TABLE 3-37
SOIL TYPES INTERSECTING THE ALIGNMENT

Soil Type	Soil Characteristics	Soil Potential and Limitations
Arents (clayey, gently undulating)	Consists of clayey soil material removed from nearby road cuts, borrow pits, or drainange ditches. The soil is typically dark brown, calcareous clay, containing many clods and bodies of very dark brown and grayish brown fragments of surface soil.	Permeability is slow to very slow, runoff is medium, and sloping areas erode easily. These soils have a very low potential for urban development. Limitations are a high content of clay, wet spots and ponding.
Bastsil-Urban land complex (0% to 2% slopes)	Nearly level to gently sloping, well drained soils and areas of Urban land. The Bastsil soil comprises approximately 40 percent of the complex, while Urban land comprises approximately 35 percent. Typically, the surface layer is moderately acid, brown fine sandy loam to yellowish red to red sandy clay loam to a depth of about 34 inches. To 68 inches, the soil is mottled dark red, yellowish red, and light gray sandy clay loam.	Permeability is moderate, runoff is medium, and the hazard of erosion is moderate. These soils have a high potential for urban development. The only limitation is corrosivity to uncoated steel.
Burleson clay (0% to 1% slopes)	Deep, nearly level, moderately well drained soils along old stream terraces. The surface layer, to a depth of 4 inches, is typically neutral, very dark gray clay. To about 46 inches, the soil is slightly acid, very dark gray clay above a neutral layer of grayish brown clay to about 64 inches. To a depth of 80 inches, the soil is moderately alkaline, grayish brown clay.	Permeability is very slow, available water capacity is high, runoff is slow, and the hazard of erosion is slight. The surface layer of these soils tends to crush. The soil has high potential for crop and pastureland and low potential for urban development. Limitations include high shrink-swell potential, corrosivity, and low strength of the soil.
Ferris-Heiden complex (5% to 12% slopes)	Deep, well drained, gently rolling and rolling soils on hillsides. Ferris soil comprises about 60 percent of the complex and Heiden soils comprise about 20percent. The surface layer of the Ferris soil is moderately alkaline, light yellowish brown clay to 3 inches. To 28 inches, the soil is moderately alkaline, olive clay over moderately alkaline, light brownish gray clay to 41 inches. The soil is mottled light brownish gray, light olive brown, and gray shaly clay to about 72 inches. Heiden soils are moderately alkaline, dark grayish brown clay to 19 inches. To a depth of 45 inches, the soil is moderately alkaline, grayish brown clay above a layer of mottled brownish gray, olive yellow, and brownish yellow, moderately alkaline shaly clay to 78 inches.	In the Ferris and Heiden soils, permeability is very slow, available water capacity is high, runoff is rapid, and the hazard of erosion is severe. The potential of this soil complex for urban uses is low. A very high shrink-swell potential, low strength, corrosivity, unstable slopes and erosion hazard are limitations to development.
Frio silty clay, occasionally flooded	Deep, well drained, nearly level soil on floodplains. The surface layer, to 7 inches, is moderately alkaline, very dark grayish brown silty clay. To a depth of 53 inches, the soil is moderately alkaline, very dark grayish brown silty clay. In the lower layer to 74 inches, the soil is moderately alkaline, brown silty clay loam.	Permeability is moderately slow, available water capacity is high, runoff is slow, and the erosion hazard is slight. This soil has a low potential for urban use because of the hazard of flooding, low soil strength, and corrosivity.
Heiden clay (1% to 3% slopes)	Deep, well drained, gently sloping soil on uplands. Typically, the first 6 inches are a moderately alkaline, dark gray clay. To about 37 inches, the soil is very dark grayish brown clay progressing to grayish brown clay with gray and yellowish brown mottles to 56 inches. The bottom 22 inches are composed of shaly clay mottled in shades of gray and yellow.	Permeability is very slow, available water capacity is high, runoff is medium and the hazard of erosion is moderate. This soil has high potential for use as cropland and pastureland and low potential for urban uses. The very high shrink-swell potential, corrosivity, and low strength of the soil are its primary limitations.
Heiden clay (2% to 5% slopes, eroded)	Deep, well drained, gently sloping soils on uplands. Typically, the first 6 inches are a moderately alkaline, dark gray clay. To 56 inches, the soil is a dark grayish brown clay. The bottom 22 inches are composed of shaly clay mottled in shades of gray and yellow.	Permeability is very slow, available water capacity is high, runoff is rapid and the hazard of erosion is severe. The soil has medium potential for pasture and low potential for urban uses. The very high shrink-swell potential, corrosivity, low strength of the soil, and severe hazard of erosion are limitations.

