

CITY OF ALBUQUERQUE



September 2, 2016

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

**Re: Lot15, Block 2, Tract, 3, NAA
9000 Eagle Rock NE
Request Permanent C.O. - Accepted
Engineer's Stamp dated: 5-12-15 (C20D056B)
Certification dated: 8-21-16**

Dear Mr. Afaghpour,

Based on the Certification received 8/25/2016, the site is acceptable for release of Certificate of Occupancy by Hydrology.

It is understood the ponds will be stabilized with landscaping within 90 days from the date of this letter.

It was made clear to the home owner that they are responsible for maintenance and monitoring of the condition of the improvements built through the SO-19 process (drainage structure). However, please ensure that the City of Albuquerque is coordinated with if any issues ensue in the future.

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

* ZONE 4, ON-SITE
*

* 100-YEAR, 6-HR STORM (UNDER HISTORICAL CONDITIONS)

START
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=2.23 IN RAIN SIX=2.90 IN
RAIN DELAY=3.65 IN DT=0.03333 HR

* ON-SITE
COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.001385 SQ MI
PER A=100.0 PER B=0.0 PER C=0.0 PER D=0.0
TP=0.1333 HR MASS RAINFALL=-1

* 10-YEAR, 6-HR STORM (UNDER HISTORICAL CONDITIONS)

START
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=1.49 IN RAIN SIX=1.93 IN
RAIN DELAY=2.43 IN DT=0.03333 HR

* ON-SITE
COMPUTE NM HYD ID=1 HYD NO=111.1 AREA=0.001385 SQ MI
PER A=100.0 PER B=0.0 PER C=0.0 PER D=0.0
TP=0.1333 HR MASS RAINFALL=-1

* 100-YEAR, 6-HR STORM (UNDER ALLOWABLE CONDITIONS)

START
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=2.23 IN RAIN SIX=2.90 IN
RAIN DELAY=3.65 IN DT=0.03333 HR

* ON-SITE
COMPUTE NM HYD ID=1 HYD NO=102.1 AREA=0.001385 SQ MI
PER A=43.0 PER B=20.0 PER C=20.0 PER D=17.0
TP=0.1333 HR MASS RAINFALL=-1

* 10-YEAR, 6-HR STORM (UNDER ALLOWABLE CONDITIONS)

START
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=2.23 IN RAIN SIX=2.90 IN
RAIN DELAY=3.65 IN DT=0.03333 HR

* ON-SITE
COMPUTE NM HYD ID=1 HYD NO=103.2 AREA=0.000839 SQ MI
PER A=43.0 PER B=20.0 PER C=20.0 PER D=17.0
TP=0.1333 HR MASS RAINFALL=-1

* 10-YEAR, 6-HR STORM (UNDER ALLOWABLE CONDITIONS)

START
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=1.49 IN RAIN SIX=1.93 IN
RAIN DELAY=2.43 IN DT=0.03333 HR

* ON-SITE
COMPUTE NM HYD ID=1 HYD NO=112.1 AREA=0.001385 SQ MI
PER A=43.0 PER B=20.0 PER C=20.0 PER D=17.0
TP=0.1333 HR MASS RAINFALL=-1

* 100-YEAR, 6-HR STORM (UNDER PROPOSED CONDITIONS)

START
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=2.23 IN RAIN SIX=2.90 IN
RAIN DELAY=3.65 IN DT=0.03333 HR

* ON-SITE
COMPUTE NM HYD ID=1 HYD NO=101.2 AREA=0.001385 SQ MI
PER A=0.0 PER B=32.0 PER C=10.0 PER D=58.0
TP=0.1333 HR MASS RAINFALL=-1

* 10-YEAR, 6-HR STORM (UNDER PROPOSED CONDITIONS)

START
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=1.49 IN RAIN SIX=1.93 IN
RAIN DELAY=2.43 IN DT=0.03333 HR

