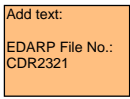


ENG-CDR23021-R2-FDR-S1.pdf Markup Summary

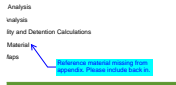
1 (1)



Subject: SW - Textbox
Page Index: 1
Date: 4/2/2024 3:32:00 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 1

Add text:
EDARP File No.:
CDR2321

3 (1)



Subject: Callout
Page Index: 3
Date: 4/4/2024 4:38:13 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 3

Reference material missing from appendix. Please include back in.

4 (4)



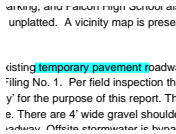
Subject:
Page Index: 4
Date: 4/9/2024 12:11:00 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 4

existing 26' wide temporary pavement (per field inspection- the existing pavement is not full depth



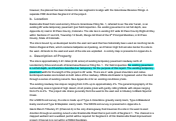
Subject: Callout
Page Index: 4
Date: 4/10/2024 12:02:50 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 4

replace all "temporary pavement" with "treated gravel"



Subject:
Page Index: 4
Date: 4/9/2024 12:14:14 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 4

temporary pavement r

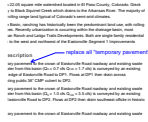


Subject:
Page Index: 4
Date: 4/9/2024 12:14:44 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 4

the existing pavement is not full depth, and therefore described as 'temporary' for the purpose of this report. The existing temporary pavement

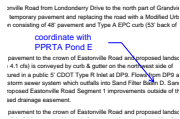


Subject: Highlight
Page Index: 6
Date: 4/9/2024 12:17:05 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 6



Subject: Callout
Page Index: 6
Date: 4/9/2024 12:21:41 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 6

replace all "temporary pavement"



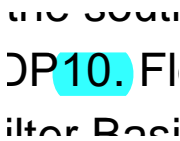
Subject: Callout
Page Index: 8
Date: 4/9/2024 1:00:49 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 8

coordinate with PPRTA Pond E



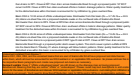
Subject:
Page Index: 8
Date: 4/9/2024 1:09:51 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 8

Sand Filter Basin D. Sand Filter Basin D



Subject:
Page Index: 8
Date: 4/9/2024 1:12:59 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 8

10.



Subject: SW - Textbox
Page Index: 9
Date: 4/2/2024 2:37:27 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 9

Unresolved comment from Review 1:
Basins OS1, OS2, OS3, and the unnamed basins that are east of Eastonville Rd all have proposed soil disturbances within them, which all must be accounted for via WQ treatment or an applicable WQ exclusion. So please address this in the respective Basin paragraphs and create new proposed sub-basins as necessary.
Review 2 update: these 3 "offsite undeveloped areas" are still shown on the drainage map as having proposed disturbances. Meaning that they are neither "offsite" or "undeveloped." Please revise map and descriptions to add onsite basins for the areas of disturbance and discuss WQ treatment or applicable WQ exclusions. Just stating that infiltration is occurring is not enough. You'll need to show Runoff Reduction calcs for RPAs and/or SPAs or an applicable exclusion.



Subject: SW - Textbox with Arrow
Page Index: 9
Date: 4/2/2024 2:37:27 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 9

Must be supported with RR calcs. But these two basins are small enough to count towards the exclusion in ECM App I.7.1.C.1 (20% up to 1ac of development can be excluded). Revise these sentences accordingly based on what you decide.



Subject: SW - Highlight
Page Index: 9
Date: 4/2/2024 2:37:41 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 9

Water quality will be accounted for via runoff reduction swales & grass buffers.



Subject: SW - Highlight
Page Index: 9
Date: 4/2/2024 2:37:45 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 9

Water quality will be accounted for via runoff reduction swales & grass buffers.

res of landscaped area. Stormwater towards DP12. Water quality will be ac

Subject: SW - Highlight
Page Index: 9
Date: 4/2/2024 2:37:49 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 9

offsite undeveloped area

res of **offsite undeveloped area**. Storm into a proposed roadside swale on the lows at DP1 then drain across Eastor : at DP2 then drain southeast offsite ir a within this basin is accounted for by

0.26 acres of lar
nto Pond D.

0.21 acres of lar

Subject:
Page Index: 9
Date: 4/9/2024 1:18:52 PM
Author: Jeff Rice - EPC Engineering Review
Color:
Layer:
Space:
Page Label: 9

Pond D.

