

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Interim Director



Mayor Timothy M. Keller

February 7, 2022

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

**RE: Saranam Golf Course & Montano
4701 Montano Rd NW
Grading and Drainage Plan
Engineer's Stamp Date: 1/4/2022
Hydrology File: E11D013B**

Dear Mr. Bohannon:

Based upon the information provided in your submittal received 1/4/2022, the Grading & Drainage Plan is **not** approved for Building Permit. The following comments need to be addressed for approval of the above referenced project:

PO Box 1293

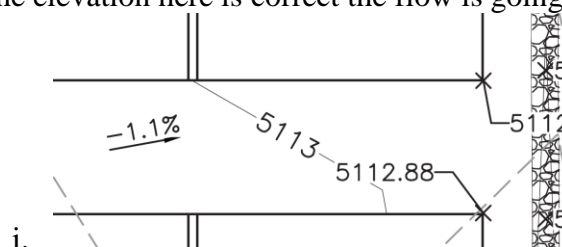
Albuquerque

NM 87103

www.cabq.gov

General Comments

1. The Basin Map does not appear to reflect the same buildings as the G&D Sheets.
 - a. Additionally, it appears flow is directly differently.
 - b. Ensure cross lot drainage is established (easement) if that is the plan and show how this will be routed to the proper location overall. We need to know where the water ends up ultimately.
2. Please utilize new DPM revision Chapter 6.
3. It appears the overall flow should end up in the lake and should be retained if possible. Please provide retention calculations (100-year storm event for 10 days) and show how this volume will be contained on-site.
4. Check FF vs corner spot elevations. They do not match.
5. Call out all pipes and materials.
 - a. Show invert elevations.
6. Swales
 - a. Provide elevations to show how they flow.
 - b. Provide section and reference to each one.
7. Overall the site needs to have a close review to ensure all of the shown elevations work.
 - a. If the elevation here is correct the flow is going right into the building?



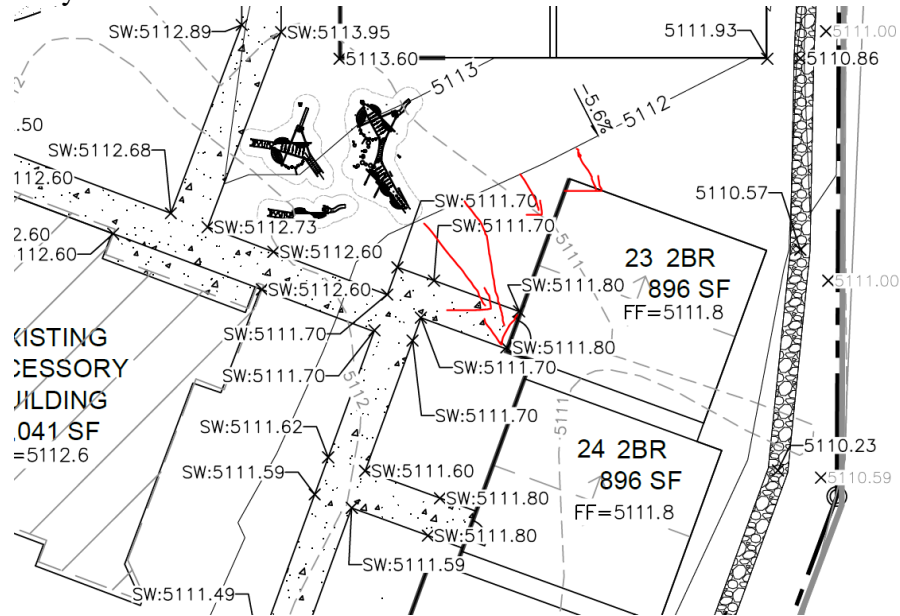
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8. Please reference DPM Chapter 6.
9. Please take a second look at everything. See below, it appears flow may go directly into the doorways here.



a.

10. Include project benchmark and datum.
11. The site must show cross lot drainage easement and ensure flow is being properly conveyed per the easements. Also ensure the pond can handle the additional retention volume for the site and show existing and proposed volumes for the entire volume the pond is collecting. Show all of this information on this G&D.

