

McDowell Engineering, Inc.

Jackie Sedillo McDowell, P.E.
Civil Engineering Consultant

August 3, 2013

Mr. Shahab Biazar, PE
Senior Engineer, Planning Dept.
Development and Building Services
City of Albuquerque
PO Box 1293
Albuquerque, NM 87103

**RE: Lot 12, Block 1, Unit 2, Chamisa Ridge Grading & Drainage Plan, 6216
Wild Onion Ave. NW (B10/D002B)**

Dear Mr. Biazar:

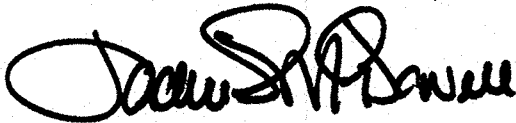
We received your review comments dated July 3, 2013 and offer the following response with the enclosed revised Grading & Drainage Plan.

- We have modified the plan to allow for water harvesting ponds to hold the volume of water generated from a 100 year storm. At this time, the developed runoff cannot be fully conveyed downstream to the detention pond through the existing drainage easement as several lots downstream have not been graded to allow for this conveyance per our discussion on August 2, 2013.
- Top of curb and flowline elevations have been added to Wild Onion Ave. to show that an adequate water block exists.
- All proposed contours have labeled and the font has been enlarged on the existing contours to be more legible.

Your timely approval of this plan for building permit is greatly appreciated.

