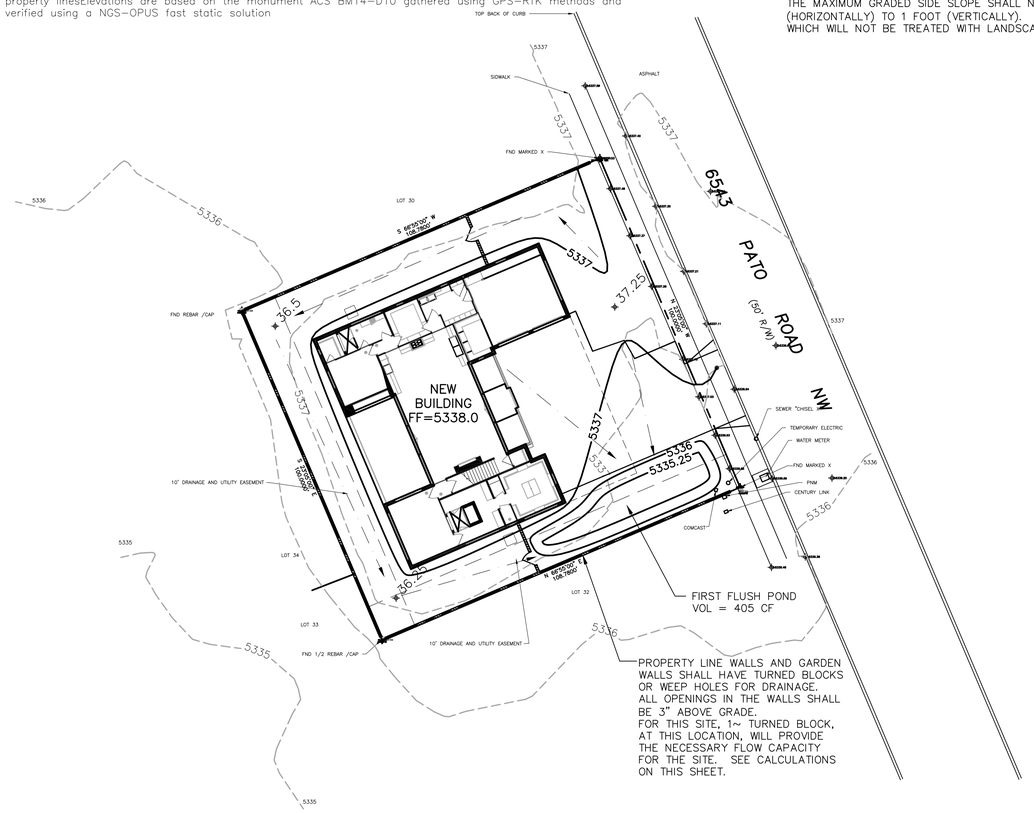
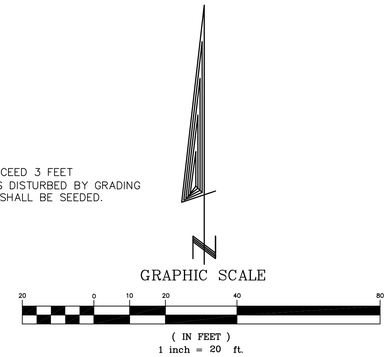
Survey Notes:
The Bearings and Distances are Record as shown on Record Plat with Horizontal Coordinates rotated to record
All monuments were found and shown on the Plot Plan
Distance measurements are at ground with units in U.S. Feet
Field Data collected using GPS-RTK techniques using an independent base station and rover
This property is subject to all easements, restrictions and reservations of record
The survey does not affect existing public or private easements whether recorded or unrecorded
This survey is not a boundary survey and does not meet the New Mexico Minimum Standards for Boundary Surveys
It may or may not reveal encroachments, overlaps, conflicts in boundary lines, shortages in area or other matters which would be disclosed by an accurate Boundary Survey
This Topographic Survey is based on previous property surveys
No monuments were set
This is not a Boundary Survey or a Right-of-Way

