

**Hydrology Calculations**

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

**Runoff Rate:**

**Treatment Type Areas**

Subbasin	Area <sub>1</sub> (ac)	Area <sub>2</sub> (ac)	Area <sub>3</sub> (ac)	Area <sub>4</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

**SWALE MANNING'S CAPACITY**

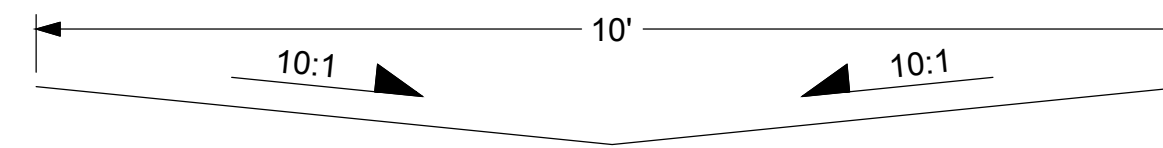
**Triangular Channel**

**Input**

Flow 9.0 cfs  
Slope 0.025 ft/ft  
Manning's n 0.025  
Base Width 0 ft  
Right Side Slope 10:1  
Left Side Slope 10:1

**Output**

Depth 0.494 ft  
Flow Area 2.44 sf  
Velocity 3.69 fps  
Velocity Head 0.211 ft  
Top Width 9.88 ft  
Froude Number 1.31  
Critical Depth 0.550 ft  
Critical Slope 0.0141 ft/ft



SWALE DETAIL

NTS



9971 JEFFERSON ST NE  
ALBUQUERQUE, NM 87109  
PHONE: 505.366.4187

**RESPEC**  
WATER & NATURAL RESOURCES

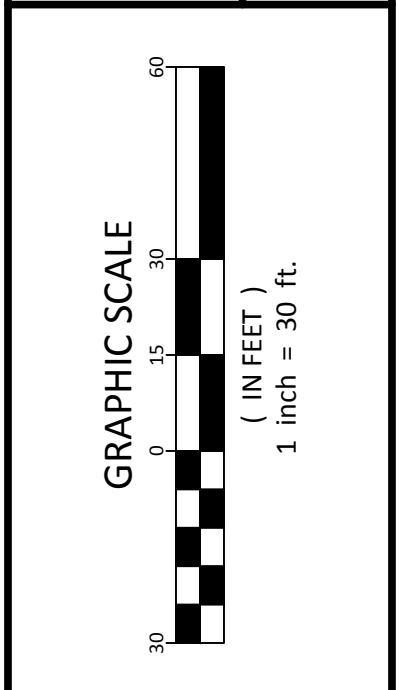
DESIGNED	DRAWN	CHECKED	DATE
HF	JS	HF	8/3/17

REVISION

STAMP

**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**



SHEET NUMBER:  
**C-2**