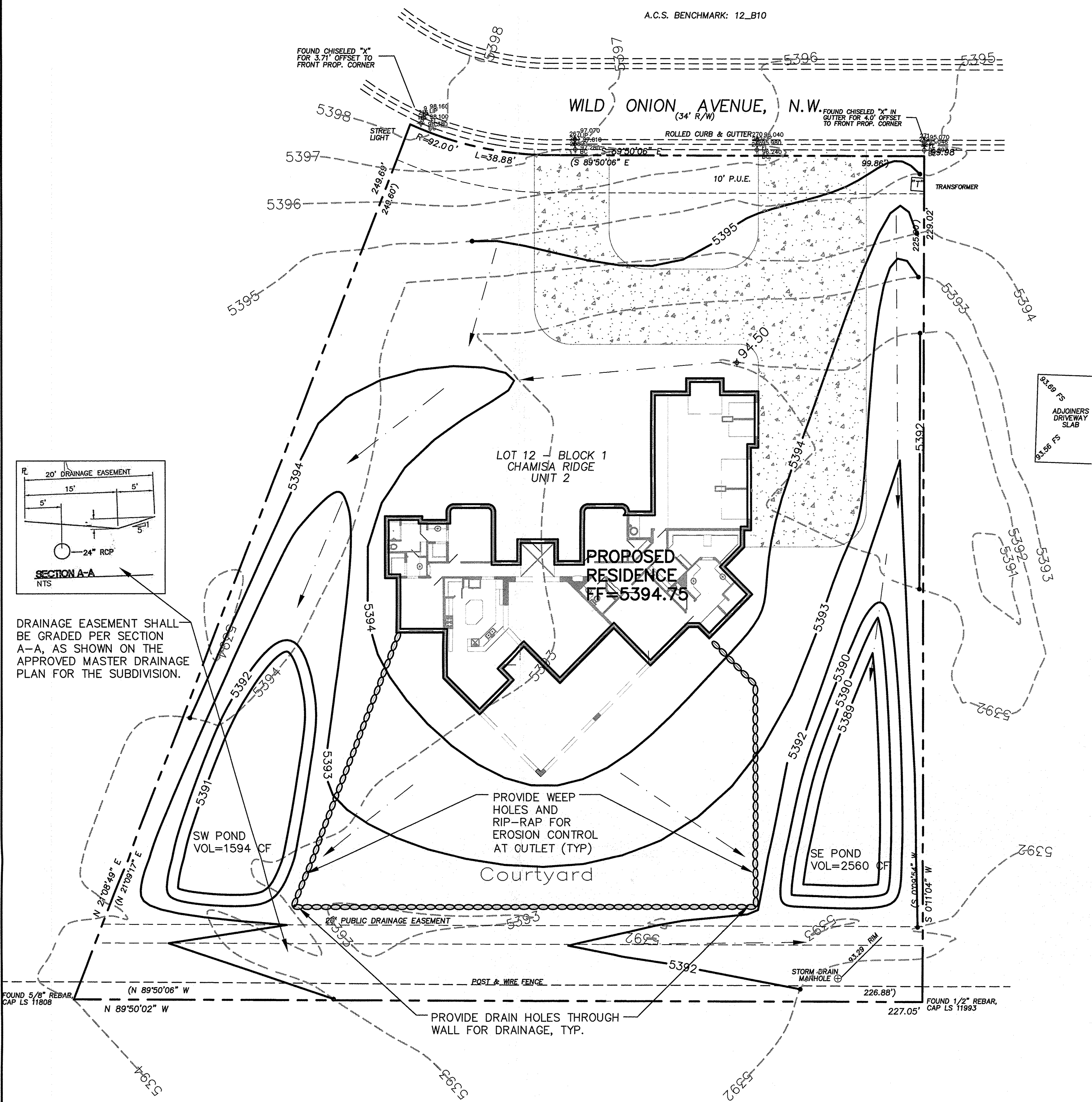
Sincerely,

MCDOWELL ENGINEERING, INC.



Jackie S. McDowell, P.E.

Copy: Owners



DRAINAGE PLAN

SCOPE:

Pursuant to the latest Bernalillo County Ordinance, the Drainage Plan shown hereon outlines the drainage management criteria for controlling developed runoff on and exiting the project site. One single family home is proposed for the subject property, with associated access, landscaping, and utility improvements.

EXISTING CONDITIONS:

Presently, the 0.95 acre site is undeveloped. The site is bounded on the west, south, and east by private property and on the north by Wild Onion Avenue NW. The site is vegetated with native grasses and shrubs. Site topography slopes from the northwest to the southeast. As shown on FEMA Panel #103 the site is not located in a flood plain. This plan follows the approved Drainage Report for Chamisa Ridge, Unit 2, prepared by Tierra West, LLC (December 2004). As noted in the report, this site lies within the boundary of the Chamisa Master Storm Drain/Lyons Diversion Master Drainage Study, by Tierra West (November 2003). The master drainage study calls for the entire 100-year, 6-hour storm event volume to be free discharged to an existing storm drainage system located along the southern boundary.

PROPOSED CONDITIONS:

As shown by the plan, the building is located within the center of the lot. Negligible off-site flows will continue to cross the property as shown on the plan. On site flows will drain around the structure via swales, and flow to the two water harvesting ponds located at the southeast and southwest corners of the property. The ponds have been designed to hold a volume of 2 times the amount of runoff generated from this development. These ponds may be vacated once the entire downstream length of swale has been constructed within the existing 20' public drainage easements. All roof drainage will discharge from the roof to the lot and be directed around the structure to the existing drainage paths. Access will be taken from Wild Onion Avenue NW. This road is currently improved.

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.

