CARBON COUNTY

Planning Office

P.O. Box 466, Red Lodge, MT 59068

Main: (406) 446-1694 Fax: (406) 446-2640

FINAL PLAT APPLICATION – STAFF REPORT

Date: October 6, 2022

To: Carbon County Board of County Commissioners

From: Forrest J. Mandeville, AICP - Contract Planner

RE: Canyon Ranches Estates Subdivision, Final Plat

REQUIRED COMMISSION ACTION: Review, and action to approve or deny the final plat application.

RECOMMENDATION: Approval

RECOMMENDED MOTION: Having reviewed and considered the application materials, project memorandum, and all of the information presented, I hereby move to **approve** of Canyon Ranches Estates Subdivision, final plat.

Project/Application Summary:

Interstate Engineering, on behalf of Christopher and Jeffrey Houden, has submitted a final plat application for Canyon Ranches Estates Subdivision, an Amended Plat of Lot 26, Canyon Ranches Subdivision. This is a two-lot subsequent minor subdivision on an 88.58-acre tract.

The subject property is located on Madison Lane, a private road, which accesses on to Palisade Campground Rd approximately 1,500 feet south of this subdivision and one mile west of the intersection of Palisade Campground Rd and Ski Run Rd. The property is legally described as Lot 26, Canyon Ranches Subdivision, Plat 1921 AM, located in Section 32, Township 7 South, Range 20 East, P.M.M., Carbon County, Montana.

Procedural History

The Board of County Commissioners reviewed this item at their meeting of May 12, 2022, and subsequently approved the preliminary plat subject to the following conditions:

1. Filing of the final plat shall be subject to the review and approval by the Montana Department of Environmental Quality for water, wastewater, solid waste, and stormwater drainage provisions for Lot 1. (Sections III-B-11.C.ii and V-A-11, 12,13, and 14). **Complete. See EQ # 22-1951. This approval will be filed with the plat.**

- 2. Filing of the final plat shall be subject to the determination by the Carbon County Sanitarian that there is an adequate water source and at least one area for a septic system and replacement area for Lot 2. (Section III-B-11.c.ii). Complete per September 13, 2022, letter from Barbara Krizek, REHS/RS.
- 3. Building envelopes shall be shown on the final plat for each lot (Section V-A-5). **Building** envelopes are shown on the final plat.
- 4. A notation shall be provided on the final plat that legal and physical access is provided per 76-3-608(3)(d), MCA. (Section III-B-11.g.v). **The required notation is shown on the final plat.**
- 5. The final plat shall show the location of all existing and required utility easements. (Section V-A-15.a). **Utility easement are shown on the final plat.**
- 6. The final plat must include the following statement: "The undersigned hereby grants unto each and every person, firm or corporation, whether public or private, providing or offering to provide telephone, telegraph, electric, power, gas, cable television, water or sewer service to the public, the right to the joint use of an easement for the construction, maintenance, repair and removal of the lines and other facilities, in, over, under and across each area designated on this plat as "Utility Easement" to have and hold forever." (Section V-A-15.h). The required statement appears on the final plat.
- 7. The bond required by the Weed District shall be paid to the satisfaction of the Weed District. (Section V-A-17). The bond has been satisfied per the September 22, 2022, letter from Brian Ostwald, Weed District Coordinator. The inspection fees have also been paid per the provided fee receipt.
- 8. Prior to final plat, the dry hydrant on Wilderness Lane shall be tested, at the subdividers' expense, and evidence provided to the Red Lodge Fire Department and County that it is functioning properly. If the hydrant is not functioning properly, it shall be repaired or replaced in order to be functional. (Section V-A-21). The final plat application contained an email from Red Lodge Fire Rescue Assistant Chief Jon Trapp dated September 14, 2022, that indicted the dry hydrant was tested and in proper working condition.
- 9. The cul-de-sac and turnaround size should be approved by the fire department prior to final plat. (Section V-A-21). The final plat application contained an email from Red Lodge Fire Rescue Chief Tom Kuntz dated May 19, 2022, indicating approval of the cul-de-sac size.
- 10. The final plat shall contain a statement noting the subdivision is in a high fire hazard area and has a single point of ingress/egress. (Section V-A-21). **The required statement is provided on the final plat.**
- 11. Covenants should be prepared that detail building restrictions per fire department requirements and recommendations and filed with the final plat. (Section V-A-21). The subdivision is subject to the Canyon Ranches Subdivision covenants which detail building restrictions, as required.
- 12. The final plat shall contain a statement noting that the subdivision is subject to the Amended and Restated Declaration of Covenants, Conditions, Restriction and Reciprocal Easements for Canyon Ranches Subdivision filed under Document Number 343196 and subsequent amendments thereto. (Section V-A-21). The required statement appears on the final plat.
- 13. The final plat shall be in substantial compliance with the plans and documents submitted as part of the preliminary plat application. (Section III-C-5.b). **The final plat application is in substantial compliance with the preliminary plat application.**

- 14. The final plat shall be submitted within two years of the date of preliminary plat approval, or an extension(s) to the approval period obtained. (Section III-B-12). The final plat application has been submitted within two years of the date of preliminary plat approval.
- 15. The final plat shall be prepared and reviewed in accordance with Section III-C of the Carbon County Subdivision Regulations and the Uniform Standards for Final Subdivision Plats (24.183.1107, ARM). The plat appears to comply with the Subdivision Regulations and the Administrative Rules. The County's examining land surveyor has reviewed the plat and his comments have been addressed.

Planning Staff Recommendation:

Having reviewed the materials submitted, staff has determined that the conditions of approval have been met and recommends approval of the final plat application.

PLAT NO. ___PRELIMINARY CERTIFICATE OF DEDICATION AND LEGAL DESCRIPTION: We, the undersigned landowners do hereby certify that we have caused to be surveyed, subdivided and platted into lots, as shown by the plat hereto annexed, a tract of land located in NW1/4 and SW1/4 of Section 32, T.7S., R.20E., Carbon County, Montana, the perimeter boundary of which is described as follows: CANYON RANCHES ESTATES SUBDIVISION That part of the NW1/4 and SW1/4 of Section 32, T.7S., R.20E., Carbon County, Montana, described as Lot 26 of the "CANYON RANCHES" SUBDIVISION", Plat No. 1921 AM, containing 88.58 acres, more or less, and all according to the attached plat. Subject to easements and/or rights-of-way of record, apparent on the ground, and/or reserved per this survey. LOCATED IN LOT 26 OF PLAT NO. 1921 AM, CANYON RANCHES SUBDIVISION LYING IN THE NW1/4 AND SW1/4 OF Legal and physical access is provided each lot per MCA 76-3-608(3)(d). SECTION 32, T.7S., R.20E., P.M.M., The above described tract of land is to be known and designated as CANYON RANCHES ESTATES SUBDIVISION. The undersigned CARBON COUNTY, MONTANA hereby grants unto each and every person, firm or corporation, whether public or private, providing or offering to provide telephone, telegraph, electric power, gas, television, water or sewer service to the public, the right to joint use of an easement for the construction, SCALE 1' = 120' maintenance, repair and removal of their lines and other facility, in, over, under and across each area designated on this plat as "utility SURVEYED BY: RED LODGE SURVEYING LLC easement" to have and to hold forever. No land is being dedicated to the public. PO BOX 986 | 606 S GRANT AVE STATE OF MONTANA RED LODGE, MT 59068 County of Carbon **DURING: JANUARY 2022** Christopher A. Houden Jeffrey J. Houden This instrument was acknowledged before me this By: Christopher A. Houden and Jeffrey J. Houden LANDOWNERS: CHRISTOPHER A. HOUDEN AND JEFFREY J. HOUDEN UNPLATTED LANDS OF LOUISE STAPLETON Notary Public - State of Montana (Signature) N89°22'32"E 1328.36 (R&F) LOT 5 TREASURER'S CERTIFICATION: I hereby certify, pursuant to Section 76-3-611(1)(b), MCA, that all real property taxes and special assessments assessed and levied on the land described above have been paid. Treasurer, Carbon County, Montana **CERTIFICATE OF FINAL PLAT APPROVAL:** LOT 6 The County Commission of Carbon County, Montana does hereby certify that it has examined this subdivision plat and having found the same to conform to law, approves it for recording. Commissioner Commissioner Attest - Carbon County Clerk and Recorder Commissioner Dated this____ day of _ LOT 7 **CLERK AND RECORDER INFORMATION: SURVEYOR'S CERTIFICATION:** I, William H. Karas, a Professional Land Surveyor certifies that such survey of Canyon Ranches Subdivision LOT 18 was made in January of 2022; that said survey is true and complete as shown and that the monuments found and set are of the character and occupy the positions shown thereon. Dated this____ day of ___ RED LODGE SURVEYING LLC UN LOT 19 William H. Karas., PLS Montana Reg. Number 13602 LS LOT 9 QUARTER CORNER **IRRIGATION FACILITY EASEMENTS:** LOT 2 - OF SECTIONS 31 & 32 3-1/4" ALUMINUM CAP Nothing herein nor any covenant shall diminish the 78.54 ACRES VIA GLASOE 9103ES unobstructed use and maintenance of the existing water PER RECORD delivery ditches, pipelines, and facilities in the subdivision that are necessary to convey water through the subdivision LOT 10 to land adjacent to or beyond the subdivision boundaries in quantities and in a manner that are consistent with historic and legal rights. **FIRE HAZARD NOTE:** Canyon Ranches Estates Subdivision is located in a high LOT 11 fire hazard area. This subdivision is access by Madison Lane, a single point of ingress and egress. **COVENANTS AND RESTRICTIONS:** This Subdivision is subject to the Amended and Restated Declaration of Covenants, Conditions, Restriction and Reciprocal Easements for Canyon Ranches Subdivision LOT 1 filed under Document No. 343196 and subsequent amendments thereto. FILING WELL AND PUMP CONTROL € 20' WIDE **BUILDING EASEMENT** ACCESS PER PLAT 1921 AM EASEMENT PER PLAT 1921 AM SET NO. 5 REBAR WITH 1-1/4" YELLOW PLASTIC CAP VIA RED LODGE SURVEYING LLC AND UNDERSIGNED PLS FOUND YPC LOT 11 VIA BRATTON 9519LS VIA BRATTON 9519LS FOUND BALD REBAR NO BUILD ZONE FOUND IRON PIPE LOT 12 NO MONUMENT SET OR FOUND PROPOSED — ○H — OVERHEAD POWER LINE € 30' WIDE ACCESS AND BUILDING >UTILITY EASEMENT **ENVELOPE** PER PLAT 1921 AM LOT 13 S89°03'09"E 535.22 R=200.00' A=171.02' CD=165.85'— CB=N36'50'34"W D=48'59'33" **4** UTILITY EASEMENT ALONG TR E **GRIZZLY PEAK** EXISTING OVERHEAD POWER LINE PER PLAT 1921 AM **MOUNTAIN HOMES** SUBDIVISION, 10TH 120'Ø | 60' R FILING **VICINITY MAP** S89°20'03"W 626.16 (R&F) LOT 1 10.04 ACRES LOT 1 LOT 2 PLAT 1921 AM CANYON RANCHES PLAT 1921 AM PROPOSED BUILDING **CANYON RANCHES** SUBDIVISION **ENVELOPE** SUBDIVISION N89°02'35"₩ N89°02'35"\ N89°02'35"W 30.83' 405.25'∂(R&F) 349.17' (R&F) N89°02'35"W 785.25 LOT 23 & WILDERNESS LANE-PLAT 1921 AM CANYON RANCHES LOT 22 SUBDIVISION PLAT 1921 AM **CANYON RANCHES** SUBDIVISION

PN 2891

SCALE: 1"=3000'

CARBON COUNTY

Planning Office

P.O. Box 466, Red Lodge, MT 59068

Main: (406) 446-1694 Fax: (406) 446-2640

PROJECT MEMORANDUM

TO: Carbon County Board of County Commissioners

FROM: Forrest J. Mandeville – Contract Planner

DATE: October 13, 2022

RE: Ferguson Subdivision Preliminary Plat Application—Staff Report and Findings

REQUIRED COMMISSION ACTION: Review, receive public comment, and action to approve, conditionally approve, or deny the proposed preliminary plat.

