

ENG-PUDSP20003-R1-PDR-redlines.pdf Markup Summary

1 (4)

RAINAGE PLAN
20-X

LORSON RANCH

Subject: Cloud+
Page Index: 1
Date: 7/10/2020 2:18:02 PM
Author: dsdrice
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Page Label: 1

007

RAINAGE PLAN
20-X

RAINAGE PLAN
20-X

Subject: Cloud+
Page Index: 1
Date: 7/10/2020 2:18:23 PM
Author: dsdrice
Color: ■
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Page Label: 1

003

see comment letter also

2
Cc

Subject: Text Box
Page Index: 1
Date: 7/14/2020 11:21:16 AM
Author: dsdrice
Color: ■
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Page Label: 1

see comment letter also

Engineering Review
07/14/2020 11:20:50 AM
dsdrice
JedrR@pudsp.com
(719) 239-7677
EPC Planning & Community
Development Department

21:
Cook

Subject: EPC ENG Review
Page Index: 1
Date: 7/14/2020 3:25:37 PM
Author: dsdrice
Color: ■
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Page Label: 1

8 (1)



Subject: Highlight
Page Index: 8
Date: 7/13/2020 6:54:43 PM
Author: dsdrice
Color: ■
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Page Label: 8

18 (5)

of 65.5k, will flow into the 36" storm sewer stub via future
corner of Lorson Boulevard and Willow Drive and across three
drainage basins. This stub has been designed for existing and future
basins. CI Line will provide 1.50% slope to the 36" storm sewer
stub. All storm flow will have capacity to accommodate the existing flows.
Can't this flow be put in the 36"
VCP 100" x 100" (100' x 100')
Inlet Number: 100-011
Total Inlet Flow: 4.82 cfs
Flow System: 0
7% capacity = 10.5 cfs, okay

Subject: Callout
Page Index: 18
Date: 7/13/2020 8:39:27 PM
Author: dsdrice
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can't this flow be put in the 36" RCP with a
sediment basin?

19.9	33.4
------	------

ws are in cfs (cubic feet per second)
 1c? →
 1a is located south of Lonsor
 it from Basin C1.6. A future is
 north to this design point. The to
 is basin. In the 5-year storm eve

Subject: Callout
Page Index: 18
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Author: dsdrice
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1c?

ortn to this design point. In the 5-year storm eve
 is basin. In the 5-year storm eve
 d to Design Point 3. In the 100-
 fs will be routed to Design Point 3
 1a? →
 1b is located at the east er
 it from Basin C1.3 and Basin C1
 at this design point. The total fut
 in. In the 5-year storm event ?

Subject: Callout
Page Index: 18
Date: 7/13/2020 8:42:06 PM
Author: dsdrice
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1a?

nature flow is 01.1cfs/10.0cfs in the 20 100-year
 4 37.1cfs will flow into the 36" storm sewer s
 rent 9.9cfs will be routed north to Design Point
 1.2cfs will flow into the 36" storm sewer at
 C1.1 and 1.2?
 r of Lorton Boulevard and Watley Drive and
 a Drive. This inlet has been designed for exist
 C1.1-ex will generate 3.2cfs/21.4cfs in the 5/1
 1 sump will have capacity to accommodate the
 lows.

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Page Index: 18
Date: 7/13/2020 8:43:47 PM
Author: dsdrice
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C1.1 and 1.2?

orson Boulevard and Watley Drive and flow is fro
 use storm sewers will be constructed from this futu
 The total future flow is 12.8cfs/28.3cfs in the 5/100-yr
 1 event 12cfs will be routed north to Design Point 1b. A
 100-year storm event 20cfs will be routed north to Des
 1c? →
 and DP 1c?
 st end of Lorton Boulevard and accepts flows fro
 in C1.4 and 36" RCP storm sewer will be installed out
 al future flow is 37.1cfs/75.3cfs in the 5/100-year stor
 ent 37.1cfs will flow into the 36" storm sewer stub v
 event 9.9cfs will be routed north to Design Point 1b. C
 65.3cfs will flow into the 36" storm sewer stub v

Subject: Callout
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and DP 1c?

19 (5)

1c? →
 1b? →
 1c is located at the NW c
 e Drive.

Subject: Callout
Page Index: 19
Date: 7/13/2020 8:44:39 PM
Author: dsdrice
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1b?

and 1c. T

Subject:
Page Index: 19
Date: 7/13/2020 8:46:16 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 19

1c

in Basin: C1.5
inflow: 0.13cfs from Des. P1 to
manhole: 2.5cfs
Flow Suppressed: 0
des: 0
Capacity: Street edge = 0.85, capacity = 32.1cfs (that street is okay)

3.2/21.4 in interim condition?

