City of Livingston Planning Board Agenda

Date: September 21, 2022

A meeting of the City Planning Board is scheduled for September 21, 2022, from 5:30-7:00 p.m. The meeting will be held via Zoom.

Join Zoom Meeting: https://us02web.zoom.us/j/82374168215?pwd=VEREOUhXekxycDlkVWUvMW1oK29Hdz09

Meeting ID: 823 7416 8215 Passcode: 127453 Call in: (669) 900-6833

Roll Call

Approval of Minutes:

- June 2022, August 2022
- No July meeting

Public Comments (state your full name and physical address prior to speaking)

New Business:

• Continued Public Hearing – Mountain View Subdivision

Old Business:

Administrative Comments:

- Public Works Update
- Planning Update
- Board Comments
- Next Meeting: October 19, 2022

Meeting Adjournment

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Billings Bozeman Denver Fort Collins

July 7, 2022

Mr. Jim Woodhull Planning Director City of Livingston 220 E. Park Street Livingston, MT 59047

Reference: Mountain View Subdivision Preliminary Plat Submittal Project No. 18005.05

Dear Jim:

Please find attached a complete Preliminary Plat application for the Mountain View Subdivision. The proposed subdivision includes 39 lots, including two open space lots, and public right-of-way for subdivision streets and utilities.

We are submitting three printed copies and digital copies of the preliminary plat application for your review. The following documentation is included in the application:

- 1. Cover Letter
- 2. Completed Preliminary Plat Application
- 3. Checklist of Submittal Materials
- 4. Application Review Fee Estimate
- 5. Application Narrative
- 6. Vicinity Map
- 7. Overall Development Plan
- 8. Active Transportation Plan
- 9. Site Plan Set
- 10. Preliminary Plat
- 11. Stormwater Overview
- 12. Water & Sewer Overview
- 13. Subdivision Improvements
- 14. Traffic Trip Generation Analysis
- 15. Summary of Probable Impacts
- 16. Wetlands Report
- 17. Public Agency Review
- 18. Private Service Providers Review

ENDURING COMMUNITY DESIGN

Mr. Jim Woodhull July 7, 2022 Page 2

The review and application fees will be provided once the total amount is confirmed with you. Please let me know if you have any questions or need additional information, please feel free to contact me at (406) 922-4311 or cnaumann@sandersonstewart.com.

Sincerely,

Chris Naumann Associate | Senior Planner Sanderson Stewart 106 East Babcock Street Suite L1 Bozeman MT 59715 <u>cnaumann@sandersonstewart.com</u> 406-922-4311 (d) 406-570-5758 (m)

City of Livingston Department of Planning 220 E. Park St. Livingston, MT 59047 (406)222-4903 planning@livingstonmontana.org



City of Livingston Subdivision Preliminary Plat Instructions

Subdivision review is required to divide any parcel of land within the City of Livingston that does not meet the criteria for a subdivision exemption as listed in 76-3-2 MCA. Subdivisions require a three-step application process prior to final approval:

- Pre-Application
- Preliminary Plat Application
- Final Plat Application

Preliminary Plats require a public hearing before the Planning Board for a recommendation to the City Commission, and are approved or denied by the City Commission. All subdivision applications are evaluated by the Planning Board and City Commission based upon the following criteria listed in Section III.B.6 of the Subdivision Regulations for major subdivisions or Section IV.B.6 for minor subdivisions:

- Provides easements for the location and installation of any planned utilities.
- Provides legal and physical access to each parcel within the subdivision and the notation of that access on the applicable plat and any instrument transferring the parcel.
- Assures that all required public improvements will be installed before final plat approval, or that their installation after final plat approval will be guaranteed.
- Complies with the requirements of 76-3-504 MCA, regarding the disclosure and disposition of water rights.
- Complies with the Subdivision Regulations.
- Complies with the applicable Zoning Regulations.
- Complies with the Montana Subdivision and Platting Act.

The Preliminary Application shall be submitted to the Planning Department. The Planning Department may forward the application to local, state, and federal agencies as necessary to ensure a comprehensive review of the project. It is required that you submit and receive an approved Subdivision Pre-Application prior to submitting a Preliminary Plat Application.

Submittal Requirements (listed in Section III.B.1 of the Subdivision Regulations for major subdivisions or Section IV.B.1 for minor subdivisions):

- Two (2) copies of the Completed Application Form.
- Three (3) copies of the Preliminary Plat, which:
 - Contains the required information for preliminary plats..
 - Conforms to the Design and Improvement Standards in Section VI of the Subdivision Regulations.
 - Conforms to the requirements of the Zoning Regulation.

• Conforms to the requirements of the Public Works Design Standards and Specifications Policy.

A summary of probable impacts of the Subdivision.
 Proof that the subdivider has submitted for review copies of the subdivision application and environmental assessment, if applicable, to the public utilities and agencies of local, state, and federal government identified during the pre-application meeting or subsequently identified as having a substantial interest in the proposed subdivision.
 Additional relevant and reasonable information as identified by the Development Review Committee during the pre-application meeting:

The Preliminary Plat Application Review Fee.

All documents other than the preliminary plat shall be submitted on either 8 $\frac{1}{2}$ " x 11" or 11" x 17" paper. Additionally, digital copies of the submittal in PDF file format are required.



City of Livingston Department of Planning 220 E. Park St. Livingston, MT 59047 (406)222-4903 planning@livingstonmontana.org

City of Livingston Subdivision Preliminary Plat Application

1.	Property Owner Name:		
2.	Location of Property		
	General Location:		
	Address:		
	Subdivision:	Lot:	Block:
	Zoning District:		
3.	Contact Information		
	Property Owner		
	Home Address:		
	Phone Number:		
	Email Address:		
	Primary Contact/ Applicant		
	Name:		
	Address:		
	Phone Number:		
	Email Address:		
	Secondary Contact		
	Name:		
	Address:		
	Phone Number:		
	Email Address:		

4. Project Information

'ype of Subdivision: \Box Major \Box Subsequent Minor \Box Minor
Proposed Subdivision Name:
Brief Description of Project:
Proposed Use(s):
Number of Lots: Number of Phases:

I hereby certify that the information included in this application is true and accurate.

Applicant's Signature

Date

APPENDIX B

LIST OF SUBMITTAL MATERIAL

(Based on City of Livingston Subdivision Regulations)

PRELIMINARY PLAT

The following materials shall be submitted with all applications for Preliminary Plat approval:

1. Three (3) copies of the preliminary plat in 24" x 36" format.	Attached (Check)
2. Eight (8) copies of the preliminary plat in 11" x 17" format.	
3. The required review fee.	
4. A vicinity sketch showing conditions on adjacent land including:	
a. Approximate locations, size and depth of existing or proposed sanitary and storm sewers, water mains, fire hydrants, gas, electric, telephone lines and streetlights.	
b. Ownership of lands immediately adjacent the subdivision and all public and private streets leading to the subdivision.	
c. Locations of buildings, structures, power lines and other improvements and nearby land uses.	
d. The existing zoning of the subdivision and of adjacent lands within 500 feet.	
 5. A complete grading and drainage plan designed to handle runoff from a 10 year, 6 hour storm and containing the following: a. Location and details, accurately dimensioned, of all existing and proposed drainage structures to include courses, elevations, 	
grades and cross sections of streets, bridges, ditches, culverts, retention areas and other drainage improvement.	

- a. Ground contours with intervals of 2 feet where the average slope is under 10% and 5 feet where average slope is 10% or greater.
- b. Information describing the ultimate destinations of storm water from the subdivision and the effect of the runoff on down-slope drainage structures.
- c. Describe construction procedures, slope protection and reseeding methods to minimize erosion.
- 6. A list of the proposed subdivision improvements shall be submitted and shall include the following items:
 - a. Provide design specifications for all streets and alleys. Include information on all drainage structures, street signs, sidewalks, and street lights.
 - b. Indicate the solid waste collection and disposal facilities proposed for the subdivision.
 - c. Show fire hydrant locations and spacing.
 - d. Describe all utilities to be installed and which entities will be providing the services.
 - e. Indicate parkland to be dedicated or amount of cash-in-lieu of land to be donated, if applicable.
 - f. Indicate how mail delivery will be handled within the subdivision.
- 7. Overall Development Plan: When a tract of land is to be subdivided in phases, the subdivider must provide an overall development plan indicating the intent for the entire development. The preliminary plat submission and other supplements must include the entire development and be in compliance with the procedures and standards contained in the Livingston Subdivision Regulations. Plat review will be based on the overall development.



July 1, 2022

Billings Bozeman Denver Fort Collins

Mr. Jim Woodhull Planning Director City of Livingston 220 E. Park Street Livingston, MT 59047

Reference: Mountain View Subdivision Preliminary Plat Submittal Project No. 18005.05

Dear Jim,

We have calculated the total preliminary plat fee based upon the City of Livingston's Planning Fee Schedule. Please review the fee breakdown below.

Preliminary Plat fee estimate:

Major Subdivision Fixed Fee	\$ 800.00
Lot Fee, \$40/lot x 39	\$ 1,560.00
<u></u>	Total: \$ 2,360.00

Once the total fee amount is confirmed by you, we will provide the appropriate payment. Please let me know if you have any questions or need additional information. Feel free to contact me at 406/922-4311 or cnaumann@sandersonstewart.com.

Sincerely,

Chris Naumann Associate | Senior Planner Sanderson Stewart 106 East Babcock Street Suite L1 Bozeman MT 59715 <u>cnaumann@sandersonstewart.com</u> 406-922-4311 (d) 406-570-5758 (m)





Billings Bozeman Denver Fort Collins

July 1, 2022 Project No. 18005.05

MOUNTAIN VIEW MAJOR SUBDIVISION PRELIMINARY PLAT APPLICATION APPLICATION NARRATIVE

INTRODUCTION

On behalf of Livingston West, LLC, Sanderson Stewart is submitting this Preliminary Plat Application for the proposed Mountain View Subdivision. This highway commercial subdivision is within the City of Livingston. The project would create 38 lots, public right-of-way, and open space totaling approximately 64 acres. These new lots would be served by the City of Livingston water and sanitary sewer systems.

The subdivision will be accessed from Highway 10 via PFL Way and Antelope Drive. It is generally located on Section 22 of Township 02 South Range 09 East. See Figure 1: Vicinity Map.

SITE LOCATION

Mountain View Subdivision is located on 64.241 acres of land to the east of the interchange of Interstate 90 and Highway 10. More specifically, the project is located on Parcel 1-A of C.O.S. 2748RB and Parcel 2-A of C.O.S 2621RB, situated in the NW ¹/₄ of Section 22, Township 02 South, and Range 09 East in the City of Livingston, Park County, Montana. See Figure 1: Vicinity Map.

EXISTING CONDITIONS

Structures

There is one existing building (approximately 110,000 GSF) with an associated parking lot (approximately 300 spaces) present within the new subdivision boundaries on parcel 2-A of C.O.S 2621 RB. This building is the Printing for Less (PFL) manufacturing facility owned by PrintingForLess.com, Inc. Although not included in the proposed Mountain View Subdivision, a new FedEx distribution facility (approximately 20,500 GSF) and its associated site improvements are currently under construction on the adjacent parcel (Parcel 3-A1 of C.O.S. 2748 RB). The footprints

of the existing and under-construction buildings can be seen in Figure 2: Overall Development Plan.

Public Infrastructure

There is approximately 550 LF of Antelope Drive currently paved, and 1,430 LF of Antelope Drive under construction in the subdivision. There is also approximately 550 LF of a 10-inch public sewer main that follows the existing roadway. In addition, a 10-inch public sewer main is currently under construction that follows the roadway along its entire length, continuing to the southeast where the sewer main leaves the subdivision. There is approximately 550 LF of a 12-inch public water main that follows the existing roadway. A 12-inch public water main is also under construction and will follow the new roadway within the subdivision with the associated water services, valves, and hydrants. Storm drainage is generally collected in the roadway gutters and conveyed through storm drainage infrastructure to a temporary on-site detention pond located at the end of Antelope Drive. Once the extension of Antelope drive occurs, this temporary detention pond will be relocated to the southeast corner of the subdivision. All existing public infrastructure is shown on the Civil Engineering Plans and the Preliminary Plat.

Private Utilities

There is an existing overhead power line with a 30' wide easement at the southern corner of the subdivision. In addition, there are several underground utility lines with 10' easements running through multiple lots of the subdivision. All existing private utility easements are shown on the Civil Engineering Plans and the Preliminary Plat.

Private Utility Easement

There are two existing 20' underground electric easements shown on the existing Certificates of Survey with "exact location undetermined". One is on Tract 3-A1 of COS 2748RB per Recorded Document No. 426785 and the other is on Tract 2-A of COS 2621RB per Recorded Document Nos. 333214 and 406962. It is the intent of the applicant to either vacate (if no in use) or exactly locate both easements prior to Final Plat.

There is one existing 60' public access and utility easement shown on Tract 1-A of COS 2748RB and proposed Mountain View Subdivision Lot 3 per Roll 219, Page 1501 and Roll 223, Page 56 as originally located on COS 1941. It is the intent of the applicant to verify this easement is no longer in use and vacate the easement prior to Final Plat.

Vacant Land

Except for the PFL facility, the remainder of the proposed subdivision is undeveloped. The land is primarily characterized by rolling hills and grassland, with a large wetland area located in the northeast quadrant of the subdivision and steeper hill areas located in the southeast corner of the subdivision.

ZONING & LAND USE

Highway Commercial

The two tracts seeking subdivision are currently zoned as Highway Commercial within the City of Livingston city limits. Therefore, all the proposed subdivision lots are subject to the Highway Commercial zoning designation. Highway Commercial is defined by the City of Livingston as:

"a district intended to provide areas for residential structures, commercial and service enterprises which serve the needs of the tourist, traveler, recreationalist or the general traveling public. Areas designated as Highway Commercial should be located in the vicinity of freeway interchanges, intersections on limited access highways, or adjacent to primary and secondary highways."

Future development within Mountain View subdivision will be required to meet the Highway Commercial zoning requirements. Zoning designations can be seen on Figure 1: Vicinity Map.

OVERALL DEVELOPMENT PLAN

General Description

There is no master development plan for the Mountain View subdivision regarding how the new subdivided lots will be developed in the future. All future lot developments will be subject to the Highway Commercial zoning requirements and submitted for formal site plan review and approval.

Current Ownership

The current ownership of the land comprising the proposed Mountain View Subdivision is shown on Figure 2: Overall Development Plan. Livingston West LLC currently owns proposed Lots 1 - 28. Printingforless.com INC currently owns proposed Lots 29 - 39. The following adjacent tracts are not included in the proposed subdivision COS 1119, COS 370, and COS 2748RB.

Lot Layout

Mountain View Subdivision will be subdivided into 39 lots that will range from 0.26 acres to 11.6 acres with most of the lots being between 0.5 and 1.5 acres. One of those lots will be PFL's existing facilities with a land area of 11.009 acres. Two of the lots, totaling approximately 18 acres, will be designated as open space. The remaining lots will range from 0.270 acres to 1.230 acres and will be intended for both commercial and residential development.

Final Plat Phasing

The subdivision will be final platted in three phases. The first final plat phase will consist of lots 2-17 and 39, phase two will consist of lots 1, 18-28, and phase three will consist of lots 29-38. The lot layout and phasing can be seen in Figure 2: Overall Development Plan and the Preliminary Plat.

Open Space

Lots 2 and 25, for a combined acreage of approximately 18 acres, will be designated as open space. Lot 2 is in the northeast corner of the subdivision and include a substantial amount of wetland area. Lot 25 is in the southeastern corner of subdivision and primarily consists of hilly grassland. The maximum required residential open space for the subdivision would be less than 4 acres. The proposed open space lots can be seen in Figure 2: Overall Development Plan and on the Preliminary Plat.

GRADING & DRAINAGE PLAN

General Description

The roadway extensions will generally follow the existing drainage patterns and slope towards the southeast to the existing wetlands. Roadways will be sloped to drain to the associated gutters and conveyed through storm drainage infrastructure toward the proposed detention pond. The proposed lots will drain towards the new streets and will be conveyed along swales following the proposed roadways. These swales will convey the runoff towards the proposed detention pond. As development occurs on the lots, the swales will be filled as the developments will be required to mitigate runoff within their site. The new detention basin at the end of the asphalt cul-de-sac at PFL Way will be sized to store and convey the pre-development peak flows from each of the lots. The proposed grading and drainage are shown on the Civil Engineering Plans. For more drainage information see Appendix A: Preliminary Stormwater Report.

PROPOSED SUBDIVISION IMPROVEMENTS

General Improvements

The proposed general improvements of the Mountain View Subdivision include streets, street signage, boulevards, sidewalks, and street lighting. All these improvements will be designed to meet the requirements established in the City of Livingston Public Works Design Standards and Specifications Policy including the corresponding Modifications to Montana Public Works Standards. As such all sidewalks will be ADA compliant and all street lighting will meet the requirements of the Night Sky Protection Act. All the proposed subdivision improvements are listed in Appendix C: Subdivision Improvements.

Streets

The proposed street improvements for the Mountain View Subdivision includes a 1,100 LF extension of Antelope Drive, a 740 LF extension of PFL Way, and an additional 320 LF roadway (Street A) to provide access to the remaining lots within the subdivision. The proposed street improvements are shown on the Civil Engineering Plans and the Preliminary Plat.

Stormwater

A preliminary drainage report summarizing the design of the future stormwater system associated with the Mountain View Major Subdivision is provided in Appendix A: Preliminary Stormwater Report. The report presents a summary of calculations performed to quantify the necessary storm drainage improvements. The storm drain system will be designed to meet the requirements in The City of Livingston Design Standards and Specification Policy (DSSP) of February 2021. There will be one (1) stormwater detention pond in the southeast portion of the subdivision to treat runoff from the street network. There will be one (1) stormwater detention pond near Highway 10 to treat existing predevelopment storm flows from Jesson property to the west northwest. The proposed stormwater facility easements are shown on the Civil Engineering Plans and the Preliminary Plat. For more stormwater information see Appendix A: Preliminary Stormwater Report.

Sewer & Water

A preliminary report summarizing the design of the future sanitary sewer and water main installations associated with the Mountain View Major Subdivision is provided in Appendix B: Preliminary Sewer & Water Report. The project will extend sanitary sewer and water, as well as provide water service stubs and sanitary stubs to serve future developments within a portion of the subdivision. The provided report summarizes the water and sewer main design and capacity calculations for the water and sewer services to the future development. Utility improvements for the subdivision include approximately 340-feet of 8-inch PVC sewer line, and three (3) 48-inch sanitary sewer manholes. The main will tie-in to an existing sanitary 10inch sewer main at Antelope Drive with a sanitary sewer manhole connection. The proposed water system consists of approximately 340-LF of new 8-inch diameter PVC water main, water services, valves, and hydrant as shown on the plans. The proposed 8-inch diameter main will tie-in to an existing 12-inch water main at Antelope Drive with a 12" x 12" x 8" tee. The proposed public utilities are shown on the Civil Engineering Plans and Preliminary Plat. For more water and sewer information see Appendix B: Preliminary Sewer and Water Report.

DRC ADDITIONAL INFORMATION

Potential Alley Access

Due to the proposed small lot layout of this subdivision and the lack of a land use development plan, the applicability of alleyways cannot be determined at this time. If multiple lots were used for a single development a common drive and/or alleyways could be incorporated into the design.

Active Transportation

At request of the City of Livingston's Building and Planning Director, Jim Woodhull, active transportation and transit facilities are conceptually proposed in the Mountain View Subdivision plan. A future bus route is anticipated to circumnavigate the subdivision along Antelope Drive and PFL Way to serve the transportation needs of PFL, FedEx, and any future development within the subdivision. There will be multiple bus stops along the route on Antelope Drive and one bus shelter on PFL Way. Shared use paths designed for bikers and pedestrians will be located along the north and south sides of Highway 10 and will extend into Mountain View Subdivision along PFL Way. Sidewalks will border all new streets in the subdivision to complete the pedestrian network. A natural surface trail will also extend into Lot 2 to access the wetlands and open space. These multimodal facilities can be seen in Figure 5: Active Transportation Plan.

Traffic Trip Generation

At request of the City of Livingston's Building and Planning Director, Jim Woodhull, a preliminary traffic trip generation analysis was produced for the proposed Mountain View subdivision. The analysis concluded:

"Projected queuing during the PM peak hour at the West Park Street/Hwy 10/North 7th Street intersection stretches to North 6th Street on the north leg, through the North 8th Street intersection on the south leg, and past the U-Haul access driveway on Highway 10 (west leg). Queues on West Park Street are the same both with and without trips from the proposed Mountain View Subdivision, and do not reach any other signalized intersections. With the addition of Mountain View Subdivision trips, approximately 6 vehicles are projected to be added to the eastbound queue during the PM peak hour, with 3 vehicles added during the AM peak hour. A maximum of two vehicles are projected to be added to existing queues at the West Park Street/North 5th Street intersection during both peak hours."

The complete analysis is included in Appendix D: Traffic Trip Generation Analysis

PUBLIC AGENCY REVIEW

At request of the City of Livingston's Building and Planning Director, Jim Woodhull, formal letters were sent to three public agencies to solicit their review and comments on the proposed Mountain View Subdivision. The three public agencies included Montana Department of Transportation, Montana Fish, Wildlife, and Parks, and the State Historic Preservation Officer. These letters and any received comments are included as Appendix F: Public Agency Review.

PRIVATE SERVICE PROVIDER REVIEW

Letters were sent to four private service providers to solicit their review and comments on the proposed Mountain View Subdivision on request of the City of Livingston's Building and Planning Director, Jim Woodhull. The four service providers included NorthWestern Energy, Park Electric Cooperative, CenturyLink, and the United States Postal Service. These letters and any received comments are included as Appendix G: Private Service Provider Review.

SUMMARY OF PROBABLE IMPACTS & MITIGATION

As required by the City of Livingston Subdivision Regulations Section III B-6 this application includes a summary of probable impact. The impacts addressed include Agriculture, Ag Water, Local Services, Natural Environment, Wildlife & Habitat, and Public Health & Human Safety.

1. IMPACTS ON AGRICULTURE

A. Would the subdivision remove agricultural or timberlands with significant existing or potential production capacity?

There are no current agricultural or timberland resources on this site.

B. Would the subdivision remove from production agricultural lands that are critical to the area's agricultural operations?

There is no agricultural production on this site now or in the past. There are no agricultural water user facilities on this site.

C. Would the subdivision create significant conflict with nearby agricultural operations (e.g. creating problems for moving livestock, operating farm machinery, maintaining water supplies, controlling weeds, applying pesticides or would the subdivision generate nuisance complaints due to nearby agricultural operations)?

The proposed subdivision would not create conflicts with nearby agricultural operations.

2. IMPACT ON AGRICULTURAL WATER USER FACILITIES

A. Would the subdivision create a significant conflict with agricultural water user facilities (e.g. creating problems for operating and maintaining irrigation systems or creating nuisance complaints due to safety concerns, noise, etc.)?

The subdivision would not create conflicts with agricultural water user facilities.

3. IMPACT ON LOCAL SERVICES

- A. What additional or expanded public services and facilities would be demanded to serve this subdivision?
 - i. What additional costs would result for services such as streets, law enforcement, parks and recreation, fire protection, water, sewer and solid waste, schools and busing (including additional personnel, equipment, construction, and maintenance costs)?

Public infrastructure is to be installed and paid for by private parties. Once dedicated to the City, maintenance requirements would fall upon the City of Livingston. Public infrastructure will include streets, street lighting, sidewalks, water mains, sewer mains and stormwater mains and ponds. See Appendix C: Subdivision Improvements for more detailed information.

ii. Who would bear these costs?

The materials and installation will be covered by the developer. Operations and maintenance costs would be covered by the City of Livingston.

iii. Can the service providers meet the additional costs given legal and other constraints?

The additional maintenance costs will be covered by the new additional tax revenue as the development builds out.

B. Would the subdivision allow existing services, through expanded use, to operate more efficiently or make the installation or improvement of services feasible?

The new sewer and water mains are designed to accommodate future development to the northwest and to be tied into the City's long term expansion plans to connect to the City's large tank reservoir to the north.

C. What are the present tax revenues received from the unsubdivided land by the County, City and Schools?

The current tax bills for these properties include a substantial amount of building square footage for the PFL.com building. The total current property tax bill is \$160,824.47.

D. What would be the approximate revenues received by each above taxing authority when the subdivision is improved and built upon?

At final plat, it is estimated that each lot would have an average market value of \$300,000. The new lots would have a taxable value of approximately \$9,900,000 without additional building development. The total taxable value of the property would be derived by multiplying the market value by the tax rate of 1.35% (value obtained from the State of Montana for 2021) then utilizing the current mill rate of 0.58606 for the City of Livingston, which would result in a potential new additional revenue generated for 2023 of \$78,326.92 for just the land. Once buildings are constructed this amount would increase substantially based on the size of the buildings.

E. Would new taxes generated from the subdivision cover additional public costs?

Yes.

i. Would any special improvement districts be created which would obligate the City fiscally or administratively?

There is currently a TIF District on this property that is scheduled to expire 2024. The current amount in the TIF will be used to cover a small amount of the new sewer and water development costs.

F. Other Impacts on Local Services—Water Rights

Regarding the disclosure and disposition of water rights as required by 76-3-504, the current property and property owners, thus subdividers, do not own any surface water rights.

4. IMPACT ON NATURAL ENVIRONMENT

A. How would the subdivision affect surface and groundwater, soils, slopes, vegetation, historical or archaeological features, and visual features within the subdivision or on adjacent lands?

i. Would any streambanks be altered, streams rechanneled or any surface water contaminated from run-off carrying sedimentation or other pollutants?

There are no streams on the proposed subdivision. Road drainage in the subdivision will be controlled by paved streets with concrete curb and gutter. Storm runoff will be collected by the gutters and transported to stormwater inlets. From the inlets, the stormwater will be conveyed to onsite stormwater detention ponds. Erosion of the road will be prevented due to the impervious paved surface. Erosion of the nonpaved right-of-way areas impacted during construction will be mitigated through reseeding affected areas after construction is complete. All phases of construction (public infrastructure and private development) will require DEQ Stormwater Pollution Prevention Plans to be approved and administered.

ii. Would groundwater supplies likely be contaminated or depleted as a result of the subdivision?

Groundwater supplies would not be depleted as of the proposed lots will be connected to City of Livingston water mains. Contamination of groundwater is not expected with the uses allowed by Highway Commercial zoning and applicable City and DEQ water quality regulations.

iii. Would construction of streets or building sites result in excessive cuts and fills on steep slopes or cause erosion on unstable soils?

Grading in areas that will be affected during construction will be done as to not adversely affect adjacent lands with stormwater runoff from the subdivision. The stormwater management plan for the subdivision has been designed in accordance with the standards of the City of Livingston and the Montana Department of Environmental Quality Design Circular DEQ-8.

iv. Would significant vegetation be removed causing soil erosion or bank instability?

The soils located within the proposed subdivision are lean clay with sand and clayey sand. Historically, the area receives between 14 and 16 inches of rain per year. The effect on native dryland vegetation will be limited to the developed areas. Revegetation of affected areas will be done as development occurs.

v. Would significant historical or archaeological features be damaged or destroyed by the subdivision?

The State Historical Preservation Office reviewed the proposed subdivision and concluded:

"Based on previous survey within the project area we feel that there is a low likelihood cultural properties will be impacted. We, therefore, feel that a recommendation for a cultural resource inventory is unwarranted at this time."

The full response from the State Historical Preservation Office and a cultural assessment from 2004 prior to the construction of the Printing for Less building are provided in Appendix F: Public Agency Review.

vi. Would the subdivision be subject to natural hazards such as flooding, rock, snow or land slides, high winds, severe wildfires or difficulties such as shallow bedrock, high water table, unstable or expansive soils, or excessive slopes?

The subdivision is not located within a floodplain. The nearest floodplain designation is along Billman Creek south of Interstate 90 and poses no hazard to the proposed subdivision.

The subject area is does not have a history of rock, snow, or landslides.

All the structures built in the subdivision will conform to building standards which will prevent hazards caused by high winds that frequently occur in the area.

Wildfire in the area is not a high risk due to the lack of fuel and the availability of fire protection in the subdivision.

The geotechnical work performed in May 2021 by Terracon Consultants, Inc. for the FedEx project currently being constructed by Ruedebusch Development & Construction identified soil depths ranging between 8 and 21 feet and water depths ranging from 6 to 15 feet below existing site grades.

The soils on the site are typical of the area and predominantly lean clay with sand. This soil type is not characterized as unstable or expansive in nature.

Although moderately steep in areas, the topography of the site is not conducive to snow or rockslides. There are no excessive slopes on the property that may be a potential hazard.

vii. Other Natural Environment Impacts—Weed Management Plan

Mountain View subdivision will comply with Park County Weed Control District requirements. Following preliminary plat approval, a weed management plan application and 3-year monitoring contract will be submitted to the district and a noxious weed management plan will be developed with the Park County Weed Control Board. The subdivision will abide by the Montana County Weed Act (Title 7, Chapter 22, Sections 7-22-2101 through 7-22-2153).

5. IMPACTS ON WILDLIFE AND HABITAT

A. How would the subdivision affect critical wildlife areas such as big game wintering range, migration routes, nesting areas, wetlands or other important habitat?

The proposed subdivision contains wetland areas, as shown on the preliminary plat, that will be protected during and after construction of the subdivision, or appropriate steps will be taken to minimize any disturbance. A wetland study was conducted by Sundog Ecological, Inc. and is contained in Appendix E: Wetland Delineation Report. This study delineates the wetland and surface water areas that exist on the development. Effects on the quality and quantity of wetland and surface water will be mitigated by designing around these areas to the greatest extent possible.

The proposed subdivision has not been previously formally identified as big game wintering range or migration routes. The applicant has solicited comments from Montana Fish Wildlife and Parks, but none have been received at this time. See Appendix F: Public Agency Review for agency request for review documentation.

B. How would pets or human activity affect wildlife?

Pets and their owners will have access to the subdivision's private property, public sidewalks, any future trails, and the proposed open spaces. It is suggested that pets be kept on leashes while in these areas. Wildlife will continue to be allowed access to proposed open spaces totally approximately 20 acres.

6. IMPACTS ON PUBLIC HEALTH AND SAFETY

A. Would the subdivision be subject to hazardous conditions due to high voltage lines, airports, highways, railroads, high-pressure gas lines, or adjacent industrial uses?

The proposed Mountain View Subdivision Lots 12 - 23, and 25 are adjacent to the Montana Department of Transportation (MDT) Right of Way for Interstate 90. The proposed subdivision Lots 2 - 11 are adjacent to MDT Right of Way for State Highway 10. The proposed subdivision Lots 2 - 5 are approximately 500 feet from the Montana Rail Link railroad tracks to the north of Highway 10. Despite the proximity of the proposed subdivision to the infrastructure referenced above, and because all the applicable setbacks are in place, the proposed Mountain View Subdivision would not be subject to hazardous conditions due to the adjacent infrastructure.

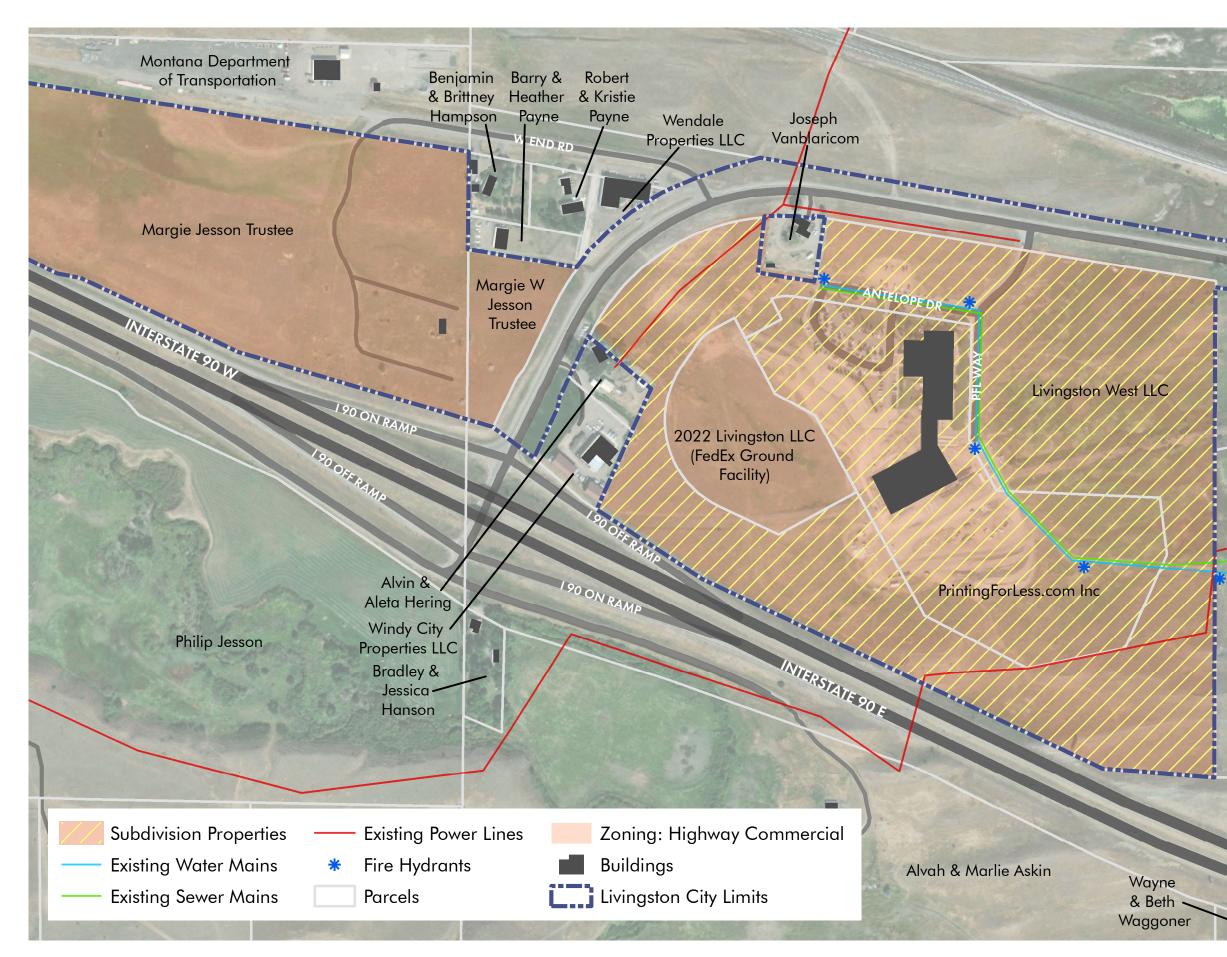
The proposed subdivision includes the Printing for Less facility and is adjacent to the FedEx Ground facility which is currently under construction. These light industrial uses do not pose any hazardous conditions and have been constructed and will operate in accordance with the City of Livingston regulations that mitigate any hazards including noise.

B. What existing uses may be subject to complaints from residents of the subdivision?

In theory any of the existing uses, public and private, may be subject to complaints from tenants or users of the proposed subdivision. The uses of potential concern, such as the highways and railroad, predate any development in the area and the characteristics of these uses are generally recognized and accepted.

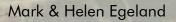
C. What public health or safety hazards, such as dangerous traffic or fire conditions, would be created by the subdivision?

The Mountain View Subdivision will not create any public health or safety hazards.



