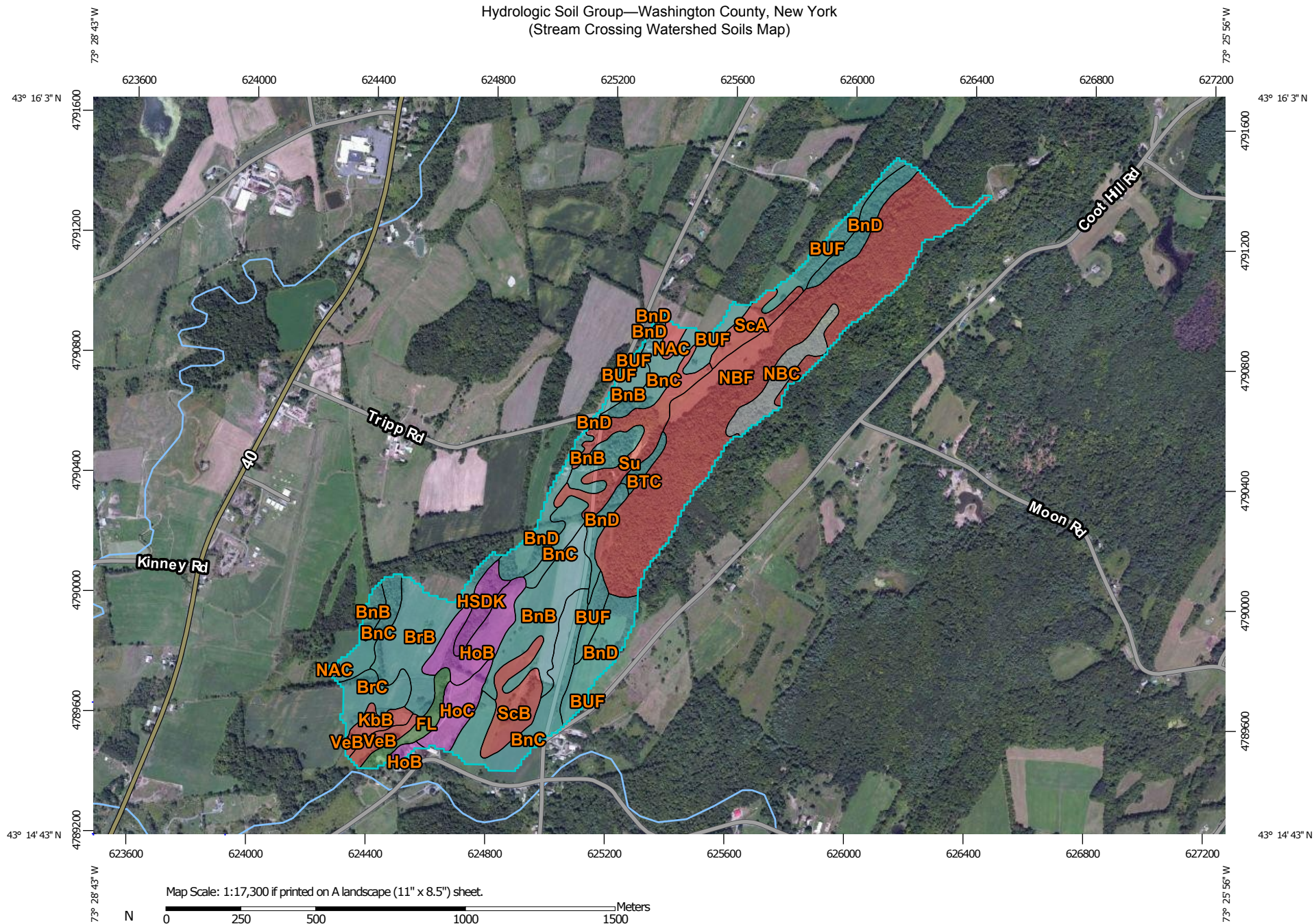


Hydrologic Soil Group—Washington County, New York (Stream Crossing Watershed Soils Map)



Map Scale: 1:17,300 if printed on A landscape (11" x 8.5") sheet.

