

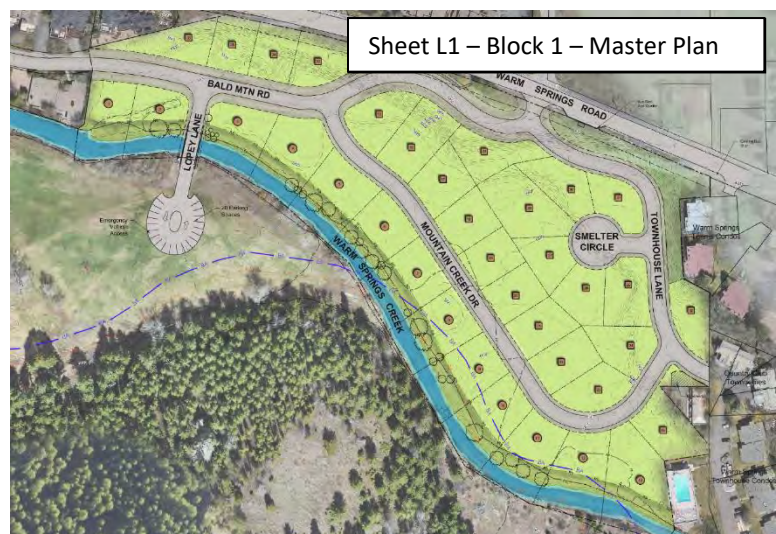


City of Ketchum Planning & Building

PROJECT:	P21-002
APPLICATION:	P21-002
OWNER:	Brennan Holdings No 300 LLC (Bob Brennan)
APPLICANT:	Brennan Holdings No 300 LLC (Bob Brennan)
REPRESENTATIVE:	Kurt Eggers, Eggers Associates
LOCATION:	1803 Warm Springs Road (Block 1, Warm Springs Ranch PUD) Block 2, Warm Springs Ranch PUD
ZONING:	General Residential – Low Density (GR-L), Tourist (T), Recreational Use (RU) and Floodplain Management Overlay (FP), Waterways and Floodway subdistricts
REQUEST:	Riparian restoration, fill in the floodplain related to subdivision development

Ketchum Municipal Code §17.88.050.A requires issuance of a Floodplain Development Permit prior to any “development” within the regulatory floodplain (also known as the Special Flood Hazard Area, 100-year, or 1% annual chance floodplain) or the floodway. For the purposes of this staff report, the term “floodplain” refers to the 1% annual chance floodplain. “Development” is a technical term used by the Federal Emergency Management Agency (FEMA) and adopted as a definition in Ketchum’s zoning code. It is defined as “Any subdivision, construction activity, or alteration of the landscape (except routine maintenance), its terrain contour or vegetation, including any construction of structures, establishment of a land use, or alteration of an existing structure or land use.” Ketchum Municipal Code also requires issuance of a permit for alteration of the riparian zone (§17.88.050.B) and adherence to the riparian standards contained within the code. The riparian zone is defined as the “That area along the banks of any waterway twenty five feet (25') in width measured horizontally from the mean high water mark.”

Block 1 of the approved Warm Springs Ranch large Block Plat (Attachment B), which is where the Warm Springs Ranch residential land subdivision will be located, shares a southern border with the northern bank of Warm Springs Creek. Of the 35 lots proposed in the subdivision, 13 contain the channel of the creek and adjacent riparian zone. On three (3) of these lots the line of demarcation between floodway and floodway are one in the same (due to a steeper streambank), and on the other ten (10) the floodplain covers a greater amount of land than the floodway (due to a less steep streambank).



In addition, three (3) lots on the north side of proposed Mountain Creek Drive contain a minor amount of floodplain, as does a portion of Mountain Creek Drive.

The floodplain maps currently in effect are the 2010 Flood Insurance Rate Maps prepared by FEMA and adopted by the City of Ketchum. As such, this application is governed by the 2010 maps. However, FEMA and its technical partners are in the process of drafting new floodplain maps for the Wood River Valley. For illustrative purposes, the applicant has provided exhibits (L2.1 and L2.2) indicating the proposed new floodplain and floodway boundaries. As these maps are not yet adopted, they are not regulatory at this time and are for informational purposes only. Future lot owners will be subject to the floodplain maps in effect at the time they apply for building permit.

The applicant has proposed two activities that require a permit from the city at this time: 1) riparian zone restoration and 2) fill associated with Mountain Creek Road and fill to level out an abandoned ditch, with compensatory storage to offset the fill within the floodplain. Notably, the applicant has proposed that the riparian zone will be maintained by the subdivision's Homeowner's Association in perpetuity; this will allow comprehensive restoration and management of the riparian zone to occur.

During the summer of 2020, permit P20-076 was issued to permit the removal of dead and dying trees from the riparian zone. The permit was issued with the condition (#7) that a restoration plan be submitted concurrent with the land subdivision application. All permitted tree removal work has occurred. No further trees are proposed to be removed at this time. This restoration plan that accompanies this application meets the requirement included with the prior tree removal permit.

Riparian Restoration Plan

The riparian restoration plan, Sheet L2 and the detailed plans for each of the 13 lots, (Attachment C), include the planting of 70 new 5-gallon size native shrubs (three species of willows, common snowberry, red-osier dogwood, and golden currant) and a native grass mix during the summer of 2021, the installation of temporary irrigation (for a maximum of two growing seasons) to aid in the vegetation's establishment, weed control (hand-pulling, no topical application of weed sprays are proposed), monitoring and re-planting over the initial two-year establishment period, and retention of existing riparian vegetation. And as noted before, both the proposed subdivision plat and the Development Agreement include language dedicating the riparian zone as an easement across the private lots that will be governed and managed by the HOA, altered only with the appropriate city permits. Plat note 20. states in full:

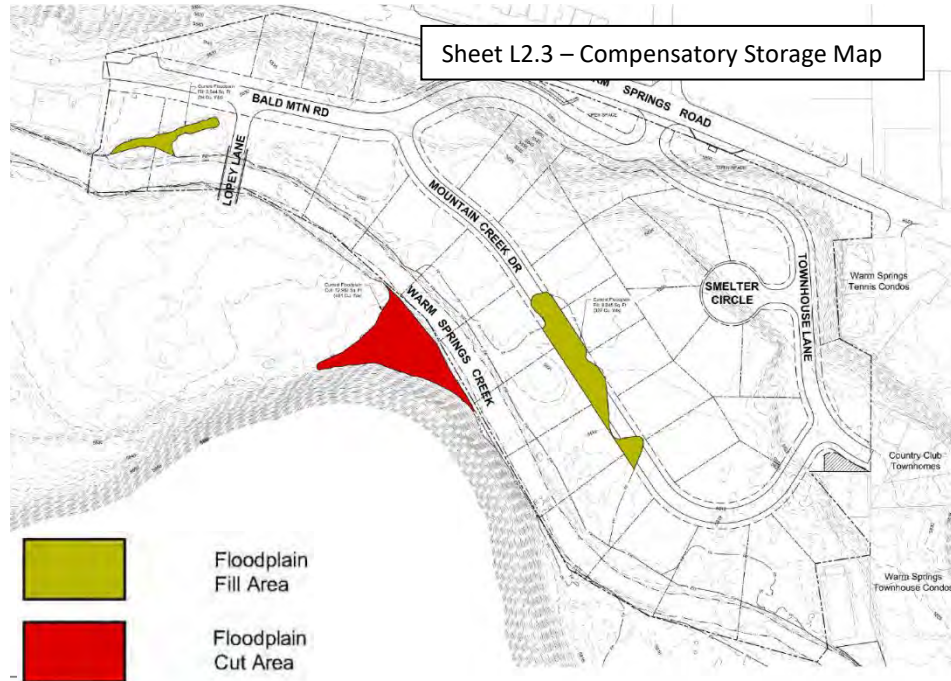
"The riparian zone identified in Block 1 shall be designated as an easement governed and managed by an owner's association (HOA) to ensure future modifications to the riparian zone and the stream bank do not occur individually but occur in a comprehensive coordinated approach. Prior to any modification to the riparian zone or streambank, an overall plan must be developed and approved by Ketchum. Ketchum will not unreasonably withhold, condition, or delay approval of such plan. Any riparian and stream bank alterations must conform to the approved plan."

The restoration plan associated with this application serves as the overall plan, until such time in the future a modification may be put forward. Staff is recommending approval of the proposed riparian restoration plan.

Proposed Fill

The fill proposed in the floodplain is proposed for two reasons: to fill in an existing abandoned irrigation ditch for the creation of suitable building sites (Lots 1 and 2) and grading related to the construction of Mountain Creek Drive. Lots 1 and 2, which are located on the upstream (western) side of the existing bridge that would be unbuildable without the addition of fill. These two lots are traversed by a

manmade, historic irrigation ditch that is no longer in use. Fill in the amount of 94 cubic yards is needed to level out these lots. For visualization purposes, a standard home oven (3' x 3' x 3') is approximately 1 cubic yard in volume. To fill in changes in topography and grade the area of Mountain Creek Drive that traverses the floodplain 327 cubic yards of fill are required.



Because the placement of fill in the floodplain can potentially displace floodwaters elsewhere, Ketchum Municipal Code has two special requirements for fill in the floodplain:

- Compensatory storage within the floodplain is required to offset the fill. In other words, an area or areas within the floodplain must be excavated in an amount equal to the fill being placed in the floodplain so that the floodplain's carrying capacity is not diminished.
- FEMA must approve a Letter of Map Revision based on fill prior to placement of any fill in the floodplain.

The applicant has proposed to locate compensatory storage on the south side of Warm Springs Creek in an area that is not proposed for residential development, as indicated in the diagram above.

The applicant is pursuing its required permit for fill from FEMA.

The February 16, 2021 memo from Brockway Engineering evaluates the impact of the proposed fill and the compensatory proposal on the south side of Warm Springs Creek (Attachment D). The analysis was reviewed by the City's consulting engineer, Jen Zung with Harmony Design and Engineering, and her March 18, 2021 comments are included in Attachment E. Brockway Engineering responded with additional analysis on March 31, 2021 (Attachment F).

As proposed, the proposed fill and the compensatory mitigation is consistent with the city's floodplain standards and staff recommends approval.

Two recommendations are identified in the March 18, 2021 memo from Harmony Design and Engineering, the city's consulting engineer, items 4 and 5.

Item 4: As noted earlier in this report, FEMA and its technical partners are in the process of drafting new floodplain maps for the Wood River Valley. For illustrative purposes, the applicant provided plans (Attachment C) indicating the proposed new floodplain and floodway boundaries. As these maps are not yet adopted, they are not regulatory at this time and are for informational purposes only. As noted in

Jen Zung's analysis, the building envelopes for lots 8, 9, 10, 11 and 12 would encroach into the future floodway should FEMA adopt the new floodplain boundaries. In Ketchum, structures are prohibited in the floodway. Because the revised maps are not yet adopted, and the ability to require modifications based on draft maps is problematic, staff is recommending a condition of approval to this permit that states:

"This approval does not authorize or grandfather the placement of any structure or improvement within the floodway based on the 2010 Flood Insurance Rate Maps prepared by FEMA and any subsequent changes or amendments to the maps as adopted by the City of Ketchum."

With this condition, in the event the FEMA maps change and the floodway boundaries impact lots 8-12, if no permit for development has been issued on those lots, any future improvements would be prohibited within the floodway.

Item 5: Jen's recommendation is the city require a CLOMR-F (conditional letter of map revision based on fill) prior to issuing the floodplain development permit. Staff is proposing an alternative approach that has been vetted with FEMA. The alternative approach still involves FEMA and consists of the following steps:

Step 1. The participating community (City of Ketchum) approves the fill in the floodplain fringe, outside of the regulatory floodway. This is allowed by FEMA (44 CFR 65.5). FEMA is not a permitting agency and does not approve or disapprove fill in the floodplain fringe.

Step 2. During construction of the subdivision, fill will be placed as per the plans approved by the City of Ketchum. Surveying will be conducted to verify that the as-constructed elevations of the fill are above the base flood elevations.

Step 3. After the fill is placed, a Letter of Map Revision based on Fill (LOMR-F) will be submitted to FEMA. The LOMR-F process is one of the administrative processes by which FEMA can recognize a change to a floodplain. It is a routine process established by FEMA to recognize fill placed in the floodplain after a flood insurance study has been adopted. A LOMR-F is defined as "A letter from DHS-FEMA stating that an existing structure or parcel of land that has been elevated by fill would not be inundated by the base flood." A LOMR-F must be filed after the participating community has issued a construction permit and after the fill has been placed, and must be based on the effective base flood elevations. (44 CFR 65.5).

Step 4. FEMA issues the LOMR-F and the parcel elevated by fill is officially excluded from the floodplain.

Recommendation

Based on the information prepared and analyzed, staff recommends approval of Warm Springs Ranch Floodplain Development and Waterways Design Review P21-002 and recommends the Planning and Zoning Commission adopt the attached findings and conditions (Attachment A).

Attachment A: Proposed Findings of Fact and Conditions of Approval

Attachment B: Block 1 of the approved Warm Springs Ranch large Block Plat

Attachment C: February 11, 2021 plans and detailed plans for each of the 13 lots

Attachment D: February 16, 2021 memo from Brockway Engineering

Attachment E: March 18, 2021 memo from Harmony Design and Engineering

Attachment F: March 31, 2021 Brockway Engineering analysis

Attachment G: December 2020 Application and Applicant Floodplain Evaluation Criteria Narrative and Project Description

Attachment A



City of Ketchum
Planning & Building

IN RE:

Warm Springs Ranch Floodplain)	KETCHUM PLANNING AND ZONING
Development Permit and Waterways Design Review)	COMMISSION FINDINGS OF FACT,
Date: April 27, 2021)	CONCLUSIONS OF LAW, AND DECISION
File No: P21-002)	

PROJECT: P21-002

APPLICATION: P21-002

OWNER: Brennan Holdings No 300 LLC (Bob Brennan)

APPLICANT: Brennan Holdings No 300 LLC (Bob Brennan)

REPRESENTATIVE: Kurt Eggers, Eggers Associates

LOCATION: 1803 Warm Springs Road, Block 1, Warm Springs Ranch
Block 2, Warm Springs Ranch

ZONING: General Residential – Low Density (GR-L), Tourist (T), Recreational Use (RU) and Floodplain Management Overlay (FP), Waterways and Floodway subdistricts

REQUEST: Riparian restoration, fill in the floodplain related to subdivision development

BACKGROUND FACTS

1. The City of Ketchum is a municipal corporation organized under Article XII of the Idaho Constitution and the laws of the State of Idaho, Title 50, Idaho Code. Under Chapter 65, Title 67 of the Idaho Code, the City is required to pass certain ordinances regarding land use, including a zoning ordinance.
2. Pursuant to Zoning Code Title 17, Section 17.88.050(D)2, the Planning and Zoning Commission has the authority to consider and approve, approve with conditions, or deny applications for floodplain development permits and for waterways design review.
3. The subject property contains floodway and riparian area. The proposed scope of work consists of two activities that require a permit from the city at this time: 1) riparian zone restoration and 2) fill associated with Mountain Creek Road and fill to level out an abandoned ditch, with compensatory storage to offset the fill within the floodplain.
4. The applicant and future property owners are put on notice that city review and approval of this application does not guarantee that flooding will not occur as the subject property is located in the Special Flood Hazard Area (1% annual chance floodplain, also known as the 100-year floodplain).
5. The scope of work approved by this permit involves restoration of the riparian district, fill within the floodplain and compensatory mitigation within the floodplain.

FINDINGS OF FACT

Floodplain Design Review Requirements				
1. EVALUATION STANDARDS: 17.88.050(E)				
Compliant			Standards and Staff Comments	
Yes	No	N/A	Guideline	City Standards and Staff Comments
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17.88.050(E)1 FLOODPLAIN DEVELOPMENT/ WATERWAYS DESIGN REVIEW	<p>Preservation or restoration of the inherent natural characteristics of the river and creeks and floodplain areas. Development does not alter river channel.</p>
			<i>Staff Comments</i>	<p><i>Riparian Restoration</i> The scope of work approved by this permit involves planting of 70 new 5-gallon size native shrubs (three species of willows ,common snowberry, red-osier dogwood, and golden currant) and a native grass mix during the summer of 2021, the installation of temporary irrigation (for a maximum of two growing seasons) to aid in the vegetation’s establishment, weed control (hand-pulling, no topical application of weed sprays are proposed), monitoring and re-planting over the initial two-year establishment period, and retention of existing riparian vegetation. The riparian zone shall be designated as an easement across the private lots that will be governed and managed by the HOA, altered only with the appropriate city permits</p> <p><i>Fill in the Floodplain</i> The fill proposed in the floodplain is proposed for two reasons: to fill in an existing abandoned irrigation ditch for the creation of suitable building sites (Lots 1 and 2) and grading related to the construction of Mountain Creek Drive. Lots 1 and 2, which are located on the upstream (western) side of the existing bridge that would be unbuildable without the addition of fill. These two lots are traversed by a manmade, historic irrigation ditch that is no longer in use. Fill in the amount of 94 cubic yards is needed to level out these lots. To fill in changes in topography and grade the area of Mountain Creek Drive that traverses the floodplain 327 cubic yards of fill are required. The applicant has proposed to locate compensatory storage on the south side of Warm Springs Creek in an area that is not proposed for residential development.</p>

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17.88.050(E)2	Preservation or enhancement of riparian vegetation and wildlife habitat, if any, along the stream bank and within the required minimum twenty five foot (25') setback or riparian zone. No construction activities, encroachment or other disturbance into the twenty five foot (25') riparian zone, including encroachment of below grade structures, shall be allowed at any time without written City approval per the terms of this chapter.
			<i>Staff Comments</i>	<i>Disturbance to the 25' riparian zone is limited to the plans approved through this permit. Any amendment to the proposed scope of work shall be approved in writing as an amendment to this permit.</i> <i>See 17.88.060(E)1 for discussion of riparian vegetation.</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17.88.50(E)3	No development, other than development by the City of Ketchum or development required for emergency access, shall occur within the twenty five foot (25') riparian zone with the exception of approved stream stabilization work. The Administrator may approve access to property where no other primary access is available. Private pathways and staircases shall not lead into or through the riparian zone unless deemed necessary by the Administrator.
			<i>Staff Comments</i>	<i>Currently, no pathways and staircases lead into or through the riparian zone. None are proposed.</i> <i>Development activity approved to occur within the riparian zone is described in the plan set attached hereto, as conditioned.</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17.88.050(E)4	A landscape plan and time frame shall be provided to restore any vegetation within the twenty five foot (25') riparian zone that is degraded, not natural or which does not promote bank stability.
			<i>Staff Comments</i>	<i>A riparian vegetation restoration plan has been proposed with this project.</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17.88.050(E)5	New or replacement planting and vegetation shall include plantings that are low growing and have dense root systems for the purpose of stabilizing stream banks and repairing damage previously done to riparian vegetation. Examples of such plantings include: red osier dogwood, common chokecherry, serviceberry, elderberry, river birch, skunk bush sumac, Beb's willow, Drummond's willow, little wild rose, gooseberry, and honeysuckle.
			<i>Staff Comments</i>	<i>A riparian planting restoration plan has been proposed (Kurt Eggers Associates) and includes planting of 70 new 5-gallon size native shrubs (three species of willows, common snowberry, red-osier dogwood, and golden currant) and a native grass mix during the summer of 2021.</i>

Compliant			Standards and Staff Comments	
Yes	No	N/A	Guideline	City Standards and Staff Comments
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17.88.050(E)6	Landscaping and driveway plans to accommodate the function of the floodplain to allow for sheet flooding. Floodwater carrying capacity is not diminished by the proposal. Surface drainage is controlled and shall not adversely impact adjacent properties including driveways drained away from paved roadways. Culvert(s) under driveways may be required. Landscaping berms shall be designed to not dam or otherwise obstruct floodwaters or divert same onto roads or other public pathways.
			<i>Staff Comments</i>	<i>The proposed fill and associated compensatory mitigation will ensure the project does not diminish the function of the floodplain. The development of Mountain Creek Drive does not include any work within the river channel and will not alter the channel in any way. The base flood elevation (BFE) in the subject area is 5820' which coincides with the existing elevation at 5820' and a few pockets sitting at 5819'. The new road is proposed at these same elevations and will not result in any change to the natural characteristics or function of the floodplain or the river channel.</i>

Compliant			Standards and Staff Comments	
Yes	No	N/A	Guideline	City Standards and <i>Staff Comments</i>
				<i>The reclamation of the former irrigation ditch will not alter the river channel. Additionally, it will act to restore a more natural river flow and floodplain function by eliminating a manmade feature. The BFE in this area is 5826' with the existing, natural grade at the top of the ditch ranging from 5828' to 5829', well above the BFE.</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17.88.050(E)7	Impacts of the development on aquatic life, recreation, or water quality upstream, downstream or across the stream are not adverse.
			<i>Staff Comments</i>	<i>The proposed riparian zone restoration will be an improvement compared to the riparian zone's current state which will aid in water quality, thereby benefiting aquatic life.</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.88.050(E)8	Building setback in excess of the minimum required along waterways is encouraged. An additional ten foot (10') building setback is encouraged to provide for yards, decks and patios outside the twenty five foot (25') riparian zone.
			<i>Staff Comments</i>	<i>N/A, no new building is proposed.</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.88.050(E)9	The top of the lowest floor of a building located in the one percent (1%) annual chance floodplain shall be a minimum of twenty four inches (24") above the base flood elevation of the subject property. (See section 17.88.060, figures 1 and 2 of this chapter.)
			<i>Staff Comments</i>	<i>N/A, no new building is proposed.</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.88.050(E)10	The backfill used around the foundation in the floodplain shall provide a reasonable transition to existing grade but shall not be used to fill the parcel to any greater extent. Compensatory storage shall be required for any fill placed within the floodplain. An LOMA-F shall be obtained prior to placement of any additional fill in the floodplain.
			<i>Staff Comments</i>	<i>N/A, no new building is proposed.</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.88.050(E)11	All new buildings shall be constructed on foundations that are approved by a licensed professional engineer.
			<i>Staff Comments</i>	<i>N/A, no new building is proposed.</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.88.050(E)12	Driveways shall comply with effective street standards; access for emergency vehicles has been adequately provided for.
			<i>Staff Comments</i>	<i>N/A, no alteration of driveway is proposed.</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.88.050(E)13	Landscaping or revegetation shall conceal cuts and fills required for driveways and other elements of the development.
			<i>Staff Comments</i>	<i>N/A, no alteration of driveway is proposed.</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.88.050(E)14	(Stream alteration.) The proposal is shown to be a permanent solution and creates a stable situation.
			<i>Staff Comments</i>	<i>No stream alteration is proposed</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.88.050(E)15	(Stream alteration.) No increase to the one percent (1%) annual chance floodplain upstream or downstream has been certified, with supporting calculations, by a registered Idaho hydraulic engineer.
			<i>Staff Comments</i>	<i>No streambank alteration is proposed</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.88.050(E)16	(Stream alteration.) The recreational use of the stream including access along any and all public pedestrian/fisherman's easements and the aesthetic beauty is not obstructed or interfered with by the proposed work.
			<i>Staff Comments</i>	<i>No streambank alteration is proposed</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.88.050(E)17	(Stream alteration.) Where development is proposed that impacts any wetland, first priority shall be to move development from the wetland area. Mitigation strategies shall be proposed at time of application that replace the impacted wetland area with a comparable amount and/or quality of new wetland area or riparian habitat improvement.
			<i>Staff Comments</i>	<i>N/A, the subject property does not contain wetlands.</i>

Compliant			Standards and Staff Comments	
Yes	No	N/A	Guideline	City Standards and <i>Staff Comments</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.88.050(E)18	(Stream alteration.) Fish habitat shall be maintained or improved as a result of the work proposed. <i>Staff Comments</i> No streambank alteration is proposed
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.88.060(E)19	(Stream alteration.) The proposed work shall not be in conflict with the local public interest, including, but not limited to, property values, fish and wildlife habitat, aquatic life, recreation and access to public lands and waters, aesthetic beauty of the stream and water quality. <i>Staff Comments</i> No streambank alteration is proposed
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.88.060(E)20	(Stream alteration.) The work proposed is for the protection of the public health, safety and/or welfare such as public schools, sewage treatment plant, water and sewer distribution lines and bridges providing particularly limited or sole access to areas of habitation. <i>Staff Comments</i> N/A.

CONCLUSIONS OF LAW

1. The City of Ketchum is a municipal corporation organized under Article XII of the Idaho Constitution and the laws of the State of Idaho, Title 50, Idaho Code;
2. Under Chapter 65, Title 67, of the Idaho Code the City has passed a zoning ordinance, Title 17;
3. The City of Ketchum Planning Department provided adequate notice of opportunity to comment on this application pursuant to Chapter 17.88 of the zoning ordinance, Title 17;
4. The Planning and Zoning Commission has authority to hear the applicant's application pursuant to Section 17.88.050.D.1 of Ketchum Municipal Code, Title 17;
5. The project **does** meet the standards of approval under Chapter 17.88 of Zoning Code Title 17.

DECISION

THEREFORE, the Floodplain Development Permit and Waterways Design Review Permit for the proposed project, Warm Spring Ranch riparian restoration plan and fill within the floodplain is approved on this date, April 27, 2021, with the following conditions:

1. This approval is subject to the scope of work described in the following documents:
 - a. The plans, description and information in Attachment A-F
2. The owner's representative shall notify the City of Ketchum, Suzanne Frick, Director of Planning and Building via e-mail 48 hours in advance of the day construction of the project is scheduled to begin and notify via e-mail on the day construction begins.
3. The owner's representative shall notify the City of Ketchum Suzanne Frick, Director of Planning and Building via e-mail within 48 hours of the next business day after the scope of work is complete.
4. The owner's representative shall facilitate a site visit with city staff to occur within five (5) business days of completion of the project.