RECOMMENDATION: Approval

RECOMMENDED MOTION: Having reviewed and considered the application materials, project memorandum, public comments and all of the information presented, I hereby move to **approve** of the Ferguson Subdivision, with the findings included in the project memorandum.

Project/Application Summary:

Red Lodge Surveying, on behalf of Dianna Ferguson, has submitted a preliminary plat and final plat application for a one-lot minor subdivision on a 71.18-acre tract. The property has a covenant restricting the use to agricultural-only, and, if approved, this subdivision will remove that covenant.

The subject property is located on the southeast corner of Detlaf Road and Highway 310, approximately 1.25 miles south of Bridger. The property is legally described as Tract 3 2nd Amended of Certificate of Survey 1545 AG, located in the NE ½ and the NW ¼ of Section 33, Township 6 South, Range 23 East, P.M.M., Carbon County, Montana.

Required County Commission Action:

Under the adopted Carbon County Subdivision Regulations, following a public meeting, the Commission shall approve, conditionally approve, or deny the plat within 35 working days of a determination of sufficiency. Sufficiency was determined on October 12, 2022, so a decision must be reached by November 5, 2022.

This subdivision meets the criteria for expedited review under Section IV-E of the Subdivision Regulations. Under this section, a subdivision is exempt from the preliminary plat process (Planning Board review, conditional approval), and proceeds directly to final plat. To qualify for this expedited process, the following must be met:

a. The division of land is for 1 lot subdivisions that meets the definition of a first minor subdivision from a tract of record:

- b. Legal and Physical access to all lots is provided;
- c. No land in the subdivision will be dedicated to the public use for parks and playgrounds;
- d. The plat has been approved by DEQ or county environmental health when approval is required. When a subdivision requires sanitary restrictions to be lifted the DEQ approval must be submitted with the final plat; and
 - e. No public improvements are required.

Because these criteria are met, the Commission may approve the subdivision without conditions, and the final plat can be filed.

The basis for the Commissioners' decision is whether the proposed subdivision application, the plat, and any additional information authorized by law demonstrates that the proposed subdivision would meet the requirements of the Montana Subdivision and Platting Act and the Carbon County Subdivision regulations.

<u>Subdivision Regulations – Compliance Review/Findings Summary:</u> (Section references are to the Carbon County Subdivision Regulations unless otherwise noted)

a. Relevant evidence relating to the public health, safety, and welfare

A review of the submitted materials does not indicate that the proposed subdivision would, if approved, negatively impact public health and safety.

An individual well and septic/drainfield system is proposed to serve a single living unit. The County Sanitarian has preliminarily approved the subdivision (C.C.# 2022-01), and construction will need to comply with the permit or follow proper procedure to revise the permit.

The property is accessed from Highway 310. The Montana Department of Transportation has permitting authority on this road. Detlaf Road is a private road in an easement on the north side of the property providing access to several parcel to the northeast of the property.

The Sand Creek Canal runs through a small portion of the northwest corner of the property. There are two additional unnamed irrigation ditches that convey water across the property.

b. Summary of Probable Impacts

Except where exempt by state law, all subdivisions must be reviewed for the impact on agriculture, agricultural water user facilities, local services, the natural environment, wildlife, wildlife habitat, and public health and safety.

Effect on agriculture: The site (approximately 71.18 acres) is currently being used for agricultural purposes and has a covenant on the property restricting the use to agriculture-only, though subdivision review and approval will lift the agricultural covenant. Approximately 90% of the property is classified by USDA as either prime farmland if irrigated or farmland of statewide importance. The balance is classified as farmland of local importance, and is where the home site is proposed. Some agricultural land may be lost as a result of this subdivision to make room for a new home and drainfield, though the balance of the property could still be utilized in agriculture.

A document revoking the agricultural covenant has been prepared by the applicant. This document should be signed by the Commission and filed with the final plat.

- Effect on agricultural water user facilities: The Sand Creek Canal runs through a small portion of the northwest corner of the property. There are two additional unnamed irrigation ditches on the property. These ditches are provided easement on the plat and the following statement is shown: "Nothing herein nor any covenant shall diminish the unobstructed use and maintenance of the existing water delivery ditches, pipelines, and facilities in the subdivision that are necessary to convey water through the subdivision to land adjacent or to beyond the subdivision in quantities and in a manner that are consistent with historic and legal rights." (Section V-A-18 of the Carbon County Subdivision Regulations).
- <u>Effect on local services</u>: This subdivision makes an existing agricultural parcel usable for residential purposes. Because of the small scale of the subdivision, and that it is in an area of existing development, the impact on local services is anticipated to be minimal.

The Carbon County Sheriff's office will provide law enforcement services to the subdivision. The applicant submitted information from Sheriff McQuillan indicated the Department has the ability to serve the subdivision. Anticipated response time would be 15-20 minutes.

Highway 310 is owned and maintained by the Montana Department of Transportation, which may require additional permitting for a change from agricultural access to residential access. Detlaf Road is a private road accessing from Highway 310.

The subdivision is within the Bridger Fire District. The developer submitted evidence that they submitted the subdivision to the Department, but no response has been received to date. A Fire Control and Prevention Plan was prepared by the applicant and contains language required defensible space, clear addresses, and Class A or B fire-rated roofing material. This Plan should be filed with the plat.

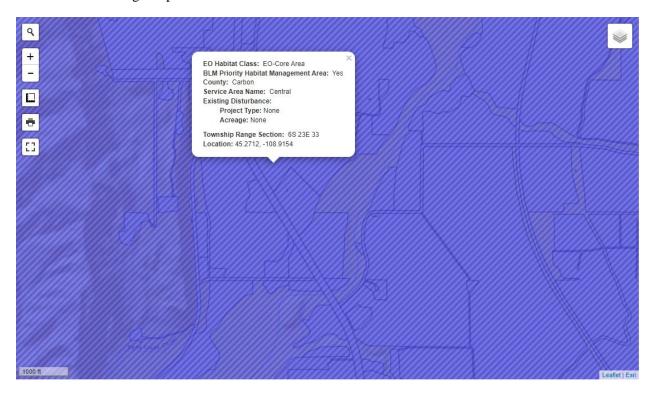
Beartooth Electric Co-op reports the ability to provide service to the subdivision via an existing overhead powerline. Per Section V-A-15 of the Subdivision Regulations, the following language appears on the plat: "The undersigned hereby grants unto each and every person, firm or corporation, whether public or private, providing or offering to provide telephone, telegraph, electric, power, gas, cable television, water or sewer service to the public, the right to the joint use of an easement for the construction, maintenance, repair and removal of the lines and other facilities, in, over, under and across each area designated on this plat as "Utility Easement" to have and hold forever."

• Effect on the natural environment: Impacts to the natural environment are expected to be minimal. An individual well and septic/drainfield system is proposed to serve a single living unit. The County Sanitarian has preliminarily approved the subdivision (C.C.# 2022-01), and construction will need to comply with the permit or follow proper procedure to revise the permit. This approval should be filed with the plat.

The Carbon County Weed District inspected the property on July 6, 2022 and reports that there is some absinth wormwood on the southern edge of the property, but that no bond is required.

The application notes that well water right will be applied for through DNRC.

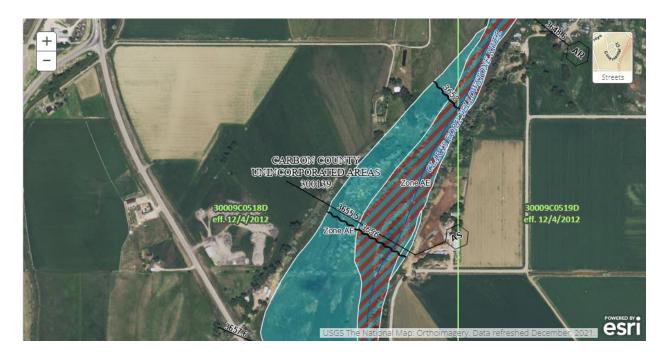
- <u>Effect on wildlife</u>: While wildlife does frequent the area, there are several similar uses on surrounding properties, and the development of this subdivision should not have a significant adverse impact on wildlife.
- Effect on wildlife habitat: Some subdivisions in similar habitat report considerable and
 on-going problems with deer, elk, or antelope damaging landscaped shrubs, flowers, and
 gardens. The property is located in Sage Grouse Core Area according to the Montana
 Sage Grouse Habitat Conservation Program, and the applicant should check with the
 Program prior to construction.



Sage Grouse Habitat Map

• Effect on public health and safety: The Carbon County Sheriff's office provides law enforcement service in the area. The subdivision is located within the Bridger Fire District.

There is floodplain associated with the Clark's Fork River along the southeastern portion of the property. The proposed residential development is located outside of the floodplain. The floodplain is shown on the plat and designated as a no-build zone (Section V-A-6).



