

CITY OF ALBUQUERQUE



Richard J. Berry, Mayor

November 30, 2017

Shawn Biazar
SBS Construction and Engineering, LLC
10209 Snowflake Ct. NW
Albuquerque, NM, 87114

RE: Storage Building – 4100 Yale NE
Grading Plan
Engineer Stamp Date: 11/24/17
Hydrology File: G16D095F

Dear Mr. Biazar:

PO Box 1293

Based upon the information provided in your submittal received 11/27/2017, the Grading and Drainage Plan **is not** approved for Building Permit, Grading Permit, and SO-19 Permit. The following comments need to be addressed for approval of the above referenced project:

Albuquerque

NM 87103

www.cabq.gov

1. Please provide the flood plain effective date to the FIRM information.
2. Please provide the benchmark information for the survey contour information provided.
3. Please show and label the existing 40 feet drainage easement along the existing storm sewer pipe. See attached as-built plan & profile for the storm sewer.
4. Please label the existing storm sewer as “existing 72” public storm sewer”.
5. Please show the water block at the propose driveway.
6. Under the Existing Conditions, it talks about the offsite basin drains west to the site. This is true for portions of the offsite basin. However, there is an existing inlet where you show a piece of concrete. This picks up some drainage which ties into the existing 72” storm sewer. Also the interstate roadway drains to the east, away from the site. Please update both the off-site basin and the calculations for the flow that drains onto the site.
7. Please clean up the calculations. There is a line and overlapping text.

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8. First Flush Ponds E, G, H, and J are all on the high side of the site. It is impossible to drain uphill to have these ponds function as first flush basins. Please relocate or consolidate in the ponds downhill where runoff can be treated.

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

Sincerely,

Renée C. Brissette

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

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 10/2015)

Project Title: Storage Building, 4100 Yale, NE Building Permit #: _____ Hydrology File #: _____
DRB#: _____ EPC#: _____ Work Order#: _____
Legal Description: Tract A-1, Kline Industrial Park
City Address: 4100 Yale Blvd., NE

Applicant: SBS CONSTRUCTION AND ENGINEERING, LLC Contact: SHAWN BIAZAR
Address: 10209 SNOWFLAKE CT., NW, ALBUQUERQUE, NM 87114
Phone#: (505) 804-5013 Fax#: (505) 897-4996 E-mail: AECLLC@AOL.COM

Other Contact: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

☒ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

☐ ENGINEER/ARCHITECT CERTIFICATION
☐ CONCEPTUAL G & D PLAN
☒ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☐ OTHER (SPECIFY) _____

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY
☐ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☒ GRADING PERMIT APPROVAL
☒ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR

PRE-DESIGN MEETING?

____ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: ☒ Yes ☐ No

DATE SUBMITTED: 11-26-2017 By: SHAWN BIAZAR

COA STAFF: _____ ELECTRONIC SUBMITTAL RECEIVED: _____

RUNOFF CALCULATIONS FOR 100 YEAR/6 HOUR STORM

BASIN	AREA (SF)	AREA (AC)	AREA (MI ²)
ON-SITE	123,517.39	2.83557	0.004431

$E = EA(AA) + EB(AB) + EC(AC) + ED(AD)$
 $AA + AB + AC + AD$

V-360 = Weighted E (AA + AB + AC + AD)/12

EA = 0.53
EB = 0.78
EC = 1.13
ED = 2.12

LAND TREATMENT

EXISTING DEVELOPED

AA = 0.00% AB = 0.00%

AB = 100.00% AC = 0.00%

AC = 0.00% AD = 80.00%

AD = 0.00%

EXISTING Weighted E = 0.78

DEVELOPED Weighted E = 1.89

POND CALCULATION

V360 (EXISTING) = 8,028.63 CF

V360 (DEVELOPED) = 19,423.11 CF

V360 (INCREASED) = 11,394.48 CF

A = 1.56 CFS/AC

B = 2.28 CFS/AC

C = 3.14 CFS/AC

D = 4.70 CFS/AC

TOTAL QP = QPA AA + QPB AB + QPC AC + QPD AD

QP (EXISTING) = 6.47 CFS

QP (DEVELOPED) = 12.20 CFS

QP (INCREASED) = 5.73 CFS

BASIN	AREA (SF)	AREA (AC)	AREA (MI ²)
OFFSITE	44,437.75	1.02015	0.001594

$E = EA(AA) + EB(AB) + EC(AC) + ED(AD)$
 $AA + AB + AC + AD$

V-360 = Weighted E (AA + AB + AC + AD)/12

EA = 0.53
EB = 0.78
EC = 1.13
ED = 2.12

LAND TREATMENT

EXISTING

AA = 0.00%

AB = 23.00%

AC = 23.00%

AD = 54.00%

EXISTING Weighted E = 1.58

V360 (EXISTING) = 5,866.15 CF

A = 1.56 CFS/AC

B = 2.28 CFS/AC

C = 3.14 CFS/AC

D = 4.70 CFS/AC

TOTAL QP = QPA AA + QPB AB + QPC AC + QPD AD

QP (EXISTING) = 3.86 CFS

POND CALCULATIONS

$VOL = (TOP\ AREA + BOTTOM\ AREA) / 2 * (TOP\ ELEVATION - BOTTOM\ ELEVATION)$

SURFACE AREA (Pond A)	ELEV (FT)	AREA (SF)
45.00	34.66	
48.00	41.99	
49.00	272.98	

SURFACE AREA (Pond B)	ELEV (FT)	AREA (SF)
40.78	172.83	
41.78	659.29	
42.78	1,431.46	

SURFACE AREA (Pond C)	ELEV (FT)	AREA (SF)
40.78	172.83	
41.78	659.29	
42.78	1,431.46	

SURFACE AREA (Pond D)	ELEV (FT)	AREA (SF)
40.78	172.83	
41.78	659.29	
42.78	1,431.46	

SURFACE AREA (Pond E)	ELEV (FT)	AREA (SF)
40.78	172.83	
41.78	659.29	
42.78	1,431.46	

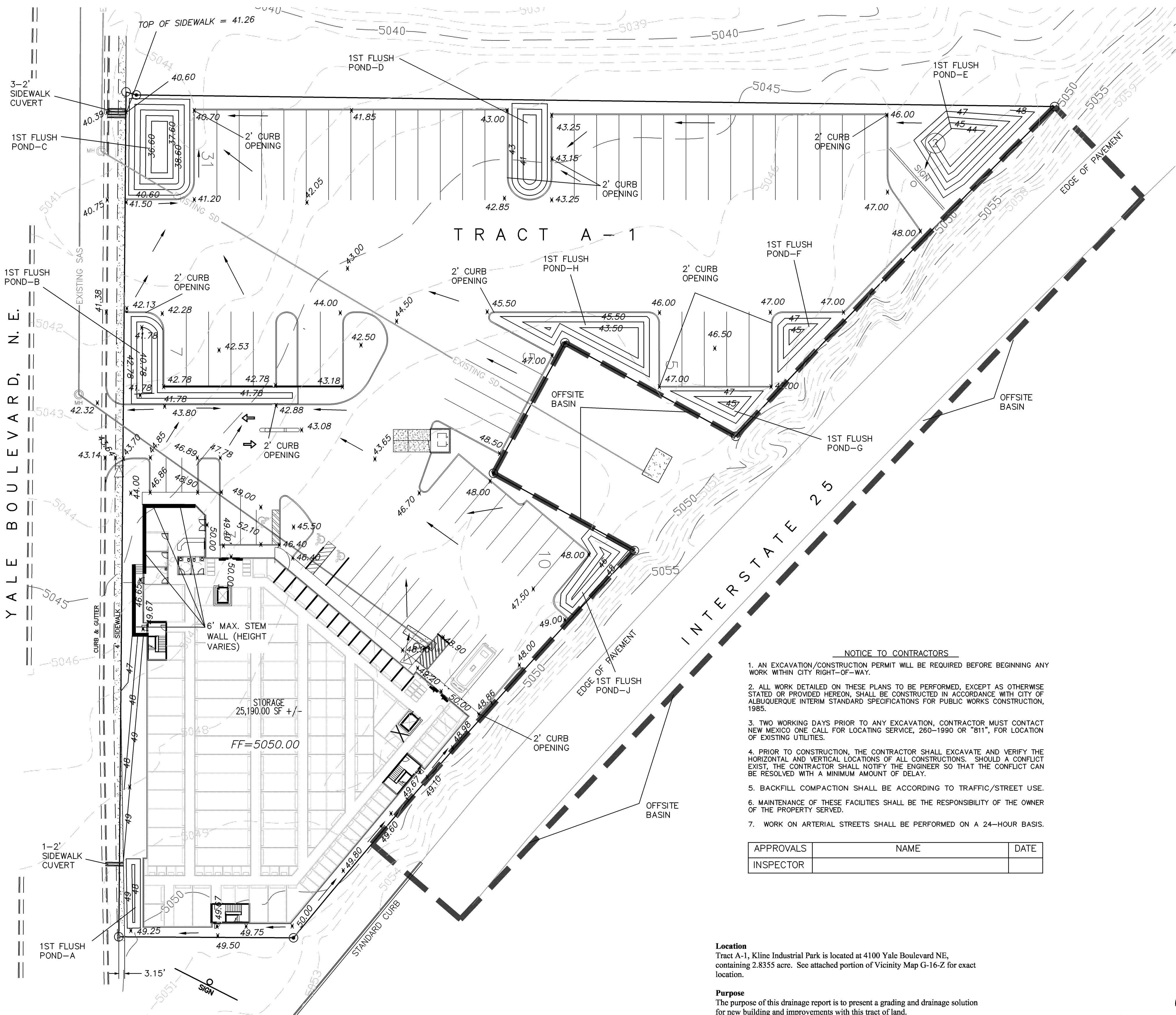
SURFACE AREA (Pond F)	ELEV (FT)	AREA (SF)
40.78	172.83	
41.78	659.29	
42.78	1,431.46	

