ENG-PUDSP21005-R5-PDR-MDDP.pdf Markup Summary

3 (1)

Filed in accordance with the requirements of the Drainage
Engineering Criteria Manual and Land Development Code

Jennifer Irvine, P.E.
County Engineer / ECM Administrator
Conditions:
————— Joshua Palmer

3

Subject: Callout
Page Index: 3
Date: 11/4/2022 12:40:11 PM
Author: dsdrice
Color: 🟦
Layer:
Space:
Page Label: 3

Joshua Palmer

<mark>REVISED</mark>

7 (1)

(diversion to Geick)

red by URS and approved in
within the Haegler Ranch Basi

Subject: Callout
Page Index: 7
Date: 11/2/2022 12:16:18 PM
Author: CDurham
Color: 🟦
Layer:
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Page Label: 7

(diversion to Geick)

<mark>ADDED</mark>

17 (2)

sults show that we have a 100% WQCV reduction for Basin N. A
hese areas on the Final Plat with the note: *"No lots shall have any
acted within the rear setback (i.e. patios, hardscape, recreational
6, & Tract C.".* The area will be vegetated with the final GEC plan.
laces impervious restrictions on this Basin area and the O and M
on this space. This acreage of 0.35 is within the allowable limits.
previously approved "Final Drainage Report for Waterbury Filing N
stated that there were 3 Stormwater Quality Ponds that needed to b
Ranch per conditions set forth by the Board of County Commis
bury PUD Development Plan. Because there have been no chang

Subject: SW - Textbox with Arrow
Page Index: 17
Date: 11/3/2022 12:07:35 PM
Author: EPC Stormwater - Glenn Reese
Color: ⬛
Layer:
Space:
Page Label: 17

Revise if appropriate per my comments on the drainage map below.

<mark>NO NEED TO REVISE</mark>

- -

Subject: SW - Highlight
Page Index: 17
Date: 11/3/2022 12:07:41 PM
Author: EPC Stormwater - Glenn Reese
Color: 🟧
Layer:
Space:
Page Label: 17

Lots 40-42,
156, & Tract C.

<mark>NO NEED TO REVISE</mark>

18 (6)

ents constructed within the rear setback (i.e.
s 40-42, 156, & Tract C". The area will be veg
PUD also places impervious restrictions on this
maintain this space. This acreage of 0.35 is with

e Tract I adjacent to undeveloped land east of th
from the open space onto the undeveloped land

Subject: SW - Textbox with Arrow
Page Index: 18
Date: 11/3/2022 12:08:11 PM
Author: EPC Stormwater - Glenn Reese
Color: ⬛
Layer:
Space:
Page Label: 18

Revise if appropriate per my comments on the drainage map below.

<mark>NO NEED TO REVISE</mark>

Subject: SW - Textbox with Arrow
Page Index: 18
Date: 11/3/2022 12:08:17 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
Space:
Page Label: 18

delete typo and/or complete the sentence.

REMOVED

Subject: SW - Textbox with Arrow
Page Index: 18
Date: 11/3/2022 12:07:52 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
Space:
Page Label: 18

Why is this text here and in several places on the drainage maps? Maybe the ECM sub-section is mis-referenced?

REMOVED

Subject: SW - Highlight
Page Index: 18
Date: 11/3/2022 12:07:57 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
Space:
Page Label: 18

Lots 40-42, 156, & Tract C

NO NEED TO REVISE

Subject: SW - Highlight
Page Index: 18
Date: 11/3/2022 12:08:00 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
Space:
Page Label: 18

I

REMOVED

Subject: SW - Highlight
Page Index: 18
Date: 11/3/2022 12:08:06 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
Space:
Page Label: 18

I.7.1.C.1.a – Less than 1 acres of developed roadway area.

REMOVED

---

24 (1)

Subject: Engineer
Page Index: 24
Date: 11/4/2022 2:08:35 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 24

and I.7.1.C.1.a – Less than 1 acres of developed roadway area.

REMOVED

Subject: Callout
Page Index: 29
Date: 11/2/2022 1:52:23 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 29

Check structure?

