

ENG-SF21026-R3-FDR.pdf Markup Summary

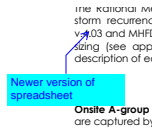
5 (7)



Subject: Text Box
Page Index: 5
Date: 12/27/2021 11:43:22 AM
Author: CDurham
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Existing condition calculations need to be updated based on current criteria. See redlines in appendix.

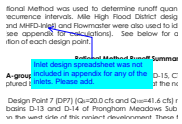
Table of updated existing conditions table added to report appendix for comparison



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Newer version of spreadsheet

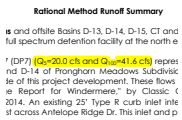
No discernable difference between current v.03 and v.04



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Inlet design spreadsheet was not included in appendix for any of the inlets. Please add.

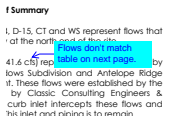
DCM charts were used instead - paragraph updated in report



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(Q5=20.0 cfs and Q100=41.6 cfs)

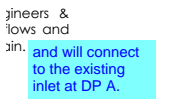
Text updated to match table



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Flows don't match table on next page.

Text updated to match table



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and will connect to the existing inlet at DP A.

Text updated



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6 (2)

1	1.00	1.00	1.00	1.00
2	1.00	1.00	1.00	1.00
3	1.00	1.00	1.00	1.00
4	1.00	1.00	1.00	1.00
5	1.00	1.00	1.00	1.00

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Provide detained flows

These are the detained flows.

 J1 = Detained pond + D16 +C3
 + C4+ EXR+ NC2

U4	1.79	2.1	9.9
C5	0.11	0.1	0.5

Tables not verified with this review.

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Tables not verified with this review.

7 (10)

mere supervision, resuming i
 y Basin A and Basin D15 w
 i the pipe flows from existi
 rtheast via 36" RCP storm
 w for flows to be directed

Basin A1

posed 10' Type R at-grade

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Basin A1

Text updated

ated of a low point on Antelope Ridge
 unlined flows from Basins D-15, offsite
 eding inlet is proposed to be replaced
 be installed on Antelope Ridge Dr. for
 in the need to adjust the existing inlet.
 ll be captured in their entirety by the
 ng DP? **DPA Q5=21.0 cfs and Q100=44.9**
 sses. An emergency overflow swale
 to the north and east in the event of

s Hfl in Basin A2. The flows leave this
 'C. This design point captures all the

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(DPA Q5=21.0 cfs and Q100=44.9

was escassinated by the
 Consulting Engineers &
 point on Antelope Ridge
 s from Basins D-15, offsite
 proposed to be replaced
 in Antelope. **Flows different from**
 o adjust the **previous page**
 g in their entirety by the
 Q=21.0 cfs and Q=44.9
 nergency overflow swale
 and east in the event of

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Flows different from previous page

Text updated

resulting in the need to adjust the ex in D15 will be captured in their entire existing DP7 (DPA Q=21.0 cfs and DP storm sewer. An emergency overt directed to the north and east in the in Antelope Ridge Drive at-grade inlet in Basin A2. The flows words DP-C. This design point capt, Q2 are Q=8.8 cfs and Q100=19.4 cfs.

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in Antelope Ridge Drive

Text updated

Plan says inlet is to be modified. Please discuss.

Design Point A replaces Preliminary Drainage Re Survey, October 2014. I Dr. of the existing 10' storm DP7 (described above) to in kind 110' Type R sump 3 access into the Windermere The flows generated by B

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Plan says inlet is to be modified. Please discuss

