

# Galloway

## FINAL DRAINAGE REPORT

### FALCON RANCHETTES FILING NO. 1A MERIDIAN STORAGE

El Paso County, Colorado

PCD File No. VR239 & PPR2336

PREPARED FOR: Mike D. Texer 11750 Owl Place Peyton, CO 80831 Contact: Mike D. Texer Phone: (719) 641-9261

PREPARED BY: Galloway & Company, Inc. 1155 Kelly Johnson Blvd., Suite 305 Colorado Springs, CO 80920 Contact: Brady Shyrock Phone: (719) 338-9732

DATE: May 6, 2024



#### As the subdivision was submitted in 2023 you may use the 2023 fees. please update

drainage basin fees shall be assessed on the additional impervious acreage. The two lots proposed for vacation and replat were previously platted as 5-acre residential lots. The Falcon DBPS was used to approximate the existing impervious acres by multiplying the total parcel area by 3%.

Note: a proposed impervious exhibit is provided in **Appendix A** and should be referenced when reading the table below.

	Existing Impervious	Proposed	Impervious Acres Eligible				
	Acres	Impervious Acres	for Fee Calculation				
Lot 1a	3% x 5,∕∕0∕= 0.150	2.832	2.832 - 0.150 = 2.682				
Lot 2a	3% <b>x 4,6</b> 1 = 0.138	3.598	3.598 - 0.138 = 3.460				
Tract A	3% x Ø.732 = 0.022	0.125	0.125 - 0.022 = 0.103				
Meridian Park Drive	3% x 0.879 = 0.026	0.748	0.748 - 0.026 = 0.722				
Meridian Road	<b>3</b> <sup>#</sup> ∕ x 0.507 = 0.015	0.067	0.067 - 0.015 = 0.052				
		Total =	7.019				

#### Drainage Fee (2024)

\$40,088 x 7.019 Impervious Acres = <u>\$281,377</u> Bridge Fee (2024)

\$5,507 x 7.019 Impervious Acres = <u>\$38,653</u>

#### Improvements and Reimbursable Costs

The Falcon Drainage Basin Planning Study – Fee Development, categorizes improvements into Developer Costs, County Costs, and Metro District Costs. Items identified as Developer Costs (those incurred by the Developer) are eligible for reimbursement. County Costs and Metro District Costs are not eligible for reimbursement. The applicable reach is classified in the DBPS as follows:

Reach/Feature	Reach Length (ft)	Improvement	Cost Category	Eligible for Reimbursement	Cost As Shown in Falcon DBPS	
RMT064	3,358	Small Drop Structures w/ Toe Protection	County	No	\$1,231,110 (\$366/LF)	

The developer intends to amend the Falcon DBPS to allow for the costs of ~700 LF of RMT064 (starting at Owl Place and measuring north) to become reimbursable by the process outlined below:

- 1. Drainage Reimbursement request application with PCD.
- 2. Prepare an amendment to the DBPS outlining the request for a portion of RMT064 changed from a County Cost to Developer Cost
  - a. Amendment request hearing to the Drainage Board and Board of County Commissioners (BOCC).
- Once construction of the reimbursable facilities is completed, procedures for Drainage Improvement Credits and Reimbursement outlined in Chapter 3 of the Drainage Criteria Manual will be utilized.

An Engineering Opinion of Probable Cost (OPC) for all drainage improvements is provided below:

DETENTION BASIN OUTLET STRUCTURE DESIGN														
			IHFD-Detention, V	ersion 4.06 (July .	2022)	JION								
Project:	Falcon Ranchetter	s Filing No. 1a (Mer	ridian Storage)		)									
Basin ID:	Pond #1													
ZONE 3 ZONE 2 ZONE 1	$\frown$			Estimated	Estimated									
100-YR				Stage (ft)	Volume (ac-ft)	Outlet Type	T							
VOLUME EURV WOCV			Zone 1 (WQCV)	3.24	0.264	Orifice Plate								
TONE LAND 2	100-YEAR ORIFICE		Zone 2 (EURV)	5.71	0.740	Orifice Plate								
PERMANENT ORIFICES	0		Zone 3 (100-year)	6.80	0.417	Weir&Pipe (Restrict)								
Example Zone	Configuration (Re	tention Pond)		Total (all zones)	1.421									
User Input: Orifice at Underdrain Outlet (typically	v used to drain WQ	CV in a Filtration BM	<u>4P)</u>				Calculated Parame	ters for Underdrain						
Underdrain Orifice Invert Depth =	N/A	ft												
onderdrain Onnce Diameter =	Underdrain Orifice Diameter = N/A Inches Underdrain Orifice Centroid													
User Input: Orifice Plate with one or more orific	es or Elliptical Slot '	Weir (typically used	to drain WOCV and	l/or EURV in a sedi	mentation BMP)		Calculated Parameters for Plate							
Centroid of Lowest Orifice =	0.00	ft (relative to basir	bottom at Stage =	0 ft)	WQ Orifi	ice Area per Row =	N/A	ft <sup>2</sup>						
Depth at top of Zone using Orifice Plate =	5.71	ft (relative to basin	n bottom at Stage =	0 ft)	Elli	iptical Half-Width =	N/A feet							
Orifice Plate: Orifice Vertical Spacing =	N/A	inches			Ellipt	ical Slot Centroid =	N/A	feet						
Orifice Plate: Orifice Area per Row =	N/A	sq. inches			E	Iliptical Slot Area =	N/A	ft <sup>2</sup>						
Here Transferr Charge and Tabel Area of Fach Orifica	- D (		-42											
User Input: Stage and Total Area of Each Ornice	Row 1 (required)	Bow 2 (optional)	<u>SU</u> Row 3 (optional)	Row 4 (optional)	Row 5 (optional)	Row 6 (optional)	Row 7 (optional)	Pow 8 (optional)	[					
Stage of Orifice Centroid (ft)		1.67	3 50	Kow + (optional)	Row 5 (optional)	Row o (optional)	Kow 7 (optional)	Row 8 (optional)						
Orifice Area (sa. inches)	0.99	1.22	5.94											
									l					
	Row 9 (optional)	Row 10 (optional)	Row 11 (optional)	Row 12 (optional)	Row 13 (optional)	Row 14 (optional)	Row 15 (optional)	Row 16 (optional)						
Stage of Orifice Centroid (ft)														
Orifice Area (sq. inches)														
Lleav Tanute Martinel Orifice (Cinevlay or Destance							Calculated Devenue	tous fou Montical Oui						
User Input: Vertical Ornice (Circular or Rectange	<u>Jidr)</u> Not Selected	Not Selected	1				Not Selected	Not Selected	ice					
Invert of Vertical Orifice =	N/A	N/A	ft (relative to basin	bottom at Stage =	0 ft) Ver	tical Orifice Area =	N/A	N/A	ft <sup>2</sup>					
Depth at top of Zone using Vertical Orifice =	N/A	N/A	ft (relative to basin	bottom at Stage =	0 ft) Vertica	I Orifice Centroid =	N/A	N/A	feet					
Vertical Orifice Diameter =	N/A	N/A	inches		,									
		· · · · · ·												
User Input: Overflow Weir (Dropbox with Flat or	Sloped Grate and	Outlet Pipe OR Rect	tangular/Trapezoida	I Weir and No Outle	et Pipe)		Calculated Parame	ters for Overflow W	eir					
	Zone 3 Weir	Not Selected					Zone 3 Weir	Not Selected						
Overflow Weir Front Edge Height, Ho =	5./5	N/A	ft (relative to basin b	bottom at Stage = $0$	t) Height of Grat	e Upper Edge, $H_t =$	6.48	61/0	<b>c</b> .					
Overflow weir Front Edge Length =		N1/A	C		0	Ista Classical and atta	2.01	N/A	feet					
Overflow Weir Crote Slope -	2.92	N/A	feet	C	Overflow W	/eir Slope Length =	3.01	N/A N/A	feet					
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Overflow Weir Grate Slope = Horiz. Length of Weir Sides = Overflow Grate Type =	2.92 4.00 2.92 Close Mesh Grate	N/A N/A N/A N/A	feet H:V feet	Gi Oʻ	Overflow W rate Open Area / 10 verflow Grate Open Overflow Grate Ope	/eir Slope Length = )0-yr Orifice Area = Area w/o Debris = n Area w/ Debris =	3.01 13.18 6.95 3.48	N/A N/A N/A N/A	feet feet ft <sup>2</sup> ft <sup>2</sup>					
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