character large, well proportioned, and well adapted for the construction of substantial and permanent structures; parties tendering must satisfy themselves as to where fitting material for the masonry can be most conveniently procured.

Bridge and retaining wall masonry

42. Bridge and nearly vertical retaining wall masonry, shall generally be in regular courses of large, well-shaped stones, laid on their natural beds; the beds and vertical joints will be dressed, so as to form quarter inch joints. The vertical joints will be dressed back square 9 inches, the beds will be dressed perfectly parallel throughout. The work will be left with the "quarry face," except the outside arrises, strings and coping, which will be chisel-dressed.

Courses.

43. The courses will not be less than 12 inches; and they will be arranged in preparing the plans to suit the nature of the quarries, courses may range up to 24 inches, and the thinest courses invariably be placed towards the top of the work.

Headers and stretchers.

44. Headers will be built in every course not farther apart than 6 feet; they will have a length in line of wall of not less than 24 inches, and they must run back at least three times their height, unless when the wall will not allow this proportion, in which case they will pass through from front to back. Stretchers will have a minimum length in line of wall of 30 inches, and their breadth of bed will at least be $1\frac{1}{2}$ times their height. The vertical joints in each course must be arranged so as to overlap those in the course below 10 inches at least. The above dimensions are for minimum courses of 12 inches, the proportions will be the same for thicker courses.

Quoins.

45. The quoins of abutments, piers, &c., shall be of the best and largest stones, and have chisel drafts properly tooled on the upright arris, from two to three inches wide, according to the size and character of the structure.

Coping.

46. Coping stones, string courses and cut-waters shall be neatly dressed in accordance with plans and directions to be furnished during the progress of the work.

Bed stones for girders.

47. The bed stones for girders shall be the best description of sound stone, free from drys or flaws of any kind, they must be not less than 12 inches in depth for the smaller bridges, and eight feet superficial area on the bed. The larger bridges will require bed stones of proportionately greater weight; these stones shall be solidly and carefully placed in position, so that the bridge will sit fair on the middle of the stones.

Backing and bond.

48. The backing will consist of flat-bedded stone, well shaped, having an area of bed equal to four superficial feet or more. Except in high piers or abutments, two thicknesses of backing stone, but not more, will be allowed in each course, and their joints must not exceed that of the face work. In special cases, where deemed necessary by the Engineer to insure stability, the backing shall be in one thickness; the beds must, if necessary, be scabbled off, so as to give a solid bearing. No pinning will be admitted. Between the backing and face stones there must be a good square joint, not exceeding one inch in width, and the face stones must be scabbled off to allow