

MDT-PPR23047-R1-FDR redlines.pdf Markup Summary

1 (5)



Subject: SW - Textbox with Arrow
Page Index: 1
Date: 12/19/2023 5:03:19 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
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Page Label: 1

PPR2347

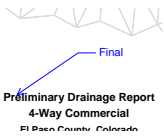


Subject: Text Box
Page Index: 1
Date: 12/29/2023 2:58:22 PM
Author: Jeff Rice - EPC Engineering Review
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Page Label: 1

Note: additional comments will be provided on additional information needed with the next review

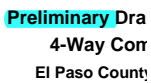


Subject: PCD Comment Legend
Page Index: 1
Date: 12/29/2023 2:58:36 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
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Subject: Callout
Page Index: 1
Date: 12/29/2023 2:58:53 PM
Author: Jeff Rice - EPC Engineering Review
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Final



Subject:
Page Index: 1
Date: 12/29/2023 2:58:58 PM
Author: Jeff Rice - EPC Engineering Review
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Preliminary

4 (5)

r Overlot grading, w
rge containers, ar
the preliminary drai
operty, are referred

Subject:
Page Index: 4
Date: 12/29/2023 1:21:49 PM
Author: Jeff Rice - EPC Engineering Review
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preliminary

Subject: Callout
Page Index: 4
Date: 12/29/2023 1:22:13 PM
Author: Jeff Rice - EPC Engineering Review
Color: [red]
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Page Label: 4

delete "preliminary"

Subject: Callout
Page Index: 4
Date: 12/29/2023 1:52:41 PM
Author: Jeff Rice - EPC Engineering Review
Color: [red]
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Page Label: 4

except for the drainageway?

Subject:
Page Index: 4
Date: 12/29/2023 2:01:42 PM
Author: Jeff Rice - EPC Engineering Review
Color: [red]
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Page Label: 4

he flows combine just south of the site

Subject: Callout
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Date: 12/29/2023 2:02:08 PM
Author: Jeff Rice - EPC Engineering Review
Color: [red]
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clarify and describe facilities under HWY 24

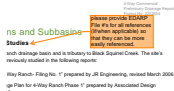
5 (2)

Subject: Callout
Page Index: 5
Date: 12/29/2023 2:03:38 PM
Author: Jeff Rice - EPC Engineering Review
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address capacities, adequacy of the existing culverts

Subject: Callout
Page Index: 5
Date: 12/29/2023 2:38:17 PM
Author: Jeff Rice - EPC Engineering Review
Color: [red]
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Add a statement that the calculated 100-year floodplain for the drainageway within the north parcel is shown on all development plans



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Author: Glenn Reese - EPC Stormwater
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please provide EDARP File #'s for all references (if/when applicable) so that they can be more easily referenced.

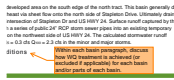


Subject: File Attachment
Page Index: 6
Date: 12/19/2023 5:08:10 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
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Page Label: 6



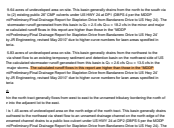
Subject: SW - Highlight
Page Index: 7
Date: 12/28/2023 8:46:57 AM
Author: Glenn Reese - EPC Stormwater
Color: ■
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Page Label: 7

The calculated runoff flows in this report are higher than those in the "MDDP



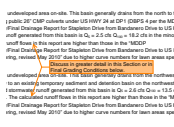
Subject: SW - Textbox with Arrow
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Author: Glenn Reese - EPC Stormwater
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Within each basin paragraph, discuss how WQ treatment is achieved (or excluded if applicable) for each basin and/or parts of each basin.



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The calculated runoff flows in this report are higher than those in the "MDDP



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Author: Glenn Reese - EPC Stormwater
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Discuss in greater detail in this Section or in Final Grading Conditions below.

see drainage plan comments. Sub-basins will be reviewed with the additional information on the next review

Subject: Callout
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Author: Jeff Rice - EPC Engineering Review
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see drainage plan comments. Sub-basins will be reviewed with the additional information on the next review

Drive from Bandanero Drive to US Hwy 24
r curve numbers for lawn areas specified in
pasture/meadow?
generally drains from the north to the south via
HWY 24 at DPT (DPRS-4) per the MIDDP
Drive from Bandanero Drive to US Hwy 24). The
= 2.5 cfs Q₁₀ = 18.2 cfs in the minor and major
can those in the MIDDP
Drive from Bandanero Drive to US Hwy 24
r curve numbers for lawn areas specified in

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pasture/meadow?

