

# Municipality of Bifrost-Riverton Culvert Installation Guideline

1. Unless otherwise stated, culverts are to be installed with inverts at elevations specified on the profile. The contractor is responsible for ensuring these elevations using laser, GPS or any other desired survey means.
2. Culverts of a size of 900mm (36") and greater are to have 2M of ends wrapped in filter cloth before installation.
3. Culvert gravel will be 3/4" limestone.
4. Culvert gravel for the base shall be spread uniformly along the full length of the culvert. For metal culverts, the base shall be constructed so that after compacting, a depth of at least 150mm remains under the full length of the culvert. After the culvert has been installed and assembled on the base, the base on both sides of the culvert shall be compacted using a plate-type packer. Fill material under the haunches shall be placed alternately in 150mm layers on both sides of the pipe to permit thorough compaction. The material under the haunches must be in firm contact with the entire bottom surface of the base. Culvert gravel shall fill adjacent to and over an assembled culvert.
5. Once the culvert is backfilled above the assembled culvert height with 3/4" limestone, debris free clay backfill material may be used. The clay material is to be installed in 300mm lifts and compacted.
6. Top material of the crossing will be constructed with 3/4" limestone at a minimum of 200mm throughout the entire crossing.
7. There is to be no standing water or excess moisture present during the installation and backfilling.
8. Erosion control in the form of clean rip rap (6" – 18") shall be placed at the inverts of culverts as well as on the side slopes of crossings surrounding culverts. Aprons shall be sub-cut .5M under each invert and extended for 2M on the up and downstream sides.
9. All side slopes shall be no greater than a 3:1 slope.
10. When required, matching size couplers are to be installed and tightened by electric impact gun or hand wrench to ensure a secure joint.
11. Culverts are to be moved by fabric sling whenever possible and the contractor will be held responsible for any damage caused during handling and installation, including but not limited to the replacement cost of the culvert and reinstallation of the damage culvert.
12. The contractor is responsible for flattening and compacting of the salvaged culverts and the delivery to the Municipality of Bifrost-Riverton yard.