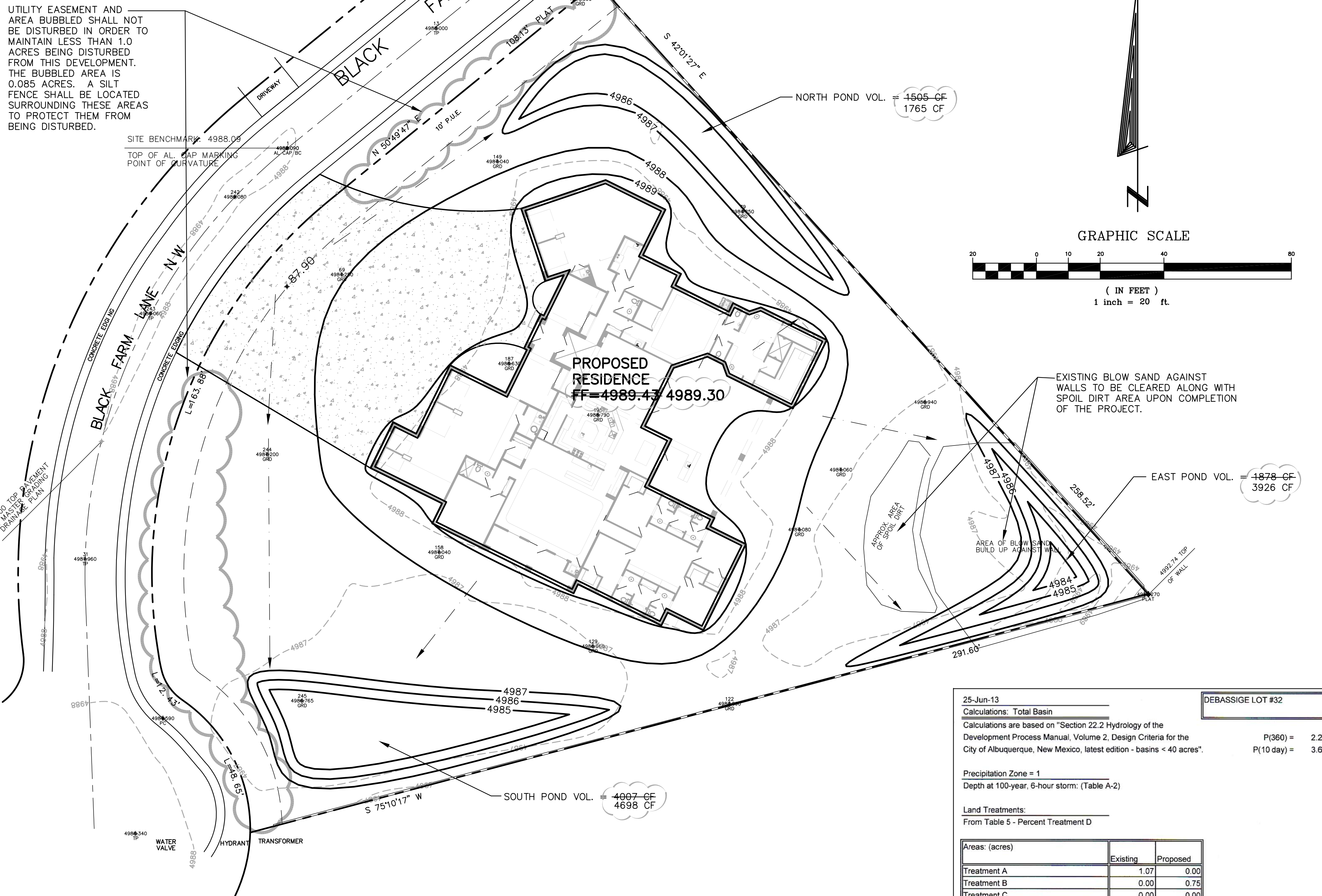


UTILITY EASEMENT AND AREA BUBBLED SHALL NOT BE DISTURBED IN ORDER TO MAINTAIN LESS THAN 1.0 ACRES BEING DISTURBED FROM THIS DEVELOPMENT. THE BUBBLED AREA IS 0.085 ACRES. A SILT FENCE SHALL BE LOCATED SURROUNDING THESE AREAS TO PROTECT THEM FROM BEING DISTURBED.

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.

ACS BM FROM PLAT:
11-C13
Z=5029.17
NAVD88=5031.88



DRAINAGE PLAN

SCOPE:

Pursuant to the latest Bernalillo County Ordinance, the Drainage Plan shown herein 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 1.07 acre site is undeveloped. The site is bounded on the northeast and southeast by private property and on the northwest by Black Farm Lane NW. The site is not vegetated and is level. As shown on FEMA Panel #116 the site is not located in a 100 year flood plain. This plan follows the approved Drainage Report for Black Farms prepared by Tierra West, LLC, dated June 2004. The approved drainage study calls for all storm drainage from each lot to be retained on-site. The pond volume required is the 100-year, 10-day storm.

