CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director

Mayor Timothy M. Keller

September 22, 2025

John Stapleton, PE
Community Design Solutions
9384 Valley View Dr. NW
Albuquerque, NM 87114

RE: Jackson's Residence
8601 Eagle Rock Ave NE
Grading and Drainage Plans
Engineer's Stamp Date: 08/06/25
Hydrology File: C20D021
Case # HYDR-2025-00334

Dear Mr. Stapleton:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Based upon the information provided in your submittal received 09/17/2025, the Conceptual Grading & Drainage Plan is preliminary approved for Grading Permit for Rough Grading Only and for action by the Development Facilitation Team (DFT) / Development Hearing Officer (DHO) on Site Plan for Building Permit and platting action.

PRIOR TO BUILDING PERMIT:

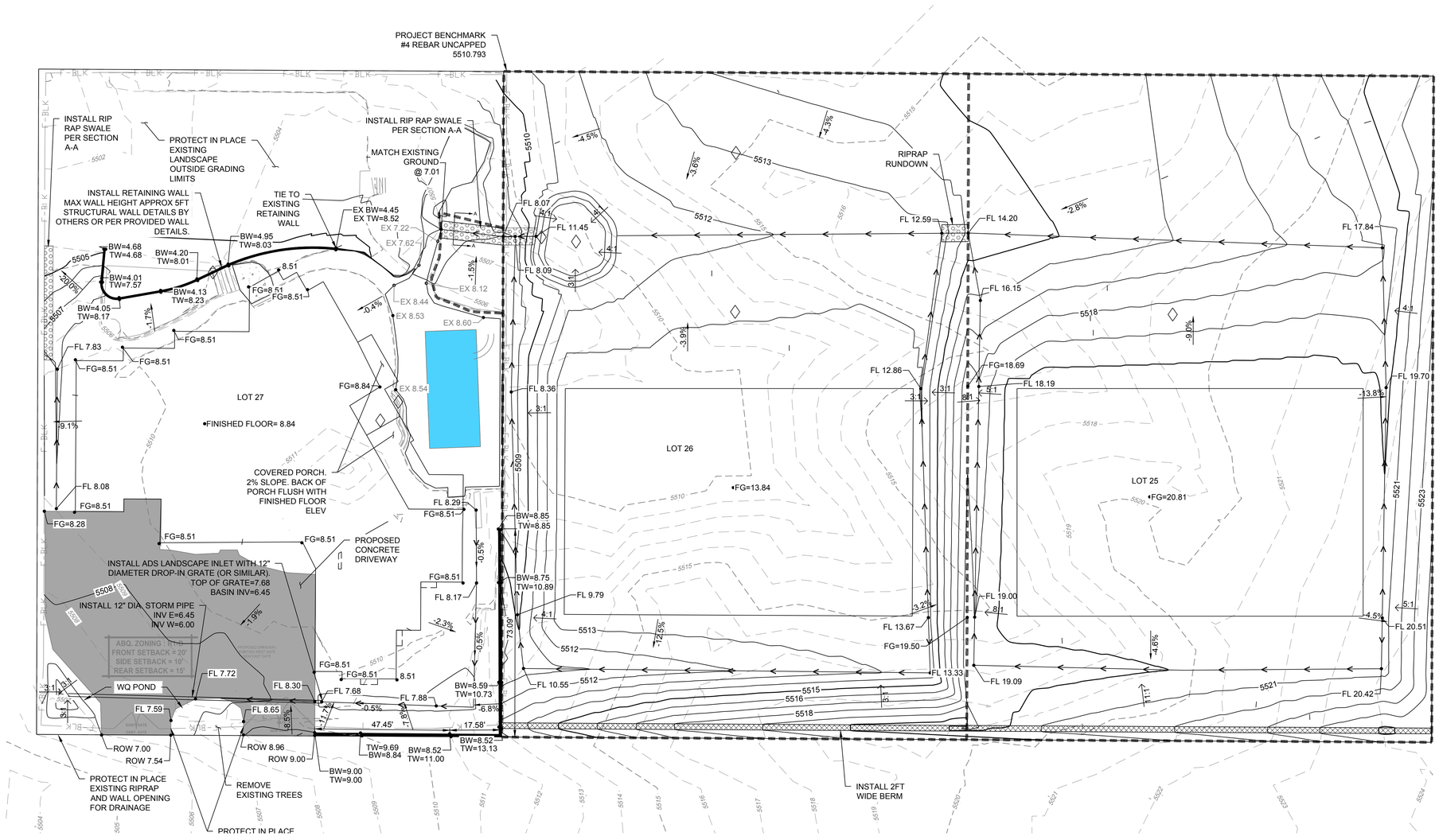
1. Please submit a more detailed Grading & Drainage Plan to Hydrology for review and approval.

