

# CITY OF ALBUQUERQUE

*Planning Department*  
Alan Varela, Director



*Mayor Timothy M. Keller*

February 10, 2025

Ronald Bohannon, P.E.  
Tierra West, LLC  
5571 Midway Park Place NE  
Albuquerque, NM 87109

**RE: 4500 Quaker Heights NW**  
**Permanent C.O. - Accepted**  
**Engineer's Certification Date: 1/20/25**  
**Engineer's Stamp Date: 11/09/2023**  
**Hydrology File: F11D019A**

Dear Mr. Bohannon:

PO Box 1293

Based on the Certification received 01/31/2025 and site visit on 02/07/2025, this letter serves as a "green tag" from Hydrology Section for a Permanent Certificate of Occupancy to be issued by the Building and Safety Division.

Albuquerque

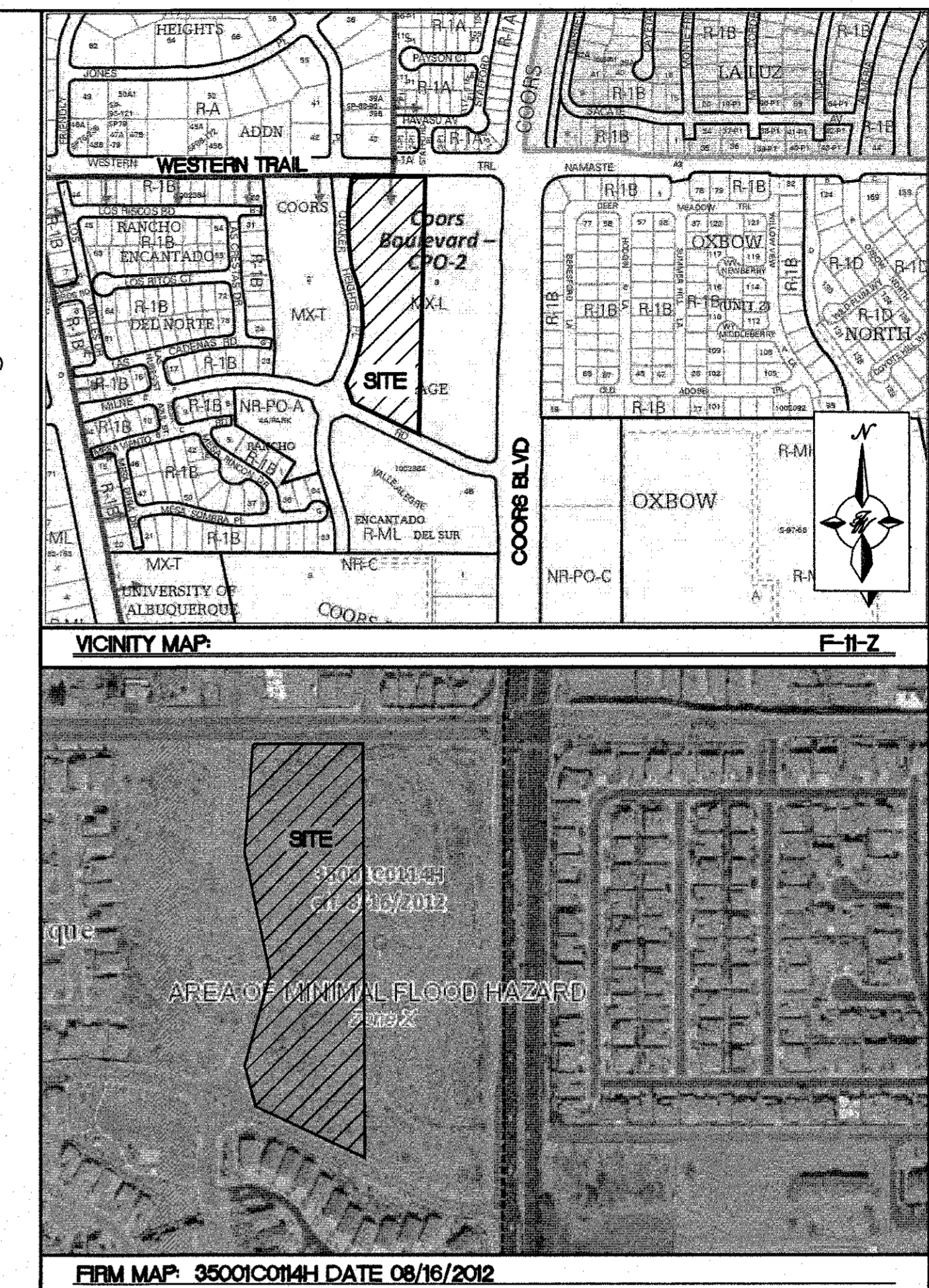
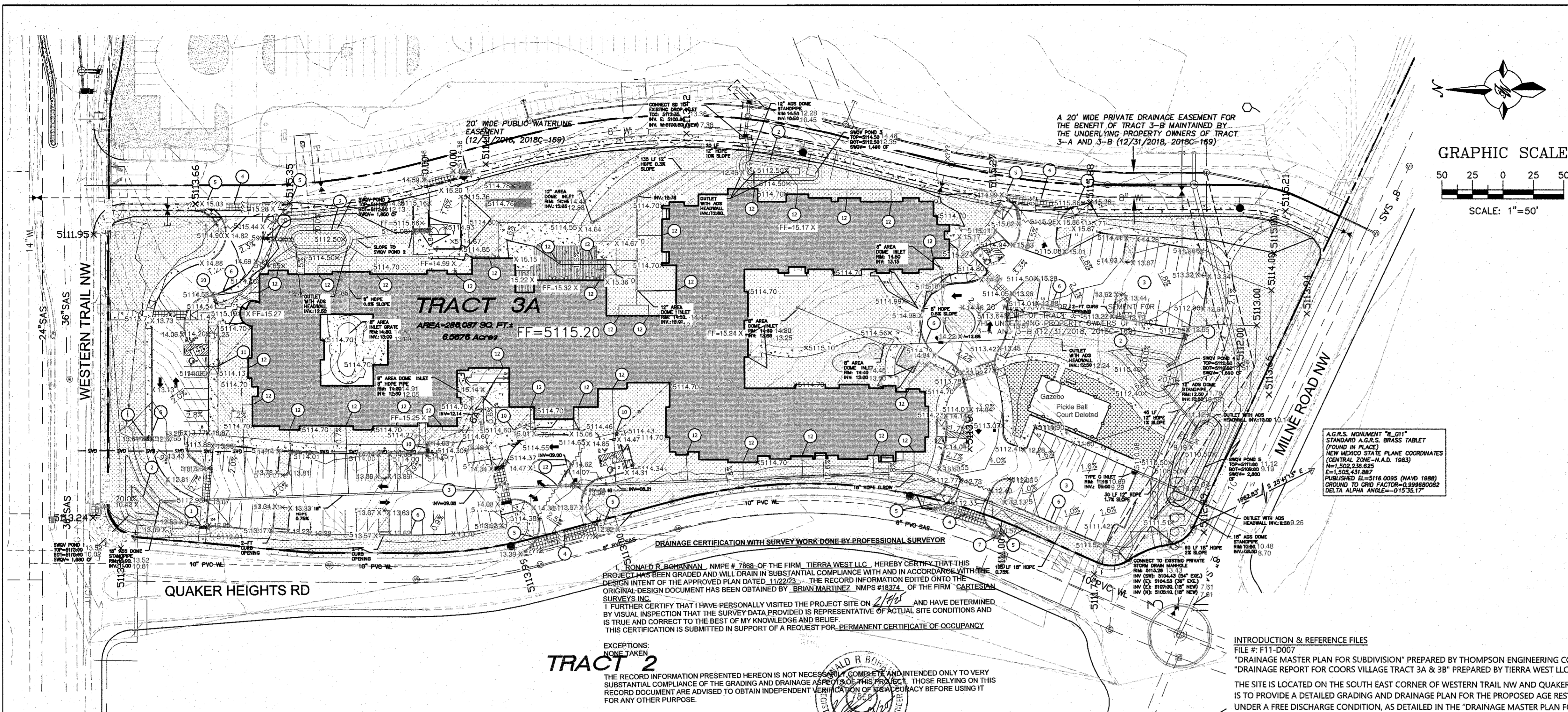
If you have any questions, please contact me at 505-924-3314 or [amontoya@cabq.gov](mailto:amontoya@cabq.gov).

