

one on each side of it, these braces being bolted to the underside of each swing girt as it intersects them. The flooring of the Bridge for 9 feet wide in the centre, will be formed of hachmatac planking 4 inches thick, placed longitudinally of the Bridge, in as long lengths as can be obtained, and spiked down to each swing girt as it crosses them. The other three feet on each side is of 3 inch plank of white pine, the whole rounded over from side to side to give a crown of 4 inches in the centre of the Bridge to throw off the water. Before driving the spikes to secure the planking, an augur hole is to be bored sufficiently large to receive the head of the spike $1\frac{1}{2}$ inches deep in the 4 inch planking, and $1\frac{1}{2}$ inches deep in the 3 inch plank, the spike driven to the bottom, and the hole plugged up with a tight pine plug levelled off with the surface of the flooring. A rain gutter to be formed 9 inches from the inside of the truss work by inclining the outside plank 1 inch inwards, so as to keep the water from running to the outside of the flooring, and dripping down the bottom chord and upright posts. The whole of the timber work to be gauged and planed to the dimensions given in the Bill of Timber, and the whole to be fitted with the most perfect joints. All the work to be primed over when framed, and the joints well painted when put together. When the whole is completed it is to have two more coats of white lead and oil. The ends of the truss where they rest upon the abutments are let in, and well fitted to cast iron shoes, through which pass bolts attached to the main chains, and when the truss is finished, and every thing in position, by screwing up these bolts, any amount of the tension strain before borne by the anchorage, can be transferred to the truss, so as to counteract the tensile strain of the truss by the compression of the chains, and relieve the anchorage from a portion of the strain. The ends of the truss and the iron work connected with these bolts, and the portion of the main chains passing over the saddles, are covered over with an ornamental casing of timber to protect them from the weather and injury, and to form an ornamental approach to the Bridge; the whole to be finished in accordance with the annexed plan and detailed drawings. The whole of the iron work to be well painted and varnished, and the main chains or any other part to be subjected at any time to such test of strength as may be satisfactory to the Board of Works.

LAND BRIDGE OVER RAVINE.

Intermediate Piers.—Each to consist of 8 upright pine posts, 4 on each side, 14 by 14 inches at the bottom, and 12 by 12 inches at the top, framed into sills 10 by 14 inches of cedar, resting on the mason work before specified. The outside posts extend up to the main cross cap, the other three frame on to a stretcher 9 feet below the cap, protected on the top by a casting which preserves them from the weather, and forms a skew-back for the arch braces, which extend to the underside of the chord. Diagonal braces 9 by 12 inches, are framed between the stretcher and the cap, to stiffen the cap and bind the whole together sideways. The inclined position of the uprights giving them immense lateral strength, enables the bent to stand on its own base without additional girts or braces. Stretchers are framed across between each set of 4 posts half way along their length, to preserve them from warping or springing. The wood work of the two piers above specified to be painted stone colour.

Trussed Handrail.—To be 5 feet high, and to consist of 18 panels 8 feet long each, with diagonals, braces, and iron connecting tie bolts, as shewn in the detailed drawings, and resting on the two piers and abutments above specified. The floor is to be formed of 6 by 9 inch hachmatac stringers resting on the swing girts of the truss, and covered with 3 inch planking laid transversely to the Bridge, with a space of one inch between the ends of the planking and the truss work, to preserve the latter from the dripping of the Bridge. The superstructure to be continued in a similar form over the eastern abutment of the main Bridge, and to be painted and finished to correspond with it.

LITTLE RIVER BRIDGE.

Abutments.—The abutments to be of squared cedar, with dovetailed ties, and half lapped corners, bolted together with $\frac{1}{2}$ inch iron bolts, and built with a batter of 1 inch to the foot up to high water mark, and square above that. A wing or shear-water to be built both up and down stream to meet the bank, also of cedar, and connected with the abutments. The outside spaces formed by the ties and face of the work to be fitted solid with stone, and the foundation of the wing dams and abutments to be protected by rip-rap stone work.

Superstructure.