SHEET C2.1

1. Please double check the calculations for the tables provided. I checked a couple and did not come up with the same.
2. Please include the required volume for retention. (100-year, 10-day storm)

SHEET C2.3

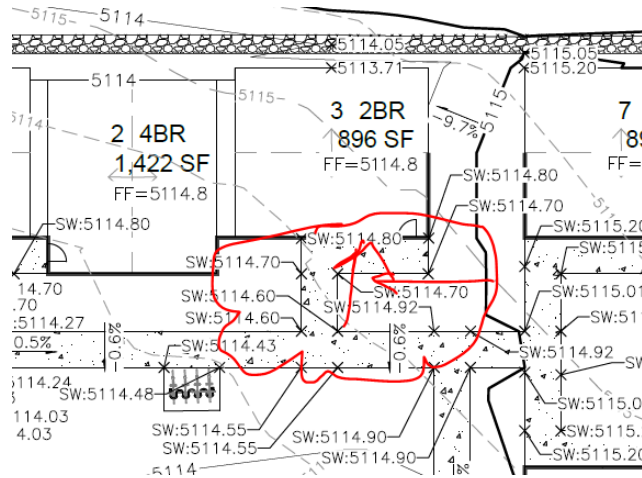
3. Check this area. Appears maybe some ponding and may flow right to the doorway area here.

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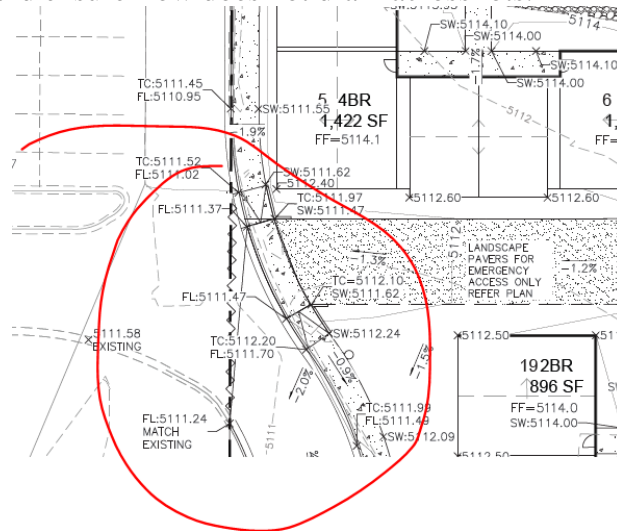
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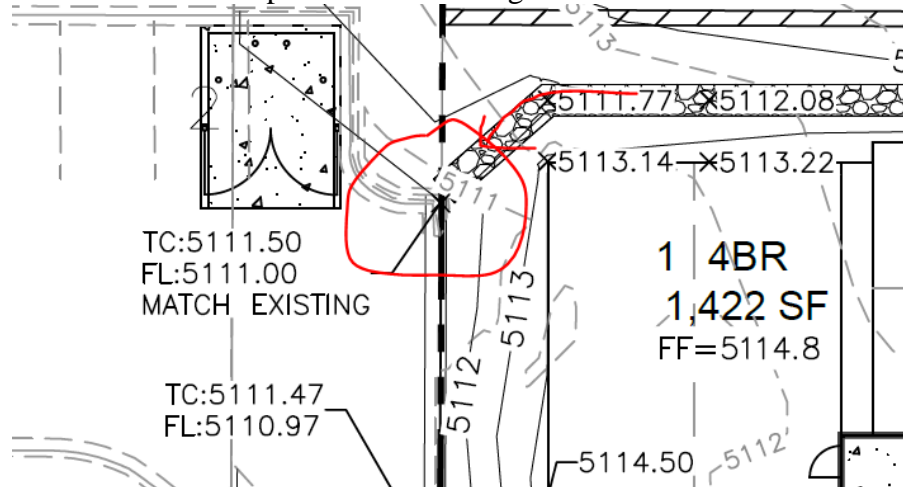
Mayor Timothy M. Keller



- a.
4. Is this a water block? If so, please provide elevations showing how these grades will work and ensure flow does not drain across lots.



- a.
5. Where does this flow end up? Cross lot drainage?



- a.
6. Check all pads. They should be higher than surrounding grade.

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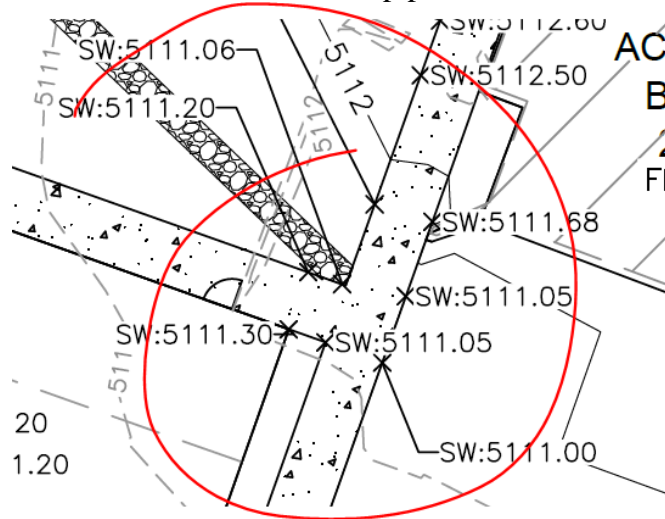
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7. How will this work? Will there be a pipe under sidewalk?