5. Within 30 days of completion of the project the owner's representative shall submit a construction completion report certifying the project has been completed as proposed. This report shall at minimum include:
 - a. A letter prepared and stamped by Brockway Engineering confirming the project was completed in accordance with the plans and engineering report in Attachment A.
 - b. A letter prepared by Kurt Eggers confirming landscaping has been installed as indicated in the plan in Attachment A.
6. Follow up reports Monitoring Reports due to the city by December 31, 2021, 2022, and 2023. Monitoring reports to reflect all maintenance performed during the given calendar year.
7. Floodplain Development Permit approval shall expire one (1) year from the date of signing of approved Findings of Fact per the terms of KMC, Section 17.88.050.G, Terms of Approval;
8. No use of restricted use chemicals or soil sterilants will be allowed within one hundred feet (100') of the mean high-water mark on any property within the city limits at any time (KMC 17.88.040.C.3);
9. No use of pesticides, herbicides, or fertilizers will be allowed within twenty-five feet (25') of the mean high water mark on any property within the City limits unless approved by the City Arborist (KMC 17.88.040.C.4);
10. All applications of herbicides and/or pesticides within one hundred feet (100') of the mean high water mark, but not within twenty five feet (25') of the mean high water mark, must be done by a licensed applicator and applied at the minimum application rates (KMC 17.88.040.C.4);
11. Application times for herbicides and/or pesticides will be limited to two (2) times a year; once in the spring and once in the fall unless otherwise approved by the City Arborist (KMC 17.88.040.C.5);
12. The application of dormant oil sprays and insecticidal soap within the Riparian Zone may be used throughout the growing season as needed (KMC 17.88.040.C.6);
13. It shall be unlawful to dump, deposit or otherwise cause any trash, landscape debris or other material to be placed in any stream, channel, ditch, pond or basin that regularly or periodically carries or stores water.
14. This approval does not authorize or grandfather the placement of any structure or improvement within the floodway based on the 2010 Flood Insurance Rate Maps prepared by FEMA and any subsequent changes or amendments to the maps as adopted by the City of Ketchum.

Decision: Approved, subject to conditions above.

Findings of Fact **adopted** this 27th day of March 2021.

Neil Morrow
Chair
City of Ketchum Planning and Zoning Commission

DATED this 27th day of April 2021

Attachments:

Attachment A: February 11, 2021 plans and detailed plans for each of the 13 lots

Attachment B: Block 1 of the approved Warm Springs Ranch large Block Plat

Attachment C: February 16, 2021 memo from Brockway Engineering

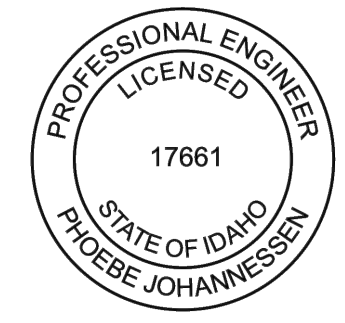
Attachment D: March 18, 2021 memo from Harmony Design and Engineering

Attachment E: March 31, 2021 Brockway Engineering analysis

Attachment F: December 2020 Applicant Floodplain Evaluation Criteria Narrative and Project Description

Attachment B

DRAFT - NOT FOR CONSTRUCTION



REVISIONS	DESCRIPTION	DATE	BY
No. 1			



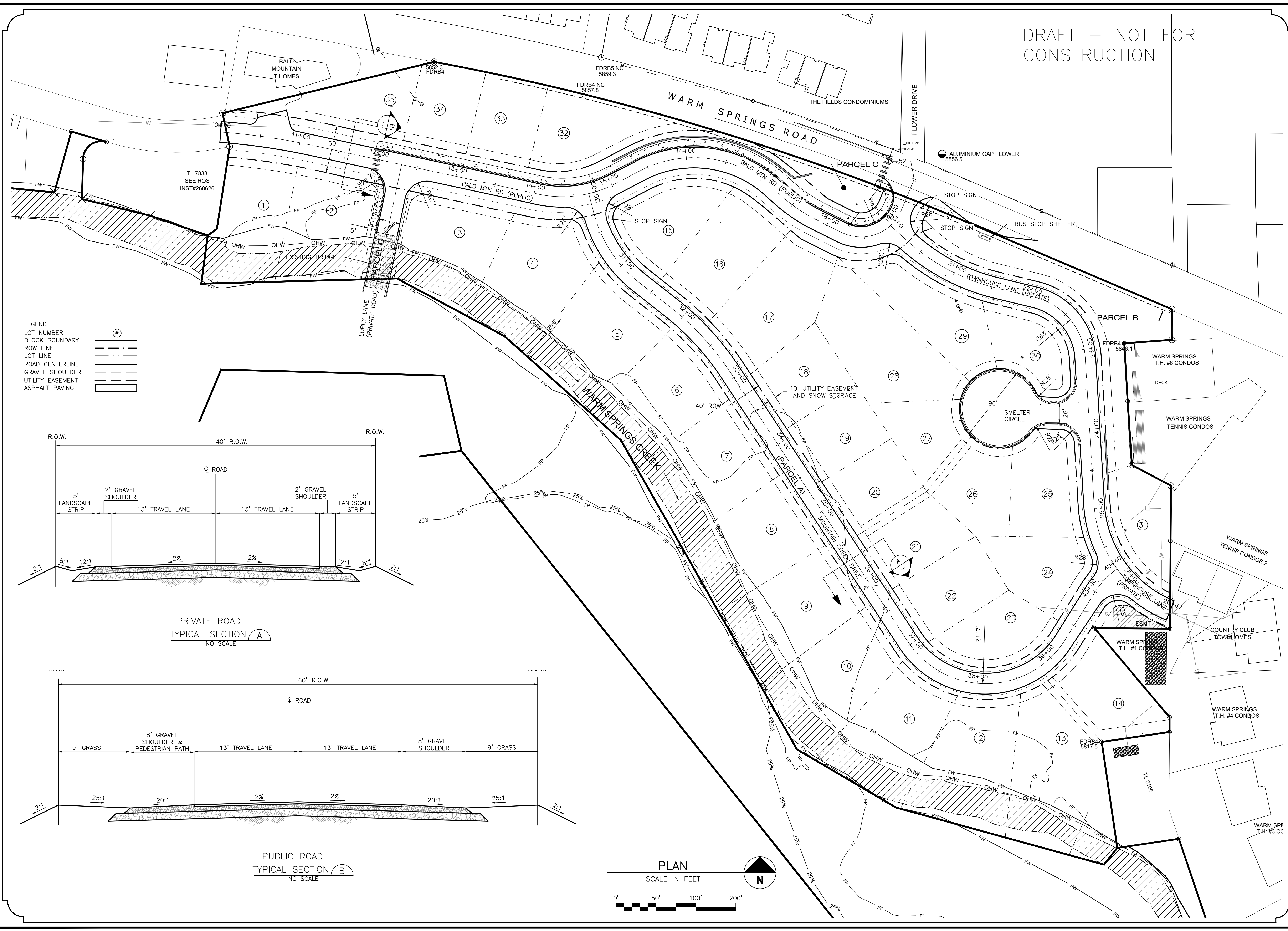
PREPARED BY:
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WEB: WWW.BMASB.COM
MAIL: WWW.BMASB.COM

ROADWAY PLAN
WARM SPRINGS RANCH: BLOCK 1
T4N, R17E, SEC 12, B.M., CITY OF KETCHUM, IDAHO
PREPARED FOR: BOB BRENNAN

DRAWN BY: PLJ
DESIGNED BY: PLJ
CHECKED BY: DP
DATE: 3/4/2021
PROJECT NO.: 20071

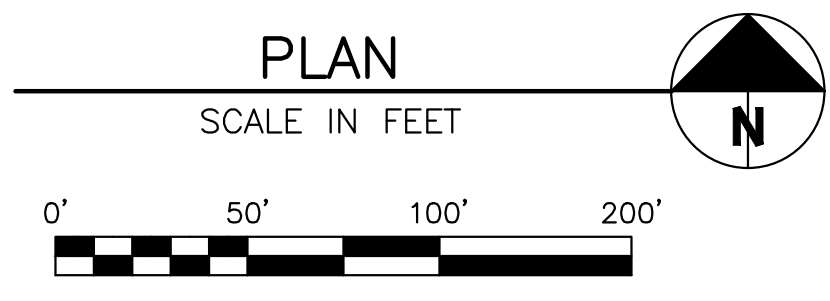
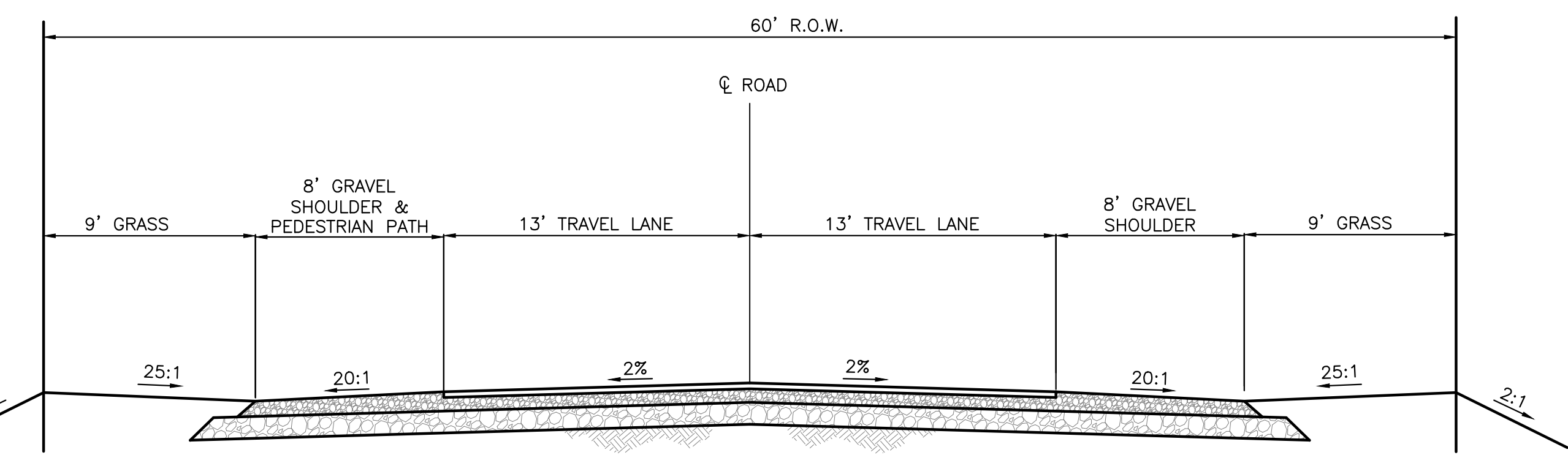
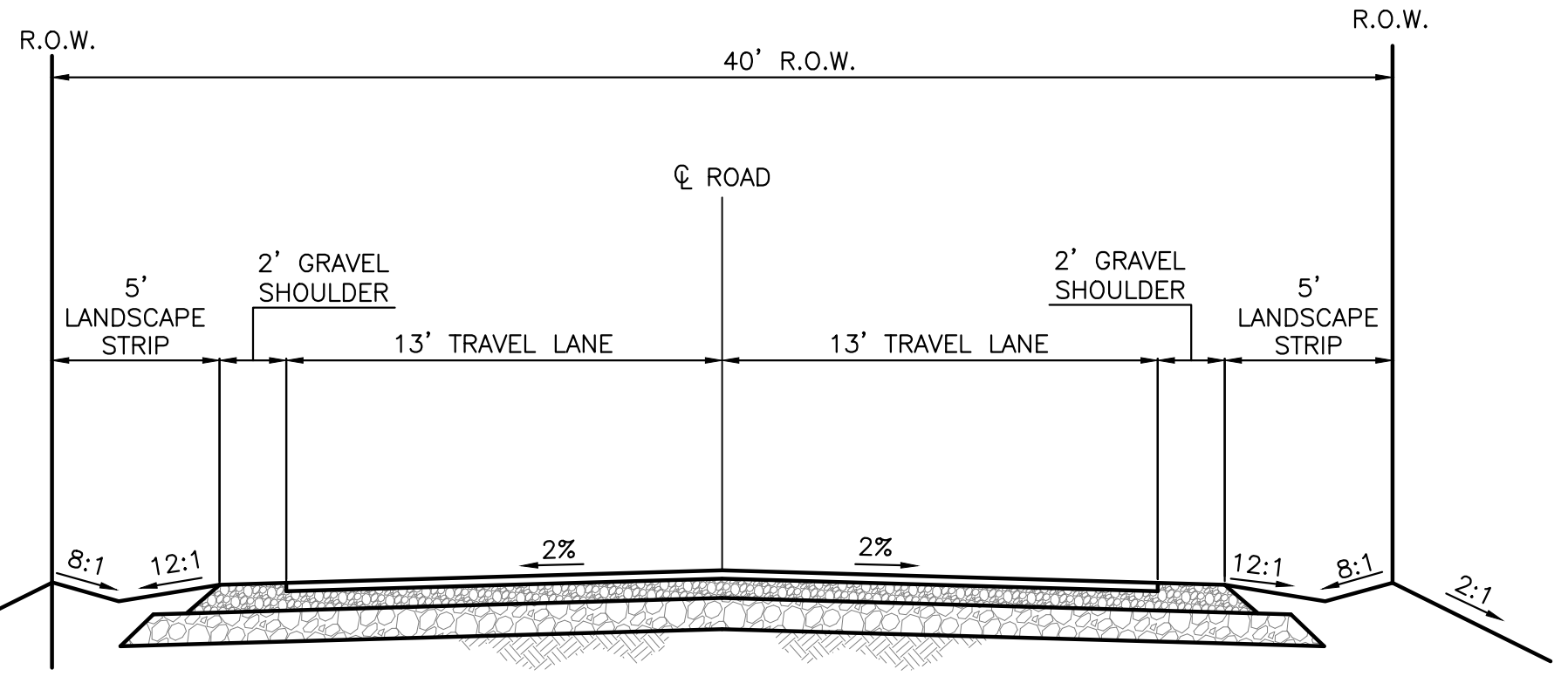
DRAWING NO.

C-1

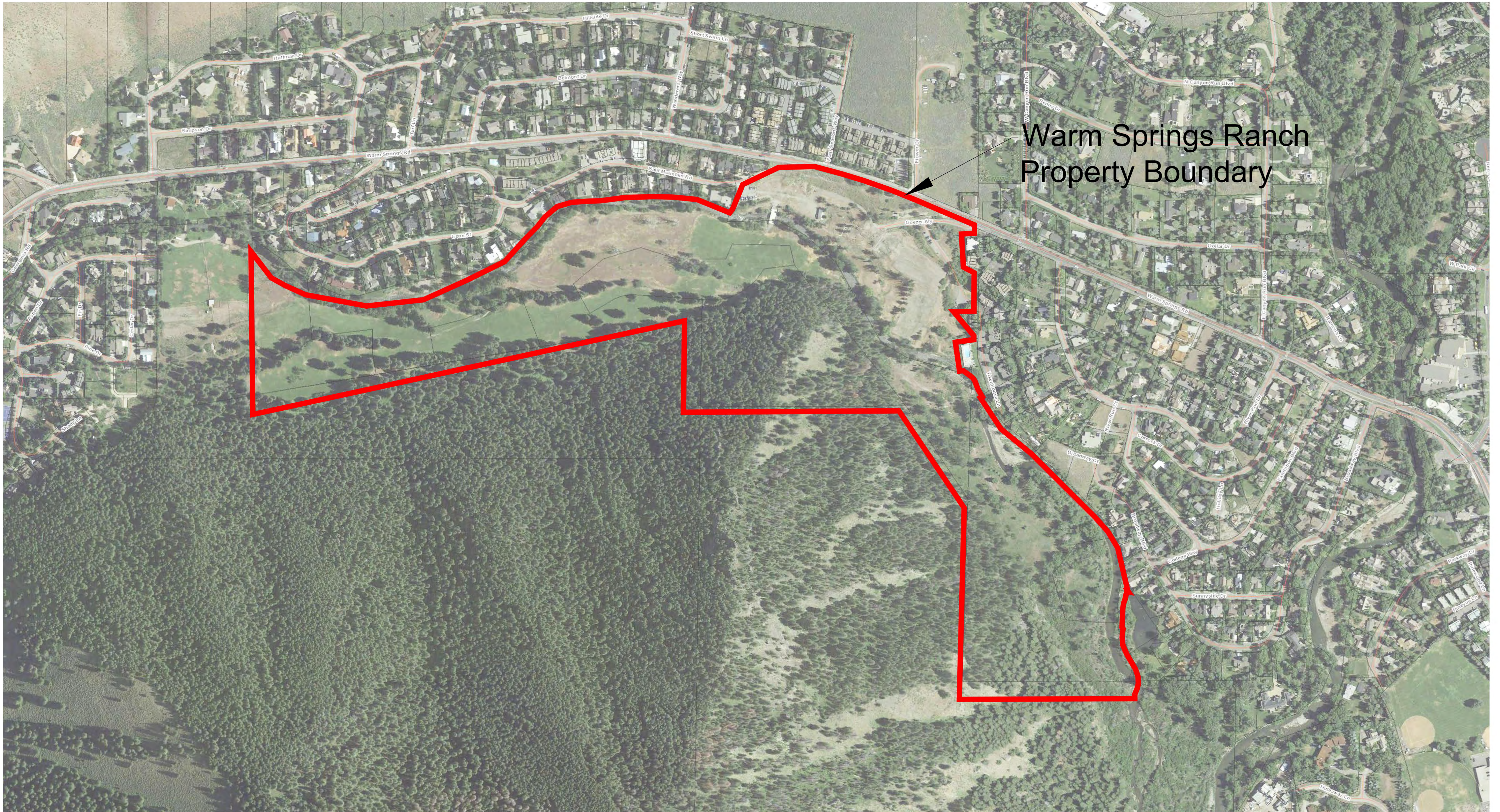


LEGEND

LOT NUMBER	①
BLOCK BOUNDARY	---
ROW LINE	---
LOT LINE	---
ROAD CENTERLINE	---
GRAVEL SHOULDER	---
UTILITY EASEMENT	---
ASPHALT PAVING	---



Attachment C



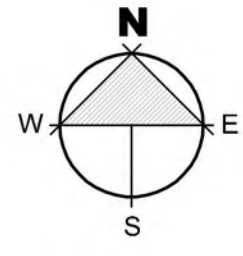
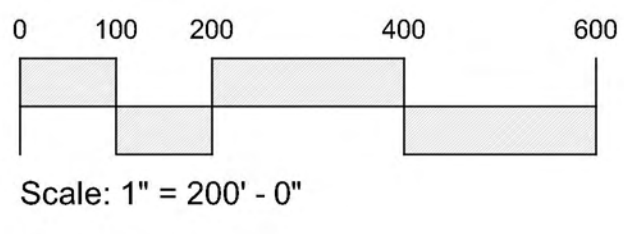
Warm Springs Ranch
Property Boundary



Warm Springs Ranch

Ketchum, ID

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Aerial Photo: Blaine County GIS

Area Map

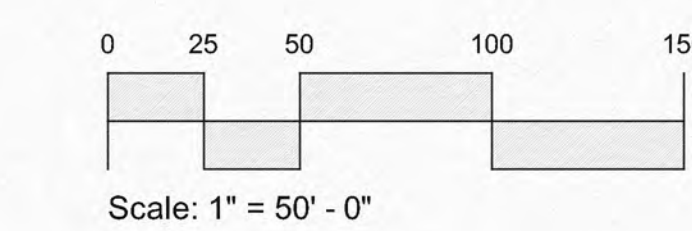
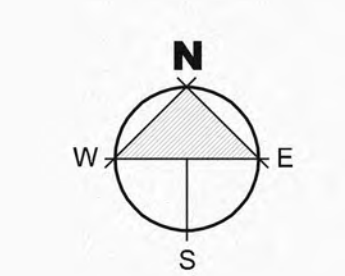
Date: 12/18/20
Preliminary Not For Construction:
 Landscape Shown Herein Is Conceptual
 Only And May Be Subject To Change

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Plan Legend	
	Property Line
	Proposed Lot
	Existing Contour
	Edge of Mean High Water
	25' Riparian Setback
	Floodway Per FEMA 2010
	100 Year Floodplain Per FEMA 2010
	Blue Avalanche Zone
	Red Avalanche Zone
	Lot Numbers

Plant Legend	
	Evergreen Tree To Remain
	Deciduous Tree To Remain



Survey Provided By Benchmark Associates
 Date: July 2020
 Aerial Photo Date: May 2020



Warm Springs Ranch

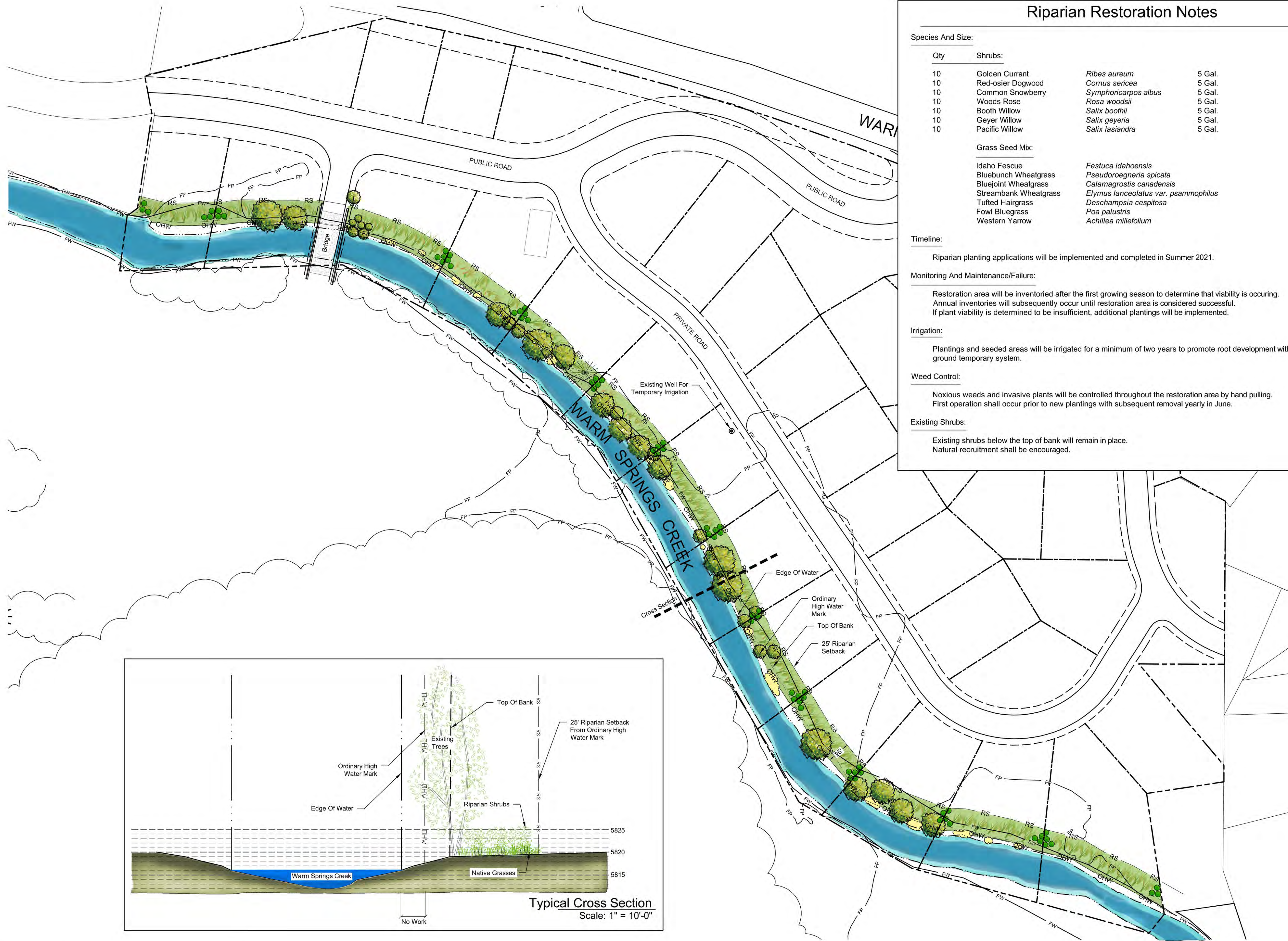
Ketchum, ID

L1 - Block 1 - Master Plan

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Date: 02/11/21
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Riparian Restoration Notes

Species And Size:

Qty	Shrubs:		
10	Golden Currant	<i>Ribes aureum</i>	5 Gal.
10	Red-osier Dogwood	<i>Cornus sericea</i>	5 Gal.
10	Common Snowberry	<i>Symphoricarpos albus</i>	5 Gal.
10	Woods Rose	<i>Rosa woodsii</i>	5 Gal.
10	Booth Willow	<i>Salix boothii</i>	5 Gal.
10	Geyer Willow	<i>Salix geyeria</i>	5 Gal.
10	Pacific Willow	<i>Salix lasiandra</i>	5 Gal.