0 250 500 1000 1500 Meters

0 500 1000 2000 3000 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

9/16/2014
Page 1 of 4

Hydrology & Hydraulics Data:

EFH2 Basic Data:

	Hydrologic Soil Group		
Cover Type	B	C	D
Pasture/Grassland/Range(Good)			
Woods(Good)			

Drainage Area	
Runoff Curve Number	
Watershed Length (ft)	
Watershed Slope (%)	
Time of Concentration	

EFH2 Results:

Storm Frequency	Peak Flows (cfs)
2-year	
10-year	

HEC-RAS Data:

10 Year Flow Depth (ft):	
Calculated Shear Stress (lb/sf):	
Required Rock d_{50} (inches):	

version 18, Sep 2019

cross-section data:

[illegible]

$$V = \frac{1.486}{n} R^{2/3} S^{1/2}$$

en

yes

w.s. elev	flow area	wetted P	hydr. radius	top width	hydr. depth	n value	darcy-weis. f	conveyance	discharge	velocity	shear
98.54	213.8	186.3	1.15	185	1.15	0.048	0.1183	10684	400	1.87	0.100

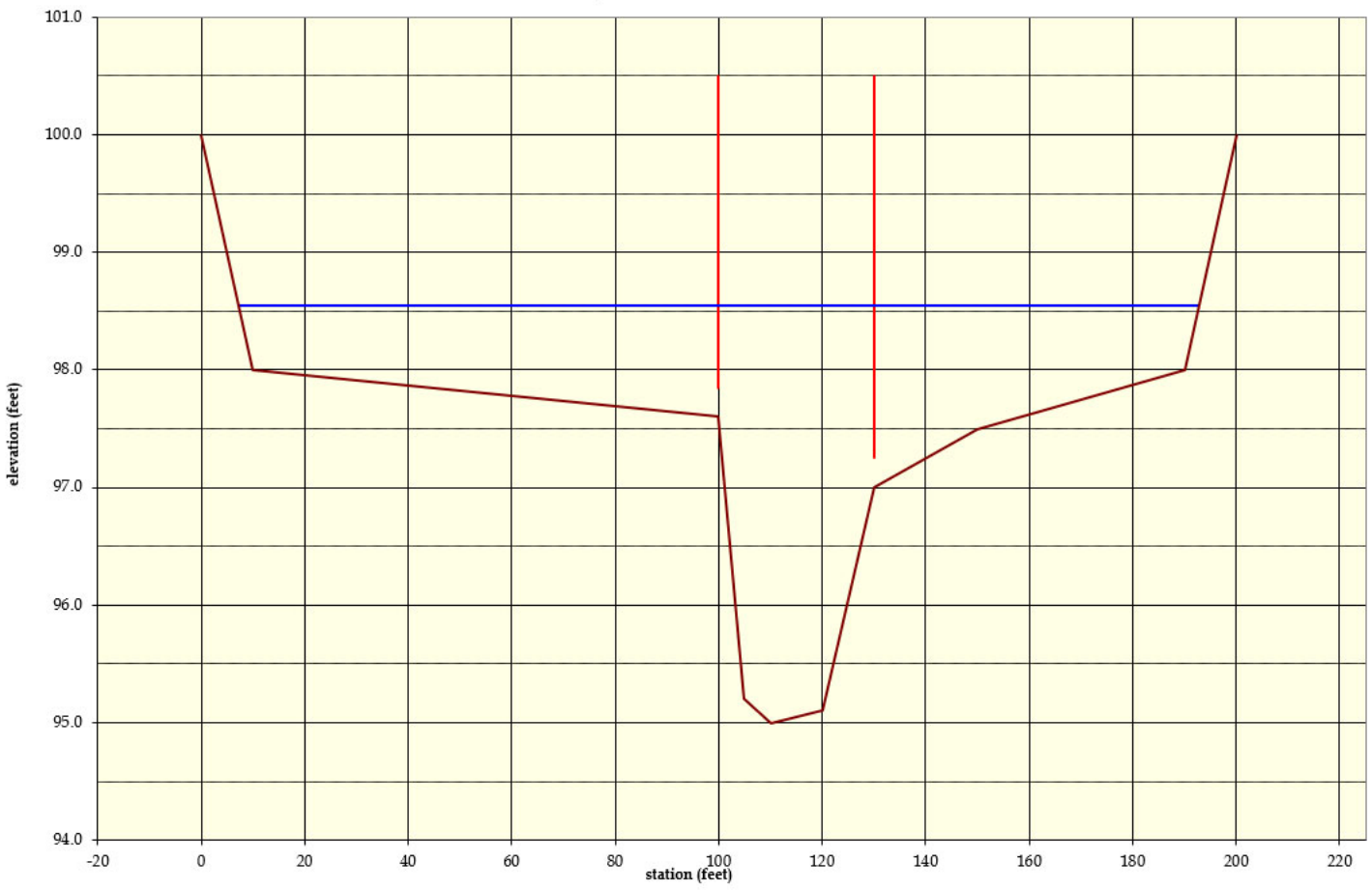
0.00140

right

130.0

w.s. elev	flow area	wetted P	hydr. radius	top width	hydr. depth	n value	darcy-weis. f	conveyance	discharge	velocity	shear
100.00	494.5	201.1	2.46	200	2.47	0.048	0.1476	32391	1212	2.45	0.215
99.50	395.7	196.0	2.02	195	2.03	0.048	0.1456	23652	885.0	2.24	0.176
99.00	299.5	190.9	1.57	190	1.58	0.048	0.1376	16227	607.2	2.03	0.137
98.50	205.7	185.8	1.11	185	1.11	0.048	0.1155	10226	382.6	1.86	0.097
98.00	114.5	180.7	0.63	180	0.64	0.048	0.0624	5857	219.1	1.91	0.055
97.50	61.5	50.5	1.22	49.8	1.24	0.042	0.0899	3634	136.0	2.21	0.106
97.00	41.9	29.3	1.43	28.8	1.46	0.035	0.1287	2238	83.7	2.00	0.125
96.50	28.4	25.5	1.11	25.1	1.13	0.034	0.1337	1317	49.3	1.73	0.097
96.00	16.8	21.7	0.78	21.4	0.78	0.033	0.1417	630.6	23.6	1.40	0.068
95.50	7.01	17.8	0.39	17.7	0.40	0.032	0.1610	175.9	6.58	0.94	0.034
95.00	0.0	0.0	0.00	0.0	0.00	0.033	0.1417	0.00	0.00	0.00	0.000

