

DRAINAGE PLAN:

I. INTRODUCTION & EXECUTIVE SUMMARY

Group 1 Automotive, Inc. plans to renovate and expand the existing Lexus of Albuquerque automotive dealership located at 4821 Pan American Freeway NE in Albuquerque, New Mexico. The project consists of renovating and expanding the existing showroom and service area. The existing site parking and circulation will be adjusted to accommodate the building expansion. The existing site does not have stormwater infrastructure and the proposed project will reduce the existing impervious cover by app. 2,078 SF.

II. PROJECT DATA

- A. Project location: 4821 Pan American Fwy. NE
- B. Legal Description: Lot 3, Blk O, Tract C of Tracts A, B & C LLD Subdivision
- C. FEMA FIRM Panel: 35001C0138H, effective 8/16/2012
- D. Special Flood Hazard Area: Zone X, Area of Minimal Flood Hazard
- E. Site Area: 3.91 Acres
- F. UPC#: 101706102726220107
- G. Precipitation Zone: Zone 2, Between Rio Grande and San Mateo

III. Background Documents: The following documents available on GIS were referenced in preparation of this submittal

A: F16-D19 Rocky Mountain Stone Company Road-Parking Documents: 12-20-1999

Shows the existing contributing drainage area to the concrete flume to the AMAFCA North Diversion Channel as 6.53 ac with Peak Discharge (Q100/6hr) = 23.04 cfs.

Shows the existing contributing drainage area to the I-25 Frontage Road reduced from 6.3 acres to 1.34 acres with a Peak Discharge (Q100/6hr) = 5.69 cfs from the former Dickey's Barbecue Restaurant, now Lexus Inventory Lot, and the southern parking lot of Rocky Mountain Stone Company, a reduction of 15.54 cfs.

B: F16-D19 Rocky Mountain Stone Co. Road-Parking Plans

C: F17-D102 GP Pav Appr

IV. Existing Conditions

The site is currently fully developed as an automotive dealership. There are no existing storm drain structures on the site except for a concrete flume under a site wall. The site slopes generally from east to west with storm water runoff leaving the site via overland flow in two locations. Location 1 is the existing roadside ditch on Southbound Pan American Freeway, the frontage road for I-25. Discharge location 2 is at the rear (North) boundary of the facility where overland flow discharges into an access road shared by the PNM Electrical Substation and the Rocky Mountain Stone Property. Eventually all of the runoff from this site reaches the AMAFCA North Diversion Channel. Existing slopes ranges from less than 0.5% to 2.5%. Offsite flows do not impact the site.

V. Proposed Conditions

The site will continue to be an automotive dealership. The proposed building expansion area replaces existing pavement area with a net reduction in impervious area of 2,078 sf. The proposed site will have concrete curb & gutter, paved swales, paving, utilities and landscaping. Because the impervious area of the site will be reduced from existing conditions, peak runoff will be reduced below runoff levels prior to the expansion. No new storm drain structures are proposed. The site slopes generally from east to west with storm water runoff leaving the site via overland flow at the same locations as existing conditions. Proposed finish grades range from 0.6% to 5%. Offsite flows do not impact the site.

VI. Sediment & Erosion Control

Erosion control measures consisting of silt fence, diversion ditches, stone construction entrance will be utilized during construction to minimize sediment and dust from leaving the site. Final stabilization will be accomplished by paving and with a vegetative cover established by landscaping and stone mulch cover.

VII. Calculations

Existing and proposed conditions for the 100-year, 6-hour storm have been prepared for the project limits following the procedure set forth in the Design Process Manual for 40 Acre and smaller basins. As shown by the calculations included, the peak flow rate of runoff leaving the site is very slightly decreased due to a small increase in pervious area.

VIII. Stormwater Quality

Water quality volume for the 80th percentile storm was determined using the Redevelopment criteria of 0.26 inches depth over the total impervious area of the proposed development. The developer has determined that reducing parking area, providing underground detention or limiting the proposed building expansion are undesirable options and has instead elected to make a payment in lieu for the WQV.

IX. Conclusions

- a. The runoff generated by the proposed improvements will continue to drain via surface drainage to the same two existing discharge locations and ultimately to the AMAFCA North Diversion Channel.
- b. Total runoff is essentially the same with a calculated reduction of 0.1 cfs.
- c. Free discharge of runoff from this site at the proposed rate is appropriate and in conformance with previously approved drainage plans.
- d. Onsite measures are not feasible for addressing stormwater quality and detention. So the developer agrees to pay the cash-in-lieu fee.

