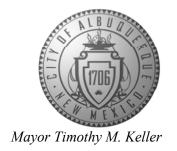
CITY OF ALBUQUERQUE

Planning Department Alan Varela, Director



July 19, 2022

Sheldon E. Greer, P.E. Development Managing Consultants 9320 Menaul Blvd. NE Suite D Albuquerque, NM 87112

RE: Santa Barbara Subdivision Replat of Lot 2 Block 16

Grading & Drainage Plan and Drainage Calculation Report

Engineer's Stamp Date: 06/13/22

Hydrology File: D19D001F

Dear Mr. Greer:

PO Box 1293

Based upon the information provided in your submittal received 06/13/2022, the Grading & Drainage Plan and Drainage Calculation Report are approved for Grading Permit, and for action by the DRB on Preliminary Plat.

PRIOR TO BUILDING PERMIT:

Albuquerque

1. Pad Certification. Once lots are properly graded, a pad certification will be required for approval.

NM 87103

2. Building Permits. Building permits for each lot can be obtained once the Pad Certification is approved by Hydrology.

www.cabq.gov

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Dough Hughes, PE, jhughes@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

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

Sincerely,

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

Renée C. Brissette

DEVELOPMENT MANAGING CONSULTANTS

PROFESSIONAL CONSTRUCTION MANAGERS & CONSULTING ENGINEERS

June 13, 2022

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

RE: Hydrology File: D19D001F, Santa Barbara Subdivision Replat – Response to Comments

Comment 1: Under the Background. Please fix the Block information. This is Block 16 and not Block 17.

Response: Revised Accordingly.

Comment 2: Under the Methodology. Please refer to Article 6-2(a) of the Development Process Manual (DPM) and not Chapter 22 (this was the old DPM).

Response: Revised Accordingly.

Comment 3: Please use the procedure for 40 acre and smaller basins as outlined in Development Process Manual (DPM) Article 6-2(a). Please provide both the existing conditions and proposed conditions for the 100 year-6 hour storm event.

Response: AHYMO Calculations are provided with the resubmittal.

Comment 4: Please also include the existing and proposed calculations for the existing concrete channel. Please use the entire watershed that goes into this channel. This being said, an aerial can be used to show the extent of the watershed. I want to ensure that the concrete channel will be able to handle the change from what is there now and when the lot is converted to townhomes.

Response: Channel Calculations are provided with the resubmittal.

Comment 5: The existing 20' Private Drainage Easement which has the existing concrete channel needs to be converted to Tract A which is owned and maintained by the HOA. This easement should not be part of Lot 2-D.

Response: A separate Tract is now being proposed for the Channel.

Comment 6: Typically, the drive pad cannot be built on a radius. Please consult Transportation Section.

Response: Discussions/coordination has alleviated any Transportation concerns.

Development Managing Consultants, LLC

Sheldon Greer P.E.

Principal

Supplemental Drainage Calculations

FOR

Santa Barbara Subdivision

Albuquerque NM

June 13, 2022



PREPARED BY:

DEVELOPMENT MANAGEMENT CONSULTANTS
PROFESSIONAL CONSTRUCTION MANAGERS & CONSULTING ENGINEERS

9320 Menaul Blvd. NE, Ste. D Albuquerque, New Mexico 87112 Phone: 505-296-7100

Fax: 505-296-7105

Supplemental Drainage Calculations

FOR

Santa Barbara Subdivision

Albuquerque NM

June 13, 2022

PREPARED BY:

Development Management Consultants
Professional Construction Managers & Consulting Engineers
9320 Menaul Blvd. NE, Ste D
Albuquerque, NM 87112

I, Sheldon Greer, do hereby certify that this report was prepared by me or under my direction and that I am a duly registered Professional Engineer under the laws of the State of New Mexico.

