

Markup Summary

5/30/2019 4:26:34 PM (1)

ah Lane, El Paso County, Colorado, adjacent to south of East Woodmen Road, between Powers Lane and the north one-half of Section 10, Township 10N, Range 10E, Principal Meridian in the County of El Paso, Colorado. Property assessor's shows 5.01 acres. Please revise. The subject property is 5.01 acres and is adjacent to a street with moderate slopes to 2-existing water courses in a southerly direction. The subject property is to be developed with gravel parking and a storage yard. Construction is anticipated at this time.

Subject: Engineer
Page Label: 5
Author: dsdgrimm
Date: 5/30/2019 4:26:34 PM
Color: ■

This was discussed at our meeting

Property assessor's shows 5.01 acres. Please revise.
Corrected area to 5.01 acres

5/30/2019 4:29:46 PM (1)



Subject: Engineer
Page Label: 5
Author: dsdgrimm
Date: 5/30/2019 4:29:46 PM
Color: ■

This was discussed at our meeting

A gravel driving area is being placed in the storage area. Mention this in the report.
This has been revised to a 24'x40' gravel drive and is include in plan and report

5/30/2019 4:35:05 PM (1)

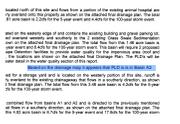


Subject: Engineer
Page Label: 33
Author: dsdgrimm
Date: 5/30/2019 4:35:05 PM
Color: ■

This was discussed at our meeting

Based on previous site visits, it does not appear that this swale exists.
The swales exist and will cleaned and restored, discussed in report

5/30/2019 5:16:45 PM (1)

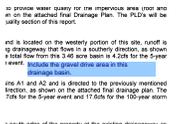


Subject: Engineer
Page Label: 6
Author: dsdgrimm
Date: 5/30/2019 5:16:45 PM
Color: ■

This was discussed at our meeting

Based on the drainage map it appears that PLD is in Basin A2
It is located in basin 2 and is detailed and discussed in report.

5/30/2019 5:17:33 PM (1)



Subject: Engineer
Page Label: 6
Author: dsdgrimm
Date: 5/30/2019 5:17:33 PM
Color: ■

This was discussed at our meeting

Include the gravel drive area in this drainage basin.
The revised gravel drive is discussed in the report and shown on the plan

5/30/2019 5:17:49 PM (1)

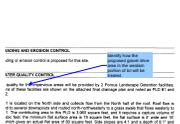


Subject: Engineer
Page Label: 6
Author: dsdgrimm
Date: 5/30/2019 5:17:49 PM
Color: ■

This was discussed at our meeting

How is the proposed gravel drive area treated through the PLDs? Please clarify the increased runoff from the gravel area.
No increase in runoff & treated by natural vegetation

5/30/2019 5:21:01 PM (1)

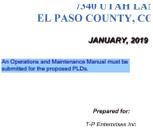


Subject: Engineer
Page Label: 7
Author: dsdgrimm
Date: 5/30/2019 5:21:01 PM
Color: ■

This was discussed at our meeting

Identify how the proposed gravel drive area in the western portion of lot will be treated.
This area will be treated by natural vegetation

5/30/2019 6:24:03 PM (1)



Subject: Engineer
Page Label: 1
Author: dsdgrimm
Date: 5/30/2019 6:24:03 PM
Color: ■

This was discussed at our meeting

An Operations and Maintenance Manual must be submitted for the proposed PLDs.
Will be included with this submittal

5/30/2019 6:25:25 PM (1)



Subject: Engineer
Page Label: 21
Author: dsdgrimm
Date: 5/30/2019 6:25:25 PM
Color: ■

This was discussed at our meeting

Include Basin A2 with the proposed gravel drive and storage area.
The revised gravel drive is included and shown on the plan

5/30/2019 6:26:01 PM (1)



Subject: Engineer
Page Label: 33
Author: dsdgrimm
Date: 5/30/2019 6:26:01 PM
Color: ■

