

CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director



Mayor Timothy M. Keller

May 17, 2019

Mark H. Burak, P.E.
1512 Sagebrush Trail SE
Albuquerque, NM, 87123

RE: 9508 Lyndale Lane NW
Grading and Drainage Plan
Engineer's Stamp Date: 04/10/19
Hydrology File: C13D027E

Dear Mr. Burak:

Based upon the information provided in your submittal received 05/09/19, the Grading and Drainage Plan is approved for Building Permit and Grading Permit.

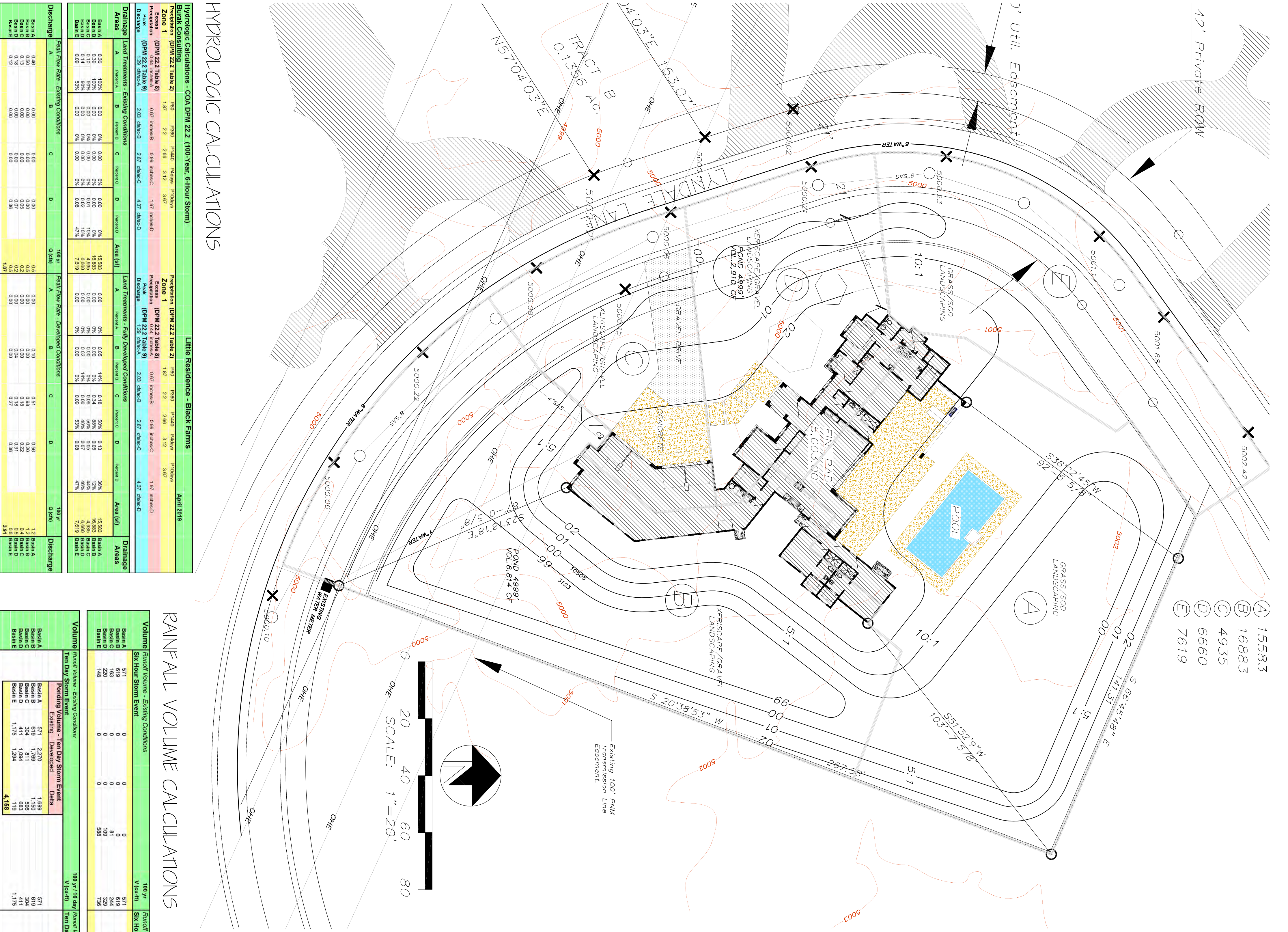
Once the grading is complete, a pad certification will be required prior to release of Building Permit. Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter and the pad certification approval letter.