NM 87103

Sincerely,

[www.cabq.gov](http://www.cabq.gov)

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



Proposed Conditions																				
Basin Descriptions										DATE		100-Year, 6-Hr			10-Year, 6-Hr			SWQV		
Basin ID	Tract	Area (sf)	Area (acres)	Area (sq miles)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (in)	Volume (ac-ft)	Flow cfs	Weighted E (in)	Volume (ac-ft)	Flow cfs	Vol Required (cf)	Provided (cf)
					%	(acres)	%	(acres)	%	(acres)	%	(acres)								
B1	roadway	15,317	0.35	0.00055	0%	0.000	0%	0.000	15%	0.053	85%	0.299	1.823	0.053	1.46	1.120	0.033	0.94	N/A	0
B2	3A	63,798	1.46	0.00229	0%	0.000	35%	0.513	0%	0.000	65%	0.952	1.515	0.185	5.20	0.883	0.108	3.14	1,451	1,680
B3	3A	13,188	0.30	0.00047	0%	0.000	100%	0.303	0%	0.000	0%	0.000	0.670	0.017	0.61	0.220	0.006	0.23	0	1,850
B4	3A	25,343	0.58	0.00091	0%	0.000	0%	0.000	0%	0.000	100%	0.582	1.970	0.096	2.54	1.240	0.060	1.68	887	
B5	3A	10,331	0.24	0.00037	0%	0.000	0%	0.000	0%	0.000	100%	0.237	1.970	0.039	1.04	1.240	0.025	0.69	362	1,490
B6	3A	26,911	0.62	0.00097	0%	0.000	82%	0.507	0%	0.000	18%	0.111	0.904	0.047	1.51	0.404	0.021	0.71	170	
B7	3A	15,135	0.35	0.00054	0%	0.000	0%	0.000	0%	0.000	100%	0.347	1.970	0.057	1.52	1.240	0.036	1.00	530	1,690
B8	3A	15,273	0.35	0.00055	0%	0.000	0%	0.000	0%	0.000	100%	0.351	1.970	0.058	1.53	1.240	0.036	1.01	535	
B9	3A	60,815	1.40	0.00218	0%	0.000	68%	0.949	0%	0.000	32%	0.447	1.086	0.126	3.88	0.546	0.064	2.01	681	
B10	3A	27,224	0.62	0.00098	0%	0.000	55%	0.344	0%	0.000	45%	0.281	1.255	0.065	1.93	0.679	0.035	1.07	429	2,800
B11	3A	12,752	0.29	0.00046	0%	0.000	92%	0.269	0%	0.000	8%	0.023	0.774	0.019	0.65	0.302	0.007	0.27	36	0
Total		286,087	6.57	0.01026		0.000		2.884		0.053		3.631		0.761	21.872		0.430	12.763	5,079	9,510

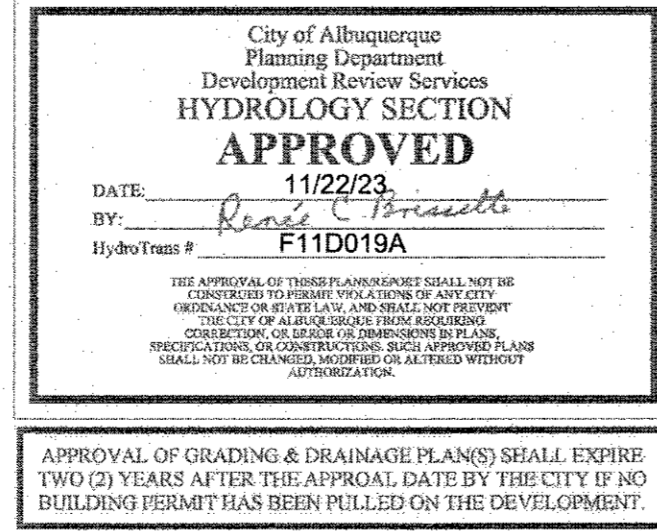
**Equations:**  
Weighted E = Ea\*Aa + Eb\*Ab + Ec\*Ac + Ed  
Volume = Weighted E \* Total Area  
Flow = Qa\*Aa + Qb\*Ab + Qc\*Ac + Qd\*Ad

D (in)	Slope (%)	Area (ft^2)	R	Q Provided (cfs)	Velocity (ft/s)
12	0.50	0.79	0.250	2.53	3.22
12	1.00	0.79	0.250	3.57	4.55
12	1.70	0.79	0.250	4.66	5.93
18	0.75	1.77	0.375	9.12	5.16
18	2.00	1.77	0.375	14.90	8.43

Excess Precipitation, E (in.)		
Zone 1	100-Year	10-Year
Ea	0.44	0.08
Eb	0.67	0.22
Ec	0.99	0.44
Ed	1.97	1.24

Peak Discharge (cfs/acre)		
Zone 1	100-Year	10-Year
Qa	1.29	0.24
Qb	2.03	0.76
Qc	2.87	1.49
Qd	4.37	2.89