Grass Seed Mix:

Idaho Fescue	<i>Festuca idahoensis</i>
Bluebunch Wheatgrass	<i>Pseudoroegneria spicata</i>
Bluejoint Wheatgrass	<i>Calamagrostis canadensis</i>
Streambank Wheatgrass	<i>Elymus lanceolatus var. psammophilus</i>
Tufted Hairgrass	<i>Deschampsia cespitosa</i>
Fowl Bluegrass	<i>Poa palustris</i>
Western Yarrow	<i>Achillea millefolium</i>

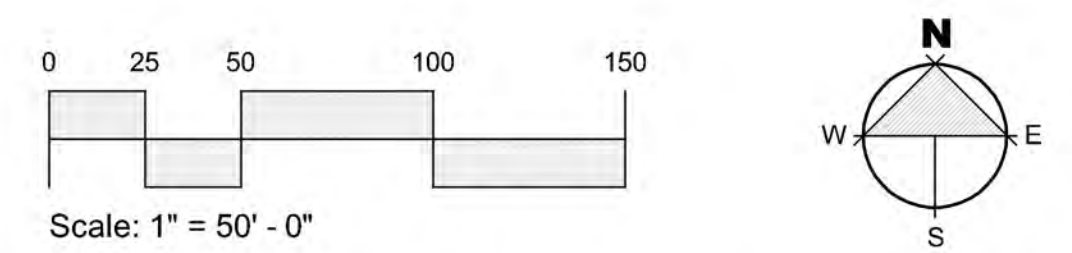
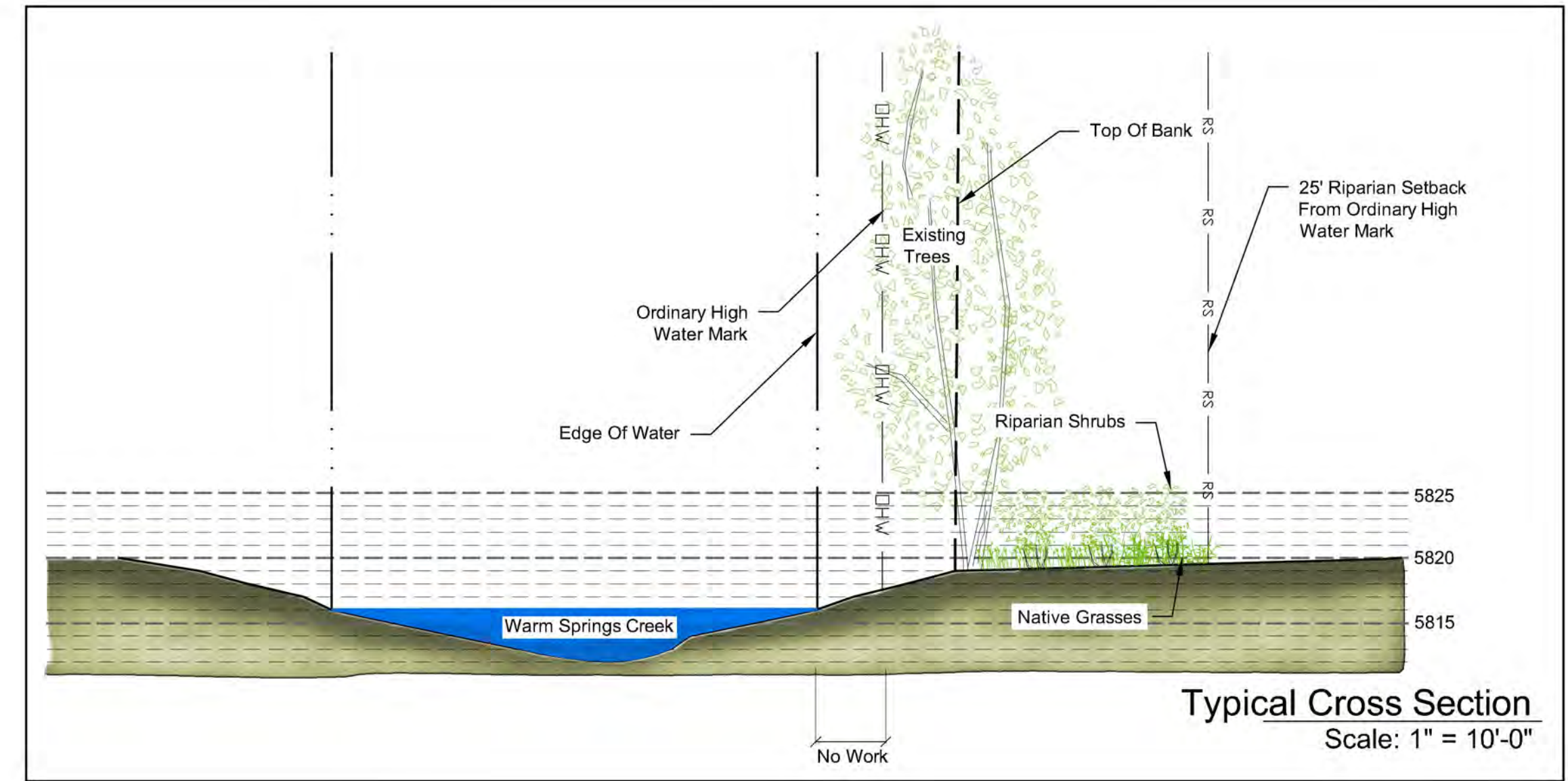
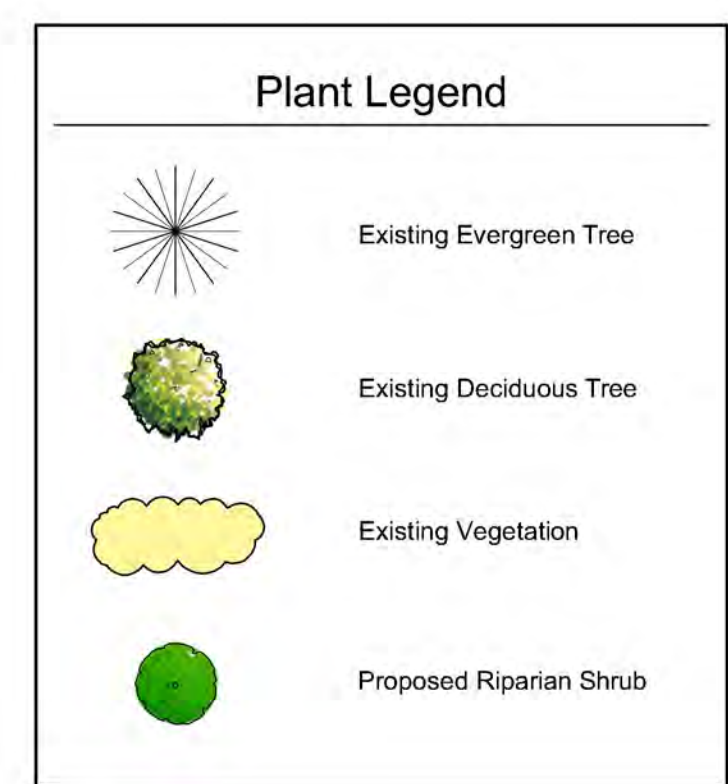
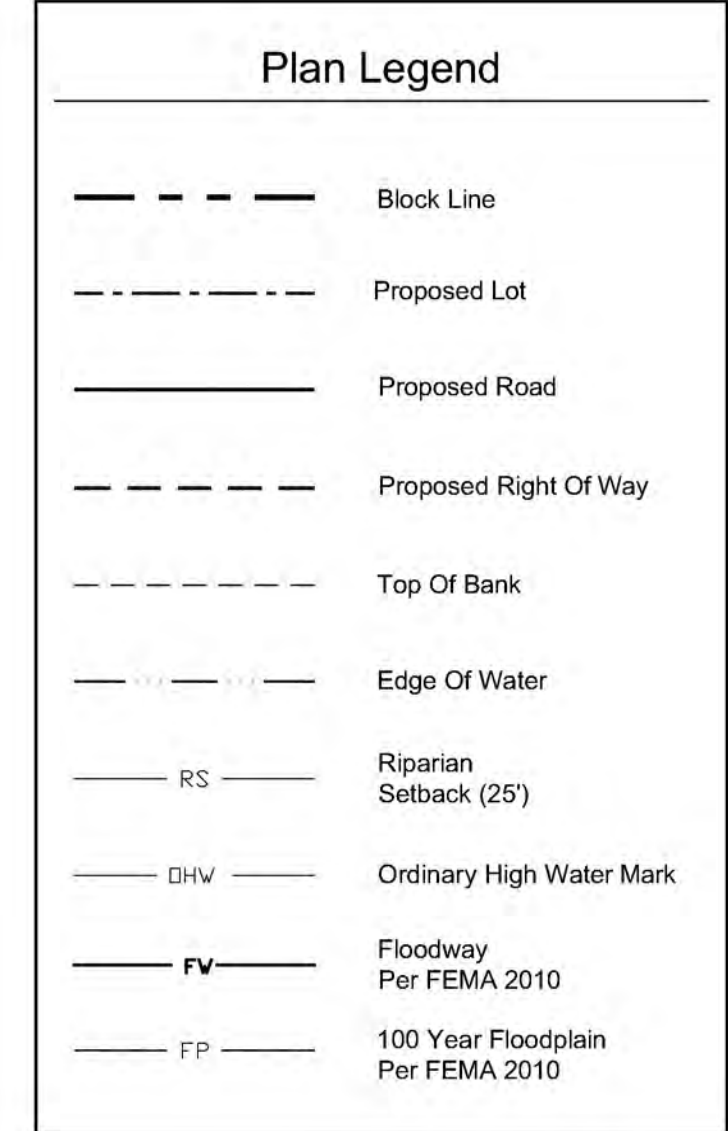
Timeline:
Riparian planting applications will be implemented and completed in Summer 2021.

Monitoring And Maintenance/Failure:
Restoration area will be inventoried after the first growing season to determine that viability is occurring. Annual inventories will subsequently occur until restoration area is considered successful. If plant viability is determined to be insufficient, additional plantings will be implemented.

Irrigation:
Plantings and seeded areas will be irrigated for a minimum of two years to promote root development with an above ground temporary system.

Weed Control:
Noxious weeds and invasive plants will be controlled throughout the restoration area by hand pulling. First operation shall occur prior to new plantings with subsequent removal yearly in June.

Existing Shrubs:
Existing shrubs below the top of bank will remain in place. Natural recruitment shall be encouraged.



Warm Springs Ranch

Ketchum, ID

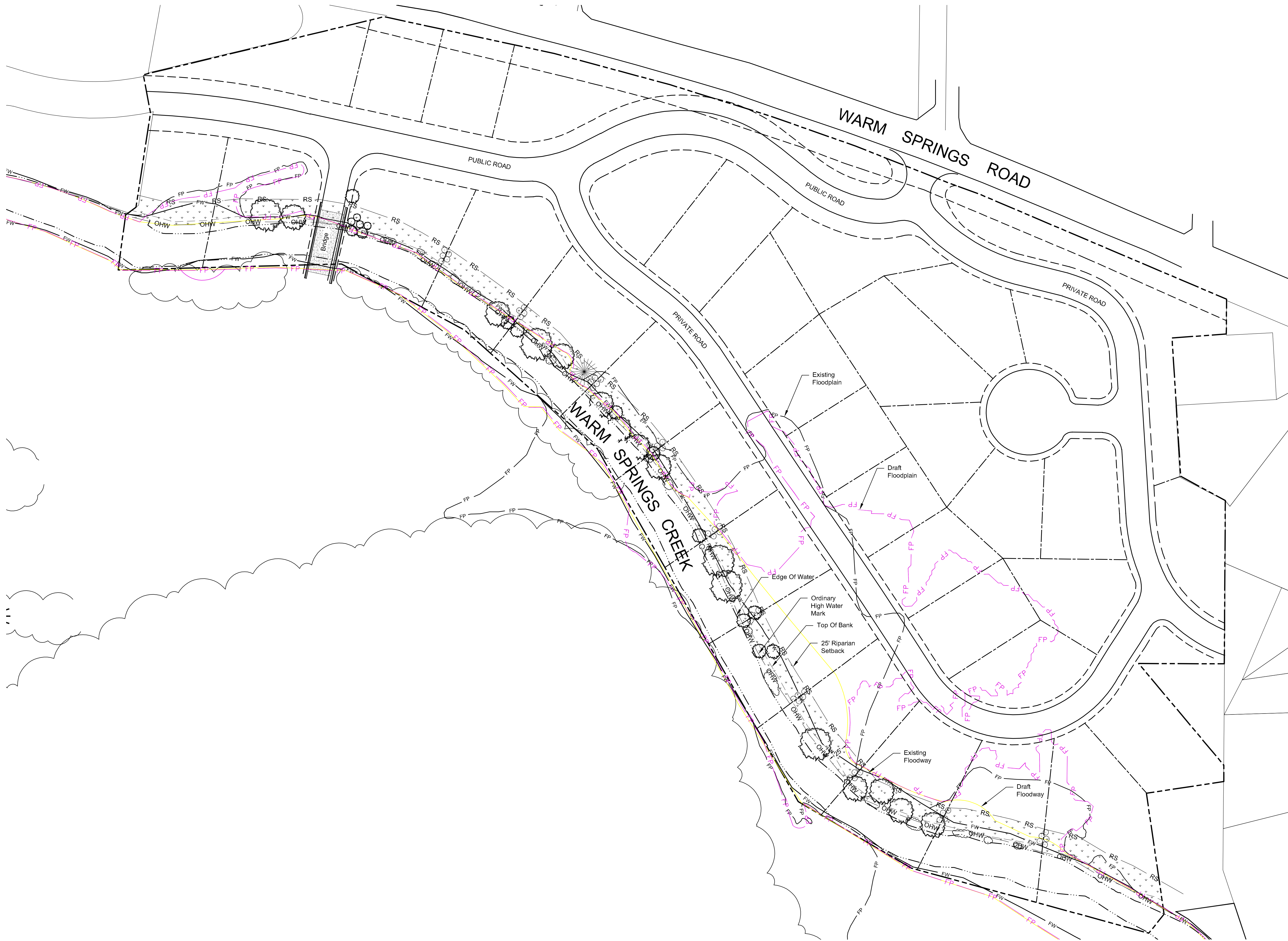
L2 - Block 1 - Riparian Restoration Plan

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Survey Provided By Benchmark Associates
Date: July 2020

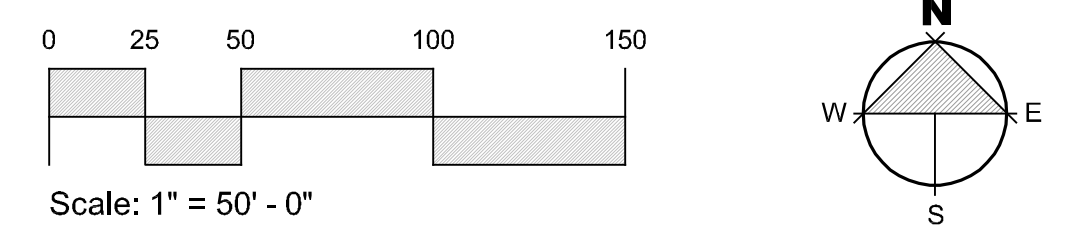
Date: 02/11/21
Preliminary Not For Construction:
Landscape Shown Herein Is Conceptual
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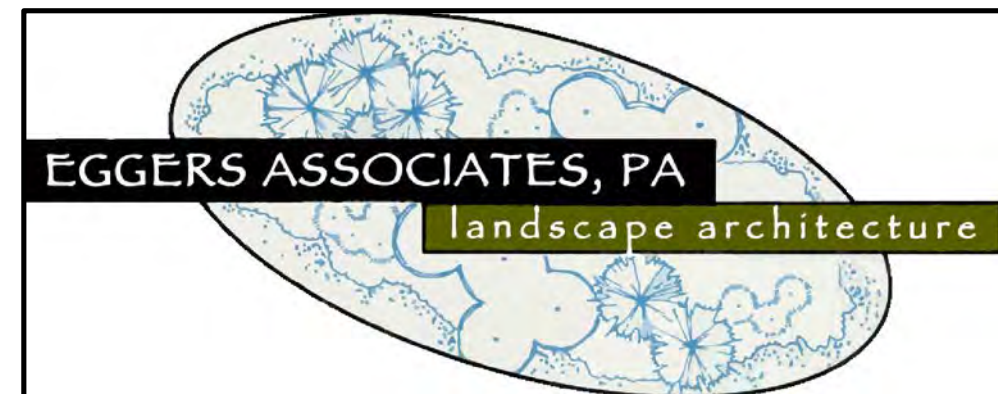


Plan Legend	
	Block Line
	Proposed Lot
	Proposed Road
	Proposed Right Of Way
	Top Of Bank
	Edge Of Water
	Riparian Setback (25')
	Ordinary High Water Mark
	Floodway Per FEMA 2010
	100 Year Floodplain Per FEMA 2010
	Floodway Per FEMA DRAFT
	100 Year Floodplain Per FEMA DRAFT

Plant Legend	
	Existing Evergreen Tree
	Existing Deciduous Tree
	Existing Vegetation
	Proposed Riparian Shrub
	Proposed Restoration Area



Survey Provided By Benchmark Associates
Date: July 2020



Warm Springs Ranch

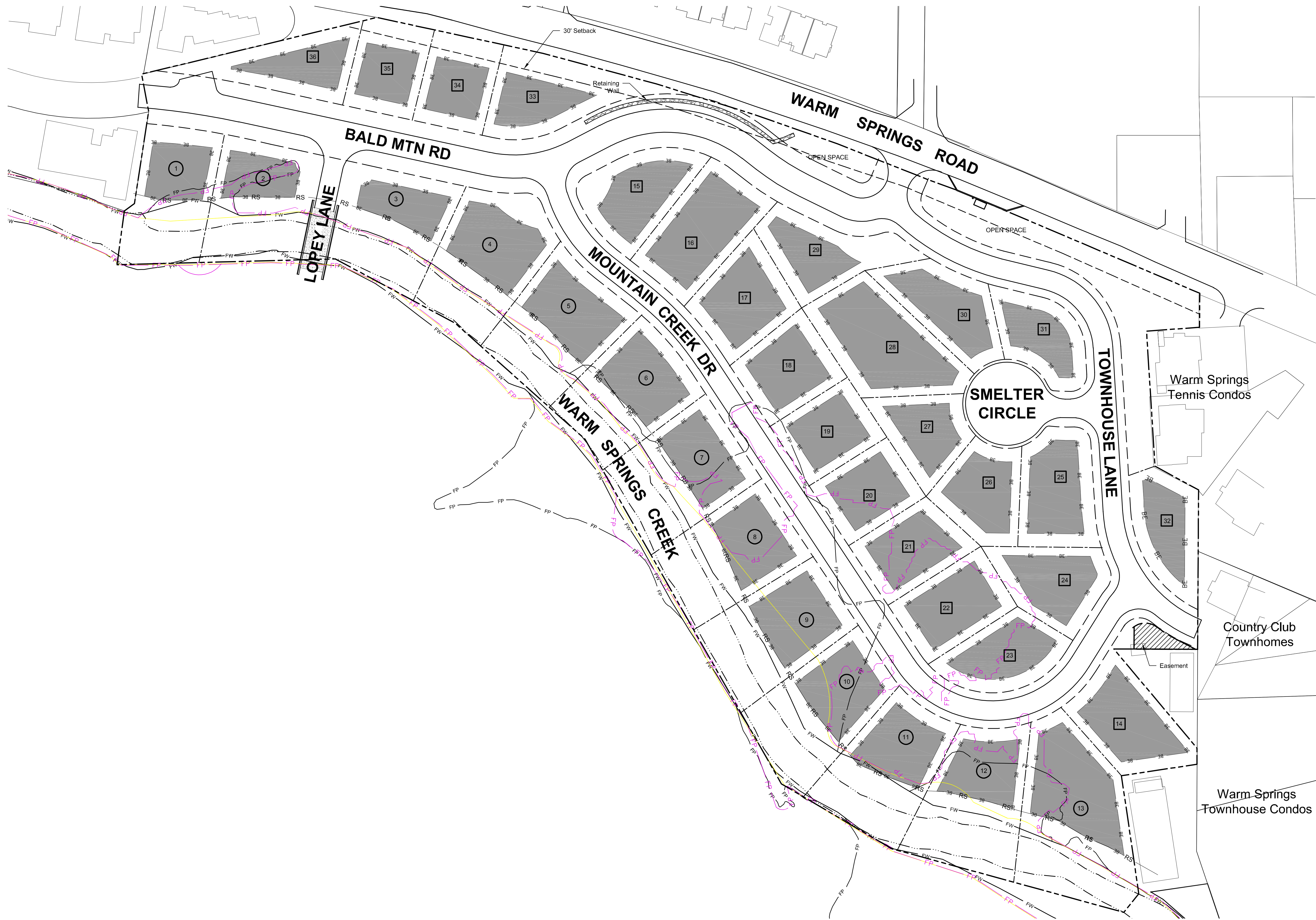
Ketchum, ID

L2.1 - Block 1 - Draft Floodplain

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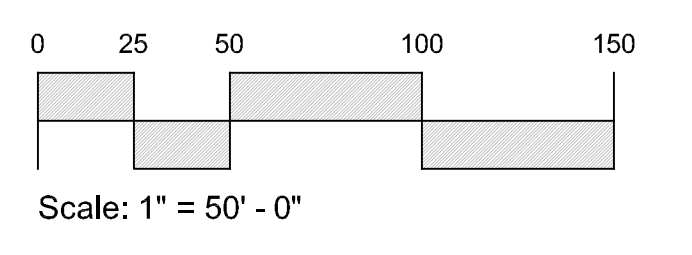
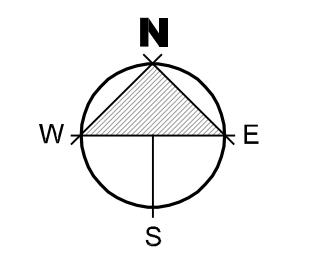
Date: 02/11/21
Preliminary Not For Construction:
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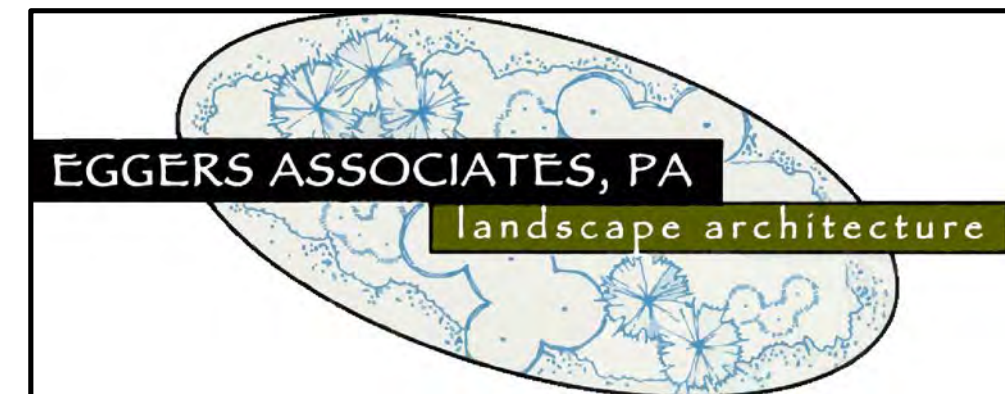


Plan Legend	
	Property Line
	Proposed Lot
	Building Envelope
	Edge of Mean High Water
	25' Riparian Setback
	Floodway Per FEMA 2010
	100 Year Floodplain Per FEMA 2010
	Floodway Per FEMA DRAFT
	100 Year Floodplain Per FEMA DRAFT

GRL Zone Minimum Setbacks	
Warm Springs Road:	30'
Front Setback:	15'
Side Setback:	5'
Rear Setback:	15'



Survey Provided By Benchmark Associates
Date: July 2020



Warm Springs Ranch

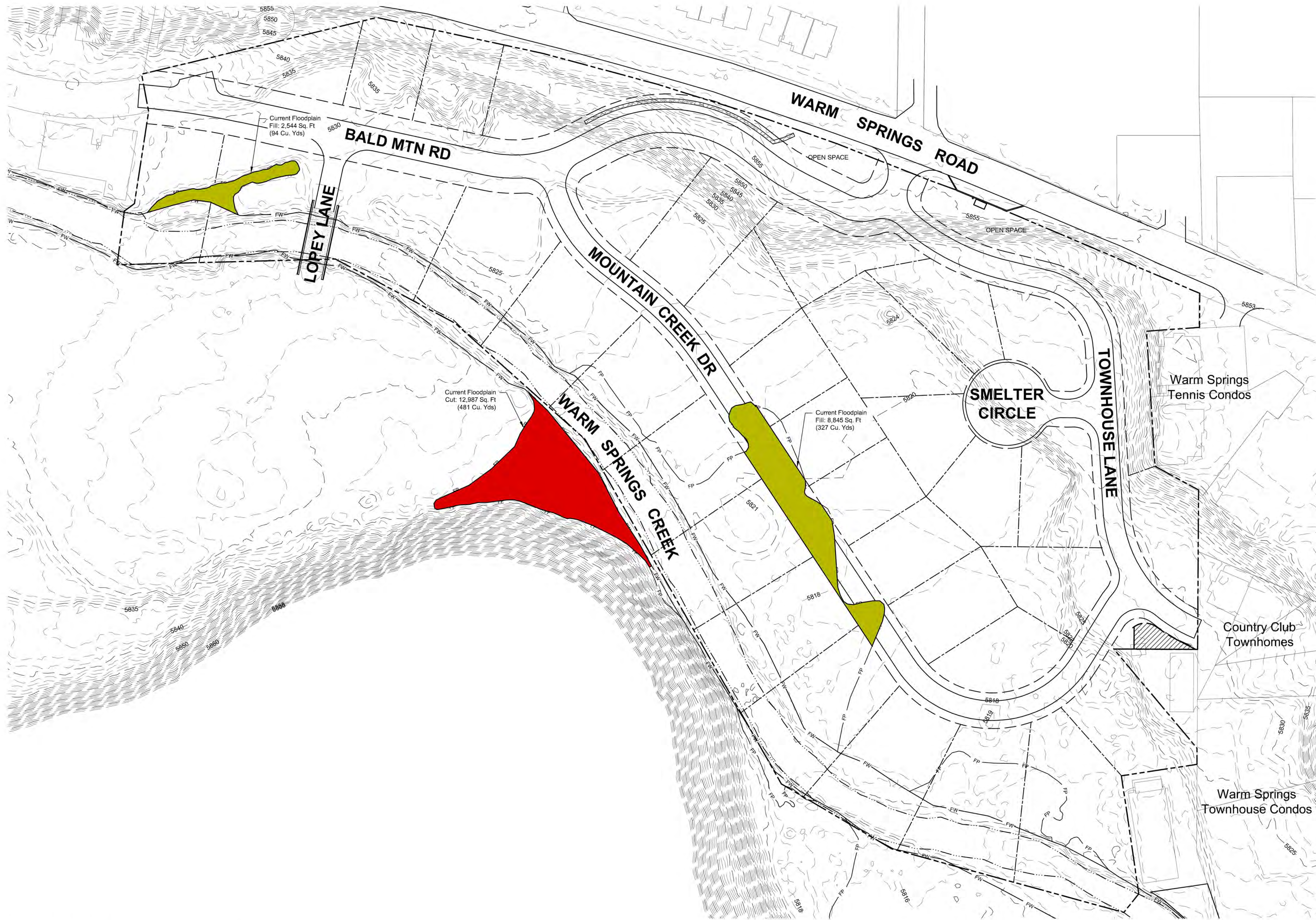
Ketchum, ID

L2.2 - Block 1 - Building Envelopes

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Date: 02/11/21
Preliminary Not For Construction:
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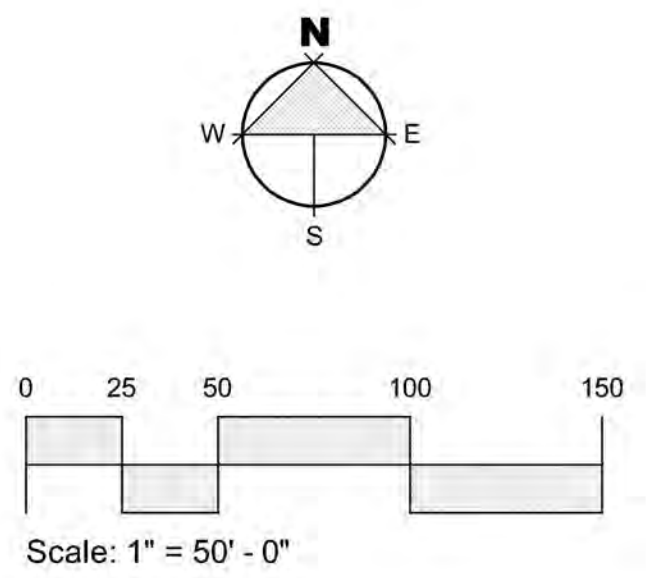