CHANGED TO CHECK

Subject: Engineer
Page Index: 29
Date: 11/4/2022 2:24:42 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 29

on 1900 l

190

revised to 1400

Subject: Callout
Page Index: 29
Date: 11/4/2022 2:25:41 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 29

some text is missing?

SORRY NOT SURE WHAT HAPPENED TO IT. NOW INSERTED
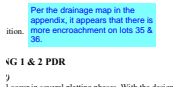
Subject: Text Box
Page Index: 31
Date: 11/2/2022 3:58:36 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 31

Per the drainage map in the appendix, it appears that there is more encroachment on lots 35 & 36.

I AM COMPARING THE HECRAS MODEL I RAN WITH THE EXISTING CONDITION AND FLOW MENTIONED ABOVE TO THE PROPOSED CONDITION HECRAS MODEL NOT TO THE FEMA FLOOPLAIN. I HAVE ADDED MORET TEXT TO THE REPORT TO EXPLAIN THIS.

Subject: Text Box
Page Index: 34
Date: 11/2/2022 4:47:10 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 34

Include discussion of maintenance and maintenance easements needed for swales

IT IS DISCUSSED IN ABOVE PARAGRAPH AND I ADDED MORE TEXT

Subject: Engineer
Page Index: 189
Date: 11/4/2022 2:53:39 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 189

not sure what the comment is
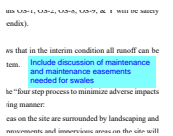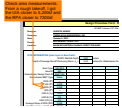
196 (1)

Subject: SW - Textbox with Arrow
Page Index: 196
Date: 11/3/2022 12:08:31 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
Space:
Page Label: 196

Check area measurements. From a rough takeoff, I got the UIA closer to 5,200sf and the RPA closer to 7300sf
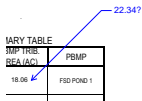
REVSED TO 5330 AND 7000

197 (1)
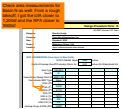
Subject: SW - Textbox with Arrow
Page Index: 197
Date: 11/3/2022 12:08:40 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
Space:
Page Label: 197

Check area measurements for Basin N as well. From a rough takeoff, I got the UIA closer to 1,200sf and the RPA closer to 3000sf

REVSED TO 1105 AND 1895

198 (3)

Subject: Callout
Page Index: 198
Date: 11/4/2022 2:57:57 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 198

22.34?

REVSEDTO 22.34

Subject: Callout
Page Index: 198
Date: 11/4/2022 3:00:31 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 198

Label these pages (why are they different?)

LABELED ONE IS FOR MMDP FULL BUILD OUT. NET ONE IS FOR PDR ONLY FIL 1 & 2

Subject: Callout
Page Index: 198
Date: 11/4/2022 3:01:49 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 198

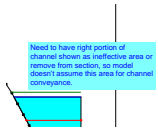should there be a third footnote?

CHNAGED TO **

199 (1)
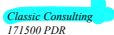
Subject: Engineer
Page Index: 199
Date: 11/4/2022 2:58:48 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 199

revised

202 (1)

Subject: Callout
Page Index: 202
Date: 11/4/2022 3:02:59 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 200

Delete these duplicate pages?

removed duplicates

204 (2)

Subject: Rectangle
Page Index: 204
Date: 11/4/2022 3:03:45 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 202

addded

Subject: Callout
Page Index: 204
Date: 11/4/2022 3:04:18 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 202

highlight the values used

addded

210 (2)

Subject: Engineer
Page Index: 210
Date: 11/4/2022 3:06:49 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 208

6.06% 7.91%

added asterisk ** about analyzing at FDR and CDs

Subject: Callout
Page Index: 210
Date: 11/7/2022 11:05:21 AM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 208

See comment memo

added asterisk ** about analyzing at FDR and CDs

211 (1)

Subject: Callout
Page Index: 211
Date: 11/4/2022 3:08:17 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 209

these values are too high

added asterisk ** about analyzing at FDR and CDs

262 (1)

Subject: Text Box
Page Index: 262
Date: 11/2/2022 4:11:18 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 260

Need to have right portion of channel shown as ineffective area or remove from section, so model doesn't assume this area for channel conveyance.