This was discussed at our meeting

The site plan shows a gravel drive area in the western portion of this lot with the storage area. Show that on the drainage map. Basin A2 must be treated with WQCV.
The 40'x24' gravel drive is shown in basin A2, WQ is discussed in report

6/25/2019 4:37:48 PM (1)

Add PCD File #

Subject: PCD File #
Page Label: 1
Author: Lindsay Darden
Date: 6/25/2019 4:37:48 PM
Color: ■

This was discussed at our meeting

Add PCD File #
The PDD File #PPR 19-024 has been added

6/3/2019 1:21:59 PM (1)



Subject: Engineer
Page Label: 6
Author: dsdgrimm
Date: 6/3/2019 1:21:59 PM
Color: ■

This was discussed at our meeting

How is the flow from OS-1 handled? Does this runoff flow through the site or continue along Utah Lane?.

6/3/2019 1:26:14 PM (1)



Subject: Engineer
Page Label: 7
Author: dsdgrimm
Date: 6/3/2019 1:26:14 PM
Color: ■

This was discussed at our meeting

How is the existing gravel lot being treated? Please clarify.
Flow continues along Utah Ln, clarified in report

6/3/2019 10:02:41 AM (1)



Subject: Engineer
Page Label: 24
Author: dsdgrimm
Date: 6/3/2019 10:02:41 AM
Color: ■

Provide a legend for the line types
Called out line designations on the sheet

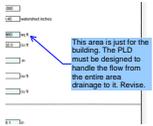
6/3/2019 10:04:23 AM (1)



Subject: Engineer
Page Label: 33
Author: dsdgrimm
Date: 6/3/2019 10:04:23 AM
Color: ■

The bold text needs to be more legible, typical all.
This has been fixed

6/3/2019 10:05:45 AM (1)



Subject: Engineer
Page Label: 28
Author: dsdgrimm
Date: 6/3/2019 10:05:45 AM
Color: ■

This was discussed at our meeting

This area is just for the building. The PLD must be designed to handle the flow from the entire area drainage to it. Revise.
The PLD's are for only the building and Concrete pads

6/3/2019 10:12:58 AM (1)



Subject: Engineer
Page Label: 35
Author: dsdgrimm
Date: 6/3/2019 10:12:58 AM
Color: ■

These depths do not match. Revise to the correct depth. Design sheet shows 8".

Discussed at our meeting and it is OK

6/3/2019 10:16:09 AM (1)



Subject: Engineer
Page Label: 36
Author: dsdgrimm
Date: 6/3/2019 10:16:09 AM
Color: ■

These depths do not match. Revise to the correct depth. Design sheet shows 8".

Discussed at our meeting and it is OK

6/3/2019 11:23:48 AM (1)



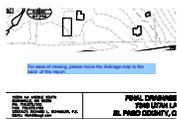
Subject: Engineer
Page Label: 37
Author: dsdgrimm
Date: 6/3/2019 11:23:48 AM
Color: ■

This was discussed at our meeting

Does the stormwater exit the facility through an outlet structure or through infiltration? Please clarify by showing on these details. Infiltration Discussed in report & on shown Const. Plans

Const. drawings will be separate set These construction details should must be in the construction drawings, not in the drainage report.

6/3/2019 11:37:37 AM (1)

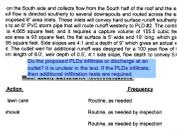


Subject: Engineer
Page Label: 33
Author: dsdgrimm
Date: 6/3/2019 11:37:37 AM
Color: ■

For ease of viewing, please move the drainage map to the back of this report.

Moved to back of report

6/3/2019 8:15:26 AM (1)

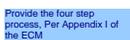


Subject: Engineer
Page Label: 7
Author: dsdgrimm
Date: 6/3/2019 8:15:26 AM
Color: ■

This was discussed at our meeting

Do the proposed PLDs infiltrate or discharge at an outlet? It is unclear in the text. If the PLDs infiltrate, then additional infiltration tests are required.
Infiltrate, discussed in report and shown on const. plans

6/3/2019 8:16:31 AM (1)



Subject: Engineer
Page Label: 8
Author: dsdgrimm
Date: 6/3/2019 8:16:31 AM
Color: ■

This was discussed at our meeting

Provide the four step process, Per Appendix I of the ECM
Four step process included in report

6/3/2019 8:27:40 AM (1)

Subject: Engineer
Page Label: 20
Author: dsdgrimm
Date: 6/3/2019 8:27:40 AM
Color: ■

A conveyance coefficient of 15 corresponds to Grassed Waterway. This does not seem accurate for all of the basins. Revise with appropriate coefficients.

