EPC STORMWATER REVIEW COMMENTS IN ORANGE BOXES WITH BLACK TEXT

Info Only: EPC engineering comments are in blue text.

FINAL DRAINAGE REPORT
FOR
PLATTE SELF STORAGE
COLORADO SPRINGS, COLORADO

MAY 2024

Prepared For:
RMG – ROCKY MOUNTAIN GROUP
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Prepared By:

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TNE Job No. 2419.00
County Job No. ###

Please include project No. PPR2418

flows off the site and onto the Motel Road right of way. This basin consists of landscaping areas and buildings. Basin EX-A has flows of Q_5 = 0.2 cfs and Q_{100} = 0.8 cfs.

Basin EX-B is 0.64 acres and drains to Design Point B at the at the site's north property line. Runoff flows off the site and onto the Motel Road right of way. This basin consists of landscaping areas, buildings, some pavement, and a swale. Basin EX-A has flows of Q_5 = 1.1 cfs and Q_{100} = 2.6 cfs.

Basin EX-C is 15.4 acres and drains to Design Point C at the existing pond on the site. Runoff doesn't appear to leave this pond other than by evaporation. This basin includes the bulk of the site and includes buildings, roads, storage areas, and parking areas. The surfaces are primarily dirt, gravel, or paved. Basin EX-C has flows of Q_5 = 29.0 cfs and Q_{100} = 65.0 cfs.

Basin EX-D is 1.05 acres and drains to Design Point D at the site's south/west property line. Runoff flows off the site and onto the adjacent property. This basin is primarily a dirt storage/stockpile area. Basin EX-D has flows of Q_5 = 0.3 cfs and Q_{100} = 1.9 cfs.

Indicate that this flow travels through Basin OS-X and enters back onto the site at DP X, combining flows with OS-X.

Basin EX-E is 0.16 acres and drains to Design Point E at the site's west property line. Runoff flows off the site and onto the adjacent property. This basin consists an earth embankment. Basin EX-E has flows of Q_5 = 0.1 cfs and Q_{100} = 0.5 cfs.

Basin EX-F is 0.23 acres and drains to Design Point F at the site's northwest property line. Runoff flows off the site and onto the adjacent property. This basin consists an earth embankment. Basin EX-F has flows of Q_5 = 0.1 cfs and Q_{100} = 0.7 cfs.

PROPOSED DRAINAGE CONDITIONS

Runoff in the developed conditions consists of 14 basins, four of which are offsite. Below is a description of the runoff in the developed conditions and how it will be safely routed, treated and detained. Basins on the west half of the site are proposed as undeveloped, but the proposed detention pond has been sized to account for their future commercial development.

Discuss how water quality is being addressed for each sub-basin.

TNES RESPONSE:
This is discussed in the Water Quality section.

Basin PR-8 is 0.30 acres and drains to Design Point 8 at the west edge of the site. This basin is an earth embankment area that sheet flows offsite to the adjacent property. Basin PR-8 has flows of Q_5 = 0.2 cfs and Q_{100} = 1.0 cfs.

Basin PR-9 is 0.59 acres and drains to Design Point 9 at the west edge of the site. This basin is an earth embankment and flatter area that sheet flows offsite to the adjacent property. Basin PR-9 has flows of Q_5 = 0.2 cfs and Q_{100} = 1.5 cfs.

Basin PR-10 is 0.40 acres and drains to Design Point 10 at the east edge of the site. This basin is between the east property line and proposed buildings that is largely embankment with a concrete drain trench to collect runoff from offsite. The drain trench discharges into a storm sewer. Basin PR-10 has flows of Q_5 = 0.3 cfs and Q_{100} = 1.4 cfs.

List all the basins that contribute to DP 6.