ME TO NE. GREET PROPESSIONAL PR

Sheldon Greer NMPE No. 17154

June 13, 2022

Date

AHYMO Developed Input

* 100 YEAR RAINFALL TABLE **RAINFALL** TYPE=12 RAIN QUARTER=1.1 IN RAIN ONE=1.96 IN RAIN SIX=2.64 IN RAIN DAY=3.60 IN DT=0.05 HR ************************ *S EXISTING SUBASINS *********************** *S COMPUTE HYD BASIN OFFSITE 1 COMPUTE NM HYD ID=1 HYDNO=101 DA=0.01130 SQ MI PER A=0 PER B=21 PER C=21 PER D=58 TP=-0.13 RAIN=-1 PRINT HYD ID=1 CODE=5 ********************* *********************** *S COMPUTE HYD EXISTING 1 COMPUTE NM HYD ID=2 HYDNO=101 DA=0.000782 SQ MI PER A=70 PER B=10 PER C=10 PER D=10 RAIN=-1 TP=-0.13 PRINT HYD ID=2 CODE=5 ************************ ********************** *S DEVELOPED SUBASINS ********************** *S COMPUTE HYD DEVELOPED BASIN DEV 1 ID=3 HYDNO=102 DA=0.000782 SO MI COMPUTE NM HYD PER A=0 PER B=21 PER C=21 PER D=58 TP=-0.13 RAIN=-1 PRINT HYD ID=3 CODE=5 *********************** ********************** *S ADD ROUTED EXISTING 1 AND OFFSITE 1 ADD HYD ID=10 HYDNO=110 ID=1 ID=2 PRINT HYD ID=10 CODE=5 ******************** ********************* *S ADD ROUTED DEV 1 AND OFF 1 ADD HYD ID=11 HYDNO=111 ID=1 ID=3 PRINT HYD ID=11 CODE=5 ********************** ********************** **FINISH**

AHYMO Developed Output

AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4) - Ver. S4.02a, Rel: 02a RUN DATE (MON/DAY/YR) =06/13/2022

FROM TO TIME TO CFS PAGE = 1 HYDROGRAPH ID ID RUNOFF PEAK PER COMMAND IDENTIFICATION NO. NO.			VOLUME
(INCHES) (HOURS) ACRE NOTATION RAINFALL TYPE=12 RAIN6= 2.640 *S EXISTING SUBASINS			
*S COMPUTE HYD BASIN OFFSITE_1			
COMPUTE NM HYD 101.00 - 1 1.81083 1.500 3.857 PER IMP= 58.00 *S COMPUTE HYD EXISTING_1	0.01130	27.89	1.091
COMPUTE NM HYD 101.00 - 2 0.86750 1.500 2.324 PER IMP= 10.00 *S DEVELOPED SUBASINS	0.00078	1.16	0.036
*S COMPUTE HYD DEVELOPED BASIN DEV_1			
COMPUTE NM HYD 102.00 - 3 1.81083 1.500 3.887 PER IMP= 58.00 *S ADD ROUTED EXISTING_1 AND OFFSITE_1	0.00078	1.95	0.076
ADD HYD 110.00 1& 2 10 1.74975 1.500 3.758 *S ADD ROUTED DEV_1 AND OFF_1	0.01208	29.06	1.127
ADD HYD 111.00 1& 3 11 1.81080 1.500 3.859 FINISH	0.01208	29.84	1.167

AHYMO PROGRAM (AHYMO-S4) - Version: S4.02a - Rel: 02a

RUN DATE (MON/DAY/YR) = 06/13/2022

START TIME (HR:MIN:SEC) = 07:59:13 USER NO.=

AHYMO-S4TempUser05901704

INPUT FILE = N:\CDS Library\Engineering Tools\AHYMO-S4\AHYMO.HMI

* 100 YEAR RAINFALL TABLE

RAINFALL TYPE=12 RAIN QUARTER=1.1 IN

RAIN ONE=1.96 IN RAIN SIX=2.64 IN

RAIN DAY=3.60 IN DT=0.05 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 -

PEAK AT 1.40 HR.

DT = 0.	050000 H	OURS	END T	IME =	6.0000	00 HOURS
0.0000	0.0095	0.0194	0.0295	0.0399	0.0507	0.0618
0.0734	0.0853	0.0977	0.1107	0.1241	0.1382	0.1530
0.1684	0.1848	0.2020	0.2203	0.2399	0.2608	0.2834
0.2916	0.3008	0.3272	0.3897	0.4972	0.6635	0.9028
1.2301	1.4882	1.6048	1.7022	1.7875	1.8638	1.9329
1.9959	2.0537	2.1069	2.1560	2.2014	2.2434	2.2538
2.2636	2.2730	2.2819	2.2905	2.2987	2.3067	2.3144
2.3219	2.3291	2.3361	2.3430	2.3497	2.3562	2.3626
2.3689	2.3750	2.3810	2.3868	2.3926	2.3983	2.4039
2.4093	2.4147	2.4200	2.4253	2.4304	2.4355	2.4405
2.4455	2.4503	2.4551	2.4599	2.4646	2.4692	2.4738
2.4784	2.4828	2.4873	2.4917	2.4960	2.5003	2.5046
2.5088	2.5130	2.5171	2.5212	2.5253	2.5293	2.5333
2.5372	2.5411	2.5450	2.5489	2.5527	2.5565	2.5603
2.5640	2.5677	2.5714	2.5751	2.5787	2.5823	2.5859
2.5894	2.5929	2.5964	2.5999	2.6034	2.6068	2.6102
2.6136	2.6170	2.6203	2.6237	2.6270	2.6302	2.6335
2.6368	2.6400					