1 landscaped area. Stormwater (C₂ = 0.1
f landscaped area. Stormwater (C₂ = 0.1
s DP12. Water quality will be accounted f
2 and 12?
offsite undeveloped area. Stormwater fro
proposed roadside swale on the northwest
at DP1 then drain across Eastonville Road.
*2 then drain southeast offsite in historic c

Subject: Callout
Page Index: 9
Date: 4/9/2024 1:31:43 PM
Author: Jeff Rice - EPC Engineering Review
Color:
Layer:
Space:
Page Label: 9

2 and 12?

10 (3)

cesses will be detained and treated for water quality
the 100-year detention volume is 0.173 ac-ft. The 1
and 49 hours, respectively. A 15' access and main
to facilitate maintenance of the pond facilities. A 4'
he developed, peak 100-yr flow rate with 1.0' of free
at historic runoff rates. Runoff from DP4 will follow th
ve ramps.

0.291 per MHFD-Detention
calcs on pg 94 below.

Subject: SW - Textbox with Arrow
Page Index: 10
Date: 4/2/2024 2:38:31 PM
Author: Glenn Reese - EPC Stormwater
Color:
Layer:
Space:
Page Label: 10

0.291 per MHFD-Detention calcs on pg 94 below.

Eastonville Road from Londonderr
wide temporary pavement and ref
ection consisting of 48' pavement
ad at low points. Stormwater from t
spectrum sand filters. All detention
ve. Runoff generated from the st

Subject:
Page Index: 10
Date: 4/9/2024 1:35:29 PM
Author: Jeff Rice - EPC Engineering Review
Color:
Layer:
Space:
Page Label: 10

temporary pavement a

County-owned

Subject: Callout
Page Index: 10
Date: 4/9/2024 2:07:59 PM
Author: Jeff Rice - EPC Engineering Review
Color:
Layer:
Space:
Page Label: 10

County-owned

11 (4)

Category	Subcategory	Area (Acres)	Volume (Ac-Ft)
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36
37	38	39	40
41	42	43	44
45	46	47	48
49	50	51	52
53	54	55	56
57	58	59	60
61	62	63	64
65	66	67	68
69	70	71	72
73	74	75	76
77	78	79	80
81	82	83	84
85	86	87	88
89	90	91	92
93	94	95	96
97	98	99	100

Subject: SW - Textbox with Arrow
Page Index: 11
Date: 4/2/2024 2:38:41 PM
Author: Glenn Reese - EPC Stormwater
Color:
Layer:
Space:
Page Label: 11

3.88ac per table at the bottom of this page. Revise
to remove discrepancy or to explain the reasoning
for it.

EA6	1.11
EA7	1.92
EA8	0.26
EA9	2.08
EA10	2.99
EA11	0.19
Total	9.20

Subject: SW - Textbox
Page Index: 11
Date: 4/2/2024 2:38:41 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 11

The FDR for Segment 2 just states that the design of EDB B was done with Segment 1. But this Segment 1 FDR does not discuss in the report text, show in calcs, or show in drainage maps the Segment 2 basins (EA8 - EA11) that will be treated by EDB B... So please do so. Otherwise there is no way for us to review the design of this pond and compare to CDs, since not enough information has been provided...

EA6	1.11
EA7	1.92
EA8	0.26
EA9	2.08
EA10	2.99
EA11	0.19
Total	9.20

Subject: SW - Textbox with Arrow
Page Index: 11
Date: 4/2/2024 2:38:41 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 11

Unresolved comment from Review that was on the "Pond B - Ultimate" MHFD Calcs page for reference, since it is related to my new comment on the left.

EA9 and EA10 are not shown on the drainage map. My understanding is that in the Ultimate Condition (Segment 1 & 2), Pond B will detain flows from Segment 1's Basins EA6-EA8 and Segment 2's Basins EA8-EA11. This is potentially confusing because the two segment basins EA8 are completely different basins. So just clarify here which basin is from each segment like I have above.

a private, full
of drainage
District?
improvements.
provides water

Subject: Callout
Page Index: 11
Date: 4/9/2024 2:04:59 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 11

District?

12 (7)

Segment	Basin	Area (ac)	Total
Segment 1	EA6	1.11	3.88
	EA7	1.91	
	EA8	0.26	
Segment 2	EA8	2.08	5.38
	EA9	2.99	
	EA10	0.19	
	EA11	0.19	
			9.26

Included in Sand Filter Basin D, SFB D
1 F. Inevitable. Waterworks recovery

Subject: Image
Page Index: 12
Date: 4/2/2024 2:40:20 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 12

Here's my understanding of EDB B, summarized in a table:

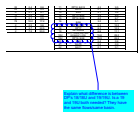
Here's my understanding of EDB B, summarized in a table:

Subject: SW - Textbox
Page Index: 12
Date: 4/2/2024 2:40:20 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 12

inveys the
ds DP4 at
storic flow

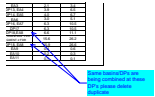
Subject: Highlight
Page Index: 12
Date: 4/4/2024 8:42:38 AM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 12

DP4



Subject: Cloud+
Page Index: 34
Date: 4/4/2024 3:42:54 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 34

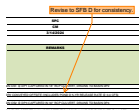
Explain what difference is between DP's 18/18U and 19/19U. Is a 19 and 19U both needed? They have the same flows/same basin.



