COMMONWEALTH OF KENTUCKY

DEPARTMENT OF TRANSPORTATION

FRANKFORT, KENTUCKY 40601

ELIJAH M. HOGGE
SECRETARY

WENDELL H. FORD
GOVERNOR

BUREAU OF HIGHWAYS

JAMES E. GRAY
COMMISSIONER

May 25, 1973

H.3.13

MEMORANDUM TO: J. R. Harbison
State Highway Engineer
Chairman, Research Committee

SUBJECT: Research Report No. 367; "Engineering Geognosy of the Western Kentucky Coal Field;" KYP-64-13; HPR-1(8), Part III

In recent years, highway building has provided exceptional opportunities to explore ground and subsurface strata through borings and to expose facia in cuts through hills which have not been seen before. Highway cuts have, in fact, proven very helpful in the current U.S. Geological Survey's geological quadrangle mapping program. Borings, which are necessary at bridge sites, together with soil tests made along the proposed line of a highway and during construction provide a wealth of information which, but for some effort as we are reporting now, would probably remain buried in files after having served its perfunctory purpose.

For many years, the Division of Research has cooperated with the Soil Conservation Service in their mapping program -- that is, by doing engineering tests on soils and writing engineering descriptions.

At times, we have been called upon to make areal surveys. For instance, one (Report No. 229) was made concerning the availability of fill material for constructing I 264 on the west side of Louisville. Another one (No. 232) was done in connection with the Purchase Parkway, and another (No. 245) was done in connection with the Pennyrile Parkway. Each of these had very specific objectives.

From studies of landslides, the Osgood and Crab Orchard formations were formed to be so frequently responsible for failures that we were inspired to devote a report (No. 254) to them.

A recount of these and other contributions is given below:

14. *Proposed Working Plan for a Survey and Pedological Classification of Kentucky Soils in Accordance with Highway Engineering Usage,* March 1946.

40. *A Laboratory Investigation of Mineralogical, Chemical and Physical Properties of Limestone Aggregates,* Young, J. L., Jr.; Havens, J. H.; and Gregg, L. E.; December 1948; also **Abstracts**, Highway Research Board, Vol 19, No 6, June 1949.

73. *Geological Considerations in Relation to a Materials Survey,* Young, J. L. Jr. and Gregg, L. E., 1951; also **Bulletin 62**, Highway Research Board, 1952.

91. *Applications of Geology to Highway Engineering in Kentucky,* Gregg, L. E. and Havens, J. H.; February 1953.

115. *Kentucky Soils: Their Origin, Distribution and Engineering Properties,* Deen, R. C.; March 1956; also **Bulletin No. 40**, Engineering Experiment Station, University of Kentucky, June 1956.

122. *A Method of Developing Engineering Soil Maps for Kentucky, A Pilot Survey of Fayette County,* Deen, R. C.; August 1957; also *An Engineering Soil Survey of Fayette County, Kentucky,* **Bulletin 213**, Highway Research Board, 1959; also thesis, MSCE, University of Kentucky, 1957.

131. *An Engineering Soil Survey of Mercer County, Kentucky,* Deen, R. C.; July 1958.

Engineering Properties of Soil Series Mapped in Kentucky; Deen, R. C., March 1962.

191. *Investigation of Aggregate Occurrence in Logan County, Kentucky,* Laughlin, G. R.; November 1962.

229. *A General Survey of Highway Construction Materials, Jefferson County (A Pilot Study),* Havens, J. H. and Deen, R. C.; December 1965.

232. *A General Survey of Highway Construction Materials, Jackson Purchase Region,* Deen, R. C. and Havens, J. H.; March 1966.

238. *Engineering Properties of Kentucky Soils,* Deen, R. C.; August 1966.

240. *Stability Analyses of Earth Masses,* Deen, R. C.; Scott, G. D.; and McGraw, W. W.; September 1966.

245. *Highway Construction in Windblown Silts of Western Kentucky,* Deen, R. C.; January 1967.

254. *The Crab Orchard and Osgood Formations, the Case for Slope Stability,* Deen, R. C.; April 1968.

266. *Landslides in Kentucky,* Deen, R. C. and Havens, J. H.; September 1968; presented at Landslide Seminar, University of Tennessee, September 18-20, 1968.

279. *Engineering Geognosy of Boyd County,* Hopkins, T. C. and Pigman, J. G.; August 1969.

281. *Engineering Geognosy of Warren County,* Pigman, J. G. and Hopkins, T. C.; October 1969.

283. *Selected Features of Kentucky Geology from Lexington to Pineville,* Southgate, H. F.; Hopkins, T. C.; and Scott, G. D.; October 1969.

324. *Degradation of Limestone Aggregates during Construction,* Deen, R. C. and Southgate, H. F.; March 1972.

325. *Expansive Limestone Aggregate in a Concrete Pavement,* Havens, J. H. and Rahal, A. S.; April 1972.

Two reports (Nos. 279 and 281) were requested by the Kentucky Department of Commerce.

The report submitted herewith makes full use of information which issued from the construction of the West Kentucky Parkway, the Pennyrile Parkway, the Audubon Parkway, and Green River Valley Parkway.

Respectfully submitted,

Jas. H. Havens
Director of Research

JHH:dw
attachment
cc: Research Committee

TECHNICAL REPORT STANDARD TITLE PAGE

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.

4. Title and Subtitle
Engineering Geognosy of the Western Coal Field

5. Report Date
May 1973

6. Performing Organization Code

7. Author(s)
W. McCann, T. C. Hopkins, and R. C. Deen

8. Performing Organization Report No.
367

9. Performing Organization Name and Address
Division of Research
Kentucky Bureau of Highways
533 South Limestone
Lexington, Kentucky 40508

10. Work Unit No.

11. Contract or Grant No.
KYP-64-13

12. Sponsoring Agency Name and Address

13. Type of Report and Period Covered
Interim

14. Sponsoring Agency Code

15. Supplementary Notes

Study Title: Engineering Geognosy

16. Abstract

Engineering soils and geologic reports are invaluable tools for engineers, industrial leaders, community planners and administrators during preliminary stages of planning and site selection for construction projects. Such information can be used to great advantage by planners in making soil and geologic reconnaissance surveys, in organizing and checking field surveys, in correlating and predicting performances of soil and geologic materials, and in locating construction materials and resource deposits. Recognizing the need for this type of information, the Division of Research, Bureau of Highways, Kentucky Department of Transportation, has undertaken a study to report the engineering geognosy of Kentucky. The report herein presents and discusses engineering properties and behavior of unconsolidated surficial deposits and consolidated bedrock materials located in the ten counties of the Western Coal Field. These counties include Butler, Daviess, Hancock, Henderson, Hopkins, McLean, Muhlenberg, Ohio, Union and Webster. Engineering soils data were retrieved from design and construction plans of the Bureau of Highways, Kentucky Department of Transportation, for routes passing through the area, as well as from reports prepared by the Soil Conservation Service and other agencies and individuals. Tabulated in the report are engineering test data for some 1646 soil samples obtained from 1309 highway borings in the Western Coal Field. Brief descriptions of the geography, topography, pedology and geology of the area are given.

17. Key Words
Engineering Geognosy
Western Coal Field of Kentucky, Engineering Soils and Rock Data, Retrieval, Soils Maps, and Pedology

18. Distribution Statement

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified		

Research Report
367

ENGINEERING GEOGNOSY
OF
THE WESTERN COAL FIELD

KYP-64-13, HPR-1(8), Part III

by

W. McCann
Research Engineer Assistant

T. C. Hopkins
Research Engineer Senior

and

R. C. Deen
Assistant Director

Division of Research
Bureau of Highways
DEPARTMENT OF TRANSPORTATION
Commonwealth of Kentucky

May 1973

INTRODUCTION

Engineering soils and geologic reports are invaluable references for engineers, industrial leaders, community planners and administrators during preliminary stages of planning and site selection for construction projects. Quantitative engineering data for soils and geological formations and the interpretation of these data are essential elements in developing the best land-use plans, in providing stable foundations for engineering structures, and in the proper usage of earth materials in the construction of highways, buildings, and earth structures. Engineering soils and geologic reports can be used to great advantage by planners in making soil and geological reconnaissance surveys, in organizing and checking field surveys, in correlating and predicting performances of soil and geological materials, and in locating construction materials and resource deposits.

Recognizing the need and demand for this type of information, the Division of Research, Bureau of Highways, Kentucky Department of Transportation, has undertaken a study to report the engineering geognosy of Kentucky. This report presents and discusses engineering properties and behavior of unconsolidated surficial deposits and consolidated bedrock materials located in the ten counties of the Western Coal Field. These counties include Butler, Daviess, Hancock, Henderson, Hopkins, McLean, Muhlenberg, Ohio, Union, and Webster (Figure 1). The discussions herein are based on an interpretation of engineering test data retrieved from design and construction plans of the Kentucky Bureau of Highways for routes passing through these counties as well as reports and maps prepared by the Soil Conservation Service, other agencies, and individuals. Engineering soils and geologic maps and interpretations presented herein should be viewed from a standpoint of providing generalized engineering information about the different soil and rock materials in the subject area. For detailed and specific data, soil and rock materials at a particular site should be thoroughly explored and tested. Also included in this report are brief descriptions of the geography and physiography of the Western Coal Field.

GEOGRAPHY

Area Description

The area under consideration is located in the Western Coal Field (Figure 1), a major physiographic and geologic division of Kentucky, and is bounded on the north by the Ohio River. It comprises approximately 4,000 square miles or about 2,600,000 acres and lies between latitudes 37° and 38° north and longitudes 86° 30' and 88° west.

Population

Based on the 1970 census *(1)* (Table 1), there are 255,040 persons living in the ten-county area. Daviess county has the largest population (79,486). Hancock had the largest percentage increase in population (32.8 percent) from 1960. The major population centers are Owensboro (50,329), Henderson (22,976), and Madisonville (15,332). Owensboro is located on the broad flood plain of the Ohio River and lies in the northeastern portion of the area. Henderson is situated on the Ohio River in the northwestern part and Madisonville is located in the southwestern part. Small towns and villages are located throughout the area. Generally, data in Table 2 indicate that during the 1960-1970 decade the population of the area shifted from the rural to the urban areas. The average increase

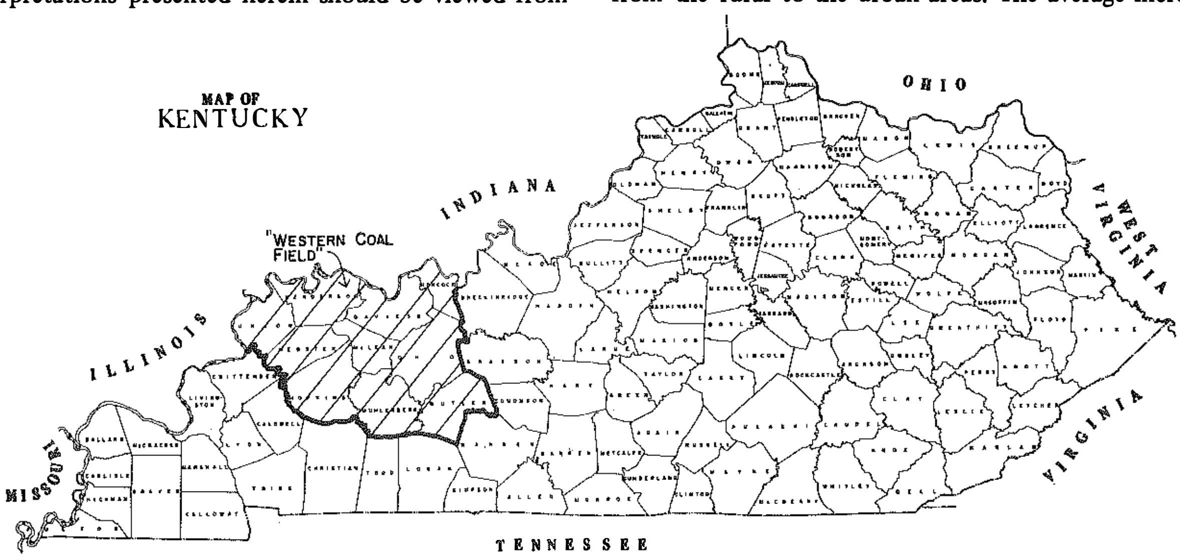


Figure 1. Map of Kentucky Showing the Approximate Boundaries of the Western Coal Field.

TABLE 1

POPULATION OF THE TEN-COUNTY AREA AND MAJOR POPULATION CENTERS OF THE WESTERN COAL FIELD ACCORDING TO THE 1960 AND 1970 CENSUS

COUNTY	MAJOR POPULATION CENTER	POPULATION 1960	POPULATION 1970	CHANGE IN POPULATION (PERCENT)
Butler		9,586	9,723	1.4
	Morgantown	1,318	1,394	5.8
Daviess		70,588	79,486	12.6
	Owensboro	42,471	50,329	18.5
Hancock		5,330	7,080	32.8
	Lewisport	610	1,595	161.5
Henderson		33,519	36,031	7.5
	Henderson	16,892	22,976	36.0
Hopkins		38,458	38,167	- 0.8
	Madisonville	13,110	15,332	16.9
McLean		9,355	9,062	- 3.1
	Livermore	2,710	2,757	1.7
Muhlenberg		27,791	27,537	- 0.9
	Greenville	3,198	3,875	21.2
Ohio		17,725	18,790	6.0
	Beaver Dam	1,648	2,622	59.1
Union		14,537	15,882	9.3
	Morganfield	3,741	3,563	- 4.8
Webster		14,224	13,282	- 6.8
	Providence	3,771	4,270	13.2

in population of the ten-county area was about six percent while the population of the ten major cities increased an average of approximately 33 percent.

Industry

Business activity *(2)* in the area ranges from the production of steel and electron tubes to vinyl gloves and bituminous concrete and includes manufacturing, retail trade, and mining (Table 2). A large segment of industrial employment is concentrated in the electrical equipment, apparel, and primary metals industries.

The area is abundant in natural resources *(3)* which include fuels, forests, minerals, farm land, and water. Coals occur in Pennsylvanian formations and are both deep mined and strip mined. Oil and gas are obtained from the Chester Formation located at depths from 700 to 1,000 feet. The Owensboro oil field is an outstanding producer. Kyrock, a bitumen-impregnated sandstone member of the lower Caseyville Formation, is a prominent rock asphalt and is used as a road surfacing material. The main deposit in Edmonson County extends into Butler County. Forests in Ohio and Hancock Counties cover some 250,000 acres; red oak, white oak, hickory, sweet gum, yellow poplar, beech, and hard maple are harvested.

Deposits of clay, shale, sand, gravel, limestone and sandstone have been mined or quarried in the area. Clay and shale are used in the ceramic industry to make brick and tile. Clay and shale of this area also possess properties that make them useful in the manufacture of portland cement and lightweight aggregate. Limestone, important as a construction material, is not commonly found in the area; however, some deposits are accessible in Ohio, Muhlenberg, and Butler Counties. Sands and gravels occurring along the Ohio River Valley have been recovered by floating-dredging operations in the river channel. Smaller amounts have been mined from pits along the floodplains. Large reserves of sand for use as foundry sand, in sand blasting, and for allied purposes are present in the Caseyville sandstone outcrops. The Caseyville -- being a medium to fine-grained, moderately cemented, angular, clean quartz sandstone -- has many industrial uses.

Agriculture is favored because of low relief, gentle slopes, and large bottom lands which are sometimes swampy and must be drained. These fertile floodplains are well adapted for growing tobacco, corn, and soy beans. The majority of the improved lands are located in the Ohio River Valley counties with large bottom lands ranging up to 7-1/2 miles wide. The majority of the unimproved lands are found in the marginal counties such as Muhlenberg and Butler.

The major construction project in the area (1971-73) is the Bowling Green-Owensboro Parkway. Upon completion of that road, there will be four super highways crossing the area. The Audubon Parkway and the Western Kentucky Parkway running east-west and the Bowling Green-Owensboro Parkway and the Pennyrile Parkway running north-south make super highways readily available to everyone in the area. Data from soil profiles for these roads constitute a large portion of the data presented in this report.

Climate

Climate *(4)* of the Western Coal Region is temperate and uniform throughout the area; it is of the continental type and, therefore, there are periods of hot and cold temperatures. However, prolonged periods of heat and cold do not occur. The average mean temperature is about 56°F. During winter and summer, the average mean temperatures are approximately 40° and 77°F, respectively. On occasions, the temperature may reach a low of minus 10-15°F during the winter, and a high of 100-105°F during the summer.

Precipitation in the area is a result of pressure systems that move either from the west to the east or from the southwest to the northeast. Average annual rainfall in the area is about 46 inches. Average monthly

TABLE 2

MAJOR BUSINESS ACTIVITIES AND NUMBER OF PERSONS EMPLOYED IN MAJOR BUSINESS ACTIVITIES IN THE WESTERN COAL FIELD

COUNTY	MAJOR BUSINESS ACTIVITY	NUMBER OF EMPLOYEES* IN 1968		PERCENTAGE EMPLOYED IN MAJOR BUSINESS ACTIVITY
		MAJOR BUSINESS ACTIVITY	TOTAL EMPLOYMENT	
Butler	Manufacturing	485	981	49
Daviess	Manufacturing	9,986	23,170	43
Hancock	Retail Trade	92	969	9
Henderson	Manufacturing	3,546	8,307	43
Hopkins	Mining	2,336	8,428	28
McLean	Manufacturing	288	747	39
Muhlenberg	Mining	1,370	4,344	32
Ohio	Manufacturing	736	2,241	33
Union	Manufacturing	440	3,448	13
Webster	Mining	324	1,752	18

*Numbers exclude railroad employees and self-employed persons.

rainfall ranges from 2.5 inches in October to 5 inches in March. During late fall, winter, and early spring, precipitation occurs as general rains; whereas during the period March through September, it occurs frequently in the form of scattered thunderstorms. Occasionally during the latter period, there is some tornado activity. The "wet" season of the year occurs during the period January through July; and during that period, precipitation averages about 4 inches per month. The "dry" period of the year occurs during August through December; average precipitation is about 3 inches per month. Average annual snowfall is approximately 20 inches; however, the ground usually does not remain covered for any prolonged period of time. Generally, the snow melts within a day to a few days after falling.

Since the climate is temperate, it does not account for major differences among the soils. Such climate, however, does induce rapid chemical reactions in the soils. Rainfall is sufficient to cause a movement of soluble and clayey substances down through the soils. Some of these substances are relocated in the soils at deeper elevations, while some are leached out of the soils. The soils are frozen only for short periods in the year; thus, translocation and leaching of material occur most of the year.

Hydrological Conditions

Ground water is an important resource *(3)* in the Western Coal Field. Industrial growth, urban expansion, and suburban development depend upon an adequate supply of water. The alluvial sands and gravels along the Ohio River Valley contain the greatest potential source of ground water for future industrial, municipal, and agricultural development. Alluvial deposits in the Ohio River Valley can be expected to yield at least 50 gallons per minute.

Where conglomerates, sandstones, or siltstones outcrop, drilled wells generally yield enough water for domestic use *(5)*. Some wells yield 100 to 500 gallons per minute for public and industrial supplies. Some water may be obtained from limestone and coal beds. Little water is available from shale. The Caseyville Sandstone is one of the most important bedrock aquifers. The wells in this formation yield from depths less than 300 feet. Sandstones and conglomerates supply water to numerous small springs. Water from wells in the outcrop area of conglomerate, sandstone, and siltstone is generally fresh and suitable for domestic use. It is soft to very hard and may contain undesirable amounts of iron. With increasing depth and distance from the outcrop area, the water is more mineralized and salt water may be encountered. The deepest well known to yield fresh water is 943 feet deep.

The Ohio River, with its abundant surface water supply and navigation facilities, is a pronounced asset to the area. The alluvial gravels and sand along the valley are in part recharged from stream flow. Other sizeable rivers passing through the area are Green River and its tributaries, Pond River, Rough River, and the Tradewater River which, like the Green River, flows north into the Ohio River. Flooding along these rivers is recorded. From these records, it has been determined that most floods (63 percent) occur in January, February, and March while smaller percentages of flooding occur in April and May through September (15 percent each). The smallest percentage of floods occurs in November and December (7 percent). No floods have been recorded at gaging stations in October.

PHYSIOGRAPHY

Topography

The Western Coal Field (Figure 2) is a region of Pennsylvanian outcrop in Western Kentucky *(6)*. Not only is it a topographic basin but also a structural basin. Along the margin is the rugged stretch of Caseyville outcrop forming a high rim about a lower interior. It is a part of a great syncline in which the Pennsylvanian is preserved. The outward-facing Pottsville cuesta capped with the Caseyville Sandstone forms a belt of higher and more rugged hills than in the adjoining country.

The border belt of Caseyville outcrop, except for differences in altitude and relief, is a duplicate of the western border belt of the Eastern Coal Field. Vertical sandstone and conglomerate cliffs border the hill tops on the outer edge. They become rockbound valleys with rapids and waterfalls farther inward. This strip is deflected across the Mammoth Cave Plateau and Pennyroyal in Hart, Green, Taylor, and Larue Counties.

Within the border, the country is a maturely dissected plateau (Figure 3) with rolling hills and valleys of moderate width. The surface shows a general accordance of summit level. This upland level is interrupted by cuestas (hills with steep faces on one side and gentle slopes on the other) formed on the Sebree, Anvil Rock, and other cliff-forming sandstones.

Outstanding features of the Western Coal Field are the broad alluvial bottoms (Figure 4) of the Green and Tradewater Rivers and their large tributaries. Wide valleys have been formed in the weak shales, except where sandstones outcrop. The valleys since have been filled with alluvium to depths up to 175 feet. From these flat alluvial bottoms, marginal hills rise abruptly. Within the bottoms, partially buried hills occur.

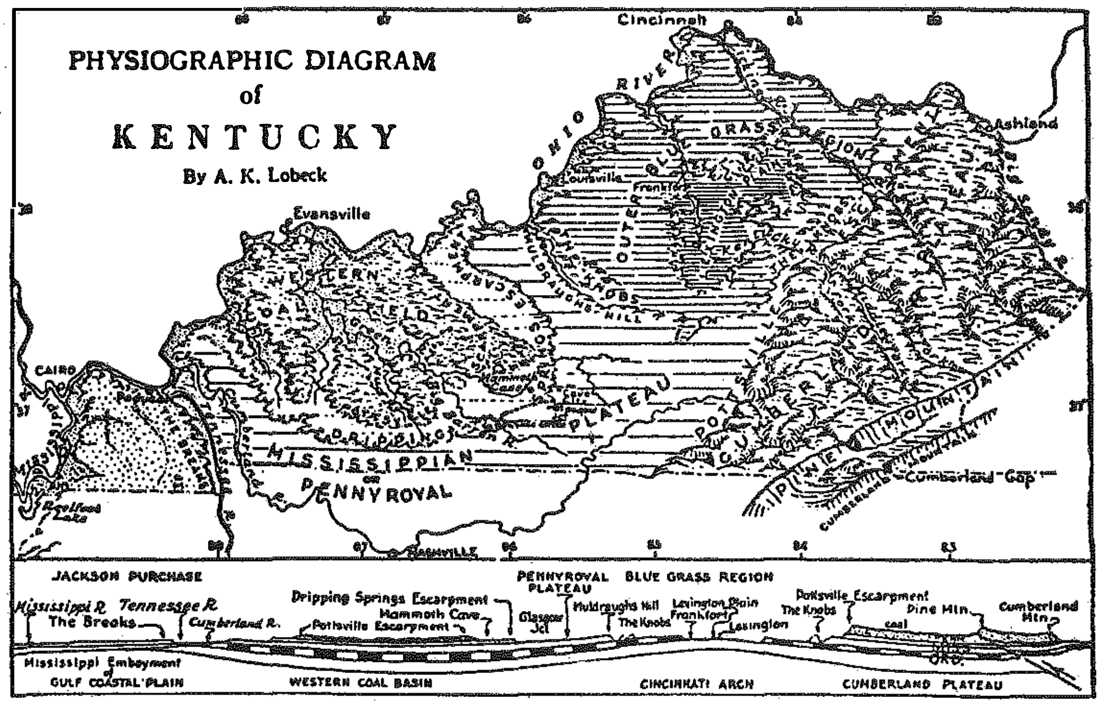


Figure 2. **Map Showing the General Topography of Kentucky.**

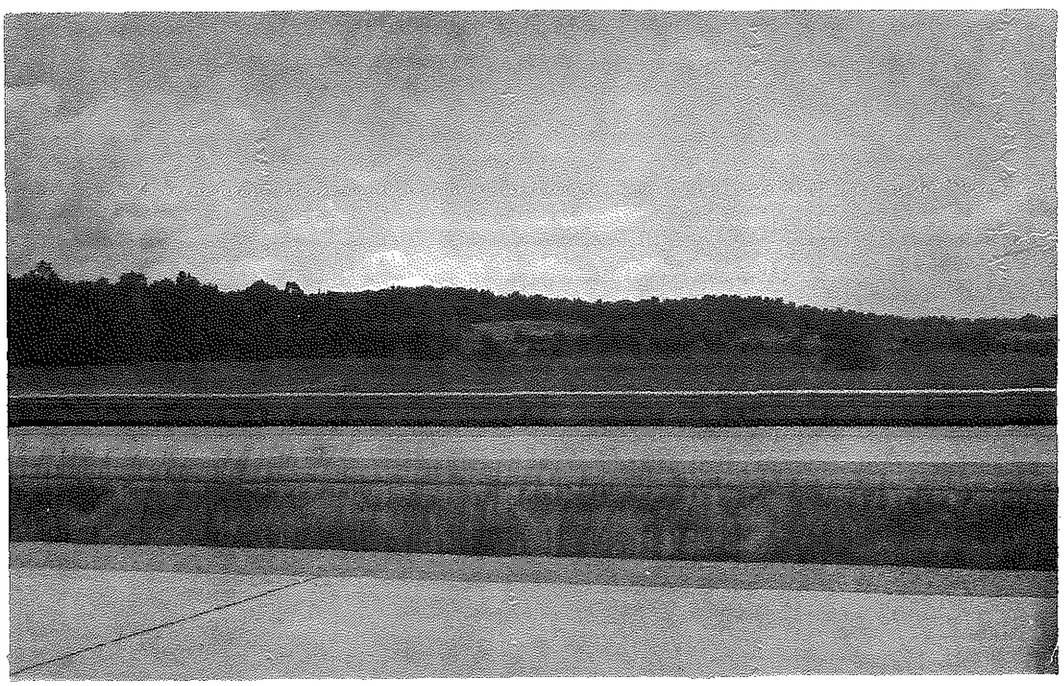


Figure 3. **General View of the Topography of the Western Coal Field.**

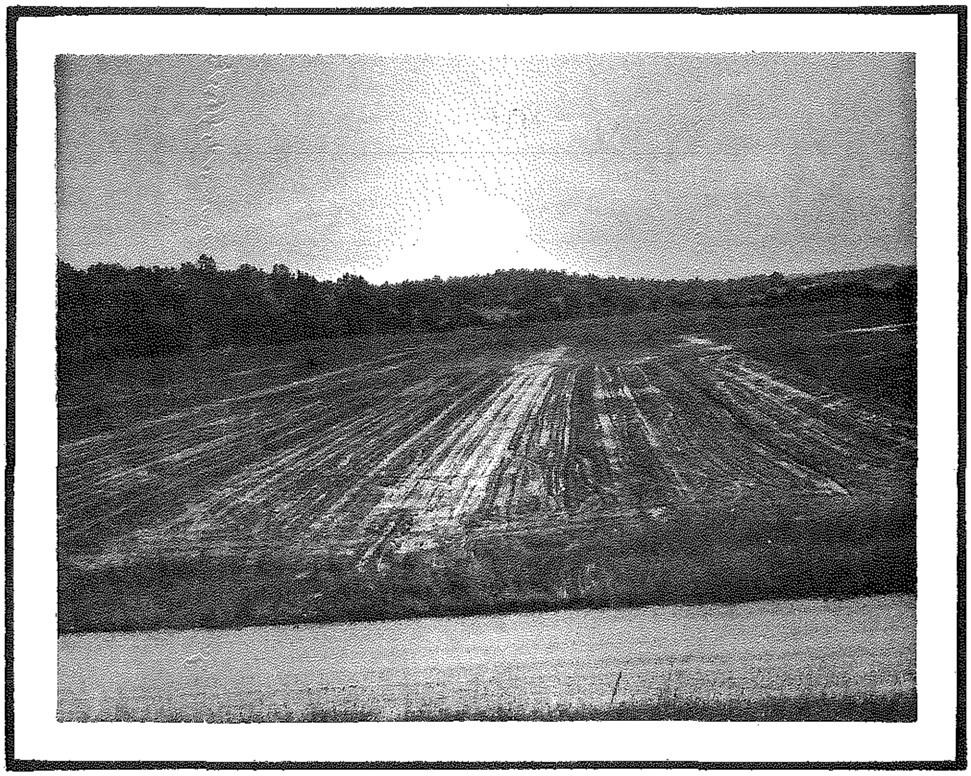


Figure 4. **Views of the Broad Alluvial Bottoms of the Green River Located in the Western Coal Field.**

Geology

The Western Coal Field is part of the Eastern Interior Coal Basin (Figure 5) located in Kentucky *(6)*. The Illinois Basin contains the northern part of the western Coal Field. This basin is bounded on the south by the Rough Creek Uplift and thus does not include the southern part of the larger basin. Underlying sedimentary rocks (consolidated) (Figure 6) consist of interlayered beds of sandstones, shales, coals, and limestones representing the Pottsville, Allegheny, and Conemaugh series of Pennsylvanian age. Some materials of the Monomgahela series may be present in the Western Coal Field.

The Rough Creek Uplift is in an east-west structure extending from Grayson County to Webster and Union Counties and divides the Western Coal Field into two parts. It is a structural uplift varying greatly in detail from one place to another. Typically, it is an anticline or series of steep anticlines with reversed faulting from the south accompanied by an echelon normal faulting. Uplift may vary from a few hundred feet to 1500 to 2500 feet or more. This brings the Caseyville sandstone and the Mississippian beds again into outcrop. The highly deformed sandstones near the fault plane are usually more highly indurated, in some instances quartzitic.

Valleys of Western Kentucky (Figure 2) are considerably deeper than indicated by their present floodplains *(6)*. These floodplains constitute the surface of an alluvial fill which is 100 to 200 feet deep. The Green River with its wide and flat alluvium-floored valley reaching far up to its headwaters is typical. Rising

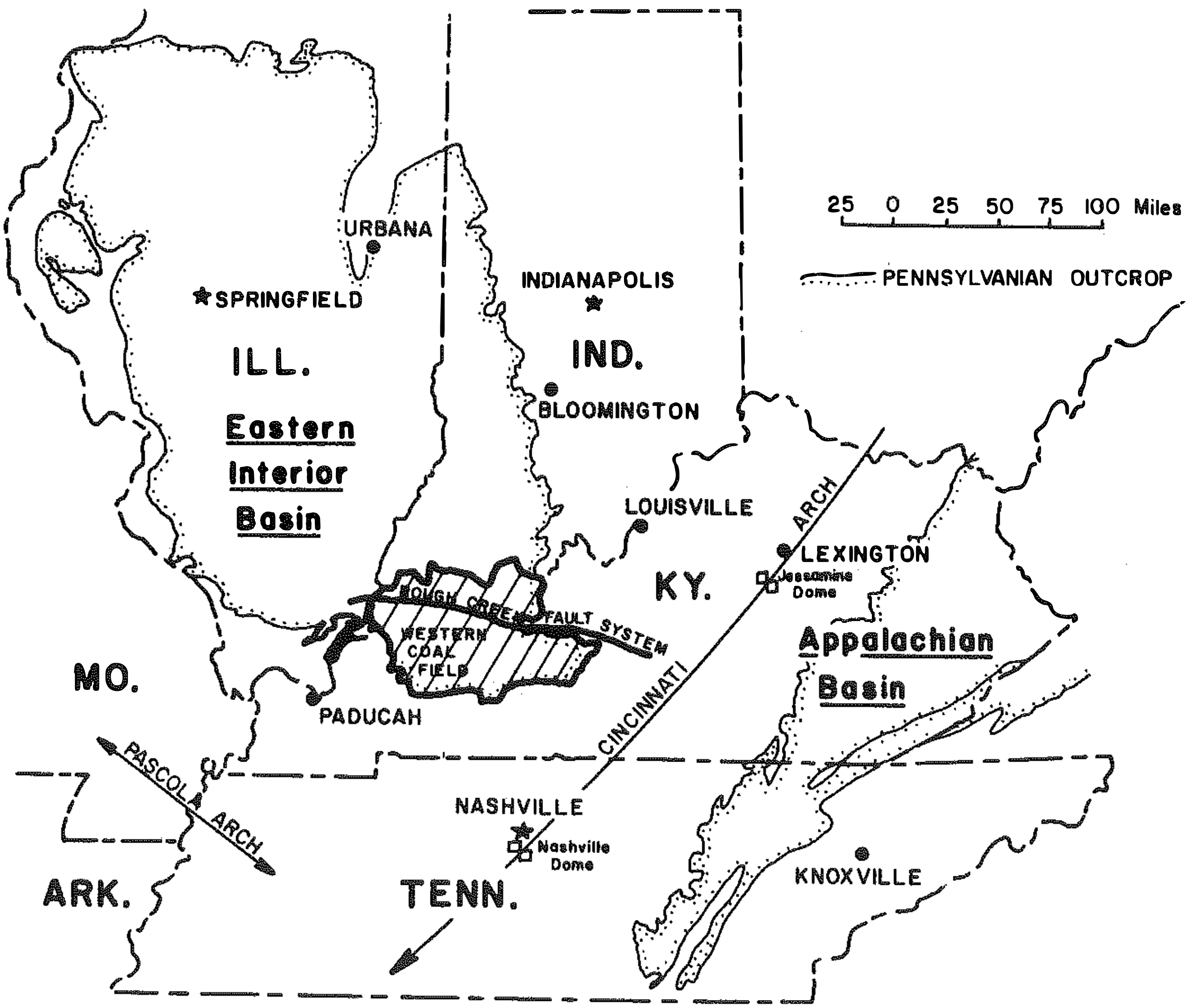
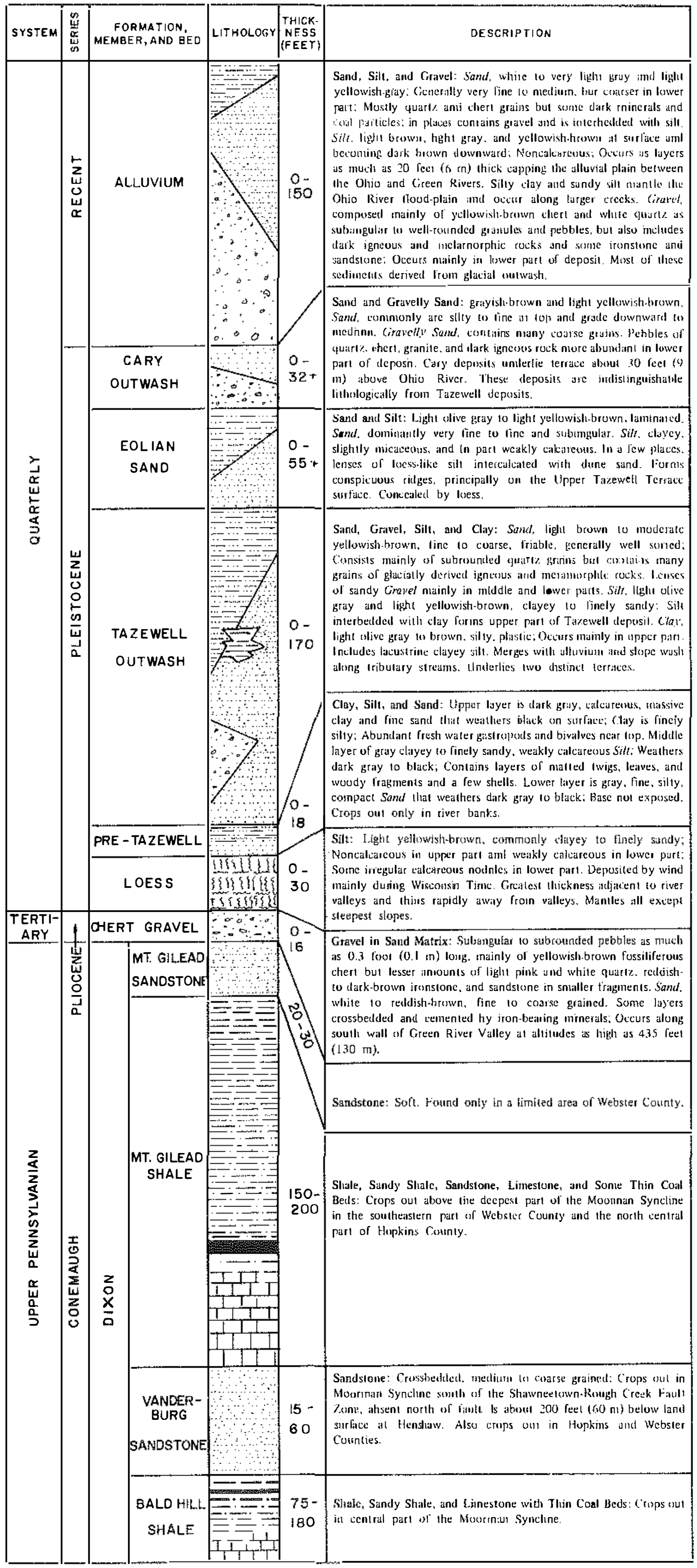


Figure 5. Regional Setting of the Western Coal Field.