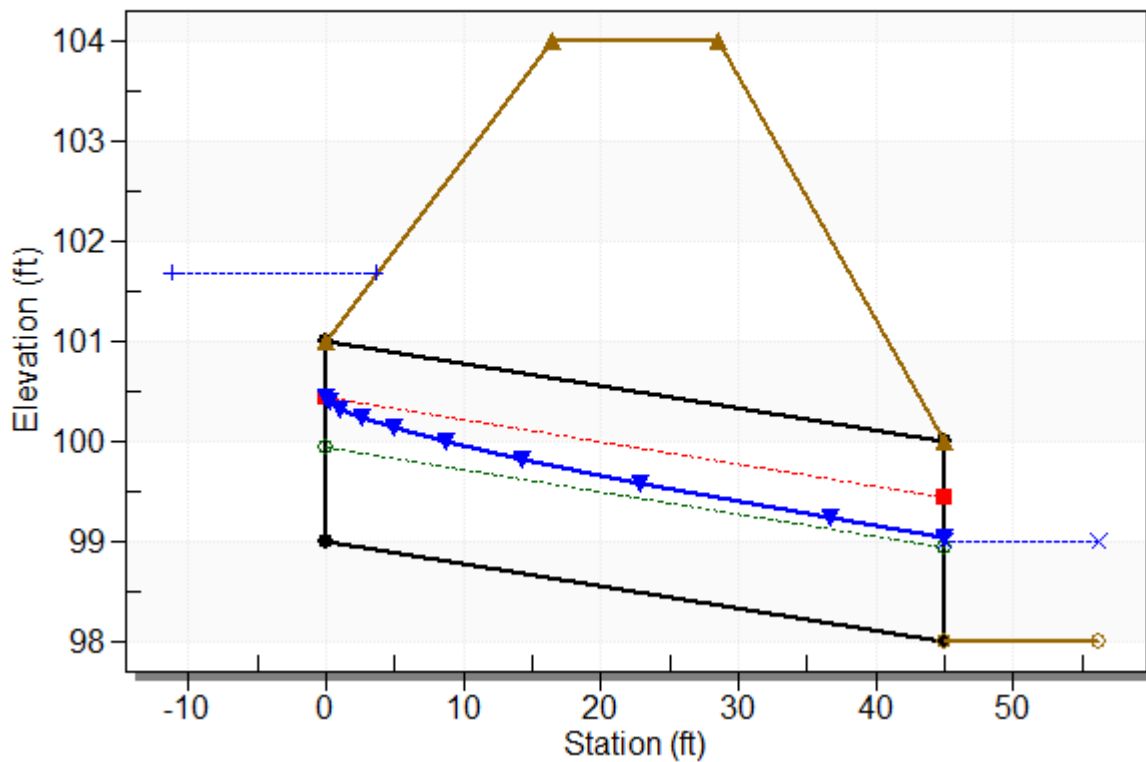
Murky Creek station 27+00



Water Surface Profile Plot for Culvert: Culvert 2

Crossing - Crossing 1, Design Discharge - 16.0 cfs

Culvert - Culvert 2, Culvert Discharge - 16.0 cfs



Site Data - Culvert 2

Site Data Option: Culvert Invert Data

Inlet Station: 0.00 ft

Inlet Elevation: 99.00 ft

Outlet Station: 45.00 ft

Outlet Elevation: 98.00 ft

Number of Barrels: 1

Culvert Data Summary - Culvert 2

