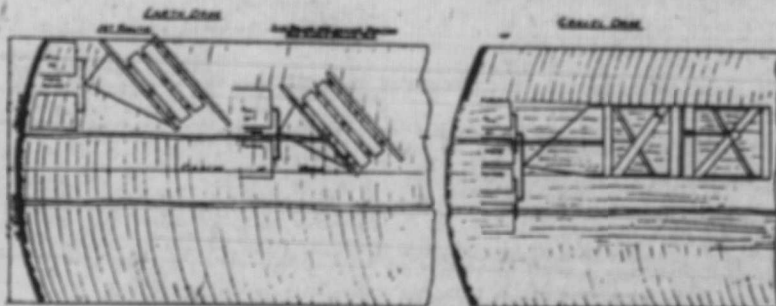


may follow along the highway for a considerable distance, but all of which finally lead out into the fields. The culverts used in the municipality are all made of cement and laid in stone with cement mortar. Nearly 1,000 of these culverts of various sizes have been installed. As will be noted by the illustrations, as many as five cement pipes, 24 inches in diameter, are sometimes laid side by side to take care of spring freshets. The report of Engineer Button for the last year shows that the municipality manufactures its own concrete pipes at a great saving. Altogether 35,865 lineal feet of pipes have been manufactured in the last three seasons. These cost at the works as follows:

10 in. diameter ..	25 cents per ft.
12 in. diameter ..	30 cents per ft.
15 in. diameter ..	35 cents per ft.
18 in. diameter ..	50 cents per ft.
24 in. diameter ..	75 cents per ft.

The average cost is 45 cents per



EARTH AND GRAVEL ROAD DRAINS

foot. The above figures are for the Wallace municipality, which has, as has been stated, plenty of gravel for manufacturing concrete pipes. These would not apply where gravel could not be secured locally. The municipality has a fully equipped plant for the manufacture of concrete pipes, which are made in sections, as is shown by the illustration. Where a large flow of water has to be taken care of the tiles are set in cement fully half way up and the walls are faced with cement. The culvert across one deep, narrow ravine which I noticed was faced for several feet on the upper side with cement. In this case a tremendous amount of water sometimes comes down in the spring and may be prevented from flowing through the tiles on account of accumulations of ice. It is sometimes necessary to dig a hole down to let the water get a start.

With the exception of long spans cement bridges are used. A certain number of standard designs are utilized, but if the standard design does not fit in with the need of a location, special designs are constructed. The foundations are laid four feet below the bed of the creek or deeper in order to secure an absolutely solid foundation. I examined several of these bridges and failed to find a single instance in which they were checking. Bridges, culverts and guard rails are put in position by contract. It is the policy closely followed by the municipality to clear all weeds from the mouths of culverts in the fall so that they will be ready for action when the spring floods begin.

The All-Efficient Road Drag

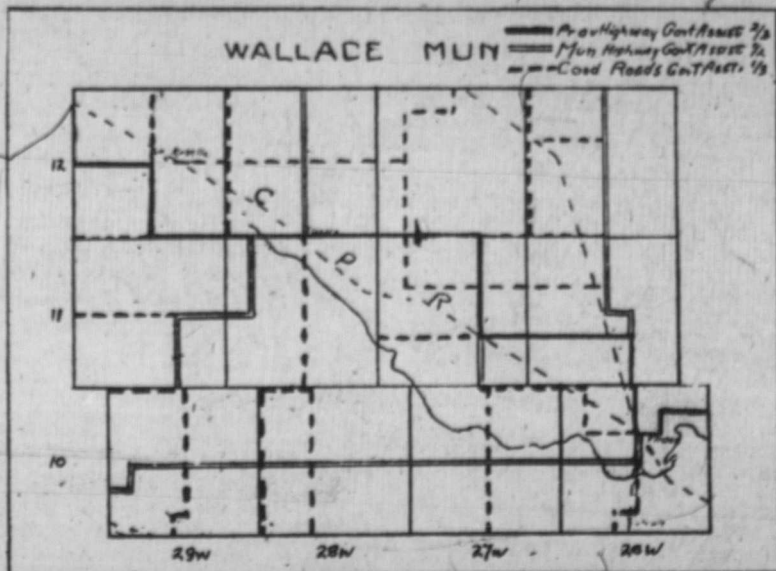
"Maintenance is the most important part of road work," said Mr. Button. "If we had not looked after our maintenance we would have had no good roads now. Last summer one of the provincial authorities who had been over the Jefferson highway stated that on that trip he had never struck such long stretches of good road as we have right here in Wallace." The whole municipal system of 193½ miles is divided into 64 sections of about three miles each for dragging purposes. One man is given charge of each section, his duty being to keep his road free from ruts, cut the grass and weeds from the sides of the grades and ditches, clean out culverts in the fall and open the ends of culverts in the spring. He is paid 40 cents per mile travelled; that is \$2.40 per round trip, and at the same rate for other work. He reports by special report cards to the secretary-treasurer, who keeps the dragging cards

up to date for inspection by the councillors. The councillors pay out of their ward appropriation \$5.00 per mile into the municipal good roads maintenance account and the drag men are paid monthly. The government now pays \$3.25 for every mile of road dragged throughout the season. Each section is entered in the dragging competition and prizes are awarded for the best kept sections.