- a.
- b. Please show all of these details. As of now it appears this is just a ponding area.

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.

If you have any questions, please contact me at 924-3695 or dggutierrez@cabq.gov

Sincerely,

David G. Gutierrez, P.E.
Senior Engineer, Hydrology
Planning Department

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov



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 TRAS27-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:** LUIS NORIEGA

Address: 5571 MIDWAY PARK PLACE NE, ALBUQUERQUE, NM 87109

Phone#: 505-858-3100 **Fax#:** _____ **E-mail:** LNORIEGA@TIERRAWESTLLC.COM

Other Contact: Saranam **Contact:** Tracy Weaver

Address: 1028 Eubank NE Suite F, Albuquerque, NM 87112

Phone#: _____ **Fax#:** _____ **E-mail:** tweaver@saranamabq.org

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:

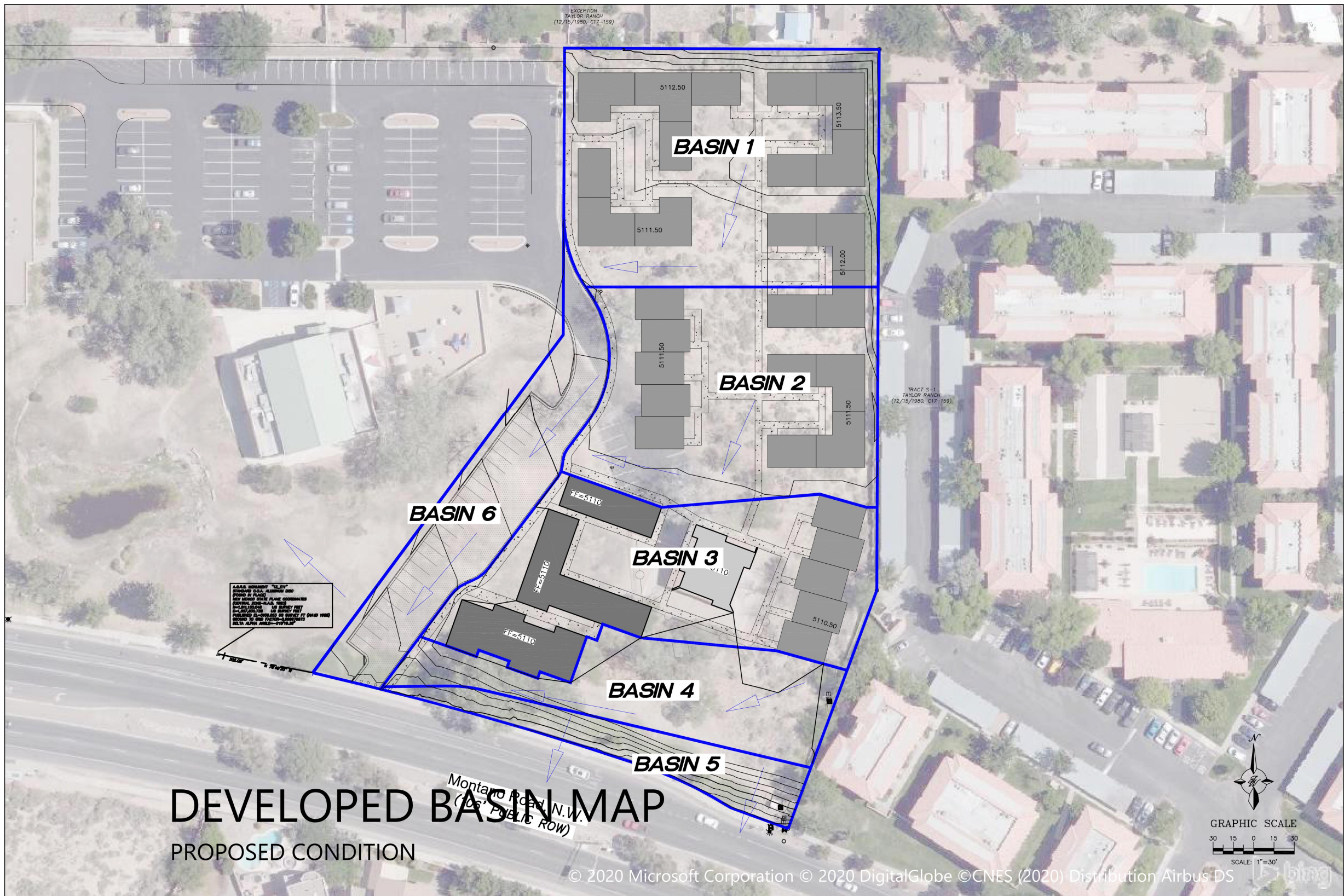
- ☒ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ SITE PLAN FOR SUB'D APPROVAL
- ☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ GRADING PERMIT APPROVAL
- ☐ SO-19 APPROVAL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