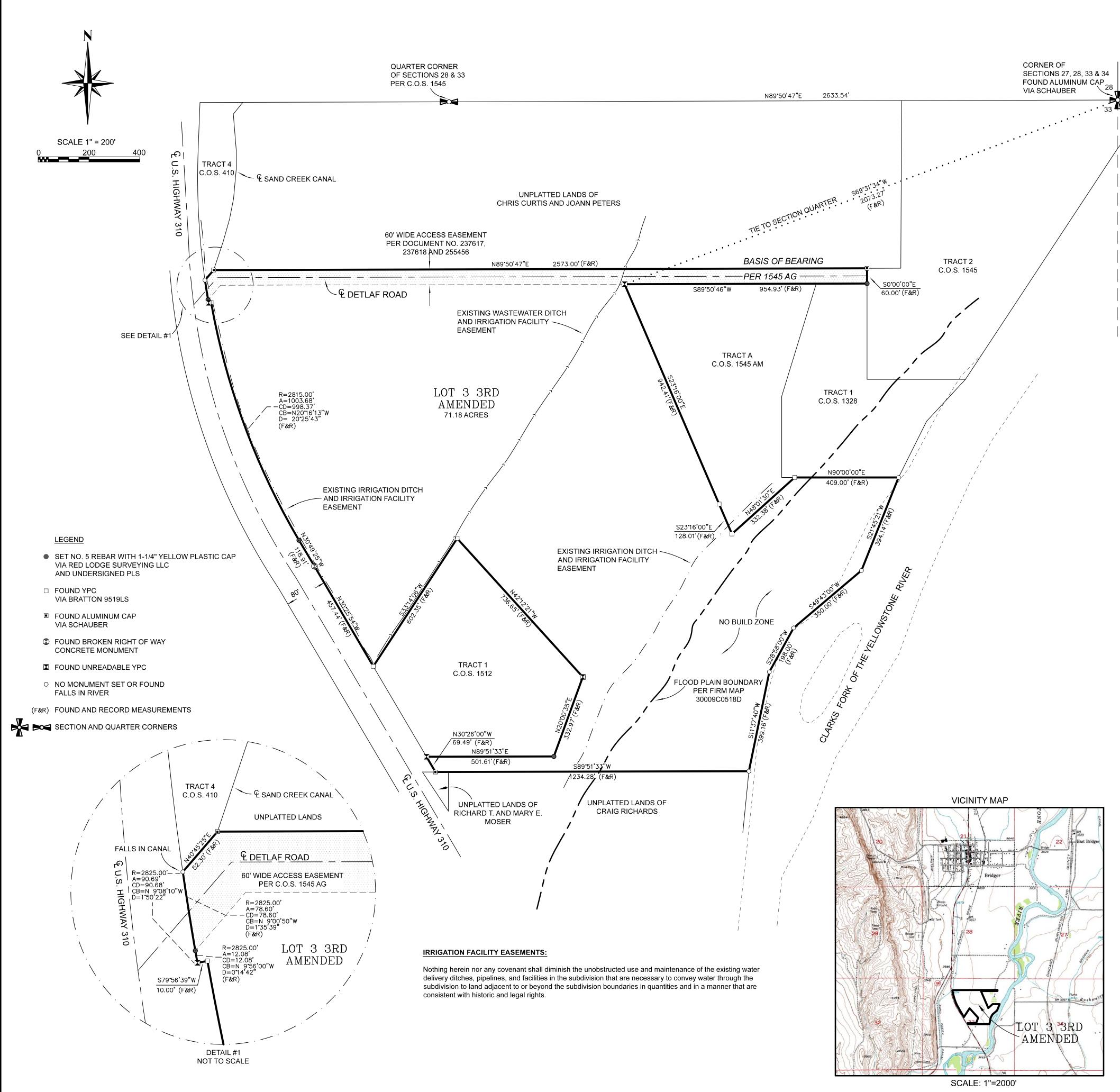
Floodplain in Vicinity of Subdivision

- c. Whether the application and plat conform to the provisions of the following:
 - i. <u>The Montana Subdivision and Platting Act</u>: The Plat has been prepared and processed in accordance with the Montana Subdivision and Platting Act.
 - ii. <u>The Carbon County Subdivision Regulations</u>: The application conforms to the requirements of the adopted Subdivision Regulations.
 - iii. <u>Applicable Zoning Regulations</u>: Prior to construction, a Group 1 Development Permit must be obtained for new home.
 - iv. Other regulations in effect in the area of the proposed subdivision: There are no known regulations in the area with which the subdivision would conflict.
 - v. Whether DEQ has approved the proposed subdivision for proposed subdivision that will create parcels of less than twenty (20) acres: There are no proposed lot of less than 20 acres.
 - vi. Whether the subdivider has demonstrated that there is an adequate water source and at least one are for a septic system and a replacement drainfield for each lot for a proposed subdivision that will create one or more parcels containing twenty (20) acres or more: The proposed lot is over 20 acres, and the applicant has submitted approval from the Carbon County Sanitarian for a well and drainfield.

d. Planning Staff Recommendation:

Planning Staff recommends approval of the Grewell Subdivision final plat. The following should be filed with the subdivision:

- 1. Carbon County Sanitarian Approval (C.C.# 2022-01).
- 2. Fire Control and Prevention Plan.
- 3. Revocation of Agricultural Covenant (needs to be signed by Commissioners)



FERGUSON SUBDIVISION

FIRST MINOR SUBDIVISION LYING IN TRACT 3 2ND AMENDED OF CERTIFICATE OF SURVEY 1545 AG LOCATED IN THE NE1/4 AND THE NW1/4 OF SECTION 33, T.6S., R.23E., P.M.M., CARBON COUNTY, MT

SURVEYED BY: RED LODGE SURVEYING LLC. PO BOX 986 | 606 S. GRANT AVE. RED LODGE, MT 59068

SURVEYED IN: JULY 2022

LANDOWNER: DIANNA M. FERGUSON

CERTIFICATE OF DEDICATION AND LEGAL DESCRIPTION:

I, the undersigned landowner, do hereby certify that I have caused to be surveyed, subdivided and platted into lots, as shown by the plat hereunto included, the perimeter boundary of which is described as Tract 3 2nd Amended of Certificate of Survey No. 1545 AG, on file in the office of the Clerk and Recorder of Carbon County under Document No. 289251. Containing 71.18 acres more or less and all according to the attached plat. Subject to easements and/or rights-of-way of record, apparent on the ground, and/or reserved per this survey.

Legal and physical access is provided each lot per 76-3-608(3)(d) MCA.

The above described tract of land is to be known and designated as "FERGUSON SUBDIVISION", and the lands included in all roadways are hereby granted and donated to the use of the public forever. Unless specifically listed herein, the lands included in all roadways shown dedicated to the public are accepted for public use, but the County accepts no responsibility for maintaining the same. The owners agree that the County has no obligation to maintain the lands included in all roadways shown hereby dedicated to public use. No parkland is being dedicated to the public.

The undersigned hereby grants unto each and every person, firm or corporation, whether public or private, providing or offering to provide telephone, electric power, gas, internet, cable television or other similar utility or service, water or sewer service to the public, the right to the joint use of an easement for the construction, maintenance, repair and removal of their lines and other facilities, in, over, under and across each area designated on this plat as "utility easement" to have and to hold forever.

Dianna M. Ferguson		
TATE OF MONTANA ounty of Carbon		
his instrument was acknowledged before me this / Dianna M. Ferguson	day of	, 2022.
otary Public for the State of Montana		
REASURER'S CERTIFICATION:		
nereby certify, pursuant to Section 76-3-611(1)(b) and levied on the land described above and encong Ferguson Subdivision have been paid:		
ated this day of,	2022.	
reasurer, Carbon County, Montana		
ERTIFICATE OF FINAL PLAT APPROVAL:		
he County commission of Carbon County, Montar ubdivision Plat and having found the same to con edication to public use of any and all lands shown	form to law, approves it, and hereb	y accepts the
ated this day of, 2	022.	
ommissioner	Commissioner	
ommissioner	Attest: Clerk and Recorder Carbon County, Montana	
LERK AND RECORDER INFORMATION:		

SURVEYOR'S CERTIFICATION:

I, William H. Karas, a Professional Land Surveyor, do hereby certify that I have performed the survey shown on the attached plat of Ferguson Subdivision; that such survey was made in July of 2022; that said survey is true and complete as shown and that the monuments found and set are of the character and occupy the positions shown thereon.

Dated this_____ day of ______, 2022.

RED LODGE SURVEYING LLC

By: _____ William H. Karas., PLS Montana Reg. Number 13602 LS

FERGUSON SUBDIVISION

Tract 3 – 3rd AM COS 1545 AG

FIRE CONTROL AND PREVENTION PLAN

OCTOBER 2022

Ferguson Subdivision is currently described as Tract 3 – 3rd Am of COS 1545 AG containing 71.18 acres. This lot is accessed via an existing approach directly from Montana Highway 310, along the west boundary of said Tract 3 – 3rd amended.

Ferguson Subdivision is located in the Bridger Fire District, approximately 2 miles from Bridger. Bridger Fire District will respond to a fire in Ferguson Subdivision. This property is predominately agricultural land along the west side of the Clark's Fork River.

Per Carbon County Montana Wildland Urban Interface map, Ferguson Subdivision does not lie within any fire risk area. The fire risk mitigation requirements as stated in Section V-A-21 of Carbon County Subdivision Regulations require that a 100 foot radius defensible space must exist around any proposed building site. It is recommended any new construction for buildings, driveways and landscaping meet the requirements of the "Fire Protection Guidelines for Wildland Residential Interface Development", 1993 Edition.

Any future conifer plantings on Tract 3 - 3rd Am shall meet the separation distance requirements from driveway and structure per the "Fire Protection Guidelines for Wildland Residential Interface Development, 1993 Edition.

The lot should clearly display the rural address numbers using a sign constructed of non-combustibles, install utilities underground, use a Class A or B fire-rated roofing material and construct a driveway that is a minimum of 16 feet wide.

File No: **B2228785T**

Subdivision Guarantee

Issued by

Old Republic Title Insurance Company

Liability: \$1,000.00 Premium: \$0.00

Effective Date: October 3, 2022, at 05:00 PM

Guarantee No: SG08016208

1. Assured: Red Lodge Surveying, LLC

- 2. The estate or interest in the land described or referred to in this Commitment is **Fee Simple**
- 3. Title to the Fee Simple estate or interest in the land is at the Effective Date vested in:

 Dianna M. Ferguson formerly known as Dianna Richards also known as Dianna M. Richards
- 4. The land referred to in this Commitment is described as follows:

That part of NW1/4 and NE1/4 in Section 33, Township 6 South, Range 23 East, of the Principal Montana Meridian, Carbon County, Montana, described as Tract 3-2nd Amended of Certificate of Survey No. 1545 AG, on file in the office of the Clerk and Recorder of said County, under Document No. 289251.

Countersigned FMT of Billings LLC

y

Authorized Signatory

File No: **B2228785T**

SCHEDULE B - PART 1

Defects, liens encumbrances or other matters affecting title:

1. General and special taxes, and assessments for the year 2022, which are a lien, but not yet computed or payable. Tax Code No. 0014228010.

Including any future or pending SID assessments that may be assessed by the city or county tax authorities.

NOTE: General and special taxes and assessments for the year 2021 which are paid in full in the amount of \$320.71.

- 2. Easement and right of way for a ditch as disclosed by various instruments in the chain of title.
- 3. Easement for railroad, dated August 21, 1909, granted to Yellowstone Park Railroad Company, recorded August 24, 1909, in Book 10 of Deeds, Page 189, under Document No. 8089.
- 4. Easement for a perpetual easement of right of way, dated January 24, 1933, granted to The State of Montana, State Highway Commission of the State of Montana, recorded February 02, 1933, in Book N/A, Page N/A, under Document No. 53053; MISC #3348.
- 5. Easement for telephone and telegraph lines, dated April 14, 1933, granted to the Mountain States Telephone and Telegraph Co., recorded December 16, 1933, in Book 50 of Deeds, Page 273, under Document No. 55397.
- 6. Easement for an electric power line and communication system, dated September 13, 1977, granted to The Montana Power Company, a corporation, recorded September 27, 1977, in Book 98 of Deeds, Page 696, under Document No. 204342.
- 7. Easement for ingress and egress, both personal and for farming purposes, dated March 01, 1983, granted to Wayne L. Vick and Twila R. Vick, recorded November 19, 1985, in Book 112 of Deeds, Page 391, under Document No. 237617.
- 8. Easement for ingress and egress, both personal and for farming purposes, dated March 01, 1983, granted to Rodney N. Sanford and Patricia D. Sanford, recorded November 19, 1985, in Book 112 of Deeds, Page 396, under Document No. 237618.
- 9. All matters, covenants, conditions, restrictions, easements and any rights, interests or claims which may exist by reason thereof, disclosed by the recorded plat of Certificate of Survey No. 1328, filed August 14, 1984, under Document No. 232053, but deleting any covenant, condition or restriction indicating a preference limitation or discrimination based upon race, color, religion, sex, handicap, familial status, or national origin to the extent such covenants or restrictions violate 42 USC 3604 (c).