Figure 6.

Geologic Columnar Section Showing the Formations and Series of the Pennsylvanian System in the Western Coal Field.



SYSTEM	SERIES	FORMATION, MEMBER, AND BED		LITHOLOGY	THICKNESS (FEET)	DESCRIPTION
UPPER PENNSYLVANIAN	CONEMAUGH	DIXON	BALD HILL SHALE		75-180	**Shale, Sandy Shale, and Limestone with Thin Coal Beds:** Crops out in central part of the Moorman Syncline.
			DIXON SAND STONE		10-60	**Sandstone:** Medium to fine grained, crossbedded; Crops out in Moorman Syncline south of the Shawneetown-Rough Creek Fault Zone around Henshaw and eastward to Union County line. Absent north of the fault. Sandstone is ledge former up to 25 feet (7 m) thick.
		LISMAN	MADISONVILLE LIMESTONE		875-1000+	**Shale, Sandy Shale, Limestone, Thin Coal Beds, and Sandstone Lenses:** Crops out in flanks of Moorman Syncline south of the fault. Underlies deepest part of syncline. Also crops out in Ohio, Hopkins, and Webster Counties. *Limestone*, dark gray; dark bluish-gray to dark brown where weathered; Dense, finely crystalline; Medium- to thick-bedded; Partly sandy, fossiliferous. *Shale*, in part clay shale, white to dark gray; Light gray to brown where weathered; Generally soft, partly carbonaceous, silty, sandy, and limonitic. *Coal*, Thin. *Underclay*, gray, soft.
			ANVIL ROCK SANDSTONE		0-150	**Sandstone:** Crossbedded fine- to coarse-grained, friable to well-cemented quartz sandstone containing quartz pebbles; Grades laterally into shale. Caps the bluffs along the Green River in Henderson County; Crops out in flanks of the Moorman Syncline, near The Rocks, and along the Camp Breckinridge Military Reservation boundary south of Morganfield as well as in Ohio, Daviess, Hopkins, and Webster Counties.
			NO. 12 COAL		9-20	**Limestone, Shale, Coal:** *Limestone*, medium gray, very fine grained to very finely crystalline, hard, fossiliferous, massive to thin-bedded. *Shale*, medium gray to light olive-gray and some medium to dark gray; Clayey. *No. 12 Coal* is 0-7 feet (0-2 m) thick. Limestone crops out between No. 12 Coal above and No. 11 Coal below.
MIDDLE PENNSYLVANIAN	ALLEGHNEY	CARBONDALE	PROVIDENCE LIMESTONE			
			NO. 11 COAL		240-590	**Shale and Fine- to Medium-Grained Quartz Sandstone:** Grades laterally into shale. Crops out in Daviess, Ohio, Webster, Hopkins, Henderson, and Union Counties. Cementing material of upper beds is calcium carbonate. *Shale* is sandy to clayey and black to gray. *Sandstone* is white to light gray. Underclay below No. 9 Coal Bed is gray and soft. No. 11 Coal is 0-9 feet (0-3 m) thick. No. 9 Coal is 0-7 feet (0 - 2 m) thick.
			UPPER SANDSTONE MEMBER			

Figure 6. (continued)

Figure 6. (continued)

SYSTEM	SERIES	FORMATION, MEMBER, AND BED		LITHOLOGY	THICKNESS (FEET)	DESCRIPTION
MIDDLE PENNSYLVANIAN	ALLEGHENY	CARBONDALE	NO. 11 COAL			
			UPPER SANDSTONE MEMBER		55-125	**Shale and Fine- to Medium-Grained Quartz Sandstone:** Grades laterally into shale. Crops out in Daviess, Ohio, Webster, Hopkins, Henderson, and Union Counties. Cementing material of upper beds is calcium carbonate. *Shale* is sandy to clayey and black to gray. *Sandstone* is white to light gray. Underclay below No. 9 Coal Bed is gray and soft. No. 11 Coal is 0-9 feet (0-3 m) thick. No. 9 Coal is 0-7 feet (0 - 2 m) thick.
			NO. 9 COAL			
			LOWER SHALE MEMBER		185-465	**Shale, Sandy Shale, and Thin Coal Beds:** Crops out in Butler, Ohio, Webster, Henderson, and Union Counties.
			SEBREE SANDSTONE		10-50	**Sandstone:** Crossbedded, coarse to medium grained, friable to well cemented. Crops out in southwestern Union County as well as in Butler and Ohio Counties.
	POTTSVILLE	TRADEWATER	NO. 7 COAL		150-180	**Shale, Sandy Shale, Thin Limestone, and Coal Beds:** Crops out in southwestern Union County and Butler, Ohio, and Hopkins Counties. Lewisport Coal Bed lies beneath Stonefort Limestone in Hancock County; May be the No. 4 Coal and is 0-3 feet (0-1 m) thick. *No. 6 Coal* is banded, sulfurous, and 1-5 feet (0.3 - 1.5 m) thick. *No. 5 Coal* is 0-2 feet (0 - 0.6 m) thick. *No. 7 Coal* is 0.5 feet (0.2 m) thick.
			NO. 6 COAL			
			NO. 5 COAL			
			STONEFORT LIMESTONE			
			CURLEW SANDSTONE		20-120	**Sandstone:** Coarse to fine grained, crossbedded, friable to well cemented. Crops out in Union, Hopkins, Webster, Butler, Ohio, Daviess, and Hancock Counties.

SYSTEM	SERIES	FORMATION, MEMBER, AND BED		LITHOLOGY	THICKNESS (FEET)	DESCRIPTION
MIDDLE PENNSYLVANIAN	POTTSVILLE	TRADEWATER	CURLEW SANDSTONE		20-120	**Sandstone:** Coarse to fine grained, crossbedded, friable to well cemented. Crops out in Union, Hopkins, Webster, Butler, Ohio, Daviess, and Hancock Counties.
			CURLEW LIMESTONE		19-40	**Shale, Sandy Shale, Thin Coal, and Limestone Beds:** Crops out in Hopkins, Webster, Daviess, and Hancock Counties. Called Lead Creek Limestone by Crider (1913). Lead Creek Coal Bed is 0-2 feet (0 - 0.6 m) thick. *Limestone*, light gray to dark bluish-gray, fine to coarse grained; Weathers to very light gray rubble. The Curlew Limestone Member is the most persistent unit in the Tradewater Formation and is useful as a reference datum for identifying and correlating coal beds.
			ABERDEEN SANDSTONE		30-100	**Sandstone:** Massive, crossbedded, coarse to medium grained, friable to well-cemented quartz sandstone; Contains fragments of silicified wood. Shaly in some areas. Unconformity at base. Crops out in Butler, Webster, Hopkins, Daviess, and Hancock Counties.
			FINNIE SANDSTONE		80±	**Sandstone, Coal:** Medium to coarse grained and contains iron; Massive. Crops out in Daviess, Hancock, Webster, Hopkins, and Union Counties.
			BELL COAL			
			GRINSTAFF SANDSTONE		0-80	**Sandstone, Coal:** Fine-grained quartz sandstone grading laterally into shale. Crops out in the southwestern tip of Union County as well as Webster, Hopkins, Daviess, and Hancock Counties. *No. Ia Coal* is also known as the Hawesville Coal. Coal contains 3- to 6-inch (8- to 15-cm) partings of smutty coal and hyrite near middle of bed, 0-1 feet (0 - 0.3 m) thick. Underclay is plastic fireclay.
			NO. Ia COAL			
LOWER PENNSYLVANIAN		CASEYVILLE	BEE SPRING SANDSTO E		40-60	**Sandstone:** Massive, cliff-forming, crossbedded, medium-grained sandstone; contains pebbles of quartz; friable to well cemented with silica or limonite; Grades laterally into shale. Crops out in Hancock, Hopkins, Union, and Butler Counties. Sandstone is gray, weathers yellow.
			BATTERY ROCK COAL		0-8	**Shale, Sandy Shale, Sandstone, and Thin Limestone and Coal Beds:** Crops out in Hopkins, Union, and Butler Counties. Shale is medium to dark gray, slightly carbonaceous.
			LOWER CONGLOM-ERATE MEMBER		0-540	**Sandstone:** Massive, cliff-forming, crossbedded, conglomeratic medium-grained sandstone with pebbles of vein quartz. Friable to well cemented with silica or limonite; Grades laterally into shale. Contains more and larger pebbles than the Bee Springs Sandstone. Crops out in Butler, Hancock, Union, and Hopkins Counties. Rock asphalt deposits (Kyrock) are associated with this member. Conglomerate is light to dark reddish-brown, poorly sorted, weathers yellow to brown.

Figure 6. (continued)

above these bottoms are islands of bedrock. The wide valleys reflect the effect of erosion on the weaker shales of much of the post-Caseyville Pennsylvanian. These alluvial floodplains cover about one-fourth of the area of the Western Coal Field. The alluvial material consists of blue sticky clays, silts having a general nature of glacial rock flour, sand which is often crossbedded, and small amounts of igneous and metamorphic pebbles. The material is coarser nearer the river than in the tributaries.

Possible explanations of this fill include deposition due to regional depression, overloaded glacial originated floodwaters, and an extension of the Gulf of Mexico. Alluviation by glacial waters has been regarded as an important cause of valley filling. The Ohio River and other major streams serving the glacier-occupied region northward were built up by valley trains deposited by glacial flood waters. Ponding of tributaries from the south by the aggrading of the river valleys added to backwater from the flooded rivers and resulted in their alluviation. The filling of the Green River and its tributary streams was partly normal material brought in from the headwaters and partly material brought in by the glacial backwater. Evidence to confirm this is found in the presence of pebbles and sand in the alluvium which are distinctly glacial in derivation, the decrease in altitude upstream of the fill near the mouths of streams, and the localization of coarser material and development of torrential crossbedding in the stream-mouth areas.

Pedology

Based on origin and position, the unconsolidated surficial materials *(7)*, which are geologically much younger than the underlying, consolidated bedrock materials have been broadly divided into three groups (see Figure 7): soils derived from alluvium located on stream terraces and flood plains, soils derived from loess located on uplands and local alluvium, and soils derived from sandstone and shale with a thin loess cover.

Original deposits of loess were as much as 50 feet thick to the west. The loess was transported by wind from the north and west and diminished in thickness from northwest to southeast. The loess cover has been further reduced in thickness by erosion. The loess is composed mainly of silt-sized particles and was apparently somewhat calcareous at the time of deposition. Soils including the Memphis, Loring, Grenada, and Calloway have developed from the loess deposits.

The underlying sandstone and interbedded shale are of the Pennsylvanian age -- with limestone making up only a minor part of the bedrock. Soils that developed from this weathered sandstone and shale include the Muskingum, Litz, Gilpin, Wellston, and Zanesville. Some loess covered the sandstone and thus was involved in the development of these soils.

Alluvial deposits of variable origins are extensive along the larger streams in the areas. The Ohio River and the Green River have large drainage basins and have brought in sediment from all materials found in their respective drainage areas. Sedimentary rocks, consisting of sandstone, shale and limestone, are extensive in the watersheds of both rivers. Loess also covers large areas of both watersheds. Other parent materials in the drainage areas of these rivers have contributed mineral sediments which have weathered to varying degrees. Accordingly, the soils of the bottom lands along the Ohio and Green Rivers vary widely in texture. Soils situated nearer the river channel are sandy, whereas soils located some distance from the river channel are generally of finer texture. Soils located nearest to the limestone regions reflect the influence of the limestone by their dark colors. These soils belong to the Huntington, Lindside, Newark, and Egam series.

The tributary streams have smaller drainage basins, and therefore, the deposits along these streams consist of sediment from nearby loess-covered uplands. Soils that formed on these stream bottom lands are silty like the loess. The soils include the Adler, Birds, Collins, Falaya, Morganfield, Wakeland, and Waverly series.

Fine-textured soils evolved from alluvial deposits on terraces of the major streams. These soils include the Markland and McGary series. Soils that formed on terraces of the smaller streams generally are more silty because of their proximity to the loess uplands. Some of these soils are the Uniontown, Henshaw, and Patton.

DESCRIPTION OF EARTH MATERIALS

Consolidated (Bedrock) Materials

Bedrock materials (Pennsylvanian Age) in the area consist of interbedded sandstones, shales, sandy shales, coals, and limestones of the Pottsville, Allegheny, and Conemaugh geologic series *(8)*. A stratigraphic section of these materials is shown in Figure 6. From older to younger, the geologic formations in the area are the Caseyville, Tradewater, Carbondale, Lisman, McLeansboro, and Dixon. A view of geological outcrops in the area is shown in Figure 8.

The Caseyville Sandstone is typically a massive cliff-forming, crossbedded formation which is usually coarse grained and frequently contains silica or limonite; the latter is often irregularly distributed. These limonitic bands appear to be controlled partly by bedding, including crossbedding, and partly by concretionary matter in development. The pebbles are vein quartz measuring one-half inch or less in diameter. Associated

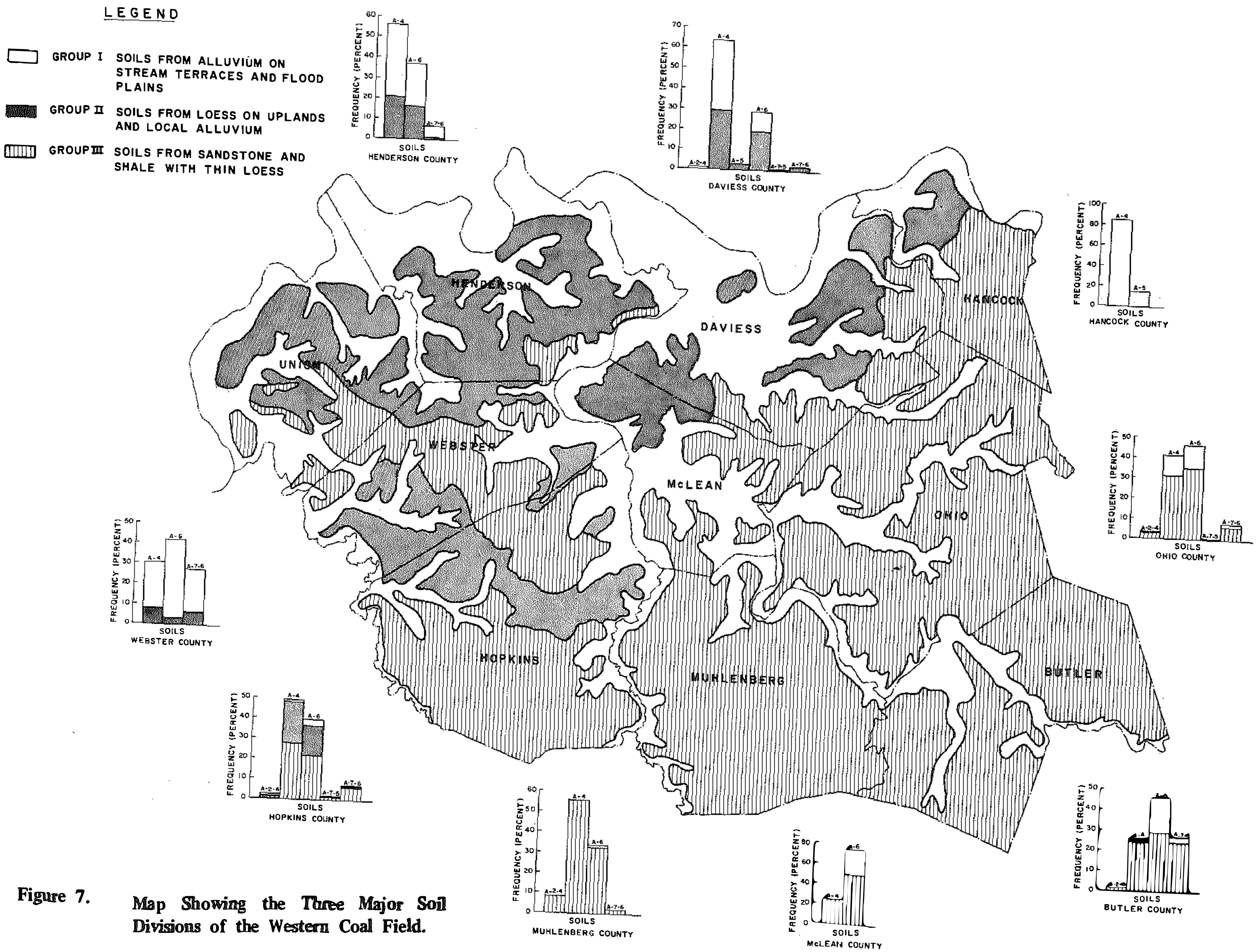
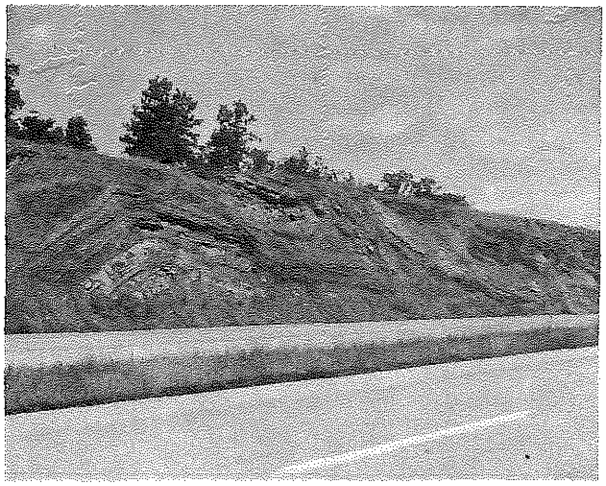


Figure 7. **Map Showing the Three Major Soil Divisions of the Western Coal Field.**



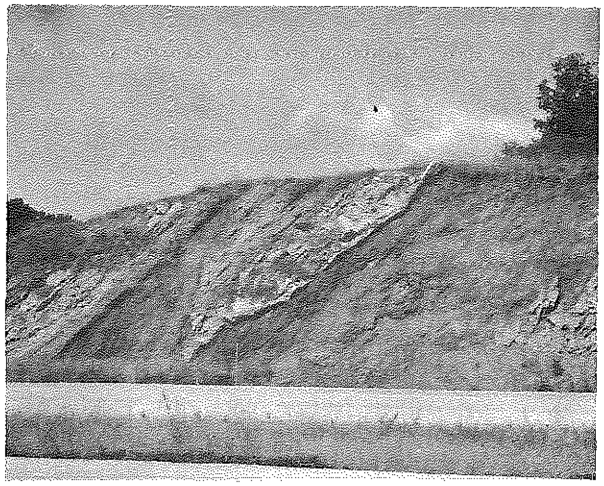
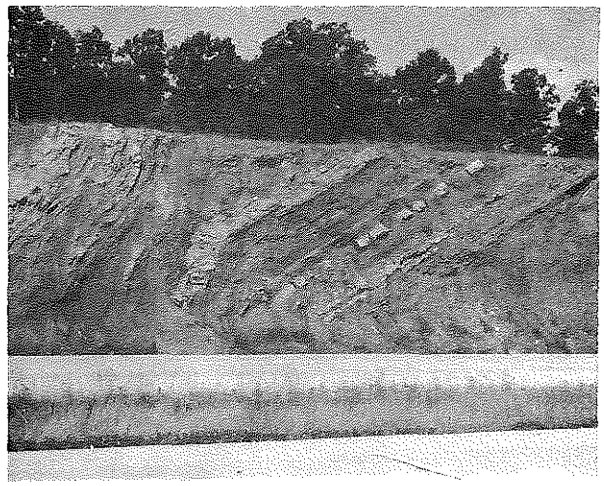


Figure 8. **View of the Geology of the Western Coal Field Exposed in a Highway Cut on the Green River Parkway.**



with the sandstones are shale layers varying from 1 to 100 feet in thickness. Kyrock (Kentucky rock asphalt) is a pebbly sandstone member locally impregnated with bitumen at Kyrock and vicinity in Edmonson County. It is the lower conglomerate and a channel fill which may be traced into Hart, Green, Taylor, and Larue Counties. This Caseyville conglomerate is regarded as the equivalent of the Rockcastle Conglomerate in Eastern Kentucky and the Sharon Conglomerate in Ohio. The Caseyville outcrops in the rugged border belt of the Western Coal Field. Its thickness varies from 200 to 500 feet or more with its maximum attained in the pre-Pennsylvanian valley fills. In Edmonson County, the lower sandstone has a thickness of 250 feet. Northward it is generally absent or present as local lenses. Oil and gas are recovered from the Caseyville formation.

Above the Caseyville is the No. 1a Coal seam. The Tradewater (Upper Pottsville) is predominantly a shale formation bounded below by the Caseyville. It occurs in layers ranging from 400 to 700 feet thick. Sandstones of the lower portion of the Tradewater Formation are subordinate, usually fine-grained, and shaly. A list and descriptions of some of these sandstones follow:

A. The Grindstaff Sandstone in the lower part of the formation is found in Union County lying just above the No. 1a Coal. It is fine grained, light gray, and finely indurated. The sharp-edged fragments located in stream beds do not readily abrade and "round off."
B. The Finnie Sandstone lies just above the No. 2 Coal. This massive sandstone is exposed along the Ohio River near Caseyville in Union County and is found only in the western counties. It is highly ferruginous and sometimes weathers to a honeycombed surface. It attains a thickness of 80 feet.
C. The Aberdeen Sandstone is a massive cliff-forming sandstone member 30 to 100 feet thick in Butler County. It is medium to coarse grained, friable, and micaceous.
D. The Curlew Sandstone, exposed in Union County, is massive, friable, crossbedded, and cliff-forming. It is about 50 feet thick with a well-marked unconformity at its base and is located slightly above the Curlew Limestone. It is present in a large portion of

the Western Coal Field.

E. The Curlew Limestone is also exposed in Union County at Indian Hill and consists of two beds of limestone, each two feet thick, and a bed of shale (15 feet) between the two beds. The upper limestone ledge lies about 25 feet below the Curlew Sandstone. The limestone is blue-gray, argillaceous, and weathers to a residual, porous, chalky chert. It occurs also in Hancock County as 3 or 4 ledges of limestone, each of which may be 10 feet thick. The lower limestone ledge usually forms the roof of the Lead Creek Coal. A prominent layer of flint occurs in a crinoidal limestone 7 feet above the base. One of the middle layers weathers yellow and is honeycombed. One upper ledge is a dark blue limestone with large crinoid stems.

F. The Stonefort Limestone located just above the horizon of the Curlew Sandstone is found in Union, Ohio, Daviess, and Butler Counties and is correlated with the argillaceous limestone located above the Lewisport Coal in Hancock County.

The Tradewater is subordinate as a coal producer. Commercial seams in this formation include the Empire, Mannington, and No. 2 Coal. The Carbondale is the greatest coal-bearing formation in the Western Coal Field. It is made up of shales, sandstones, and some limestones. It includes the Sebree Sandstone as its base and is capped by the Anvil Rock Sandstone. Its thickness varies from 250 to 650 feet. There are numerous mine tunnels, some at relatively shallow depths, and extensive strip-mined spoil areas from earlier generations. Drainage waters through such areas are often highly copperas, requiring special consideration in the design and maintenance of drainage structures.

The Sebree Sandstone is a massive, coarse-grained, cliff-forming sandstone. It is 40 to 50 feet thick in places, but locally it may be only 10 to 12 feet thick. It is the first coarse sandstone above the Caseyville and is mainly responsible for the rugged hills of the Rough Creek Fault zone. Much of the cement is ferruginous; sand ironstone plates and seams are prominent. Provident Limestone, a blue agrillaceous limestone with varying compositions and irregular bedding, is the most prominent limestone in the Carbondale and is located a few feet above the No. 11 Coal. It is a valuable horizon marker, although locally it may be thin and discontinuous. In Webster County, it may be 5 to 8 feet thick.

The Lisman Formation extends from the base of the Anvil Rock Sandstone to the base of the Dixon Sandstone. Its thickness may vary from 900 to 1000 feet. It is composed of soft shales, sandy shales, soft sandstones, and occasional limestones. The No. 9, 13, and 14 Coals are situated in the lower part of this formation. The Madisonville Limestone is also located in this formation.

Anvil Rock Sandstone is a coarse, loosely cemented, ferruginous, usually massive, and crossbedded sandstone which is locally conglomeritic. It is coarser than the Sebree. In Webster County, it may be 20 to 40 feet thick; while in Henderson County it reaches a thickness of 125 feet. It varies considerably in apparent stratigraphic position. Usually, it occurs between the No. 12 and No. 14 Coal seams. It is sometimes found above the No. 12 Coal, sometimes below the No. 12 Coal, and sometimes splitting this coal into two seams.

The Madisonville Limestone is an impure, blue to dark gray, homogeneous to brecciated limestone. In Webster and Hopkins Counties, the limestone occurs as three ledges, each 7 to 9 feet thick. The zone may be 25 to 40 feet thick and 200 feet above the base of the Lisman. The interbedded shale is red. This limestone is quarried at Madisonville.

The Dixon is the youngest formation of the Pennsylvanian in Kentucky and is bounded below by the base of the Dixon Sandstone. It outcrops in Webster and Hopkins Counties and may be over 400 feet thick. A number of recognized members include:

A. The Dixon Sandstone is a medium to fine-grained sandstone and varies from massive and hard to seamed, soft, and even argillaceous. It is frequently crossbedded and has a maximum thickness of 50 to 60 feet with a usual range of 10 to 30 feet.

B. Bald Hill Shale is often marly and leadish colored to green with purplish mottling. Thin coals and limestones occur in the formation. In the marly phase, nodules of iron carbonate as well as nodules and lenses of impure limestone occur. In part of the marly phase, vugs of fluorspar, galena, and sphalerite are found. At the top of the formation, marine fossils occur in a few inches of the marly shale or limestone which overlies a thin coal.

C. The Vanderburg Sandstone is also a medium- to coarse-grained, loosely cemented sandstone normally 15 to 30 feet thick; it may be as much as 60 feet thick. Its appearance is much like the Dixon Sandstone.

D. Mt. Gilead Shales are exposed in Webster County and have the same character as the Bald Hill Shales. Thickness of the formation varies from 150 to 200 feet. They become sandier in the upper part of the formation, grading into the Mt. Gilead Sandstone member. The Mt. Gilead Shales weather to a rusty yellow. The limestones are thin and inconspicuous with the exception of a local lens which may be 20 to 30 feet thick, located 2 miles southwest of Mt. Gilead. Also, the limestones are earthy or brecciated.

E. Mt. Gilead Sandstone is a soft sandstone 20 to 30 feet thick. It is the youngest known member of the Pennsylvanian System in the Western Coal Field and is found only in a limited area of Webster County.

Engineering properties of a few representative rock specimens obtained from the geologic formations of the Western Coal Field are tabulated in Appendix A. Specific locations from which test specimens were obtained are given in this appendix and shown in Figure 16. The limestone specimens had the highest strength values. The unconfined compressive strengths of these specimens ranged from about 14,000 to 18,000 psi and averaged 15,000 psi. Sandstone specimens had unconfined compressive strengths that ranged between 1,000 and 8,000 psi and averaged about 5,000 psi. Unconfined compressive strengths of the shales ranged form about 3,000 psi to a value slightly less than 6,000 psi. Permeability tests indicate the shales and limestones are impervious. However, the sandstones are quite pervious, having permeability constants that were as high as 340 millidacys. Generally, sclerescope hardness values indicate the limestone specimens were much harder than the sandstone and shale samples. Dry unit weights of all samples ranged from 146 to 168 pounds per cubic foot.

Unconsolidated (Surficial) Materials

The major soil associations located in each of the ten counties of the Western Coal Field are shown in Figures 9 through 18. Pedological descriptions of the major soil associations are presented in Appendix B. Numbers shown in those figures correspond to those shown in Appendix B. Each association consists of one or more major soils and at least one minor soil; the soil association is named for the major soils. Soils in one association may occur in another association but in a different pattern, as illustrated in Figures 19 and 20. Engineering soils data retrieved from highway records and plans of the Bureau of Highways, Kentucky Department of Transportation, are presented in Appendix C. These data are listed by county. The numbered bore-hole locations of the soil samples referred to in Appendix C are shown in Figures 9 through 18.

The unconsolidated materials of the Western Coal Field consist predominantly of clays and silty clays. Those soils classify by the AASHO and Unified Systems mainly as A-4 and A-6 and CL and ML-CL, respectively. Distributions of the different soil classes (Unified System) for each of three major soil groups (Figure 7) are shown in Figure 21. Distributions of the AASHO classes of the top soil horizons for each county, except Union, are shown in Figure 7. Average engineering test results of all data for each of the three major soils groups are compared in Table 3. Typical engineering classifications of the soils of the major soil associations of the area are shown in Table 4 *(9, 10, 11)*. General characteristics and relative desirability ratings for various engineering uses of the soils of the Western Coal Field can be obtained by using the Unified Classification of the soils and charts presented in Appendix D *(12)*. Typical engineering interpretations of the major soil associations in the area are shown in Table 5 *(12)*.

REFERENCES

1. *Characteristics of Population,* Bureau of the Census, 1970.
2. *County Business Patterns,* Bureau of the Census, 1968.
3. McGrain, P., Schwalb, H. R., and Smith, G. E., *Economic Geology of Hancock County, Kentucky,* Kentucky Geological Survey, 1970.
4. McCabe, John A., *Floods in Kentucky - Magnitude and Frequency,* Kentucky Geological Survey, 1962.
5. Hendrickson, G. E., *Summary of Occurrence of Ground Water in Kentucky,* US Geological Survey, 1958.
6. McFarlan, A. C., **Geology of Kentucky,** The University of Kentucky, 1943.
7. Converse, H. T., Jr. and Cox, F. R., Jr., *Soil Survey of Henderson County, Kentucky,* Soil Conservation Service, 1967.
8. Maxwell, B. W. and DeVaul, R. W., *Availability of Groundwater in Hopkins and Webster Counties, Kentucky,* US Geological Survey, 1962.
9. Jacobs, E. H., *Soil Report, Morganfield, Kentucky and Adjacent Areas,* Soil Conservation Service, 1970.
10. Jacobs, E. H., *Soil Report, Providence, Kentucky and Adjacent Area,* Soil Conservation Service, 1970.
11. Fehr, J. P., *Soil Report, Madisonville, Earlington and Dawson Springs Area, Kentucky,* Soil Conservation Service, 1970.
12. *Engineering Soil Classification for Residential Developments,* Federal Housing Administration, 1959.

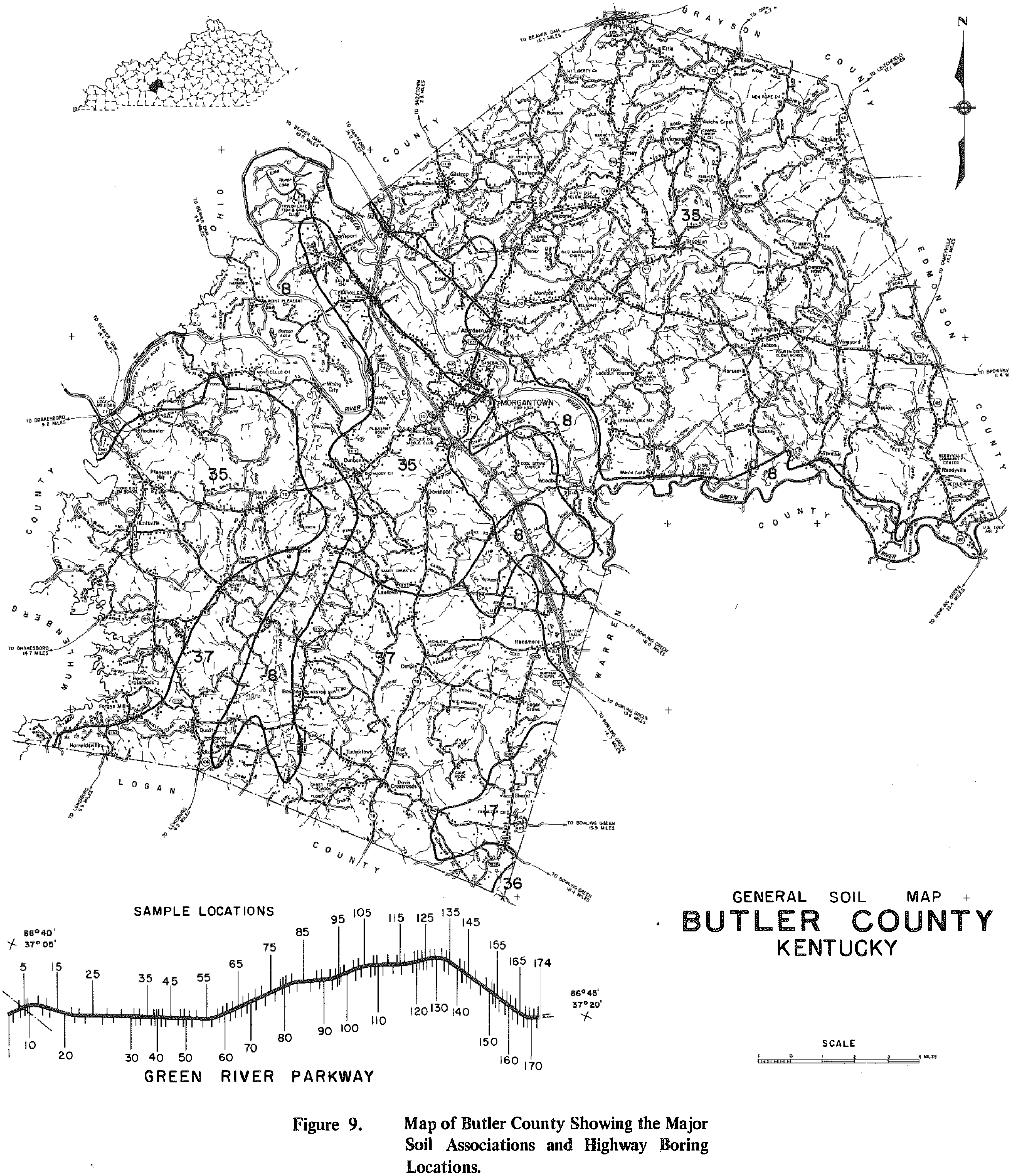


Figure 9. **Map of Butler County Showing the Major Soil Associations and Highway Boring Locations.**

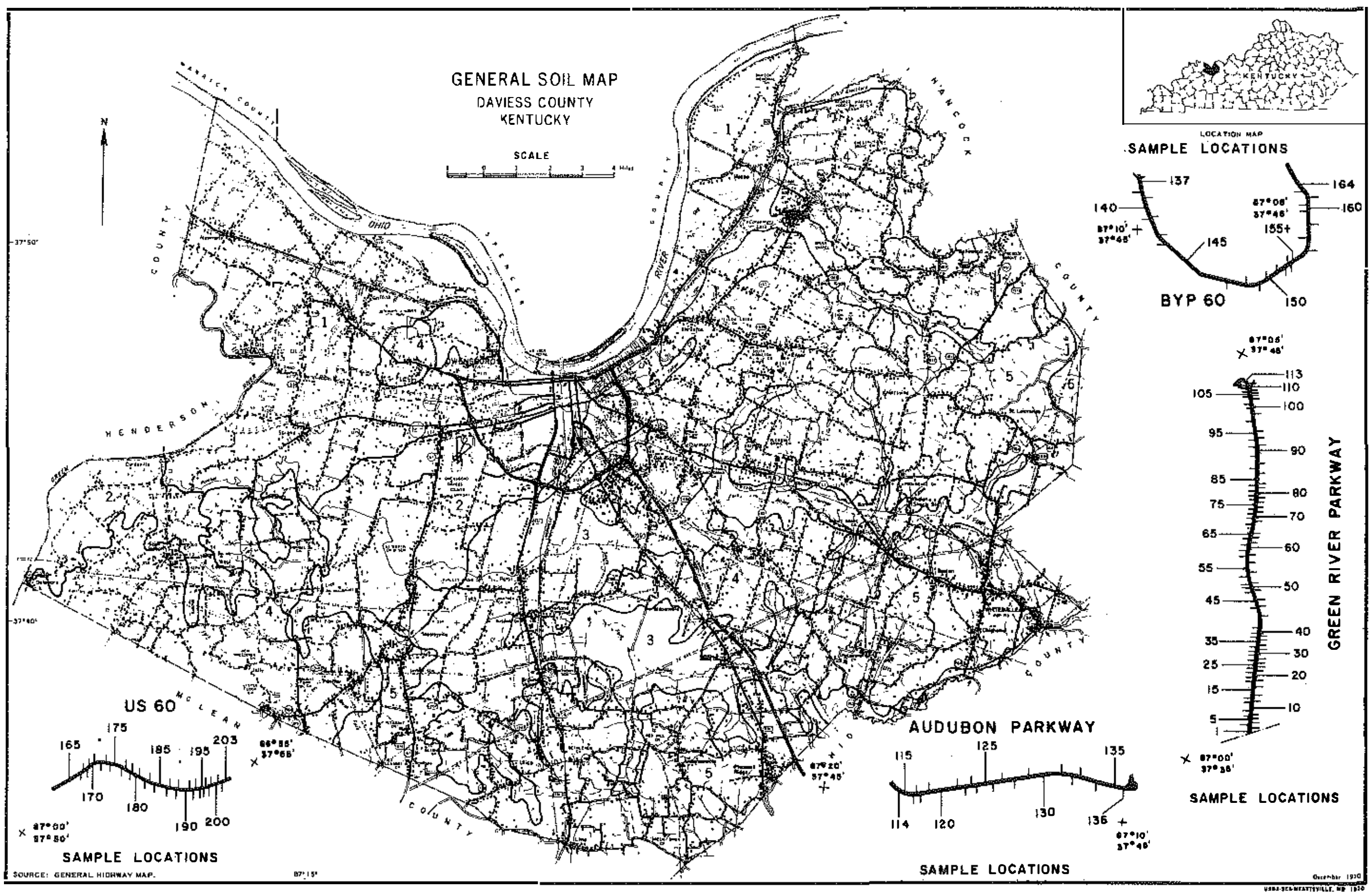


Figure 10. Map of Daviess County Showing the Major Soil Associations and Highway Boring Locations.