Plan Legend	
	Property Line
	Proposed Lot
	Existing Contour
	Edge of Mean High Water
	Floodway Per FEMA 2010
	100 Year Floodplain Per FEMA 2010
	Floodplain Fill Area
	Floodplain Cut Area

Compensatory Calculations	
Total Floodplain Fill:	11,389 Sq. Ft 421 Cu. Yds
Total Floodplain Cut:	12,987 Sq. Ft 481 Cu. Yds

Fill	
	BFE
	Existing Grade

Cut	
	BFE
	Existing Grade
	Cut



Warm Springs Ranch

Ketchum, ID

L 2.3 - Compensatory Storage Map

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Date: 02/11/21
 Preliminary Not For Construction:
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WARM SPRINGS RANCH BLOCK 1 PRELIMINARY PLAT

A SUBDIVISION PLAT WHEREIN:
BLOCK 1, WARM SPRINGS RANCH LARGE BLOCK PLAT IS SUBDIVIDED CREATING
WARM SPRINGS RANCH BLOCKS 1-5, LOTS 1-36 & PARCELS A, B, C, D & E
FEBRUARY 2021

NOTES:

- ZONING IS GR-L.
- PRIVATE ROAD #1 WITHIN WARM SPRINGS RANCH LARGE BLOCK PLAT, BLOCK 1, ALONG WITH ALL EASEMENTS WITHIN SAID ROAD ARE HEREBY VACATED.
- PARCELS A & D ARE PRIVATE ROADS. PARCELS A & D WILL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION. PRIVATE ROADS SHALL MAINTAIN A FREE AND CLEAR WIDTH OF 26 FEET FOR EMERGENCY VEHICLES. A 40-FOOT-WIDE ACCESS AND PUBLIC UTILITY EASEMENT TO BENEFIT WARM SPRINGS RANCH LARGE BLOCK PLAT BLOCKS 2-7 IS GRANTED ON PARCELS A & D AS SHOWN HEREON. A 10-FOOT-WIDE SNOW STORAGE AND UTILITY EASEMENT IS GRANTED ADJACENT TO ALL PRIVATE ROAD PARCELS. NO PUBLIC PARKING IS PERMITTED IN PARCELS A & D.
- PARCELS B & C ARE COMMON AREA OPEN SPACE AND SHALL BE MAINTAINED BY THE H.O.A. SNOW STORAGE IS GRANTED WITHIN ALL OF PARCELS B & C.
- THE ACCESS AND PUBLIC UTILITY EASEMENT BENEFITING THE COUNTRY CLUB TOWNHOMES AND WARM SPRINGS TOWNHOUSE CONDOMINIUMS KNOWN AS TOWNHOUSE LANE IS RELOCATED WITHIN PARCEL A AS SHOWN HEREON.
- BASIS OF BEARINGS IS IDAHO STATE PLANE COORDINATE SYSTEM, NAD83, CENTRAL ZONE AS DERIVED BY GPS OBSERVATIONS.
- THE RED AND BLUE AVALANCHE ZONES ARE PER ARTHUR MEARS SITE SPECIFIC AVALANCHE HAZARD AND MAPPING ANALYSIS, APRIL 2001.
- A 10' FISHERMAN'S AND NATURE STUDY EASEMENT IS GRANTED ALONG THE BANKS OF WARM SPRINGS CREEK. LOCATION OF SAID EASEMENT SHALL SHIFT IN ACCORDANCE WITH THE LOCATION OF THE MEAN HIGH WATER MARK.
- A 25' SCENIC EASEMENT AND RIPARIAN SETBACK EASEMENT IS GRANTED ALONG THE NORTH BANK OF WARM SPRINGS CREEK AS SHOWN HEREON. LOCATION OF SAID EASEMENT SHALL SHIFT IN ACCORDANCE WITH THE LOCATION OF THE MEAN HIGH WATER MARK.
- FLOODPLAIN: THE 1% CHANCE OF FLOOD LINE (FP), AS DESIGNATED ON THIS MAP IS CONSIDERED REASONABLE FOR REGULATORY PURPOSES. HOWEVER, BENCHMARK ASSOCIATES DOES NOT REPRESENT, GUARANTEE, WARRANT NOR IMPLY THAT AREAS OUTSIDE OF THE DESIGNATED FLOOD PLAIN AREA ARE SAFE AND FREE FROM FLOODS OR FLOOD DANGER. FLOOD INFORMATION IS BASED ON THE FLOOD INSURANCE STUDY FOR BLAINE COUNTY, IDAHO, UNINCORPORATED AREAS) COMMUNITY NUMBER 165167 - PANEL NO. 0434 E - NOVEMBER 26, 2010.
- ORDINARY HIGH WATER DELINEATION PER SAWTOOTH ENVIRONMENTAL CONSULTING, LLC, JUNE 2020. PERMITS MAY BE REQUIRED FROM LOCAL, STATE OR FEDERAL AGENCIES PRIOR TO CONSTRUCTION, EXCAVATION OR FILL ACTIVITIES.
- LOTS 15 & 16 SHALL BE ACCESSED FROM MOUNTAIN CREEK DRIVE.
- LOTS 33-36 SHALL BE ACCESSED FROM BALD MT. ROAD.
- PARCEL D IS DEDICATED AS A PUBLIC PEDESTRIAN EASEMENT FOR ACCESS TO THE 10' FISHERMAN'S AND NATURE STUDY EASEMENT.
- ANY CONSTRUCTION IN THE AVALANCHE OVERLAY ZONE ON LOTS 8-12 SHALL MEET THE REQUIREMENTS OF KETCHUM ZONING CODE 17.92, AS MAY BE AMENDED.
- ANY DEVELOPMENT WITHIN THE REGULATORY FLOODPLAIN (AS MAY BE AMENDED) SHALL OBTAIN A FLOODPLAIN DEVELOPMENT PERMIT AND COMPLY WITH THE REQUIREMENTS IN KETCHUM ZONING CODE 17.88, AS MAY BE AMENDED.
- FLOODPLAIN LINES, ORDINARY HIGH WATER AND SETBACKS ARE SUBJECT TO CHANGE WITH UPDATED FLOOD STUDIES BY FEMA AND CHANGES IN THE COURSE OF THE CREEK OVER TIME. THIS PLAT REFLECTS THE CURRENT CONDITIONS BUT SHOULD NOT BE RELIED UPON AS THE DEFINITIVE SOURCE FOR THIS INFORMATION.
- REFER TO THE WARM SPRINGS RANCH REZONE AND DEVELOPMENT AGREEMENT RECORDED AS INSTRUMENT NO. _____ RECORDS OF BLAINE COUNTY, IDAHO.
- DESIGN REVIEW IS REQUIRED FOR NEW DEVELOPMENT ON LOTS 33, 34, 35 & 36.
- THE RIPARIAN ZONE IDENTIFIED IN BLOCK 1 SHALL BE DESIGNATED AS AN EASEMENT GOVERNED AND MANAGED BY AN OWNERS ASSOCIATION (HOA) TO ENSURE FUTURE MODIFICATIONS TO THE RIPARIAN ZONE AND THE STREAM BANK DO NOT OCCUR INDIVIDUALLY BUT OCCUR IN A COMPREHENSIVE COORDINATED APPROACH. PRIOR TO ANY MODIFICATION TO THE RIPARIAN ZONE OR STREAM BANK, AN OVERALL PLAN MUST BE DEVELOPED AND APPROVED BY KETCHUM. KETCHUM WILL NOT UNREASONABLY WITHHOLD, CONDITION, OR DELAY APPROVAL OF SUCH PLAN. ANY RIPARIAN AND STREAM BANK ALTERATIONS MUST CONFORM TO THE APPROVED PLAN.
- A BUS STOP SHELTER EASEMENT IS GRANTED WITHIN PARCEL B TO BENEFIT MOUNTAIN RIDES AS SHOWN HEREON. THE BUS SHELTER SHALL BE MAINTAINED BY MOUNTAIN RIDES.
- SHEET FLOODING CAN AND WILL OCCUR ON THE PROPERTY SHOWN HEREON, AND FLOODING MAY EXTEND BEYOND THE FLOODWAY AND FLOODPLAIN BOUNDARY LINES IDENTIFIED.
- THE DECLARATION ESTABLISHING COVENANTS, CONDITIONS, AND RESTRICTIONS FOR THE WARM SPRINGS RANCH SUBDIVISION HOMEOWNERS ASSOCIATION IS RECORDED UNDER INST. NO. _____ RECORDS OF BLAINE COUNTY, IDAHO.
- RESIDENCES SHALL BE LIMITED TO SINGLE-FAMILY DWELLINGS ONLY. A TOTAL OF 36 DWELLING UNITS IS PERMITTED.
- THE 25' RIPARIAN AREA SHALL BE MANAGED BY THE HOA ACCORDING TO A PLAN APPROVED BY THE CITY OF KETCHUM. ANY RIPARIAN OR STREAM BANK ALTERATIONS MUST CONFORM TO THE APPROVED PLAN.
- THE USE OF CHEMICALS, FERTILIZERS, PESTICIDES, HERBICIDES, ETC. IS SUBJECT TO THE RESTRICTIONS IN KETCHUM MUNICIPAL CODE 17.88.040 C.3-6, AS MAY BE AMENDED.

P1

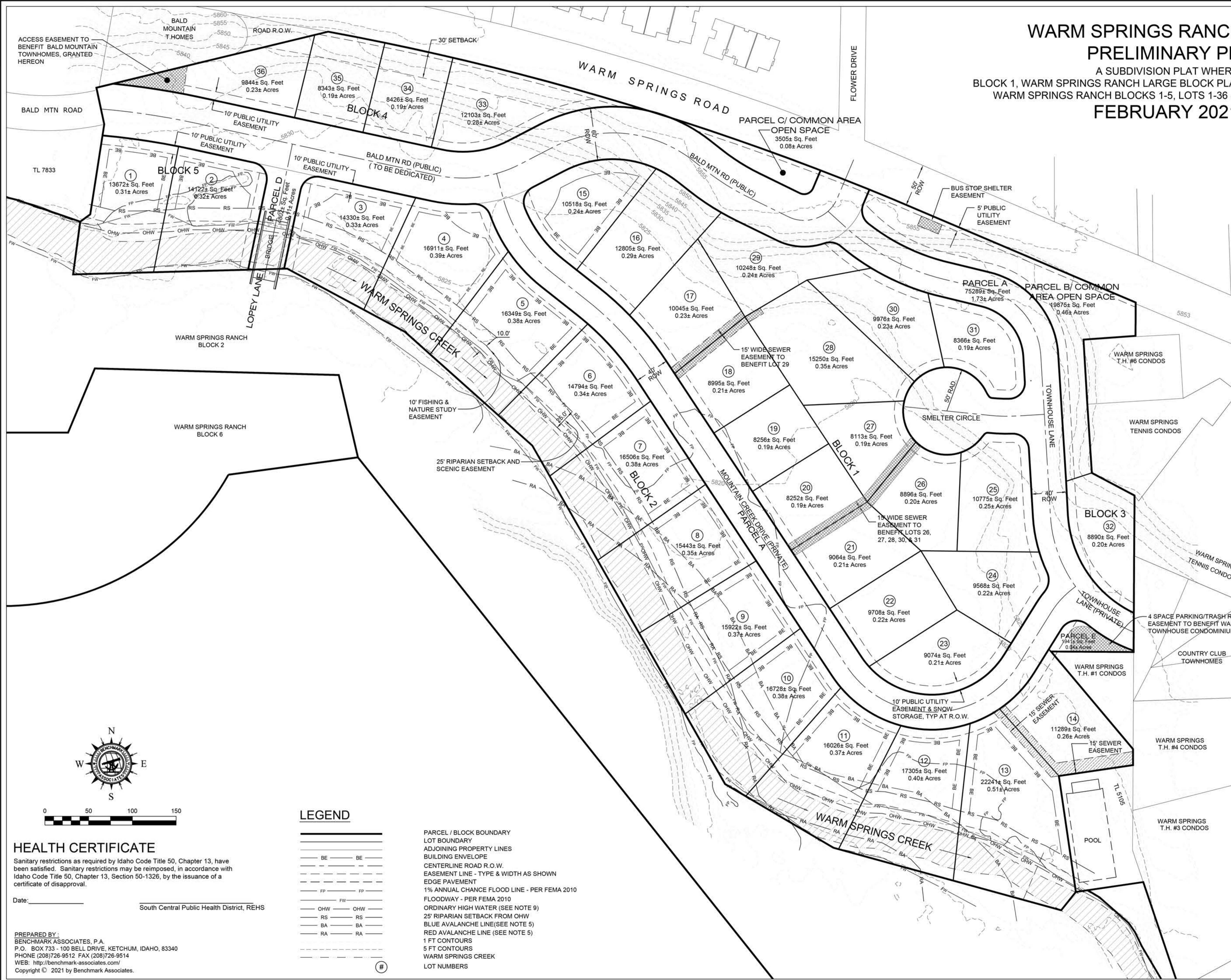
PRELIMINARY PLAT



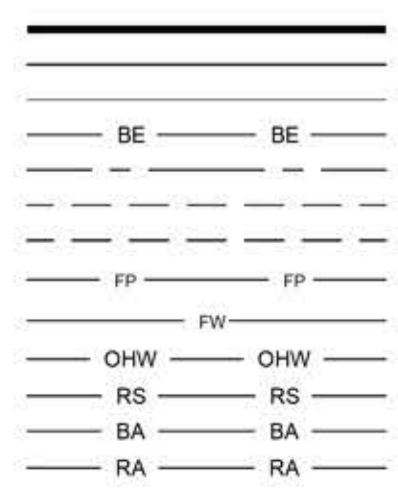
WARM SPRINGS RANCH BLOCK 1
LOCATED WITHIN
SECTION 12, TOWNSHIP 4 NORTH, RANGE 17 EAST, B.M.,
CITY OF KETCHUM, IDAHO

PREPARED FOR: BRENNAN HOLDINGS, LLC.

PROJECT NO. 20071	DWG BY: ROB	CRD: 20071.CRD	20071 PRE-PLAT.DWG
A PRELIMINARY PLAT	DATE: 2/12/2021	SHEET: 1 OF 2	



LEGEND










PARCEL / BLOCK BOUNDARY
LOT BOUNDARY
ADJOINING PROPERTY LINES
BUILDING ENVELOPE
CENTERLINE ROAD R.O.W.
EASEMENT LINE - TYPE & WIDTH AS SHOWN
EDGE PAVEMENT
1% ANNUAL CHANCE FLOOD LINE - PER FEMA 2010
FLOODWAY - PER FEMA 2010
ORDINARY HIGH WATER (SEE NOTE 9)
25' RIPARIAN SETBACK FROM OHW
BLUE AVALANCHE LINE(SEE NOTE 5)
RED AVALANCHE LINE (SEE NOTE 5)
1 FT CONTOURS
5 FT CONTOURS
WARM SPRINGS CREEK
LOT NUMBERS

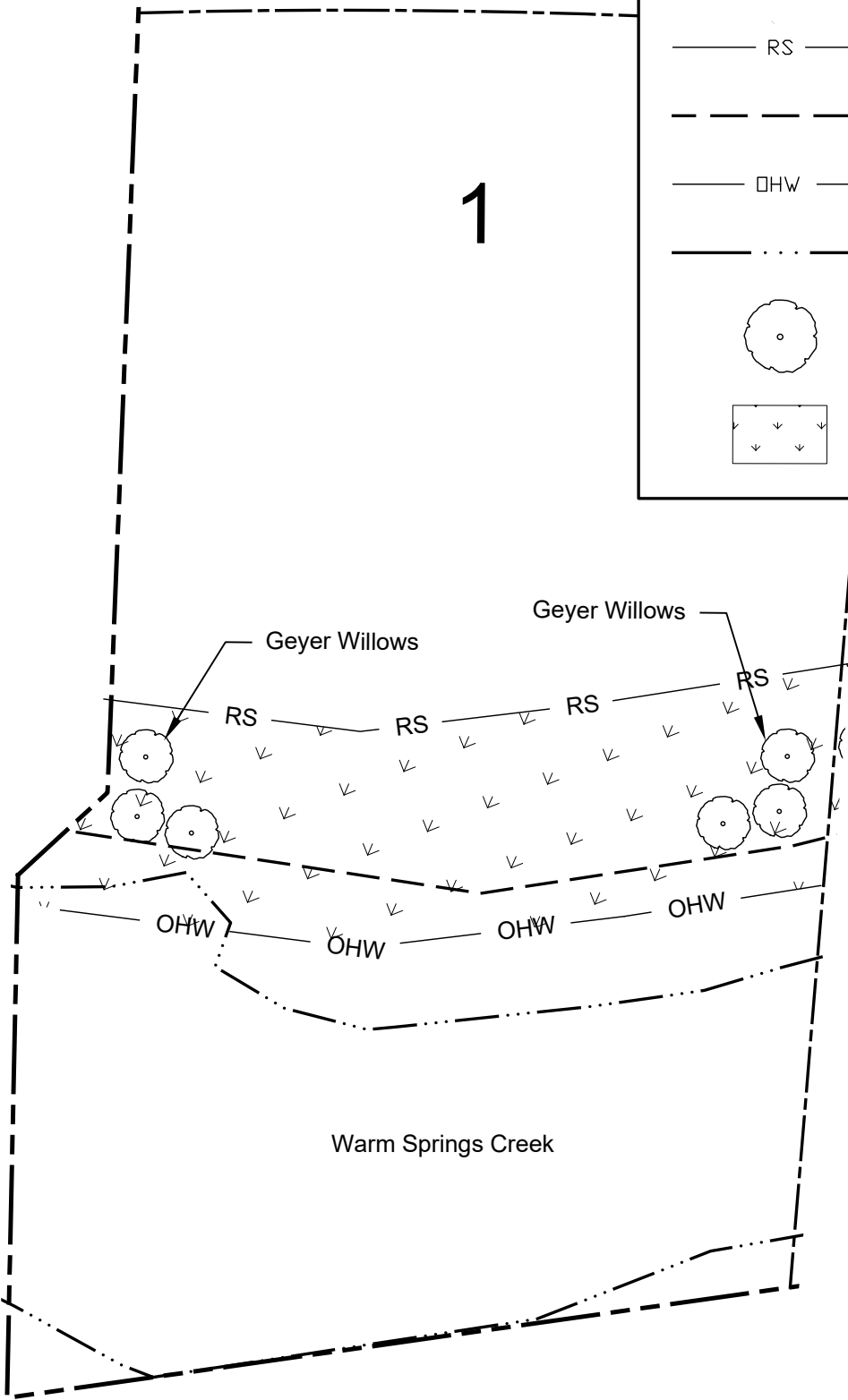
HEALTH CERTIFICATE

Sanitary restrictions as required by Idaho Code Title 50, Chapter 13, have been satisfied. Sanitary restrictions may be reimposed, in accordance with Idaho Code Title 50, Chapter 13, Section 50-1326, by the issuance of a certificate of disapproval.

Date: _____ South Central Public Health District, REHS

PREPARED BY:
BENCHMARK ASSOCIATES, P.A.
P.O. BOX 733 - 100 BELL DRIVE, KETCHUM, IDAHO, 83340
PHONE (208)726-9512 FAX (208)726-9514
WEB: <http://benchmark-associates.com/>
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
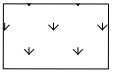
Plan Legend	
	Lot Line
	25' Riparian Setback
	Top Of Bank
	Ordinary High Water Mark
	Edge of Mean High Water
	Riparian Shrub (6)
	Riparian Grasses -See Sheet L2



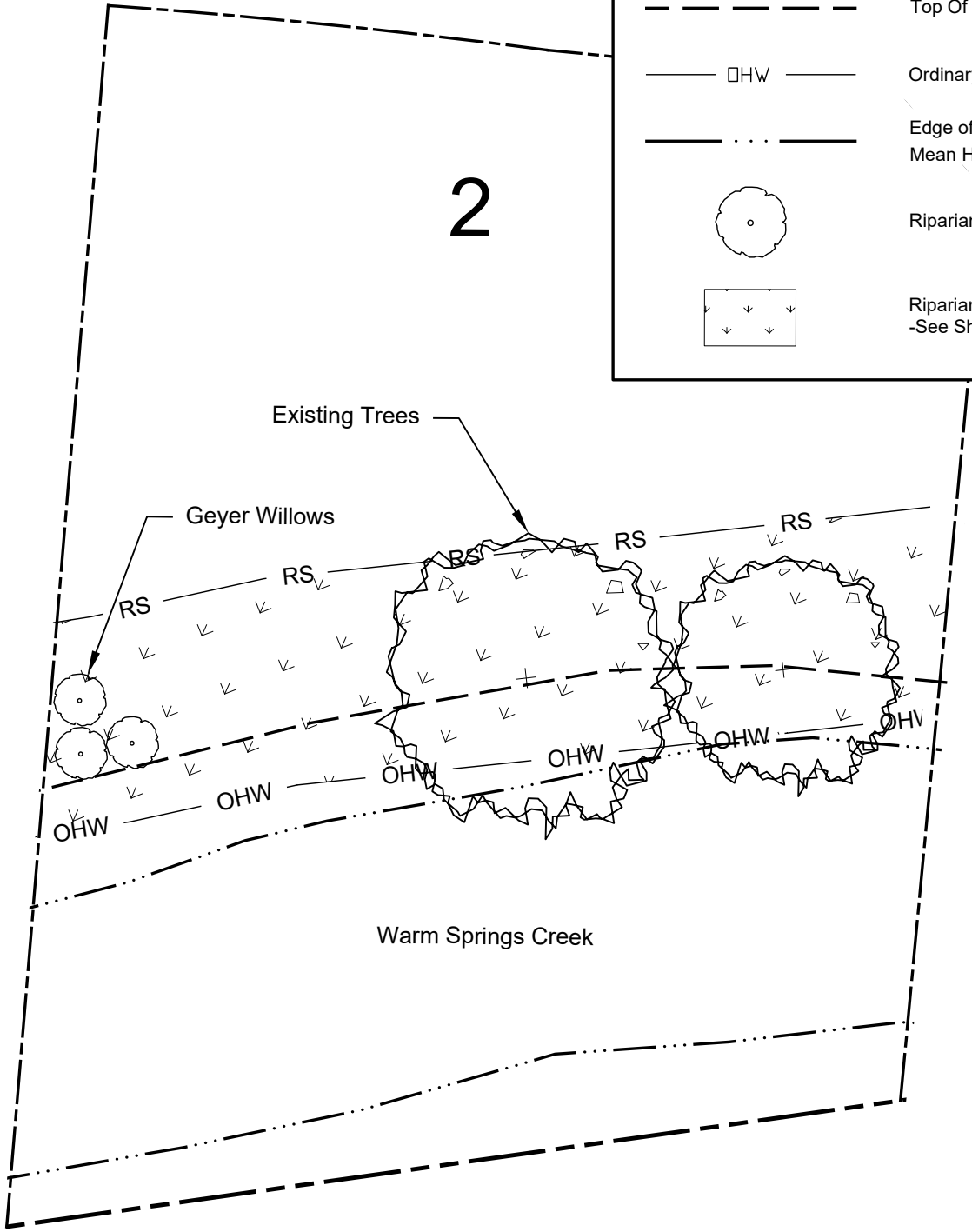
Warm Springs Ranch

Lot - 1

Plan Legend

	Lot Line
	25' Riparian Setback
	Top Of Bank
	Ordinary High Water Mark
	Edge of Mean High Water
	Riparian Shrub (3)
	Riparian Grasses -See Sheet L2


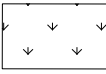
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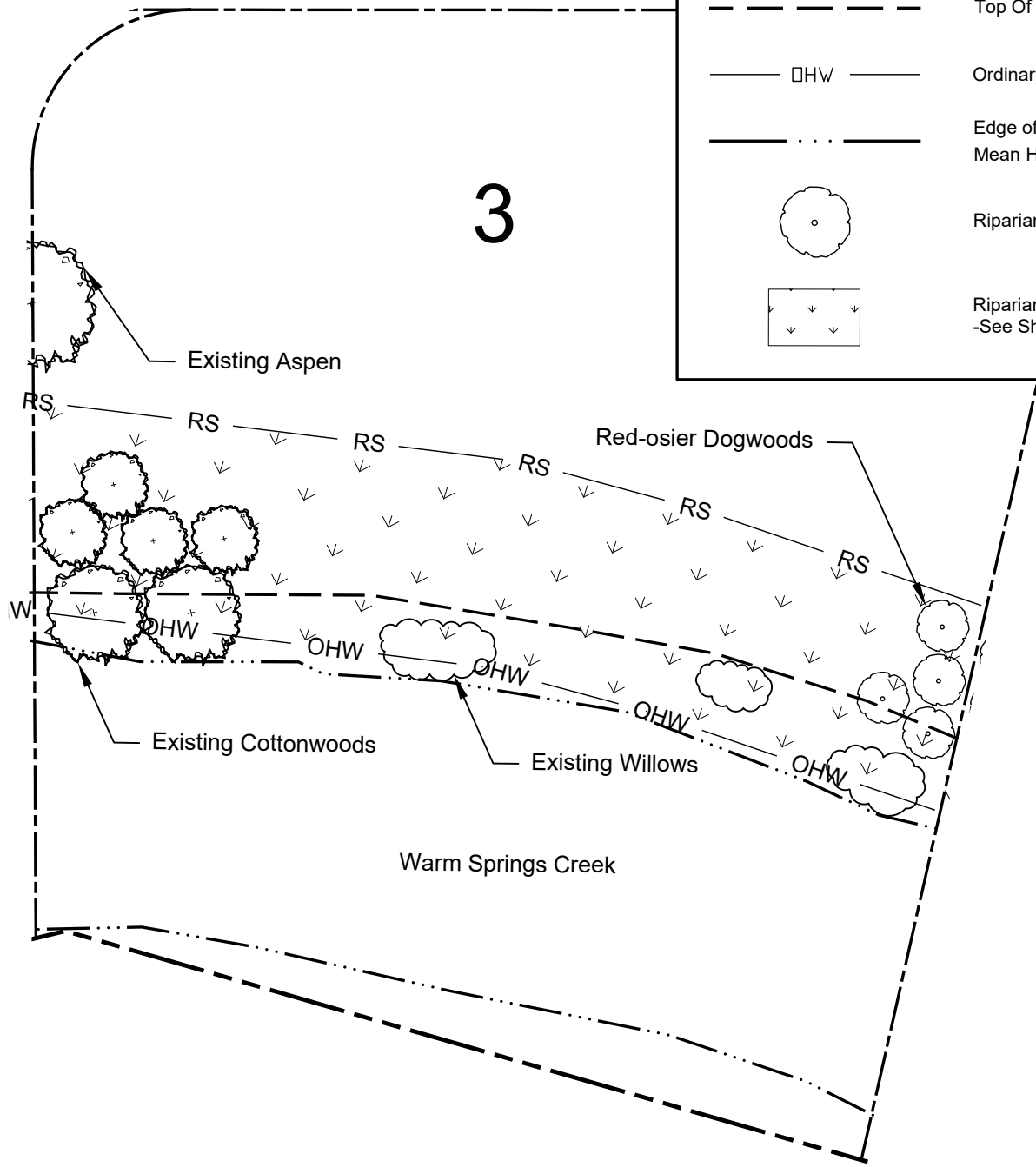


