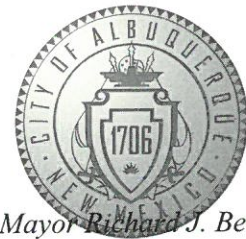


CITY OF ALBUQUERQUE

Planning Department
Suzanne Lubar, Director



Mayor Richard J. Berry

August 25, 2017

David Soule, P.E.
Rio Grande Engineering
PO Box 93924
Albuquerque, New Mexico 87199

**RE: Lot 19 Block 4 Unit 19 Volcano Cliffs SAD 228
6539 Vista Del Prado NW
Grading and Drainage Plan
Engineers Stamp Date 8/18/17 (D10D003T19)**

Dear Mr. Soule,

Based upon the information provided in your submittal received 8/21/17, this plan is approved for Grading Permit.

PO Box 1293

Please inform the builder/owner to attach a copy of this approved plan to the construction sets in the permitting process prior to sign-off by Hydrology.

Albuquerque

Reiterate to the Owner/Contractor that a separate permit for a garden/retaining wall must be obtained, with the approved G&D plan dated 8/18/17.

NM 87103

Prior to Building permit approval a Pad Certification will be required, provided by the Engineer or a registered Land Surveyor.

www.cabq.gov

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist of this plan will be required.

If you have any questions, please contact me at 924-3695 or Rudy Rael at 924-3977.

Sincerely,

James D. Hughes, P.E.
Principal Engineer, Hydrology
Planning Department

RR/JH
C: File



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: _____ **Building Permit #:** _____ **City Drainage #:** _____

DRB#: _____ **EPC#:** _____ **Work Order#:** _____

Legal Description: _____

City Address: _____

Engineering Firm: _____ **Contact:** _____

Address: _____

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

Owner: _____ **Contact:** _____

Address: _____

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

Architect: _____ **Contact:** _____

Address: _____

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

Other Contact: _____ **Contact:** _____

Address: _____

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

Check all that Apply:

DEPARTMENT:

- ☐ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

- ☐ ENGINEER/ ARCHITECT CERTIFICATION
- ☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ☐ OTHER (SPECIFY) _____

CHECK 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
- ☐ PRE-DESIGN MEETING
☐ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: ☐ Yes ☐ No

DATE SUBMITTED: _____ **By:** _____

COA STAFF: _____ ELECTRONIC SUBMITTAL RECEIVED: _____

Weighted E Method

										100-Year, 6-hr.		
Basin	Area (sf)	Area (acres)	Treatment A % (acres)	Treatment B % (acres)	Treatment C % (acres)	Treatment D % (acres)	Weighted (ac-ft)	Volume (ac-ft)	Flow cfs			
UPLAND	27131.00	0.623	0%	0	10% 0.062	40% 0.2491	50% 0.311	0.807	0.042			
ALLOWED	14177.00	0.325	0%	0	10% 0.033	40% 0.1302	50% 0.163	1.448	0.039			
PROPOSED	14177.00	0.325	0%	0	38% 0.124	32% 0.1041	30% 0.098	1.162	0.032			
total												

Equations:

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

Volume = Weighted D * Total Area

Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad

Where for 100-year, 6-hour storm- zone 1

Ea= 0.44
Eb= 0.67
Ec= 0.99
Ed= 1.97

Qa= 1.29
Qb= 2.03
Qc= 2.87
Qd= 4.37

ONSITE Conditons

FIRST FLUSH WATER QUALITY VOLUME

REQUIRED

PROVIDED

(CF)

(CF)

WATER QUALITY

121

999

Narrative

This site is within the SAD 226 Master Drainage plan boundaries. The site is to maintain existing patterns and drain to the the adjacent roadway lot to east per the master drainage plan. We are ponding the water harvest volume generated by the site there is not measurable upland flow. This plan has a shallow water harvest pond in excess of the drainage regulations.

