



EXPLANATION

This map shows the distribution of potential sources of various construction materials, including gravel and sand, and mixed coarse- and fine-grained material, clay, crushed aggregate, and silt. The occurrence of these materials are interpreted from the deposits shown on the generalized geologic map (Map 1-787-A). The map units are summarized below in terms of the probability of finding a good source of each kind of material. The qualitative terms good, moderate, poor, and nil are used to express such a likelihood. They do not mean absolute values in these terms, but consider that "good" may indicate a probability of about 80 percent or more, "moderate" may cover a broad range between about 40 percent and 80 percent, and "poor" may represent less than about 40 percent. "Nil" indicates virtually no chance of finding a good source of a particular material. Each map unit is described in terms of materials and geology, some restrictions to the locating of good sources of construction material are also given. This map does not attempt to show areas that deserve consideration for site location and areas that may be damaged from further consideration. Estimates of quantities, evaluations of materials for specific uses, and availability of land for exploration are not presented; these determinations must be made by a more detailed exploration and testing program for each potential site prior to development.

DESCRIPTION OF MAP UNITS

GRAVEL AND SAND - Exposed in large alluvial channels and fans, deltas, and some terraces. Thicknesses of 20 feet or more of generally uniform material occur. The large deposit extending beneath Fort Richardson to downtown Anchorage is a thin, discontinuous gravel at the surface, and becomes progressively finer grained and more sandy westward. In places it is overlain by as much as 5 feet of silt and fine sand.

CHEFLY GRAVEL AND SAND - In small alluvial deposits, glacial alluvium, and small deltas. Also includes most man-made fill shown on the generalized geologic map, but not the extensive fill at International Airport. Although gravel and sand are prevalent within the area of this map unit, use as major sources of construction material outside these areas is less desirable than those in the preceding map unit in places of lateral homogeneity or consistent lateral extent. Scarcity of sand over gravel, significant attraction of interbeds of fine grained material, poor drainage and over-burden of peat, high water table, particularly near major streams.

CHEFLY SAND - Deposited in marine, estuarine, alluvial or dune environments. Other materials, especially gravel, occur in places. Many of the streams listed on the map unit above also apply to the area of this map unit.

CHEFLY MIXED COARSE- AND FINE-GRAINED MATERIAL - Includes glauconite to poorly sorted mixture of gravel, sand, silt, and/or of silt and fine interbeds of well-sorted materials of widely different sizes, accumulated principally as glacial, glauconitic, and colluvial deposits. Thicknesses range from more than 100 feet in some hills to less than 5 feet in the upper parts of some hills. These materials may be used for fill that does not require site-grade specification; they generally include too much fine-grained material to provide other than minor sources of gravel and sand.

CHEFLY SILT AND CLAY - Deposited in ponds, glacial lakes, a former estuary, and the present tidal zone. The ponds may be more than 100 feet thick except in many small areas where they are considerably thinner and may consist largely of peat. Most of this material is not useful for construction purposes if impure material is desired, however, it may be obtained from the Boatlodge Cove Clay exposed principally in the area of lower Campbell Creek and in river and sea bluffs near downtown Anchorage and Elmendorf Air Force Base. This clay has been used on a very small scale in making brick and pottery.

CHEFLY METAMORPHIC BEDROCK - Includes weakly metamorphosed siltstone, graywacke, arkose, conglomerate, sandstone, and gneiss, and granitic material with quartz and apatite; marble is present near the mouth of Little Rabbit Creek. These rocks are generally unsatisfactory for use as crushed aggregate. In many places the rock is too highly fractured or weakened to be used as stone, but suitable material may be found locally in excavations that extend below the zone of weathering.

SUMMARY OF MAP UNITS

MAP UNIT	GRAVEL AND SAND	MIXED COARSE- AND FINE-GRAINED MATERIAL	CLAY	CRUSHED AGGREGATE	RIPRAP
Good	Good	Poor	Nil	Good	Nil
Moderate	Moderate	Poor	Poor	Moderate	Nil
Poor	Good	Poor	Poor	Nil	Nil
Poor	Poor	Good	Poor	Poor	Nil
Nil	Nil	Nil	Moderate	Nil	Nil
Nil	Nil	Nil	Nil	Good	Moderate

Base from U.S. Geological Survey, 1962, modified in 1971.
10,000-foot grid based on Alaska coordinate system, zone 6.
1,000-meter Universal Transverse Mercator grid ticks, zone 6, shown in blue.



SCALE 1:24,000
CONTOUR INTERVAL 20 FEET
DOTTED LINES REPRESENT 10-20 FEET
DASHED LINES REPRESENT 5-10 FEET
SOLID LINES REPRESENT 1-5 FEET
DOTTED LINES REPRESENT 1-5 FEET
DOTTED LINES REPRESENT 1-5 FEET

CONSTRUCTION MATERIALS MAP OF ANCHORAGE AND VICINITY, ALASKA
By Henry R. Schnoll and Ernest Dobrovolsky
1973