*S EXISTING SUBASINS

*S COMPUTE HYD BASIN OFFSITE_1

COMPUTE NM HYD ID=1 HYDNO=101 DA=0.01130 SQ MI

PER A=0 PER B=21 PER C=21 PER D=58

TP=-0.13 RAIN=-1

K = 0.070850 HR TP = 0.130000HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 26.532 CFS UNIT VOLUME = 0.9989 B = 526.28 P60 = 1.9600

AREA = 0.006554 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.116233HR TP = 0.130000HR K/TP RATIO = 0.894098 SHAPE CONSTANT, N = 3.965387

UNIT PEAK = 12.882 CFS UNIT VOLUME = 1.001 B = 352.86 P60 = 1.9600

AREA = 0.004746 SQ MI IA = 0.42500 INCHES INF = 1.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

PRINT HYD ID=1 CODE=5

PARTIAL HYDROGRAPH 101.00

TIME	TIME FLOW	FLOW TIME	TIME FLOW	FLOW	TIME	FLOW
1 1112	HRS	CFS	HRS	CFS	HRS	CFS
HRS	CFS	HRS	CFS			
	0.000	0.0	1.500	27.9	3.000	0.4
4.500	0.3	6.000	0.3			
	0.250	0.0	1.750	10.3	3.250	0.3
4.750	0.3	6.250	0.0			
	0.500	0.0	2.000	5.5	3.500	0.3
5.000	0.3	6.500	0.0			
	0.750	0.9	2.250	1.7	3.750	0.3
5.250	0.3	6.750	0.0			
	1.000	1.4	2.500	0.9	4.000	0.3
5.500	0.3	7.000	0.0			
	1.250	2.8	2.750	0.6	4.250	0.3
5.750	0.3					

RUNOFF VOLUME = 1.81083 INCHES = 1.0913 ACRE-FEET
PEAK DISCHARGE RATE = 27.89 CFS AT 1.500 HOURS BASIN AREA = 0.0113 SQ. MI.

*S COMPUTE HYD EXISTING 1

COMPUTE NM HYD ID=2 HYDNO=101 DA=0.000782 SQ MI

PER A=70 PER B=10 PER C=10 PER D=10

TP=-0.13 RAIN=-1

K = 0.070850 HR TP = 0.130000 HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 0.31657 CFS UNIT VOLUME = 0.9621 B = 526.28 P60 = 1.9600

AREA = 0.000078 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.148266 HR TP = 0.130000 HR K/TP RATIO = 1.140511 SHAPE CONSTANT, N = 3.104498

UNIT PEAK = 1.5713 CFS UNIT VOLUME = 0.9908 B = 290.24 P60 = 1.9600

AREA = 0.000704 SQ MI IA = 0.60000 INCHES INF = 1.53000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

PRINT HYD ID=2 CODE=5

PARTIAL HYDROGRAPH 101.00

	TIME	FLOW	TIME	FLOW	TIME	FLOW
TIME	FLOW	TIME	FLOW			
	HRS	CFS	HRS	CFS	HRS	CFS
HRS	CFS	HRS	CFS			
	0.000	0.0	1.250	0.0	2.500	0.0
3.750	0.0	5.000	0.0			
	0.250	0.0	1.500	1.2	2.750	0.0
4.000	0.0	5.250	0.0			
	0.500	0.0	1.750	0.4	3.000	0.0
4.250	0.0	5.500	0.0			
	0.750	0.0	2.000	0.1	3.250	0.0
4.500	0.0	5.750	0.0			

1.000 0.0 2.250 0.1 3.500 0.0 4.750 0.0 6.000 0.0

RUNOFF VOLUME = 0.86750 INCHES = 0.0362 ACRE-FEET
PEAK DISCHARGE RATE = 1.16 CFS AT 1.500 HOURS BASIN AREA = 0.0008 SQ. MI.