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Doug Hughes, PE, jhughes@cabq.gov, 505-924-3420) 14 days prior to any earth disturbance.

If you have any questions, please contact me at 505-924-3314 or amontoya@cabq.gov.

Sincerely,

Anthony Montoya, Jr., P.E., C.F.M.
Senior Engineer, Hydrology
Planning Department, Development Review Services

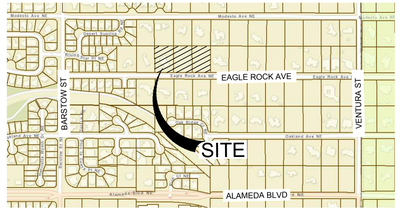


Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Volume	**1.00**	1.25	100679.79 Sq. Ft.	3606.70 Cu. Yd.	3070.32 Cu. Yd.	536.38 Cu. Yd.<Cut>
Totals			100679.79 Sq. Ft.	3606.70 Cu. Yd.	3070.32 Cu. Yd.	536.38 Cu. Yd.<Cut>

Remodel of existing house pad requires an additional 530 CY of fill to accommodate for over-excavation shrinkage. Net export is 0 CY.

NOTE: EARTHWORK CALCULATIONS ACCOUNT FOR THE EXISTING HOUSE REMODEL AND ENCOMPASS BOTH ADJACENT LOTS TO THE EAST.



LOCATION MAP

LEGEND

- PROPERTY LINE
- BUILDING ENVELOPE
- LIMITS OF DISTURBANCE
- EX CONTOUR MAJOR
- EX CONTOUR MINOR
- PROP CONTOUR MAJOR
- PROP CONTOUR MINOR
- SWALE
- FG = 80.00 — TOP OF FINISHED GRADE ELEVATION (SEE NOTE 11
- 80.00 FL — ELEV AT FLOWLINE INVER
- BW = 80.00 — BOTTOM OF RETAINING WALL ELEVATION
- TW = 80.00 — TOP OF RETAINING WALL ELEVATION
- 80.00 ROW — ELEVATION AT RIGHT OF
- WAY
- 2" - 4" STONE, UNLESS SPECIFIED OTHERWISE
- TOP OF BERM
- PROPOSED RETAINING WALL

LEGAL DESCRIPTION:

LOTS 25, 26, AND 27 OF NORTH ALBUQUERQUE ACRES TRACT 3, UNIT 3

0 20 40
SCALE: 1" = 20'

CDS
COMMUNITY DESIGN SOLUTIONS LLC
9384 VALLEY VIEW DR NW SUITE 100
ALBUQUERQUE, NEW MEXICO 87114
PHONE: (505)366-4187

REVISIONS:

NO.	DATE	DESCRIPTION	BY

ISSUED FOR: PRELIM APPROVAL

DESIGNED SD
DRAWN SD
CHECKED JMS
DATE 06.11.25

JOHN M. STAPLETON NEW MEXICO 30170 PROFESSIONAL ENGINEER
08/06/25

PROJECT NAME: JACKSON'S RESIDENCE
8601 EAGLE ROCK AVE NE
ALBUQUERQUE NM

SHEET TITLE: OVER ALL GRADING PLAN

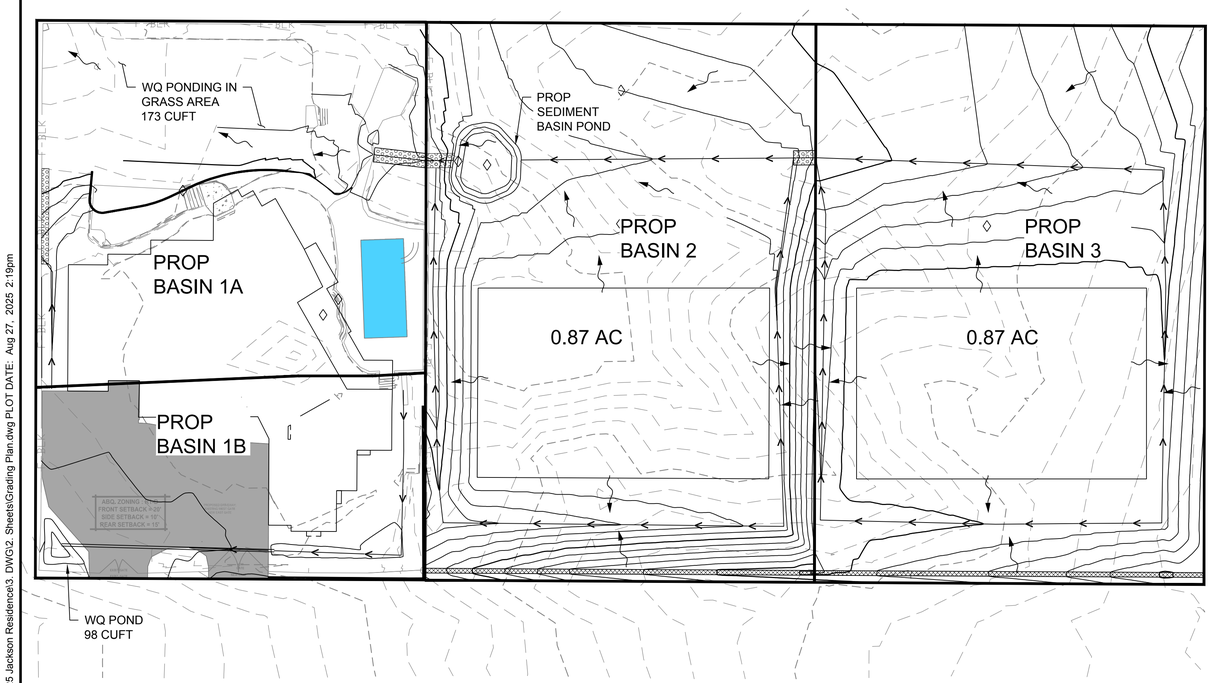
CDS PROJ. NO. 760125

OTHER PROJ. NO.

SHEET NO: 4 OF 5

NAME: C:\Users\John stapleton.CDSNM\appdata\local\temp\AcPublish_24860\Grading Plan.dwg PLOT DATE: Aug 27, 2025 3:44pm

EXISTING CONDITIONS



PROPOSED CONDITIONS

1. Project Overview

This drainage report supports the proposed development of a single-family residence located at 8601 Eagle Rock Ave NE in Albuquerque, NM, along with the two adjacent undeveloped lots to the east. Hydrologic analysis was performed in accordance with the City of Albuquerque Development Process Manual (DPM), Section 6-2(A)(7) – *Hydrograph for Small Watersheds*.

2. EXISTING CONDITIONS

According to FEMA FIRM Panel No. 35001C0133H, the site is not located within a designated floodplain.

SUBBASIN 1 consists of a developed residential lot with established landscaping. Subbasin 1 is further split into two subbasins: subbasin 1A and subbasin 1B. Surface runoff from subbasin 1A generally flows to the northwest, while the subbasin 1B drains toward the southwest. Runoff from this subbasin ultimately discharges as surface flow onto Eagle Rock Avenue.

An existing earthen channel is located on the northeast side of Subbasin 1A. This channel conveys stormwater runoff from the adjacent undeveloped lots (Subbasin 2) toward the northwest.

SUBBASIN 2 consists of two undeveloped lots that generally slope from east to west. Surface runoff follows the existing topography and drains toward Subbasin 1, via turned blocks in the wall, ultimately discharging into the existing earthen channel located within Subbasin 1. There are no existing drainage structures or ponding facilities within Subbasin 2.

3. Proposed Conditions

SUBBASIN 1 is an existing developed residential lot with established landscaping and a single-family structure. The proposed development includes construction of a new home located approximately on the same footprint as the original structure. Existing landscaped areas will remain undisturbed. The existing channel on the northeast side will be filled with dirt and flows from Subbasin 2 will be redirected to flow over landscaped areas to the north. The proposed development maintains the existing pattern of free discharge at approximately the same rate as the existing development.

