

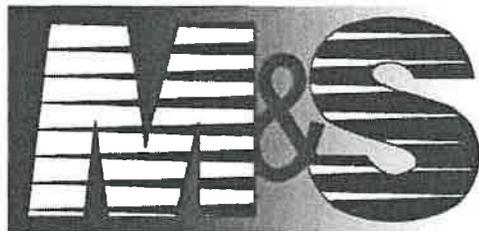
**MASTER DEVELOPMENT DRAINAGE PLAN FOR
STERLING RANCH
COST AND FEE ANALYSIS**

FEBRUARY 2019

Prepared for:

Morley-Bentley Investments, LLC
20 Boulder Crescent, 2nd Floor
Colorado Springs, CO 80903
(719) 471-1742

Prepared by:



CIVIL CONSULTANTS, INC.

20 Boulder Crescent, Suite 110
Colorado Springs, CO 80903
(719) 955-5485

Project #09-002
SKP-18-003
SF-17-024

*Red lines 10/28/19
JK*

**MASTER DEVELOPMENT DRAINAGE PLAN FOR
STERLING RANCH
COST AND FEE ANALYSIS**

TABLE OF CONTENTS

PURPOSE	1
SITE GENERAL LOCATION AND DESCRIPTION	1
DISCUSSION	1
DIFFERENCES BETWEEN DRAINAGE STUDIES	1
SAND CREEK SCDBPS REIMBURSABLE IMPROVEMENTS VERSUS STERLING RANCH	3
PROPOSED VARIATIONS TO SCDBPS FOR REIMBURSEMENT	4
CHANNEL IMPROVEMENTS	5
REGIONAL DETENTION FACILITIES	5
SUMMARY	7
APPENDIX	

APPENDIX

Sand Creek Drainage Basin Planning Study Costs for Sterling Ranch

Sterling Ranch Estimated Construction Cost Opinion

SCDBPS Table Excerpts

Sterling Ranch Filing No. 1 - Tracts and Right-of-Way - Drainage & Bridge Fees

Fees for the foreseeable Final Plat Recordings within Sterling Ranch - January 2019

MASTER DEVELOPMENT DRAINAGE PLAN FOR STERLING RANCH COST AND FEE ANALYSIS

PURPOSE

This document is the Cost and Fee Analysis for the Sterling Ranch Master Development Drainage Plan (MDDP). The purpose of this report is to summarize the reimbursable improvements as identified in the Sand Creek Drainage Basin Planning Study (SCDBPS) as it relates to the Sterling Ranch development. The approved master development drainage plan for Sterling Ranch (MDDP) identifies the proposed improvements and this document compares the SCDBPS improvements versus the actual improvements per the approved Sterling Ranch MDDP.

SITE GENERAL LOCATION AND DESCRIPTION

Sterling Ranch is a 1444 acre parcel located in Sections 27, 28, 32, 33 & 34, Township 12 South, and Section 4, Township 13 South, Range 65 West of the 6th P.M., in the City of Colorado Springs, El Paso County, Colorado. The project is located along Vollmer Road northeast of the intersection of Black Forest Road and Woodmen Road approximately 1.2 miles northeast to the southern boundary. The development is proposed to be zoned "PUD", Planned Unit Development. Development of Sterling Ranch is anticipated to be completed in multiple phases.

DISCUSSION

- This document is to discuss cost and fees, not hydrology or hydraulics. The purpose of this document is to analyze Sterling Ranch reimbursable improvements as a whole. Individual subdivision filings will analyze local and reimbursable improvements.
- Refer to appendix for summary of SCDBPS improvements within Sterling Ranch. These improvements have been taken from the SCDBPS and multiplied by 2.033 to compare to 2019 dollars.
- The second summary in the appendix is the estimated actual cost for construction to build and or replace the SCDBPS improvements. These costs are preliminary and need to be updated as more planning and engineering take place. They are also preliminary for Sterling Ranch development with little or no development planning, only based upon the approved sketch plan.
- The difference in costs between SCDBPS reimbursable improvements and the MDDP improvements are shown in the following appendices.