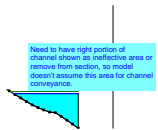removed right portion but we still have overt topping.

263 (1)
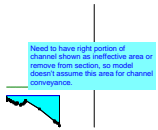
Subject: Text Box
Page Index: 263
Date: 11/2/2022 4:11:25 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 261

Need to have right portion of channel shown as ineffective area or remove from section, so model doesn't assume this area for channel conveyance.

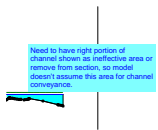removed right portion but we still have overt topping.

301 (1)

Subject: Text Box
Page Index: 301
Date: 11/2/2022 4:10:46 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 299

Need to have right portion of channel shown as ineffective area or remove from section, so model doesn't assume this area for channel conveyance.

removed right portion but we still have overt topping.

302 (1)

Subject: Text Box
Page Index: 302
Date: 11/2/2022 4:12:42 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 300

Need to have right portion of channel shown as ineffective area or remove from section, so model doesn't assume this area for channel conveyance.

removed right portion but we still have overt topping.

329 (1)
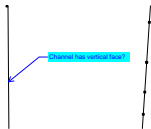
Subject: Callout
Page Index: 329
Date: 11/2/2022 4:15:41 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 327

Channel has vertical face?

SORY I HAD A BAD SPOT IN THERE REVISED

346 (1)

Subject: Callout
Page Index: 346
Date: 11/7/2022 10:07:00 AM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: [1] EX 1

Add DP13

ADDED

347 (1)

Subject: Callout
Page Index: 347
Date: 11/7/2022 10:34:56 AM
Author: dsdrice
Color: ▪
Layer:
Space:
Page Label: [1] EX 2

Label the channel flow here

I have to ask why? there is no design point or any significance for this spot and per you other comment and my response on the MDDP maps there is no channel flow here in the proposed condition. so why are we adding a flow here to compare or analyze against. I added DP 7A anyway
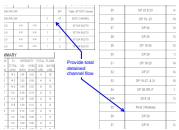
348 (1)
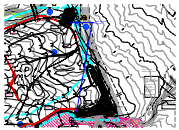
Subject: Callout
Page Index: 348
Date: 11/7/2022 9:56:12 AM
Author: dsdrice
Color: ▪
Layer:
Space:
Page Label: [1] EGP 1

Delete duplicate contours?

REMOVED

350 (1)

Subject: Callout
Page Index: 350
Date: 11/7/2022 10:11:30 AM
Author: dsdrice
Color: ▪
Layer:
Space:
Page Label: [1] PROP 1

Provide total detained channel flow

THERE IS NO CHANNEL FLOW HERE IT IS 0 CFS IN THE MDDP DRAINAGE ANALYSIS, WHEN WE ASSUME UPSTREAM IS DEVELOPED. THE FUTURE FILINGS IN THE FULL BUILD OUT WILL BE CAPTURING RUN OFF AND ROUTING IT VIA STORM DRAIN TO THE POND SO ROADS WILL CUTOFF FLOW AND TAKE IT IN PIPE. PER MAP CHANNEL IS FILLED IN AND WE DON'T SHOW CULVERTS

351 (3)

Subject: Callout
Page Index: 351
Date: 11/7
Author: d
Color: ▪
Layer:
Space:
Page Lab

Label the channel flow here

THE CHANNEL FLOW HERE IS 0 CFS IN THE MDDP DRAINAGE ANALYSIS, WHEN WE ASSUME UPSTREAM IS DEVELOPED. THE FUTURE FILINGS IN THE FULL BUILD OUT WILL BE CAPTURING RUN OFF AND ROUTING IT VIA STORM DRAIN TO THE POND SO ROADS WILL CUTOFF FLOW AND TAKE IT IN PIPE. PER MAP BELOW CHANNEL IS FILLED IN AND WE DON'T SHOW CULVERTS REMOVED THE CHANNEL AND WETLANDS UPTSREAM OF ROAD XING
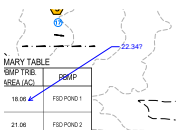
Subject: C
Page Index: 351
Date: 11/7/2022 10:39:27 AM
Author: dsdrice
Color: ▪
Layer:
Space:
Page Label: [1] PROP 2