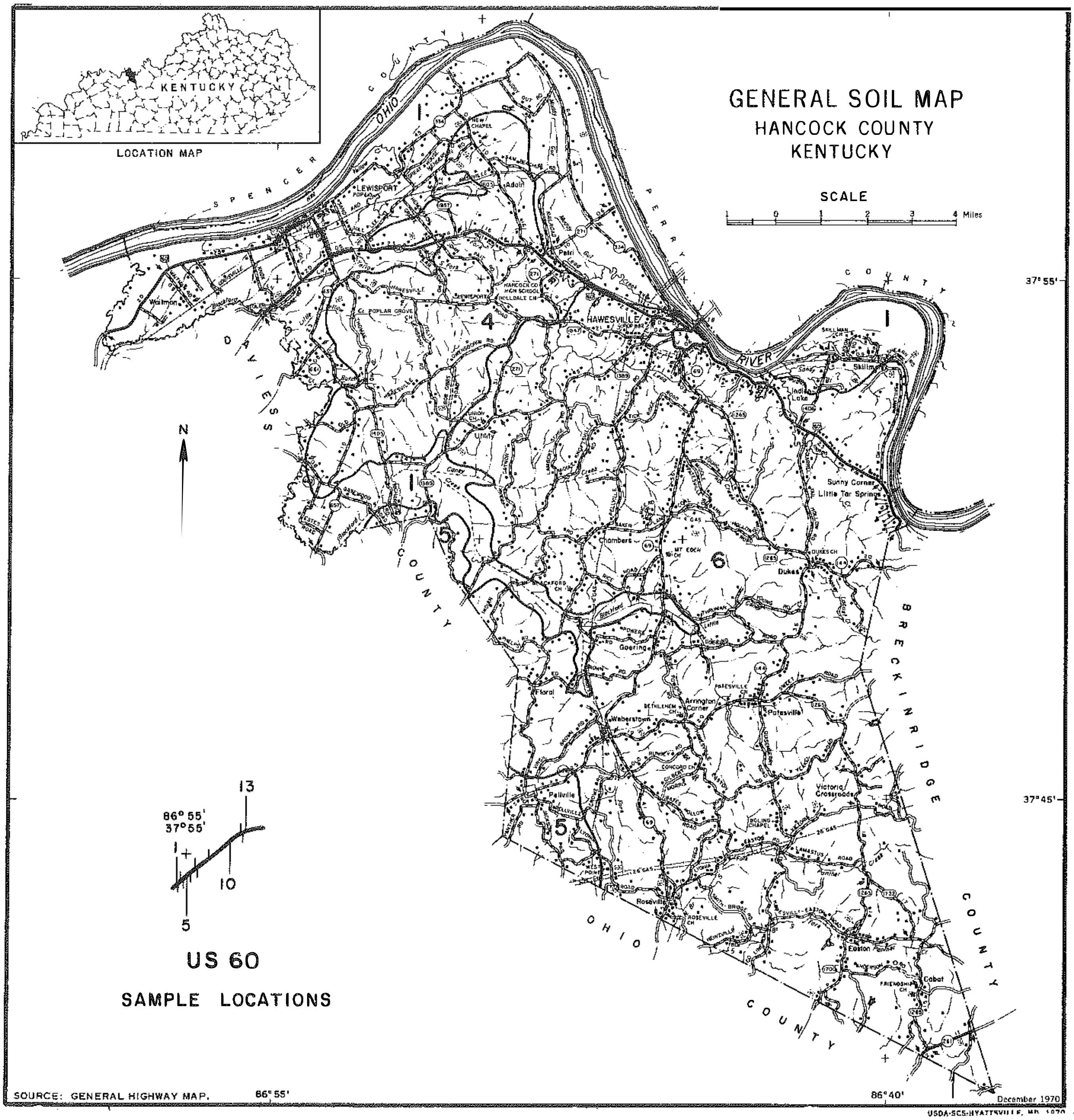


Figure 11. Map of Hancock County Showing the Major Soil Associations and Highway Boring Locations.

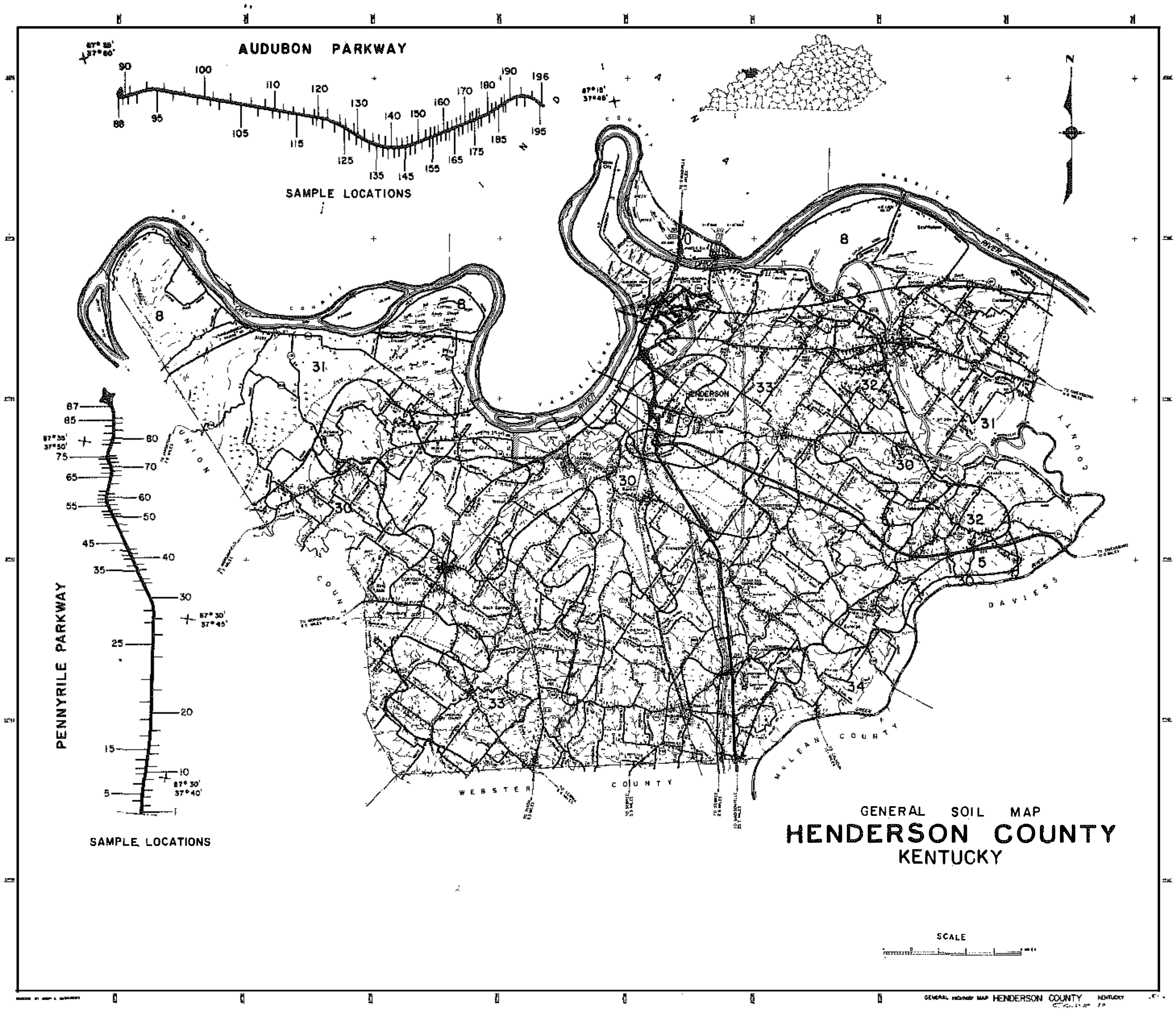


Figure 12. Map of Henderson County Showing the Major Soil Associations and Highway Boring Locations.

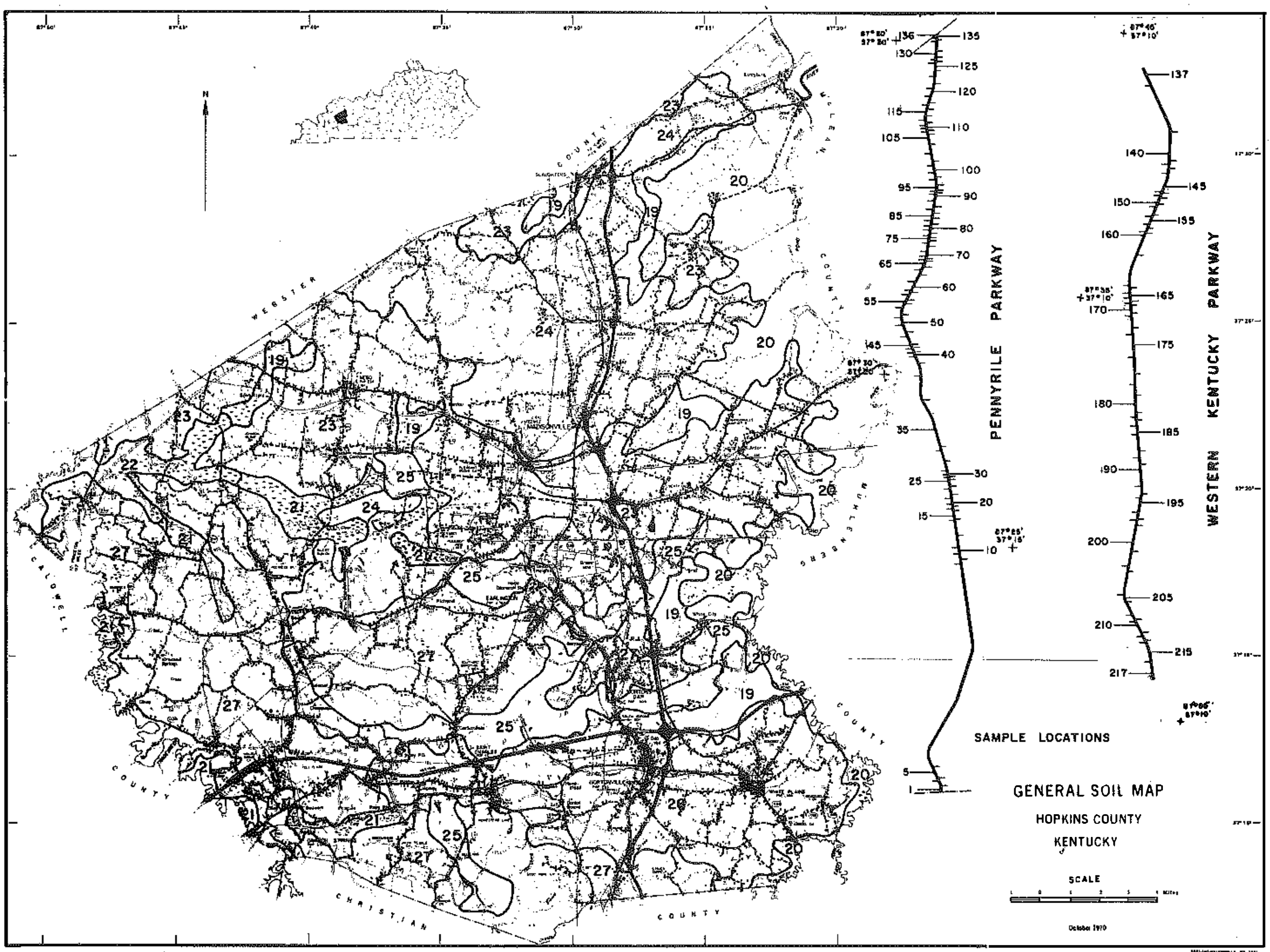


Figure 13. **Map of Hopkins County Showing the Major Soil Associations and Highway Boring Locations.**

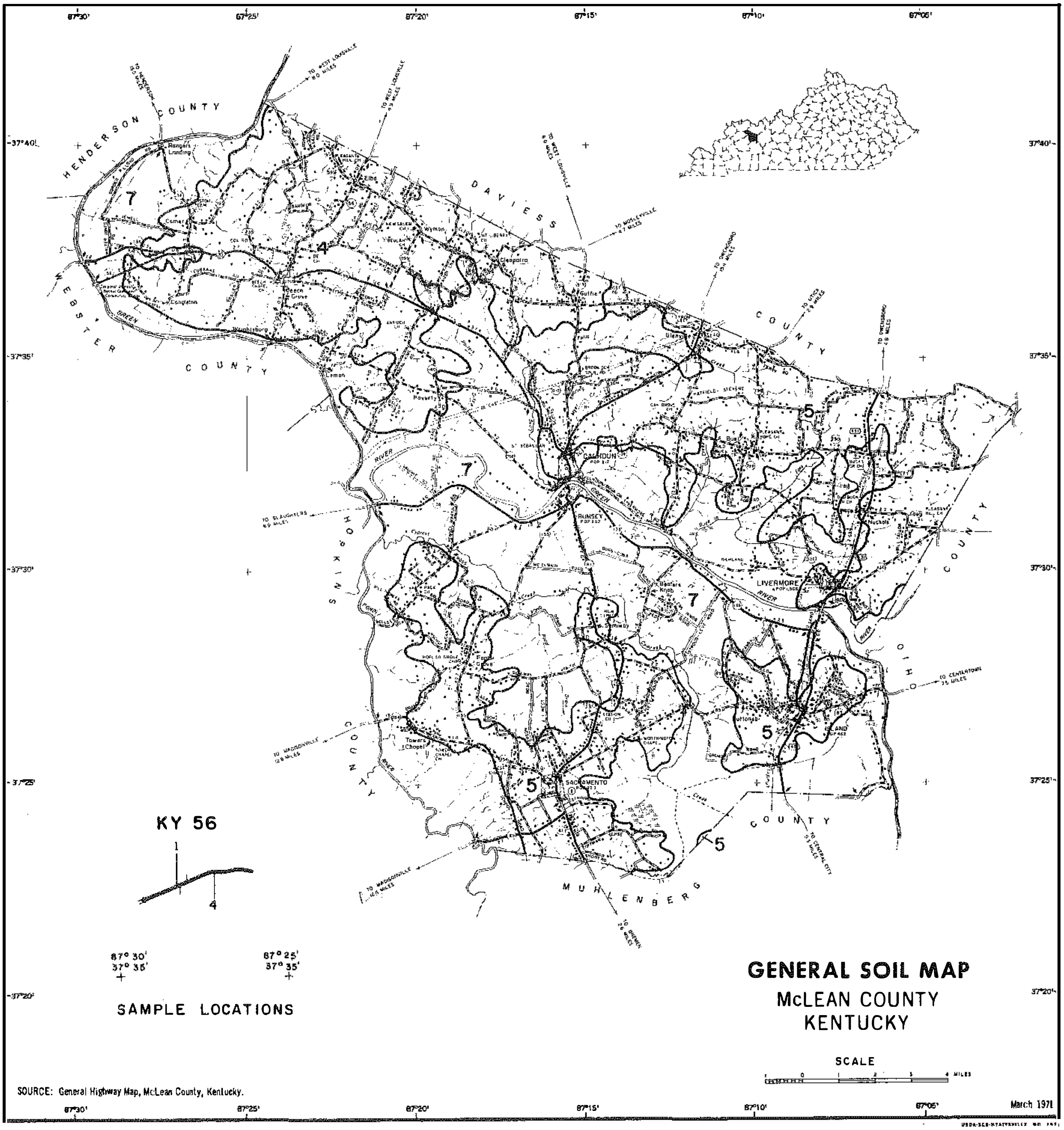


Figure 14. **Map of McLean County Showing the Major Soil Associations and Highway Boring Locations.**

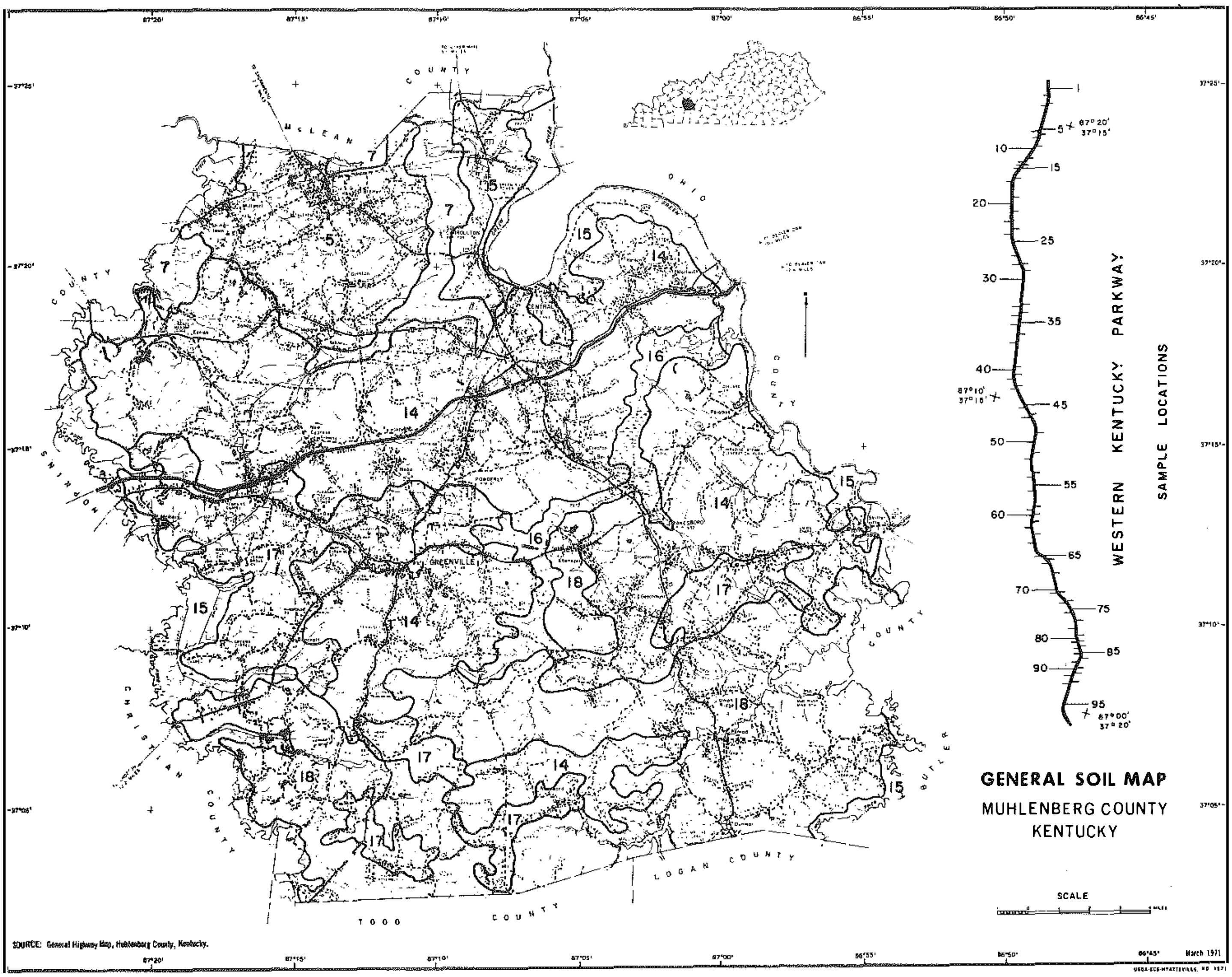


Figure 15. Map of Muhlenberg County Showing the Major Soil Associations and Highway Boring Locations.

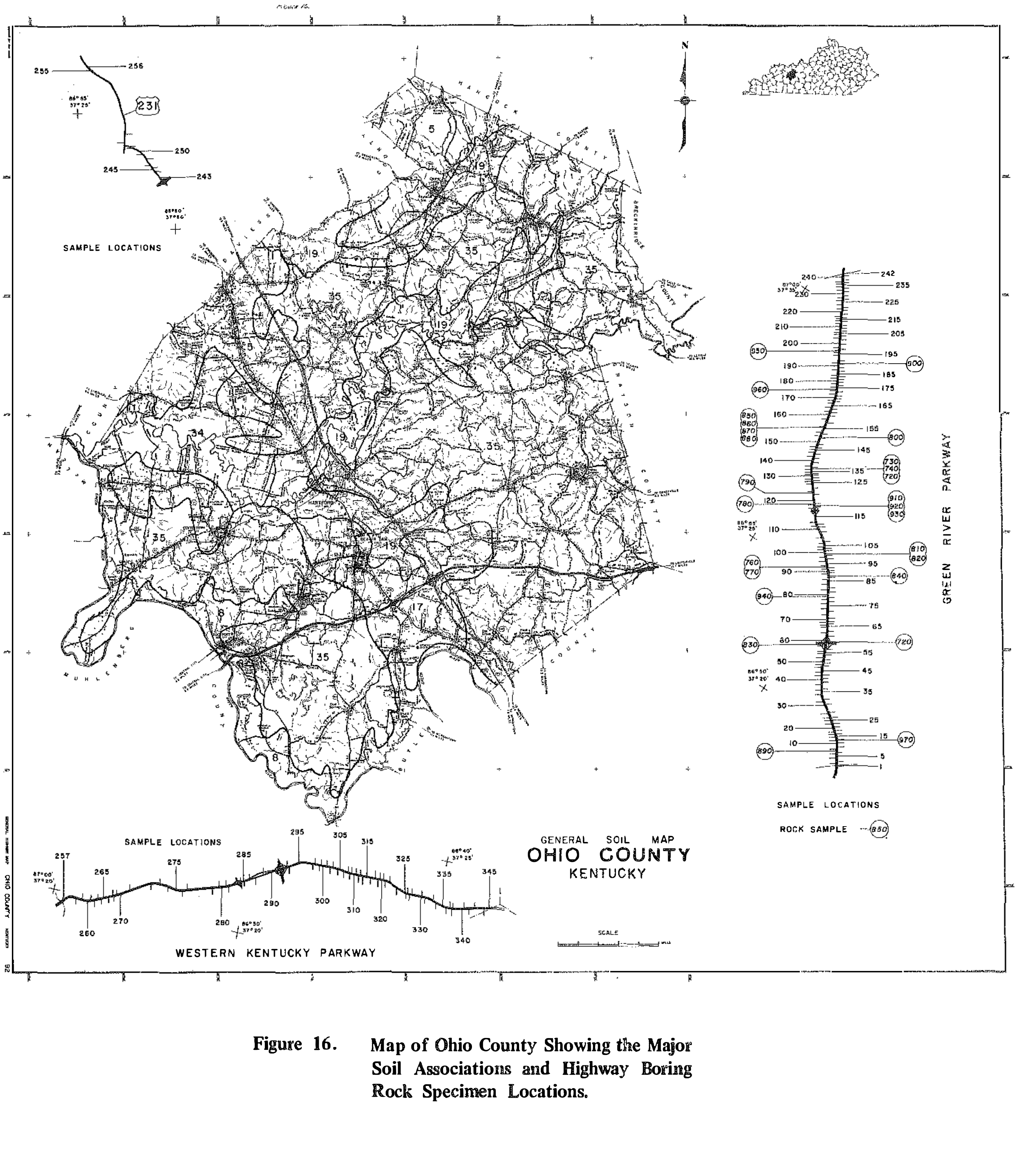


Figure 16. Map of Ohio County Showing the Major Soil Associations and Highway Boring Rock Specimen Locations.

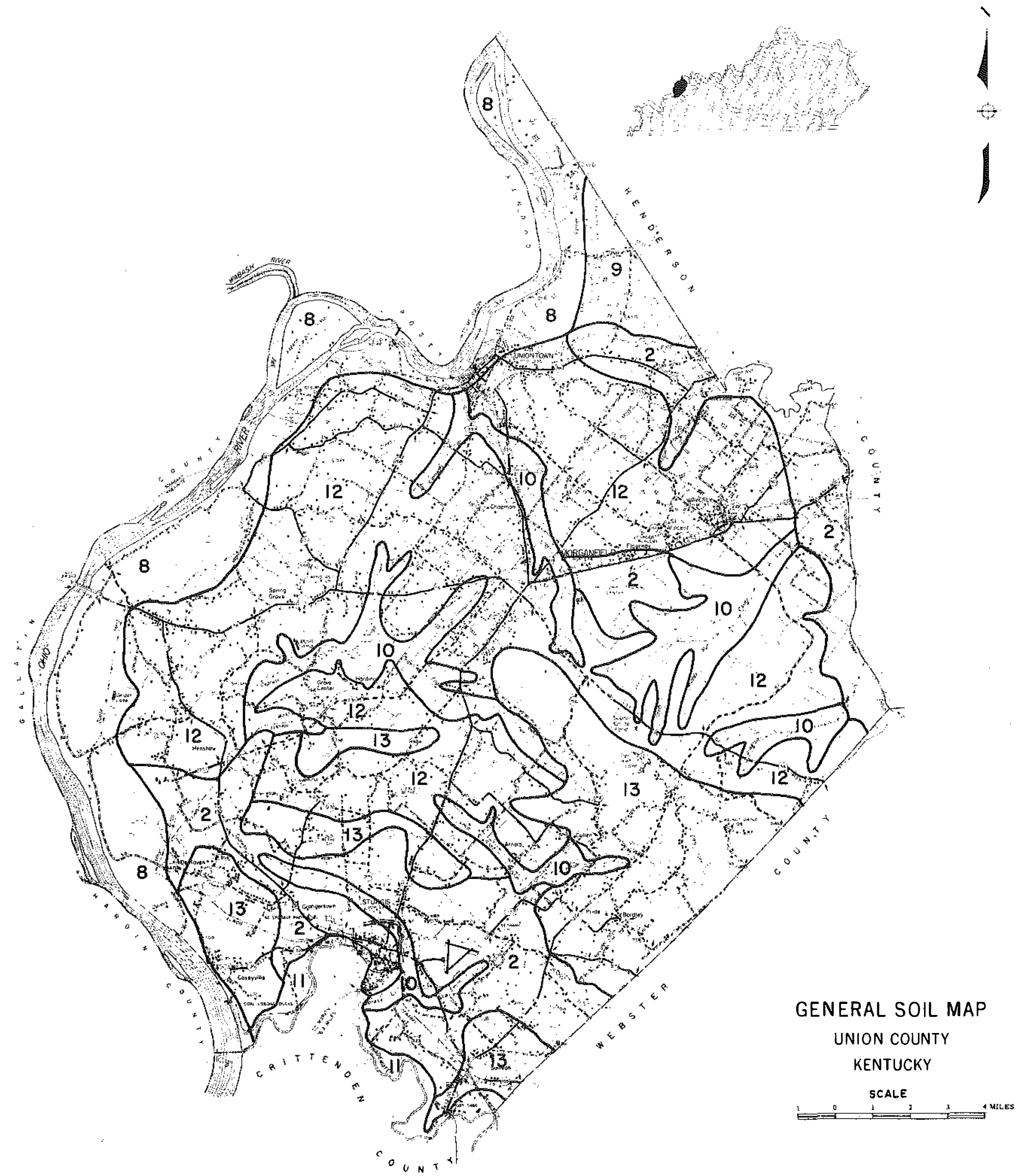


Figure 17. **Map of Union County Showing the Major Soil Associations.**

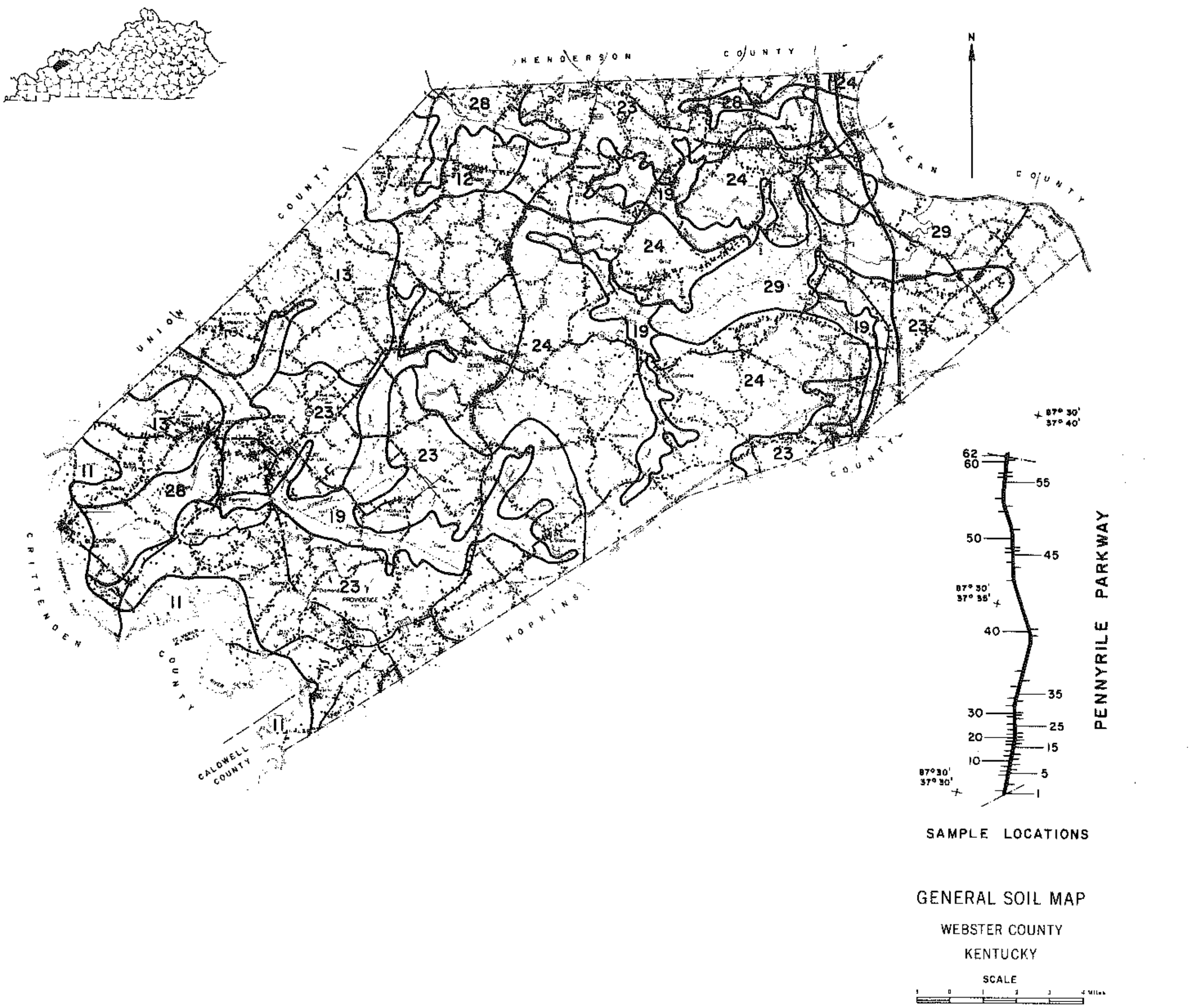


Figure 18. Map of Webster County Showing the Major Soil Associations and Highway Boring Locations.

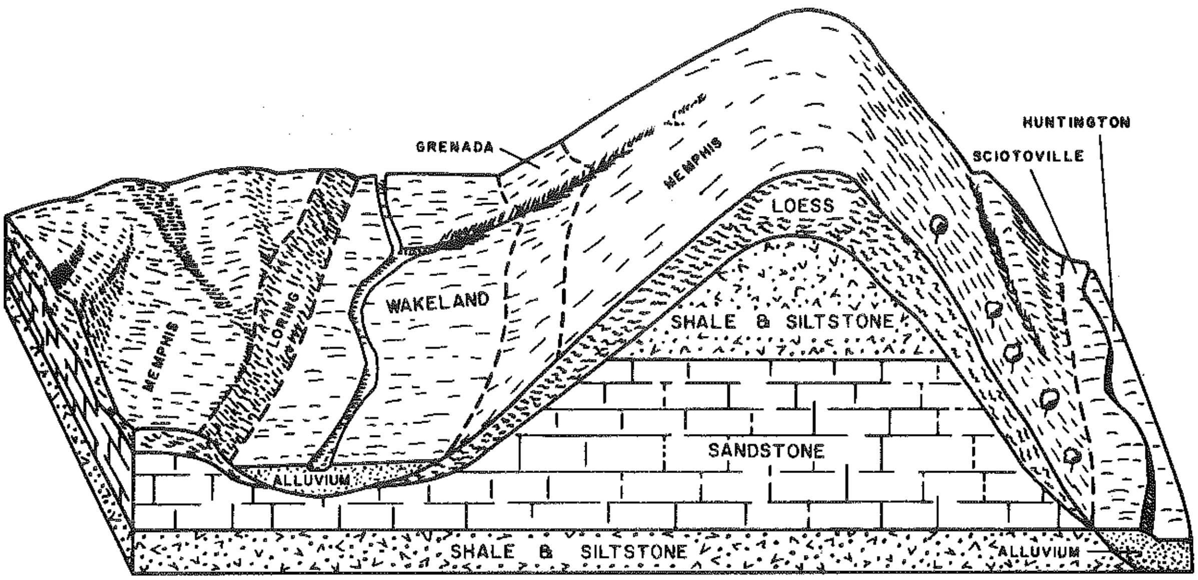


Figure 19. Block Diagrams Showing Parent Material, Position and Pattern of Soils in the Memphis-Wakeland Association.