Inlet no longer needs to be modified. Label updated on plan

Intercepted by Basin A2 and Basin A3 will be captured in their entirety. Combine with the flows from storm existing DP7 (DPA Q=21.0 cfs and DP storm sewer. An emergency overflow Basin A2 will allow for flows to be directed to the north and east in the Basin. Intercepted at a proposed 10' Type R at-grade inlet in Basin A2. The flows in a 10' storm pipe to the north towards DP-C. This design point captures in Basin A2. The flows from Basin A2 are Q=8.8 cfs and Q100=19.4 cfs. Intercepted at a proposed 10' Type R at-grade inlet in Basin A2. The flows in a 10' storm pipe to the north towards DP-C. This design point captures in Basin A2. The flows from Basin A2 are Q=8.8 cfs and Q100=19.4 cfs. Intercepted at a proposed 10' Type R at-grade inlet in Basin A2. The flows in a 10' storm pipe to the north towards DP-C. This design point captures in Basin A2. The flows from Basin A2 are Q=8.8 cfs and Q100=19.4 cfs.

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From inlet capacity spreadsheet in appendix, double type R inlet can handle 19.4 cfs.

This inlet captures flowby from upstream. Inlet summary sheet added to appendix to clarify.

Intercepted by Basin A2 and Basin A3 will be captured in their entirety. Combine with the flows from storm existing DP7 (DPA Q=21.0 cfs and DP storm sewer. An emergency overflow Basin A2 will allow for flows to be directed to the north and east in the Basin. Intercepted at a proposed 10' Type R at-grade inlet in Basin A2. The flows in a 10' storm pipe to the north towards DP-C. This design point captures in Basin A2. The flows from Basin A2 are Q=8.8 cfs and Q100=19.4 cfs. Intercepted at a proposed 10' Type R at-grade inlet in Basin A2. The flows in a 10' storm pipe to the north towards DP-C. This design point captures in Basin A2. The flows from Basin A2 are Q=8.8 cfs and Q100=19.4 cfs. Intercepted at a proposed 10' Type R at-grade inlet in Basin A2. The flows in a 10' storm pipe to the north towards DP-C. This design point captures in Basin A2. The flows from Basin A2 are Q=8.8 cfs and Q100=19.4 cfs.

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Q5=5.2 cfs and Q100=11.2 cfs

Intercepted by Basin A2 and Basin A3 will be captured in their entirety. Combine with the flows from storm existing DP7 (DPA Q=21.0 cfs and DP storm sewer. An emergency overflow Basin A2 will allow for flows to be directed to the north and east in the Basin. Intercepted at a proposed 10' Type R at-grade inlet in Basin A2. The flows in a 10' storm pipe to the north towards DP-C. This design point captures in Basin A2. The flows from Basin A2 are Q=8.8 cfs and Q100=19.4 cfs. Intercepted at a proposed 10' Type R at-grade inlet in Basin A2. The flows in a 10' storm pipe to the north towards DP-C. This design point captures in Basin A2. The flows from Basin A2 are Q=8.8 cfs and Q100=19.4 cfs. Intercepted at a proposed 10' Type R at-grade inlet in Basin A2. The flows in a 10' storm pipe to the north towards DP-C. This design point captures in Basin A2. The flows from Basin A2 are Q=8.8 cfs and Q100=19.4 cfs.

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For all at-grade inlets, discuss how much of flow is intercepted and how much is flow-by.

Text updated

Intercepted by Basin A2 and Basin A3 will be captured in their entirety. Combine with the flows from storm existing DP7 (DPA Q=21.0 cfs and DP storm sewer. An emergency overflow Basin A2 will allow for flows to be directed to the north and east in the Basin. Intercepted at a proposed 10' Type R at-grade inlet in Basin A2. The flows in a 10' storm pipe to the north towards DP-C. This design point captures in Basin A2. The flows from Basin A2 are Q=8.8 cfs and Q100=19.4 cfs. Intercepted at a proposed 10' Type R at-grade inlet in Basin A2. The flows in a 10' storm pipe to the north towards DP-C. This design point captures in Basin A2. The flows from Basin A2 are Q=8.8 cfs and Q100=19.4 cfs. Intercepted at a proposed 10' Type R at-grade inlet in Basin A2. The flows in a 10' storm pipe to the north towards DP-C. This design point captures in Basin A2. The flows from Basin A2 are Q=8.8 cfs and Q100=19.4 cfs.

