that is known the average per cent of wear can be calculated. It is evident that the per cent of wear of most of the mixtures will be 3 or less; that is, the tests indicate that the boulder aggregates are of a durable character.

The large gravel deposits in the Rigaud hills have been developed in a small way only, as their position prevents their transportation to any distance. There are three easily available deposits near the Ottawa river; two of these are immediately south of Point Fortune, and the other 2 miles east of Rigaud.

In Tables II, III, and IV, test numbers 60, 58, 57, and 59, the results of tests upon the physical properties of gravels and sands are given. The value of the gravels in a water-bound macadam, gravel road is influenced by the textures (or grading) as given in Tables II and III and by their percentages of wear and cementing values as given in Table IV. If Table II is compared with Table V, in which the recommended gradings of gravel for gravel macadam roads are given, it will be seen that the gradings of all four approach those in the specifications, although some of the coarse stone could probably be screened out of sample 60 from Point Fortune and No. 51 is rather fine-grained. All of the gravels have high cementing values, but only No. 57, from concession Riviére a la Graisse at Rigaud, is durable enough for any but the lightest traffic. To determine whether or not the sand portion of these gravels is suited for sheet asphalt construction, Table III should be compared with Table VI. To compare the results given in Table III with the specification requirements given in Table VI subtract the total percentages as given for each screen from that for the next smaller screen.

St. Lawrence Area.

The only rock outcrops available for road purposes in the St. Lawrence area occur around Cardinal and north and west of Cornwall. Exposures of Beekmantown dolomite and magnesian limestone north and east of Cardinal would probably furnish over 50,000 yards of stone within a maximum hauling distance of 3 miles from the front road. More than 80,000 cubic yards have been taken from an old quarry on the front road $1\frac{1}{4}$ miles west of Cardinal, mainly for use in the construction of the ship canal, and 20,000 cubic yards are still available, without much overburden. North of Cornwall, over 85,000 cubic yards have been quarried from an exposure of Black River limestone and used largely in the locks and walls of the Cornwall canal. Outcrops are plentiful in the southeast part and over 100,000 cubic yards could probably be quarried without difficulty. The hauling distance to the front road and canal is $4\frac{1}{2}$ miles. More than 200,000 cubic yards of stone have been quarried in five different places in an area of Black River limestone $5\frac{1}{2}$ miles west of Cornwall, but there is practically no more stone available. One-half mile farther south there is a small exposure of the same stone, where about 30,000 cubic yards can be easily quarried. The haulage distance to the front road, canal, and railway siding is $1\frac{1}{2}$ miles.

Laboratory tests (Table I) indicate that the Beekmantown dolomites near Cardinal are in most cases durable enough to withstand moderately heavy traffic up to 250 vehicles per day. This stone does not generally bind well in