Subject: Callout
Page Index: 34
Date: 4/4/2024 3:44:02 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 34

Same basins/DPs are being combined at these DP's please delete duplicate

37 (6)



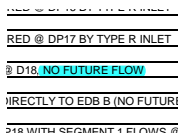
Subject: SW - Textbox with Arrow
Page Index: 37
Date: 4/2/2024 2:40:47 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 37

Revise to SFB D for consistency.



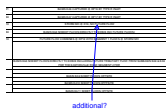
Subject: Callout
Page Index: 37
Date: 4/4/2024 3:44:44 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 37

Unresolved:
 Basin listed twice. Please remove one.



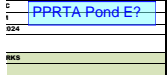
Subject:
Page Index: 37
Date: 4/10/2024 7:54:34 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 37

NO FUTURE FLOW



Subject: Callout
Page Index: 37
Date: 4/10/2024 7:54:56 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 37

additional?



Subject: Text Box
Page Index: 37
Date: 4/10/2024 7:55:27 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 37

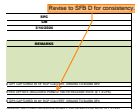
PPRTA Pond E?

TO SFB D

Subject:
Page Index: 37
Date: 4/10/2024 7:55:41 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 37

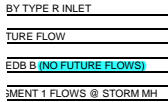
SFB D

38 (3)



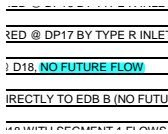
Subject: SW - Textbox with Arrow
Page Index: 38
Date: 4/2/2024 2:40:53 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 38

Revise to SFB D for consistency.



Subject:
Page Index: 38
Date: 4/10/2024 7:56:46 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 38

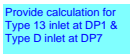
(NO FUTURE FLOWS)



Subject:
Page Index: 38
Date: 4/10/2024 7:57:37 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 38

NO FUTURE FLOW

39 (1)



Subject: Text Box
Page Index: 39
Date: 4/4/2024 4:18:07 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 39

Provide calculation for Type 13 inlet at DP1 & Type D inlet at DP7

42 (2)

IV/A	IV/A
MINOR	MAJOR
5.4	6.4
1.8	3.3

Subject: Highlight
Page Index: 42
Date: 4/4/2024 4:01:41 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 42

1.8 3.3

Inlet appears to be still be ok, but flows at DP9 per hydrology spreadsheet are 2.2 & 4.1

Subject: Callout
Page Index: 42
Date: 4/4/2024 4:02:21 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 42

Inlet appears to be still be ok, but flows at DP9 per hydrology spreadsheet are 2.2 & 4.1

44 (3)

5.4
1.8

Subject: Highlight
Page Index: 44
Date: 4/4/2024 4:02:33 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 44

1.8

6.4
4.0

Subject: Highlight
Page Index: 44
Date: 4/4/2024 4:02:34 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 44

4.0

Flows at DP10 per hydrology spreadsheet are 4.2 & 9.0

Subject: Callout
Page Index: 44
Date: 4/4/2024 4:03:00 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 44

Flows at DP10 per hydrology spreadsheet are 4.2 & 9.0

48 (3)

Flows at DP14 per hydrology spreadsheet are 3.9 & 6.5

Subject: Callout
Page Index: 48
Date: 4/4/2024 4:04:53 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 48

Flows at DP14 per hydrology spreadsheet are 3.9 & 6.5

5.4

2.6

Subject: Highlight
Page Index: 48
Date: 4/4/2024 4:04:30 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 48

2.6

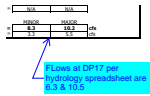
6.4

4.4

Subject: Highlight
Page Index: 48
Date: 4/4/2024 4:04:32 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 48

.4

52 (2)



Subject: Callout
Page Index: 52
Date: 4/4/2024 4:09:12 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 52

FLows at DP17 per hydrology spreadsheet are 6.3 & 10.5

N/A	N/A
MINOR	MAJOR
8.3	10.2
3.3	5.5

Subject: Highlight
Page Index: 52
Date: 4/4/2024 4:09:16 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 52

3.3 5.5

53 (1)

Provide calculations for riprap outlet protection & all other pipe outlet locations.