June 13, 2022 SANDERSONSTEWART

Mountain View Subdivision: Vicinity Map



Chana Montana Real Estate Holdings LLC

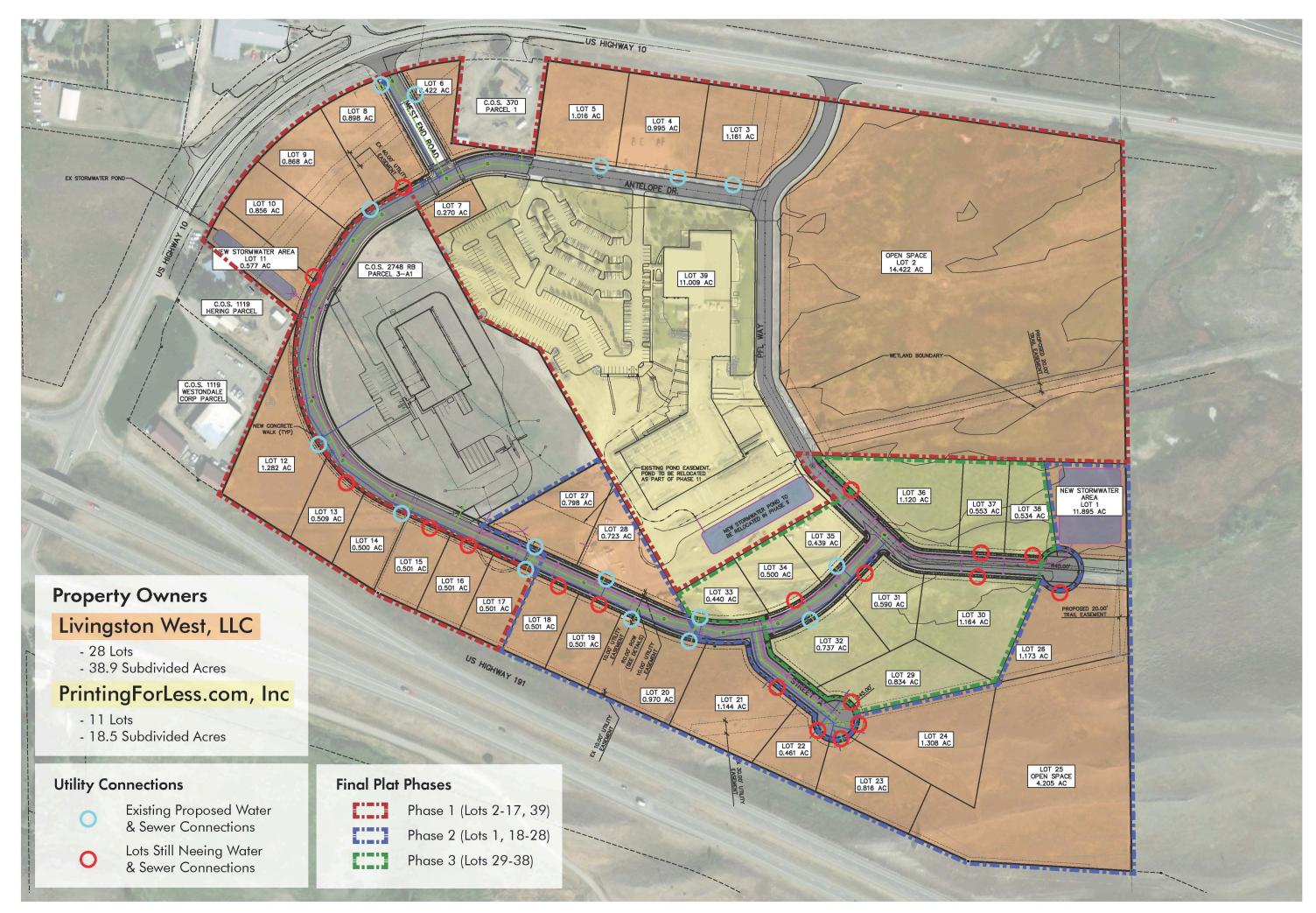
Michael Adams



250



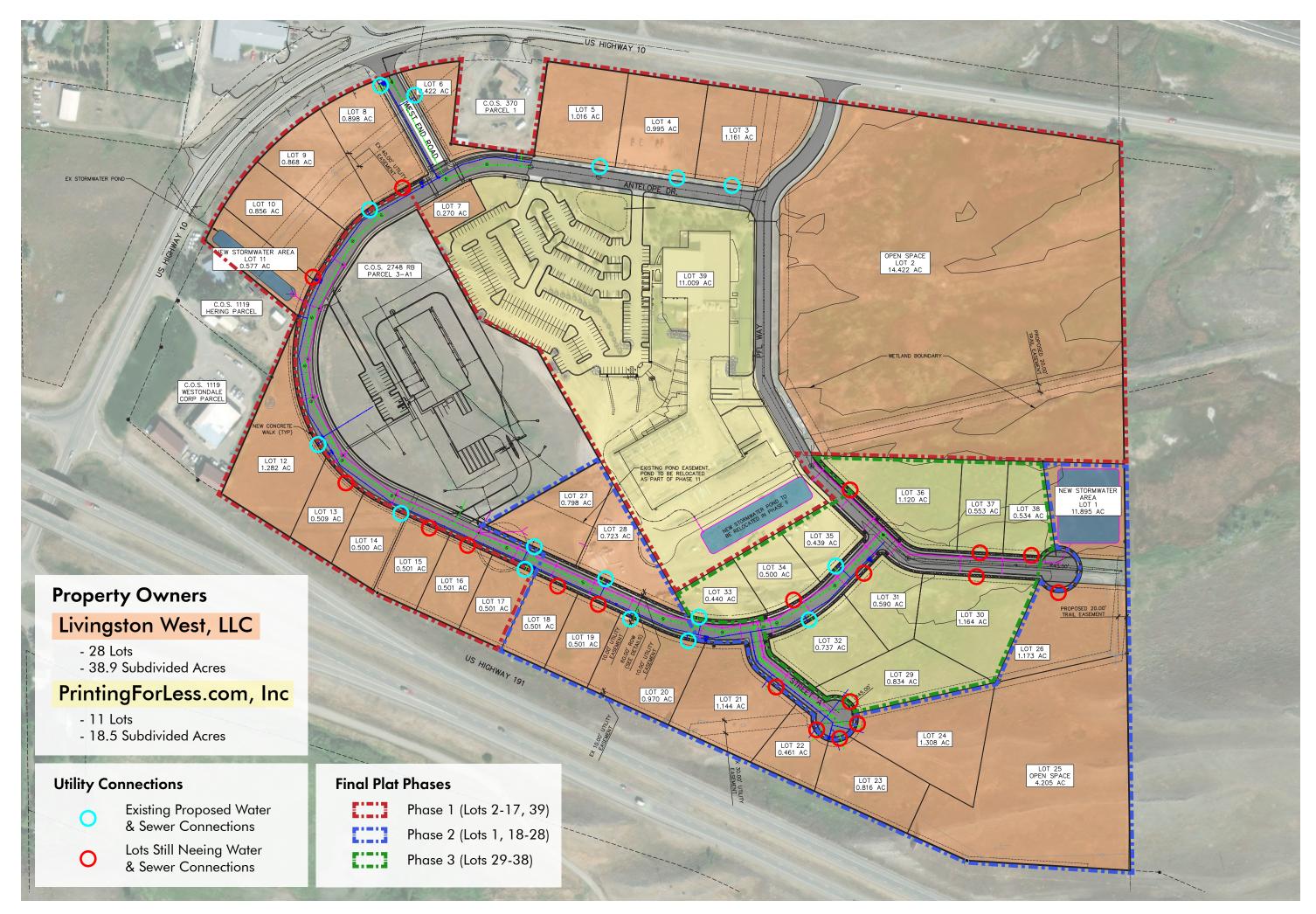






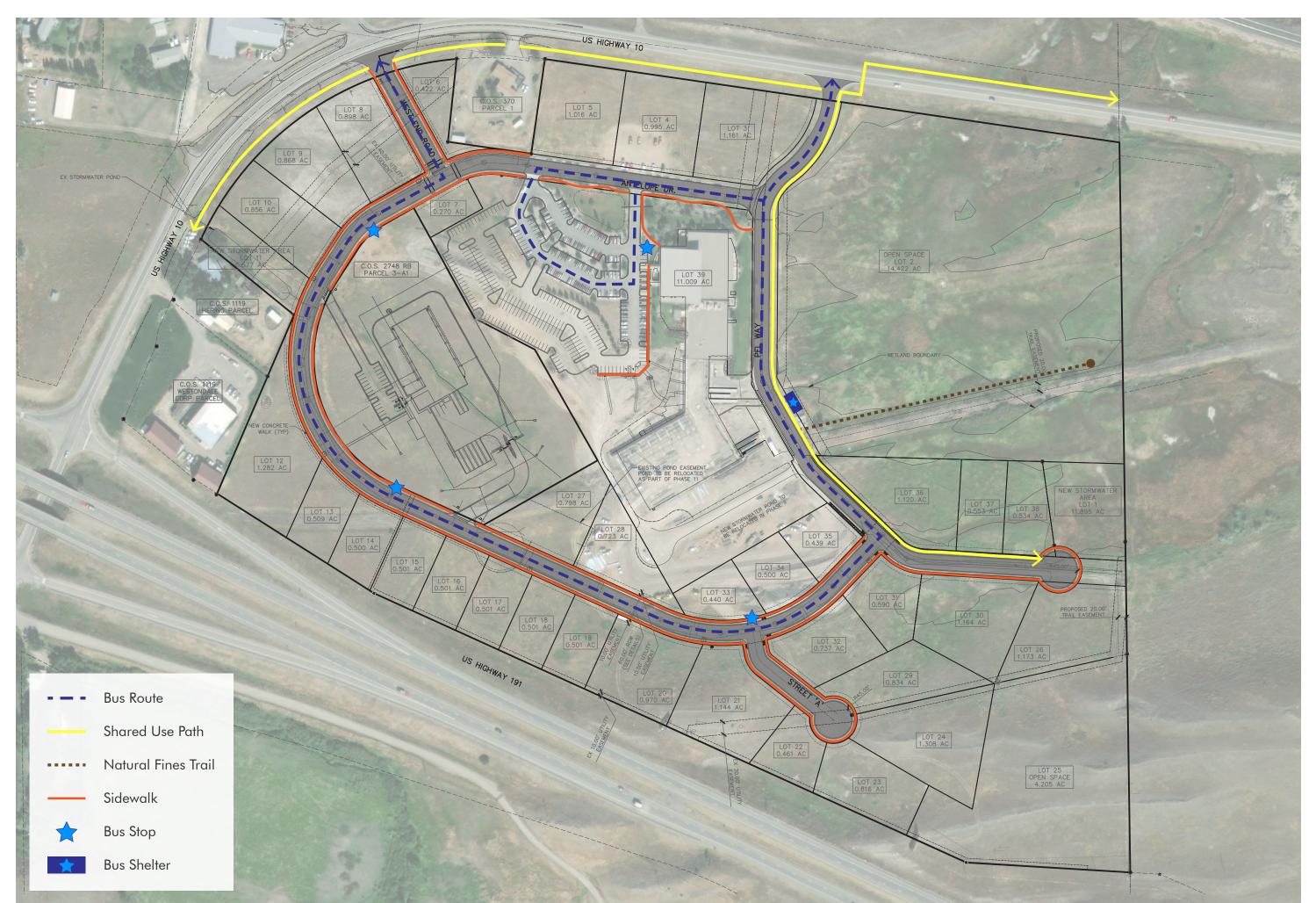
Enduring Community Design

MOUNTAIN VIEW SUBDIVISION OVERALL DEVELOPMENT PLAN





MOUNTAIN VIEW SUBDIVISION OVERALL DEVELOPMENT PLAN



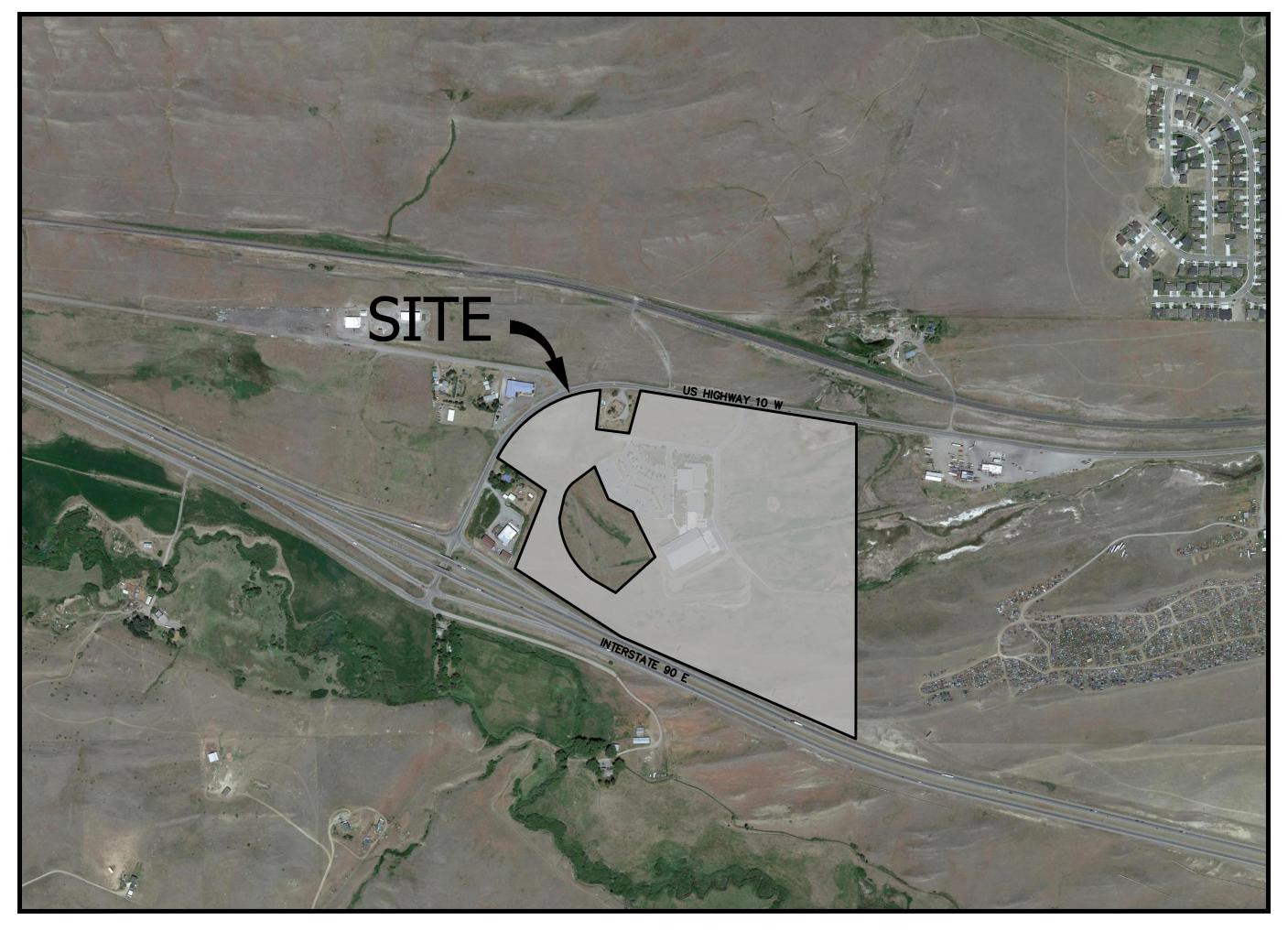


Enduring Community Design

MOUNTAIN VIEW SUBDIVISION ACTIVE TRANSPORTATION CIRCULATION

MOUNTAIN VIEW SUBDIVISION PROPOSED SITE & UTILITY IMPROVEMENTS FOR TRACT 1-A OF COS 2748RB & TRACT 2-A OF COS 2621RB LIVINGSTON, MONTANA

PREPARED FOR: LIVINGSTON WEST, LLC **100 PFL WAY** LIVINGSTON, MT 59047





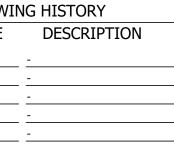


Sheet	Title	
C1.1	COVER	1
C1.2	LEGEND, NOTES & ABBREVIATIONS	2
C2.1	EXISTING SITE & DEMOLITION PLAN	3
C3.1	SITE PLAN	4
C4.1	UTILITY PLAN	5
C5.1	GRADING & STORM DRAINAGE PLAN	6
C6.1	DETAILS	7

FILE:	DRAW
FILE.	DATE
18005_05_COVER_PROD.DWG	DAIL
	-
PROJECT NO:	
	-
18005.05	-
CAD:	-
NAH	-
QUALITY ASSURANCE:	-
QUALTI ASSONANCE.	-

106 East Babcock, Suite L1

Bozeman, Montana 59715





Enduring Community Design

C1.1

406.522.9876

sandersonstewart.com

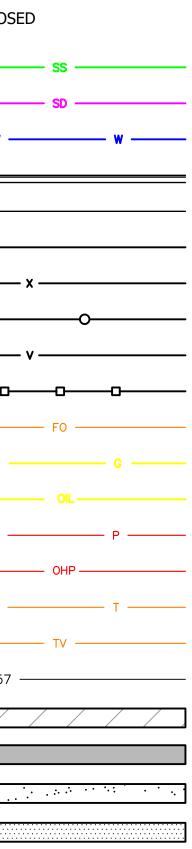
	LINETYPES	
	EXISTING	PROPOS
SANITARY SEWER	SS SS	ss
STORM DRAIN	SD SD	SD
WATER	w w	w w -
CURB AND GUTTER		
EDGE OF ASPHALT	EDGEOFEX_ASPHALT	
EDGE OF GRAVEL		
FENCE - BARBWIRE	X X	x
FENCE - CHAINLINK/ WOVEN WIRE	OO	oo
FENCE - VINYL	V V	v
FENCE - WOOD		<u> </u>
FIBER OPTIC	FO FO	FO
GAS PIPELINE	G G G	G G -
OIL PIPELINE	OIL OIL	OIL
UNDERGROUND POWER	——————————————————————————————————————	———— P ———— P –
OVERHEAD POWER	OHP OHP	OHP
TELEPHONE	T T T	— T — T –
TELEVISION/CABLE	TV TV	TV
CONTOUR	3157	3157
DEMO AREA		
PROPOSED ASPHALT		
PROPOSED CONCRETE		
PROPOSED GRAVEL		

- PROPOSED WATER REDUCER
- EXISTING WATER VALVE
- PROPOSED WATER VALVE
- Q EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- #So EXISTING CURB STOP
- PROPOSED CURB STOP
- Image: mage: m
- \bigcirc WELL
- W EXISTING WATER MANHOLE

W WATER METER	
---------------	--

- H YARD HYDRANT
- (S) EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- © SANITARY SEWER CLEAN OUT
- EXISTING STORM DRAIN MANHOLE (D)
- PROPOSED STORM DRAIN MANHOLE
- EXISTING CATCH BASIN
- PROPOSED CATCH BASIN
- ROOF DRAIN RD
- TELEPHONE BOX

- TELEPHONE MAN
- TELEPHONE PED \Box
- \bigcirc COMMUNICATIO
- © COMMUNICATIONS PEDESTAL
- FIBER OPTIC PEDESTAL
- \bigcirc GAS MANHOLE **GAS METER**
- GAS WELL
- 🖄 GAS VALVE
- **EJB ELECTRIC JUNCTION BOX**
- E ELECTRIC PEDESTAL



AC = FINISHED GRADE AT ASPHALT

- BC = FINISHED GRADE AT BUILDING CORNER
- BRK = GRADE BREAK
- BFV = BUTTERFLY VALVE
- BVC = BEGIN VERTICAL CURVE
- CS = CURB STOP
- EA = FINISHED GRADE AT EDGE OF ASPHALT
- EC = FINISHED GRADE AT EDGE OF CONCRETE
- EVC = END VERTICAL CURVE
- EW = FINISHED GRADE AT EDGE OF WALK
- EX = APPROXIMATE EXISTING ELEVATION
- FL = FINISHED GRADE AT FLOWLINE
- FT = FEET
- FG = FINISHED GRADE
- GR = EXISTING GRADE AT GROUND
- GV = GATE VALVE
- HP = HIGH POINT
- LF = LINEAL FOOT
- LT = LEFT

KEYNOTE CALL OUT (#) (SEE KEYNOTE LEGEND)

SYMBOLS

NHOLE	
DESTAL	
ONS MANHOLE	

- P TRANSFORMER E POWER MANHOLE EM POWER METER -O- POWER POLE -----GUYWIRE LIGHT POLE ── SIGN 🖲 BOLLARD □ EXISTING MONUMENT BOX PROPOSED MONUMENT BOX IRR IRRIGATION BOX
- IRRIGATION VALVE
- G BUSH
- CONIFEROUS TREE ⋙
- 影 DECIDUOUS TREE
- $\langle \rangle$ SIGNAL POLE
 - FOUND CORNER MONUMENT AS NOTED
 - SET CORNER MONUMENT, REBAR WITH CAP
- \mathbf{O} BENCHMARK

Ο

- SECTION QUARTER CORNER
- (\mathcal{A}) SECTION CORNER

NOTE:

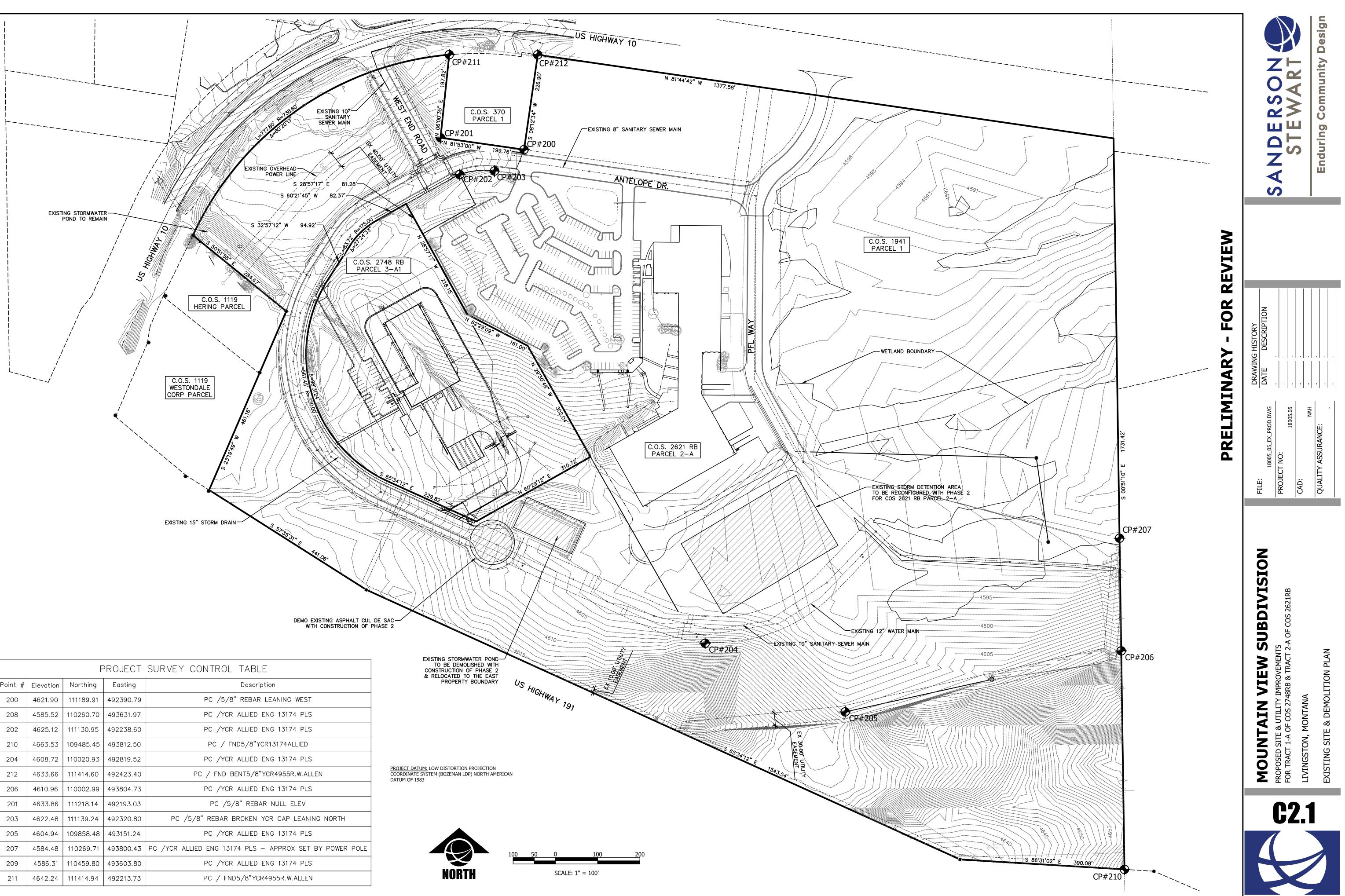
-EXISTING UNDERGROUND INSTALLATIONS & PRIVATE UTILITIES SHOWN ARE INDICATED ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OF SUCH INFORMATION. SERVICE LINES (WATER, POWER, GAS, STORM, SEWER, TELEPHONE & TELEVISION) MAY NOT BE STRAIGHT LINES OR AS INDICATED ON THE PLANS. STATE LAW REQUIRES CONTRACTOR TO CALL ALL UTILITY COMPANIES BEFORE EXCAVATION FOR EXACT LOCATIONS.

-ALL IMPROVEMENTS SHALL BE PERFORMED IN ACCORDANCE WITH MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS 6TH EDITION, APRIL, 2010, AND THE CITY OF LIVINGSTON STANDARD MODIFICATIONS, APPROVED MAY 2014.

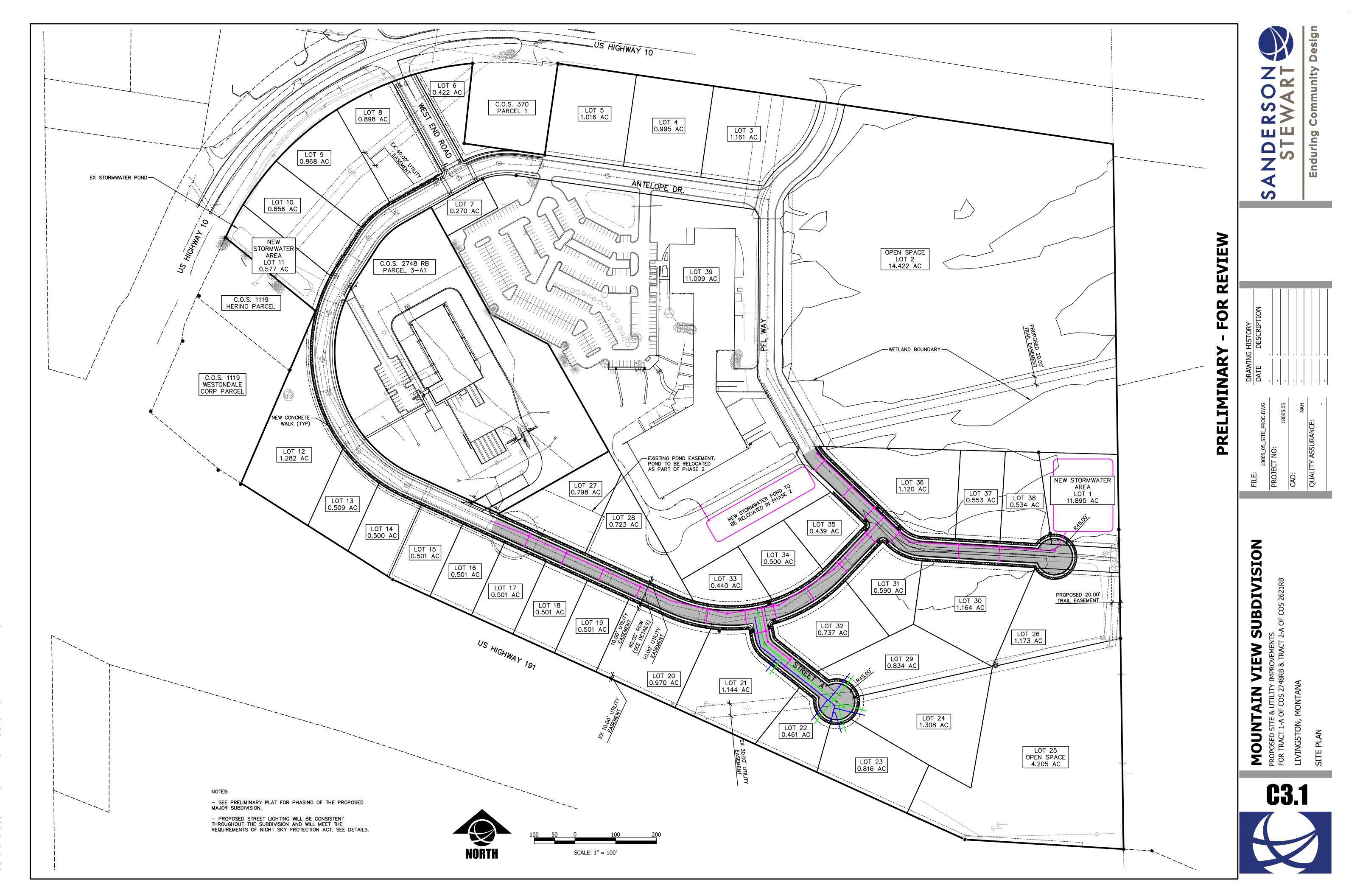
-UNLESS OTHERWISE SPECIFIED, ALL CONSTRUCTION LAYOUT AND STAKING SHALL BE PERFORMED UNDER THE RESPONSIBLE CHARGE OF A LAND SURVEYOR LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED AND BY A PARTY CHIEF OR ENGINEERING TECHNICIAN EXPERIENCED IN CONSTRUCTION LAYOUT AND STAKING TECHNIQUES AS ARE REQUIRED BY THE SPECIFIC TYPE OF WORK BEING PERFORMED.

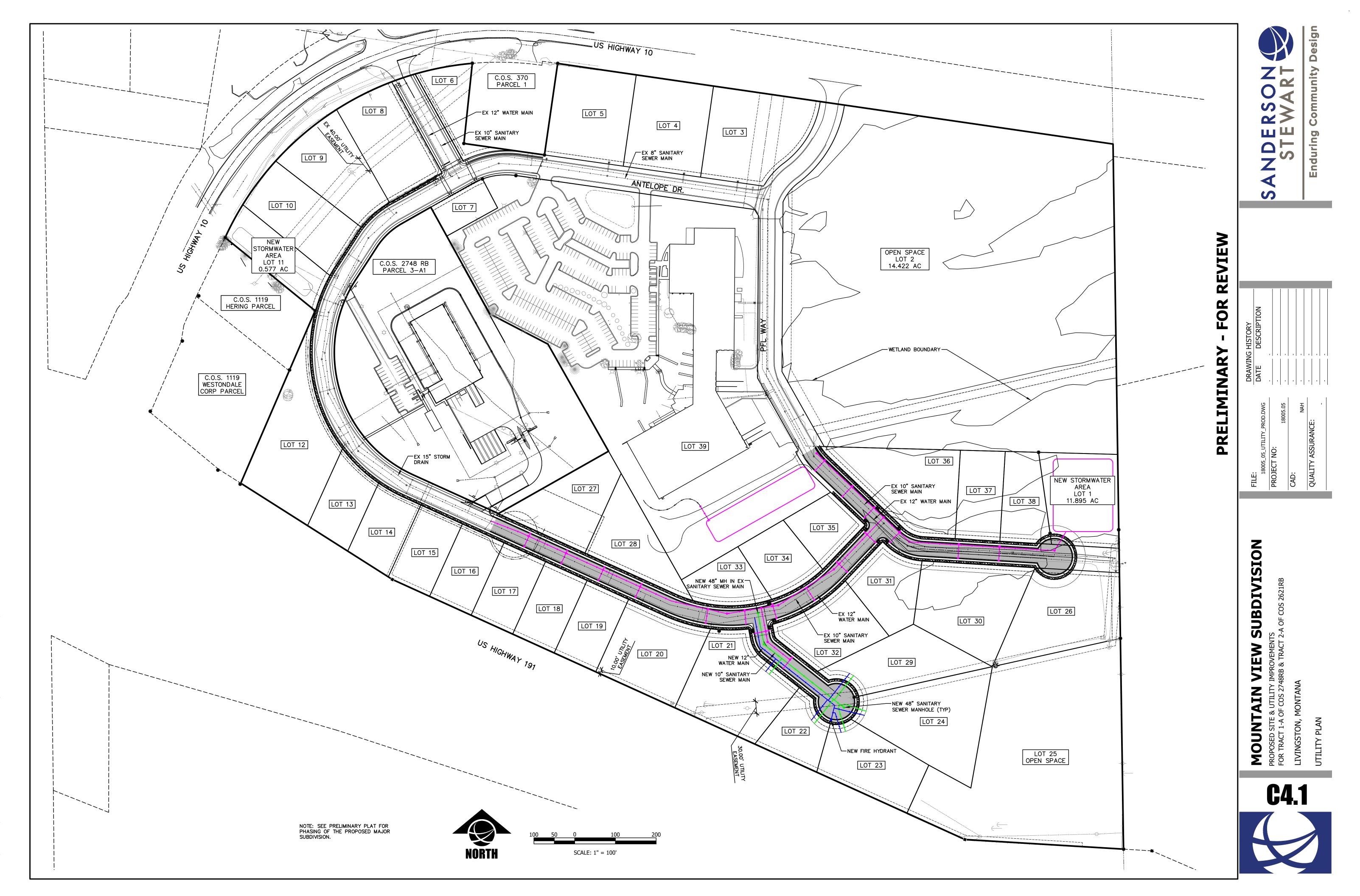
PC = POINT OF CURVATURE
PI = POINT OF INTERSECTION
POC = POINT ON CURVE
PRC = POINT OF REVERSE CURVE
PT = POINT OF TANGENCY
PVI = POINT OF VERTICAL INTERSECTION
RED = REDUCER
RT = RIGHT
SD = STORM DRAIN
SDI = STORM DRAIN INLET
SDMH = STORM DRAIN MANHOLE
SRVC = SERVICE
SS = SANITARY SEWER
SSMH = SANITARY SEWER MANHOLE
TC = FINISHED GRADE AT TOP BACK OF CURI
TW = FINISHED GRADE AT TOP OF WALL
WTR = WATER
(TYP.) = TYPICAL

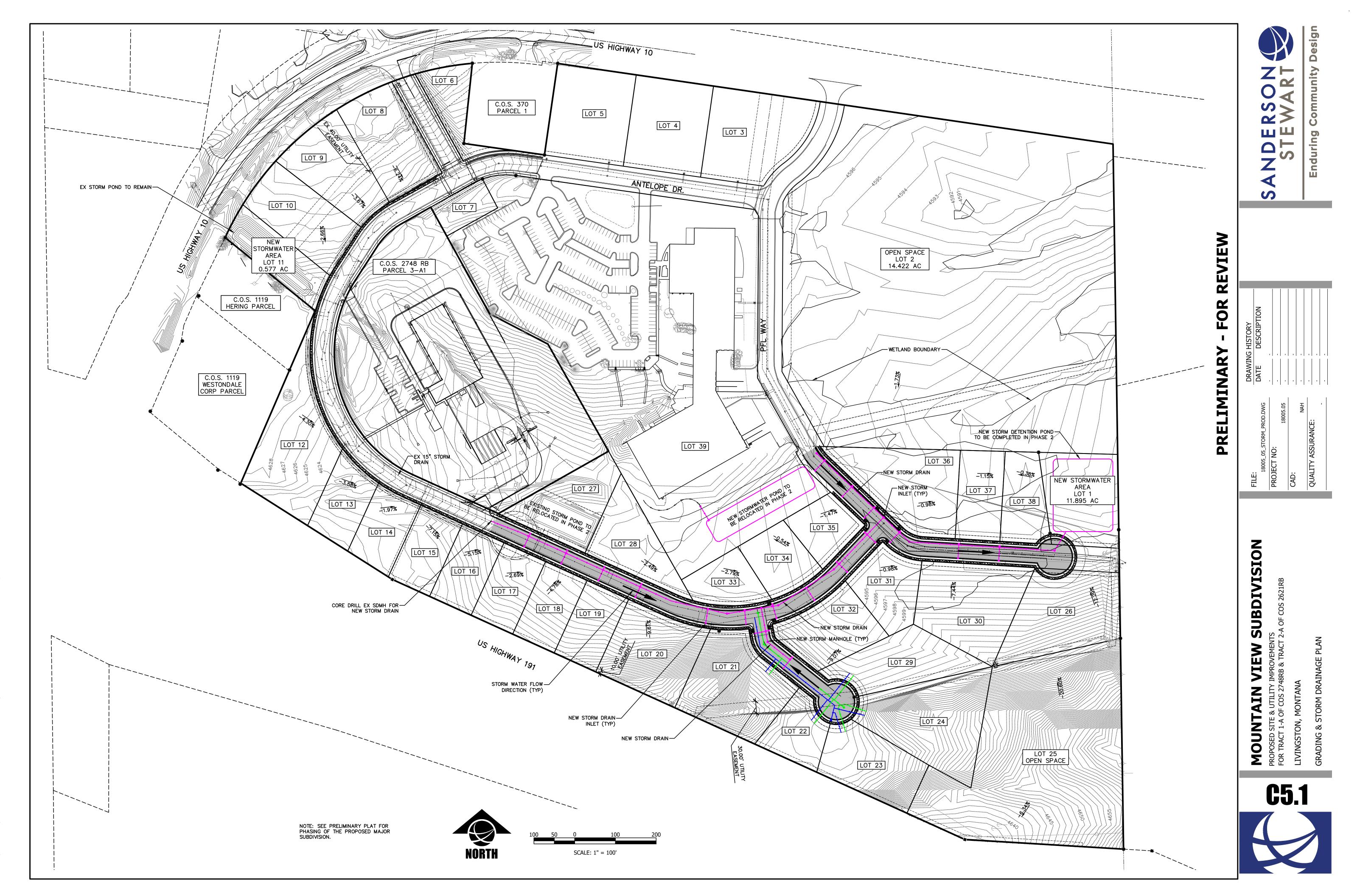
Ζ 2 Ο S 10 S 3 VIE K M Ŷ 0 L ΞĽ 2 IMINA ш PR PROJECT DUALIT Ē Ζ 0 S SUBDIV 8 ЦС E₹ æ Η >OUNTAIN MONTAN ∞ ŝ NOT LIVINGSTON, ACT Ď TR FOR Ž **C1.2**

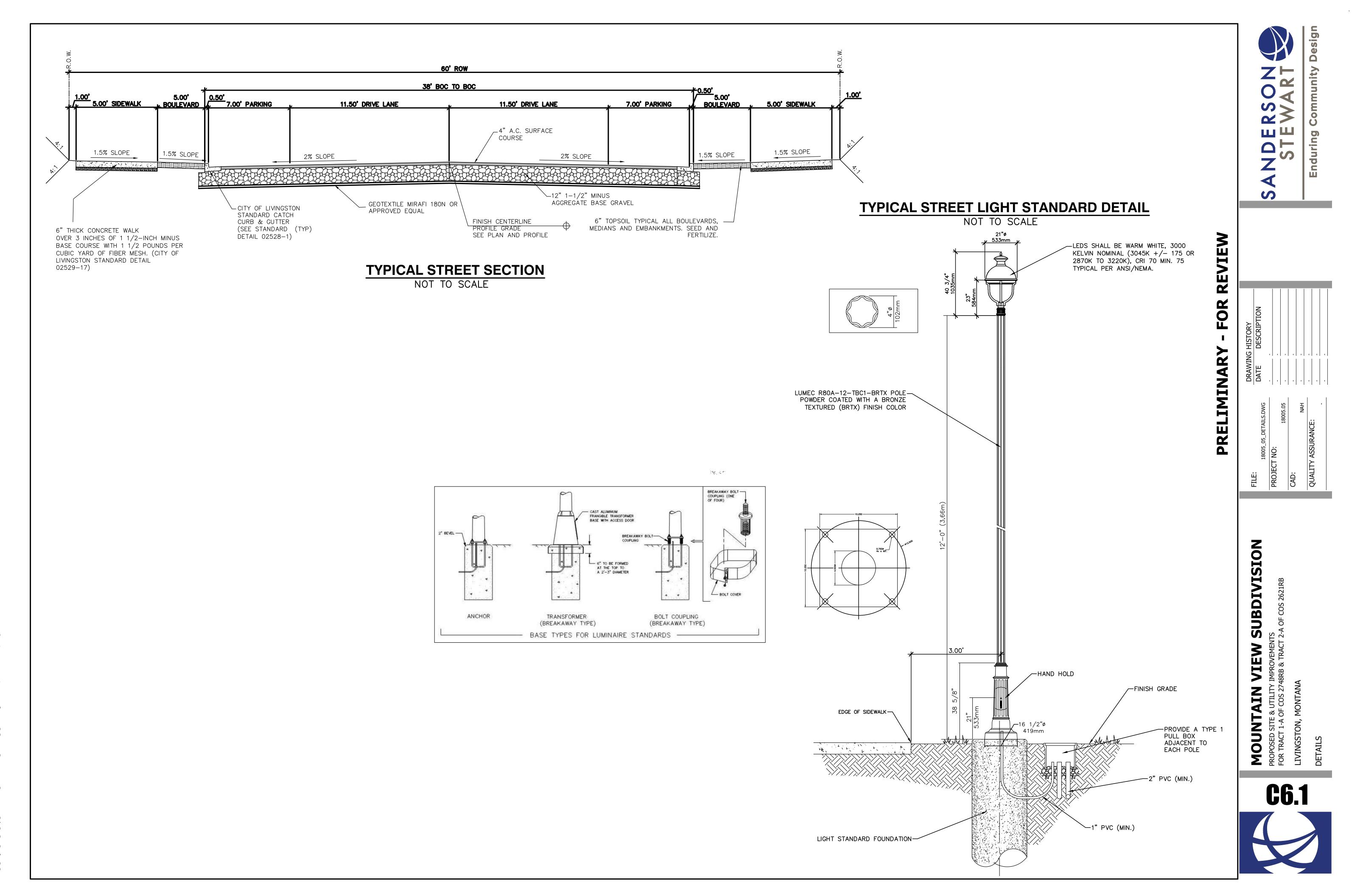


FROJECT SURVET CONTROL TABLE				
Point #	Elevation	Northing	Easting	Description
200	4621.90	111189.91	492390.79	PC /5/8" REBAR LEANING WEST
208	4585.52	110260.70	493631.97	PC /YCR ALLIED ENG 13174 PLS
202	4625.12	111130.95	492238.60	PC /YCR ALLIED ENG 13174 PLS
210	4663.53	109485.45	493812.50	PC / FND5/8"YCR13174ALLIED
204	4608.72	110020.93	492819.52	PC /YCR ALLIED ENG 13174 PLS
212	4633.66	111414.60	492423.40	PC / FND BENT5/8"YCR4955R.W.ALLEN
206	4610.96	110002.99	493804.73	PC /YCR ALLIED ENG 13174 PLS
201	4633.86	111218.14	492193.03	PC /5/8" REBAR NULL ELEV
203	4622.48	111139.24	492320.80	PC /5/8" REBAR BROKEN YCR CAP LEANING NORTH
205	4604.94	109858.48	493151.24	PC /YCR ALLIED ENG 13174 PLS
207	4584.48	110269.71	493800.43	PC /YCR ALLIED ENG 13174 PLS - APPROX SET BY POWER POLE
209	4586.31	110459.80	493603.80	PC /YCR ALLIED ENG 13174 PLS
211	4642.24	111414.94	492213.73	PC / FND5/8"YCR4955R.W.ALLEN









PRELIMINARY PLAT OF **MOUNTAIN VIEW SUBDIVISION, PHASES 1, 2, & 3**

BEING TRACT 1-A OF COS 2748RB AND TRACT 2-A OF COS 2621RB, SITUATED IN THE NW1/4 OF SECTION 22, T. 2 S., R. 9 E., P.M.M., CITY OF LIVINGSTON, PARK COUNTY, MONTANA

PREPARED FOR : LIVINGSTON WEST, LLC AND PRINTINGFORLESS.COM, INC.

