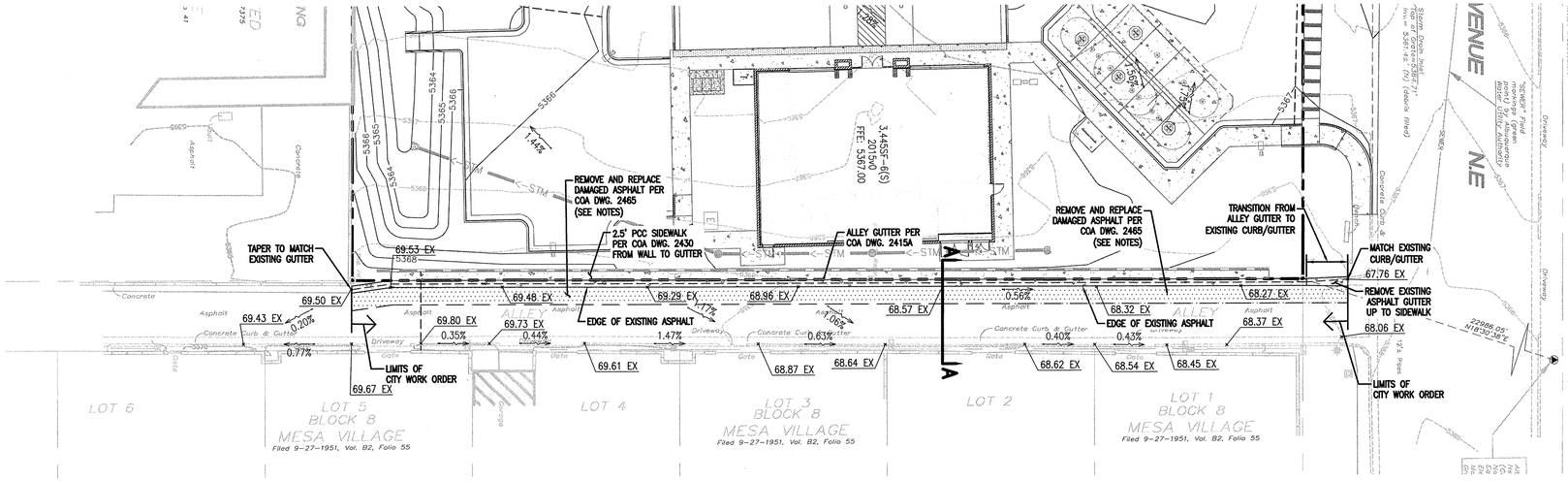
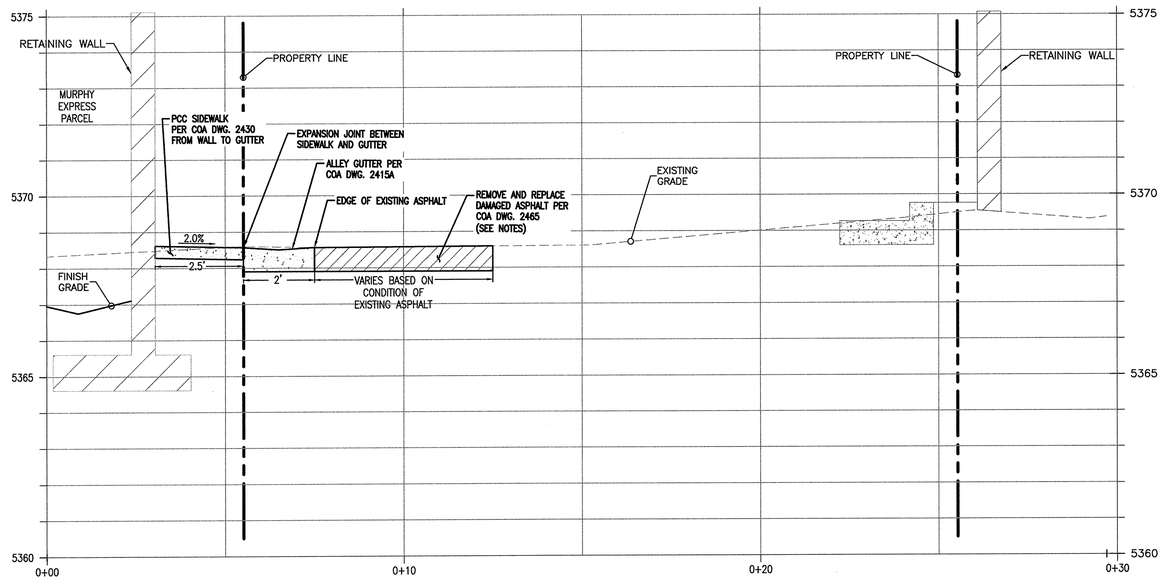
20 0 10 20
(IN FEET)
1 inch = 20 ft





