

When conducting the works connected with the widening and deepening of the channel, as well as in placing the material in the spoil banks, the contractor must be guided strictly by the lines marked out by the officer in charge.

He must also take great care not to cut into the inside slopes, nor do anything at all likely to have a tendency to impair the stability of the banks.

The bottom of the present channel, when deepened, as well as that of the new work, must be made as level and uniform as possible, so as to insure throughout the full width and depth contemplated.

Over water surface the slopes must be trimmed to the angles before mentioned, and be made to correspond with the lines marked out on the ground, and agreeably to the instructions of the officer in charge.

*Embankments.*—When the ground on which a bank adjoining the canal or any permanent structure is to be formed is below the water level, the surface must invariably be removed for such a depth as may be required by the nature of the material and circumstances. In all such cases the entire space to be occupied by the bank must be cleared of all sods, turf, muck, loose stones, logs, roots, slabs, sawdust and all kinds of rubbish or objectionable matter; loose earth, or such as will admit of water percolating through it, must also be removed for such a depth as the officer in charge may consider necessary to enable a proper connection with the bottom to be formed.

The seats of all banks must be made nearly level; but, where the surface of the ground is such that there is a solid bank between the place of deposit and the channel, part of the seat may have an inclination outward, provided there is within a distance of 100 feet a bank sufficiently solid to prevent the lower part of the embankment or spoil from moving. This must be observed on all parts of the section, but more especially when forming banks at both ends of the new Aqueduct and other places in that vicinity, as well as those connected with the new lock, or at any place where a bank has to be formed over sloping ground; otherwise the seat must invariably be either cut down so as to give a level bearing or be made into benches, each of which must of itself present a horizontal surface of sufficient width to admit of a suitable connection being made, and so as to guard against any tendency to slide.

For preparing the seats of banks the material removed will be measured in the "solid," and the quantity paid for at the same rate as for earth excavation on that part of the section on which the work is done; this rate should be clearly understood to include the cost of handling all kinds of material necessary to effect the object, and the removal of the same to such places within the limits of the section or elsewhere as may be directed.

When forming banks, raising or widening others, or forming embankments adjoining the Aqueduct or lock, or *wheresoever a water-tight bank is required, the material must be hauled on to the respective banks in carts or waggons and laid on in layers not exceeding one foot in depth at a time*, and if the work is done at a dry season of the year water must be thrown over each layer to assist in consolidating the material.

*Puddle Beds.*—where necessary to be made in any of the banks, must be carried up at the same time the banks are formed. They must consist of the best description of material for that purpose that can be obtained in the vicinity, laid on in layers not exceeding 8 inches in thickness, each of which must be watered, properly cut transversely and longitudinally, well trodden and pounded, and everything done that may be required to form them into puddle walls impervious to water.

The excavation for the widening of the prism of the canal for a distance of about 1,500 feet at the north end of the section has been done, except for 500 feet where there is a mean width of 30 feet with a depth of 22 feet still to be taken out, besides bottoming for a distance of 1,500 feet for a width of from 5 to 50 feet, and a depth of from 2 to 4 feet.

From the south end of the section to the new bridge at Division Street, the widening has been, for the most part, done, but there remains in the bottom a piece of about 400 feet in length, 45 feet in width and about 5 feet in depth; besides a number of detached small patches a little above bottom, as well as immediately south