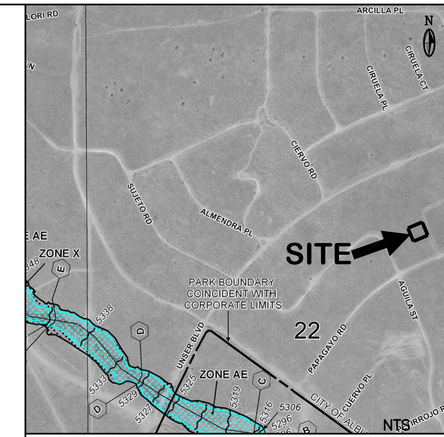
Apparent property corners, Right-of-Way lines or property lines as shown are Derived from Record Survey Plats, Right-of-Way Maps, or Deeds referenced hereon and are not guaranteed or to be relied on for the establishment of property linesElevations are based on the monument ACS BM14-D10 gathered using GPS-RTK methods and verified using a NGS-OPUS fast static solution

Topographic Survey
For Grading and Drainage
Address 6543 Pato Road NWAlbuquerque, NM
Lot 31 Block 6. Volcano Cliffs, Unit 18
Albuquerque , Bernalillo County, NM
Book D4 Page 106, 01/19/1971
June 2017

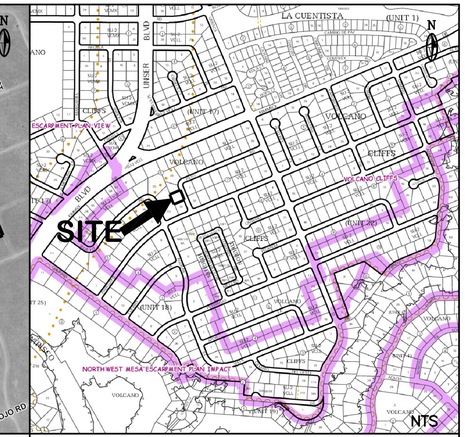
STANDARD GRADING NOTE:
THE MAXIMUM GRADED SIDE SLOPE SHALL NOT EXCEED 3 FEET (HORIZONTALLY) TO 1 FOOT (VERTICALLY). AREAS DISTURBED BY GRADING WHICH WILL NOT BE TREATED WITH LANDSCAPING SHALL BE SEEDED.







FEMA FLOODWAY MAP PANEL #111G



VICINITY MAP ZONE ATLAS D-10

ZONE 1

Areas: (acres)	Existing	Proposed
Treatment A	0.25	0.00
Treatment B	0.00	0.12
Treatment C	0.00	0.00
Treatment D	0.00	0.13
Total (acres) =	0.25	0.25

POND VOLUME PROVIDED:

ELEV.	AREA	VOL. (CF)
5336	720	
		405.375
5335.25	361	

Volume	100 year Existing	100 year Proposed	10 year Existing	10 year Proposed	2 year Existing	2 year Proposed
Volume (acre-feet) =	0.009	0.028	0.002	0.016	0.000	0.008
Volume (cubic feet) =	399	1,221	73	681	0	344

FIRST FLUSH REQUIRED POND VOL = 0.34"/(12"/FT)*(0.25AC * 43560 SF/AC) = 309 CF

Total Q(p), cfs:	100 year Existing Q(p)*A	100 year Proposed Q(p)*A	10 year Existing Q(p)*A	10 year Proposed Q(p)*A	2 year Existing Q(p)*A	2 year Proposed Q(p)*A
Treatment A	0.32	0.00	0.06	0.00	0.00	0.00
Treatment B	0.00	0.24	0.00	0.09	0.00	0.00
Treatment C	0.00	0.00	0.00	0.00	0.00	0.00
Treatment D	0.00	0.57	0.00	0.38	0.00	0.22
Total Q (cfs) =	0.32	0.81	0.06	0.47	0.00	0.22

LEGEND

	EXISTING	PROPOSED
CONTOUR	6045	6045
PROPERTY LINE		
ROAD		
SETBACK		
WALL		
SPOT ELEVATION	142 5336.00 FL 5332.56 TC 5331. 94 FL	XXX

GENERAL DRAINAGE PLAN NOTES:

1. It is recommended that the Owner obtain a Geotechnical Evaluation of the on-site soils prior to foundation/structural design.

2. This plan recommends positive drainage away from all structures to prohibit ponding of runoff adjacent to the structure. Future alterations of the grades next to the structures are not recommended.

3. Irrigation within 10 feet of any proposed structure is not recommended. Irrigation water adjacent to the structures could cause settlement.

4. This plan establishes on-site drainage and assumes no responsibility for subsurface analysis, foundation or structural design, or utility design.

