

CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director



Mayor Timothy M. Keller

March 13, 2020

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

**RE: Saranam
4701 Montano Rd NW
Conceptual Grading and Drainage Plan
Engineer's Stamp Date: 02/26/20
Hydrology File: E11D013B**

Dear Mr. Bohannon:

PO Box 1293

Based upon the information provided in your submittal received 03/04/2020, the Conceptual Grading & Drainage Plan is approved for action by the DRB on Preliminary Plat / Final Plat, Site Plan for Subdivision, and Site Plan for Building Permit.

Albuquerque

NM 87103

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, 924-3420) 14 days prior to any earth disturbance.

www.cabq.gov

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department



City of Albuquerque

Planning Department
Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: Saranam Golf Course & Montano **Building Permit #:** _____ **Hydrology File #:** _____

DRB#: _____ **EPC#:** PR-2020-003461 **Work Order#:** _____

Legal Description: TR 27A-2 TAYLOR RANCH REDIV OF TR 27-A INTO TRS 27A-1 27A-2 OF THE PLAT OF TRS 27-A, S-1, S-2 & S-3 TAYLOR RANCH SITUATE WITHIN SECTIONS 23, 25 & 26

City Address: 4701 Montano Rd NW

Applicant: Tierra West, LLC **Contact:** Richard Stevenson

Address: 5571 Midway Park PI NE Albuquerque NM 87109

Phone#: 505-858-3100 **Fax#:** 505-858-1118 **E-mail:** rstevenson@tierrawestllc.com

Other Contact: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

TYPE OF DEVELOPMENT: _____ PLAT (# of lots) _____ RESIDENCE ☒ DRB SITE _____ ADMIN SITE _____

IS THIS A RESUBMITTAL? _____ Yes ☒ No

DEPARTMENT _____ TRANSPORTATION _____ HYDROLOGY/DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

- ☐ ENGINEER/ARCHITECT CERTIFICATION
- ☐ PAD CERTIFICATION
- ☒ CONCEPTUAL G & D PLAN
- ☐ GRADING PLAN
- ☐ DRAINAGE REPORT
- ☐ DRAINAGE MASTER PLAN
- ☐ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
- ☐ ELEVATION CERTIFICATE
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ TRAFFIC IMPACT STUDY (TIS)
- ☐ STREET LIGHT LAYOUT
- ☐ OTHER (SPECIFY) _____
- ☐ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY
- ☒ PRELIMINARY PLAT APPROVAL
- ☒ SITE PLAN FOR SUB'D APPROVAL
- ☒ SITE PLAN FOR BLDG. PERMIT APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ GRADING PERMIT APPROVAL
- ☐ SO-19 APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ GRADING/ PAD CERTIFICATION
- ☐ WORK ORDER APPROVAL
- ☐ CLOMR/LOMR
- ☐ FLOODPLAIN DEVELOPMENT PERMIT
- ☐ OTHER (SPECIFY) _____