PREPARED BY : SANDERSON STEWART



<u>NOTES</u>

1. A ten foot (10') wide public utility easement exists on the property side of the public right-of-way, to provide for installation of gas, electric, phone, TV cable, and other utilities, as required. No trees are allowed within the utility easement.

JUNE 2022

BOZEMAN, MONTANA

CERTIFICATE OF SURVEYOR

The undersigned, a professional land surveyor licensed in the State of Montana, does hereby certify that between ______ and _____, a survey was performed under their direct supervision for MOUNTAIN VIEW SUBDIVISION, PHASES 1, 2, and 3, and described the same as shown on the accompanying plat and platted in accordance with the provisions of the Montana Subdivision and Platting Act, Section 76-3-101 through 76-3-625, MCA, and the City of Livingston Subdivision Regulations.

DATED this _____ day of ______, 2022.

SANDERSON STEWART

Montana Registration No.

CERTIFICATE OF COUNTY TREASURER

I, Kevin J. Larkin, Treasurer of Park County, Montana, do hereby certify that the accompanying Plat has been duly examined and that all real property taxes and special assessments assessed and levied on the land to be subdivided are paid.

DATED this _____ day of ______, A.D., 2022.

By: _____ Treasurer, Park County, Montana

CERTIFICATE OF GOVERNING BODY

The Chair of the City Commission of the City of Livingston, Montana, does hereby certify that the accompanying Plat has been duly reviewed, and has been found to conform to the requirements of the Subdivision and Platting Act, Section 76-3-101 et. seq. MCA, and the City of Livingston Subdivision Regulations, approves it, and hereby accepts the dedication to public use.

DATED this _____ day of ______, A.D. 2022.

Chair of the City Commission City of Livingston, Montana

CERTIFICATE OF CLERK AND RECORDER

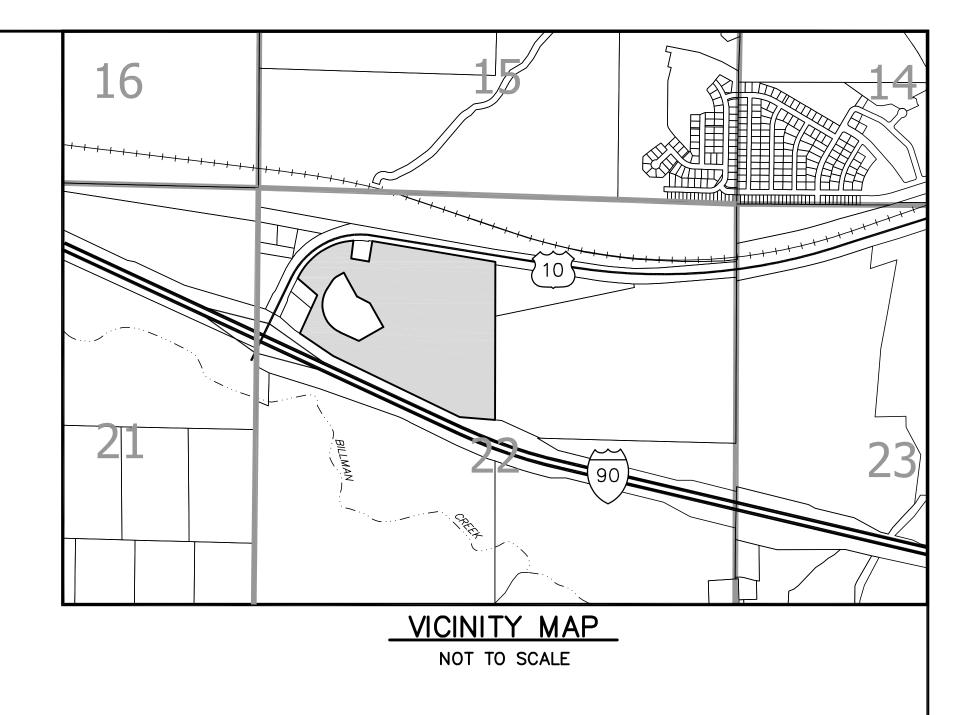
I, Maritza H. Reddington, Clerk and Recorder of Park County, Montana, do hereby certify that the foregoing instrument was filed in my office at _____ o'clock, (a.m., or p.m.), this _____ day of ______, A.D., 2022, and recorded under Document No. ______, Records of the Clerk and Recorder, Park County, Montana.

Clerk and Recorder, Park County, Montana

to wit:

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

Dated



CERTIFICATE OF DEDICATION

We, the undersigned property owners, do hereby certify that they have caused to be surveyed, subdivided and platted into lots, blocks, roads and parks, as shown on the accompanying plat hereunto annexed, the following described tract of land,

LEGAL DESCRIPTION:

Tract 1-A of Certificate of Survey No. 2748RB, as recorded in the office of the Clerk and Recorder of Park County, Montana, under Document No. 426634, situated in the NW1/4 of Section 22, T. 2 S., R. 9 E., P.M.M., in the City of Livingston, Park County, Montana and Tract 2-A of Certificate of Survey No. 2621RB, as recorded in the office of the Clerk and Recorder of Park County, Montana, under Document No. 406584, situated in the NW1/4 of Section 22, T. 2 S., R. 9 E., P.M.M., in the City of Livingston, Park County, Montana.

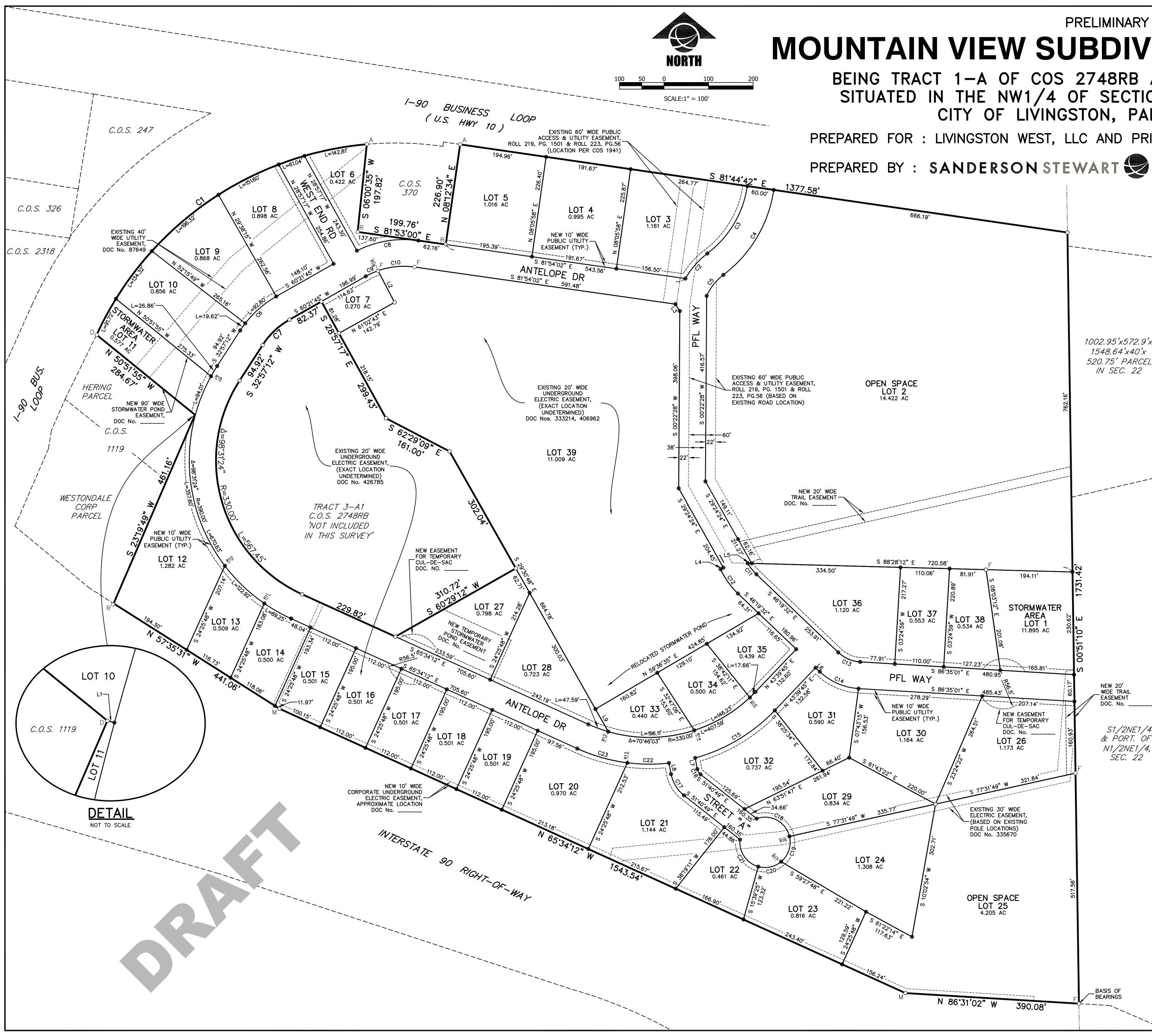
The above described tract of Land is to be known and designated as MOUNTAIN VIEW SUBDIVISION, PHASES 1, 2, and 3, City of Livingston, Park County, Montana; and the lands included in all roads, avenues, rights-of-way, parks, and common areas shown on said plat are hereby granted and donated to the use of the public forever.

CERTIFICATE OF GRANT OF UTILITY EASEMENTS

CERTIFICATE OF WAIVER

We, the undersigned property owners, do hereby waive the right to protest the creation of Special Improvement Districts. In doing so, we do not waive any right to comment on, protest, and/or appeal any assessment formula which may be imposed, if we believe it to be inequitable. This waiver shall be binding upon the heirs, assigns and purchasers of all lots within this Subdivision.

Dated this	day of	, 2022.				
LIVINGSTO	DN WEST, LLC					
		Ву:				
		Title:				
STATE OF MON	:ss					
This inst as	trument was acknowled of LIVINGSTON	ged before me on WEST, LLC.		_, 20, by		
			Notary Public i	in and for the State	of Montana	
PRINTING	FORLESS.COM, INC.					
		Ву:				
		Title:				
STATE OF MON	: SS					
This inst as	trument was acknowled of PRINTINGFC	ged before me on RLESS.COM, INC.		_, 20, by		
			Notary Public i	in and for the State	of Montana	
					SHEET	1 OF 2
				18005_05_PP_PROD.DWG	1800	05.05 6/30/22 CDF



PRELIMINARY PLAT OF MOUNTAIN VIEW SUBDIVISION, PHASES 1, 2, & 3 BEING TRACT 1-A OF COS 2748RB AND TRACT 2-A OF COS 2621RB, SITUATED IN THE NW1/4 OF SECTION 22, T. 2 S., R. 9 E., P.M.M., CITY OF LIVINGSTON, PARK COUNTY, MONTANA PREPARED FOR : LIVINGSTON WEST, LLC AND PRINTINGFORLESS.COM, INC. JUNE 2022 BOZEMAN, MONTANA BASIS OF BEARINGS: THE BASIS OF BEARINGS FOR THIS SURVEY HAS BEEN DERIVED FROM GPS OBSERVATIONS AND IS BASED ON A NAD 83, LAMBERT CONFORMAL CONIC, SINGLE PARALLEL, LOW DISTORTION PROJECTION FOR THE CITY OF BOZEMAN; HAVING A POINT OF ORIGIN AT 46'15'00'N LATITUDE AND 111'15'00"W LONGITUDE WITH A SCALE FACTOR OF 1.000185 -----THE GRID TO GROUND COMBINED SCALE FACTOR AT THE SOUTHEAST CORNER OF TRACT 3 OF C.O.S. No. 1941, BEING A REBAR WITH YELLOW CAP MARKED "ALLIED ENG 13174PLS", IS 1.0000188289; THE CONVERGENCE ANGLE IS 0°28'05". DISTANCES ARE INTERNATIONAL FEET. FOR THIS SURVEY, GRID DISTANCE IS ESSENTIALLY EQUAL TO GROUND DISTANCE. FOUND SURVEY MONUMENT. REBAR WITH YELLOW CAP '15273' FOUND SURVEY MONUMENT, REBAR WITH YELLOW CAP '4955' FOUND SURVEY MONUMENT, REBAR WITH YELLOW CAP '10010' 1002.95'x572.9'x FOUND SURVEY MONUMENT, REBAR WITH YELLOW CAP '13174' 1548.64'x40'x 520.75' PARCEL FOUND SURVEY MONUMENT, 4"x4" CONCRETE ROW MONUMENT IN SEC. 22 FOUND SURVEY MONUMENT, 5/8" REBAR SET 5/8" X 18" REBAR WITH YELLOW CAP MARKED WITH THE LICENSE NUMBER OF THE UNDERSIGNED LAND SURVEYOR AND "SANDERSON STEWART" NOTE: ALL CURVES ARE TANGENT AND ALL PROPERTY LINES INTERSECTING CURVES ARE RADIAL UNLESS OTHERWISE NOTED. DEVELOPED LOTS (35): 36.597 ACRES STORMWATER AREA LOTS (2): 1.516 ACRES 18.627 ACRES OPEN SPACE LOTS (2): AREA OF DEDICATED R.O.W.: 7.501 ACRES TOTAL AREA: 64.241 ACRES FINAL PLAT PHASES PHASE 1 (LOTS 2 - 17, 39) PHASE 2 (LOTS 1, 18 - 28) PHASE 3 (LOTS 29 - 38) CURVE TABLE NEW 20' _WDE TRAIL EASEMENT Curve # Delta Radius Length Chord Bearing Chord Distance C1 60°20'13" 738.60' 777.80' N 54°48'47" E 742.36' DOC. No. ____ C2 | 23[•]57[']58" | 180.00['] | 75.29['] | S 41[•]09[']43" W | 74.74' C3 44'58'38" 230.00' 180.55' S 30'39'23" W 175.95**'** S1/2NE1/4 C4 44°57'48" 290.00' 227.58' S 30°39'47" W 221.79**'** & PORT. OF C5 29'05'13" 120.00' 60.92' S 38'36'05" W 60.27**'** N1/2NE1/4, SEC. 22

CURVE TABLE								
Curve #	Delta	Radius	Length					
C6	27 · 24'33"	235.00'	112.42'					
C7	27 · 24'33"	175.00'	83.72 '					
C8	27 * 42'42"	232.43'	112.42'					
C9	10°01'30"	172.43'	30.17 '					
C10	27 * 42'42"	172.43'	83.40 '					
C11	15 ° 07 ' 17"	120.00'	31.67 '					
C12	21'30'22"	180.00'	67.56 '					
C13	40 ° 15'30"	78.00'	54.81'					
C14	40 ° 15'30"	138.00'	96.96'					
C15	30 • 58'19"	390.00'	210.82'					
C16	40*43'36"	20.00'	14.22'					
C17	40 · 43'36"	80.00'	56.86'					
C18	95 • 54'38"	56.50'	94.58'					
C19	63 · 55'46"	56.50'	63.04'					
C20	55 ° 25'34"	56.50'	54.66'					
C21	80'35'29"	56.50'	79.47 '					
C22	13•43'39"	390.00'	93.44'					
C23	17 ° 14'40"	390.00'	117.38 '					

BASIS OF

LINE TABLE									
Line #	Bearing	Distance							
L1	N 74 ° 48'11" W	0.82'							
L2	N 27°37'25" W	80.40'							
L3	S 32 · 34'23" E	18.40'							
L4	S 60°35'36" W	7.18'							
L5	N 88 ° 28'12" W	8.98'							
L6	S 46°19'32" E	13.06'							
L7	S 10 ° 57'13" E	25.38'							
L8	S 10 ° 57'13" E	25.95'							
L9	S 29'30'48" E	58.22'							

RADIAL TABLE						
Radial #	Bearing					
R10	N 52 ° 39'42" E					
R11	N 34°36'13" E					
R12	N 1610'02" E					
R13	N 07 ° 11'08" E					
R14	N 17 ° 52'55" W					
R15	N 43°16'16" W					
R16	S 76 1 8'05" W					
R17	N 39 ° 46'09" W					
R18	S 19 ' 37'21" E					
R19	S 60 ° 59'32" E					

18005_05_PP_PROD.DWG

18005.05 6/30/22 CDK

SHEET 2 OF 2



Billings Bozeman Denver Fort Collins

July 1, 2022 Project No. 18005.05

PRELIMINARY STORMWATER REPORT FOR THE MOUNTAIN VIEW SUBDIVISION LIVINGSTON, MONTANA

OVERVIEW NARRATIVE

The purpose of this preliminary drainage report is to present a summary of calculations performed to quantify storm drainage improvements required for the Mountain View Major Subdivision in Livingston, Montana. The project is located in the City of Livingston within Park County, Montana. This site is located between Hwy 10 and Hwy 191. The existing area consists of an access roadway, two (2) facilities, grasslands, and the associated utilities. The storm drain system will be designed to meet the requirements in *The City of Livingston Design Standards and Specification Policy* (DSSP) of February 2021. The "Storm Drainage Report Ruedebusch Offsite Street and Utility" dated May 24, 2022 is referenced in this report, which the City of Livingston has.

EXISTING CONDITIONS

The existing topography of the subdivision flows to the southeast to the existing wetland area. There is a temporary detention pond at the end of the asphalt cul-de-sac as shown in the report previously mentioned. This detention pond will be removed as part of the remaining infrastructure proposed. There is also an existing detention pond to the southeast of the Printing for Less facility that treats a portion of their runoff. This pond will be relocated as part of the infrastructure improvements. The remaining land cover surrounding the proposed roadway is generally vacant grassland. Runoff is generally conveyed into the existing shallow ditches and depressions and directed towards the existing wetland to the east of the site. The new development area is hydrologically divided into three watershed areas in its existing state, Existing Watershed 1, 2, and 3 as shown on Exhibit A in Appendix A. Preliminary hydrologic calculations for these watersheds can be found in Appendix B.

ENDURING COMMUNITY DESIGN

PROPOSED CONDITIONS

The proposed improvements of the Mountain View Subdivision include roads, sidewalks, open lots and open space that will house the stormwater facilities. There will be one (1) relocated detention pond and the removal of a temporary basin as part of the full build out of the subdivision. The temporary detention pond was constructed as a part of the Reudebusch Offsite Street and Utility project.

The new development area of the subdivision has been broken into five (5) total basins as shown on Exhibit B in Appendix A. Preliminary hydrologic calculations for these watersheds can be found in Appendix B.

Basin A includes the proposed roadways and sidewalks throughout the southeast side of the subdivision. All other basins include the parcels adjacent to the proposed roadway as seen in Appendix A.

Basin A runoff will be collected in the gutters and conveyed through storm drainage infrastructure toward the proposed detention pond.

Basins B, C, and D runoff will generally drain toward the new street and will be conveyed along swales following the proposed roadway. These swales will convey the runoff towards the proposed detention pond. As development occurs on the lots, the swales will be filled as the developments will be required to mitigate runoff within their site. The new detention basin at the end of the asphalt cul-de-sac will be designed to store and convey the pre-development peak flows from each of these basins.

Basin E is generally "open space" that will remain undeveloped. The runoff will follow existing drainage patterns and diverted to the wetland on the eastern edge of the subdivision.

INLETS

Inlet locations will be designed to capture runoff from the right-of-way area and limit the spread width to less than 9.5-feet for this project's typical section. Bentley's FlowMaster program, which uses the methodology of the FHWA Hec-22 Manual, will be utilized to calculate inlet spacing. This program will be used to calculate the spread width and gutter flow depth at each of the inlets using the calculated peak post-development flow rate from the 25-year storm event, inlet dimensions, and road parameters. The allowable limit for the depth of flow in the curb line is 0.15-feet below the top of curb, but the design will provide at least 0.3-feet. The inlets will be analyzed with a 50% clogging factor.

PIPES

The Manning's equation will be used to analyze and design the storm drain pipes throughout the project. Pipe slopes will be set to maintain a minimum depth of cover of two feet below final grade and the minimum velocity of 3-fps when flowing full. The storm drain pipes will be designed to

convey the peak flow from the 25-year storm event. When the depth of flow in the pipe exceeds full flow capacity, the next larger size pipe will be used.

BASIN/UNDERGROUND DETENTION FACILITY

As mentioned above, a new detention basin is proposed to the northeast of the proposed asphalt culde-sac at the end of the street. The proposed detention basin will treat the runoff and limit the discharge flow rate to the 2-year pre-development flow rate from the existing watershed.

The new detention basin will have a maximum side slope steepness of 4:1. Site detention will be calculated using the 10-year design storm allowing for the discharge of the 2-year pre-development flow rate.

MAJOR STORM EVENTS

In the event of a 100-year storm event, the proposed detention basin will overtop and flow to the east with shallow concentrated flow.

Appendices

Appendix A – Watershed Exhibits Appendix B – Preliminary Hydrology Calculations



18005.05

APPENDIX A Watershed Exhibits





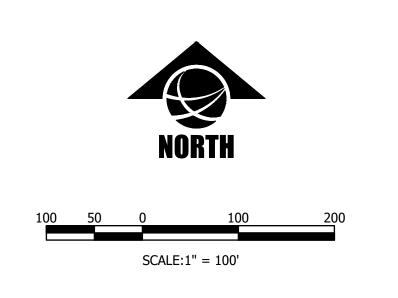


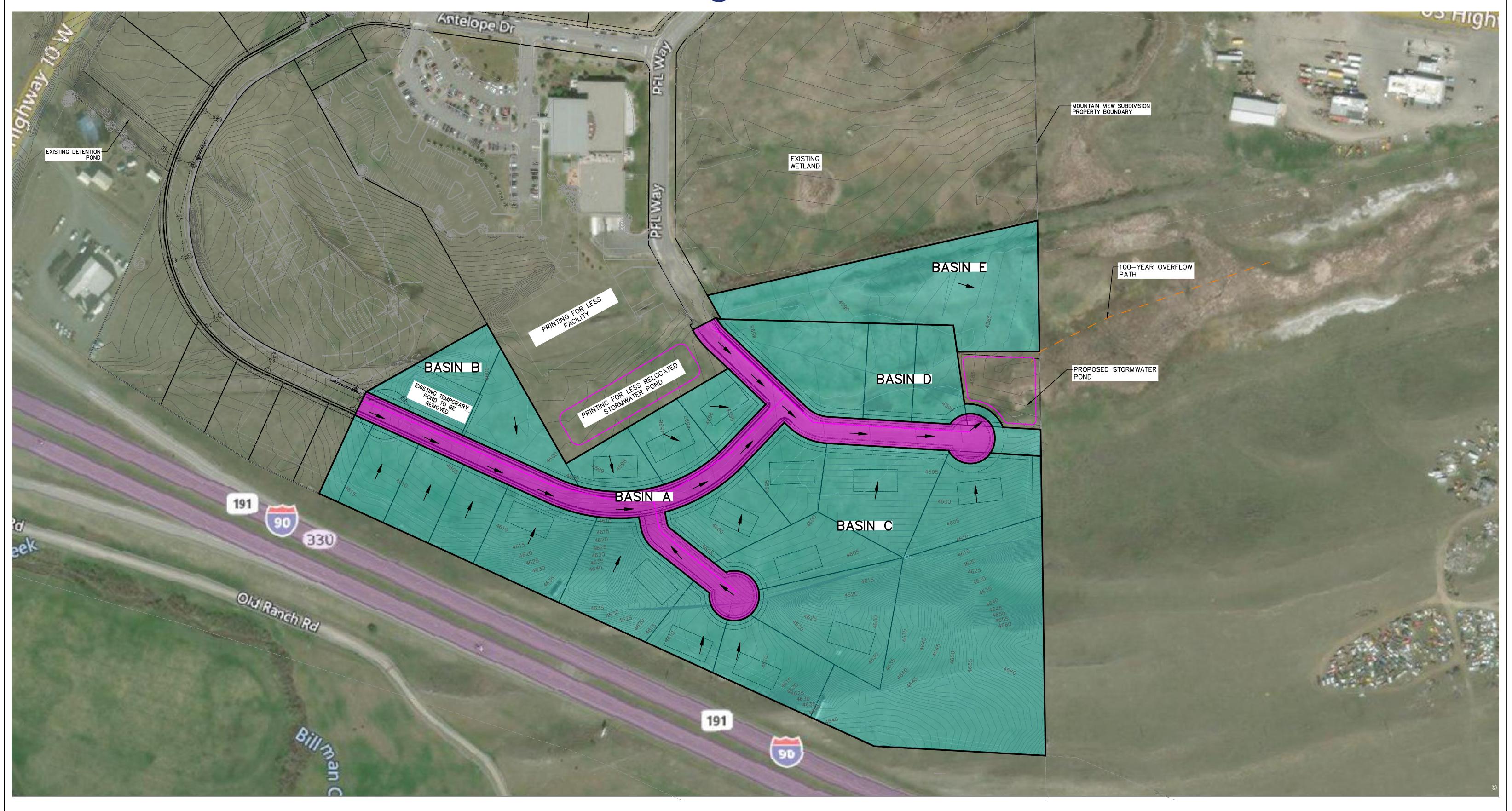
PREPARED FOR : LIVINGSTON WEST, LLC.
PREPARED BY : SANDERSONSTEWART

EXHIBIT A

PRE-DEVELOPMENT WITHIN MOUNTAIN VIEW SUBDIVISION

> JUNE 2022 LIVINGSTON, MONTANA



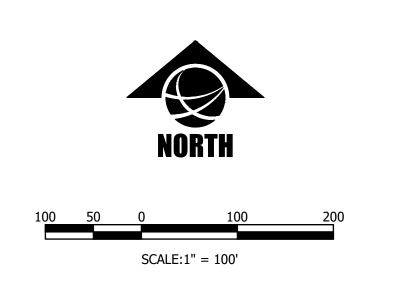


PREPARED FOR : LIVINGSTON WEST, LLC.
PREPARED BY : SANDERSONSTEWART

EXHIBIT B

POST-DEVELOPMENT within Mountain view subdivision

> JUNE 2022 LIVINGSTON, MONTANA



Mountain View Subdivision

18005.05



ENDURING

C MMUNITY

DESIGN



Project: Project No.: Date: Mountain View Subdivision 18005.05 06/22/2022



PRE DEVELOPMENT/EXISTING BASINS

ws	Tc (hours)	Area (sf)	Area (ac.)	Area Impervious (sf)	Area Gravel (sf)	Area Pervious (sf)	RC	% IC	I ₂ (in/hr)	I ₁₀ (in/hr)	I ₂₅ (in/hr)	Q ₂ Peak Flow (cfs)	Q ₁₀ Peak Flow (cfs)	Q ₂₅ Peak Flow (cfs)
1	0.350	804,928	18.48	0	0	804,928	0.20	0%	0.940	1.583	1.840	3.47	5.85	6.80
2	0.450	187,231	4.30	0	0	187,231	0.20	0%	0.796	1.344	1.567	0.68	1.16	1.35
3	0.292	152,213	3.49	0	0	152,213	0.20	0%	1.060	1.782	2.068	0.74	1.25	1.45

POST DEVELOPMENT/PROPOSED BASINS

ws	Tc (hours)	Area (sf)	Area (ac.)	Area Impervious (sf)	Area Gravel (sf)	Area Pervious (sf)	RC	% IC	I ₂ (in/hr)	I ₁₀ (in/hr)	I ₂₅ (in/hr)	Q2 Peak Flow (cfs)	Q ₁₀ Peak Flow (cfs)	Q ₂₅ Peak Flow (cfs)
А	0.083	134,191	3.08	100,800	0	33,391	0.73	75%	2.423	4.023	4.611	5.42	9.00	10.31
В	0.283	127,336	2.92	0	0	127,336	0.20	0%	1.080	1.816	2.107	0.63	1.06	1.23
С	0.217	658,062	15.11	0	0	658,062	0.20	0%	1.290	2.162	2.502	3.90	6.53	7.56
D	0.317	103,834	2.38	0	0	103,834	0.20	0%	1.004	1.689	1.962	0.48	0.81	0.94
E	0.300	120,848	2.77	0	0	120,848	0.20	0%	1.040	1.750	2.031	0.58	0.97	1.13



July 1, 2022 Project No. 18005.05

PRELIMINARY SEWER AND WATER DESIGN REPORT FOR THE MOUNTAIN VIEW SUBDIVISION LIVINGSTON, MONTANA

SITE NARRATIVE

The purpose of this preliminary report is to summarize the design of the future sanitary sewer and water main installations associated with the Mountain View Major Subdivision in Livingston, Montana. The project will extend sanitary sewer and water, as well as provide water service stubs and sanitary stubs to serve future developments within a portion of the subdivision. The following report will summarize the water and sewer main design and capacity calculations for the water and sewer services to the future development. The "Sewer and Water Design Report Reudebusch Infrastructure Improvements" document dated April 18, 2022, is referenced in this report, which the City of Livingston has.

SEWER

The proposed sewer main includes the installation of approximately 340-feet of 8-inch PVC sewer line, and three (3) 48-inch sanitary sewer manholes. The main will tie-in to an existing sanitary 10-inch sewer main at Antelope Drive with a sanitary sewer manhole connection. The existing 10-inch sanitary sewer system has capacity to handle this additional connection, refer to the "Sewer and Water Design Report Reudebusch Infrastructure Improvements" document dated April 18, 2022.

Capacity calculations will be conducted in accordance with the City of Livingston Design Standards and will include capacity spreadsheets. The 8-inch sewer main capacity at 75-percent full is 350-gal/min using the minimum pipe slope of 0.005 ft/ft.

Using a zoned H.C. designation with 1,000 gal/acre/day, over 5.3 acres, the average daily flow was 3.68 gal/min. A peaking factor of 4.24 was then applied for a peak hourly flow rate of 15.62 gal/min. An infiltration flowrate of 150 gal/acre/day was then used to calculate a total peak hourly flow rate with infiltration at 16.17 gal/min, which is significantly less the 8-inch capacity of 350 gal/min stated above.

WATER

The proposed water system consists of approximately 340-LF of new 8-inch diameter PVC water main, water services, valves, and hydrant as shown on the plans. The proposed 8-inch diameter main will tie-in to an existing 12-inch water main at Antelope Drive with a 12" x 12" x 8" tee.

The existing 12-inch water system has capacity to handle this additional connection, refer to the Sewer and Water Design Report Reudebusch Infrastructure Improvements" documents dated April 18, 2022.

Given the HC, Highway Commercial Zoning, the proposed 5.3 acres serving the proposed area would serve around 53 persons based on wastewater usage of 100 gal/day/person (1,000 gal/day/acre x 5.3 acres)/100 gal per day per person = 53 persons). Using a more conservative value of 100 people, the average daily domestic flow using 127.5 gpd/person per Livingston Design Standards is as follows:

Average Daily Flow = 100 people x 127.5 gal/day/person = 12,750 gal/day = 8.85 gpm

Using a peaking factor of 3.0 per the City of Livingston Design Standards, the Peak Hourly Flow is as follows:

Peak Hourly Domestic Flow = $3.0 \times 8.85 = 26.56$ gpm (round to 30 gpm)

The water main will be designed using a fire flow of 1500 gpm plus the 30 gpm domestic flow for a total of 1530 gpm.

Bentley's WaterCAD will be used to model the flows for the fully built Mountain View Subdivision. A total flow of 1,530 gpm (1,500 gpm fire flow and 30 gpm peak hour flow), a "C" Factor of 130 (per the City of Livingston Design Standards), and minor losses in the fittings will be used in the WaterCAD calculations. A model overview exhibit and model results will be included.

CONCLUSION

Based on the assumptions provided above and the Sewer and Water Design Report for the Reudebusch Infrastructure Improvements, the proposed 8-inch sanitary sewer and 8-inch water main installation will provide the required capacity for existing and planned developments in the project area. Please contact Bobby Egeberg, PE for any questions pertaining to this preliminary report by email, <u>begeberg@sandersonstewart.com</u> or by phone 406-922-4308.



Billings Bozeman Denver Fort Collins

July 1, 2022 Project No. 18005.05

MOUNTAIN VIEW MAJOR SUBDIVISION PRELIMINARY PLAT APPLICATION SUBDIVISION IMPROVEMENTS

The proposed general improvements of the Mountain View Subdivision include streets, street signage, boulevards, sidewalks, and street lighting. All these improvements will be designed to meet the requirements established in the City of Livingston Public Works Design Standards and Specifications Policy including the corresponding Modifications to Montana Public Works Standards. As such all sidewalks will be ADA compliant and all street lighting will meet the requirements of the Night Sky Protection Act.

STREETS & ALLEYS

All the proposed streets and any future alleys will be designed in accordance with the City of Livingston Public Works Standards and Subdivision Regulations. The proposed new streets are designed to the "local" street classification standards approved by the City of Livingston for the Ruedebusch FedEx project currently under construction. For more details see the Civil Engineering Plans.

DRAINAGE STRUCTURES

All proposed stormwater drainage structures will be designed in accordance with the City of Livingston Public Works Standards and applicable DEQ Circulars. For more information and details see Appendix A: Preliminary Stormwater Report and Civil Engineering Plans.

SIGNS

The proposed Mountain View Subdivision will meet the standards established by the City of Livingston Public Works Standards and Manual on Uniform Control Devices.

SIDEWALKS

All the proposed sidewalks will be designed in accordance with the City of Livingston Public Works Standards and Subdivision Regulations. The proposed new sidewalks will be designed to match the specifications and standards approved by the City of Livingston for the Ruedebusch FedEx project currently under construction. For more information see the Civil Engineering Plans.

STREETLIGHTS

All the proposed street lighting will be designed in accordance with the City of Livingston Public Works Standards, Subdivision Regulations, and the Night Sky Protection Act. The proposed new streetlights will be installed to match the specifications and standards approved by the City of Livingston for the Ruedebusch FedEx project currently under construction. For more information see the Civil Engineering Plans.

SOLID WASTE FACILITIES

Per the Administrative Rules of Montana17.36.309, the Mountain View Subdivision tenants will store solid waste in adequate containers and will contract with the City of Livingston Solid Waste Department to be removed frequently to prevent a nuisance.

FIRE HYDRANTS

All the required fire hydrants will be designed and installed in accordance with the City of Livingston Public Works Standards and Subdivision Regulations. For more details see the Civil Engineering Plans.

SEWER, WATER & STORM FACILITIES

All the proposed sewer, water, and stormwater facilities will be designed and installed in accordance with the City of Livingston Public Works Standards, Subdivision Regulations, and applicable DEQ Circulars. The new subdivision wet utilities will be designed and installed to integrate with the existing City services and those approved by the City of Livingston for the Ruedebusch FedEx project currently under construction. For more information and details see Appendix A: Preliminary Stormwater Report, Appendix B: the Civil Engineering Plans.

MAIL DELIVERY

Mail deliver services will be provided for the proposed Mountain View Subdivision on a contract basis from the United States Postal Service. The local USPS representative responding to a request for comment indicated that the subdivision would need to provide a central mailbox bank. For more details see Appendix H: Private Service Providers Review.



Billings Bozeman Denver Fort Collins

June 30, 2022

Mr. Jim Woodhull Planning Director City of Livingston 220 E Park St Livingston, MT 59047

Reference: Mountain View Subdivision, Livingston, Montana Project No. 18005.05

Dear Mr. Woodhull:

The purpose of this letter is to evaluate traffic impacts for development of the Mountain View Subdivision in Livingston, Montana. Mountain View Subdivision is located east and south of Hwy 10 just north of the I-90 interchange at exit 330.

