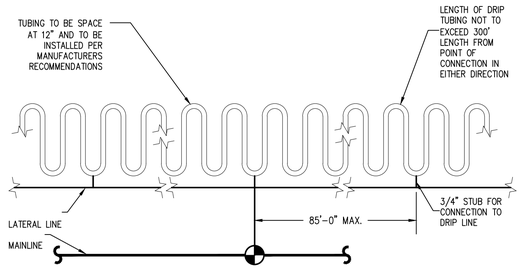
STATE OF IDAHO
GREG P. BAER
LICENSED LANDSCAPE ARCHITECT
11/26/2024
LA-16635

BAER DESIGN GROUP, LLC
greg@baerdg.com
Ph. 208.859.1980

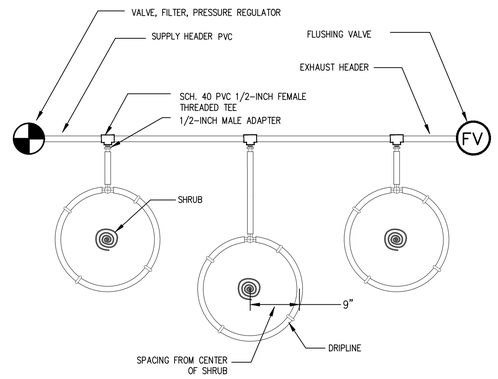
SCALE: AS NOTED

IR301

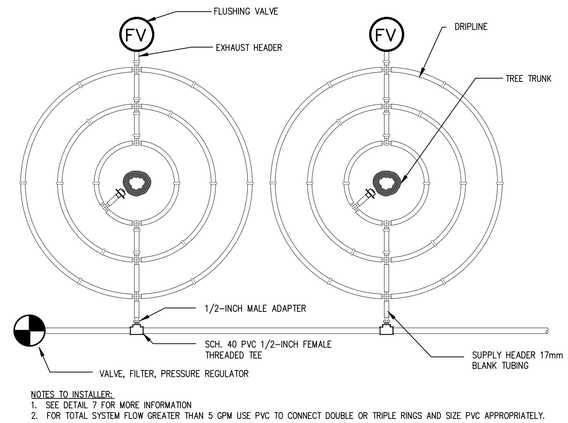
DRAWN BY: GB
CHECKED BY: GB



18 Drip Layout - Grasses/Perennials/Annuals
NTS

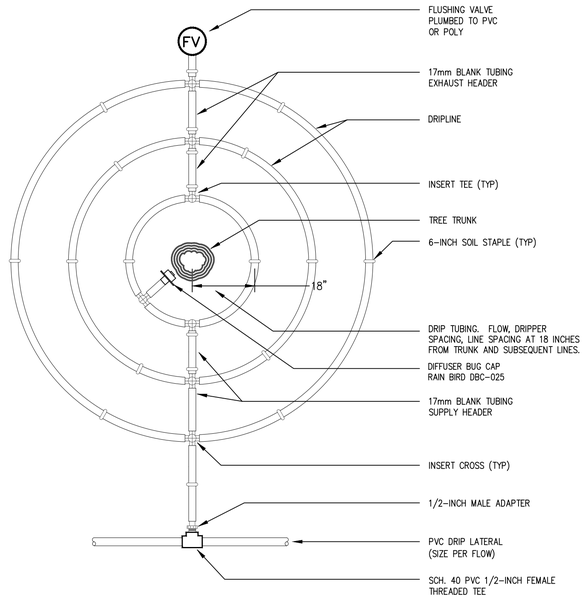


19 Drip Layout - Shrubs
NTS



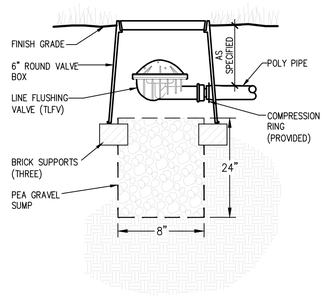
NOTES TO INSTALLER:
1. SEE DETAIL 7 FOR MORE INFORMATION
2. FOR TOTAL SYSTEM FLOW GREATER THAN 5 GPM USE PVC TO CONNECT DOUBLE OR TRIPLE RINGS AND SIZE PVC APPROPRIATELY.