Barrel Shape: Circular

Barrel Diameter: 2.00 ft

Barrel Material: Smooth HDPE

Embedment: 0.00 in

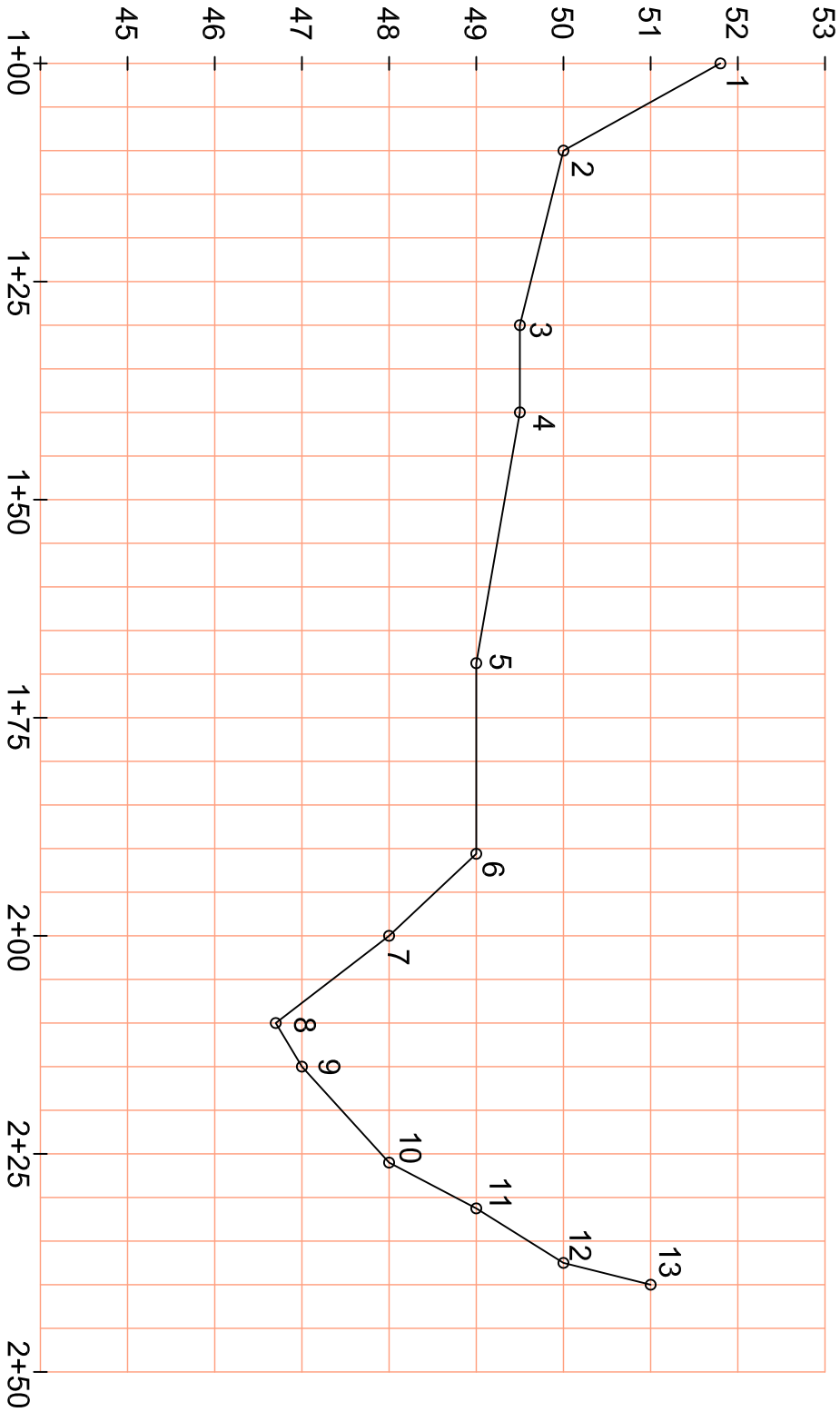
Barrel Manning's n: 0.0120

Culvert Type: Straight

Inlet Configuration: Thin Edge Projecting

Inlet Depression: NONE

Point Data		
No.	Sta.	Elev.
1	1+00	51.8
2	1+10	50.0
3	1+30	49.5
4	1+40	49.5
5	1+68.7	49.0
6	1+90.6	49.0
7	2+00	48.0
8	2+10	46.7
9	2+15	47.0
10	2+26	48.0
11	2+31.3	49.0
12	2+37.5	50.0
13	2+40	51.0