SWQV	Area At Mid Depth	Depth	Volume
1	840	2	1,680
2	925	2	1,850
3	745	2	1,490
4	845	2	1,690
5	1400	2	2,800



- KEYED NOTES**
- 2-FT CURB CUT AND 2-FT CONCRETE RUNDOWN W/ SIDEWALK CULVERT. RUNDOWN WINGWALL TO BE 6" IN HEIGHT
  - SWQV POND - SEE PLAN FOR NUMBER AND VOLUME THIS SHEET
  - ASPHALT PAVING (SEE GEOTECH REPORT)
  - BUILD NEW DRIVEWAY (CURB, GUTTER & SW) AND REPLACE WITH COA STD. CURB, GUTTER & SW. MATCH EXISTING FL AT GUTTER.
  - NEW HC RAMP PER COA STD. DETAIL
  - ONSITE CURB AND GUTTER
  - MODIFY EXISTING CURB INLET TO BE FLUSH WITH FLOWLINE OF DRIVEWAY
  - SURVEY PROVIDED BY PRECISION SURVEYS, INC. SEE SURVEY MONUMENT TIE THIS SHEET.
  - A CROSS LOT DRAINAGE EASEMENT FOR THE BENEFIT OF TRACTS 3-A AND 3-B, TO BE MAINTAINED BY THE OWNERS OF EACH TRACT (12/31/2018, 2018C-169)
  - 2-FT SIDEWALK CULVERT WITH 0.4% SLOPE MINIMUM
  - 2-FT CURB CUT
  - 8" ROOF DRAIN CONNECTION, SEE PLUMBING PLANS FOR CONTINUATION

**INTRODUCTION & REFERENCE FILES**  
FILE # F11-D007  
"DRAINAGE MASTER PLAN FOR SUBDIVISION" PREPARED BY THOMPSON ENGINEERING CONSULTANTS, INC. DATED 2/2000  
"DRAINAGE REPORT FOR COORS VILLAGE TRACT 3A & 3B" PREPARED BY TERRA WEST LLC. DATED 2/2019

THE SITE IS LOCATED ON THE SOUTH EAST CORNER OF WESTERN TRAIL NW AND QUAKER HEIGHTS RD. THE PURPOSE OF THIS SUBMITTAL IS TO PROVIDE A DETAILED GRADING AND DRAINAGE PLAN FOR THE PROPOSED AGE RESTRICTED FACILITY. THE ENTIRE SUBDIVISION IS UNDER A FREE DISCHARGE CONDITION, AS DETAILED IN THE "DRAINAGE MASTER PLAN FOR COORS VILLAGE SUBDIVISION", FEBRUARY 2000 BY THOMPSON ENGINEERING CONSULTANTS, INC. REF: F11-D007.

**FLOOD PLAIN**  
THE PROJECT AREA IS INCLUDED ON FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) PANEL 35001C0114H DATED AUGUST 16, 2012 AND IS SHOWN ON THIS PAGE. THE MAP INDICATES THE SITE LIES WITHIN FLOOD ZONE X, AN AREA OF MINIMAL FLOOD HAZARD.

**EXISTING DRAINAGE**  
TRACT 3-A-1 IS A 6.57 ACRE UNDEVELOPED PARCEL. IN 2018 A MASTER DRAINAGE PLAN WAS PREPARED FOR THE DEVELOPMENT OF THIS TRACT AND THE ADJACENT TRACT 3B. TRACT 3B IS A PRESBYTERIAN URGENT CLINIC AND HALF OF THE PARCEL WAS DEVELOPED IN 2019. A COMMON STORMDRAIN WAS INSTALLED IN 2020 TO PROVIDE DRAINAGE FOR BOTH PARCELS IN THE DEVELOPED STATE PER THE DRAINAGE MASTER PLAN. A PRIVATE STORM DRAIN EASEMENT IS DETAILED ON THE RECORDED PLAT 2018 FOR TRACT 3-A AND 3-B. THE STORMDRAIN CONNECTED TO AN EXISTING 54-INCH STORM DRAIN STUB AT THE SOUTH WEST CORNER OF TRACT 3A, WHICH CONNECTS TO THE EXISTING SYSTEM EXISTS WITHIN QUAKER HEIGHTS PL. AS DETAILED ON THE PLANS FOR THE RANCHO ENCANTADO OFF-SITE IMPROVEMENTS FROM 2003. THE STORMWATER RUNOFF EVENTUALLY DRAINS TO THE LADERA DETENTION POND. PER THE 2019 DRAINAGE MASTERPLAN AN 85% IMPERVIOUS LAND TREATMENT WAS PROVIDED FOR THE DEVELOPED CONDITION OF TRACT 3A WITH A TOTAL RUNOFF OF 25.8 CFS FOR THE PARCEL. THIS EXCLUDES THE COMMON PRIVATE ROADWAY.