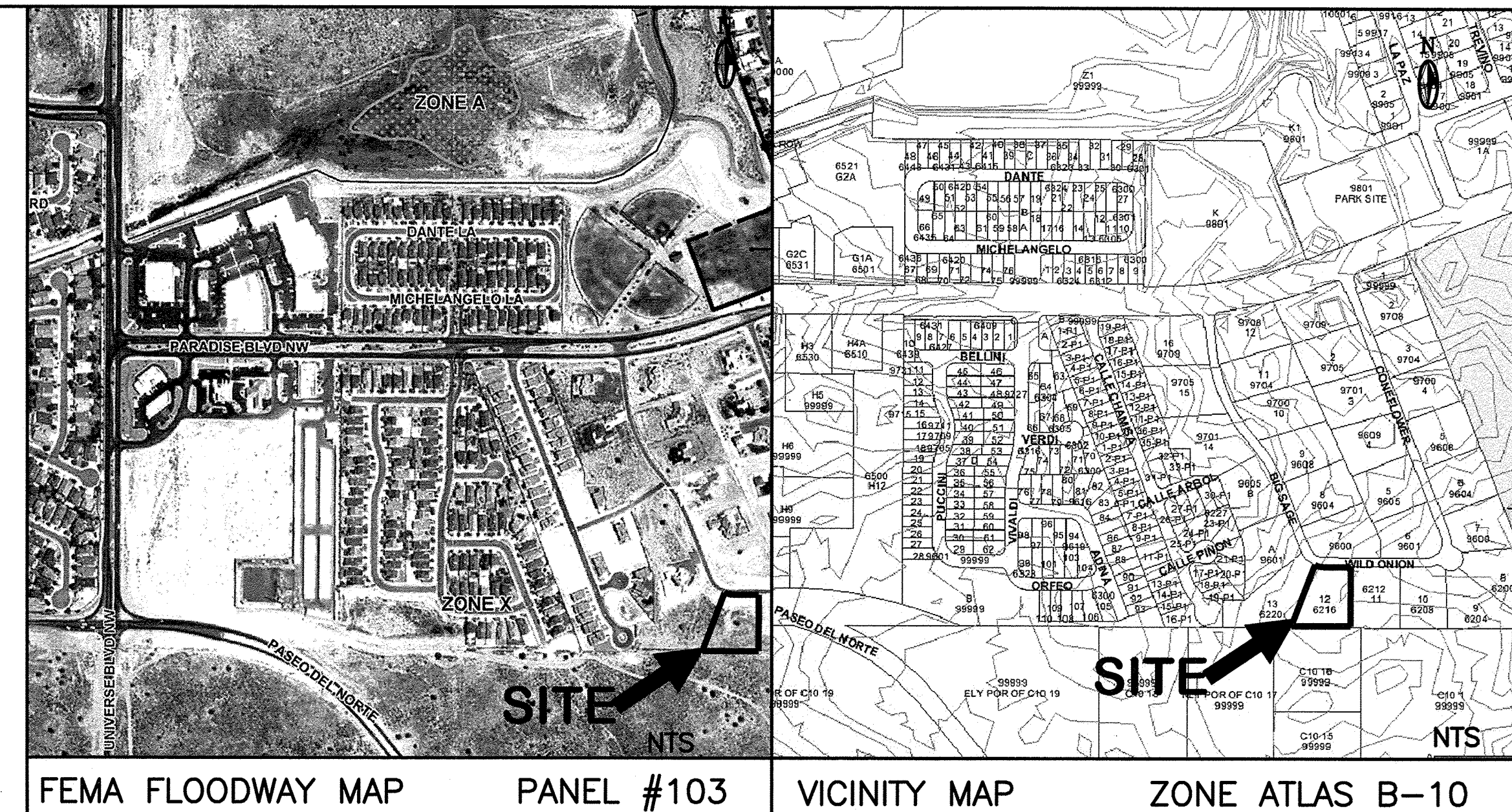
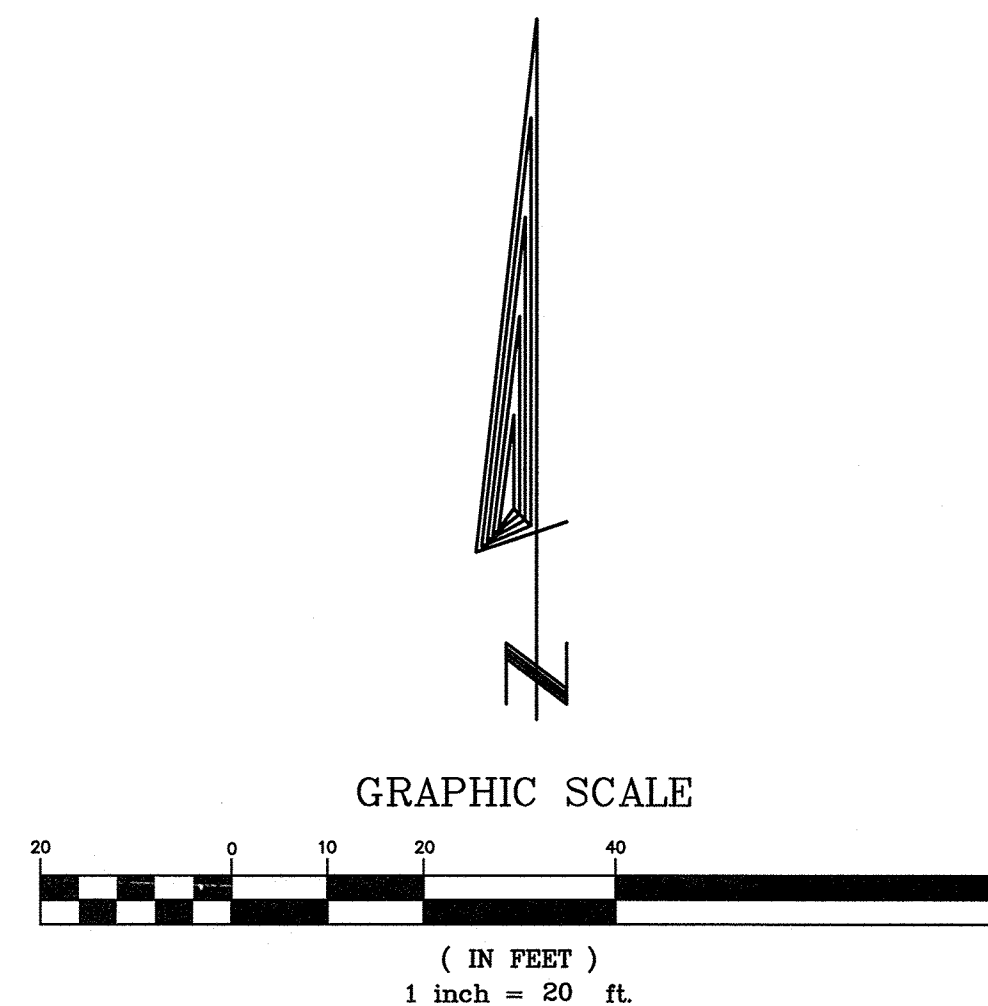
PROPERTY ADDRESS:

6216 Wild Onion Avenue NW

TOPOGRAPHY:

Topographic information provided by Mike Shook dated May 27, 2013.

GRADING
5-30-13
1=20
SANO213L



LEGEND	
EXISTING	PROPOSED
CONTOUR	6045
PROPERTY LINE	
ROAD	
SETBACK	
WALL	
SPOT ELEVATION	

05-Jun-13 Rev. 8-3-13

Calculations: Total Basin

Calculations are based on "Section 22.2 Hydrology of the Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque, New Mexico, latest edition - basins < 40 acres".

Precipitation Zone = 1

Depth at 100-year, 6-hour storm: (Table A-2)

Land Treatments:

From Table 5 - Percent Treatment D

SANDIA BUILDERS-TRUEBA HOME
LOT #12

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

SE POND VOLUME PROVIDED:

Elev Area Vol
5391 1824 > 1534
5390 1261 > 1017
5389 772
2560

SW POND VOLUME PROVIDED:

Elev. Area Vol
5392 1850 > 1594
5391 1337

TOTAL = 4154 CF
OK

Areas: (acres)	Existing	Proposed
Treatment A	0.95	0.11
Treatment B	0.00	0.32
Treatment C	0.00	0.32
Treatment D	0.00	0.20
Total (acres) =	0.95	0.95

Volume	100 year Existing	100 year Proposed	10 year Existing	10 year Proposed	2 year Existing	2 year Proposed
Volume (acre-feet) =	0.035	0.081	0.006	0.039	0.000	0.015
Volume (cubic feet) =	1,517	3,534	276	1,699	0	674