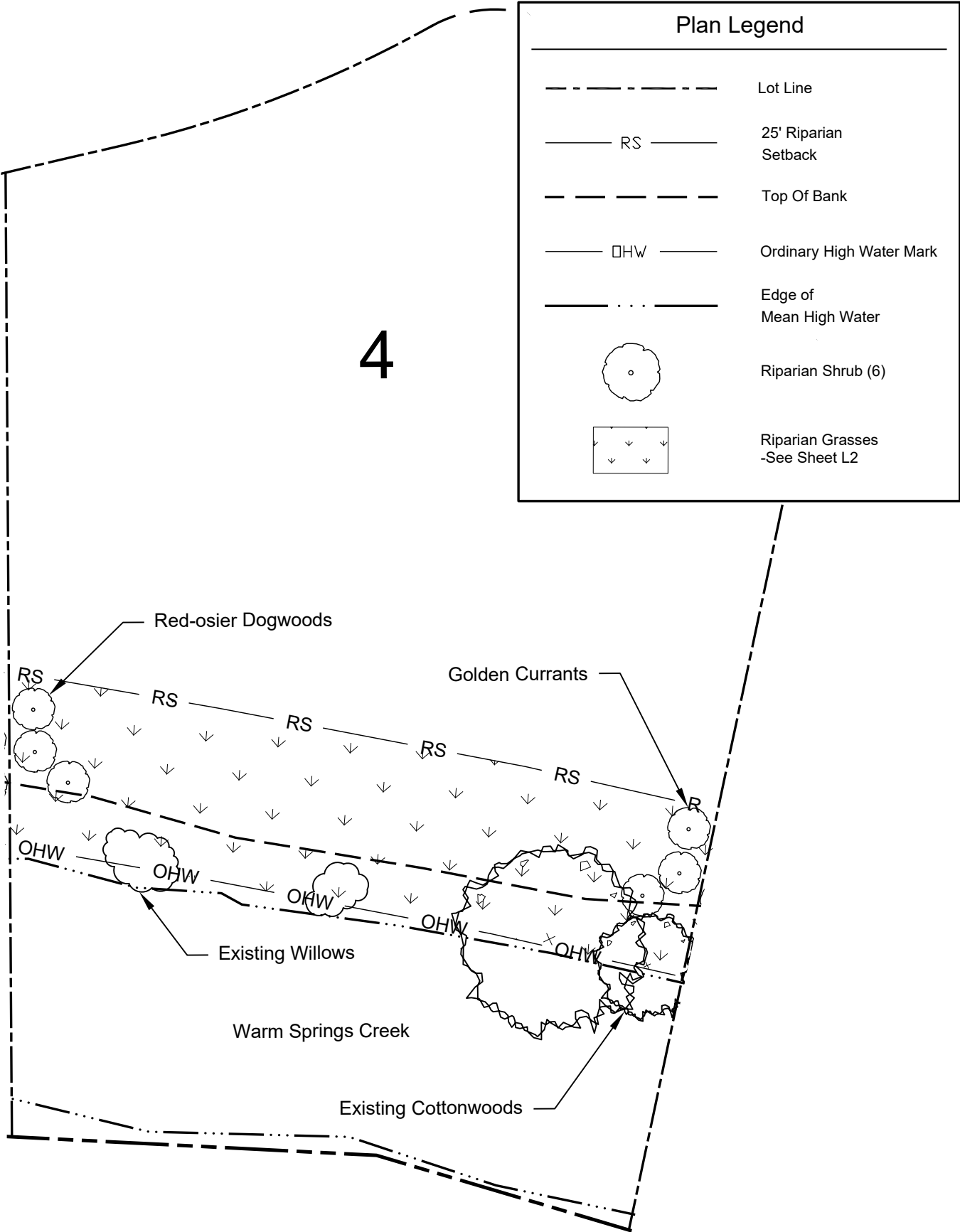
Warm Springs Ranch

Lot - 2

Plan Legend

- Lot Line
- RS ----- 25' Riparian Setback
- Top Of Bank
- OHW ----- Ordinary High Water Mark
- Edge of Mean High Water
-  Riparian Shrub (4)
-  Riparian Grasses
-See Sheet L2







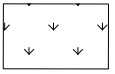


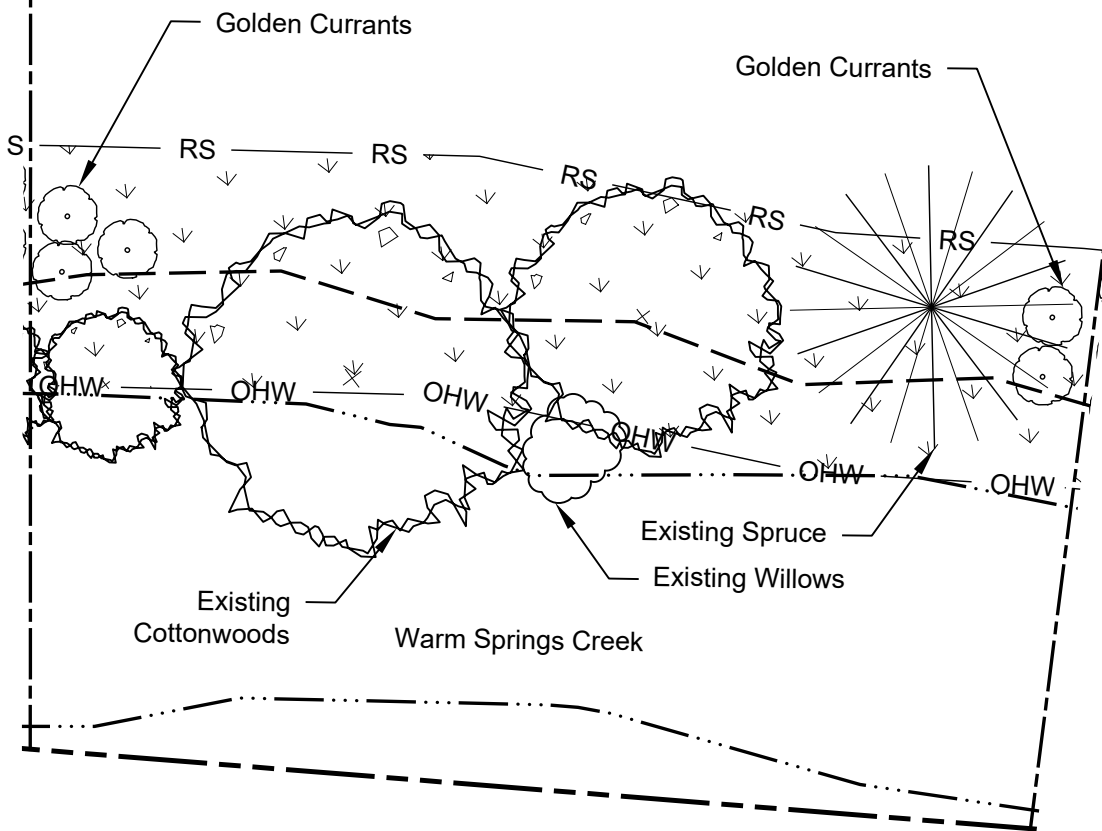


Warm Springs Ranch

Lot - 4

5







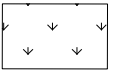
Plan Legend	
	Lot Line
	25' Riparian Setback
	Top Of Bank
	Ordinary High Water Mark
	Edge of Mean High Water
	Riparian Shrub (5)
	Riparian Grasses -See Sheet L2



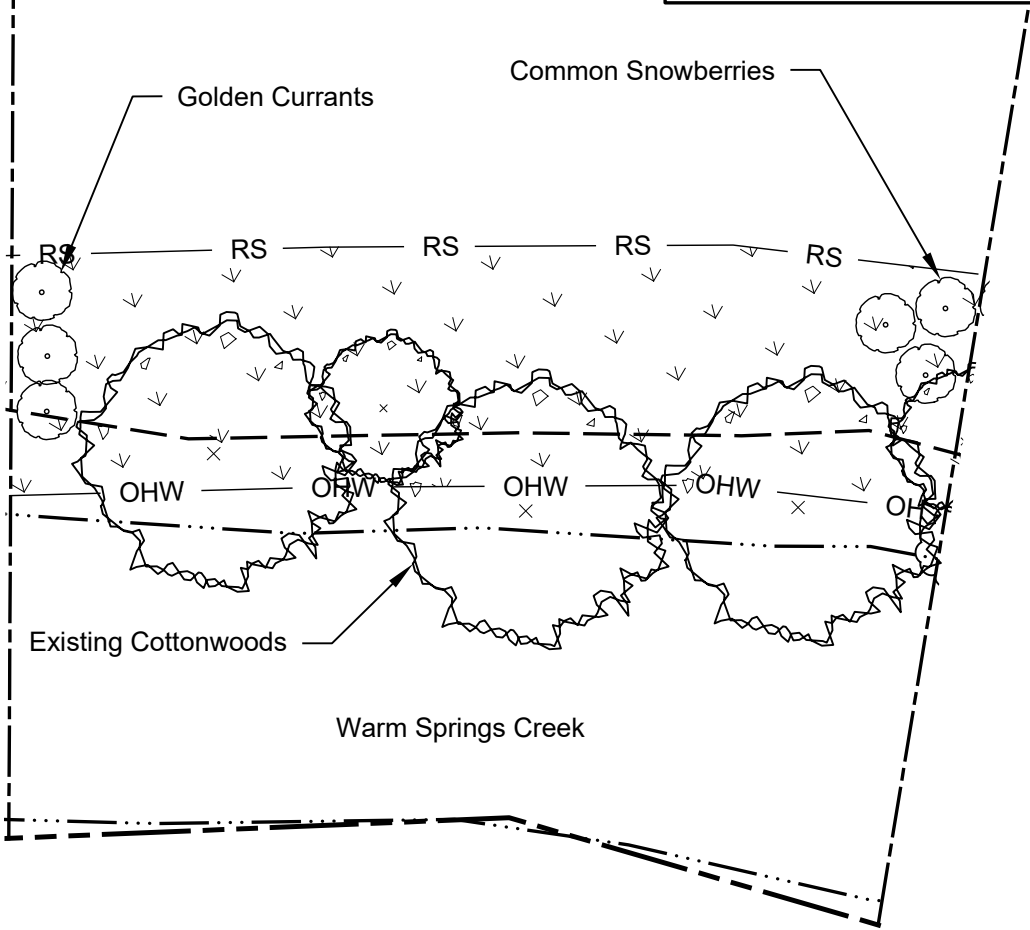
Warm Springs Ranch

Lot - 5

Plan Legend

-  Lot Line
-  25' Riparian Setback
-  Top Of Bank
-  Ordinary High Water Mark
-  Edge of Mean High Water
-  Riparian Shrub (6)
-  Riparian Grasses
-See Sheet L2







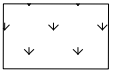
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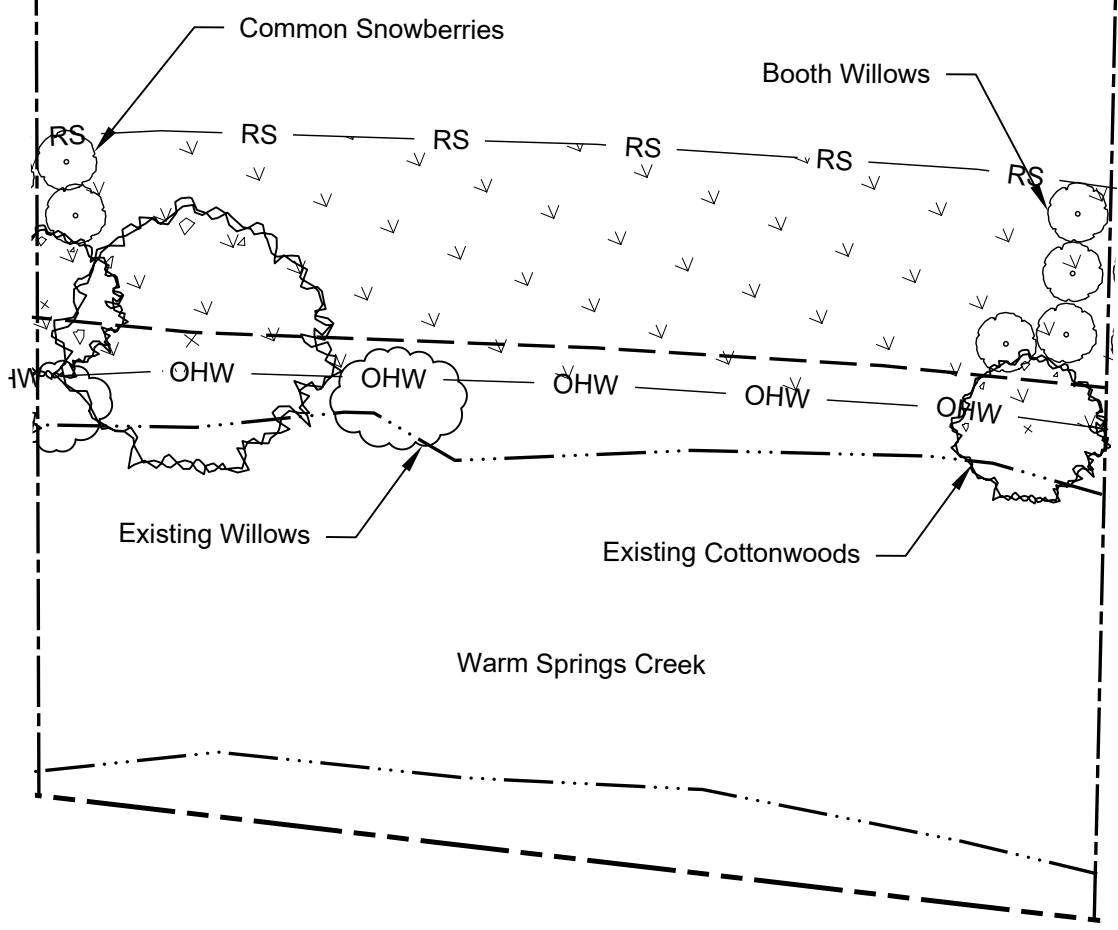
Warm Springs Ranch

Lot - 6

Plan Legend

	Lot Line
	25' Riparian Setback
	Top Of Bank
	Ordinary High Water Mark
	Edge of Mean High Water
	Riparian Shrub (6)
	Riparian Grasses -See Sheet L2







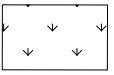
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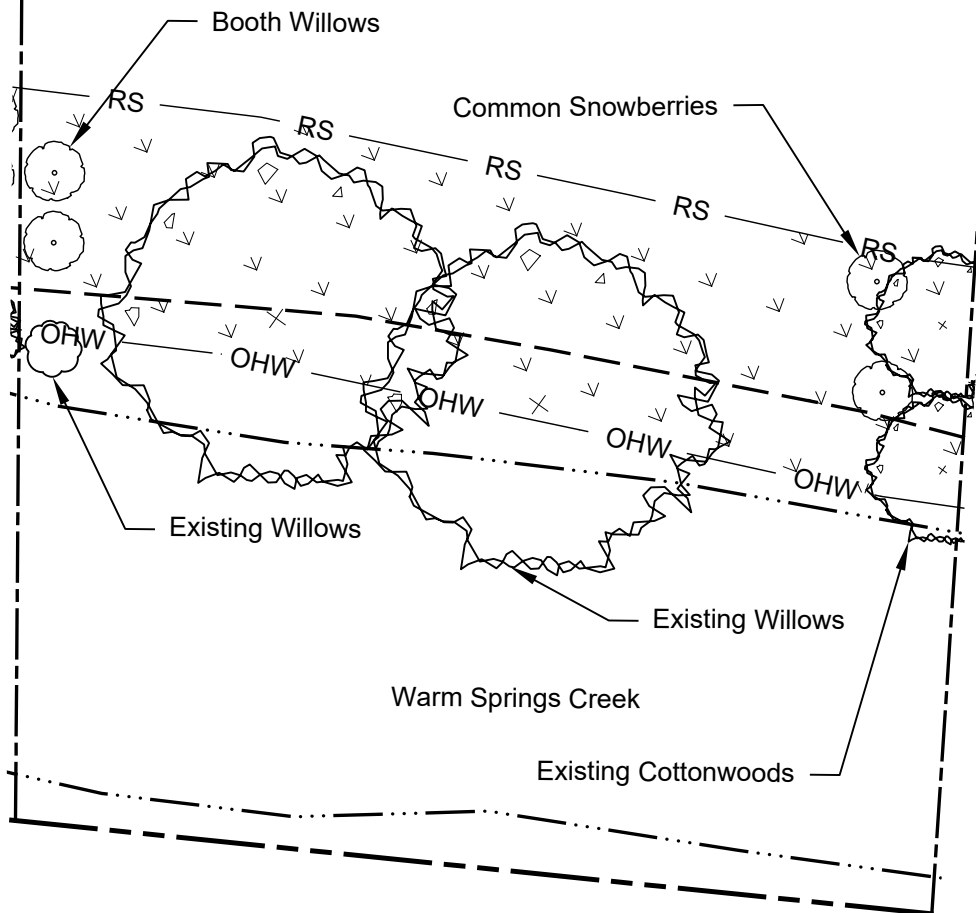


Warm Springs Ranch

Lot - 7

8








Plan Legend	
	Lot Line
	25' Riparian Setback
	Top Of Bank
	Ordinary High Water Mark
	Edge of Mean High Water
	Riparian Shrub (4)
	Riparian Grasses -See Sheet L2

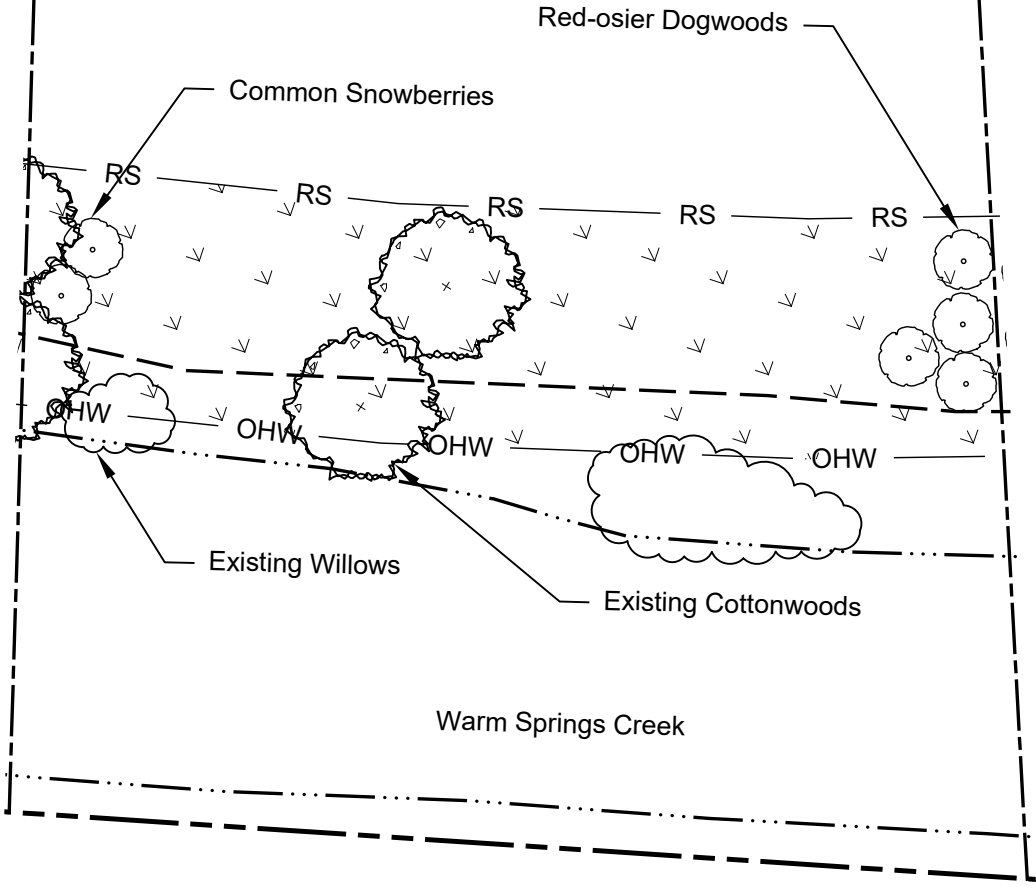


Warm Springs Ranch

Lot - 8

9







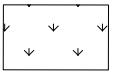
Plan Legend	
	Lot Line
	25' Riparian Setback
	Top Of Bank
	Ordinary High Water Mark
	Edge of Mean High Water
	Riparian Shrub (6)
	Riparian Grasses -See Sheet L2

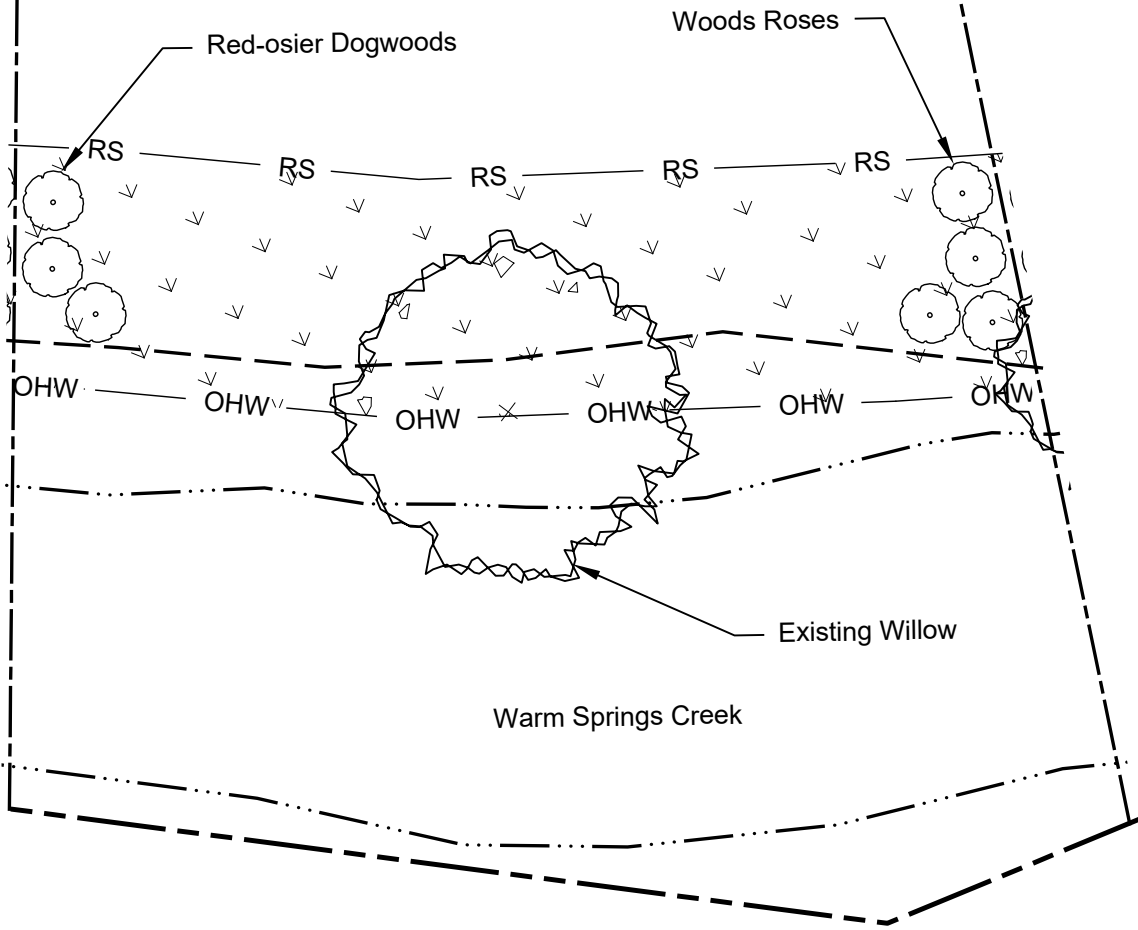


Warm Springs Ranch

Lot - 9

10







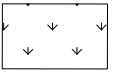
Plan Legend	
	Lot Line
	25' Riparian Setback
	Top Of Bank
	Ordinary High Water Mark
	Edge of Mean High Water
	Riparian Shrub (7)
	Riparian Grasses -See Sheet L2