At Design Point 6 the combined flow of the currently proposed development and future commercial development will be captured in a 2.657 acre-foot Extended Detention Basin. Runoff entering the pond through the storm sewer system will be routed into a 702 cu-ft concrete lined forebay with a 1.5 feet high concrete cutoff wall. A 3 inch notch in the wall drains the flow to a 2' concrete trickle channel, then the runoff is routed to the 3.0' deep micropool which has a 6" deep initial surcharge area. The 32.96 acres tributary to the EDB are 44% impervious. Based upon this we need a WQCV of 0.523 ac-ft, an EURV volume of 1.091 ac-ft and 100-year volume of 1.044 ac-ft for a total volume needed of 2.657 ac-ft. The bottom of the micropool elevation is at 6199.50 while the top of the ISV elevation is at 6202.50. The WQCV orifice starts at 6202.00 with two 1-5/8 inch diameter holes spaced 20.40 inches apart, then one 1-1/2 inch diameter hole spaced 20.40 inches apart, then one 3.00" diameter spaced 8.40 inches apart. A 4'x4' outlet structure is set at 6210.00. The 100-year water elevation tops out at 6210.54. A 18" HDPE storm pipe will release Q_5=0.5 cfs and Q_{100}=11.3 cfs discharge to a stilling basin at the west property line, which will outfall onto the adjacent property.

Please compare the runoff at the design point (DP) between the existing and proposed conditions as they leave the site.

There is one storm sewer system proposed on the site. This system collects runoff from the drain trench along the east property line and the two curb inlets in the mini-storage area and pipes the

The existing flow at this point appears to sheet flow, will a stilling basin be sufficient to ensure a suitable outfall and matching the existing condition?

TNES RESPONSE:
In the proposed condition, outflow will be concentrated and the stilling basin will dissipate energy. Flow after the stilling basin will be sheet flow, which matches the existing condition.

A culvert is proposed at one of the site entrances. Design calculations have been included for the proposed culvert.

Street runoff capacity calculations for the onsite drive isles have been included.

FLOODPLAIN STATEMENT

No portion of this site is within a designated FEMA floodplain, as determined by FIRM Number 08041C0754 G, dated December 7, 2018 (see appendix).

WATER QUALITY

The proposed detention basin provides water quality treatment for nearly all of the proposed development.

Runoff from basins PR-1, PR-2, PR-5, PR-7, PR-8, and PR-9 are not captured by the proposed detention pond. Basins PR-1 and PR-2 are landscaping areas along the property line with no impervious area. Basin PR-5 is an undeveloped area with a swale that directs offsite flow back offsite, with no impervious area. Basins PR-7 and PR-8 are earth embankments on the downstream edge of the site that drop 10-15 feet in elevation, with no impervious area. Basin PR-9 is part flatter undeveloped area and part earth embankment on the downstream edge of the site that doesn't flow toward the detention pond, with no impervious area. The combined area of these basins is 1.69 acres, with zero impervious area. As there is no impervious area in these basins, no WQCV treatment is required for them. Additionally, as all of these basins are landscaping or undeveloped areas, they would qualify as water quality treatment areas (grass buffers).

All disturbed areas are required to be accounted for with treatment or water quality exclusions, not impervious areas.

If the areas are proposed to as "runoff reduction" water quality treatment areas as stated in the sentence after, they need to be identified as separate pervious areas with supporting calculations and identified clearly on the plans. Vegetation in RPAs and SPAs should have a uniform density of at least 80%. In the Drainage Report, runoff reduction calculations (UD-BMP spreadsheet or equivalent) shall be included. In the Drainage Report, include a figure delineating all proposed UIA, RPA, and SPA areas to be utilized for runoff reduction. All RPAs and SPAs are considered PCMs and therefore require a signed PCM Maintenance Agreement and an O&M Manual.

CONSTRUCTION COST OPINION

Public Reimbursable

None

Public Non-Reimbursable

None

TNES RESPONSE:
We are not doing runoff reduction for this project.

Include a cost estimate for each PBMP with line items for all components (ex: riprap, road base, forebay, trickle channel, outlet structure, outlet pipe, spillway, etc). Input the total value into the FAE form under "Permanent Pond/BMP (provide engineer's estimate)" in Section 1. The total should not include grading, which is a separate line item in Section 1: "Earthwork." The cost estimate should include labor costs (as a separate line item or added into the cost of each component).