Prior to approval in support of Permanent Release of Occupancy by Hydrology, Engineer Certification per the DPM checklist will be required.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

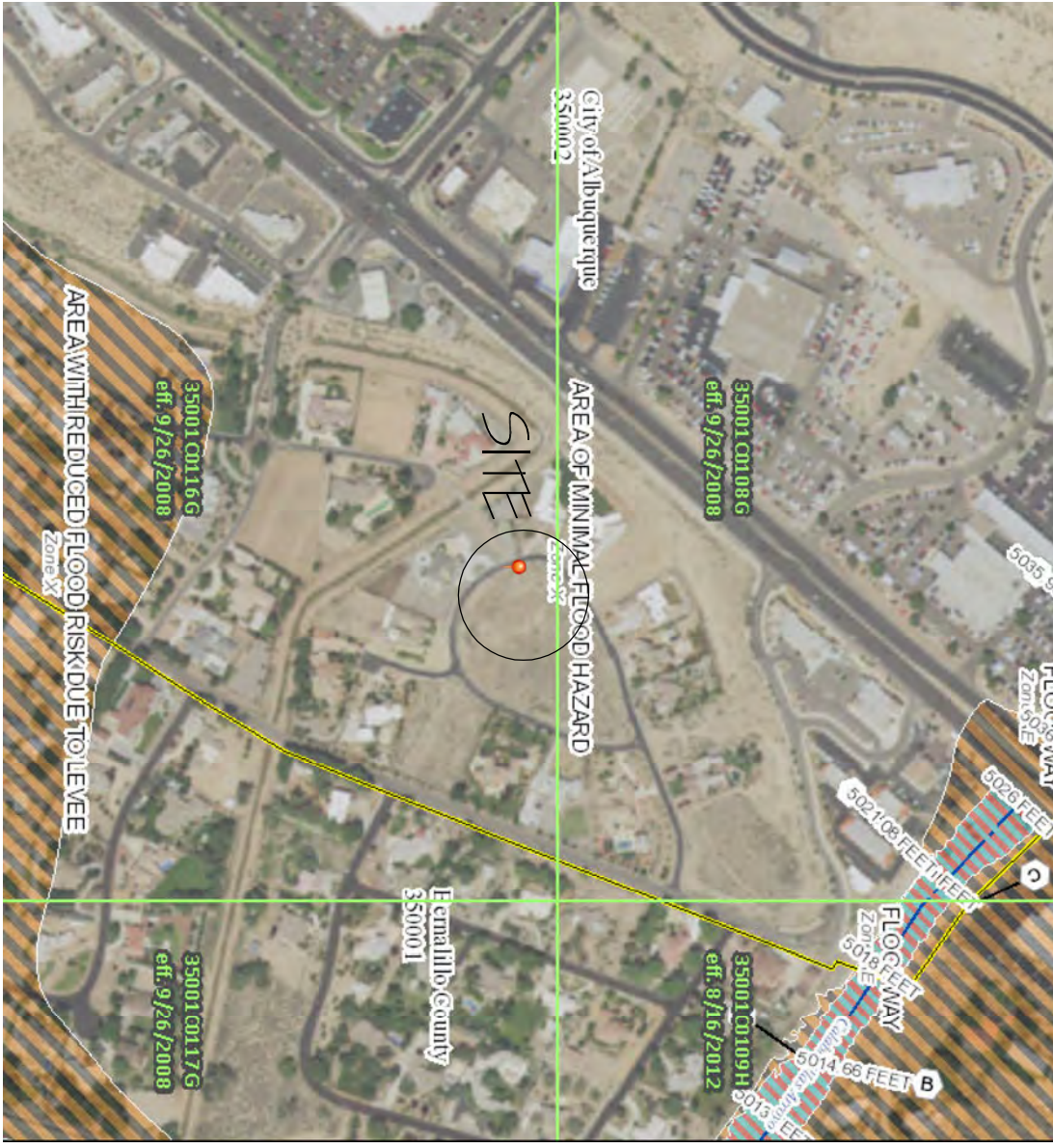
Sincerely,

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department

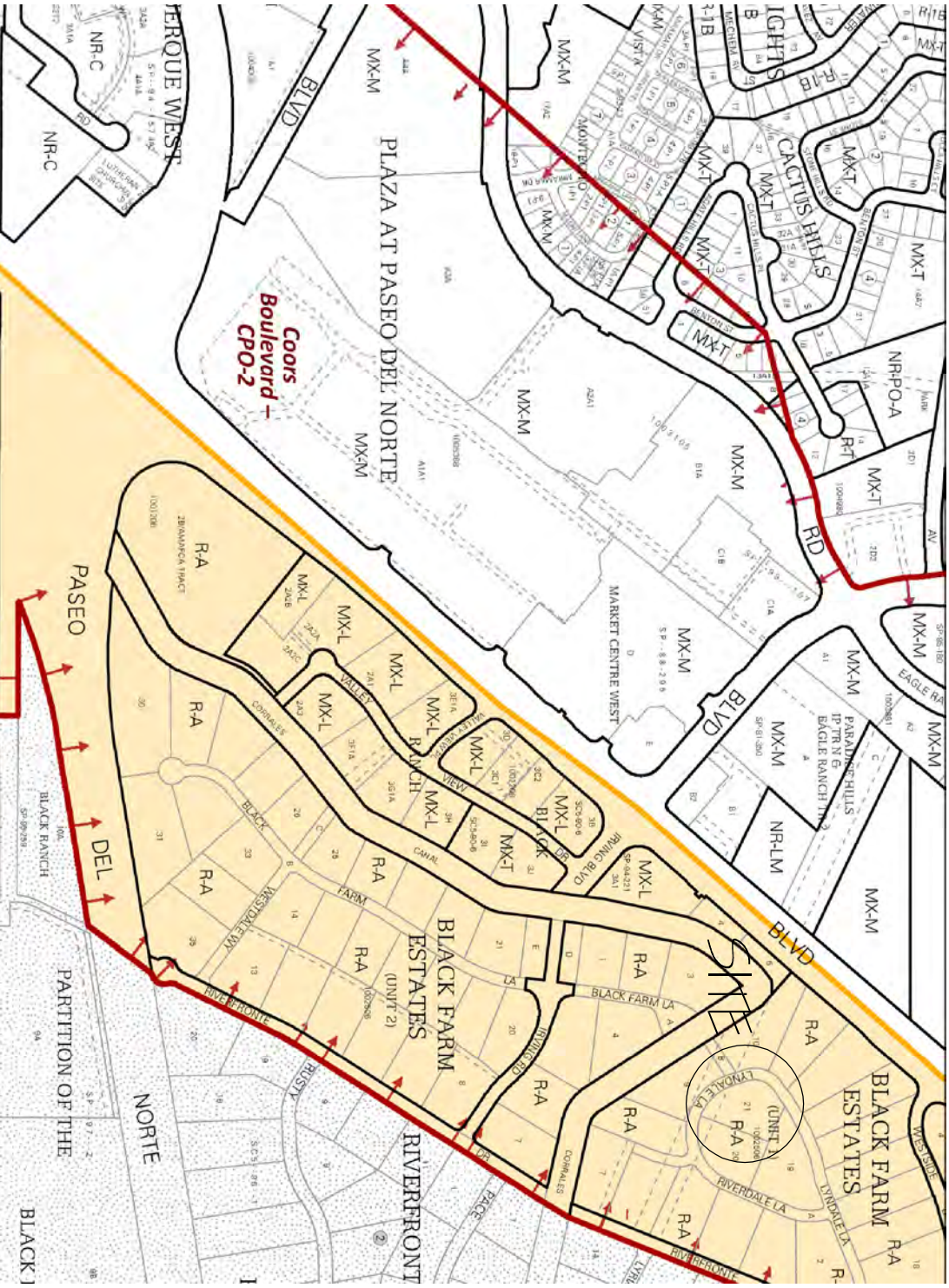


Hydrologic Calculations - COA DPM 22.2 (100-Year 6-hour Storm)									
Buck Consulting									
Precipitation (DPM 22.2 Table 2)	PMF	P500	P1000	P1500	P1000	P500	P1000	P1500	P1000
Zone 1	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Precipitation (DPM 22.2 Table 8)	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Discharge (DPM 22.2 Table 9)	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03
Land Treatment - Fully Developed Conditions									
Area (ft ²)	A	B	C	D	E	A	B	C	D
Basin A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin E	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discharge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Rainfall Volume Calculations									
Buck Consulting									
Precipitation (DPM 22.2 Table 2)	PMF	P500	P1000	P1500	P1000	P500	P1000	P1500	P1000
Zone 1	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Precipitation (DPM 22.2 Table 8)	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Discharge (DPM 22.2 Table 9)	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03