As will be noted by the illustration, showing the process of road dragging, two kinds of drags are utilized. One of these is for earth roads and the other for gravel roads. For earth roads the ordinary split log design is used, while for gravel roads a runner design is utilized. In this drag holes 18 inches long and three inches deep are left in the upper runner at the end of the diagonal pieces. This is not made too large, as it is desirable not to have the gravel escape too easily or it would not fill the depressions. Mr. Button is perfecting an attachment for the gravel drag which will cut the weeds for a distance on each side of the road bed. The gravel drags are 12 feet by 5 feet in size and are made by a local man, costing about \$20 each.

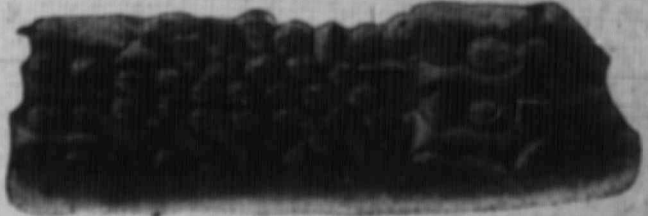
Tributary Roads

The municipal highways, of course, do not include all the roads in the municipality. They are distributed so as to carry the main volume of the traffic. When the system is completed it is believed that there will not be a farmer in the municipality who will be more



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THOUSANDS OF BUSHELS OF CHOICE SEED GRAIN

OATS	Stock No.	Brand	Price Per Bushel	Calgary
American Banner	850	Brandon	\$1.13	\$1.10
American Banner	851	Brandon	1.09	1.06
Abundance	860	Brandon	1.11	1.08
Abundance	861	Brandon	1.08	1.05
Garton's 22	870	Brandon	1.12	1.09
Garton's 22	871	Brandon	1.09	1.06
Victory	880	Brandon	1.13	1.10
Widesake	890	Brandon	1.13	1.10

N.B.—Prices quoted above are as per conditions stipulated in our 1918 Seed Catalog.

BARLEY	Stock No.	Brand	Price Per Bushel	Calgary
Six Rowed	840	Brandon	\$1.75	\$1.70
Marquis	850	Brandon	2.48	2.45

Prices are for quantities of 25 bushels or more—add 5c. per bushel for smaller quantities. Use Stock Numbers when ordering. Add 50c. for Jute Sacks (Oats 2½ bushels Barley and Wheat 3 bushels). Write for special quotations on carloads.

ASK FOR SPECIAL SEED GRAIN CATALOG

PEDIGREE AND OTHER VARIETIES

WHEAT	Stock No.	Brand	Price Per Bushel	Calgary
Marquis, McKenzie's Gold Standard	3185	Brandon	\$3.00	\$2.90
Marquis Registered	3205	Brandon	3.55	3.50
Red Fife (General Stock)	3205	Brandon	3.10	3.40
Early Red Fife	3185	Brandon	3.60	3.50
Red Fife Registered	3204	Brandon	3.75	4.10
OATS				
American Banner McKenzie's Special Strain	3212	Brandon	1.40	1.40
American Banner Registered, per 100 lbs.	3213	Brandon	4.50	4.50
Abundance	3217	Brandon	1.25	1.20
Garton's 22	3293	Brandon	1.25	1.20
Newmarket	3214	Brandon	1.25	1.20
60 Day or July	3215	Brandon	1.40	1.30
Seger or Victory	3292	Brandon	1.35	1.35
Seger or Victory Registered, per 100 lbs.	3219	Brandon	4.80	5.15
RYE—Spring	3218	Brandon	2.60	2.75
FLAX—Winter	3219	Brandon	2.70	2.85
Common or Russian	3296	Brandon	4.10	4.30
Primost	3295	Brandon	4.05	4.50
Golden	3294	Brandon	5.25	5.50
N.D.R. 73	3288	Brandon	4.70	4.70
N.D.R. 114	3288	Brandon	4.70	4.70
N.D.R. 52	3290	Brandon	4.70	4.70
BARLEY—O.A.C. 21	3296	Brandon	3.00	1.75
Mensury	3292	Brandon	1.90	1.65
Manchurian 771	3295	Brandon	2.05	2.30
Minnesota 105	3290	Brandon	2.05	2.30
White Hullless, per 50 lbs.	3293	Brandon	2.10	2.00

Prices are for quantities of 10 bushels or more. Use Stock Number when ordering. Add 45c. for Cotton Bag (Wheat, 2 bushels; Oats, 3 bushels; Rye, Flax and Barley, 2½ bushels).

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