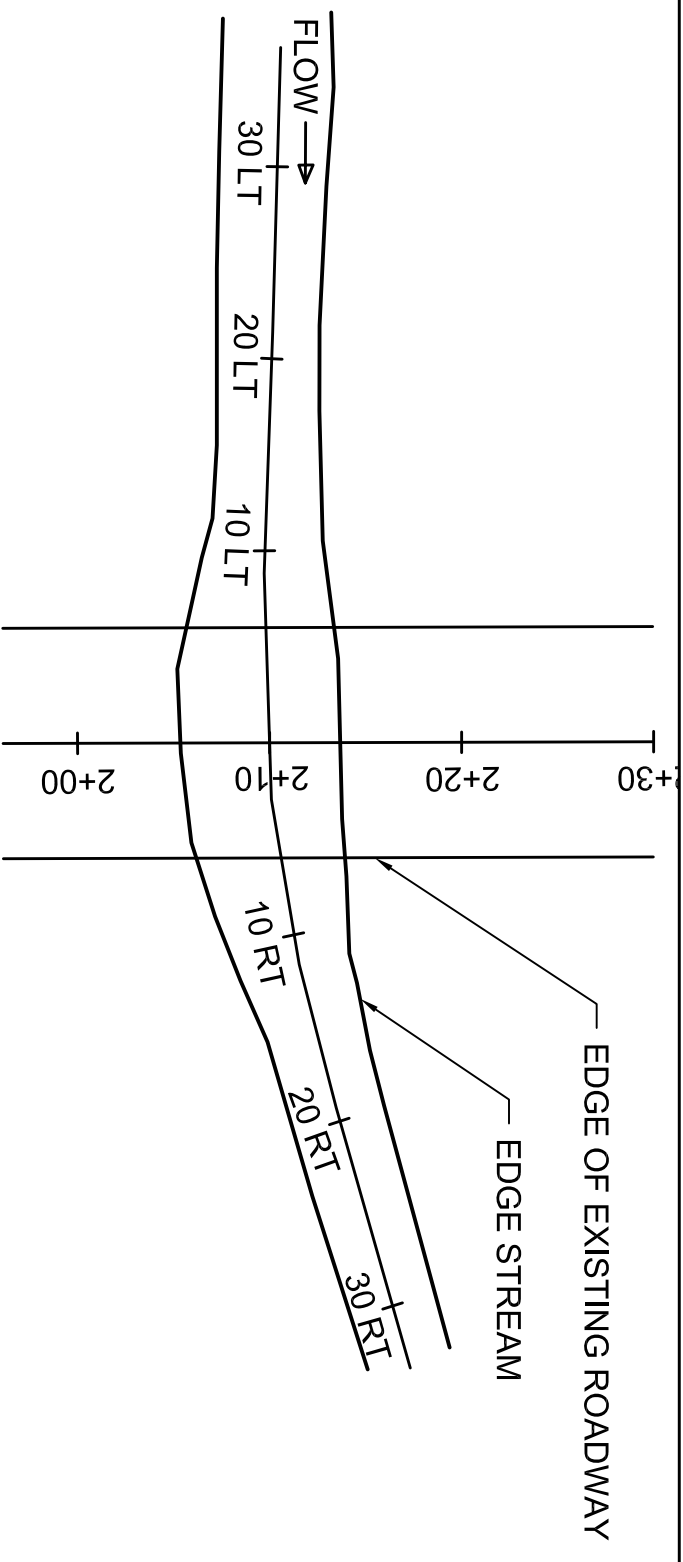


VERT SCALE: 1" = 2'
HORZ SCALE: 1" = 20'



ROADWAY PROFILE

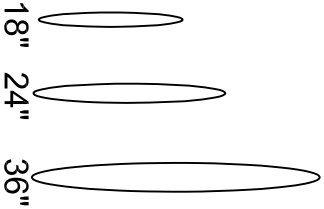
STREAM CROSSING DESIGN