MIDDP
anero Drive to US |
for **lawn areas** spe

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Date: 12/29/2023 2:50:22 PM
Author: Jeff Rice - EPC Engineering Review
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lawn areas


can those in the M
anero Drive to US |
for **lawn areas** spe

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awn areas


8 (4)

the Final Drainage Map within the Appendix.
soff per final grading conditions which includes
ridors, paved parking areas, the construction
da, and full spectrum detention pond
veloped area of the site will be captured in sur
noff in the northern tract will remain as propos
/ sediment basin. The remaining area of the s
on historic drainage patterns.

Subject: SW - Highlight
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Date: 12/19/2023 5:13:51 PM
Author: Glenn Reese - EPC Stormwater
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full spectrum detention ponds.

Revise drainage map to match this. Drainage map shows all ponds as TSBs.
ons hydrology is shown on the Final Drainage Ma
quantity the stormwater runoff per final grading cos
site for paved roadway corridors, paved parking
mmercial development area, and full spectrum de
retention runoff from the development area of the site

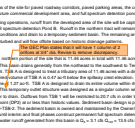
Subject: SW - Textbox with Arrow
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Date: 12/19/2023 5:14:24 PM
Author: Glenn Reese - EPC Stormwater
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Revise drainage map to match this. Drainage map shows all ponds as TSBs.



Subject: SW - Highlight
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Date: 12/19/2023 5:17:00 PM
Author: Glenn Reese - EPC Stormwater
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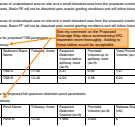
This temporary outlet structure was designed as a singular column with five 1" dia holes allowing for water to drain.



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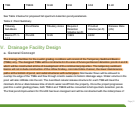
The GEC Plan states that it will have 1 column of 2 orifices at 3/4" dia. Revise to remove discrepancy.

10 (5)



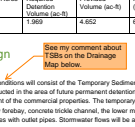
Subject: SW - Textbox with Arrow
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See my comment on the Proposed Drainage Map about summarizing WQ treatment more thoroughly. Adding to these tables would be acceptable.



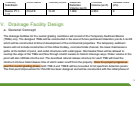
Subject: SW - Highlight
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Author: Glenn Reese - EPC Stormwater
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The drainage facilities for the overlot grading conditions will consist of the Temporary Sediment Basins (TSBs) only. The designed TSBs will be constructed in the area of future permanent detention ponds A and B which will be constructed at time of development of the commercial properties. The temporary sediment basins will not include construction of the inflow forebay, concrete trickle channel, the lower maintenance paths at the bottom of pond, and outlet structures with outlet pipes.



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See my comment about TSBs on the Drainage Map below.



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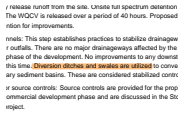
Once the project progresses past this overlot grading phase,



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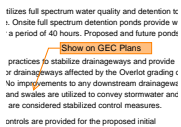
The GEC Plan and Drainage Map show the construction of two buildings and whatever the many rectangles around the buildings are (are those the storage containers?), which is more than just overlot grading. So this text does not match what is shown as proposed on those plans. Please revise as needed to remove discrepancies.

11 (13)



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Diversion ditches and swales are utilized



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Show on GEC Plans

the FRD.

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Author: Glenn Reese - EPC Stormwater
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FRD



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Author: Jeff Rice - EPC Engineering Review
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stormwater discharges are routed across pervious areas prior to capture in diversion ditches constructed at the Overlot grading stage.




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this is not consistent with the site design

routed across previous areas prior to capture in divert
his practice promotes infiltration and reduces peak ru
ases of development through the use of grass swales.

step utilizes full spectrum water quality and detention
the site. **temporary sediment basins** provide
of over a period of 40 hours. Proposed and future con
ts.


ishes practices to stabilize drainageways and provid
to major drainageways affected by the Overlot grading
ment. No improvements to any downstream drainage

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Onsite full spectrum detention ponds


tion at stormwater outfalls. There are no major drainageways affected
the development phase of the development. No improvements to any
or anticipated at this time. Diversion ditches and basins are utilized to
off to the temporary **sediment basins**. These are considered stabiliz
water the need for source controls. Source controls are provided for
1 phase and the commercial development phase and are discussed in 1
4 Report for this project.

provide the
required analysis

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provide the required analysis

se stream channels. This step establishes
i at stormwater outfalls. There are no major
development phase of the development. I
anticipated at this time. Diversion ditches
to the **temporary sediment basins**. These
ler the need for source controls. Source c
ase and the commercial development ph
sport for this project.