SUBBASIN 2 & 3 will be graded to accommodate future residential construction. The proposed grading plan includes defined building pads with designated pad elevations. No impervious surfaces are proposed at this time. A 2-foot-wide berm is proposed along the southern boundary to prevent discharge from Eagle Rock Ave into the site. The allowable discharge from Subbasin 2 and 3 is governed by the North Albuquerque Acres Master Drainage Plan (NAAMDP), which identifies the area as part of Developed Basin 111.1*.

According to the NAAMDP, the basin land treatment include:

- 0% Type A
- 34% Type B
- 16% Type C
- 50% Type D

Based on these parameters, the allowable discharge from Subbasin 2 and 3 is **3.16 cfs**. The allowable discharge per NAAMDP is 6.12 cfs/acre.

A temporary sediment basin pond is proposed at the northwest corner of Subbasin 2. This basin will be removed upon final lot development. When the two east lots develop, they shall discharge their runoff into prop basin 1A in the location indicated on this plan and at the NAA allowable rate.

4. Methodology

HYDROLOGIC CALCULATIONS were performed following the procedures outlined in DPM Section 6-2(A)(7) – *Hydrograph for Small Watersheds*. The following parameters and assumptions were used:

- PRECIPITATION ZONE: The site falls within Precipitation Zone 3 per DPM Figure 6.2.3.
- DESIGN STORM: 100-year, 6-hour storm event.
- RUNOFF ESTIMATION: Peak discharge was calculated using the method outlined in DPM Section 6-2(A)(5).
- EXCESS PRECIPITATION: Weighted excess precipitation (E) values were derived using Table 6.2.13 from DPM Section 6-2(A)(4), based on land treatment and zone.

5. Hydrology Calculations

Hydrograph computations, peak discharge values, excess precipitation values, and routing results are shown in the calculation tables below.

6. Conclusion

The proposed grading and drainage plan is compliant with the City of Albuquerque DPM requirements. Each lot detains and manages its own runoff through properly graded surfaces, ponding areas, and drainage infrastructure.

EXISTING HOUSE DRAINAGE CALCULATIONS:

Table/Recurrace Interval	Zone
Excess100Year	3

Existing Areas of Each Treatment		Excess Precipitation	Existing Runoff	
Areas	Acres	Land Treatment	cfs/acre	cfs
Aa	0	A	1.84	0
Ab	0.281	B	2.49	0.70
Ac	0.281	C	3.17	0.89
Ad	0.315	D	4.49	1.41
Tota Area	0.877			

Existing Q (cfs)	
Q	3

Proposed Areas of Each Treatment		Excess Precipitation		Prop Runoff	
Areas	Acres	Land Treatment	E (inch)	cfs/acre	cfs
Aa	0	A	0.67	1.84	0
Ab	0	B	0.86	2.49	0
Ac	0.417	C	1.09	3.17	1.32
Ad	0.460	D	2.58	4.49	2.07
Total Area	0.877				

Prop Q (cfs)	
Q	3

EAST LOTS DRAINAGE CALCULATIONS:

Calculations for proposed subbasin 3 are the same as those for subbasin 2:

Table/Recurrace Interval	Zone
Excess100Year	3

Proposed Areas of Each Treatment			Prop Runoff		
Treatment Type	%	Acres	E (inch)	cfs/acre	cfs
A			0.67	1.84	0
B	34	0.298	0.86	2.49	0.74
C	16	0.140	1.09	3.17	0.44
D	50	0.439	2.58	4.49	1.97
Total Area	0.877				

Weighted E (inches)	
Equation 6.1	1.76

Prop Q (cfs)	
Q	3.16

WATER QUALITY PAYMENT-IN-LIEU CALCULATIONS:

Water Quality Ponding

Basin	Total Area (ac)	Imp. (%)	Imp. Area (ac)	WQ Depth (in)	Required WQ Vol (cuft)	Provided WQ Vol (cuft)	Remaning WQ Vol (cuft)	WQ Payment in lieu ($6/cuft)
1A	0.4385	36	0.162	0.26	153.13	98	55.13	330.76
1B	0.4385	36	0.162	0.26	153.13	See note below		