DIFFERENCES BETWEEN DRAINAGE STUDIES

Major differences between the SCDBPS and the approved MDDP are;

- Research Parkway has been relocated by the approved sketch plan for Sterling Ranch. Therefore the bridges and culverts in the SCDBPS are no longer necessary or will be relocated to Sterling Ranch Road.
- A tributary for Research Parkway west of sand creek is no longer crossing Research Parkway, instead the flows from the tributary are being redirected to sand creek north of Research Parkway.
- At the southeast corner of Sterling Ranch, Research Parkway has been relocated and now Banning Lewis Parkway will be constructed near this location.
- The SCDBPS calls out for grade control, channel bank linings, and check structures. The current EPC criteria and design for the sand creek channel will comprise of check structures, drops and channel bank linings protection.

- The SCDBPS does not consider all land and tributaries within Sterling Ranch. The SCDBPS limit of study stops short of the total length of the tributaries.
- The SCDBPS does not provide a reimbursable cost for the 100-year capacity outlet control structures for the existing ponds, nor does it allow for costs to improve and stabilize the existing embankments.
- The SCDBPS shows to improve the existing tributaries with rip rap lined channels. however, the approved MDDP shows to replace the tributaries with reinforced concrete pipe.
- The SCDBPS does not show historic flows crossing Vollmer Road from north to south in all locations as currently exists.
- The SCDBPS does not agree with current EPC standards, including but not limited to water quality. The approved MDDP requires full spectrum detention ponds in lieu of regional ponds for water quality and detention. Therefore, per current EPC criteria, full spectrum detention ponds can be considered 50% reimbursable.

how? address
all rgmts,

Notable Facts Shown in the Appendices;

- A table has been provided to show the drainage and bridge fees paid for Sterling Ranch filing No.1. This final plat did not contain single-family lots. The imperviousness for the tracts and right-of-way are summarized on this sheet.
- A table has been provided to show the "fees for the foreseeable final plat recordings within Sterling Ranch - January 2019". This document shows the tabulation of fees or credits used to record the recent final plats and upcoming final plats. This table should be updated with each Final Drainage Report and recorded Final Plat at Sterling Ranch. The amount of these fees therefore can be compared to constructed reimbursable drainage and bridge improvements.
- Once actual reimbursable improvements are constructed and preliminarily accepted by EPC, a summary of actual construction costs shall be compiled. These costs shall be submitted to EPC for review. Following EPC review, a request to the City/EPC drainage board shall occur for approval of reimbursement. This process shall occur upon the request of EPC after a significant amount of construction occurs.

The following paragraphs are quoted from the approved MDDP for Sterling Ranch;

SAND CREEK SCDBPS (SCDBPS) REIMBURSABLE IMPROVEMENTS VERSUS STERLING RANCH MDDP

SCDBPS Segment 159, & 164 (SCDBPS Pages 47-48, 50A) - Western Tributary to Sand Creek Channel

The existing swale is a western Tributary of the Sand Creek. The confluence of the tributary and the main stem exists within the Woodmen Heights master plan area, south of Sterling Ranch. These two existing channel segments are proposed in the SCDBPS as "Improved Riprap Channel, Bottom Width 25', Depth 3', Slope 1.2%, 3' Drops @ 270' intervals, Q100=600 cfs". The two Segments are divided by "Proposed Research Parkway" (currently relocated, and known as Marksheffel Road & Research Parkway) The crossing is shown in the DPBS as; 2-6'High x 9' Wide Concrete Box Culverts. The MDDP does not propose a CBC crossing of the western tributary for Research Parkway at this location. The tributary will be crossed by Sterling Ranch Road using a ~66" RCP.

The SCDBPS does not continue the analysis northerly through the existing industrial property, which does not account for flows from the west side of Vollmer Road. This MDDP, accounts for +300 acres of property on the west side of Vollmer Road that is tributary to Segment 159 & 164. The MDDP design uses RCP to convey the existing and developed storm water to Sand Creek, in lieu of Riprap channels. Furthermore, the MDDP proposes Pond W-5, at the southeast side of Segment 159, to provide detention and water quality prior to discharge in Sand Creek. (See Detention Section of this report for more information on Pond FSD6)

**The facilities in this reach should be considered reimbursable since the proposed drainage improvements are to be constructed with RCP in lieu of an improved riprap channel. Also, the MDDP completes the tributary analysis after where the SCDBPS study terminated.*

upstream of?

? why?

SCDBPS Segment 163, 187, 170 & 171 (SCDBPS Pages 49-53) - Mainstem Sand Creek Channel

The SCDBPS for Sand Creek channel within Sterling Ranch proposes check structures, select riprap linings and grade control structures to improve the existing channel. The DPBS also states;

"Areas within the exiting floodplain or the low flow zone of the drainageway where riparian or wetland vegetation exists shall be preserved in its existing cross section. Areas disturbed by the construction of drops, grade control, culverts, or channel bank linings shall be revegetated with native species."