20 Drip Layout - Trees
NTS

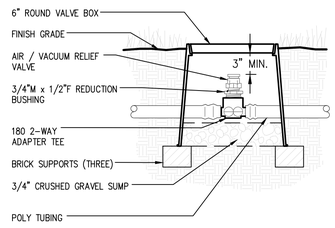


NOTES TO INSTALLER:
1. INSTALL FIRST DRIPLINE LOOP 18-INCHES FROM CENTER OF TREE TRUNK. INSTALL EACH ADDITIONAL LOOP AT 18-INCH SPACING
2. INSTALL DRIPLINE TUBING ON SURFACE TO A MAXIMUM OF 6-INCHES BELOW GRADE, STAPLE IN PLACE PER MANUFACTURER'S RECOMMENDATION, BACKFILL, AND SPREAD SURFACE TREATMENT AS DIRECTED BY OTHERS.

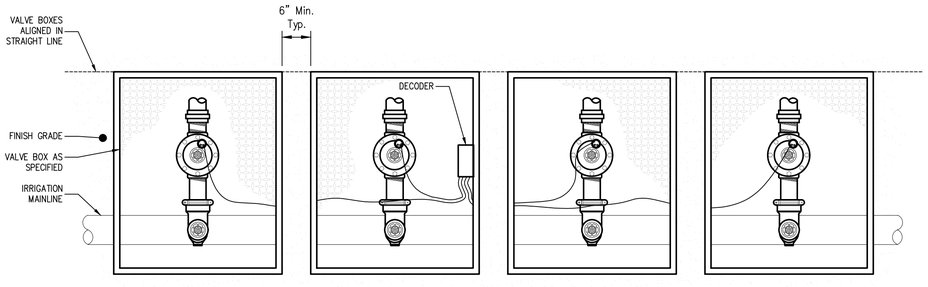
21 Tree Drip Plumbing Detail
NTS



22 Drip Line Flush Valve
NTS



23 Drip Line Air/Vac Release Valve
NTS



24 Rectangular Valve Box Spacing
NTS

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KETCHUM, ID
CITY OF KETCHUM AND WRLT

