

**Hydrology Calculations**

The following calculations are based on Albuquerque's Development Process Manual, Section 22.2

**Runoff Rate:**

**Treatment Type Areas**

Subbasin	Area <sub>a</sub> (ac)	Area <sub>b</sub> (ac)	Area <sub>c</sub> (ac)	Area <sub>d</sub> (ac)	Total (ac)
Offsite Subbasin-1	0.1845	0.0654	0.0654	0.2983	0.6135

**Peak Discharge values based on Zone 3 from Table A-9**

Q<sub>a</sub> = 1.87 cfs/ac    Q<sub>b</sub> = 2.60 cfs/ac    Q<sub>c</sub> = 3.45 cfs/ac    Q<sub>d</sub> = 5.02 cfs/ac

**Peak Discharge calculation for a 100-yr, 24-hr storm event from equation A-10**

Subbasin	Discharge (cfs)
Offsite Subbasin-1	2.2
Tract A-1	6.8
Total	9.0

**GRAVEL SWALE MANNING'S CALCULATION**

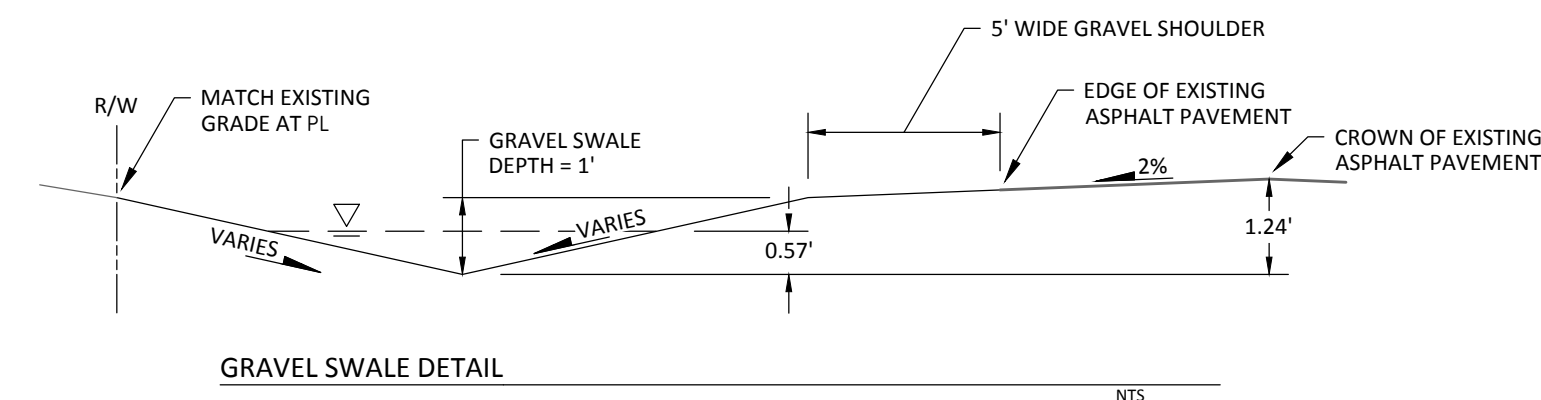
**Triangular Channel**

**Input**

Flow 9.0 cfs  
Slope 0.03 ft/ft  
Manning's n 0.025  
Base Width 0 ft  
Right Side Slope 5.3:1  
Left Side Slope 7.4:1