Private Non-Reimbursable

1. 48" RCP	260 LF	$ 245	$ 63,700
2. 42" RCP	80 LF	$ 201	$ 16,080
3. 36" RCP	385 LF	$ 151	$ 58,135
4. 30" RCP	170 LF	$ 123	$ 20,910
5. 24" RCP	115 LF	$ 98	$ 11,270
6. 18" HDPE	36 LF	$ 50	$ 1,800
7. 6' Manhole	1 EA	$ 10,000	$ 10,000
8. 7' Manhole	1 EA	$ 14,000	$ 14,000
9. CDOT Type C Area Inlet	9 EA	$ 6,037	$ 54,333
10. 16' D-10-R Curb Inlet	1 EA	$ 13,835	$ 13,835
11. 20' D-10-R Curb Inlet	1 EA	$ 20,000	$ 20,000
12. Concrete Drain Trench	710 LF	$ 200	$ 142,000
13. EDB	1 EA	$ 100,000	$ 100,000
		Total	**$ 426,063**

DRAINAGE FEES

This drainage report is part of a site development application; therefore, no drainage fees are due.

MAINTENANCE

The Extended Detention Basin is private and will be maintained by the property owner. The proposed storm sewers are private and will be maintained by the property owner.

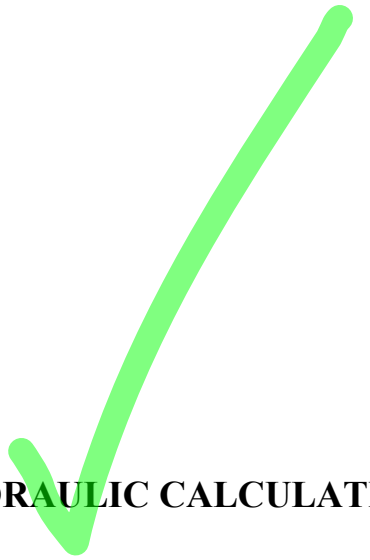
SUMMARY

Development of this site will not adversely affect the surrounding development. This report is in general conformance with the previous reports which included this site. Site runoff and storm drain appurtenances from the development will not adversely affect the downstream and surrounding developments and will be safely routed to the proposed extended detention basin and runoff reduced to the allowable pre-developed rates while slowly treating the water quality capture volume.

TNES RESPONSE: Statement removed; this site has not been previously platted or studied.

Please include name, date of approval and prepared by whom of the previous reports. Also, please include them in the reference part.

Provide discussion earlier in report discussing suitable outfall location. Provide comparison of existing flow rates to developed/released flow rates.



HYDRAULIC CALCULATIONS

Please include inlet management tab, and inlet calculations.

TNES RESPONSE:
UD-Inlet was not used, thus inlet management tab has not been included. Inlet capacity charts have been included.

Also include calculations for riprap outlet protection

MANNING'S EQUATION for OPEN CHANNEL FLOW

Project: **Platte Self Storage** Location: East Drain Trench (need Q=9.1 cfs)

By: John Fornander Date: 4/19/2024

Chk By: Date: version 12-2004

Mannings Formula

$Q = (1.486/n)AR_h^{2/3}S^{1/2}$

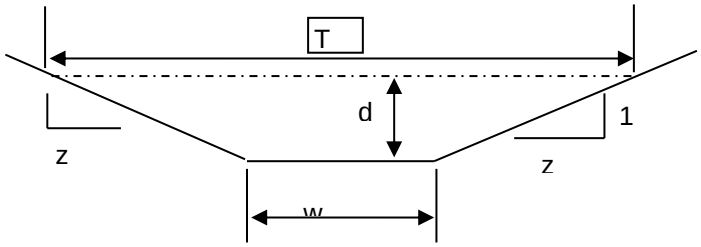
R = A/P

A = cross sectional area

P= wetted perimeter

S = slope of channel

n = Manning's roughness coefficient



$V = (1.49/n)R_h^{2/3}S^{1/2}$

Q = V x A

INPUT	
z (sideslope)=	0
z (sideslope)=	0
b (btm width, ft)=	1.5
d (depth, ft)=	1
S (slope, ft/ft)	0.01
n_{low} =	0.013
n_{high} =	0.013

