

Gravel has been used for over thirty years on the roads of this district and now sells at from 15 to 25 cents per cubic yard. The roads are patched when needed, or are re-surfaced to a thickness of from 9 to 12 feet, but are not rolled. Few of the roads thus gravelled are much better than earth roads, except that they have harder foundations. In a few cases, however, where the gravelling is not older than 2 years and where the subsoil is firm, the surface is in fairly good shape.

The results of laboratory tests for percentage of wear, and cementing value of the gravels, are given in Table IV. The tests show that all the gravels cement well but appear to have a high percentage of wear, indicating that they are suited only to very light country traffic. Most of the deposits examined carry from 25 to 50 per cent of gravel and 75 to 50 per cent of sand. The stone over 3 inches should be discarded and it may be profitable to screen out the excess of sand, but most of the gravels are close enough to the required textures to be used for gravel macadam as they come from the pit.

The textures of the sand<sup>1</sup> portion of these gravels, Table III, fall within the recommended specifications for the textures of sands that are to be used in Portland cement concrete, but they were not tested as to their suitability in other respects.

To determine whether the textures of the sand approach the specifications for sand in the wearing course of sheet asphalt, compare Tables III and VI, pages 8 and 10.

Table I.—Results of Tests upon Bedrock.

Test No.	Location.	Rock species.	Series and formations.	Per cent of wear.	French coefficient of wear.	Toughness.	Hardness.	Specific gravity.	Water absorbed per cubic foot.
177	Con. Rivière à la Graise, Rigaud, along Rigaud river.....	Dolomite.	Beekmantown..	3.4	11.8	15	17.0	2.81	1.16
172	Lots 5, 6, con. IV, Cornwall tp.....	Limestone.	Black River....	3.5	11.4	6	16.6	2.71	0.27
178	Lot 7, con. IV, Cornwall tp..	Limestone.	Black River....	3.3	12.1	8	16.0	2.71	0.16
171	Lot 24, con. IV, Cornwall tp..	Limestone.	Black River....	3.2	12.5	5	16.4	2.71	0.36
169	Lot 26, con. IV, Cornwall tp..	Limestone.	Black River....	3.5	11.4	.....	.....	2.71	0.17
176	Lot 25, con. I, Matilda tp....	Dolomite.	Beekmantown..	2.7	14.8	10	16.5	2.82	0.97
174	Lot 34, con. II, Matilda tp....	Dolomite.	Beekmantown..	3.2	12.5	11	16.3	2.83	0.98
175	Lot 11, con. I, Edwardsburgh tp.....	Dolomite.	Beekmantown..	2.9	13.8	5	15.6	2.82	0.7

<sup>1</sup> "Final report of the joint committee in concrete and reinforced concrete": Proc. Am. Soc. Test. Mater., vol. XVII, 1917, pt. I, p. 216.

The American Society for Testing Materials recommends that not over 30 per cent of the fine aggregate, that is sand under  $\frac{1}{8}$  inch in diameter, shall pass a 50 mesh sieve (practically equivalent to 48 mesh in Table III) and not more than 5 per cent a 100 mesh sieve.