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Why is this inlet so large?

This inlet captures flowby from upstream. Inlet summary sheet added to appendix to clarify.

The combined flows at DP-F1 are Q=38.2 cfs. DP-G is located at a proposed at-grade 5' inlet via an 18" storm pipe and are captured at the flow from Basin A7. This inlet was missing on the inlet capacity chart in appendix.

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This inlet was missing on the inlet capacity chart in appendix.

Inlet labels don't all match design points. Inlet capacity charts updated, and inlet labels added to drainage maps for clarity.

8 (2)

This inlet was missing on the inlet capacity chart in appendix. It is a 10' Type K inlet in Basin A8. The flow is conveyed towards DP-H1 to the east. The flow is 13.4 cfs.

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This inlet was missing on the inlet capacity chart in appendix.

Inlet labels don't all match design points. Inlet capacity charts updated, and inlet labels added to drainage maps for clarity.

The combined flows at DP-K are Q=10.0 cfs. The flow is conveyed towards DP-L1 to the northeast. The flow is 14.4 cfs. This inlet is shown on at-grade not sump inlet chart. Please update.

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This inlet is shown on at-grade not sump inlet chart. Please update.

Inlet labels don't all match design points. Inlet capacity charts updated, and inlet labels added to drainage maps for clarity.

9 (6)

The flow is conveyed towards DP-O are Q=10.0 cfs. The flow is conveyed towards DP-P1 to the east. The flow is 14.4 cfs. This inlet is shown on at-grade not sump inlet chart. Please update.

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Include what flow is for each of these basins.

Text updated

The combined (undrainable) flows are Q=12.0 cfs and Q=26.5 cfs. The flow is conveyed towards DP-Q1 to the east. The flow is 14.4 cfs. This inlet is shown on at-grade not sump inlet chart. Please update.

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These inlets were not shown on inlet charts in appendix.


Inlet labels don't all match design points. Inlet capacity charts updated, and inlet labels added to drainage maps for clarity.

The combined (undrainable) flows are Q=12.0 cfs and Q=26.5 cfs. The flow is conveyed towards DP-R1 to the east. The flow is 14.4 cfs. This inlet is shown on at-grade not sump inlet chart. Please update.

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Q5=12.0 cfs and Q100=26.5 cfs


64. The flows at the top of the future stage by report. This words the south detention 26.5 cfs. **Flows don't match plan.** was generated by the concrete swale along the lot side flows are directed to the 38ly. Flows generated by this

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Flows don't match plan


Text updated

isin **B4.**
ws are

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B4

B5?
in R4


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B5?

Text updated


10 (3)

4" CMP culvert crossing at M-116. The flows from the culvert are split into C1 & C2. detained flows reflow from MDDP DP-1X. If 2.4 cfs, a portion of which were from the MDDP flows can be four by Classic Consulting Engineers

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s, a portion of which


64. The flows at the top of the future stage by report. This words the south detention 26.5 cfs. **Flows don't match plan.** was generated by the concrete swale along the lot side flows are directed to the 38ly. Flows generated by this

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Author: dsdrice
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If used, SCS needs to be the whole basin

These flows were used to compare MDDP rates. Sentence removed from report.

64. The flows at the top of the future stage by report. This words the south detention 26.5 cfs. **Flows don't match plan.** was generated by the concrete swale along the lot side flows are directed to the 38ly. Flows generated by this

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Compare to the MDDP flows here.

Text added

Need analysis check of this existing inlet with current flows.

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Need analysis check of this existing inlet with current flows.

Flows reaching this inlet overland are less than in the historic condition.

List basin flows

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List basin flows

Text updated

List flows

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List flows

Text updated

Discussion of existing storm system is included in the preliminary report referenced and included in the appendix.

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Include discussion on proposed storm sewer design & impact to existing systems (current design flow vs previous design flow)

Discussion of existing storm system is included in the preliminary report referenced and included in the appendix.