TIM CLARK, PE
ONLINE UDEMY COURSE



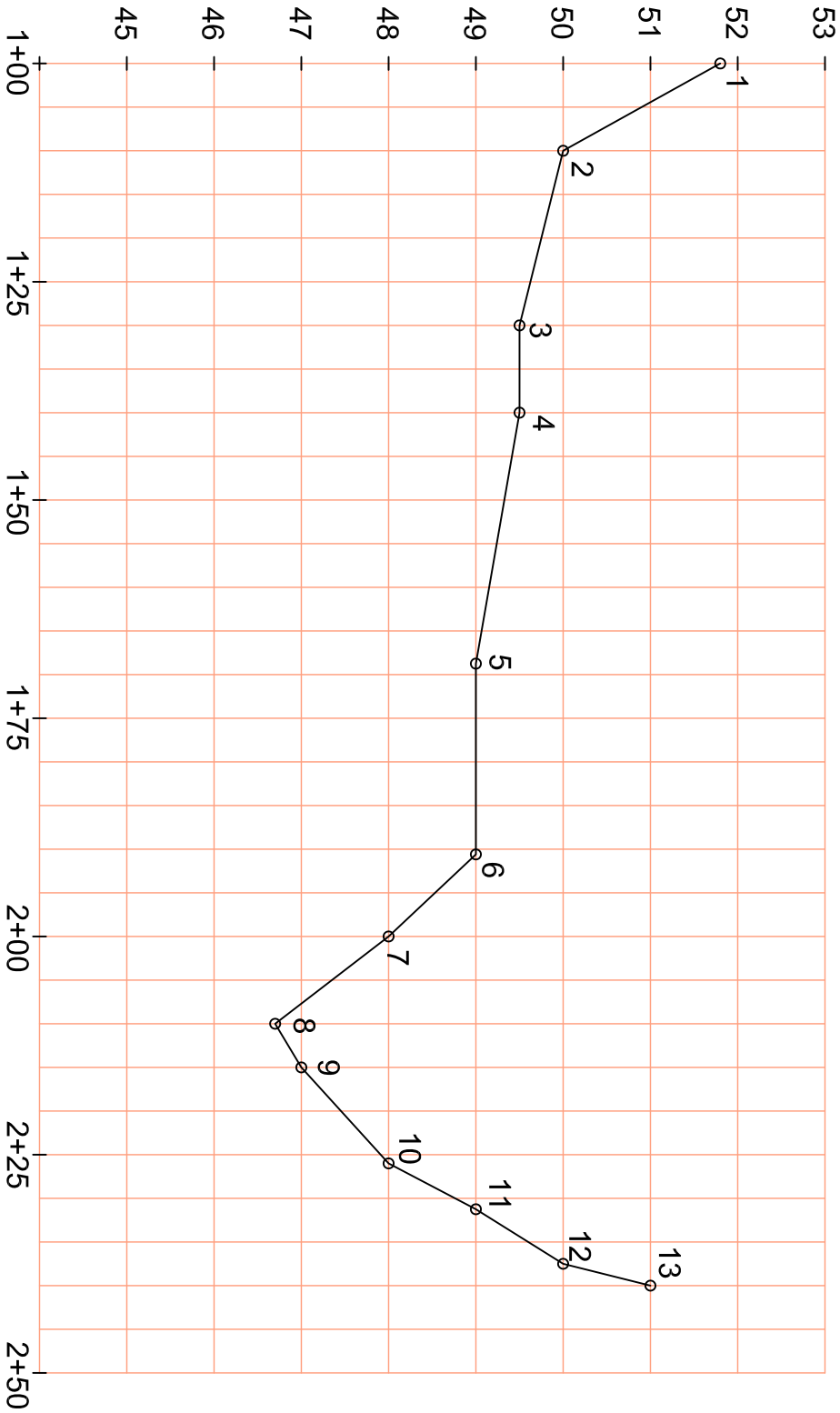
Point Data	
Offset	Elev.
30 LT	49.0
20 LT	48.9
10 LT	47.9
CL	46.7
10 RT	46.0
20 RT	45.5
30 RT	44.8