* ON-SITE
COMPUTE NM HYD ID=1 HYD NO=111.2 AREA=0.001385 SQ MI
PER A=0.0 PER B=32.0 PER C=10.0 PER D=58.0
TP=0.1333 HR MASS RAINFALL=-1

FINISH

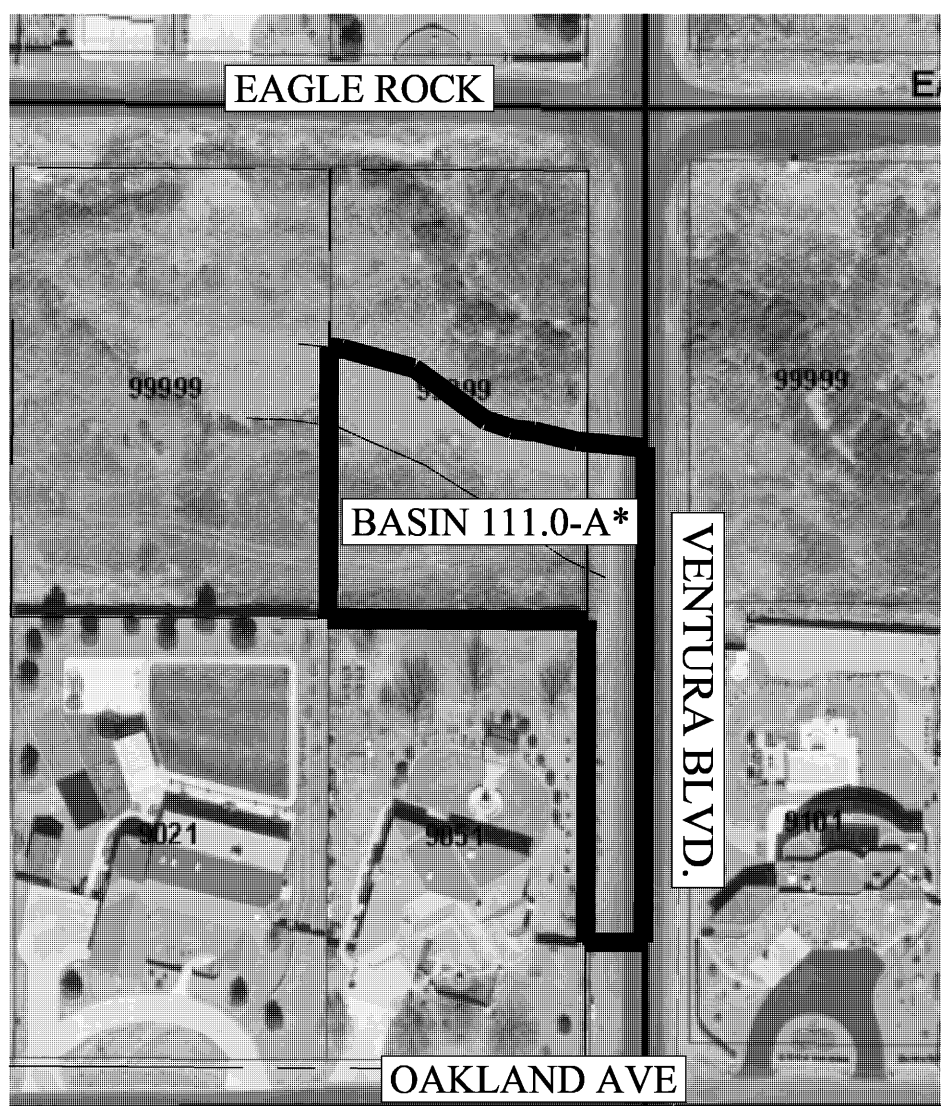
Location
Lot 15 Block 2, Unit 3, Tract 3, North Albuquerque Acres is located south side of Eagle Rock and west of Ventura Boulevard contains +/- 0.89. See attached portion of the Vicinity Map for exact location.

Purpose
The purpose of this drainage report is to present a grading and drainage solution for the proposed buildings.