Existing Conditions

Existing Conditions (2022) traffic counts were collected by Sanderson Stewart at the West Park Street/North 5th Street intersection on Thursday, January 27, 2022, in support of another area study. Traffic counts were collected by Marvin & Associates at the West Park Street/Hwy 10/North 7th Street intersection on Monday, January 16, 2017, in support of the Transportation Study Update performed for the City of Livingston. It was found by evaluating historical MDT count data in the area that a growth rate of approximately 2% was experienced on area streets between 2017 and 2021. Therefore, the counts from West Park Street/Hwy 10/North 7th Street were scaled up to represent 2022 values by applying an annual growth rate of 2% for 5 years. Intersection peak hours were found to be from 7:30 to 8:30 AM and 4:45 to 5:45 PM at both intersections.

Both intersections are controlled with traffic signals with protected/permissive left-turn phasing only on the northbound/eastbound approaches on West Park Street. All other approaches have permissive-only left turns. Both intersections have an at-grade rail crossing across the western legs, with queuing space for only approximately 2 vehicles between the stop bar and the rail crossing.

Capacity calculations were performed for both intersections using Synchro, Version 11, which is based on the Highway Capacity Manual (HCM) 6th Edition methodologies. Level of service (LOS) is defined as a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. LOS is a qualitative measure of the performance of an intersection with values ranging from LOS A, indicating good operation and low vehicle delays, to LOS F, which indicates congestion and longer vehicle delays. LOS C is generally considered the minimum acceptable threshold in Montana communities, though exceptions are made in some cases.

Capacity results, as shown in Table 1 below, show that both intersections currently operate at LOS C or better on all approaches. Projected 95th percentile queues are lengthy on all approaches at the West Park Street/Hwy 10/North 7th Street intersection during the PM peak hour, except for the westbound North 7th Street approach. Southbound and eastbound queues at both the West Park Street/North 5th Street and West Park Street/Hwy 10/North 7th Street intersections, respectively, are projected to extend across the at-grade rail crossings. Hwy 10 provides a stop bar in advance of the crossing for eastbound vehicles to queue, but there are no such markings provided southbound on North 5th Avenue to prevent vehicles stopping across the railroad tracks.

				Existing	g (2022)				
		AM Peak					K		
Intersection	Approach	Avg		95th %	Avg		95th %		
	11	Delay		Queue	Delay		Queue		
		(s/veh)	LOS	(veh)	(s/veh)	LOS	(veh)		
Intersection Contr	ol			Signe	alized				
	EB	6.5	А	4	4.9	А	5		
West Park Street &	WB	10.4	В	6	9.2	А	8		
	NB	16.8	В	2	20.8	С	4		
North 5th Street	SB	21.4	С	5	23.0	С	3		
	Intersection	13.7	В		10.9	В			
Intersection Contr	ol	Signalized							
	EB	23.4	С	4	23.6	С	14		
West Park Street &	WB	22.3	С	3	16.8	В	2		
	NB	4.2	А	6	12.4	В	14		
Hwy 10	SB	6.4	А	7	14.0	В	12		
	Intersection	8.4	А		15.9	В			

Table 1: Existing Conditions (2022) Capacity Calculations Summary

Trip Generation & Traffic Assignment

This analysis utilized Trip Generation, 11th Edition, published by the Institute of Transportation Engineers (ITE), which is the most widely accepted source in the United States for determining trip generation projections. These projections are used to analyze the impacts of a new development on the surrounding area.

The applicant does not have a development plan in regard to the future uses and intensities. The following land use and intensity assumptions were made solely for the purposes of this trip generation analysis. It is assumed that the Mountain View Subdivision could contain 7 lots (6.79 total acres) of highway commercial uses to include a small hotel, two gas stations/convenience stores, one coffee shop, and one fast-food restaurant. It is also assumed that the site could include 11 lots (6.63 total acres) of light industrial/commercial uses with 60% lot coverage, which equates to approximately 173,280 square-feet. Lastly, the proposed subdivision could include 13 lots (10.45

total acres) of multi-family residential use with one 4-plex building per lot, for 52 total residential units and 104 total bedrooms.

Common industry sizes of the highway commercial land uses were evaluated and used to make assumptions about the anticipated sizes of the hotel, gas station/convenience store, coffee shop, and fast-food developments. It was found that the average gas station in the Livingston area has 10 fueling stations, so trips for a total of 20 stations were calculated since two gas stations are proposed to be built.

For the purposes of this analysis, Land Use Code 310 – Hotel, Land Use Code 934 – Fast-Food Restaurant with Drive-Thru Window, Land Use Code 937 – Coffee/Donut Shop with Drive-Thru Window, and Land Use Code 945 – Convenience Store/Gas Station were utilized to project trip generation for the highway commercial portion of the site. Land Use Code 110 – General Light Industrial was utilized to project trip generation for the light industrial/commercial lots. Land Use Code 220 – Multifamily Housing (Low-Rise) was utilized to project trip generation for the results of the trip generation calculations.

Trip generation projections provide an estimate of the total number of trips that would be generated by a proposed development, but adjustments must often be made to estimate the net number of new external trips. These adjustments account for internal capture and pass-by trips, as well as trips made by alternate modes.

Internal capture (IC) trips do not have origins or destinations external to a project site and therefore do not have an impact on external traffic operations. Due to the mixed-use nature of the highway commercial and residential portions of the site, IC trips were calculated among those land uses.

Pass-by trips are made as intermediate stops on the way from a point of origin to a primary trip destination and were calculated for the convenience store/gas station, coffee shop, and fast-food land uses.

Trips made by alternate modes (walking, biking, transit) are not anticipated for this development due to its location and lack of multi-modal accessibility on Highway 10.

With reductions for IC and pass-by trips, the site is projected to generate 4,189 new external weekday trips with 474 trips (285 entering/189 exiting) during the AM peak hour and 323 trips (125 entering/198 exiting) during the PM peak hour.

The trip distribution for this study was calculated based on an analysis of existing traffic patterns in the study area. It was found that 50% of trips would be expected to travel to/from the east on Highway 10 and access one or both study intersections on West Park Street.

Table 2: Mountain View Subdivision	n Trip Generation Summary
------------------------------------	---------------------------

	Inder	Aver	age Wee	kdav	A 14	I Peak H	our	PM Peak Hour				
		endent Variable Units					enter	exit				
Land Use	Intensity		total	enter	exit	total	enter	exit	total	enter	exit	
1	50	Highway C			200	22	12	10	20	15	15	
Hotel ¹	50	Rooms	400	200	200	23	13	10	30	15	15	
Internal Capture Trips**			202	95	107	3	1	2	19	11	8	
Convenience Store/Gas Station ²	20	Veh Fueling Positions	5302	2651	2651	321	161	160	368	184	184	
Internal Capture Trips**			1152	536	616	35	14	21	101	54	47	
Pass-By Trips (Avg. Rate = 56%)**	1		2324	1184	1140	160	82	78	150	73	77	
Coffee/Donut Shop w/ Drive-Thru Window ³	2	1000 SF GFA	1067	534	533	172	88	84	78	39	39	
Internal Capture Trips**			386	210	176	17	11	6	33	14	19	
Pass-By Trips (Avg. Rate = 49%)**+	1		334	159	175	76	38	38	22	12	10	
Fast-Food Restaurant w/ Drive-Thru Window ⁴	5	1000 SF GFA	2337	1169	1168	223	114	109	165	86	79	
Internal Capture Trips**			845	460	385	22	14	8	70	30	40	
Pass-By Trips (Avg. Rate = 49%)**			731	347	384	98	49	49	46	27	19	
		Light Industria	al/Comme	rcial								
General Light Industrial ⁵	173.280	1000 SF GFA	844	422	422	128	113	15	113	16	97	
		Resia	lential									
Multifamily Housing (Low-Rise) ⁶	52	Dwelling Units	350	175	175	21	5	16	27	17	10	
Internal Capture Trips**			137	60	77	3	0	3	17	11	6	
Total Gross Tri	ps		10300	5151	5149	888	494	394	781	357	424	
Total Internal Captu	re Trips		2722	1361	1361	80	40	40	240	120	120	
Total Pass-By T	rips		3389	1690	1699	334	169	165	218	112	106	
Total New Externa	l Trips		4189	2100	2089	474	285	189	323	125	198	
(1) Hotel - Land Use 310*					Units =	Rooms						
Average Weekday:					Average	Rate $= 7$.	99		(50% ent	ering/50%	6 exiting	
Peak Hour of the Adjacent Street, One Hour	between 7	and 9 AM:		Average Rate = 0.46 (56% entering/44					ering/44%	6 exiting		
Peak Hour of the Adjacent Street, One Hour					0	Rate $= 0$.				ering/49%		
(2) Convenience Store/Gas Station - Land Use 9					0		ueling Pos	sitions	(0		
Average Weekday:					Average	(50% entering/50% exiting)						
Peak Hour of the Adjacent Street, One Hour	· between 7	and 9 AM.			0					(50% entering/50% exiting)		
Peak Hour of the Adjacent Street, One Hour				Average Rate = 18.42 (50% entering)					0			
(3) Coffee/Donut Shop with Drive-Thru Windo					0	1000 SF ((5070 cm	ening/ 507	, exiting	
Average Weekday:	/w - Land C	se code 757							(50% ent	ering/50%	avitino	
Peak Hour of the Adjacent Street, One Hour	between 7	and 9 AM:			Average Rate = 533.57 Average Rate = 85.88				(50% entering/50% exiting) (51% entering/49% exiting)			
Peak Hour of the Adjacent Street, One Hour					0	Rate = 38			`	ering/50%		
(4) Fast-Food Restaurant with Drive-Thru Wind					0	1000 SF ((5070 cm	cing/ 507	" exiting	
	low - Land	Use 954**							(5.08/			
Average Weekday:	1. 7	10 116			0	Rate = 40				ering/50%		
Peak Hour of the Adjacent Street, One Hour					0	Rate = 44				ering/49%		
Peak Hour of the Adjacent Street, One Hour	between 4	and 6 PM:				Rate $= 33$			(52% ent	ering/48%	o exiting	
(5) General Light Industrial - Land Use 110*						1000 SF ((500)	. /=	/	
Average Weekday:					0	Rate = 4 .			(50% ent			
Peak Hour of the Adjacent Street, One Hour between 7 and 9 AM:						Rate $= 0$.			`	ering/12%	C.	
Peak Hour of the Adjacent Street, One Hour between 4 and 6 PM:					0	Rate $= 0$.			(14% ent	ering/86%	• exiting	
(6) Multifamily Housing (Low-Rise) - Land Use	220*					Dwelling						
Average Weekday:						Rate $= 6$.				ering/50%		
Peak Hour of the Adjacent Street, One Hour	between 7	and 9 AM:			Average	Rate $= 0$.	40		(24% ent	ering/76%	o exiting	
Peak Hour of the Adjacent Street, One Hour	between 4	and 6 PM:			Average	Rate $= 0$.	51		(63% ent	ering/37%	o exiting	

*Trip Generation, 11th Edition, Institute of Transportation Engineers, 2021

**Trip Generation Handbook, 3rd Edition, Institute of Transportation Engineers, 2017

[†]Pass-By Trips Average Rate for Coffee/Donut Shop w/ Drive-Through Window is not included in ITE Pass-By data, therefore 49% Pass-By Average Rate for Fast Food Restaurant w/ Drive-Through was selected

Existing + Site Conditions

Existing + Site projections were calculated by adding projected site trips to existing intersection volumes, and Existing + Site capacity calculations were performed again using Synchro, Version 11. Those results are shown in Table 3 below.

Existing + Site capacity results were very similar to Existing Conditions (2022) results, with the largest impact being to the projected eastbound queue on Highway 10 during the PM peak hour, which is projected to increase from 14 to 20 vehicles.

		Existing + Site								
		1	PM Peak							
Intersection	Approach	Avg		95th %	Avg		95th %			
		Delay		Queue	Delay		Queue			
		(s/veh)	LOS	(veh)	(s/veh)	LOS	(veh)			
Intersection Contr	ol			Signe	alized					
	EB	7.3	А	5	5.3	А	6			
West Park Street &	WB	11.9	В	8	9.9	А	9			
	NB	17.0	В	3	20.9	С	5			
North 5th Street	SB	22.3	С	5	23.3	С	3			
	Intersection	14.4	В		11.2	В				
Intersection Contr	ol	Signalized								
	EB	24.7	С	7	27.8	С	20			
West Park Street &	WB	21.0	С	3	15.7	В	2			
	NB	6.3	А	7	16.9	В	14			
Hwy 10	SB	10.0	В	9	19.2	В	12			
	Intersection	11.7	В		20.8	С				

Table 3: Existing + Site Capacity Calculations Summary

Conclusions & Recommendations

Projected queuing during the PM peak hour at the West Park Street/Hwy 10/North 7th Street intersection stretches to North 6th Street on the north leg, through the North 8th Street intersection on the south leg, and past the U-Haul access driveway on Highway 10 (west leg). Queues on West Park Street are the same both with and without trips from the proposed Mountain View Subdivision, and do not reach any other signalized intersections. With the addition of Mountain View Subdivision trips, approximately 6 vehicles are projected to be added to the eastbound queue during the PM peak hour, with 3 vehicles added during the AM peak hour. A maximum of two vehicles are projected to be added to existing queues at the West Park Street/North 5th Street intersection during both peak hours.

Regardless of the potential development of Mountain View Subdivision, safety should be monitored at both intersections, particularly on the legs with at-grade railroad crossings, and steps should be taken to prevent vehicles from stopping across the railroad tracks if necessary.

If you have any questions or concerns, please feel free to contact me at 406-922-4306 or jstaszcuk@sandersonstewart.com.

Sincerely,

hyne

Joey Staszcuk, PE, PTOE, RSP1 Senior Engineer | Community Transportation Studio Manager

ARS/ajd

Enc

P:18005_05_Livingston_West_LLC_Major_Subdivision_6.30.2022

Printing for Less Wetland Delineation Report



Prepared By:



PO Box 1424 Bozeman, MT 59771 406.539.7244 briana@sundogeco.com

09/13/2019

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- Appendix B Mapped Wetland Boundary
- Appendix C Wetland Determination Data Forms
- Appendix D Site Photographs

Introduction

A routine wetland delineation was conducted by Sundog Ecological Inc., on June 19th and 26th, 2019 on behalf of property owner, Printing for Less (PFL), to verify wetland boundaries east of PFL Way. The purpose of this wetland delineation was to investigate the project area, identify areas meeting technical guidelines for wetlands, delineate the extent of wetlands within the project area and to classify these wetland habitats. This report describes methodologies used, summarizes results of wetland investigations, and provides technical documentation for all delineated wetlands within the project area. Figures referred to in text are included in Appendices at the end of the report.

Site Description

The PFLWetland Delineation site is located in the northwest quarter of Section 22, Township 2 South, Range 9 East, approximately 2.15 miles west of Livingston, Montana. The property is located immediately east of the Printing for Less headquarters on PFL Way. Upland communities are comprised of pasture grasses, Montana State Listed noxious weeds, small shrubs and other weedy species. Wetlands communities are dominated by mixed grasses, rushes, sedges and cattails. Four wetland types and one upland type were identified within project boundaries.



Figure 1: Location of the Printing for Less Wetland Delineation Site relative to US Interstate 90 and MT Highway 10.

<u>Directions to site from Bozeman</u>: From North 7th Avenue take Interstate 90 east for 22.7 miles, exiting at Livingston Exit 330. Turn left onto 1-90 Business Loop/MT Highway 10 for 0.5 miles. Turn right onto PFL Way, the project area is on the left.

Waterbodies and Waterways

While there are no direct waterbodies or streams on the PFL wetland site, there is a stream that flows west from the north side of the Interstate 90 business loop to the south side and eventually discharges into the wetland in the northeast corner of the site. A review of aerial photos shows that this water

appears to be diverted from Fleshman Creek (north of the site). Other waterways in the area include Billman Creek (south of the site) and the Yellowstone River (east of the site).

Methods

This wetland delineation was conducted using the routine on-site-approach in accordance with standard practices outlined in the 1987 Army Corps of Engineers (ACOE) Wetland Delineation Manual (Environmental Laboratory 1987) and by Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast - Version 2.0 (ACOE 2010). The study evaluated the presence or absence of indicators of three wetlands parameters described in the ACOE Wetland Delineation Manual. Under the delineation procedures outlined in this manual, an area must exhibit characteristic wetland hydrology, hydric soils, and hydrophytic vegetation to be considered a wetland. If field investigation determines that any of the three parameters are not satisfied, the area does not usually qualify as a wetland. Wetlands were classified according to the Cowardin classification system (Cowardin *et al.*, 1979). Non-wetland water bodies such as streams were classified according to the Cowardin system (Cowardin *et al.*, 1979).

Prior to conducting field studies, available background and supplementary reference materials were reviewed, including aerial photographs and maps from: Google Earth Pro, National Wetlands Inventory, Montana Natural Heritage Program, the Park County Soil Survey, Web Soil Survey, the National Wetlands Plant List, plat and topographic maps. Site maps used for assessment of the Printing for Less wetland delineation site are included in Appendix A.

As part of a delineation report, data forms and technical information are required by the ACOE to document the three parameters for any area determined to be wetland. A total of seventeen (17) data points were observed. Wetland boundaries were drawn utilizing field data, aerial photographs and topographic boundaries. Wetland boundaries were surveyed using survey grade GPS equipment and data point locations were collected using a resource grade handheld GPS unit. Exact accuracy of maps and locations of boundaries and data points is limited by the accuracy of data collection devices (less than 30 cm for survey grade and 0.5 to 2 meters for handheld). Data forms for sample locations are provided in Appendix B. Representative photographs of sample locations and delineated wetlands are provided in Appendix D.

Results

The following discussion provides an overview of each of the four wetland components inventoried at the PFL wetland delineation site. In June 2019, four wetland types were identified and delineated within the 25-acre project boundary. All potential areas of impact were assessed for dominant hydrophytic vegetation, hydric soils, and evidence of wetland hydrology. Wetland areas outside of the project limits were not assessed. Overall, 17 (seven matched sets) data points were investigated to determine the wetland/upland boundary within the project area. Data points were placed along the wetland/upland boundary and in areas where vegetation and topographic changes appeared across the landscape.

The location of identified wetlands, upland sample points and wetland sample points are shown on Figure 1 (Appendix B). Data forms for sample locations can be found in Appendix C. Photographs of sample locations are located in Appendix D.

Vegetation

Approximately 34 plant species were identified within the proposed project site (Table 1). Plants observed at sample locations are listed on their respective data forms. Of the plant species observed, four are listed as Montana State noxious weeds. Three priority 2B species observed are: whitetop (*Cardaria draba*), Canada thistle (*Cirsium arvense*) and gypsyflower (*Cynoglossum officinale*); which are widespread on the property. One priority 3 species, Russian olive (*Elaeagnus angustifolia*), was observed in a few isolated locations. A weed management plan should be developed and implemented for this site.

Uplands

A total of 7 upland sample points (paired with 9 wetland sample points) were documented within the project area and are shown on Figure 1, Appendix B. These sample points were used to assist in establishing wetland boundaries and to determine/verify upland areas. Taken throughout the project limits, sample points varied throughout upland areas. Uplands generally occur in areas of slightly higher topography and in some cases, convex surfaces. Vegetation within the uplands included a mix of hydrophytic and upland species but facultative upland (FACU) generally dominated the overall cover. Common species noted in the uplands included: smooth brome, redtop and Kentucky bluegrass. Soils ranged from a grey, very dark greyish brown to dark brown and typically lacked redox concentrations. Soil textures varied, but generally ranged from a silty clay loam to silty loam.

Delineated Wetlands

Four wetland types, covering 13-acres were delineated within the PFL wetland delineation site boundaries.

Wetland Type 1 is dominated by cattails (*Typha latifolia*) and occupies 1.75 acres of wetlands. Wetland Type 1 areas are generally located along the east property boundary, extending west of the property. Cattails were observed in both the north and central wetland cells (1.43 and 0.32 acres, respectfully).

Wetland Type 2 is a willow dominated scrub-shrub community with a *Salix exigua* (narrowleaf willow) overstory and a mixed *Juncus/Agrostis (J. balticus, A. alba*) understory. Wetland Type 2 accounts for 0.35 wetland acres located along north (0.21 acres) and south sides (0.14 acres) of the abandoned railroad grade.

Wetland Type 3 is dominated by a mixed *Juncus* community (*J. balticus, J. effusus*) with lesser amounts of reed canary grass (*Phalaris arundinacea*), redtop (*A. alba*) and Rocky Mountain iris (*Iris missouriensis*). Wetland Type 3 occupies 4.02 acres.

Wetland Type 4 is the largest wetland community, covering 6.68 acres (5.11, 1.07 and 0.5 acres in the north, central and south complexes, respectively). This community is comprised of redtop, Rocky Mountain iris, common rush, reed canary grass and Baltic rush.

Scientific Name	Common Name	Indicator Status
Achillea millefolium	common yarrow	FACU
Agrostis alba	redtop	FAC
Agroypron intermedium	intermediate wheatgrass	UPL
Alopecurus arundinaceus	Garrison creeping foxtail	FAC
Bromus inermis	smooth brome	UPL
Cardaria draba	whitetop	UPL
Carex nebrascensis	Nebraska sedge	OBL
Carex stipata	awlfruit sedge	OBL
Cirsium arvense	Canada thistle	FACU
Cynoglossum officinale	gypsyflower	FACU
Dactylis glomerata	orchard grass	FACU
Elaeagnus angustifolia	Russian olive	FAC
Eleocharis palustris	common spikerush	OBL
Elymus lanceolatus	streambank wheatgrass	FACU
Equisetum hyemale	rough horsetail	FACW
Helianthus annus	common sunflower	FACU
Hordeum jubatum	foxtail barley	FAC
Iris missourienssis	Rocky Mountain iris	FACW
Juncus balticus	Baltic rush	FACW
Juncus effusus	common rush	FACW
Mentha arvesis	field mint	FACW
Pascopyrum smithii	western wheatgrass	FACU
Poa pratensis	Kentucky bluegrass	FAC
Rosa woodsii	Wood's rose	FACU
Salix exigua	narrowleaf willow	FACW
Schoenoplectus pungens	common threesqure	OBL
Solidago canadensis	Canada goldenrod	FACU
Sonchus arvensis	field sowthistle	FACU
Sporobolus airoides	alkali sacaton	FAC
Stipa viradula	green needlegrass	UPL
Symphoricarpos albus	common snowberry	FACU
Taraxacum officinale	common dandelion	FACU
Triglochin maritima	seaside arrowgrass	OBL
Typha latifolia	broadleaf cattail	OBL

Table 1: Plant species observed at the Printing for Less Wetland Delineation Site.

Site	General Location	Size (Acres)	Cowardin Class	Primary Hydrology	Dominant Vegetation
Upland	Throughout project area	12.00	none	none	smooth brome, Kentucky bluegrass, common snowberry
Wetland Type 1	Throughout project area	1.75	PEMA	ground and surface water	cattails, common rush
Wetland Type 2	Throughout project area	0.35	PSS	ground and surface water	narrowleaf willow, redtop, Baltic rush
Wetland Type 3	Throughout project area	4.22	PEMA	ground and surface water	common rush, Baltic rush, Rocky Mountain iris, redtop
Wetland Type 4	Throughout project area	6.68	PEMA	ground and surface water	redtop, Rocky Mountain iris, reed canary grass, common rush, Baltic rush

 Table 2: Wetland characteristics identified at the Printing for Less Wetland Delineation Site.

Soils

One soil unit was observed within the project limits of the PFL wetland delineation site, the Reedpoint-Tanna-Ethridge complex. This soil complex is variable with loamy, sandy clay loam and silty clay loam soils. Soil matrix observations for hues were 7.5 YR and 10YR, matrix values ranged from 2 to 5 and chromas were 2 or less. Redox concentrations were generally common throughout most observed wetland soils within the project area. Redox values ranged from 4 to 6 and chromas were 3 or less. Hydric soil indicators were generally Hydrogen Sulfide odor (A4), depleted matrix (F3) or redox dark surface (F6). Detailed soil descriptions for each wetland and upland sample point are provided on the wetland delineation data forms, in Appendix C.

Hydrology

Typical conditions for the region were observed during field sampling. Primary indictors of wetland hydrology were surface water present (A1), saturation (A3) or Hydrogen Sulfide odor (C1). Most wetlands sites also met wetland hydrology indicators based on secondary indicators of geomorphic position (D2) and positive FAC-Neutral test (D5). Depressional wetlands and swales are supported by high groundwater or seasonal groundwater expressed at or near ground surface. Hydrologic indicators at sample locations are documented on their respective data forms located in Appendix C.

Wetland Boundaries

Wetland boundaries were generally readily identifiable due to changes in topography, shifts in vegetation structure or changes in vegetation dominance from FAC to wetter (FACW, OBL) or drier (FACU, UPL) species, changes in hydrology and/or changes in soil types. Topographic breaks were frequently used to help identify wetland boundaries in depressions and swales. In some areas, shifts in plant species composition toward drier species such as smooth brome (*Bromus inermis*) and common snowberry (*Symphoricarpos albus*) also assisted with boundary determinations. When Kentucky bluegrass, redtop or Baltic rush were common in both wetland and upland sample plots, subsurface explorations to assess soil and hydrology assisted in identifying boundaries.

Wetland Impacts

This wetland delineation report for PFL provides baseline information that will assist in developing practices to minimize wetland impacts during development.

Threatened and Endangered Species

A review of USFWS Information, Planning and Conservation System database for the site listed the Canada Lynx as threatened and the North American Wolverine as proposed threatened. Development within the PFL site is not expected to impact any of these species as there are no critical habitats for these species within the project area.

Cultural Resources and Historic Structures

There are no cultural resources, historic or other structures that would be impacted by development activities at the PFL wetland delineation site.

Summary

Four wetland types and one upland type were identified within the PFL wetland delineation site project boundaries totaling 13 and 12 acres, respectively. The largest wetland area accounts for 6.68-acres of mixed *Agrostis* community that is abundant throughout the site. Three wetlands were classified as palustrine emergent wetlands (9.65 acres) and one wetland was classified as shrub-scrub (0.35 acres).

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Websites

Montana Department of Agriculture website. Accessed July 2019 at https://agr.mt.gov/Weeds

Montana Natural Heritage Program website. Accessed in July 2019 at http://mtnhp.org/mapviewer

- USDA, Natural Resources Conservation Service Web Soil Survey. Park County, Montana. Accessed July 2019 at: <u>http://websoilsurvey.nrcs.usda.gov/app/</u>
- U.S. Fish and Wildlife Service National Wetlands Inventory website. Accessed in July 2019 at: https://www.fws.gov/wetlands/data/mapper.html.
- US Fish & Wildlife Service. Information for Planning and Conservation. Accessed in July 2019 at: https://ecos.fws.gov/ipac/

Appendix A

Aerial Overview of the Printing for Less Wetland Delineation Site

Topographic Overview of the Printing for Less Wetland Delineation Site

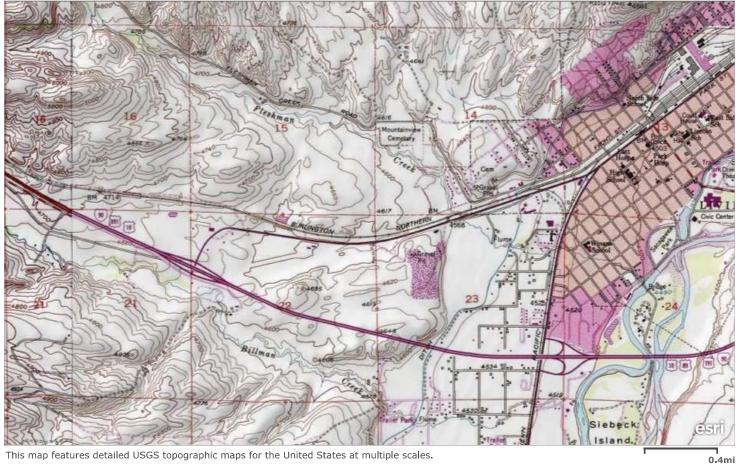
National Wetland Inventory – Mapped Wetlands of the Printing for Less Wetland Delineation Site

Montana Natural Heritage Program - Mapped Wetlands of the Printing for Less Wetland Delineation Site

Soils of the Printing for Less Wetland Delineation Site in Park County, MT



USA Topo Maps



Esri, HERE, DeLorme | Copyright: $\textcircled{\sc c}$ 2013 National Geographic Society, i-cubed



U.S. Fish and Wildlife Service **National Wetlands Inventory**

Printing for Less



July 23, 2019

Wetlands

- Estuarine and Marine Wetland

Estuarine and Marine Deepwater

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- **Freshwater Pond**

Lake Other Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



Latitude	Longitude
45.64766	-110.58997
45.65676	-110.61551



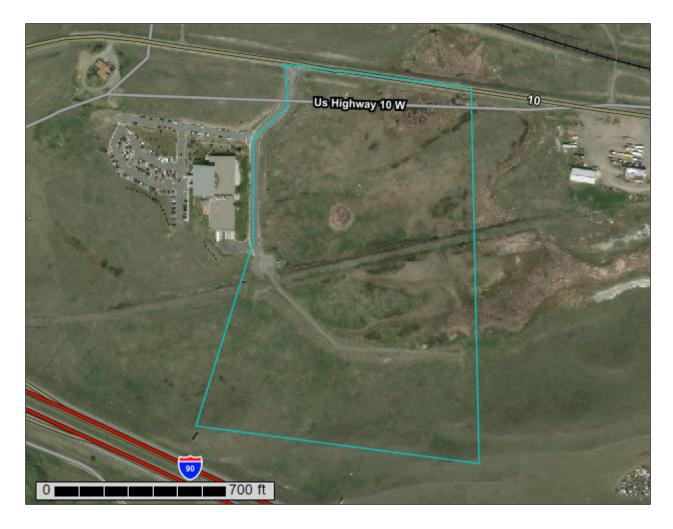
United States Department of Agriculture

Natural Resources Conservation

Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Park County Area, Montana



Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



	MAP L	EGEND		MAP INFORMATION
Area of Int	terest (AOI) Area of Interest (AOI)	8	Spoil Area Stony Spot	The soil surveys that comprise your AOI were mapped at 1:24,000.
Soils	Soil Map Unit Polygons	00 12	Very Stony Spot Wet Spot	Warning: Soil Map may not be valid at this scale.
ĩ	Soil Map Unit Lines Soil Map Unit Points	۵ •	Other Special Line Features	Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of
ల	Point Features Blowout	Water Fea		contrasting soils that could have been shown at a more detailed scale.
×	Borrow Pit Clay Spot	Transport	ation Rails	Please rely on the bar scale on each map sheet for map measurements.
\$ \$	Closed Depression Gravel Pit Gravelly Spot	~	US Routes Web Soil Survey	Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)
 © A	Landfill Lava Flow	Backgrou	Major Roads Local Roads nd	Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts
<u>بله</u> ج	Marsh or swamp Mine or Quarry		Aerial Photography	distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.
0	Miscellaneous Water Perennial Water			This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.
× +	Rock Outcrop Saline Spot			Soil Survey Area: Park County Area, Montana Survey Area Data: Version 10, Sep 11, 2018
** •	Sandy Spot Severely Eroded Spot			Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.
\$ ≽	Sinkhole Slide or Slip			Date(s) aerial images were photographed: Aug 3, 2009—Sep 1, 2016
ø	Sodic Spot			The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
5401D	Ethridge-Tanna-Reedpoint complex, 2 to 15 percent slopes	0.8	2.3%
5502E	Reedpoint-Tanna-Ethridge complex, 4 to 35 percent slopes	32.4	97.7%
Totals for Area of Interest		33.2	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Park County Area, Montana

5401D—Ethridge-Tanna-Reedpoint complex, 2 to 15 percent slopes

Map Unit Setting

National map unit symbol: 582g Elevation: 4,300 to 5,100 feet Mean annual precipitation: 12 to 14 inches Mean annual air temperature: 43 to 45 degrees F Frost-free period: 90 to 120 days Farmland classification: Not prime farmland

Map Unit Composition

Ethridge and similar soils: 35 percent *Tanna and similar soils:* 25 percent *Reedpoint and similar soils:* 15 percent *Minor components:* 25 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Ethridge

Setting

Landform: Swales on hills Landform position (two-dimensional): Footslope Down-slope shape: Linear Across-slope shape: Linear Parent material: Clayey alluvium derived from sedimentary rock

Typical profile

A - 0 to 4 inches: clay loam Bt - 4 to 17 inches: clay loam Bk1 - 17 to 53 inches: clay loam 2Bk2 - 53 to 60 inches: gravelly loam

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Sodium adsorption ratio, maximum in profile: 5.0
Available water storage in profile: High (about 10.4 inches)

Interpretive groups

Land capability classification (irrigated): 3e Land capability classification (nonirrigated): 3e Hydrologic Soil Group: C Ecological site: Clayey (Cy) 9-14" p.z. (R044XS330MT) Hydric soil rating: No

Description of Tanna

Setting

Landform: Hills Landform position (two-dimensional): Backslope Down-slope shape: Convex Across-slope shape: Convex Parent material: Loamy alluvium derived from igneous, metamorphic and sedimentary rock

Typical profile

A - 0 to 8 inches: clay loam

Bt - 8 to 16 inches: clay loam

Bk - 16 to 23 inches: loam

Cr - 23 to 60 inches: weathered bedrock, bedrock

Cr - 23 to 60 inches:

Properties and qualities

Slope: 4 to 15 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): 4e Land capability classification (nonirrigated): 4e Hydrologic Soil Group: C Ecological site: Silty (Si) 9-14" p.z. (R044XS339MT) Hydric soil rating: No

Description of Reedpoint

Setting

Landform: Hills Landform position (two-dimensional): Summit Down-slope shape: Convex Across-slope shape: Convex Parent material: Loamy residuum weathered from sandstone

Typical profile

A1 - 0 to 2 inches: very channery loam A2 - 2 to 8 inches: extremely channery loam R - 8 to 18 inches: bedrock

Properties and qualities

Slope: 4 to 15 percent Depth to restrictive feature: 4 to 10 inches to lithic bedrock Natural drainage class: Well drained Runoff class: Medium

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr) Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Available water storage in profile: Very low (about 0.8 inches)

Interpretive groups

Land capability classification (irrigated): 7s Land capability classification (nonirrigated): 7s Hydrologic Soil Group: D Ecological site: Very Shallow (VSw) 9-14" p.z. (R044XS348MT) Hydric soil rating: No

Minor Components

Yamacall

Percent of map unit: 10 percent Landform: Hills Landform position (two-dimensional): Backslope Down-slope shape: Convex Across-slope shape: Convex Ecological site: Silty (Si) 9-14" p.z. (R044XS339MT) Hydric soil rating: No

Cabbart

Percent of map unit: 10 percent Landform: Scarp slopes Landform position (two-dimensional): Backslope Down-slope shape: Convex Across-slope shape: Convex Ecological site: Shallow Limy (SwLy) 9-14" p.z. (R044XS612MT) Hydric soil rating: No

Rock outcrop

Percent of map unit: 5 percent

5502E—Reedpoint-Tanna-Ethridge complex, 4 to 35 percent slopes

Map Unit Setting

National map unit symbol: 5801 Elevation: 4,300 to 5,200 feet Mean annual precipitation: 12 to 14 inches Mean annual air temperature: 43 to 45 degrees F Frost-free period: 90 to 120 days Farmland classification: Not prime farmland

Map Unit Composition

Reedpoint and similar soils: 35 percent Tanna and similar soils: 25 percent Ethridge and similar soils: 20 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Reedpoint

Setting

Landform: Dip slopes Landform position (two-dimensional): Summit, shoulder, backslope Down-slope shape: Convex Across-slope shape: Linear Parent material: Loamy residuum weathered from sandstone

Typical profile

A1 - 0 to 2 inches: very channery loam A2 - 2 to 8 inches: extremely channery loam R - 8 to 18 inches: bedrock

Properties and qualities

Slope: 4 to 35 percent
Depth to restrictive feature: 4 to 10 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 0.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7s Hydrologic Soil Group: D Ecological site: Very Shallow (VSw) 9-14" p.z. (R044XS348MT) Hydric soil rating: No

Description of Tanna

Setting

Landform: Swales on dip slopes Landform position (two-dimensional): Backslope Down-slope shape: Concave Across-slope shape: Convex Parent material: Loamy alluvium derived from sandstone and shale

Typical profile

A - 0 to 2 inches: sandy clay loam Bt - 2 to 8 inches: clay loam Bk - 8 to 26 inches: loam Cr - 26 to 30 inches: weathered bedrock R - 30 to 40 inches: bedrock

Properties and qualities

Slope: 4 to 25 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock; 20 to 40 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: C Ecological site: Silty (Si) 9-14" p.z. (R044XS339MT) Hydric soil rating: No

Description of Ethridge

Setting

Landform: Swales on dip slopes Landform position (two-dimensional): Toeslope Down-slope shape: Concave Across-slope shape: Concave Parent material: Clayey alluvium derived from sandstone and shale

Typical profile

A - 0 to 5 inches: clay loam Bt - 5 to 21 inches: clay loam Bk1 - 21 to 30 inches: clay loam 2Bk2 - 30 to 60 inches: gravelly loam

Properties and qualities

Slope: 4 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Sodium adsorption ratio, maximum in profile: 5.0
Available water storage in profile: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): 4e Land capability classification (nonirrigated): 4e Hydrologic Soil Group: C Ecological site: Clayey (Cy) 9-14" p.z. (R044XS330MT) Hydric soil rating: No

Minor Components

Cabbart

Percent of map unit: 12 percent Landform: Scarp slopes Landform position (two-dimensional): Backslope Down-slope shape: Convex Across-slope shape: Convex Ecological site: Shallow Limy (SwLy) 9-14" p.z. (R044XS612MT) Hydric soil rating: No

Rock outcrop

Percent of map unit: 5 percent

Bigsandy

Percent of map unit: 3 percent Landform: Drainageways Landform position (two-dimensional): Footslope Down-slope shape: Linear Across-slope shape: Linear Ecological site: Saline Subirrigated (SSb) 9-14" p.z. (R044XS333MT) Hydric soil rating: Yes

Appendix B

Figure 1 – Mapped Wetland Boundary at the Printing for Less Wetland Delineation Site



NO.	REVISIONS	DRAWN BY	DATE	Q 100	200 300				
				SCALE (FEET)					
				PROJECT ENGINEER: RO	DRAWN BY: Sanderson Stewart				
				DESIGNED BY: REVIEWED BY:					

Appendix C

Printing for Less Wetland Determination Data Forms

Project/Site: Printing for Less	City/County: Livingston/Park	ampling Date: <u>19-</u>	mpling Date: <u>19-Jun-19</u>		
Applicant/Owner: Printing for Less	S	tate: MT	Sampling Point:	PFL 1	
Investigator(s): B Schultz	Section, Township, Range: S	5 22 T 2 5	5 R 9E	_	
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, convex, none): none Slope: 0.0 % /				
Subregion (LRR): LRR E	45°39'2.53"N Long	.: 110°36'10.41"₩	V Datu	m: WGS 84	
Soil Map Unit Name: Reedpoint-Tanna-Ethridge complex		NWI classific	cation: none		
Are climatic/hydrologic conditions on the site typical for this time of year	ar? Yes $ullet$ No $iglood$	(If no, explain in Re	emarks.)		
Are Vegetation, Soil, or Hydrology significant	ly disturbed? Are "Normal (Circumstances" pre	esent? Yes 🖲	No 🔿	
Are Vegetation, Soil, or Hydrology naturally p	problematic? (If needed, ex	xplain any answers	s in Remarks.)		

