

ONTARIO DEPARTMENT OF AGRICULTURE.

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BULLETIN (SPECIAL).

ROAD-MAKING.

PREPARED BY THE ONTARIO GOOD ROADS ASSOCIATION.

REQUISITES FOR PERMANENCY. In order to make and maintain a permanent roadway, two rules must be followed :

1. Take the water out.
2. Keep the water out.

UNDERDRAINING. Where a road is to be constructed on a wet and retentive soil, a perfect system of underdraining must be provided. This is best done by cutting ditches diagonally across the roadbed with discharge into sideditches. These diagonal ditches should have a good fall and good outlet and should be from eighteen inches to two feet deep and about one foot wide at the bottom, with a slight slope outward. In these should be laid coarse, broken stone, broken bricks or other material suitable to form a drain, filling them up to the level of the sub-grade.

SURFACE DRAINING. Open ditches should be cut on each side of the roadbed at a distance of about twelve feet from the outsides of the metalling. They should be deep enough to drain the foundation ; at least eighteen inches below the sub-grade.

TILE PREFERABLE. Where tile is cheap and a good outlet obtainable, tile side drains are preferable to open ditches. Shallow gutters should be made over the tiles to catch the surface water and conduct it to catch-basins placed at convenient distances apart. The catch-basins should be made of durable materials of sufficient size to be freely cleaned and should be covered with iron gratings. The basins should extend at least two feet below the bottom of the tile to provide space for the deposit and they should be cleaned at least twice year.