Subject: Text Box
Page Index: 53
Date: 4/4/2024 5:14:37 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 53

Provide calculations for riprap outlet protection & all other pipe outlet locations.

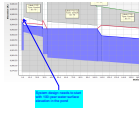
60 (1)

EASTONVILLE 6
StormCAD not needed for this segment, as it's a single culvert and provided for with MHFD culvert spreadsheet

Subject: Text Box
Page Index: 60
Date: 4/8/2024 3:12:19 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 60

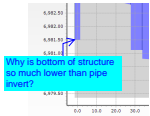
StormCAD not needed for this segment, as it's a single culvert and provided for with MHFD culvert spreadsheet

65 (2)



Subject: Callout
Page Index: 65
Date: 4/4/2024 4:27:07 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 65

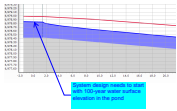
System design needs to start with 100-year water surface elevation in the pond



Subject: Callout
Page Index: 65
Date: 4/4/2024 4:30:16 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 65

Why is bottom of structure so much lower than pipe invert?

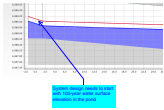
69 (1)



Subject: Callout
Page Index: 69
Date: 4/4/2024 4:27:53 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 69

System design needs to start with 100-year water surface elevation in the pond

71 (1)



Subject: Callout
Page Index: 71
Date: 4/4/2024 4:28:14 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 71

System design needs to start with 100-year water surface elevation in the pond

91 (2)

Please provide forebay sizing calcs for SFB A and D.

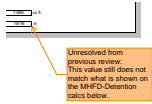
Subject: SW - Textbox
Page Index: 91
Date: 4/2/2024 4:37:35 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 91

Please provide forebay sizing calcs for SFB A and D.

Provide sizing of riprap for emergency overflows

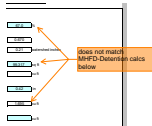
Subject: Text Box
Page Index: 91
Date: 4/4/2024 5:13:54 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: 91

Provide sizing of riprap for emergency overflows



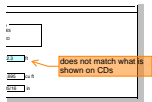
Subject: SW - Textbox with Arrow
Page Index: 92
Date: 4/2/2024 2:41:00 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 92

Unresolved from previous review:
This value still does not match what is shown on the MHFD-Detention calcs below.



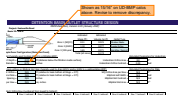
Subject: SW - Textbox with Arrow
Page Index: 92
Date: 4/2/2024 4:27:49 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 92

does not match MHFD-Detention calcs below



Subject: SW - Textbox with Arrow
Page Index: 92
Date: 4/2/2024 4:31:16 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 92

does not match what is shown on CDs



Subject: SW - Textbox with Arrow
Page Index: 96
Date: 4/2/2024 2:57:51 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 96

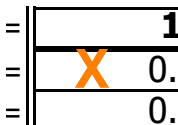
Shown as 15/16" on UD-BMP calcs above. Revise to remove discrepancy.

r Input: Orifice at Und
Underdrain
X Underdr

Subject: Text Box
Page Index: 96
Date: 4/2/2024 2:41:15 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 96

X

r Input: Orifice Plate:



Subject: Text Box
Page Index: 96
Date: 4/2/2024 2:41:15 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 96

X

44
X 1.1
0.1

Subject: Text Box X
Page Index: 96
Date: 4/2/2024 2:41:15 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 96

40
X 1.1
0.1

Subject: Text Box X
Page Index: 96
Date: 4/2/2024 2:41:15 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 96

Emergency Spillway
 Spillway
 Spillway
 Spillway
 Freeboard above Max



Subject: Checkmark
Page Index: 96
Date: 4/2/2024 2:52:42 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 96

X Depth at

Subject: Text Box X
Page Index: 96
Date: 4/2/2024 2:53:35 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 96

Outlet: Vertical Orifice (C
 Invert of
 th at top of Zone using
 Vertical C



Subject: Text Box X
Page Index: 96
Date: 4/2/2024 2:53:44 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 96


Invert of
 th at top of Zone using
 Vertical C



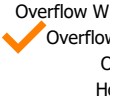
Subject: Text Box X
Page Index: 96
Date: 4/2/2024 2:53:46 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 96


User Input: Over

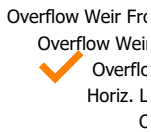



Subject: Text Box
Page Index: 96
Date: 4/2/2024 2:55:08 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 96

X




Subject: Checkmark
Page Index: 96
Date: 4/2/2024 2:55:16 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 96




Subject: Checkmark
Page Index: 96
Date: 4/2/2024 2:55:20 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 96