Note: The required Water Quality Volume for Basin 1B is accommodated by utilizing an existing grassed area that functions as an infiltration zone in accordance with the COA (DPM) Section 6-12(A)

LEGEND

- PROPERTY LINE
- BUILDING ENVELOPE
- EX CONTOUR MAJOR
- EX CONTOUR MINOR
- PROP CONTOUR MAJOR
- PROP CONTOUR MINOR
- EXISTING SUBBASIN
- PROPOSED SUBBASIN
- PROPOSED SWALE
- EXISTING FLOW ARROWS
- PROPOSED FLOW ARROWS

0 20 40
SCALE: 1" = 20'

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8601 EAGLE ROCK AVE NE
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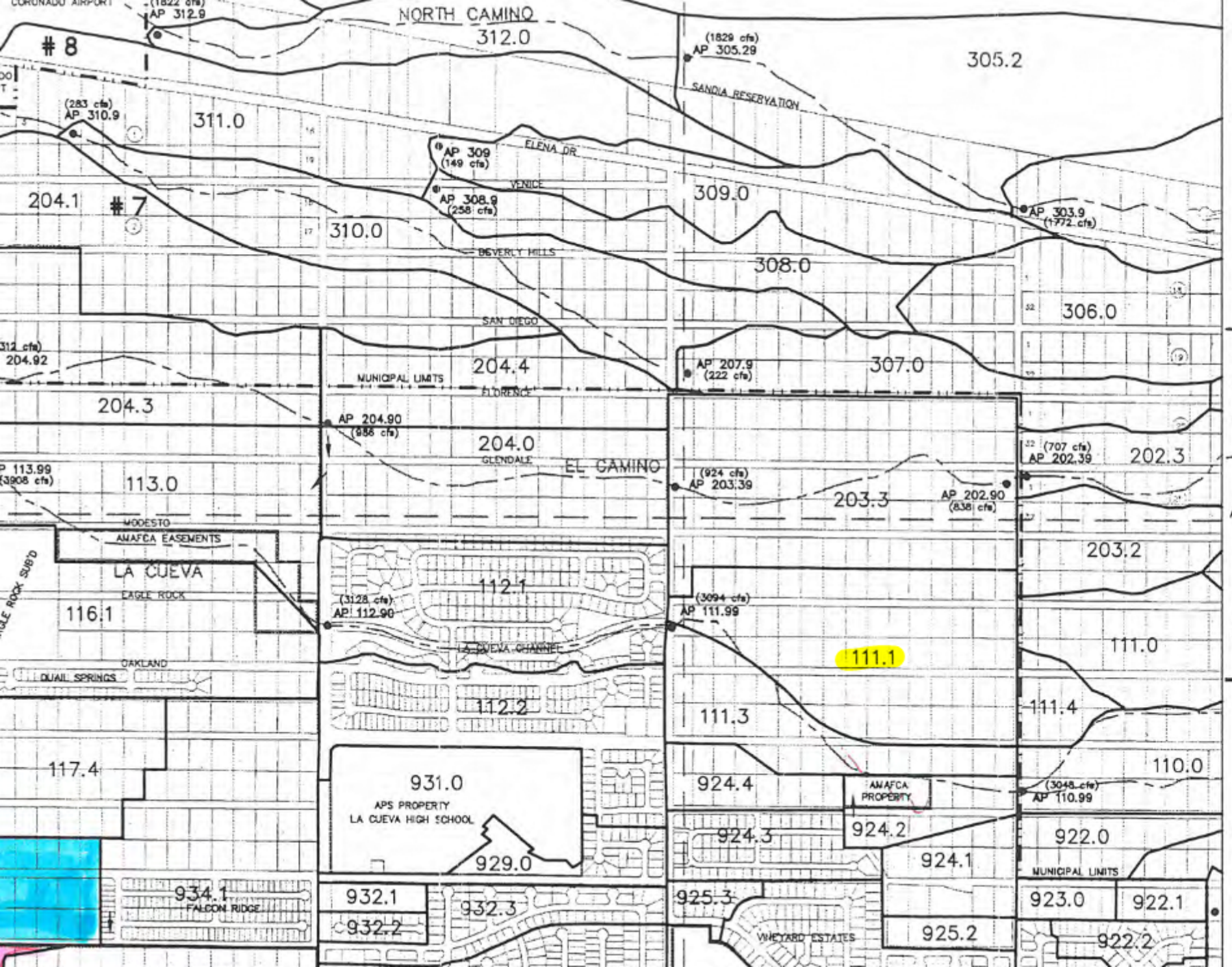
SHEET TITLE: DRAINAGE PLAN

CDS PROJ. NO. 760125

OTHER PROJ. NO.