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes 🔿	No 🖲	Is the Sampled Area				
Hydric Soil Present?	Yes 🖲	No O	•	Yes 🔿 No 🖲			
Wetland Hydrology Present?	Yes \bigcirc	No 🖲	within a Wetland?				
Remarks:							

Dominant

Sample located south of gravel access drive.

VEGETATION - Use scientific names of plants.

		_Species?		1
		Rel.Strat.	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% Cover	Cover	Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		
3	0	0.0%		Total Number of Dominant Species Across All Strata: 1
4.	0	0.0%		
		= Total Cov	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Percent of dominant Species
Sapling/Shrub Stratum (Plot size: 15 ft.)	0			That Are OBL, FACW, or FAC:(A/B)
	0	0.0%		
1				Prevalence Index worksheet:
2	0	0.0%		Total % Cover of: Multiply by:
3	0	0.0%		OBL species $0 \times 1 = 0$
4	0	0.0%		FACW species $0 \times 2 = 0$
5	0	0.0%		FAC species $5 \times 3 = 15$
	0	= Total Cov	er	FACU species $0 \times 4 = 0$
Herb Stratum (Plot size: 5 ft.)				UPL species $\frac{75}{100} \times 5 = \frac{375}{100}$
1. Bromus inermis	75	✔ 78.9%	UPL	
2. Litter	15	15.8%		Column Totals: <u>80</u> (A) <u>390</u> (B)
3 Poa pratensis	5	5.3%	FAC	Prevalence Index = $B/A = 4.875$
4	0	0.0%		
5	0	0.0%		Hydrophytic Vegetation Indicators:
6	0	0.0%		1 - Rapid Test for Hydrologic Vegetation
	0	0.0%		\square 2 - Dominance Test is > 50%
7	0	0.0%		□ 3 - Prevalence Index is ≤3.0 1
8		0.0%		4 - Morphological Adaptations ¹ (Provide supporting
9	0	0.0%		data in Remarks or on a separate sheet)
10	0	0.0%		\Box 5 - Wetland Non-Vascular Plants 1
11	_			Problematic Hydrophytic Vegetation ¹ (Explain)
	95	= Total Cov	er	
Woody Vine Stratum (Plot size:)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0	0.0%		be present, unless disturbed of problematic.
2.	0	0.0%		Hydrophytic
	0	= Total Cov	er	Vegetation Present? Yes O No •
% Bare Ground in Herb Stratum: 0				
				1
Remarks:				
Community dominated by pasture grasses				

Sampling Point: PFL 1

Profile Descr	iption: (Des	scribe to t	he depth	needed to de	ocument	the indic	ator or co	nfirm the a	absence of indicators.)			
Depth		Matrix			Red	ox Featu	ires					
(inches)	Color (moist)	%	Color (n	noist)	%	Type ¹	Loc ²	Texture	Remarks		
0-6	7.5YR	3/2	93	7.5YR	5/1	7	С	М	Silty Clay Loam	wet, not saturated		
6-13	7.5YR	3/2	95	7.5YR	5/3	3	С	М	Silty Clay	very clayey		
				7.5YR	4/4	2	С	М				
13-22	7.5YR	4/2	80	7.5YR	5/3	20	С	М	Silty Clay Loam	reddish profile, wet, not saturated		
						_						
¹ Type: C=Con	centration. D	=Depletion	. RM=Red	uced Matrix, C	S=Covered	d or Coate	ed Sand Gra	ins ² Loca	tion: PL=Pore Lining. M=	=Matrix		
Hydric Soil I	ndicators:	(Applicab	le to all L	RRs, unless	otherwise	e noted.))		Indicators for Pro	blematic Hydric Soils ³ :		
Histosol (A1)			Sano	dy Redox (S5)			2 cm Muck (A1	0)		
📃 Histic Epip	pedon (A2)				ped Matrix	• •			Red Parent Material (TF2)			
Black Hist	. ,						1) (except	in MLRA 1)	Conter (Explain in Remarks)			
	Sulfide (A4)				ny Gleyed	•	2)					
Depleted	Below Dark S	Surface (A1	1)		leted Matri	• •						
Thick Dar	k Surface (Al	12)			ox Dark Su	•	,		³ Indicators of hydrophytic vegetation and			
Sandy Mu	ck Mineral (S	51)			Depleted Dark Surface (F7) Redox depressions (F8)				wetland hydrology must be present, unless disturbed or problematic.			
,	eyed Matrix (S	,			ox depress	ions (F8)			uniess distuibed o	problematic.		
Restrictive L	ayer (if pre	sent):										
Туре:									Hydric Soil Present	? Yes 🖲 No 🔾		
Depth (inc	hes):			_					Hydric Son Present:			
Remarks:												
Mottles at 3 i	nches.											
Hydrology	/											
Wetland Hyd	rology Indi	cators:										
Primary Indi	cators (mir	imum of	one requi	red; check a	II that ap	ply)			Secondary In	dicators (minimum of two required)		
Surface V	Vater (A1)			W	ater-Staine	d Leaves	(B9) (exce	ot MLRA	Water-Sta	ined Leaves (B9) (MLRA 1, 2,		
High Water Table (A2) 1, 2, 4A, and 4B)						4A, and 4	B)					

Primary Indicators (minim	um of one require	d; check all that apply)		Secondary Indica	ntors (minimu	m of two r
Surface Water (A1)			Water-Stained Leaves (B9) (except MLRA			1LRA 1, 2,
High Water Table (A2)		1, 2, 4A, and 4B)		4A, and 4B)		
Saturation (A3)		Salt Crust (B11)		Drainage Patte	erns (B10)	
Water Marks (B1)		Aquatic Invertebrates (B13)		Dry Season Wa	ater Table (C2)	
Sediment Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visi	ble on Aerial In	nagery (C9)
Drift deposits (B3)		Oxidized Rhizospheres on Livi	ng Roots (C3)	Geomorphic Po	osition (D2)	
Algal Mat or Crust (B4)		Presence of Reduced Iron (C4	ł)	Shallow Aquita	ard (D3)	
Iron Deposits (B5)		Recent Iron Reduction in Tille	d Soils (C6)	FAC-neutral Te	est (D5)	
Surface Soil Cracks (B6)		Stunted or Stressed Plants (D	1) (LRR A)	Raised Ant Mo	unds (D6) (LRF	(A)
Inundation Visible on Aer	Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)				ummocks (D7)	
Sparsely Vegetated Conce	ave Surface (B8)					
Field Observations:						
Surface Water Present?	Yes 🔾 No 🖲	Depth (inches):				
Water Table Present?	Yes 🔿 No 🖲	Depth (inches):			v	No 🖲
Saturation Present? (includes capillary fringe)	Yes 🔿 🛛 No 🖲	Depth (inches):	Wetland Hy	drology Present?	Yes \bigcirc	NO 🙂
Describe Recorded Data (s	tream gauge, mor	nitor well, aerial photos, previous in	nspections), if availa	ble:		
Remarks:						
No wetland hydrology indic	ators were observ	ved at this sample location.				

Project/Site: Printing for Less	City/County: Livingston/Park	City/County: Livingston/Park Samp		
Applicant/Owner: Printing for Less	s	state: MT	Sampling Point:	PFL 2
Investigator(s): B Schultz	Section, Township, Range:	s _22 т _2	5 R 9E	_
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, convex	, none): none	Slope:	<u>0.0</u> % / <u>0.0</u> °
Subregion (LRR): LRR E	45°39'2.65"N Long	g.: 110°36'10.65"V	V Datu	n: WGS 84
Soil Map Unit Name: Reedpoint-Tanna-Ethridge complex		NWI classifi	cation: none	
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes $ullet$ No $iglood$	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Normal	Circumstances" pro	esent? Yes 🖲	No 🔿
Are Vegetation D , Soil , or Hydrology naturally	problematic? (If needed, e	explain any answers	s in Remarks.)	

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes 🖲	No O	Is the Sampled Area			
Hydric Soil Present?	Yes 🖲	No O	•	Yes 🖲 No		
Wetland Hydrology Present?	Yes 🖲	No O	within a Wetland?			

Dominant

Remarks:

Sample located eight feet from sample point 1.

VEGETATION - Use scientific names of plants.

		_Species?		
		Rel.Strat.		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% Cover	Cover	Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC:3(A)
2	0	0.0%		
2	0	0.0%		Total Number of Dominant
3 4	0	0.0%		Species Across All Strata: <u>3</u> (B)
T				Percent of dominant Species
	0	= Total Cov	er	That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft.)				
1. Elaeagnus angustifolia	5	✓ 100.0%	FAC	Prevalence Index worksheet:
2.	0	0.0%		Total % Cover of: Multiply by:
3	0	0.0%		OBL species 0 x 1 = 0
4.	0	0.0%		FACW species 0 x 2 = 0
5.	0	0.0%		FAC species $80 \times 3 = 240$
Herb Stratum (Plot size: 5 ft.)	5	= Total Cov	er	FACU species $5 \times 4 = 20$
	35	✔ 36.8%	FAC	UPL species $0 \times 5 = 0$
1. Poa pratensis				Column Totals:
2. Sporobolus airoides	30	✓ 31.6%	FAC	
3	15	15.8%		Prevalence Index = $B/A = 3.059$
4. Hordeum jubatum	10	10.5%	FAC	Hydrophytic Vegetation Indicators:
5. Sonchus arvensis	5	5.3%	FACU	1 - Rapid Test for Hydrologic Vegetation
6	0	0.0%		 ✓ 2 - Dominance Test is > 50%
7	0	0.0%		
8	0	0.0%		□ 3 - Prevalence Index is \leq 3.0 ¹
9	0	0.0%		4 - Morphological Adaptations ¹ (Provide supporting
10	0	0.0%		data in Remarks or on a separate sheet)
11.	0	0.0%		$igsqcup$ 5 - Wetland Non-Vascular Plants 1
	95	= Total Cov	er	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)				¹ Indicators of hydric soil and wetland hydrology must
	0	0.0%		be present, unless disturbed or problematic.
1 2.	_			Hydrophytic
۷	0	0.0%		Veretation
		= Total Cov	er	Present? Yes I No
% Bare Ground in Herb Stratum: <u>5</u>				
Remarks:				

Sample dominated by Kentucky bluegrass and alkai sacaton.

Sampling Point: PFL 2

Depth (inches) Matrix Redox Features 0-4 7.57R 94 Colr (moist) 96 Yuse Loc2 Texture Saturated to soil surface 412 7.57R 3/1 94 7.57R 6/1 3 C M Silty Clay Loam saturated to soil surface 412 7.57R 3/2 50 7.57R 5/2 3 C M 12:18+ 7.57R 3/2 50 Silty Clay Loam soil a linest appears mixed 12:18+ 7.57R 3/2 50 Silty Clay Loam soil a linest appears mixed 12:18+ 7.57R 3/2 50 Silty Clay Loam soil a linest appears mixed 12:18+ 7.57R 3/2 50 Silty Clay Loam soil a linest appears mixed 12:18+ 7.57R 3/2 50 Silty Clay Loam soil a linest appears mixed 12:18+ 7.57R 3/2 50 Silty Clay Loam soil a linest appears mixed 12:18+ Tothicators (nothicators: (Applicable Katin (Si) <td< th=""><th>Profile Descr</th><th>iption: (Des</th><th>cribe to t</th><th>he depth :</th><th>needed to doc</th><th>ument ti</th><th>he indic</th><th>ator or co</th><th>nfirm the a</th><th>bsence of indicators</th><th>.)</th></td<>	Profile Descr	iption: (Des	cribe to t	he depth :	needed to doc	ument ti	he indic	ator or co	nfirm the a	bsence of indicators	.)
0.4 7.5YR 4/1 100					/						
U-4 2.51K 1/1 100 7.5YR 6/1 3 C M Silly Clay Loam 4-12 7.5YR 3/2 50 7.5YR 5/2 3 C M 12-18+ 7.5YR 3/2 50 7.5YR 4/2 50 Silly Clay Loam 5011 almost appears mixed 12-18+ 7.5YR 3/2 50 7.5YR 4/2 50 Silly Clay Loam 5011 almost appears mixed 12-18+ 7.5YR 3/2 50 7.5YR 4/2 50 Silly Clay Loam 5011 almost appears mixed 12-18+ 7.5YR 3/2 50 7.5YR 4/2 50 Silly Clay Loam 5011 almost appears mixed 12-18+ 7.5YR 3/2 50 7.5YR 4/2 50 Silly Clay Loam 5011 almost appears mixed 12-18+ 7.5YR 3/2 50 7.5YR 4/2 50 Silly Clay Loam 5011 almost appears mixed 12-18+ 7.5YR 50 7.5YR 6/10 7.5YR 6/10 7.5YR 6/10 7.5YR 14/2	·				Color (mo	ist)	%	Type	Loc		
7.5YR 5/2 3 C M 12-18+ 7.5YR 3/2 50 7.5YR 4/2 50 Silty Clay Loam \$011 a 1most appears mixed 12-18+ 7.5YR 3/2 50 7.5YR 4/2 50 Silty Clay Loam \$011 a 1most appears mixed 12-18+ 7.5YR 5/2 3 C M Silty Clay Loam \$011 a 1most appears mixed 12-18+ 7.5YR 5/2 3 C M Silty Clay Loam \$011 a 1most appears mixed 17ype: Center Cancentration. D=Depletion. RM=Reduced Matrix (S Indicators if Problematic Hydric Soils * Indicators if Problematic Hydric Soils * Indicators if Problematic Hydric Soils * Indicators of hydrophydic vegetation and wetland hydrology must be present, unless disturbed or problematic. Image Problematic (A1) Image Problematic (F7) 3 ¹ Indicators of hydrophydic vegetation and wetland hydrology must be present, unless disturbed or problematic. Image Problematic (S4) Image Problematic. M No Image Problematic. Restrictive Layer (if present): Type: Image Present,											
12:18+ 7.5YR 3/2 50 7.5YR 4/2 50 Sity Clay Loam soil a limost appears mixed 1 ¹ Type: C.SYR 3/2 50 7.5YR 4/2 50 Sity Clay Loam soil a limost appears mixed 1 ¹ Type: C.SYR 4/2 50 Sity Clay Loam soil a limost appears mixed 1 ¹ Type: C.Concentration. D=Depleton. RM=Reduced Matrix, CS=-Covered or Coated Sand Grains *Locator: PL=Pore Lining. M=Matrix Hydros Soil Indicators: Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils 3: Histic Epipadin (A2) Stripped Matrix (S3) Carm Muck (A10) Red Parent Material (TF2) Hydros Suffac (A1) Depleted Matrix (S1) Depleted Matrix (S1) Other (Explain in Remarks) Gardy Muck Mineral (S1) Depleted Matrix (S2) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (If present): Trype: Perity Indicators (R11) Depleted Matrix (S2) Secondary Indicators (minum of two required) Surface Mater (A1) 1, 2, 4A, and 4B) Secondary Indicators (minum of two required) Secondary Indicators (B10) Secondary Indicators (B10)	4-12	7.5YR	3/1	94	7.5YR	6/1	3	C	M	Silty Clay Loam	
12:16+ 7.31K 3/2 30 7.31K 4/2 30 Sill(Ude)(Ude)(Ude)(Ude)(Ude)(Ude)(Ude)(Ude)					7.5YR	5/2	3	C	М		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histicsol (A1) Sandy Redox (55) C Red Parent Material (TF2) Black Histo (A2) Stripped Matrix (56) Red Parent Material (TF2) Other (Explain in Remarks) Depleted Bolow Dark Surface (A11) Depleted Matrix (F2) Other (Explain in Remarks) Other (Explain in Remarks) Sandy Muck Mineral (S1) Depleted Matrix (F2) Redox Dark Surface (F7) 3Indicators of hydrophytic vegetation and wettand hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:	12-18+	7.5YR	3/2	50	7.5YR	4/2	50			Silty Clay Loam	soil almost appears mixed
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histicsol (A1) Sandy Redox (55) C Red Parent Material (TF2) Black Histo (A2) Stripped Matrix (56) Red Parent Material (TF2) Other (Explain in Remarks) Depleted Bolow Dark Surface (A11) Depleted Matrix (F2) Other (Explain in Remarks) Other (Explain in Remarks) Sandy Muck Mineral (S1) Depleted Matrix (F2) Redox Dark Surface (F7) 3Indicators of hydrophytic vegetation and wettand hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:											
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histicsol (A1) Sandy Redox (55) C Red Parent Material (TF2) Black Histo (A2) Stripped Matrix (56) Red Parent Material (TF2) Other (Explain in Remarks) Depleted Bolow Dark Surface (A11) Depleted Matrix (F2) Other (Explain in Remarks) Other (Explain in Remarks) Sandy Muck Mineral (S1) Depleted Matrix (F2) Redox Dark Surface (F7) 3Indicators of hydrophytic vegetation and wettand hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:											
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histicsol (A1) Sandy Redox (55) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (56) Red Parent Material (TF2) Biack Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Other (Explain in Remarks) Depleted Balow Dark Surface (A11) Depleted Matrix (F2) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Depleted Dark Surface (F7) 3Indicators of hydrophytic vegetation and wettand hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:											
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histicsol (A1) Sandy Redox (55) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (56) Red Parent Material (TF2) Biack Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Other (Explain in Remarks) Depleted Balow Dark Surface (A11) Depleted Matrix (F2) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Depleted Dark Surface (F7) 3Indicators of hydrophytic vegetation and wettand hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:											
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ : Histicsol (A1) Sandy Redox (55) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (56) Red Parent Material (TF2) Biack Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Other (Explain in Remarks) Depleted Balow Dark Surface (A11) Depleted Matrix (F2) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Depleted Dark Surface (F7) 3Indicators of hydrophytic vegetation and wettand hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:						,					
Histosol (A1) Histic Epipedon (A2) Stripped Matrix (55) Generative C(A2) Stripped Matrix (52) Back Histic (A3) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Sandy Muck Mineral (S1) Depleted Dark Surface (F7) wetand hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:	¹ Type: C=Con	centration. D	=Depletion	ı. RM=Redu	ced Matrix, CS=	Covered	or Coate	ed Sand Gra	ains ² Locat	-	
Image: Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Image: Bide Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Other (Explain in Remarks) Image: Bide Histic (A3) Depleted Matrix (F2) Other (Explain in Remarks) Image: Bide Histic (A11) Depleted Matrix (F3) Image: Bide Histic (A11) Image: Bide Histic (A12) Image: Bide Histic (A13) Image: Bide Histic (A11) Image: Bide Histic (A12) Image: Bide Histic (A11) Depleted Dark Surface (F7) Image: Bide Histic (A11) Image: Bide Histic (A3) Depleted Dark Surface (F7) Image: Bide Histic (A11) Depleted Dark Surface (F7) Image: Bide Histic (A11) Image: Bide Histic (A11) Depleted Dark Surface (F7) Image: Bide Histic (A11) Image: Bide Histic (A11) Image: Bide Histic (A11) Image: Bide Histic (A11) Depleted Dark Surface (B11) Image: Bide Histic (A11) Image: Bide Histic (A11) Image: Bide Histic (A11) Image: Bide Histic (A2) 1, 2, 4A, and 4B) Secondary Indicators (minimum of two required) Image: Bide Histic (A12) Image: Bide Histic (A12) Image: Bide Histic (A2) 1, 2, 4A, and 4B) Image: Bide Histic (A12) Image: Bide Histic (A12) Image: Bide Histic (A12) Image: Bide Hist	_		(Applicab	le to all LF)			•
Black Histic (A3) □ Loamy Gleged Matrix (F2) □ Black Histic (A3) □ Loamy Gleged Matrix (F2) □ Depleted Black (F3) □ Comy Gleged Matrix (F2) □ Depleted Black (F3) □ Comy Gleged Matrix (F2) □ Depleted Matrix (F3) □ Comy Gleged Matrix (F3) □ Sandy Muck Mineral (S1) □ Depleted Matrix (F3) □ Sandy Gleged Matrix (S4) □ Redox Dark Surface (F7) ■ Restrictive Layer (if present): Type: Type:		-			·	-	-				•
Hydrogen Sulfide (A4) □ Loamy Gleyed Matrix (F2) □ beleted Matrix (F2) □ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Trick Dark Surface (A12) □ Depleted Matrix (F3) □ Sandy Muck Mineral (S1) □ Depleted Dark Surface (F7) □ Sandy Muck Mineral (S1) □ Depleted Dark Surface (F7) □ Depleted Matrix (S4) □ Redox depressions (F8) Restrictive Layer (if present): Type: Type:		. ,			··		• •	=1) (except	in MI RA 1)		
□ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Depleted Below Dark Surface (A12) □ Redox Dark Surface (F6) □ Sandy Muck Mineral (S1) □ Depleted Dark Surface (F7) □ Sandy Gleyed Matrix (S4) Redox depressions (F8) Restrictive Layer (If present): Type: □ Depleted Dark Surface (F7) Hydric Soil Present? Yes:		. ,				,	•	,, ,			n In Remarks)
Indicators of mydrophydro vegetation and wetgetation and hydrophydro vegetation and hydrophydrophydro vegetation and hydrophydrophydrophydro vegetation and hydrophydrophydro vegetation and hydrophydrophydro vegetation and hydrophydrophydrophydrohydrophydrophydro vegetation and hydrophydrop		. ,	urface (A1	.1)		-	-	,			
Sandy Muck Mineral (S1) □ Depleted Dark Surface (F7) wetland hydrology must be present, Sandy Gleyed Matrix (S4) □ Redox depressions (F8) unless disturbed or problematic. Restrictive Layer (if present):	Thick Dar	k Surface (A1	2)				• • •			³ Indicators of hydro	phytic vegetation and
Standy Gleyed Matrix (S4) Intervention depresents (r 6) Restrictive Layer (if present): Type: Type:	Sandy Mu						wetland hydrolog	gy must be present,			
Type: Hydric Soil Present? Yes No Remarks: Mottles at 4 inches. No No No Hydric Soil Present? Yes No No No Remarks: Mottles at 4 inches. No No No No No Hydric Soil Present? Yes No	Sandy Gleyed Matrix (S4)								uniess aisturveu	or problematic.	
Depth (inches): Hydric Soil Present? Yes No Remarks: Mottles at 4 inches. Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Water-Stained Leaves (B9) (except MLRA High Water Table (A2) I, 2, 4A, and 4B) Saturation (A3) Saturation (A3) Sediment Deposits (B1) Aquatic Invertebrates (B13) Drift deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Primary Indicetors (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9)	Restrictive L	ayer (if pres	ent):								
Deput (index):	Туре:									Undrie Ceil Dressen	
Mottles at 4 inches. Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Water-Stained Leaves (B9) (except MLRA High Water Table (A2) 1, 2, 4A, and 4B Vater-Stained Leaves (B1) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Drift deposits (B2) Hydrogen Sulfide Odor (C1) Drift deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6)	Depth (inc	hes):								Hyaric Soli Presen	t? Yes 👻 ind 🔾
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except MLRA High Water Table (A2) 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6)	Remarks:										
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Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Water-Stained Leaves (B9) (except MLRA High Water Table (A2) 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6)											
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Water-Stained Leaves (B9) (except MLRA High Water Table (A2) 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6)	Hydrology										
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High Water Table (A2) 1, 2, 4A, and 4B) 4A, and 4B) ✓ Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift deposits (B3) Oxidized Rhizospheres on Living Roots (C3) ✓ Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-neutral Test (D5)				One requir				(RQ) (exce	nt MI RA		
Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-neutral Test (D5)		. ,							penerov		
Water Marks (B1) Aquatic Invertebrates (B13) Dry Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-neutral Test (D5)	_	. ,			Salt	Crust (B1	1)			Drainage	Patterns (B10)
Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-neutral Test (D5)		. ,				•	,	(B13)		-	
Drift deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Image: Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-neutral Test (D5)		()	2)					. ,			
Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-neutral Test (D5)			,			-			Roots (C3)		• • • •
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-neutral Test (D5)	Algal Mat	or Crust (B4))				•	-			
					Rece	nt Iron R	eduction	n in Tilled Se	oils (C6)		
	Surface S	Soil Cracks (Be	5)						. ,	_	

Inundation Visible on Aerial Imagery (B7) Frost Heave Hummocks (D7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Field Observations: Yes 🔘 No 🖲 Depth (inches): Surface Water Present? Yes 🔿 No 🖲 Water Table Present? Depth (inches): Yes 💿 No 🔾 Wetland Hydrology Present? Saturation Present? Yes 🖲 No \bigcirc 0 Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available: Remarks: Soil saturated to surface.

Project/Site: Printing for Less	City/County: Livingston/Park		Jun-19	
Applicant/Owner: Printing for Less		State: MT	Sampling Point:	PFL 3
Investigator(s): B Schultz	Section, Township, Range	s 22 t 2	S R 9 E	
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, conv	ex, none): concave	Slope:	0.0 % / 0.0 °
Subregion (LRR): LRR E	45°39'2.66"N Lo	ng.: 110°36'10.80"\	W Datu	m: WGS 84
Soil Map Unit Name: Reedpoint-TannaEthridge complex		NWI classif	ication: none	
Are climatic/hydrologic conditions on the site typical for this time of ye	ear? Yes 🖲 No 🔾	(If no, explain in F	Remarks.)	
Are Vegetation, Soil, or Hydrology significan	tly disturbed? Are "Norma	l Circumstances" pr	resent? Yes 🖲	No 🔿
Are Vegetation D , Soil , or Hydrology naturally	problematic? (If needed,	explain any answer	rs in Remarks.)	

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes 🖲	No O	Is the Sampled Area	
Hydric Soil Present?	Yes 🖲	No O	•	Yes 🖲 No 🔿
Wetland Hydrology Present?	Yes 🖲	No 🔿	within a Wetland?	
Remarks:				

Dominant

Sample located in small depression.

VEGETATION - Use scientific names of plants.

		_Species?		1
		Rel.Strat.	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% Cover	Cover	Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2.	0	0.0%		
3	0	0.0%		Total Number of Dominant
4.	0	0.0%		Species Across All Strata: (B)
4		0.0%		Percent of dominant Species
	0	= Total Cov	er	That Are OBL, FACW, or FAC:100.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft.)		_		
1. Elaeagnus angustifolia	3	100.0%	FAC	Prevalence Index worksheet:
2	0	0.0%		Total % Cover of: Multiply by:
3.	0	0.0%		OBL species 65 x 1 = 65
4.	0	0.0%		FACW species $10 \times 2 = 20$
5.	0	0.0%		
				FAC species $8 \times 3 = 24$
	3	= Total Cov	er	FACU species $0 \times 4 = 0$
Herb Stratum (Plot size: 5 ft.)		_		UPL species $0 \times 5 = 0$
1. Schoenoplectus pungens	65	✔ 81.3%	OBL	Column Totals: 83 (A) 109 (B)
2. Sporobolus airoides	5	6.3%	FAC	$\begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} $
3. Juncus effusus	5	6.3%	FACW	Prevalence Index = $B/A = 1.313$
4. Juncus balticus	5	6.3%	FACW	
5	0	0.0%		Hydrophytic Vegetation Indicators:
6	0	0.0%		✓ 1 - Rapid Test for Hydrologic Vegetation
	0	0.0%		✓ 2 - Dominance Test is > 50%
7		0.0%		✓ 3 - Prevalence Index is \leq 3.0 ¹
8	0	0.0%		4 - Morphological Adaptations ¹ , Provide supporting
9				data in Remarks or on a separate sheet)
10	0	0.0%		\Box 5 - Wetland Non-Vascular Plants ¹
11	0	0.0%		
	80	= Total Cov	er	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)				¹ Indicators of hydric soil and wetland hydrology must
	0	0.0%		be present, unless disturbed or problematic.
1	0	0.0%		Hydrophytic
2				Veretation
	0	= Total Cov	er	Present? Yes • No O
% Bare Ground in Herb Stratum: 5				
Remarks:				1

Mixed wetland species were observed at this sample location.

Shallow Aquitard (D3)

✔ FAC-neutral Test (D5)

Raised Ant Mounds (D6) (LRR A)

Soil

Sampling Point: PFL 3

Profile Descri	iption: (De	scribe to t	he depth r	eeded to do	cument t	the indic	ator or co	onfirm the a	bsence of indicators	.)	
Depth		Matrix				ox Featu					
(inches)	Color (moist)	%	Color (m	oist)	%	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR	3/1	90	10YR	5/2	10	С	M	Silty Clay Loam	aturated to soil surface, mottles at 4 inches	
6-14+	10YR	2/1	100						Silty Clay Loam	dark, saturated, stinky	
		_	_								
¹ Type: C=Cond	centration. D	=Depletion	. RM=Redu	ced Matrix, CS	=Covered	l or Coate	d Sand Gr	ains ² Locat	ion: PL=Pore Lining. M		
Hydric Soil I	ndicators:	(Applicab	le to all LF	Rs, unless o	therwise	e noted.)			Indicators for Pro	oblematic Hydric Soils ³ :	
Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) ✓ Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Depleted Matrix (F3)						2 cm Muck (A Red Parent Ma Other (Explain	aterial (TF2)				
Thick Dark	k Surface (A: ck Mineral (S yed Matrix (12) 51)	-)	Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox depressions (F8)					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
Restrictive La	ayer (if pre	sent):									
Туре:											
Depth (incl	nes):								Hydric Soil Present	t? Yes 🖲 No 🔾	
Remarks:											
Strong mottles at 4 inches with hydrogen sulfide odor.											
	Hydrology										
Wetland Hyd	rology Indi	cators:									
Primary Indi	cators (mir	nimum of o	one requir	ed; check all	that ap	ply)			Secondary I	ndicators (minimum of two required)	
Surface W	Vater (A1) er Table (A2)			ter-Staine 2, 4A, and		(B9) (exce	pt MLRA	Water-St 4A, and 4	ained Leaves (B9) (MLRA 1, 2, 4B)	
Saturation	•	-		Salt	: Crust (B	11)			Drainage	Patterns (B10)	
Water Ma	. ,			Aqu	iatic Invei	rtebrates	(B13)			on Water Table (C2)	
	Deposits (B	2)		✓ Hyd	lrogen Su	lfide Odor	r (C1)			n Visible on Aerial Imagery (C9)	
Drift depo	osits (B3)			Oxi	dized Rhiz	zospheres	on Living	Roots (C3)	Geomorp	bhic Position (D2)	

Presence of Reduced Iron (C4)
Recent Iron Reduction in Tilled Soils (C6)

 (
Stunted or Stressed Plants (D1) (LRR A)

Inundation Visible on Aerial Imagery (B7)	Other (Explai

Algal Mat or Crust (B4)

Surface Soil Cracks (B6)

Iron Deposits (B5)

Field Observations:							
Surface Water Present?	Yes \bigcirc	No 🔍	Depth (inches):				
Water Table Present?	Yes \bigcirc	No 🖲	Depth (inches):		x		
Saturation Present? (includes capillary fringe)	Yes 🖲	No \bigcirc	Depth (inches): 0	Wetland Hydrology Present?	Yes 🔍 No 🔾		
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:							

Sample was saturated to surface with hydrogen sulfide odor. Two seconday indicators were also observed.

Project/Site: Printing for Less	City/County: Livingston/Park	ampling Date: <u>19-Ju</u>	in-19	
Applicant/Owner: Printing for Less		State: MT	Sampling Point:	PFL 4
Investigator(s): B Schultz	Section, Township, Range:	s 22 t 2 5	R 9 E	_
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, conve	x, none): convex	Slope: 0	.0 % / °
Subregion (LRR): LRR E	45°39'2.62"N Lon	 110°36'14.77"W	Datum	: WGS 84
Soil Map Unit Name: Reedpoint-Tanna-Ethridge complex		NWI classific	ation: none	
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes 🖲 No 🔾	(If no, explain in Re	emarks.)	
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Normal	Circumstances" pre	sent? Yes 🖲	No 🔿
Are Vegetation, Soil, or Hydrology naturally p	problematic? (If needed,	explain any answers	in Remarks.)	

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes \bigcirc	No 🖲	Is the Sampled Area	
Hydric Soil Present?	Yes \bigcirc	No 🖲	•	Yes 🔿 No 🖲
Wetland Hydrology Present?	Yes \bigcirc	No 🖲	within a Wetland?	
Remarks:				

Dominant

Upland site, southwest of PFL Way.

VEGETATION - Use scientific names of plants.

		_Species?		1
		Rel.Strat.	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% Cover	Cover	Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC:0(A)
2	0	0.0%		
3.	0	0.0%		Total Number of Dominant
4.	0	0.0%		Species Across All Strata: (B)
1,				Percent of dominant Species
Sapling/Shrub Stratum (Plot size: 15 ft.)	0	= Total Cov	er	That Are OBL, FACW, or FAC: 0.0% (A/B)
1	0	0.0%		Prevalence Index worksheet:
2	0	0.0%		Total % Cover of: Multiply by:
3	0	0.0%		OBL species $0 \times 1 = 0$
4	0	0.0%		FACW species $0 \times 2 = 0$
5.	0	0.0%		FAC species $10 \times 3 = 30$
	0	= Total Cov	or	
Herb Stratum (Plot size: 5 ft.)		- 10001 000	CI	
1 Bromus inermis	60	✔ 66.7%	UPL	UPL species $\frac{70}{100} \times 5 = \frac{350}{1000}$
	10			Column Totals: <u>80</u> (A) <u>380</u> (B)
2. Litter 3. Cardaria draba	10		UPL	Prevalence Index = $B/A = 4.750$
4. Poa pratensis	5	5.6%	FAC	Hydrophytic Vegetation Indicators:
5. Sporobolus airoides		5.6%	FAC	1 - Rapid Test for Hydrologic Vegetation
6	0	0.0%		2 - 2 2 - Dominance Test is > 50%
7	0	0.0%		□ 3 - Prevalence Index is \leq 3.0 ¹
8	0	0.0%		
9	0	0.0%		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10	0	0.0%		
11	0	0.0%		5 - Wetland Non-Vascular Plants ¹
	90	= Total Cov	er	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)				¹ Indicators of hydric soil and wetland hydrology must
1	0	0.0%		be present, unless disturbed or problematic.
2	0	0.0%		Hydrophytic
2				Vegetation
	0	= Total Cov	er	Present? Yes No •
% Bare Ground in Herb Stratum: _0				
Remarks:				

Smooth brome and weeds dominated this location.

Sampling Point: PFL 4

Profile Descr	iption: (Des	cribe to t	he depth n	eeded to docu	ment the indi	cator or co	onfirm the a	bsence of indicators	.)	
Depth Matrix Redox Features										
(inches)	Color (r	noist)	%	Color (mois	t) %	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR	3/2	100					Silty Clay Loam	friable	
6-12	10YR	3/3	100					Silty Clay Loam	Damp	
12-22+	10YR	3/3	98	10YR 5	5/2 20	С	м	Silty Clay Loam	small mottles at 16 inches	
¹ Type: C=Cond	centration. D	=Depletion	. RM=Reduc	ed Matrix, CS=C	Covered or Coat	ed Sand Gr	ains ² Locat	ion: PL=Pore Lining. M	=Matrix	
Hydric Soil I	ndicators:	(Applicab	le to all LR	Rs, unless oth	erwise noted.	.)		Indicators for Pro	oblematic Hydric Soils ³ :	
Histosol (A	A1)			Sandy R	edox (S5)			2 cm Muck (A	10)	
	pedon (A2)				Matrix (S6)			Red Parent Ma	aterial (TF2)	
Black Hist	. ,			<i>`</i>	Aucky Mineral (, , , ,	in MLRA 1)	Other (Explain	in Remarks)	
	Sulfide (A4)	C (A)			Gleyed Matrix (F 1 Matrix (F3)	-2)				
	Below Dark S	•	1)		ark Surface (F6	5)		2		
	k Surface (A1				d Dark Surface				phytic vegetation and y must be present,	
	ck Mineral (S yed Matrix (S	,			epressions (F8)			unless disturbed or problematic.		
Restrictive La	, ,	,				, 				
Type:	.,	,enc):								
Depth (incl	nes):							Hydric Soil Present	t? Yes 🔾 No 🖲	
Remarks:										
Small mottles	at 16 inche	es.								
Hydrology	,									
Wetland Hyd		cators:								
-			one require	ed; check all th	nat annly)			Secondary I	ndicators (minimum of two required)	
	Vater (A1)		She require		-Stained Leaves	s (B9) (exce	nt MIRA		ained Leaves (B9) (MLRA 1, 2,	
	er Table (A2)	1			A, and 4B)	5 (D5) (CAC		4A, and 4		
Saturation	. ,			Salt Cr	rust (B11)			Drainage	Patterns (B10)	
Water Ma	. ,				c Invertebrates	s (B13)			on Water Table (C2)	
	Deposits (B2	2)			gen Sulfide Odo	. ,			n Visible on Aerial Imagery (C9)	
Drift depo		,			ed Rhizosphere	. ,	Roots (C3)		whic Position (D2)	
	or Crust (B4))			nce of Reduced	-			Aquitard (D3)	

Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	Shallow Aquitard (D3) FAC-neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Front Lioning Lightments (D7)
Sparsely Vegetated Concave Surface (B8)	Uther (Explain in Remarks)	Frost Heave Hummocks (D7)
Field Observations: Yes No Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) Yes No Describe Recorded Data (stream gauge, monitor)	Depth (inches):	Hydrology Present? Yes O No O
Remarks:		

No evidence of wetland hydrology was observed at this sample location.