The SCDBPS proposes two crossings of major roadways within Sterling Ranch. The southerly one is at "Proposed Research Parkway" (currently relocated and known as Marksheffel Road & Research Parkway), which is now shown on the approved Sketch Plan for Sterling Ranch as "Sterling Ranch Road". The second major crossing is at "Proposed Banning-Lewis Parkway" (Which is now shown on the approved Sketch Plan for Sterling Ranch as "Briargate Parkway"). Per the SCDBPS the southerly crossing is proposed as; 4-10' wide x 8' High Concrete Box Culverts) The northerly crossing of Briargate Parkway is proposed as; 4-10' wide x 8' High concrete box culverts. Both these proposed crossings are shown in the SCDBPS as reimbursable bridges. A second crossing of "Research Parkway is shown on the SCDBPS (6'H x 8'W CBC) east of Sand Creek along the southern boundary of Sterling Ranch (6'H x 8'W CBC). This MDDP does not propose a CBC crossing for the eastern tributary for Research Parkway at this location).

The MDDP proposes to construct the Sand Creek main stem channel improvements as suggested by the SCDBPS and per current EPC criteria. The MDDP also proposes to construct the CBC box culverts under Sterling Ranch Road and Briargate Parkway. The final design of the Sand Creek channel and crossings will determine the total number and size of structures, drops, box culverts, etc...Refer to the detailed drainage discussion for preliminary size of the two crossing based upon the MDDP hydrology Calculations have been provided in the appendix.

Additional Reimbursable improvements along the Sand Creek Channel include, as shown in the SCDBPS are; Pond Outlet Structures (Segment 170 & 163). These structures and all others along Sand Creek will be re-analyzed in the final design stage.)

**The proposed channel improvements are considered reimbursable in the SCDBPS, however the final design and current EPC criteria will deviate from the proposed improvements in the SCDBPS. It is generally assumed that the proposed improvement costs will exceed the SCDBPS costs.*

SCDBPS Segment 186 & 169 (SCDBPS Pages 51-52) - Western Tributary to Sand Creek Channel

The existing swale is a western Tributary of the Sand Creek. The confluence of the tributary and the main stem exists within the Sterling Ranch master plan area. These two existing channel segments are proposed in the SCDBPS as "Improved Riprap Channel, Bottom Width 20', Depth 3', Slope 1.3%, 3' Drops @ 450' intervals, Q100=500 cfs" (Segment 186) and Improved Riprap Channel, Bottom Width 20', Depth 2', Slope 1.8%, 3' Drops, Q100=325 cfs" (Segment 169). The two Segments are divided by "Proposed Banning-Lewis Parkway" (currently known as Briargate Parkway). The crossing is shown in the DPBS as a; 6'High x 10' Wide Concrete Box Culverts. The MDDP does not propose a CBC crossing of Briargate Parkway at this location. The SCDBPS also shows a 60" CMP culvert across Vollmer Road at the terminus of Segment 169.

The SCDBPS does not continue the analysis northerly across Vollmer Road. This MDDP, accounts for +300 acres of property on the west side of Vollmer Road that is tributary to Segment 186 & 169. The MDDP design uses RCP to convey the existing and developed storm water to Sand Creek, in lieu of riprap channels. The flows north of Briargate Parkway (Segment 169) will be diverted along the northerly right-of-way of Briargate Parkway to Sand Creek. The flows south of Briargate Parkway (Segment 186) will be conveyed to Sand Creek through the proposed development. The MDDP proposes to install a 60" RCP culvert under Vollmer Road along with Headwalls and Wing Walls. The construction of these improvements will occur with the widening of Vollmer Road and the construction of the adjacent development at Sterling Ranch.

(Refer to MDDP for Sterling Ranch Filing Nos. 1 & 2, and Final Drainage Report for Sterling Ranch Filing No. 1, approved January, 2018). Construction drawings for RCP to replace Segment 186 were approved as a part of Sterling Ranch Filing No. 1, approved, January, 2017.

**The facilities in this reach should be considered reimbursable since the proposed drainage improvements are to*

provide a summary table of DBPS vs. MDDP/Proposed improvements and costs.

be constructed with RCP in lieu of an improved riprap channel. Also, the MDDP completes the tributary analysis after where the SCDBPS study terminated west of Vollmer Road.

