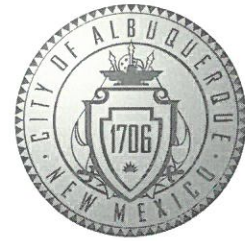


# CITY OF ALBUQUERQUE

Planning Department



Mayor Timothy M. Keller

February 21, 2018

Jackie McDowell, PE  
McDowell Engineering, Inc.  
7820 Beverly Hills Ave NE  
Albuquerque, NM 87121

RE: **Lot 1 Block 2 Unit 18, S.A.D. 228**  
**Volcano Cliffs Subdivision**  
**6616 Petirrojo Rd. NW**  
**Grading and Drainage Plan**  
**Engineers Stamp Date 2/19/18 (D10D003G1)**

Dear Ms. McDowell,

Based upon the information provided in your submittal received 2/20/18, this plan is approved for Grading Permit.

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

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.

Reiterate to the Owner/Contractor that a separate permit for a garden/retaining wall must be obtained, with the approved G&D plan dated 2/19/18.

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 924-3986 or Rudy Rael at 924-3977.

Sincerely,

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

RR/JDH  
C: File

PO Box 1293

Albuquerque

NM 87103

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



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

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: \_\_\_\_\_

**Surveyor:** \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

**Contractor:** \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

### TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN 1st SUBMITTAL
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL G & D PLAN
- ☐ GRADING PLAN
- ☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ☐ ENGINEER'S CERT (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEER'S CERT (TCL)
- ☐ ENGINEER'S CERT (DRB SITE PLAN)
- ☐ ENGINEER'S CERT (ESC)
- ☐ SO-19
- ☐ OTHER (SPECIFY) **PAD CERTIFICATION**

### CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ SIA/FINANCIAL GUARANTEE RELEASE
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D APPROVAL
- ☐ S. DEV. FOR BLDG. PERMIT APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY (PERM)
- ☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ BUILDING PERMIT APPROVAL
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ GRADING CERTIFICATION
- ☐ SO-19 APPROVAL
- ☐ ESC PERMIT APPROVAL
- ☐ ESC CERT. ACCEPTANCE
- ☐ OTHER (SPECIFY) **PAD CERTIFICATION**

WAS A PRE-DESIGN CONFERENCE ATTENDED: \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Copy Provided

DATE SUBMITTED: \_\_\_\_\_ By: JACKIE MCDOWELL

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development



#### GENERAL DRAINAGE PLAN NOTES:

- It is recommended that the Owner obtain a Geotechnical Evaluation of the on-site soils prior to foundation/structural design.
- 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.
- Irrigation within 10 feet of any proposed structure is not recommended. Irrigation water adjacent to the structures could cause settlement.
- This plan establishes on-site drainage and assumes no responsibility for subsurface analysis, foundation or structural design, or utility design.
- 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.
- It is recommended that the Owner obtain the services of a Geotechnical Engineer to test and inspect all earthwork aspects of the project.
- 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.
- All work shall be constructed in accordance with the City of Albuquerque Standard Specifications for Public Works Construction with updates.
- 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.
- Contacto shall ensure that no site soils/sediment or silt enters the right-of-ways during construction.
- Areas disturbed due to construction shall be restored per City of Albuquerque Spec. 1012 native seed mix.

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 SEEDDED.

#### 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).

PROPERTY LINE WALLS AND GARDEN WALLS SHALL HAVE TURNED BLOCKS OR WEEP HOLES FOR DRAINAGE. ALL OPENINGS IN THE WALLS SHALL BE 3" ABOVE GRADE.

PROPERTY LINE WALL MAY BE INSTALLED NOW OR IN THE FUTURE. PROVIDE 6 TURNED BLOCKS OR DRAINAGE HOLES 3" ABOVE PROPOSED GRADE AT DOWNSTREAM CORNER OF PROPERTY

#### GRAPHIC SCALE

( IN FEET )  
1 inch = 20 ft.