Point # is the storm sewer pipe flow in Wabasha Drive from Design P1A 1 + 1.000/2.26 in the 5/100-year storm event in the storm sewer.

Point # is the storm sewer pipe flow in London Boulevard east of 10th and 2nd. The 10th pipe flow is 43.26/88.61cfs in the 5/100-year storm event.

Point # is located at the SE corner of London Boulevard and a future SW storm sewer west from 4th and Newmarket to the south side street.

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Author: dsdrice
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3.2/21.4 in interim condition?

pipe flow in Wabasha Drive from Design P1A 1 and 1c. The 10th pipe flow storm event in the storm sewer.

in pipe flow in London Boulevard east of Wabasha Drive from Design P1A 1 + 43.26/88.61cfs in the 5/100-year storm event in the storm sewer.

Point # is the storm sewer pipe flow in London Boulevard east of 10th and 2nd. The 10th pipe flow is 43.26/88.61cfs in the 5/100-year storm event.

Point # is located at the SE corner of London Boulevard and a future SW storm sewer west from 4th and Newmarket to the south side street.

in P1 to
Flow Suppressed: 0

Subject: Callout
Page Index: 19
Date: 7/13/2020 8:55:16 PM
Author: dsdrice
Color: ■
Layer:
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address interim and ultimate

to west of wabasha curve from Design year storm events in the storm sewer.

and a future street and accepts flows and east.

SW of Brooktrout Trl.

number:
Flow: 14.3cfs
sed: 0

Subject: Callout
Page Index: 19
Date: 7/13/2020 8:56:28 PM
Author: dsdrice
Color: ■
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Page Label: 19

SW of Brooktrout Trl.

20 (1)

ultimate developed

Design Point # is the storm sewer pipe flow in Wabasha Drive from Design P1A 1 + 43.26/88.61cfs in the 5/100-year storm event in the storm sewer.

Design Point # is the storm sewer pipe flow in London Boulevard east of 10th and 2nd. The 10th pipe flow is 43.26/88.61cfs in the 5/100-year storm event.

Point # is located at the SE corner of London Boulevard and a future SW storm sewer west from 4th and Newmarket to the south side street.

in P1 to
Flow Suppressed: 0

Subject: Callout
Page Index: 20
Date: 7/13/2020 8:57:54 PM
Author: dsdrice
Color: ■
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Page Label: 20

ultimate developed

22 (1)

Point # is the storm sewer pipe flow west of Sp 4 pipe flow is 38.1cfs/81.9cfs in the 5/100-year st.

Design Point # is the storm sewer pipe flow in Wabasha Drive from Design P1A 1 + 43.26/88.61cfs in the 5/100-year storm event in the storm sewer.

Point # is the storm sewer pipe flow west of Sp 4 pipe flow is 38.1cfs/81.9cfs in the 5/100-year storm event.

Point # is the storm sewer pipe flow west of Sp 4 pipe flow is 38.1cfs/81.9cfs in the 5/100-year storm event.

southwest inflow to pond C1

Subject: Callout
Page Index: 22
Date: 7/13/2020 9:12:42 PM
Author: dsdrice
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Page Label: 22

southwest inflow to pond C1

24 (3)

).

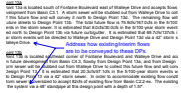


Subject: Highlight
Page Index: 24
Date: 7/13/2020 9:16:32 PM
Author: dsdrice
Color: ■
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Page Label: 24

T.0013/ 10.



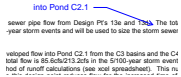
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Page Index: 24
Date: 7/13/2020 9:16:51 PM
Author: dsdrice
Color:
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Space:
Page Label: 24



Subject: Callout
Page Index: 24
Date: 7/13/2020 9:23:00 PM
Author: dsdrice
Color:
Layer:
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Page Label: 24

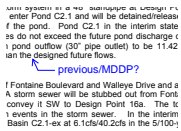
Address how existing/interim flows are to be conveyed to these DPs.

26 (3)



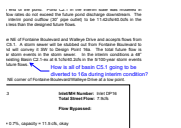
Subject: Callout
Page Index: 26
Date: 7/13/2020 9:25:58 PM
Author: dsdrice
Color:
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Page Label: 26

into Pond C2.1



Subject: Callout
Page Index: 26
Date: 7/14/2020 8:12:37 AM
Author: dsdrice
Color:
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Page Label: 26

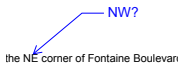
previous/MDDP?



Subject: Callout
Page Index: 26
Date: 7/14/2020 8:17:09 AM
Author: dsdrice
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Page Label: 26

How is all of basin C5.1 going to be diverted to 16a during interim condition?

27 (1)



Subject: Callout
Page Index: 27
Date: 7/14/2020 8:19:18 AM
Author: dsdrice
Color:
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Page Label: 27

NW?