PROPOSED CONDITIONS:

As shown by the plan, the building is located within the center of the lot. There are no off-site flows entering the site with the exception of the roadway that fronts the property and will continue to drain into the site per the approved report. On site flows will drain around the structure via sheet flow and swales, and flow to one of the 3 proposed retention ponds. All roof drainage will discharge from the roof to the lot and be directed around the structure to drainage paths. Access will be taken from Black Farm Lane NW. This road is currently improved.

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

CALCULATIONS:

The calculations shown herein 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:

9204 Black Farm Lane NW

TOPOGRAPHY:

Topographic information provided by Mike Shook dated June 24, 2013.

25-Jun-13 DEBASSIGE LOT #32

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

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

Land Treatments:
From Table 5 - Percent Treatment D

| Areas: (acres) | Existing | Proposed |
|------------------------|-------------|-------------|
| Treatment A | 1.07 | 0.00 |
| Treatment B | 0.00 | 0.75 |
| Treatment C | 0.00 | 0.00 |
| Treatment D | 0.00 | 0.32 |
| Total (acres) = | 1.07 | 1.07 |

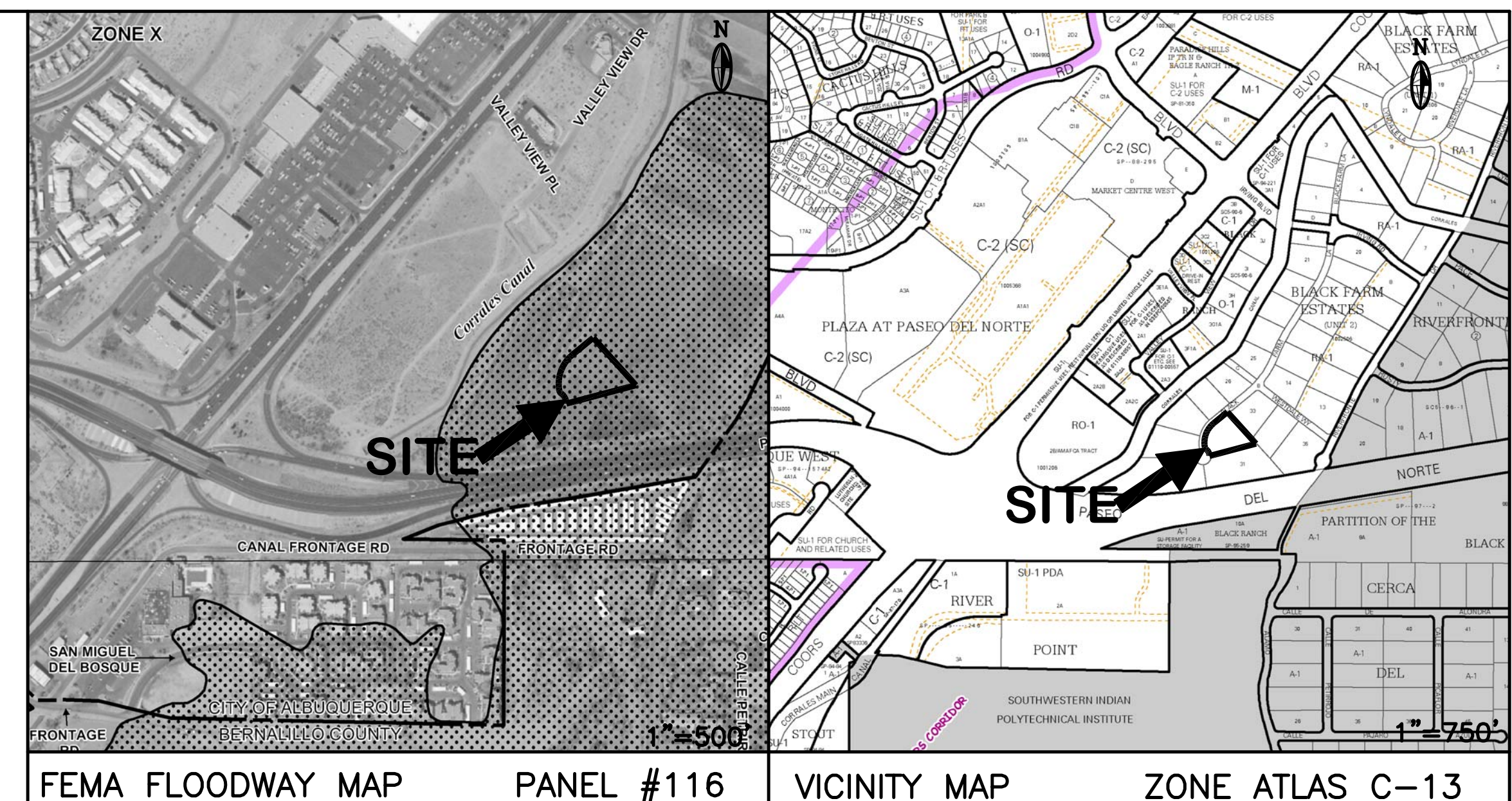
| Volume | 100 year Existing | 100 year Proposed | 10 year Existing | 10 year Proposed | 2 year Existing | 2 year Proposed |
|-----------------------|-------------------|-------------------|------------------|------------------|-----------------|-----------------|
| Volume (acre-feet) = | 0.039 | 0.084 | 0.007 | 0.047 | 0.000 | 0.020 |
| Volume (cubic feet) = | 1,709 | 4,112 | 311 | 2,039 | 0 | 864 |