VERT SCALE: 1" = 5'
 HORZ SCALE: 1" = 10'



Point Data		
No.	Sta.	Elev.
1	1+00	51.8
2	1+10	50.0
3	1+30	49.5
4	1+40	49.5
5	1+68.7	49.0
6	1+90.6	49.0
7	2+00	48.0
8	2+10	46.7
9	2+15	47.0
10	2+26	48.0
11	2+31.3	49.0
12	2+37.5	50.0
13	2+40	51.0

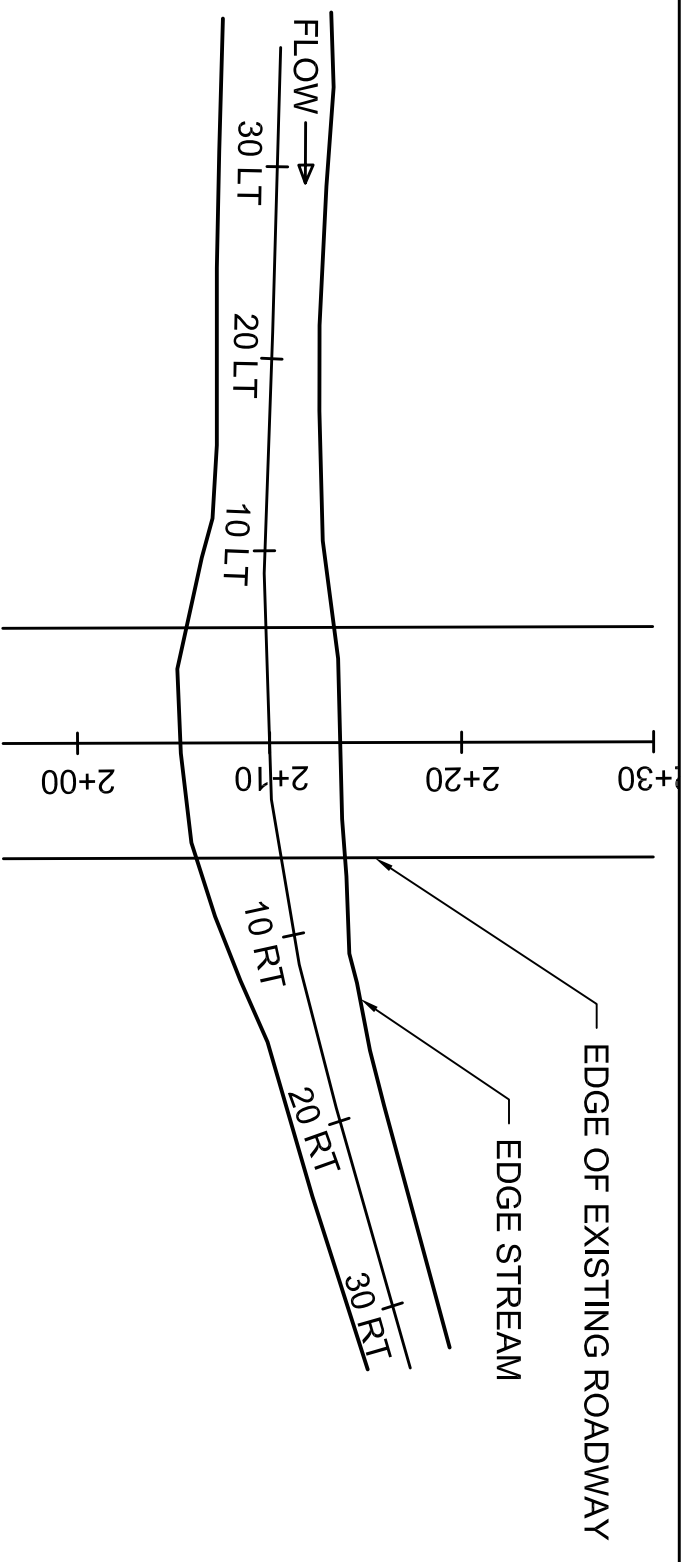


VERT SCALE: 1" = 2'