SURFACE AREA (Pond G)	ELEV (FT)	AREA (SF)
40.78	172.83	
41.78	659.29	
42.78	1,431.46	

SURFACE AREA (Pond H)	ELEV (FT)	AREA (SF)
40.78	172.83	
41.78	659.29	
42.78	1,431.46	

SURFACE AREA (Pond I)	ELEV (FT)	AREA (SF)
40.78	172.83	
41.78	659.29	
42.78	1,431.46	

SURFACE AREA (Pond J)	ELEV (FT)	AREA (SF)
40.78	172.83	
41.78	659.29	
42.78	1,431.46	



SIDEWALK CULVERT CALCULATIONS

12" Sidewalk Culvert Flow Capacity Calculation Using Orifice Equation

Orifice Equation: $Q = CA (2gh)^{0.50}$
 $h(\text{head}) = 0.67'$
 $A = 6 \times 0.67 = 4.02 \text{ sf}$
 $g = 32.20$

$Q = 0.60 \times 4.02 \times (2 \times 32.2 \times 0.67)^{0.50}$
 $= 15.84 \text{ cfs}$

15.84 cfs < 16.05 cfs (on-site 12.20 + offsite 3.86)
The sidewalk culvert has less capacity than overall runoff, but more than 15% of the runoff will be retained within the 1st flush ponds.

GENERAL NOTES:

1. CONTOUR INTERVAL IS HALF (1.00) FOOT.
2. 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.
3. THIS IS NOT A BOUNDARY SURVEY, BEARINGS ARE ASSUMED, DISTANCES AND FOUND PROPERTY CORNERS ARE FOR INFORMATIONAL PURPOSES ONLY.
4. 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 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

Tract A-1, Kline Industrial Park is located at 4100 Yale Boulevard NE, containing 2.8355 acre. See attached portion of Vicinity Map G-16-Z for exact location.

Purpose

The purpose of this drainage report is to present a grading and drainage solution for new building and improvements with this tract of land.