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temporary sediment basins.

via **future** po
rlier sections

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future


the future deter
the **Overlot** gra

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Overlot


the Overlot grading

initial

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initial

ion has been pro
ince

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has been


be provided via future ponds A and
explained in earlier sections, Tempora
constructed with similar basin geor
will be?
full spectrum detention has been pro
and Maintenance
spectrum detention ponds are to be ow

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will be?


12 (9)

able Cost
cost is presented will

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Author: Glenn Reese - EPC Stormwater
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is presented

of Probable Cost
of probable cost is presented will be provided with a Final Dr
Control Plan

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\$50k is shown in the FAE for a PBMP. Remove
from FAE or provide an itemized breakdown of that
item here.

Summary
The Preliminary Drai
ncludes preliminary
ditches and tempora

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Preliminary

are submitted since the project is detailing more than 1 acre. The Engineer
intended and for the initial phase of development has been submitted under
Drainage and Bridge Fees
Summary - delete - this is the FDR
A detailed Drainage report discusses the site conditions, a regional of area
includes preliminary subcatchment of the site, and as to in
and temporary sediment basins to control runoff from the site until
after the construction phase. This report also discusses the preliminary design
of the site and the proposed FDR. The proposed improvements will not
any disturbance or surrounding development.
a basin will be owned and maintained by the Owner/Developer and each site
a permanent control measure will be owned and maintained by a Municipality
in the future. All drainage facilities were inspected on the 12/29/2023 during the

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delete - this is the FDR

Plan
via Municipalities as Erosion Control Plan and associated cost estimate
to a drainage area that is not. The Erosion Control Plan for Village
of development has been submitted concurrently with this report.
Edge Fees - a site development plan
See with preliminary drainage report. An estimate of basin fees for th
ated and provided with the FDR.

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a site development plan

VI - Operation of Portable Cistern
VII - Erosion Control Plan
VIII - Drainage and Bridge Fees
IX - Summary
X - References

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he preliminary drainage report. An estimate of basin fees for the proposed development will be calculated and provided with the FDR.

VI - Erosion Control Plan
VII - Drainage and Bridge Fees
IX - Summary
X - References

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the preliminary development for the site and additional detail will be provided in the FDR.

Edge and Bridge Fees
VII - Drainage and Bridge Fees
IX - Summary
X - References

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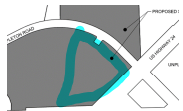
PBMPs are required on the south side


VII - Drainage and Bridge Fees
IX - Summary
X - References

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future construction of the permanent control measure

14 (1)



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25 (1)

L F 20 1 5 26 1 152

Hydrologic calculations not checked in detail pending additional information per drainage plan redlines

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Author: Jeff Rice - EPC Engineering Review
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Hydrologic calculations not checked in detail pending additional information per drainage plan redlines

42 (1)

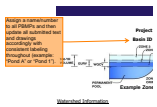
U - WU & DETENTION

Why are the following pond calcs provided (presumably for Pond B) when no detail drawings were provided to compare the calcs to? If the pond design is to come under a different EDARP submittal then an SF or alternative flow control method must be provided from this drainage report to avoid confusion.

Subject: SW - Textbox
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Author: Glenn Reese - EPC Stormwater
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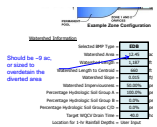
Why are the following pond calcs provided (presumably for Pond B) when no detail drawings were provided to compare the calcs to? If the pond design is to come under a different EDARP submittal (like an SF, for example) than just remove the calcs from this drainage report to avoid confusion.

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Assign a name/number to all PBMPs and then update all submitted text and drawings accordingly with consistent labeling throughout (example: "Pond A" or "Pond 1").