- 10. Easement for a road contained in Warranty Deed, executed by Jurovich, Inc., a Montana corporation to Harry W. Thormahlen and Betty Thormahlen, recorded January 23, 1986, in Book 112 of Deeds, Page 587, under Document No. 238332.
- 11. Easement for an electric transmission and distribution line or system, dated November 04, 1986, granted to Beartooth Electric Cooperative, Inc., a corporation, recorded October 23, 1987, in Book 114 of Deeds, Page 413, under Document No. 242014.
- 12. Easement for an electric transmission and distribution line or system, dated February 26, 1988, granted to Beartooth Electric Cooperative, Inc., a corporation, recorded March 08, 1988, in Book 117 of Deeds, Page 322, under Document No. 247033.
- 13. All matters, covenants, conditions, restrictions, easements and any rights, interests or claims which may exist by reason thereof, disclosed by the recorded plat of Certificate of Survey No. 1545, filed August 14, 1990, under Document No. 255278, but deleting any covenant, condition or restriction indicating a preference limitation or discrimination based upon race, color, religion, sex, handicap, familial status, or national origin to the extent such covenants or restrictions violate 42 USC 3604 (c).
- 14. Easement for a road contained in Warranty Deed, executed by Jurovich Incorporated to Harry W. Thormahlen and Betty Thormahlen, recorded August 31, 1990, in Book 122 of Deeds, Page 287, under Document No. 255456.
- 15. Easement for an electric transmission and distribution line or system, dated July 03, 1991, granted to Beartooth Electric Cooperative, Inc., a corporation, recorded July 29, 1991, in Book 124 of Deeds, Page 17, under Document No. 258493.
- 16. All matters, covenants, conditions, restrictions, easements and any rights, interests or claims which may exist by reason thereof, disclosed by the recorded plat of Certificate of Survey No. 1545 AM, filed June 11, 1993, under Document No. 265581, but deleting any covenant, condition or restriction indicating a preference limitation or discrimination based upon race, color, religion, sex, handicap, familial status, or national origin to the extent such covenants or restrictions violate 42 USC 3604 (c).
- 17. All matters, covenants, conditions, restrictions, easements and any rights, interests or claims which may exist by reason thereof, disclosed by the recorded plat of Certificate of Survey No. 1545 AG, filed April 09, 1999, under Document No. 289251, but deleting any covenant, condition or restriction indicating a preference limitation or discrimination based upon race, color, religion, sex, handicap, familial status, or national origin to the extent such covenants or restrictions violate 42 USC 3604 (c).
- 18. Any terms, provisions, covenants, conditions, restrictions, easements, charges, assessments and liens provided in the Covenants, Conditions and Restrictions recorded April 09, 1999, in Book N/A, Page N/A, under Document No. 289252, but omitting any covenant, condition or restriction, if any, based on race, color, religion, sex, handicap, familial status, or national origin unless and only to the extent that the covenant, condition or restriction (a) is exempt under Title 42 of the United States Code, or (b) relates to handicap, but does not discriminate against handicapped persons.

- 19. Terms, conditions, easements and provisions contained in Designation of Controlled Access Highway and Facility, recorded August 31, 2001, under Document No. 299099
- 20. Terms, conditions, easements and provisions contained in Road Maintenance Agreement, recorded March 24, 2003, under Document No. 306398
- 21. All matters, covenants, conditions, restrictions, easements and any rights, interests or claims which may exist by reason thereof, disclosed by the recorded plat of Certificate of Survey No. 2156 RE, filed February 14, 2006, under Document No. 321675, but deleting any covenant, condition or restriction indicating a preference limitation or discrimination based upon race, color, religion, sex, handicap, familial status, or national origin to the extent such covenants or restrictions violate 42 USC 3604 (c).
- 22. All matters, covenants, conditions, restrictions, easements and any rights, interests or claims which may exist by reason thereof, disclosed by the recorded plat of Certificate of Survey No. 2157 RE, filed February 15, 2006, under Document No. 321676, but deleting any covenant, condition or restriction indicating a preference limitation or discrimination based upon race, color, religion, sex, handicap, familial status, or national origin to the extent such covenants or restrictions violate 42 USC 3604 (c).
- 23. Terms, conditions, easements and provisions contained in access control Bargain and Sale Deed, recorded November 16, 2009, under Document No. 339657
- 24. Any terms, provisions, covenants, conditions, restrictions, easements, charges, assessments and liens provided in the Covenants, Conditions and Restrictions recorded June 21, 1993, in Book 102 of Miscellaneous, Page 70, under Document No. 265582, but omitting any covenant, condition or restriction, if any, based on race, color, religion, sex, handicap, familial status, or national origin unless and only to the extent that the covenant, condition or restriction (a) is exempt under Title 42 of the United States Code, or (b) relates to handicap, but does not discriminate against handicapped persons.

End of Schedule B

Return Address: Dianna M. Ferguson 4652 Arapaho Trail Billings, MT 59106

REVOCATION OF DECLARATION OF AGRICULTURAL COVENANT

THIS AGREEMENT is made and entered into by and between **Dianna M. Ferguson.**, as owner of the herein described real property and **CARBON COUNTY**, Montana, as the governing body.

WHEREAS, Tract 3 2nd Amended of Certificate of Survey No. 1545 AG, situated in the N/E1/4 and NW1/4 of Section 33, T.6S., R.23E., P.M.M., Carbon County, Montana, was subject to two Declaration of Agricultural Covenants recorded under Document No's. 265582 and 289252, recorded in the office of the Clerk and Recorder of Carbon County, Montana; and

WHEREAS, said tract was surveyed and platted as Ferguson Subdivision which complied with all requirements, rules, regulations, policies, and resolutions of Carbon County, and the laws and administrative rules of the State of Montana; and,

WHEREAS, the Plat	of Ferguson Subdivision was filed under Plat No	, as
document no	in the office of the Clerk and Recorder of Carbon	n County,
Montana; and		

WHEREAS, Ferguson Subdivision consists of 1 lot and the owner of lot 3 3rd Amended, Ferguson Subdivision, desire to lift the agricultural covenants on said lot;

THEREFORE, the parties to this agreement do hereby agree that the provisions of the Declaration of Agricultural Covenant imposed upon Lot 3 3rd Amended, Ferguson Subdivision, are hereby terminated and revoked.

Dianna M. Ferguson Dianna M. Ferguson	
STATE OF MONTANA County of Carbon This instrument was acknowledged before me o by Dianna M. Ferguson.	n this 29th day of September, 2022,
Notary Public of the State of Montana	KATHERINE STOUT NOTARIAL STATE SEAL Residing at Roberts, Montane My Commission Expires June 28, 2025
Dated this day of	, 2022.
Commissioner	Commissioner
Commissioner	Attest: Clerk and Recorder

Carbon County, Montana

CARBON COUNTY ENVIRONMENTAL HEALTH CARBON COUNTY BOARD OF HEALTH CERTIFICATE OF SANITARY APPROVAL (Section 50-2-116, MCA)

TO: County Clerk and Recorder Carbon County Red Lodge, Montana C.C.# 2022-01

THIS IS TO CERTIFY THAT the plans and supplemental information relating to **Tract 3 2nd AM** of Certificate of Survey 1545 AG:

Situated in S33, T06S, R23E, P.M.M. Carbon County, Montana

Consisting of one tract has been reviewed by personnel of the Environmental Health Services Department, and,

THAT the documents and data required by ARM Title 17, Chapter 36, Subchapter 9, have been submitted and found to be in compliance therewith, and,

THAT the approval of the AMENDED PLAT to remove Agricultural Restrictions is made with the understanding that the following conditions shall be met:

THAT the lot size as indicated on the PLAT to be filed with the county clerk and recorder will not be further altered without approval, and,

THAT the lot shall be used for one single living unit, and,

THAT the individual water supply system will consist of a well drilled to a minimum depth of 25 feet constructed in accordance with the criteria established in Title 17, Chapter 36, Sub-Chapters 1, 3 and 6 ARM and the most current standards of the Department of Environmental Quality, and,

THAT data provided indicates an acceptable water source at a depth of approximately 50 feet, and.

THAT the individual sewage treatment system will consist of a septic tank and subsurface drainfield of such size and description as will comply with Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM and the most current standards of the Department of Environmental Quality, and,

THAT the subsurface drainfield shall consist of a minimum 1,500-gallon septic tank (4 bedroom) or 1,000-gallon septic tank (3 bedroom) with an effluent filter and subsurface drainfield of such size and description as designed by Papez Development Services dated August 2022, and as will comply with Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM, the most current standards of the Department of Environmental Quality, and the most current Carbon County Regulations for Sewage Treatment Systems, and,

THAT the individual subsurface drainfield shall have an absorption area of sufficient size to provide for a **0.6 gpd/sqft application rate**, and,

PAGE 2 of 2 Tract 3 2nd AM COS 1545 AG Carbon County

THAT the bottom of the drainfield shall be at a depth no greater than 24 inches to be at least four feet above the water table or applicable limiting layer, and,

THAT no sewage treatment system shall be constructed within 100 feet of the maximum highwater level of a 100 year flood of any stream, lake, watercourse, or irrigation ditch, nor within 100 feet of any domestic water supply source, and,

THAT water supply systems, sewage treatment systems and storm drainage systems will be located as shown on the approved plans, and,

THAT all sanitary facilities must be located as shown on the attached lot layout (by Papez Development Services dated August 2022), and,

THAT the developer and/or owner of record shall provide the purchaser of property with a copy of the PLAT, and approved location of water supply and sewage treatment system as shown on the attached lot layout, and a copy of this document, and,

THAT instruments of transfer for this property shall contain reference to these conditions, and,

THAT plans and specifications for any proposed sewage treatment systems will be reviewed and approved by the county health department and will comply with local regulations and ARM, Title 17, Chapter 36, Subchapters 3 and 9, before construction is started, and,

THAT departure from any criteria set forth in the approved plans and specifications and Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM when erecting a structure and appurtenant facilities in said subdivision without Department approval, is grounds for injunction by the Department.

YOU ARE REQUESTED to record this certificate by attaching it to the PLAT filed in your office as required by law.

DATED this 28th day of September, 2022.