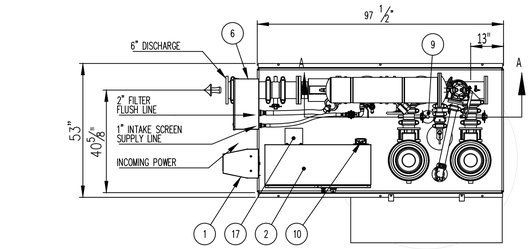
IRRIGATION - DETAILS

STATE OF IDAHO
GREG P. BAER
11/26/2024
LA-16635
LICENSED LANDSCAPE ARCHITECT

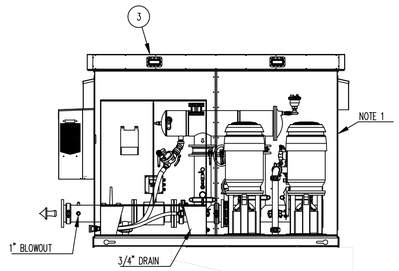
SCALE: AS NOTED

IR302

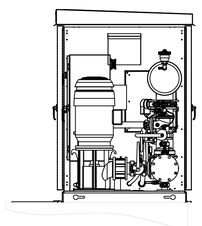
DRAWN BY: GB
CHECKED BY: GB



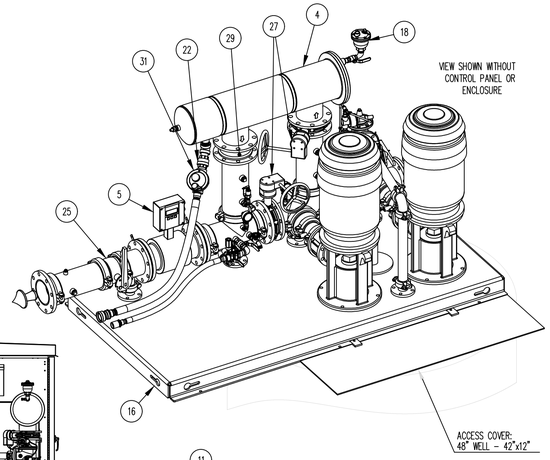
PLAN VIEW

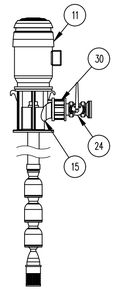


FRONT VIEW

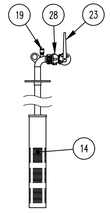


END VIEW

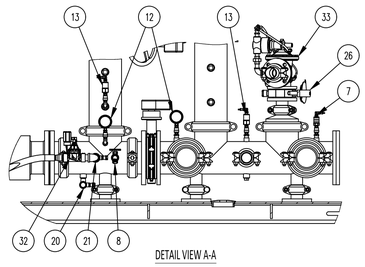




DUTY PUMP



JOCKEY PUMP



DETAIL VIEW A-A

DESIGN SPECIFICATIONS								
Design Flow Rate:	500	GPM	@	105	PSI			
Duty Pump Details:	25	HP/Pump		270	GPM	@	240	TDH
Jockey Pump Details:	5	HP/Pump		55	GPM	@	240	TDH
Minimum Power:	480	Volt	/	3	Phase			

ITEM NO.	DESCRIPTION	Size	QTY.
1	AC UNIT, N28, HOFFMAN		1
2	CONTROL PANEL		1
3	ENCLOSURE, MARINE GRADE ALUMINUM, 4-DOOR	48x96x66	1
4	FILTER	6"	1
5	FLOW METER, BADGER	6"	1
6	HARMONICS PANEL	24"x20"x10"	1
7	HIGH PRESSURE SWITCH	1/4"	1
8	HOSE BIB	3/4"	1
9	LEVEL SENSOR/FLOAT SWITCH CAP		1
10	MODEM		1
11	MOTOR		2
12	PRESSURE GAUGE	2-1/2"	2
13	PRESSURE TRANSDUCER	1/4"	2
14	PUMP, SUBMERSIBLE		1
15	PUMP, TURBINE, DI HEAD	4"	2
16	SKID, BENT	48"x96"	1
17	TRANSFORMER	3kVA	1
18	VALVE, AIR RELIEF	3/4"	1
19	VALVE, AIR RELIEF, FV-4	1/2"	1
20	VALVE, BALL	3/4"	1
21	VALVE, BALL	1"	1
22	VALVE, BALL	1-1/2"	1
23	VALVE, BUTTERFLY, GROOVE, LEVER	2"	1
24	VALVE, BUTTERFLY, GROOVE, LEVER	4"	2
25	VALVE, BUTTERFLY, GROOVE, LEVER	6"	1
26	VALVE, BUTTERFLY, LUG, LEVER, 175 PSI	2"	1
27	VALVE, BUTTERFLY, WAFER, GEAR-OP, NBE	6"	2
28	VALVE, CHECK, GROOVED	2"	1
29	VALVE, CHECK, NBE	6"	1
30	VALVE, CHECK, SILENT	4"	2
31	VALVE, FILTER FLUSH	1-1/2"	1
32	VALVE, LAKE SCREEN SUPPLY	1"	1
33	VALVE, PRESSURE RELIEF, ANGLED	2"	1

SCOPE OF WORK

Packaged Pump Station supplier shall provide a variable speed vertical turbine pump station complete with pump, piping, valves, sensors, variable frequency drive (VFD), programmable logic controller (PLC), UL 508A listed control panel, and all appurtenances necessary for a complete and functioning pumping system. The station shall be mounted to press brake formed steel base and enclosed in a powder-coated marine grade aluminum enclosure. The pump station shall be manufactured by a UL QCZJ and ISO 9001 certified pump station manufacturer.

Technical Service and Support. The manufacturer shall provide access 24/7 phone support with a factory certified technician. The technician shall have access to all relevant data specific to the pump station, including specifications, submittal, shop drawings, programming, and detailed photos of the system.

Factory Testing. The pump station shall undergo and pass all of the following system performance tests: Hydrostatic testing that meets ANSI/HI specifications and standards; Flow testing that meets ANSI/HI 14.6 specifications and standards; and Vibration testing that meets ANSI/HI 9.6.4 Vibration Measurement and Allowable Values specifications and standards. The pumping system shall be flow tested as a complete unit, which shall include function testing of pumps, motors, instrumentation, appurtenances, and control panel. The results of all tests shall be available to the owner.