**PROPOSED DRAINAGE**  
THE WEIGHTED E METHOD FROM THE "CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL VOLUME I - DESIGN CRITERIA, 2006 REVISION" WAS USED TO CALCULATE THE RUNOFF AND VOLUME FOR THE SITE. THE HYDROLOGY TABLES ARE SHOWN ON THIS PAGE. THE SITE WAS DIVIDED INTO 11 BASINS WITH THE APPROPRIATE LAND TREATMENT DETERMINED AS SHOWN IN THE DRAINAGE TABLE. THE MAJORITY OF THE SITE WILL SHEET FLOW AND BE DIRECTED TO CONCRETE RUNDOWNS OR INLETS VIA CURB AND GUTTER WHICH SHALL FLOW INTO THE STORMWATER QUALITY VOLUME PONDS. THERE IS NO OFFSITE DRAINAGE ENTERING THE SITE. THE STORMDRAIN CONVEYS FLOWS FROM TRACT 3B THROUGH TRACT 3A PROPERTY.

NEW DEVELOPMENT SITES ARE REQUIRED TO CAPTURE AND INFILTRATE THE "STORMWATER QUALITY VOLUME" FROM THE 90TH PERCENTILE STORM. THE METHODOLOGY USED IN THE EPA REPORT "ESTIMATING PREDEVELOPMENT HYDROLOGY IN THE MIDDLE RIO GRANDE WATERSHED" APRIL 2014, YIELDS A RUNOFF VALUE OF 0.42 INCHES FOR THE 90TH PERCENTILE STORM. THEREFORE THE REQUIRED STORMWATER QUALITY VOLUME TO BE CAPTURED AND INFILTRATED IS THE PRODUCT OF THE IMPERVIOUS AREA MULTIPLIED BY 0.42 INCHES FOR NEW DEVELOPMENT SITES.

THE PEAK DISCHARGE FOR THE ENTIRE SITE IS 21.8 CFS WHICH IS LESS THAN THE FLOWS CALCULATED IN THE APPROVED DRAINAGE MASTERPLAN. ONCE THE SWQV PONDS ARE FULL THEY WILL FLOW INTO THE EXISTING STORMDRAIN VIA INLETS AND PIPE CONNECTING TO THE EXISTING DRAIN. BASIN 11 HAS MINIMAL OPPORTUNITY TO ACHIEVE THE REQUIRED STORM WATER QUALITY VOLUME AND IS 8% IMPERVIOUS.

**ENTITLEMENT PROCESS FOR THIS SITE**  
THE SITE WAS PREVIOUSLY APPROVED BY DRB AND HYDROLOGY FOR CONCEPTUAL GRADING & DRAINAGE WITH ENGINEERS STAMP DATE 08/22/18. AN ADMINISTRATIVE AMENDMENT TO THE PRIOR APPROVAL IS PROPOSED. THIS PLAN IS BEING SUBMITTED TO HYDROLOGY FOR APPROVAL FOR SITE PLAN FOR BUILDING PERMIT.

LEGEND	
---	CURB & GUTTER
---	BOUNDARY LINE
---	EASEMENT
---	CENTERLINE
---	RIGHT-OF-WAY
---	BUILDING
---	CONCRETE / SIDEWALK
---	GRADE BREAK
---	RETAINING WALL
---	CONTOUR MAJOR
---	CONTOUR MINOR
---	SPOT ELEVATION
---	FLOW ARROW
---	EXISTING CURB & GUTTER
---	EXISTING BOUNDARY LINE
---	EXISTING CONTOUR MAJOR
---	EXISTING CONTOUR MINOR
---	EXISTING SPOT ELEVATION
---	CURB INLET
---	GRADE BREAK AT ENTRANCE

ENGINEER'S SEAL

VINCENT PEREA  
NEW MEXICO  
25311  
11/09/2023  
P.E. #25311

**TRACT 3A COORS VILLAGE**  
4500 QUAKER HEIGHTS ABO NM 87120

**GRADING & DRAINAGE PLAN**

**TERRA WEST, LLC**  
5571 MIDWAY PARK PLACE NE  
ALBUQUERQUE, NM 87109  
(505) 858-3100  
www.tierrawestllc.com

DRAWN BY  
pm

DATE  
10-11-2023

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SHEET #  
**C2**

JOB #  
2019064