SCDBPS Segment 92 (SCDBPS Page EF-34) - East Fork Tributary to Sand Creek Channel

The existing swale is a part of the Eastern Tributary of Sand Creek. The confluence of the tributary and the main stem exists several miles south of the Sterling Ranch master plan area. The existing channel segments are proposed in the SCDBPS as "Improved Riprap Channel, Bottom Width 15', Depth 3', select bank linings. (No other data was given) The Segment terminates at the southern boundary of Sterling Ranch at "Proposed Research Parkway", and continues southerly as Segment 84. These two Segments are divided by "Proposed Research Parkway" (currently shown on the approved Sketch Plan for Sterling Ranch as Banning-Lewis Parkway) The crossing is shown in the DPBS as a; 6'High x 10' Wide Concrete Box Culverts. The MDDP does not propose a CBC crossing of Banning-Lewis Parkway at this location.

The SCDBPS (Segment 92) does not continue the analysis more than a few thousand feet north of the south boundary of Sterling Ranch. This MDDP, accounts for +1,000 acres of property north of the SCDBPS studied area. The MDDP design uses RCP to convey the existing and developed storm water to the Eastern Tributary of Sand Creek, in lieu of Riprap channels. Furthermore, the MDDP proposes Pond FSD-E7, at the southeast corner of Sterling Ranch, to provide detention and water quality prior to discharge in Eastern Tributary Channel of Sand Creek. (See Detention Section of this report for more information on Pond FSD-E6).

**The facilities in this reach should be considered reimbursable since the proposed drainage improvements are to be constructed with RCP in lieu of an improved riprap channel. Also, the MDDP completes the tributary analysis after where the SCDBPS study terminated.*

Proposed Variations to SCDBPS for Reimbursement

The MDDP identifies regional improvements for Sterling Ranch and for existing land outside the limits of Sterling Ranch to the west, north & east. The SCDBPS limited study did not address these areas. Therefore, the MDDP requests that these regional public infrastructure components be reimbursable.

Sand Creek Regional Pond W3 north of Sterling Ranch Road (See Detention Pond Section of this report for more information regarding detention ponds). The purpose of this sub-regional on-line detention facility is to control storm water events to discharge at historic levels downstream of Sterling Ranch. Therefore, the storm water flows exiting Sterling Ranch and conveyed into the Woodmen Heights development (City of Colorado Springs) to the south are consistent. The MDDP requests that the construction of this online sub-regional pond is reimbursable.

FSD Ponds - There will be multiple Full Spectrum Detention and Water Quality Ponds (FSD Ponds) located within the Sterling Ranch development. (One off-site pond is proposed west of Vollmer Road and north of Marksheffel Road) These ponds will control both existing off-site and on-site developed storm water. The MDDP requests that the Sterling Ranch FSD Ponds be reimbursable. These ponds will also control the discharge of storm water across the Sterling Ranch development which will reduce the size and cost of public storm pipe between the ponds and discharge into Sand Creek or the Eastern Tributary of Sand Creek.

Additional Culvert crossings of Vollmer Road - Additional culverts across Vollmer Road are required to convey the storm water from the west side to the east side. The existing Vollmer Road and roadside swales are inadequate to convey the 100-year storm. The culverts and improvements to Vollmer Road will drastically improve the current storm water public infrastructure. The culverts, FSD's, and downstream storm water pipe to convey these flows to Sand Creek will be requested to be reimbursable.

Un-named easterly tributary for the Sand Creek - A second crossing of "Research Parkway is shown on the SCDBPS east of Sand Creek along the southern boundary of Sterling Ranch (6'H x 8'W CBC). The MDDP does not propose a CBC crossing for the eastern tributary for Research Parkway at this location, because Research Parkway is no longer proposed along the southern boundary of Sterling Ranch. However, the tributary for this crossing was un-studied in the SCDBPS. The MDDP for Sterling proposed storm sewer pipe and open channel to convey the developed flows into the Sand Creek Channel. The existing flows rates will be reduced but remain present for the downstream properties. See Existing Basin section of this report. The MDDP request that this Un-named tributary be considered reimbursable.

CHANNEL IMPROVEMENTS

Per the Sand Creek SCDBPS, Sand Creek and connected tributaries in the area of the site will require improvements. The east and west tributary reaches within the site boundary will not require improvements because they will no longer be present, as development in the areas will eliminate them, and replace them with full spectrum detentions ponds and storm sewer systems which will collect and control the discharge into Sand Creek. The western tributary reach within the site boundary will require some improvements in some areas but will also be eliminated by development and replaced with large diameter storm sewer and Pond FSD6 (Pond W5), to control the discharge into Sand Creek. However, Sand Creek itself will continue to be routed through the development.

the tributaries

in other areas?