DATE SUBMITTED: 01.04.2022 **By:** LUIS NORIEGA

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____



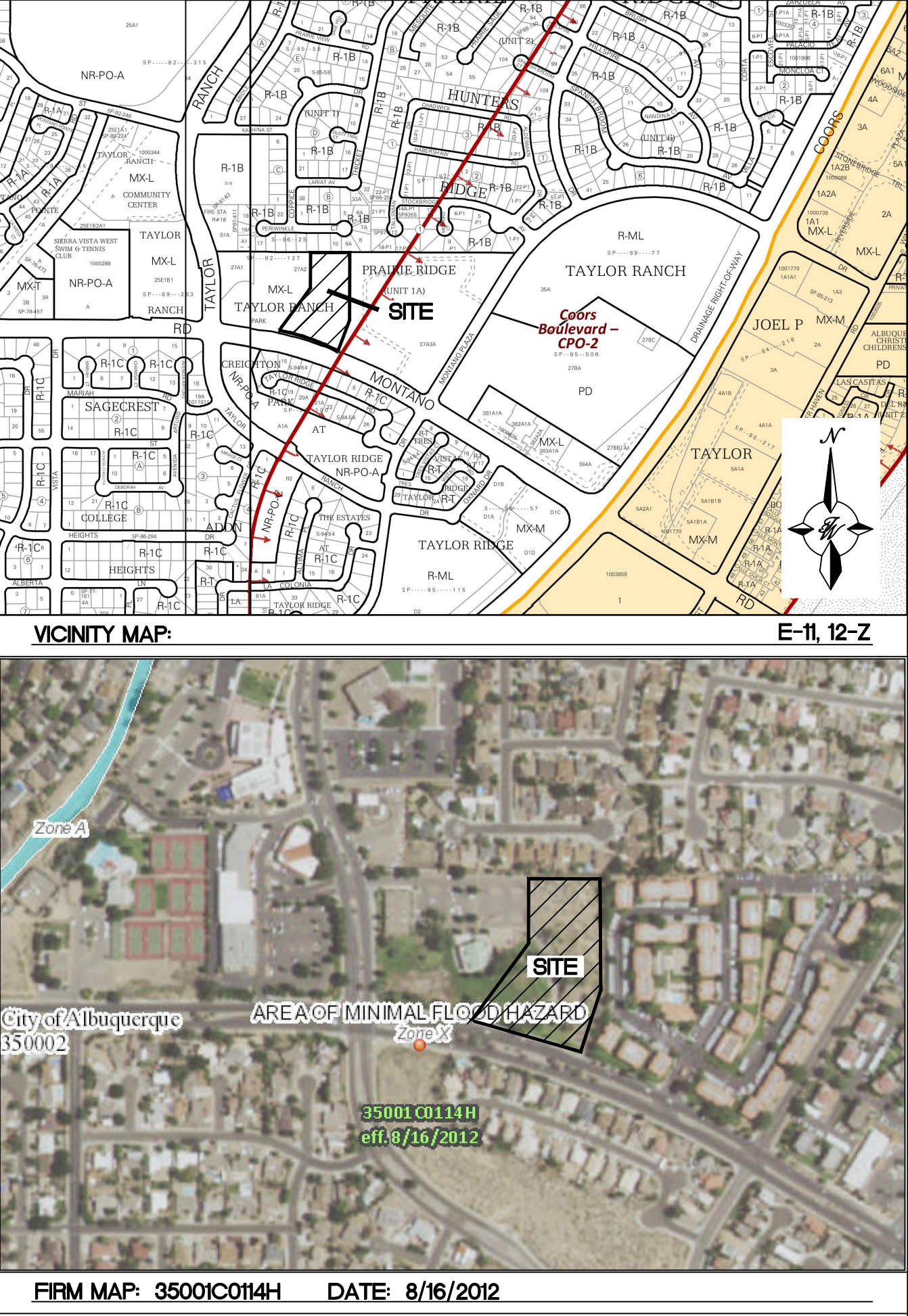
INTRODUCTION & REFERENCE FILES
FILE #: E11D013 & E11D013B

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.