TABLE 3-37 - continued
SOIL TYPES INTERSECTING THE ALIGNMENT

Soil Type	Soil Characteristics	Soil Potential and Limitations
Normangee clay loam (1% to 3% slopes)	Deep, moderately well drained, gently sloping soil on uplands. The surface layer is typically neutral, dark grayish brown clay loam to a depth of 9 inches. To 14 inches, the soil is a dark brown clay. Slightly acid, grayish brown clay with light olive brown mottles is found to depths of 25 inches. To 41 inches, the soil is olive clay with common yellowish brown mottles. To a depth of 66 inches, it is moderately alkaline clay, mottled with shades of brown, olive and gray over fine platy shale.	Permeability is very slow, available water capacity is high, runoff is medium, and the hazard of erosion is moderate. The soil has medium potential for urban development. Limitations include high shrink-swell potential, low strength, corrosivity, and the hazard of erosion.
Ovan clay, frequently flooded	Deep, moderately well drained, nearly level soils on floodplains. This soil is moderately alkaline, very dark grayish brown clay to 15 inches thick. Dark grayish brown clay is found to 35 inches with moderately alkaline, light olive brown clay to a depth of 80 inches.	Permeability is very slow, available water capacity is high, runoff is slow and there is a slight erosion hazard. This soil has a very low potential for urban uses due to frequent flooding, high shrink-swell potential, clayey texture and corrosivity of the soil.
Silawa fine sandy loam (1% to 3% slopes)	Deep, well drained, gently sloping soil on uplands. Typically the surface layer is neutral, brown fine sandy loam 10 inches thick. To a depth of 19 inces, the soil is slightly acid, yellowish red sandy clay loam. To a depth of 34 inches, it is medium acid, reddish yellow sandy clay loam. To a depth of 44 inches, the soil is strongly acid, reddish yellow fine sandy loam, and to a depth of 80 inches, it is medium acid, reddish yellow loamy fine sand.	Permeability is moderate, and the available water capacity is medium. Runoff is slow. Water and wind erosion are moderate hazards. The soil has high potential for pasture, medium potential for use as cropland, and high potential for urban uses.
Silawa Urban land complex (2% to 6% slopes)	This complex is made up of deep, well drained, gently sloping and sloping soils and areas of Urban land. The Silawa soil makes up about 50% of this complex; Urban land makes up 25%. Typically, the surface layer of the Silawa soil is slightly acid, grayish brown fine sandy loam six inches thick.	Permeability is moderate, and the available water capacity is medium. Runoff is medium. Water and wind erosion are moderate hazards. This soil has a high potential for urban uses.
Silstid loamy fine sand (0% to 3% slopes)	This is a deep, well drained, nearly level to gently sloping soil on uplands. Typically, the surface layer is neutral, brown loamy fine sand 10 inches thick.	Permeability is moderate, and the available water capacity is low. Runoff is slow, and water erosion is a slight hazard. Wind erosion is a severe hazard if the surface is bare. The Silstid soil has medium potential for pasture, low potential for use as cropland, and high potential for urban uses.
Trinity clay, occasionally flooded	Deep, nearly level, somewhat poorly drained soil on floodplains. Typically, the surface layer is moderately alkaline, very dark grayish brown, very dark gray and black clay. Between 48 and 68 inches, the soil is black clay that has brownish mottles.	Permeability is very slow, available water capacity is high, runoff is very slow, and the hazard of erosion is slight. This soil has a very low potential for urban uses. Limitations include the hazard of flooding and wetness, corrosivity, and very high shrink-swell potential.
Trinity clay, frequently flooded	Deep, nearly level, somewhat poorly drained soil on floodplains. Typically, the surface layer is moderately alkaline, dark gray, grayish brown and very dark gray clay.	Permeability is very slow, runoff is slow, and the hazard of erosion is slight. This soil has a very low potential for urban use. Limitations include the frequent flooding and wetness, corrosivity, very high shrink-swell potential, and clayey texture of the soil.
Urban land	Extensively built up areas where 75 percent or more of the surface is covered with buildings and pavement. Native soils have been altered or covered by urban development.	This mapping unit is extensively used for urban development.
Wilson-Urban land complex (0% to 2% slopes)	Nearly level to gently sloping, deep, somewhat poorly drained soils and areas of Urban land. The Wilson soil makes up about 60 percent of this complex and Urban land makes up about 30 percent. The surface layer of the Wilson soil is typically mildly to moderately alkaline, dark grayish brown clay loam, and dark gray and olive brown to light olive brown clay.	Permeability is very slow, runoff is slow, and the hazard of erosion is slight. The Wilson soil has medium potential for urban development. The high shrink-swell potential, corrosivity, and low strength of the soil are the main limitations to urban use.

Source: ***Soil Survey for Dallas County, Texas*** (NRCS, 1980)