Include statement that ponds will be designed to full spectrum retention criteria

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Include statement that ponds will be designed to full spectrum detention criteria

Text updated

Each forebay should be designed per area directed to it.

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Each forebay should be designed per area directed to it.

WQCV calculated for each tributary area and volume confirmed as adequate

12 (3)

See final. See further discussion of the design in the attached report. The design with 18 Paso County criteria, the modified Type C outlet structure if necessary will release the WQCV over a 40-hour period with release rates of 0.001 cfs/ft.

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Include calculation in appendix for sizing riprap in spillway. See Ch 13 Eqn 13-9 in City DCM

Riprap sizing chart added to appendix

flows from the 'B' basins. With rain undevolved. Future flow of pond presented in this report.

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Appendix shows 58.8%.

Pond spreadsheet updated to reflect 68%

release the flow of a reduced flow rate with the use of a 12 storm pipe. The pipe releases into a ditch that conveys it south under Marksheffel Rd. other which the flow continues. See further discussion of the existing Marksheffel outlet structure.

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How do these release rates compare to those in the previous report by Classic?

Comparison text added

13 (1)

Update table per spreadsheet

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Update table per spreadsheet

Table updated

14 (2)

The table above indicates that by depth the proposed Wadsworth Filing No. 1, location of the unimproved canal or condition, and all within the same section.

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Include discussion on design of proposed swales and analysis of existing ditches (velocities, depths, freeboard, etc)

Marksheffel ditch is existing and not being modified by this grading (other than minor redefining after sediment build up. Flows meet historic rates so no additional impact is anticipated. No further analysis has been completed.

existing historic flow rates from both filltop subdivision to the north, the fill is improved from the existing 4000.

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What happens at Marksheffel (overtop road, inundates channel, etc)

Further discussion added

Embankments should be on the B Pacer County Engineer Criteria Manual, the B Pacer geotechnical report require

Include section on Maintenance

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Author: CDurham
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Include section on Maintenance

Maintenance section added to report

Include cost estimate

10.0 DRAINAGE/BRIDGE FEES
 The project fees within the Sand Creek Drainage Basin are calculated as follows:

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Include cost estimate

Added

calculated as follows:
 previous acres seems high - per App. L Table 3-1, 53%?
 previous acres

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Author: dsdrice
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seems high - per App. L Table 3-1, 53%?

Revised per table listed above

AGE/BRIDGE FEES
 fees within the Sand Creek Drainage Basin and is previous drainage/bridge fees are required prior to recording of Sand Creek Drainage Basin fees are as follows:
 \$118.341/impervious acre = \$50,387
 \$8,339/impervious acre
 imperviousness for this subdivision is calculated as follows:
 residential subdivision 40% impervious
 open space 0% impervious
 total 44.6% impervious

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\$20,387

Revised per table listed above

BRIDGE FEES
 of fees within the Sand Creek Drainage Basin and is previous drainage/bridge fees are required prior to recording of Sand Creek Drainage Basin fees are as follows:
 \$118.341/impervious acre = \$8,339
 \$8,339/impervious acre
 imperviousness for this subdivision is calculated as follows:
 residential subdivision 40% impervious
 open space 0% impervious
 total 44.6% impervious
 \$118.341/impervious acre = 23.23 impervious acres

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\$8,339

Revised per table listed above


acres of 44.6% impervious = 23.23 impervious acres, the following fees are due:
 acres x \$18,841.00 = \$437,646.80 drainage
 acres x \$8,339.00 = \$193,701.86 bridge
 is considered as an open space tract; payment of Tract B will require a replat of proposed impervious acreage.

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\$18,841.00 = \$437,646.80

Revised per table listed above


acres at 44.6% impervious = 23.23 impervious acres, the following fees are due:
 acres x \$18,841.00 = \$437,646.80 drainage
 acres x \$8,339.00 = \$193,701.86 bridge
 is considered as an open space tract. If the impervious area of Tract B will require a replat, the proposed impervious acreage.