DPM Weighted E Method
Precipitation Zone 1
East of Mesa View United Methodist Church
4701 Montaño Rd NW, Albuquerque, NM 87120
TWLLC Date 2/24/2020

Existing Conditions											100-Year, 6-Hr			10-Year, 6-Hr				
Basin ID	Area (sf)	Area (acres)	Area (sq miles)	Basin Descriptions								Weighted E (in)	Volume (ac-ft)	Flow cfs	Weighted E (in)	Volume (ac-ft)	Flow cfs	
				Treatment A		Treatment B		Treatment C		Treatment D								
				%	(acres)	%	(acres)	%	(acres)	%	(acres)							
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	
2	23,437	0.54	0.00084	100%	0.538	0%	0.000	0%	0.000	0%	0.000	Total On Site Retention pond	0.440	0.020	0.69	0.080	0.004	0.13
Total	149,871	3.44	0.00538		3.092		0.000		0.000		0.348	Total Montaño Rd		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)
				%	(acres)	%	(acres)	%	(acres)	%	(acres)											
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

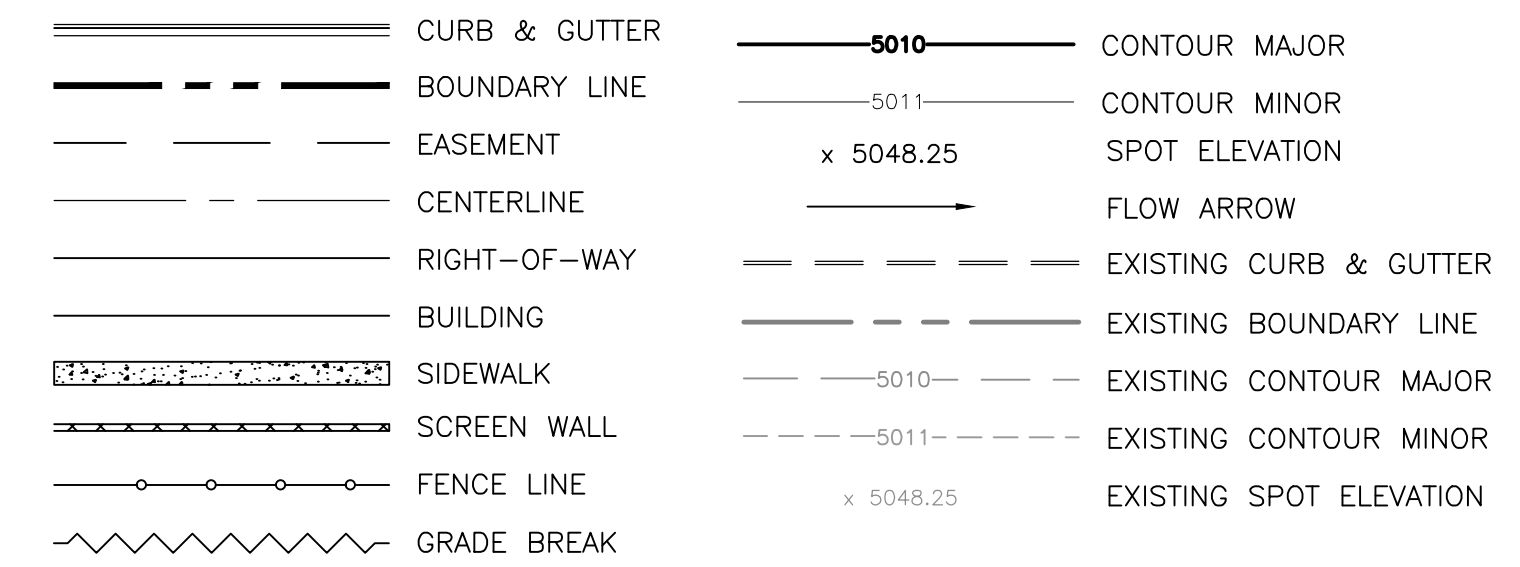
Equations:
Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area)
Volume = Weighted E * Total Area
Flow = Qa*Aa + Qb*Ab + Qc*Ac + Qd*Ad

Stormwater Quality Volume
Total Impervious Area = Σ Area in "Treatment D"
Retainage depth = 0.42" Per DPM Pg. 272 0.035
Retention Volume = $= 0.035 \times \text{area}$ Foot Cubic Feet