CROSS-SECTION A-A

NOTES

AT ALL PAVEMENT REMOVAL AND REPLACEMENTS, SAW-CUT EDGES SHALL BE STRAIGHT AND CLEAN, AND LONGITUDINAL JOINTS SHALL NOT BE PLACED WITHIN WHEEL PATHS.

PATCHES SHALL BE REGULAR AND SQUARE OR RECTANGULAR, WITH FOUR STRAIGHT SIDES.

FINISHED PAVEMENT SURFACE SHALL BE FLUSH WITH EXISTING PAVEMENT SURFACE, WITH NO SPILLOVER OF ASPHALT OR TACK COAT. CARE MUST BE TAKEN TO AVOID DAMAGING THE INTEGRITY OR APPEARANCE OF SURROUNDING PAVEMENTS; IF DAMAGED, THE ENTIRE SURFACE PATCH MUST BE EXPANDED TO COVER DAMAGES.

CONSULTANTS

BENCH MARKS
VERTICAL DATUM IS BASED UPON THE ALBUQUERQUE CONTROL SURVEY MONUMENT "8-E21", ELEVATION=5705.082 FEET (NAVD 1988)

SEAL
JOHN C. BALDRIDGE
NEW MEXICO
19062
PROFESSIONAL ENGINEER
MAY 15 2019

NO.	DESCRIPTION	BY
	AS-BUILT INFORMATION DATE	
	CONTRACTOR:	
	WORK STAKED BY: DATE:	
	INSPECTOR'S ACCEPTANCE BY: DATE:	
	FIELD VERIFICATION BY: DATE:	
	DRAWINGS CORRECTED BY: DATE:	

811
CALL NM ONE-CALL SYSTEM SEVEN (7) DAYS PRIOR TO ANY EXCAVATION

DESIGNED BY: CJB
DRAWN BY: CJB
CHECKED BY: WL
DATE 5/7/19

CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT
ENGINEERING DIVISION

MURPHY EXPRESS ALLEY IMPROVEMENTS

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL

ZONE MAP NO. J-20
CITY PROJECT NO. 771580
SHEET NO. 3 OF 3

STORMWATER REPORT

For Unnamed Alley
West of Murphy Parcel

PREPARED FOR

MURPHY EXPRESS

1358 Wyoming Blvd
Albuquerque, New Mexico

Prepared by:

GreenbergFarrow
1430 W. Peachtree Street NW, Suite 200
Atlanta, GA 30309
T: (404) 601-4000
F: (404) 601-3990

GFA PROJECT No. 20161221.0

May 7, 2019

JOHN M. NOURZAD
NEW MEXICO
19062
PROFESSIONAL ENGINEER

MAY 07 2019

Project Description:

An existing unnamed alley is located to the west of the Murphy Parcel. The alley is asphalt paved with existing walls located on either side. During the construction of the Murphy site, the concrete alley gutter was removed. Per the prepared DRC Plans, the removed gutter will be replaced with a Concrete Valley Gutter per COA Standards. Concrete Sidewalk will be constructed between the Alley Gutter and the Murphy wall. Damaged portions of the alley asphalt will be repaired per City Standards.