SHEET NO: 4 OF 5

NAME: P:\760125 Jackson Residence\3. DWG\2. Sheets\Grading Plan.dwg PLOT DATE: Aug 27, 2025 2:19pm



NORTH ALBUQUERQUE ACRES
MASTER DRAINAGE PLAN

FUTURE CONDITION

TABLE A-6

LA CUEVA ARROYO FUTURE CONDITIONS

Sub basin	Area (sq mi)	10-Yr Vol (ac-ft)	10-Yr Qp (cfs)	100-Yr Vol (ac-ft)	100-yr Qp (cfs)
100.0	1.214	45.333	598.79	87.881	1201.70
101.0	.6070	23.352	498.34	45.841	953.84
102.0	.8750	20.905	392.78	54.313	1033.60
102.1	.0930	1.622	60.53	4.457	149.17
103.0	.2120	6.637	184.92	14.423	365.76
103.1	.2299	6.117	149.93	14.085	326.84
103.2	.0616	3.311	87.21	5.997	147.27
103.4	.0953	5.497	142.27	9.771	239.06
103.5	.0625	3.605	94.68	6.408	157.65
103.6	.0684	4.042	101.97	7.142	169.48
104.1	.1367	7.422	203.74	13.378	344.63
104.2	.0471	1.877	50.46	3.688	91.02
105.1	.1305	6.150	173.78	11.502	308.49
105.2	.1045	4.123	125.95	8.123	230.30
106.0	.0436	1.732	52.14	3.448	95.85
106.1	.1116	4.342	126.34	8.685	238.47
107.1	.1808	7.151	208.11	14.303	399.38
107.2	.1720	7.115	168.43	13.591	325.87
108.0	.2055	7.759	207.96	15.573	404.63
109.0	.1006	3.750	114.66	7.552	216.30
110.0	.1634	5.774	138.24	11.738	275.61
111.0	.0533	1.823	57.02	3.739	108.83
111.1	.0500	2.054	57.41	7.699	195.97
111.3	.0420	2.498	64.56	4.348	107.90
111.4	.0141	.482	15.09	.989	28.80

TABLE B-3

LA CUEVA ARROYO SUB-BASIN CHARACTERISTICS

Basin ID	Hydrologic Condition	Basin Area (mi^2)	Land Treatment (%)				TP (hrs)
			A	B	C	D	
100	Existing	1.2140	0	0	100	0	.475
	Future	1.2140	0	0	100	0	.475
101	Existing	.6070	0	0	100	0	.267
	Future	.6070	0	0	100	0	.267
102	Existing	.8750	20	40	40	0	.320
	Future	.8750	20	40	40	0	.320
102.1	Existing	.0930	82	0	18	0	.133
	Future	.0930	80	0	20	0	.133
106	Existing	.0436	78	0	5	17	.133
	Future	.0436	22	23	38	17	.133
106.1	Existing	.1116	75	0	15	10	.14
	Future	.1116	22	23	38	17	.14
107.1	Existing	.1808	92	0	3	5	.14
	Future	.1808	22	23	38	17	.14
107.2	Existing	.1720	86	0	5	9	.18
	Future	.1720	22	23	38	17	.18
108	Existing	.2055	80	0	10	10	.16
	Future	.2055	22	23	38	17	.16
109	Existing	.1006	80	0	10	10	.133
	Future	.1006	22	23	38	17	.133
110	Existing	.1634	80	0	10	10	.19
	Future	.1634	22	23	38	17	.19
111	Existing	.0674	90	0	5	5	.14
	Future	.0533	16	26	33	25	.14
111.1*	Existing	.1194	80	0	10	10	.133
	Future	.0969	0	34	16	50	.133
111.3*	Future	.0420	0	34	16	50	.133
111.4*	Future	.0141	22	23	38	17	.133
112.1*	Existing	.0894	0	34	16	50	.140
	Future	.0894	0	34	16	50	.140