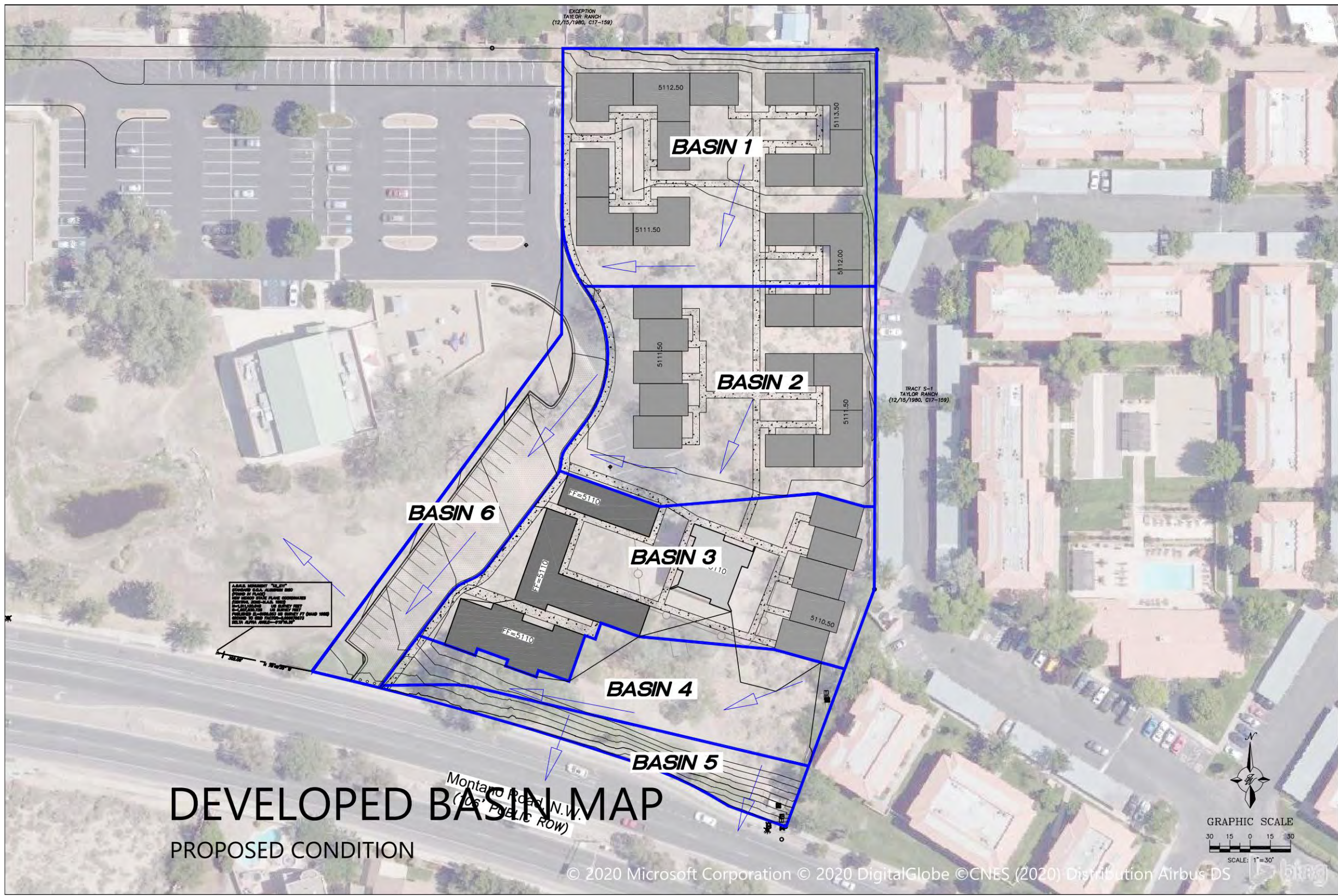
DATE SUBMITTED: 3/3/2020 **By:** Richard Stevenson

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

Z:\2019\2019080 Golf Course & Montano 25 Unit Home (Saranam)\dwg\2019080_GRE.dwg Feb 27, 2020 - 3:58pm