PRODUCTS

Piping, Valves, Skid Base, & Station Enclosure.

Piping. The station piping shall be standard wall pipe with grooved connections. Flanged or welded connections shall not be acceptable. Threaded connections between the main piping sections other than at the pump volute shall not be acceptable.

Valves. Butterfly style isolation valves--with grooved connections--shall be included on station suction and discharge piping. Flanged or threaded connections shall not be accepted. A non-slam check valve shall be included on the discharge of each pump. An air release valve shall be included, located immediately after the pump check valve.

Skid. The pump skid shall be made of 1/4" press broke A36 steel. No welded bases or open rail systems shall be acceptable.

Corrosion Protection. The pump skid and appurtenances shall be cleaned to bare steel and coated with a baked on powder coating, all piping including elbows shall be coated inside and out. The pump station shall be pressure tested prior to coating. No welding shall be performed after the pump station is powder coated.

Station Enclosure. The pump station enclosure shall be constructed of marine grade aluminum modular panels to allow access to all pumps and components by simply removing any panel. The entire front of the enclosure shall consist of hinged doors. The enclosure shall be powder coated. The roof of the enclosure shall be easily displaced and replaced by one person for the purpose of servicing the pump station. The station enclosure shall include a ventilation fan (or fans) appropriately sized to adequately cool the enclosed equipment.

Automatic Filter: The pump station shall include an automatic screen filter. The filter shall use suction scanning devices to automatically remove debris from the filter element. The filter shall be VAF or approved equal. Control logic for filter flush shall be included as part of the main control panel PLC programming.

Pump Control System

NEMA Rating. The VFD, PLC, and associated electrical equipment shall be mounted in a NEMA 12 enclosure rated for indoor installation. To avoid potential water or rodent damage, VFD's mounted outside the main control panel are not acceptable.

Control Panel Manufacturing & Testing. The pump control panel shall be manufactured and listed by a UL508A Panel Shop. The panel shall be UL labeled as an "Enclosed Industrial Control Panel". The pump control panel shall be completely manufactured, tested and programmed prior to delivery to the job site.

Documentation. A color wiring schematic and pump nameplate information shall be permanently affixed to the inside of the control enclosure. All field terminal connections shall be numbered and labeled.

Cooling System. The control panel cooling system shall be appropriately sized for the ambient conditions. The cooling system shall not allow dust, insects or rodents inside the pump control panel. Two sets of spare filters shall be included with the pumping system.

Main Disconnect. A service-entrance rated, non-fused disconnect shall be mounted in the pump control panel and shall isolate all power to the control panel. The disconnect shall include an operating handle mounted on the control panel enclosure door that is mechanically interlocked to prevent entry while the disconnect is in the ON position. To prevent damage from vandalism, a disconnect external to the pump station enclosure shall not be accepted.

Overcurrent Protection. The VFD bridge rectifiers shall be protected from over current by an appropriately sized circuit breaker. Fuses are not acceptable.

Lightning & Surge Protection. The Pump Control Panel shall be equipped with transient voltage and surge arrestors.

Variable Frequency Drive (VFD). The VFD shall be appropriately sized to meet the FLA (full load amps) required by the pump motor, as stated on the motor nameplate. The VFD shall be manufactured by ABB Industrial Systems, Mitsubishi, or approved equal. Initial start-up and calibration shall be performed by a factory certified technician, which shall extend the warranty on the control panel to a total of three (3) years.

Programmable Logic Controller (PLC). The PLC shall be fully programmed prior to pump panel installation. The technician installing and programming the PLC is to be factory trained and certified by the PLC manufacturer. The PLC programming shall be non-proprietary, and the complete station programming shall be made available to the owner via a USB drive included with the station control panel.

PLC Operator Interface. The PLC shall be equipped with a 5.7" LCD color touchscreen. The operator interface shall allow the user to make adjustments to the PLC program locally without requiring any additional equipment such as a laptop computer. A VFD control keypad is not an acceptable substitution for the digital operator interface. The PLC shall have an Ethernet port to enable remote access.