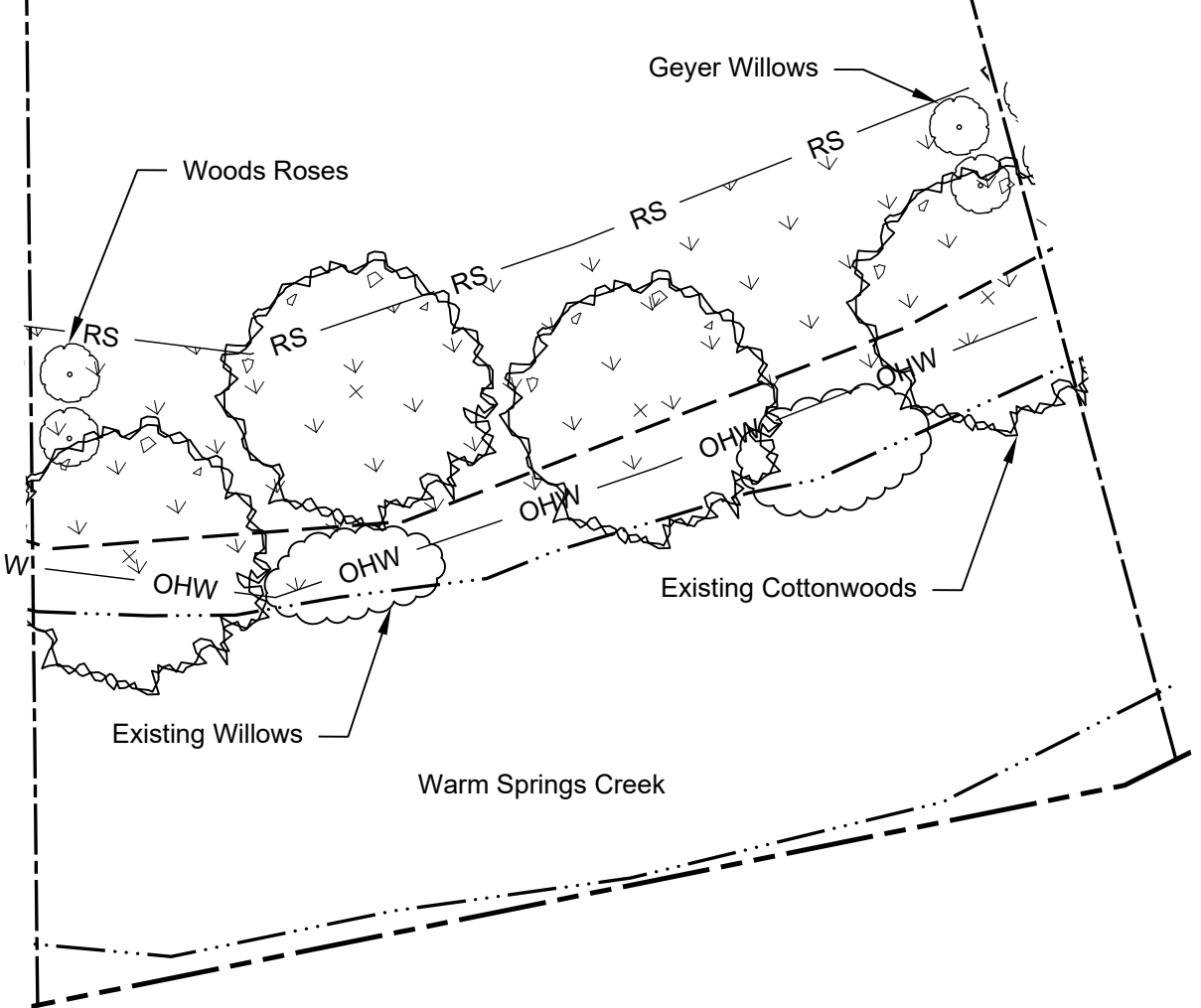


Warm Springs Ranch

Lot - 10

11




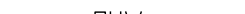


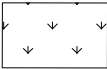
Plan Legend	
	Lot Line
	25' Riparian Setback
	Top Of Bank
	Ordinary High Water Mark
	Edge of Mean High Water
	Riparian Shrub (4)
	Riparian Grasses -See Sheet L2

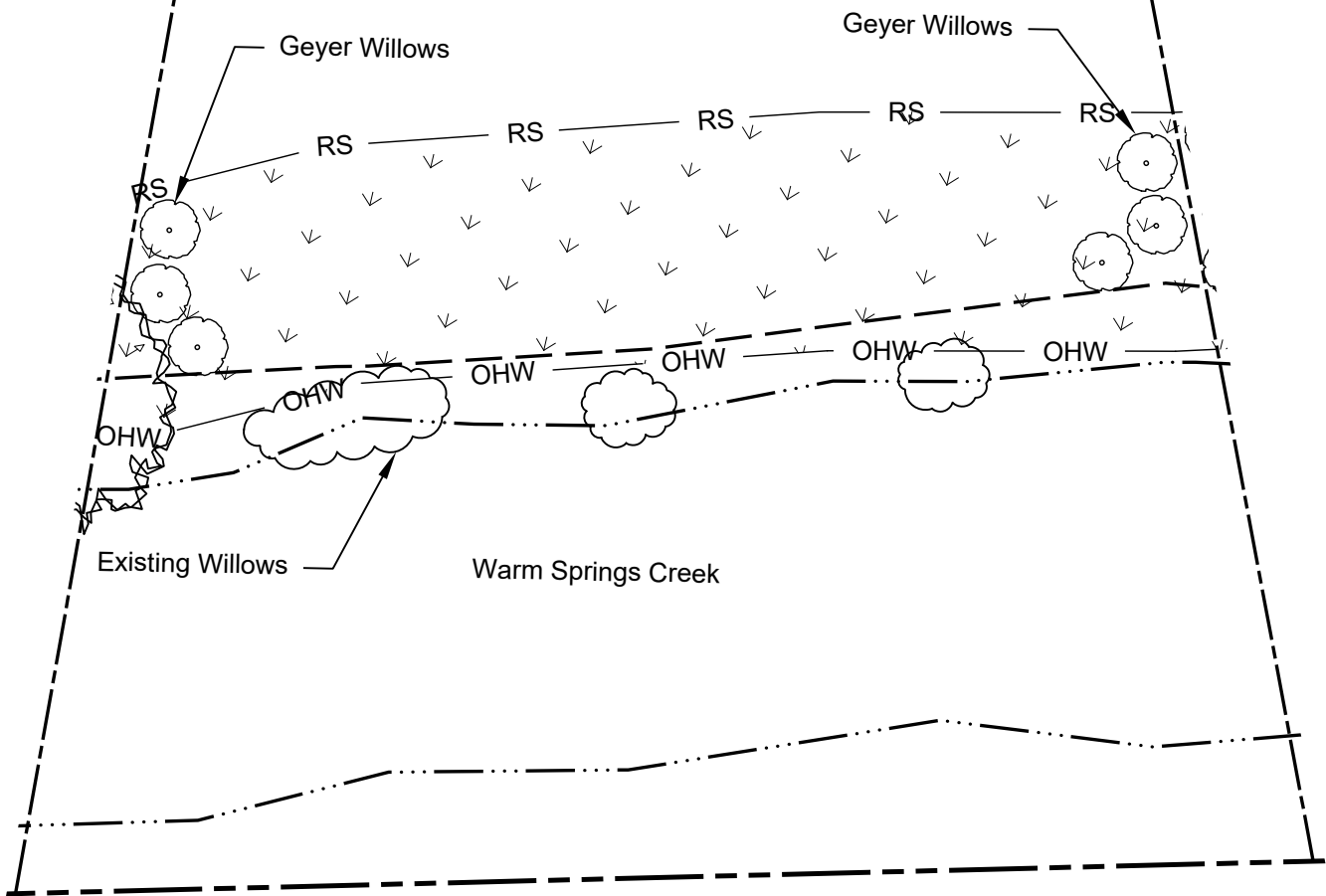


Warm Springs Ranch

Lot - 11

12







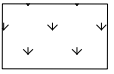
Plan Legend	
	Lot Line
	25' Riparian Setback
	Top Of Bank
	Ordinary High Water Mark
	Edge of Mean High Water
	Riparian Shrub (6)
	Riparian Grasses -See Sheet L2

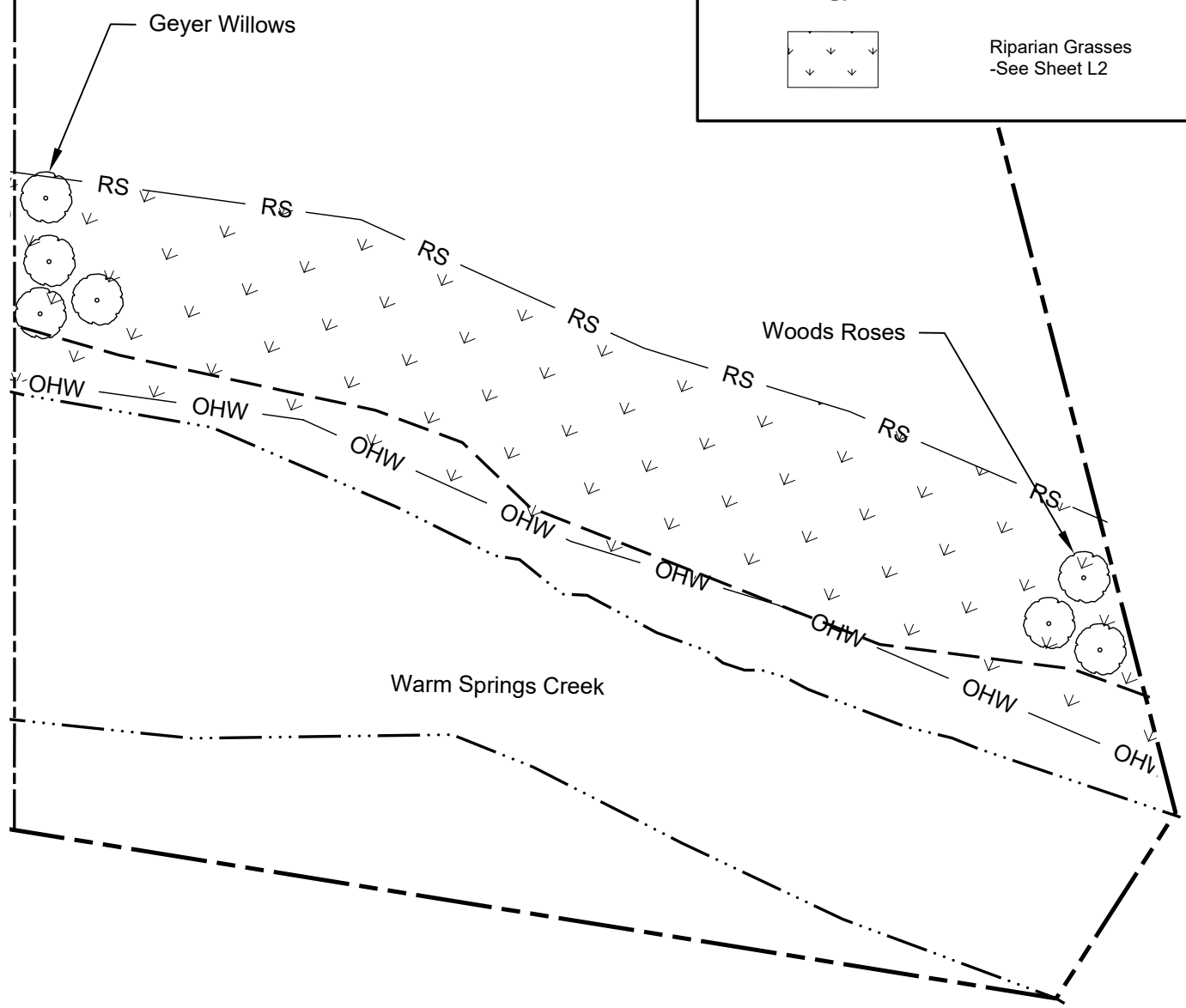


Warm Springs Ranch

Lot - 12

13

Plan Legend	
	Lot Line
	25' Riparian Setback
	Top Of Bank
	Ordinary High Water Mark
	Edge of Mean High Water
	Riparian Shrub (7)
	Riparian Grasses -See Sheet L2



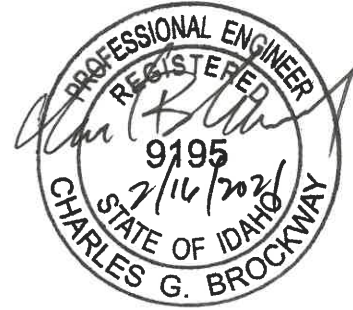
Warm Springs Ranch

Lot - 13

Attachment D



Technical Memo



To: Kurt Eggers, Eggers Associates
From: Charles G. Brockway, P.E.
Cc:
Date: February 16, 2021
Re: Warm Springs Ranch – Analysis of Floodplain Fill for LOMR-F and City of Ketchum Development Permit

A. Overview

In conjunction with the Warm Springs Ranch residential development adjacent to Warm Springs Creek, it is proposed to place fill within an effective floodplain established by FEMA and regulated by the City of Ketchum. The fill will take place within two discrete areas: 1) the lower area, related to placement of a private roadway and associated utilities, and 2) the upper area, related to backfilling an obsolete irrigation diversion. No fill will be placed in the floodway.

Each of these areas was analyzed to calculate the volume of fill below the established, effective base flood elevations (FEMA, 2010). The analysis is necessary for both the City of Ketchum's subdivision process and associated Floodplain Development Permit, and for a contemplated Letter of Map Amendment Based on Fill (LOMR-F) to be filed with FEMA after preliminary plat approval. The City of Ketchum also requires that compensatory storage be provided by excavating somewhere else in the floodplain so that no net loss of floodplain volume occurs during the 100-year event.

B. Lower Area

The floodplain of Warm Springs Creek is mostly confined within the channel banks in this reach; however, an area of shallow inundation occurs east of the channel. A roadway embankment and associated utilities will be placed through the east fringe of this area as shown on Drawing 2. This area has BFEs ranging from 5818.7 feet to 5821.0 feet. Based on the grading plan provided by Benchmark Associates, the general engineering firm for the project, it was verified that the finished top of roadway elevation will be above the BFE everywhere. Volume of fill below the BFEs was calculated by interpolating the effective BFEs from the effective FIRM to the nearest 0.25 foot. At each 0.25-foot BFE, the width of fill was determined and the average depth of fill was derived from the 2017 LiDAR topography. Differential volumes were calculated and summed. A small area of backwater above the 5821.0 BFE was added to the volume by assuming an average depth of 0.1 feet (this is an assumption, because the land surface here is mostly above FEMA's BFE of 5821.0) The calculations are shown on the attached spreadsheet. Total fill volume below the effective BFEs for the lower area is 194 cubic yards.

C. Upper Area

This area consists of a legacy irrigation diversion channel that is no longer needed and will be backfilled (Drawing 3). The area is a backwater and not part of the flowing channel, with a BFE of 5826.5 feet. Fill will be placed to bring the finished grade to 5828.0 feet. The volume was determined by finding the areas of topographic contours within the ponded area and summing the differential volumes up to the BFE. The calculations are shown on the attached spreadsheet. Total fill volume below the effective BFEs for the lower area is 85 cubic yards.

D. Compensatory Storage

Though not required by FEMA, the City of Ketchum requires that any water storage volume loss due to fill in the 100-year floodplain be compensated by excavating an equal or greater volume of material somewhere else in the floodplain. The area selected for compensatory storage is across Warm Springs Creek as shown on Drawing 4. The existing ground topography indicates that the area is extremely flat with an elevation of 5822 feet. The land will be excavated to an elevation of 5821 feet over an area of 7,897 square feet as shown. The total volume excavated will be 292 cubic yards, which more than compensates for the 279 cubic yards of storage lost to the fill placement.

Warm Spring Ranch floodplain fill calculation

Lower area - roadway fill

Top of roadway fill is above BFE, find fill below BFEs at 0.25-foot increments

Effective FEMA floodplain delineation and BFEs

Differential volumes calculated using the formula for volume of a frustum

BFE (ft)	Distance (ft)	Avg exist ground elev (ft)	Width (ft)	Cross-section Area (ft ²)	dV (ft ³)	
5818.5	0	5819.3	0	0.0		
5818.75	30	5818.4	36	12.6	126	
5819	60	5818.5	9	4.5	246	
5819.25	92	5818	7	8.8	208	
5819.5	124	5818.7	29	23.2	493	
5819.75	155	5818.5	46	57.5	1211	
5820	188	5819.4	35	21.0	1246	
5820.25	208	5819.8	45	20.2	412	
5820.5	228	5820.1	49	19.6	398	
5820.75	248	5820.4	52	18.2	378	
5821	268	5820.7	54	16.2	344	
Backwater area 1832 sf x 0.1' depth					183	
Total volume					5246	ft ³
					194	cy

Warm Spring Ranch floodplain fill calculation

Upper area - fill old ditch headgate area

Area is a backwater at average WSE 5826.5, determine volume below level plane

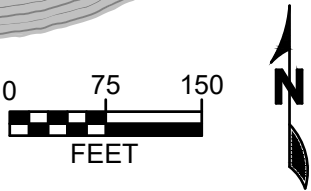
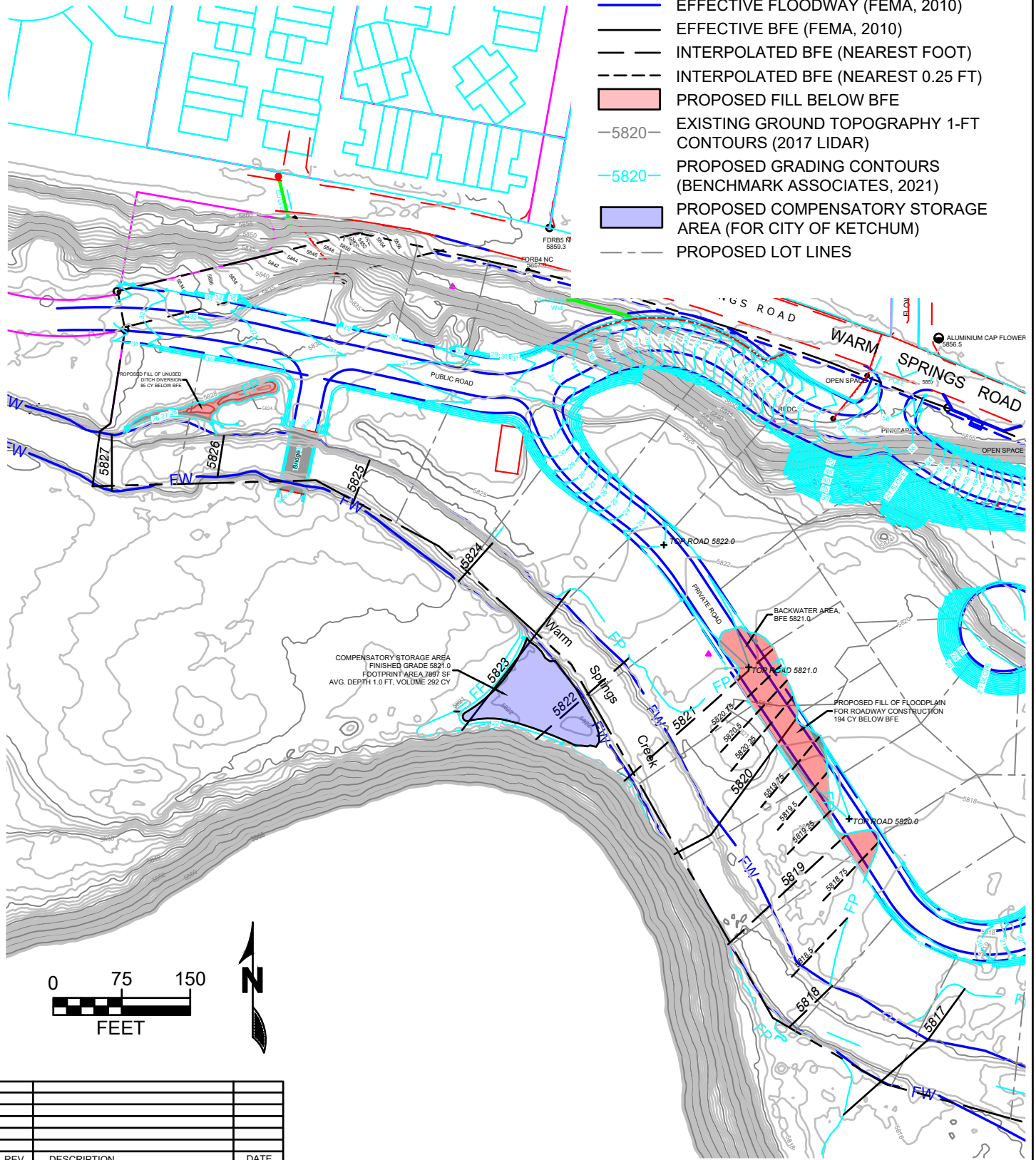
Effective FEMA floodplain delineation and BFEs

Differential volumes calculated using the formula for volume of a frustum

Elev (ft)	Ground topo area (ft ²)	dV (ft ³)	
5824	52.8		
5824.5	232	66	
5825	663	215	
5826	1677	1131	
5826.5	1892	892	
	Total volume	2304	ft ³
		85.3	cy

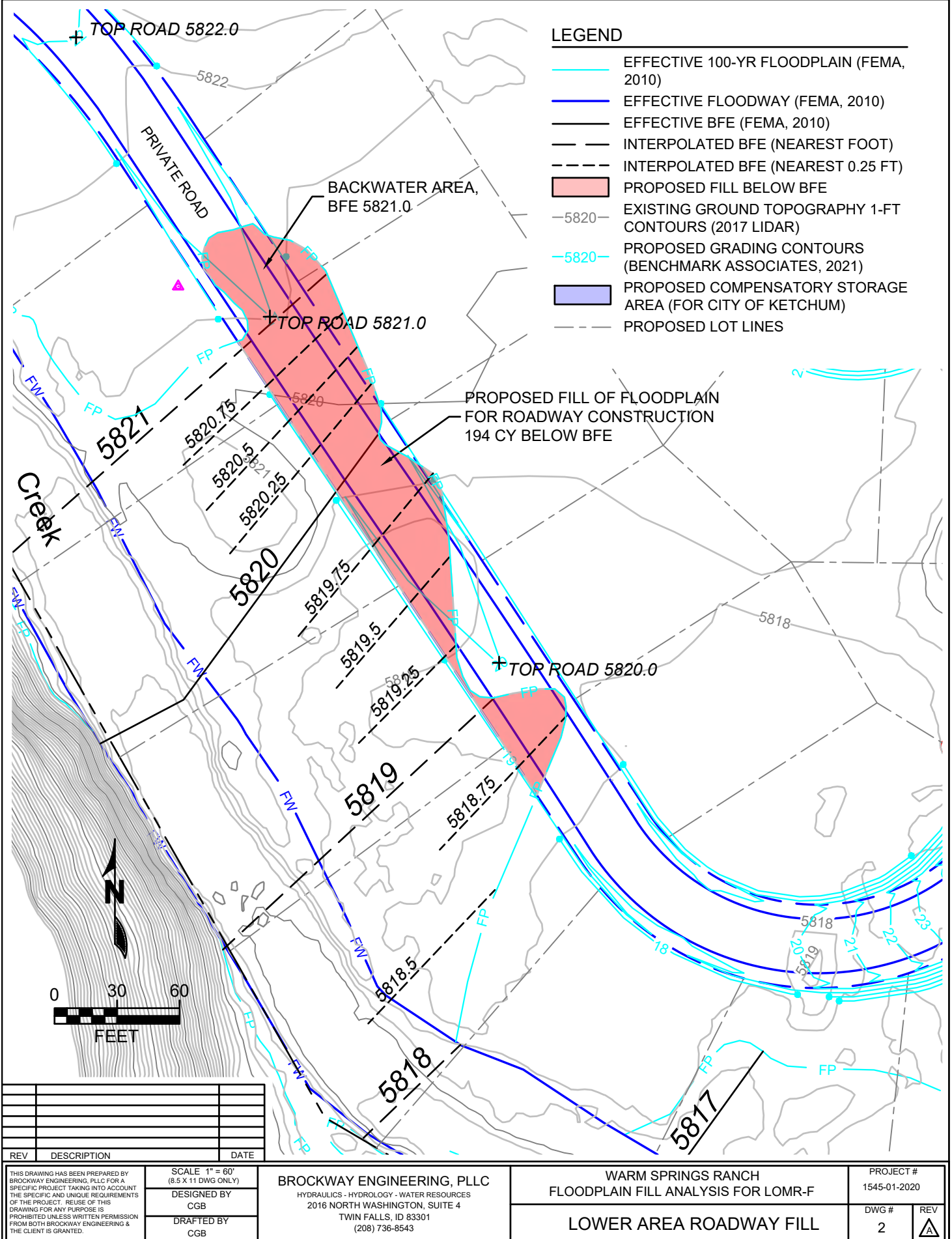
LEGEND

- EFFECTIVE 100-YR FLOODPLAIN (FEMA, 2010)
- EFFECTIVE FLOODWAY (FEMA, 2010)
- EFFECTIVE BFE (FEMA, 2010)
- - - INTERPOLATED BFE (NEAREST FOOT)
- - - INTERPOLATED BFE (NEAREST 0.25 FT)
- PROPOSED FILL BELOW BFE
- 5820 EXISTING GROUND TOPOGRAPHY 1-FT CONTOURS (2017 LIDAR)
- 5820 PROPOSED GRADING CONTOURS (BENCHMARK ASSOCIATES, 2021)
- PROPOSED COMPENSATORY STORAGE AREA (FOR CITY OF KETCHUM)
- - - PROPOSED LOT LINES



REV	DESCRIPTION	DATE

THIS DRAWING HAS BEEN PREPARED BY BROCKWAY ENGINEERING, PLLC FOR A SPECIFIC PROJECT TAKING INTO ACCOUNT THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH BROCKWAY ENGINEERING & THE CLIENT IS GRANTED.	SCALE 1" = 150' (8.5 X 11 DWG ONLY) DESIGNED BY CGB DRAFTED BY CGB	BROCKWAY ENGINEERING, PLLC HYDRAULICS - HYDROLOGY - WATER RESOURCES 2016 NORTH WASHINGTON, SUITE 4 TWIN FALLS, ID 83301 (208) 736-8543	WARM SPRINGS RANCH FLOODPLAIN FILL ANALYSIS FOR LOMR-F OVERVIEW MAP	PROJECT # 1545-01-2020 DWG # 1 REV A
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LEGEND

- EFFECTIVE 100-YR FLOODPLAIN (FEMA, 2010)
- EFFECTIVE FLOODWAY (FEMA, 2010)
- EFFECTIVE BFE (FEMA, 2010)
- - - INTERPOLATED BFE (NEAREST FOOT)
- - - INTERPOLATED BFE (NEAREST 0.25 FT)
- PROPOSED FILL BELOW BFE
- 5820- EXISTING GROUND TOPOGRAPHY 1-FT CONTOURS (2017 LIDAR)
- 5820- PROPOSED GRADING CONTOURS (BENCHMARK ASSOCIATES, 2021)
- PROPOSED COMPENSATORY STORAGE AREA (FOR CITY OF KETCHUM)
- - - PROPOSED LOT LINES