INTRODUCTION & REFERENCE FILES

FILE #: E11D013

THE SITE IS LOCATED ON THE NORTH EAST CORNER OF MONTANO RD NW AND TAYLOR RANCH RD NW. THE PROPERTY WILL BE SUBDIVIDED TO CREATE THE NEW TRACT TO SUPPORT THE 32 UNIT RESIDENTIAL COMMUNITY HOUSING DEVELOPMENT. THE PURPOSE OF THIS SUBMITTAL IS TO PROVIDE A CONCEPTUAL GRADING AND DRAINAGE MANAGEMENT PLAN. THE ENTIRE PARCEL CURRENTLY DRAINS TO AN EXISTING LAKE IN THE SOUTH WEST CORNER. THE SITE IS NOT WELL DOCUMENTED WITH ANY SPECIFIC HYDROLOGY REPORTS ON RECORD DETAILING THE DRAINAGE FOR THE SITE AND THEREFORE AT TIME OF BUILDING PERMIT SUBMITTAL AN OVERALL MASTERPLAN DRAINAGE SHALL BE COMPLETED TO VERIFY THE LAKE HAS ADEQUATE CAPACITY TO RECEIVE THE DEVELOPED FLOWS. THE LAKE IS ALSO PROPOSED TO BE USED TO MEET THE FIRST FLUSH RETENTION VOLUME FOR THE NEW DEVELOPMENT.

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.

HISTORIC DRAINAGE:

THERE IS NO OFFSITE FLOWS INTO THE PARCEL. THE HISTORIC DRAINAGE RUNOFF IS RETAINED ONSITE WITH THE PARCEL DRAINING TO THE EXISTING LAKE AT THE SOUTHWEST CORNER. IT APPEARS FROM A CURSORY REVIEW OF THE AVAILABLE DOCUMENTS THE LAKE WAS SIZED TO ACCOMMODATE THE ENTIRE PARCEL IN A DEVELOPED STATE. AS DETAILED ON THE SITE DEVELOPMENT PLAN. THE LAKE IS AT LEAST 6 FEET DEEP AND THERE IS AN EXISTING MARSH/WETLAND AREA THAT WAS PLANTED AND IS IN GOOD HEALTH FOR ALBUQUERQUE. A SMALL PORTION OF THE EMBANKMENT ALONG THE FRONTAGE DRAINS DIRECTLY INTO MONTANO RD. THIS SLOPED LANDSCAPED AREA WILL REMAIN IN THE DEVELOPED CONDITION AND FREELY DISCHARGE.

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 6 BASINS WITH THE APPROPRIATE LAND TREATMENT DETERMINED AS SHOWN IN THE DRAINAGE TABLE. THE MAJORITY OF THE SITE WILL SHEET FLOW AND BE DIRECTED BY CURB AND GUTTER TO A 3'X3' GRATE INLET IN THE PARKING LOT IN THE SOUTH WEST CORNER OF THE SITE WHICH HAS THE INLET CAPACITY FOR THE EXPECTED FLOW. ROOF DRAINS FROM THE RESIDENTIAL BUILDINGS SHALL BE DIRECTED INTO THE PARKING LOT AREA AND SHEET FLOW ACROSS THE PROPERTY. THE RUNOFF SHALL THEN BE DISCHARGED DIRECTLY TO THE LAKE VIA AN 18-INCH HDPE PIPE THAT HAS THE CAPACITY TO CONVEY THE DESIGN FLOWS. THE LANDSCAPED EMBANKMENT ALONG MONTANO WILL FREELY DISCHARGE INTO THE STREET AND DOES NOT CONTRIBUTE SIGNIFICANT FLOWS. A SMALL PORTION OF THE DRIVEWAY ENTRANCE SHALL ALSO FLOW INTO MONTANO RD. 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 9.3 CFS WHICH IS MORE THAN THE HISTORIC FLOWS DUE TO THE IMPERVIOUS AREAS BEING PROPOSED BUT THE LAKE WILL HAVE THE CAPACITY TO RETAIN THE ADDITIONAL VOLUME GENERATED FROM THIS DEVELOPMENT AND WILL THEREFORE MEET THE FIRST FLUSH REQUIREMENTS. THE 10 DAY VOLUME WAS CALCULATED AND THE CAPACITY OF THE LAKE WILL BE VERIFIED TO CONFIRM THERE IS EXCESS CAPACITY AT THE TIME OF THE FINAL REPORT.