POND VOL. REQ'D = (3534 - 1517) * 2 = 4034 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	1.23	0.14	0.23	0.03	0.00	0.00
Treatment B	0.00	0.65	0.00	0.24	0.00	0.01
Treatment C	0.00	0.92	0.00	0.48	0.00	0.15
Treatment D	0.00	0.87	0.00	0.58	0.00	0.34
Total Q (cfs) =	1.23	2.58	0.23	1.32	0.00	0.50

LOT 12, BLOCK 1

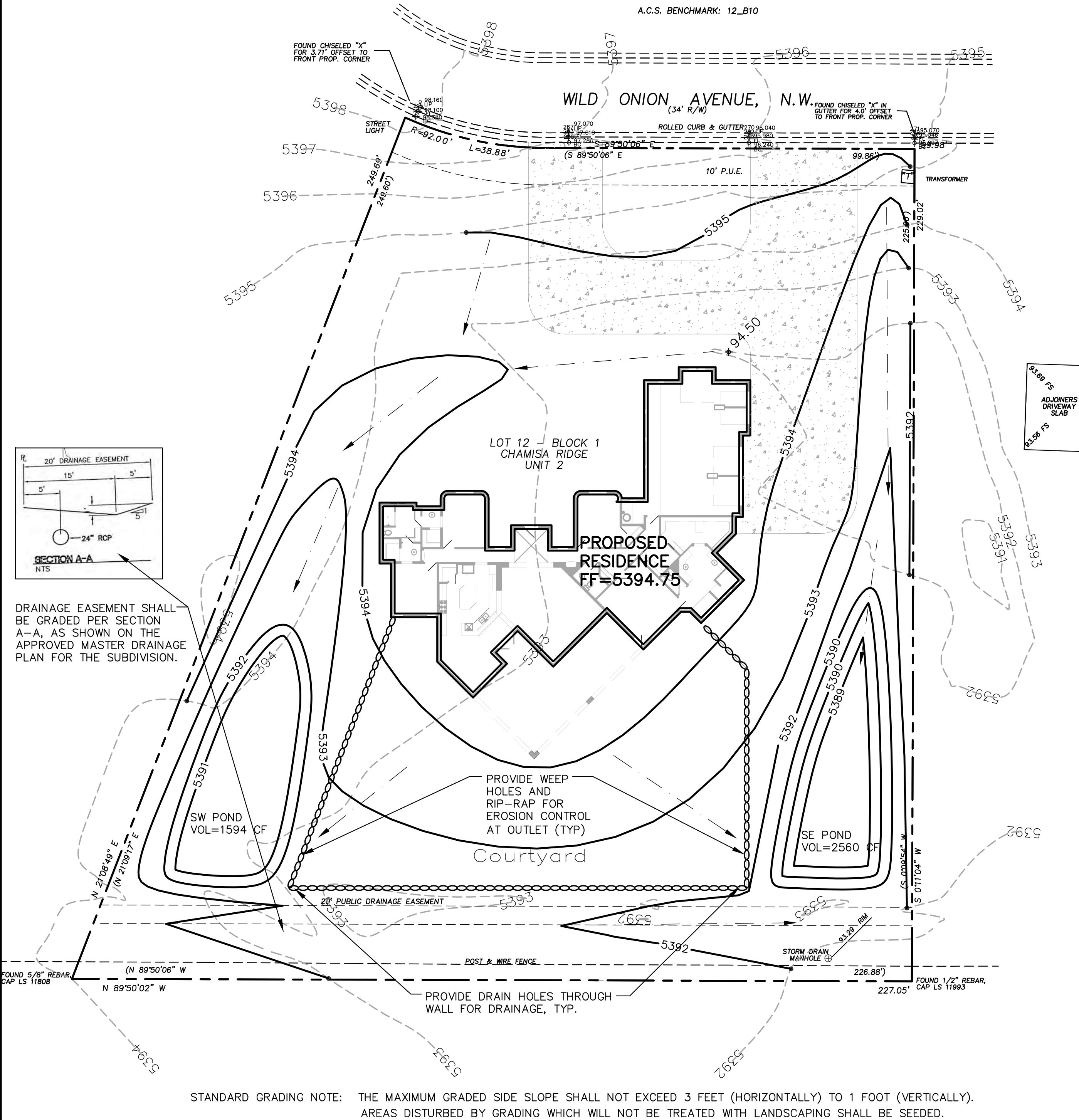
WITHIN
UNIT 2
CHAMISA RIDGE
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
6216 Wild Onion Ave. NW