Clear Data Entry Cells

				Low N		High N			
Depth, ft	Area, sf	Wetted Perimeter, ft	Hydraulic Radius, ft	Velocity, fps	Flow, cfs	Velocity, fps	Flow, cfs		
1	1.50	3.50	0.43	6.49748573	9.74623	6.497486	9.74623	T =	1.5
								Dm =	1.000
				Sc low =	0.0076	Sc high =	0.0076		
				.7 Sc	1.3 Sc	.7 Sc	1.3 Sc		
				0.0053	0.0099	0.0053	0.0099		

s_c = critical slope ft / ft

T = top width of the stream

d_m = a/T = mean depth of flow

Created by: Mike O'Shea

Please provide erosion protection for this open channel as velocity is above the standard velocity per DCM vol.1, chapter 10, table 10-4

TNES RESPONSE:
This is a concrete-lined trench which provides sufficient erosion protection.

MANNING'S EQUATION for OPEN CHANNEL FLOW

Project: **Platte Self Storage** Location: Bldg N+RV Drive Aisel (need Q=31 cfs)

By: John F Date: 4/2/2024

Chk By: Date: version 12-2004

Mannings Formula

$Q = (1.486/n)AR_h^{2/3}S^{1/2}$

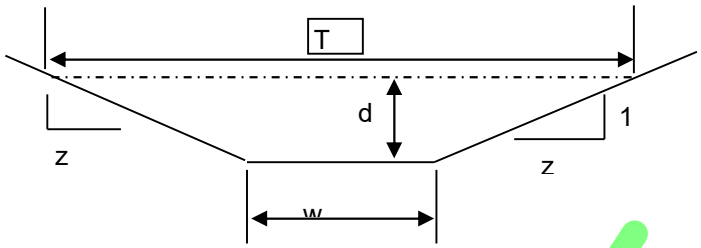
R = A/P

A = cross sectional area

P= wetted perimeter

S = slope of channel

n = Manning's roughness coefficient



$V = (1.49/n)R_h^{2/3}S^{1/2}$

Q = V x A

INPUT	
z (sideslope)=	7.1
z (sideslope)=	14.7
b (btm width, ft)=	0
d (depth, ft)=	0.7
S (slope, ft/ft)	0.01
n_{low} =	0.013
n_{high} =	0.013

Clear Data Entry Cells

				Low N		High N			
Depth, ft	Area, sf	Wetted Perimeter, ft	Hydraulic Radius, ft	Velocity, fps	Flow, cfs	Velocity, fps	Flow, cfs		
0.7	5.34	15.33	0.35	5.65883356	30.2238	5.658834	30.2238	T =	15.26
								Dm =	0.350
				Sc low =	0.0035	Sc high =	0.0035		
				.7 Sc	1.3 Sc	.7 Sc	1.3 Sc		
				0.0025	0.0046	0.0025	0.0046		

s_c = critical slope ft / ft

T = top width of the stream

d_m = a/T = mean depth of flow

Created by: Mike O'Shea

Please provide erosion protection for this open channel as velocity is above the standard velocity per DCM vol.1, chapter 10, table 10-4

TNES RESPONSE:
This is a drive-aisle and flow is centered in a concrete cross-pan. This provides sufficient erosion protection.

MANNING'S EQUATION for OPEN CHANNEL FLOW

Project:	**Platte Self Storage**	Location:	Bldg Central Drive Aisel (need Q=41.3 cfs)	
By:	John F	Date:	4/2/2024	
Chk By:		Date:		version 12-2004

Mannings Formula

$Q = (1.486/n)AR_h^{2/3}S^{1/2}$

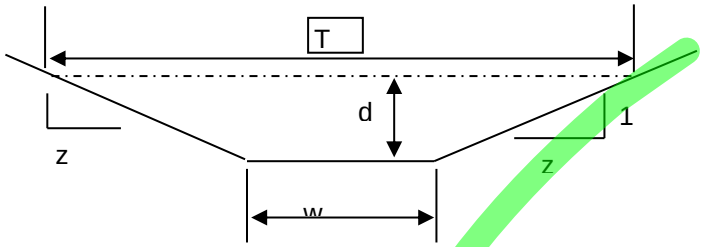
R = A/P

A = cross sectional area

P= wetted perimeter

S = slope of channel

n = Manning's roughness coefficient



$V = (1.49/n)R_h^{2/3}S^{1/2}$

Q = V x A

INPUT

z (sideslope)=	33
z (sideslope)=	33
b (btm width, ft)=	0
d (depth, ft)=	0.5
S (slope, ft/ft)	0.02
n_{low} =	0.013
n_{high} =	0.013