30 (1)

agency overflow conveyance structure just downs...
is a 20' CDOT Type R inlet with an 18" throat ope...
CP outflow pipe will connect the conveyance str...
which outfalls at...
ated at the east side of Big Bird Drive and Piping I...
C7.1-C7.3
Inlet/MH No
Total Street

Subject: Callout
Page Index: 30
Date: 7/14/2020 8:25:55 AM
Author: dsdrice
Color: ■
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Page Label: 30

which outfalls at...

32 (1)

Address how interim flows are captured from parts...
of C4.2-ex. Sediment basins/standpipes or other...
methods are required.

Subject: Callout
Page Index: 32
Date: 7/14/2020 8:35:29 AM
Author: dsdrice
Color: ■
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Page Label: 32

Address how interim flows are captured from parts of C4.2-ex. Sediment basins/standpipes or other methods are required.

33 (1)

42" RCP
form sewer pipe flow from Design P1 31a (storm sewer...
c4.2.2.5.1 in the 5/100-year storm events in the storm...
form sewer pipe flow from Design P1 30 (storm sewer), I...
31c. The total pipe flow is 445,100 gals in the 5/100...
Xcel spreadsheets.

Subject: Callout
Page Index: 33
Date: 7/14/2020 8:38:04 AM
Author: dsdrice
Color: ■
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Page Label: 33

42" RCP

35 (3)

This undeveloped runoff needs to be kept out of...
the streets if possible.

Subject: Callout
Page Index: 35
Date: 7/14/2020 11:17:22 AM
Author: dsdrice
Color: ■
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This undeveloped runoff needs to be kept out of the streets if possible.

How do flows get to the Pond in the interim...
condition?

Subject: Callout
Page Index: 35
Date: 7/14/2020 8:45:14 AM
Author: dsdrice
Color: ■
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Page Label: 35

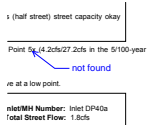
How do flows get to the Pond in the interim condition?

when?

Subject: Callout
Page Index: 35
Date: 7/14/2020 8:45:45 AM
Author: dsdrice
Color: ■
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when?

36 (1)



Subject: Callout
Page Index: 36
Date: 7/14/2020 11:19:07 AM
Author: dsdrice
Color: ■
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Page Label: 36

not found

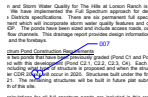
37 (1)



Subject: Callout
Page Index: 37
Date: 7/14/2020 11:20:21 AM
Author: dsdrice
Color: ■
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Space:
Page Label: 37

Detailed review of DPs ended here.

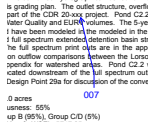
42 (1)



Subject: Cloud+
Page Index: 42
Date: 7/14/2020 12:56:49 PM
Author: dsdrice
Color: ■
Layer:
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Page Label: 42

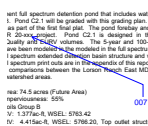
007

43 (2)



Subject: Callout
Page Index: 43
Date: 7/14/2020 3:07:46 PM
Author: dsdrice
Color: ■
Layer:
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Page Label: 43

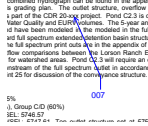
007



Subject: Callout
Page Index: 43
Date: 7/14/2020 3:07:55 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 43

007


44 (3)



Subject: Callout
Page Index: 44
Date: 7/14/2020 3:07:23 PM
Author: dsdrice
Color: ■
Layer:
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Page Label: 44


007

comparisons between the i watershed areas.
55% ← 52%?
%, Group C/D (80%)
'SEL: 5758.01
WSFI : 5759.08 Ton outlet :

Subject: Callout
Page Index: 44
Date: 7/14/2020 3:08:47 PM
Author: dsdrice
Color: 
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Page Label: 44

52%?


at 5758.90, (

Subject:
Page Index: 44
Date: 7/14/2020 3:10:27 PM
Author: dsdrice
Color: 
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Space:
Page Label: 44

5758.9


45 (5)

overflow will be built in the the CDR 20 yyr project. Por Quality and QCV volumes. have been modeled in the mod full spectrum extended detentic full spectrum print cuts are in outflow comparisons between adjacent for watershed areas.
007
• Watershed Area E
• Watershed Imperv
• Hydrologic Soils G
• Zone 1 WOOD: 1.

Subject: Callout
Page Index: 45
Date: 7/14/2020 3:14:32 PM
Author: dsdrice
Color: 
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007

State whether flows are in conformance with Pond C5 design.
007

Subject: Callout
Page Index: 45
Date: 7/14/2020 3:19:15 PM
Author: dsdrice
Color: 
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Page Label: 45


State whether flows are in conformance with Pond C5 design.