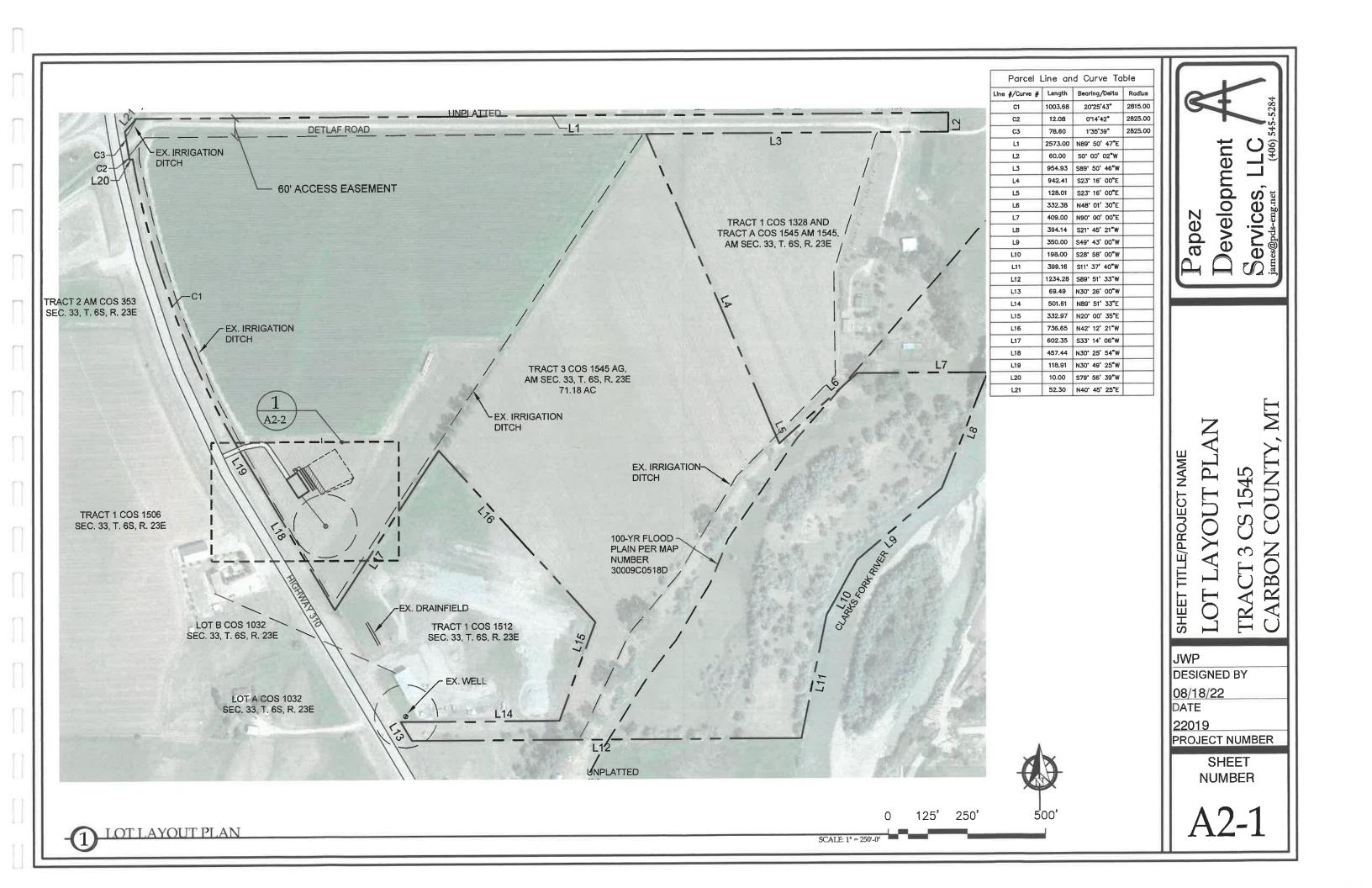
REVIEWED AND APPROVED:

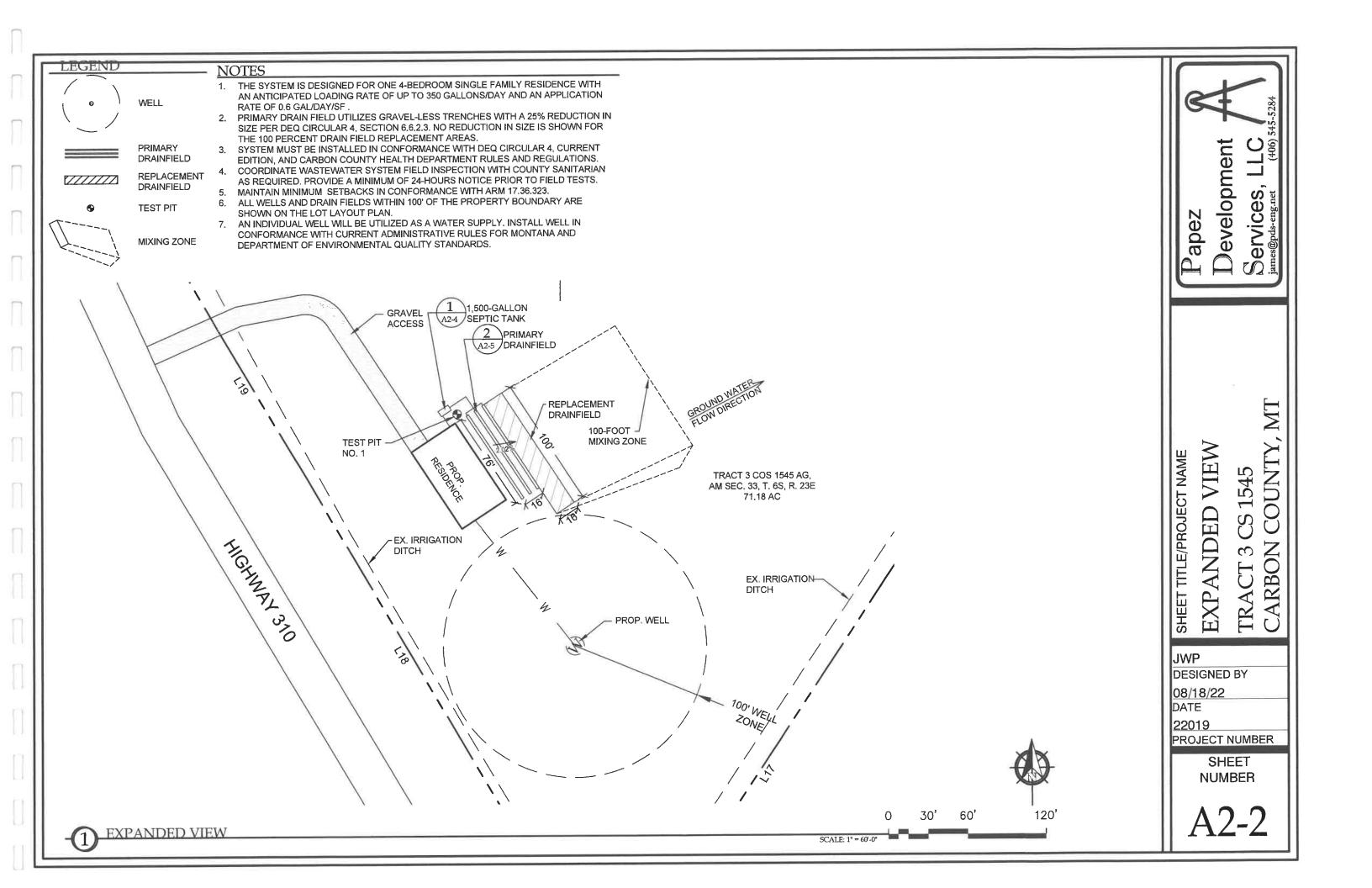
HEALTH OFFICER CYRINA ALLEN

Bv:

BARBARA KRIZEK, REHS/RS ENVIRONMENTAL HEALTH PROGRAM CARBON COUNTY

Owner's Name: Dianna Ferguson





5.1.1 General

All wastewater must discharge into a septic tank unless otherwise specifically provided in this Circular.

Roof, footing, garage, surface water drainage, and cooling water must be excluded from the septic tank.

The septic tank must be located where it is readily accessible for inspection and maintenance. The bottom of the septic tank should not be deeper than 12 feet from finished grade for ease of pumping and maintenance.

All septic tanks and access ports must have lids. The lids must be of durable construction and be secured with hex screws, lag bolts, locks, or other methods to prevent unauthorized access. Safety basket screens (child catchers) should be installed in all sentic tanks.

5.1.2Design

- 5.1.2.1.Liquid connection between compartments must consist of a single opening completely across the compartment wall or two or more openings equally spaced across the wall. The total area of openings must be at least three times the area of the inlet pipe.
- 5.1.2.2. A septic tank must provide an air space above the liquid level, which must be equal to, or greater than, 15 percent of its liquid capacity. Dose tanks do not need to meet the 15 percent air space requirement. Each compartment of the septic tank must be vented back to the inlet pipe.
- 5.1.2.3.Inspection ports measuring at least 8 inches in diameter must be provided above each inlet and outlet and marked with rebar. An access of an least 1.75 aquare feet in size must be provided for each compartment. Each access must be extended to within 12 inches of the finished ground surface. Access to the effluent filter must be large enough to maintain the filter and must be extended to the finished ground surface.
- 5.1.2.4. The nominal length of the septic tank must be at least twice the width (or diameter) of the tank. Dose tanks are excluded from these length, width, and depth requirements.
- 5.1.2.5. Scptic tanks that have less than, or equal to, a 5,000-gallon liquid capacity must not use depths greater than 78 inches in computing tank capacity.
- 5.1.2.6. Septic tanks that have a greater than 5,000-gallon liquid capacity must calculate

the maximum liquid depth by dividing the liquid length by a factor of 2.5.

5.1.3. Inlet:

- 5.1.3.1. The inlet into the tank must be at least 4 inches in diameter and enter the tank 3 inches above the liquid level. The inlet
- 5.1.3.2. The inlet of the septic tank and each compartment must be submerged by means of a vented nee or baffle. Tees and baffles must extend below the liquid level to a depth where at least 10 percent of the tank's liquid volume is above the bottom of the tee or baffle.
- 5.1.3.3. Vented tees or baffles must extend above the liquid level a minimum of 7 inches.
- 5.1.3.4. Baffle tees must extend horizontally into the tank to the nearest edge of the riser access to facilitate baffle maintenance.

5.1.4. Outle

- 5.1.4.1. Outlets must include an effluent filter complying with Section 5.1.5. A combination septic/dosing tank outlet is considered to be in the wall dividing the septic compartment(s) and the dosing compartment. Septic tanks aligned in series require an effluent filter cabe, on the fined outlet.
- 5,1.4.2. The outlet of the tank must be at least 4 inches in diameter. The outlet connection must be watertight.
- 5,1.4,3. Each compartment of the septic tank must be vented to the atmosphere

5.1.5. Effluent Filters

- 5.1,5.1. Effluent filters must be used in all systems, unless the reviewing authority approves another filtering device such as a screened pump vault.
- 5.1.5.2. All septic tank effluent must pass through the effluent filter. No by-pass capability may be designed into the effluent filter. A high-water alarm should be installed to signal that the filter has clogged and needs maintenance.
- 5.1.5.3. Effluent filter inlets must be located below the liquid level at a depth where 30 to 40 percent of the tank's liquid volume is above the intake of the filter.
- 5.1.5.4. The effluent filter must be secured so that inadvertent movement does not take place during operation or maintenance. Filters must be readily accessible to the ground surface and the handle must extend to within 2 inches of the access riser lid to facilitate maintenance.
- 5.1.5.5. The effluent filter manufacturer must provide documentation that the filter meets the design standard for effluent filters in ANSI/NSF Standard 46.
- 5.1.5.6.The effluent filter manufacturer must provide installation and maintenance instructions with each filter. The installer must follow the manufacturer's instructions when installing the filter and must use the manufacturer's recommendations for sizing and application. The installer must provide the owner of the system with a copy of the maintenance instructions.