Land Treatment - Fully Developed Conditions									
Area (ft ²)	A	B	C	D	E	A	B	C	D
Basin A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin E	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Discharge	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



FEMA MAP - PANEL C0116G



VICINITY MAP - ZONE ATLAS C-13

Site Location - As shown by the Vicinity Map (Zone Atlas Map C-13), the proposed residential project site is located on a one-acre parcel on the north side of Lyndale Avenue NW in the Black Farm Subdivision near the northeast intersection of Coors Boulevard and Paseo del Norte on the west side of Albuquerque. At present, the site is undeveloped. Single homes are adjacent to the west, and south of the property, Lyndale Avenue is a private paved roadway with a 42-foot right-of-way and estate curb. The purpose of this project is to develop the site with a new residence.

Legal Description - 9308 Lyndale Avenue NW, Lot 21, Plat of Black Farm Estates Unit I, Albuquerque, New Mexico. UFG: 101306447146310223

Benchmark - Basis of elevation is from City of Albuquerque bench mark "NM-448-N10" with elevation stamped 5,048.205 feet (NAVD88).

Flood Zone - As shown by Panel 35001-C0116G of the National Flood Insurance Program Flood Insurance Rate Maps (FIRM) for the City of Albuquerque, New Mexico, dated September 26, 2008 this site does not lie within a designated flood hazard zone. It is within the area of minimal flood hazard Zone X.

Existing Conditions - Currently, the one acre project site slopes at about two percent and drains from north to south across the undeveloped site within a number of small swales. The site has been rough graded and is comprised of sand with very little vegetation. Runoff is directed to cross a low area on Lyndale Avenue to an existing 40-foot access/drainage easement (Tract B) that discharges into the Corralle Main Canal approximately 150 feet south of the property. No offsite runoff impacts the site. Lyndale Avenue has a 42-foot right-of-way with 24-foot paved roadway with estate curb and underground utilities in place.

Proposed Grading - The Grading and Drainage Plan shows 1) existing and proposed grades indicated by spot elevations and contours; 2) the limit of existing and proposed improvements. Cut and or fill slopes are at grades steeper than 3:1 are to be armored with 2'-4" riprap or cobble material. Most cut and fill slopes have been set at 5:1 or 10:1. The finish pad elevation is elevated a minimum of one foot above the surrounding ground with positive drainage away from the foundation a minimum of ten feet away. The rear yard area is to be lowered two feet below finish pad and sloped at a 20:1 to produce a large, shallow ponding area for retention of the ten day storm. Excess runoff will discharge directly south over Lyndale Avenue into the Corralle Main Drain.