007

Subject: Callout
Page Index: 45
Date: 7/14/2020 3:20:23 PM
Author: dsdrice
Color: 
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007

Address sediment control for offsite areas. Will LRMD maintain the BMPs, streets and storm drains until development is complete?
007

Subject: Callout
Page Index: 45
Date: 7/14/2020 3:21:53 PM
Author: dsdrice
Color: 
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Address sediment control for offsite areas. Will LRMD maintain the BMPs, streets and storm drains until development is complete?

see all the new county systems to new county or plating of land as part of the plat recordation in Ranch Metro District will compile and submit fees for the approved plats and shall show name.

Subject: Callout
Page Index: 45
Date: 7/14/2020 3:22:29 PM
Author: dsdrice
Color: ■
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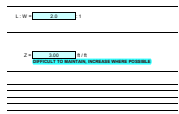
please attach in Appendix.

79 (1)



Subject: Highlight
Page Index: 79
Date: 7/13/2020 5:15:49 PM
Author: dsdrice
Color: ■
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Page Label: 79

121 (1)



Subject:
Page Index: 121
Date: 7/14/2020 2:33:10 PM
Author: dsdrice
Color: ■
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Page Label: 121

DIFFICULT TO MAINTAIN, INCREASE WHERE POSSIBLE

155 (1)

Configuration (Retention Pond)

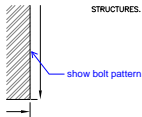
Time	Flow	Level
0.00	0.00	0.00
0.25	0.00	0.00
0.50	0.00	0.00
0.75	0.00	0.00
1.00	0.00	0.00
1.25	0.00	0.00
1.50	0.00	0.00
1.75	0.00	0.00
2.00	0.00	0.00
2.25	0.00	0.00
2.50	0.00	0.00
2.75	0.00	0.00
3.00	0.00	0.00
3.25	0.00	0.00
3.50	0.00	0.00
3.75	0.00	0.00
4.00	0.00	0.00
4.25	0.00	0.00
4.50	0.00	0.00
4.75	0.00	0.00
5.00	0.00	0.00
5.25	0.00	0.00
5.50	0.00	0.00
5.75	0.00	0.00
6.00	0.00	0.00
6.25	0.00	0.00
6.50	0.00	0.00
6.75	0.00	0.00
7.00	0.00	0.00
7.25	0.00	0.00
7.50	0.00	0.00
7.75	0.00	0.00
8.00	0.00	0.00
8.25	0.00	0.00
8.50	0.00	0.00
8.75	0.00	0.00
9.00	0.00	0.00
9.25	0.00	0.00
9.50	0.00	0.00
9.75	0.00	0.00
10.00	0.00	0.00

55%?

Subject: Callout
Page Index: 155
Date: 7/14/2020 3:09:09 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 155

55%?

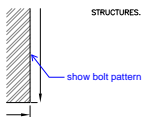
182 (1)



Subject: Callout
Page Index: 182
Date: 7/14/2020 1:14:20 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 182

show bolt pattern

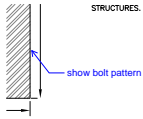
183 (1)



Subject: Callout
Page Index: 183
Date: 7/14/2020 1:14:07 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 183

show bolt pattern

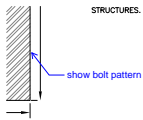
184 (1)



Subject: Callout
Page Index: 184
Date: 7/14/2020 1:12:32 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 184

show bolt pattern

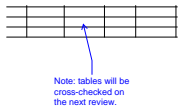
185 (1)



Subject: Callout
Page Index: 185
Date: 7/14/2020 1:11:48 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 185

show bolt pattern

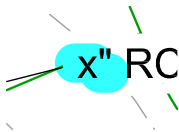
212 (1)



Subject: Callout
Page Index: 212
Date: 7/14/2020 3:18:06 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 212

Note: tables will be cross-checked on the next review.

213 (3)



Subject:
Page Index: 213
Date: 7/13/2020 8:22:16 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 213



Subject: Callout
Page Index: 213
Date: 7/14/2020 1:26:45 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 213

Show interim grading to divert runoff to the pond or pipe



Subject: Callout
Page Index: 213
Date: 7/14/2020 1:28:31 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 213

How is sediment control provided for this basin before runoff gets to the street?

215 (2)



Subject: Callout
Page Index: 215
Date: 7/14/2020 1:24:56 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 215

Sediment basin/riser?



Subject: Callout
Page Index: 215
Date: 7/14/2020 1:25:36 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 215

Sediment basins/risers?

217 (1)



Subject: Callout
Page Index: 217
Date: 7/14/2020 8:18:30 AM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 217

How is basin C5.1 flow diverted to DP 16a?

219 (1)



Subject: Cloud+
Page Index: 219
Date: 7/13/2020 8:45:45 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 219

DP labels don't appear to match the narrative