PLC Control Functions:

1. User settable Local or Remote control.
2. System Pressure Setpoint
3. Pump Sleep Settings, with two threshold modes: Sleep by Flow or Sleep by Frequency
4. System Protection Settings, including fault and warning parameters for low flow, high flow, low pressure, high pressure, restart trials and restart delay time.
5. Load Factory Default Settings, User Saved Default Settings.
6. Pre-Programmed Start-Up Routines to limit and/or delay starting and acceleration of the pump to eliminate excessive velocity and pressure. It shall also include initial start-up, mainline fill, power outage and automatic re-starts.

PLC Monitoring Functions

1. Pump operating status, total pump run hours, motor frequency, motor amperage
2. System pressure, flow rate
3. Fault Log with time stamps and diagnostic utility.
4. Trend Data, with graphic display of system pressure, flow, motor frequency and amperage. Data shall be exportable to MS Excel.
5. USB port to upload, download of program, and data storage.

Instrumentation.

Pressure Gauges shall have a 304 stainless steel case, with bezel construction. Gauges shall have a 2.5" diameter and be liquid filled.

Pressure Transmitter(s) shall be constructed of stainless steel and rated for the pump station discharge pressure.

Flow Meter. The station shall include a magnetic flow meter. The flow meter shall have flange connections. The flow meter shall be capable of pulse and analog output. Current and totalized flow shall be read at the pump control panel HMI. Inserion flow meters and sensors shall not be accepted.

Submersible Pump Protection Shrouds

Each pump and motor shall be completely encased in a slotted PVC well casing. Both ends of the shall be thoroughly sealed to ensure that no water can enter at either end. Water shall only enter the casing through precision laser cut slots, which will not allow debris larger than can be passed entirely through the pump. All water entering the casing shall pass over, and cool the motor, prior to entering the pump.

SUPERBLOOM
750 PENNSYLVANIA ST,
DENVER, CO 80203
720.440.2668

DATE: November 17, 2023
PROJECT NO. WSP

SUBMITTALS	DATE
1 DESIGN REVIEW	11/17/23
2	
3	
4	
5	
6	

NOTES:
1. CONTRACTORS AND SUBCONTRACTORS SHALL VERIFY ALL FIGURED DIMENSIONS AND CONDITIONS AT THE JOBSITE, REVIEW AND COMPARE ALL CHAPTERS AND INTERDISCIPLINARY DRAWINGS, AND NOTIFY THE ARCHITECT OF ANY DIMENSIONAL ERRORS, OMISSIONS OR DISCREPANCIES PRIOR TO ANY FABRICATION OF ANY WORK OR FIELD WORK BEING DONE, IN ACCORDANCE WITH AIA DOCUMENT A201. DO NOT SCALE THESE DRAWINGS.
2. THE DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS PREPARED BY THE ARCHITECTS FOR THIS PROJECT ARE INSTRUMENTS OF THE ARCHITECTS SERVICE FOR USE SOLELY WITH RESPECT TO THIS PROJECT AND UNLESS OTHERWISE PROVIDED THE ARCHITECT SHALL BE DEEMED THE AUTHOR OF THESE DOCUMENTS AND SHALL RETAIN ALL COMMON LAW STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING THE COPYRIGHT. REPRODUCTION IS PROHIBITED. COPYRIGHT 2022. STUDIO SUPERBLOOM, LLC.

