CITY OF ALBUQUERQUE

February 5, 2016

Reza Afaghpour, PE
SBS Construction and Engineering, LLC
10209 Snowflake Ct NW
Albuquerque, NM 87114

Re: 4 Unit Townhouse Development
1203 Griegos Rd NW
Request Permanent C.O. - Accepted
Engineer's Stamp dated: 3-22-15 (F14D070)
Certification dated: 2-3-16

Dear Mr. Afaghpour,

Based on the Certification received 2/4/2016, the site is acceptable for release of Certificate of Occupancy by Hydrology.

If you have any questions, you can contact me at 924-3686 or Totten Elliott at 924-3982.

Sincerely,

Abiel Carrillo, P.E.
Principal Engineer, Planning Department
Development and Review Services

TE/AC
C: email, Cordova, Camille C.; Miranda, Rachel; Sandoval, Darlene M.; Blocker, Lois

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

NOTICE TO CONTRACTORS

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.

2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1985.

3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL FOR LOCATING SERVICE, 260-1990 OR "811", FOR LOCATION OF EXISTING UTILITIES.

4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.

5. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.

6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.

7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

APPROVALS	NAME	DATE
INSPECTOR		

Location
Lots 3 and 4, Block 2, Sandia Plaza, contains +/- 0.3519 acres and is loated at 203 Griegos Rd. N.W. See attached portion of the Vicinity Map for exact location.

Purpose
The purpose of this drainage report is to present a grading and drainage solution to replace existing improvements with this new building.

Existing Drainage Conditions
There is undeveloped. This site is fairly flat, and it drains to Griegos Road and 12th Street N.W. No offsite runoff enters the site. Based on the FIRM Map 35001C0119G (revised September 26, 2008) the site does not fall within a 100-year floodplain.

Proposed Conditions and On-Site Drainage Management Plan
The runoff generated from this site will be retained on-site. Several Ponds (A through D) are designed to hold nearly twice the volume of the 100-yr/6-day volume under the proposed conditions minus 100-yr/6-day volume under the the historical conditions. Then when the ponds exceed their capacity the runoff will overflow into the parking lot and then to public street via sidewalk culverts. The allowable discharge in the Valley is 2.75 cf/acre meaning a retention volume requirement of 0.50 inches times the area (638.74 cf). The 90th Percentile/First Flush ponding requirement is 0.34 inches times the impervious area (282.32 cf). Total retention volume provided (2,052.23 cf) far exceeds the ponding requirement in the Valley (638.741 cf) and First Flush (282.32 cf).