Existing Drainage Conditions
This site is undeveloped and falls within the NAA Master Drainage Plan prepared by RTI. The site is within Basin 111.0 of the RTI report and is subject to 108.83 cfs which passes through the lot at the northerly portion of the site. Another 1.71 cfs enters the mid portion of the lot from the east. Based on the FIRI Map 33001C0141G (revised September 26, 2008) the site does not fall within a 100-year floodplain.

Proposed Conditions and On-Site Drainage Management Plan
The developed runoff generated from this site will have to comply with the land treatments set as part of the NAA Master Drainage Plan. Additional runoff volume generated by this development will be retained on site. Therefore, a retention pond with a volume of 2,467.38 cfs is designed to retain the additional volume. The total retention volume required is only 2,395.08 cfs. The off-site flow of 1.71 cfs will enter the site to a pond and then intercepted by the Beehive inlets and then discharged to the west via 10" pipe. The 108.83 cfs off-site runoff from Basin 111.0, NAA Master Drainage Plan Basin #101.10 will be intercepted by 2-36" CMPs and will be carried across the property.

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



* PORTION OF BASIN 111.0 FROM RTI'S NAA MASTER DRAINAGE PLAN
OFFSITE BASIN MAP

AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) -
INPUT FILE = sont.txt

PAGE = 1											
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
START	RAINFALL	TYPE= 1									TIME=
COMPUTE NM HYD		101.10	-	1	.00139	1.96	.059	.79828	1.500	2.213	PER IMP=
START	RAINFALL	TYPE= 1									TIME=
COMPUTE NM HYD		111.10	-	1	.00139	.71	.020	.26998	1.533	.796	PER IMP=
START	RAINFALL	TYPE= 1									TIME=
COMPUTE NM HYD		102.10	-	1	.00139	2.81	.094	1.27203	1.500	3.168	PER IMP=
START	RAINFALL	TYPE= 1									TIME=
COMPUTE NM HYD		103.20	-	1	.00084	1.71	.057	1.27203	1.500	3.184	PER IMP=
START	RAINFALL	TYPE= 1									TIME=
COMPUTE NM HYD		112.10	-	1	.00139	1.44	.045	.61083	1.500	1.624	PER IMP=
START	RAINFALL	TYPE= 1									TIME=
COMPUTE NM HYD		101.20	-	1	.00139	3.87	.149	2.01759	1.500	4.367	PER IMP=
START	RAINFALL	TYPE= 1									TIME=
COMPUTE NM HYD		111.20	-	1	.00139	2.40	.087	1.18437	1.500	2.709	PER IMP=