This plan is in conformance to the master drainage plan

TURNED BLOCKS

Weir Equation:

$$Q=CLH^{3/2}$$

drainage thru walls

Q= 2.92 cfs
C= 2.95
H= 0.5 ft
L = Length of weir

$$Q = 2.95 * .5 * ((0.5)^{(3/2)})$$

Each opening is 6"x6"
Each block has two openings
Each opening has .52 cfs capacity

UPLAND

Therefore 1.48 cfs requires 3 openings and 2 turned blocks

OUTFALL

Therefore 2.46 cfs requires 5 openings and 3 turned blocks

EROSION CONTROL NOTES:

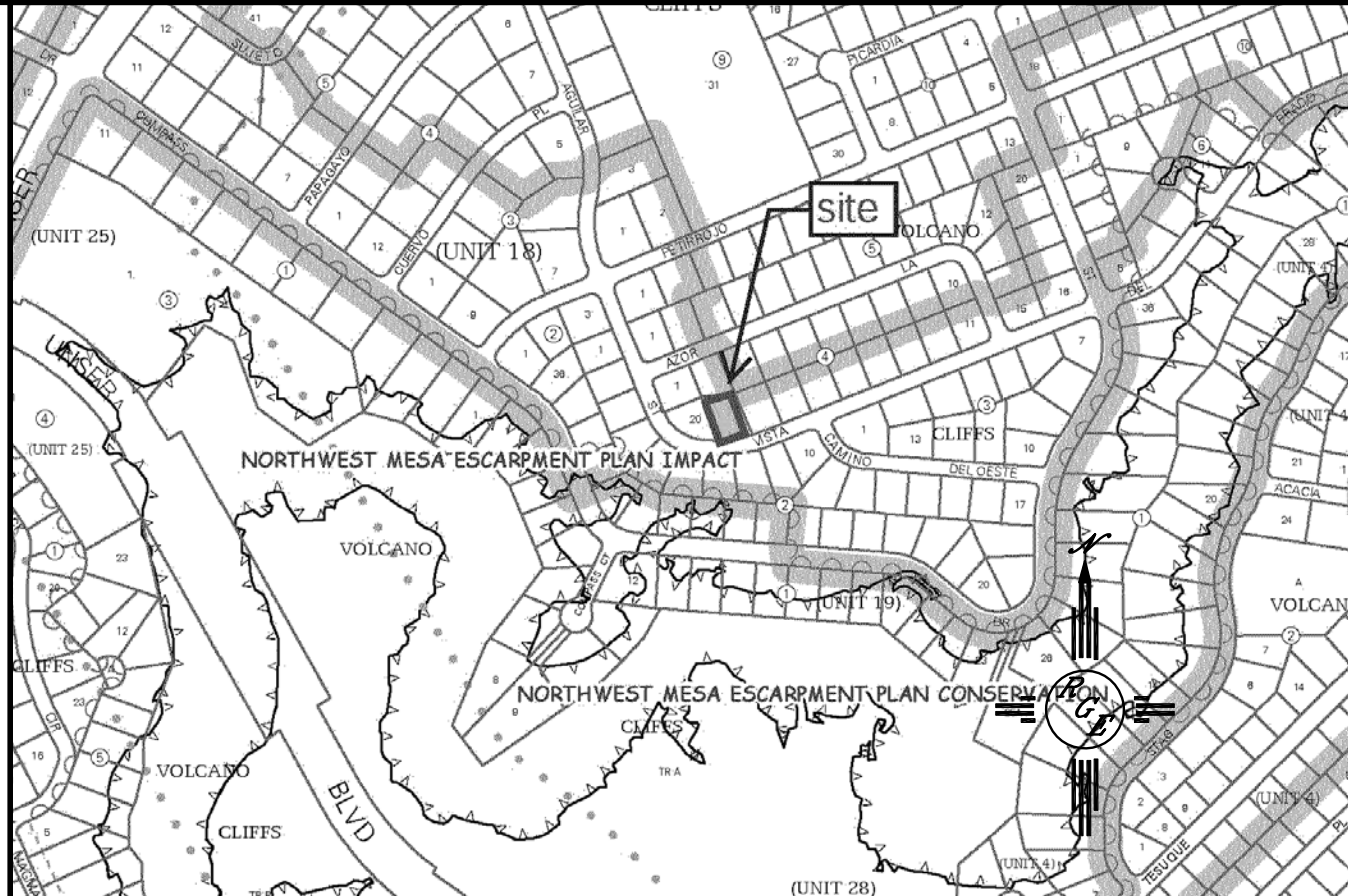
1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.

2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.