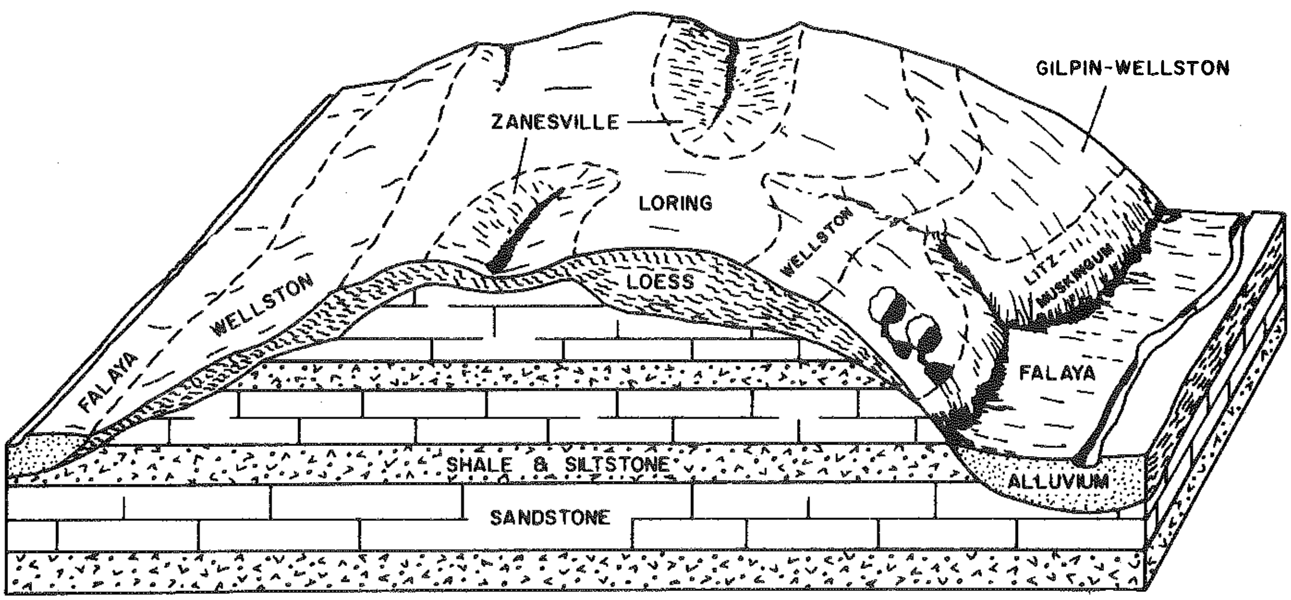


Figure 20. Block Diagram Showing Parent Material, Position and Pattern of Soils in the Loring-Zanesville-Wellston Association.

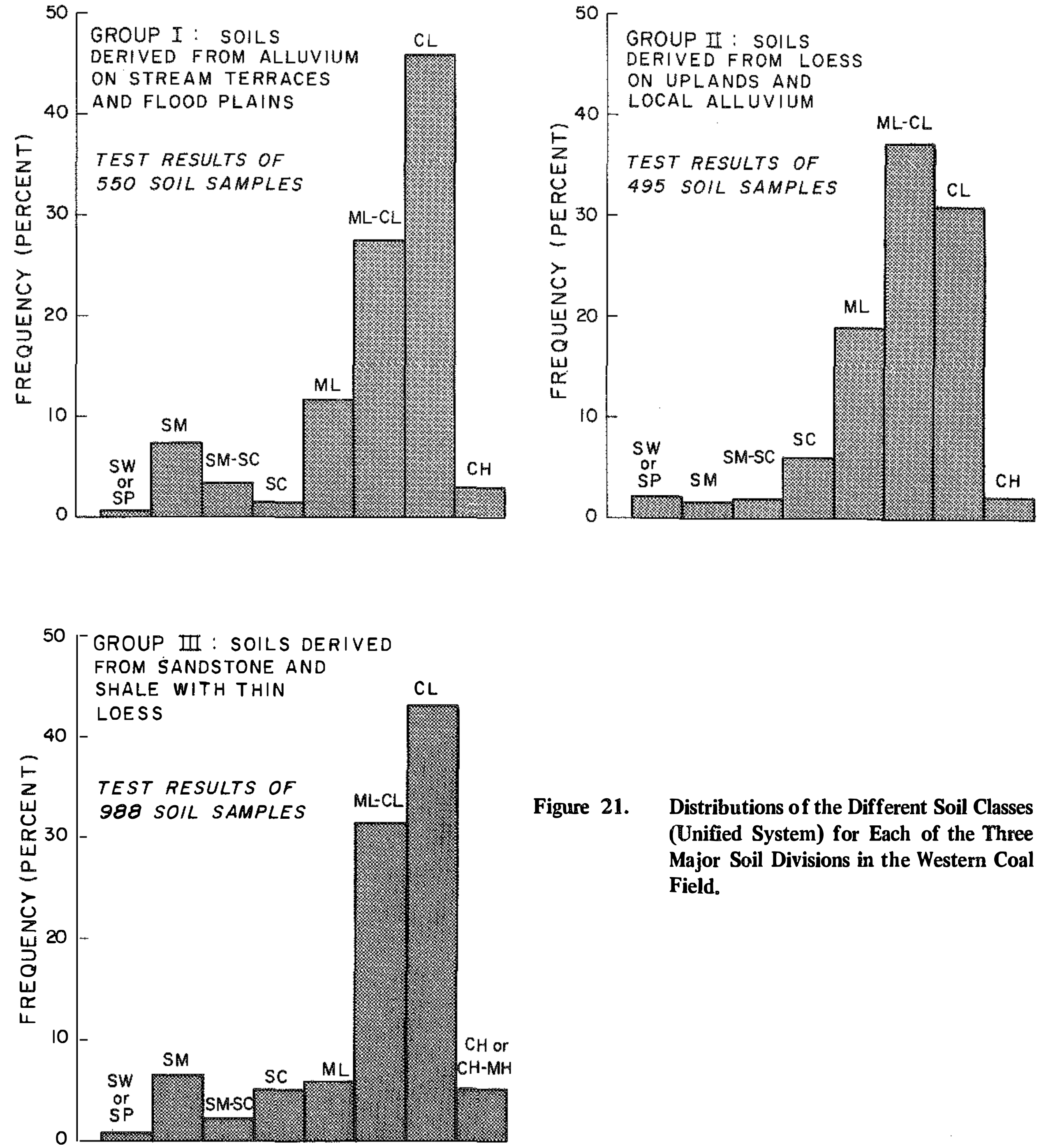


Figure 21. **Distributions of the Different Soil Classes (Unified System) for Each of the Three Major Soil Divisions in the Western Coal Field.**

TABLE 3

COMPARISON OF THE AVERAGE ENGINEERING TEST DATA OF SOILS IN EACH OF THE THREE MAJOR SOILS GROUPS OF THE WESTERN COAL FIELD

		GROUP I SOILS	GROUP II SOILS	GROUP III SOILS
Classification	Textural[a]	Clay	Clay Loam	Clay
	AASHO[b]	A-6(6)	A-6(7)	A-6(7)
	Unified[c]	CL	CL	CL
Particle-Size Distribution (percent)[d]	+No. 4 (> 4.76 mm)	2.4	1.9	2.4
	Coarse Sand (4.76 mm to 0.42 mm)	2.8	3.4	4.3
	Fine Sand (0.42 mm to 0.074 mm)	21.9	20.4	23.6
	Silt (0.074 mm to 0.005 mm)	42.6	46.0	37.0
	Clay (< 0.005 mm)	30.3	28.3	32.7
	Colloids (< 0.001 mm)	18.5	17.2	19.4
Liquid Limit (percent)[e]		30.4	31.7	33.1
Plastic Limit (percent)[f]		19.4	20.8	20.5
Plasticity Index (percent)[f]		11.0	10.9	12.6
Field Moisture Equivalent (percent)[g]		23.7	24.6	23.0
Shrinkage Limit (percent)[h]		23.0	23.2	21.7
Shrinkage Ratio[h]		1.67	1.66	1.68
Specific Gravity[i]		2.69	2.69	2.69
California Bearing Ratio (percent)[j]		7.2	8.3	6.9
Optimum Moisture Content (percent)[k]		16.2	16.3	16.1
Maximum Dry Density (pcf)[k]		110.6	110.1	110.9

[a]KY-64-509-69, Manual for Soil Consultants, Kentucky Bureau of Highways

[b]AASHO M 145-66 I

[c]ASTM D 2487-69

[d]ASTM D 422-63 (1972)

[e]ASTM D 423-66 (1972)

[f]ASTM D 424-59 (1971)

[g]AASHO T-93

[h]ASTM D 427-61 (1967)

[i]ASTM D 854-58 (1972)

[j]ASTM D 1883-67

[k]ASTM D 698-70

TABLE 4

TYPICAL ENGINEERING CLASSIFICATIONS OF THE SOILS OF THE MAJOR SOIL ASSOCIATIONS IN THE WESTERN COAL FIELD

SOIL	DEPTH TO BEDROCK (FEET)	DEPTH FROM SURFACE (INCHES)	CLASSIFICATION			PERMEABILITY (INCHES/HOUR)
			USDA TEXTURE	UNIFIED	AASHO	
Bonnie silt loam	5-10+	0-60	Silt loam	ML or ML-CL	A-4	0.63 - 2.00
Calloway silt loam	5-15	0-7	Silt loam	ML	A-4	0.63 - 2.00
		7-24	Silt loam	ML or ML-CL	A-4	0.63 - 2.00
		24-60	Silty clay loam	ML-CL or CL	A-6	0.06 - 0.20
Captina silt loam	20+	0-7	Silt loam	ML	A-4	0.63 - 2.0
		7-18	Silty clay loam	CL	A-6	0.2 - 0.63
		18-38	Fine silt loam	CL	A-6	< 0.2
		38-40+	Silty clay loam	CL	A-6 or A-7	0.2 - 0.63
Dekalb very stony loam	1 1/2-3	0-7	Very stony loam	SM or ML	A-2 or A-4	2.00 - 6.30
		7-28	Very stony fine sandy loam	SM	A-2 or A-4	2.00 - 6.30
		28-35	Very rocky sandy loam	SM	A-2 or A-4	2.00 - 6.30
Dekoven silt loam	20+	0-8	Silt loam	ML or CL	A-4 or A-6	0.63 - 2.0
Dekoven silty clay loam		8-26	Silt loam	ML or CL	A-4 or A-6	0.63 - 2.0
		26-42+	Silty clay loam	CL	A-6 or A-7	0.2 - 0.63
Egam silt loam	20+	0-7	Silty clay loam or silt loam	ML or CL	A-4 or A-6	0.63 - 2.0
Egam silty clay loam		7-18	Silt loam	ML or CL	A-6	0.2 - 0.63
		18-30+	Silty clay loam	CL or CH	A-6 or A-7	0.2 - 0.63
Elk silt loam, 0 to 2 percent slopes	20+	0-8	Silt loam	ML or CL	A-4 or A-6	0.63 - 2.0
Elk silt loam, 2 to 6 percent slopes		8-48+	Silty clay loam	CL	C-6 or A-7	0.2 - 0.63
Falaya silt loam	5-10+	0-60	Silt loam	ML or ML-CL	A-4	0.63 - 2.00
Gilpin silt loam	1 1/2-3	0-7	Silt loam	ML	A-4	0.63 - 2.00
		7-25	Silty clay loam	CL or ML-CL	A-4 or A-6	0.63 - 2.00
		25-32	Channery sandy clay loam	ML or SM	A-4	0.63 - 2.00
Ginat silt loam	20+	0-24	Silt loam or silty clay loam	ML or CL	A-4 or A-6	0.63 - 2.0
Ginat silty clay loam		24-28	Silty clay loam	CL	A-6 or A-7	0.2 - 0.63
		28-48	Silty clay loam	CL	A-7	< 0.2
Grenada silt loam	5-15	0-25	Silt loam	ML or ML-CL	A-4	0.63 - 2.00
		25-48	Silty clay loam	CL	A-6	0.06 - 0.20
		48-60	Silt loam	ML-CL	A-4 or A-6	0.63 - 2.00
Henshaw silt loam	6+	0-9	Silt loam	ML or CL	A-4 or A-6	0.63 - 2.00
		9-45	Silty clay loam	CL	A-6	0.20 - 0.63
		45-60	Silt loam	CL	A-6	0.63 - 2.00
Huntington fine sandy loam	20+	0-20	Fine sandy loam	SM or ML	A-2 or A-4	> 6.3
		20-48+	Fine sandy loam or loamy sand	SM or ML	A-2 or A-4	> 6.3
Loring silt loam	5-15	0-12	Silt loam	ML	A-4	0.63 - 2.00
		12-48	Silty clay loam	CL or ML-CL	A-6	0.63 - 2.00
		28-45	Silt clay loam	CL or ML-CL	A-6	0.20 - 0.63
		45-60	Silt loam	ML-CL	A-4 or A-6	0.63 - 2.00
McGary silt loam	20+	0-6	Silt loam	ML or CL	A-4 or A-6	0.63 - 2.0
		6-14	Silty clay	CL or CH	A-7	< 0.2
		14-42+	Silty clay	CL or CH	A-7	< 0.2
Melvin silt loam	20+	0-24	Silty clay loam or silt loam	ML or CL	A-4 or A-6	0.63 - 2.0
Melvin silty clay loam		24-36+	Silty clay loam	CL	A-7	0.2 - 0.63
Memphis silt loam	6+	0-13	Silt loam	ML	A-4	0.63 - 2.00
		13-43	Silty clay loam	CL	A-6	0.63 - 2.00
		43-60+	Silt loam	ML	A-4	0.63 - 2.00
Newark silt loam	20+	0-6	Silt loam	ML or CL	A-4 or A-6	0.63 - 2.0
		6-36+	Silt loam	ML or CL	A-4 or A-6	0.63 - 2.0
Patton silt loam	20+	0-24	Silt loam or silty clay loam	ML or CL	A-4 or A-6	0.63 - 2.0
Patton silt loam, overwash		24-36	Silty clay loam	CL	A-6 or A-7	0.2 - 0.63
Patton silty clay loam		36-42+	Silt loam	CL	A-6	0.2 - 0.63
Sadler silt loam	5-8	0-7	Silt loam	ML	A-4	0.63 - 2.00
		7-24	Silt loam	ML or ML-CL	A-4 or A-6	0.63 - 2.00
		24-41	Silt loam	ML or ML-CL	A-4 or A-6	0.20 - 0.63
		41-60	Silty clay loam	CL	A-6	0.63 - 2.00
Sciotoville fine sandy loam	20+	0-8	Fine sandy loam	SM	A-2 or A-4	2.0 - 6.3
Sciotoville fine sandy loam		8-20	Clay loam	CL	A-6	0.63 - 2.0
		20-36	Loam	ML or CL	A-4 or A-6	< 0.2
		36-42+	Clay loam	CL	A-6	0.2 - 0.63
Sharkey silty clay	20+	0-6	Silty clay or silty clay loam	CL or CH	A-7	0.2 - 0.63
Sharkey silty clay loam		6-28	Clay	CL or CH	A-7	< 0.063
		28-42+	Silty clay	CL or CH	A-7	< 0.063
Stoff silt loam	5-10+	0-60	Silt loam	ML or ML-CL	A-4	0.63 - 2.00
Stendal silt loam	5-10+	0-60	Silt loam	ML or ML-CL	A-4	0.63 - 2.00
Uniontown silt loam	6+	0-12	Silt loam	ML or CL	A-4 or A-6	0.63 - 2.00
		12-34	Silty clay loam	CL	A-6	0.63 - 2.00
		34-60	Silt loam	CL	A-6	0.63 - 2.00
Wakeland silt loam	6+	0-60	Silt loam	ML or ML-CL	A-4	0.63 - 2.00
Waverly silt loam	5-8+	0-60	Silt loam	ML or ML-CL	A-4	0.63 - 2.00
Welkert channery silt loam	6+	0-12	Channery silt loam	ML	A-4	2.00 - 6.30
		12-18	Channery silty clay loam	GP-GC or GC	A-1, A-2 or A-4	2.00 - 6.30
Wellston silt loam	5+	0-13	Silt loam	ML	A-4	0.63 - 2.00
		13-37	Silty clay loam	CL	A-6	0.63 - 2.00
		37-60+	Clay loam	ML or CL	A-4 or A-6	0.63 - 2.00
Zanesville silt loam	5-8	0-7	Silt loam	ML	A-4	0.63 - 2.00
		7-28	Silty clay loam	CL or ML-CL	A-6	0.63 - 2.00
		28-39	Silty clay loam	CL or ML-CL	A-6	0.20 - 0.63
		39-60	Silty clay loam	CL or ML-CL	A-4 or A-6	0.63 - 2.00

From References *7, 9, 10* and *11*

TABLE 5

TYPICAL ENGINEERING INTERPRETATIONS OF THE SOILS OF THE MAJOR SOIL ASSOCIATIONS IN THE WESTERN COAL FIELD

SOIL	SUITABILITY AS SOURCE OF			SOIL FEATURES AFFECTING					
					PONDS				
	TOPSOIL	SAND AND GRAVEL	ROADFILL	HIGHWAY LOCATION	RESERVOIR AREA	EMBANKMENT	DRAINAGE	GRASSED WATERWAYS	PIPELINE CONSTRUCTION AND MAINTENANCE
Bonnie silt loam	Fair; Depth to seasonal high water table 0 to 1/2 foot	Unsuitable; no source	Fair; A-4; medium to high compressibility; seasonal high water table 0 to 1/2 foot	Flooding; medium compressibility; seasonal high water table 0 to 1/2 foot; liquefaction hazard	Moderate permeability; seasonal high water table 0 to 1/2 foot	Poor stability and compaction	Seasonal high water table at 0 to 1/2 foot	Nearly level flood plain; poorly drained; possible siltation	Flooding; seasonal high water table 0 to 1/2 foot
Calloway silt loam	Fair; seasonal high water table 1/2 to 1 1/2 feet	Unsuitable; no source	Fair; A-4 or A-6; seasonal high water table 1/2 to 1 1/2 feet	Fair to poor stability; medium compressibility; seasonal high water table 1/2 to 1 1/2 feet	All features favorable	Fair to poor stability and compaction; subject to piping	Somewhat poorly drained; slowly permeable fragipan	Nearly level; fragipan somewhat poorly drained	5 feet to rock in same areas; seasonal high water table 1/2 to 1 1/2 feet
Captina	Fair		Poor to fair	Subject to flooding; seasonal high water table; susceptible to frost action	Subject to flooding	Instability	Slow permeability; fragipan at depth of 15 to 30 inches	Seasonal high water table; difficult to vegetate	
Dekalb very stony loam	Poor; high content of stones; 1 1/2 to 3 feet to bedrock	Unsuitable; contains fine material	Poor; limited quantity; some areas have high stone content	Steep slopes; stony; 1 1/2 to 3 feet to bedrock	Steep slopes; stony	Limited material	Not needed	Not needed	1 1/2 to 3 feet to bedrock; steep slopes
Dekoven	Fair to good		Poor to fair	Subject to flooding; seasonal high water table; susceptible to frost action	Subject to seepage	Subject to slight piping and sliding	Subject to flooding; seasonal high water table	None	
Egam	Fair		Poor to fair	Subject to flooding; susceptible to frost action; seasonal high water table	Subject to flooding	Instability	Subject to flooding	None	
Elk	Good		Poor to fair	Subject to flooding; susceptible to frost action	Subject to flooding	None	Subject to flooding	Subject to flooding	
Falaya silt loam	Good; seasonal high water table 1/2 to 1 1/2 feet	Unsuitable; no source	Fair; A-4; medium compressibility; seasonal high water table 1/2 to 1 1/2 feet	Flooding; medium compressibility; seasonal high water table 1/2 to 1 1/2 feet; liquefaction hazard	Moderate permeability; seasonal high water table 1/2 to 1 1/2 feet	Poor stability and compaction; subject to piping	Seasonal high water table at 1/2 to 1 1/2 feet	Nearly level flood plain; somewhat poorly drained; possible siltation	Flooding; seasonal high water table 1/2 to 1 1/2 feet
Gilpin silt loam	Fair; moderate clay content	Unsuitable; no source	Poor; A-4 or A-6; plastic; medium to high compressibility	1 1/2 to 3 feet to rock; steep slopes; medium compressibility	Moderate permeability; 1 1/2 to 3 feet to rock	Fair stability and compaction; 1 1/2 to 3 feet to bedrock	Not needed	Slope range 12 to 30 percent; erodible; well drained; 1 1/2 to 3 feet to rock	12 to 30 percent slopes; 1 1/2 to 3 feet to rock
Ginat	Fair		Poor to fair	Subject to flooding; seasonal high water table; susceptible to frost action	Highly permeable substratum in places	Seasonal high water table	Slow permeability; high water table; subject to flooding	Wetness limits kinds of vegetation	
Grenada silt loam	Fair; moderate clay content	Unsuitable; no source	Fair; A-4 or A-6; medium to high compressibility; seasonal high water table at 1 1/2 to 2 feet	Fair to poor stability; medium to high compressibility; seasonal high water table 1 1/2 to 2 feet	All features favorable	Fair to poor stability and compaction; seasonal high water table	Moderately well drained with slowly permeable fragipan	Slope range 2 to 6 percent; fragipan; moderately well drained	5 feet to rock in some areas; seasonal high water table 1 1/2 to 2 feet
Henshaw silt loam	Fair; seasonal high water table 1/2 to 1 1/2 feet	Unsuitable; no source	Poor; seasonal high water table 1/2 to 1 1/2 feet; medium to high compressibility	Seasonal high water table 1/2 to 1 1/2 feet; flooding; medium to high compressibility	Flood hazard	Seasonal high water table 1/2 to 1 1/2 feet	Seasonal high water table 1/2 to 1 1/2 feet	Seasonal high water table 1/2 to 1 1/2 feet	Seasonal high water table 1/2 to 1 1/2 feet; flooding
Huntington	Good		Poor to good	Subject to flooding; highly erodible on embankments; susceptible to frost action in places	Rapid seepage rate	Subject to piping; high erodibility	Generally not needed	Subject to flooding	
Loring silt loam	Fair; moderate clay content	Unsuitable; no source	Poor; A-4 or A-6; medium to high compressibility; seasonal high water table 2 to 3 feet	2 to 3 feet to seasonal high water table; medium to high compressibility	All features favorable	Fair to poor stability and compaction; seasonal high water table	Not needed	Slope range 2 to 12 percent; moderately well drained; fragipan	5 feet to rock in some areas; seasonal high water table 2 to 3 feet
McGary	Poor		Poor to fair	Subject to infrequent flooding; seasonal high water table; plastic subsoil; susceptible to frost action	None	Plastic soil material (good for core)	Slow permeability; therefore, field tests should be made to determine feasibility of tiling	Wetness limits kinds of plants	
Melvin	Poor to fair		Poor to fair	Subject to flooding; seasonal high water table; subsoil is plastic in some places; susceptible to frost action	Highly permeable sandy loam in subsoil in some places; subject to flooding	Subject to piping in places	Subject to flooding; moderately slow permeability	Seasonal water table	
Memphis silt loam	Fair; moderate to low clay content	Unsuitable; no source	Fair; A-4 or A-6; medium to high compressibility	Medium to high compressibility	Moderate permeability	Medium to high compressibility; erodible	Not needed	Slope range 2 to 6 percent; erodible	Erodible
Newark	Fair to good		Poor to fair	Subject to flooding; seasonal high water table; susceptible to frost action	Excessive seepage in subsoil	Subject to piping	Subject to flooding, seasonal high water table	Subject to flooding; seasonal high water table	
Patton	Fair to good		Poor to fair	Subject to infrequent flooding; seasonal high water table; susceptible to frost action	Generally not needed	Instability; subject to piping	Moderately slow permeability	Subject to infrequent flooding; seasonal high water table	
Sadler silt loam	Good; to about 3 feet	Unsuitable; no source	Fair; A-4 to A-6; medium to high compressibility; seasonal high water table 1 1/2 to 2 feet	Fair to poor stability; medium to high compressibility; seasonal high water table 1 1/2 to 2 feet	All features favorable	Fair to poor stability and compaction; seasonal high water table	Moderately well drained with slowly permeable fragipan	Slope range 2 to 6 percent; moderately well drained; fragipan	5 feet to rock in some areas; seasonal high water table 1 1/2 to 2 feet
Sciotoville	Fair		Poor to fair	Subject to infrequent flooding; seasonal high water table; susceptible to frost action	None	Instability; subject to piping	Fragipan; slow permeability	None	
Sharkey	Poor		Poor	Subject to flooding; seasonal high water table; plastic subsoil with high shrink-swell potential; susceptible to frost action	Subject to flooding	Very plastic soil material	Very slow permeability; subject to flooding	Seasonal high water table	
Steff silt loam	Good; seasonal high water table 1 1/2 to 3 feet	Unsuitable; no source	Fair; A-4; medium compressibility; seasonal high water table 1 1/2 to 3 feet	Flooding; medium compressibility; seasonal high water table 1 1/2 to 3 feet	Moderate permeability; seasonal high water table 1 1/2 to 3 feet	Poor stability and compaction	Seasonal high water table at 1 1/2 to 3 feet	Nearly level flood plain; moderately well drained; possible siltation	Flooding; seasonal high water table 1 1/2 to 3 feet
Stendal silt loam	Good; seasonal high water table 1/2 to 1 1/2 feet	Unsuitable; no source	Fair; A-4; medium compressibility; seasonal high water table 1/2 to 1 1/2 feet	Flooding; medium compressibility; seasonal high water table 1/2 to 1 1/2 feet; liquefaction hazard	Moderate permeability; seasonal high water table at 1/2 to 1 1/2 feet	Poor stability and compaction	Seasonal high water table at 1/2 to 1 1/2 feet	Nearly level flood plain; somewhat poorly drained; possible siltation	Flooding; seasonal high water table 1/2 to 1 1/2 feet
Uniontown silt loam	Fair; poor on severely eroded areas	Unsuitable; no source	Fair; seasonal high water table 2 to 3 feet; medium to high compressibility	Flood hazard on some areas; medium to high compressibility	Flood hazard on some areas	Fair stability and compaction	Not needed	Flood hazard on some areas	Flood hazard on some areas
Wakeland silt loam	Good; seasonal water table 1/2 to 1 1/2 feet	Unsuitable; no source	Fair; high dispersion; seasonal water table 1/2 to 1 1/2 feet; medium compressibility; flooding	1/2 to 1 1/2 feet to seasonal water table; flooding; liquefaction hazard	High seasonal water table; moderate permeability; subject to flooding	Poor stability and compaction; moderate permeability; subject to piping	1/2 to 1 1/2 feet to seasonal water table; few adequate outlets; flooding	Flood plain; somewhat poorly drained	Seasonal water table 1/2 to 1 1/2 feet; flooding
Waverly silt loam	Fair; depth to seasonal high water table 0 to 1/2 foot	Unsuitable; no source	Fair; A-4; medium to high compressibility; seasonal high water table 0 to 1/2 foot	Flooding; medium compressibility; seasonal high water table 0 to 1/2 foot; liquefaction hazard	Moderate permeability; seasonal high water table 0 to 1/2 foot	Poor stability and compaction; subject to piping	Seasonal high water table at 0 to 1/2 foot	Nearly level flood plain; poorly drained; possible siltation	Flooding; seasonal high water table 0 to 1/2 foot
Wellston channery silt loam	Poor; high content of channers; 1/2 to 1 1/2 feet to bedrock	Unsuitable; no source	Poor; very limited quantity; some areas have high stone content	Steep slopes; stony; shallow; 1/2 to 1 1/2 feet to rock	Steep slopes; shallow to rock	Limited material; 1/2 to 1 1/2 feet to rock	Not needed	Slope range 20 to 30 percent; erodible; less than 1 1/2 feet to rock	Steep slopes; shallow to rock
Wellston silt loam	Fair; moderate clay content	Unsuitable; no source	Fair; A-4 or A-6; plastic; medium compressibility	Medium compressibility; bedrock at 5 feet in some areas	Moderate permeability	Medium compressibility; subject to piping	Not needed	Slope range 6 to 20 percent	5 feet to bedrock in some areas; 6 to 20 percent slopes
Zanesville silt loam	Fair; moderate clay content	Unsuitable; no source	Poor; A-6; medium to high compressibility; seasonal high water table 2 to 3 feet	2 to 3 feet to seasonal high water table; medium to high compressibility; strongly sloping in some areas	All features favorable	Fair stability and compaction; seasonal high water table	Not needed	Erodible; slope range 2 to 20 percent; fragipan well to moderately well drained	5 feet to rock and strongly sloping in some areas; seasonal high water table 2 to 3 feet

From References 7, 9, 10 and 11

APPENDIX A

ENGINEERING PROPERTIES OF ROCK SPECIMENS OBTAINED FROM THE WESTERN COAL FIELD

LABORATORY NUMBER	GEOLOGIC FORMATION AND GENERAL DESCRIPTION	SURFACE ELEVATION (FT)	SPECIMEN ELEVATION (FT)	METHOD SPECIMEN OBTAINED	UNCONFINED COMPRESSIVE STRENGTH (PSI)	CORRECTED UNCONFINED COMPRESSIVE STRENGTH (PSI)	LENGTH TO DIAMETER RATIO	MOISTURE CONTENT (%)	SCRATCH HARDNESS	SCLERESCOPE HARDNESS	PERMEABILITY CONSTANT (MD)	TOUGHNESS (CM)	DRY UNIT WEIGHT (PCF)
720	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; CARBONDALE, TRADEWATER AND CASEYVILLE FORMATIONS; 1085-1310 FEET THICK SANDSTONE; MEDIUM COARSE GRAIN, MICACEOUS; PREDOMINANTLY QUARTZ	484	457	CORE DRILL	3,322	3,818	2.41	0.07	S	10	106.0	3	152.3
730	PENNSYLVANIAN SYSTEM, LOWER AND MIDDLE PENNSYLVANIAN SERIES; TRADEWATER AND CASEYVILLE FORMATIONS; 770+ FEET THICK SANDSTONE; MEDIUM GRAINED, MICACEOUS, SHALE PARTINGS, SLIGHTLY FRIABLE; PREDOMINANTLY QUARTZ	451	431	CORE DRILL	2,390	2,715	2.17	0.43	S	11	27.0	2	149.1
740	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVALIAN SERIES; TRADEWATER AND CASEYVILLE FORMATIONS; 770+ FEET THICK INTERBEDDED SILTSTONE AND SHALE (THIN BEDS)	451	425	CORE DRILL				1.08	S	9	IMPERMEABLE		159.1
750	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; TRADEWATER AND CASEYVILLE FORMATIONS; 770+ FEET THICK SANDSTONE; MEDIUM FINE GRAINED, SLIGHTLY MICACEOUS, CROSSBEDDED; PREDOMINANTLY QUARTZ	451	418	CORE DRILL	7,517	8,379	1.86	0.07	S	19	2.0	6	146.6
760	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; CARBONDALE, TRADEWATER AND CASEYVILLE FORMATIONS; 1085-1310 FEET THICK LIMESTONE; PARTLY BIOCLASTIC, COARSE GRAINED; PREDOMINANTLY $CaCO_3$	475	456	CORE DRILL	18,050	20,240	1.95	0.69	H	24	IMPERMEABLE	8	166.6
770	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; CARBONDALE, TRADEWATER AND CASEYVILLE FORMATIONS; 1085-1310 FEET THICK LIMESTONE; MEDIUM CRYSTALLINE, FOSSILIFEROUS; PREDOMINANTLY $CaCO_3$	475	451	CORE DRILL	16,447	18,488	1.99	0.09	H	33	IMPERMEABLE	8	162.9
780	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; TRADEWATER AND CASEYVILLE FORMATIONS; 770 FEET THICK SANDSTONE; MEDIUM FINE GRAINED, SLIGHTLY FRIABLE; PREDOMINANTLY QUARTZ	517	496	CORE DRILL	4,886	5,487	1.97	0.43	S	16	63.0	3	151.6
790	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; TRADEWATER AND CASEYVILLE FORMATIONS; 770 FEET THICK SANDSTONE; MEDIUM GRAINED, SLIGHTLY FRIABLE; PREDOMINANTLY QUARTZ	474	447	CORE DRILL	4,297	4,669	1.56	0.21	S	15	137.0	4	150.4
800	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; TRADEWATER AND CASEYVILLE FORMATIONS; 650 FEET THICK SANDSTONE; MEDIUM FINE GRAINED, CROSSBEDDED; PREDOMINANTLY QUARTZ	582	552	CORE DRILL	8,183	9,161	1.93	0.10	S	19	0.4	6	146.0
810	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; CARBONDALE, TRADEWATER AND CASEYVILLE FORMATIONS; 1083-1310 FEET THICK SANDSTONE; MEDIUM FINE GRAINED, MICACEOUS; PREDOMINANTLY QUARTZ	480	457	CORE DRILL	6,654	7,422	1.87	0.17	S	22	0.2	5	162.2
820	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; CARBONDALE, TRADEWATER AND CASEYVILLE FORMATIONS; 1085-1310 FEET THICK SANDSTONE; VERY FINE GRAINED, MICACEOUS; PREDOMINANTLY QUARTZ	480	450	CORE DRILL	8,055	9,264	2.43	0.20	S	28	IMPERMEABLE	5	160.5
830	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; CARBONDALE, TRADEWATER AND CASEYVILLE FORMATIONS; 1085-1310 FEET THICK SANDSTONE; COARSE GRAINED, SLIGHTLY MICACEOUS; PREDOMINANTLY QUARTZ	430	406	CORE DRILL	2,355	2,637	1.93	0.31	S	9	340.0	3	152.3
840	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; CARBONDALE, TRADEWATER AND CASEYVILLE FORMATIONS; 1085-1310 FEET THICK SHALE; CARBONACEOUS, COAL LAMINAE	453	435	CORE DRILL	3,129	3,190	1.09	2.43	S	17	IMPERMEABLE		129.2
850	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; TRADEWATER AND CASEYVILLE FORMATIONS; 650 FEET THICK SANDSTONE; COARSE GRAINED, COAL LAMINAE, CLASTIC INCLUSIONS; PREDOMINANTLY QUARTZ	592	552	CORE DRILL	5,169	5,785	1.92	0.61	S	11	6.0	5	148.5
860	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; TRADEWATER AND CASEYVILLE FORMATIONS, 650 FEET THICK LIMESTONE; BIOCLASTIC, COARSE GRAINED; PREDOMINANTLY $CaCO_3$	592	547	CORE DRILL	12,845	13,268	1.17	1.04	S	23	0.1	4	167.3
870	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; TRADEWATER AND CASEYVILLE FORMATIONS; 650 FEET THICK SHALE; SILTY	592	542	CORE DRILL	5,698	5,930	1.21	1.25	S	15	IMPERMEABLE	7	159.8
880	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; TRADEWATER AND CASEYVILLE FORMATIONS; 650 FEET THICK SANDSTONE; FINE GRAINED; PREDOMINANTLY QUARTZ	592	559	CORE DRILL	7,049	7,934	2.01	0.10	S	19	IMPERMEABLE	6	163.7
890	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; CARBONDALE, TRADEWATER AND CASEYVILLE FORMATIONS; 1085-1310 FEET THICK SHALE; SILTY	519	482	CORE DRILL				1.90	S	13	IMPERMEABLE		160.6
900	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; CARBONDALE, TRADEWATER AND CASEYVILLE FORMATIONS; 1085-1310 FEET THICK SANDSTONE; MEDIUM GRAINED, MICACEOUS; PREDOMINANTLY QUARTZ	520	471	CORE DRILL	6,579	7,374	1.94	0.26	S	17	IMPERMEABLE	5	158.5
910	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; TRADEWATER AND CASEYVILLE FORMATIONS; 770 FEET THICK SANDSTONE; MEDIUM GRAINED; PREDOMINANTLY QUARTZ	517	482	CORE DRILL	2,046	2,294	1.95	0.60	S	12	111.0	3	145.9
920	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; TRADEWATER AND CASEYVILLE FORMATIONS; 770 FEET THICK SANDSTONE; FINE GRAINED, CROSSBEDDED; PREDOMINANTLY QUARTZ	517	464	CORE DRILL	3,479	3,634	1.24	0.41	S	12	IMPERMEABLE	4	152.4
930	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; TRADEWATER AND CASEYVILLE FORMATIONS; 770 FEET THICK SILTSTONE; ARGILLACEOUS	517	455	CORE DRILL	6,412	5,900	0.72	1.15	S	19	IMPERMEABLE		155.8
940	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; CARBONDALE, TRADEWATER AND CASEYVILLE FORMATIONS; 1085-1310 FEET THICK SHALE; SILTY	480	451	CORE DRILL	5,545	5,656	1.10	1.15	S	14	IMPERMEABLE	7	152.3
950	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; TRADEWATER AND CASEYVILLE FORMATIONS; 650 FEET THICK SANDSTONE; COARSE GRAINED, MICACEOUS, FRIABLE; PREDOMINANTLY QUARTZ	440	440	FIELD SAMPLE	940	1,024	1.59	0.34	S	10	131.0	2	149.7
960	MISSISSIPPIAN SYSTEM; CHESTER SERIES; GOLCONDA FORMATION; HANEY LIMESTONE MEMBER; 35-40 FEET THICK LIMESTONE; FINELY CRYSTALLINE, CALCITE VEINS; PREDOMINANTLY $CaCO_3$	480	480	FIELD SAMPLE	13,814	15,469	1.93	0.09	H	44	IMPERMEABLE	7	167.5
970	PENNSYLVANIAN SYSTEM; LOWER AND MIDDLE PENNSYLVANIAN SERIES; CARBONDALE, TRADEWATER AND CASEYVILLE FORMATIONS; 1085-1310 FEET THICK SANDSTONE; MEDIUM GRAINED, MICACEOUS, FRIABLE; PREDOMINANTLY QUARTZ	430	430	FIELD SAMPLE	1,733	1,849	1.40	0.37	S	13	22.0	4	152.8