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\$8,339.00 = \$193,701.86

Revised per table listed above


23.23 AC
 23.23 AC

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23.23

Revised per table listed above


23.23 AC
 23.23 AC

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Author: dsdrice
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23.23

Revised per table listed above

The percent imperviousness for this subdivision is 44.6%.
 35.74 acres residential subdivision 44.6%
 79.42 acres open lands 44.6%
 52.07 acres 44.6% impervious = 23.23 impervious
 Therefore, the following fees are due:
 23.23 acres x \$18,841.00 = \$437,646.80 drainage
 23.23 acres x \$8,339.00 = \$193,701.86 bridge
 Tract B is considered as an open space tract if the impervious area of Tract B is less than 5 acres.


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52.07 acres at 44.6% impervious = 23.23

Revised per table listed above

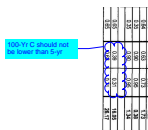
63 (2)




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These values should be 0.09 & 0.36 per new criteria

Existing condition comparison table added to appendix

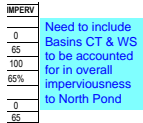


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100-Yr C should not be lower than 5-yr

Existing condition comparison table added to appendix. Error in c-values fixed.

147 (1)

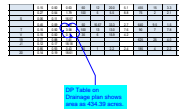


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Color: ■
Layer:
Space:
Page Label: 147

Need to include Basins CT & WS to be accounted for in overall imperviousness to North Pond

Offsite basins already included in calcs - table added to report for clarity

152 (1)

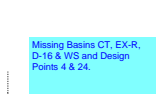


Subject: Cloud+
Page Index: 152
Date: 12/27/2021 1:55:04 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 152

DP Table on Drainage plan shows area as 434.39 acres.

DP table updated

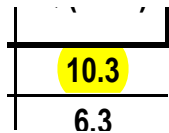
153 (5)



Subject: Text Box
Page Index: 153
Date: 12/27/2021 1:56:16 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 153

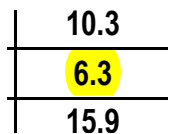
Missing Basins CT, EX-R, D-16 & WS and Design Points 4 & 24.

DP table updated



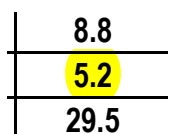
Subject: Highlight
Page Index: 153
Date: 12/27/2021 1:56:26 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 153

10.3



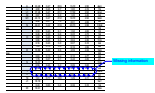
Subject: Highlight
Page Index: 153
Date: 12/27/2021 1:56:28 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 153

6.3



Subject: Highlight
Page Index: 153
Date: 12/27/2021 1:56:33 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 153

5.2



Subject: Cloud+
Page Index: 153
Date: 12/27/2021 1:57:17 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 153

Missing information

Table updated

154 (4)

22.6
13.2

Subject: Highlight
Page Index: 154
Date: 12/27/2021 1:56:50 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 154

22.6

22.6
13.2
34.2

Subject: Highlight
Page Index: 154
Date: 12/27/2021 1:56:52 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 154

13.2

34.2
9.1
7.1

Subject: Highlight
Page Index: 154
Date: 12/27/2021 1:56:56 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 154

9.1

19.4
11.2
63.5

Subject: Highlight
Page Index: 154
Date: 12/27/2021 1:56:59 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 154

11.2

155 (1)

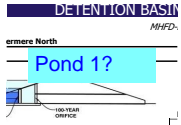
Full review not performed on storm system inlet sizing due to possible changes in flows with edits to "C-values" in hydrology calculations. Review will be completed at next submittal.

Subject: Text Box
Page Index: 155
Date: 12/21/2021 2:57:31 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 155

Full review not performed on storm system& inlet sizing due to possible changes in flows with edits to "C-values" in hydrology calculations. Review will be completed at next submittal.

No changes to flows

205 (1)



Subject: Text Box
Page Index: 205
Date: 12/27/2021 9:16:05 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 205

Pond 1?