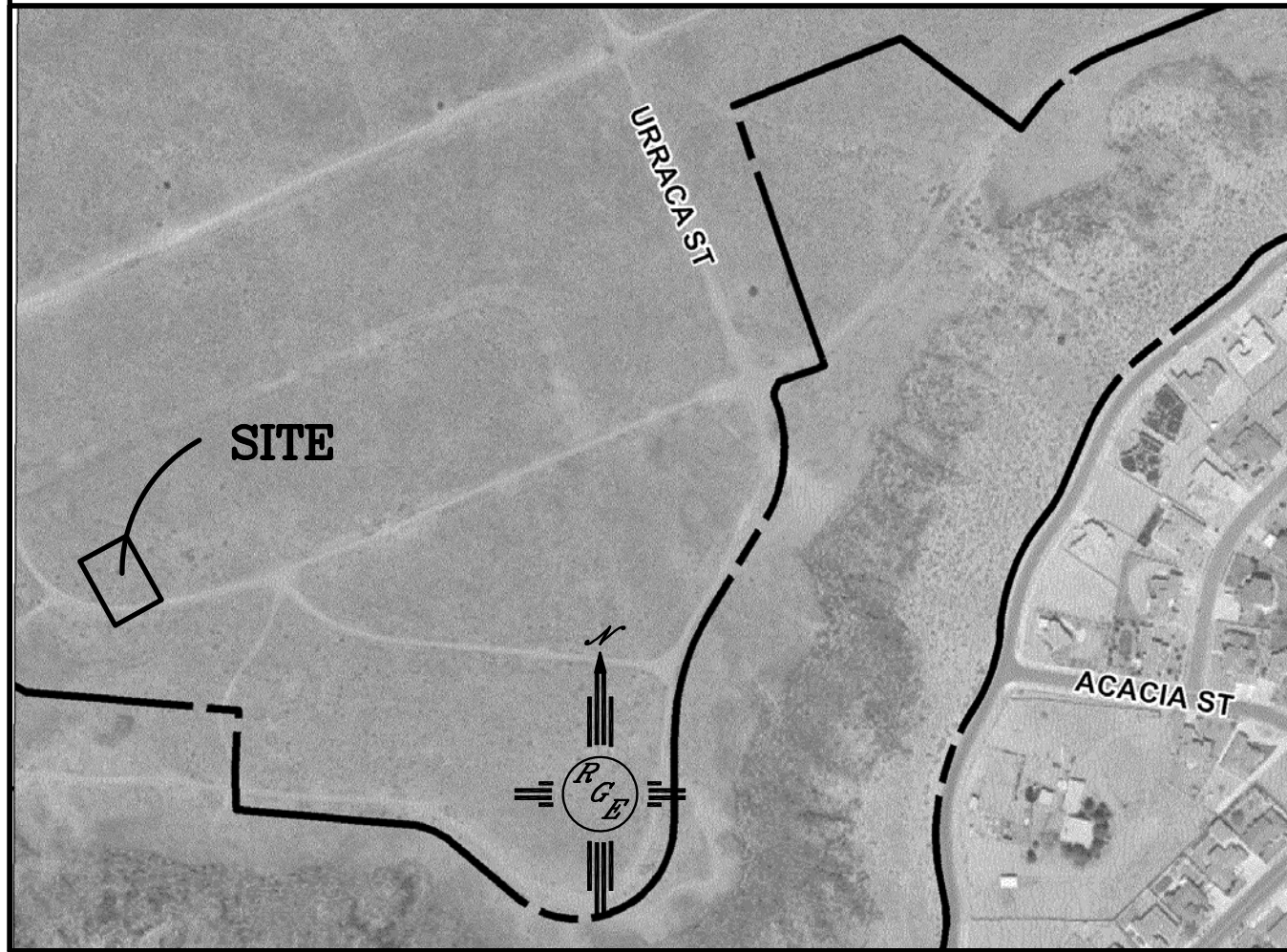
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.

4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.

5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.



VICINITY MAP: D-10-Z



FIRM MAP: FM35001C0112G

LEGAL DESCRIPTION:

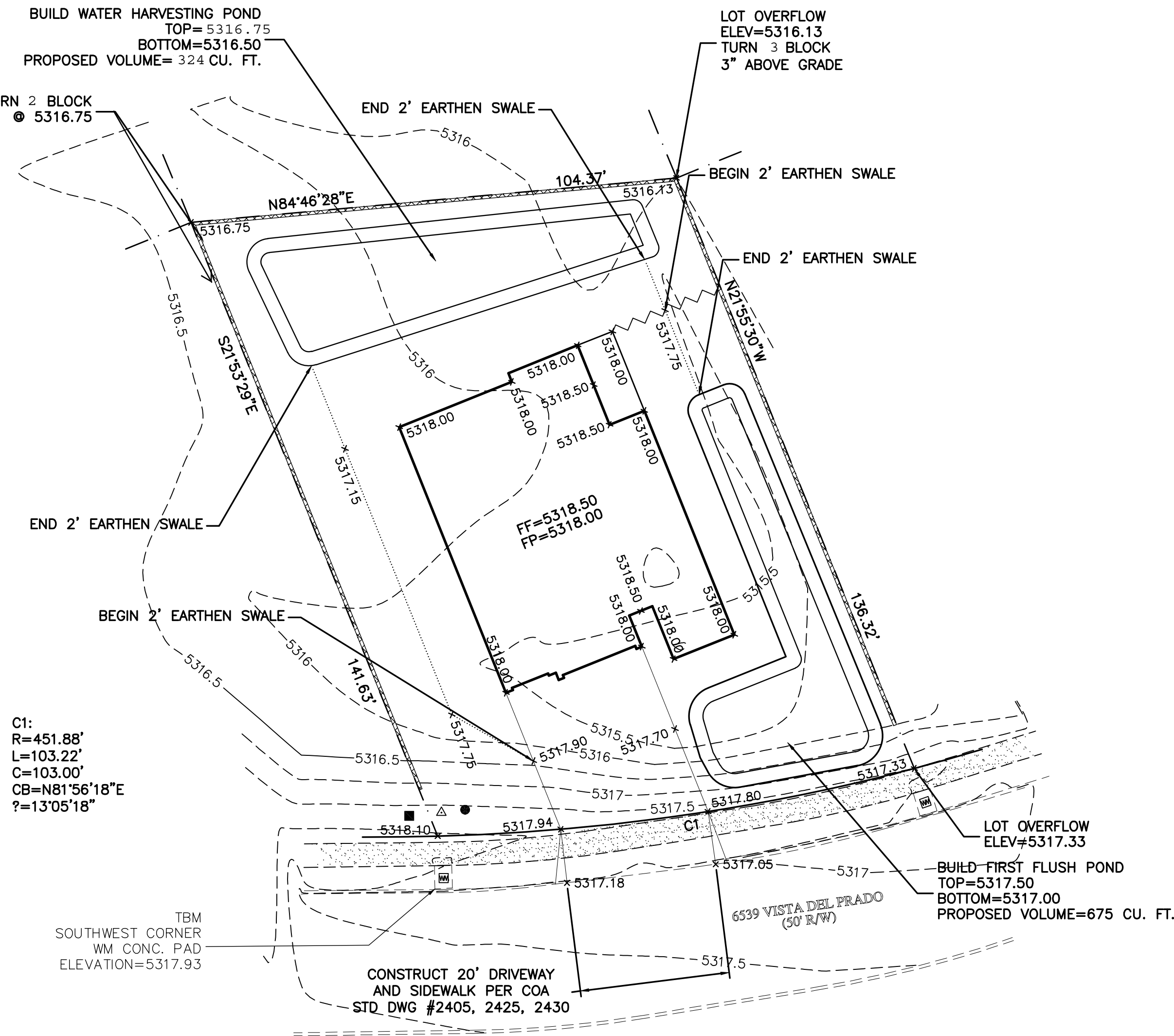
LOT 19, BLOCK 4 VOLCANO CLIFFS UNIT 19

NOTES:

- ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
- ALL SLOPES SHALL BE 3:1 MAX. AND GRAVEL OR NATIVE SEEDING PRIOR TO CO.
- ANY PERIMETER WALLS MUST BE PERMITTED SEPARATELY. ALL RETAINING WALL DESIGN SHALL BE BY OTHERS.