Subject: Checkmark
Page Index: 96
Date: 4/2/2024 2:55:28 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 96

User Input: Outlet Pipe




Subject: Checkmark
Page Index: 96
Date: 4/2/2024 2:55:46 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 96



Subject: Checkmark
Page Index: 96
Date: 4/2/2024 2:55:48 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 96


X Restrictor

User Input: En


Subject: Text Box
Page Index: 96
Date: 4/2/2024 2:55:59 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 96

X

✓ Freebr


Subject: Checkmark
Page Index: 96
Date: 4/2/2024 2:57:05 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 96

Spillwa
Spillway
Spillwa
Spillwa
eboard above Max V

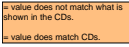

Subject: Checkmark
Page Index: 96
Date: 4/2/2024 2:57:07 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 96


t: Emergency Spillway
Spillwa
Spillwa
Spillw

X

Subject: Text Box
Page Index: 96
Date: 4/2/2024 2:57:45 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 96

X



DEFENTION BASE
Project: 
Date: 10/2024

Subject: SW - Textbox
Page Index: 96
Date: 4/2/2024 2:59:01 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 96

= value does not match what is shown in the CDs.

= value does match CDs.

X

Subject: Text Box
Page Index: 96
Date: 4/2/2024 2:58:37 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 96

X



Subject: Checkmark
Page Index: 96
Date: 4/2/2024 2:58:39 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 96

Jser Input: Orifice at
 Underdr
 Undr



Subject: Checkmark
Page Index: 96
Date: 4/2/2024 2:59:23 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 96

Subject: SW - Textbox with Arrow
Page Index: 96
Date: 4/2/2024 3:00:42 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 96

Why isn't this value that is >1 highlighted in red?
 Regardless, this ratio should be less than or equal to 1 for minor (5-yr) and major (100-yr) design storms. See Chapter 4.1 of DCM volume 2 (and also Chap 2 of MHFD DCM vol. 3).

0.15
1.2
0.3
1.1
1
Overflow Weir 1
0.0
N/A

Subject: SW - Rectangle
Page Index: 96
Date: 4/2/2024 3:00:48 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 96

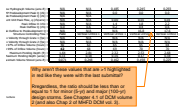
100 (1)

Subject: SW - Textbox with Arrow
Page Index: 100
Date: 4/2/2024 4:32:59 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 100

does not match MHFD-Detention calcs below

106 (21)

Subject: SW - Rectangle
Page Index: 106
Date: 4/2/2024 2:41:24 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 106



Subject: SW - Textbox with Arrow
Page Index: 106
Date: 4/2/2024 3:26:20 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 106

Why aren't these values that are >1 highlighted in red like they were with the last submittal?

Regardless, the ratio should be less than or equal to 1 for minor (5-yr) and major (100-yr) design storms. See Chapter 4.1 of DCM volume 2 (and also Chap 2 of MHFD DCM vol. 3).



Subject: Checkmark
Page Index: 106
Date: 4/2/2024 3:19:53 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 106

put: Stage and Total

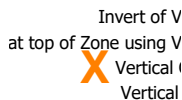


Subject: Checkmark
Page Index: 106
Date: 4/2/2024 3:19:55 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 106

put: Vertical Orifice

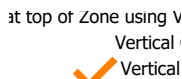


Subject: Checkmark
Page Index: 106
Date: 4/2/2024 3:23:24 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 106



Subject: Text Box
Page Index: 106
Date: 4/2/2024 3:23:33 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 106

X



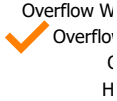
: Overflow Weir (Dro

Subject: Checkmark
Page Index: 106
Date: 4/2/2024 3:23:37 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 106

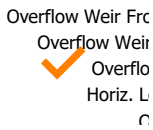
User Input: Ove



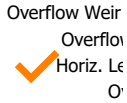
Subject: Checkmark
Page Index: 106
Date: 4/2/2024 3:23:51 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 106



Subject: Checkmark
Page Index: 106
Date: 4/2/2024 3:24:12 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 106



Subject: Checkmark
Page Index: 106
Date: 4/2/2024 3:24:17 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 106



Subject: Checkmark
Page Index: 106
Date: 4/2/2024 3:26:28 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 106


User Input: Outlet Pipe





Subject: Checkmark
Page Index: 106
Date: 4/2/2024 3:24:28 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 106





Subject: Checkmark
Page Index: 106
Date: 4/2/2024 3:24:31 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 106


 Restrict
User Input:


Subject: Checkmark
Page Index: 106
Date: 4/2/2024 3:24:34 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 106