| Total Q (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 | 1.38 | 0.00 | 0.26 | 0.00 | 0.00 | 0.00 |
| Treatment B | 0.00 | 1.52 | 0.00 | 0.57 | 0.00 | 0.02 |
| Treatment C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Treatment D | 0.00 | 1.40 | 0.00 | 0.92 | 0.00 | 0.54 |
| Total Q (cfs) = | 1.38 | 2.92 | 0.26 | 1.49 | 0.00 | 0.56 |

V (10 day) = V (360) + A (D) * (P(10day)-P(360))/12 in/ft = 0.1336 ac-ft = 8620 cu-ft = Regret Pond Volume.

POND VOL. PROVIDED:

| Area | Vol. |
|--------------|----------------|
| NORTH POND | 1505 CF |
| SOUTH POND | 4067 CF |
| EAST POND | 4878 CF |
| TOTAL | 1390 CF |



AS BUILT POND VOLUME CALCS:

| ELEV. | AREA | VOL. |
|---------------------|---------|-----------------|
| 4986.50 | 99.00 | 1765.00 |
| 4987.50 | 3431.00 | 1765.00 |
| TOTAL | | 1765.00 |
| 4985.50 | 83.00 | 550.00 |
| 4986.50 | 1017.00 | 3375.50 |
| 4987.50 | 5734.00 | 3925.50 |
| TOTAL | | 3925.50 |
| 4986.00 | 77.00 | 1658.00 |
| 4987.00 | 3239.00 | 3039.50 |
| 4987.50 | 8919.00 | 3039.50 |
| TOTAL | | 4697.50 |
| TOTAL VOLUME | | 10388.00 |

LEGEND

| | EXISTING | PROPOSED |
|----------------|--------------|-------------------------------------|
| CONTOUR | --- 6045 --- | --- 6045 --- |
| PROPERTY LINE | --- | --- |
| ROAD | --- | --- |
| SETBACK | --- | --- |
| WALL | --- | --- |
| SPOT ELEVATION | + | + |
| AS BUILT | | EAST POND VOL. = 4878 CF 3926 CF |

LOT 32
WITHIN
UNIT 2
BLACK FARM ESTATES
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
9204 Black Farm Lane NW

Jackie S. McDowell
REGISTERED PROFESSIONAL ENGINEER
6-25-13
3-13-14 AS BUILT

DRAINAGE CERTIFICATION
I, Jackie S. McDowell, NMPE 10903, of McDowell Engineering, Inc., hereby certify that this project has been graded and will drain in substantial compliance with and in accordance with the design intent of the approved plan dated June 25, 2013. The record information edited onto the original/approved design document has been obtained by Mike Shook, NMPS #13240, of the firm Advantage Surveying. I further certify that I have personally visited the project site on February 27, 2014 and have determined by visual inspection that the survey data provided is representative of actual site conditions and is true and correct to the best of my knowledge and belief. This certification is submitted in support of a request for a Certificate of Occupancy.

The record information presented herein is not necessarily complete and intended only to verify substantial compliance of the Grading and Drainage aspects of this project. Those relying on this record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

Jackie S. McDowell
Jackie S. McDowell, NMPE #10903
3-20-14
Date

ENGINEER'S CERTIFICATION:
I, Jackie S. McDowell, hereby certify that I personally inspected the site shown on this plan on June 17, 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.

BERNALILLO COUNTY NEW MEXICO

LOT 32, UNIT 2,
BLACK FARM ESTATES

DEBASSIGE CUSTOM HOME - AS BUILT 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 DEB0113L Date JUNE, 2013 1 1