The purpose of this report is to demonstrate that there will be no negative impact on stormwater drainage

Methodology:

This report was prepared in accordance with the City of Albuquerque Drainage, Flood Control and Erosion Control Ordinance. The analysis uses the SCS unit hydrograph method using a type II-24 hour storm distribution.

Stormwater drainage in the alley has been reviewed using the following requirements from the City of Albuquerque Code (14-5-2-7):

(B) The 100-year design storm runoff shall not exceed the top of curb or the right-of-way in a sump condition, in any street nor enter private property from a street, except in recorded drainage or flood control easements, rights-of-way, or historic channels and watercourses where easements or rights-of-way cannot be obtained.

(C) The 10-year design storm runoff shall not exceed a depth of 0.5 feet in any arterial street and shall flow such that one driving lane in each direction is free of flowing or standing water. The 10-year design storm runoff shall not exceed a depth of 0.5 feet in any collector street. Arterial and collector streets that are in the state highway system may require more stringent drainage criteria.

Alley Conditions:

The majority of the alley abutting the Murphy parcel drains to the north. Curb and gutter is located on the west side of the alley. The cross-slope of the alley is relatively flat, which some portions of the basin flowing slightly to the west and some flowing slightly to the east.

For this study, the alley has been considered to have no cross-slope and drain to the north using a slope of 0.40% which reflects the flatter portion of the road.

Alley Basin						
Basin No.	**Drain. Area, Ac**	**Imperv. Area, Ac**	**Perv. Area, Ac**	**Cn**	**Tc, mins.**	**Study Pnt No.**
1	0.13	0.13	0	98	5.0	1A

Alley Basin		
Basin No.	**Q100, cfs**	**Q100, cfs**
1	0.33	0.50

Drainage Analysis:
Due to the varying (and relatively flat) cross-slope of the alley pavement, the calculated stormwater flowrates have been routed through the alley as a rectangular weir (see enclosed calculations).

The 10-year storm event routing reaches a depth of 0.03 feet (0.36 inches), and therefore meets the city code requirement noted in 14-5-2-7 (C).

The 100-year storm event routing reaches a depth of 0.04 feet (0.48 inches). Since the existing curb on the east side of the alley is approximately 6" in height, the 100-year event meets the city code requirement noted in 14-5-2-7 (B).

Summary
Based on the prepared stormwater calculations and drainage review, it is our professional opinion that the proposed alley gutter and concrete will not have a negative impact on the function or use of the existing alley.

PROJECT NUMBER:
20161221
DATE:5/8/2019

3,445SF-6(S)
2015v0
FFE: 5367.00

69.53 EX
69.50 EX
69.48 EX
69.29 EX
68.96 EX
68.57 EX
68.32 EX
68.27 EX
69.80 EX
69.73 EX
68.37 EX
69.67 EX
69.61 EX
68.87 EX
68.64 EX
68.62 EX
68.54 EX
68.45 EX

ALLEY BASIN
0.13 ACRES
Cn=0.98

ALLEY

LOT 5
BLOCK 8
MESA VILLAGE
ed 9-27-1951, Vol. B2, Folio 55

LOT 4

LOT 3
BLOCK 8
MESA VILLAGE
Filed 9-27-1951, Vol. B2, Folio 55

LOT 2

LOT 1
BLOCK 8
MESA VILLAGE
Filed 9-27-1951, Vol. B2, Folio 55

20 0 10 20
(IN FEET)
1 inch = 20 ft

MURPHY EXPRESS

1358 WYOMING BOULEVARD
ALLEY DRAINAGE BASIN

GreenbergFarrow
1430 W. Peachtree St. Suite 200
Atlanta, GA 30309
t: 404 601 4000 f: 404 601 3970

