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Commonwealth of Massachusetts
Department of Public Works
John A. Velpe, Commissioner

U. S. Department of the Interior
Geological Survey
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(Taunton & Bridgewater)

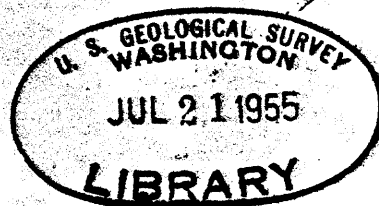
Cooperative Geologic Project

File Report

Geologic strip map along Route 28

in the

Taunton and Bridgewater quadrangles, Massachusetts



by

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3 pages of text
1 Plate

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Taunton and Bridgewater quadrangles, Massachusetts
by
Joseph H. Hartshorn, Geologist, U. S. Geological Survey

General Statement

A part of the proposed relocation of Route 28 falls within the area covered by the Taunton and Bridgewater, Mass. quadrangle map sheets. These two quadrangles were mapped geologically, and bedrock and surficial formations recorded as a part of the program of detailed geologic quadrangle mapping carried out by the Geological Survey in Massachusetts. As a result, the geology along the proposed relocation is already known, and the compilation of a highway strip map is a simple matter.

The work was done during parts of field seasons from 1950 to 1952, as a part of a cooperative program of the Massachusetts Department of Public Works and the United States Department of the Interior, Geological Survey.

Location

The area covered by the strip map includes parts of the towns of Raynham, Bridgewater, and Middleborough; it starts at the Amvets Memorial Highway and continues for a distance of about eight miles to the southern border of the Bridgewater quadrangle.

Geology

The areal distribution of surficial geologic units is shown on the accompanying map, Plate I; the distinction between units is marked both by letter symbol and by color.

The surficial deposits are of several general types. Till is exposed at several places along the centerline of the roadway, and lies beneath the sand and gravel cover on the hill east of Pine Street on the Raynham-Bridgewater town line. The till is a heterogeneous, unconsolidated deposit of materials ranging from boulder to clay sizes, and is easy to excavate with power tools.

Deposits of sand and gravel are common in the area. On the hill mentioned above, the sand and gravel cover may be quite thin, but in other parts of the area, as south of Middleboro, the deposits are in the form of large outwash plains of considerable thickness. Finer grained deposits, mostly of sand, are found in lower topographic situations, and are either small discontinuous outwash areas or part of the lake deposits which flank the present course of the Taunton River.

Bedrock

Bedrock outcrops are rare in the southeastern part of Massachusetts, and only six areas where bedrock creeps out at the surface are noted on this map. None of these are on the center line of the proposed highway, and they are located in such a manner as to indicate that bedrock will not be reached by shallow excavations in the area covered by this strip map.

Possible Sources of Sand and Gravel

Sources of granular material suitable for highway construction purposes are shown on the accompanying map by groups of colors; the discrimination between granular textures is based on the dominance of till, gravel, or sand in the various landforms. No attempt is made to

discriminate the materials on the basis of adaptability for specific uses or as to suitability for base-course material, select "borrow", or type of compaction necessary. The map thus is a guide to localities where more detailed investigations on composition and quantity of material can be carried out by the local materials engineers and soils engineers.

The ground moraine or till may be of value as ordinary "borrow". In the few places where it is necessary to cut through till hills, the sandy texture of the till and its well-graded grain size distribution will make it useful for fill.

Coarse-grained deposits, suitable for clean base course material, are common in the area, and are particularly well developed in the southeastern part of the Bridgewater quadrangle. East of Vernon Street in the central part of the map, a number of eskers provide a source of coarse sands and gravels convenient to the Taunton River Valley where much fill is necessary.

Summary

The map, Plate I, can be used as a field guide to the location of sand and gravel sources close to the proposed relocation of Route 28. The chief sources of coarse granular material are noted on the map, and can easily be sought out in the field. Bedrock appears to offer no problem to relocation of the highway.