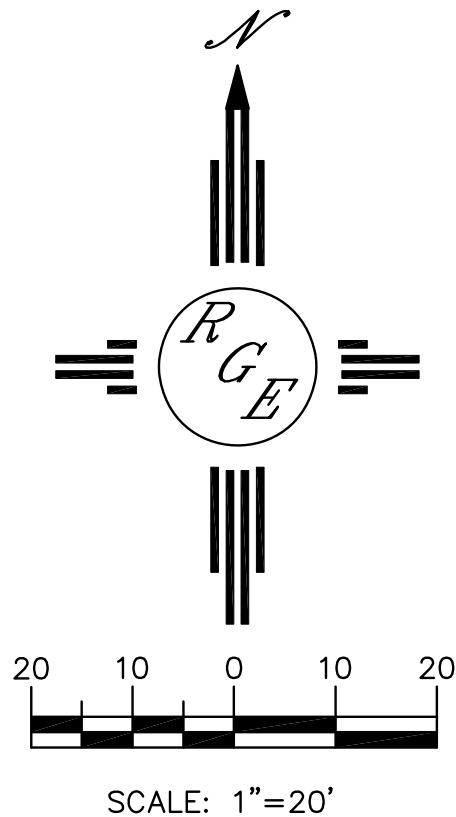
LEGEND


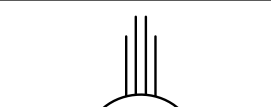
- XXXX--- EXISTING CONTOUR
- - - - - EXISTING INDEX CONTOUR
- XXXX----- PROPOSED CONTOUR
- XXXX----- PROPOSED INDEX CONTOUR
- XXXX----- SLOPE TIE
- + XXXX EXISTING SPOT ELEVATION
- + XXXX PROPOSED SPOT ELEVATION
- BOUNDARY
- CENTERLINE
- RIGHT-OF-WAY
- ===== EXISTING CURB AND GUTTER
- PROPOSED CMU SCREEN WALL 24" MAX RETAINAGE (DESIGN BY OTHERS)



CAUTION:

EXISTING UTILITIES ARE NOT SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES & OTHER IMPROVEMENTS.



ENGINEER'S SEAL	6539 VISTA DEL PRADO MAESTAS RESIDENCE	DRAWN BY WCWJ
		DATE 8-19-17
	GRADING AND DRAINAGE PLAN	21779-LAYOUT-8-18-17
	8/18/17	 <i>Rio Grande Engineering</i> 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0999
DAVID SOULE P.E. #14522	JOB # 21779	



Proposed Conditions Model-Sub-Basin Data				
Basin	Area (ac)	cfs/ac	Q ₁₀₀ (cfs)	V ₁₀₀₋₂₄ (ac-ft)
Basin 200 (Discharge to Pond 4)				
200	13.12	2.44	32.02	1.546
Basin 201 (Discharge to Pond 5)				
201-A	7.48	1.97	14.72	0.965
201-B	6.62	1.97	13.03	0.854
201-C	5.12	1.97	10.08	0.661
201-D	2.47	1.97	4.86	0.319
201-E	1.53	1.97	3.01	0.197
201-F	8.73	1.97	17.18	1.127
201-G	8.54	1.97	16.81	1.102
201-H	8.88	1.97	17.47	1.146
201-I	6.09	1.97	11.98	0.786
201-J	8.51	1.97	16.75	1.098
201-K	3.75	1.97	7.38	0.484
201-L	11.78	1.97	23.18	1.520
201-M	5.17	1.97	10.17	0.667
201-N	5.27	1.97	10.37	0.680
201-O	3.16	1.97	6.22	0.408
201-P	2.20	1.97	4.33	0.284
Total	95.30		187.54	12.300
Basin 202 (Discharge to La Cuentista Pond)				
202-A	8.57	3.20	27.44	1.104
202-B	10.72	3.20	34.32	1.382
Total	19.29		61.76	2.486
202-C	1.33	2.62	3.50	0.235
Basin 203 (Discharge to Pond 8)				
203-A	6.51	2.99	19.47	0.841
203-B	9.99	2.99	29.87	1.290
203-C	5.24	2.99	15.67	0.677
203-D	4.18	2.99	12.50	0.540
203-E	9.89	2.99	29.57	1.277
203-F	3.02	2.99	9.03	0.390
Total	38.83		116.11	5.014
Basin 204 (Discharge to Pond 7)				
204	8.98	3.20	28.73	1.156
Basin 205 (Discharge to Pond 6)				
205-A	10.29	2.73	28.11	1.328
205-B	10.06	2.73	27.49	1.298
205-C	5.66	2.73	15.46	0.730
205-D	3.22	2.73	8.80	0.416
205-E	5.75	2.73	15.71	0.742
205-F	6.88	2.73	18.80	0.888
Total	41.86		114.37	5.402
Basin 206-A (Discharge to Pond 9)				
206-A	4.01	3.19	12.79	0.514
Basin 206-B (Free Discharge)				
206-B	1.01	3.19	3.22	0.130
Total	5.02		16.01	0.644
Basin 207 (Free Discharge)				
207	1.85	3.22	5.96	0.240