HORZ SCALE: 1" = 20'

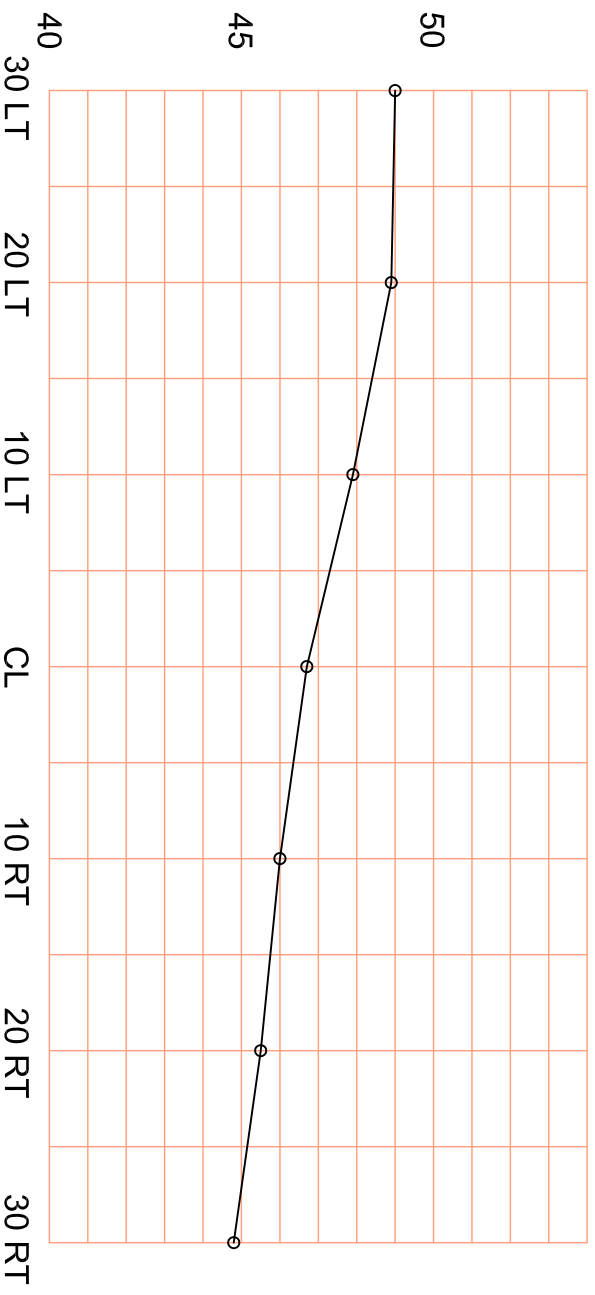


ROADWAY PROFILE

STREAM CROSSING DESIGN
TIM CLARK, PE
ONLINE UDEMY COURSE



Point Data	
Offset	Elev.
30 LT	49.0
20 LT	48.9
10 LT	47.9
CL	46.7
10 RT	46.0
20 RT	45.5
30 RT	44.8



VERT SCALE: 1" = 5'

HORZ SCALE: 1" = 10'

[illegible]