APPENDIX B

PEDOLOGICAL DESCRIPTIONS OF SOIL ASSOCIATIONS OF THE WESTERN COAL FIELD

1. *Elk-Sciotoville-Ginat Association:* Nearly level to sloping, deep to moderately deep to a fragipan, well-drained to poorly drained, medium textured soils on stream terraces formed in alluvium from the Ohio River.
2. *Uniontown-Patton-Henshaw Association:* Nearly level to sloping, well-drained to poorly drained, medium textured soils formed in neutral alluvium on stream terraces and flood plains.
3. *Falaya-Karnak-Waverly Association:* Nearly level, poorly drained and somewhat poorly drained soils formed in clayey and silty alluvium on flood plains.
4. *Loring-Memphis-Falaya Association:* Gently sloping to steep, well-drained and moderately well-drained soils on loess uplands and nearly level, somewhat poorly drained, silty soils formed in alluvium on flood plains.
5. *Loring-Wellston Association:* Gently sloping to moderately steep, moderately well-drained to well-drained, moderately deep and deep, loamy soils from loess and loess over sandstone, siltstone and shale on uplands.
6. *Wellston-Gilpin-Zanesville Association:* Gently sloping to steep, well-drained to moderately well-drained, moderately deep to deep, loamy soils from loess over sandstone, siltstone and shale on uplands.
7. *Karnak-Waverly-Falaya Association:* Nearly level, poorly drained and somewhat poorly drained soils formed in clayey and silty alluvium on flood plains.
8. *Huntington-Egam-Newark Association:* Deep, nearly level, well to somewhat poorly drained silt loam alluvial soils, formed in alluvium on stream terraces and flood plains.
9. *Melvin-Ginat Association:* Deep, nearly level, poorly drained, silt loam alluvial soils, formed in alluvium on stream terraces and flood plains.
10. *Wakeland-Patton-Wilbur Association:* Deep, nearly level, moderately well to poorly drained silt loam alluvial soils, formed in alluvium on stream terraces and flood plains.
11. *McGary-Stendal Association:* Deep, nearly level to gently sloping, somewhat poorly drained silt loam and clayey alluvial soils, formed in alluvium on stream terraces and flood plains.
12. *Memphis-Wakeland-Wilbur Association:* Deep, gently sloping to steep, well-drained silt loam soils on uplands and deep, nearly level moderately well to somewhat poorly drained, silt loam alluvial soils, formed in loess on uplands and floodplains.
13. *Memphis-Wellston-Dekalb Association:* Deep and moderately deep, gently sloping to steep, well-drained loamy soils, formed in loess or sandstone and shale on uplands.
14. *Wellston-Gilpin-Falaya Association:* Gently sloping to strongly sloping, well-drained soils developed in thin loess and residuum from sandstone and siltstone on uplands and nearly level, somewhat poorly drained, silty soils on flood plains.
15. *Newark-Calloway-Waverly Association:* Nearly level, somewhat poorly drained and poorly drained soils on flood plains and nearly level, somewhat poorly drained soils on stream terraces.
16. *Waverly-Falaya-Swamp Association:* Nearly level, poorly drained, somewhat poorly drained and very poorly drained, soils formed in silty alluvium on flood plains.
17. *Sadler-Zanesville-Wellston Association:* Gently sloping to moderately steep, moderately well drained and well-drained, loamy soils developed in thin loess and material weathered from sandstone and siltstone on uplands.
18. *Zanesville-Gilpin-Weikert Association:* Gently sloping to steep, moderately well-drained to excessively drained soils developed in thin loess and material weathered from sandstone and siltstone on uplands.
19. *Falaya-Waverly Association:* Deep, nearly level, somewhat and poorly drained silt loam alluvial soils formed in alluvium on terraces and flood plains.
20. *Alligator-McGary Falaya Association:* Deep, nearly level, somewhat poorly and poorly drained clay and silt loam alluvial soils, formed in alluvium on terraces and flood plains.
21. *Bonnie-Steff-Stendal Association:* Deep, nearly level, moderately well to poorly drained, silt loam alluvial soils formed in alluvium on terraces and flood plains.
22. *Bonnie-Alligator Association:* Deep, nearly level, poorly drained, silt loam and clay alluvial soils, formed in alluvium on terraces and flood plains.
23. *Loring-Genada-Calloway Association:* Deep, nearly level to gently sloping, well to somewhat poorly drained, silt loam upland soils, formed in loess on uplands.
24. *Gilpin-Loring Association:* Moderately deep and deep, gently sloping to moderately steep, well to moderately well-drained silt loam soils of the uplands, formed in thin loess over sandstone and shale.
25. *Strip Mine Spoil-Gilpin-Waverly Association:* Deep and moderately deep, nearly level to steep, well to poorly drained, loamy soils on uplands and bottom lands, formed in thin loess over sandstone and shale.
26. *Zanesville-Sadler-Calloway Association:* Deep, nearly level to strongly sloping, well to somewhat poorly drained, silt loam upland soils formed in

loess over sandstone and shales.

27. *Gilpin-Zanesville-Falaya Association:* Deep and moderately deep, nearly level to steep, well to somewhat poorly drained, silt loam soils over sandstones and shales on the uplands and silt loam alluvial soils on the bottom lands.
28. *Wakeland-Uniontown-Henshaw Association:* Deep, nearly level and gently sloping, well to somewhat poorly drained, silt loam soils, formed in alluvium on stream terraces and flood plains.
29. *Sharkey-McGary-Falaya Association:* Deep, nearly level, somewhat poorly and poorly drained mostly clayey alluvial soils, formed in alluvium on stream terraces and flood plains.
30. *Uniontown-Dekoven-Henshaw Association:* Nearly level, well-drained to poorly drained soils, from alluvium on stream terraces and flood plains.
31. *Elk-Ginat-Captina Association:* Nearly level, well-drained to poorly drained soils, from alluvium on stream terraces and flood plains.
32. *Memphis-Loring-Wakeland Association:* Level to steep somewhat poorly drained to well-drained soils from loess on uplands and local alluvium.
33. *Loring-Grenada Association:* Level to steep somewhat poorly drained to well-drained soils from loess on uplands and local alluvium.
34. *Karnak-McGary-Melvin Association:* Nearly level, well-drained to poorly drained soils, from alluvium on stream terraces and flood plains.
35. *Zanesville-Wellston-Weikert Association:* Moderately well-drained to excessively drained, gently sloping to steep soils, from sandstone and shale with thin loess.
36. *Fredonia-Cumberland-Pembroke Association:* Soils formed from limestone on Upland areas.
37. *Weikert-Zanesville-Caneyville Association:* Soils formed from sandstone and shale uplands.

APPENDIX C

ENGINEERING SOILS DATA RETRIEVED FROM RECORD PLANS OF THE BUREAU OF HIGHWAYS, KENTUCKY DEPARTMENT OF TRANSPORTATION

COUNTY- BUTLER

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005 (MM)	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
1	0- 4	04+	0.0	0.0	0.0	0.5	0.5	51.9	31.2	15.9	8.9	16.3	•.0	0.0	0.0	0.0	2.74	SL	A-4(3)	SM
2	0- 4	04	108.8	16.7	5.7	0.5	0.5	6.1	71.0	21.9	6.9	25.0	3.7	21.7	27.0	1.54	2.62	SICL	A-4(8)	ML
3	0- 5		108.8	16.7	5.7	0.5	0.5	6.1	71.0	21.9	6.9	25.0	3.7	21.7	27.0	1.54	2.62	SICL	A-4(8)	ML
	5- 8		99.1	22.5	1.5	0.0	0.4	10.2	15.6	63.8	48.0	65.5	45.5	20.6	17.6	1.83	2.72	C	A-7-6(20)	CH
	8-11	11	108.8	18.4	4.4	1.0	1.1	1.1	51.1	45.7	31.1	49.6	22.8	17.5	20.1	1.76	2.73	C	A-7-6(15)	ML-CL
4	0- 5	05	108.8	16.7	5.7	0.5	0.5	6.1	71.0	21.9	6.9	25.0	3.7	21.7	27.0	1.54	2.62	SICL	A-4(8)	ML
5	0- 4	04+	108.8	16.7	5.7	0.5	0.5	6.1	71.0	21.9	6.9	25.0	3.7	21.7	27.0	1.54	2.62	SICL	A-4(8)	ML
6	0- 5	05	99.1	22.5	1.5	0.0	0.4	10.2	15.6	63.8	48.0	65.5	45.5	20.6	17.6	1.83	2.72	C	A-7-6(20)	CH
7	0- 3		108.8	16.7	5.7	0.5	0.5	6.1	71.0	21.9	6.9	25.0	3.7	21.7	27.0	1.54	2.62	SICL	A-4(8)	ML
	3- 5	05	99.1	22.5	1.5	0.0	0.4	10.2	15.6	63.8	48.0	65.5	45.5	20.6	17.6	1.83	2.72	C	A-7-6(20)	CH
8	0- 4	04+	108.8	16.7	5.7	0.5	0.5	6.1	71.0	21.9	6.9	25.0	3.7	21.7	27.0	1.54	2.62	SICL	A-4(8)	ML
9	0- 4	04+	0.0	0.0	0.0	0.5	0.5	51.9	31.2	15.9	8.9	16.3	0.0	0.0	0.0	0.0	2.74	SL	A-4(3)	SM
10	0- 4	04	108.8	16.7	5.7	0.5	0.5	6.1	71.0	21.9	6.9	25.0	3.7	21.7	27.0	1.54	2.62	SICL	A-4(8)	ML
11	0- 3		108.8	16.7	5.7	0.5	0.5	6.1	71.0	21.9	6.9	25.0	3.7	21.7	27.0	1.54	2.62	SICL	A-4(8)	ML
	3- 7	07+	99.1	22.5	1.5	0.0	0.4	10.2	15.6	63.8	48.0	65.5	45.5	20.6	17.6	1.83	2.72	C	A-7-6(20)	CH
12	0- 2	02	108.8	16.7	5.7	0.5	0.5	6.1	71.0	21.9	6.9	25.0	3.7	21.7	27.0	1.54	2.62	SICL	A-4(8)	ML
13	0- 2		108.8	16.7	5.7	0.5	0.5	6.1	71.0	21.9	6.9	25.0	3.7	21.7	27.0	1.54	2.62	SICL	A-4(8)	ML
	2- 7		99.1	22.5	1.5	0.0	0.4	10.2	15.6	63.8	48.0	65.5	45.5	20.6	17.6	1.83	2.72	C	A-7-6(20)	CH
	7-10	10+	108.8	18.4	4.4	1.0	1.1	1.1	51.1	45.7	31.1	49.6	22.8	17.5	20.1	1.76	2.73	C	A-7-6(15)	ML-CL
14	0- 2		0.0	•.0	0.0	0.4	3.0	3.5	38.9	54.2	42.2	54.5	30.2	0.0	0.0	0.0	2.75	C	A-7-6(19)	CH
	2- 4	04+	0.0	0.0	0.0	0.0	1.0	8.1	58.9	32.0	18.0	31.6	12.7	0.0	0.0	0.0	2.69	SIC	A-6(8)	CL
15	0- 5		89.7	22.5	2.4	0.7	2.1	0.9	23.2	73.1	57.3	90.2	63.9	33.4	17.4	1.83	2.69	C	A-7-6(20)	CH
	5-20	20+	110.0	15.9	2.9	0.0	6.6	7.9	39.5	46.0	23.0	43.5	24.3	23.3	15.2	1.92	2.73	SH	A	CL
16	0- 3		99.9	22.0	7.0	0.0	0.2	0.0	44.8	55.0	40.0	56.3	33.4	23.5	31.3	1.46	2.69	C	A-7-6(19)	CH
	3- 7		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	LS	A	SW OR SP
	7-42	42+	110.0	15.9	2.9	0.0	6.6	7.9	39.5	46.0	23.0	43.5	24.3	23.3	15.2	1.92	2.73	SH	A	CL
17	0- 4		89.7	22.5	2.4	0.7	2.1	•.9	23.2	73.1	57.3	90.2	63.9	33.4	17.4	1.83	2.69	C	A-7-6(20)	CH
	4-20	20+	110.0	15.9	2.9	0.0	6.6	7.9	39.5	46.0	23.0	43.5	24.3	23.3	15.2	1.92	2.73	SH	A	CL
18	0- 2	02	89.7	22.5	2.4	0.7	2.1	0.9	23.2	73.1	57.3	90.2	63.9	33.4	17.4	1.83	2.69	C	A-7-6(20)	CH
19	0- 3	03+	89.7	22.5	2.4	0.7	2.1	0.9	23.2	73.1	57.3	90.2	63.9	33.4	17.4	1.83	2.69	C	A-7-6(20)	CH
20	0- 6	06+	0.0	0.0	0.0	0.4	3.0	3.5	38.9	54.2	42.2	54.5	30.2	0.0	0.0	0.0	2.75	C	A-7-6(19)	CH
21	0- 3		103.3	20.1	7.3	0.0	0.1	0.7	51.7	47.5	36.0	56.8	36.0	20.7	25.6	1.60	2.71	C	A-7-6(19)	CH
	3- 6	06	84.3	28.8	1.4	0.0	0.6	1.0	12.9	85.5	67.8	86.3	55.2	38.1	25.2	1.61	2.71	C	A-7-5(20)	CH
22	0- 4	04	103.3	20.1	7.3	0.0	0.1	0.7	51.7	47.5	36.0	56.8	36.0	20.7	25.6	1.60	2.71	C	A-7-6(19)	CH
23	0- 6	06+	0.0	•.•	0.0	0.•	0.4	2.4	69.7	27.5	15.0	36.0	14.4	0.0	0.0	0.•	2.70	SICL	A-6(10)	CL
24	0- 2	02	0.0	0.0	0.0	0.4	3.0	3.5	38.9	54.2	42.2	54.5	30.2	0.0	0.0	0.02	7.50	C	A-7-6(19)	CH
25	0- 6	06+	0.0	0.0	0.0	0.0	0.4	2.4	69.7	27.5	15.•	36.0	14.4	0.0	0.•	0.0	2.70	SICL	A-6(1•)	CL
26	0- 2		0.0	0.0	0.0	0.0	0.4	2.4	69.7	27.5	15.0	36.0	14.4	0.0	0.0	0.0	2.70	SICL	A-6(10)	CL
	2- 7	07+	0.0	0.0	0.0	0.0	3.7	10.2	53.6	32.5	22.5	32.7	15.5	0.0	0.0	0.•	2.71	C	A-6(10)	CL
27	0- 2		0.0	0.0	0.0	0.0	1.3	0.0	67.2	31.5	17.5	31.4	10.0	0.0	0.0	0.0	2.79	SIC	A-4(7)	ML-CL
	2- 7	07+	0.0	0.0	•.0	0.•	3.7	10.2	53.6	32.5	22.5	32.7	15.5	0.0	0.0	0.•	2.71	C	A-6(10)	CL
28	0- 2		0.0	0.0	0.0	0.0	1.3	0.0	67.2	31.5	17.5	31.4	10.0	0.0	0.0	0.0	2.79	SIC	A-4(7)	ML-CL
	2- 5		0.0	0.0	0.0	0.0	0.6	2.1	40.3	57.0	43.0	62.1	36.2	0.0	0.0	0.0	2.77	C	A-7-6(2•)	CH
	5- 7	07+	0.0	0.0	0.0	0.0	3.7	10.2	53.6	32.5	22.5	32.7	15.5	0.0	0.0	0.0	2.71	C	A-6(10)	CL
29	0- 6		0.0	0.0	0.0	0.0	0.6	2.1	40.3	57.0	43.•	62.1	36.2	0.0	0.0	0.0	2.77	C	A-7-6(20)	CH
	6-12	12+	0.0	0.0	0.0	0.0	3.7	10.2	53.6	32.5	22.5	32.7	15.5	0.0	0.0	0.0	2.71	C	A-6(10)	CL
30	0-14	14+	100.9	22.7	4.2	0.0	4.8	0.0	29.2	66.0	42.0	50.5	26.3	27.2	20.4	1.76	2.74	C	A-7-6(17)	CH
31	0- 8		100.9	22.7	4.2	0.0	4.8	0.0	29.2	66.0	42.0	50.5	26.3	27.2	20.4	1.76	2.74	C	A-7-6(17)	CH
	8-24	24+	111.3	16.2	1.7	8.3	15.7	4.5	3•.2	41.3	16.2	43.•	17.7	29.5	17.9	1.84	2.75	SH	A	ML-CL
32	0- 7		100.9	22.7	4.2	0.•	4.8	0.0	29.2	66.0	42.0	50.5	26.3	27.2	20.4	1.76	2.74	C	A-7-6(17)	CH
	7-18	18	111.3	16.2	1.7	8.3	15.7	4.5	30.2	41.3	16.2	43.0	17.7	29.5	17.9	1.84	2.75	SH	A	ML-CL
33	0- 4	04	100.9	22.7	4.2	0.0	4.8	0.0	29.2	66.0	42.0	50.5	26.3	27.2	20.4	1.76	2.74	C	A-7-6(17)	CH
34	0- 7	07	114.6	13.6	7.7	0.0	3.8	0.7	66.5	29.0	14.0	26.3	5.6	21.4	25.6	1.57	2.63	SICL	A-4(8)	ML-CL
35	0- 8	08+	0.0	0.0	0.0	0.0	1.5	15.0	56.5	27.0	12.0	37.0	12.7	0.0	0.0	0.0	2.67	SICL	A-6(9)	ML-CL
36	0- 2		114.6	14.7	9.9	0.0	1.6	0.0	64.9	33.5	20.5	28.0	12.1	17.8	21.2	1.70	2.67	SIC	A-6(9)	CL
	2- 7	07	97.3	24.1	3.7	0.0	3.7	0.0	27.3	69.0	43.0	60.5	30.9	32.8	23.4	1.67	2.79	C	A-7-6(20)	MH-CH
37	0- 9	09	97.3	24.1	3.7	0.0	3.7	0.0	27.3	69.0	43.0	60.5	30.9	32.8	23.4	1.67	2.79	C	A-7-6(20)	MH-CH
38	0- 6		97.3	24.1	3.7	0.0	3.7	0.0	27.3	69.0	43.0	60.5	30.9	32.8	23.4	1.67	2.79	C	A-7-6(20)	MH-CH
	6-13	13	111.9	15.4	1.7	0.0	6.9	1.3	41.3	50.5	27.5	37.0	16.5	24.2	16.5	1.88	2.72	SH	A	CL
39	0- 3	03+	0.0	0.0	0.0	0.0	1.5	15.0	56.5	27.0	12.0	37.0	12.7	0.0	0.0	0.0	2.67	SICL	A-6(9)	ML-CL
40	0- 2		114.6	14.7	9.9	0.0	1.6	0.0	64.9	33.5	20.5	28.0	12.1	17.8	21.2	1.70	2.67	SIC	A-6(9)	CL
	2- 6		97.3	24.1	3.7	0.0	3.7	0.0	27.3	69.0	43.0	60.5	30.9	32.8	23.4	1.67	2.79	C	A-7-6(2•)	MH-CH
	6-10	10+	111.9	15.4	1.7	0.0	6.9	1.3	41.3	50.5	27.5	37.0	16.5	24.2	16.5	1.88	2.72	SH	A	CL
41	0- 8		114.6	14.7	9.9	0.0	1.6	0.0	64.9	33.5	20.5	28.0	12.1	17.8	21.2	1.70	2.67	SIC	A-6(9)	CL
	8-25	25+	111.9	15.4	1.7	0.0	6.9	1.3	41.3	50.5	27.5	37.0	16.5	24.2	16.5	1.88	2.72	SH	A	CL
42	0- 7		97.3	24.1	3.7	0.0	3.7	0.0	27.3	69.0	43.•	60.5	30.9	32.8	23.4	1.67	2.79	C	A-7-6(2•)	MH-CH
	7-27	27+	111.9	15.4	1.7	0.0	6.9	1.3	41.3	50.5	27.5	37.0	16.5	24.2	16.5	1.88	2.72	SH	A	CL
43	0- 7		114.6	14.7	9.9	0.0	1.6	0.0	64.9	33.5	20.5	28.0	12.1	17.8	21.2	1.70	2.67	SIC	A-6(9)	CL
	7-22	22+	111.9	15.4	1.7	0.0	6.9	1.3	41.3	50.5	27.5	37.0	16.5	24.2	16.5	1.88	2.72	SH	A	CL
44	0-12		0.0	0.0	0.0	0.0	2.4	4.6	57.8	35.2	19.0	38.8	20.9	0.0	0.0	0.0	2.69	SIC	A-6(12)	CL
	12-22	22+	0.0	0.0	0.0	0.0	0.4	12.8	54.3	35.5	21.0	35.8	17.3	0.0	0.0	0.0	2.63	C	A-6(11)	CL
45	0- 5		0.0	0.0	0.0	0.0	2.4	4.6	57.8	35.2	19.0	38.8	20.9	0.0	0.0	0.0	2.69	SIC	A-6(12)	CL
	5-38	38+	0.0	0.0	0.0	0.0	0.7	0.0	53.3	46.0	24.0	42.5	23.9	0.0	0.0	0.0	2.72	C	A-7-6(15)	CL
46	0- 6		104.9	18.0	4.3	0.0	0.8	4.4	55.3	39.5	27.0	36.8	15.7	22.5	28.6	1.50	2.63	SIC	A-6(10)	CL
	6-10		104.2	20.5	2.2	0.0	6.2	2.6	27.7	63.5	45.0	51.3	27.7	28.4	20.4	1.75	2.72	C	A-7-6(17)	CH
	10-11	11	119.6	12.5	7.3	0.0	1.4	57.8	23.3	17.5	7.0	0.0	0.0	0.0	21.3	1.69	2.66	SL	A-4(0)	SM
47	0- 6	06+	104.9	18.0	4.3	0.0	0.8	4.4	55.3	39.5	27.0	36.8	15.7	22.5	28.6	1.50	2.63	SIC	A-6(10)	CL
48	0- 2		104.9	18.0	4.3	0.0	0.8	4.4	55.3	39.5	27.0	36.8	15.7	22.5	28.6	1.50	2.63	SIC	A-6(10)	CL
	2- 6	06+	104.2	20.5	2.2	0.0	6.2	2.6	27.7	63.5	45.0	51.3	27.7	28.4	20.4	1.75	2.72	C	A-7-6(17)	CH
49	0- 2	02	104.9	18.0	4.3	0.0	0.8	4.4	55.3	39.5	27.0	36.8	15.7	22.5	28.6	1.50	2.63	SIC	A-6(10)	CL
50	0- 3		104.9	18.0	4.3	0.0	0.8	4.4	55.3	39.5	27.0	36.8	15.7	22.5	28.6	1.50	2.63	SIC	A-6(10)	CL
	3- 7		119.6	12.5	7.3	0.0	1.4	57.8	23.3	17.5	7.0	0.0	•.0	0.0	21.3	1.69	2.66	SL	A-4(0)	SM
	7-10	10	120.1	11.2	3.9	0.0	2.5	•.0	67.0	30.5	14.0	26.3	9.9	18.7	17.9	1.82	2.69	SIC	A-4(8)	CL
51	0- 4		104.9	18.0	4.3	0.0	0.8	4.4	55.3	39.5	27.0	36.8	15.7	22.5	28.6	1.50	2.63	SIC	A-6(10)	CL
	4- 7	07	119.6	12.5	7.3	0.0	1.4	57.8	23.3	17.5	7.0	0.0	0.0	0.0	21.3	1.69	2.66	SL	A-4(0)	SM
52	0- 5	05	104.9	18.0	4.3	0.0	0.8	4.4	55.3	39.5	27.0	36.3	15.7	22.5	28.6	1.50	2.63	SIC	A-6(10)	CL
53	0- 8	08+	0.0	0.0	0.0	0.0	1.0	0.0	81.0	18.0	10.0	21.6	5.5	0.0	0.0	0.0	2.67	SIL	A-4(8)	ML-CL
54	0- 6	06	110.8	15.6	13.7	0.6	1.5	0.4	66.9	30.6	17.8	31.1	11.1	17.9	25.7	1.57	2.65	SIC	A-6(8)	CL
55	0- 3	03+	0.0	0.•	0.0	0.0	0.6	18.2	68.7	12.5	8.0	25.0	4.0	0.0	0.0	0.0	2.71	SIL	A-4(8)	ML-CL
56	0- 5	05	110.8	15.6	13.7	0.6	1.5	0.4	66.9	30.6	17.8	31.1	11.1	17.9	25.7	1.57	2.65	SIC	A-6(8)	CL
57	0- 7	07	0.0	0.0	0.0	0.0	1.0	0.0	81.0	18.0	10.0	21.6	5.5	0.0	0.0	0.0	2.67	SIL	A-4(8)	ML-CL
58	0- 6	06+	0.0	0.0	0.0	0.0	1.0	0.0	81.0	18.0	10.0	21.6	5.5	0.0	0.0	0.0	2.67	SIL	A-4(8)	ML-CL
59	0- 8	08+	11•.8	15.6	13.7	0.6	1.5	0.4	66.9	30.6	17.8	31.1	11.1	17.9	25.7	1.57	2.65	SIC	A-6(8)	CL
60	0- 6	06+	•.0	0.0	0.0	0.0	1.0	0.0	81.0	18.0	10.0	21.6	5.5	0.0	0.0	0.0	2.67	SIL	A-4(8)	ML-CL

