

## FORM 422



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

### SADDLE BRANCH SUPPLY AND INSTALLATION

#### INDEX

#### 422.01 SCOPE

#### 422.02 MATERIALS

#### 422.03 INSTALLATION

#### 422.04 MEASUREMENT FOR PAYMENT

#### 422.05 BASIS OF PAYMENT

#### 422.01 SCOPE

This specification covers the requirements for the supply and installation of a saddle branch to connect a smaller pipe to a corrugated steel pipe culvert or storm sewer. The work involves: cutting into the C.S.P., the supply and installation of the saddle branch to the C.S.P., and the joining of the smaller pipe to the saddle branch.

Excavation and backfilling required in making the connection will be covered separately under Section 404 "Trenching, and Excavation For Catch Basins", and bedding will be covered under Section 410 "Select Bedding for Storm Sewers, Sub-Drains and Catch Basins".

#### 422.02 MATERIALS

The saddle branch shall consist of 1.6 mm aluminized corrugated steel, manufactured to a size and shape suitable for connecting the smaller pipe to the corrugated steel pipe.

See Section 1219 "Typical Saddle Branch".

After fabrication, the saddle branch and saddle branch welds shall be either factory galvanized or treated as follows. Where corrugated steel pipe is cut, drilled, or welded, the pipe shall be thoroughly cleaned with a wire brush to remove scale, rust, slag residue, weld splatter, etc. and wiped clean. The cleaned surface shall receive at least one application of metal conditioner to de-oxidize, de-grease, and phosphatize the metal surface to be treated if the surface is oily. Pre-mixed, ready-to-apply, liquid-zinc compound should be applied to the prepared clean dry metal surface. The cold-galvanizing compound must be of a type that imparts cathodic action against corrosion. The cold-galvanizing compound should have a minimum 50 mm overlap of the surrounding undamaged aluminized metal.

Both metal conditioner and cold-galvanizing compound must be approved by Underwriters Laboratories Inc. for component coatings (organic) and meet or exceed Canadian Government Specification 1-GP-181A. All materials must be applied in accordance with the manufacturer's instructions.

Should the corrugated steel pipe, to which the saddle is to be attached, be asphalt treated, then the aluminized saddle branch shall be asphalt treated too.

Nuts, bolts and washers shall be of galvanized steel.

Materials including saddle branch, nuts, bolts, washers, metal conditioner, cold-galvanizing compound and asphalt shall be supplied by the Contractor.

## FORM 422

### 422.03 INSTALLATION

Excavation required at the required point of connection shall be carried out in accordance with Section 404 "Trenching and Excavation For Catch Basins". The Contractor shall brush off all soil or dirt sticking to that part of the C.S.P. where the connection is to be made.

The Contractor shall cut a neat hole of suitable size in the C.S.P. at the location where the connection is to be made. Holes shall be drilled in the C.S.P. at required locations in preparation for connecting the saddle branch.

The Contractor shall treat both the cut edge and drilled holes as outlined above.

After the cold-galvanizing compound is thoroughly dry, the saddle branch shall be securely bolted to the wall of the C.S.P. and the pipe secured to the other end of the saddle branch.

### 422.04 MEASUREMENT FOR PAYMENT

Measurement for payment for saddle branch supply and installation, shall be by the number of saddle branches of a particular size and type installed.

### 422.05 BASIS OF PAYMENT

Payment at the contract price for each saddle branch of the type and size specified shall be compensation for all labour, materials, and equipment use to: clean pipes to be connected, cut a hole into the wall of the corrugated steel pipe, drill the bolt holes, surface preparation, the supply and application of metal conditioner, cold-galvanizing compound, and asphalt, the supply of the saddle branch, nuts, bolts and washers, the connection of the saddle branch of the C.S.P. and the connection of the pipe to be saddle branched, together with such unwatering as may be required to carry out the work.