Calculations
City of Albuquerque, Development Process Manuel, Section 22.2, Hydrology Section, was used for runoff calculations. See this plan for AHYMO input and Summary output files.

```
* ZONE 2
*****************************************************************************
*       100-YEAR,  6-HR STORM (UNDER EXISITNG CONDITIONS)                   *
*****************************************************************************
START                 TIME=0.0
RAINFALL              TYPE=1 RAIN QUARTER=0.0 IN
                      RAIN ONE=2.01 IN RAIN SIX=2.35 IN
                      RAIN DAY=2.75 IN DT=0.03333 HR
* ON-SITE
COMPUTE NM HYD        ID=1 HYD NO=100.0 AREA=0.000550 SQ MI
                      PER A=0.00 PER B=100.00 PER C=0.00 PER D=0.00
                      TP=0.1333 HR MASS RAINFALL=-1
*****************************************************************************
*       10-YEAR,  6-HR STORM (UNDER EXISTING CONDITIONS)                    *
*****************************************************************************
START                 TIME=0.0
RAINFALL              TYPE=1 RAIN QUARTER=0.0 IN
                      RAIN ONE=1.34 IN RAIN SIX=1.57 IN
                      RAIN DAY=1.83 IN DT=0.03333 HR
* ON-SITE
COMPUTE NM HYD        ID=1 HYD NO=110.0 AREA=0.000550 SQ MI
                      PER A=0.00 PER B=100.00 PER C=0.00 PER D=0.00
                      TP=0.1333 HR MASS RAINFALL=-1
*****************************************************************************
*       100-YEAR,  6-HR STORM (UNDER PROPOSED CONDITIONS)                   *
*****************************************************************************
START                 TIME=0.0
RAINFALL              TYPE=1 RAIN QUARTER=0.0 IN
                      RAIN ONE=2.01 IN RAIN SIX=2.35 IN
                      RAIN DAY=2.75 IN DT=0.03333 HR
* ON-SITE
COMPUTE NM HYD        ID=1 HYD NO=100.1 AREA=0.000550 SQ MI
                      PER A=0.00 PER B=10.00 PER C=15.00 PER D=65.00
                      TP=0.1333 HR MASS RAINFALL=-1
*****************************************************************************
*       10-YEAR,  6-HR STORM (UNDER PROPOSED CONDITIONS)                    *
*****************************************************************************
START                 TIME=0.0
RAINFALL              TYPE=1 RAIN QUARTER=0.0 IN
                      RAIN ONE=1.34 IN RAIN SIX=1.57 IN
                      RAIN DAY=1.83 IN DT=0.03333 HR
* ON-SITE
COMPUTE NM HYD        ID=1 HYD NO=110.1 AREA=0.000550 SQ MI
                      PER A=0.00 PER B=10.00 PER C=15.00 PER D=65.00
                      TP=0.1333 HR MASS RAINFALL=-1
*****************************************************************************
FINISH
```

AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) – – VERSION: 1997.02d RUN DATE (MON/DAY/YR) =12/22/2014
INPUT FILE = 12th.txt USER NO.= AHYMO-I-9702c01000R31-AH

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION	
										PAGE =	1
START										TIME=	.00
RAINFALL TYPE= 1										RAIN6=	2.350
COMPUTE NM HYD	100.00	–	1	.00055	.81	.023	.77821	1.533	2.301	PER IMP=	.00
START										TIME=	.00
RAINFALL TYPE= 1										RAIN6=	1.570
COMPUTE NM HYD	110.00	–	1	.00055	.33	.008	.27828	1.533	.945	PER IMP=	.00
START										TIME=	.00
RAINFALL TYPE= 1										RAIN6=	2.350
COMPUTE NM HYD	100.10	–	1	.00055	1.48	.053	1.79770	1.500	4.216	PER IMP=	72.22
START										TIME=	.00
RAINFALL TYPE= 1										RAIN6=	1.570
COMPUTE NM HYD	110.10	–	1	.00055	.93	.032	1.07842	1.500	2.650	PER IMP=	72.22
FINISH											