Discussed this at our meeting and agreed that 15 is appropriate for this report

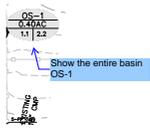
6/3/2019 9:02:55 AM (1)



Subject: Polylength Measurement
Page Label: 33
Author: dsdgrimm
Date: 6/3/2019 9:02:55 AM
Color: ■

98'-7"
Scale is 1" = 100', fixed bar scale

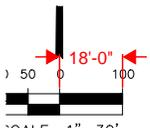
6/3/2019 9:04:44 AM (1)



Subject: Engineer
Page Label: 33
Author: dsdgrimm
Date: 6/3/2019 9:04:44 AM
Color: ■

Show the entire basin OS-1
All of basin OS-1 is shown

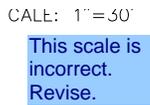
6/3/2019 9:06:38 AM (1)



Subject: Length Measurement
Page Label: 33
Author: dsdgrimm
Date: 6/3/2019 9:06:38 AM
Color: ■

18'-0"
Scale is 1" = 100', fixed bar scale

6/3/2019 9:06:57 AM (1)



Subject: Engineer
Page Label: 33
Author: dsdgrimm
Date: 6/3/2019 9:06:57 AM
Color: ■

This scale is incorrect. Revise.
Scale is 1" = 100', fixed bar scale

6/3/2019 9:07:46 AM (1)



Subject: Engineer
Page Label: 20
Author: dsdgrimm
Date: 6/3/2019 9:07:46 AM
Color: ■

The basin lengths will be verified once the scale is revised on the drainage map.
Scale is 1" = 100', fixed bar scale

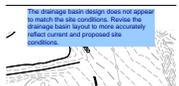
6/3/2019 9:45:09 AM (1)



Subject: Engineer
Page Label: 33
Author: dsdgrimm
Date: 6/3/2019 9:45:09 AM
Color: ■

It does not appear that the runoff from the parking lot is reaching PLD #2. How is this area treated?
Flow is directed to the 2-existing grass swales, to be cleaned and restored

6/3/2019 9:57:48 AM (1)



Subject: Engineer
Page Label: 33
Author: dsdgrimm
Date: 6/3/2019 9:57:48 AM
Color: ■

This was discussed at our meeting

The drainage basin design does not appear to match the site conditions. Revise the drainage basin layout to more accurately reflect current and proposed site conditions.
The basins now match site conditions
40'x24' gravel drive has been added

6/3/2019 9:58:41 AM (1)

Basin	Area (sq ft)	Volume (cu ft)	Retention Time (min)
Basin 1	10,000	100,000	10
Basin 2	15,000	150,000	15
Basin 3	20,000	200,000	20
Basin 4	25,000	250,000	25
Basin 5	30,000	300,000	30
Basin 6	35,000	350,000	35
Basin 7	40,000	400,000	40
Basin 8	45,000	450,000	45
Basin 9	50,000	500,000	50
Basin 10	55,000	550,000	55
Basin 11	60,000	600,000	60
Basin 12	65,000	650,000	65
Basin 13	70,000	700,000	70
Basin 14	75,000	750,000	75
Basin 15	80,000	800,000	80
Basin 16	85,000	850,000	85
Basin 17	90,000	900,000	90
Basin 18	95,000	950,000	95
Basin 19	100,000	1,000,000	100

Subject: Engineer
Page Label: 20
Author: dsdgrimm
Date: 6/3/2019 9:58:41 AM
Color: ■

Rational method calculations will be reviewed once the drainage basin design is revised.

We discussed this at our meeting