PROJECT
WARM SPRINGS PRESERVE
BALD MOUNTAIN RD.
KETCHUM, ID
CITY OF KETCHUM AND WRLT

IRRIGATION PUMP STATION DETAILS

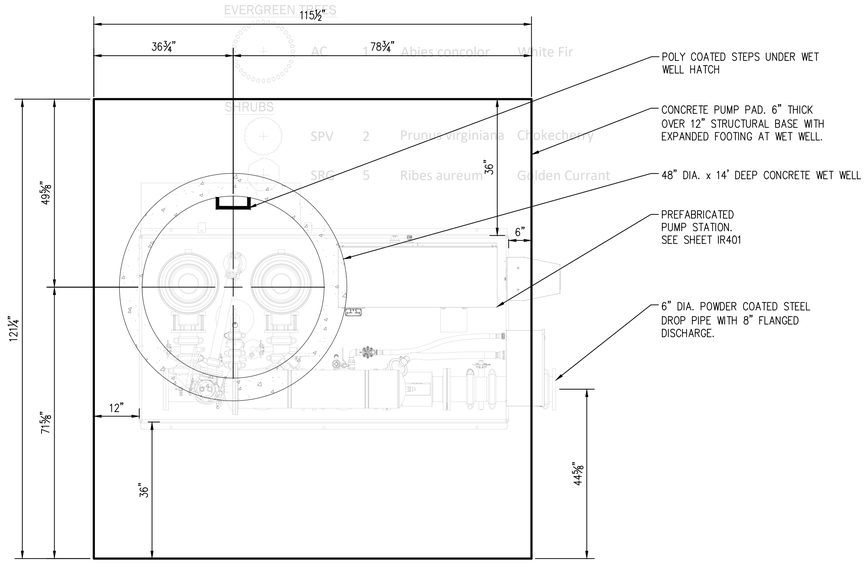
STATE OF IDAHO
GREG P. BAER
LICENSED LANDSCAPE ARCHITECT
11/26/2024
LA-16635

BAER DESIGN GROUP, LLC
greg@baerdg.com
Ph. 208.859.1980

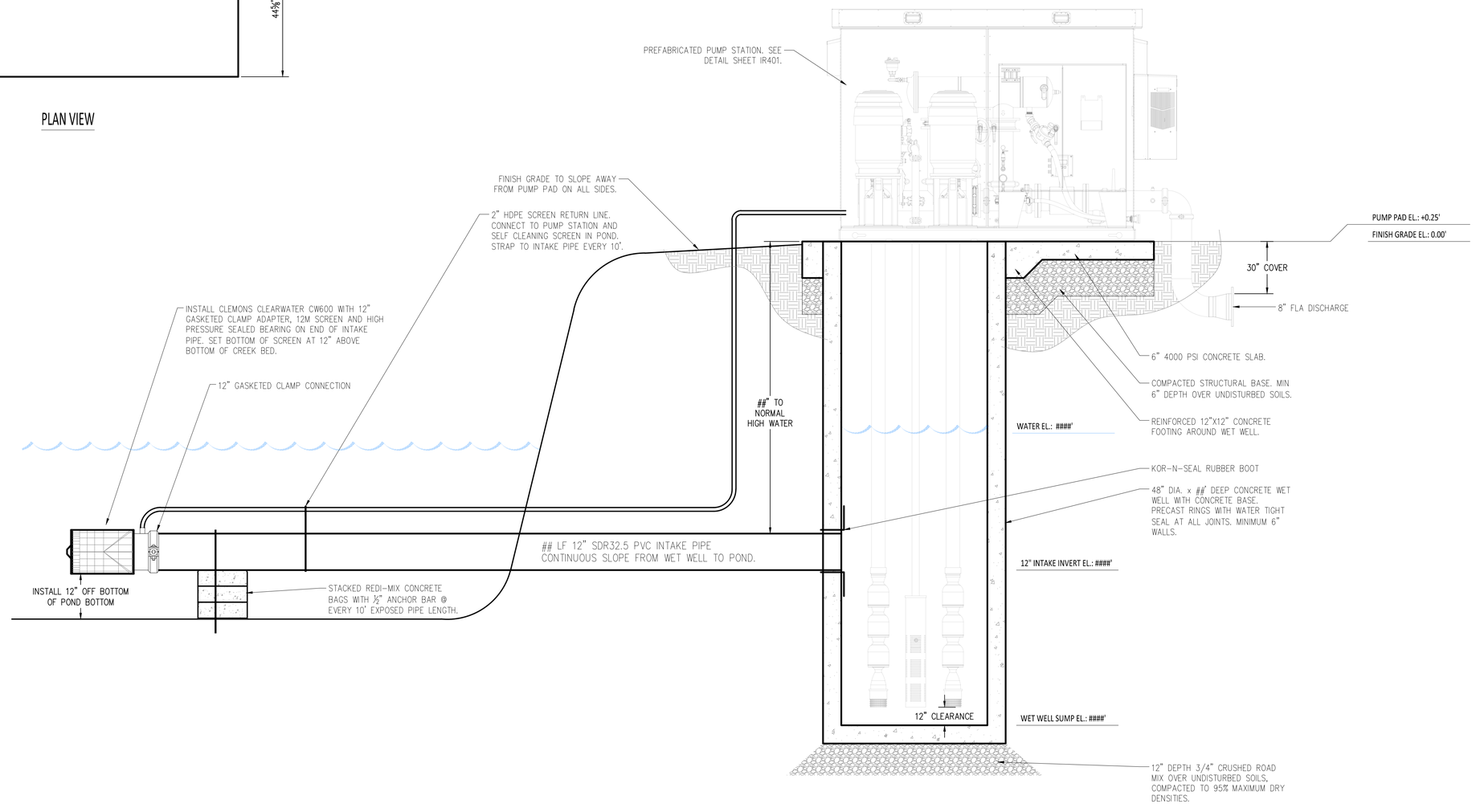
SCALE: AS NOTED

IR400

DRAWN BY: GB
CHECKED BY: GB



PLAN VIEW



SECTION VIEW

PLANT SCHEDULE L6.15
PLANT SCHEDULE L6.16

SUPERBLOOM
750 PENNSYLVANIA ST,
DENVER, CO 80203
720.440.2668

DATE: November 17, 2023
PROJECT NO. WSP

SUBMITTALS		DATE
1	DESIGN REVIEW	11/17/23
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PROJECT
WARM SPRINGS PRESERVE
BALD MOUNTAIN RD.
KETCHUM, ID
CITY OF KETCHUM AND WRLT

PUMP PAD & WET WELL LAYOUT

STATE OF IDAHO
GREG P. BAER
Greg Baer
11/26/2024
LA-16635
LICENSED LANDSCAPE ARCHITECT

SCALE: AS NOTED

IR401

DRAWN BY: GB
CHECKED BY: GB

BAER DESIGN GROUP, LLC
greg@baerdg.com
Ph. 208.859.1980

CITY OF KETCHUM

PO BOX 2315 * 191 5TH ST. * KETCHUM, ID 83340
Administration 208-726-3841 (fax) 208-726-8234

PURCHASE ORDER

BUDGETED ITEM? ____ Yes ____ No

PURCHASE ORDER - NUMBER: 25110

To:	Ship to:
6329 AQUA TERRA RESTORATION LLC PO BOX 651 DRIGGS ID 83422	CITY OF KETCHUM PO BOX 2315 KETCHUM ID 83340