Existing Drainage Conditions

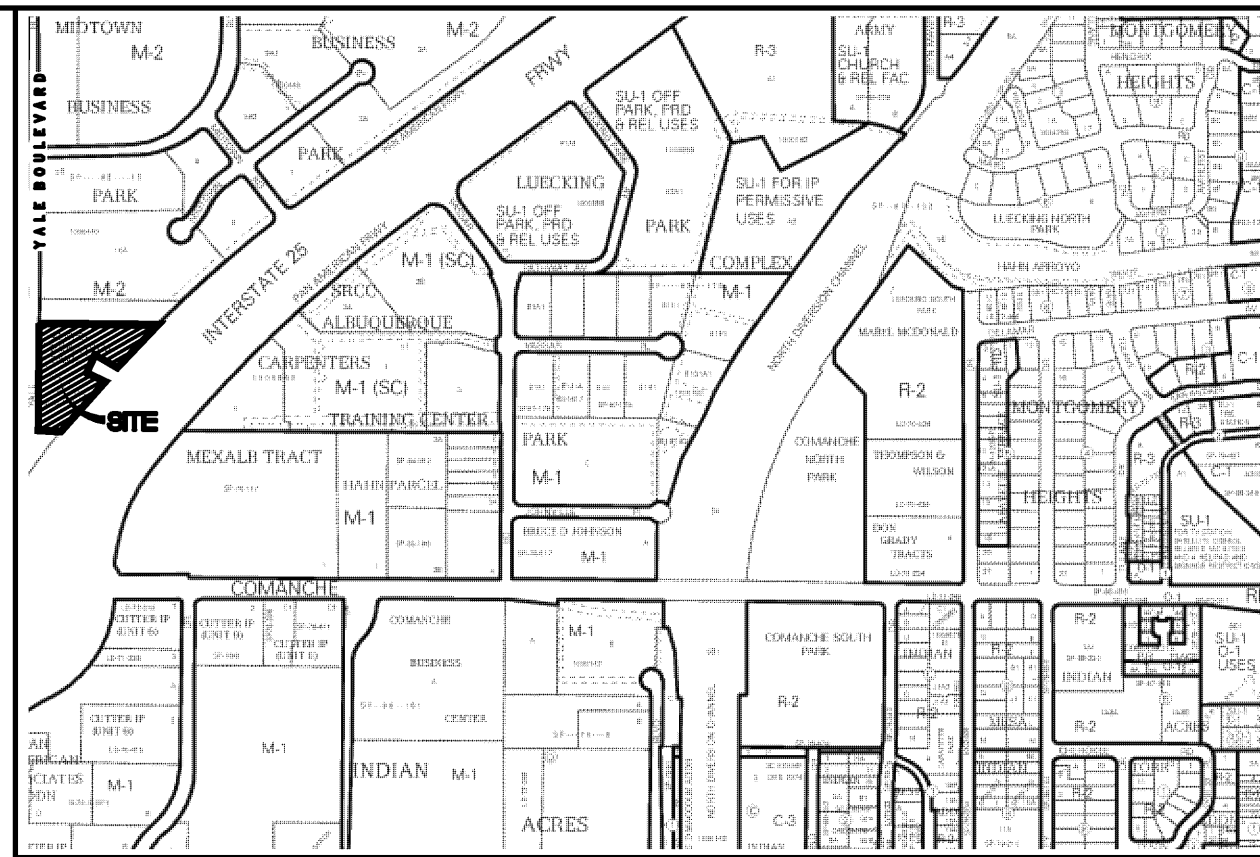
The site drains from east to west to Yale Boulevard and north to the exiting earthen channel to the north. There is an offsite basin from the east (State Highway right-of-way) that drains west to the this site at a flow rate of 3.86 cfs. This site does not fall within a 100 year floodplain. See attached portion of the FIRM map for the location of the site.

Proposed Conditions and On-Site Drainage Management Plan

The offsite runoff will continue to drain through this site. The runoff will be intercepted by a number of retention ponds/1st flush ponds. After that to runoff from this site will drain to Yale Boulevard via 3-2' sidewalk culverts. The runoff on Yale Boulevard will be intercepted by a series of storm drain inlets.