PIPE & GRATE CAPACITY CALCULATIONS

CALCULATING PIPE CAPACITY USING ORFICIE EQUATION: $Q = CA(2gh)^{0.50}$

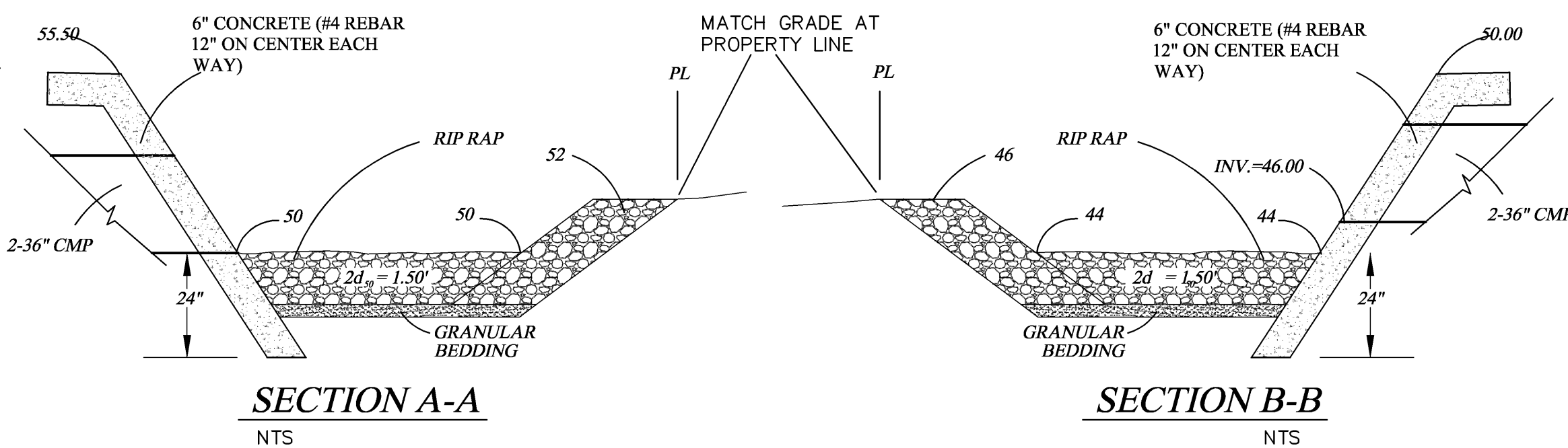
NEENAH R-4350-1 BEEHIVE GRATE:
 $Q = 0.6 \times 0.30 (2 \times 32.2 \times 0.50)^{0.50} = 2.04 \text{ cfs}$

NYLOPLAST 10" GRATE (7001-110-198):
 $Q = 0.6 \times 0.20 (2 \times 32.2 \times 0.50)^{0.50} = 0.95 \text{ cfs}$

8" PVC:
 $Q = 0.6 \times 0.35 (2 \times 32.2 \times 0.50)^{0.50} = 2.06 \text{ cfs}$

10" PVC:
 $Q = 2 \times 0.6 \times 0.55 (2 \times 32.2 \times 0.50)^{0.50} = 3.79 \text{ cfs}$

2-36" PVC:
 $Q = 2 \times 0.6 \times 0.7 (2 \times 32.2 \times 0.50)^{0.50} = 136.07 \text{ cfs}$



** BASIN 111.0 FROM RTI'S NAA MASTER DRAINAGE PLAN

NOTE:

ALL THE RETAINING WALLS THAT WAS CONSTRUCTED ON THIS SITE WERE PERMITTED AND INSPECTED. ALL THE REMAINING STRUCTURES AND CONCRETE WORK ARE ADEQUATE AND THE HEADER WILL WAS BUILT WITH #4 REBAR AND 6" CONCRETE.