Project/Site: Printing for Less	City/County: Livingston/Park	ampling Date: <u>19-Jun-1</u>	9		
Applicant/Owner: Printing for Less		State: MT	Sampling Point:	PFL 5	
Investigator(s): B Schultz	Section, Township, Range: S 22 T 2 S R 9 E				
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, conve	x, none): concave	Slope:0.0	%/°	
Subregion (LRR): LRR E	45°39'2.47"N Long.: 110°36'14.28"W Datum: WGS 84				
Soil Map Unit Name: Reedpoint-Tanna-Ethridge complex		NWI classific	ation: none		
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes 🖲 No 🔿	(If no, explain in Re	emarks.)		
Are Vegetation, Soil, or Hydrology significant	ly disturbed? Are "Normal	Circumstances" pre	sent? Yes 🖲 No	, O	
Are Vegetation, Soil, or Hydrology naturally p	problematic? (If needed,	explain any answers	in Remarks.)		

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes 🖲	No O	Is the Sampled Area	
Hydric Soil Present?	Yes 🖲	No O	•	Yes 🖲 No 🔾
Wetland Hydrology Present?	Yes 🖲	No O	within a Wetland?	
Remarks:				

Dominant

Sample located in slight depression.

VEGETATION - Use scientific names of plants.

		_Species?		
		Rel.Strat.		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% Cover	Cover	Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: 2 (A)
2.	0	0.0%		
3	0	0.0%		Total Number of Dominant
4.	0	0.0%		Species Across All Strata: <u>2</u> (B)
4				Percent of dominant Species
	0	= Total Cove	er	That Are OBL, FACW, or FAC:100.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft.)		_		
1	0	0.0%		Prevalence Index worksheet:
2	0	0.0%		Total % Cover of: Multiply by:
3.	0	0.0%		OBL species $0 \times 1 = 0$
4.	0	0.0%		FACW species $25 \times 2 = 50$
5.	0	0.0%		
				FAC species $55 \times 3 = 165$
	0	= Total Cove	er	FACU species $5 \times 4 = 20$
Herb Stratum (Plot size: 5 ft.)				UPL species $5 \times 5 = 25$
1. Poa pratensis	50	47.6%	FAC	Column Totals: 90 (A) 260 (B)
2. Juncus effusus	25	23.8%	FACW	$\frac{1}{200}$ (A) $\frac{1}{200}$ (B)
3, Litter	15	14.3%		Prevalence Index = $B/A = 2.889$
4. Cirsium arvense	5	4.8%	FAC	
5. Cardaria draba	5	4.8%	UPL	Hydrophytic Vegetation Indicators:
(Canada misma atama	5	4.8%	FACU	1 - Rapid Test for Hydrologic Vegetation
6. Carex micropiera 7	0	0.0%		✓ 2 - Dominance Test is > 50%
		0.0%		✓ 3 - Prevalence Index is \leq 3.0 ¹
8	0	0.0%		4 - Morphological Adaptations ¹ , Provide supporting
9				data in Remarks or on a separate sheet)
10	0	0.0%		\Box 5 - Wetland Non-Vascular Plants ¹
11	0	0.0%		
	105	= Total Cove	er	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)				¹ Indicators of hydric soil and wetland hydrology must
	0	0.0%		be present, unless disturbed or problematic.
1	0	0.0%		Hydrophytic
2				Vegetation
	0	= Total Cove	er	Present? Yes • No O
% Bare Ground in Herb Stratum: _0				
Remarks:				

Kentucky bluegrass and Baltic rush were most dominant at this location.

Sampling Point: PFL 5

Profile Descr	iption: (Des	cribe to t	he depth r	needed to docur	nent the indi	cator or co	onfirm the a	bsence of indicators	.)
Depth		Matrix			Redox Featu				
(inches)	Color (r		%	Color (moist	it) <u>%</u>		Loc ²	Texture	Remarks saturated to soil surface
0-6	10YR	3/1	100					Silty Clay Loam	
6-18+	10YR	3/2	92	10YR 5	5/1 5	С	М	Silty Clay Loam	increased saturation
				10YR 4	4/2 3	С	М		
1Turney C-Con		Depletier	DM -Dodu			- d Cand Cr		Di Daro Lining N	A BA-1
		-		ced Matrix, CS=Co			ains ² Locat	tion: PL=Pore Lining. N	
		(Applicab	le to all LH	RRs, unless othe	-)		_	oblematic Hydric Soils ³ :
Histosol (/	A1) Dedon (A2)				edox (S5) Matrix (S6)			2 cm Muck (A	
Black Hist	. ,				Aucky Mineral (F	F1) (except	in MLRA 1)	Red Parent M Other (Explain	
	Sulfide (A4)				Gleyed Matrix (F	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,		
	Below Dark S	urface (A1	.1)	Depleted	d Matrix (F3)	-			
Thick Dar	k Surface (A1	.2)			ark Surface (F6			³ Indicators of hydro	phytic vegetation and
	ck Mineral (S	,			d Dark Surface (wetland hydrolog	gy must be present,
Sandy Gle	eyed Matrix (S	54)		Redox de	epressions (F8))		unless disturbed	or problematic.
Restrictive La	ayer (if pres	ent):							
Туре:									
Depth (incl	hes):							Hydric Soil Presen	t? Yes 🖲 No 🔿
Remarks:									
Mottles at 6 in	nches.								
Hydrology									
Wetland Hyd					t a mate à			Consulation T	
		imum or (one requir	ed; check all the		(00) (aver			ndicators (minimum of two required)
	Vater (A1)				-Stained Leaves IA, and 4B)	3 (BA) (exce	Pt MLKA	Water-Si 4A, and	ained Leaves (B9) (MLRA 1, 2, 4B)
	er Table (A2)								
Saturation	()				rust (B11)	(242)			e Patterns (B10)
Water Ma	()			·	c Invertebrates	. ,		,	son Water Table (C2)
	Deposits (B2	.)			gen Sulfide Odo	. ,	()		on Visible on Aerial Imagery (C9)
Drift depo					ed Rhizospheres	-	Roots (C3)		phic Position (D2)
Algal Mat	or Crust (B4))		Presen	nce of Reduced	Iron (C4)		Shallow	Aquitard (D3)

Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)
Crowsky Verstated Conserve Courfees (D0)	

Iron Deposits (B5)

 Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) 			Other (Explain in Remarks)	Frost Heave H	ummocks (D7)				
Field Observations: Surface Water Present?	Yes 🔿	No 🖲	Depth (inches):						
Water Table Present?	Yes \bigcirc	No 🖲	Depth (inches):						
Saturation Present? (includes capillary fringe)	Yes 🖲	No \bigcirc	Depth (inches): 0	Wetland Hydrology Present?	Yes 🔍 No 🔾				
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:									
Remarks:									

✔ FAC-neutral Test (D5)

Raised Ant Mounds (D6) (LRR A)

Recent Iron Reduction in Tilled Soils (C6)

Soil saturated to surface. Two secodnary indicators of wetland hydrology were also observed.

Project/Site: Printing for Less	City/County: Livingston/Park	Sampling Date: <u>19-</u>	Jun-19			
Applicant/Owner: Printing for Less		State: MT	Sampling Point:	PFL 6		
Investigator(s): B Schultz	Section, Township, Range	Section, Township, Range: S 22 T 2 S R 9 E				
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, convex, none): concave Slope: 0.0 % /					
Subregion (LRR): LRR E	45°39'2.28"N Long.: 110°36'14.17"W Datum: WGS					
Soil Map Unit Name: reedpoint-Tanna-Ethridge complex		NWI classifi	cation: none			
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes 🖲 No 🔾	(If no, explain in R	emarks.)			
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Norma	al Circumstances" pro	esent? Yes 🖲	No \bigcirc		
Are Vegetation, Soil, or Hydrology naturally [problematic? (If needed,	explain any answer	s in Remarks.)			

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes 🖲	No O	Is the Sampled Area	
Hydric Soil Present?	Yes 🖲	No O	-	Yes 🖲 No 🔾
Wetland Hydrology Present?	Yes 🖲	No O	within a Wetland?	

Dominant

Remarks:

Sample located in slight depression south of access road.

VEGETATION - Use scientific names of plants.

		_Species?		
(Diet size: 20 ft)		Rel.Strat.		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% Cover		Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata: 3 (B)
4	0	0.0%		
Sapling/Shrub Stratum (Plot size: 15 ft.)	0	= Total Cov	er	Percent of dominant Species That Are OBL, FACW, or FAC:66.7% (A/B)
1	0	0.0%		Prevalence Index worksheet:
2	0	0.0%		Total % Cover of: Multiply by:
3.	0	0.0%		OBL species $0 \times 1 = 0$
4.	0	0.0%		FACW species $20 \times 2 = 40$
5.	0	0.0%		
Herb Stratum (Plot size: 5 ft.)	0	= Total Cov	er	FACU species $20 \times 4 = 80$
d luneur officeur	20	✔ 26.7%	FACW	UPL species $0 \times 5 = 0$
2 Carex microptera	20	26.7%	FACU	Column Totals: (A) (B)
3. Sporobolus airoides	15	20.0%	FAC	Prevalence Index = $B/A = 3.000$
4 Alopecurus arundinaceus	10	13.3%	FAC	
5. Cirsium arvense	5	6.7%	FAC	Hydrophytic Vegetation Indicators:
	5	6.7%		1 - Rapid Test for Hydrologic Vegetation
		0.0%		✓ 2 - Dominance Test is > 50%
7		0.0%		✓ 3 - Prevalence Index is \leq 3.0 ¹
8				4 - Morphological Adaptations ¹ , Provide supporting
9	0	0.0%		data in Remarks or on a separate sheet)
10	0			\Box 5 - Wetland Non-Vascular Plants 1
11	_	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
	75	= Total Cov	er	
Woody Vine Stratum (Plot size:) 1.	0	0.0%		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.	0	0.0%		Hydrophytic
	0	= Total Cov	er	Vegetation Present? Yes No
% Bare Ground in Herb Stratum: _0				
Remarks:				t.
Sample loction contained approximately 25% water.				
Sumple roction contained approximately 2370 water.				

Sampling Point: PFL 6

Profile Descri	ption: (Des	cribe to t	he depth ne	eded to	document	the indic	ator or co	nfirm the a	bsence of indicator	s.)
Depth Matrix Redox Features										
(inches)	Color (n	noist)	%	Color	(moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10YR	4/1	100						Silt Loam	saturated to surface
6-12	10YR	4/1	95	10YR	4/6	5	С	М	Silt Loam	mottles at 6 inches
	· · · · ·									
¹ Type: C=Conc	entration. D=	Depletion	. RM=Reduce	ed Matrix,	CS=Covere	d or Coate	ed Sand Gra	ains ² Locat	ion: PL=Pore Lining.	M=Matrix
Hydric Soil I	ndicators: (Applicab	le to all LRF	Rs, unles	s otherwis	e noted.))		Indicators for P	roblematic Hydric Soils ³ :
Histosol (A	,				ndy Redox (. ,			2 cm Muck (A10)
Histic Epip	. ,				ripped Matri	. ,	-1) (- MIDA 1)		Naterial (TF2)
Black Histi	. ,				amy Mucky amy Gleyed	•	,, ,	IN MLRA 1)	Other (Expla	in in Remarks)
	Sulfide (A4)	urface (A1	1)		epleted Matri	•	2)			
Depleted Below Dark Surface (A11)			1)		dox Dark Su	. ,)		3	
Thick Dark Surface (A12)				epleted Dark	•			³ Indicators of hydrowetland bydrole	ophytic vegetation and ogy must be present,	
<i>.</i>	ck Mineral (S1 yed Matrix (S				dox depress					d or problematic.
Restrictive La		-								
Type:		eneyi								
Depth (inch	nes).								Hydric Soil Prese	nt? Yes 🖲 No 🔾
Remarks:										
Good mottles	at 6 inches.	•								
Hydrology	,									
Wetland Hyd		ators:								
Primary Indi			one require	d. check	all that an	nlv)			Secondary	Indicators (minimum of two required)
Surface W			Jie requires		Water-Staine		(B9) (exce	nt MI RA		Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)				1, 2, 4A, and				4A, and	
✓ Saturation	. ,				Salt Crust (B	11)				je Patterns (B10)
					Aquatic Inve	,	(B13)			
Water Ma	Deposits (B2)	`			Hydrogen Su					ason Water Table (C2)
Drift depo)					. ,	Deate (C2)		ion Visible on Aerial Imagery (C9)
					Oxidized Rhi	•	-	Roots $(C3)$		rphic Position (D2)
	or Crust (B4)				Presence of					Aquitard (D3)
Iron Depo	. ,				Recent Iron			. ,	_	utral Test (D5)
	oil Cracks (B6	,			Stunted or S	tressed Pl	lants (D1) (LRR A)		Ant Mounds (D6) (LRR A)
Inundatio	n Visible on A	erial Imag	ery (B7),		Other (Expla	in in Rem	arks)		Frost H	eave Hummocks (D7)

Raised Ant Mounds	(D6)	(LRR	A)
raioea / are r roarrao	()	(_	• • • •

	Frost	Heave	Hummocks	(D7)
 _	11000	i icui c	rianniocito	(2 /)	,

Sparsely Vegetated Concave Surface (B8)

□ sparsely vegetated Concave sufface (bo)								
Field Observations: Surface Water Present?	Yes 🖲	No O	Depth (inches):	1				
Water Table Present? Saturation Present?	Yes O	No 🖲	Depth (inches):		Wetland Hydrology Present?	Yes 🖲	No O	
(includes capillary fringe)	Yes 🖲	No ()	Depth (inches):	0				
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:								
Remarks:								

One inch of surface water was observed.

Project/Site: Printing for Less	City/County: Livingston/Park	ampling Date: <u>19-Jun-19</u>	
Applicant/Owner: Printing for Less		State: MT	Sampling Point: PFL 7
Investigator(s): B Schultz	Section, Township, Range	s 22 t 2 9	5 R 9 E
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, conve	ex, none): concave	Slope: 0.0 % / 0.0
Subregion (LRR): LRR E	45°39'4.28"N Lo	ng.: 110°36'10.81"W	/ Datum: WGS 84
Soil Map Unit Name: Reedpoint-Tanna-Ethridge complex		NWI classifie	cation: PEM1C
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes 🖲 No 🔾	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Norma	I Circumstances" pre	esent? Yes 🖲 No 🔾
Are Vegetation D , Soil , or Hydrology naturally	problematic? (If needed,	explain any answers	s in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes 🖲	No O	Is the Sampled Area			
Hydric Soil Present?	Yes 🖲	No O	•	Yes 🖲 No 🔿		
Wetland Hydrology Present?	Yes 🖲	No O	within a Wetland?			
Remarks:						

Dominant

Sample located in wetland swale.

VEGETATION - Use scientific names of plants.

		_Species?		T
		Rel.Strat.	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% Cover	Cover	Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC:(A)
2	0	0.0%		Tatal Number of Device st
3	0	0.0%		Total Number of Dominant Species Across All Strata: 1
4.	0	0.0%		
	0	= Total Cov	or	Percent of dominant Species
Sapling/Shrub Stratum (Plot size: 15 ft.)		- 10001 000		That Are OBL, FACW, or FAC:(A/B)
1	0	0.0%		Prevalence Index worksheet:
	0	0.0%		
2				Total % Cover of: Multiply by:
3	0	0.0%		OBL species $6 \times 1 = 6$
4	0	0.0%		FACW species $50 \times 2 = 100$
5	0	0.0%		FAC species $0 \times 3 = 0$
	0	= Total Cov	er	FACU species $30 \times 4 = 120$
Herb Stratum (Plot size: 5 ft.)		_		UPL species $0 \times 5 = 0$
1. Juncus effusus	50	✓ 52.1%	FACW	
2, Litter	10	10.4%		Column Totals: $\underline{86}$ (A) $\underline{226}$ (B)
3. Solidago canadensis	10	10.4%	FACU	Prevalence Index = $B/A = 2.628$
4. Rosa woodsii	5	5.2%	FACU	
5. Symphoricarpos albus	5	5.2%	FACU	Hydrophytic Vegetation Indicators:
6. Helianthus annuus	5	5.2%	FACU	✓ 1 - Rapid Test for Hydrologic Vegetation
7 Taraxacum officinale	5	5.2%	FACU	✓ 2 - Dominance Test is > 50%
8 Eleocharis palustris	3	3.1%	OBL	✓ 3 - Prevalence Index is \leq 3.0 1
9. Triglochin maritima	3	3.1%	OBL	\Box 4 - Morphological Adaptations ¹ (Provide supporting
10	0	0.0%		data in Remarks or on a separate sheet)
	0	0.0%		\square 5 - Wetland Non-Vascular Plants 1
11	96	= Total Cov		Problematic Hydrophytic Vegetation ¹ , (Explain)
(Plot size:		- 10001 0000		¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:) 1.	0	0.0%		be present, unless disturbed or problematic.
2.	0	0.0%		Hydrophytic
	0	= Total Cov	er	Vegetation Present? Yes I No 🔾
% Bare Ground in Herb Stratum: $_{ m 0}$				
Remarks:				L
Baltic rush dominated this sample location				

Sampling Point: PFL 7

Profile Descri	iption: (Des	cribe to t	ne depth n	eeded to docum	ent the indic	cator or co	onfirm the a	bsence of indicators.)	
Depth		Matrix			Redox Featu	ures			
(inches)	Color (noist)	%	Color (moist) %	Type ¹	Loc ²	Texture	Remarks
0-6	10YR	4/1	100					Silt Loam	saturated to soil surface
6-14	10YR	4/1	93	10YR 4/	/6 7	С	м	Silt Loam	mottles at 6 inches
Hydric Soil In Histosol (A Histic Epip Black Histi	ndicators: A1) Dedon (A2)	(Applicab		Rs, unless other Sandy Red Stripped N	rwise noted.)) F1) (except		tion: PL=Pore Lining. M= Indicators for Prot 2 cm Muck (A10 Red Parent Mate Other (Explain in	blematic Hydric Soils ³ :)) erial (TF2)
Depleted E Thick Dark Sandy Mud	Below Dark S Surface (A1 ck Mineral (S yed Matrix (S	Surface (A1: 12) 51) 54)	1)	Depleted Redox Da Depleted	Matrix (F3) ark Surface (F6 Dark Surface (pressions (F8)	i) (F7)		³ Indicators of hydroph wetland hydrology unless disturbed or	must be present,
Type:	iyei (ii pre	,enc):							
Depth (inch	nes):							Hydric Soil Present?	Yes $oldsymbol{igstar}$ No $igcap$
Remarks:									
Mottles at 6 ir	nches.								
Hydrology									
Wetland Hyd								- ·	
		imum of a	one require	ed; check all tha					dicators (minimum of two required
Surface W	/ater (A1) er Table (A2))			Stained Leaves A, and 4B)	s (B9) (exce	pt MLRA	Water-Stain 4A, and 4B	ned Leaves (B9) (MLRA 1, 2, 3)

Wetland Hydrology India	cators:			
Primary Indicators (mini	imum of one	required; o	check all that apply)	Secondary Indicators (minimum of two required)
Surface Water (A1)			Water-Stained Leaves (B9) (except ML	
High Water Table (A2)			1, 2, 4A, and 4B)	4A, and 4B)
 Saturation (A3) 			Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)			Aquatic Invertebrates (B13)	Dry Season Water Table (C2)
Sediment Deposits (B2	.)		Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift deposits (B3)			Oxidized Rhizospheres on Living Roots	(C3) Geomorphic Position (D2)
Algal Mat or Crust (B4))		Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)			Recent Iron Reduction in Tilled Soils (C	5) FAC-neutral Test (D5)
Surface Soil Cracks (B6	5)		Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)
Inundation Visible on A	Aerial Imagery	(B7)	Other (Explain in Remarks)	Frost Heave Hummocks (D7)
Sparsely Vegetated Co	ncave Surface	(B8)		
Field Observations:				
Surface Water Present?	Yes \bigcirc	No 🖲	Depth (inches):	
	\sim			
Water Table Present?	Yes \bigcirc	No 🖲	Depth (inches):	Wetland Hydrology Present? Yes $lacksquare$ No $igodoldsymbol{ imes}$
Saturation Present? (includes capillary fringe)	Yes 🖲	No \bigcirc	Depth (inches): 0	Wetland Hydrology Present? Yes 🔍 No 🔾
Describe Recorded Data	(stream gau	ge, monito	r well, aerial photos, previous inspection	ns), if available:
Remarks:				
Soil saturated to surface	. Two secon	darv indica	ators of wetland hydrology were also ob	served.

Project/Site: Printing for Less	City/County: Livingston/Park	City/County: Livingston/Park S		
Applicant/Owner: Printing for Less		State: MT	Sampling Point: PFL 8	
Investigator(s): B Schultz	Section, Township, Range:	s 22 t 2 S	R 9 E	
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, conve	Slope: <u>0.0</u> % / <u>0.0</u> °		
Subregion (LRR): LRR E	45°39'4.49"N Lor	 110°36'11.13"W	Datum: WGS 84	
Soil Map Unit Name: Reedpoint-Tanna-Ethridge complex		NWI classific	ation: PEM1C	
Are climatic/hydrologic conditions on the site typical for this time of ye	ear? Yes 🖲 No 🔾	(If no, explain in Re	emarks.)	
Are Vegetation, Soil, or Hydrology significan	tly disturbed? Are "Norma	Circumstances" pres	sent? Yes 🖲 No 🔾	
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🗌 naturally	problematic? (If needed,	explain any answers	in Remarks.)	

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes \bigcirc	No 🖲	Is the Sampled Area			
Hydric Soil Present?	Yes \bigcirc	No 🖲	within a Wetland?	Yes 🔿 No 🖲		
Wetland Hydrology Present?	Yes \bigcirc	No 🖲	within a wetland?			
Demostres						

Dominant

Remarks:

Located approximately three feet above sample seven.

VEGETATION - Use scientific names of plants.

		Species?		I
		Rel.Strat.		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% Cover	Cover	Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: 0 (A)
2	0	0.0%		
	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata: <u>2</u> (B)
4		0.0%		Percent of dominant Species
	0	= Total Cov	er	That Are OBL, FACW, or FAC:(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft.)		_		
1	0	0.0%		Prevalence Index worksheet:
2	0	0.0%		Total % Cover of: Multiply by:
3	0	0.0%		OBL species $0 \times 1 = 0$
4.	0	0.0%		FACW species $8 \times 2 = 16$
5.	0	0.0%		
				FAC species $10 \times 3 = 30$
(Plotoiro, Eft.)	0	= Total Cov	er	FACU species 25 x 4 = 100
Herb Stratum (Plot size: 5 ft.)				UPL species $50 \times 5 = 250$
1. Bromus inermis	50	✓ 51.0%	UPL	Column Totals: 93 (A) 396 (B)
2. Symphoricarpos albus	20	✔ 20.4%	FACU	
3. Poa pratensis	10	10.2%	FAC	Prevalence Index = $B/A = 4.258$
4. Litter	5	5.1%		
5. Rosa woodsii	5	5.1%	FACU	Hydrophytic Vegetation Indicators:
6. Juncus balticus	5	5.1%	FACW	1 - Rapid Test for Hydrologic Vegetation
7 Iris missouriensis	3	3.1%	FACW	2 - Dominance Test is > 50%
	0	0.0%		□ 3 - Prevalence Index is \leq 3.0 1
	0			4 - Morphological Adaptations ¹ (Provide supporting
9		0.0%		data in Remarks or on a separate sheet)
10	0	0.0%		\square 5 - Wetland Non-Vascular Plants ¹
11	0	0.0%		
	98	= Total Cov	er	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)				¹ Indicators of hydric soil and wetland hydrology must
	0	0.0%		be present, unless disturbed or problematic.
1 2.	0			Hydrophytic
۷	Vegetation		Vogotation	
	0	= Total Cov	er	Present? Yes O No •
% Bare Ground in Herb Stratum: 0				
Remarks:				1
NCIIIal N3.				

Smooth brome and snowberry dominated this sample location.

Sampling Point: PFL 8

Profile Description: (Describe to the depth needed	d to document the indicator or confirm the a	bsence of indicators.)
Depth Matrix	Redox Features	
	olor (moist) <u>% Type¹ Loc²</u>	Texture Remarks
0-4 10YR 3/2 100		
4-22+ 10YR 3/3 100		Silty Clay Loam damp
¹ Type: C=Concentration. D=Depletion. RM=Reduced Ma	atrix, CS=Covered or Coated Sand Grains ² Locat	ion: PL=Pore Lining. M=Matrix
Hydric Soil Indicators: (Applicable to all LRRs, u	nless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except in MLRA 1)	Other (Explain in Remarks)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	2
Thick Dark Surface (A12) Sandy Muck Mineral (S1)	Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		
Depth (inches):		Hydric Soil Present? Yes \bigcirc No $oldsymbol{igodol}$
Remarks:	8	
	mple location	
No hydric soil indicators were observed at this sar	nple location.	
łydrology		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; ch	neck all that apply)	Secondary Indicators (minimum of two require
Surface Water (A1)	Water-Stained Leaves (B9) (except MLRA	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	1, 2, 4A, and 4B)	4A, and 4B)
	Salt Crust (B11)	Drainage Patterns (B10)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Saturation (A3) Water Marks (B1)	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	Dry Season Water Table (C2)
Saturation (A3)	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Dry Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
 Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) 	Aquatic Invertebrates (B13)	 Dry Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) 	 Dry Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
 Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Algal Mat or Crust (B4) 	 Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C3) 	 Dry Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)

 Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) 		Other (Explain in Remarks)	Frost Heave Hummocks (D7)				
Field Observations: Surface Water Present? Water Table Present?	Yes 〇 Yes 〇	No 🖲 No 🖲	Depth (inches):				
Saturation Present? (includes capillary fringe)	Yes O	No 🖲		Wetland Hydrology Present?	Yes 🔾 No 🖲		
Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:							
Remarks:							
No wetland hydrology ind	dicators were	e observed	d at this sample location.				

Project/Site: Printing for Less	City/County: Livingston/Park	s	Sampling Date: 26-Jun-19		
Applicant/Owner: Printing for Less		State: MT	Sampling Point:	PFL 9	
Investigator(s): B Schultz	Section, Township, Range	s 22 t 2	S R 9 E	_	
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, conv	ex, none): none	Slope:	0.0 % / 00 °	
Subregion (LRR): LRR E	45°39'3.32"N Lo	ng.: 110°36'10.83"V	V Datum	n: WGS 84	
Soil Map Unit Name: Reedpoint-Tanna-Ethridge complex		NWI classifi	cation: PEM1C		
Are climatic/hydrologic conditions on the site typical for this time of year	ar? Yes $oldsymbol{O}$ No $oldsymbol{O}$	(If no, explain in R	emarks.)		
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🗌 significant	ly disturbed? Are "Norma	al Circumstances" pro	esent? Yes 🖲	No \bigcirc	
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🗌 naturally p	problematic? (If needed,	explain any answer	s in Remarks.)		

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes 🖲	No O	Is the Sampled Area
Hydric Soil Present?	Yes 🖲	No O	
Wetland Hydrology Present?	Yes 🔾	No 🖲	within a Wetland? Yes Vio S

Remarks:

Two of three wetland indicators were observed at this sample location.

VEGETATION - Use scientific names of pla	nts.	Dominant Species?		
Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Rel.Strat.	Indicator Status	Dominance Test worksheet:
1	0	0.0%		Number of Dominant Species That are OBL, FACW, or FAC:(A)
2.		0.0%		
3	0	0.0%		Total Number of Dominant Species Across All Strata: 1 (B)
4.	0	0.0%		
Sapling/Shrub Stratum (Plot size: 15 ft.)	0	= Total Cov	/er	Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
1	0	0.0%		Prevalence Index worksheet:
2	0	0.0%		Total % Cover of: Multiply by:
3.	0	0.0%		OBL species $0 \times 1 = 0$
4.	0	0.0%		FACW species $10 \times 2 = 20$
5.	0	0.0%		FAC species $70 \times 3 = 210$
	0	= Total Cov	/er	FACU species $0 \times 4 = 0$
Herb Stratum (Plot size: 5 ft.)		_		UPL species $\frac{5}{5} \times 5 = \frac{25}{5}$
1. Agrostis gigantea	50	✓ 52.6%	FAC	Column Totals: (A) (B)
2. Cirsium arvense	10	10.5%	FAC	
3. Poa pratensis	10	10.5%	FAC	Prevalence Index = B/A = <u>3.000</u>
4. Juncus balticus	10	10.5%	FACW	Hydrophytic Vegetation Indicators:
5. Litter	10	10.5%		1 - Rapid Test for Hydrologic Vegetation
6. Cardaria draba		5.3%	UPL	✓ 2 - Dominance Test is > 50%
7		0.0%		✓ 3 - Prevalence Index is \leq 3.0 ¹
8		0.0%		4 - Morphological Adaptations 1 (Provide supporting
9	0	0.0%		data in Remarks or on a separate sheet)
10	0	0.0%		\Box 5 - Wetland Non-Vascular Plants 1
11				Problematic Hydrophytic Vegetation ¹ (Explain)
	95	= Total Cov	/er	
Woody Vine Stratum (Plot size:) 1	0	0.0%		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1 2.	0	0.0%		Hydrophytic
-	0	= Total Cov	/er	Vegetation
% Para Ground in Harb Stratum, a				Present? Yes V No U
% Bare Ground in Herb Stratum: _0				
Remarks:				

Redtop dominated the sample location.

Sampling Point: PFL 9

Depth		Matrix			Redox Fea	tures				
(inches)	Color (%	Color (mo			Loc ²	Texture	Remarks	
0-2	10YR	3/2	100				_	silty clay loam	rooty, organic	
2-8	10YR	4/1	97	10YR	5/1 3	С	M	Silty Clay Loam	increase clay as increase depth, 3% mottles at 6	
8-22	10YR	4/1	92	10YR	5/1 5	С	M	Silty Clay Loam	very clayey, very wet soi	
				10YR	5/3 3	С	М			
			_							
/1				ced Matrix, CS=			ains ² Loca	tion: PL=Pore Lining. M		
-		(Applicab	le to all L	RRs, unless ot		d.)			blematic Hydric Soils ³ :	
Histosol (/	,			Sandy Redox (S5)				2 cm Muck (A10)		
Black Hist	edon (A2)			Stripped Matrix (S6)				Red Parent Material (TF2)		
_	Sulfide (A4)				Gleyed Matrix		III MERA I)	Other (Explain	in Remarks)	
=	Below Dark S	Surface (A1	1)		ed Matrix (F3)	(12)				
		•	1)		Dark Surface (F6)		2		
	CSurface (A1	,			ed Dark Surface (,		³ Indicators of hydrop wetland hydrology		
	ck Mineral (S	,		'	depressions (F	()		unless disturbed o		
	yed Matrix (S	,				0)				
estrictive La	ayer (if pres	sent):								
Type: Depth (incl	nes):							Hydric Soil Present	? Yes 🖲 No 🔾	
emarks:										
ottles at 6 ii	nches.									
ydrology	/									
Vetland Hyd	rology Indi	cators:								
Primary Indi	cators (min	imum of	one requi	ed; check all	that apply)	_		Secondary In	dicators (minimum of two requir	
Surface V	/ater (A1)				er-Stained Leav	es (B9) (exce	pt MLRA	Water-Sta	ined Leaves (B9) (MLRA 1, 2,	
High Wat	er Table (A2))		1, 2,	4A, and 4B)			4A, and 4	В)	

Surface Water (A1) High Water Table (A2)		L	Water-Stained Leaves (B9) (excep 1, 2, 4A, and 4B)	t MLRA	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)		
Saturation (A3)		[Salt Crust (B11)		Drainage Patterns (B10)		
Water Marks (B1)			Aquatic Invertebrates (B13)		Dry Season Water Table (C2)		
Sediment Deposits (B2)	[Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)		
Drift deposits (B3)		[Oxidized Rhizospheres on Living R	oots (C3)	Geomorphic Position (D2)		
Algal Mat or Crust (B4)		[Presence of Reduced Iron (C4)		Shallow Aquitard (D3)		
Iron Deposits (B5)		[Recent Iron Reduction in Tilled So	ils (C6)	FAC-neutral Test (D5)		
Surface Soil Cracks (B6)	[Stunted or Stressed Plants (D1) (L	RR A)	Raised Ant Mounds (D6) (LRR A)		
Inundation Visible on A	erial Imagery (B	7)	Other (Explain in Remarks)		Frost Heave Hummocks (D7)		
Sparsely Vegetated Con	ncave Surface (B	8)					
Field Observations:	-	-					
Surface Water Present?	Yes 🔾	No 🖲	Depth (inches):				
Water Table Present?	Yes \bigcirc	No 🖲	Depth (inches):]	ology Present? Yes 🔿 No 🖲		
Saturation Present? (includes capillary fringe)	Yes 🔿	No 🖲	Depth (inches):	Wetland Hydr	ology Present? Yes 🔾 No 🖲		
Describe Recorded Data	(stream gauge	e, monitor v	vell, aerial photos, previous inspe	ections), if available	e:		
Remarks:							
No hydric soil indicators							

Project/Site: Printing for Less	City/County: Livingston/Park	S	Sampling Date: 26-Jun-19		
Applicant/Owner: Printing for Less		State: MT	Sampling Point: PFL 10		
Investigator(s): B Schultz	Section, Township, Range:	s 22 t 2 9	5 R 9E		
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, conve	x, none): none	Slope: <u>0.0</u> % / <u>0.0</u> °		
Subregion (LRR): LRR E	45°39'3.37"N Lon	g.: 110°36'9.90"W	Datum: WGS 84		
Soil Map Unit Name: Reedpoint-Tanna-Ethridge complex		NWI classifie	cation: PEM1C		
Are climatic/hydrologic conditions on the site typical for this time of γ	year? Yes $oldsymbol{igodol}$ No $igodol$	(If no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrology significa	ntly disturbed? Are "Normal	Circumstances" pre	esent? Yes 🖲 No 🔾		
Are Vegetation, Soil, or Hydrology naturally	y problematic? (If needed, o	explain any answers	s in Remarks.)		

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes 🖲	No 🔿	Is the Sampled Area			
Hydric Soil Present?	Yes 🖲	No O	within a Wetland?	Yes 🖲 No 🔾		
Wetland Hydrology Present?	Yes 🖲	No O	within a wetland?			

Dominant

Remarks:

Sample located three feet below sample nine.

VEGETATION - Use scientific names of plants.

		_Species?		
(0) at view 20 ft (1)		Rel.Strat.		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% Cover		Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata: 2 (B)
4	0	0.0%		
Sapling/Shrub Stratum (Plot size: 15 ft.)	0	= Total Cove	er	Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
1	0	0.0%		Prevalence Index worksheet:
2	0	0.0%		Total % Cover of: Multiply by:
3.	0	0.0%		OBL species $0 \times 1 = 0$
4.	0	0.0%		FACW species $70 \times 2 = 140$
5.	0	0.0%		
		= Total Cove		
Herb Stratum (Plot size: 5 ft.)	0		er	FACU species $0 \times 4 = 0$
1 Junque officius	65	✔ 68.4%	FACW	UPL species $0 \times 5 = 0$
Alopecurus arundinaceus	25	26.3%	FAC	Column Totals: (A) (B)
3 Mentha arvensis	5	5.3%	FACW	Prevalence Index = $B/A = 2.263$
	0	0.0%		
4	0	0.0%		Hydrophytic Vegetation Indicators:
5	0	0.0%		1 - Rapid Test for Hydrologic Vegetation
6	0	0.0%		✓ 2 - Dominance Test is > 50%
7		0.0%		✓ 3 - Prevalence Index is \leq 3.0 ¹
8	0	0.0%		4 - Morphological Adaptations ¹ (Provide supporting
9	0	0.0%		data in Remarks or on a separate sheet)
10				5 - Wetland Non-Vascular Plants 1
11	0	0.0%		\square Problematic Hydrophytic Vegetation ¹ (Explain)
	95	= Total Cove	er	
Woody Vine Stratum (Plot size:)		_		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0	0.0%		be present, unless disturbed of problematic.
2.	0	0.0%		Hydrophytic
	0	= Total Cove	er	Vegetation Present? Yes I No
% Bare Ground in Herb Stratum: 0				
Remarks:				
Sample location dominated by Baltic rush.				

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Sampling Point: PFL 10

Depth "	Depth Matrix				Red	lox Featu	res			
(inches)	Color (moist)	%	Color (m	oist)	%	Type ¹	Loc ²	Texture	Remarks
0-14	10YR	4/1	90	10YR	4/4	5	С	М	Silty Clay Loam	saturated to soil surfac
				10YR	4/6	5	С	М		increase clay as increae depth
,										
ype: C=Conce	entration. D	=Depletion	. RM=Redu	uced Matrix, C	5=Covere	d or Coate	d Sand Gra	ins ² Loca	ition: PL=Pore Lining. N	1=Matrix
Histosol (A: Histic Epipe Black Histic Hydrogen S Depleted B Thick Dark Sandy Muc	1) edon (A2) c (A3)	Surface (A1 2) 11)		Strip	y Redox (ped Matrix ny Mucky ny Gleyed eted Matri ox Dark Su eted Dark	(S5) x (S6) Mineral (F Matrix (F2	1) (except 2)	in MLRA 1)	2 cm Muck (A Red Parent M ✓ Other (Explain ³ Indicators of hydro	n in Remarks) pophytic vegetation and gy must be present,
estrictive Lay		,								
Туре:										
Depth (inche	es):								Hydric Soil Presen	it? Yes 🖲 No 🔾
emarks:										
					nches. H					

Hydrology

Wetland Hydrology Indicators:			
		Cocondony Indicators (minimum of two arrived)	
Primary Indicators (minimum of one required; che	Secondary Indicators (minimum of two required)		
Surface Water (A1)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2,	
High Water Table (A2)		4A, and 4B)	
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)	
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry Season Water Table (C2)	
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)	
Drift deposits (B3)	Oxidized Rhizospheres on Living Roots (C3)	✓ Geomorphic Position (D2)	
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)	
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6)	✓ FAC-neutral Test (D5)	
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)	
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Frost Heave Hummocks (D7)	
Sparsely Vegetated Concave Surface (B8)		—	
Field Observations:			
Surface Water Present? Yes \bigcirc No $oldsymbol{igstar}$	Depth (inches):		
Water Table Present? Yes O No O	Depth (inches):	Irology Present? Yes 🖲 No 🔿	
Saturation Present? Yes No	Depth (inches): 0	Irology Present? Yes 🔍 No 🔾	
Describe Recorded Data (stream gauge, monitor w	ell, aerial photos, previous inspections), if availab	ole:	
Remarks:			
Soil saturated to surface. Soil had a hydrogen sulf	ide odor. Two secondary indicators of wetland h	ydrology were observed at this sample location.	