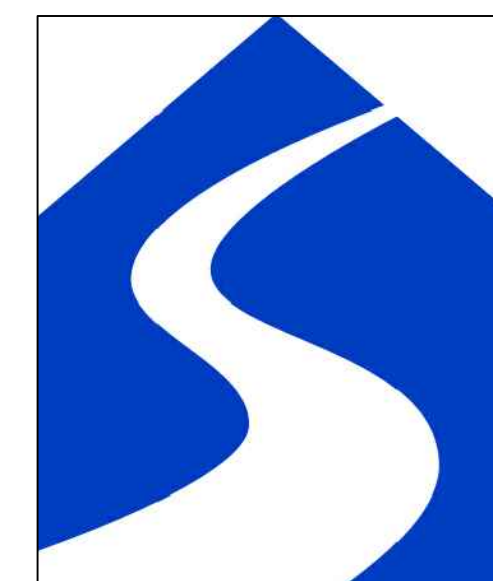
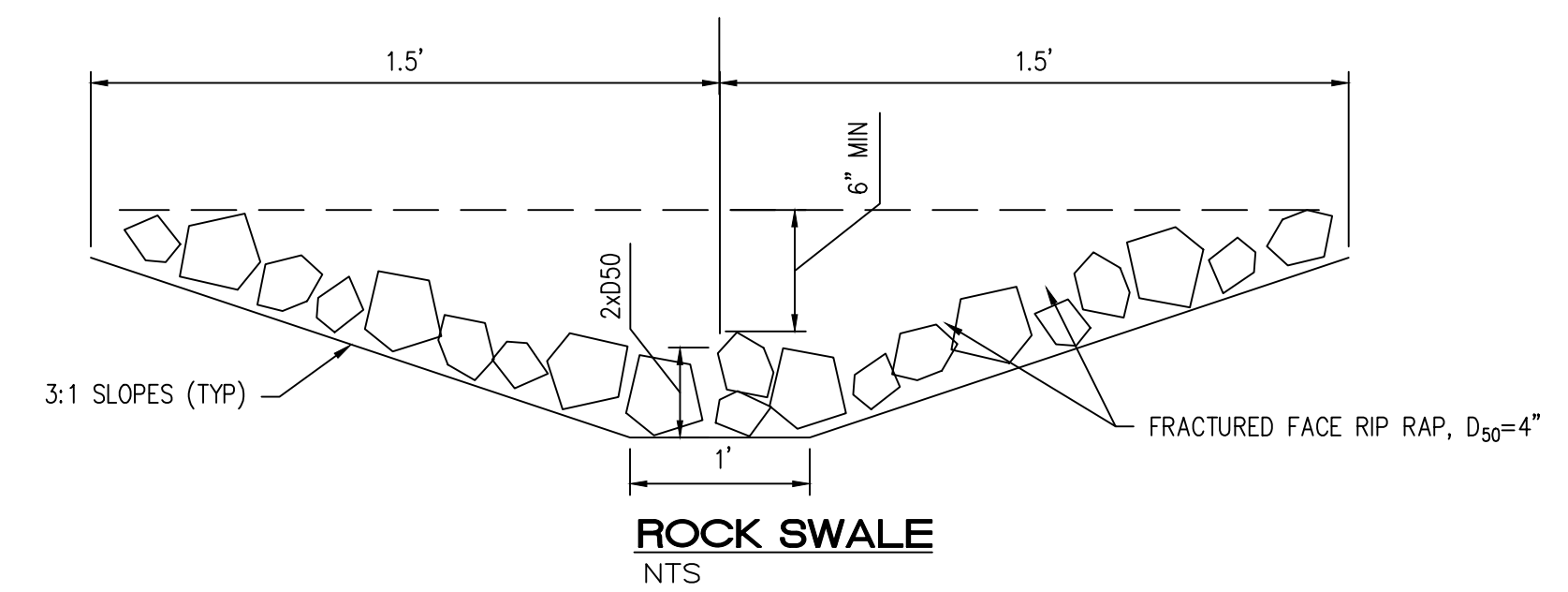


	ENGINEER'S SEAL	SARANAM AT 4701 MONTANO RD NW BASIN MAP PLAN	DRAWN BY LN
			DATE 10/20/2021
			2019080_GRE
			SHEET # C2.1 JOB # 2019080