5. Local codes may require all footings to be placed in natural undisturbed soil. If the contractor plans to place footings on engineered fill, a certification by a registered Professional Engineer is recommended.

6. It is recommended that the Owner obtain the services of a Geotechnical Engineer to test and inspect all earthwork aspects of the project.

7. The property boundary shown on this plan is given for information only to describe the project limits. Property boundary information shown hereon does not constitute a boundary survey.

8. All work shall be constructed in accordance with the City of Albuquerque Standard Specifications for Public Works Construction with updates.

9. 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.

10. Contactor shall ensure that no site soils/sediment or silt enters the righ-of-ways during construction.

11. Areas disturbed due to construction shall be restored per City of Albuquerque Spec. 1012 native seed mix.

DRAINAGE PLAN

SCOPE:

Pursuant to the latest City of Albuquerque and Bernalillo County Ordinances, the Drainage Plan shown hereon outlines the drainage management criteria for controlling developed runoff on and exiting the project site. A single family home is proposed for the site with associated parking, access, landscaping, and utility improvements.

EXISTING CONDITIONS:

Presently, the 0.25 acre site is undeveloped. The site is bounded on the northeast by Pato Rd. NW, and on the northwest, southwest, and southeast by private property. The site is relatively level in the center and has a gentle slope from the northwest to the southeast. Site topography slopes to the southeast. As shown on FEMA Panel #111G, the site is not located in a 100 year flood plain.

PROPOSED CONDITIONS:

Per the SAD 228 Drainage Report by Wilson & Company, drainage from the lots have been master planned to be intercepted by drainage features downstream of the properties. Current COA Drainage Ordinance requires that ponds must be provided to handle the First Flush volume which has been calculated and is included on this plan. As shown by the plan, the building is located in the center of the lot. No off-site flows enter the site due to existing grades on adjacent lots which transport offsite runoff to public streets around the site. On site flows will drain around the structure via swales, and flow to the southeast to the first flush retention pond. All roof drainage will discharge from the roof to the lot and be directed around the structure to the drainage paths and pond.

Supplemental calculations are shown as part of this Grading and Drainage plan.

CALCULATIONS:

The calculations shown hereon define the 100 year-6 hour design storm falling within the project area under existing and developed conditions. The Hydrology is per "Section 22.2, Hydrology of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque, New Mexico in cooperation with Bernalillo County, New Mexico and the Albuquerque Metropolitan Arroyo Flood Control Authority.

PROPERTY ADDRESS:

6543 Pato Road NW

TOPOGRAPHY:

Topographic information provided by Russell Elliott dated June, 2017.

WALL OPENING CALCULATOINS:
1 Turned Block
Weir Equattion
Q=CLH^3/2
Q(max) = 0.81 cfs (total site runoff)
C=3
H=0.5 ft
L=0.5 ft
for 1/2 block, 6" x 6" opening
Q=0.53 cfs capacity, so for the full block,
the total block capacity = 1.06 cfs
therefore, 1 turned block is adequate

6-19-17
REV. 6-20-17

ENGINEER'S CERTIFICATION:

I, Jackie S. McDowell, hereby certify that I personally inspected the site shown on this plan on June 9, 2017 and as of that date it appeared that no filling, grading, or excavation had occurred thereon since completion of the topographic survey used to prepare this plan.

STANDARD WALL AND PAD CERTIFICATION NOTES:

ALL PERMITER GARDEN WALLS SHALL BE PERMITTED SEPARATELY.

A PAD CERTIFICATION IS REQUIRED BEFORE THE BUILDING PERMIT IS RELEASED.

This is the plan to be used for any garden walls and any openings in the walls shall be placed 3" above final grade in the rear yard to allow for cross lot drainage from west to east (upstream to downstream).

CITY OF ALBUQUERQUE, BERNALILLO COUNTY NEW MEXICO

LOT 31, BLOCK 6, UNIT 18
VOLCANO CLIFFS SUBDIVISION

AYALA - GRADING & DRAINAGE PLAN

McDowell Engineering, Inc.
7820 BEVERLY HILLS AVE. NE • ALBUQUERQUE, NM 87122
TELE: 505-828-2430 • FAX: 505-821-4857

Designed	Drawn	Checked	Sheet	of
JSM	STAFF	JSM	1	1
File AYA0117L	Date JUNE,2017			

GRADING
6-1-17
1=20
AYA0117L