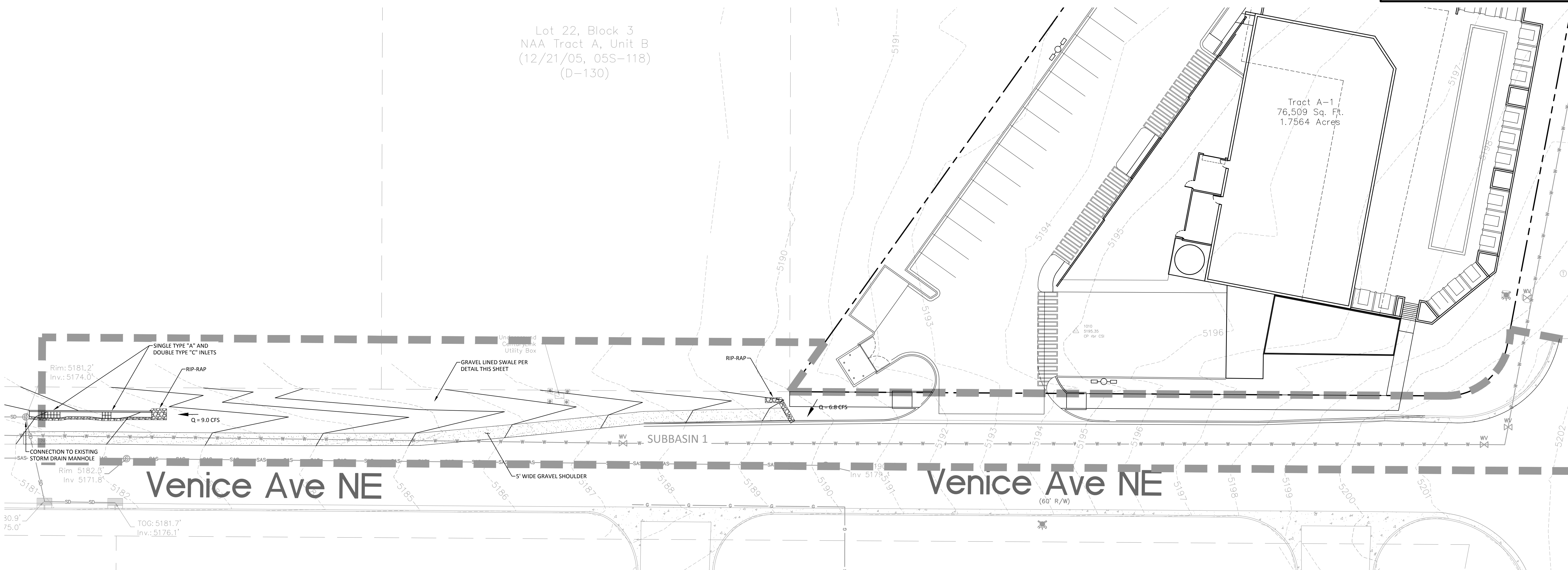
**Output**

Depth 0.567 ft  
Flow Area 2.04 sf  
Velocity 4.41 fps  
Velocity Head 0.302 ft  
Top Width 7.20 ft  
Froude Number 1.46  
Critical Depth 0.860 ft  
Critical Slope 0.0134 ft/ft



Lot 22, Block 3  
NAA Tract A, Unit B  
(12/21/05, 05S-118)  
(D-130)

Tract A-1  
76,509 Sq. Ft.  
1.7564 Acres



FIRM: FM35001C0129H

**RESPEC**  
WATER & NATURAL RESOURCES

9971 JEFFERSON ST NE  
ALBUQUERQUE, NM 87109  
PHONE: 505.366.4187

DESIGNED	DRAWN	CHECKED	DATE
HF	JS	HF	11/7/17

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18633  
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11-7-17

NOT FOR CONSTRUCTION

**LEGAL DESCRIPTION:**  
TRACT A-1, BLOCK 3, NORTH  
ALBUQUERQUE ACRES, TRACT  
A, UNIT B, CITY OF  
ALBUQUERQUE, BERNALILLO  
COUNTY, NEW MEXICO

**I-25 WEST FRONTAGE ROAD  
VENICE & PASADENA**

OFFSITE EXHIBIT

**GRAPHIC SCALE**  
( IN FEET )  
1 inch = 20 ft.

FOR INFORMATION ONLY  
TO BE CONSTRUCTED WITH  
WORK ORDER PLANS

SHEET NUMBER:  
**C-2**