PROPOSED FILL OF FLOODPLAIN FOR ROADWAY CONSTRUCTION
194 CY BELOW BFE

BACKWATER AREA, BFE 5821.0

TOP ROAD 5822.0

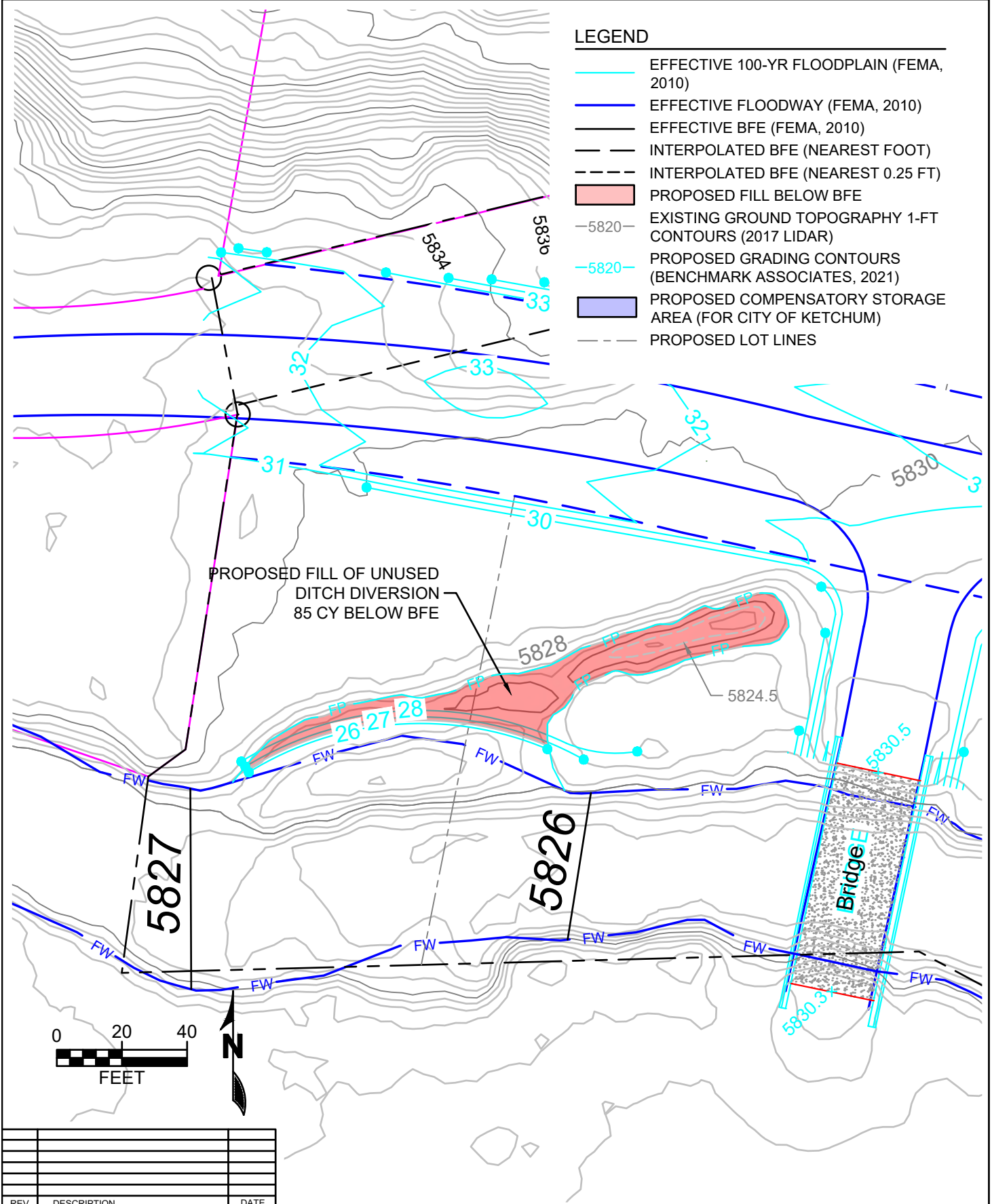
TOP ROAD 5821.0

TOP ROAD 5820.0



REV	DESCRIPTION	DATE

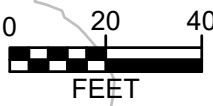
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LEGEND

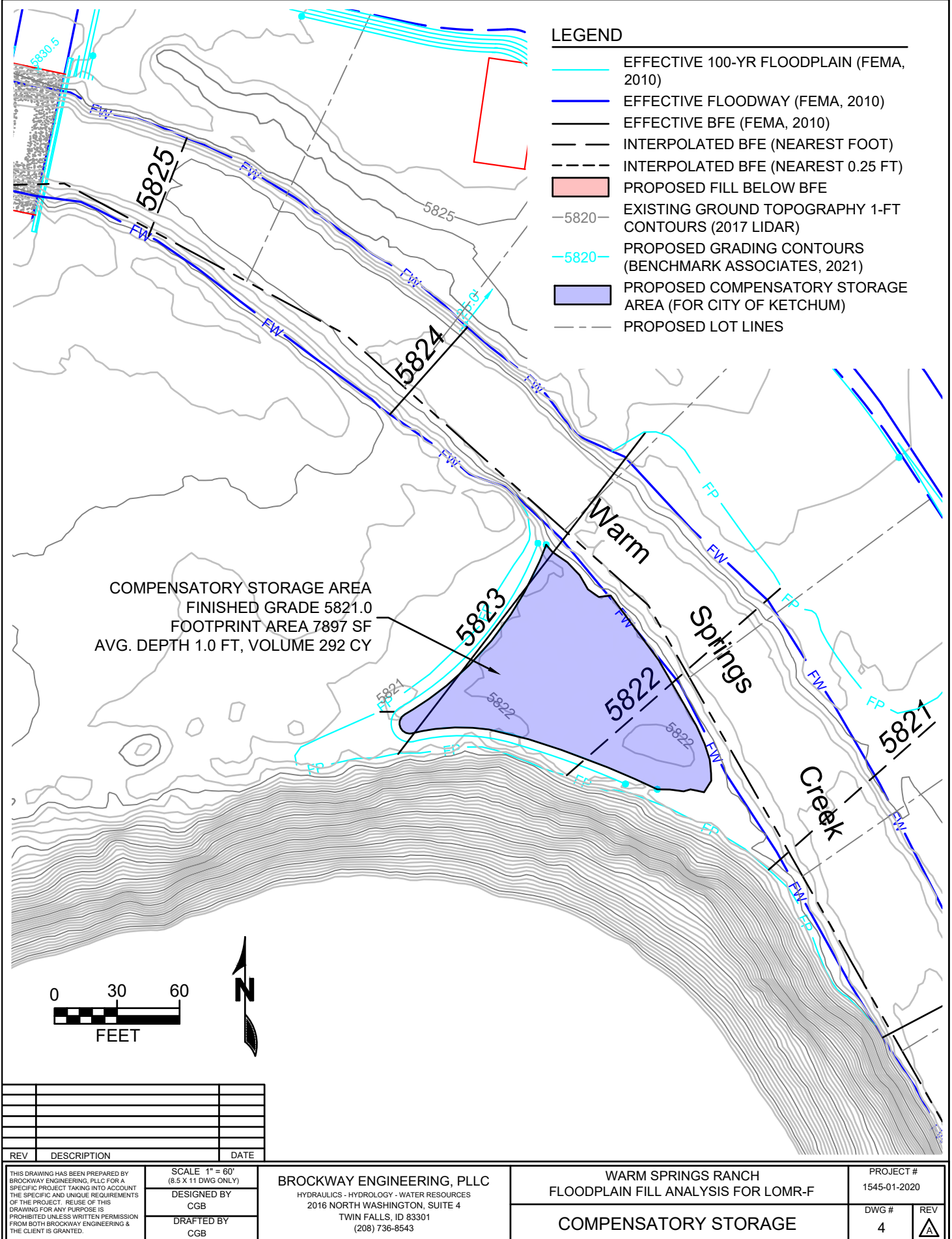
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- EFFECTIVE FLOODWAY (FEMA, 2010)
- EFFECTIVE BFE (FEMA, 2010)
- - - INTERPOLATED BFE (NEAREST FOOT)
- - - INTERPOLATED BFE (NEAREST 0.25 FT)
- PROPOSED FILL BELOW BFE
- EXISTING GROUND TOPOGRAPHY 1-FT CONTOURS (2017 LIDAR)
- PROPOSED GRADING CONTOURS (BENCHMARK ASSOCIATES, 2021)
- PROPOSED COMPENSATORY STORAGE AREA (FOR CITY OF KETCHUM)
- - - PROPOSED LOT LINES

PROPOSED FILL OF UNUSED DITCH DIVERSION
85 CY BELOW BFE



REV	DESCRIPTION	DATE

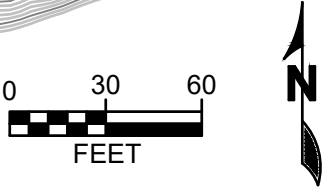
THIS DRAWING HAS BEEN PREPARED BY BROCKWAY ENGINEERING, PLLC FOR A SPECIFIC PROJECT TAKING INTO ACCOUNT THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH BROCKWAY ENGINEERING & THE CLIENT IS GRANTED.	SCALE 1" = 40' (8.5 X 11 DWG ONLY) DESIGNED BY CGB DRAFTED BY CGB	BROCKWAY ENGINEERING, PLLC HYDRAULICS - HYDROLOGY - WATER RESOURCES 2016 NORTH WASHINGTON, SUITE 4 TWIN FALLS, ID 83301 (208) 736-8543	WARM SPRINGS RANCH FLOODPLAIN FILL ANALYSIS FOR LOMR-F UPPER AREA OLD DITCH FILL	PROJECT # 1545-01-2020 DWG # 3 REV A
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LEGEND

- EFFECTIVE 100-YR FLOODPLAIN (FEMA, 2010)
- EFFECTIVE FLOODWAY (FEMA, 2010)
- EFFECTIVE BFE (FEMA, 2010)
- - - INTERPOLATED BFE (NEAREST FOOT)
- - - INTERPOLATED BFE (NEAREST 0.25 FT)
- PROPOSED FILL BELOW BFE
- 5820 EXISTING GROUND TOPOGRAPHY 1-FT CONTOURS (2017 LIDAR)
- 5820 PROPOSED GRADING CONTOURS (BENCHMARK ASSOCIATES, 2021)
- PROPOSED COMPENSATORY STORAGE AREA (FOR CITY OF KETCHUM)
- - - PROPOSED LOT LINES

COMPENSATORY STORAGE AREA
 FINISHED GRADE 5821.0
 FOOTPRINT AREA 7897 SF
 AVG. DEPTH 1.0 FT, VOLUME 292 CY



REV	DESCRIPTION	DATE

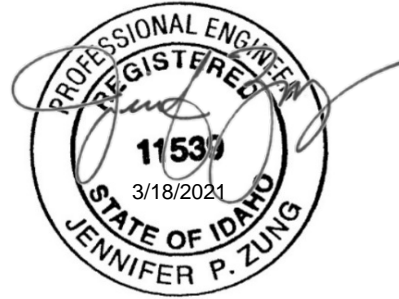
THIS DRAWING HAS BEEN PREPARED BY BROCKWAY ENGINEERING, PLLC FOR A SPECIFIC PROJECT TAKING INTO ACCOUNT THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH BROCKWAY ENGINEERING & THE CLIENT IS GRANTED.	SCALE 1" = 60' (8.5 X 11 DWG ONLY) DESIGNED BY CGB DRAFTED BY CGB	BROCKWAY ENGINEERING, PLLC HYDRAULICS - HYDROLOGY - WATER RESOURCES 2016 NORTH WASHINGTON, SUITE 4 TWIN FALLS, ID 83301 (208) 736-8543	WARM SPRINGS RANCH FLOODPLAIN FILL ANALYSIS FOR LOMR-F PROJECT # 1545-01-2020 DWG # 4 REV 4
COMPENSATORY STORAGE			

Attachment E



Memo

To: Suzanne Frick, City of Ketchum
From: Jennifer Zung, PE, CFM
Date: 3/18/2021
Re: Warm Springs Ranch Subdivision



Per your request, I have reviewed the “Warm Springs Ranch – Analysis of Effect of Floodplain Fill for LOMR-F on Flood Elevations” technical memo by Brockway Engineering dated March 10, 2021. I also reviewed the Warm Springs Ranch plans and preliminary plat dated February 11, 2021 and the technical memo by Brockway Engineering dated February 16, 2021 titled, “Warm Springs Ranch – Analysis of Effect of Floodplain Fill for LOMR-F and City of Ketchum Floodplain Development Permit” with respect to City of Ketchum municipal code Chapter 17.88, Article 1. Flood Damage Prevention and 44 CFR 60.3 – Flood plain management criteria for flood prone areas.

1. I concur with the flood elevation analysis that the proposed fill, which is in areas that are modeled as ineffective flow areas, will not cause any increase in the base flood elevations.
2. The compensatory storage requirements should be based on either the effective or the preliminary BFE, whichever is higher. Request to use the higher BFE is based on 44 CFR subparagraph 60.3(a)(3) and (a)(4) that states the community has the right to request any and all data necessary to make the determination that the proposed development would be reasonably safe from flooding. So, the City can, and should, require that the more conservative draft data be the basis for any permits. Please verify that the volume of fill is based on the higher of either the effective or preliminary BFE data.
3. The compensatory storage proposed is located at preliminary cross section E, which has a BFE of 5821.50'. The proposed storage is between elevations 5821' and 5822'. However, only the amount of storage located below the BFE will be activated. Please verify that adequate compensatory storage is being provided that is located below both the preliminary and effective BFEs.

4. The City of Ketchum municipal code Chapter 17.88.040. C.1. states that “new residential structures and residential substantial improvements are prohibited in the floodway.” Plan sheet L2.2. – Block 1 – Building Envelopes shows building envelopes for lots 8, 9, 10, 11, and 12 that encroach into the draft floodway. As stated above and reiterated by FEMA in a March 4, 2021 email, the City can, and should, require the more conservative data be used as the basis for any permits. Thus, I would recommend that the plat be amended so that there are no building envelopes located in either the effective or preliminary floodway.

5. City of Ketchum municipal code Chapter 17.88.040.E.10. states “compensatory storage shall be required for any fill placed within the floodplain. An [*sic*] LOMA-F shall be obtained prior to placement of any additional fill in the floodplain.” Since a LOMA-F is not an actual FEMA map change document, I believe the intent of this section of the code is to require a CLOMR-F prior to placement of any additional fill in the floodplain. A LOMR-F would be appropriate after the fill is placed. I would recommend that the City require a CLOMR-F (Conditional Letter of Map Revision based on Fill) prior to issuing the Floodplain Development Permit. The applicant can then file a LOMR-F after the grading work is completed.

END OF DOCUMENT

Attachment F



Technical Memo

To: Kurt Eggers, Eggers Associates
From: Charles G. Brockway, P.E.
Cc:
Date: March 31, 2021
Re: Warm Springs Ranch – Analysis of Floodplain Fill and Compensatory Storage using FEMA Draft 2020 Maps



This memo is an update to the memo dated February 16, 2021, in which the floodplain fill volume and compensatory volumes were calculated based on the effective flood insurance rate maps issued by FEMA with an effective date of 2010. The City of Ketchum has requested the same analysis using the draft maps circulated by FEMA in 2020. It must be noted that FEMA has provided these as “draft” products as a courtesy for review by communities and consultants. They are unpublished, not the effective products, and do not represent FEMA’s legally-adopted maps or analysis that govern the flood insurance program.

The fill calculation procedure is the same as in the February 16 memo. East of the stream, a similar type of inundation occurs, including the same backwater area that cannot exist because FEMA’s calculated base flood elevation is below the land surface. The calculated fill below the BFE in the floodplain is 217 cubic yards.

West of the stream, the proposed compensatory flood area is not shown on the draft map as an existing floodplain, as it is on the effective maps. Therefore, in this area, excavation would be done to create “new” floodplain based on the draft maps. The bottom elevation would be 5820.4 feet with the grading contours shown on the attached map. The volume below the average BFE of 5021.4 feet at that location is 226 cubic yards.

Warm Spring Ranch floodplain fill calculation

Lower area - roadway fill

Top of roadway fill is above BFE, find fill below BFEs at approximately 0.5-foot increments

Draft FEMA 2020 floodplain delineation and BFEs - not effective, not the legal floodplain

Differential volumes calculated using the formula for volume of a frustum

BFE (ft)	Distance (ft)	Avg exist ground elev (ft)	Width (ft)	Cross-section Area (ft ²)	dV (ft ³)
5817	0	5817.3	0	0.0	
5817.8	49	5817.8	33	0.0	0
5818.4	121	5818	40	16.0	384
5818.9	174	5817.9	40	40.0	1436
5819.4	230	5818.7	40	28.0	1894
5819.6	253	5819.7	25	0.0	215
5819.6	384	5821.3	28	0.0	0
Backwater area 3434 sf x 0.1' depth (assume this even though ground is higher than BFE)					343
Total volume					4272 ft ³
					158 cy

Warm Spring Ranch floodplain fill calculation

Upper area - fill old ditch headgate area

Area is a backwater at average WSE 5826.1, determine volume below level plane

Draft FEMA 2020 floodplain delineation and BFEs - not effective, not the legal floodplain

Differential volumes calculated using the formula for volume of a frustum

Elev (ft)	Ground topo area (ft2)	dV (ft3)	
5824	52.8		
5824.5	232	66	
5825	663	215	
5826	1677	1131	
5826.1	1825	175	
	Total volume	1587	ft3
		58.8	cy

Warm Spring Ranch Compensatory Storage Volume Calculation

Differential volumes calculated using the formula for volume of a frustum

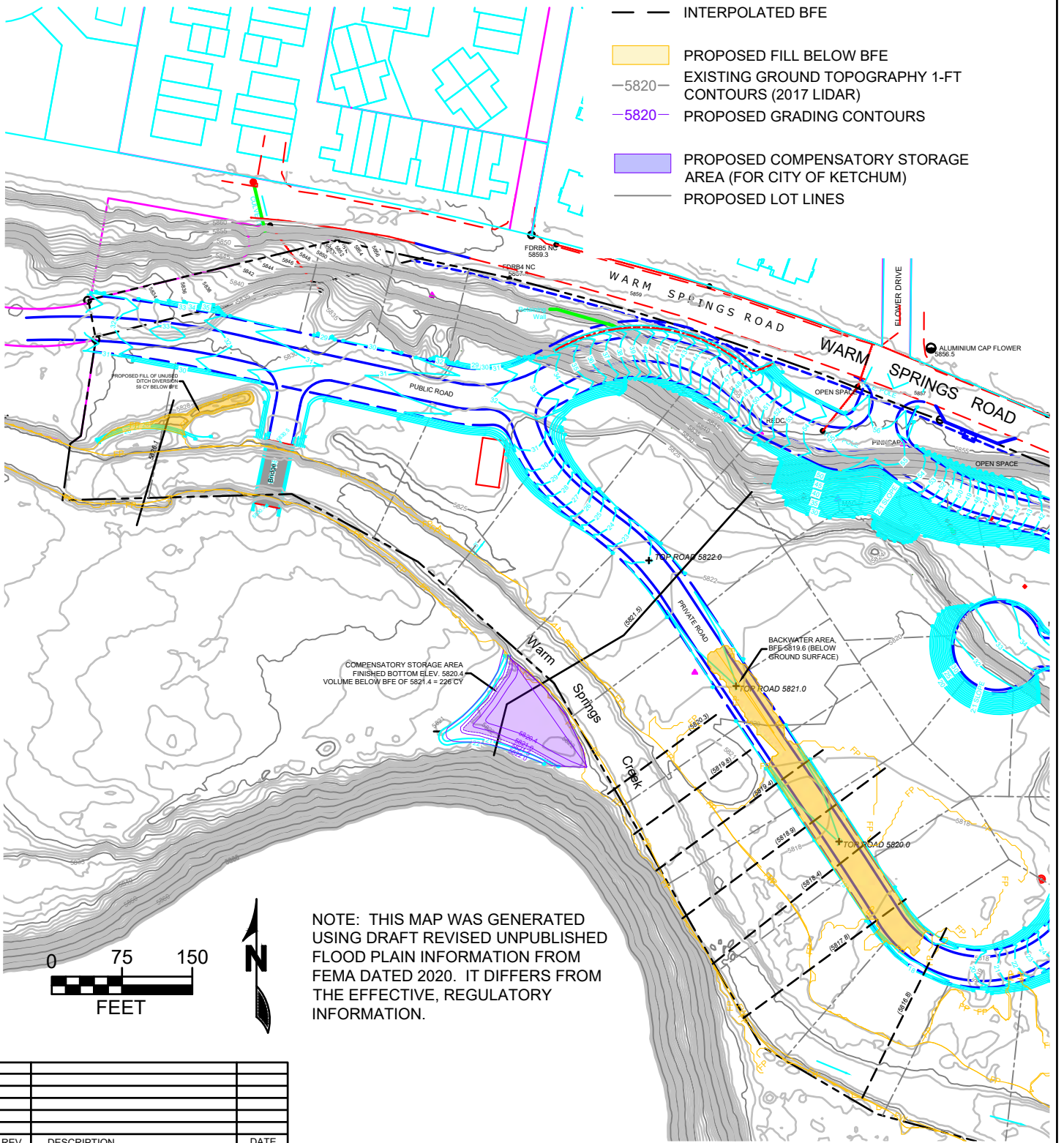
Elev (ft)	Ground topo area (ft ²)	dV (ft ³)
5820.4	4909	
5821.0	6311	3357
5821.4	7409	2741
5821.5	7684	755
5822.0	9079	4186
5822.1	9358	922

Total volume below 5821.4 feet (draft BFE) 226 cu. Yd.

Total volume below 5822.1 feet (effective BFE) 443 cu. Yd.

LEGEND

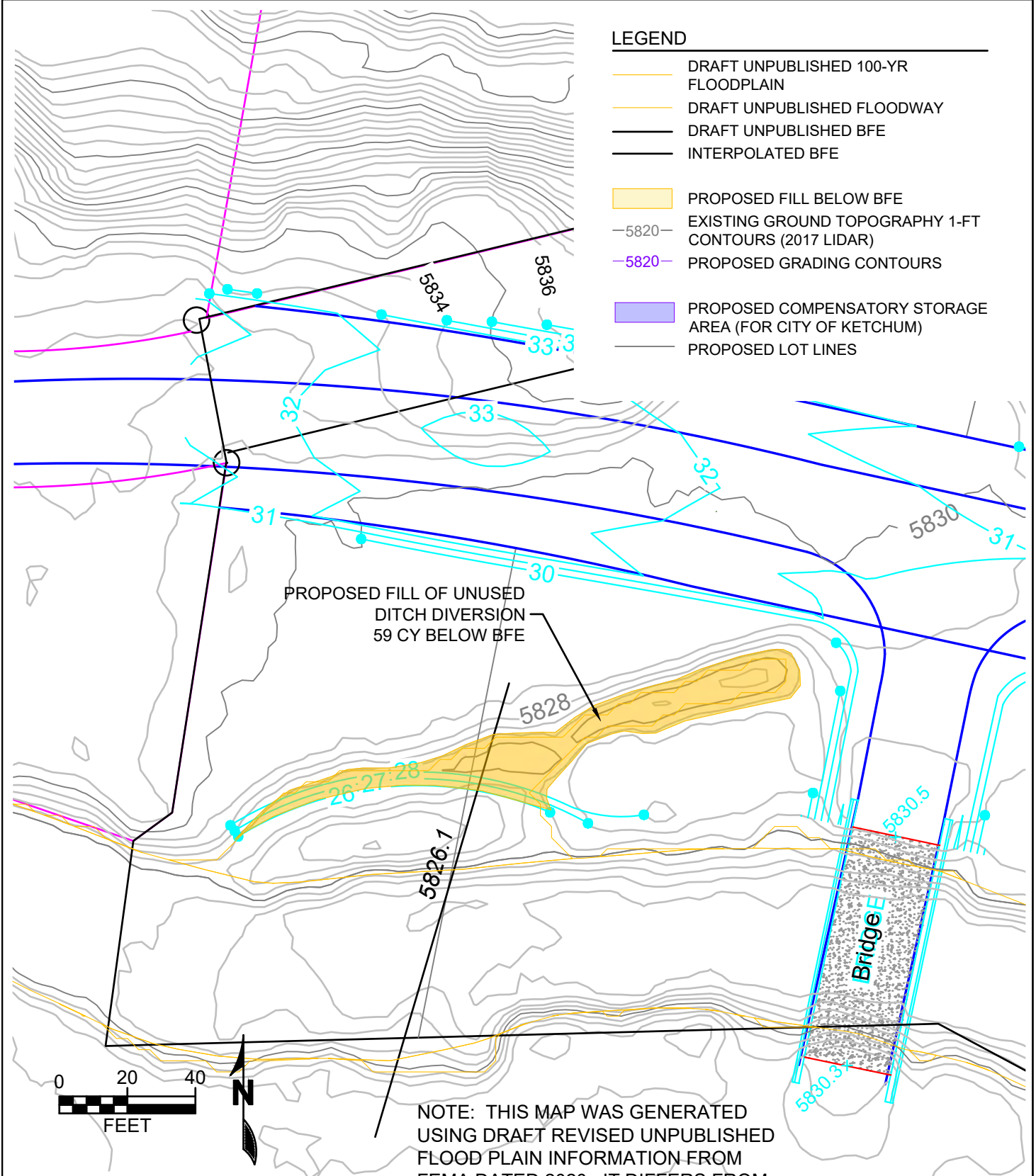
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- DRAFT UNPUBLISHED FLOODWAY
- DRAFT UNPUBLISHED BFE
- - - INTERPOLATED BFE
- PROPOSED FILL BELOW BFE
- -5820- EXISTING GROUND TOPOGRAPHY 1-FT CONTOURS (2017 LIDAR)
- -5820- PROPOSED GRADING CONTOURS
- PROPOSED COMPENSATORY STORAGE AREA (FOR CITY OF KETCHUM)
- - - PROPOSED LOT LINES



NOTE: THIS MAP WAS GENERATED USING DRAFT REVISED UNPUBLISHED FLOOD PLAIN INFORMATION FROM FEMA DATED 2020. IT DIFFERS FROM THE EFFECTIVE, REGULATORY INFORMATION.