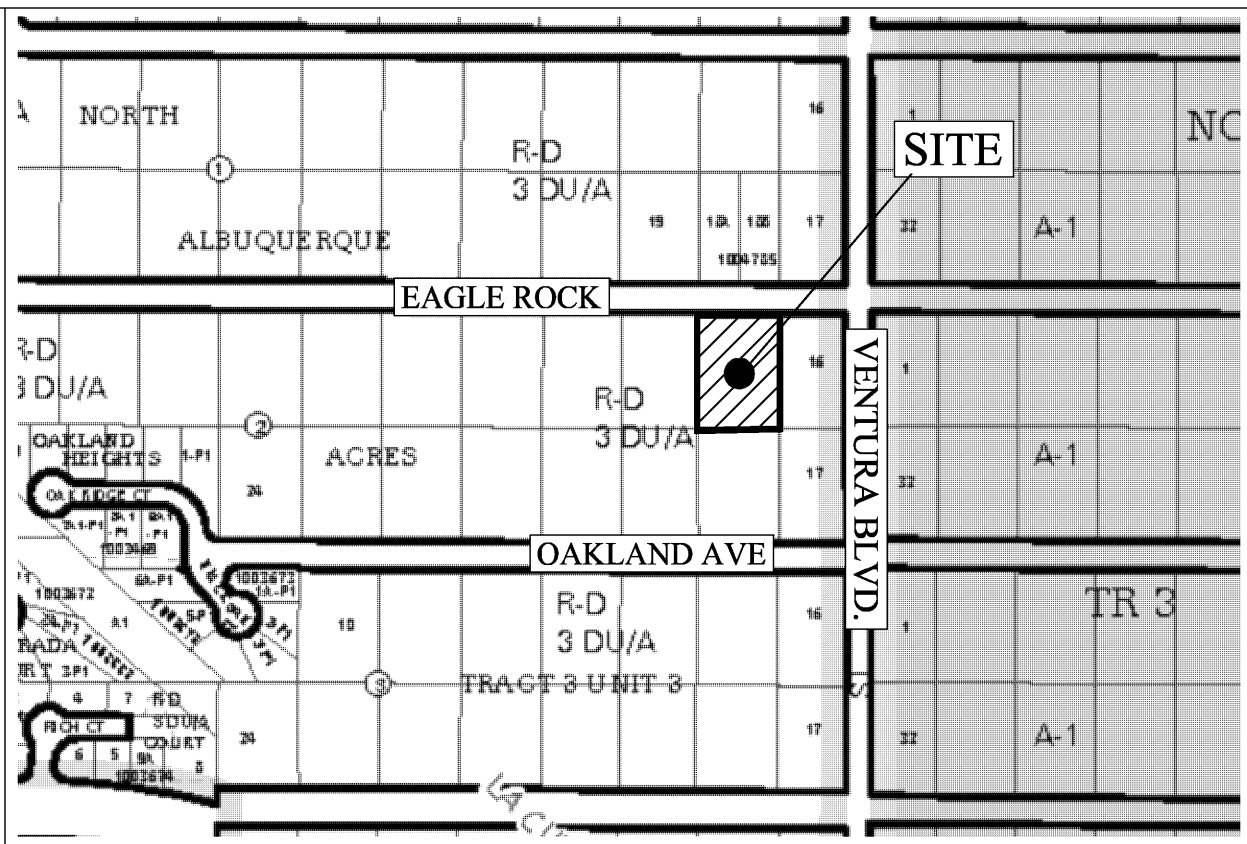
DRAINAGE CERTIFICATION

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 05-12-2015. 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, NMPE 11814

8/21/2016
DATE



VICINITY MAP:

C-20-Z

LEGAL DESCRIPTION:

Lot 15 Block 2, Unit 3, Tract 3, North Albuquerque Acres
BURGS REPLAT, PERFECTO ARMUJO, CONTAINING 0.89 ACRE

BENCH MARK DESCRIPTION:

BM: 7_B20
X=1553078.775, Y=1524900.435, ELEV.=5566.658

GENERAL NOTES:

- 1: CONTOUR INTERVAL IS HALF (1.00) FOOT.
- 2: ELEVATIONS ARE BASED ON CITY OF ALBUQUERQUE CONTROL STATION 7_B20, HAVING AN ELEVATION OF 5566.658 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.

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 LINE LOCATING SERVICE, 765-1234, 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.

LEGEND

- 5100--- EXISTING CONTOUR (MAJOR)
- 5102--- EXISTING CONTOUR (MINOR)
- BOUNDARY LINE
- x 85.46 PROPOSED SPOT ELEVATION
- 5265.16 EXISTING GRADE
- x 5284.43 EXISTING FLOWLINE ELEVATION
- x 5284.43 EXISTING GROUND 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
- TRW=55.64 AS-BUILT RET. WALL
- x 5353.05 AS-BUILT GRADES

GRAPHIC SCALE

20 10 0 20
SCALE: 1"=20'



SBS CONSTRUCTION AND ENGINEERING, LLC

10209 SNOWFLAKE CT., NW
ALBUQUERQUE, NEW MEXICO 87114
(505)899-3570

LOT 15, BLOCK 2, UNIT3, TRACT 3, NAA GRADING AND DRAINAGE PLAN

DRAWING:	DRAWN BY:	DATE:	SHEET #
201423-GR.DWG	SH-B	2-16-2015	1