Project/Site: Printing for Less	City/County: Livingston/Park	Sa	mpling Date: 26-Jun-19
Applicant/Owner: Printing for Less		State: MT	Sampling Point: PFL 11
Investigator(s): B Schultz	Section, Township, Range:	s 22 t 2 S	R 9 E
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, conve	x, none): none	Slope: <u>0.0</u> % / <u>0.0</u> °
Subregion (LRR): LRR E	45°39'3.43"N Lor	ng.: 110°36'9.48"W	Datum: WGS 84
Soil Map Unit Name: Reedpoint-Tanna-Ethridge complex		NWI classific	ation: PEM1C
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes 🖲 No 🔾	(If no, explain in Re	marks.)
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Norma	l Circumstances" pres	sent? Yes 🖲 No 🔾
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed,	explain any answers	in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes () Yes () Yes ()	No () No () No ()	Is the Sampled Area within a Wetland?	Yes 🖲 No 🔿
Remarks:				
Cattail marsh.				

Dominant

VEGETATION - Use scientific names of plants.

		_Species? .		-
Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Rel.Strat.	Indicator Status	Dominance Test worksheet:
			Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: <u>2</u> (A)
2	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata: <u>2</u> (B)
4	0	0.0%		
Sapling/Shrub Stratum (Plot size: 15 ft)	0	= Total Cove	er	Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
1	0	0.0%		Prevalence Index worksheet:
2	0	0.0%		Total % Cover of: Multiply by:
3.	0	0.0%		OBL species $50 \times 1 = 50$
4.	0	0.0%		FACW species 40 x 2 = 80
5.	0	0.0%		FAC species $0 \times 3 = 0$
	0	= Total Cove	er	FACU species $0 \times 4 = 0$
Herb Stratum (Plot size: 5 ft.)				UPL species $0 \times 5 = 0$
1, Typha latifolia	40	42.1%	OBL	
2. Juncus effusus	35	✔ 36.8%	FACW	Column Totals: <u>90</u> (A) <u>130</u> (B)
3. Carex nebrascensis	10	10.5%	OBL	Prevalence Index = $B/A = 1.444$
4 Mentha arvensis	5	5.3%	FACW	
5. Litter	5	5.3%		Hydrophytic Vegetation Indicators:
6	0	0.0%		✓ 1 - Rapid Test for Hydrologic Vegetation
7	0	0.0%		✓ 2 - Dominance Test is > 50%
8	0	0.0%		✓ 3 - Prevalence Index is ≤3.0 1
9	0	0.0%		4 - Morphological Adaptations ¹ (Provide supporting
10	0	0.0%		data in Remarks or on a separate sheet)
11	0	0.0%		\square 5 - Wetland Non-Vascular Plants 1
11	95	= Total Cove	er	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)				¹ Indicators of hydric soil and wetland hydrology must
1	0	0.0%		be present, unless disturbed or problematic.
2.	0	0.0%		Hydrophytic
	0	= Total Cove		Vegetation Present? Yes • No O
% Bare Ground in Herb Stratum: $_{()}$				
Remarks:				1
Site dominated by cattails and Baltic rush.				

Sampling Point: PFL 11

-	otion: (Des		he depth r				nfirm the a	absence of indicators.)
Depth (inches)	Color (I	Matrix moist)	%	Color (moist)	Redox Featu %	ires Type ¹	Loc ²	Texture	Remarks
<u>0-6</u>	10YR	4/1	100			TTPC	LUC	Silty Clay Loam	saturated, stinky soil
6-14+	10YR	4/1	95	10YR 4/6	5 5	С	М	Silty Clay Loam	stinky, silky soil
/1		=Depletion		ced Matrix, CS=Cov	vered or Coate		ins ² Loca	tion: PL=Pore Lining. M	=Matrix bblematic Hydric Soils ³ :
Thick Dark	edon (A2) : (A3) Sulfide (A4) elow Dark S Surface (A1 k Mineral (S	12) 51)	1)	Loamy Gle Depleted I Redox Dar Depleted I	· · ·	2)) [F7)	in MLRA 1)	 2 cm Muck (A1 Red Parent Ma Other (Explain ³Indicators of hydrop wetland hydrolog unless disturbed o 	terial (TF2) in Remarks) phytic vegetation and y must be present,
Restrictive La	ed Matrix (S yer (if pres	,							·
Type: Depth (inche	es):	-						Hydric Soil Present	? Yes 🖲 No 🖯
Remarks:									
Hydrogen sulfi	de odor w	as observ	ed.						

Hydrology

Wetland Hydrology India	ators				
		المعينات مارما			Cocondany, Indiantaus (minimum of two yoursed)
Primary Indicators (mini	mum of one	requirea; ci		(50) (Secondary Indicators (minimum of two required)
✓ Surface Water (A1)			Water-Stained Leave 1, 2, 4A, and 4B)	es (B9) (excep	ept MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
High Water Table (A2)					
 Saturation (A3) 			Salt Crust (B11)		Drainage Patterns (B10)
Water Marks (B1)			Aquatic Invertebrate	es (B13)	Dry Season Water Table (C2)
Sediment Deposits (B2)		✓ Hydrogen Sulfide O	dor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift deposits (B3)			Oxidized Rhizospher	res on Living R	Roots (C3) Geomorphic Position (D2)
Algal Mat or Crust (B4)			Presence of Reduce	d Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)			Recent Iron Reducti	ion in Tilled So	Soils (C6) FAC-neutral Test (D5)
Surface Soil Cracks (B6	5)		Stunted or Stressed	Plants (D1) (L	
Inundation Visible on A	erial Imagery	(B7)	Other (Explain in Re	emarks)	Frost Heave Hummocks (D7)
Sparsely Vegetated Co	ncave Surface	(B8)			
		(-)			
Field Observations:		~	_		
Surface Water Present?	Yes 🖲	No \bigcirc	Depth (inches):	1	
Water Table Present?	Yes \bigcirc	No 🖲	Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes 🖲	No \bigcirc	Depth (inches):	0	Wetland Hydrology Present? Yes 💿 No 🔾
Describe Recorded Data	(stream gau	ge, monitor	well, aerial photos, p	revious inspe	pections), if available:
Remarks:					
	- f f	.			
Approximately one inch	or surrace wa	iter.			

Project/Site: Printing for Less	City/County: Livingston/Park	Sa	ampling Date: <u>26-Jun-19</u>
Applicant/Owner: Printing for Less		State: MT	Sampling Point: PFL 12
Investigator(s): B Schultz	Section, Township, Range:	s 22 t 2 S	R 9 E
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, conve	x, none): none	Slope: <u>0.0</u> % / <u>0.0</u> °
Subregion (LRR): LRR E	45°39'6.36"N Lon	g.: 110°36'11.12"W	Datum: WGS 84
Soil Map Unit Name: Reedpoint-Tanna-Ethridge complex		NWI classific	ation: FSW
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes 🖲 No 🔾	(If no, explain in Re	marks.)
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Normal	Circumstances" pres	sent? Yes 🖲 No 🔾
Are Vegetation . , Soil , or Hydrology naturally	problematic? (If needed,	explain any answers	in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes 🖲	No O	Is the Sampled Area	
Hydric Soil Present?	Yes 🖲	No O	•	Yes 🖲 No
Wetland Hydrology Present?	Yes 🖲	No O	within a Wetland?	

Dominant

Remarks:

Shrub/scrub sample location along railroad grade.

VEGETATION - Use scientific names of plants.

		_Species?		
- $-$ (Distring 20 ft)		Rel.Strat.		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30 ft.</u>)	% Cover		Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: <u>3</u> (A)
2		0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata: <u>3</u> (B)
4	0	0.0%		
Sapling/Shrub Stratum (Plot size: 15 ft.)	0	= Total Cove	er	Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
1. Salix exigua	40	✔ 100.0%	FACW	Prevalence Index worksheet:
2	0	0.0%		Total % Cover of: Multiply by:
3.	0	0.0%		OBL species $10 \times 1 = 10$
4.	0	0.0%		FACW species $60 \times 2 = 120$
5.	0	0.0%		FAC species $15 \times 3 = 45$
	40	= Total Cove	er	FACU species $5 \times 4 = 20$
Herb Stratum (Plot size: 5 ft.)				UPL species $0 \times 5 = 0$
1, Juncus effusus	20	37.7%	FACW	
2. Agrostis gigantea	15	28.3%	FAC	Column Totals: <u>90</u> (A) <u>195</u> (B)
3, Triglochin maritima	5	9.4%	OBL	Prevalence Index = $B/A = 2.167$
4. Eleocharis palustris	5	9.4%	OBL	Hydrophytic Vegetation Indicators:
5, Litter	3	5.7%		
6. Symphoricarpos albus	5	9.4%	FACU	1 - Rapid Test for Hydrologic Vegetation
7		0.0%		✓ 2 - Dominance Test is > 50%
8		0.0%		✓ 3 - Prevalence Index is \leq 3.0 ¹
9	0	0.0%		4 - Morphological Adaptations ¹ (Provide supporting
10	0	0.0%		data in Remarks or on a separate sheet)
11	0	0.0%		5 - Wetland Non-Vascular Plants ¹
	53	= Total Cove	er	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)				¹ Indicators of hydric soil and wetland hydrology must
1	0	0.0%		be present, unless disturbed or problematic.
2.	0	0.0%		Hydrophytic
	0	= Total Cove	ər	Vegetation Present? Yes I No
% Bare Ground in Herb Stratum:				
Remarks:				
Salix overstory with mixed understory.				

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Sampling Point: PFL 12

	Matrix			Redox Featu				
(inches)	Color (moist)	%	Color (mois	st) <u>%</u>	Type	Loc ²	Texture	Remarks saturated, surface water
0-6	10YR 4/1	100					Silty Clay Loam	
6-15	10YR 4/1	94	10YR 4	4/6 6	С	М	Silty Clay Loam	mottles at 6 inches
	·							
	•					ins ² Locat	tion: PL=Pore Lining. N	
-	Indicators: (Applica	ible to all LF		-)			oblematic Hydric Soils ³ :
Histosol (,			Redox (S5) 1 Matrix (S6)			2 cm Muck (A	,
Black Hist	pedon (A2)			l Matrix (S6) Mucky Mineral (F	E1) (evcent i	MIRA 1)	Red Parent M	
	cic (A3) i Sulfide (A4)			Gleyed Matrix (F	, , ,		Other (Explain	n in Remarks)
	Below Dark Surface (A	A 1 1 \	_ '	d Matrix (F3)	2)			
	k Surface (A12)	(11)		Dark Surface (F6)	5)		3. dianton of hydro	اممح ممتلمك مستخلف
	k Surface (A12) Ick Mineral (S1)			d Dark Surface (,			ophytic vegetation and gy must be present,
	eyed Matrix (S4)			lepressions (F8)	. ,		unless disturbed	
	ayer (if present):							
Туре:								• • •
Depth (inc	nes):						Hydric Soil Presen	it? Yes 🖲 No 🔾
Remarks:								
	nches.							
ottles at 6 i								
lottles at 6 i								
lottles at 6 i								
lottles at 6 i								
lydrology								
iydrolog y Wetland Hyd	lrology Indicators:							
iydrolog Wetland Hyd Primary Indi	Irology Indicators: icators (minimum of	f one requir						indicators (minimum of two requ
Hydrology Wetland Hyd Primary Indi ✓ Surface V	Irology Indicators: icators (minimum of Vater (A1)	f one requir	Water-	-Stained Leaves	(B9) (excep	rt MLRA	Water-St	tained Leaves (B9) (MLRA 1, 2,
Hydrology Wetland Hyd Primary Indi ✓ Surface V ☐ High Wat	Irology Indicators: icators (minimum of	f one requir	Water- 1, 2, 4	-Stained Leaves 4A, and 4B)	(B9) (excep	nt MLRA	Water-St 4A, and	tained Leaves (B9) (MLRA 1, 2, 4B)
Hydrology Wetland Hyd Primary Indi ✓ Surface V	irology Indicators: icators (minimum of Vater (A1) rer Table (A2)	f one requir	Water- 1, 2, 4	-Stained Leaves	(B9) (excep	nt MLRA	Water-St 4A, and	tained Leaves (B9) (MLRA 1, 2,
Hydrology Wetland Hyd Primary Indi ✓ Surface V ☐ High Wat	irology Indicators: icators (minimum of Vater (A1) er Table (A2) n (A3)	f one requir	Water- 1, 2, 4	-Stained Leaves 4A, and 4B)		nt MLRA	Water-Si 4A, and Drainage	tained Leaves (B9) (MLRA 1, 2, 4B)
Hydrology Wetland Hyd Primary Indi Surface V High Wat Saturatio Water Mater	irology Indicators: icators (minimum of Vater (A1) er Table (A2) n (A3)	f one requir	U Water- 1, 2, 4 Salt Cr Aquati	-Stained Leaves 4A, and 4B) rust (B11)	s (B13)	nt MLRA	Water-Si 4A, and Drainage Dry Seas	tained Leaves (B9) (MLRA 1, 2, 4B) e Patterns (B10)
Hydrology Wetland Hyd Primary Indi Surface V High Wat Saturatio Water Mater	icators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2)	f one requir	Water- 1, 2, 4 Salt Cr Aquati	-Stained Leaves 4A, and 4B) rust (B11) ic Invertebrates	; (B13) pr (C1)		 Water-St 4A, and Drainage Dry Seas Saturation 	tained Leaves (B9) (MLRA 1, 2, 4B) e Patterns (B10) son Water Table (C2)
Hydrology Wetland Hyd Primary Indi ✓ Surface V High Wat ✓ Saturatio Water Ma Sediment Drift depute	icators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2)	f one requir	Water- 1, 2, 4 Salt Cr Aquati Hydrog Oxidize	-Stained Leaves 4A, and 4B) rust (B11) ic Invertebrates igen Sulfide Odo	; (B13) pr (C1) s on Living R		Water-St 4A, and Drainage Dry Seas Saturation Geomory Geomory	tained Leaves (B9) (MLRA 1, 2, 4B) e Patterns (B10) son Water Table (C2) on Visible on Aerial Imagery (C9)
Primary Indi Surface V High Wat Saturatio Water Ma Sediment Drift depu	Irology Indicators: icators (minimum of Water (A1) eer Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3)	f one requir	Water- 1, 2, 4 Salt Cr Aquati Hydrog Oxidize	-Stained Leaves 4A, and 4B) rust (B11) ic Invertebrates igen Sulfide Odo red Rhizospheres	s (B13) or (C1) s on Living R Iron (C4)	Roots (C3)	Water-St 4A, and Drainage Dry Seas Saturatic Geomory Shallow	tained Leaves (B9) (MLRA 1, 2, 4B) e Patterns (B10) son Water Table (C2) on Visible on Aerial Imagery (C9) phic Position (D2)
Hydrology Wetland Hyd Primary Indi ✓ Surface V High Wat ✓ Saturatio Water Ma Sediment Drift depu Algal Mat Iron Dep	Irology Indicators: icators (minimum of Water (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) c or Crust (B4)	<u>f one requir</u>	Water- 1, 2, 4 Salt Cr Aquati Hydrog Oxidize Presen Recent	-Stained Leaves 4A, and 4B) rust (B11) ic Invertebrates ugen Sulfide Odo ted Rhizospheres nce of Reduced 1	; (B13) or (C1) s on Living R Iron (C4) n in Tilled So	Roots (C3) bils (C6)	 Water-St 4A, and Drainage Dry Sease Saturatic ✓ Geomorp Shallow ✓ FAC-neu 	tained Leaves (B9) (MLRA 1, 2, 4B) e Patterns (B10) son Water Table (C2) on Visible on Aerial Imagery (C9) phic Position (D2) Aquitard (D3)

Inundation Visible on A Sparsely Vegetated Cor	5,	. ,	Other (Explain in Re	marks)	Frost Heave H	ummocks (D7)	
Field Observations: Surface Water Present?	Yes 🖲	No O	Depth (inches):	1			
Water Table Present?	$_{ m Yes}$ \bigcirc	No 🖲	Depth (inches):				
Saturation Present? (includes capillary fringe)	Yes 🖲	No \bigcirc	Depth (inches):		Wetland Hydrology Present?	Yes 🔍 No 🔾	
Describe Recorded Data	(stream gau	ge, monito	or well, aerial photos, pr	evious inspec	tions), if available:		
Remarks:							
Remarks:							

One inch of surface water was observed. Two secondary indicators of wetland hydrology were observed at this location.

Project/Site: Printing for Less	City/County: Livingston/Park	Sa	ampling Date: 26-Jun-19
Applicant/Owner: Printing for Less		State: MT	Sampling Point: PFL 13
Investigator(s): B Schultz	Section, Township, Range	s 22 t 2 S	R 9 E
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, conve	ex, none): none	Slope: <u>0.0</u> % / <u>0.0</u> °
Subregion (LRR): LRR E	45°39'6.52"N Lo	ng.: 110°36'11.22"W	Datum: WGS 84
Soil Map Unit Name: reedpoint-Tanna-Ethridge complex		NWI classific	ation: FSW
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes 🖲 No 🔾	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significan	tly disturbed? Are "Norma	l Circumstances" pre	sent? Yes 🖲 No 🔾
Are Vegetation D , Soil , or Hydrology naturally	problematic? (If needed,	explain any answers	in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes \bigcirc	No 🖲	Is the Sampled Area	Yes 🔿 No 🖲
Hydric Soil Present?	Yes \bigcirc	No 🖲	within a Wetland?	
Wetland Hydrology Present?	Yes \bigcirc	No 🖲	within a wetland?	

Dominant

Remarks:

No wetland indicators were observed at this sample location.

VEGETATION - Use scientific names of plants.

		_Species?		
Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Rel.Strat.	Indicator Status	Dominance Test worksheet:
			Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC:(A)
2	0			Total Number of Dominant
3	0	0.0%		Species Across All Strata:(B)
4	0	0.0%		
Sapling/Shrub Stratum (Plot size: 15 ft.)	0	= Total Cov	er	Percent of dominant Species That Are OBL, FACW, or FAC:50.0% (A/B)
1. Salix exigua	5	✔ 100.0%	FACW	Prevalence Index worksheet:
2.	0	0.0%		Total % Cover of: Multiply by:
3.	0	0.0%		OBL species $0 \times 1 = 0$
4.	0	0.0%		FACW species $10 \times 2 = 20$
5.	0	0.0%		FAC species $0 \times 3 = 0$
	5	= Total Cov	er	FACU species $\frac{88}{352}$ x 4 = $\frac{352}{352}$
Herb Stratum (Plot size: 5 ft.)		- 10001 001		
1. Symphoricarpos albus	50	✓ 53.8%	FACU	
2. Rosa woodsii	15	16.1%	FACU	Column Totals: <u>98</u> (A) <u>372</u> (B)
3. Dactylis glomerata	10	10.8%	FACU	Prevalence Index = $B/A = 3.796$
4 Achillea millefolium	10	10.8%	FACU	
5. Equisetum hyemale	5	5.4%	FACW	Hydrophytic Vegetation Indicators:
6. Helianthus annuus	3	3.2%	FACU	1 - Rapid Test for Hydrologic Vegetation
7	0	0.0%		2 - Dominance Test is > 50%
8.	0	0.0%		\Box 3 - Prevalence Index is ≤3.0 1
9	0	0.0%		\Box 4 - Morphological Adaptations ¹ (Provide supporting
10	0	0.0%		data in Remarks or on a separate sheet)
11.	0	0.0%		$igsqcup$ 5 - Wetland Non-Vascular Plants 1
	93	= Total Cov	er	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)				¹ Indicators of hydric soil and wetland hydrology must
	0	0.0%		be present, unless disturbed or problematic.
1		0.0%		Hydrophytic
۷	0	= Total Cov	er	Vegetation Present? Yes No •
% Bare Ground in Herb Stratum: 🕦				
Remarks:				1
Snowberry domianted this site.				

Sampling Point: PFL 13

Depth (inches) Matrix Redox Features 0-4 10YR 3/2 100 100 silty lay loam organic, rooty 4-20 10YR 4/1 100 Image: Color (moist) Silty Clay Loam increase clay as deeper in profile	
0-4 10YR 3/2 100 silty lay loam organic, rooty	
4 20 10VR 4/1 100 Silty lay loan increase clay as deeper in	
	n
	_
¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ² Location: PL=Pore Lining. M=Matrix	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :	
Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10)	
Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2)	
Black Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Other (Explain in Remarks) Hydrogen Sulfide (A4) Loamy Gleved Matrix (F2)	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3)	
Image: Thick Dark Surface (A12) Image: Redux Dark Surface (F0) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, Sandy Muck Mineral (S1) Image: Depleted Dark Surface (F7) wetland hydrology must be present,	
Sandy Flock Pillera (S1) Redox depressions (F8) unless disturbed or problematic.	
Restrictive Layer (if present):	
Type:	
Depth (inches): Hydric Soil Present? Yes O No O	
Remarks:	
No hydric soil indicators were observed at this sample location.	
Hydrology	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of two required	ed)
Surface Water (A1) Water-Stained Leaves (B9) (except MLRA Water-Stained Leaves (B9) (MLRA 1, 2,	00.7
High Water Table (A2) 1, 2, 4A, and 4B) 4A, and 4B)	
Saturation (A3)	
Water Marks (B1) Aquatic Invertebrates (B13) Dry Season Water Table (C2)	
Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9)	
Drift deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2)	
Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3)	
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-neutral Test (D5)	
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost Heave Hummocks (D7)	

 Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) 		Other (Explain in Remarks)	Frost Heave Hummocks (D7)		
Field Observations: Surface Water Present? Water Table Present?	Yes 〇 Yes 〇	No 🖲 No 🖲	Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes O	No 🖲	Depth (inches):	Wetland Hydrology Present?	Yes 🔿 No 🖲
Describe Recorded Data ((stream gau	ge, monito	r well, aerial photos, previous inspe	ctions), if available:	
Remarks:					
No evidence of wetland h	nydrology wa	as observe	d at this sample location.		

Project/Site: Printing for Less	City/County: Livingston/Park	Sampling Date: <u>26-</u>	Jun-19		
Applicant/Owner: Printing for Less		State: MT	Sampling Point:	PFL 14	
Investigator(s): B Schultz	Section, Township, Range	S 22 T 2	S R 9 E	_	
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none): Slope: 0.0				
Subregion (LRR): LRR E	45°39'10.46"N Lo	ng.: 110°36'8.06"W	Datu	m: WGS 84	
Soil Map Unit Name:		NWI classifi	ication:		
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes $ullet$ No $igcap$	(If no, explain in R	Remarks.)		
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Norma	al Circumstances" pro	esent? Yes 🖲	No 🔿	
Are Vegetation, Soil, or Hydrology naturally p	problematic? (If needed,	, explain any answer	s in Remarks.)		

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes 🖲	No O	Is the Sampled Area		
Hydric Soil Present?	Yes \bigcirc	No 🖲	•	Yes 🔿 No 🖲	
Wetland Hydrology Present?	Yes 🖲	No \bigcirc	within a Wetland?		
Remarks:					

Dominant

Sample located along eastern boundary.

VEGETATION - Use scientific names of plants.

•		_Species?		1
- $ (0)$ (1) $(1$				Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% Cover		Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: <u>2</u> (A)
2	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata:(B)
4.	0	0.0%		
Sapling/Shrub Stratum (Plot size: 15 ft.)	0	= Total Cov	er	Percent of dominant Species That Are OBL, FACW, or FAC:100.0% (A/B)
1	0	0.0%		Prevalence Index worksheet:
2	0	0.0%		Total % Cover of: Multiply by:
3.	0	0.0%		OBL species $0 \times 1 = 0$
4	0	0.0%		FACW species $30 \times 2 = 60$
5.	0	0.0%		FAC species $38 \times 3 = 114$
	0	= Total Cov	er	FACU species $10 \times 4 = 40$
Herb Stratum (Plot size: 5 ft.)				$\begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 $
1. Agrostis gigantea	30	32.3%	FAC	
2. Juncus effusus	30	32.3%	FACW	Column Totals: <u>78</u> (A) <u>214</u> (B)
3. Litter	15	16.1%		Prevalence Index = $B/A = 2.744$
4. Solidago canadensis	10	10.8%	FACU	
5. Poa pratensis	5	5.4%	FAC	Hydrophytic Vegetation Indicators:
6. Cirsium arvense	3	3.2%	FAC	1 - Rapid Test for Hydrologic Vegetation
7	0	0.0%		2 - Dominance Test is > 50%
8	0	0.0%		✓ 3 - Prevalence Index is \leq 3.0 ¹
9	0	0.0%		4 - Morphological Adaptations ¹ (Provide supporting
10	0	0.0%		data in Remarks or on a separate sheet)
11	0	0.0%		\Box 5 - Wetland Non-Vascular Plants 1
	93	= Total Cov	er	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)				¹ Indicators of hydric soil and wetland hydrology must
1	0	0.0%		be present, unless disturbed or problematic.
2.	0	0.0%		Hydrophytic
-	0	= Total Cov	er	Vegetation Present? Yes No
% Bare Ground in Herb Stratum: _0				
Remarks:				•
Redtop and Baltic rush dominated this location.				

Sampling Point: PFL 14

_

Profile Descr	iption: (Des	scribe to t	the depth i	needed to do	cument th	ne indic	ator or co	nfirm the a	absence of indicators	s.)
Depth		Matrix				x Featu				
(inches)	Color (moist)	%	Color (m	oist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR	3/1	100						silty clay loam	organic, rooty
3-12	10YR	4/2	94	10YR	4/6	3	С	М	Silty Clay Loam	mottles start at 3 inches
				10YR	5/2	3	С	М		
12-18+	10YR	4/2	87	10YR	4/6	8	С	М	Silty Clay Loam	increase mottles
				10YR	5/2	5	С	M		
					_			_		
¹ Type: C=Con	centration. D	=Depletior	n. RM=Redu	ced Matrix, CS	=Covered	or Coate	ed Sand Gra	ins ² Loca	tion: PL=Pore Lining. N	1=Matrix
¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ² Loca Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histosol (A1) Sandy Redox (S5) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Muck Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Remarks: Mottles at 3 inches, Mottles at 3 inches,							n MLRA 1)	2 cm Muck (A Red Parent M Other (Explain ³ Indicators of hydro	aterial (TF2) n in Remarks) pphytic vegetation and gy must be present, or problematic.	
Hydrology Wetland Hyd	lrology Indi			ed; check all	that ann	(v)			Secondary I	ndicators (minimum of two required
	Notor (A1)		UNE LEQUI						·	

Primary Indicators (minimum	n of one i	Secondary Indicators (minimum of two required)			
Surface Water (A1)	urface Water (A1) Water-Stained Leaves (B9) (except MLRA			Water-Stained Leaves (B9) (MLRA 1, 2,	
High Water Table (A2)	$1, 2, 4\Lambda$ and $4P$				4A, and 4B)
Saturation (A3)			Salt Crust (B11)		Drainage Patterns (B10)
Water Marks (B1)			Aquatic Invertebrates (B13)		Dry Season Water Table (C2)
Sediment Deposits (B2)			Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
Drift deposits (B3)			Oxidized Rhizospheres on Living Ro	oots (C3)	Geomorphic Position (D2)
Algal Mat or Crust (B4)			Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
Iron Deposits (B5)					✓ FAC-neutral Test (D5)
			Stunted or Stressed Plants (D1) (Ll	RR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Frost Heave Hummocks (D7)	
Sparsely Vegetated Concave	e Surface (B8)			
Field Observations:					
Surface Water Present? Y	fes \bigcirc	No 🖲	Depth (inches):		
Water Table Present?	res 🔿	No 🖲	Depth (inches):]	drology Present? Yes 🖲 No 🔿
Saturation Present? (includes capillary fringe)	(es 🔿	No 🖲	Depth (inches):	wetland Hyd	drology Present? Yes $ullet$ No $igcup$
Describe Recorded Data (stre	am gaug	e, monito	r well, aerial photos, previous inspe	ections), if availal	ble:
Remarks:					
Two secondary indicators of v	wetland l	nydrology	were observed at this sample locat	ion	

Project/Site: Printing for Less	City/County: Livingston/Park	Sa	Sampling Date: 26-Jun-19			
Applicant/Owner: Printing for Less	s	State: MT	Sampling Point: PFL 15			
Investigator(s): B Schultz	Section, Township, Range:	s 22 t 2 S	R 9 E			
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, convex	, none): none	Slope: <u>0.0</u> % / <u>0.0</u> °			
Subregion (LRR): LRR E	: 45°39'10.70"N Long	g.: 110°36'8.20"W	Datum: WGS 84			
Soil Map Unit Name: Reedpoint-Tanna-Ethridge complex		NWI classific	ation: none			
Are climatic/hydrologic conditions on the site typical for this time of y	rear? Yes 🖲 No 🔾	(If no, explain in Re	marks.)			
Are Vegetation D , Soil , or Hydrology Significant	ntly disturbed? Are "Normal	Circumstances" pres	sent? Yes 🖲 No 🔾			
Are Vegetation D , Soil , or Hydrology naturally	problematic? (If needed, e	explain any answers	in Remarks.)			

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes 🔿	No 🖲	Is the Sampled Area	Yes 🔾 No 🖲	
Hydric Soil Present?	Yes \bigcirc	No 🖲	within a Wetland?		
Wetland Hydrology Present?	Yes \bigcirc	No 🖲	within a wetland?		
Remarks:					

Dominant

Sample located along eastern boundary.

VEGETATION - Use scientific names of plants.

	-	_Species?		1
		Rel.Strat.	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% Cover	Cover	Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2	0	0.0%		
3	0	0.0%		Total Number of Dominant Species Across All Strata: 2 (B)
4.	0	0.0%		
		= Total Cov	~~	Percent of dominant Species
Sapling/Shrub Stratum (Plot size: 15 ft.)	0		er	That Are OBL, FACW, or FAC:(A/B)
	0	0.0%		
1				Prevalence Index worksheet:
2	0	0.0%		Total % Cover of: Multiply by:
3	0	0.0%		OBL species $0 \times 1 = 0$
4	0	0.0%		FACW species $10 \times 2 = 20$
5	0	0.0%		FAC species x $3 =15$
	0	= Total Cov	er	FACU species $75 \times 4 = 300$
Herb Stratum (Plot size: 5 ft.)				UPL species $5 \times 5 = 25$
1. Symphoricarpos albus	40	42.1%	FACU	
2. Pascopyrum smithii	25	26.3%	FACU	Column Totals: <u>95</u> (A) <u>360</u> (B)
3 Juncus balticus	10	10.5%	FACW	Prevalence Index = $B/A = 3.789$
4. Solidago canadensis	10	10.5%	FACU	
5. Cirsium arvense	5	5.3%	FAC	Hydrophytic Vegetation Indicators:
C Chine winidule	5	5.3%	UPL	1 - Rapid Test for Hydrologic Vegetation
6. supa vindula 7	0	0.0%		\square 2 - Dominance Test is > 50%
	0	0.0%		□ 3 - Prevalence Index is ≤3.0 1
8	0	0.0%		4 - Morphological Adaptations ¹ (Provide supporting
9	0	0.0%		data in Remarks or on a separate sheet)
10	0	0.0%		\Box 5 - Wetland Non-Vascular Plants 1
11				Problematic Hydrophytic Vegetation ¹ (Explain)
	95	= Total Cov	er	
Woody Vine Stratum (Plot size:)		_		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0	0.0%		be present, unless disturbed of problematic.
2	0	0.0%		Hydrophytic
	0	= Total Cov	er	Vegetation Present? Yes O No •
% Bare Ground in Herb Stratum: $_{ m 0}$				
Remarks:				
Dominated by snowberry and Baltic rush				

Sampling Point: PFL 15

Profile Descri	iption: (Des	cribe to t	he depth r	needed to document	the indic	cator or co	nfirm the a	absence of indicators.	.)
Depth		Matrix		Red	lox Feati	ures			
(inches)	Color (r	noist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR	4/1	100					Silty Clay Loam	powdery, friable
3-6	10YR	4/2	100					Silty Clay Loam	dry
6-18+	10YR	5/2	100					Silty Clay Loam	friable
			_						
			_						
/1				,			ins ² Loca	tion: PL=Pore Lining. M	
		(Applicab	le to all Li	RRs, unless otherwis)		_	oblematic Hydric Soils ³ :
Histosol (A				Sandy Redox (. ,			2 cm Muck (A	•
Histic Epip	. ,			Stripped Matri	. ,	F 1) /		Red Parent Ma	
Black Histi	()			Loamy Mucky	•	,, ,	IN MLRA 1)	Other (Explain	in Remarks)
	Sulfide (A4)			Loamy Gleyed	•	-2)			
	Below Dark S	•	1)		• •	- \			
	Surface (A1)	,		Redox Dark Su	•	,			phytic vegetation and
· ·	ck Mineral (S					. ,		unless disturbed	y must be present,
	yed Matrix (S	,		Redox depress	sions (F8))			bi problemate.
Restrictive La	ayer (if pres	sent):							
Type:									
Depth (incl	nes):							Hydric Soil Present	:? Yes 🔿 No 🖲
Remarks:									
No hydric soil	indicators	were obs	erved at t	his sample location.					
- ,				· · · · · · · · · · · · · · · · · · ·					
Hydrology	/								
Wetland Hyd	rology Indi	cators:	-		-				
Primary Indi	cators (min	imum of	one reauir	red; check all that ap	(ylac			Secondary Ir	ndicators (minimum of two required
Surface W				Water-Staine		s (B9) (exce	ot MLRA		ained Leaves (B9) (MLRA 1, 2,
	er Table (A2)			1, 2, 4A, and		/ (4A, and 4	

High Water Table (A2)			1, 2, 4A, and 4D)	4A, dhu 4D)				
Saturation (A3)			Salt Crust (B11)	Salt Crust (B11)				
Water Marks (B1)			Aquatic Invertebrates (B13)		Dry Season Wa	ater Table (C2))	
Sediment Deposits (B2))		Hydrogen Sulfide Odor (C1)		Saturation Visi	ble on Aerial Ir	magery (C9	
Drift deposits (B3)			Oxidized Rhizospheres on Livir	g Roots (C3)	Geomorphic Po	osition (D2)		
Algal Mat or Crust (B4)			Presence of Reduced Iron (C4	Presence of Reduced Iron (C4)				
Iron Deposits (B5)			Recent Iron Reduction in Tilled	FAC-neutral Te	est (D5)			
Surface Soil Cracks (B6))		Stunted or Stressed Plants (D1	Raised Ant Mo	unds (D6) (LRI	RA)		
Inundation Visible on A	erial Imagery	(B7)	Other (Explain in Remarks)	Frost Heave H		-		
Sparsely Vegetated Cor	ncave Surface	(B8)						
Field Observations: Surface Water Present?	Yes 🔾	No 🖲	Depth (inches):					
Water Table Present?	Yes \bigcirc	No 🖲	Depth (inches):		\frown			
Saturation Present? (includes capillary fringe)	$_{\rm Yes} \bigcirc$	No 🖲	Depth (inches):	Wetland Hy	/drology Present?	Yes \bigcirc	No 🖲	
Describe Recorded Data	(stream gau	ge, monito	or well, aerial photos, previous in	spections), if availa	able:			
Remarks:								

Project/Site: Printing for Less	City/County: Livingston/Park	S	ampling Date: 26-Jun-19	
Applicant/Owner: Printing for Less		State: MT	Sampling Point: PFL 16	
Investigator(s): B Schultz	Section, Township, Range	s 22 t 2 9	5 R 9 E	
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, convex, none): none Slope: 0.0 %			
Subregion (LRR): LRR E	45°39'13.27"N Lo	ng.: 110°36'15.76"W	V Datum: WGS 84	
Soil Map Unit Name: reedpoint-Tanna-Ethridge complex		NWI classifie	cation: none	
Are climatic/hydrologic conditions on the site typical for this time of yea	ar? Yes 🖲 No 🔿	(If no, explain in R	emarks.)	
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🗌 significant	ly disturbed? Are "Norma	l Circumstances" pre	esent? Yes 🖲 No 🔾	
Are Vegetation, Soil, or Hydrology naturally p	problematic? (If needed,	explain any answers	s in Remarks.)	

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes 🖲	No O	Is the Sampled Area			
Hydric Soil Present?	Yes 🖲	No O		Yes 🔿 No 🖲		
Wetland Hydrology Present?	Yes \bigcirc	No 🖲	within a Wetland?			
Remarks:						

Dominant

Sample located at toe slope along Business 90.

VEGETATION - Use scientific names of plants.

		_Species?		
Tree Stratum (Plot size: 30 ft.)	Absolute % Cover		Indicator Status	Dominance Test worksheet:
			Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: (A)
2.	0	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata: <u>3</u> (B)
4	0	0.0%		
Sapling/Shrub Stratum (Plot size: 15 ft.)	0	= Total Cove	er	Percent of dominant Species That Are OBL, FACW, or FAC:66.7% (A/B)
1	0	0.0%		Prevalence Index worksheet:
2.	0	0.0%		Total % Cover of: Multiply by:
3.	0	0.0%		OBL species 0 x 1 = 0
4.	0	0.0%		FACW species $5 \times 2 = 10$
5.	0	0.0%		FAC species $35 \times 3 = 105$
	0	= Total Cove	er	FACU species $35 \times 4 = 140$
Herb Stratum (Plot size: 5 ft.)				UPL species $10 \times 5 = 50$
1. Poa pratensis	20	23.5%	FAC	Column Totals: 85 (A) 305 (B)
2. Pascopyrum smithii	20	23.5%	FACU	$\begin{array}{c} \text{Column lotals:} \underline{\text{os}} (A) \underline{\text{sos}} (B) \end{array}$
3. Hordeum jubatum	15	✔ 17.6%	FAC	Prevalence Index = $B/A = 3.588$
4. Agropyron intermedium	10	11.8%	UPL	Hydrophytic Vegetation Indicators:
5. Sonchus arvensis	10	11.8%	FACU	1 - Rapid Test for Hydrologic Vegetation
6, Solidago canadensis	5	5.9%	FACU	 ✓ 1 - Kaple Test for Hydrologic Vegetation ✓ 2 - Dominance Test is > 50%
7. Iris missouriensis	5	5.9%	FACW	
8	0	0.0%		\square 3 - Prevalence Index is ≤3.0 ¹
9	0	0.0%		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10	0	0.0%		
11,	0	0.0%		5 - Wetland Non-Vascular Plants ¹
	85	= Total Cove	er	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)				¹ Indicators of hydric soil and wetland hydrology must
1	0	0.0%		be present, unless disturbed or problematic.
2.	0	0.0%		Hydrophytic
	0	= Total Cove	er	Vegetation Present? Yes • No ·
% Bare Ground in Herb Stratum: ()				
Remarks:				
MIxed grasses were observed.				