5.1.6. Sizing of Septic Tanks

5.1.6,1.Minimum Size Requirements

Multiple single compartment tanks may be connected in series to meet minimum capacity requirements. Dose tank or other tank volumes included in the design may not be included in the required septic tank minimum capacity. The reviewing authority may have additional maintenance requirements for tanks connected in series or those systems utilizing grinder pumps.

5.1.6.2. For Residential Flows

- A. Residential scritic tank capacity must be sized in accordance with the number of bedrooms as described below:
- 1. For 1 to 3 bedrooms, the minimum capacity is 1,000 gallons per living unit
- 2. For 4 to 5 bedrooms, the minimum capacity is 1,500 gallons per living unit;
- For 6 to 7 bedrooms, the minimum capacity is 2,000 gallons per living unit;
- 4. For 8 or more bedrooms, the minimum capacity is 2,000 gallons per living unit plus 250 gallons for each bedroom greater than 7 bedrooms (i.e., 8 bedrooms requires a 2,250 gallon tank, 9 bedrooms requires a 2,501 gallon tank).
- B. When the number of living units on a single or common septic tank is between 2 and 9, the minimum capacity will be based on the number of living units and corresponding bedrooms as described in Subsection 5.1.6.2.A.
- C. When the number of living units on a single or common septic tank is 10 or greater, the septic tank must have a capacity of at least 2.5 times the design flow.

5,1,0,1, For Nonresidential Flows

The minimum acceptable septic tank size is 1,000 gallons for any nonresidential system and must have a minimum tank capacity of 2.5 times the design flow.

5.1,1.1.Concrete Tanks (cast-in-place tanks and pre-cast tanks)

A. General Requirement

All concrete tanks must comply with Sections 1, 2, 3, 5, and 6 of ASTM C 1227-12 with the following additional requirements:

- All concrete tanks must be manufactured with ASTM C 150-12 Type I, Type I-II or Type V cement and must be made with sulfate- resistant cement (tricalcium aluminates content of less than 8 percent).
- made with suitate-resistant cement (incateium autimize content or issa than a pei-cent).

 All concrete tanks must be watertight. Tanks used for commercial facilities, multiple-user systems, public systems or those with a design flow of 700 gallons per day, or greater, must be tested in place for water tightness using a vacuum test or water pressure test. The reviewing authority or designer may require tanks intended for other uses to be tested. Tanks must be tested using one of the following methods:
 - a. Vacuum testing: Seal the empty tank and apply a vacuum to 4 inches (100 mm) mercury. The tank is approved if 90 percent of vacuum is held for 2 minutes; or
 - b. Water pressure testing: Seal the tank, fill with water, and let stand for at least 24 hours. Refill the tank. The tank is approvable if it holds water.
- Repairs of all concrete tanks, when required, must be performed by the manufacturer in a manner ensuring that the repaired structure will conform to the requirements of this Circular.
- All concrete tank sealants must be flexible, appropriate for use in septic tanks, and must conform to ASTM C 990-09.

B. Pre-cast Concrete Tank Requirements

A set of complete plans stamped by a professional engineer to certify compliance with this Circular must be on file with the tank manufacturer and made available to the reviewing authority upon request. These plans must show maximum depth of bury, all dimensions, capacities, reinforcing, structural calculations, and other such pertinent data for each tank model.

The pre-east concrete tank manufacturer shall develop manufacturer's recommended installation instructions for each tank model. The manufacturer shall provide a copy of the stamped drawings along with the installation instructions to each tank purchaser.

All pre-cast concrete tanks must be clearly marked within 2 feet of the outlet with the name of the tank manufacturer, tank model, number of gallons, date of manufacture, and maximum depth of bury.

C. Cast-in-Place Concrete Tank Requirements, Certification, and As-builts

A complete set of plans stamped by a professional engineer to certify compliance with this Circular and ACI 318-11 must be provided to the reviewing authority. These plans must shaw maximum depth of bury, all dimensions, capacities, reinforcing, structural calculations, and other such pertinent data. The approved stamped plans must be given to the tank purchaser. As-built plans and a letter of certification, from a professional engineer, must be submitted to the reviewing authority within 90 days of construction of all cast-in-place concrete tanks.

5.1.0.1. Thermoplastic and Fiberglass Tanks

Thermoplastic and fiberglass septic tanks must be water tight and made of materials resistant to the corrosive environment found in septic tanks.

A set of complete plans stamped by a professional engineer to certify compliance with this Circular and IAPMO/ANSI Z1000-07 must be on file with the tank manufacturer and made available to the reviewing authority upon request. These plans must show maximum depth of bury, all dimensions, capacities, reinforcing, structural calculations, and other such pertinent data for each tank model.

The thermoplastic and fiberglass tank manufacturer shall develop manufacturer's recommended installation instructions for each tank model. The manufacturer shall provide a copy of the stamped drawings along with the installation instructions to each tank purchaser.

All thermoplastic and fiberglass tanks must be clearly marked near the order or on the top surface of the tank with the name of the tank manufacturer, tank model, number of gallons, date of manufacture, and maximum depth of bury.

Tanks used for commercial facilities, multiple-user systems, public systems, or those with a design flow of 700 gpd or greater must be tested in place for water tightness. The reviewing authority may require tanks intended for other uses to be tested. For pressure testing a fiberglass or thermoplastic tank, all inlets, outlets, and access ports must be scaled and adequately secured. The tank must be charged with 5 pound-force per square inch gauge (psig) for a tank less than 12 feet in diameter or 3 psig for a tank 12 feet or larger in diameter. The tank pressure must be allowed to stabilize and the air supply must be disconnected. If there is any noticeable pressure drop in 1 hour, the tank must be rejected or repaired. After repair, the test must be repeated. Air must be carefully released through an appropriate valve mechanism.

5.1.1. Installation

All septic tanks must be installed per the manufacturer's recommendations.

5.1.2. Maintenanc

Owners of septic systems should follow the septic tank maintenance recommendations published by Montana State University Extension Service, which are available through Montana County Extension Service offices located in each county. Two of these publications are Septic Tank and Drainfield Operation and Maintenance and Septic System Inspection and Troubleshooting. Those who own systems with siphous, pumps, or controls should carefully adhere to manufacturer's recommendations for operation and maintenance and seek guidance from the county extension service or local health department.

6.1. STANDARD ABSORPTION TRENCHES

6.1.1. General

The satisfactory operation of the wastewater treatment system is largely dependent upon wastewater quality, proper site selection, and the design and construction of absorption trenches.

All new and replacement absorption systems must be designed to accept and treat residential strength waste. High strength wastewater or water treatment waste residuals must comply with Subchapters 3.2 and 3.3 of this Circular.

6.1.2. Location

Absorption trenches must meet the location criteria in ARM Title 17, Chapter 36, subchapter 3 or 9, as applicable.

All absorption trenches must meet the site requirements of Chapter 2.

6.1.3. Trench Design

- 6.1.3.1.The minimum area in any absorption trench system must be based upon the flow, as determined in Chapter 3 and sized by the soil type and percolation rate if percolation testing is required by the reviewing authority, whichever results in a larger absorption system, in accordance with Chapter 2, Section 6.1.4, and Appendix B. The reviewing authority may require a percolation test when the soils are variable or other conditions create the need to verify trench sizing.
- 6.1.3.2. An area that can be used as a replacement area for the original absorption trench system must be designated. Interim use of the area must be compatible with future absorption system use. The replacement area should be located separately from the primary area and must not be interlaced within the primary area.
- 6.1.3.3. Gravity-fed and gravity-dosed absorption trenches must be separated by at least 5 feet between trench walls. Pressure dosed absorption trenches must be separated by at least 4 feet between trench walls. Absorption trenches utilizing proprietary design configurations, with effluent meeting NSF 40 criteria for 30 mg/L BOD₅ and 30 mg/L TSS, may have trench separation distances that meet manufacture recommendations.
- 6.1.3.4. Gravity-fed and gravity-dosed absorption trenches must be at least 18 inches wide, but, for purposes of sizing, any width greater than 24 inches wide will not be considered. Systems utilizing pressure distribution may have absorption trenches 36 inches wide.
- 6.1.3.5. The bottom of the absorption trenches must be at least 24 inches and no more than 36 inches below the natural ground surface. There must be a minimum of 12 inches of soil or fill material above the drain rock.
- 6.1.3.6. Gravity-fed absorption trenches may not exceed 100 feet in length from where effluent is first applied to the soil. Gravity-fed absorption trenches may be connected through a manifold to accommodate serial configurations. If more than 500 lineal feet, or 1000 square feet, of absorption area, calculated before applying any reductions, is needed, then pressure distribution must be provided.

6,1,4, Sizing of the Absorption System

- 6.1.4.1.Application rates and absorption system length used for sizing onsite wastewater absorption systems can be determined using soil descriptions in accordance with Chapter 2, Appendix B, and the formula in Subsection 6.1.4.2. Comparison of the soil profile descriptions, at or near the depth of the infiltrative surface, percolation rate, if conducted, and USDA soils report must be submitted for review. If the submitted information shows a variable application rate, additional site-specific information may be required by the reviewing authority.
- 6.1.4.2. Absorption system sizing must be determined using the following formula:

The total square feet of the absorption system area is determined using the design wastewater flow rates from Chapter 3 (gpd) divided by the application rate in Section 2.1.7, Table 2.1-1 (gpd/ h^2).

Total trench length is calculated by dividing the total square feet of the absorption system area by the trench width

- 6.1.4.3. Systems that provide documentation or demonstrate, through a third independent party, that the unit is able to meet the testing criteria and performance requirements for NSF Standard No. 40 for Class 1 certification, or meet the testing requirements outlined in ARM 17.30.718 for 30 mg/L BOD₅ and 30 mg/L TSS, only, may utilize a reduced absorption area in accordance with the following criteria:
 - A. For subsurface absorption systems constructed in soils with percolation rates between 3 and 50 mpi, as described in Chapter 2 and Appendix B, the final absorption area may be reduced by 50 percent;
 - B. For subsurface absorption systems constructed in soils with percolation rates between 51 and 120 mpi as described in Chapter 2 and Appendix B, the final absorption area may be reduced by 25 percent.

A full-sized separate subsurface absorption replacement area, sized without reduction, must be designated for each site.

Further reductions in subsurface absorption system sizing, beyond those listed in this subsection, are not permissible.

6.0.1. Construction

- 6.0.1.1. Gravity-fed and gravity-dosed absorption field distribution pipes and trench bottoms must be level. Pressure-dosed distribution pipes in an absorption system or sand filter must be level, unless a hydraulic analysis indicates uniform distribution of effluent will occur with a sloped line.
- 6.0.1.2. When the trenches have been excavated, the sides and bottom must be raked to scarify any smeared soil surfaces. Construction equipment, unless needed to construct the system, should be kept off the area to be utilized for the absorption trench system to prevent undesirable compaction of the soils. Construction must not be initiated when the soil moisture content is high.

Note: If a sample of soil within the working depth can be easily rolled into the shape of a wire or ribbon, the soil moisture content is too high for construction purposes.

