

And in the case of a secondary country road, we have:—

Example III.

Qualities	Ideal (Table W)	Vit. brick	Values for		
			Plain con- crete	Pitch macadam	Water- bound macadam
First cost	15	8	10	10	15
Maintenance cost	25	25	20	20	10
Durability	7	7	5	5	3
Ease of maintenance ..	10	7	8	8	10
Cleanliness	5	3	3	5	2
Low tractive resistance	5	5	4	4	4
Non-slipperiness	10	4	7	5	10
Sanitariness	5	4	4	5	3
Noiselessness	5	3	3	5	4
Acceptability	5	2	3	4	5
Favorableness to travel	8	3	5	6	8
	100	71	72	77	74

The foregoing will perhaps serve to illustrate the idea the writer has in mind that mathematics can aid the highway engineer and help to reduce the personal equation in the important matter of selecting the proper pavement for any particular case. Of course, the tables suggested may be amplified or altered at the discretion of the individual. The principle remains the same.

For general cases and in order to furnish proper starting points to modifications for particular instances, it seems to the writer that the attention of the profession, the discussion of the question and the standardization of a set of tables as suggested above, and of their components and their values for an ideal pavement in each case, would be well worth while.

When this shall have been done, there will next be needed accurate information from records, uniformly kept, as to the cost of maintenance of the various kinds of pavements, and as to their behavior as to the other items or components of the tables under stated conditions of travel, so that values can be properly assigned, with as little "guessing" as practicable, to such components for the comparison of different pavements under any particular travel which is known to be expected in a specific case. Such records are now being collected and will probably soon be available.

NEW BRITISH CABLE SERVICE.

The new cable direct from Land's End (England) to Hong-kong by way of Suez, Aden, Colombo, Penang, and Singapore, is to be laid during the present year. The Malta section to Alexandria is already finished, so that about 9,000 miles remain to be completed out of a total distance of 12,000 miles. The section from Colombo to Penang is expected to be ready by July, and the work on the other sections is to begin shortly. With the exception of a small land cable from Alexandria to Suez, the whole line will be under sea. It is said to be the largest ever laid, and is estimated to cost about \$7,500,000. At present the time taken to transmit a 20-word message from Bombay to London in 2½ hours, while the distance from Colombo to Bombay occupies another hour or hour and a half. By the new cable it will take only ten minutes to transmit a message from Colombo to London, while the cost of cabling will be greatly reduced. By means of the "slot" system the message is mechanically transmitted from section to section, and is not touched by hand till it reaches its ultimate destination, thus reducing to a minimum any chances of mutilation in retransmission. The cable will be under European management, and will be worked entirely by European operators.

COAST TO COAST.

Toronto, Ont.—C. A. Magrath, former member for Medicine Hat, Alta., in the Dominion House, and a member of the Canadian section of the International Waterways Commission, has been named as the probable choice of the Ontario Government for the chairmanship of the Provincial Highways Commission, through which the Government will carry out the vast road development scheme promised last session. It is generally understood that W. A. McLean, present provincial highways engineer, will be a member of the commission, with supervision over the engineering and construction end of the scheme. Just now Mr. McLean is abroad, where he went partly to attend the International Roads Congress, but chiefly to journey about and study advanced road construction methods of Britain and Europe. Upon his return, and after the appointment of a commission, it is probable the commissioner will visit the United States and study methods there. The government's third choice is somewhat in doubt, but the name of Reeve Henry, of the York Highways Commission, has been spoken of. Reeve Henry is a road enthusiast, and would represent the farming interests of the province on the board.

Victoria, B.C.—A meeting of leading state highway commissioners and the manufacturers of horse-drawn wagons and motor-driven trucks is the suggestion of Chairman George C. Diehl, of the American Automobile Association national good roads board, who contends that the time has arrived when those interests can advantageously discuss the drafting of suitable legislation governing the width of tires and the weight of loads. After an interchange of views he holds a committee could prepare laws, the passage of which would be practically assured when put forward by the chief highway officers of the various states. "Many states have enacted laws which endeavor to regulate the width of tires of vehicles, but unfortunately there has not been strict enforcement of these regulations," says Mr. Diehl. "The width of tires is one of the important factors in highway construction and maintenance. Narrow tires, especially during the wet season, form ruts in improved roads, and in many instances, where the roads are weak, break through the surface, causing subsequent rapid destruction of the highway. One great difficulty in enforcing wide tire ordinances with horse-drawn vehicles has been that while less traction is required, with wide tires, on slippery clay or hilly roads it is very difficult in wet weather to manage a horse-drawn vehicle with wide tires, owing to its tendency to skid and slide into the ditches. Instances are frequent where in a journey a farmer must drive over miles of slippery road and only have a few miles of improved highway, in which case he would naturally prefer to use narrow tires for the entire distance, rather than to attempt the use of wide tires over the slippery section of the road. There is no question that protection and economical maintenance of improved highways require that narrow tires should be discarded, and ordinances must be enforced which will prevent their use on main travelled highways which have been improved at great expense. If a vehicle owner desires to use narrow-tired wagons on slippery roads, he must be absolutely prevented from using the same tires on improved roads. Equal, if not greater, damage can be done to the highway with tires of insufficient width on motor trucks.

Victoria, B.C.—Preparations for more active work on the Sooke Lake waterworks system are being made by Water Commissioner Rust, and a few more men have been added to the force on the ground, about fifty being now engaged. A camp is being established at the lake, and supplies and