Emergency Spillway
Spillway
 Spillway
Spillway
Freeboard above Max

Subject: Checkmark
Page Index: 106
Date: 4/2/2024 3:24:50 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 106

Spillway
Spillway
 Spillway
Freeboard above Max


Subject: Checkmark
Page Index: 106
Date: 4/2/2024 3:25:13 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 106


Emergency Spillway
 Spillway
Spillway
Spillway


Subject: Text Box
Page Index: 106
Date: 4/2/2024 3:26:32 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 106

X

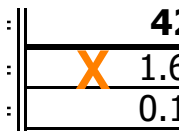
 Freeboard

Subject: Checkmark
Page Index: 106
Date: 4/2/2024 3:25:34 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 106

	6.0
	3.4
	0.2

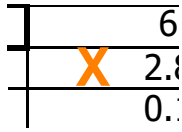
Subject: Text Box
Page Index: 106
Date: 4/2/2024 3:26:02 PM
Author: Glenn Reese - EPC Stormwater
Color: 
Layer:
Space:
Page Label: 106

X



Subject: Text Box
Page Index: 106
Date: 4/2/2024 3:25:50 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 106

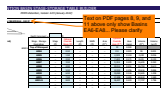
X



Subject: Text Box
Page Index: 106
Date: 4/2/2024 3:25:52 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 106

X

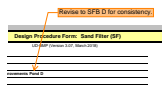
110 (1)



Subject: SW - Textbox with Arrow
Page Index: 110
Date: 4/2/2024 2:41:32 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 110

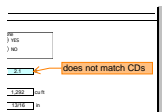
Text on PDF pages 8, 9, and 11 above only show Basins EA6-EA8... Please clarify

116 (2)



Subject: SW - Textbox with Arrow
Page Index: 116
Date: 4/2/2024 2:41:38 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 116

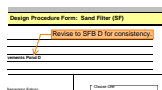
Revise to SFB D for consistency.



Subject: SW - Textbox with Arrow
Page Index: 116
Date: 4/2/2024 3:17:36 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 116

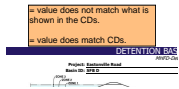
does not match CDs

117 (1)



Subject: SW - Textbox with Arrow
Page Index: 117
Date: 4/2/2024 2:41:44 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 117

Revise to SFB D for consistency.



Subject: SW - Textbox
Page Index: 120
Date: 4/2/2024 3:01:45 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120

= value does not match what is shown in the CDs.

= value does match CDs.



Subject: Text Box
Page Index: 120
Date: 4/2/2024 3:01:45 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120

X



Subject: Checkmark
Page Index: 120
Date: 4/2/2024 3:01:45 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120

er Input: Outlet Pipe



Depth to

Restrictor Plate Height

Subject: Checkmark
Page Index: 120
Date: 4/2/2024 3:05:28 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120

Depth to Invert c



Outlet P

Restrictor Plate Height Above

Subject: Checkmark
Page Index: 120
Date: 4/2/2024 3:05:30 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120



Restrict

User Input: f

Subject: Checkmark
Page Index: 120
Date: 4/2/2024 3:05:38 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120

User Input: Overflow



Subject: Checkmark
Page Index: 120
Date: 4/2/2024 3:06:15 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120

ours) =	12
ours) =	12
n (ft) =	1.00
res) =	0.04
re-ft) =	0.030

Subject: Checkmark
Page Index: 120
Date: 4/2/2024 3:06:19 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120

	38
	40
	2.64
	0.07
	0.117

Subject: Checkmark
Page Index: 120
Date: 4/2/2024 3:06:22 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120

	40
	43
	3.39
	0.09
	0.175

Subject: Checkmark
Page Index: 120
Date: 4/2/2024 3:06:25 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120

User Input: Orifice at Underdrain



Subject: Checkmark
Page Index: 120
Date: 4/2/2024 3:06:46 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120

User Input: Orifice at Underdrain



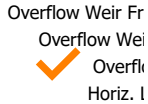
Subject: Checkmark
Page Index: 120
Date: 4/2/2024 3:07:00 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120

User Input: Orifice Plate



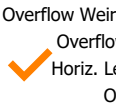
Overflow \
Overflow

Subject: Checkmark
Page Index: 120
Date: 4/2/2024 3:07:16 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120



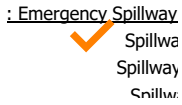
Overflow Weir Fr
Overflow Wei
Overflow
Horiz. L

Subject: Checkmark
Page Index: 120
Date: 4/2/2024 3:07:20 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120



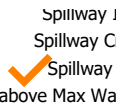
Overflow Weir
Overflow
Horiz. Lt
O

Subject: Checkmark
Page Index: 120
Date: 4/2/2024 3:07:26 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120