Jackie S. McDowell
Professional Engineer
0513
Rev. 8-3-13

ENGINEER'S CERTIFICATION:

I, Jackie S. McDowell, hereby certify that I personally inspected the site shown on this plan on April 25, 2013 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.

SANDOVAL COUNTY	NEW MEXICO
LOT 12, BLOCK 1, UNIT 2, CHAMISA RIDGE	
SANDIA BUILDERS - TRUEBA CUSTOM HOME - 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 SANO213L	Date MAY, 2013
1	1



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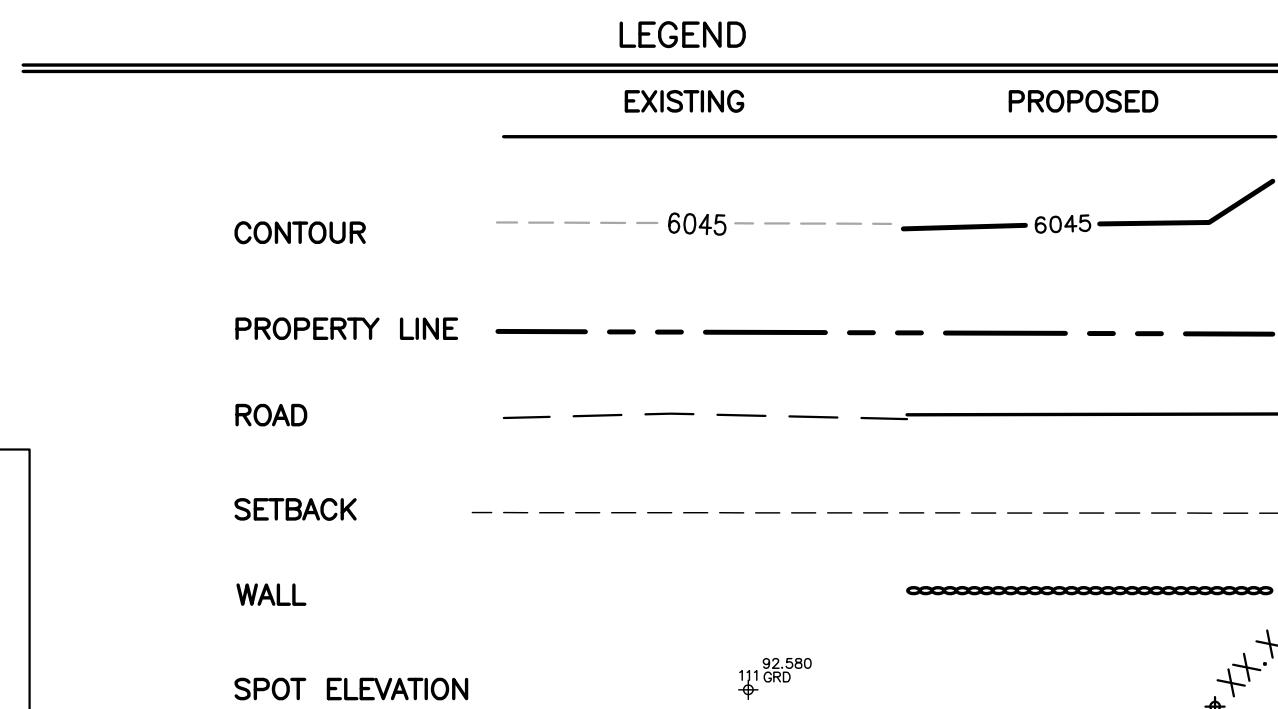
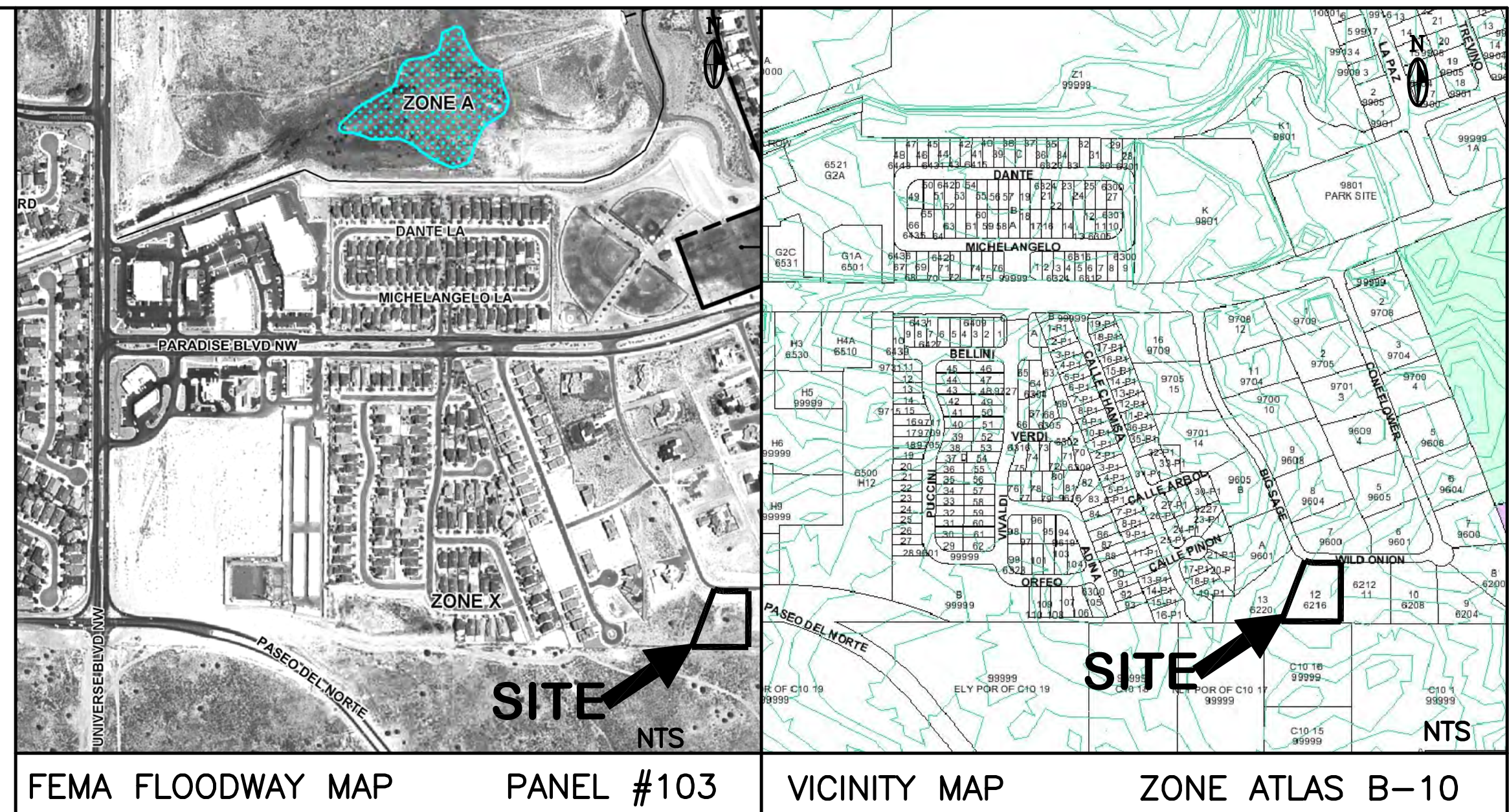
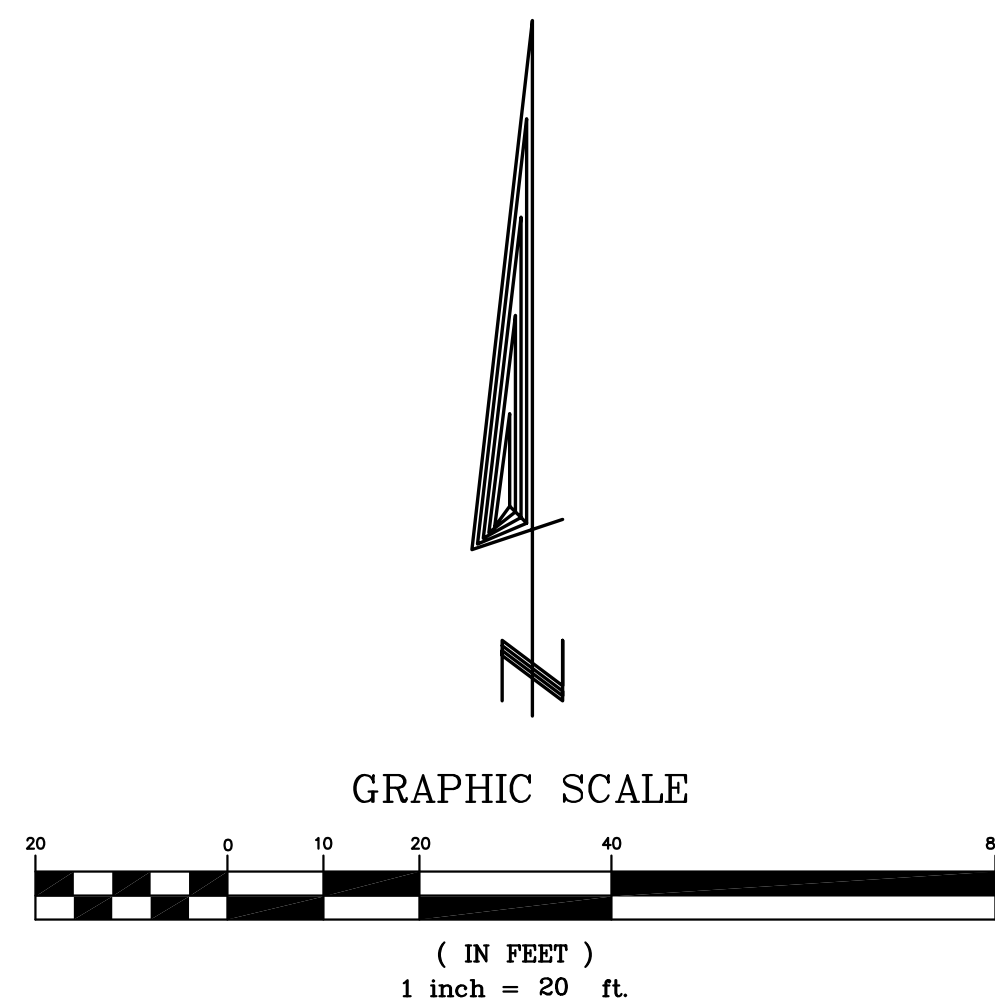
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LOT 12, BLOCK 1
WITHIN
UNIT 2
CHAMISA RIDGE
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
6216 Wild Onion Ave. NW

JACKIE S. McDOWELL
REGISTERED PROFESSIONAL ENGINEER
6-513
Rev. 8-3-13

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SANDOVAL COUNTY NEW MEXICO

LOT 12, BLOCK 1, UNIT 2,
CHAMISA RIDGE

SANDIA BUILDERS - TRUEBA CUSTOM HOME - 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 SAN0213L Date MAY, 2013 1 1

05-Jun-13 Rev. 8-3-13

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