*S DEVELOPED SUBASINS

*S COMPUTE HYD DEVELOPED BASIN DEV_1

COMPUTE NM HYD ID=3 HYDNO=102 DA=0.000782 SQ MI

PER A=0 PER B=21 PER C=21 PER D=58

TP=-0.13 RAIN=-1

K = 0.070850 HR TP = 0.130000 HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 1.8361 CFS UNIT VOLUME = 0.9937 B = 526.28 P60 = 1.9600

AREA = 0.000454 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.116233HR TP = 0.130000HR K/TP RATIO = 0.894098 SHAPE CONSTANT, N = 3.965387

UNIT PEAK = 0.89149 CFS UNIT VOLUME = 0.9873 B = 352.86 P60 = 1.9600

AREA = 0.000328 SQ MI IA = 0.42500 INCHES INF = 1.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

PRINT HYD ID=3 CODE=5

PARTIAL HYDROGRAPH 102.00

	TIME	FLOW	TIME	FLOW	TIME	FLOW
TIME	FLOW	TIME	FLOW			
	HRS	CFS	HRS	CFS	HRS	CFS
HRS	CFS	HRS	CFS			
	0.000	0.0	1.500	1.9	3.000	0.0
4.500	0.0	6.000	0.0			
	0.250	0.0	1.750	0.7	3.250	0.0
4.750	0.0	6.250	0.0			
	0.500	0.0	2.000	0.4	3.500	0.0
5.000	0.0					
	0.750	0.1	2.250	0.1	3.750	0.0
5.250	0.0					
	1.000	0.1	2.500	0.1	4.000	0.0
5.500	0.0					
	1.250	0.2	2.750	0.0	4.250	0.0
5.750	0.0					
4.750 5.000 5.250 5.500	0.0 0.250 0.0 0.500 0.0 0.750 0.0 1.000 0.0 1.250	6.000 0.0 6.250 0.0 0.1	0.0 1.750 0.0 2.000 2.250 2.500	0.70.40.1	3.250 3.500 3.750 4.000	0.00.00.0

RUNOFF VOLUME = 1.81083 INCHES = 0.0755 ACRE-FEET PEAK DISCHARGE RATE = 1.95 CFS AT 1.500 HOURS BASIN AREA = 0.0008 SQ. MI.

*S ADD ROUTED EXISTING_1 AND OFFSITE_1

ADD HYD ID=10 HYDNO=110

ID=1 ID=2

PRINT HYD ID=10 CODE=5

PARTIAL HYDROGRAPH 110.00

	TIME	FLOW	TIME	FLOW	TIME	FLOW
TIME	FLOW	TIME	FLOW			
	HRS	CFS	HRS	CFS	HRS	CFS
HRS	CFS	HRS	CFS			
	0.000	0.0	1.500	29.1	3.000	0.4
4.500	0.3	6.000	0.3			
	0.250	0.0	1.750	10.6	3.250	0.3
4.750	0.3	6.250	0.0			
	0.500	0.0	2.000	5.7	3.500	0.3
5.000	0.3	6.500	0.0			
	0.750	1.0	2.250	1.8	3.750	0.3
5.250	0.3	6.750	0.0			

5.500	1.000 0.3	1.4 7.000	2.500 0.0	0.9	4.000	0.3
	1.250	2.9	2.750	0.6	4.250	0.3
5.750	0.3					

RUNOFF VOLUME = 1.74975 INCHES = 1.1275 ACRE-FEET
PEAK DISCHARGE RATE = 29.06 CFS AT 1.500 HOURS BASIN AREA = 0.0121 SQ. MI.