- 6.0.1.3. At least 6 inches of drain rock meeting the requirements of Section 1.2.25 must be placed in the bottom of the trench.
- 6.0.1.4. The distribution pipe must be covered with at least 2 inches of drain rock meeting the requirements of Section 1.2.25. An appropriate geotextile fabric, untreated building paper, or straw must be placed over the drain rock and covered with a minimum of 1 foot of soil or fill.
- 6.0.1.5. The ends of the distribution pipes must be capped or plugged
- 6.0.1.6. Gravelless trenches and other absorption systems may be used in place of distribution pipe and drain rock in accordance with Subchapter 6.6.



RACT 3 CS 1545 ARBON COUNTY, N

JWP DESIGNED BY

AII

لتأ

08/18/22 DATE 22019

NAM

S

TITLE/PROJE

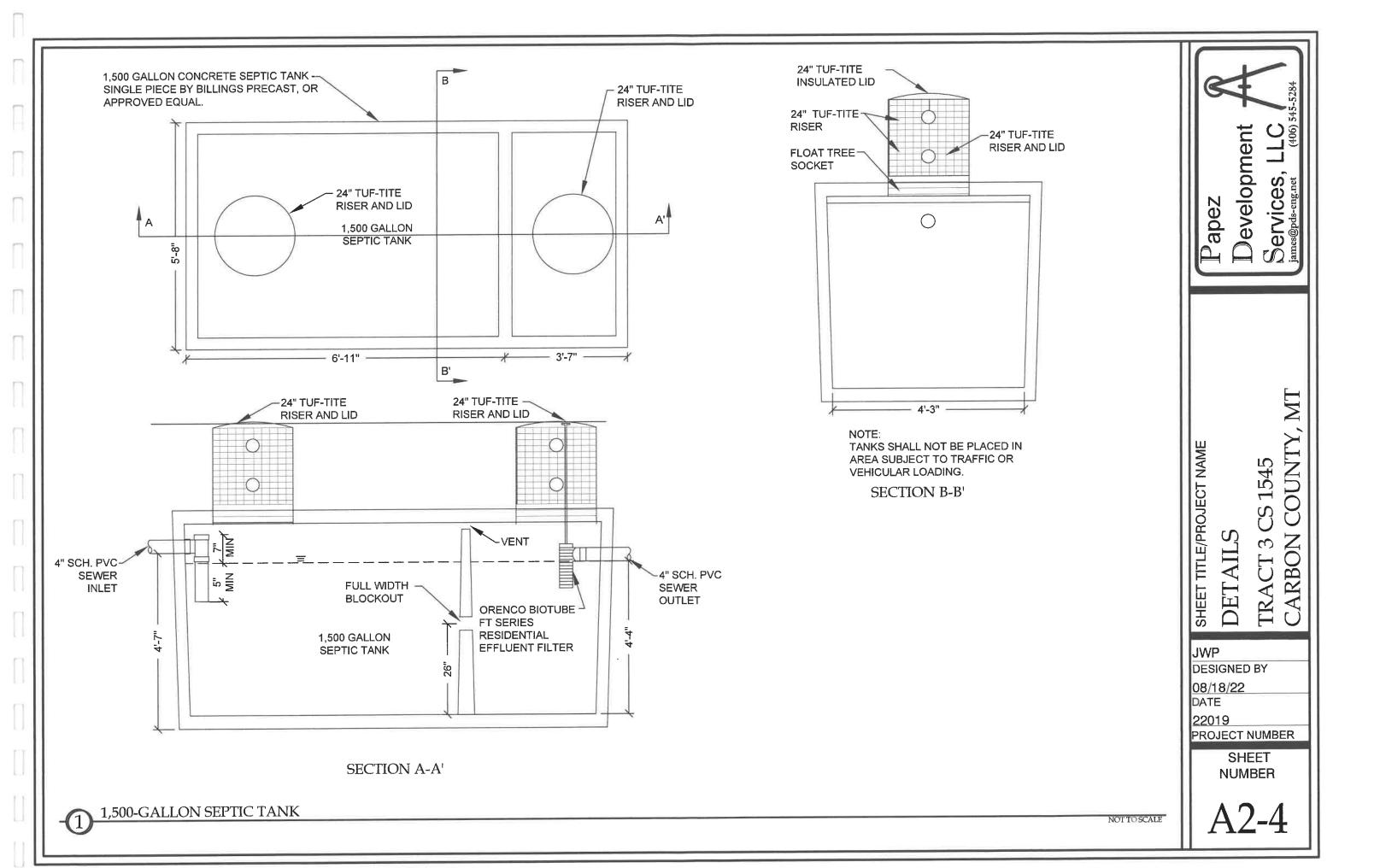
Ш

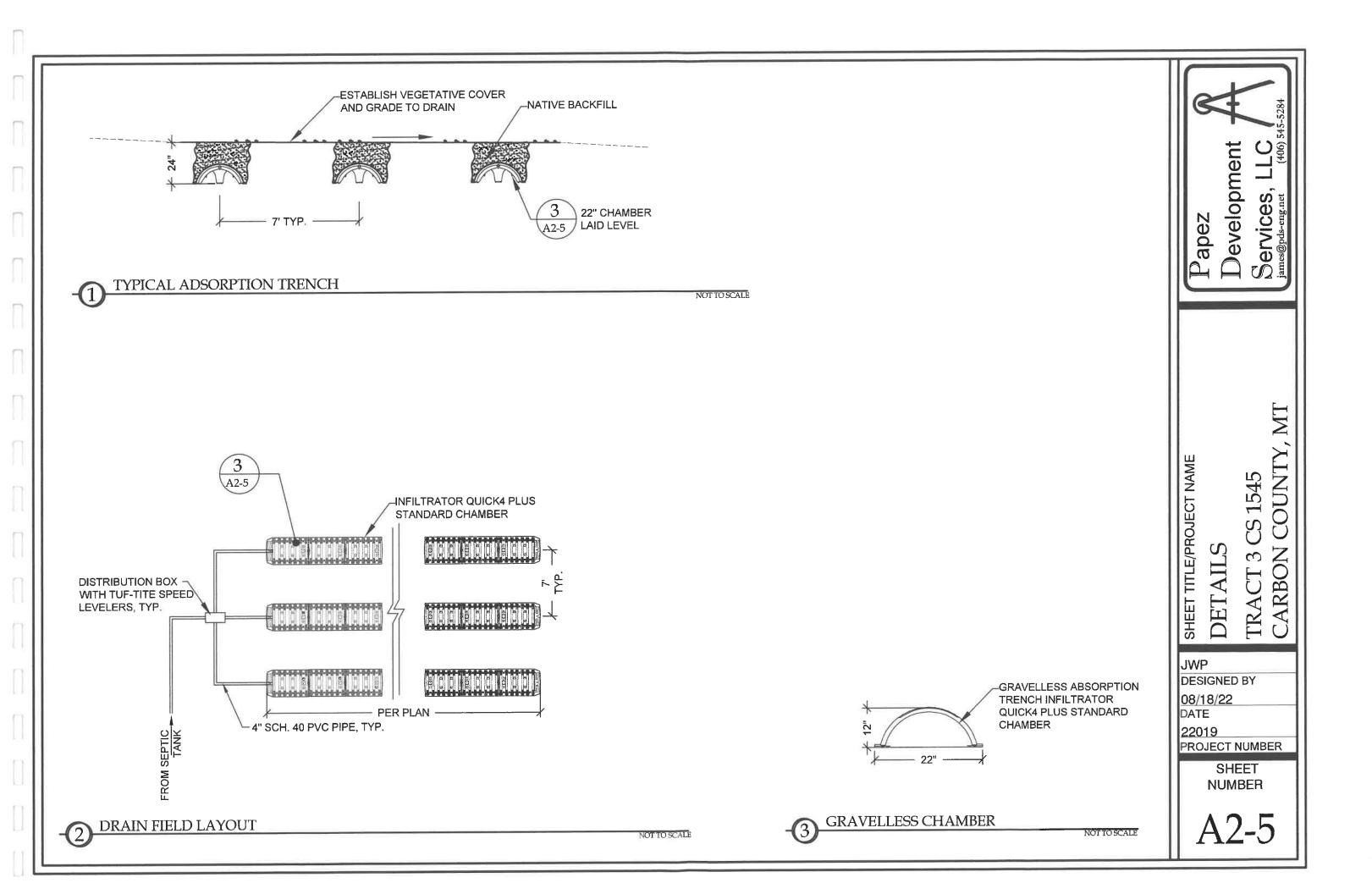
SHE

PROJECT NUMBER

SHEET NUMBER

A2-3





WATER AND WASTEWATER SYSTEM DESIGN REPORT

INTRODUCTION:

The project will serve to lift the sanitary restrictions from Tract 3 -2nd AM of certificate of survey 1545 AG located in Carbon County, Montana. The 71-acre property is located in a portion of Section 33, Township 6 South, Range 23 East, Carbon County, Montana. A copy of the preliminary plat is included in Appendix 'A-3'.

Since Tract 3 is in excess of 20-acres in size, the project will be subject to Title 50 review by Carbon County in lieu of Title 76 review by Montana DEQ. The property contains an agriculture covenant that will be removed through the subdivision process with the County but will remain a single Tract.

The property is currently undeveloped. No record wastewater treatments systems were located for the property. The property is planned for a single-family residence with an individual well and septic system.

WATER SUPPLY

Water supply for Tract 3 will be provided from an individual well. From a review of area well logs, it appears that a sufficient sustainable water supply is located between 9 and 20 feet below existing grade. The well logs report an available flow between 25 and 100 gallons per minute. A copy of the well logs is provided in Appendix 'B'.

A water sample was obtained from the existing water well located on the Montana Department of Transportation property located south of Tract 3. Testing was completed by Energy Labs for Nitrogen, Nitrate+Nitrite and Conductivity. The results of the test indicated a total nitrogen concentration of 0.48 mg/l and a conductance of 578 umhos/cm. A copy of the test results is included in Appendix 'B'.

No public water system is located within 500-feet of the property.

WASTEWATER TREATMENT

Wastewater treatment for Tract 3 will be provided from an individual septic tank and drain field. The location of the individual wastewater treatment system for Tract 3 is depicted on the Lot Layout Plan in Appendix 'A'. The proposed residence is designed for up to 4-bedrooms with an anticipated loading of up to 350-gallons per day. No public sewer system is located within 500-feet of the property.

The existing on-site soils were evaluated for suitability on June 20, 2022. One test pit was completed in the immediate vicinity of the proposed drain field. The test pit was advanced to a minimum depth of 8.5-feet below existing grade. Ground water encountered in the test pit at a depth of 8.0' below existing grade. The onsite soil composition is shown below:

	Test Pit No. 1
Depth	Soils
0-14"	Sandy Loam Brown Topsoil
14"-108"	Medium Course Light Brown Sand with Cobbles



Table 1

A soil sample was collected at 14" and 30" for analysis. A particle size analysis was completed for each of the collected soil samples by Energy Labs. A copy of the laboratory test results is provided in Appendix 'B'.

Using the Textural Triangle contained in Circular DEQ 4, the texture for soil samples was utilized to develop an application rate for the drain field. From DEQ 4 Table 2.1-1 and application rate of 0.6 gal/sf/day was selected based on the sandy soils observed in the Test Pit at the elevation of the proposed adsorption trenches.

