

Stream Channel:

Project #: 209-4511
 Name: Centene Data Center
 Calculated: JMB 06/10/10
 Checked:
 Station #: A-A

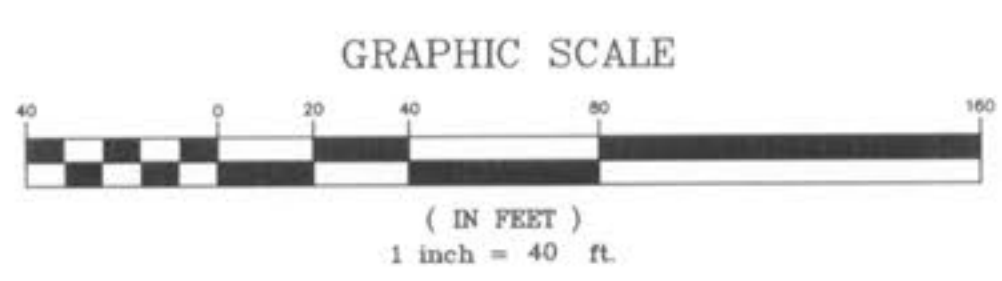
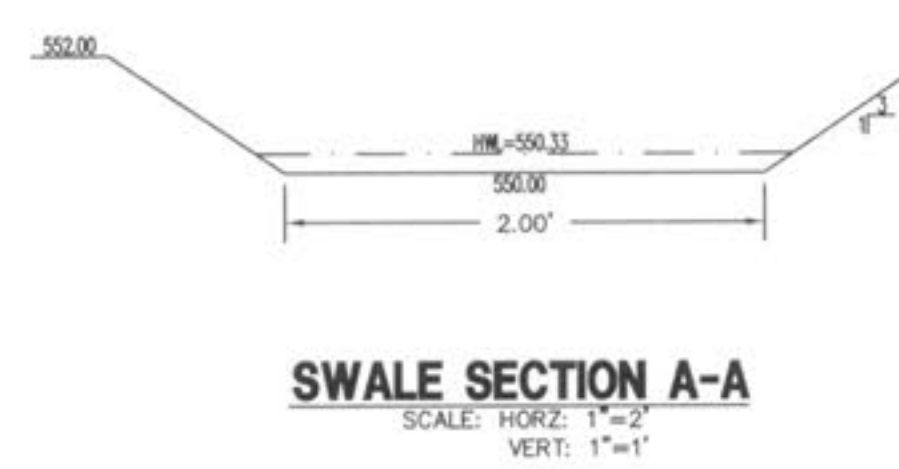
Roughness Coefficient (n)	
Concrete	0.012
Asphalt, smooth	0.013
Asphalt, rough	0.018
Gravel beds, straight	0.025
Gravel beds plus large boulders	0.040
Earth winding w/ grass	0.050
Earth, straight w/ grass	0.026

Manning Equation:
 $Q = (1.49)n^2 A R^{2/3} S^{1/2}$

FIND DEPTH OF WATER AND WIDTH OF THE CHANNEL:
 INPUT:
 Top Of Bank Elevation = 552.00
 Bot. Elevation = 550.00
 Stream Slope = 0.007 (ft/ft)
 n = 0.026
 W (Bottom width) = 2 (ft)

OUTPUT:

Depth	= 0.33 (ft)	Water Surface Width	= 3.98 (ft)
Velocity	= 1.89 (ft/sec)	R ^{2/3}	= 0.39
Water Surface Elev	= 550.33	Perimeter	= 4.09 (ft)
Free Board	= 1.67 (ft)	Cross section Area	= 0.99 (ft ²)



- 5 2010-11-03 FOR PERMIT
- 4 2010-07-21 REVISED PER CITY & PWSD COMMENTS
- 3 2010-06-30 REVISED PER CITY COMMENTS
- 2 2010-16-09 PROGRESS PRINTING #2
- 1 2010-05-24 REVISED PER SEWER DISTRICT COMMENTS

NOV. 3, 2010

GEORGE M. STOCK E-25116
 CIVIL ENGINEER
 CERTIFICATE OF AUTHORITY
 NUMBER: 000996

SITE GRADING PLAN
CENTENE DATA CENTER

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DRAWN BY: J.M.B.	DATE: 05/07/10	CHECKED BY: G.M.S.	DATE: 05/07/10	JOB NUMBER: 209-4511	SHEET: C6 of 21
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