In the existing condition the main branch of Sand Creek Channel measures ~9,850 linear feet. The existing channel bed is heavily vegetated, with native grasses and slopes typically ranging from 0.50% - 4.0%, with an average slope of 1.6%. The existing side slopes typically range from 1:1 to 10:1, and are composed of native grasses and exposed sand stone. The channel contains 3 existing stock ponds.

What is the slope required for subcritical flows?

Per the SCDBPS, Reach SC-9, the recommended improvements to the channel include selective rip rap linings, grade control check structures, and drop structure improvements that are anticipated to stabilize the channel to prevent further degradation, scour and meandering. Offline Full Spectrum Detention will reduce peak flows within the channel there-by added to the integrity of the Sand Creek Channel. With stabilization and improvements to the outlet work and overflow routing paths, the existing stock ponds will be preserved as amenities for the adjacent development.

are proposed to

The concept design of the channel will initially be based upon the FEMA flow rate of 2,600 cfs. This is a conservative flow to allow for planning of trails and developed lots. The calculated max flow as determined with this report is ~2,200 cfs. This flow number will be used for the analysis of a CLOMR/LOMR for the design of the channel improvements and submittal to FEMA. Coordination with FEMA and the Army Corps of Engineers will occur prior to the submittal of the design drawings for the channel improvements. The FEMA flow rates, SCDBPS flow rates and those calculated by this analysis are provided in the appendix.

what is developed undetained flow?

HEC-RAS input and output files that model the developed peak 100 year flows across the existing channel (LOMR X Sections) has been provided in the appendix as a cursory evaluation of some of the short comings of the existing channel that will need to be address with the future improvements. Based upon the model output velocities and shear in the 100 year developed condition range from 3.9 fps to 27.0 fps and 0.2 lbs/sf to 14.9 lbs/sf with depths between 0.7' and 8.0' in depth. The proposed channel improvements as shown in the SCDBPS will function to arrest erosion caused by the developed runoff while minimizing impacts to the existing vegetation. The data is for information purposes only and is not intended to be utilized in design.

this doesn't make sense

Upstream and downstream channel improvements are proposed to be similar to what was anticipated in the SCDBPS. Check structures and rip-rap lining in some locations shall be installed to handle the increase in volume of flows from the full spectrum detention ponds. In the final design stage of development, the channels will be analyzed to verify the amount of improvements necessary. The existing culverts under Mustang Place are currently inadequate. They are recommended by the SCDBPS to be enlarged to 6'Hx8'W CBC. These culverts will be analyzed at the time of final design to determine the correct size in order to accommodate the developed flows, which will be discharged from Sterling Ranch less than historic.

this is now

REGIONAL DETENTION FACILITIES

A single regional online, onsite detention facility (Pond W3), upstream of Sterling Ranch Road (at DP68), is recommended to aid in the controlling of the total runoff leaving Sterling Ranch. Although the development of Sterling Ranch will require the implementation and construction of several FSD ponds to mitigate increase runoff, the total amount of runoff reaching the Sand Creek Channel is greater than historic, due to the inter-basin transfer of drainage from East Fork of Sand Creek Watershed to Sand Creek Watershed. The roadway embankment, proximity to the southern boundary and the need for a culvert crossing at this location make the location practical. A separate design report for this facility will be necessary to verify the volumetric sizing requirements.

Prior to this analysis an online regional facility was also recommended within Sterling Ranch (on the Sand Creek Channel) upstream of Briargate Parkway at DP 69. The planned implementation of offline full spectrum detention for the developable ground up-gradient of this location will alleviate the need for this facility. The culvert crossing at this location will be sized in a manner that allows for the free discharge of flow through the structure.

and provide WQCV

**For the following Ponds (W3, W4 & E7) The construction of the Regional Detention Pond should be considered reimbursable due to the regional nature of the facility controlling the developed drainage to historic levels at the City / EPC boundary. The purpose to control the flow to a known number is to be consistent with downstream facilities and previous drainage analysis.*