LEGEND



1. CONTACT STORM DRAIN MAINTENANCE AT (505) 857-8033 TO SCHEDULE A MEETING PRIOR TO FORMING.
2. AN EXCAVATION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT **NEW MEXICO ONE CALL, DIAL "811"** [OR (505) 260-1990] FOR THE LOCATION OF EXISTING UTILITIES.
5. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
6. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
7. MAINTENANCE OF THE FACILITY SHALL BE THE RESPONSIBILITY OF THE ENGINEER OF THE PERMITTING AGENCY.
8. WORK ON ARTERIAL STREETS MAY BE REQUIRED ON A 24-HOUR BASIS.
9. CONTRACTOR MUST CONTACT STORM DRAIN MAINTENANCE AT (505) 857-8033 TO SCHEDULE A CONSTRUCTION INSPECTION. FOR EXCAVATING AND BARRICADING INSPECTIONS, CONTACT CONSTRUCTION COORDINATION AT (505) 924-3416.



ENGINEER'S
SEAL

RONALD R. BOHANNAN
NEW MEXICO
7868
PROFESSIONAL ENGINEER


R. Bohannon

01/04/2

RONALD R. BOHANNAN
P.E. #7868

SARANAM AT
4701 MONTANO RD NW

**GRADING PLAN
(OVER ALL)**

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

DRAWN BY
LN

DATE
10/20/2021

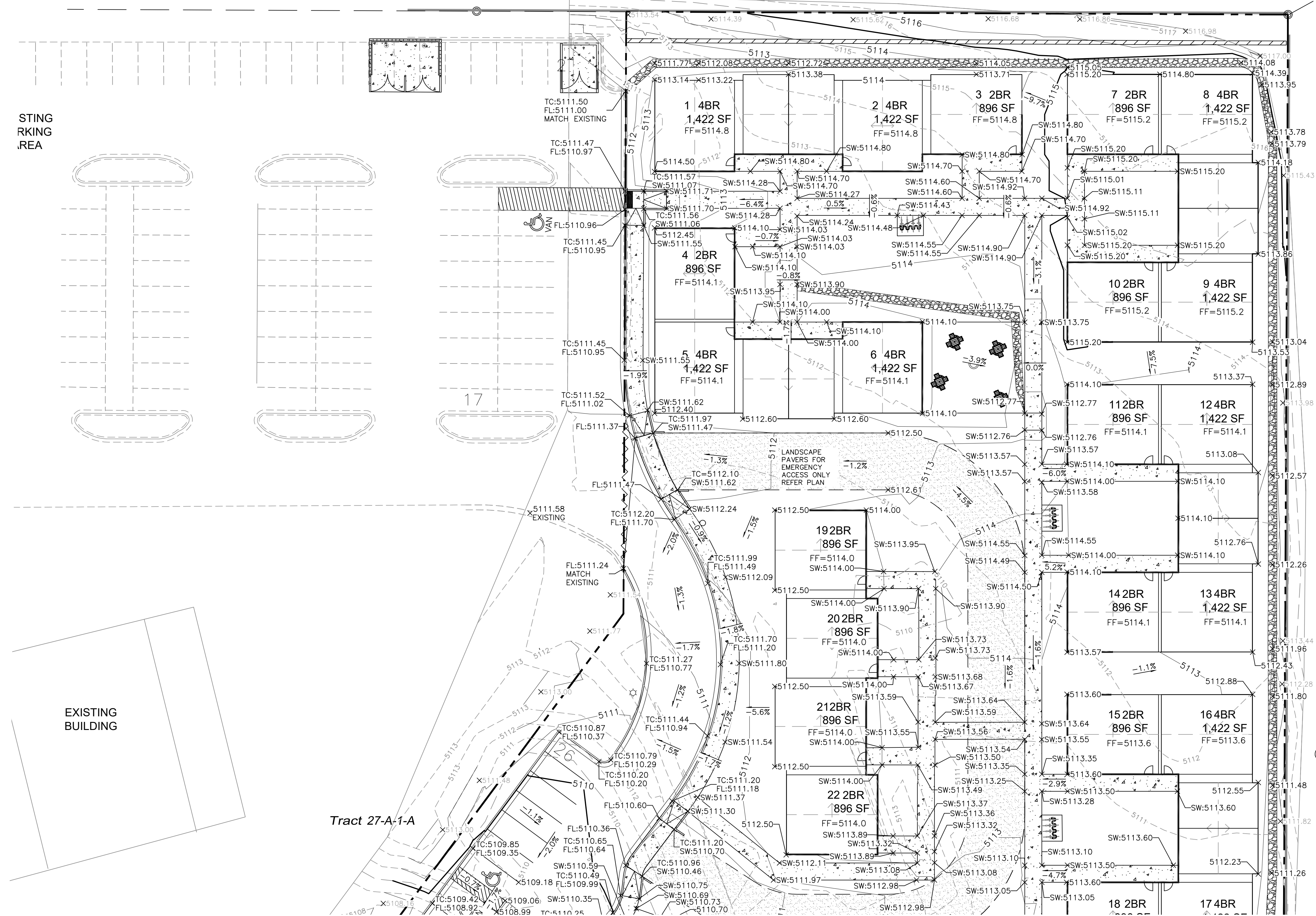
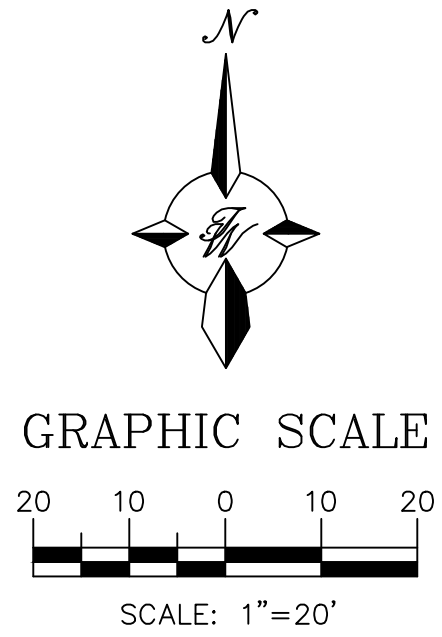
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SHEET #
C2.2