Summary for Subcatchment 1: Alley Basin 1

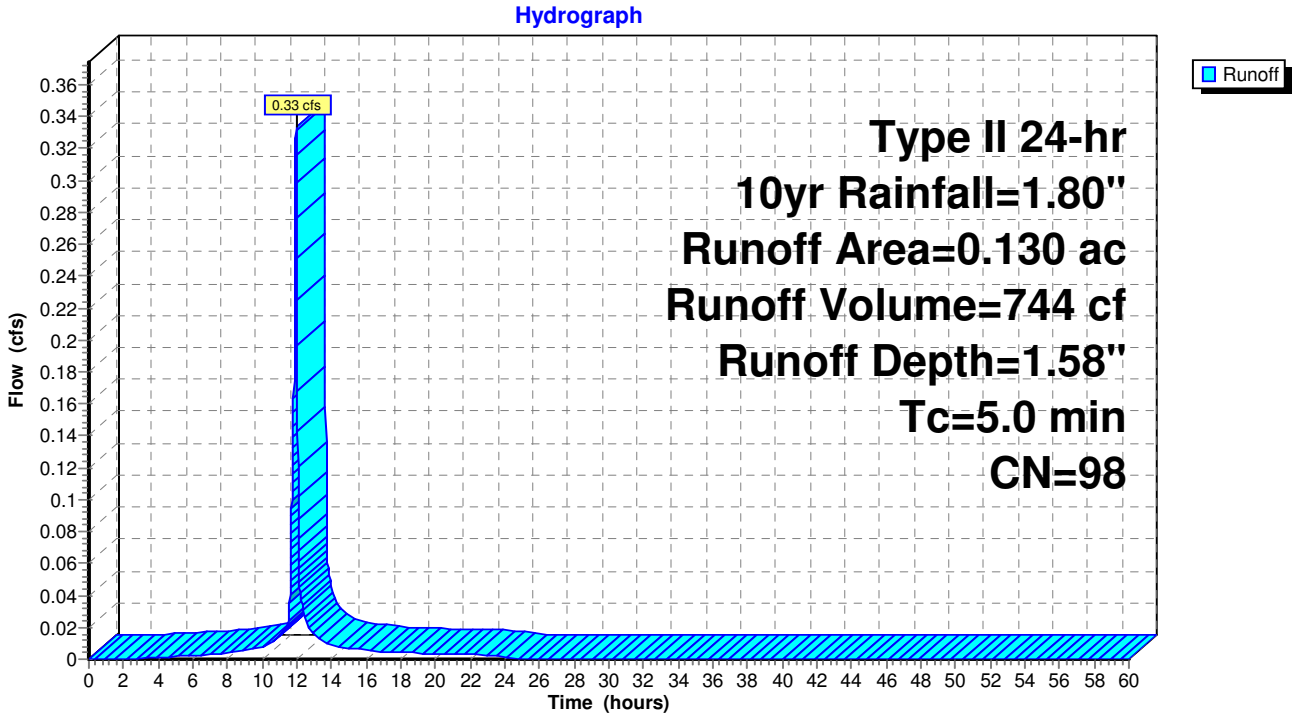
Runoff = 0.33 cfs @ 11.96 hrs, Volume= 744 cf, Depth= 1.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 10yr Rainfall=1.80"

	Area (ac)	CN	Description
*	0.130	98	PAVEMENT
	0.130		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, SHEET FLOW**