Labeling updated

207 (1)



Subject: Callout
Page Index: 207
Date: 12/21/2021 3:00:29 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 207

This should be ~1

Both 5-year and 100-year are within criteria. Modifications to the outlet design are significant to achieve ~1 for the 10-year. Request for design to remain as is.

210 (1)

Subject: Callout
Page Index: 210
Date: 12/21/2021 3:01:50 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 210

Need to include in appendix how this imperviousness was obtained

Table added to report for clarity. Basins B3&B5 are considered as open space, remainder as single family

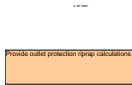
215 (1)

Subject: Callout
Page Index: 215
Date: 12/21/2021 3:03:31 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 215

Appendix shows % imp to be 58.8%. Confirm correct %

Updated to 68% and table added for clarity.

220 (3)



Subject: Engineer
Page Index: 220
Date: 12/27/2021 2:26:54 PM
Author: dotprete
Color: ■
Layer:
Space:
Page Label: 220

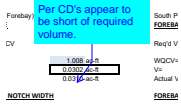
Provide outlet protection riprap calculations

Outfall riprap calculations added to appendix.

Subject: Highlight
Page Index: 220
Date: 12/27/2021 2:41:25 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 220

0.0310 ac-ft

H

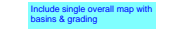


Subject: Callout
Page Index: 220
Date: 12/27/2021 2:41:55 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 220

Per CD's appear to be short of required volume.

See updated WQCV calculations

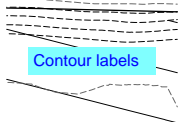
221 (21)



Subject: Text Box
Page Index: 221
Date: 12/21/2021 3:28:21 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

Include single overall map with basins & grading

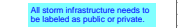
Overall map added



Subject: Text Box
Page Index: 221
Date: 12/21/2021 3:28:35 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

Contour labels

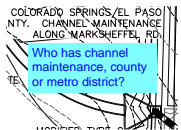
Labels added



Subject: Text Box
Page Index: 221
Date: 12/21/2021 3:36:12 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

All storm infrastructure needs to be labeled as public or private.

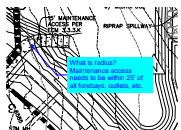
Labels added



Subject: Text Box
Page Index: 221
Date: 12/22/2021 1:16:22 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

Who has channel maintenance, county or metro district?

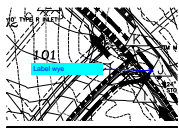
County or City, depends on current ownership



Subject: Callout
Page Index: 221
Date: 12/27/2021 9:11:47 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

What is radius? Maintenance access needs to be within 25' of all forebays, outlets, etc.

Labels added



Subject: Callout
Page Index: 221
Date: 12/27/2021 9:03:16 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

Label wye

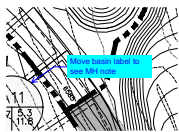
Labels added



Subject: Callout
Page Index: 221
Date: 12/27/2021 9:03:24 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

Label pipe size

Labels added



Subject: Callout
Page Index: 221
Date: 12/27/2021 9:05:32 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

Move basin label to see MH note

Labels adjusted

Label inlets as sump or at-grade

Subject: Text Box
Page Index: 221
Date: 12/27/2021 9:06:19 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

Label inlets as sump or at-grade

Labels added

Include match lines on all sheets

Subject: Text Box
Page Index: 221
Date: 12/27/2021 9:07:02 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

Include match lines on all sheets

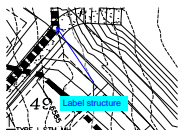
Labels added



Subject: Callout
Page Index: 221
Date: 12/27/2021 9:11:14 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

Label pipe size

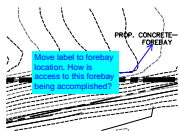
Labels added



Subject: Callout
Page Index: 221
Date: 12/27/2021 9:11:44 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

Label structure

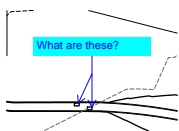
Labels added



Subject: Callout
Page Index: 221
Date: 12/27/2021 9:25:11 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

Move label to forebay location. How is access to this forebay being accomplished?