*S ADD ROUTED DEV_1 AND OFF_1

ADD HYD ID=11 HYDNO=111

ID=1 ID=3

PRINT HYD ID=11 CODE=5

PARTIAL HYDROGRAPH 111.00

TIME	TIME FLOW	FLOW TIME	TIME FLOW	FLOW	TIME	FLOW
	HRS	CFS	HRS	CFS	HRS	CFS
HRS	CFS	HRS	CFS			
	0.000	0.0	1.500	29.8	3.000	0.4
4.500	0.3	6.000	0.3			
	0.250	0.0	1.750	11.0	3.250	0.4
4.750	0.3	6.250	0.0			
	0.500	0.0	2.000	5.9	3.500	0.3
5.000	0.3	6.500	0.0			
	0.750	1.0	2.250	1.8	3.750	0.3
5.250	0.3	6.750	0.0			
	1.000	1.5	2.500	1.0	4.000	0.3
5.500	0.3	7.000	0.0			
	1.250	3.0	2.750	0.6	4.250	0.3
5.750	0.3					

RUNOFF VOLUME = 1.81080 INCHES = 1.1668 ACRE-FEET
PEAK DISCHARGE RATE = 29.84 CFS AT 1.500 HOURS BASIN AREA = 0.0121 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 07:59:13

Existing Channel Capacity Calculations

Manning Formula:

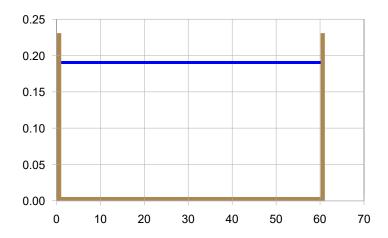
Rectangular Channel

Input

Flow 29.84 cfs
Slope 0.005 ft/ft
Manning's n 0.013
Base Width 60 ft
Right Side Slope 0:1
Left Side Slope 0:1

Output

Depth 0.188 ft Flow Area 11.3 sf 2.64 fps Velocity Velocity Head 0.109 ft Top Width 60.0 ft Froude Number 1.07 Critical Depth 0.197 ft Critical Slope 0.00427 ft/ft



Manning Formula:

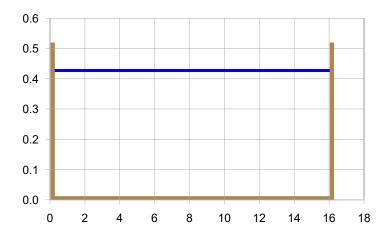
Rectangular Channel

Input

Flow 29.84 cfs
Slope 0.005 ft/ft
Manning's n 0.013
Base Width 16 ft
Right Side Slope 0:1
Left Side Slope 0:1

Output

Depth 0.423 ft Flow Area 6.78 sf Velocity 4.40 fps Velocity Head 0.301 ft Top Width 16.0 ft Froude Number 1.19 Critical Depth 0.476 ft Critical Slope 0.00341 ft/ft



Manning Formula:

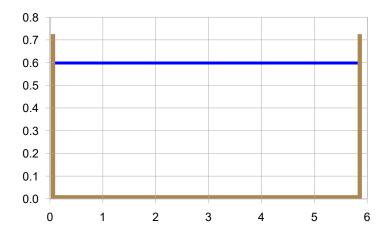
Rectangular Channel

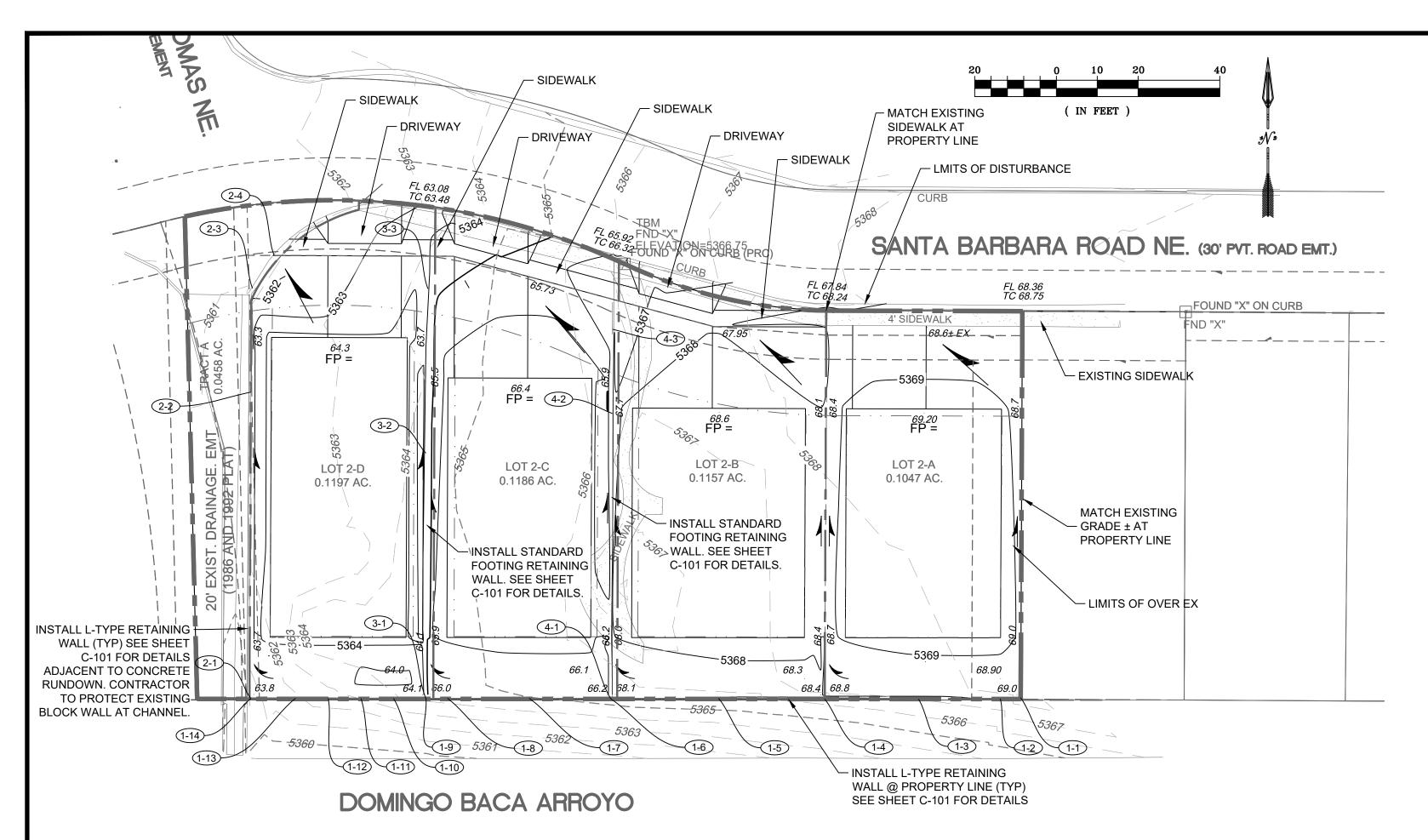
Input

Flow 29.84 cfs
Slope 0.015 ft/ft
Manning's n 0.013
Base Width 5.8 ft
Right Side Slope 0:1
Left Side Slope 0:1