22.34?

revised

Subject: Callout
Page Index: 351
Date: 11/7/2022 10:40:36 AM
Author: dsdrice
Color: ▪
Layer:
Space:
Page Label: [1] PROP 2

Label future inflow pipe location from upstream basins to the north

SORRY I CANNOT GIVE YOU A LOCATION UPSTREAM OWNER IS A DIFFERENT CLIENT WITH ANOTHER ENGINEER AND THEY ARE PLAYING WITH LAYOUT CHANGES TO THE NORTH SO NOT SURE WHERE IT WILL COME IN BUT THEY WILL HAVE TO DO A MDDP AND FINAL DRAINAGE REPORT TO MODIFY THIS POND AND PROVE IT STILL WORKS

Subject: Callout
Page Index: 355
Date: 11/2/2022 4:41:34 PM
Author: CDurham
Color: ◼
Layer:
Space:
Page Label: [1] PROP 2

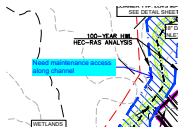Fix multiple contour labels & overlapping texts (check all sheets)

revised

Subject: Callout
Page Index: 355
Date: 11/2/2022 4:41:14 PM
Author: CDurham
Color: ◼
Layer:
Space:
Page Label: [1] PROP 2

Pond needs maintenance access

access was there added label

Subject: Callout
Page Index: 355
Date: 11/2/2022 4:42:14 PM
Author: CDurham
Color: ◼
Layer:
Space:
Page Label: [1] PROP 2

Need maintenance access along channel
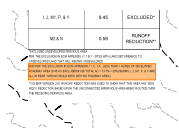
have call outs already moved note

Subject: SW - Textbox with Arrow
Page Index: 355
Date: 11/3/2022 12:09:10 PM
Author: EPC Stormwater - Glenn Reese
Color: ◼
Layer:
Space:
Page Label: [1] PROP 2

The comment below is from an email I sent on 10/10/2022:

Also please list the basins for exclusion I.7.1.C.1.A in a separate row so we can easily confirm that those excluded areas are <1ac and <20% of total.

Update: make a separate row in the table above to show where/how the two exclusions currently in this row are divided up. And please re-read item I.7.1.C.1.A in the ECM because that excluded area cannot exceed 1ac. So the text that I have highlighted here is confusing since you show that it exceeds 1ac (it must be both <1ac and <20% of total area).

I am just removing the reference to I.7.1.C.1.A. as basins I, J, M1, P & Y all meet the exclusion for I.7.1.B.7.

Subject: SW - Rectangle
Page Index: 355
Date: 11/3/2022 12:09:10 PM
Author: EPC Stormwater - Glenn Reese
Color: ◼
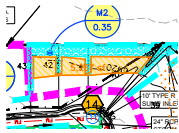**Layer:**
Space:
Page Label: [1] PROP 2

I am just removing the reference to I.7.1.C.1.A. as basins I, J, M1, P & Y all meet the exclusion for I.7.1.B.7.
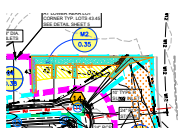
Subject: Area Measurement
Page Index: 355
Date: 11/3/2022 12:09:10 PM
Author: EPC Stormwater - Glenn Reese
Color: ◼
Layer:
Space:
Page Label: [1] PROP 2

7,372 sf

revised

Subject: Area Measurement
Page Index: 355
Date: 11/3/2022 12:09:10 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
Space:
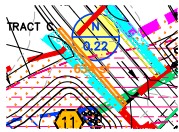**Page Label:** [1] PROP 2

5,257 sf

revised

Subject: SW - Textbox with Arrow
Page Index: 355
Date: 11/3/2022 12:09:10 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
Space:
Page Label: [1] PROP 2

area measurements shown for reference only. You don't need to add these numbers into this map. But verify RR calcs spreadsheet on pdf pg 196 above.
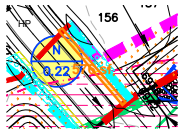
revised