Clear Data Entry Cells

				Low N		High N			
Depth, ft	Area, sf	Wetted Perimeter, ft	Hydraulic Radius, ft	Velocity, fps	Flow, cfs	Velocity, fps	Flow, cfs		
0.5	8.25	33.02	0.25	6.41304341	52.9076	6.413043	52.9076	T =	33
								Dm =	0.250
				Sc low =	0.0039	Sc high =	0.0039		
				.7 Sc	1.3 Sc	.7 Sc	1.3 Sc		
				0.0027	0.0051	0.0027	0.0051		

s_c = critical slope ft / ft

T = top width of the stream

d_m = a/T = mean depth of flow

Created by: Mike O'Shea

Please provide erosion protection for this open channel as velocity is above the standard velocity per DCM vol.1, chapter 10, table 10-4

TNES RESPONSE:
This is a drive-aisle and flow is centered in a concrete cross-pan. This provides sufficient erosion protection.

MANNING'S EQUATION for OPEN CHANNEL FLOW

Project:	**Platte Self Storage**		Location:	2' TRICKEL CHANNEL	
By:	JS	Date:	4/29/2024		
Chk By:	DF	Date:	4/29/2024		version 12-2004

Mannings Formula

$Q = (1.486/n)AR_h^{2/3}S^{1/2}$

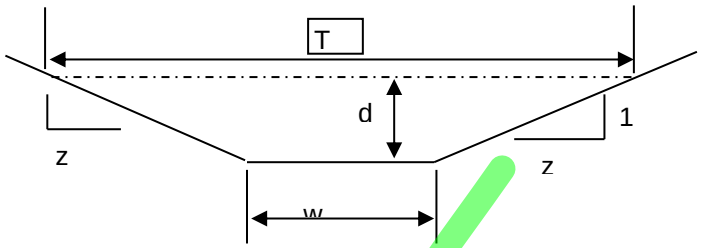
R = A/P

A = cross sectional area

P= wetted perimeter

S = slope of channel

n = Manning's roughness coefficient



$V = (1.49/n)R_h^{2/3}S^{1/2}$

Q = V x A

INPUT	
z (sideslope)=	0
z (sideslope)=	0
b (btm width, ft)=	2
d (depth, ft)=	0.5
S (slope, ft/ft)	0.01
n_{low} =	0.013
n_{high} =	0.013

Clear Data Entry Cells

				Low N		High N			
Depth, ft	Area, sf	Wetted Perimeter, ft	Hydraulic Radius, ft	Velocity, fps	Flow, cfs	Velocity, fps	Flow, cfs		
0.5	1.00	3.00	0.33	5.49513943	5.49514	5.495139	5.49514	T =	2
								Dm =	0.500
				Sc low =	0.0053	Sc high =	0.0053		
				.7 Sc	1.3 Sc	.7 Sc	1.3 Sc		
				0.0037	0.0069	0.0037	0.0069		

s_c = critical slope ft / ft

T = top width of the stream

d_m = a/T = mean depth of flow

Created by: Mike O'Shea

Please provide erosion protection for this open channel as velocity is above the standard velocity per DCM vol.1, chapter 10, table 10-4

TNES RESPONSE:
This is a concrete trickle channel. This provides sufficient erosion protection.

TNES RESPONSE:
Trickle channel: see previous page
Spillway: Spillway is sized by UD-Det spreadsheet which is included in appendix.
Riprap: Calcs have been included.
Stilling Basin: Calcs have been included.

Please include calculations for trickle channel, emergency spillway, ripraps, stilling basin.

Per DCMv2 – Chap 4.2, trickle channel should at a minimum provide capacity equal to twice the release capacity at the upstream forebay outlet. Provide these calcs in the drainage report and revise plans as needed.

TNES RESPONSE:
Please compare trickle channel flow calculation with forebay notch release rate. Trickle channel flow is significantly higher than notch release rate, more than twice the capacity.