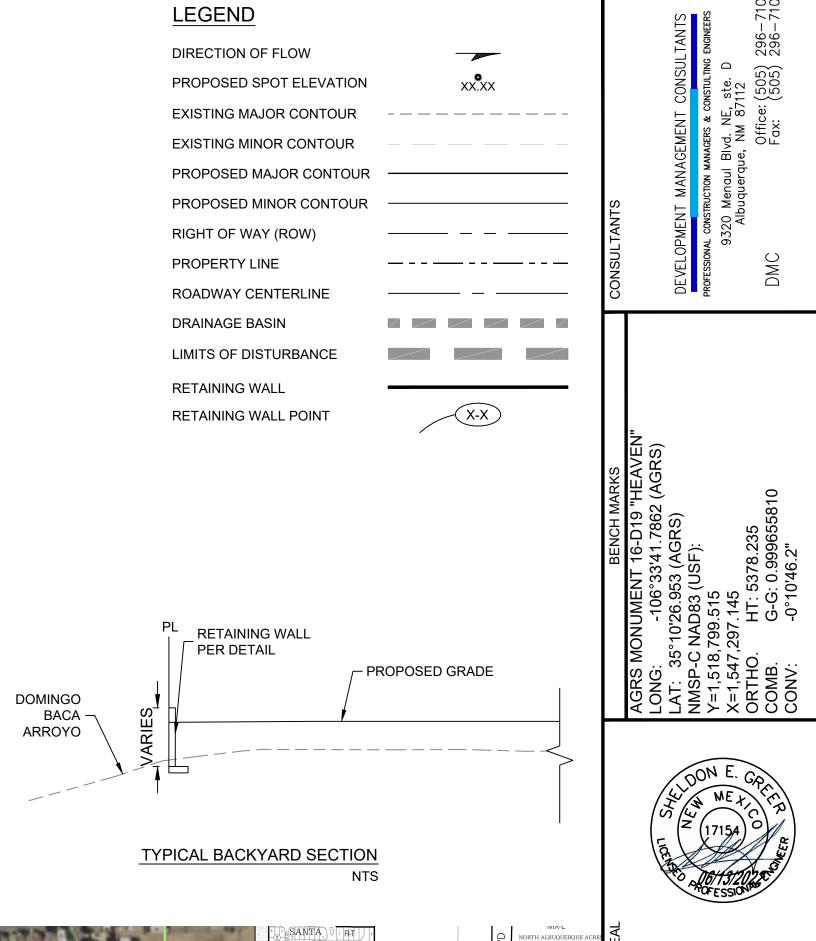
Output

Depth 0.591 ft Flow Area 3.43 sf Velocity 8.71 fps Velocity Head 1.18 ft Top Width 5.80 ft Froude Number 2.00 Critical Depth 0.937 ft Critical Slope 0.00366 ft/ft





	RE1	TAINING WALL TA	BLE	
WALL	TOP OF	TOP OF FOOTING	WALL	APPROX.
POINT	WALL	ELEVATION	HEIGHT (FT)	DISTANC
1-1	69.00	67.00		
		STEP FOOTING	2.00	5.0
1-2	69.00	67.00/66.33		
			2.67	20.0
1-3	69.00	66.33/65.67		
			3.33	23.0
1-4	69.00	65.67/65.00		
4.5	00.00/00.00	05 00/04 00	4.00	26.0
1-5	69.00/68.33	65.00/64.33	4.00	26.0
1-6	68.33/66.33	64.33	4.00	26.0
1-0	00.33/00.33	04.33	2.00	26.3
1-7	66.33	64.33/63.67	2.00	20.5
	00.00	04.00/00.07	2.67	20.0
1-8	66.33	63.67/63.00	2.01	20.0
			3.33	20.0
1-9	66.33/64.33	63.00		
			1.33	5.2
1-10	64.33	63.00/62.33		
			2.00	8.0
1-11	64.33	62.33/61.67		
			2.67	8.0
1-12	64.33	61.67/61.00		
4.40	04.00	04.00/00.00	3.33	8.0
1-13	64.33	61.00/60.33	4.00	10.5
1-14	64.33	60.33	4.00	10.5
1-14	04.00	00.33		
2-1	64.33	61.00		
	01.00	01.00	3.33	75.0
2-2	61.00	61.00	0.00	1 0.0
			2.67	25.0
2-3	63.67/63.00	61.00		
	TOP STEP		0.67-2.67	10.0
2-4	61.67	61.00		
3-1	66.33	63.00		
			3.33	60.0
3-2	66.33/65.67	63.00		
			2.67	40.0
3-3	65.67	63.00		
4-1	66.33	65.00		
	00.00	00.00	3.33	70.0
4-2	66.33/65.67	65.00	1.55	. 5.5
			2.67	20.0
4-3	65.67	65.00		
				i







HYDROI	OGIC	DATA -	- EXIST	ING C	ONDITI	ON			
BASINS	AREA (acres)	LAND TREATMENT YIELD Q 10 Q 100 PERCENTAGES BY TYPE (cfs/ac) (cfs) (cfs)				Q ¹⁰⁰ (cfs)	V ¹⁰⁰ (acft)		
	(43.33)	Α	В	С	D	(5.5,45)	(5.5)	(5.5)	(45.1)
EXISTING 1	0.50	70	10	10	10	2.32	-	1.16	0.036
OFFSITE 1	7.23	0	21	21	58	3.86	-	27.89	1.091

HYDROLOGIC DATA - DEVELOPED CONDITION										
BASINS	AREA (acres)	Р	LAND TRE	EATMENT SES BY TYPI	E	YIELD (cfs/ac)	Q ¹⁰ (cfs)	Q ¹⁰⁰ (cfs)	V 100 (acft)	
	, ,	Α	В	С	D		,			
DEV 1	0.50	0	21	21	58	3.89	-	1.95	0.076	

DESIGNED BY: SEG DRAWN BY: SFG CHECKED BY: SEG 7.18.2022 DATE

Development Review Services **HYDROLOGY SECTION APPROVED** 07/19/22 D19D001F

(IN FEET)

—— — EXISTING PROPERTY BOUNDARY

SUBBASIN BOUNDARY

---- PROPOSED PROPERTY BOUNDARY

LEGEND

CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT ENGINEERING DIVISION SANTA BARBARA IMPROVEMENTS

GRADING AND DRAINAGE PLAN

D-19-Z CITY PROJECT NO. NA of 2

PERFORMED TO DEMONSTRATE THAT THE EXISTING CONCRETE RUNDOWN/CHANNEL HAS THE CAPACITY FOR THE CONTRIBUTING AREA FLOW.

