

Branch presents peculiar advantages; a very low depression exists across the isthmus of a great bend, just above the mouth, where with a cut of only 700 feet extreme length and 34 feet maximum depth, we are enabled by the feeder line, to cut off a distance of about 4 miles and gain the advantage of a fall of 13 feet which exists in the river around the bend.

Thus by a stone dam of about 12 feet high across the South Branch, a feeder of near two miles in length, and an aqueduct over the North Branch of 5 arches of 60 feet span and 10 feet rise each, with the water surface of the feeder elevated 27 feet above low water mark at the confluence of the two Potomacs—a height sufficient to enable us with a properly constructed edifice of stone, to cross the stream and bid defiance to the assaults of the North Branch—we could with these arrangements lead the feeder in upon the 68th level, the water surface of which (supposing a depth of 6 feet) is also elevated precisely 27 feet above the same plane assumed for low water.

This feeder being made navigable, as it ought by all means to be, would by the formation of a cheap tow path along the margin of the pool of the feeder dam, form a navigable improvement of some 6 miles in length, receiving and transporting all the trade of the magnificent valley, watered by the South Branch; and the tolls upon these 6 miles, arising from this trade now considerable and annually augmenting—would I question not, very soon pay such an interest upon the money expended in this feeder line, as would at the least, bring down its cost in equivalent capital, to a very reasonable sum.

2nd plan proposed for the intermediate feeder, viz: by a dam erected upon the Town Falls, about  $\frac{1}{4}$  of a mile below the mouth of the South Branch, to conduct a feeder into the 67th level. The United States Engineers planned a dam here of only 12 feet high, which their plan of Locking into the river at Alum Hill, enabled them to make so low, and which would in fact have been *too low* to pass Town Creek with safety.

The water line of the 67th Level is laid 19 feet above the water surface of the Town Falls Pool, and would require a dam of 21 feet high to feed it; an examination of the locality in 1835, quickly satisfied me that the erection of a dam of that height, would so flood several most fertile and valuable bottom land Farms, near the confluence of the two Potomacs, as to be almost tantamount to their destruction; which damages at the rate they would probably be assessed at by a Jury, would pro-