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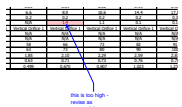
Should be ~9 ac, or sized to overdetermine the diverted area



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Author: Jeff Rice - EPC Engineering Review
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Verify that slope and lengths are calibrated to result in flows to approximate the Rational calculations for flows entering the pond

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Author: Jeff Rice - EPC Engineering Review
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this is too high - revise as appropriate



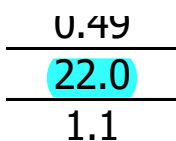
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see comment on Table Builder sheet. These flows should approximate the total calculated flows entering the pond. (These values are less than half)



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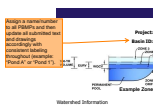
8.9



Subject:
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Author: Jeff Rice - EPC Engineering Review
Color: ■
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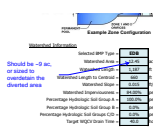
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49 (2)



Subject: SW - Textbox with Arrow
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Author: Glenn Reese - EPC Stormwater
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Assign a name/number to all PBMPs and then update all submitted text and drawings accordingly with consistent labeling throughout (example: "Pond A" or "Pond 1").



Subject: Callout
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Date: 12/29/2023 2:09:54 PM
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Should be ~9 ac, or sized to overdetain the diverted area

51 (2)



Subject: Callout
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Date: 12/29/2023 2:05:13 PM
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the highlighted cells are too high - revise as appropriate

Revise grading to include only historic tributary area or acquire downstream drainage easements and address stable conveyance

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Page Label: 54

Revise grading to include only historic tributary area or acquire downstream drainage easements and address stable conveyance

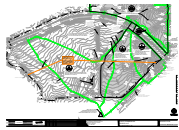
55 (1)

Provide all calculations and analyses for culverts, swales, offsite conveyances, TSB spillways, etc.

Subject: Text Box
Page Index: 55
Date: 12/29/2023 2:55:57 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: 17

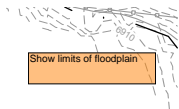
Provide all calculations and analyses for culverts, swales, offsite conveyances, TSB spillways, etc.

59 (32)



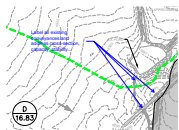
Subject: SW - Textbox with Arrow
Page Index: 59
Date: 12/28/2023 8:49:10 AM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: [1] EX DNG

Please label the existing ponds shown in the MDDP Amendment (May 2010). You have currently already labeled 3 out of the 5. Also label these other 2.



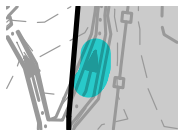
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Page Index: 59
Date: 12/20/2023 8:01:33 AM
Author: Glenn Reese - EPC Stormwater
Color: ■
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Space:
Page Label: [1] EX DNG

Show limits of floodplain

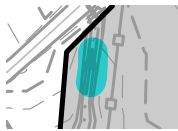



Subject: Callout
Page Index: 59
Date: 12/29/2023 8:42:15 AM
Author: Jeff Rice - EPC Engineering Review
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Page Label: [1] EX DNG

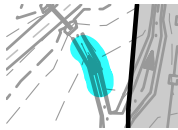
Label all existing conveyances and address cross-section, capacity, stability...




Subject:
Page Index: 59
Date: 12/29/2023 8:33:47 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
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Space:
Page Label: [1] EX DNG




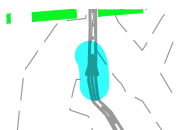
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Page Index: 59
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


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Page Index: 59
Date: 12/29/2023 8:33:56 AM
Author: Jeff Rice - EPC Engineering Review
Color: 
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Page Label: [1] EX DNG




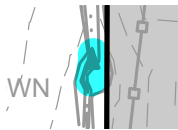
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Page Index: 59
Date: 12/29/2023 8:34:03 AM
Author: Jeff Rice - EPC Engineering Review
Color: 
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Page Label: [1] EX DNG




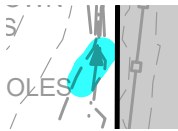
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Page Index: 59
Date: 12/29/2023 8:34:06 AM
Author: Jeff Rice - EPC Engineering Review
Color: 
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Page Label: [1] EX DNG



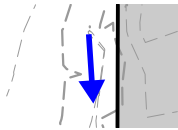
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Page Index: 59
Date: 12/29/2023 8:34:09 AM
Author: Jeff Rice - EPC Engineering Review
Color: 
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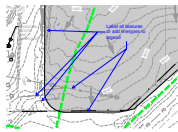
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Page Index: 59
Date: 12/29/2023 8:34:36 AM
Author: Jeff Rice - EPC Engineering Review
Color: 
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Space:
Page Label: [1] EX DNG