Subcatchment 1: Alley Basin 1



Summary for Subcatchment 1: Alley Basin 1

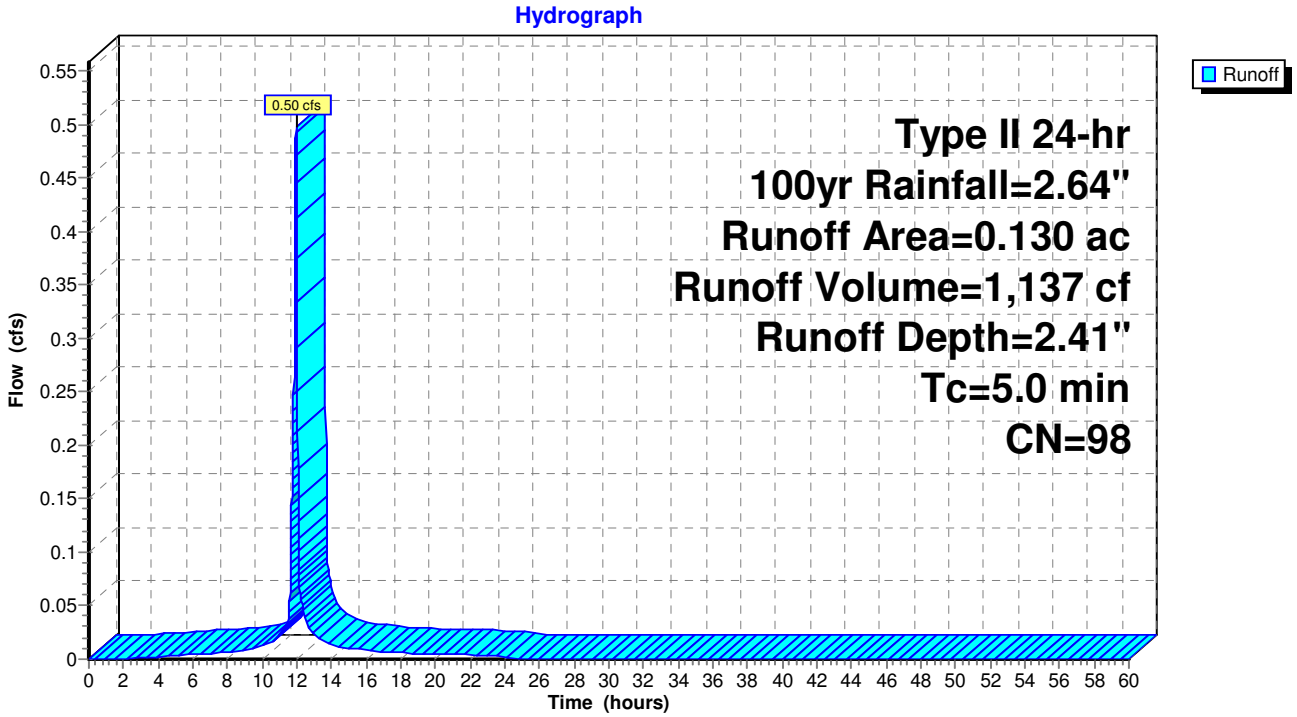
Runoff = 0.50 cfs @ 11.96 hrs, Volume= 1,137 cf, Depth= 2.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type II 24-hr 100yr Rainfall=2.64"

	Area (ac)	CN	Description
*	0.130	98	PAVEMENT
	0.130		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, SHEET FLOW**

