

E. CONVEYANCE SEWER

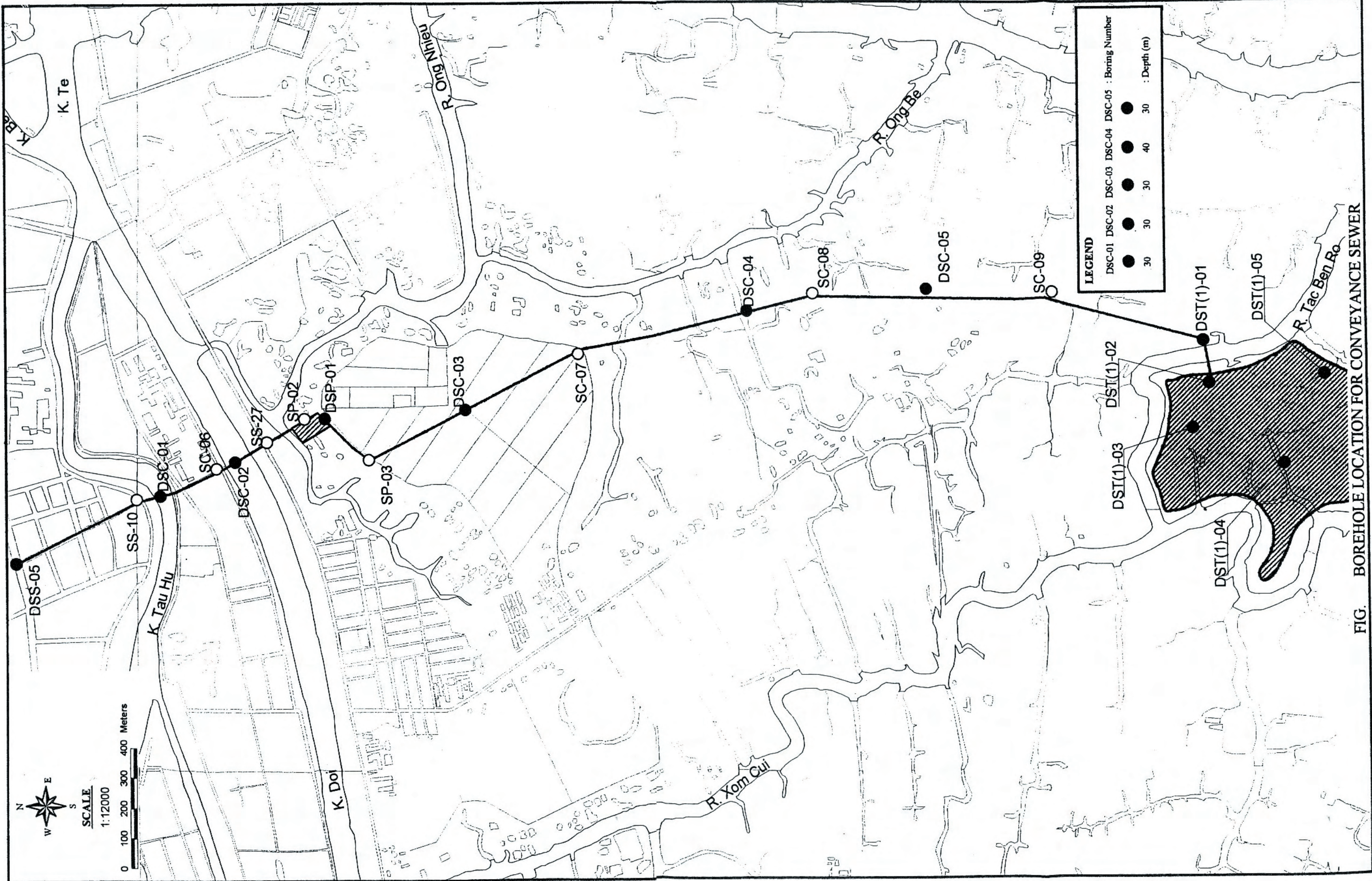


FIG. BOREHOLE LOCATION FOR CONVEYANCE SEWER

4. PROGRESS OF INVESTIGATION.

Drilling, sampling and field test : Carried out from May 31st to August 3rd, 2000.

Laboratory test : Carried out from June 2nd, 1999 to Aug 5th, 2000.

II ANALYSIS OF THE INVESTIGATION RESULT

1. STRUCTURE OF THE BASE SOIL.

Based on in-situ survey, drilling documents and the results obtained from the soil tests. We have noticed that basic soil on the surveying site (up to 40.0m deep) was composed by Holocene and Pleistocene deposits. Thickness of the Holocene Deposits is from 0.6m (DSS-05) to more than 28.5m (DST(1)-2 and Pleistocene deposits, which the thickness is to 38.7m and the thickness of the Pliocene deposits has not been determined yet (boreholes of 55.0m depth did not excess these deposits) and at some boreholes there is made ground on the surface with the thickness is from 0.5m to 1.5m. From the surface downwards there are the following layers:

1.1 . Layer 1: Made ground – soft, blackish grey SANDY CLAY.

This layer lies right on the surface, was found at all boreholes, with the thickness is from 0.5m(SC-06, SC-08 to SC12) to 1.5m (DSP-01).

1.2 . Layer 2: Very soft, high plasticity blackish grey ORGANIC CLAY (OH).

It is covered by layer 1 or lies on the surface with thickness from 0.6m (DSS-05) to 20.0m (DST(1)-2) and the depth of the layer bottom is from 1.6m (DSS-05) to more 21.0m (DST(1)-2) deep. Standard penetration resistance N from 0 to 2. In total, 18 samples were taken from this layer, the obtained physico-mechanical properties of the samples have shown that, natural moisture is from 47.55% to 115.86%, wet density from 1.356 to 1.651g/cm³, liquid limit from 70.8 to 98.1%, plasticity index from 17.9 to 51.8%, high compressibility (see average value of the physico-mechanical properties - table 1). The main characteristics of the layer are as follows:

Wet density	γ_w	=	1,489 g/cm ³
Unconfined compressive strength	q_u	=	0.118 Kg/cm ²
Compression index	C_c	=	0.807 cm ² /kg
Coefficient of consolidation	C_v	=	3.16 x 10 ⁻⁴ cm ² /s
Coefficient of volume compressibility	m_v	=	1.21 x 10 ⁻⁵ cm ² /g

1.3 . Layer 3: Soft, high plasticity blackish grey ORGANIC CLAY (OH).

Was found at the boreholes DST(1)-1 and DST(1)-2. The thickness is from 6.7m (DST(1)-1) to 8.5m (DST(1)-2) and the depth of the layer bottom is from 27.2m (DST(1)-1) to 29.5m (DST(1)-2) . Standard penetration resistance N from 2 to 3. The obtained physico-mechanical properties of the samples have shown that, natural moisture is from 56.61% to 84.89%, wet density from 1.451 to 1.530g/cm³, liquid limit from 74.1% to 93.2%, plasticity index is from 36.8% to 45.4%.