Labels revised



Subject: Callout
Page Index: 221
Date: 12/27/2021 9:13:27 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

What are these?

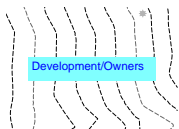
Removed

Label all existing storm infrastructure

Subject: Text Box
Page Index: 221
Date: 12/27/2021 11:31:37 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

Label all existing storm infrastructure

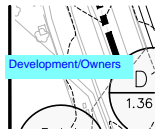
Labels added



Subject: Text Box
Page Index: 221
Date: 12/27/2021 11:28:47 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

Development/Owners

Labels added



Subject: Text Box
Page Index: 221
Date: 12/27/2021 11:28:57 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

Development/Owners

Labels added

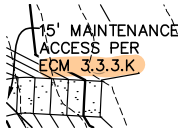
Label high and low points



Subject: Text Box
Page Index: 221
Date: 12/27/2021 11:31:50 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 221

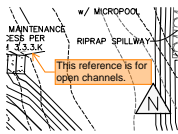
Label high and low points

Labels added



Subject: Engineer
Page Index: 221
Date: 12/27/2021 1:27:17 PM
Author: dotprete
Color: ■
Layer:
Space:
Page Label: 221

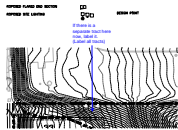
ECM section
Label removed



Subject: Engineer
Page Index: 221
Date: 12/27/2021 1:27:28 PM
Author: dotprete
Color: ■
Layer:
Space:
Page Label: 221

This reference is for open channels.

ECM section
Label removed

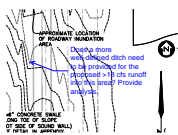


Subject: Callout
Page Index: 221
Date: 12/29/2021 10:03:24 AM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 221

If there is a separate tract here now, label it. (Label all tracts)

Tract labeling updated

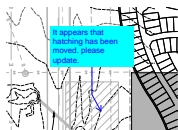
222 (12)



Subject: Callout
Page Index: 222
Date: 12/21/2021 12:32:03 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 222

Does a more well-defined ditch need to be provided for the proposed >18 cfs runoff into this area? Provide analysis.

This area is only receiving flow from Basin C2 - and even then, only that small portion of Tract F. Flows are minimal and not expected to overrun ditch area.



Subject: Callout
Page Index: 222
Date: 12/21/2021 12:31:44 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 222

It appears that hatching has been moved. please update.

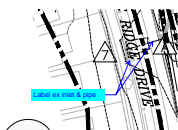
Labels revised



Subject: Callout
Page Index: 222
Date: 12/21/2021 12:32:48 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 222

If Tract F is a runoff reduction Grass Buffer Strip, calculations and maintenance requirements need to be provided.

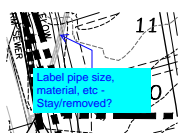
Tract F will be landscaped, but will not officially be a grass buffer strip. Flows are minimal in this area.



Subject: Callout
Page Index: 222
Date: 12/21/2021 3:29:58 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 222

Label ex inlet & pipe

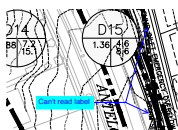
Labels added



Subject: Callout
Page Index: 222
Date: 12/21/2021 3:38:14 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 222

Label pipe size, material, etc - Stay/removed?

