CHAPTER 4

USE OF SOIL MAPS BY CITY OFFICIALS FOR OPERATIONAL PLANNING

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THE CITY OF San Antonio, Texas, the home of the Alamo, has made extensive use of soil maps in both general and operational planning. Through cost-sharing agreement with the Soil Conservation Service the city obtained advance copies of soil maps and a soils handbook of the greater metropolitan planning area of San Antonio. Some additional soil investigations were made in the area. The additional investigations included characterization of the various soils as to (1) corrosivity to metal, (2) depth of soil to bedrock, and (3) character of the bedrock or the underlying materials to a depth of ten feet. The soil handbook describes the soils, gives their chemical and physical properties, including engineering properties, and gives soil interpretations important to the use of the soils.

The most extensive use of the maps has been in day-to-day operational planning. The City Public Service Board, the City Water Board (city-owned gas and water utilities), the Parks and Recreation Department, and the special projects engineer of the city use the soil maps most frequently.

DESIGN OF CORROSION CONTROL FOR PIPELINES

Past experience in the city with the design and performance of buried pipelines left much to be desired. A number of soil properties are known to affect the cost of installation and length of service. Shallow soil depth to hard rock directly affects costs of excavating trenches. Hard rock fragments or gravel in the soil and backfill material may bring about damage to protective pipe coatings. Shrink-swell properties of soils may preclude the use of rigid utility pipe construction materials.

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