The rear yard is graded to slope away from the house and pool area toward the north wall of the property. The grading allows for a large, 50-foot wide flat area behind the pool area for landscaping and recreation. This area will drain towards the east and then south into the proposed ponding area located along the eastern portion of the property. The proposed grading scheme in this area is shown to be three feet lower than the finish pad of the house and has a total capacity of about 6,814 cubic feet of storage before overtopping of the roadway to the south.

An additional retention area is located north of the driveway in the front of the house. This depressed area has a total capacity of 2,910 cubic feet before overtopping of Lyndale will occur.

Hydrologic Methods - The drainage basin map shows five separate sub-basins (A-E) within the project area to assess peak flow rates at various points around the project site culminating at either of the two retention basins and their corresponding crossing at Lyndale Avenue. The calculations which appear herein analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The process outlined in the DPM, Section 22.2 was used to quantify the peak flow rates and volumes. As shown by these calculations, the fully developed improvements will result in a slight increase in runoff generated by the site. When incorporating the proposed ponding, the downstream impact is greatly improved when comparing to existing and/or historical conditions.

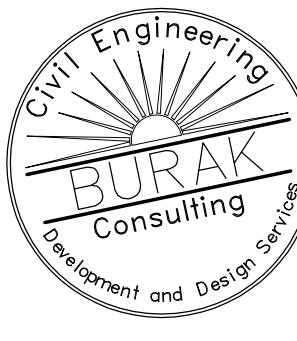
The proposed improvements will increase the existing peak runoff due to the higher percentage of impervious area proposed by the development. A spreadsheet for Precipitation Zone 1 is included on this plan. This spreadsheet outlines the peak runoff and volume generated for each sub-basin for existing and proposed fully developed conditions. Percentage of each land treatment is shown to illustrate the addition of impervious area related to the proposed construction.

The larger proposed retention basin will have a maximum capacity of 6,814 cubic feet and the smaller will have a maximum capacity of 2,910 cubic feet as shown on the Plan. The cumulative volume generated for the ten day storm for onsite sub-basins A-C was estimated as 3,356 cubic feet. This peak volume will produce a ponding depth of approximately 5.9-inches in the larger ponding area. Sub-basins D & E will generate 2,388 cubic feet including the northern half of the roadway. The smaller ponding area west of the driveway will pond at a maximum depth of about one foot for the ten-day volume generated by the 6-hour, 100-year rainfall event. In the unlikely event that a rainfall event exceeds the estimated 100-year storm and the volume capacity of the proposed ponding is exceeded, the ponding areas will overflow onto Lyndale Avenue.

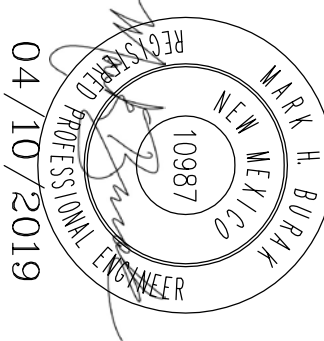
90% Compensatory Volume Management - The first flush has been mitigated based on the impervious areas listed on the attached spreadsheet. This equates to the total impervious area of the site multiplied by 0.34-inches or about 576 cubic feet. This storage has been provided within either of the two proposed retention ponding areas.

9508 Lyndale Lane NW Black Farm Estates

Little Custom Home
Luxury Design Builders
GRADING AND DRAINAGE PLAN



Mark H. Burak, P.E.
1512 Sagebrush Trail SE
Albuquerque, New Mexico, 87123
(505) 235-2256
mburak@comcast.net



DESIGNED BY: M.H.B.
DRAWN BY: T.D.S.
CHECKED BY:

REVISION	BY	DATE	MARK