Subject:
 Page Index: 59
 Date: 12/29/2023 8:34:45 AM
 Author: Jeff Rice - EPC Engineering Review
 Color: ■
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 Space:
 Page Label: [1] EX DNG



Subject: Arrow
 Page Index: 59
 Date: 12/29/2023 8:34:58 AM
 Author: Jeff Rice - EPC Engineering Review
 Color: ■
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 Page Label: [1] EX DNG



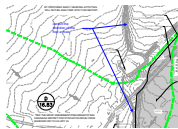
Subject: Callout
 Page Index: 59
 Date: 12/29/2023 8:37:10 AM
 Author: Jeff Rice - EPC Engineering Review
 Color: ■
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Label all features or add linetypes to legend



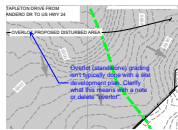
Subject: Callout
 Page Index: 59
 Date: 12/29/2023 8:36:59 AM
 Author: Jeff Rice - EPC Engineering Review
 Color: ■
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 Space:
 Page Label: [1] EX DNG

Is drainageway obstructed?



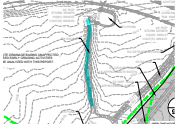
Subject: Callout
 Page Index: 59
 Date: 12/29/2023 8:42:56 AM
 Author: Jeff Rice - EPC Engineering Review
 Color: ■
 Layer:
 Space:
 Page Label: [1] EX DNG

correct the direction of the flow arrows

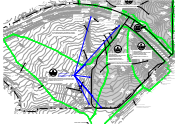


Subject: Callout
 Page Index: 59
 Date: 12/29/2023 10:17:42 AM
 Author: Jeff Rice - EPC Engineering Review
 Color: ■
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 Space:
 Page Label: [1] EX DNG

Overlot (standalone) grading isn't typically done with a site development plan. Clarify what this means with a note or delete "overlot".

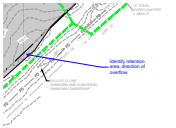


Subject:
Page Index: 59
Date: 12/29/2023 8:42:31 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
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Page Label: [1] EX DNG



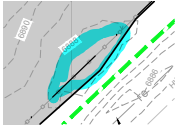
Subject: Callout
Page Index: 59
Date: 12/29/2023 8:46:58 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
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Space:
Page Label: [1] EX DNG

Provide design points with all flow information



Subject: Callout
Page Index: 59
Date: 12/29/2023 2:00:48 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] EX DNG

Identify retention area, direction of overflow



Subject:
Page Index: 59
Date: 12/29/2023 8:48:00 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] EX DNG

DESIGN POINT	CONTRIBUTING AREA	SIG (sq)	SCHE (sq)
1	0.2	4.8	15.1
2	NTING	3.1	22.4

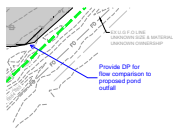
Subject: Callout
Page Index: 59
Date: 12/29/2023 8:49:22 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] EX DNG

Add all site-level design points

DESIGN POINT	CONTRIBUTING AREA	SIG (sq)	SCHE (sq)
1	0.2	4.8	15.1
2	NTING	3.1	22.4

Subject: Callout
Page Index: 59
Date: 12/29/2023 8:49:50 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] EX DNG

Provide total flows also



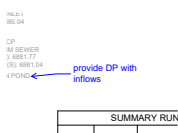
Subject: Callout
Page Index: 59
Date: 12/29/2023 10:11:18 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
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Page Label: [1] EX DNG

Provide DP for flow comparison to proposed pond outfall



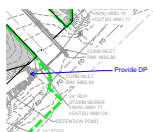
Subject: Callout
Page Index: 59
Date: 12/29/2023 10:12:00 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] EX DNG

provide DP with flows released



Subject: Callout
Page Index: 59
Date: 12/29/2023 10:12:23 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] EX DNG

provide DP with inflows



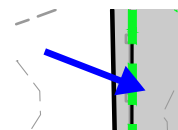
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Page Index: 59
Date: 12/29/2023 10:12:46 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
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Page Label: [1] EX DNG

Provide DP

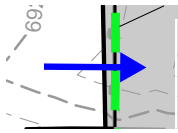


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Page Index: 59
Date: 12/29/2023 1:18:00 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
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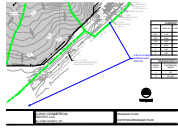
address offsite basins flowing onto the site