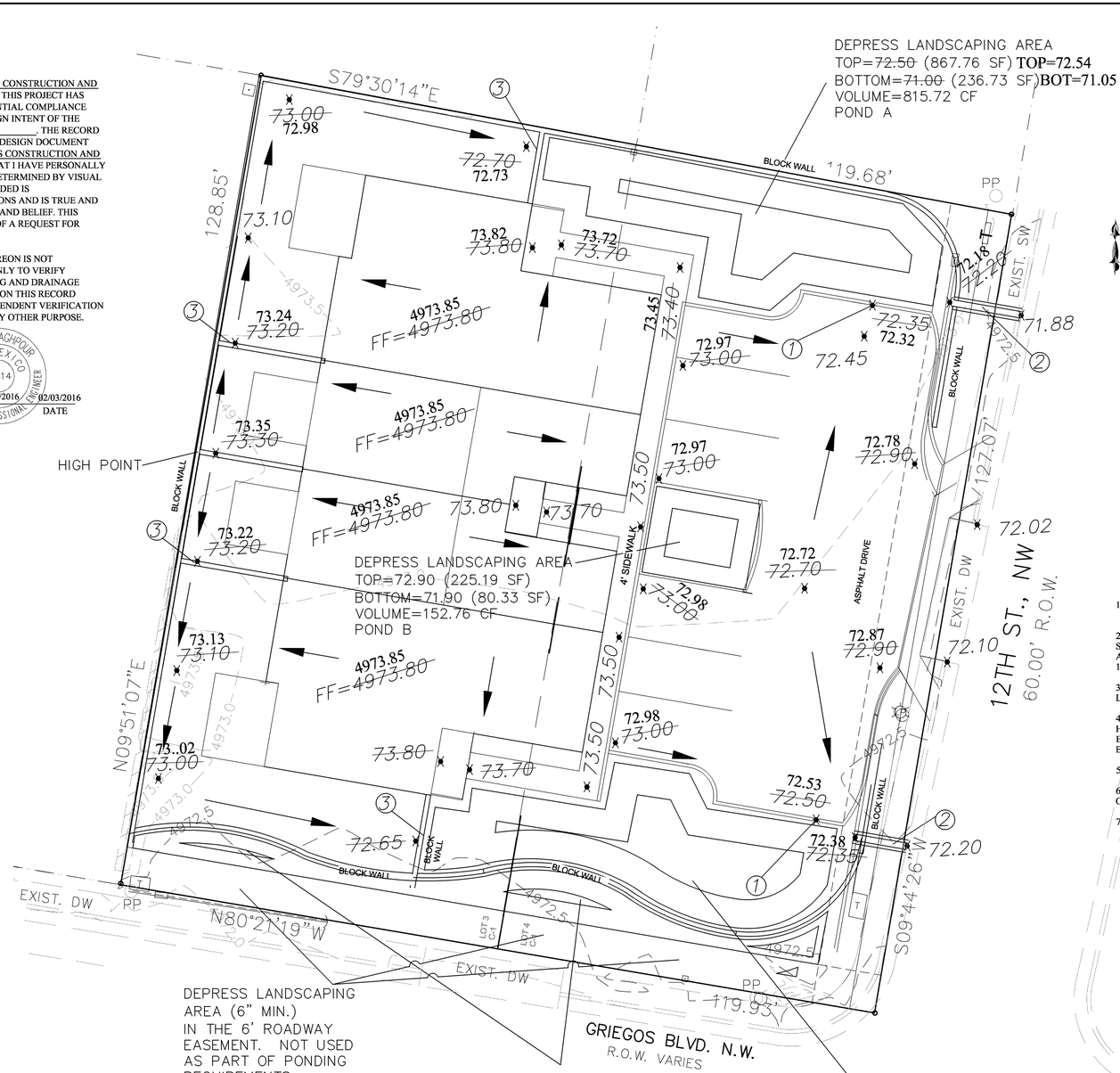
DRAINAGE CERTIFICATION

I, REZA AFAGHPOUR , NMPE 11814 , OF SBS CONSTRUCTION AND ENGINEERING, LLC , 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 03-22-2015 . THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY NMPS 9801 , OF SBS CONSTRUCTION AND ENGINEERING, LLC . I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON 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 FINAL CERTIFICATE OF OCCUPANCY .

THE RECORD INFORMATION PRESENTED HEREON 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.

REZA AFAGHPOUR NEW MEXICO 11814 REGISTERED PROFESSIONAL ENGINEER 02/03/2016

REZA AFAGHPOUR, NMPE 11814 — DATE 02/03/2016



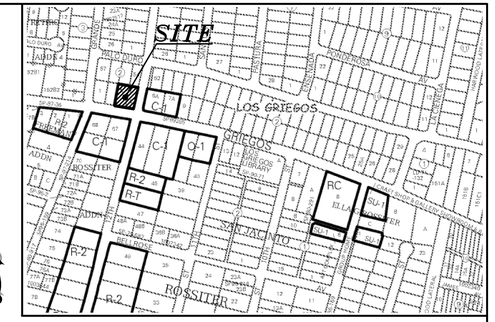
NOTES:

1. PROVIDE 12" CURB OPENING
2. 12" SIDEWALK CULRVET PER CITY STD DWG 2236 (TACK WELD PLATE AT THE BOLT)
3. 6" WALL OPENING (OR TURN TWO BLOCKS) BUILD #4 REBAR AT 3" ON CENTER

POND CALCULATION

TOTAL POND AREA PROVIDED = POND A + B + C + D = 2,052.23 CF
TOTAL PONDING VOLUME REQUIRED = VOL. PROPOSED CONDITIONS – VOL. EXISTING CONDITIONS
= 0.053 – 0.023 = 0.03 AC-FT = 1,306.80 CF
TOTAL PONDING VOLUME REQUIRED (VALLEY)= 0.5 INCHES x AREA = (0.5/12 x 15,329.81) = 638.74 CF
TOTAL PONDING VOLUME REQUIRED (90TH PERCENTILE/FIRST FLUSH) = 0.34 IMCHES x IMPERVIOUS AREA = (0.34/12 x 9,964.38) = 282.32 CF

GRAPHIC SCALE
10 5 0 10
SCALE: 1"=10'



VICINITY MAP: F-14-Z

LEGAL DESCRIPTION:
LOTS 3 AND 4, BLOCK 2, SANDIA PLAZA
CONTAINING 15,329.81 S.F. (0.3519 ACRE)
ZONING: C-1 USES

ADDRESS:
203 GRIEGOS ROAD N.W.

GENERAL NOTES:
1: CONTOUR INTERVAL IS HALF (0.50) FOOT.
2: ELEVATIONS ARE BASED ON CITY OF ALBUQUERQUE CONTROL STATION LSS_206, HAVING AN ELEVATION OF 4976.652 FEET ABOVE SEA LEVEL.
3: UTILITIES SHOWN HEREON ARE IN THEIR APPROXIMATE LOCATION BASED ONLY ON ABOVE GROUND EVIDENCE FOUND IN THE FIELD AND AS-BUILT INFORMATION PROVIDED BY THE CLIENT. UTILITIES SHOWN HEREON, WHETHER INDICATED AS ABANDONED OR NOT, SHALL BE VERIFIED BY OTHERS FOR EXACT LOCATION AND/ OR DEPTH PRIOR TO EXCAVATION OR DESIGN CONSIDERATIONS.
4: THIS IS NOT A BOUNDARY SURVEY, BEARINGS ARE ASSUMED, DISTANCES AND FOUND PROPERTY CORNERS ARE FOR INFORMATIONAL PURPOSES ONLY.
5: SLOPES ARE AT 3:1 MAXIMUM.

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LEGEND

–––5100–––	EXISTING CONTOUR (MAJOR)
–––5102–––	EXISTING CONTOUR (MINOR)
———	BOUNDARY LINE
* 85.46	PROPOSED SPOT ELEVATION
×5265.16	EXISTING GRADE
× 5284.43 FL	EXISTING FLOWLINE ELEVATION
▬ ▬ ▬ ▬	PROPOSED RETAINING WALL
BC=89.08	BOTTOM OF CHANEL
TRW=91.50	TOP OF RETAINING WALL
TF=88.00	TOP OF FOOTING
HP	HIGH POINT
86.65 / 85.47	AS-BUILT GRADES

REZA AFAGHPOUR NEW MEXICO 11814 CONSULTING PROFESSIONAL ENGINEER 3/22/2015

REZA AFAGHPOUR
P.E. #11814

SBS CONSTRUCTION AND ENGINEERING, LLC
10209 SNOWFLAKE CT., NW
ALBUQUERQUE, NEW MEXICO 87114
(505)899-5570

4 UNIT TOWNHOUSE DEVELOPMENT GRADING AND DRAINAGE PLAN

DRAWING:	DRAWN BY:	DATE:	SHEET #
201418-GR.DWG	SH-B	12-22-2014	

LAST REVISION: 03/22/2015