JOB #
2019080

\\TWNAS\Z_Drive\2019\2019080 Golf Course & Montano 25 Unit Home (Saranam)\dwg\EPIC\2019080_GRE.dwg Jan 04, 2022 - 8:57am

STING
RKING
REA



LEGEND

	CURB & GUTTER		5010	CONTOUR MAJOR
	BOUNDARY LINE		5011	CONTOUR MINOR
	EASEMENT		5048.25	SPOT ELEVATION
	CENTERLINE			FLOW ARROW
	RIGHT-OF-WAY			EXISTING CURB & GUTTER
	BUILDING			EXISTING BOUNDARY LINE
	SIDEWALK		5010	EXISTING CONTOUR MAJOR
	SCREEN WALL		5011	EXISTING CONTOUR MINOR
	FENCE LINE		5048.25	EXISTING SPOT ELEVATION
	GRADE BREAK			

NOTICE TO CONTRACTORS

- CONTACT STORM DRAIN MAINTENANCE AT (505) 857-8033 TO SCHEDULE A MEETING PRIOR TO FORMING.
- AN EXCAVATION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT **NEW MEXICO ONE CALL**, DIAL "811" (OR (505) 260-1990) FOR THE LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
- MAINTENANCE OF THE FACILITY SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY BEING SERVED.
- WORK ON ARTERIAL STREETS MAY BE REQUIRED ON A 24-HOUR BASIS.
- CONTRACTOR MUST CONTACT STORM DRAIN MAINTENANCE AT (505) 857-8033 TO SCHEDULE A CONSTRUCTION INSPECTION. FOR EXCAVATING AND BARRICADING INSPECTIONS, CONTACT CONSTRUCTION COORDINATION AT (505) 924-3416.

SPOT ELEVATION LEGEND

SW=SIDEWALK ELEVATION
FL=FLOW LINE ELEVATION
TC=TOP OF CURB ELEVATION
FF=FINISHED FLOOR ELEVATION

SPOT ELEVATION NOTE:

ALL SPOT ELEVATIONS ARE FLOWLINE UNLESS OTHERWISE NOTED.

CAUTION

ALL EXISTING UTILITIES/TOPOGRAPHY SHOWN WERE OBTAINED FROM RESEARCH, AS-BUILTS, SURVEYS OR INFORMATION PROVIDED BY OTHERS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO AND INCLUDING ANY EXCAVATION, TO DETERMINE THE ACTUAL LOCATION OF UTILITIES AND OTHER IMPROVEMENTS, PRIOR TO STARTING THE WORK. ANY CHANGES FROM THIS PLAN SHALL BE COORDINATED WITH AND APPROVED BY THE ENGINEER.

TRACT S-1
TAYLOR RANCH
(12/15/1980, C17-159)



ENGINEER'S SEAL RONALD R. BOHANNAN P.E. #7868	SARANAM AT 4701 MONTANO RD NW DETAILED GRADING PLAN (NORTH)	DRAWN BY LN
		DATE 10/20/2021
 TIERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com	SHEET # C2.3	2019080_GRE
		JOB # 2019080