COUNTY- BUTLER

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
61	0- 7	07	110.8	15.6	13.7	0.6	1.5	0.4	66.9	30.6	17.8	31.1	11.1	17.9	25.7	1.57	2.65	SIC	A-6(8)	CL
62	0- 4	04+	110.8	15.6	13.7	0.6	1.5	0.4	66.9	30.6	17.8	31.1	11.1	17.9	25.7	1.57	2.65	SIC	A-6(8)	CL
63	0- 9	09	110.8	15.6	13.7	0.6	1.5	0.4	66.9	30.6	17.8	31.1	11.1	17.9	25.7	1.57	2.65	SIC	A-6(8)	CL
64	0- 5	05	111.3	17.1	9.2	0.7	2.5	0.1	61.3	35.4	22.6	35.8	15.7	19.7	25.2	1.60	2.70	SIC	A-6(10)	CL
65	0- 3		111.3	17.1	9.2	0.7	2.5	0.1	61.3	35.4	22.6	35.8	15.7	19.7	25.2	1.60	2.70	SIC	A-6(10)	CL
	3-10	10	100.3	22.0	5.0	0.0	8.3	14.2	23.0	54.5	36.5	58.5	29.9	33.8	24.4	1.63	2.71	C	A-7-6(20)	MH-CH
66	0- 3		111.3	17.1	9.2	0.7	2.5	0.1	61.3	35.4	22.6	35.8	15.7	19.7	25.2	1.60	2.70	SIC	A-6(10)	CL
	3-11	11+	100.3	22.0	5.0	0.0	8.3	14.2	23.0	54.5	36.5	58.5	29.9	33.8	24.4	1.63	2.71	C	A-7-6(20)	MH-CH
67	0- 4	04+	0.0	0.0	0.0	0.0	3.7	26.7	48.6	21.0	12.0	26.0	7.2	0.0	0.0	0.0	2.68	CL	A-4(7)	CL
68	0- 3		111.3	17.1	9.2	0.7	2.5	0.1	61.3	35.4	22.6	35.8	15.7	19.7	25.2	1.60	2.70	SIC	A-6(10)	CL
	3-11	11	100.3	22.0	5.0	0.0	8.3	14.2	23.0	54.5	36.5	58.5	29.9	33.8	24.4	1.63	2.71	C	A-7-6(20)	MH-CH
69	0- 3	03+	0.0	0.0	0.0	0.0	3.7	26.7	48.6	21.0	12.0	26.0	7.2	0.0	0.0	0.0	2.68	CL	A-4(7)	CL
70	0- 6	06+	105.9	18.7	9.9	0.0	0.8	3.0	55.7	40.5	26.5	42.7	19.0	27.1	22.2	1.68	2.68	SIC	A-7-6(13)	CL
71	0- 5		105.9	18.7	9.9	0.0	0.8	3.0	55.7	40.5	26.5	42.7	19.0	27.1	22.2	1.68	2.68	SIC	A-7-6(13)	CL
	5- 9	09+	112.4	16.2	2.0	0.0	3.6	5.2	51.2	40.0	16.5	39.6	15.8	25.9	24.0	1.65	2.74	SH	A	ML-CL
72	0- 3	03+	105.9	18.7	9.9	0.0	0.8	3.0	55.7	40.5	26.5	42.7	19.0	27.1	22.2	1.68	2.68	SIC	A-7-6(13)	CL
73	0- 6	06+	0.0	0.0	0.0	0.0	2.5	6.3	63.2	28.0	15.0	30.0	9.3	0.0	0.0	0.0	2.70	SICL	A-4(8)	ML-CL
74	0- 3		111.7	16.9	7.1	0.0	2.9	8.0	54.6	34.5	23.0	31.9	12.2	22.8	21.2	1.72	2.70	C	A-6-(9)	CL
	3- 7	07	105.9	18.7	9.9	0.0	0.8	3.0	55.7	40.5	26.5	42.7	19.0	27.1	22.2	1.68	2.68	SIC	A-7-6(13)	CL
75	0- 4		105.9	18.7	9.9	0.0	0.8	3.0	55.7	40.5	26.5	42.7	19.0	27.1	22.2	1.68	2.68	SIC	A-7-6(13)	CL
	4-16	16	111.7	16.9	7.1	0.0	2.9	8.0	54.6	34.5	23.0	31.9	12.2	22.8	21.2	1.72	2.70	C	A-6-(9)	CL
76	0- 5		0.0	0.0	0.0	0.0	2.5	6.3	63.2	28.0	15.0	30.0	9.3	0.0	0.0	0.0	2.70	SICL	A-4(8)	ML-CL
	5-14	14+	111.7	16.9	7.1	0.0	2.9	8.0	54.6	34.5	23.0	31.9	12.2	22.8	21.2	1.72	2.70	C	A-6-(9)	CL
77	0-10		0.0	0.0	0.0	0.0	2.5	6.3	63.2	28.0	15.0	30.0	9.3	0.0	0.0	0.0	2.70	SICL	A-4(8)	ML-CL
	10-26	26	111.7	16.9	7.1	0.0	2.9	8.0	54.6	34.5	23.0	31.9	12.2	22.8	21.2	1.72	2.70	C	A-6-(9)	CL
78	0- 8		0.0	0.0	0.0	0.0	2.1	22.0	53.4	22.5	13.5	24.3	6.9	0.0	0.0	0.0	2.69	SICL	A-4(8)	ML-CL
	8-17	17+	115.1	13.2	12.1	0.0	9.5	33.2	29.3	28.0	24.0	33.2	16.1	18.7	24.6	1.62	2.68	CL	A-6(6)	CL
79	0-10		0.0	0.0	0.0	0.0	2.1	22.0	53.4	22.5	13.5	24.3	6.9	0.0	0.0	0.0	2.69	SICL	A-4(8)	ML-CL
	10-27	27+	115.1	13.2	12.1	0.0	9.5	33.2	29.3	28.0	24.0	33.2	16.1	18.7	24.6	1.62	2.68	CL	A-6(6)	CL
80	0- 5		113.3	14.9	11.2	1.2	2.7	11.5	56.3	28.3	17.6	31.0	11.6	19.6	22.8	1.66	2.67	SICL	A-6(9)	CL
	5- 8	08+	115.1	13.2	12.1	0.0	9.5	33.2	29.3	28.0	24.0	33.2	16.1	18.7	24.6	1.62	2.68	CL	A-6(6)	CL
81	0- 2		113.3	14.9	11.2	1.2	2.7	11.5	56.3	28.3	17.6	31.0	11.6	19.6	22.8	1.66	2.67	SICL	A-6(9)	CL
	2- 7	07	115.1	13.2	12.1	0.0	9.5	33.2	29.3	28.0	24.0	33.2	16.1	18.7	24.6	1.62	2.68	CL	A-6(6)	CL
82	0- 8		113.3	14.9	11.2	1.2	2.7	11.5	56.3	28.3	17.6	31.0	11.6	19.6	22.8	1.66	2.67	SICL	A-6(9)	CL
	8-13	13+	115.0	16.7	1.3	0.0	6.0	5.9	32.6	55.5	23.8	40.1	17.2	25.5	18.2	1.88	2.86	SH	A	CL
83	0- 3		113.3	14.9	11.2	1.2	2.7	11.5	56.3	28.3	17.6	31.0	11.6	19.6	22.8	1.66	2.67	SICL	A-6(9)	CL
	3- 7		121.7	11.5	9.7	0.0	0.3	71.0	15.7	13.0	4.0	0.0	0.0	0.0	22.1	1.67	2.65	SS	A	SM
	7-16	16+	115.0	16.7	1.3	0.0	6.0	5.9	32.6	55.5	23.8	40.1	17.2	25.5	18.2	1.88	2.86	SH	A	CL
84	0- 4		113.3	14.9	11.2	1.2	2.7	11.5	56.3	28.3	17.6	31.0	11.6	19.6	22.8	1.66	2.67	SICL	A-6(9)	CL
	4- 7	07+	115.1	13.2	12.1	0.0	9.5	33.2	29.3	28.0	24.0	33.2	16.1	18.7	24.6	1.62	2.68	CL	A-6(6)	CL
85	0- 2		113.3	14.9	11.2	1.2	2.7	11.5	56.3	28.3	17.6	31.0	11.6	19.6	22.8	1.66	2.67	SICL	A-6(9)	CL
	2-10	10	115.1	13.2	12.1	0.0	9.5	33.2	29.3	28.0	24.0	33.2	16.1	18.7	24.6	1.62	2.68	CL	A-6(6)	CL
86	0- 7	07+	0.0	0.0	0.0	8.5	3.8	3.8	53.3	30.6	20.7	36.0	13.3	0.0	0.0	0.0	2.72	SIC	A-6(9)	ML-CL
87	0- 6	06	0.0	0.0	0.0	8.5	3.8	3.8	53.3	30.6	20.7	36.0	13.3	0.0	0.0	0.0	2.72	SIC	A-6(9)	ML-CL
88	0-10	10+	0.0	0.0	0.0	8.5	3.8	3.8	53.3	30.6	20.7	36.0	13.3	0.0	0.0	0.0	2.72	SIC	A-6(9)	ML-CL
89	0- 3		104.4	19.7	6.7	0.0	2.3	2.1	56.6	39.0	27.0	43.0	19.9	25.5	26.3	1.57	2.68	SIC	A-7-6(12)	CL
	3-14	14	111.5	16.8	1.7	0.0	8.7	8.0	35.3	48.0	23.0	40.0	17.4	26.4	19.2	1.80	2.70	SH	A	CL
90	0- 3	03+	0.0	0.0	0.0	0.0	6.2	41.9	32.9	19.0	11.0	23.7	6.0	26.9	0.0	0.0	0.0	L	A-4(3)	ML-CL
91	0- 7	07	104.4	19.7	6.7	0.0	2.3	2.1	56.6	39.0	27.0	43.0	19.9	25.5	26.3	1.57	2.68	SIC	A-7-6(12)	CL
92	0- 6	06+	0.0	0.0	0.0	8.5	3.8	3.8	53.3	30.6	20.7	36.0	13.3	0.0	0.0	0.0	2.72	SIC	A-6(9)	ML-CL
93	0- 3	03+	0.0	0.0	0.0	8.5	3.8	3.8	53.3	30.6	20.7	36.0	13.3	0.0	0.0	0.0	2.72	SIC	A-6(9)	ML-CL
94	0- 4	04	104.4	19.7	6.7	0.0	2.3	2.1	56.6	39.0	27.0	43.0	19.9	25.5	26.3	1.57	2.68	SIC	A-7-6(12)	CL
95	0-20	20	115.6	14.0	3.4	0.0	5.3	1.4	59.3	34.0	14.0	35.2	10.8	26.6	24.0	1.64	2.71	SIC	A-6(8)	ML-CL
96	0-10	10	111.5	16.8	1.7	0.0	8.7	8.0	35.3	48.0	23.0	40.0	17.4	26.4	19.2	1.80	2.70	SH	A	CL
97	0- 3	03	121.7	11.8	12.0	0.3	3.1	42.6	33.1	20.9	11.9	21.5	6.3	14.5	22.6	1.67	2.67	CL	A-4(4)	ML-CL
98	0- 4	04+	0.0	0.0	0.0	18.8	13.9	35.9	16.8	14.6	7.0	0.0	0.0	0.0	0.0	0.0	2.70	SL	A-2(4)	SM
99	0- 4	04+	121.7	11.8	12.0	0.3	3.1	42.6	33.1	20.9	11.9	21.5	6.3	14.5	22.6	1.67	2.67	CL	A-4(4)	ML-CL
100	0- 5	05+	0.0	0.0	0.0	18.8	13.9	35.9	16.8	14.6	7.0	0.0	0.0	0.0	0.0	0.0	2.70	SL	A-2(4)	SM
101	0- 5	05+	0.0	0.0	0.0	0.0	11.2	48.3	22.5	18.0	14.0	27.5	13.5	0.0	0.0	0.0	2.70	SL	A-6(2)	SC
102	0- 6	06+	0.0	0.0	0.0	0.0	11.2	48.3	22.5	18.0	14.0	27.5	13.5	0.0	0.0	0.0	2.70	SL	A-6(2)	SC
103	0- 7	07	121.7	11.8	12.0	0.3	3.1	42.6	33.1	20.9	11.9	21.5	6.3	14.5	22.6	1.67	2.67	CL	A-4(4)	ML-CL
104	0- 5	05	121.7	11.8	12.0	0.3	3.1	42.6	33.1	20.9	11.9	21.5	6.3	14.5	22.6	1.67	2.67	CL	A-4(4)	ML-CL
105	0- 8	08+	0.0	0.0	0.0	0.0	11.2	48.3	22.5	18.0	14.0	27.5	13.5	0.0	0.0	0.0	2.70	SL	A-6(2)	SC
106	0- 6	06+	121.7	11.8	12.0	0.3	3.1	42.6	33.1	20.9	11.9	21.5	6.3	14.5	22.6	1.67	2.67	CL	A-4(4)	ML-CL
107	0- 4	04	121.7	11.8	12.0	0.3	3.1	42.6	33.1	20.9	11.9	21.5	6.3	14.5	22.6	1.67	2.67	CL	A-4(4)	ML-CL
108	0- 4		121.7	11.8	12.0	0.3	3.1	42.6	33.1	20.9	11.9	21.5	6.3	14.5	22.6	1.67	2.67	CL	A-4(4)	ML-CL
	4- 7		114.1	15.5	2.6	0.0	6.1	32.0	25.9	36.0	22.0	30.3	13.0	21.0	18.6	1.79	2.68	C	A-6(6)	CL
	7- 9	09	116.3	12.1	1.6	1.8	3.4	27.2	31.2	36.4	18.7	25.6	10.0	18.0	13.6	1.96	2.68	C	A-6(7)	CL
109	0- 6	06	121.7	11.8	12.0	0.3	3.1	42.6	33.1	20.9	11.9	21.5	6.3	14.5	22.6	1.67	2.67	CL	A-4(4)	ML-CL
110	0- 4	04	114.0	14.3	9.8	0.0	1.9	13.8	57.3	27.0	17.0	29.0	9.3	21.3	25.0	1.61	2.68	SICL	A-4(8)	CL
111	0- 2	02+	114.0	14.3	9.8	0.0	1.9	13.8	57.3	27.0	17.0	29.0	9.3	21.3	25.0	1.61	2.68	SICL	A-4(8)	CL
112	0- 4	04+	113.7	15.4	1.1	7.4	11.7	5.4	26.2	57.3	28.2	41.0	21.2	19.2	14.5	1.98	2.77	SH	A	CL
113	0- 9		114.0	14.3	9.8	0.0	1.9	13.8	57.3	27.0	17.0	29.0	9.3	21.3	25.0	1.61	2.68	SICL	A-4(8)	CL
	9-19	19+	0.0	0.0	0.0	0.0	1.3	22.6	52.8	23.3	16.0	26.4	8.1	0.0	0.0	0.0	2.66	SICL	A-4(8)	CL
114	0- 4		0.0	0.0	0.0	0.0	0.9	12.8	57.3	29.0	21.0	30.5	11.6	20.2	22.3	1.67	2.65	SIL	A-6(9)	CL
	4- 9	09	111.8	15.8	7.6	0.0	0.3	14.5	58.2	27.0	16.0	25.1	7.2	18.0	25.6	1.58	2.65	SICL	A-4(8)	CL
115	0- 2		0.0	0.0	0.0	0.0	0.9	12.8	57.3	29.0	21.0	30.5	11.6	20.2	22.3	1.67	2.65	SIL	A-6(9)	CL
	2- 7		111.8	15.8	7.6	0.0	0.3	14.5	58.2	27.0	16.0	25.1	7.2	18.0	25.6	1.58	2.65	SICL	A-4(8)	CL
	7-24	24	113.7	15.4	1.1	7.4	11.7	5.4	26.2	57.3	28.2	41.0	21.2	19.2	14.5	1.98	2.77	SH	A	CL
116	0- 6		111.8	15.8	7.6	0.0	0.3	14.5	58.2	27.0	16.0	25.1	7.2	18.0	25.6	1.58	2.65	SICL	A-4(8)	CL
	6-21	21	113.7	15.4	1.1	7.4	11.7	5.4	26.2	57.3	28.2	41.0	21.2	19.2	14.5	1.98	2.77	SH	A	CL
117	0- 5	05	111.8	15.8	7.6	0.0	0.3	14.5	58.2	27.0	16.0	25.1	7.2	18.0	25.6	1.58	2.65	SICL	A-4(8)	CL
118	0- 4	04	102.2	20.6	7.6	0.0	0.5	2.7	51.8	45.0	32.0	49.3	24.2	27.6	26.5	1.57	2.67	C	A-7-6(15)	CL
119	0- 3		102.2	20.6	7.6	0.0	0.5	2.7	51.8	45.0	32.0	49.3	24.2	27.6	26.5	1.57	2.67	C	A-7-6(15)	CL
	3- 6		111.6	15.6	7.1	0.0	3.8	14.4	45.3	36.5	26.0	36.4	19.2	19.6	17.6	1.81	2.66	C	A-6(12)	CL
	7-12	12	110.1	16.4	2.6	0.0	2.3	8.0	35.7	54.0	29.0	42.1	21.1	24.7	17.3	1.84	2.72	SH	A	CL
120	0- 3		102.2	20.6	7.6	0.0	0.5	2.7	51.8	45.0	32.0	49.3	24.2	27.6	26.5	1.57	2.67	C	A-7-6(15)	CL
	3- 7		111.6	15.6	7.1	0.0	3.8	14.4	45.3	36.5	26.0	36.4	19.2	19.6	17.6	1.81	2.66	C	A-6(12)	CL
	7-13	13+	110.1	16.4	2.6	0.0	2.3	9.0	35.7	54.0	29.0	42.1	21.1	24.7	17.3	1.84	2.72	SH	A	CL
121	0- 5		102.2	20.6	7.6	0.0	0.5	2.7	51.8	45.0	32.0	49.3	24.2	27.6	26.5	1.57	2.67	C	A-7-6(15)	CL
	5- 9	09	111.6	15.6	7.1	0.0	3.8	14.4	45.3	36.5	26.0	36.4	19.2	19.6	17.6	1.81	2.66	C	A-6(12)	CL
122	0- 8	08	102.2	20.6	7.6	0.0	0.5	2.7	51.8	45.0	32.0	49.3	24.2	27.6	26.5	1.57	2.67	C	A-7-6(15)	CL
123	0- 5		102.2	20.6	7.6	0.0	0.5	2.7	51.8	45.0	32.0	49.3	24.2	27.6	26.5	1.57	2.67	C	A-7-6(15)	CL
	5- 9	09+	111.6	15.6	7.1	0.0	3.8	14.4	45.3	36.5	26.0	36.4	19.2	19.6	17.6	1.81	2.66	C	A-6(12)	CL

COUNTY- BUTLER

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
124	0- 2		102.2	20.6	7.6	0.0	0.5	2.7	51.8	45.0	32.0	49.3	24.2	27.6	26.5	1.57	2.67	C	A-7-6(15)	CL
	2- 8	08+	99.9	22.3	3.5	0.0	3.6	1.9	32.5	62.0	48.0	53.8	25.1	31.2	24.9	1.63	2.73	C	A-7-6(16)	MH-CH
125	0- 3		102.2	20.6	7.6	0.0	0.5	2.7	51.8	45.0	32.0	49.3	24.2	27.6	26.5	1.57	2.67	C	A-7-6(15)	CL
	3- 6		111.6	15.6	7.1	0.0	3.8	14.4	45.3	36.5	26.0	36.4	19.2	19.6	17.6	1.81	2.66	C	A-6(12)	CL
	6-12	12+	99.9	22.3	3.5	0.0	3.6	1.9	32.5	62.0	48.0	53.8	25.1	31.2	24.9	1.63	2.73	C	A-7-6(16)	MH-CH
126	0- 6	06+	102.2	20.6	7.6	0.0	0.5	2.7	51.8	45.0	32.0	49.3	24.2	27.6	26.5	1.57	2.67	C	A-7-6(15)	CL
127	0- 6	06+	0.0	0.0	0.0	0.0	2.5	3.5	63.0	31.0	14.0	37.0	9.2	0.0	0.0	0.0	2.72	SIC	A-4(8)	ML
128	0- 3		102.2	20.6	7.6	0.0	0.5	2.7	51.8	45.0	32.0	49.3	24.2	27.6	26.5	1.57	2.67	C	A-7-6(15)	CL
	3- 6	06+	111.6	15.6	7.1	0.0	3.8	14.4	45.3	36.5	26.0	36.4	19.2	19.6	17.6	1.81	2.66	C	A-6(12)	CL
129	0- 5	05+	102.2	20.6	7.6	0.0	0.5	2.7	51.8	45.0	32.0	49.3	24.2	27.6	26.5	1.57	2.67	C	A-7-6(15)	CL
130	0- 2		0.0	0.0	0.0	0.0	2.5	3.5	63.0	31.0	14.0	37.0	9.2	0.0	0.0	0.0	2.72	SIC	A-4(8)	ML
	2- 6	06+	0.0	0.0	0.0	0.0	2.1	2.1	33.0	62.8	35.0	54.1	30.1	0.0	0.0	0.0	2.78	C	A-7-6(19)	CH
131	0- 7		102.2	20.6	7.6	0.0	0.5	2.7	51.8	45.0	32.0	49.3	24.2	27.6	26.5	1.57	2.67	C	A-7-6(15)	CL
	7-12	12+	105.8	18.6	2.3	0.0	1.6	2.7	31.7	64.0	38.0	52.0	26.0	30.3	17.7	1.84	2.72	C	A-7-6(16)	CH
132	0- 3	03+	102.2	20.6	7.6	0.0	0.5	2.7	51.8	45.0	32.0	49.3	24.2	27.6	26.5	1.57	2.67	C	A-7-6(15)	CL
133	0- 6	06+	107.1	16.5	6.3	0.0	0.9	3.7	56.4	39.0	27.0	38.8	16.6	24.6	32.2	1.44	2.68	SIC	A-6(11)	CL
134	0- 5	05	105.8	18.6	2.3	0.0	1.6	2.7	31.7	64.0	38.0	52.0	26.0	30.3	17.7	1.84	2.72	C	A-7-6(16)	CH
135	0- 5	05	107.1	16.5	6.3	0.0	0.9	3.7	56.4	39.0	27.0	38.8	16.6	24.6	32.2	1.44	2.68	SIC	A-6(11)	CL
136	0- 8		107.1	16.5	6.3	0.0	0.9	3.7	56.4	39.0	27.0	38.8	16.6	24.6	32.2	1.44	2.68	SIC	A-6(11)	CL
	8-18	18	113.9	14.9	1.0	3.0	2.5	7.2	26.8	60.5	32.7	37.0	18.6	23.3	13.2	2.00	2.72	SH	A	CL
137	0- 7		107.1	16.5	6.3	0.0	0.9	3.7	56.4	39.0	27.0	38.8	16.6	24.6	32.2	1.44	2.68	SIC	A-6(11)	CL
	7-16	16+	113.9	14.9	1.0	3.0	2.5	7.2	26.8	60.5	32.7	37.0	18.6	23.3	13.2	2.00	2.72	SH	A	CL
138	0- 8		107.1	16.5	6.3	0.0	0.9	3.7	56.4	39.0	27.0	38.8	16.6	24.6	32.2	1.44	2.68	SIC	A-6(11)	CL
	8-14	14+	105.8	18.6	2.3	0.0	1.6	2.7	31.7	64.0	38.0	52.0	26. 0	30.3	17.7	1.84	2.72	C	A-7-6(16)	CH
139	0- 3	03+	105.8	18.6	2.3	0.0	1.6	2.7	31.7	64.0	38.0	52.0	26.0	30.3	17.7	1.84	2.72	C	A-7-6(16)	CH
140	0- 2		107.1	16.5	6.3	0.0	0.9	3.7	56.4	39.0	27.0	38.8	16.6	24.6	32.2	1.44	2.68	SIC	A-6(11)	CL
	2- 4	04+	105.8	18.6	2.3	0.0	1.6	2.7	31.7	64.0	38.0	52.0	26.0	30.3	17.7	1.84	2.72	C	A-7-6(16)	CH
141	0- 3	03+	107.1	16.5	6.3	0.0	0.9	3.7	56.4	39.0	27.0	38.8	16.6	24.6	32.2	1.44	2.68	SIC	A-6(11)	CL
142	0- 2		107.1	16.5	6.3	0.0	0.9	3.7	56.4	39.0	27.0	38.8	16.6	24.6	32.2	1.44	2.68	SIC	A-6(11)	CL
	2- 5	05	107.5	19.4	3.7	0.0	1.5	14.2	31.3	53.0	34.0	45.8	21.7	26.0	19.6	1.79	2.75	C	A-7-6(14)	CL
143	0- 2		107.1	16.5	6.3	0.0	0.9	3.7	56.4	39.0	27.0	38.8	16.6	24.6	32.2	1.44	2.68	SIC	A-6(11)	CL
	2- 5	05+	105.8	18.6	2.3	0.0	1.6	2.7	31.7	64.0	38.0	52.0	26.0	30.3	17.7	1.84	2.72	C	A-7-6(16)	CH
144	0- 3	03	107.1	16.5	6.3	0.0	0.9	3.7	56.4	39.0	27.0	38.8	16.6	24.6	32.2	1.44	2.68	SIC	A-6(11)	CL
145	0-22	22+	0.0	0.0	0.0	0.0	0.7	11.8	56.9	30.6	21.0	32.3	14.1	0.0	0.0	0.0	2.70	SIC	A-6(10)	CL
146	0-24		0.0	0.0	0.0	0.0	0.7	11.8	56.9	30.6	21.0	32.3	14.1	0.0	0.0	0.0	2.70	SIC	A-6(10)	CL
	24-27	27+	0.0	0.0	0.0	0.0	0.3	11.3	57.4	31.0	21.0	28.2	10.0	0.0	0.0	0.0	2.70	SIC	A-6(8)	CL
147	0-21		0.0	0.0	0.0	0.0	0.7	11.8	56.9	30.6	21.0	32.3	14.1	0.0	0.0	0.0	2.70	SIC	A-6(10)	CL
	21-33		0.0	0.0	0.0	0.0	0.3	11.3	57.4	31.0	21.0	28.2	10.0	0.0	0.0	0.0	2.70	SIC	A-6(8)	CL
	33-41	41+	0.0	0.0	0.0	30.2	30.6	35.7	2.8	0.7	0.1	0.0	0.0	0.0	0.0	0.0	2.72	S	A-3(0)	SW OR SP
148	0-25		0.0	0.0	0.0	0.0	0.7	24.5	46.8	28.0	16.5	25.3	7.8	0.0	0.0	0.0	2.68	L	A-4(8)	CL
	25-31		0.0	0.0	0.0	0.0	0.1	56.7	30.2	13.0	8.5	0.0	0.0	0.0	0.0	0.0	2.70	SL	A-4(8)	SM
	31-66	66+	0.0	0.0	0.0	30.2	30.6	35.7	2.8	0.7	0.1	0.0	0.0	0.0	0.0	0.0	2.72	S	A-3(0)	SW OR SP
149	0-13	13+	0.0	0.0	0.0	0.0	0.7	24.5	46.8	28.0	16.5	25.3	7.8	0.0	0.0	0.0	2.68	L	A-4(8)	CL
150	0- 2		109.7	16.6	11.3	0.0	0.7	7.3	61.0	31.0	18.0	32.1	11.6	20.3	25.4	1.56	2.58	SIC	A	CL
	2- 7	07+	113.4	16.5	2.1	0.0	2.3	23.8	24.9	49.0	28.0	35.3	17.6	19.6	17.5	1.83	2.70	C	A-6(10)	CL
151	0- 4	04+	113.4	16.5	2.1	0.0	2.3	23.8	24.9	49.0	28.0	35.3	17.6	19.6	17.5	1.83	2.70	C	A-6(10)	CL
152	0- 5		109.7	16.6	11.3	0.0	0.7	7.3	61.0	31.0	18.0	32.1	11.6	20.3	25.4	1.56	2.58	SIC	A	CL
	5- 9	09+	113.4	16.5	2.1	0.0	2.3	23.8	24.9	49.0	28.0	35.3	17.6	19.6	17.5	1.83	2.70	C	A-6(10)	CL
153	0- 6	06	109.7	16.6	11.3	0.0	0.7	7.3	61.0	31.0	18.0	32.1	11.6	20.3	25.4	1.56	2.58	SIC	A	CL
154	0- 4	04+	109.7	16.6	11.3	0.0	0.7	7.3	61.0	31.0	18.0	32.1	11.6	20.3	25.4	1.56	2.58	SIC	A	CL
155	0- 5	05+	107.5	18.4	10.6	0.0	0.3	2.6	62.1	35.0	25.0	43.5	21.5	21.3	23.9	1.63	2.66	SIC	A-7-6(14)	CL
156	0- 3		109.7	16.6	11.3	0.0	0.7	7.3	61.0	31.0	18.0	32.1	11.6	20.3	25.4	1.56	2.58	SIC	A	CL
	3- 7	07+	107.5	18.4	10.6	0.0	0.3	2.6	62.1	35.0	25.0	43.5	21.5	21.3	23.9	1.63	2.66	SIC	A-7-6(14)	CL
157	0- 4	04	109.7	16.6	11.3	0.0	0.7	7.3	61.0	31.0	18.0	32.1	11.6	20.3	25.4	1.56	2.58	SIC	A	CL
158	0- 5	05+	107.5	18.4	10.6	0.0	0.3	2.6	62.1	35.0	25.0	43.5	21.5	21.3	23.9	1.63	2.66	SIC	A-7-6(14)	CL
159	0- 2		109.7	16.6	11.3	0.0	0.7	7.3	61.0	31.0	18.0	32.1	11.6	20.3	25.4	1.56	2.58	SIC	A	CL
	2- 5	05+	107.5	18.4	10.6	0.0	0.3	2.6	62.1	35.0	25.0	43.5	21.5	21.3	23.9	1.63	2.66	SIC	A-7-6(14)	CL
160	0- 5		109.7	16.6	11.3	0.0	0.7	7.3	61.0	31.0	18.0	32.1	11.6	20.3	25.4	1.56	2.58	SIC	A	CL
	5-11	11+	113.4	16.5	2.1	0.0	2.3	23.8	24.9	49.0	28.0	35.3	17.6	19.6	17.5	1.83	2.70	C	A-6(10)	CL
161	0- 4	04+	109.7	16.6	11.3	0.0	0.7	7.3	61.0	31.0	18.0	32.1	11.6	20.3	25.4	1.56	2.58	SIC	A	CL
162	0- 5	05+	113.4	16.5	2.1	0.0	2.3	23.8	24.9	49.0	28.0	35.3	17.6	19.6	17.5	1.83	2.70	C	A-6(10)	CL
163	0- 5	05+	109.7	16.6	11.3	0.0	0.7	7.3	61.0	31.0	18.0	32.1	11.6	20.3	25.4	1.56	2.58	SIC	A	CL
164	0- 3		108.2	17.8	10.8	0.0	0.6	7.5	53.9	38.0	23.5	39.2	17.0	20.5	23.0	1.65	2.67	C	A-6(11)	CL
	3-13	13+	115.7	14.9	11.2	0.0	0.4	40.7	27.9	31.0	21.0	32.0	15.1	17.5	22.6	1.67	2.68	C	A-6(7)	CL
165	0- 2	02+	108.2	17.8	10.8	0.0	0.6	7.5	53.9	38.0	23.5	39.2	17.0	20.5	23.0	1.65	2.67	C	A-6(11)	CL
166	0- 2		108.2	17.8	10.8	0.0	0.6	7.5	53.9	38.0	23.5	39.2	17.0	20.5	23.0	1.65	2.67	C	A-6(11)	CL
	2- 8		115.7	14.9	11.2	0.0	0.4	40.7	27.9	31.0	21.0	32.0	15.1	17.5	22.6	1.67	2.68	C	A-6(7)	CL
	8-14	14+	113.3	16.0	1.4	0.0	3.4	7.5	36.6	52.5	25.0	44.0	23.7	22.4	17.0	1.86	2.72	SH	A	CL
167	0- 2		108.2	17.8	10.8	0.0	0.6	7.5	53.9	38.0	23.5	39.2	17.0	20.5	23.0	1.65	2.67	C	A-6(11)	CL
	2-10	10+	115.7	14.9	11.2	0.0	0.4	40.7	27.9	31.0	21.0	32.0	15.1	17.5	22.6	1.67	2.68	C	A-6(7)	CL
168	0- 3		115.7	14.9	11.2	0.0	0.4	40.7	27.9	31.0	21.0	32.0	15.1	17.5	22.6	1.67	2.68	C	A-6(7)	CL
	3- 8	08+	118.8	12.9	12.5	0.0	0.3	63.9	20.8	15.0	3.8	0.0	0.0	0.0	20.5	1.69	2.68	SL	A-4(8)	SM
169	0- 3	03+	108.2	17.8	10.8	0.0	0.6	7.5	53.9	38.0	23.5	39.2	17.0	20.5	23.0	1.65	2.67	C	A-6(11)	CL
170	0- 4		108.2	17.8	10.8	0.0	0.6	7.5	53.9	38.0	23.5	39.2	17.0	20.5	23.0	1.65	2.67	C	A-6(11)	CL
	4- 6	06+	115.7	14.9	11.2	0.0	0.4	40.7	27.9	31.0	21.0	32.0	15.1	17.5	22.6	1.67	2.68	C	A-6(7)	CL
171	0- 3		108.2	17.8	10.8	0.0	0.6	7.5	53.9	38.0	23.5	39.2	17.0	20.5	23.0	1.65	2.67	C	A-6(11)	CL
	3- 6		115.7	14.9	11.2	0.0	0.4	40.7	27.9	31.0	21.0	32.0	15.1	17.5	22.6	1.67	2.68	C	A-6(7)	CL
	6-16	16+	118.8	12.9	12.5	0.0	0.3	63.9	20.8	15.0	3.8	0.0	0.0	0.0	20.5	1.69	2.68	SL	A-4(8)	SM
172	0- 1		108.2	17.8	10.8	0.0	0.6	7.5	53.9	38.0	23.5	39.2	17.0	20.5	23.0	1.65	2.67	C	A-6(11)	CL
	1- 9	09+	115.7	14.9	11.2	0.0	0.4	40.7	27.9	31.0	21.0	32.0	15.1	17.5	22.6	1.67	2.68	C	A-6(7)	CL
173	0- 3		115.7	14.9	11.2	0.0	0.4	40.7	27.9	31.0	21.0	32.0	15.1	17.5	22.6	1.67	2.68	C	A-6(7)	CL
	3-10	10+	118.8	12.9	12.5	0.0	0.3	63.9	20.8	15.0	3.8	0.0	0.0	0.0	20.5	1.69	2.68	SL	A-4(8)	SM
174	0- 7	07+	115.7	14.9	11.2	0.0	0.4	40.7	27.9	31.0	21.0	32.0	15.1	17.5	22.6	1.67	2.68	C	A-6(7)	CL