The location of the test pit is shown below in Figure 1.



Figure 1

The selected location for the primary and replacement drain field is in the immediate vicinity of the soils test pit. Based on the soil classification, the selected drain field location is suitable for installation of an on-site wastewater system with standard absorption trenches.

SOILS SURVEY

A National Resources Conservation Service (NRCS) soil survey was completed for the subject property. The results of the soils survey indicate the presence of Heldt Silty Clay Loam (Hs), Haverson Silty Clay Loam (Hm), and Tonra Gravelly Silty Clay Loam (Tv). In the vicinity of the test pit and proposed drain field the predominate soil type was identified as Tonra Gravelly Silty Clay Loam. The description of the Tonra Gravelly Silty Clay Loam coincides with the soils observed in the test pit. A copy of the soils survey is included in Appendix 'C'.

WASTEWATER TREATMENT SYSTEM

Design Flows

The wastewater treatment system is designed to accommodate up to 4-bedrooms. Utilizing Section 5.1 Residential Wastewater Flows, contained in Circular DEQ 4, the anticipated wastewater flow rate is estimated at 350-gallons per day.

Service Pipe

Sewer service connections from the building to the septic tank must be at least 4 inches in diameter and must be placed at a minimum slope of 1/4 inch per foot. PVC sewer pipes must meet the requirements of ASTM D 3034-08, Schedule 40 and meet ASTM D 1785-12.

Septic Tank Sizing

Circular DEQ 4, Section 5.1.6.2, specifies the minimum septic tank capacity is 1,000-gallons for up to 3-bedroom and 1,500-gallons for 4-5 bedrooms.

Drain Field Size

The proposed on-site wastewater treatment system is designed to accommodate up to 4-bedrooms with a total daily load of 350 gallons per day. Based on the soil classification in the vicinity of the drain fields, an application rate of 0.6 gallons/sf/day was utilized to size the primary and replacement drain fields.

Total drain field abortion trench required for the project was calculated utilizing the equation below:

L= Flow Rate / Application Rate / Trench Width

For this project, gravel-less chambers will be utilized. The sizing of the replacement drain field utilize no reduction in size. The required drain field sizes are shown in Table 2.

		D	rain Field	Sizing			
	Application Rate (gal/sf/day)	Flow Rate (gal/day)	Trench Width (ft)	Minimum Total Lateral Length (ft)	No. of Laterals	Provided Individual Lateral Length (ft)	Total Provided Lateral Length (ft)
Tract 3 Primary Drain Field with 25% Reduction for Gravel-less Chambers	0.6	350	2	219	3 1	76	228
Tract 3 100 % Replacement Drain Field	0.6	350	2	292	3 V	100	300

Table 2

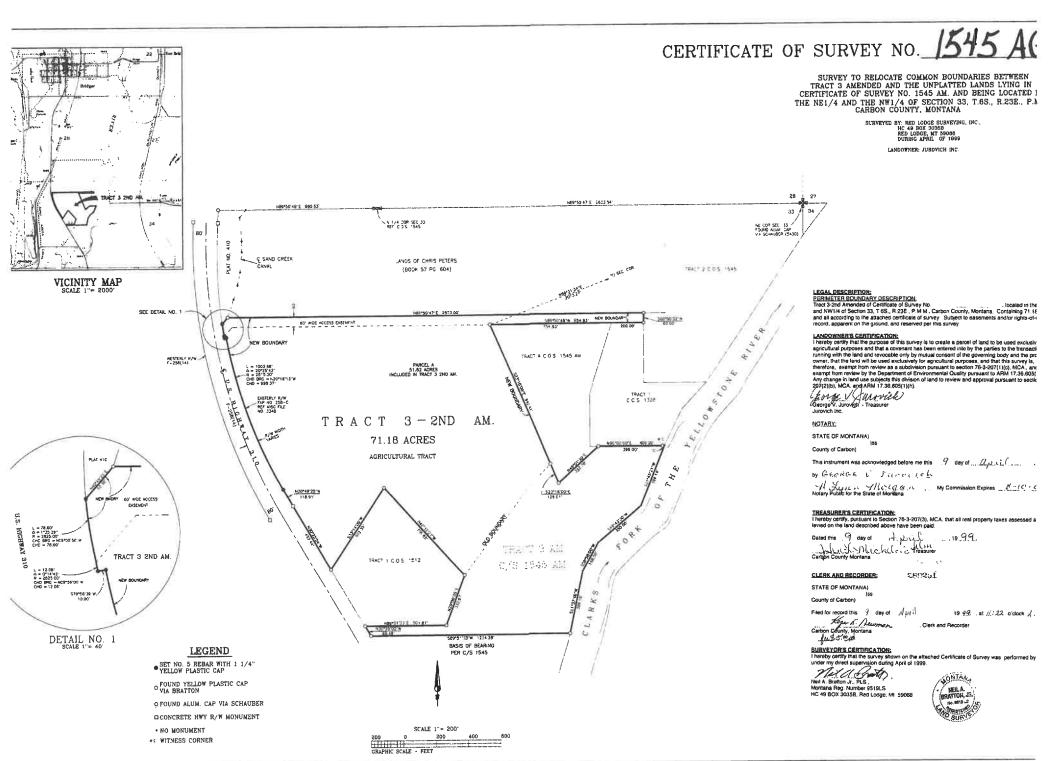
Summary

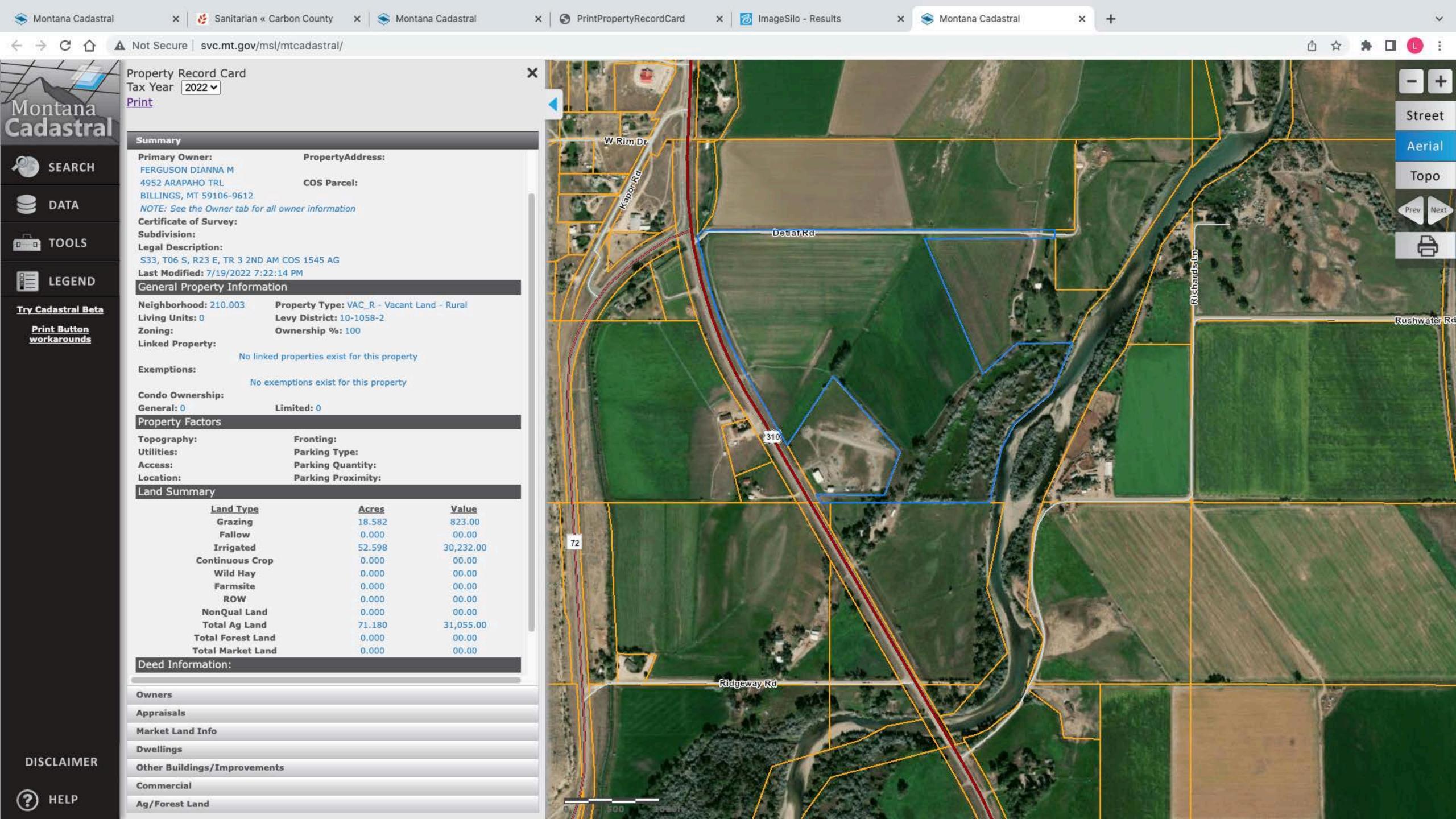
The proposed on-site water and wastewater treatment system has been designed in conformance with the requirements of DEQ Circular 4 and Carbon County Health Department Standards.

The on-site wastewater treatment system is designed to accommodate the volume of wastewater generated from one single family residence containing up to 4-bedrooms. Wastewater treatment system will consist of a septic tank and gravity dosed drain field to evenly distribute the effluent over the drain field at a maximum application rate of 0.60 gallons/sf/day. The on-site wastewater treatment system is not anticipated to have any adverse effects on the surrounding properties.

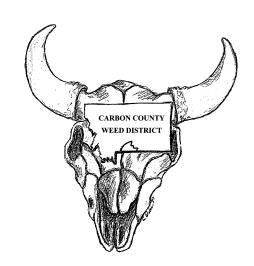
APPENDICES

APPENDIX A: DESIGN PLANS A-3: PRELIMINARY PLAT





Carbon County Weed District Planning Office Subdivision Weed Inspection Report



DATE: 07/6/22

SUBDIVISION NAME: _Ferguson Subdivision

SIZE IN ACRES: __71.18 acres______

PRESENT OWNERS: __Dianna Ferguson

ADDRESS: 4952 Arapaho Trail Billings, MT 59106-9612

PHONE NUMBERS: _____

LOCATION (legal description) include **COUNTY PLAT MAP AREA:**

T6S R23E Sec 33

ROADS & MARKERS – neighboring land, ditches, creeks or any other land marks: **East of Hwy 310 south of Bridger.**

LAND TYPE: X Irrigated \square Dry land Grassland Timbered X Farmland

TYPE OF WEEDS PRESENT: Absinth Wormwood

INSPECTION FEE DUE: X YES □ NO

AMOUNT OF FEE DUE: \$300.00 to Carbon County Weed District

ADMINISTRATION FEE DUE: __ YES X NO

AMOUNT OF ADMINISTRATION FEE DUE: NA

WEED BOND REQUIRED: YES X NO

AMOUNT OF WEED BOND REQUIRED: NA

COMMENTS: Absinth Wormwood found on the southern edge of

property.

INSPECTION BY: _*Brian Ostwald*

Carbon County Weed District Coordinator