

Bridge, and eight and one-third feet above the datum plane, —which, it will be seen, is in the grade line drawn in the profile of the river—and, with a fall of two feet per mile, reaches the Pequest at first bench five and six-tenths feet above the datum plane; or, by the branch cut, reaches the river five and ninth-tenths feet above the datum plane. Both of these routes were leveled for the purpose of ascertaining which would be the most favorable one for the “cut” that the citizens of Danville and Vienna have talked of for some time as being more favorable to the draining of the Great Meadows than the present channel of the river.

By reference to the profiles it will be seen that the cut to the first bench will be fifty six feet deep at the highest point, and the other forty-nine feet; and that the latter is shorter than the former by seven hundred and fifteen feet.

With a cross section of thirty feet bottom, and a slope of three base to two rise the excavation in these cuts down to the grade line will be as follows:

	Cubic Yards.
From one hundred and ten yards above Steam-mill Bridge to junction of cuts.....	77,365
From junction of cuts to first bench.....	232,511
“ “ “ river four hundred yards above first bench.....	187,296
Total excavation from one hundred and ten yards above Steam-mill Bridge to first bench.....	309,876
Total excavation from one hundred and ten yards above Steam-mill Bridge to point four hundred yards above first bench.....	264,661

With the same cross section of thirty feet base, the amount of excavation in the present channel of the river between first bench and the point one hundred and ten yards above Steam-mill Bridge will be:

	Cubic Yards.
Excavation in rock on the three reefs.....	13,363
“ “ loose earth.....	10,641
Total excavation in rock and and loose earth between first bench and one hundred and ten yards above Steam-mill Bridge.....	24,204