: Emergency Spillway
Spillwa
Spillway
Spillwa

Subject: Checkmark
Page Index: 120
Date: 4/2/2024 3:07:55 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120



Spillway J
Spillway C
Spillway
:board above Max Wa

Subject: Checkmark
Page Index: 120
Date: 4/2/2024 3:08:12 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120



Freebc

Subject: Checkmark
Page Index: 120
Date: 4/2/2024 3:08:16 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120

out: Vertical Orifice (C

X Invert o
th at top of Zone using
Vertical I

Subject: Text Box
Page Index: 120
Date: 4/2/2024 3:09:57 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120

X

X Depth at

Subject: Text Box
Page Index: 120
Date: 4/2/2024 3:09:59 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120

X

Invert c
th at top of Zone usin

X Vertical

Subject: Text Box
Page Index: 120
Date: 4/2/2024 3:10:00 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: 120

X

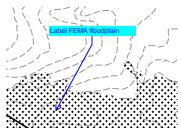
125 (1)

Indicate where Segment
1 ends/Segment 2 starts.

Subject: Text Box
Page Index: 125
Date: 4/4/2024 4:48:21 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] Existing drainage map

Indicate where Segment 1 ends/Segment 2 starts,

126 (1)



Subject: Callout
Page Index: 126
Date: 4/4/2024 4:57:38 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] Existing drainage map (2)

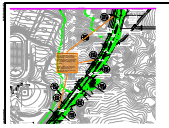
Label FEMA floodplain

127 (21)

LINE	TEXT
001	127
002	127
003	127
004	127
005	127
006	127
007	127
008	127
009	127
010	127
011	127
012	127
013	127
014	127
015	127
016	127
017	127
018	127
019	127
020	127
021	127
022	127
023	127
024	127
025	127
026	127
027	127
028	127
029	127
030	127
031	127
032	127
033	127
034	127
035	127
036	127
037	127
038	127
039	127
040	127
041	127
042	127
043	127
044	127
045	127
046	127
047	127
048	127
049	127
050	127
051	127
052	127
053	127
054	127
055	127
056	127
057	127
058	127
059	127
060	127
061	127
062	127
063	127
064	127
065	127
066	127
067	127
068	127
069	127
070	127
071	127
072	127
073	127
074	127
075	127
076	127
077	127
078	127
079	127
080	127
081	127
082	127
083	127
084	127
085	127
086	127
087	127
088	127
089	127
090	127
091	127
092	127
093	127
094	127
095	127
096	127
097	127
098	127
099	127
100	127

Subject: SW - Textbox with Arrow
Page Index: 127
Date: 4/2/2024 2:41:53 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

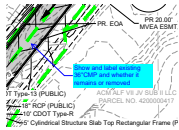
Revise to SFB D for consistency.



Subject: SW - Textbox with Arrow
Page Index: 127
Date: 4/2/2024 2:41:59 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

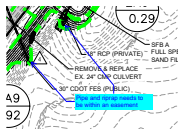
Unresolved comment from Review 1:
 All areas of disturbance must be accounted for via WQ treatment or an applicable WQ exclusion. A table would help organize and summarize how all disturbances are accounted for. Two example tables have been provided.

Review 2 update: in the report text above you just added in that these grass swales will get WQ via infiltration. This statement has to be supported with calcs.



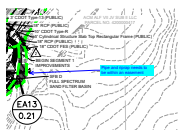
Subject: Callout
Page Index: 127
Date: 4/4/2024 5:31:22 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

Show and label existing 36" CMP and whether it remains or removed



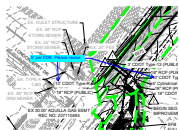
Subject: Callout
Page Index: 127
Date: 4/4/2024 5:15:36 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

Pipe and riprap needs to be within an easement



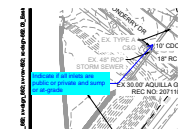
Subject: Callout
Page Index: 127
Date: 4/4/2024 5:16:07 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

Pipe and riprap needs to be within an easement



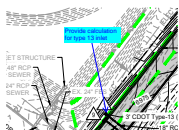
Subject: Callout
Page Index: 127
Date: 4/4/2024 5:19:03 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

5' per FDR. Please revise



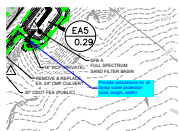
Subject: Callout
Page Index: 127
Date: 4/4/2024 5:19:58 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

Indicate if all inlets are public or private and sump or at-grade



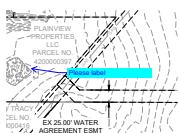
Subject: Callout
Page Index: 127
Date: 4/4/2024 5:20:22 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