Precipitation Zone = 1  
Depth at 100-year, 6-hour storm: (Table A-2)

P(360) = 2.20 inches  
P(10 day) = 3.67 inches

#### Land Treatments:

From Table 5 - Percent Treatment D

Single Family Residential =

$7 \times \text{SQR}((N \times N) + (5 \times N))$

where N = units/acre

N = ..... = ....., ok < 6

#### ZONE 1

Areas: (acres)	Existing	Proposed
Treatment A	0.43	0.00
Treatment B	0.00	0.23
Treatment C	0.00	0.00
Treatment D	0.00	0.20
Total (acres) =	0.43	0.43

#### NW POND VOLUME PROVIDED:

ELEV.	AREA	VOL. (CF)
5323	763	
5322	170	466.5

#### SE POND VOLUME PROVIDED:

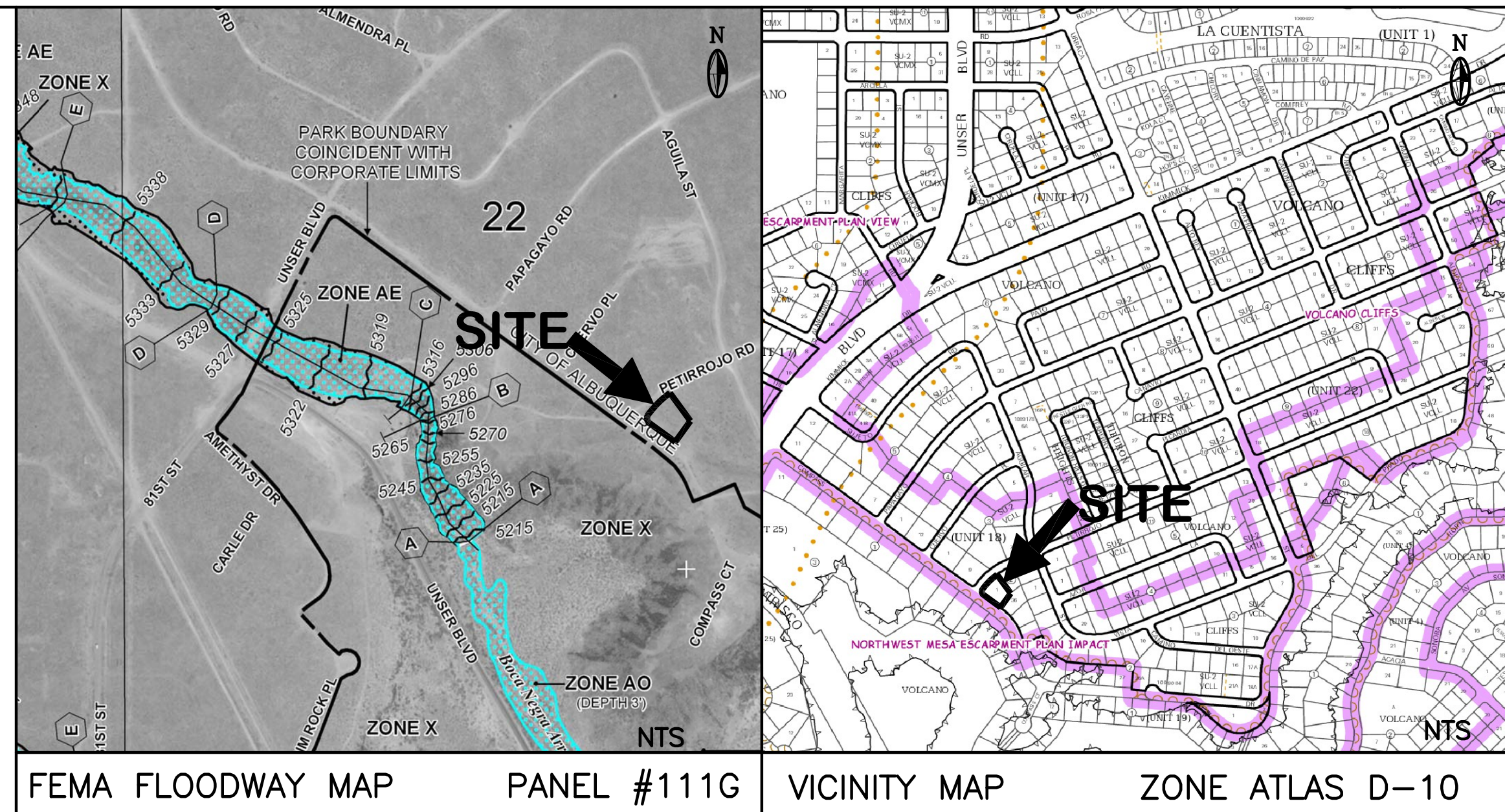
ELEV.	AREA	VOL. (CF)
5320	358	
5319	80	219