Subject: Arrow
Page Index: 59
Date: 12/29/2023 1:17:27 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] EX DNG

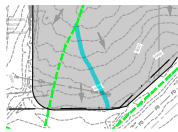


Subject: Arrow
Page Index: 59
Date: 12/29/2023 1:17:36 PM
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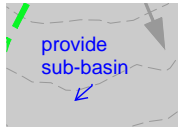


Subject: Callout
Page Index: 59
Date: 12/29/2023 2:00:19 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] EX DNG

Call out drainage facilities under HWY 24



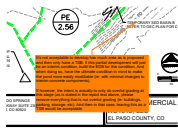
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Page Index: 59
Date: 12/29/2023 2:08:00 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] EX DNG



Subject: Callout
Page Index: 59
Date: 12/29/2023 2:08:45 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] EX DNG

provide sub-basin

60 (25)



Subject: SW - Textbox with Arrow
Page Index: 60
Date: 12/19/2023 5:31:11 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: [1] PR DNG

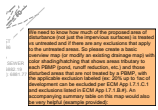
It's not acceptable to develop has much area as is proposed and then only have a TSB. If this partial development will just be an interim condition, build the EDB for this condition. And when doing so, have the ultimate condition in mind to make the pond more easily modifiable (ie: with minimal changes to interim concrete components).

If however, the intent is actually to only do overlot grading at this stage (as is stated in the report text above, please remove everything that is overlot grading (ie: buildings, parking, storage, etc). And then in that case, leaving this as a TSB would be acceptable.

-FEMP SUMMARY TABLE-			
BASE	FEMP	PERCENT	PERM
ACR	MECL(C)		
ACR	1.00	80.0%	80.0%
ASL	1.00	80.0%	80.0%
RSAL	0.00	0.0%	0.0%
RSAL	0.00	0.0%	0.0%

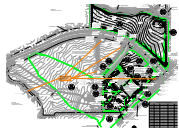
* FEMPED AREAS ARE "AS-IS" OF EXISTING RESIDENT AREA PER 10/24/2018 PERMITS

Subject: Image
Page Index: 60
Date: 12/19/2023 5:22:48 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
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Page Label: [1] PR DNG



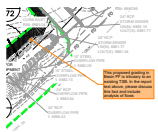
Subject: SW - Textbox
Page Index: 60
Date: 12/19/2023 5:22:30 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: [1] PR DNG

We need to know how much of the proposed area of disturbance (not just the impervious surfaces) is treated vs untreated and if there are any exclusions that apply to the untreated areas. So please create a basic overview map (or modify an existing drainage map) with color shading/hatching that shows areas tributary to each PBMP (pond, runoff reduction, etc.) and those disturbed areas that are not treated by a PBMP, with the applicable exclusion labeled (ex: 20% up to 1ac of development can be excluded per ECM App I.7.1.C.1 and exclusions listed in ECM App I.7.1.B.#). An accompanying summary table on this map would also be very helpful (example provided):



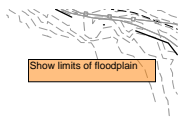
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Page Index: 60
Date: 12/19/2023 5:32:50 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
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Space:
Page Label: [1] PR DNG

Please label the existing ponds shown in the MDDP Amendment (May 2010)



Subject: SW - Textbox with Arrow
Page Index: 60
Date: 12/19/2023 5:34:15 PM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
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Page Label: [1] PR DNG

This proposed grading in Basin PF is tributary to an existing TSB. In the report text above, please discuss this fact and include analysis of flows



Subject: SW - Textbox
Page Index: 60
Date: 12/20/2023 8:09:40 AM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: [1] PR DNG

Show limits of floodplain



Subject: SW - Textbox with Arrow
Page Index: 60
Date: 12/20/2023 8:09:33 AM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: [1] PR DNG

This EDB is going to as relatively close to the existing drainage way as test borings 3 and 4 that had shallow groundwater. Consider this in regards to the placement and design of this EDB.

Per CDPHE's "Low Risk Discharge Guidance - Discharges of Uncontaminated Groundwater to Land," discharging groundwater to a pond or other SW conveyance is prohibited unless properly permitted through CDPHE. Please review this guidance and the applicable permits. The guidance and permits can be found on CDPHE's website.