REV	DESCRIPTION	DATE

THIS DRAWING HAS BEEN PREPARED BY BROCKWAY ENGINEERING, PLLC FOR A SPECIFIC PROJECT TAKING INTO ACCOUNT THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH BROCKWAY ENGINEERING & THE CLIENT IS GRANTED.	SCALE 1" = 150' (8.5 X 11 DWG ONLY) DESIGNED BY CGB DRAFTED BY CGB	BROCKWAY ENGINEERING, PLLC HYDRAULICS - HYDROLOGY - WATER RESOURCES 2016 NORTH WASHINGTON, SUITE 4 TWIN FALLS, ID 83301 (208) 736-8543	WARM SPRINGS RANCH FLOODPLAIN FILL ANALYSIS FOR LOMR-F OVERVIEW MAP	PROJECT # 1545-01-2020 DWG # 1 REV A
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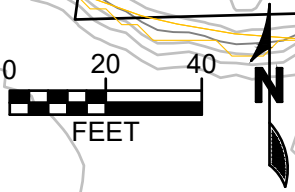


LEGEND

- DRAFT UNPUBLISHED 100-YR FLOODPLAIN
- DRAFT UNPUBLISHED FLOODWAY
- DRAFT UNPUBLISHED BFE
- INTERPOLATED BFE
- PROPOSED FILL BELOW BFE
- 5820 EXISTING GROUND TOPOGRAPHY 1-FT CONTOURS (2017 LIDAR)
- 5820 PROPOSED GRADING CONTOURS
- PROPOSED COMPENSATORY STORAGE AREA (FOR CITY OF KETCHUM)
- PROPOSED LOT LINES

PROPOSED FILL OF UNUSED DITCH DIVERSION
59 CY BELOW BFE

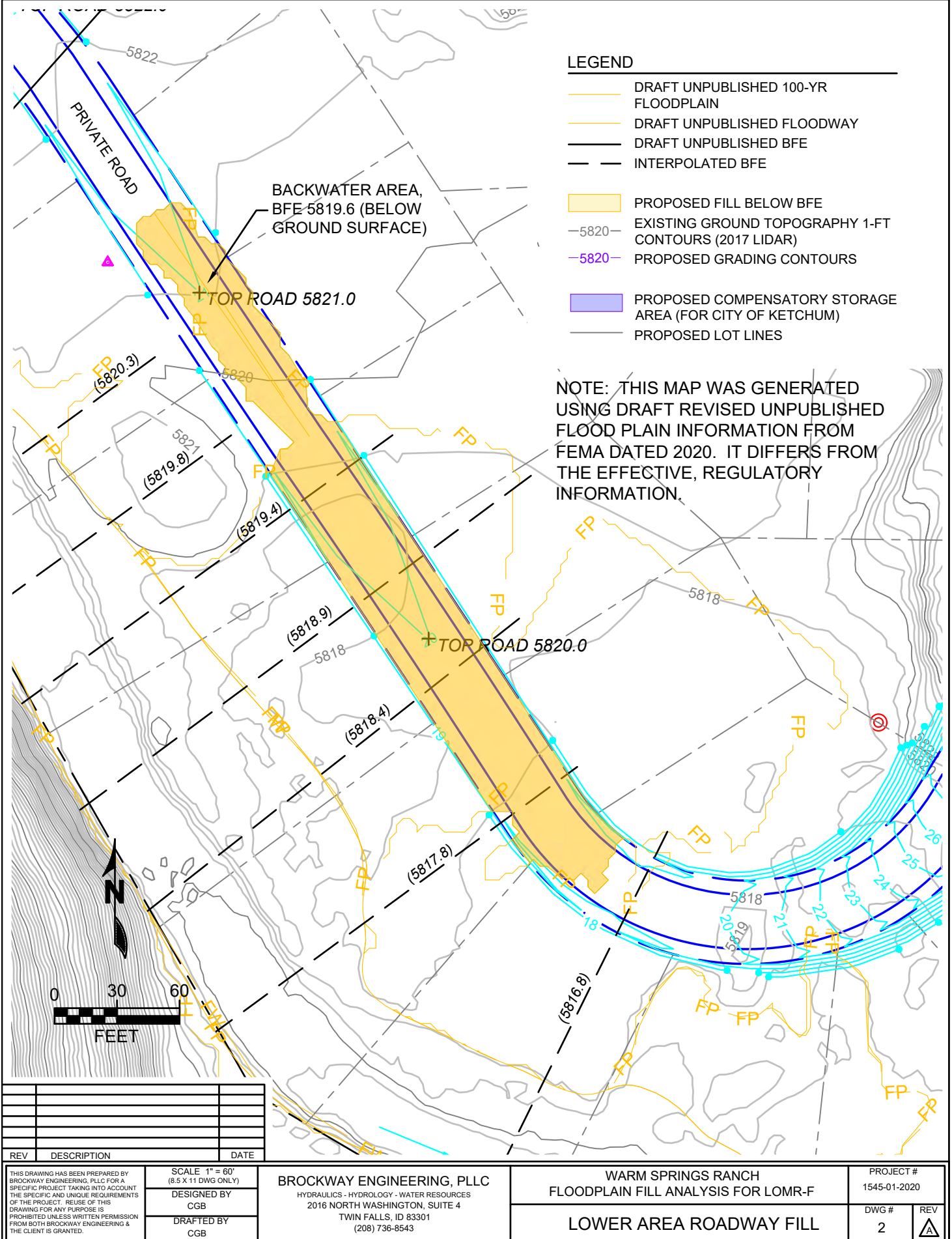
Bridge



NOTE: THIS MAP WAS GENERATED USING DRAFT REVISED UNPUBLISHED FLOOD PLAIN INFORMATION FROM FEMA DATED 2020. IT DIFFERS FROM THE EFFECTIVE, REGULATORY INFORMATION.

REV	DESCRIPTION	DATE

THIS DRAWING HAS BEEN PREPARED BY BROCKWAY ENGINEERING, PLLC FOR A SPECIFIC PROJECT TAKING INTO ACCOUNT THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH BROCKWAY ENGINEERING & THE CLIENT IS GRANTED.	SCALE 1" = 40' (8.5 X 11 DWG ONLY) DESIGNED BY CGB DRAFTED BY CGB	BROCKWAY ENGINEERING, PLLC HYDRAULICS - HYDROLOGY - WATER RESOURCES 2016 NORTH WASHINGTON, SUITE 4 TWIN FALLS, ID 83301 (208) 736-8543	WARM SPRINGS RANCH FLOODPLAIN FILL ANALYSIS FOR LOMR-F		PROJECT # 1545-01-2020
			UPPER AREA OLD DITCH FILL		DWG # 3



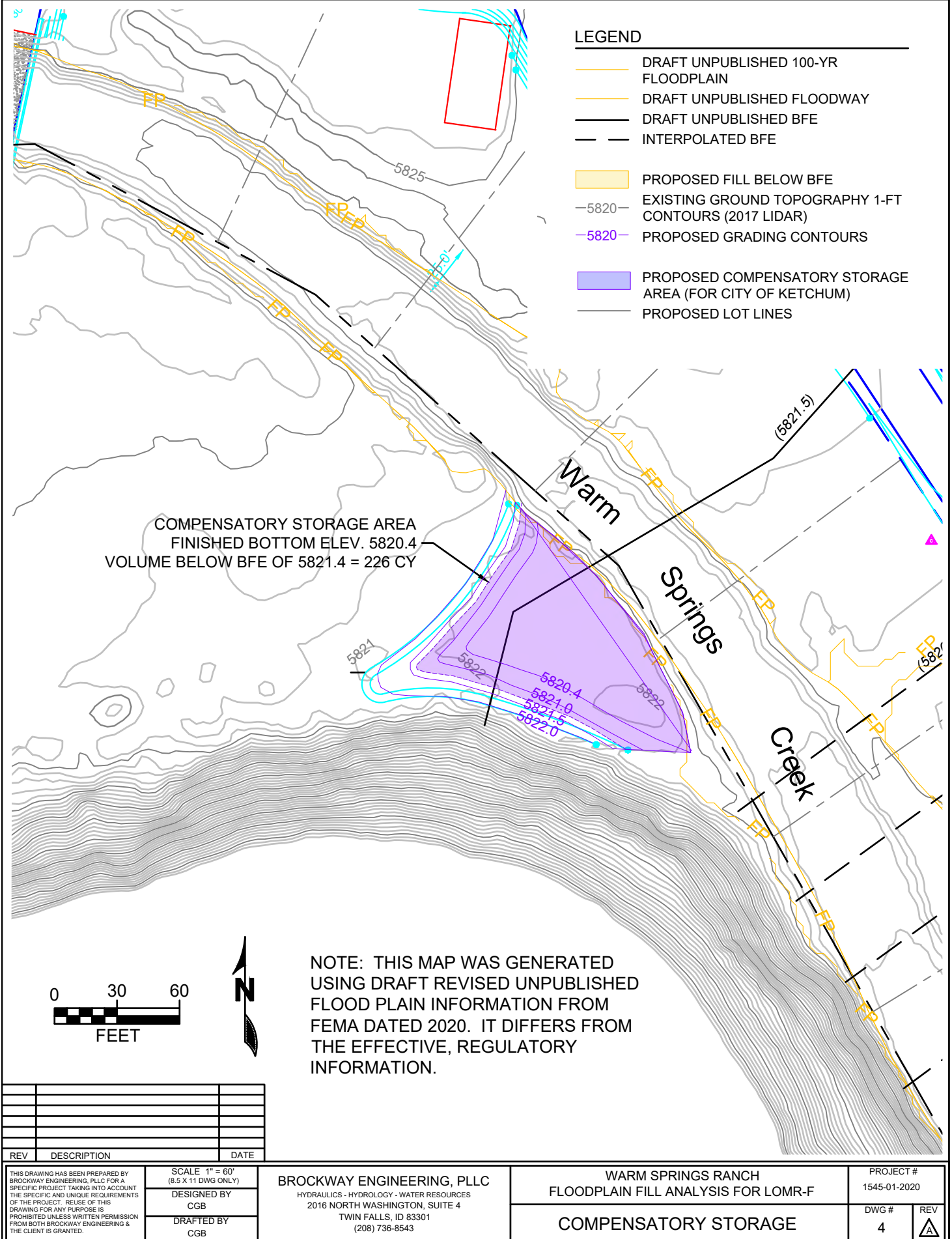
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- DRAFT UNPUBLISHED FLOODWAY
- DRAFT UNPUBLISHED BFE
- - - INTERPOLATED BFE
- PROPOSED FILL BELOW BFE
- 5820- EXISTING GROUND TOPOGRAPHY 1-FT CONTOURS (2017 LIDAR)
- 5820- PROPOSED GRADING CONTOURS
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NOTE: THIS MAP WAS GENERATED USING DRAFT REVISED UNPUBLISHED FLOOD PLAIN INFORMATION FROM FEMA DATED 2020. IT DIFFERS FROM THE EFFECTIVE, REGULATORY INFORMATION.

REV	DESCRIPTION	DATE

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LOWER AREA ROADWAY FILL			DWG # 2	REV A

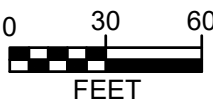


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- DRAFT UNPUBLISHED FLOODWAY
- DRAFT UNPUBLISHED BFE
- - - INTERPOLATED BFE
- PROPOSED FILL BELOW BFE
- -5820- EXISTING GROUND TOPOGRAPHY 1-FT CONTOURS (2017 LIDAR)
- -5820- PROPOSED GRADING CONTOURS
- PROPOSED COMPENSATORY STORAGE AREA (FOR CITY OF KETCHUM)
- PROPOSED LOT LINES

COMPENSATORY STORAGE AREA
 FINISHED BOTTOM ELEV. 5820.4
 VOLUME BELOW BFE OF 5821.4 = 226 CY

NOTE: THIS MAP WAS GENERATED USING DRAFT REVISED UNPUBLISHED FLOOD PLAIN INFORMATION FROM FEMA DATED 2020. IT DIFFERS FROM THE EFFECTIVE, REGULATORY INFORMATION.



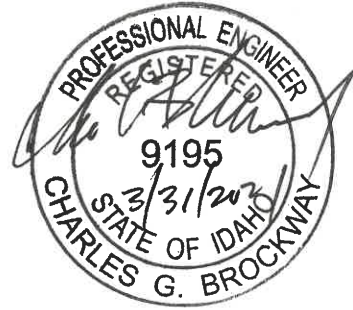
REV	DESCRIPTION	DATE

THIS DRAWING HAS BEEN PREPARED BY BROCKWAY ENGINEERING, PLLC FOR A SPECIFIC PROJECT TAKING INTO ACCOUNT THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH BROCKWAY ENGINEERING & THE CLIENT IS GRANTED.	SCALE 1" = 60' (8.5 X 11 DWG ONLY) DESIGNED BY CGB DRAFTED BY CGB	BROCKWAY ENGINEERING, PLLC HYDRAULICS - HYDROLOGY - WATER RESOURCES 2016 NORTH WASHINGTON, SUITE 4 TWIN FALLS, ID 83301 (208) 736-8543	WARM SPRINGS RANCH FLOODPLAIN FILL ANALYSIS FOR LOMR-F COMPENSATORY STORAGE	PROJECT # 1545-01-2020 DWG # 4 REV 1 A
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Technical Memo

To: Kurt Eggers, Eggers Associates
From: Charles G. Brockway, P.E.
Cc:
Date: March 31, 2021
Re: Warm Springs Ranch – Analysis of Floodplain Fill and Compensatory Storage, Comparison of Effective and Draft 2020 Maps



This memo is intended to address items #2 and #3 on a memo from Jennifer Zung dated March 18, 2021.

In general, the draft map base flood elevations are 0.3 to 0.7 feet lower than those in the effective maps. This means the volume of fill in the floodplain from the roadway embankment and the ditch reclamation is lower, but deeper excavation is needed in the compensatory storage area to achieve the net volume.

Relative to Zung's item #2, the effective BFEs results in 279 cubic yards of fill as compared to 217 cubic yards for the draft maps.

Relative to Zung's item #3, the storage area will be based on the draft maps. With this grading, the additional storage volume created will be 226 cubic yards relative to the draft BFE and 443 cubic yards relative to the effective BFE.

This analysis demonstrates that the compensatory storage is adequate if the calculations are based on either the effective or draft maps.

Attachment G



City of Ketchum
Planning & Building

OFFICIAL USE ONLY	
File Number:	P 21-002
Date Received:	12/18/20
By:	M Puddicombe
Fee Paid:	\$6,300.00
Approved Date:	
Denied Date:	
By:	

Floodplain Management Overlay Application

OWNER INFORMATION			
Project Name: Warm Springs Ranch - Block 1			
Owner Name: Brennan Holdings No 300 LLC			
Mailing Address: PO Box 1991, Sun Valley, ID 83353			
Phone:			
Email: brennanholdings@gmail.com			
PROJECT INFORMATION			
Architect/Representative: Benchmark Associates, PA			
Phone: 208-726-9512			
Mailing Address: PO Box 733, Ketchum			
Email: garth@bma5b.com			
Engineer of Record: Benchmark Associates			
Engineer Email: phoebe@bma5b.com			
Legal Land Description: WARM SPRINGS RANCH RESORT PUD, BLOCK 1			
Project Address: 1803 Warm Springs Road			
Lot Area: 13.72 acres			
Zoning District: Tourist (T)			
Anticipated Use: Residential			
Value of Construction: \$ N/A			
TYPE OF CONSTRUCTION			
<input type="checkbox"/> New	<input type="checkbox"/> Remodel	<input type="checkbox"/> Addition	<input type="checkbox"/> Other, please explain:
<input type="checkbox"/> Waterways Design Review	<input checked="" type="checkbox"/> Floodplain Development Road Construction	<input type="checkbox"/> Stream Alteration	
TOTAL FLOOR AREA N/A			
Proposed		Existing	
Basement:			
1 st Floor:			
2 nd Floor:			
3 rd Floor:			
Decks:			
Mezzanine:			
Total:			
Building Coverage:	SF	%	Curb Cut: SF %
PROPOSED SETBACKS N/A			
Front:	Side:	Side:	Rear:
ADDITIONAL INFORMATION			
Building Height: N/A		Parking Spaces Provided: N/A	
Will Fill or Excavation Be Required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
If Yes, Amount in Cubic Yards Fill: 397 CY Excavation: 51 CY			
Will Existing Trees or Vegetation Be Removed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (see riparian restoration plan)			

Applicant agrees in the event of a dispute concerning the interpretation or enforcement of the Floodplain Management Overlay Application, in which the City of Ketchum is the prevailing party, to pay reasonable attorney fees, including attorney fees on appeal, and expenses of the City of Ketchum. I, the undersigned, certify that all information submitted with and upon this application form is true and accurate to the best of my knowledge and belief.

Signature of Owner/Representative

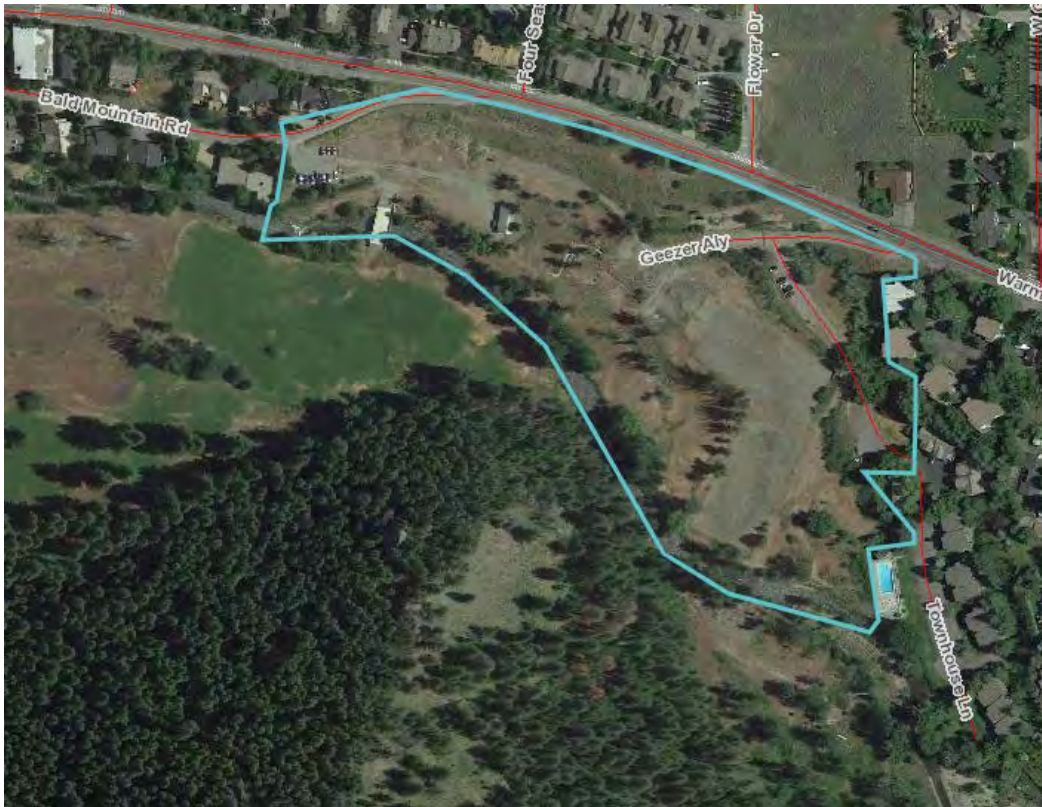
Date

WARM SPRINGS RANCH

FLOODPLAIN EVALUATION CRITERIA NARRATIVE & PROJECT DESCRIPTION

SUBMITTED FOR: Brennan Holdings, LLC

SUBMITTED BY: Benchmark Associates, P.A
Project Engineer



SEPTEMBER 2020
DECEMBER 2020 - UPDATE

Project Description

A section of the proposed Mountain Creek Drive in the proposed Warm Springs Ranch Subdivision, Block 1 is within FEMA designated 100-year floodplain. Approximately three hundred feet (300') of the proposed private roadway will be in the floodplain as indicated on the preliminary plat. The preliminary plat application is submitted concurrently with this Floodplain Management Overlay Application.

We are applying for a permit to construct the identified section of roadway within the floodplain. We are proposing to keep the new road elevations at the existing elevations to the greatest extent possible. This will allow the road to flood during a 100-year event and will not adversely impact the function of the floodplain. However, there are small depressions in the existing grade that will require a small amount of fill to evenly grade the road. The impact of this fill will be mitigated by the borrow ditch on both sides of the proposed road which will allow for the conveyance of floodwaters.

Additionally, the former irrigation ditch within proposed Lot 1 and Lot 2 created a "finger" of floodplain just upstream of the existing bridge. This floodplain area consists of 0.05842 acres or 2,545 square feet with an approximate depth of twelve inches. We are also proposing to fill this abandoned irrigation ditch. Because it is a manmade ditch, this area is not part of the natural floodplain function of Warm Springs Creek. No reclamation of this former ditch will take place inside of the twenty-five foot (25') Riparian Setback.

Evaluation Criteria Narrative

The Floodplain Management Overlay Application requires the applicant to address the following standards of evaluation to obtain a permit. Our analysis follows:

1. Preservation or restoration of the inherent natural characteristics of the river and creeks and floodplain areas. Development does not alter river channel.

The development of Mountain Creek Drive does not include any work within the river channel and will not alter the channel in any way. The base flood elevation (BFE) in the subject area is 5820' which coincides with the existing elevation at 5820' and a few pockets sitting at 5819'. The new road is proposed at these same elevations and will not result in any change to the natural characteristics or function of the floodplain or the river channel.

The reclamation of the former irrigation ditch will not alter the river channel. Additionally, it will act to restore a more natural river flow and floodplain function by eliminating a manmade feature. The BFE in this area is 5826' with the existing, natural grade at the top of the ditch ranging from 5828' to 5829', well above the BFE.

2. Preservation of riparian vegetation and wildlife habitat, if any, along the stream bank and within the required minimum twenty-five-foot (25') setback or riparian zone. No construction activities, encroachment or other disturbance (mowing, pruning, or any other landscape activity) into the

twenty-five-foot (25') riparian zone, except for restoration, shall be allowed at any time without written city approval per the terms of this chapter.

The proposed road lies entirely outside the 25' riparian zone. In addition, there is no riparian vegetation in the proposed construction area.

Likewise, the reclamation of the abandoned irrigation ditch will take place outside the twenty-five foot (25') Riparian Setback.

3. No development, other than development by the city of Ketchum or development required for emergency access, shall occur within the twenty-five foot (25') riparian zone with the exception of approved stream stabilization work. The planning and zoning commission may approve access to property where no other primary access is available. Private pathways and staircases shall not lead into or through the riparian zone unless deemed necessary by the planning and zoning commission.

No development is proposed in either permit area within the 25' riparian zone.

4. A landscape plan and time frame shall be provided to restore any vegetation within the twenty-five foot (25') riparian zone that is degraded, not natural or which does not promote bank stability.

A riparian restoration plan is submitted with this permit application and the subdivision application to be heard concurrently.

5. New or replacement planting and vegetation shall include plantings that are low growing and have dense root systems for the purpose of stabilizing stream banks and repairing damage previously done to riparian vegetation. Examples of such plantings include: red osier dogwood, common chokecherry, serviceberry, elderberry, river birch, skunk bush sumac, Bebb's willow, Drummond's willow, little wild rose, gooseberry, and honeysuckle.

Consistent with number 4 above, a riparian restoration plan is submitted with this permit application and the subdivision application to be heard concurrently.

6. Landscaping and driveway plans to accommodate the function of the floodplain to allow for sheet flooding. Floodwater carrying capacity is not diminished by the proposal. Surface drainage is controlled and shall not adversely impact adjacent properties including driveways drained away from paved roadways. Culvert(s) under driveways may be required. Landscaping berms shall be designed to not dam or otherwise obstruct floodwaters or divert same onto roads or other public pathways.

The scope of work in this application does not include the construction of driveways. The road to be constructed is designed to remain at existing grade. The fill in this area is necessary to eliminate a small depression that does not substantially contribute to the floodplain function (no riparian vegetation, etc.). A net 6 CY will be placed in this area and will not diminish the overall carrying capacity of the floodplain. The grading and drainage plan that is part of the subdivision application submitted concurrently with this application details the drainage plan for this area.

The reclamation of the irrigation ditch will allow for sheet flooding in the event that flood waters exceed the BFE and will not diminish the carrying capacity of the natural floodplain. The proposed enhancement and restoration of riparian vegetation within the riparian zone will improve the current floodplain function in this area.

7. Impacts of the development on aquatic life, recreation, or water quality upstream, downstream or across the stream are not adverse.

There will be no adverse impact on aquatic life, recreation or water quality as a result of approving this application.

8. Building setback in excess of the minimum required along waterways is encouraged. An additional ten foot (10') building setback is encouraged to provide for yards, decks and patios outside the twenty-five foot (25') riparian zone.

No buildings are proposed in this application.

9. The top of the lowest floor of a building located in the one percent (1%) annual chance floodplain shall be a minimum of twenty-four inches (24") above the base flood elevation of the subject property.

No buildings are proposed in this application.

10. The backfill used around the foundation in the floodplain shall provide a reasonable transition to existing grade but shall not be used to fill the parcel to any greater extent. Compensatory storage shall be required for any fill placed within the floodplain. An LOMA-F shall be obtained prior to placement of any additional fill in the floodplain.

No buildings are proposed in this application.

11. All new buildings shall be constructed on foundations that are approved by a licensed professional engineer.

No buildings are proposed in this application.

12. Driveways shall comply with effective street standards; access for emergency vehicles has been adequately provided for.

No driveways are proposed in this application.

13. Landscaping or revegetation shall conceal cuts and fills required for driveways and other elements of the development.

Cuts and fills associated with this application are shown in Exhibit A. The net fill to construct the road is 6 CY and will be primarily concealed by the roadway itself. For non-roadway areas, the road

section (Private Road Section B) submitted with the subdivision application details a seven foot (7') landscaping strip on each side of the roadway that will conceal any cuts or fill.

The net fill associated with the reclamation of the abandoned irrigation ditch is 279 CY (including fill above the 5826' BFE noted in #1) and will be done in a way that restores the pre-ditch natural grade. There will be no obvious fill to conceal.

Numbers 14 - 16 are required only for Stream Alteration permits.

17. Where development is proposed that impacts any wetland, first priority shall be to move development from the wetland area. Mitigation strategies shall be proposed at time of application that replace the impacted wetland area with a comparable amount and/or quality of new wetland area or riparian habitat improvement.

There are no wetland, or potential wetland, areas impacted in the scope of this application.

Numbers 18 - 20 are required only for Stream Alteration permits.

EXHIBIT A