Provide calculation for type 13 inlet



Subject: Callout
Page Index: 127
Date: 4/4/2024 5:21:02 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

Provide calculations for all riprap outlet protection (size, length, width)



Subject: Callout
Page Index: 127
Date: 4/4/2024 5:21:37 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

Please label

(DP1)

Subject: Text Box
Page Index: 127
Date: 4/4/2024 5:21:52 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

(DP1)

(DP3)

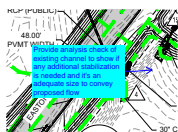
Subject: Text Box
Page Index: 127
Date: 4/4/2024 5:22:01 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

(DP3)

(DP7)

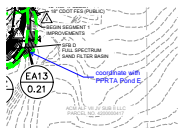
Subject: Text Box
Page Index: 127
Date: 4/4/2024 5:22:12 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

(DP7)



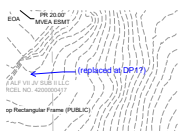
Subject: Callout
Page Index: 127
Date: 4/8/2024 2:54:23 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

Provide analysis check of existing channel to show if any additional stabilization is needed and it's an adequate size to convey proposed flow



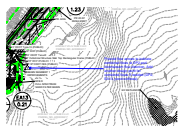
Subject: Callout
Page Index: 127
Date: 4/9/2024 1:09:00 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

coordinate with PPRTA Pond E



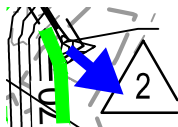
Subject: Callout
Page Index: 127
Date: 4/9/2024 1:21:28 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

(replaced at DP1?)



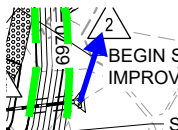
Subject: Callout
Page Index: 127
Date: 4/9/2024 1:33:27 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

Provide flow arrows to indicate combined flows at DP2 and downstream flow direction. Add another design point for combined flows if needed (DP2, EA13, pond outflows).



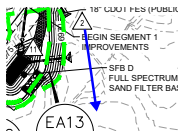
Subject: Arrow
Page Index: 127
Date: 4/9/2024 1:25:23 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

2

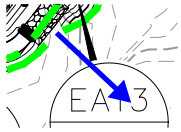


Subject: Arrow
Page Index: 127
Date: 4/9/2024 1:25:27 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

2

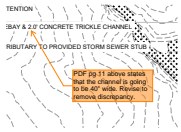


Subject: Arrow
Page Index: 127
Date: 4/9/2024 1:25:46 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1



Subject: Arrow
Page Index: 127
Date: 4/9/2024 1:27:50 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
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Page Label: [1] 201662.08_FDR_map_Seg1-Segment-1

128 (8)



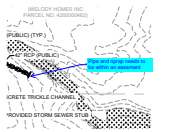
Subject: SW - Textbox with Arrow
Page Index: 128
Date: 4/2/2024 2:42:12 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: [1] Segment-1.2

PDF pg 11 above states that the channel is going to be 40" wide. Revise to remove discrepancy.

DESIGN POINT	CONTRIBUTING WATERSHED
1	USE1
2	USE1 - Pond 2 Run
3	USE2
4	USE1 POND 1 RELEASE

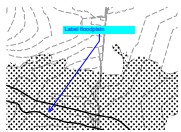
Subject: SW - Textbox with Arrow
Page Index: 128
Date: 4/2/2024 2:42:12 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: [1] Segment-1.2

Revise to SFB D for consistency.



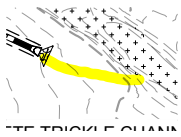
Subject: Callout
Page Index: 128
Date: 4/4/2024 5:17:17 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] Segment-1.2

Pipe and riprap needs to be within an easement

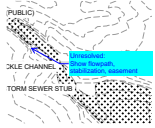


Subject: Callout
Page Index: 128
Date: 4/4/2024 5:17:27 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] Segment-1.2

Label floodplain

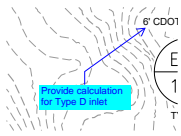


Subject: Highlight
Page Index: 128
Date: 4/4/2024 5:17:48 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] Segment-1.2



Subject: Callout
Page Index: 128
Date: 4/4/2024 5:18:07 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] Segment-1.2

Unresolved:
 Show flowpath, stabilization, easement



Subject: Callout
Page Index: 128
Date: 4/4/2024 5:23:28 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] Segment-1.2

Provide calculation for Type D inlet



Subject: Callout
Page Index: 128
Date: 4/4/2024 5:23:48 PM
Author: CDurham
Color: ■
Layer:
Space:
Page Label: [1] Segment-1.2

Show these DP's on map