POND W3

It should be noted that after the initial run of the Proposed Condition Model, it was determined that the peak developed 100-year flow reaching the subject reach were higher than the 100-year existing condition flow rates and higher than the 100-year peak flows anticipated by the Wilson Study. To reduce the runoff, a detention facility has been added to the model upstream of Sterling Ranch Road within the Sterling Ranch Development. The incorporation of this facility when coupled with multiple Full Spectrum Detention facilities will allow the development upstream of the City/County boundary to release developed discharge at a rate this is at or below the current existing flow rates. It should be noted that the location of the facility was previously planned as a regional pond /park site in the Sterling Ranch 2010 MDDP (Draft) and Sketch Plan. Stage storage and stage volume worksheets are included in the attachments for this pond. It is anticipated that this facility can be designed without having to be jurisdiction in nature. Based upon preliminary modeling the pond will reduce 100 year peak runoff rates from 2204 to less than 1400 cfs. The pond will detain a maximum of 78 acre feet at a depth of around 10 feet. The pond embankment containing the 100 year event will be separate from Sterling Ranch Road. An exhibit detailing the concept design is provided in the appendix of this report. It is important to note that this pond will allow for the free discharge of the 2 year storm and is not intended to provide water quality and will meet the state statute regarding the allowable release times.

Design point 61 is located on the maps between Sand Creek Regional Detention Pond 3 and south boundary of Sterling Ranch just upstream of Mustang Road. Future development in the watershed should attempt to mimic the flow rates provided within the report with special consideration given to the flow at the City/County boundary line at Design Point 61. It should be noted that the hydrologic calculations contained in this memorandum are intended to aid in the design of the crossing structure at Marksheffel Road north of City Pond 3 (DP 60A) and as a planning resource to limit the amount of developed runoff discharged into the Sand Creek Channel. This report is not intended to be utilized for final design of stormwater storage facilities and infrastructure. It should also be noted, that this report did not include City Pond 3 in any of its models and was only used as a comparison point.

POND W4

Verify Pond W4 is planned for the northwest corner of Marksheffel Road and Vollmer Road. The purpose of the pond is to provide some detention of stormwater flows for the land on the west side of Vollmer Road. Currently, no public stormwater improvements exist in the developments west of Vollmer Road. Therefore, Pond W4 will collect the flows on the west side, and convey to Sand Creek. These flows are discharged directly into sand creek, bypassing Pond W5. This facility does not provide water quality treatment for the existing developments. Pond W4 is sized to maximize the area located in a tract of Land dedicated by the Final Plat for Highland Park Filing No. 2 - Tract G. The detention area could potentially be enlarged in the future if more land is purchased, and available to enlarge the pond. The design of Pond W4 will accommodate the extension of Marksheffel Road / Research Parkway and will be furthered in subsequent drainage reports. The construction of Pond W4 facilitates "solves" an existing drainage problem in the existing right-of-way of Vollmer Road. Pond W4 and its downstream facilities will be requested to be a reimbursable facility. *ra lot?*

**The construction of this pond solves existing EPC drainage deficiencies on the west side of Vollmer Road. Therefore this should be considered a reimbursable facility as approved by the City/EPC drainage board.*

POND E7

Pond E7 will be required to at the southeast corner of Sterling Ranch to detain developed flows and release at or less than Historic. The pond is necessary and should be coordinated with downstream improvements accompanying the extension of Banning Lewis Parkway and property currently under the ownership of Norwood Development.

Downstream easements may be required.

Pond W5?

SUMMARY

Per the analysis above and tables in the Appendix, the cost of the MDDP reimbursable improvements exceeds the improvement costs per the SCDBPS. The total 2019 cost of SCDBPS reimbursable facilities is \$5,773,945. The total estimated 2019 costs to construct the reimbursable facilities as proposed is \$12,272,563. Therefore the difference is \$6,498,618, which is more than what was projected in the SCDBPS. The Sterling Ranch Metropolitan District is requesting to increase the Sand Creek Drainage Basin drainage fee to accommodate the shortfall, or consider that the drainage construction within the Sterling Ranch Sketch Plan be a closed basin.

Furthermore; The total 2019 Drainage fees for the entire Sterling Ranch is \$12,545,856 (Based on 1440 Acres and the 2019 Fee Amount), is similarly close to the same cost of the construction of the reimbursable facilities - \$12,272,563. Therefore, by closing the drainage basin for Sterling Ranch, the fees and costs would come close to a balance at the end of the day. (Assuming cost and fees increase at the same rate over the next 20+ years). The same comparison can be made for the bridge fees and costs.