Subject: Area Measurement
Page Index: 355
Date: 11/3/2022 12:09:10 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
Space:
Page Label: [1] PROP 2

634 sf

revised

Subject: Area Measurement
Page Index: 355
Date: 11/3/2022 12:09:10 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
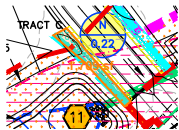**Space:**
Page Label: [1] PROP 2

576 sf

revised
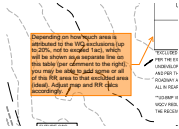
Subject: SW - Textbox with Arrow
Page Index: 355
Date: 11/3/2022 12:09:10 PM
Author: EPC Stormwater - Glenn Reese
Color:
Layer:
Space:
Page

I am just removing the reference to I.7.1.C.1.A. as basins I, J, M1, P & Y all meet the exclusion for I.7.1.B.7.

Depending on how much area is attributed to the WQ exclusions (up to 20%, not to exceed 1ac), which will be shown as a separate line on this table (per comment to the right), you may be able to add some or all of this RR area to that excluded area (ideal). Adjust map and RR calcs accordingly.
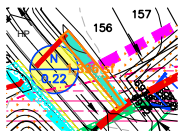

Subject: Area Measurement
Page Index: 355
Date: 11/3/2022 12:09:10 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
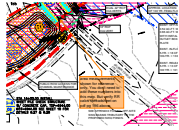**Space:**
Page Label: [1] PROP 2

1,709 sf

revised

Subject: Area Measurement
Page Index: 355
Date: 11/3/2022 12:09:10 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
Space:
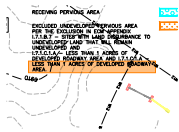**Page Label:** [1] PROP 2

1,336 sf

revised

Subject: SW - Textbox with Arrow
Page Index: 355
Date: 11/3/2022 12:09:10 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
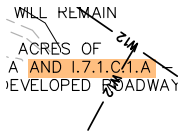**Layer:**
Space:
Page Label: [1] PROP 2

area measurements shown for reference only. You don't need to add these numbers into this map. But verify RR calcs spreadsheet on pdf pg 196 above.

revised

Subject: SW - Rectangle
Page Index: 355
Date: 11/3/2022 12:09:10 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
Space:
Page Label: [1] PROP 2

revised

Subject: SW - Rectangle
Page Index: 355
Date: 11/3/2022 12:09:10 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
Space:
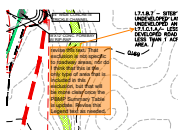**Page Label:** [1] PROP 2

revised

Subject: SW - Textbox with Arrow
Page Index: 355
Date: 11/3/2022 12:09:10 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
Space:
Page Label: [1] PROP 2

delete duplicate text

revised

Subject: SW - Textbox with Arrow
Page Index: 355
Date: 11/3/2022 12:09:10 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
Space:
Page Label: [1] PROP 2

revise this text. That exclusion is not specific to roadway areas, nor do I think that this is the only type of area that is included in this exclusion, but that will be more clear once the PBMP Summary Table is update. Revise this Legend text as needed.
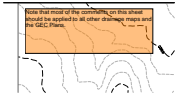
I am just removing the reference to I.7.1.C.1.A. as basins I, J, M1, P & Y all meet the exclusion for I.7.1.B.7.

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What are these 2 yellow areas? The legend shows that that is RPA's but I don't think that is the intent of these areas.
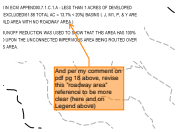
removed

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Note that most of the comments on this sheet should be applied to all other drainage maps and the GEC Plans.

revised all sheets per these comments

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And per my comment on pdf pg 18 above, revise this "roadway area" reference to be more clear (here and on Legend above)

I am just removing the reference to I.7.1.C.1.A. as basins I, J, M1, P & Y all meet the exclusion for I.7.1.B.7.
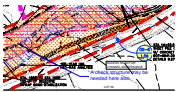
Subject: Callout
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Date: 11/4/2022 4:42:39 PM
Author: dsdrice
Color: ■
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A check structure may be needed here also

added text in report stating that this may need to happen time of FDR.