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):

DRAINAGE MAPS

Water Quality Treatment Summary Table

Basin ID	Total Area (ac)	Total Proposed Disturbed Area (ac)	Area Trib to Pond A (ac)	Disturbed Area Treated via Runoff Reduction (ac)	Disturbed Area Excluded from WQ per ECM App I.7.1.C.1 (ac)	Disturbed Area Excluded from WQ per ECM App I.7.1.B.# (ac)	Applicable WQ Exclusions (App I.7.1.B.#)
A	4.50	4.50	4.50				
B	1.25	1.25		1.25			
C	6.00	4.00				4.00	ECM App I.7.1.B.5
D	2.50	2.50	1.00		0.50	1.00	ECM App I.7.1.B.7
E	3.00		3.00				
F	8.25						
Total	25.50	12.25	8.50	1.25	0.50	5.00	
Comments		*[For each row, the sum of the values in Columns 4-7 must be greater than or equal to the value in Column 3 above.]*	*[Values in this column can be more than Column 3 if over-treating non-disturbed areas of the same land-use.]*	*[See RR calc spreadsheet.]*	*[Total must be <20% of site and <1ac.]*		

Total Proposed Disturbed Area (ac)	Total Proposed Treated Area (ac)	Total Proposed Disturbed Area Excluded from WQ (ac)	Minimum Area to be Treated (ac)
12.25	9.75	5.50	6.75

PLATTE SELF STORAGE
SITE DEVELOPMENT PLAN
EXISTING DRAINAGE MAP
MAY 2024

LEGEND

- P-7 / 12.22 / 65 %Imp — BASIN DESIGNATION, AREA IN BASIN (AC), PERCENT IMPERVIOUS
- D — DESIGN POINT
- BASIN BOUNDARY
- EXISTING 1' CONTOUR
- GROUND SURFACE FLOW DIRECTION
- ROAD AND DITCH FLOW DIRECTION
- TIME OF CONCENTRATION PATH