P. O. Date	Created By	Requested By	Department	Req Number	Terms
04/28/2025	CCHING	CCHING			

Quantity	Description		Unit Price	Total
1.00	Warm Springs Preserve Restoration	93-4900-7950	2,999,163.85	2,999,163.85
		SHIPPING & HANDLING		0.00
		TOTAL PO AMOUNT		2,999,163.85

Authorized Signature

CITY OF KETCHUM

PO BOX 2315 * 191 5TH ST. * KETCHUM, ID 83340
Administration 208-726-3841 (fax) 208-726-8234

PURCHASE ORDER

BUDGETED ITEM? ____ Yes ____ No

PURCHASE ORDER - NUMBER: 25111

To:	Ship to:
6330 WESTERN STATES RECLAMATION 3756 IMPERIAL ST FREDERICK CO 80516	CITY OF KETCHUM PO BOX 2315 KETCHUM ID 83340

P. O. Date	Created By	Requested By	Department	Req Number	Terms
04/28/2025	CCHING	CCHING			

Quantity	Description		Unit Price	Total
1.00	Warm Springs Preserve Irrigation	93-4900-7950	1,300,000.00	1,300,000.00
		SHIPPING & HANDLING		0.00
		TOTAL PO AMOUNT		1,300,000.00

Authorized Signature

CITY OF KETCHUM

PO BOX 2315 * 191 5TH ST. * KETCHUM, ID 83340
Administration 208-726-3841 (fax) 208-726-8234

PURCHASE ORDER

BUDGETED ITEM? ____ Yes ____ No

PURCHASE ORDER - NUMBER: 25115

To:	Ship to:
1716 CONRAD BROTHERS CONSTRUCTION P.O. BOX 3432 HAILEY ID 83333	CITY OF KETCHUM PO BOX 2315 KETCHUM ID 83340