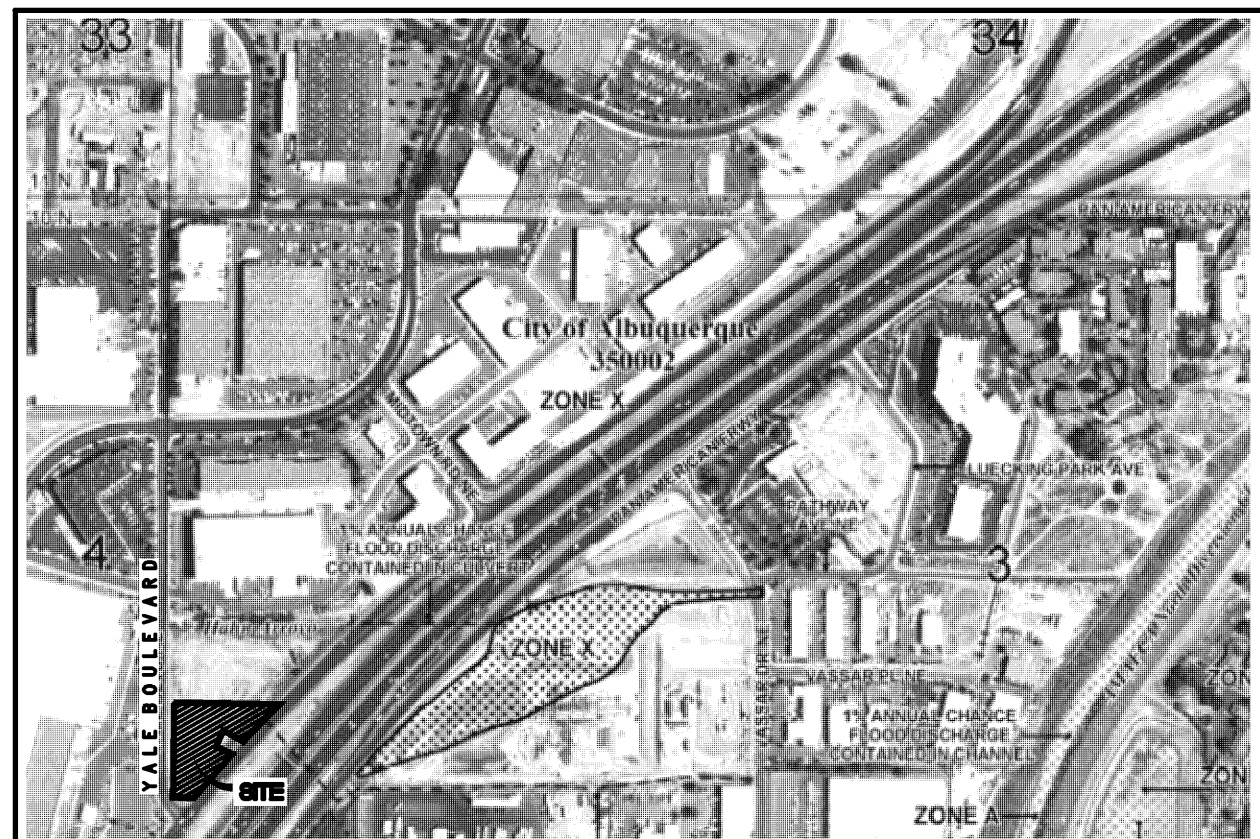
Calculations

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.



VICINITY MAP:

G-16-Z



FIRM MAP:

35001C0138H

LEGAL DESCRIPTION:

TRACT A-1, KLINE INDUSTRIAL PARK
CONTAINING 2.8355 ACRE
ADDRESS: 4100 YALE BOULEVARD NE, ALBUQUERQUE

LEGEND

---	BOUNDARY LINE
---	EASEMENT LINE
---	EXISTING SEWER
---	EXISTING STORM DRAIN
---	EXISTING CURB & GUTTER
---	CHAIN LINK FENCE
---	EXISTING SIDEWALK
---	EXISTING FIRE HYDRANT
---	EXISTING WATER SERVICE
---	EXISTING DROP INLET



REZA AFAGHPUR
P.E. #11814

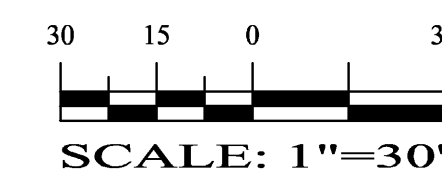
SBS CONSTRUCTION
AND ENGINEERING, LLC

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

STORAGE BUILDING
4100 YALE BOULEVARD NE
GRADING PLAN

DRAWING:	DRAWN BY:	DATE:	SHEET #
201726-GD.DWG	SDR	10/29/2017	1

GRAPHIC SCALE



LAST REVISION: 11-26-2017