COUNTY- DAVIESS

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
1	0- 6	06+	0.0	0.0	0.0	0.1	4.1	29.6	49.2	17.1	7.0	28.0	4.8	0.0	0.0	0.0	2.71	L	A-4(6)	ML-CL
2	0- 7	07+	109.1	16.6	14.0	0.0	1.0	13.7	59.7	25.6	15.3	35.0	10.4	28.5	24.8	1.61	2.72	SICL	A-6(8)	ML-CL
3	0- 6	06+	0.0	0.0	0.0	0.1	4.1	29.6	49.2	17.1	7.0	28.0	4.8	0.0	0.0	0.0	2.71	L	A-4(6)	ML-CL
4	0- 6	06+	109.9	16.3	5.7	0.0	0.4	16.5	56.6	25.1	12.8	31.4	8.2	25.4	27.2	1.58	2.68	SICL	A-4(8)	ML-CL
5	0- 8	08+	0.0	0.0	0.0	0.0	1.3	20.6	50.4	27.7	17.0	32.1	10.6	0.0	0.0	0.0	2.68	SICL	A-6(8)	ML-CL
6	0- 3		109.9	16.3	5.7	0.0	0.4	16.5	56.6	25.1	12.8	31.4	8.2	25.4	27.2	1.58	2.68	SICL	A-4(8)	ML-CL
	3- 7	07+	109.1	16.6	14.0	0.0	1.0	13.7	59.7	25.6	15.3	35.0	10.4	28.5	24.8	1.61	2.72	SICL	A-6(8)	ML-CL
7	0- 5	05+	0.0	0.0	0.0	0.0	1.3	20.6	50.4	27.7	17.0	32.1	10.6	0.0	0.0	0.0	2.68	SICL	A-6(8)	ML-CL
8	0- 3		109.9	16.3	5.7	0.0	0.4	16.5	56.6	25.1	12.8	31.4	8.2	25.4	27.2	1.58	2.68	SICL	A-4(8)	ML-CL
	3-10	10+	120.5	12.4	1.2	0.0	3.8	26.9	28.5	37.7	22.4	35.3	16.2	25.4	14.4	1.86	2.75	CSH	A-6(9)	CL
9	0- 4	04+	0.0	0.0	0.0	0.1	4.1	29.6	49.2	17.1	7.0	28.0	4.8	0.0	0.0	0.0	2.71	L	A-4(6)	ML-CL
10	0- 3		113.9	15.0	6.0	0.0	1.4	22.2	43.6	28.8	18.8	33.9	13.5	23.6	21.4	1.74	2.76	CL	A-6(9)	CL
	3-15		123.1	11.3	1.2	1.1	4.3	36.4	18.2	27.0	14.1	29.3	12.7	19.1	16.5	1.89	2.75	CSH	A-6(5)	SC
	15-22	22+	118.6	12.5	1.9	5.4	5.9	23.2	29.9	26.7	12.4	33.7	12.0	24.9	21.6	1.73	2.72	CSH	A-6(7)	ML-CL
11	0- 8		113.9	15.0	6.0	0.0	1.4	22.2	43.6	28.8	18.8	33.9	13.5	23.6	21.4	1.74	2.76	CL	A-6(9)	CL
	8-13	13+	0.0	0.0	0.0	0.1	3.5	20.1	24.2	52.2	32.7	45.6	25.3	22.9	13.9	2.01	2.75	C	A-7-6(15)	CL
12	0- 5	05+	0.0	0.0	0.0	0.0	0.9	15.4	56.7	27.0	18.3	33.2	11.4	0.0	0.0	0.0	2.75	SICL	A-6(9)	ML-CL
3	0- 7	07+	112.3	15.3	10.5	0.0	3.7	21.0	51.7	23.6	13.2	32.3	10.7	26.3	24.0	1.64	2.68	SICL	A-6(8)	ML-CL
14	0- 5	05+	0.0	0.0	0.0	0.0	0.9	15.4	56.7	27.0	18.3	33.2	11.4	0.0	0.0	0.0	2.75	SICL	A-6(9)	ML-CL
15	0- 4		0.0	0.0	0.0	0.0	0.8	19.6	49.7	26.3	16.1	29.0	8.8	0.0	0.0	0.0	2.73	SICL	A-4(8)	CL
	4-11	11	0.0	0.0	0.0	8.4	7.7	25.3	24.8	22.2	12.6	31.6	13.1	0.0	0.0	0.0	2.74	CLSH	A-6(6)	SC
16	0- 4		113.9	15.0	6.0	0.0	1.4	22.2	43.6	28.8	18.8	33.9	13.5	23.6	21.4	1.74	2.76	CL	A-6(9)	CL
	4- 8		0.0	0.0	0.0	0.1	3.5	20.1	24.2	52.2	32.7	45.6	25.3	22.9	13.9	2.01	2.75	C	A-7-6(15)	CL
	8-15		123.1	11.3	1.2	1.1	4.3	36.4	18.2	27.0	14.1	29.3	12.7	19.1	16.5	1.89	2.75	CSH	A-6(5)	SC
	15-18	18+	118.6	12.5	1.9	5.4	5.9	23.2	29.9	26.7	12.4	33.7	12.0	24.9	21.6	1.73	2.72	CSH	A-6(7)	ML-CL
17	0- 5		0.0	0.0	0.0	4.8	2.9	24.7	25.6	37.1	26.6	43.9	20.1	0.0	0.0	0.0	2.75	C	A-7-6(12)	CL
	5- 7	07+	0.0	0.0	0.0	8.8	6.2	17.6	26.7	31.7	17.5	35.4	15.5	0.0	0.0	0.0	2.79	CSH	A-6(9)	CL
18	0-14	14+	0.0	0.0	0.0	0.0	0.8	19.6	49.7	26.3	16.1	29.0	8.8	0.0	0.0	0.0	2.73	SICL	A-4(8)	CL
19	0- 3		113.9	15.0	6.0	0.0	1.4	22.2	43.6	28.8	18.8	33.9	13.5	23.6	21.4	1.74	2.76	CL	A-6(9)	CL
	3- 5	05+	123.1	11.3	1.2	1.1	4.3	36.4	18.2	27.0	14.1	29.3	12.7	19.1	16.5	1.89	2.75	CSH	A-6(5)	SC
20	0- 5		0.0	0.0	0.0	4.8	2.9	24.7	25.6	37.1	26.6	43.9	20.1	0.0	0.0	0.0	2.75	C	A-7-6(12)	CL
	5-14	14+	0.0	0.0	0.0	0.0	0.8	19.6	49.7	26.3	16.1	29.0	8.8	0.0	0.0	0.0	2.73	SICL	A-4(8)	CL
21	0- 1		0.0	0.0	0.0	0.0	1.3	20.6	50.4	27.7	17.0	32.1	10.6	0.0	0.0	0.0	2.68	SICL	A-6(8)	ML-CL
	1- 4		0.0	0.0	0.0	0.0	2.0	22.3	59.8	15.9	6.3	29.3	4.0	0.0	0.0	0.0	2.67	SIL	A-4(8)	ML
	4-11	11+	0.0	0.0	0.0	0.0	0.8	19.6	49.7	26.3	16.1	29.0	8.8	0.0	0.0	0.0	2.73	SICL	A-4(8)	CL
22	0- 6	06+	0.0	0.0	0.0	0.0	4.5	22.5	36.1	36.9	26.4	41.1	20.1	0.0	0.0	0.0	2.74	C	A-7-6(12)	CL
23	0- 1		107.0	18.4	5.1	0.0	0.9	15.7	51.6	28.3	19.4	38.3	12.8	26.9	25.5	1.61	2.69	SICL	A-6(9)	ML-CL
	1- 8	08	117.7	13.2	0.9	10.1	5.1	16.7	22.9	30.9	16.7	34.2	12.8	23.3	17.7	1.86	2.83	CSH	A-6(8)	CL
24	0- 5		107.0	18.4	5.1	0.0	0.9	15.7	51.6	28.3	19.4	38.3	12.8	26.9	25.5	1.61	2.69	SICL	A-6(9)	ML-CL
	5-14		117.7	13.2	0.9	10.1	5.1	16.7	22.9	30.9	16.7	34.2	12.8	23.3	17.7	1.86	2.83	CSH	A-6(8)	CL
	14-16		118.5	12.3	3.2	12.0	5.0	15.2	23.5	29.0	11.7	35.8	15.1	22.9	16.3	1.89	2.75	CSH	A-6(9)	CL
	16-19	19	117.7	13.2	0.9	10.1	5.1	16.7	22.9	30.9	16.7	34.2	12.8	23.3	17.7	1.86	2.83	CSH	A-6(8)	CL
25	0- 7		107.0	18.4	5.1	0.0	0.9	15.7	51.6	28.3	19.4	38.3	12.8	26.9	25.5	1.61	2.69	SICL	A-6(9)	ML-CL
	7-10	10	110.9	14.5	1.4	0.0	0.6	16.7	26.5	56.2	38.3	41.7	20.6	23.6	15.3	1.92	2.74	C	A-7-6(15)	CL
26	0- 3		107.0	18.4	5.1	0.0	0.9	15.7	51.6	28.3	19.4	38.3	12.8	26.9	25.5	1.61	2.69	SICL	A-6(9)	ML-CL
	3- 5		110.9	14.5	1.4	0.0	0.6	16.7	26.5	56.2	38.3	41.7	20.6	23.6	15.3	1.92	2.74	C	A-7-6(15)	CL
	5-12	12	117.7	13.2	0.9	10.1	5.1	16.7	22.9	30.9	16.7	34.2	12.8	23.3	17.7	1.86	2.83	CSH	A-6(8)	CL
27	0- 4		107.0	18.4	5.1	0.0	0.9	15.7	51.6	28.3	19.4	38.3	12.8	26.9	25.5	1.61	2.69	SICL	A-6(9)	ML-CL
	4- 9	09	117.7	13.2	0.9	10.1	5.1	16.7	22.9	30.9	16.7	34.2	12.8	23.3	17.7	1.86	2.83	CSH	A-6(8)	CL
28	0- 6		107.0	18.4	5.1	0.0	0.9	15.7	51.6	28.3	19.4	38.3	12.8	26.9	25.5	1.61	2.69	SICL	A-6(9)	ML-CL
	6- 8		110.9	14.5	1.4	0.0	0.6	16.7	26.5	56.2	38.3	41.7	20.6	23.6	15.3	1.92	2.74	C	A-7-6(15)	CL
	8-10	10	117.7	13.2	0.9	10.1	5.1	16.7	22.9	30.9	16.7	34.2	12.8	23.3	17.7	1.86	2.83	CSH	A-6(8)	C
29	0- 6		0.0	0.0	0.0	0.0	4.5	22.5	36.1	36.9	26.4	41.1	20.1	0.0	0.0	0.0	2.74	C	A-7-6(12)	CL
	6- 9		0.0	0.0	0.0	4.0	5.3	15.2	24.2	41.7	29.0	45.7	23.0	0.0	0.0	0.0	2.78	C	A-7-6(14)	CL
	9-11	11+	0.0	0.0	0.0	0.0	8.7	18.9	28.8	29.6	14.4	32.3	11.8	0.0	0.0	0.0	2.79	CSH	A-6(8)	CL
30	0- 7		0.0	0.0	0.0	0.0	0.2	15.9	56.3	19.9	11.4	31.6	8.9	0.0	0.0	0.0	2.74	CL	A-4(8)	ML-CL
	7- 8	08	0.0	0.0	0.0	0.0	4.5	22.5	36.1	36.9	26.4	41.1	20.1	0.0	0.0	0.0	2.74	C	A-7-6(12)	CL
31	0- 4		0.0	0.0	0.0	0.0	4.5	22.5	36.1	36.9	26.4	41.1	20.1	0.0	0.0	0.0	2.74	C	A-7-6(12)	CL
	4- 9	09	0.0	0.0	0.0	0.0	8.7	18.9	28.8	29.6	14.4	32.3	11.8	0.0	0.0	0.0	2.79	CSH	A-6(8)	CL
32	0- 3		107.0	18.4	5.1	0.0	0.9	15.7	51.6	28.3	19.4	38.3	12.8	26.9	25.5	1.61	2.69	SICL	A-6(9)	ML-CL
	3- 4		110.9	14.5	1.4	0.0	0.6	16.7	26.5	56.2	38.3	41.7	20.6	23.6	15.3	1.92	2.74	C	A-7-6(15)	CL
	4- 8		117.7	13.2	0.9	10.1	5.1	16.7	22.9	30.9	16.7	34.2	12.8	23.3	17.7	1.86	2.83	CSH	A-6(8)	CL
	8-11	11	118.5	12.3	3.2	12.0	5.0	15.2	23.5	29.0	11.7	35.8	15.1	22.9	16.3	1.89	2.75	CSH	A-6(9)	CL
33	0- 3		107.0	18.4	5.1	0.0	0.9	15.7	51.6	28.3	19.4	38.3	12.8	26.9	25.5	1.61	2.69	SICL	A-6(9)	ML-CL
	3-18	18	117.7	13.2	0.9	10.1	5.1	16.7	22.9	30.9	16.7	34.2	12.8	23.3	17.7	1.86	2.83	CSH	A-6(8)	CL
34	0- 3		107.0	18.4	5.1	0.0	0.9	15.7	51.6	28.3	19.4	38.3	12.8	26.9	25.5	1.61	2.69	SICL	A-6(9)	ML-CL
	3-11		117.7	13.2	0.9	10.1	5.1	16.7	22.9	30.9	16.7	34.2	12.8	23.3	17.7	1.86	2.83	CSH	A-6(8)	CL
	11-14	14	118.5	12.3	3.2	12.0	5.0	15.2	23.5	29.0	11.7	35.8	15.1	22.9	16.3	1.89	2.75	CSH	A-6(9)	CL
35	0- 3		107.0	18.4	5.1	0.0	0.9	15.7	51.6	28.3	19.4	38.3	12.8	26.9	25.5	1.61	2.69	SICL	A-6(9)	ML-CL
	3- 9	09	117.7	13.2	0.9	10.1	5.1	16.7	22.9	30.9	16.7	34.2	12.8	23.3	17.7	1.86	2.83	CSH	A-6(8)	CL
36	0-10	10+	105.6	17.4	1.9	0.0	0.6	8.6	61.3	29.5	11.9	33.3	9.2	26.1	27.1	1.49	2.69	SICL	A-4(8)	ML-CL
37	0- 7		105.6	17.4	1.9	0.0	0.6	8.6	61.3	29.5	11.9	33.3	9.2	26.1	27.1	1.49	2.69	SICL	A-4(8)	ML-CL
	7-10	10+	109.4	15.3	7.2	0.0	0.2	12.8	63.3	23.7	9.2	23.4	1.6	23.1	24.8	1.53	2.70	SICL	A-4(8)	ML
38	0- 7	07+	105.6	17.4	1.9	0.0	0.6	8.6	61.3	29.5	11.9	33.3	9.2	26.1	27.1	1.49	2.69	SICL	A-4(8)	ML-CL
39	0- 9	09+	109.4	15.3	7.2	0.0	0.2	12.8	63.3	23.7	9.2	23.4	1.6	23.1	24.8	1.53	2.70	SICL	A-4(8)	ML
40	0- 3		105.6	17.4	1.9	0.0	0.6	8.6	61.3	29.5	11.9	33.3	9.2	26.1	27.1	1.49	2.69	SICL	A-4(8)	ML-CL
	3- 6	06+	109.4	15.3	7.2	0.0	0.2	12.8	63.3	23.7	9.2	23.4	1.6	23.1	24.8	1.53	2.70	SICL	A-4(8)	ML
41	0- 6	06+	109.4	15.3	7.2	0.0	0.2	12.8	63.3	23.7	9.2	23.4	1.6	23.1	24.8	1.53	2.70	SICL	A-4(8)	ML
42	0- 5	05+	109.4	15.3	7.2	0.0	0.2	12.8	63.3	23.7	9.2	23.4	1.6	23.1	24.8	1.53	2.70	SICL	A-4(8)	ML
43	0- 5		105.6	17.4	1.9	0.0	0.6	8.6	61.3	29.5	11.9	33.3	9.2	26.1	27.1	1.49	2.69	SICL	A-4(8)	ML-CL
	5-20	20+	109.4	15.3	7.2	0.0	0.2	12.8	63.3	23.7	9.2	23.4	1.6	23.1	24.8	1.53	2.70	SICL	A-4(8)	ML
44	0- 5		107.8	17.2	15.0	0.0	0.2	13.3	58.6	28.0	19.7	38.4	14.8	28.2	25.3	1.61	2.72	SICL	A-6(10)	ML-CL
	5-11	11+	0.0	0.0	0.0	0.0	1.5	9.5	30.7	58.3	42.1	64.5	39.5	31.7	15.7	1.90	2.77	C	A-7-6(20)	CH
45	0- 5	05+	0.0	0.0	0.0	0.0	1.9	14.2	56.5	27.4	18.1	38.4	13.1	0.0	0.0	0.0	2.73	SICL	A-6(9)	ML-CL
46	0- 9	09	107.8	17.2	15.0	0.0	0.2	13.3	58.6	28.0	19.7	38.4	14.8	28.2	25.3	1.61	2.72	SICL	A-6(10)	ML-CL
47	0- 6		107.8	17.2	15.0	0.0	0.2	13.3	58.6	28.0	19.7	38.4	14.8	28.2	25.3	1.61	2.72	SICL	A-6(10)	ML-CL
	6-10	10	117.2	13.3	11.4	0.0	0.2	31.5	47.1	21.2	12.5	25.3	6.6	20.0	16.5	1.79	2.70	CL	A-4(7)	ML-CL
48	0- 6	06+	0.0	0.0	0.0	0.0	1.9	14.2	56.5	27.4	18.1	38.4	13.1	0.0	0.0	0.0	2.73	SICL	A-6(9)	ML-CL
49	0- 7		107.8	17.2	15.0	0.0	0.2	13.3	58.6	28.0	19.7	38.4	14.8	28.2	25.3	1.61	2.72	SICL	A-6(10)	ML-CL
	7- 9	09+	117.2	13.3	11.4	0.0	0.2	31.5	47.1	21.2	12.5	25.3	6.6	20.0	16.5	1.79	2.70	CL	A-4(7)	ML-CL
50	0-10	10+	107.8	17.2	15.0	0.0	0.2	13.3	58.6	28.0	19.7	38.4	14.8	28.2	25.3	1.61	2.72	SICL	A-6(10)	ML-CL
51	0- 6	06+	0.0	0.0	0.0	0.0	1.9	14.2	56.5	27.4	18.1	38.4	13.1	0.0	0.0	0.0	2.73	SICL	A-6(9)	ML-CL
52	0- 8	08+	107.8	17.2	15.0	0.0	0.2	13.3	58.6	28.0	19.7	38.4	14.8	28.2	25.3	1.61	2.72	SICL	A-6(10)	ML-CL
53	0- 5	05+	0.0	0.0	0.0	0.0	1.9	14.2	56.5	27.4	18.1	38.4	13.1	0.0	0.0	0.0	2.73	SICL	A-6(9)	ML-CL

COUNTY- DAVIESS

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
54	0- 9	09+	0.0	0.0	0.0	0.0	1.3	17.9	62.7	18.1	7.5	25.8	3.1	0.0	0.0	0.0	2.70	SIL	A-4(8)	ML
55	0- 5		0.0	0.0	0.0	0.0	1.4	17.4	63.4	17.8	5.3	29.5	4.6	0.0	0.0	0.0	2.69	SIL	A-4(8)	ML
	5- 6	06+	0.0	0.0	0.0	0.0	0.2	17.2	54.6	28.0	18.3	31.0	11.8	0.0	0.0	0.0	2.75	SICL	A-6(9)	CL
56	0- 5	05+	0.0	0.0	0.0	0.0	1.4	17.4	63.4	17.8	5.3	29.5	4.6	0.0	0.0	0.0	2.69	SIL	A-4(8)	ML
57	0- 6		111.0	16.1	12.5	0.0	2.0	15.6	52.5	29.9	17.7	33.5	12.2	25.6	23.8	1.67	2.72	SICL	A-6(9)	CL
	6- 8		0.0	0.0	0.0	0.0	6.0	10.2	35.1	47.2	35.5	52.9	28.1	28.6	19.1	1.83	2.82	C	A-7-6(17)	CH
	8-15	15+	117.2	14.0	1.5	0.1	3.6	23.3	35.3	32.2	15.0	33.1	12.1	24.9	22.3	1.71	2.78	CSH	A-6(8)	CL
58	0- 5		111.0	16.1	12.5	0.0	2.0	15.6	52.5	29.9	17.7	33.5	12.2	25.6	23.8	1.67	2.72	SICL	A-6(9)	CL
	5-17	17+	117.2	14.0	1.5	0.1	3.6	23.3	35.3	32.2	15.0	33.1	12.1	24.9	22.3	1.71	2.78	CSH	A-6(8)	CL
59	0- 7		111.0	16.1	12.5	0.0	2.0	15.6	52.5	29.9	17.7	33.5	12.2	25.6	23.8	1.67	2.72	SICL	A-6(9)	CL
	7-11		0.0	0.0	0.0	0.0	6.0	10.2	35.1	47.2	35.5	52.9	28.1	28.6	19.1	1.83	2.82	C	A-7-6(17)	CH
	11-21	21+	117.2	14.0	1.5	0.1	3.6	23.3	35.3	32.2	15.0	33.1	12.1	24.9	22.3	1.71	2.78	CSH	A-6(8)	CL
60	0-14	14+	0.0	0.0	0.0	0.0	1.3	17.9	62.7	18.1	7.5	25.8	3.1	0.0	0.0	0.0	2.70	SIL	A-4(8)	ML
61	0-10	10+	0.0	0.0	0.0	0.0	1.4	17.4	63.4	17.8	5.3	29.5	4.6	0.0	0.0	0.0	2.69	SIL	A-4(8)	ML
62	0- 3		0.0	0.0	0.0	0.0	1.4	17.4	63.4	17.8	5.3	29.5	4.6	0.0	0.0	0.0	2.69	SIL	A-4(8)	ML
	3-10	10+	0.0	0.0	0.0	0.0	1.3	17.9	62.7	18.1	7.5	25.8	3.1	0.0	0.0	0.0	2.70	SIL	A-4(8)	ML
63	0- 5		0.0	0.0	0.0	0.0	1.4	17.4	63.4	17.8	5.3	29.5	4.6	0.0	0.0	0.0	2.69	SIL	A-4(8)	ML
	5-10	10+	107.8	17.2	15.0	0.0	0.2	13.3	58.6	28.0	19.7	38.4	14.8	28.2	25.3	1.61	2.72	SICL	A-6(10)	ML-CL
64	0- 2		109.0	16.4	7.8	0.0	5.6	5.6	61.1	27.7	17.1	32.3	11.3	26.6	26.3	1.59	2.69	SICL	A-6(8)	CL
	2- 5		106.1	18.4	9.0	0.0	0.1	11.1	59.2	29.6	21.5	38.6	15.0	30.5	29.2	1.52	2.74	SICL	A-6(10)	ML-CL
	5- 9	09+	113.5	15.3	7.4	0.0	2.4	13.8	52.4	31.4	20.8	33.1	15.8	22.7	18.3	1.81	2.72	C	A-6(10)	CL
65	0- 1		109.0	16.4	7.8	0.0	5.6	5.6	61.1	27.7	17.1	32.3	11.3	26.6	26.3	1.59	2.69	SICL	A-6(8)	CL
	1- 7		106.1	18.4	9.0	0.0	0.1	11.1	59.2	29.6	21.5	38.6	15.0	30.5	29.2	1.52	2.74	SICL	A-6(10)	ML-CL
	7-10		108.0	18.3	8.0	0.0	0.2	18.9	37.4	43.5	30.6	44.4	24.9	27.4	18.4	1.82	2.74	C	A-7-6(15)	CL
	10-15	15+	113.5	15.3	7.4	0.0	2.4	13.8	52.4	31.4	20.8	33.1	15.8	22.7	18.3	1.81	2.72	C	A-6(10)	CL
66	0- 6	06+	0.0	0.0	0.0	0.0	1.0	14.9	58.9	25.2	13.0	27.7	3.4	0.0	0.0	0.0	2.70	SICL	A-4(8)	ML
67	0- 2		0.0	0.0	0.0	0.0	1.0	14.9	58.9	25.2	13.0	27.7	3.4	0.0	0.0	0.0	2.70	SICL	A-4(8)	ML
	2- 8	08+	0.0	0.0	0.0	0.0	1.1	15.3	50.0	28.1	18.5	37.7	25.4	0.0	0.0	0.0	2.67	SICL	A-6(10)	CL
68	0- 5	05+	0.0	0.0	0.0	0.0	1.1	15.3	50.0	28.1	18.5	37.7	25.4	0.0	0.0	0.0	2.67	SICL	A-6(10)	CL
69	0- 5		0.0	0.0	0.0	0.0	1.0	14.9	58.9	25.2	13.0	27.7	3.4	0.0	0.0	0.0	2.70	SICL	A-4(8)	ML
	5- 6	06+	0.0	0.0	0.0	0.0	1.1	15.3	50.0	28.1	18.5	37.7	25.4	0.0	0.0	0.0	2.67	SICL	A-6(10)	CL
70	0- 2		0.0	0.0	0.0	0.0	1.0	14.9	58.9	25.2	13.0	27.7	3.4	0.0	0.0	0.0	2.70	SICL	A-4(8)	ML
	2- 4		0.0	0.0	0.0	0.0	1.1	15.3	50.0	28.1	18.5	37.7	25.4	0.0	0.0	0.0	2.67	SICL	A-6(10)	CL
	4-10	10+	113.5	15.3	7.4	0.0	2.4	13.8	52.4	31.4	20.8	33.1	15.8	22.7	18.3	1.81	2.72	C	A-6(10)	CL
71	0- 1		109.0	16.4	7.8	0.0	5.6	5.6	61.1	27.7	17.1	32.3	11.3	26.6	26.3	1.59	2.69	SICL	A-6(8)	CL
	1- 4		106.1	18.4	9.0	0.0	0.1	11.1	59.2	29.6	21.5	38.6	15.0	30.5	29.2	1.52	2.74	SICL	A-6(10)	ML-CL
	4- 8		108.0	18.3	8.0	0.0	0.2	18.9	37.4	43.5	30.6	44.4	24.9	27.4	18.4	1.82	2.74	C	A-7-6(15)	CL
	8-12		113.5	15.3	7.4	0.0	2.4	13.8	52.4	31.4	20.8	33.1	15.8	22.7	18.3	1.81	2.72	C	A-6(10)	CL
	12-15	15+	0.0	0.0	0.0	0.0	1.5	11.4	22.7	51.4	19.7	48.6	21.6	31.3	22.8	1.68	2.76	C	A-7-6(14)	ML-CL
72	0- 2		109.0	16.4	7.8	0.0	5.6	5.6	61.1	27.7	17.1	32.3	11.3	26.6	26.3	1.59	2.69	SICL	A-6(8)	CL
	2- 4		106.1	18.4	9.0	0.0	0.1	11.1	59.2	29.6	21.5	38.6	15.0	30.5	29.2	1.52	2.74	SICL	A-6(10)	ML-CL
	4- 9		108.0	18.3	8.0	0.0	0.2	18.9	37.4	43.5	30.6	44.4	24.9	27.4	18.4	1.82	2.74	C	A-7-6(15)	CL
	9-13	13+	113.5	15.3	7.4	0.0	2.4	13.8	52.4	31.4	20.8	33.1	15.8	22.7	18.3	1.81	2.72	C	A-6(10)	CL
73	0- 6	06+	0.0	0.0	0.0	0.0	1.1	15.3	50.0	28.1	18.5	37.7	25.4	0.0	0.0	0.0	2.67	SICL	A-6(10)	CL
74	0- 5		0.0	0.0	0.0	0.0	1.0	14.9	58.9	25.2	13.0	27.7	3.4	0.0	0.0	0.0	2.70	SICL	A-4(8)	ML
	5- 6	06+	0.0	0.0	0.0	0.0	1.1	15.3	50.0	28.1	18.5	37.7	25.4	0.0	0.0	0.0	2.67	SICL	A-6(10)	CL
75	0-10	10+	0.0	0.0	0.0	0.0	1.1	15.3	50.0	28.1	18.5	37.7	25.4	0.0	0.0	0.0	2.67	SICL	A-6(10)	CL
76	0- 9	09+	109.2	15.6	9.0	0.0	0.3	17.0	60.3	18.3	10.2	26.2	3.2	23.9	24.7	1.59	2.65	SL	A-4(8)	ML
77	0- 8		109.2	15.6	9.0	0.0	0.3	17.0	60.3	18.3	10.2	26.2	3.2	23.9	24.7	1.59	2.65	SL	A-4(8)	ML
	8-13		99.0	21.7	8.7	0.0	10.4	15.6	19.8	40.3	25.0	46.4	22.4	33.0	21.2	1.70	2.75	C	A-7-6(13)	CL
	13-19	19+	120.0	11.9	3.3	0.0	2.1	59.5	14.5	19.6	10.2	22.0	4.4	18.5	20.5	1.69	2.66	SCLSH	A-2-4(0)	SM-SC
78	0- 7		109.2	15.6	9.0	0.0	0.3	17.0	60.3	18.3	10.2	26.2	3.2	23.9	24.7	1.59	2.65	SL	A-4(8)	ML
	7-14		99.0	21.7	8.7	0.0	10.4	15.6	19.8	40.3	25.0	46.4	22.4	33.0	21.2	1.70	2.75	C	A-7-6(13)	CL
	14-25	25+	120.0	11.9	3.3	0.0	2.1	59.5	14.5	19.6	10.2	22.0	4.4	18.5	20.5	1.69	2.66	SCLSH	A-2-4(0)	SM-SC
79	0-12		109.2	15.6	9.0	0.0	0.3	17.0	60.3	18.3	10.2	26.2	3.2	23.9	24.7	1.59	2.65	SL	A-4(8)	ML
	12-15	15+	108.7	14.9	4.8	0.0	0.3	28.6	56.6	14.5	6.8	0.0	0.0	22.6	24.0	1.62	2.66	SIL	A-4(7)	ML
80	0- 7		109.2	15.6	9.0	0.0	0.3	17.0	60.3	18.3	10.2	26.2	3.2	23.9	24.7	1.59	2.65	SL	A-4(8)	ML
	7- 9		99.0	21.7	8.7	0.0	10.4	15.6	19.8	40.3	25.0	46.4	22.4	33.0	21.2	1.70	2.75	C	A-7-6(13)	CL
	9-13	13	120.0	11.9	3.3	0.0	2.1	59.5	14.5	19.6	10.2	22.0	4.4	18.5	20.5	1.69	2.66	SCLSH	A-2-4(0)	SM-SC
81	0- 6		109.2	15.6	9.0	0.0	0.3	17.0	60.3	18.3	10.2	26.2	3.2	23.9	24.7	1.59	2.65	SL	A-4(8)	ML
	6-15	15+	99.0	21.7	8.7	0.0	10.4	15.6	19.8	40.3	25.0	46.4	22.4	33.0	21.2	1.70	2.75	C	A-7-6(13)	CL
82	0- 6	06+	109.0	16.1	5.2	0.0	2.7	15.0	53.6	24.6	13.5	29.9	7.5	27.3	25.9	1.58	2.70	SICL	A-4(8)	ML-CL
83	0- 8	08+	109.2	15.6	9.0	0.0	0.3	17.0	60.3	18.3	10.2	26.2	3.2	23.9	24.7	1.59	2.65	SL	A-4(8)	ML
84	0- 2		109.2	15.6	9.0	0.0	0.3	17.0	60.3	18.3	10.2	26.2	3.2	23.9	24.7	1.59	2.65	SL	A-4(8)	ML
	2- 9	09+	108.7	14.9	4.8	0.0	0.3	28.6	56.6	14.5	6.8	0.0	0.0	22.6	24.0	1.62	2.66	SIL	A-4(7)	ML
85	0-14	14+	109.2	15.6	9.0	0.0	0.3	17.0	60.3	18.3	10.2	26.2	3.2	23.9	24.7	1.59	2.65	SL	A-4(8)	ML
86	0- 1		109.0	16.1	5.2	0.0	2.7	15.0	53.6	24.6	13.5	29.9	7.5	27.3	25.9	1.58	2.70	SICL	A-4(8)	ML-CL
	1- 5	05+	0.0	0.0	0.0	0.0	1.9	8.3	9.2	72.1	48.8	61.9	37.9	32.9	13.4	1.97	2.69	C	A-7-6(20)	CH
87	0- 5	05+	104.5	16.7	5.8	0.0	0.1	22.5	65.1	12.3	5.4	0.0	0.0	28.1	29.9	1.50	2.66	SIL	A-4(8)	ML
88	0- 1		111.4	15.4	17.2	0.0	0.2	17.0	62.6	20.2	12.9	31.4	7.7	25.1	25.8	1.61	2.71	SICL	A-4(8)	ML-CL
	1- 6	06+	104.5	16.7	5.8	0.0	0.1	22.5	65.1	12.3	5.4	0.0	0.0	28.1	29.9	1.50	2.66	SIL	A-4(8)	ML
89	0- 6	06+	104.5	16.7	5.8	0.0	0.1	22.5	65.1	12.3	5.4	0.0	0.0	28.1	29.9	1.50	2.66	SIL	A-4(8)	ML
90	0- 1		111.4	15.4	17.2	0.0	0.2	17.0	62.6	20.2	12.9	31.4	7.7	25.1	25.8	1.61	2.71	SICL	A-4(8)	ML-CL
	1- 6	06+	104.5	16.7	5.8	0.0	0.1	22.5	65.1	12.3	5.4	0.0	0.0	28.1	29.9	1.50	2.66	SIL	A-4(8)	ML
91	0- 8		111.4	15.4	17.2	0.0	0.2	17.0	62.6	20.2	12.9	31.4	7.7	25.1	25.8	1.61	2.71	SICL	A-4(8)	ML-CL
	8-22	22+	119.5	13.0	15.2	0.0	0.4	53.7	21.8	24.1	19.0	27.6	11.1	20.8	20.4	1.73	2.70	SCL	A-6(2)	SC
92	0-12		104.5	16.7	5.8	0.0	0.1	22.5	65.1	12.3	5.4	0.0	0.0	28.1	29.9	1.50	2.66	SIL	A-4(8)	ML
	12-15	15+	119.5	13.0	15.2	0.0	0.4	53.7	21.8	24.1	19.0	27.6	11.1	20.8	20.4	1.73	2.70	SCL	A-6(2)	SC
93	0-10	10+	111.4	15.4	17.2	0.0	0.2	17.0	62.6	20.2	12.9	31.4	7.7	25.1	25.8	1.61	2.71	SICL	A-4(8)	ML-CL
94	0- 5	05+	104.5	16.7	5.8	0.0	0.1	22.5	65.1	12.3	5.4	0.0	0.0	28.1	29.9	1.50	2.66	SIL	A-4(8)	ML
95	0- 5		113.8	14.7	12.4	0.0	0.5	30.3	45.9	23.3	15.1	28.3	7.8	23.6	22.8	1.67	2.68	CL	A-4(7)	ML-CL
	5-13		109.2	16.7	5.6	0.0	3.6	15.4	56.8	24.2	15.3	32.1	9.5	24.9	27.0	1.57	2.73	SICL	A-4(8)	ML-CL
	13-23	23+	115.8	13.7	10.6	0.0	1.6	20.6	53.3	24.5	14.5	28.6	10.2	20.9	21.3	1.71	2.72	SICL	A-6(8)	CL
96	0- 7	07+	0.0	0.0	0.0	0.0	1.9	28.9	46.9	22.3	15.0	30.9	9.2	0.0	0.0	0.0	2.73	CL	A-4(7)	ML-CL
97	0-13		113.8	14.7	12.4	0.0	0.5	30.3	45.9	23.3	15.1	28.3	7.8	23.6	22.8	1.67	2.68	CL	A-4(7)	ML-CL
	13-22	22+	115.8	13.7	10.6	0.0	1.6	20.6	53.3	24.5	14.5	28.6	10.2	20.9	21.3	1.71	2.72	SICL	A-6(8)	CL
98	0- 8	08+	0.0	0.0	0.0	0.0	1.9	28.9	46.9	22.3	15.0	30.9	9.2	0.0	0.0	0.0	2.73	CL	A-4(7)	ML-CL
99	0- 7		0.0	0.0	0.0	0.0	0.2	16.7	63.6	19.5	11.6	29.1	7.2	0.0	0.0	0.0	2.73	SL	A-4(8)	ML-CL
	7- 9	09+	0.0	0.0	0.0	0.1	4.8	25.2	29.5	39.2	24.2	38.0	19.1	0.0	0.0	0.0	2.81	C	A-6(11)	CL
100	0-10	10+	0.0	0.0	0.0	0.0	0.2	16.7	63.6	19.5	11.6	29.1	7.2	0.0	0.0	0.0	2.73	SL	A-4(8)	ML-CL
101	0-11		112.9	14.8	11.0	0.0	0.4	17.0	61.9	20.7	12.9	30.0	6.2	28.2	26.8	1.58	2.69	SCL	A-4(8)	ML-CL
	11-14		115.6	14.6	9.3	2.7	2.2	30.2	27.6	31.6	21.3	33.6	18.0	21.8	17.3	1.87	2.72	C	A-6(9)	CL
	14-21	21	0.0	0.0	0.0	0.0	1.9	8.3	9.2	72.1	48.8	61.9	37.9	32.9	13.4	1.97	2.69	C	A-7-6(20)	CH
102	0- 7	07+	0.0	0.0	0.0	0.0	0.2	16.7	63.6	19.5	11.6	29.1	7.2	0.0	0.0	0.0	2.73	SL	A-4(8)	ML-CL