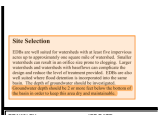
See excerpts to the left from MHFD's DCM Volume 2 and 3 for potential concerns with groundwater in an EDB and the recommended mitigation options (like a clay or geomembrane liner). Please discuss this potential shallow groundwater in the report text above. If you decide not to design for mitigation now and shallow groundwater is encountered during or after construction (or at PA/FA), proper mitigation and permitting will need to be implemented at that time



Subject: Image
Page Index: 60
Date: 12/20/2023 8:09:23 AM
Author: Glenn Reese - EPC Stormwater
Color: ■
Layer:
Space:
Page Label: [1] PR DNG



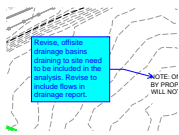
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Page Index: 60
Date: 12/20/2023 8:09:23 AM
Author: Glenn Reese - EPC Stormwater
Color: ■
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Page Label: [1] PR DNG



Subject: Image
Page Index: 60
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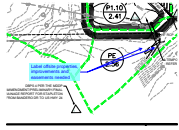


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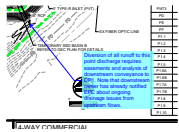
Subject: Callout
Page Index: 60
Date: 12/20/2023 3:12:44 PM
Author: lpackman
Color: ■
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Page Label: [1] PR DNG

Revise, offsite drainage basins draining to site need to be included in the analysis. Revise to include flows in drainage report.



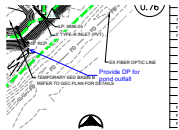
Subject: Callout
Page Index: 60
Date: 12/29/2023 1:19:10 PM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] PR DNG

Label offsite properties, improvements and easements needed



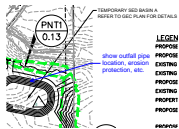
Subject: Callout
Page Index: 60
Date: 12/29/2023 10:21:04 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] PR DNG

Diversion of all runoff to this point discharge requires easements and analysis of downstream conveyance to DP1. Note that downstream owner has already notified EPC about ongoing drainage issues from upstream flows.



Subject: Callout
Page Index: 60
Date: 12/29/2023 10:10:44 AM
Author: Jeff Rice - EPC Engineering Review
Color: ■
Layer:
Space:
Page Label: [1] PR DNG

Provide DP for pond outfall

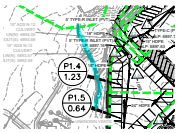


Subject: Callout
Page Index: 60
Date: 12/29/2023 10:28:28 AM
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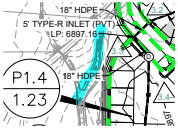
show outfall pipe location, erosion protection, etc.



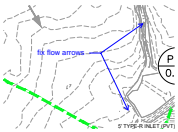
Subject:
Page Index: 60
Date: 12/29/2023 10:22:12 AM
Author: Jeff Rice - EPC Engineering Review
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Page Label: [1] PR DNG



Subject:
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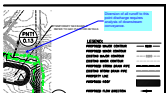


Subject:
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Subject: Callout
 Page Index: 60
 Date: 12/29/2023 10:23:16 AM
 Author: Jeff Rice - EPC Engineering Review
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fix flow arrows



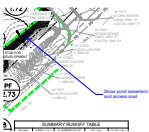
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 Page Index: 60
 Date: 12/29/2023 10:31:06 AM
 Author: Jeff Rice - EPC Engineering Review
 Color: ■
 Layer:
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 Page Label: [1] PR DNG

Diversion of all runoff to this point discharge requires analysis of downstream conveyance.



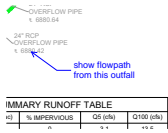
Subject: Callout
 Page Index: 60
 Date: 12/29/2023 1:18:18 PM
 Author: Jeff Rice - EPC Engineering Review
 Color: ■
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 Page Label: [1] PR DNG

address offsite basins flowing onto the site



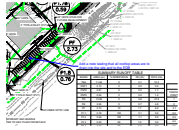
Subject: Callout
 Page Index: 60
 Date: 12/29/2023 1:55:30 PM
 Author: Jeff Rice - EPC Engineering Review
 Color: ■
 Layer:
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 Page Label: [1] PR DNG

Show pond easement and access road



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show flowpath from this outfall



Subject: Callout
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Author: Jeff Rice - EPC Engineering Review
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Page Label: [1] PR DNG

Add a note stating that all rooftop areas are to drain into the site and to the EDB