EXISTING CONDITIONS

FLOW PATHS ARE SUFFICIENT TO CARRY FLOWS.

METHODOLOGY

BOULEVARD AND RANCHO DE PALOMAS. THE SITE CURRENTLY IS AN ABANDONED RECREATIONAL AREA.

THE PROPOSED PROJECT WILL SUBDIVIDE LOT 2 INTO 4 TYPICAL INDIVIDUAL SINGLE FAMILY HOME LOTS PLUS ONE TRACT THAT CONTAINS THE EXISTING CONCRETE RUNDOWN/CHANNEL. THE SITE WILL BE GRADED TO DRAIN DIRECTLY TO SANTA BARBARA ROAD SO THAT STORM WATER IS DIRECTED TO THE STREET. RUNOFF THEN ENTERS THE EXISTING CONCRETE RUNDOWN/CHANNEL FROM THE STREET AND IS DISCHARGED IN A CONTROLLED MANNER TO THE DOMINGO BACA ARROYO. CALCULATIONS HAVE BEEN PERFORMED TO ENSURE THAT THE INCREASE IN RUNOFF FROM THE SITE HAS NO ADVERSE IMPACT ON THE EXISTING RUNDOWN/CHANNEL. THE EXISTING AREA CONTRIBUTING FLOW TO THE EXISTING RUNDOWN/CHANNEL GENERATES 29.06 CFS AND THE MODIFICATIONS TO THE PROPOSED SITE ADD AN ADDITIONAL 0.78 CFS FOR A TOTAL OF 29.84 CFS. AN INCREASE OF 2.6%.

TRACT 2, BLOCK 16 SANTA BARBARA SUBDIVISION PARK SQUARE IS APPROXIMATELY 0.5 ACRES IN THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO. THE PROPERTY IS LOCATED JUST SOUTH OF SANTA BARBARA ROAD NE BETWEEN WYOMING

HYDROLOGY CALCULATIONS FOR THE SITE ARE PERFORMED IN ACCORDANCE WITH THE ALBUQUERQUE DEVELOPMENT PROCESS MANUAL (DPM) SECTION 22.2 USING THE RATIONAL METHOD (AHYMO) TO CALCULATE PEAK FLOW RATES IN ORDER TO ENSURE ALL

THE PROPOSED PROJECT AREA, IN GENERAL, SLOPES FROM EAST TO WEST AT AN APPROXIMATE SLOPE OF 3% - 4%. STORM WATER RUNOFF FROM LOT 2 SHEET DRAINS EAST TO WEST. LOCATED IN AN EASEMENT ALONG THE WESTERN BOUNDARY OF LOT 2 IS A

EXISTING CONCRETE RUNDOWN THAT DISCHARGES THE STORM WATER RUNOFF FROM THE NEIGHBORHOOD DIRECTLY INTO THE DOMINGO BACA ARROYO. THIS PROPERTY IS NOT IMPACTED BY OFFSITE FLOWS. THERE IS NO DESIGNATED 100-YEAR FLOODPLAIN ON THE SITE. A PORTION OF LOT 2 DRAINS TO SANTA BARBARA ROAD, A PORTION DRAINS SOUTH, UNDER AN EXISTING WOODEN FENCE AND DIRECTLY INTO SAID ARROYO AND A PORTION DRAINS DIRECTLY INTO SAID CONCRETE RUNDOWN. CALCULATIONS HAVE BEEN

THE EXISTING RUNOFF FROM THE SITE GENERATES 1.16 CFS IN THE 100-YR 6-HR EVENT. THE PROPOSED CONDITIONS INCREASE THIS RUNOFF TO 1.95 CFS IN THE SAME STORM EVENT. THIS INCREASE IN RUNOFF RELATIVE TO THE DISCHARGE TO THE ARROYO AT THIS LOCATION IS MINIMAL AND WILL HAVE NO IMPACT ON THE STREET FLOW, THE RUNDOWN OR THE ARROYO. NO MITIGATION OF THIS SMALL INCREASE IN RUNOFF IS PROPOSED.