DPM Weighted E Method

Precipitation Zone 1
East of Mesa View United Methodist Church
4701 Montano Rd NW, Albuquerque, NM 87120
TWLLC Date 2/24/2020

Existing Conditions

Basin Descriptions												100-Year, 6-Hr			10-Year, 6-Hr		
Basin ID	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
1	126,434	2.90	0.00454	88%	2.554	0%	0.000	0%	0.000	12%	0.348	0.624	0.151	4.82	0.219	0.053	1.62
												Total On Site Retention pond					
2	23,437	0.54	0.00084	100%	0.538	0%	0.000	0%	0.000	0%	0.000	0.440	0.020	0.69	0.080	0.004	0.13
												Total Montano Rd					
Total	149,871	3.44	0.00538	3.092		0.000		0.000		0.348		0.171		5.51	0.057		1.75

Proposed Conditions

Basin Descriptions												100-Year, 6-Hr			10-Year, 6-Hr			100-Year, 10-day			SWQV	
Basin ID	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	Weighted E (in)	Volume (ac-ft)	Volume (cf)	Required (cf)	Provided (cf)
1	40,617	0.93	0.00146	0%	0.000	65%	0.606	0%	0.000	35%	0.326	1.125	0.087	2.66	0.577	0.045	1.40	1.125	0.130	5,676	498	
2	33,156	0.76	0.00119	0%	0.000	67%	0.510	0%	0.000	33%	0.251	1.099	0.070	2.13	0.557	0.035	1.11	1.099	0.110	4,797	383	
3	33,504	0.77	0.00120	0%	0.000	55%	0.423	0%	0.000	45%	0.346	1.255	0.080	2.37	0.679	0.044	1.32	1.255	0.136	5,905	528	
4	16,888	0.39	0.00061	100%	0.388	0%	0.000	0%	0.000	0%	0.000	0.440	0.014	0.50	0.080	0.003	0.09	0.440	0.014	619	0	
5	8,212	0.19	0.00029	100%	0.189	0%	0.000	0%	0.000	0%	0.000	0.440	0.007	0.24	0.080	0.001	0.05	0.440	0.007	301	0	
6	17,494	0.40	0.00063	0%	0.000	20%	0.080	0%	0.000	70%	0.281	1.513	0.051	1.39	0.912	0.031	0.87	1.513	0.136	5,941	429	
Total	149,871	3.44	0.00538	0.576		1.619		0.000		1.205		0.309		9.296	0.158		4.851	0.534		23,239	1,837	-

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	

Equations:

Weighted E = $Ea \cdot Aa + Eb \cdot Ab + Ec \cdot Ac + Ed \cdot Ad$ / (Total Area)

Volume = Weighted E * Total Area

Flow = $Qa \cdot Aa + Qb \cdot Ab + Qc \cdot Ac + Qd \cdot Ad$

Stormwater Quality Volume

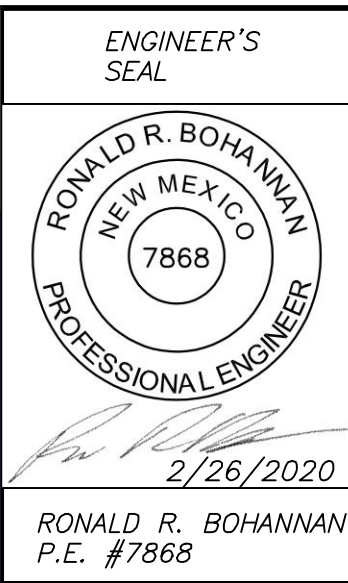
Total Impervious Area = Σ Area in "Treatment D"


Retention depth = 0.42" Per DPM Pg. 272 0.035

Retention Volume = $= 0.035 \times \text{area}$

Foot

Cubic Feet



SARANAM AT 4701 MONTANO RD NW	DRAWN BY BF
	DATE 2/26/2020
CONCEPTIONAL GRADING & DRAINAGE PLAN	2019080_GRE
	SHEET # C2-A
 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com	JOB # 2019080