Sampling Point: PFL 16

0-4 10YR 4/1 100 Silty Clay Loam dry 4-16 10YR 4/2 95 10YR 5/4 5 C M Silty Clay Loam ye11owish mo 4-16 10YR 4/2 95 10YR 5/4 5 C M Silty Clay Loam ye11owish mo 10YR 4/2 95 10YR 5/4 5 C M Silty Clay Loam ye11owish mo 10YPe: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ² Location: PL=Pore Lining. M=Matrix Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric S Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histosol (A2) Stripped Matrix (S6) 2 cm Muck (A10) Black Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Other (Explain in Remarks) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) 3Indicators of hydrophytic vegetation and wetlad hydrology must be present, unless disturbed or problematic. Sandy Muck Mineral (S1) Depleted Dark Surface (F7) 3Indicators of hydrophytic vegetation and wetlad hydrology must be present, unless disturbed or problematic. <th>0-4 10YR 4/1 100 Silty Clay Loam dry</th> <th>Remarks mottles</th>	0-4 10YR 4/1 100 Silty Clay Loam dry	Remarks mottles			
0-4 10YR 4/1 100 Silky Clay Loam yel Towish mo 4-16 10YR 4/2 95 10YR 5/4 5 C M Silky Clay Loam yel Towish mo 4-16 10YR 4/2 95 10YR 5/4 5 C M Silky Clay Loam yel Towish mo 4-16 10YR 4/2 95 10YR 5/4 5 C M Silky Clay Loam yel Towish mo yee: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ² Location: PL=Pore Lining. M=Matrix Memory Matrix ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric S Histosol (A1) Sandy Redox (S5) Indicators for Problematic Hydric S Histic Epipedon (A2) Stripped Matrix (S6) Indicators for Problematic Hydric S Black Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Other (Explain in Remarks) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F3) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Muck Mineral (S1) Depleted Dark Surface (F7) 3Indicators of hy	U-4 IUYR 4/I IUU Silty Clay Loam yellowish	mottle			
4416 10YR 4/2 95 10YR 5/4 5 C M Slity Clay Loam pe: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining, M=Matrix dric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric S Histosol (A1) Sandy Redox (S5) Indicators for Problematic Hydric S Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Other (Explain in Remarks) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Gleyed Matrix (S4) Redox depressions (F8) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	4-16 10YR 4/2 95 10YR 5/4 5 C M Silty Clay Loam yer row is in a second s	mottre			
rdric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric S Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Other (Explain in Remarks) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) ✓ Depleted Matrix (F3) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Muck Mineral (S1) Redox depressions (F8) Indicators of nydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric S Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Other (Explain in Remarks) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Muck Mineral (S1) Redox depressions (F8) Indicators of problematic.					
Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric S Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Other (Explain in Remarks) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Muck Mineral (S1) Redox depressions (F8) altrix wetland hydrology must be present, unless disturbed or problematic.					
Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric S Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Other (Explain in Remarks) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Muck Mineral (S1) Redox depressions (F8) also disturbed or problematic.					
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators of Problematic Hydric S Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Other (Explain in Remarks) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Muck Mineral (S1) Redox depressions (F8) Indicators of problematic.					
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Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Histos Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Other (Explain in Remarks) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) ✓ Depleted Matrix (F3) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Muck Mineral (S1) Redox depressions (F8) unless disturbed or problematic.		ic Soils ³			
Histic Epipedon (A2) Stripped Matrix (S6) Red Parent Material (TF2) Black Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Other (Explain in Remarks) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) ✓ Depleted Matrix (F3) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Gleyed Matrix (S4) Redox depressions (F8) unless disturbed or problematic.					
Black Histic (A3) Loamy Mucky Mineral (F1) (except in MLRA 1) Other (Explain in Remarks) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) ✓ Depleted Matrix (F3) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Gleyed Matrix (S4) Redox depressions (F8) unless disturbed or problematic.					
□ Depleted Below Dark Surface (A11) □ Depleted Matrix (F3) □ Thick Dark Surface (A12) □ Redox Dark Surface (F6) □ Sandy Muck Mineral (S1) □ Depleted Dark Surface (F7) □ Sandy Gleyed Matrix (S4) □ Redox depressions (F8)					
Below bark Surface (A12) Redox Dark Surface (F6) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Muck Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, unless disturbed or problematic.					
Image: Surface (A12) Image: Depleted Dark Surface (F7) Image: Depleted Dark Surface (F7) Image: Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox depressions (F8) unless disturbed or problematic.					
Sandy Fluck Finite al (31) Redox depressions (F8) unless disturbed or problematic.					
	Sandy Gleyed Matrix (S4)	unless disturbed or problematic.			
	estrictive Layer (if present):				
Type: Depth (inches): Hydric Soil Present? Yes • N	Type:	No C			
Depth (inches): Hydric Soil Present? Yes 🔍 N	Depth (inches): Yes •				
Remarks:	emarks:				
	ssible mixed profile close to the road?				

Primary Indicators (minimum of one required;	check all that apply)	Secondary Indicators (minimum of two required)
Surface Water (A1)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
 Saturation (A3) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) 	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) 	 Drainage Patterns (B10) Dry Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost Heave Hummocks (D7)
Field Observations: Yes No Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No Cincludes capillary fringe) Yes No Describe Recorded Data (stream gauge, monitor)	Depth (inches): Depth (inches): Depth (inches): wetland H Depth (inches): or well, aerial photos, previous inspections), if avail	ydrology Present? Yes O No 🖲 able:
Remarks: No hydric soil indicators were observed at this l	ocaiton.	

Project/Site: Printing for Less	City/County: Livingston/Park	S	ampling Date: 26-Jun-19	_
Applicant/Owner: Printing for Less		State: MT	Sampling Point: PFL 17	
Investigator(s): B Schultz	Section, Township, Range:	S 22 T 2 5	5 R 9 E	
Landform (hillslope, terrace, etc.): Undulating	Local relief (concave, conve	x, none): none	Slope: 0.0 % / 0.0) °
Subregion (LRR): LRR E	45°39'12.97"N Loi	יים: 110°36'15.75"W	/ Datum: WGS 84	_
Soil Map Unit Name: reedpoint-Tanna-Ethridge complex		NWI classifi	cation: PEMA	_
Are climatic/hydrologic conditions on the site typical for this time of ye	ar? Yes 🖲 No 🔾	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Norma	l Circumstances" pre	esent? Yes $ullet$ No $igloo$	
Are Vegetation D , Soil , or Hydrology naturally	problematic? (If needed,	explain any answers	in Remarks.)	

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes 🖲	No O	Is the Sampled Area	
Hydric Soil Present?	Yes 🖲	No O	within a Wetland?	Yes 🖲 No 🔾
Wetland Hydrology Present?	Yes 🖲	No O	within a wetland?	

Dominant

Remarks:

Sample located at toe slope along Business 90.

VEGETATION - Use scientific names of plants.

		_Species?		
		Rel.Strat.		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft.)	% Cover	Cover	Status	Number of Dominant Species
1	0	0.0%		That are OBL, FACW, or FAC: 1 (A)
2	0	0.0%		
3	0	0.0%		Total Number of Dominant
4.	0	0.0%		Species Across All Strata: (B)
1.				Percent of dominant Species
(Plot size: 15 ft)	0	= Total Cove	er	That Are OBL, FACW, or FAC:100.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft.)				
1	0	0.0%		Prevalence Index worksheet:
2.	0	0.0%		Total % Cover of: Multiply by:
3	0	0.0%		OBL species $0 \times 1 = 0$
4.	0	0.0%		FACW species $15 \times 2 = 30$
5.	0	0.0%		FAC species $55 \times 3 = 165$
		= Total Cov		·
Herb Stratum (Plot size: 5 ft.)	0		ei	
1 Agrostis gigantea	50	✓ 53.8%	FAC	UPL species $0 \times 5 = 0$
	15	16.1%	FACW	Column Totals: <u>83</u> (A) <u>247</u> (B)
	10	10.1%	FACW	Prevalence Index = $B/A = 2.976$
3. Litter	5	5.4%	FAC	
4. Alopecurus arundinaceus			FAC	Hydrophytic Vegetation Indicators:
5. Rosa woodsii	5	5.4%	FACU	1 - Rapid Test for Hydrologic Vegetation
6. Cynoglossum officinale		3.2%	FACU	✓ 2 - Dominance Test is > 50%
7. Elymus lanceolatus	5	5.4%	FACU	✓ 3 - Prevalence Index is \leq 3.0 ¹
8	0	0.0%		
9	0	0.0%		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10	0	0.0%		\Box 5 - Wetland Non-Vascular Plants ¹
11	0	0.0%		
	93	= Total Cov	er	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)				¹ Indicators of hydric soil and wetland hydrology must
	0	0.0%		be present, unless disturbed or problematic.
1	0	0.0%		Hydrophytic
2				Veretation
	0	= Total Cove	er	Present? Yes • No O
% Bare Ground in Herb Stratum: 0				
Remarks:				

Primarily redtop was observed at this sample location.

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Sampling Point: PFL 17
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(Implement)	Depth Matrix			Redox Features						
(inches)	Color (moist)	%	Color (m	oist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR	4/1	100						Silty Clay Loam	dry, rooty
4-8	10YR	4/1	94	10YR	5/1	3	С	м	Silty Clay Loam	saturated
, saturate				10YR	4/6	3	С	M		
8-16	10YR	4/2	85	10YR	4/6	10	С	M	Silty Clay Loam	oxidized root zones? Calcium? Salts?
				10YR	6/1	5	С	м		
/1				iced Matrix, CS				ins ² Loca	tion: PL=Pore Lining. I	
Histosol (Histic Epi Black Hist Hydrogen Depleted Thick Dar	A1) pedon (A2) tic (A3) Sulfide (A4) Below Dark S rk Surface (A1	Surface (A1		Stripp	v Redox (S ed Matrix y Mucky I y Gleyed ted Matrix < Dark Su	S5) (S6) Mineral (F Matrix (F2	1) (except i 2)	in MLRA 1)	2 cm Muck (<i>I</i> Red Parent M Other (Explai ³ Indicators of hydro	,
Sandy Muck Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox depressions (F8)				unless disturbed or problematic.						
Restrictive L	ayer (if pres	sent):								
Туре:	hec).								Hydric Soil Preser	nt? Yes 🖲 No 🔿
Depth (inc	.nes).									
Depth (inc										
Remarks:	ations on si	irface								
	ations on su	urface								
Remarks:	ations on su	urface								

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required;	check all that apply)	Secondary Indicators (minimum of two required)
Surface Water (A1)	Water-Stained Leaves (B9) (except MLRA	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift deposits (B3)	Oxidized Rhizospheres on Living Roots (C3)	Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6)	FAC-neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Frost Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)		
Field Observations:		
Surface Water Present? Yes O No 🔍	Depth (inches):	
Water Table Present? Yes O No O	Depth (inches):	vdrology Present? Yes 🖲 No 🔿
Saturation Present? Yes Ves No	Depth (inches): 4	ydrology Present? Yes 🖲 No 🔾
Describe Recorded Data (stream gauge, monito	r well, aerial photos, previous inspections), if avail	able:
Remarks:		
Saturated at 4 inches below ground surface		
-		

Appendix D

Printing for Less Wetland Delineation Site Photographs

Printing for Less - Wetland Delineation

(Data Points 1-3)

(Data Point 4)

(Data Point 5)







Printing for Less - Wetland Delineation

(Data Points 10-11)

(Data Point 12)







)



Billings Bozeman Denver Fort Collins

June 21, 2022

Michael Tierney Transportation Planning and Programming Division Montana Department of Transportation PO Box 201001 2960 Prospect Ave Helena, MT 59620

Delivered via Email

Reference: Mountain View Subdivision, Livingston, Montana

Dear Mr. Tierney:

We are soliciting your comments regarding a proposed highway commercial subdivision within the City of Livingston. The project would create 39 lots, public right-of-way, and open space totaling 64 acres. These new lots would be served by the City of Livingston water and sanitary sewer systems.

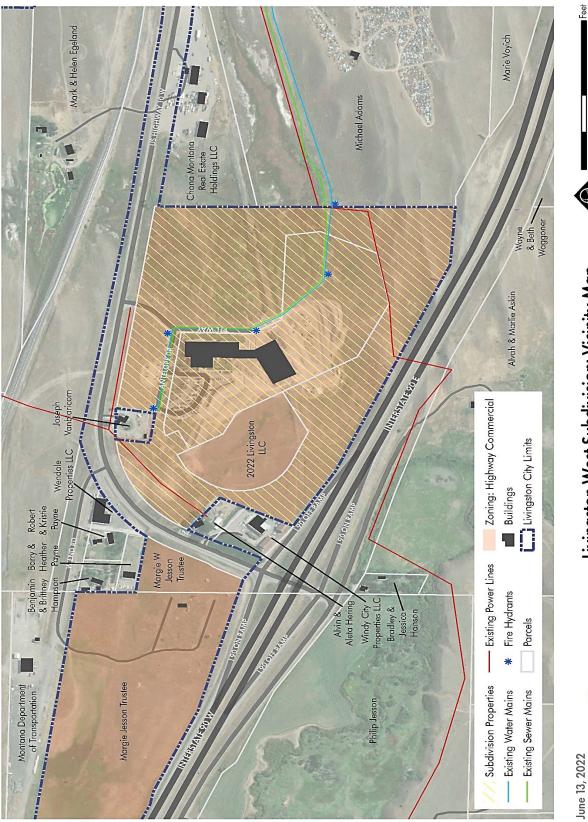
The project is located within the Livingston city limits and will be accessed from Highway 10 via PFL Way and Antelope Drive. It is located on Section 22 of Township 02 South Range 09 East. Attached is the proposed subdivision vicinity map.

As part of the subdivision application process, we are soliciting comments you may have regarding the proposed subdivision. Should you have any comments or questions, we would appreciate a written response to this letter delivered by email no later than June 28, 2022.

If you have and further questions or comments, please do not hesitate to call me at (406) 922-4311 or email at cnaumann@sandersonstewart.com.

Sincerely,

Chris Naumann Associate | Senior Planner Sanderson Stewart 106 East Babcock Street Suite L1 Bozeman MT 59715 cnaumann@sandersonstewart.com ph: 406-922-4311



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Livingston West Subdivision: Vicinity Map

June 13, 2022 SANDERSONSTEWART



July 08, 2022

Chris Nauman Associate | Senior Planner Sanderson Stewart 106 East Babcock Street Suite L1 Bozeman, Mt, 59715

Subject: Mountain View Subdivision - Livingston - Hwy 10 W

Thank you for submitting information on the subject development to the Montana Department of Transportation (MDT). This development has been transferred to the Systems Impact Action Process (SIAP). In order to move forward with the review process, we require the following materials and information that can be found in the SIAP Developers Guide (<u>https://www.mdt.mt.gov/other/webdata/external/planning/SIAP-DEVELOPERS-GUIDE/siap_guide.pdf</u>):

- MDT requires a complete Traffic Impact Study (TIS) based on the development at full build out that studies the traffic distribution and impacts this development will place on state and local roads. The study area must adequately include all known and existing development in the area. The TIS must identify and propose any mitigation necessary to maintain levels of service and safety. Be sure to contact MDT to discuss TIS requirements prior to preparing this document for MDT review. Please refer to the SIAP Developers Guide page 20.
- 2. The developer must submit a hydraulics report. The hydraulic report will need to include all items identified in the Hydraulics checklist on page 19 of the SIAP Developer's Guide.
- 3. The developer must provide copies of any State or Federal agency permit(s) required for this development.
- 4. If requested, MDT will conduct a scoping meeting to discuss design of all identified mitigations once the TIS is approved. The developer will be required to design, construct, and fund all mitigations. MDT will also need to review and approve any plans designed for the construction of the approaches.
- If needed, MDT will request geometric plans and construction details for review once we have conceptual agreement on the approach location and any required mitigations along US Hwy 10 W.

6. All utility permitting will need to be processed through the UPAS system available in the link below. If you have questions about submitting a permit through the UPAS system, please contact Denis Casey, Butte Utility Agent, at (406) 494-9619.

https://www.mdt.mt.gov/upas/

Please provide the materials requested above and any other information concerning impacts to the State highway system for MDT review. You can contact me at (406) 444-9342 if you have any questions or if you need additional information.

Sincerely,

Lonnie Von Oesen Planner – Policy, Program & Performance Analysis

copies: Bill Fogarty, Butte District Administrator Kyle DeMars, Bozeman Division Maintenance Chief Dave Gates, Butte District Engineering Services Supervisor Kristina Kilts, Bozeman District Traffic Engineer



Billings Bozeman Denver Fort Collins

June 21, 2022

Ms. Julie Cunningham Wildlife Biologist Montana Fish, Wildlife, and Parks 1400 S. 19th Avenue Bozeman, MT 59718

Delivered via Email

Reference: Mountain View Subdivision, Livingston, Montana

Dear Ms. Cunningham:

We are soliciting your comments regarding a proposed highway commercial subdivision within the City of Livingston. The project would create 39 lots, public right-of-way, and open space totaling 64 acres. These new lots would be served by the City of Livingston water and sanitary sewer systems.

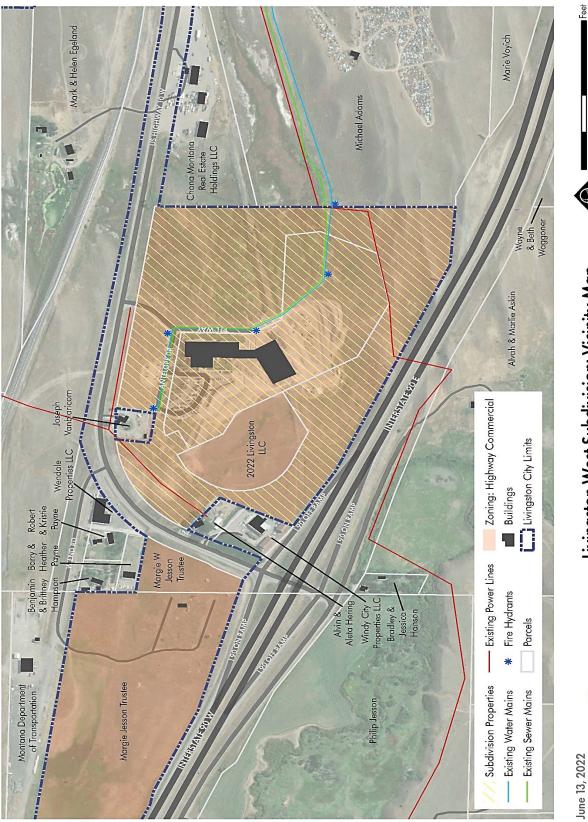
The project is located within the Livingston city limits and will be accessed from Highway 10 via PFL Way and Antelope Drive. It is located on Section 22 of Township 02 South Range 09 East. Attached is the proposed subdivision vicinity map.

As part of the subdivision application process, we are soliciting comments you may have regarding the proposed subdivision. Should you have any comments or questions, we would appreciate a written response to this letter delivered by email no later than June 28, 2022.

If you have and further questions or comments, please do not hesitate to call me at (406) 922-4311 or email at cnaumann@sandersonstewart.com.

Sincerely,

Chris Naumann Associate | Senior Planner Sanderson Stewart 106 East Babcock Street Suite L1 Bozeman MT 59715 <u>cnaumann@sandersonstewart.com</u> ph: 406-922-4311



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Livingston West Subdivision: Vicinity Map

June 13, 2022 SANDERSONSTEWART



Billings Bozeman Denver Fort Collins

June 21, 2022

Pete Brown State Historic Preservation Officer Montana Historical Society 225 North Roberts P.O. Box 201201 Helena, MT 59620-1201

Delivered via Email

Reference: Mountain View Subdivision, Livingston, Montana

Dear Mr. Brown:

We are soliciting your comments regarding a proposed highway commercial subdivision within the City of Livingston. The project would create 39 lots, public right-of-way, and open space totaling 64 acres. These new lots would be served by the City of Livingston water and sanitary sewer systems.

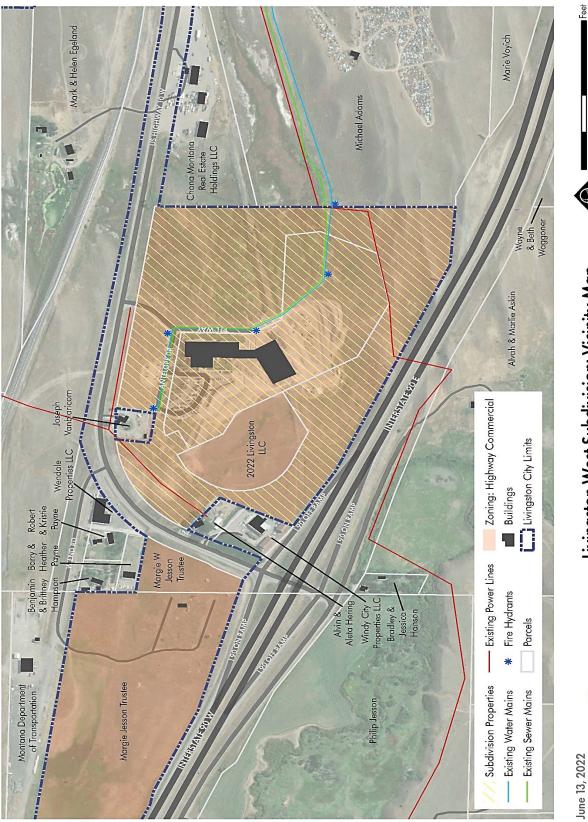
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Sincerely,

Chris Naumann Associate | Senior Planner Sanderson Stewart 106 East Babcock Street Suite L1 Bozeman MT 59715 cnaumann@sandersonstewart.com ph: 406-922-4311



y Map 0 250 500

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Livingston West Subdivision: Vicinity Map

June 13, 2022 SANDERSONSTEWART

From:	<u>Murdo, Damon</u>
То:	<u>Chris Naumann</u>
Subject:	MOUNTAIN VIEW SUBDIVISION, LIVINGSTON
Date:	Tuesday, June 21, 2022 5:01:02 PM
Attachments:	2022062105.pdf
	Reports.pdf



Chris Naumann Sanderson Stewart 106 East Babcock Street Suite L1 Bozeman MT 59715

RE: MOUNTAIN VIEW SUBDIVISION, LIVINGSTON. SHPO Project #: 2022062105

Dear Mr. Naumann:

I have conducted a cultural resource file search for the above-cited project located in Section 22, T2S R9E. According to our records there have been no previously recorded sites within the designated search locale. However, there have been a few previously conducted cultural resource inventories done in the areas. I've attached a list of these reports. If you would like any further information regarding these reports, you may contact me at the number listed below.

It is SHPO's position that any structure over fifty years of age is considered historic and is potentially eligible for listing on the National Register of Historic Places. If any structures are within the Area of Potential Effect, and are over fifty years old, we would recommend that they be recorded, and a determination of their eligibility be made prior to any disturbance taking place.

Based on previous survey within the project area we feel that there is a low likelihood cultural properties will be impacted. We, therefore, feel that a recommendation for a cultural resource inventory is unwarranted at this time. However, should structures need to be altered or if cultural materials are inadvertently discovered during this project, we would ask that our office be contacted, and the site investigated.

If you have any further questions or comments, you may contact me at (406) 444-7767 or by e-mail at <u>dmurdo@mt.gov</u>. I have attached an invoice for the file search. Thank you for consulting with us.

Sincerely,

Damon Murdo Cultural Records Manager State Historic Preservation Office File: LOCAL/SUBDIVISIONS/2022

09/13/2004 16:17 FAX 09/13/2004 14:32 FAX 406 01.10.2004 14:33 1AA		opment 2003/004
DA	6 027162	6 027162
PA	ANTHRO RESEAR	CH
	LARRY A. LAHREN PH.I	
	Mailing Address: P.O. Box 1 Physical Address: 53 Mission Mea Livingston, MT 59047	idow Road
(40)	6) 222-3168 (Phone/Fax) • (406) 2	
www.larrylahren.com	"Since 1971"	Email: larrylahren@msn.com

Cultural Resource Evaluations of the Proposed Printing For Less Facility Park County, Montana SHPO Project: 2003111204 Legal Location: SW of the NW 14 of Section 22, T. 2S, R.9E, Park County, Montana. 70.78 acres

Overview

Printing for Less, a Livingston, Montana commercial entity and the body politic of Park County, Montana are considering the purchase of 70.78 acres of land on the western edge of Livingston, Montana. Since federal funds will be used for the purchase of the subject property, the Montana State Historic Preservation Office in Helena, Montana recommended that a cultural resource inventory and evaluation be conducted to comply with Section 106 of the National Historic Preservation Act.

On December 1, 2003, Dan Rice, Director of Development for Printing for Less contracted Anthro Research Inc. to conduct a cultural resource evaluation of the subject property.

File Search and Field Methods

A file and literature search was conducted at the Montana State Historic Preservation Office, the University of Montana, the Montana Department of Transportation and the office of Anthro Research Inc.

Field reconnaissance of the project area was conducted on December 7-8, 2003 in snowfree conditions by Larry Lahren and Tom Jerde. Lineal transcets, spaced at 50-100 meters, were walked over the project area surface.

Research Findings

Historic Resources

The file and literature search did not indicate that any cultural resource sites have been located or recorded within the subject area. Since a portion of former U.S. Highway 10 is located on the project area, Montana Department of Transportation historian, Jon Axline was consulted and provided the following information: 09/13/2004 16:17 FAX 09/13/2004 14:32 FAX 406 585 2565 01/16/2004 11:33 FAX 4062223166

MOUNTAIN WEST BANK USDA Rural Development LARKY LAHKEN

2

"U.S. Highway 10 originated as a county road and was incorporated into the Yellowstone Trail in the vicinity of Livingston in 1913 The following year, the Yellowstone Trail Association decided to extend the trail west of Livingston to the Pacific Coast. Also in 1914, the road became an official state highway. In 1922, it became a Federal Aid highway (making it eligible for federal funds) and in 1926 it was designated U.S. Highway 10 It appears, though, that no improvement projects were initiated on it until 1929. That year the MDT spent \$108,155.21 to improve 11.5 miles from Livingston west to the county line. The project consisted of grading and surfacing the road with gravel. That segment of the road was given a bituminous (asphalt) overlay sometime between 1932 and 1935. There were improvement projects on that section in 1949 and again in 1952. It was by-passed by Interstate 90 in 1962.

Recommendations

Although National Register eligibility has not been determined for historic roads and bridges, the SHPO recommends the recording and assignment of site numbers for historic roads and bridges. This task will be completed by Anthro Research Inc. as part of this project

Prehistoric Resources

Although surface reconnaissance evaluations of the project area did not result in the location or indication of any prehistoric sites, portions of the project area along the spring system may contain buried sites or features.

Recommendations

Since the file and literature search and surface reconnaissance evaluations of the proposed Print for Less/Park County project did not result in the location of any National Register properties, project approval is recommended with the provision that archaeological monitoring be coordinated with the contractor and conducted during the construction process.

Larry A. Lahren Ph.D Principal Investigator Date of Report: January 16, 2004



June 21, 2022

Matt Fettig, PE Manager of District Operations - Livingston Northwestern Energy 224 S. B St. Livingston, MT 59047

Delivered via Email

Reference: Mountain View Subdivision, Livingston, Montana

Dear Mr. Fettig:

We are soliciting your comments regarding a proposed highway commercial subdivision within the City of Livingston. The project would create 39 lots, public right-of-way, and open space totaling 64 acres. These new lots would be served by the City of Livingston water and sanitary sewer systems.

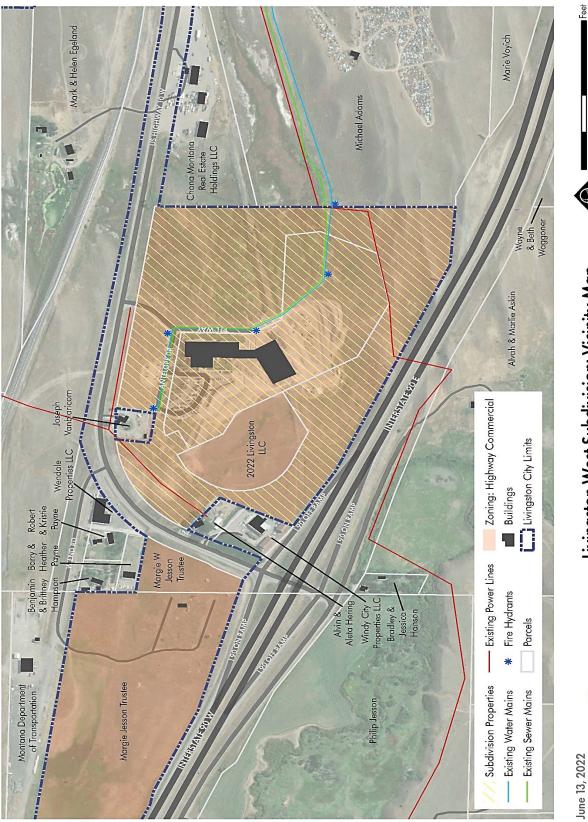
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If you have and further questions or comments, please do not hesitate to call me at (406) 922-4311 or email at cnaumann@sandersonstewart.com.

Sincerely,

Chris Naumann Associate | Senior Planner Sanderson Stewart 106 East Babcock Street Suite L1 Bozeman MT 59715 <u>cnaumann@sandersonstewart.com</u> ph: 406-922-4311



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Livingston West Subdivision: Vicinity Map





June 21, 2022

Chris Naumann Sanderson Stewart – Senior Planner 106 E Babcock St. – Suite L1 Bozeman, MT 59718

Dear Chris,

Northwestern Energy is willing and able to provide electric and natural gas services to the proposed Mountain View Subdivision in Livingston, MT near the West Interchange and 100 PFL Way. The area in question consists of portions of T2S, R9E, S22.

These services will be provided in accordance with applicable Montana Public Services rules and regulations and the current Northwestern Energy tariff schedule. NWE has both underground and overhead electric, as well as gas distribution in and around the project area.

Northwestern Energy shall determine the locations of all transformers, underground lines and equipment for proper installation and maintenance. These facilities shall be located on front lot lines in the utility easement right-of-way unless otherwise approved by both parties.

As the project gets closer to approved plat and a finalized development plan, please reach out to NWE directly in order to start the utility planning, design and sizing process for your development. Please feel free to contact me if you have any questions or require any additional information.

Sincerely,

Matt Fettig

Matt Fettig Livingston District Manager matthew.fettig@northwestern.com 224 S. B St. Livingston, MT 59047 406-582-4606



June 21, 2022

Matt Grose Park Electric Cooperative P.O. Box 1119 5706 U.S. Hwy 89 South Livingston, MT 59047-1119

Delivered via Email

Reference: Mountain View Subdivision, Livingston, Montana

Dear Mr. Grose:

We are soliciting your comments regarding a proposed highway commercial subdivision within the City of Livingston. The project would create 39 lots, public right-of-way, and open space totaling 64 acres. These new lots would be served by the City of Livingston water and sanitary sewer systems.

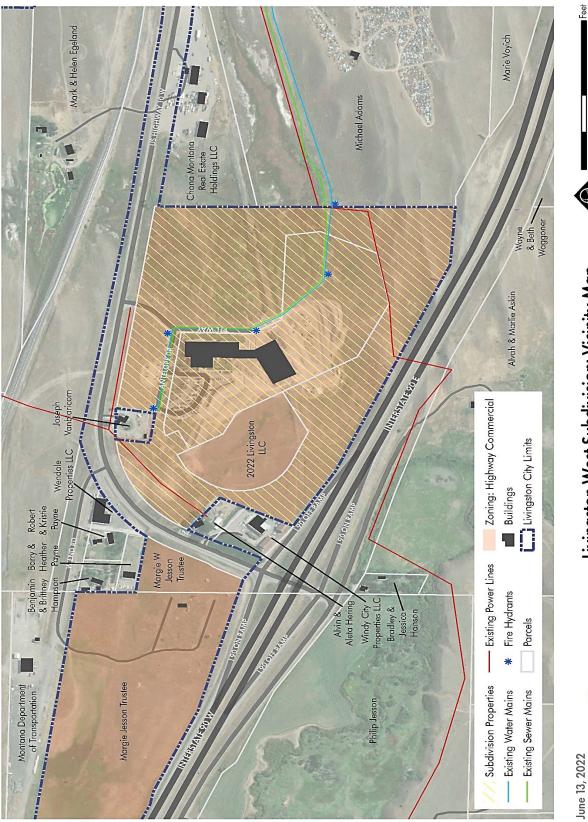
The project is located within the Livingston city limits and will be accessed from Highway 10 via PFL Way and Antelope Drive. It is located on Section 22 of Township 02 South Range 09 East. Attached is the proposed subdivision vicinity map.

As part of the subdivision application process, we are soliciting comments you may have regarding the proposed subdivision. Should you have any comments or questions, we would appreciate a written response to this letter delivered by email no later than June 28, 2022.

If you have and further questions or comments, please do not hesitate to call me at (406) 922-4311 or email at cnaumann@sandersonstewart.com.

Sincerely,

Chris Naumann Associate | Senior Planner Sanderson Stewart 106 East Babcock Street Suite L1 Bozeman MT 59715 <u>cnaumann@sandersonstewart.com</u> ph: 406-922-4311



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Livingston West Subdivision: Vicinity Map



June 21, 2022

Jana Jones CenturyLink Bozeman Region

Delivered via Email

Reference: Mountain View Subdivision, Livingston, Montana

Dear Ms. Jones:

We are soliciting your comments regarding a proposed highway commercial subdivision within the City of Livingston. The project would create 39 lots, public right-of-way, and open space totaling 64 acres. These new lots would be served by the City of Livingston water and sanitary sewer systems.

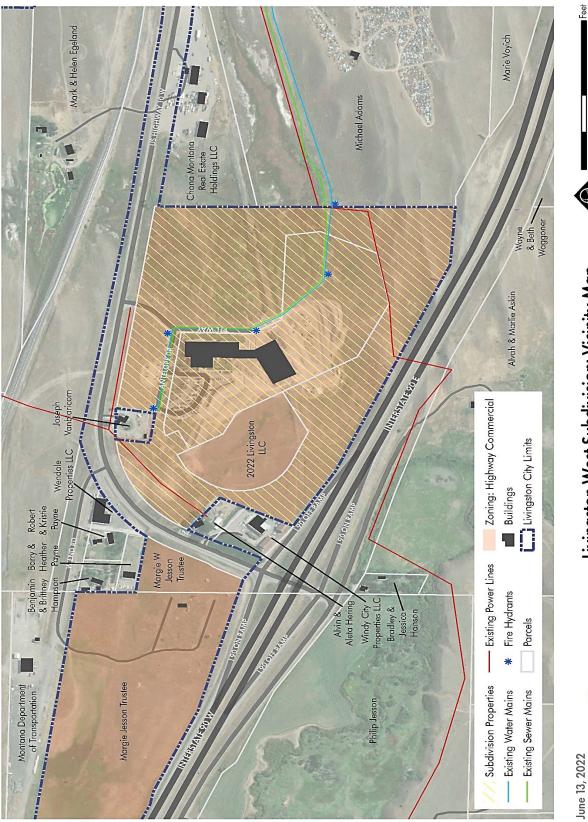
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If you have and further questions or comments, please do not hesitate to call me at (406) 922-4311 or email at cnaumann@sandersonstewart.com.

Sincerely,

Chris Naumann Associate | Senior Planner Sanderson Stewart 106 East Babcock Street Suite L1 Bozeman MT 59715 <u>cnaumann@sandersonstewart.com</u> ph: 406-922-4311



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Livingston West Subdivision: Vicinity Map



June 21, 2022

Bradley Anderson UNITED STATES POSTAL SERVICE Livingston Post Office 105 N 2ND ST FL 1 LIVINGSTON, MT 59047-9998

Delivered via Email

Reference: Mountain View Subdivision, Livingston, Montana

Dear Mr. Anderson:

We are soliciting your comments regarding a proposed highway commercial subdivision within the City of Livingston. The project would create 39 lots, public right-of-way, and open space totaling 64 acres. These new lots would be served by the City of Livingston water and sanitary sewer systems.

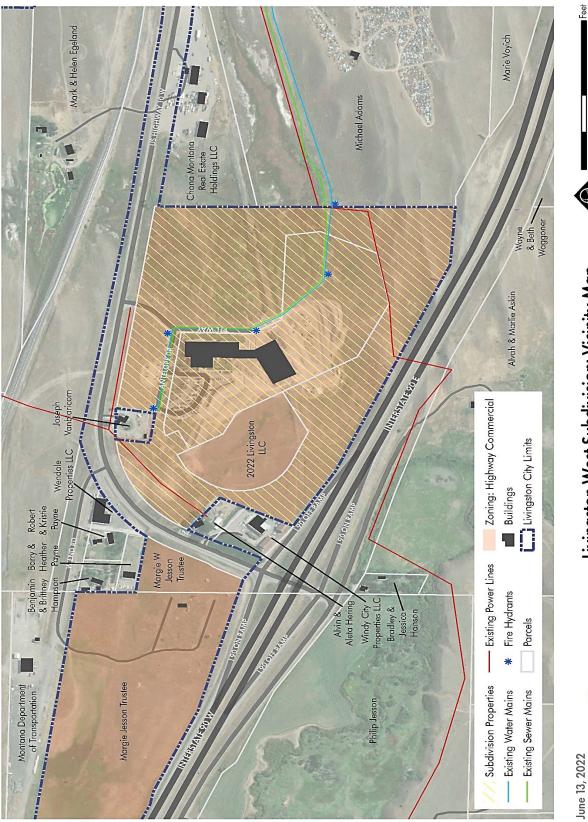
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Sincerely,

Chris Naumann Associate | Senior Planner Sanderson Stewart 106 East Babcock Street Suite L1 Bozeman MT 59715 <u>cnaumann@sandersonstewart.com</u> ph: 406-922-4311



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Livingston West Subdivision: Vicinity Map



To Whom it may concern:

This letter is concerning the Mountain View subdivision. A central bank of mailboxes will need to be located/installed to provide mail delivery for the entire subdivision. This is on a contract route. We need to keep from adding milage to keep the USPS cost of these deliveries down.

If you have any questions, please call (406) 222-3458. Thank You for your patronage.

Sincerely,

Penny Simmons Supervisor Customer Service 230 Jefferson ST Livingston MT 59047