Subcatchment 1: Alley Basin 1



Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Tuesday, May 7 2019

Unnamed Alley

Rectangular

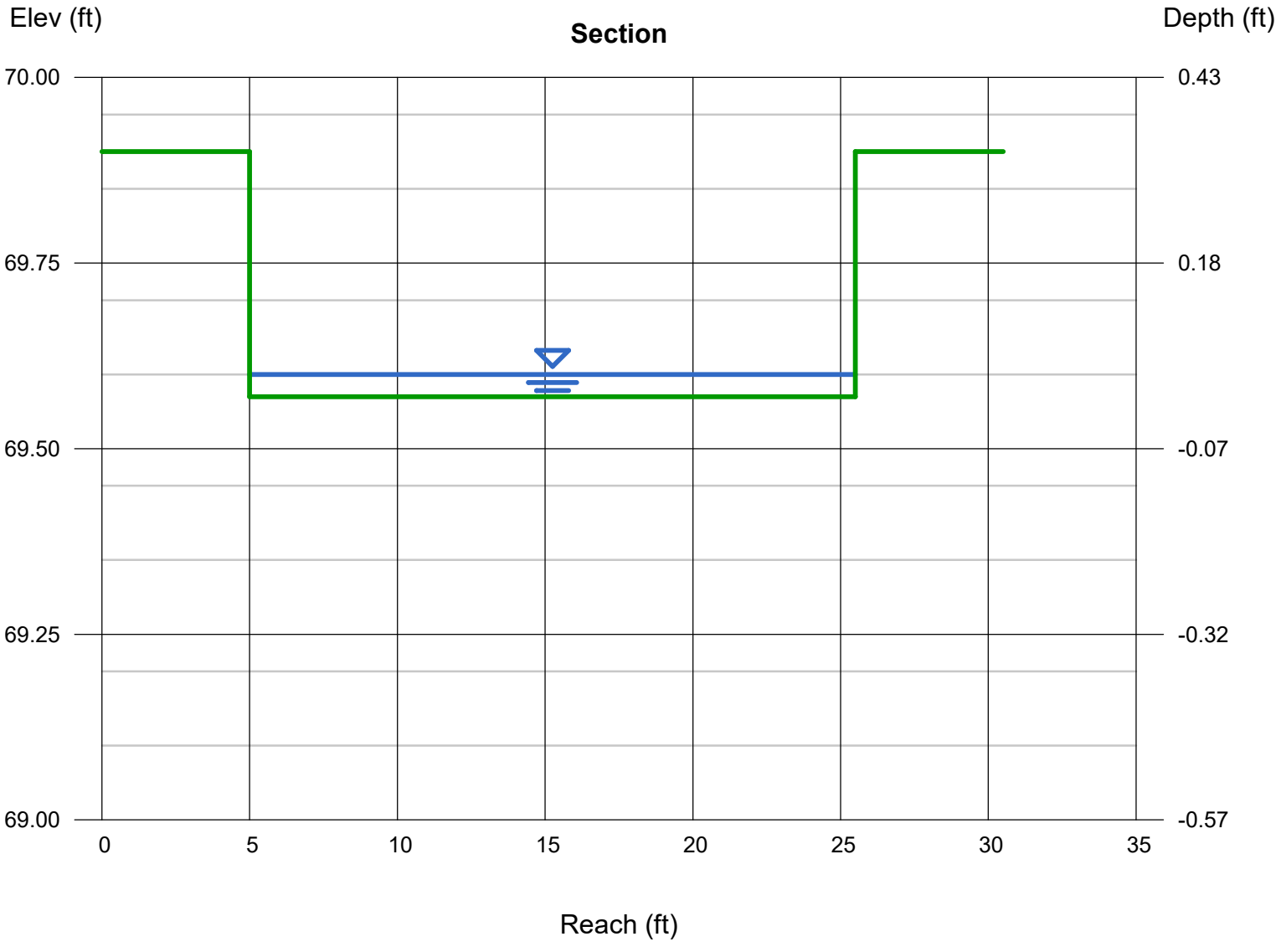
Bottom Width (ft)	= 20.50
Total Depth (ft)	= 0.33
Invert Elev (ft)	= 69.57
Slope (%)	= 0.40
N-Value	= 0.013

Calculations

Compute by:	Known Q
Known Q (cfs)	= 0.33

Highlighted

Depth (ft)	= 0.03
Q (cfs)	= 0.330
Area (sqft)	= 0.62
Velocity (ft/s)	= 0.54
Wetted Perim (ft)	= 20.56
Crit Depth, Yc (ft)	= 0.03
Top Width (ft)	= 20.50
EGL (ft)	= 0.03



Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Wednesday, May 8 2019

Unnamed Alley

Rectangular

Bottom Width (ft)	= 20.50
Total Depth (ft)	= 0.33
Invert Elev (ft)	= 69.57
Slope (%)	= 0.40
N-Value	= 0.013

Calculations

Compute by:	Known Q
Known Q (cfs)	= 0.50

Highlighted

Depth (ft)	= 0.04
Q (cfs)	= 0.500
Area (sqft)	= 0.82
Velocity (ft/s)	= 0.61
Wetted Perim (ft)	= 20.58
Crit Depth, Yc (ft)	= 0.03
Top Width (ft)	= 20.50
EGL (ft)	= 0.05