TOTAL POND VOL PROVIDED = 685.5 CF

Volume	100 year Existing	100 year Proposed	10 year Existing	10 year Proposed	2 year Existing	2 year Proposed
Volume (acre-feet) =	0.016	0.046	0.003	0.025	0.000	0.012
Volume (cubic feet) =	687	1,990	125	1,084	0	531

FIRST FLUSH REQUIRED POND VOL =  $0.34''/(12''/\text{FT}) \times (0.43 \text{ AC} \times 43560 \text{ SF/AC}) = 531 \text{ CF}$

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	0.55	0.00	0.10	0.00	0.00	0.00
Treatment B	0.00	0.47	0.00	0.17	0.00	0.01
Treatment C	0.00	0.00	0.00	0.00	0.00	0.00
Treatment D	0.00	0.87	0.00	0.58	0.00	0.34
Total Q (cfs) =	0.55	1.34	0.10	0.75	0.00	0.34



#### SURVEY NOTES:

##### LEGAL DESCRIPTION

Lot numbered One (1) in Block numbered Two (2) in Unit numbered Eighteen (18) of VOLCANO CLIFFS SUBDIVISION, as the same is shown and designated on the Plat thereof, filed in the Office of the County Clerk of Bernalillo County, New Mexico, on January 19, 1971 in Volume D4, Folio 106.

##### NOTES

- Bearings and distances shown are record and measured and as indicated on a Retrospect Survey prepared by Wilson & Company dated 1/12/2017. All distances shown are ground.
- Elevations shown hereon are NAVD 88 values GPS derived reduction using Geoid 12B.
- Any underground structure not shown is not a part of this survey.
- This property is subject to pertinent easements, matters of zoning, covenants, restrictions and reservations of record.
- This survey shows only those easements apparent on the ground and those disclosed by the Plat of Record. No title search was performed by the Surveyor.

##### KEY

bw = back of walk  
tc = top of curb  
fl = flow line  
CL = centerline

#### 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 0.43 acre site is undeveloped. The site is bounded on the east and south by private property, on the west by Compass Drive, and on the north by Petirrojo Road NW. The site 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 has 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. On site flows will drain around the structure via swales, and flow to the northwest and southeast to first flush retention ponds located at the northwest and southeast corners of the property. All roof drainage will discharge from the roof to the lot and be directed around the structure to the drainage paths and ponds.

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:

6616 Petirrojo Rd. NW

##### TOPOGRAPHY:

Topographic information provided by Christopher Dehler, NMPS #7923 dated February, 2018.

#### LEGEND

	EXISTING	PROPOSED
CONTOUR	--- 6045 ---	--- 6045 ---
PROPERTY LINE	---	---
ROAD	---	---
SETBACK	---	---
RETAINING WALL		--- o ---
SPOT ELEVATION	2257.40	★ XXX

Jackie S. McDowell  
Professional Engineer  
2-19-18

#### ENGINEER'S CERTIFICATION:

I, Jackie S. McDowell, hereby certify that I personally inspected the site shown on this plan on February 16, 2018 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.

CITY OF ALBUQUERQUE, BERNALILLO COUNTY		NEW MEXICO	
LOT 1, BLOCK 2, UNIT 18 VOLCANO CLIFFS SUBDIVISION			
SOU MPHOLPHAKDY — 6616 PETIRROJO — GRADING & DRAINAGE PLAN			
McDowell Engineering, Inc. 7820 BEVERLY HILLS AVE. NE • ALBUQUERQUE, NM 87122 TELE: 505-828-2430 • FAX: 505-821-4857			
Designed JSM	Drawn STAFF	Checked JSM	Sheet of
File SOU0118L	Date FEBRUARY, 2018	1	1