NOTES

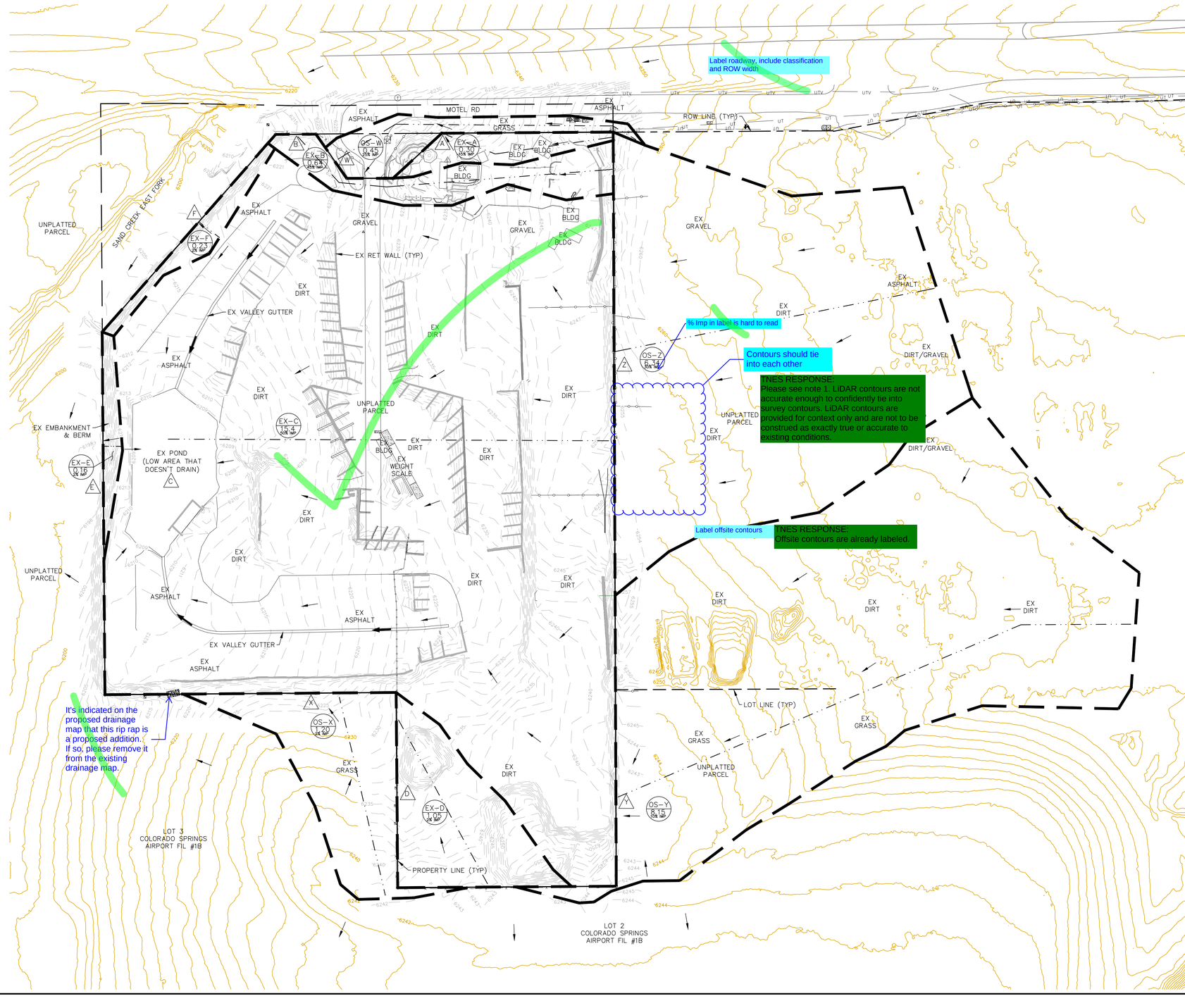
1. BROWN GROUND SURFACE CONTOURS ARE LIDAR DATA DOWNLOADED FROM THE COLORADO HAZARD MAPPING & RISK MAP PORTAL, DATA SET: 2018 3DEP EAST CO EL PASO. THIS DATA IS APPROXIMATE. LIDAR DATA IS FROM 2018 AND AT 2' INTERVALS.
2. THE EXISTING SITE IS A LANDSCAPING MATERIALS YARD. GROUND SURFACES ARE DIRT, GRAVEL, AND ASPHALT. THE EDGE OF ASPHALT IS OFTEN COVERED BY DIRT/GRAVEL AND IT'S EXTENTS ARE ONLY ROUGHLY KNOWN.

BASIN SUMMARY

BASIN	AREA TO TAL (Acres)	TOTAL FLOWS Q_5 (c.f.s.)	TOTAL FLOWS Q_{100} (c.f.s.)
OS-Z	6.34	6.1	16.7
OS-Y	8.15	3.6	15.4
OS-X	1.20	0.4	2.3
OS-W	0.45	0.5	1.3
EX-A	0.30	0.2	0.8
EX-B	0.64	1.1	2.6
EX-C	15.4	29.0	65.0
EX-D	1.05	0.3	1.9
EX-E	0.16	0.1	0.5
EX-F	0.23	0.1	0.7

DESIGN POINT SUMMARY

Design Point(s)	Contributing Basins	Area (ac)	Flow (cfs) Q_5	Flow (cfs) Q_{100}
Z	OS-Z	6.34	6.1	16.7
Y	OS-Y	8.15	3.6	15.4
X	OS-X,EX-D	2.25	0.7	4.2
W	OS-W	0.45	0.5	1.3
A	EX-A	0.30	0.2	0.8
B	EX-B	0.64	1.1	2.6
C	OS-Z,OS-Y,OS-X,EX-C,EX-D	32.14	39.4	101.4
D	EX-D	1.05	0.3	1.9
E	EX-E	0.16	0.1	0.5
F	EX-F	0.23	0.1	0.7



N
80' 0 80' 160'
SCALE: 1"=80'

REVISIONS

NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR:
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www.tnesinc.com

PLATTE SELF STORAGE

EXISTING DRAINAGE MAP

DESIGNED BY DLF
DRAWN BY DLF
CHECKED BY LD
H-SCALE AS SHOWN
V-SCALE N/A
JOB NO. 2419.00
DATE ISSUED 05/07/24
SHEET NO. 1 OF 4

