

FORM 601



GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
Department of Transportation and Works
Highway Design Division

SECTION 601

SUPPLY AND INSTALLATION OF GABIONS

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601.01 SCOPE

This specification covers the requirements for the supply and installation of various sizes of gabions.

601.02 MATERIALS

Gabion baskets shall be of various sizes and consist of vinyl coated wire mesh as specified in the unit price table.

Tie-wire to secure the baskets shall be vinyl coated.

Stones used in the construction of gabions shall be clean, hard and durable, and shall be either boulder, broken rock, quarry stone, broken concrete or gravel screenings. The least dimension of any stone shall not be less than one and one-half the mesh size. The greatest dimension shall not exceed 300 mm.

Stones shall be of such dimensions that no less than two layers of overlapping stone are required to fill the gabion. The Contractor shall supply the stones to fill the gabion.

The Contractor shall supply gabion baskets, tie wire, and wooden or metal pegs to anchor the gabion baskets, should anchoring be necessary during construction.

The drawing showing various types and sizes of gabions is shown in Section 1210 "Gabions".

601.03 INSTALLATION

The Contractor shall load the gabion baskets and tie-wire at the point of supply and transport them to the installation site.

Gabions shall be installed to neat lines, to the lines and grades as staked by the Engineer.

Should excavation be required to install the gabions at the required grade then excavation shall be carried out in accordance with Section 403 "Excavation for Foundations". The foundation shall be excavated to an even finish and to the required grade.

The Contractor shall assemble gabions according to the manufacturer's recommendations.

The Contractor shall unfold each gabion to the open position. The four corner edges shall be wired to secure the gabion shape. The edges of the diaphragms shall be wired to the gabion walls in the correct position.

Each assembled gabion shall be securely wired to the adjacent gabions along the top and the vertical edges prior to placing of stone.

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All wiring of gabions shall be carried out using the tie-wire provided, and using the following method of connection by looping. The tie-wire shall be looped around the edges to be joined. Loops shall be separated by a distance not greater than 100 mm. Single loops shall alternate with double loops. A single loop is one which wraps around the edges being joined once. A double loop is one which wraps around the edges being joined twice.

To achieve better alignment and finish, the Contractor shall stretch gabions before filling.

Stone on exposed areas shall be carefully hand-picked to minimize voids and also to present an attractive and pleasing appearance.

Gabions shall be filled, keeping voids to a minimum, to a depth of 300 mm in each cell after which connecting wires shall be placed one in each direction, with these wires looped around two meshes at each end.

For gabions of height greater than 600 mm, then the operation shall be repeated and a further 200 mm of rock shall be placed, and then two more connecting wires shall be installed in each cell.

When filling of each gabion has been completed, the top shall be folded shut and wired to the ends, sides and diaphragms.

When placing gabions on top of each other, fill placing and compaction operations as specified in Section 204 "Grading of Fill" shall be carried out behind each row of completed gabions before a successive row may be placed.

Empty gabions placed on top of a completed row of gabions shall be wired to the filled gabions at the front and at the back of a row, before filling commences.

Gabions adjacent to culverts shall be cut and fit to match the culvert to present an attractive and pleasing appearance.

601.04 MEASUREMENT FOR PAYMENT

Measurement for payment for gabions will be based on the number of each size of required gabion placed to the required alignment.

601.05 BASIS OF PAYMENT

Payment at the contract price for the size of gabion specified shall be compensation in full for all labour, materials and equipment-use required to supply the gabion baskets and tie-wire, assemble and place the gabion baskets, tie together the gabion baskets, place connecting wires, complete necessary cutting and fitting together with the supply and placing of stones and also the supply and placing of anchors, if anchor pegs should be needed.