HYDROLOGY CALCULATIONS:

Drainage Area 1- EXISTING CONDITION

Land Treatment	Area SF	Area AC	% of Total Area	Table 6-2(A)(5) CFS/AC 100-yr	Q CFS 100-YR	Table 6.2.13 Excess Precip E-100YR-6HR	Volume E"Ac-In	Volume Ac-ft
A	0	0	0	1.71	0	0.62	0	0
B	21018	0.483	13.2%	2.36	1.14	0.80	0.39	0.03
C	0	0	0.0%	3.05	0	1.03	0	0.00
D	137895	3.166	86.8%	4.34	13.74	2.33	7.38	0.61
Totals	158913	3.648	100.0%		14.88		7.76	0.65

Drainage Area 2- EXISTING CONDITION

Land Treatment	Area SF	Area AC	% of Total Area	Table 6-2(A)(5) CFS/AC 100-yr	Q CFS 100-YR	Table 6.2.13 Excess Precip E-100YR-6HR	Volume E"Ac-In	Volume Ac-ft
A	0	0	0	1.71	0	0.62	0	0
B	4234	0.097	2.7%	2.36	0.23	0.80	0.08	0.01
C	0	0	0.0%	3.05	0	1.03	0	0.00
D	4960	0.114	3.1%	4.34	0.49	2.33	0.27	0.02
Totals	9194	0.211	5.8%		0.72		0.34	0.03

Drainage Area 1: REDEVELOPED CONDITION

Land Treatment	Area SF	Area AC	% of Total Area	Table 6-2(A)(5) CFS/AC 100-yr	Q CFS 100-YR	Table 6.2.13 Excess Precip E-100YR-6HR	Volume E"Ac-In	Volume Ac-ft
A	0	0	0	1.71	0	0.62	0	0
B	18722	0.430	15.1%	2.36	1.01	0.80	0.3438384	0.03
C	0	0	0.0%	3.05	0	1.03	0	0.00
D	105019	2.411	84.9%	4.34	10.46	2.33	5.6174075	0.47
Totals	123741	2.841	100.0%		11.48		5.96	0.50

Drainage Area 2: REDEVELOPED CONDITION

Land Treatment	Area SF	Area AC	% of Total Area	Table 6-2(A)(5) CFS/AC 100-yr	Q CFS 100-YR	Table 6.2.13 Excess Precip E-100YR-6HR	Volume E"Ac-In	Volume Ac-ft
A	0	0	0	1.71	0	0.62	0	0
B	8540	0.196	6.9%	2.36	0.46	0.80	0.16	0.01
C	0	0	0.0%	3.05	0	1.03	0	0.00
D	35758	0.821	28.9%	4.34	3.56	2.33	1.91	0.16
Totals	44298	1.017	35.8%		4.03		2.07	0.17