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PLATTE SELF STORAGE

SITE DEVELOPMENT PLAN

PROPOSED DRAINAGE MAP

MAY 2024

LEGEND

- P-7 / 12.22 / 25 IMP — BASIN DESIGNATION, AREA IN BASIN (AC), PERCENT IMPERVIOUS
- D — DESIGN POINT
- BASIN BOUNDARY
- EXISTING 1' CONTOUR
- GROUND SURFACE FLOW DIRECTION
- ROAD AND DITCH FLOW DIRECTION
- PROPOSED RETAINING WALL
- TIME OF CONCENTRATION PATH

NOTES

1. BROWN GROUND SURFACE CONTOURS ARE LIDAR DATA DOWNLOADED FROM THE COLORADO HAZARD MAPPING & RISK MAP PORTAL, DATA SET: 2018 3DEP EAST CO EL PASO. THIS DATA IS APPROXIMATE. LIDAR DATA IS FROM 2018 AND AT 2' INTERVALS.

BASIN SUMMARY

BASIN	AREA TO TAL (Acres)	TOTAL FLOWS Q5 (c.f.s.)	TOTAL FLOWS Q100 (c.f.s.)
OS-Z	6.34	6.1	16.7
OS-Y	8.15	3.6	15.4
OS-X	1.20	0.4	2.3
OS-W	0.45	0.5	1.3
1	0.07	0.0	0.2
2	0.13	0.1	0.4
3	5.12	23.1	41.4
4	3.66	8.2	16.8
5	0.56	0.1	0.9
6	6.64	3.1	13.1
7	0.34	0.2	1.1
8	0.30	0.2	1.0
9	0.59	0.2	1.5
10	0.40	0.3	1.4

DESIGN POINT SUMMARY

Design Point(s)	Contributing Basins	Area (ac)	Flow (cfs) Q_5	Flow (cfs) Q_{100}
1	PR-1	0.07	0.0	0.2
2	PR-2	0.13	0.1	0.4
3	PR-3	5.12	23.1	41.4
4	OS-Y,PR-4	11.81	11.8	32.2
5	OX-X,PR-5	1.76	0.5	3.3
6	PR-6	6.64	3.1	13.1
7	PR-7	0.34	0.2	1.1
8	PR-8	0.30	0.2	1.0
9	PR-9	0.59	0.2	1.5
10	OS-Z,PR-10	6.74	6.4	18.1

See comments on summary table in report

TNES RESPONSE:
50-200' is where LiDAR contours are currently shown. Please see note 1. LiDAR contours are not accurate enough to confidently tie into survey contours. LiDAR contours are provided for context only and are not to be construed as exactly true or accurate to existing conditions.

Please display more off-site contour 50 -200 feet beyond the boundary or drainage basin delineation line to illustrate how the runoff diverges from the site.

Please show and label all side slope of the pond. Side slope cannot be steeper than 3:1.

Please consider the distance between inlet and outlet. Distance measured along the trickle channel (from inlet to outlet) to the average basin width is at least 1.5:1, and greater than 2:1 is preferred. USDCM, Chapter 4, T-6.

Please show all drainage easements.

Please show and label spillway with type, size, and condition.

Please show and label the maintenance access connection to a stable, existing/proposed driveway/local roadway.

Please add more flow direction arrows to all basins.

All pond components must be called out and labeled within the drainage map.

Disturbed areas must be within the drainage basin boundary.

Please label all grass swale IDs to match the calculations, including the slope of each swale, ownership details, and its condition.

Please provide calculation for the riprap

Label outlet protection

Type C inlet is for 30" dia pipe or less. Type C inlet grates are not HS-20 rated and not to be used in paved roadways.

Type C inlet is for 30" dia pipe or less. Type C inlet grates are not HS-20 rated and not to be used in paved roadways.

Storm labels too small to read

N

80' 0 80' 160'

SCALE: 1"=80'

REVISIONS

NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

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PLATTE SELF STORAGE

PROPOSED DRAINAGE MAP

DESIGNED BY DLF
DRAWN BY DLF
CHECKED BY LD
H-SCALE AS SHOWN
V-SCALE N/A
JOB NO. 2419.00
DATE ISSUED 05/07/24
SHEET NO. 2 OF 4

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