Labels added



Subject: Callout
Page Index: 222
Date: 12/21/2021 3:37:33 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 222

Can't read label

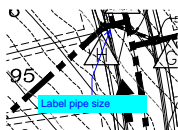
Labels revised



Subject: Callout
Page Index: 222
Date: 12/21/2021 3:37:53 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 222

Move arrow or text

Labels revised



Subject: Callout
Page Index: 222
Date: 12/27/2021 8:51:23 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 222

Label pipe size

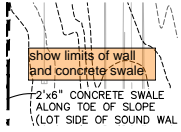
Labels added



Subject: Text Box
Page Index: 222
Date: 12/27/2021 11:29:11 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 222

Development/Owners

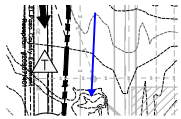
Labels added



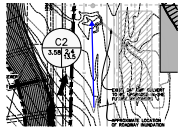
Subject: Engineer
Page Index: 222
Date: 12/27/2021 1:03:21 PM
Author: dotprete
Color: ■
Layer:
Space:
Page Label: 222

show limits of wall and concrete swale

Note below comment indicates extents of wall

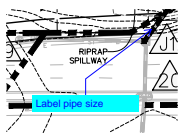


Subject: Arrow
Page Index: 222
Date: 12/29/2021 10:00:57 AM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 222



Subject: Arrow
Page Index: 222
Date: 12/29/2021 10:00:57 AM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 222

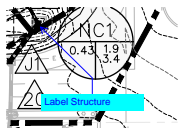
223 (4)



Subject: Callout
Page Index: 223
Date: 12/27/2021 9:34:57 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 223

Label pipe size

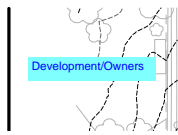
Labels added



Subject: Callout
Page Index: 223
Date: 12/27/2021 9:35:07 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 223

Label Structure

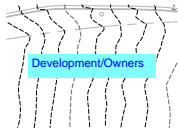
Labels added



Subject: Text Box
Page Index: 223
Date: 12/27/2021 11:29:21 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 223

Development/Owners

Labels added

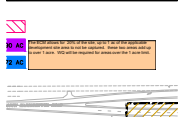


Subject: Text Box
Page Index: 223
Date: 12/27/2021 11:29:28 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 223

Development/Owners

Labels added

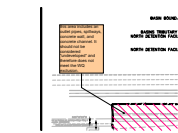
224 (5)



Subject: Engineer
Page Index: 224
Date: 12/27/2021 12:29:16 PM
Author: dotprete
Color: ■
Layer:
Space:
Page Label: 224

The ECM allows for 20% of the site, up to 1 ac of the applicable development site area to not be captured. these two areas add up to over 1 acre. WQ will be required for areas over the 1 acre limit.

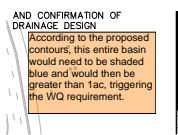
Tract B is not being developed at this time - can't it be considered as a separate development area once it goes back through design and final plat?



Subject: Engineer
Page Index: 224
Date: 12/27/2021 12:29:11 PM
Author: dotprete
Color: ■
Layer:
Space:
Page Label: 224

this area includes an outlet pipes, spillways, concrete wall, and concrete channel. It should not be considered "undeveloped" and therefore does not meet the WQ exclusion.

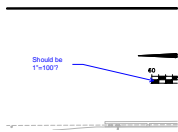
Outlet pipes, spillways and concrete crest wall are all buried and will be revegetated. Much of the basin is the Marksheffel ditch and will remain undeveloped.



Subject: Engineer
Page Index: 224
Date: 12/29/2021 9:56:38 AM
Author: dotprete
Color: ■
Layer:
Space:
Page Label: 224

According to the proposed contours, this entire basin would need to be shaded blue and would then be greater than 1ac, triggering the WQ requirement.

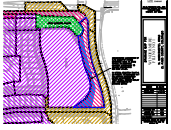
Can we condition this blue area that it must remain impervious, or at final design, be redirected to the detention pond for capture and treatment? The rest of this basin is to be landscaping and remain undeveloped (except for the future sidewalk along N. Carefree)



Subject: Callout
Page Index: 224
Date: 12/29/2021 9:56:34 AM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 224

Should be 1"=100'?

updated



Subject: Area Measurement

78,656.54 sf

Page Index: 224

Date: 12/29/2021 9:57:44 AM

Author: dsdrice

Color: ■

Layer:

Space:

Page Label: 224