SUMMARY & COMPARISON OF EXISTING VS. RE-DEVELOPED CONDITION 100-YR, 6-HOUR

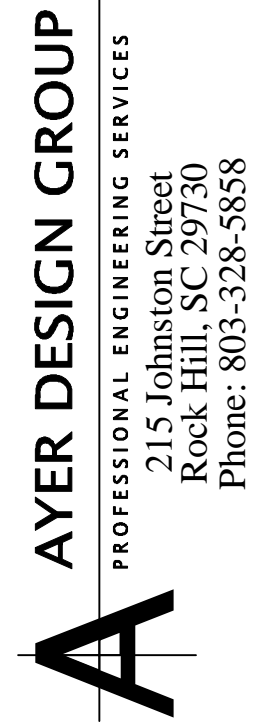
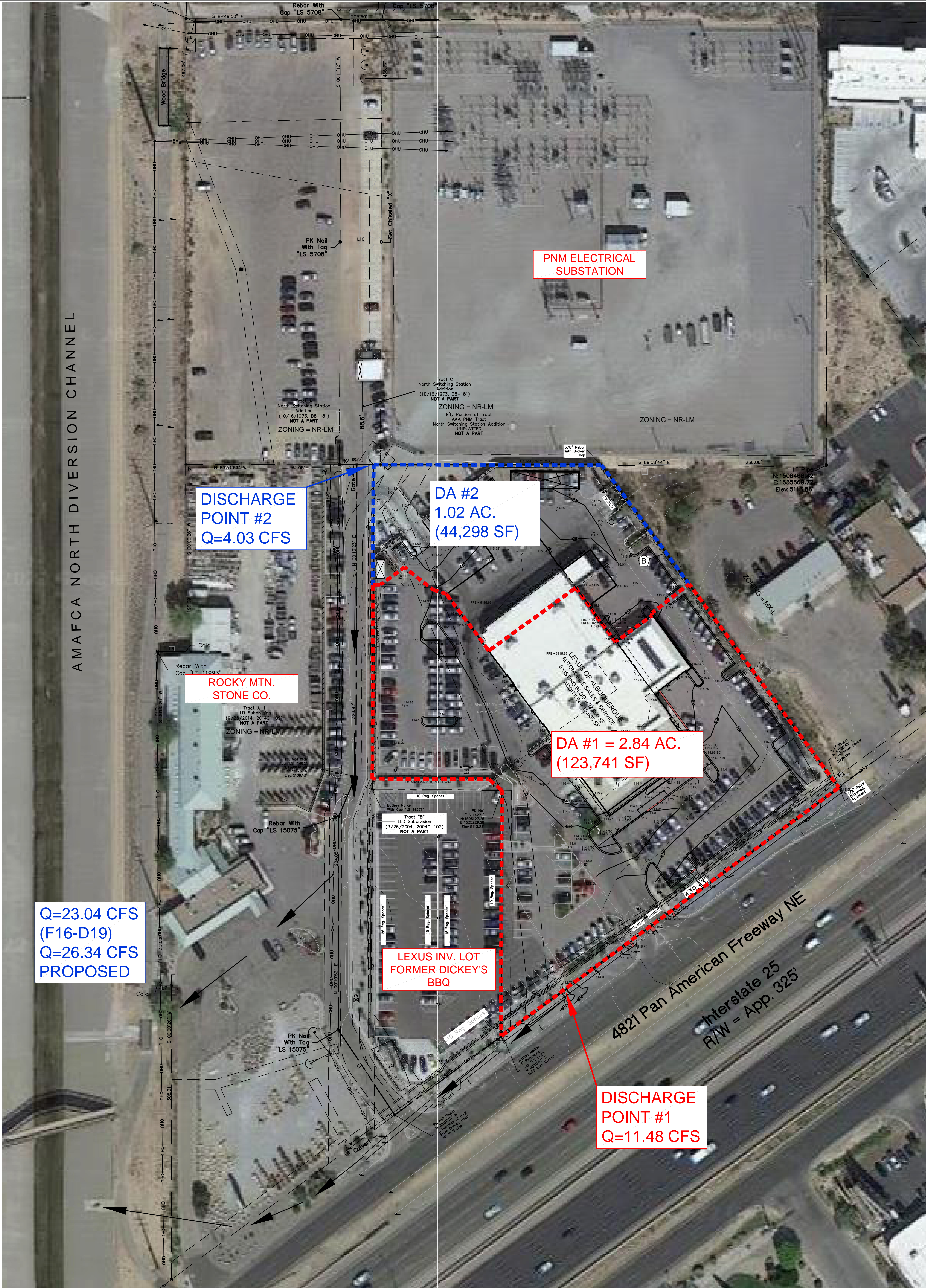
DEVELOPED CONDITION	Q DA#1 CFS	Q DA#2 CFS	Q TOTAL CFS	V DA#1 AC-FT	V DA#2 AC-FT	V TOTAL AC-FT
EXISTING	14.88	0.72	15.60	0.65	0.03	0.68
REDEVELOPED	11.48	4.03	15.50	0.50	0.17	0.67
	DECREASE		-0.10		DECREASE	-0.01

FIRST FLUSH WATER QUALITY VOLUME, WQV

DRAINAGE BASIN	AREA AC	AREA SF	DEPTH IN	WQV AC-IN	WQV AC-FT	WQV CF
A ₀₁	2.411	105019	0.26	0.627	0.052	2275
A ₀₂	0.821	35758	0.26	0.213	0.018	775
Total A ₀	3.232	140777	0.26	0.840	0.070	3050

WQV = IMPVERVIOUS AREA * 0.26 IN

WQV = (A₀₁ + A₀₂) * 0.26 IN



PROJECT NAME:

LEXUS OF ALBUQUERQUE

4821 PAN AMERICAN FWY. ALBUQUERQUE, NM

SHEET DESCRIPTION:
PROPOSED CONDITION
DRAINAGE AREA MAP

PROJECT #		2021-12
DRAWN BY		CC
CHECKED BY		BA
NO	ISSUE/REVISION	DATE
	FOR PERMIT	6/23/22
#1	PERMIT REVISIONS	7/1/22
#2	PERMIT REVISIONS	10/31/22

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