P. O. Date	Created By	Requested By	Department	Req Number	Terms
04/30/2025	KCHOMA	KCHOMA			

Quantity	Description		Unit Price	Total
1.00	Paving of Warm Springs Preserve Entrance and Par	93-4900-7950	180,851.00	180,851.00
		SHIPPING & HANDLING		0.00
		TOTAL PO AMOUNT		180,851.00

Authorized Signature

MEMORANDUM OF APPROVAL

25-002

Between the City of Ketchum and Warm Springs Ranch Homeowners Association

This Memorandum of Approval (Approval) is made and entered into by and between the City of Ketchum (City) and the Warm Springs Ranch Homeowners Association (HOA). The purpose of this Approval is to document the approval of the HOA and further acknowledge and clarify the rights, responsibilities, and obligations related to the HOA approval and City activities within the riparian easement area and setbacks governed by the Development Agreement dated April 28, 2020 and the Easement Agreement dated August 26, 2021.

1. Purpose

This Approval does not alter existing agreements, but serves to reference and address relevant HOA concerns, including coordination planning, responsibility for maintenance and repair, insurance obligations, and protection of viewsheds.

2. Acknowledgment of Responsibilities

Both parties recognize, and this Approval affirms, that the applicable development approvals and agreements provide for, and this Approval is contingent upon, that:

- The City is responsible for the work and liability associated with the Warms Springs Creek Riparian Restoration Project (Project), as well as maintenance and repair within the riparian easement area.
- The City is solely responsible for the actions of the City and its agents, and maintains and/or requires appropriate and adequate insurance coverage associated with the Project and accompanying work.
- The City has provided a 95% Construction Document for Warm Springs Preserve Ketchum, Idaho issued 2/17/25 prepared by Superbloom Landscape Architecture (Plan) for the Project, upon which the HOA has had opportunity to review, provide feedback, and approve via this Approval.
- The Project anticipates riparian restoration and landscaping in the Plan-identified areas, would be reasonably anticipated for restoring and maintaining the integrity and continuity of a riparian area. As the Project progresses, the City will further reasonably communicate and coordinate with abutting property owners to the Project, so as to provide opportunity for additional input on specific landscaping plans and selections to balance the desired riparian integrity and protection with reasonable opportunity for property viewshed preservation
- The City has use of the bridge over the Creek within the City's easement rights, and acknowledges that such is at the City's own risk and with the City's acknowledgment of responsibility for maintenance and repair as would be commensurate with any such easement usage.

- The parties acknowledge that the HOA does not make or affirm any representation about the boundaries of the easement area. The parties acknowledge there may be an argument of discrepancy on the bounds of the easement area between the applicable development agreement and documentation on the plat map. The parties also understand that the Project has always been anticipated and is planned to include riparian restoration on both sides of the Creek. To the extent, if any, a third-party dispute on such arises, the City is solely responsible for handling any such that may arise connected to the City's activities.
- The City affirms to the HOA that the City has pursued and obtained separate construction access easements across individual properties for appropriate construction access to the easement area, or will be accessing the Project area via the City's own adjoining property (Warm Springs Preserve). The City is not requesting or pursuing any type of other construction access from the HOA or its members, beyond the usage already contemplated within the easement area established during the development approvals.
- Barring emergency circumstances, the City confirms that work on the Project will be performed in accordance with Ketchum Municipal Code, between the hours of 7:30 a.m. and 7:00 p.m. on weekdays and Saturdays, however weekend work is not anticipated.
- The Project contemplates a schedule for work from spring 2025 to fall 2025. Work will resume in spring 2026 and be substantially completed by fall of 2026. The City affirms that the work will be pursued in a timely fashion. The HOA will be given reasonable advance notice and opportunity for additional input if the City becomes aware that the anticipated schedule may be significantly exceeded, whether through force majeure reasons or any other reason for delay.

This Approval is a statement of understanding between the parties to ensure alignment on the pursuit of the Project and provide a framework for continued communication and cooperation. As called for in the applicable Easement Agreement, the HOA hereby approves the Restoration Plan presented by the City of Ketchum.

Approved by Warm Springs Ranch Homeowners Association

By: DocuSigned by: 648878F2C3B044F...

Robert Parker, President

Accepted by City of Ketchum

By: _____

Neil Bradshaw, Mayor

Attest: _____

Trent Donat, City Clerk