COUNTY- DAVIESS

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
103	0-18		112.9	14.8	11.0	0.0	0.4	17.0	61.9	20.7	12.9	30.0	6.2	28.2	26.8	1.58	2.69	SCL	A-4(8)	ML-CL
	18-34	34+	118.7	13.0	9.6	0.0	2.1	61.8	11.4	24.7	18.9	27.7	13.4	22.9	19.3	1.78	2.75	SCL	A-6(1)	SC
104	0-23		112.9	14.8	11.0	0.0	0.4	17.0	61.9	20.7	12.9	30.0	6.2	28.2	26.8	1.58	2.69	SCL	A-4(8)	ML-CL
	23-35	35+	119.7	12.5	3.9	0.0	1.3	34.8	27.6	22.5	12.4	29.5	12.4	23.8	17.2	1.83	2.74	CL	A-6(6)	CL
105	0-17		112.9	14.8	11.0	0.0	0.4	17.0	61.9	20.7	12.9	30.0	6.2	28.2	26.8	1.58	2.69	SCL	A-4(8)	ML-CL
	17-32	32+	118.7	13.0	9.6	0.0	2.1	61.8	11.4	24.7	18.9	27.7	13.4	22.9	19.3	1.78	2.75	SCL	A-6(1)	SC
106	0-19		112.9	14.8	11.0	0.0	0.4	17.0	61.9	20.7	12.9	30.0	6.2	28.2	26.8	1.58	2.69	SCL	A-4(8)	ML-CL
	19-30		118.7	13.0	9.6	0.0	2.1	61.8	11.4	24.7	18.9	27.7	13.4	22.9	19.3	1.78	2.75	SCL	A-6(1)	SC
	30-35	35	119.7	12.5	3.9	0.0	1.3	34.8	27.6	22.5	12.4	29.5	12.4	23.8	17.2	1.83	2.74	CL	A-6(6)	CL
107	0-13		112.9	14.8	11.0	0.0	0.4	17.0	61.9	20.7	12.9	30.0	6.2	28.2	26.8	1.58	2.69	SCL	A-4(8)	ML-CL
	13-21	21+	115.6	14.6	9.3	2.7	2.2	30.2	27.6	31.6	21.3	33.6	18.0	21.8	17.3	1.87	2.72	C	A-6(9)	CL
108	0-12	12+	0.0	0.0	0.0	0.0	0.2	16.7	63.6	19.5	11.6	29.1	7.2	0.0	0.0	0.0	2.73	SL	A-4(8)	ML-CL
109	0- 9		0.0	0.0	0.0	0.0	0.2	16.7	63.6	19.5	11.6	29.1	7.2	0.0	0.0	0.0	2.73	SL	A-4(8)	ML-CL
	9-12	12+	0.0	0.0	0.0	0.1	4.8	25.2	29.5	39.2	24.2	38.0	19.1	0.0	0.0	0.0	2.81	C	A-6(11)	CL
110	0-15		0.0	0.0	0.0	0.0	0.2	16.7	63.6	19.5	11.6	29.1	7.2	0.0	0.0	0.0	2.73	SL	A-4(8)	ML-CL
	15-17	17+	0.0	0.0	0.0	0.0	1.2	13.9	54.5	30.4	20.9	32.0	11.2	0.0	0.0	0.0	2.63	C	A-6(8)	CL
111	0- 2		0.0	0.0	0.0	0.0	0.6	14.0	60.9	24.5	12.6	29.8	8.7	0.0	0.0	0.0	2.66	SICL	A-4(8)	ML-CL
	2- 6		0.0	0.0	0.0	0.1	4.8	25.2	29.5	39.2	24.2	38.0	19.1	0.0	0.0	0.0	2.81	C	A-6(11)	CL
	6-11		0.0	0.0	0.0	0.0	0.2	16.7	63.6	19.5	11.6	29.1	7.2	0.0	0.0	0.0	2.73	SL	A-4(8)	ML-CL
	11-20	20+	0.0	0.0	0.0	0.1	4.8	25.2	29.5	39.2	24.2	38.0	19.1	0.0	0.0	0.0	2.81	C	A-6(11)	CL
112	0- 7		0.0	0.0	0.0	0.0	0.6	14.0	60.9	24.5	12.6	29.8	8.7	0.0	0.0	0.0	2.66	SICL	A-4(8)	ML-CL
	7-14		0.0	0.0	0.0	0.0	0.2	16.7	63.6	19.5	11.6	29.1	7.2	0.0	0.0	0.0	2.73	SL	A-4(8)	ML-CL
	14-15	15+	0.0	0.0	0.0	0.0	1.2	13.9	54.5	30.4	20.9	32.0	11.2	0.0	0.0	0.0	2.63	C	A-6(8)	CL
113	0- 8	08+	0.0	0.0	0.0	0.1	4.8	25.2	29.5	39.2	24.2	38.0	19.1	0.0	0.0	0.0	2.81	C	A-6(11)	CL
114	0-13		113.5	15.1	5.3	0.3	0.9	8.7	64.6	25.5	13.8	27.6	6.6	23.6	22.8	1.67	2.70	SICL	A-6(8)	ML-CL
	13-33	33+	0.0	0.0	0.0	0.0	0.0	13.8	33.8	52.4	31.6	37.4	13.6	26.0	19.7	1.75	2.67	C	A-6(9)	ML-CL
115	0-10	10+	113.5	15.1	5.3	0.3	0.9	8.7	64.6	25.5	13.8	27.6	6.6	23.6	22.8	1.67	2.70	SICL	A-6(8)	ML-CL
116	0-12	12+	0.0	0.0	0.0	0.3	0.3	7.0	68.0	21.7	11.8	27.0	5.7	23.4	22.9	1.67	2.70	SICL	A-4(8)	ML-CL
117	0- 9	09+	114.5	1.4	0.4	0.0	0.8	9.4	67.4	22.4	13.2	27.4	6.5	22.3	23.2	1.59	2.52	SICL	A-4(8)	ML-CL
118	0-15	15+	110.8	14.0	8.5	0.1	0.1	15.7	63.3	20.8	14.8	28.4	6.9	23.4	25.2	1.60	2.68	SICL	A-4(8)	ML-CL
119	0-22		110.8	14.0	8.5	0.1	0.1	15.7	63.3	20.8	14.8	28.4	6.9	23.4	25.2	1.60	2.68	SICL	A-4(8)	ML-CL
	22-45		109.5	16.9	4.3	1.1	0.6	11.1	46.5	40.7	24.1	38.6	16.2	25.0	18.2	1.82	2.72	C	A-6(11)	CL
	45-56	56+	108.5	15.0	3.3	0.9	5.6	20.3	36.1	37.1	19.0	37.3	15.1	24.0	18.5	1.75	2.59	C	A-6(10)	CL
120	0-10	10+	109.9	18.0	6.0	0.0	0.0	13.0	68.0	19.0	12.0	27.0	6.0	23.2	26.4	1.56	2.65	SIL	A-4(8)	ML-CL
121	0- 9	09+	0.0	0.0	0.0	0.0	0.1	0.9	65.0	25.0	16.0	31.4	7.5	27.0	26.0	1.54	2.62	SICL	A-4(8)	ML-CL
122	0-20	20+	110.8	14.7	6.7	0.0	0.0	15.8	64.4	19.8	15.8	28.0	5.4	24.3	24.9	1.61	2.68	SIL	A-4(8)	ML-CL
123	0- 7		105.2	19.9	1.1	1.1	1.4	28.7	26.9	41.9	23.9	24.6	7.1	19.3	31.4	1.42	2.56	C	A-4(7)	CL
	7-17	17+	0.0	0.0	0.0	0.0	0.4	72.6	12.0	14.0	8.0	19.4	2.4	18.2	24.6	1.60	2.64	SL	A-2-4(0)	SM
124	0-10	10+	105.2	19.9	1.1	1.1	1.4	28.7	26.9	41.9	23.9	24.6	7.1	19.3	31.4	1.42	2.56	C	A-4(7)	CL
1 5	0-19	19+	112.9	15.9	2.5	0.0	1.5	44.5	30.0	24.0	14.0	27.0	6.2	22.0	23.1	1.64	2.64	CL	A-4(4)	ML-CL
126	0-15	15+	109.5	14.4	3.5	0.3	0.6	29.1	49.2	20.7	11.8	25.8	7.1	20.0	24.5	1.61	2.66	CL	A-4(7)	CL
127	0-10	10+	112.4	16.4	6.0	0.2	0.6	21.2	56.3	21.8	19.8	27.2	4.7	23.2	23.4	1.65	2.69	SICL	A-4(8)	ML-CL
128	0-11	11+	0.0	0.0	0.0	0.0	0.0	12.0	63.0	25.0	19.0	29.2	8.9	22.8	26.6	1.54	2.61	SICL	A-4(8)	CL
129	0-10	10+	107.4	17.8	5.0	0.0	0.1	10.9	60.0	29.0	21.0	33.1	11.3	24.6	20.7	1.70	2.62	SICL	A-6(9)	ML-CL
130	0-10	10+	109.7	16.3	7.7	0.2	0.2	10.2	53.9	35.5	20.4	29.2	6.7	24.5	23.0	1.63	2.61	SIC	A-4(8)	ML-CL
131	0-10	10+	108.2	18.4	1.8	1.2	0.9	13.1	57.0	29.0	18.0	28.1	6.2	23.6	27.1	1.54	2.64	SICL	A-4(8)	ML-CL
132	0-20	20+	112.3	15.4	6.7	0.9	0.5	13.3	69.4	16.8	11.8	28.1	4.8	22.4	28.3	1.53	2.70	SIL	A-4(8)	ML-CL
133	0-10	10+	0.0	0.0	0.0	0.0	0.1	14.7	57.8	27.4	20.8	30.4	8.1	24.7	31.4	1.45	2.66	SICL	A-4(8)	ML-CL
134	0-10	10+	109.2	17.0	5.0	0.0	0.4	22.6	49.0	28.0	20.0	32.4	9.5	25.6	30.8	1.45	2.62	CL	A-4(8)	ML-CL
135	0-12	12+	110.8	13.4	12.2	0.0	2.6	77.7	10.0	12.0	9.0	0.0	0.0	0.0	22.7	1.65	2.64	SL	A-2-4(10)	SM
136	0-10	10+	113.4	13.8	5.0	0.0	0.1	54.3	27.8	17.8	9.8	21.3	3.8	18.7	25.7	1.59	2.67	SL	A-4(2)	SM
137	0- 1		94.2	22.1	6.0	0.0	2.5	10.4	56.7	30.4	16.5	33.0	8.1	26.4	29.3	1.46	2.55	SIC	A-4(8)	ML-CL
	1- 8	08+	109.4	16.9	7.0	0.0	0.8	14.4	55.4	29.4	23.2	37.7	14.3	26.1	26.1	1.57	2.66	SICL	A-6(10)	ML-CL
138	0- 9	09+	111.3	12.5	15.5	0.0	0.2	58.6	29.7	11.5	5.3	25.3	9.0	16.4	23.6	1.62	2.62	SL	A-4(1)	SC
139	0- 1		109.4	16.9	7.0	0.0	0.8	14.4	55.4	29.4	23.2	37.7	14.3	26.1	26.1	1.57	2.66	SICL	A-6(10)	ML-CL
	1- 9	09+	111.3	12.5	15.5	0.0	0.2	58.6	29.7	11.5	5.3	25.3	9.0	16.4	23.6	1.62	2.62	SL	A-4(1)	SC
140	1- 8	08+	109.4	16.9	7.0	0.0	0.8	14.4	55.4	29.4	23.2	37.7	14.3	26.1	26.1	1.57	2.66	SICL	A-6(10)	ML-CL
141	0-23	23+	109.1	13.8	24.0	0.0	0.2	83.2	7.3	9.3	7.1	0.0	0.0	0.0	20.3	1.74	2.69	S	A-1B(0)	SM
142	0- 5		106.4	17.5	7.0	0.0	0.8	17.6	53.9	25.7	15.4	29.6	6.6	25.0	28.5	1.50	2.62	SICL	A-4(8)	ML-CL
	5-15	15+	109.1	13.8	24.0	0.0	0.2	83.2	7.3	9.3	7.1	0.0	0.0	0.0	20.3	1.74	2.69	S	A-1B(0)	SM
143	0- 3	03+	106.4	17.5	7.0	0.0	0.8	17.6	53.9	25.7	15.4	29.6	6.6	25.0	28.5	1.50	2.62	SICL	A-4(8)	ML-CL
144	0- 4		106.4	17.5	7.0	0.0	0.8	17.6	53.9	25.7	15.4	29.6	6.6	25.0	28.5	1.50	2.62	SICL	A-4(8)	ML-CL
	4- 6	06+	103.5	20.3	4.5	0.0	0.4	13.8	44.4	41.4	29.2	43.4	19.1	26.6	25.4	1.58	2.64	C	A-7-6(13)	CL
145	0- 1		103.6	17.7	7.5	0.0	0.6	13.8	57.9	27.7	15.4	32.7	11.2	23.6	31.7	1.43	2.61	SICL	A-6(8)	ML-CL
	1- 5	05+	103.5	20.3	4.5	0.0	0.4	13.8	44.4	41.4	29.2	43.4	19.1	26.6	25.4	1.58	2.64	C	A-7-6(13)	CL
146	0- 1		100.1	20.1	7.0	0.0	0.5	17.9	56.2	25.4	14.0	32.6	7.6	25.6	29.9	1.48	2.65	SICL	A-4(8)	ML-CL
	1- 5	05+	106.1	17.8	10.0	0.0	1.0	13.4	55.9	29.7	21.4	35.0	12.3	23.2	28.1	1.51	2.62	SICL	A-6(9)	ML-CL
147	0- 1		96.7	21.3	5.5	0.0	0.8	17.6	62.0	19.6	7.3	33.8	7.1	29.3	35.6	1.35	2.60	SIL	A-4(8)	ML
	1- 5	05+	108.1	17.4	7.5	0.0	1.0	15.2	54.4	29.4	18.2	31.6	11.6	21.7	27.9	1.52	2.64	SICL	A-6(9)	CL
148	0- 6	06+	108.1	17.4	7.5	0.0	1.0	15.2	54.4	29.4	18.2	31.6	11.6	21.7	27.9	1.52	2.64	SICL	A-6(9)	CL
149	0- 1		96.7	21.3	5.5	0.0	0.8	17.6	62.0	19.6	7.3	33.8	7.1	29.3	35.6	1.35	2.60	SIL	A-4(8)	ML
	1- 5	05+	108.1	17.4	7.5	0.0	1.0	15.2	54.4	29.4	18.2	31.6	11.6	21.7	27.9	1.52	2.64	SICL	A-6(9)	CL
150	0- 6	06+	108.1	17.4	7.5	0.0	1.0	15.2	54.4	29.4	18.2	31.6	11.6	21.7	27.9	1.52	2.64	SICL	A-6(9)	CL
151	0- 1		102.3	17.0	13.5	0.0	0.1	13.6	56.2	30.1	16.4	29.5	7.3	25.0	27.3	1.52	2.60	SIL	A-4(8)	ML-CL
	0-15	15+	106.8	17.0	9.5	0.0	0.1	12.5	57.6	29.8	21.2	33.5	12.7	22.5	23.5	1.64	2.67	SICL	A-6(9)	CL
152	0- 1		102.3	17.0	13.5	0.0	0.1	13.6	56.2	30.1	16.4	29.5	7.3	25.0	27.3	1.52	2.60	SIL	A-4(8)	ML-CL
	1- 8		106.8	17.0	9.5	0.0	0.1	12.5	57.6	29.8	21.2	33.5	12.7	22.5	23.5	1.64	2.67	SICL	A-6(9)	CL
	8-20	20+	116.4	14.3	3.0	0.0	1.0	34.3	27.3	37.4	24.0	27.7	11.8	17.0	14.9	1.92	2.69	CSH	A-6(7)	CL
153	0- 5	05+	106.8	17.0	9.5	0.0	0.1	12.5	57.6	29.8	21.2	33.5	12.7	22.5	23.5	1.64	2.67	SICL	A-6(9)	CL
154	0- 1		102.3	17.0	13.5	0.0	0.1	13.6	56.2	30.1	16.4	29.5	7.3	25.0	27.3	1.52	2.60	SIL	A-4(8)	ML-CL
	1-13		106.8	17.0	9.5	0.0	0.1	12.5	57.6	29.8	21.2	33.5	12.7	22.5	23.5	1.64	2.67	SICL	A-6(9)	CL
	13-19		116.4	14.3	3.0	0.0	1.0	34.3	27.3	37.4	24.0	27.7	11.8	17.0	14.9	1.92	2.69	CSH	A-6(7)	CL
	19-22		119.4	12.9	7.0	0.0	0.9	54.0	20.0	25.1	11.9	23.1	6.7	18.3	20.3	1.74	2.69	SICL	A-4(2)	SM-SC
	22-24	24	116.4	14.3	3.0	0.0	1.0	34.3	27.3	37.4	24.0	27.7	11.8	17.0	14.9	1.92	2.69	CSH	A-6(7)	CL
155	0- 6	06+	106.8	17.0	9.5	0.0	0.1	12.5	57.6	29.8	21.2	33.5	12.7	22.5	23.5	1.64	2.67	SICL	A-6(9)	CL
156	0- 4		103.0	16.1	14.0	0.0	1.0	20.0	59.0	20.0	13.0	29.4	7.6	24.7	32.0	1.44	2.67	SICL	A-4(8)	ML-CL
	4-10	10+	111.7	16.7	9.0	0.0	1.4	15.3	54.9	28.4	18.6	32.3	10.8	23.2	29.1	1.53	2.76	SICL	A-6(8)	ML-CL
157	0- 2		103.0	16.1	14.0	0.0	1.0	20.0	59.0	20.0	13.0	29.4	7.6	24.7	32.0	1.44	2.67	SICL	A-4(8)	ML-CL
	2-32		111.7	16.7	9.0	0.0	1.4	15.3	54.9	28.4	18.6	32.3	10.8	23.2	29.1	1.53	2.76	SICL	A-6(8)	ML-CL
	32-38	38+	97.8	18.3	8.5	0.0	0.4	10.6	40.0	49.0	37.0	35.0	9.5	27.0	32.2	1.43	2.65	C	A-4(8)	ML-CL
158	0- 3		106.2	16.1	11.0	0.0	0.4	10.5	44.5	44.6	33.7	39.6	15.9	25.5	33.4	1.42	2.70	C	A-6(10)	ML-CL
	3- 9	09+	111.6	15.1	19.5	0.0	0.6	7.4	50.0	42.0	29.0	31.8	12.2	21.2	23.9	1.62	2.64	C	A-6(9)	CL

COUNTY- DAVIESS

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
159	0- 3		106.2	16.1	11.0	0.0	0.4	10.5	44.5	44.6	33.7	39.6	15.9	25.5	33.4	1.42	2.70	C	A-6(10)	ML-CL
	3-37		111.6	15.1	19.5	0.0	0.6	7.4	50.0	42.0	29.0	31.8	12.2	21.2	23.9	1.62	2.64	C	A-6(9)	CL
	37-43	43+	97.8	18.3	8.5	0.0	0.4	10.6	40.0	49.0	37.0	35.0	9.5	27.0	32.2	1.43	2.65	C	A-4(8)	ML-CL
160	0- 2		90.9	24.1	8.0	0.0	0.6	15.2	55.5	28.7	14.9	46.5	15.2	34.1	32.2	1.45	2.72	SICL	A-7-5(11)	ML
	2-36		112.3	15.2	11.5	0.0	0.2	10.8	61.0	28.0	21.2	35.7	12.6	24.5	22.7	1.65	2.64	SICL	A-6(9)	ML-CL
	36-43	43+	97.8	18.3	8.5	0.0	0.4	10.6	40.0	49.0	37.0	35.0	9.5	27.0	32.2	1.43	2.65	C	A-4(8)	ML-CL
161	0- 2		90.9	24.1	8.0	0.0	0.6	15.2	55.5	28.7	14.9	46.5	15.2	34.1	32.2	1.45	2.72	SICL	A-7-5(11)	ML
	2- 6	06+	112.3	15.2	11.5	0.0	0.2	10.8	61.0	28.0	21.2	35.7	12.6	24.5	22.7	1.65	2.64	SICL	A-6(9)	ML-CL
162	0-12	12+	111.6	15.1	19.5	0.0	0.6	7.4	50.0	42.0	29.[illegible]	31.8	12.2	21.2	23.9	1.62	2.64	C	A-6(9)	CL
163	0- 1		97.5	19.5	7.5	0.0	0.2	15.6	59.4	24.8	11.9	37.4	11.6	26.1	24.5	1.63	2.71	SICL	A-6(8)	ML-CL
	1-15	15+	111.2	16.0	15.5	0.0	0.4	18.3	52.9	28.4	18.6	32.9	12.5	23.2	19.4	1.81	2.79	SICL	A-6(8)	CL
164	0- 4	04+	111.3	15.3	13.5	0.0	0.2	16.8	55.0	28.0	21.2	31.8	10.5	22.0	23.4	1.64	2.66	SICL	A-6(8)	ML-CL
165	0- 1		0.0	0.0	0.0	0.0	3.1	49.2	23.6	24.1	9.8	22.1	2.3	21.1	22.8	1.64	2.62	SCL	A-4(3)	SM
	1- 5	5+	118.8	13.0	15.2	0.0	2.0	41.1	27.1	29.8	18.0	25.7	7.5	20.6	21.2	1.72	2.71	CL	A-4(4)	CL
166	0- 1		0.0	0.0	0.0	0.0	3.1	49.2	23.6	24.1	9.8	22.1	2.3	21.1	22.8	1.64	2.62	SCL	A-4(3)	SM
	1- 2		121.5	11.8	13.0	0.0	2.0	62.2	16.6	19.2	10.9	0.0	0.0	15.6	20.9	1.71	2.66	SL	A-4(2)	SM
	2- 4	4+	118.8	13.0	15.2	0.0	2.0	41.1	27.1	29.8	18.0	25.7	7.5	20.6	21.2	1.72	2.71	CL	A-4(4)	CL
167	0- 2		0.0	0.0	0.0	0.0	3.1	49.2	23.6	24.1	9.8	22.1	2.3	21.1	22.8	1.64	2 62	SCL	A-4(3)	SM
	2- 6	6+	121.5	11.8	13.0	0.0	2.0	62.2	16.6	19.2	10.9	0.0	0.0	15.6	20.9	1.71	2.66	SL	A-4(2)	SM
168	0- 1		0.0	0.0	0.0	0.2	3.3	57.4	24.7	14.4	6.3	0.0	0.0	19.5	23.0	1.65	2.66	SL	A-4(1)	SM
	1- 6	6+	118.8	13.0	15.2	0.0	2.0	41.1	27.1	29.8	18.0	25.7	7.5	20.6	21.2	1.72	2.71	CL	A-4(4)	CL
169	0- 1		0.0	0.0	0.0	0.2	3.3	57.4	24.7	14.4	6.3	0.0	0.0	19.5	23.0	1.65	2.66	SL	A-4(1)	SM
	1- 4		121.5	11.8	13.0	0.0	2.0	62.2	16.6	19.2	10.9	0.0	0.0	15.6	20.9	1.71	2.66	SL	A-4(2)	SM
	4- 8		118.8	13.0	15.2	0.0	2.0	41.1	27.1	29.8	18.0	25.7	7.5	20.6	21.2	1.72	2.71	CL	A-4(4)	CL
	8-13		0.0	0.0	0.0	0.0	11.0	49.8	18.3	20.9	13.7	22.4	9.0	18.8	19.1	1.78	2.70	SCL	A-4(1)	SC
	13-17	17	121.5	11.8	13.0	0.0	2.0	62.2	16.6	19.2	10.9	0.0	0.0	15.6	20.9	1.71	2.66	SL	A-4(2)	SM
170	0- 5		0.0	0.0	0.0	0.2	3.3	57.4	24.7	14.4	6.3	0.0	0.0	19.5	23.0	1.65	2.66	SL	A-4(1)	SM
	5-10	10+	118.8	13.0	15.2	0.0	2.0	41.1	27.1	29.8	18.0	25.7	7.5	20.6	21.2	1.72	2.71	CL	A-4(4)	CL
171	0- 3		0.0	0.0	0.0	0.2	3.3	57.4	24.7	14.4	6.3	0.0	0.0	19.5	23.0	1.65	2.66	SL	A-4(1)	SM
	3- 7		121.5	11.8	13.0	0.0	2.0	62.2	16.6	19.2	10.9	0.0	0.0	15.6	20.9	1.71	2.66	SL	A-4(2)	SM
	7- 9		0.0	0.0	0.0	0.0	11.0	49.8	18.3	20.9	13.7	22.4	9.0	18.8	19.1	1.78	2.70	SCL	A-4(1)	SC
	9-12	12+	118.8	13.0	15.2	0.0	2.0	41.1	27.1	29.8	18.0	25.7	7.5	20.6	21.2	1.72	2.71	CL	A-4(4)	CL
172	0- 1		103.3	18.2	4.2	0.2	0.4	12.3	63.0	24.1	12.4	32.0	6.3	30.2	31.7	1.43	2.67	SICL	A-4(8)	ML
	1- 4		108.5	17.6	6.7	0.0	0.1	12.4	55.8	31.7	23.4	38.4	16.2	27.2	27.8	1.55	2.72	SIC	A-6(10)	CL
	4- 9		111.7	15.0	11.5	0.8	0.1	15.8	64.6	18.7	12.4	0.0	0.0	27.1	28.2	1.54	2.72	SIL	A-4(8)	ML
	9-17	17+	0.0	0.0	0.0	0.0	18.9	46.5	22.9	11.7	12.4	24.8	9.0	18.5	21.0	1.74	2.74	SL	A-2-4(0)	SC
173	0- 5		108.5	17.6	6.7	0.0	0.1	12.4	55.8	31.7	23.4	38.4	16.2	27.2	27.8	1.55	2.72	SIC	A-6(10)	CL
	5-12	12+	111.7	15.0	11.5	0.8	0.1	15.8	64.6	18.7	12.4	0.0	0.0	27.1	28.2	1.54	2.72	SIL	A-4(8)	ML
174	0- 3		103.3	18.2	4.2	0.2	0.4	12.3	63.0	24.1	12.4	32.0	6.3	30.2	31.7	1.43	2.67	SICL	A-4(8)	ML
	3-13		111.7	15.0	11.5	0.8	0.1	15.8	64.6	18.7	12.4	0.0	0.0	27.1	28.2	1.54	2.72	SIL	A-4(8)	ML
	13-16	16+	0.0	0.0	0.0	0.0	18.9	46.5	22.9	11.7	12.4	24.8	9.0	18.5	21.0	1.74	2.74	SL	A-2-4(0)	SC
175	0- 1		103.3	18.2	4.2	0.2	0.4	12.3	63.0	24.1	12.4	32.0	6.3	30.2	31.7	1.43	2.67	SICL	A-4(8)	ML
	1- 4		108.5	17.6	6.7	0.0	0.1	12.4	55.8	31.7	23.4	38.4	16.2	27.2	27.8	1.55	2.72	SIC	A-6(10)	CL
	4-13		111.7	15.0	11.5	0.8	0.1	15.8	64.6	18.7	12.4	0.0	0.0	27.1	28.2	1.54	2.72	SIL	A-4(8)	ML
	13-17		0.0	0.0	0.0	0.0	18.9	46.5	22.9	11.7	12.4	24.8	9.0	18.5	21.0	1.74	2.74	SL	A-2-4(0)	SC
	17-20	20	0.0	0.0	0.0	0.0	3.3	10.7	21.8	64.2	40.7	50.6	25.7	33.4	23.0	1.69	2.76	C	A-7-6(16)	CH
176	0- 2		103.3	18.2	4.2	0.2	0.4	12.3	63.0	24.1	12.4	32.0	6.3	30.2	31.7	1.43	2.67	SICL	A-4(8)	ML
	2-12	12+	111.7	15.0	11.5	0.8	0.1	15.8	64.6	18.7	12.4	0.0	0.0	27.1	28.2	1.54	2.72	SIL	A-4(8)	ML
177	0- 2		103.3	18.2	4.2	0.2	0.4	12.3	63.0	24.1	12.4	32.0	6.3	30.2	31.7	1.43	2.67	SICL	A-4(8)	ML
	2- 7		108.5	17.6	6.7	0.0	0.1	12.4	55.8	31.7	23.4	38.4	16.2	27.2	27.8	1.55	2.72	SIC	A-6(10)	CL
	7-13		111.7	15.0	11.5	0.8	0.1	15.8	64.6	18.7	12.4	0.0	0.0	27.1	28.2	1.54	2.72	SIL	A-4(8)	ML
	13-21		0.0	0.0	0.0	0.0	18.9	46.5	22.9	11.7	12.4	24.8	9.0	18.5	21.0	1.74	2.74	SL	A-2-4(0)	SC
	21-31		124.1	10.2	10.4	0.0	16.6	59.7	10.5	13.2	5.9	0.0	0.0	15.4	15.8	1.88	2.67	SL	A-2-4(0)	SM
	31-37	37+	119.0	12.5	2.0	3.8	2.3	15.1	29.0	49.8	22.4	35.0	15.8	24.3	17.4	1.86	2.75	SH	A-6(10)	CL
178	0- 1		103.3	18.2	4.2	0.2	0.4	12.3	63.0	24.1	12.4	32.0	6.3	30.2	31.7	1.43	2.67	SICL	A-4(8)	ML
	1- 6	6+	0.0	0.0	0.0	0.0	18.9	46.5	22.9	11.7	12.4	24.8	9.0	18.5	21.0	1.74	2.74	SL	A-2-4(0)	SC
179	0- 1		103.3	18.2	4.2	0.2	0.4	12.3	63.0	24.1	12.4	32.0	6.3	30.2	31.7	1.43	2.67	SICL	A-4(8)	ML
	1- 6		108.5	17.6	6.7	0.0	0.1	12.4	55.8	31.7	23.4	38.4	16.2	27.2	27.8	1.55	2.72	SIC	A-6(10)	CL
	6-10	10+	111.7	15.0	11.5	0.8	0.1	15.8	64.6	18.7	12.4	0.0	0.0	27.1	28.2	1.54	2.72	SIL	A-4(8)	ML
180	0- 1		0.0	0.0	0.0	0.0	0.3	14.4	61.6	23.7	12.3	24.3	0.6	24.1	27.5	1.54	2.67	SICL	A-4(8)	ML
	1- 8		110.9	17.0	8.7	0.0	0.1	11.2	60.5	28.2	21.4	32.4	8.8	26.4	28.4	1.53	2.71	SICL	A-4(8)	ML-CL
	8-10	10+	111.4	15.0	20.7	0.0	0.4	11.1	65.7	2[illegible].8	15.0	25.5	2.1	24.8	27.4	1.55	2.69	SICL	A-4(8)	ML
181	0- 1		0.0	0.0	0.0	0.0	0.3	14.4	61.6	23.7	12.3	24.3	0.6	24.1	27.5	1.54	2.67	SICL	A-4(8)	ML
	1- 9	9+	111.4	15.0	20.7	0.0	0.4	11.1	65.7	22.8	15.0	25.5	2.1	24.8	27.4	1.55	2.69	SICL	A-4(8)	ML
182	0- 1		0.0	0.0	0.0	0.0	0.3	14.4	61.6	23.7	12.3	24.3	0.6	24.1	27.5	1.54	2.67	SICL	A-4(8)	ML
	1- 6		110.9	17.0	8.7	0.0	0.1	11.2	60.5	28.2	21.4	32.4	8.8	26.4	28.4	1.53	2.71	SICL	A-4(8)	ML-CL
	6-14	14	111.4	15.0	20.7	0.0	0.4	11.1	65.7	22.8	15.0	25.5	2.1	24.8	27.4	1.55	2.69	SICL	A-4(8)	ML
183	0- 2		0.0	0.0	0.0	0.0	0.3	14.4	61.6	23.7	12.3	24.3	0.6	24.1	27.5	1.54	2.67	SICL	A-4(8)	ML
	2- 8	8+	110.9	17.0	8.7	0.0	0.1	11.2	60.5	28.2	21.4	32.4	8.8	26.4	28.4	1.53	2.71	SICL	A-4(8)	ML-CL
184	0- 2		0.0	0.0	0.0	0.0	0.3	14.4	61.6	23.7	12.3	24.3	0.6	24.1	27.5	1.54	2.67	SICL	A-4(8)	ML
	2- 8	8+	111.4	15.0	20.7	0.0	0.4	11.1	65.7	22.8	15.0	25.5	2.1	24.8	27.4	1.55	2.69	SICL	A-4(8)	ML
185	0- 1		0.0	0.0	0.0	0.0	0.3	14.4	61.6	23.7	12.3	24.3	0.6	24.1	27.5	1.54	2.67	SICL	A-4(8)	ML
	1- 8	8+	110.9	17.0	8.7	0.0	0.1	11.2	60.5	28.2	21.4	32.4	8.8	26.4	28.4	1.53	2.71	SICL	A-4(8)	ML-CL
186	0- 1		0.0	0.0	0.0	0.0	0.3	14.4	61.6	23.7	12.3	24.3	0.6	24.1	27.5	1.54	2.67	SICL	A-4(8)	ML
	1- 9		110.9	17.0	8.7	0.0	0.1	11.2	60.5	28.2	21.4	32.4	8.8	26.4	28.4	1.53	2.71	SICL	A-4(8)	ML-CL
	9-14	14	111.4	15.0	20.7	0.0	0.4	11.1	65.7	22.8	15.0	25.5	2.1	24.8	27.4	1.55	2.69	SICL	A-4(8)	ML
187	0- 4		0.0	0.0	0.0	0.0	2.4	16.6	60.2	20.8	10.0	0.0	0.0	27.9	30.0	1.40	2.66	SICL	A-4(8)	ML
	4-10	10+	109.2	15.7	7.4	0.0	0.3	12.6	67.1	20.0	11.0	26.6	3.6	26.2	28.0	1.54	2.71	SICL	A-4(8)	ML
188	0-10	10	113.1	15.6	15.2	0.0	1.7	18.3	53.5	26.5	18.4	30.0	8.7	23.7	24.2	1.63	2.70	SICL	A-4(8)	ML-CL
189	0- 1		0.0	0.0	0.0	0.0	2.4	16.6	60.2	20.8	10.0	0.0	0.0	27.9	30.0	1.40	2.66	SICL	A-4(8)	ML
	1- 8		113.1	15.6	15.2	0.0	1.7	18.3	53.5	26.5	18.4	30.0	8.7	23.7	24.2	1.63	2.70	SICL	A-4(8)	ML-CL
	8-12		0.0	0.0	0.0	0.0	4.5	34.1	39.8	21.6	12.6	22.3	5.4	18.7	18.9	1.78	2.68	CL	A-4(5)	ML-CL
	12-14	14	0.0	0.0	0.0	0.0	31.5	47.8	9.1	11.6	7.3	0.0	0.0	0.0	22.8	1.66	2.67	SL	A-2-4(0)	SM
190	0- 1		0.0	0.0	0.0	0.0	2.4	16.6	60.2	20.8	10.0	0.0	0.0	27.9	30.0	1.40	2.66	SICL	A-4(8)	ML
	1- 2		0.0	0.0	0.0	0.0	4.5	34.1	39.8	21.6	12.6	22.3	5.4	18.7	18.9	1.78	2.68	CL	A-4(5)	ML-CL
	2- 3	3+	109.2	15.7	7.4	0.0	0.3	12.6	67.1	20.0	11.0	26.6	3.6	26.2	28.0	1.54	2.71	SICL	A-4(8)	ML
191	0- 5	5+	113.1	15.6	15.2	0.0	1.7	18.3	53.5	26.5	18.4	30.0	8.7	23.7	24.2	1.63	2.70	SICL	A-4(8)	ML-CL
192	0- 1		0.0	0.0	0.0	0.0	2.4	16.6	60.2	20.8	10.0	0.0	0.0	27.9	30.0	1.40	2.66	SICL	A-4(8)	ML
	1- 3		113.1	15.6	15.2	0.0	1.7	18.3	53.5	26.5	18.4	30.0	8.7	23.7	24.2	1.63	2.70	SICL	A-4(8)	ML-CL
	3- 7		109.2	15.7	7.4	0.0	0.3	12.6	67.1	20.0	11.0	26.6	3.6	26.2	28.0	1.54	2.71	SICL	A-4(8)	ML
	7-11	11	0.0	0.0	0.0	0.0	31.5	47.8	9.1	11.6	7.3	0.0	0.0	0.0	22.8	1.66	2.67	SL	A-2-4(0)	SM
193	0- 3		0.0	0.0	0.0	0.0	2.4	16.6	60.2	20.8	10.0	0.0	0.0	27.9	30.0	1.40	2.66	SICL	A-4(8)	ML
	3-11	11+	0.0	0.0	0.0	0.0	4.5	34.1	39.8	21.6	12.6	22.3	5.4	18.7	18.9	1.78	2.68	CL	A-4(5)	ML-CL

COUNTY- DAVIESS

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
194	0- 2		109.2	15.7	7.4	0.0	0.3	12.6	67.1	20.0	11.0	26.6	3.6	26.2	28.0	1.54	2.71	SICL	A-4(8)	ML
	2- 5		113.1	15.6	15.2	0.0	1.7	18.3	53.5	26.5	18.4	30.0	8.7	23.7	24.2	1.63	2.70	SICL	A-4(8)	ML-CL
	5- 7	7+	109.2	15.7	7.4	0.0	0.3	12.6	67.1	20.0	11.0	26.6	3.6	26.2	28.0	1.54	2.71	SICL	A-4(8)	ML
195	0- 2		0.0	0.0	0.0	0.0	0.0	16.8	68.7	14.5	5.3	42.4	7.7	37.9	39.5	1.22	2.55	SIL	A-5(8)	ML
	2- 5	5+	0.0	0.0	0.0	0.0	0.0	28.1	47.9	24.0	14.5	25.2	5.5	19.9	22.5	1.67	2.67	CL	A-4(7)	ML-CL
196	0- 1		0.0	0.0	0.0	0.0	0.0	16.8	68.7	14.5	5.3	42.4	7.7	37.9	39.5	1.22	2.55	SIL	A-5(8)	ML
	1- 3		107.8	15.6	11.6	0.0	0.0	18.3	66.0	15.7	10.8	26.3	1.7	25.3	25.5	1.60	2.70	SIL	A-4(8)	ML
	3- 6	6+	0.0	0.0	0.0	0.0	0.0	28.1	47.9	24.0	14.5	25.2	5.5	19.9	22.5	1.67	2.67	CL	A-4(7)	ML-CL
197	0- 1		0.0	0.0	0.0	0.0	0.0	16.8	68.7	14.5	5.3	42.4	7.7	37.9	39.5	1.22	2.55	SIL	A-5(8)	ML
	1- 5	5+	107.8	15.6	11.6	0.0	0.0	18.3	66.0	15.7	10.8	26.3	1.7	25.3	25.5	1.60	2.70	SIL	A-4(8)	ML
198	0- 1		0.0	0.0	0.0	0.0	0.0	16.8	68.7	14.5	5.3	42.4	7.7	37.9	39.5	1.22	2.55	SIL	A-5(8)	ML
	1- 5	5+	107.8	15.6	11.6	0.0	0.0	18.3	66.0	15.7	10.8	26.3	1.7	25.3	25.5	1.60	2.70	SIL	A-4(8)	ML
199	0- 2		0.0	0.0	0.0	0.0	0.0	16.8	68.7	14.5	5.3	42.4	7.7	37.9	39.5	1.22	2.55	SIL	A-5(8)	ML
	2- 7	7+	107.8	15.6	11.6	0.0	0.0	18.3	66.0	15.7	10.8	26.3	1.7	25.3	25.5	1.60	2.70	SIL	A-4(8)	ML
200	0- 5		0.0	0.0	0.0	0.0	0.0	28.1	47.9	24.0	14.5	25.2	5.5	19.9	22.5	1.67	2.67	CL	A-4(7)	ML-CL
	5- 8	8	0.0	0.0	0.0	0.0	13.3	34.6	31.5	20.6	14.9	17.9	5.6	14.9	15.5	1.89	2.67	CL	A-4(3)	ML-CL
201	0-10	10+	0.0	0.0	0.0	0.0	0.0	28.1	47.9	24.0	14.5	25.2	5.5	19.9	22.5	1.67	2.67	CL	A-4(7)	ML-CL
202	0-15		107.8	15.6	11.6	0.0	0.0	18.3	66.0	15.7	10.8	26.3	1.7	25.3	25.5	1.60	2.70	SIL	A-4(8)	ML
	15-24		0.0	0.0	0.0	0.0	0.0	28.1	47.9	24.0	14.5	25.2	5.5	19.9	22.5	1.67	2.67	CL	A-4(7)	ML-CL
	24-30		0.0	0.0	0.0	0.0	13.3	34.6	31.5	20.6	14.9	17.9	5.6	14.9	15.5	1.89	2.67	CL	A-4(3)	ML-CL
	30-33		0.0	0.0	0.0	0.0	10.0	52.3	20.5	17.2	10.8	18.7	4.8	16.1	18.3	1.79	2.66	SL	A-2-4(0)	SM-SC
	33-34		0.0	0.0	0.0	0.0	0.0	16.8	68.7	14.5	5.3	42.4	7.7	37.9	39.5	1.22	2.55	SIL	A-5(8)	ML
	34-36	36+	0.0	0.0	0.0	0.0	0.0	28.1	47.9	24.0	14.5	25.2	5.5	19.9	22.5	1.67	2.67	CL	A-4(7)	ML-CL
203	0- 1		0.0	0.0	0.0	0.0	0.0	16.8	68.7	14.5	5.3	42.4	7.7	37.9	39.5	1.22	2.55	SIL	A-5(8)	ML
	1- 6	6+	107.8	15.6	11.6	0.0	0.0	18.3	66.0	15.7	10.8	26.3	1.7	25.3	25.5	1.60	2.70	SIL	A-4(8)	ML

COUNTY- HANCOCK

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
1	0-16	16+	109.8	16.5	4.8	3.8	4.9	21.0	41.4	28.9	12.1	30.4	8.1	27.6	26.2	1.58	2.70	CL	A-4(8)	ML-CL
2	0- 2		0.0	0.0	0.0	0.0	0.0	16.8	68.7	14.5	5.3	42.4	7.7	37.9	39.5	1.22	2.55	SIL	A-5(8)	ML
	2- 6	06+	0.0	0.0	0.0	0.0	0.0	28.1	47.9	24.0	14.5	25.2	5.5	19.9	22.5	1.67	2.67	CL	A-4(7)	ML-CL
3	0- 2		0.0	0.0	0.0	0.0	0.0	16.8	68.7	14.5	5.3	42.4	7.7	37.9	39.5	1.22	2.55	SIL	A-5(8)	ML
	2- 8		0.0	0.0	0.0	0.0	0.0	28.1	47.9	24.0	14.5	25.2	5.5	19.9	22.5	1.67	2.67	CL	A-4(7)	ML-CL
	8-12	12+	0.0	0.0	0.0	0.0	10.0	52.3	20.5	17.2	10.8	18.7	4.8	16.1	18.3	1.79	2.66	SL	A-2-4(0)	SM-SC
4	0- 2		109.8	16.5	4.8	3.8	4.9	21.0	41.4	28.9	12.1	30.4	8.1	27.6	26.2	1.58	2.70	CL	A-4(8)	ML-CL
	2- 6	06+	112.1	16.1	5.8	6.0	8.4	19.4	35.3	30.9	16.5	27.4	6.9	23.9	24.1	1.63	2.69	C	A-4(7)	ML-CL
5	0- 2		109.8	16.5	4.8	3.8	4.9	21.0	41.4	28.9	12.1	30.4	8.1	27.6	26.2	1.58	2.70	CL	A-4(8)	ML-CL
	2- 6	06+	0.0	0.0	0.0	0.0	0.0	28.1	47.9	24.0	14.5	25.2	5.5	19.9	22.5	1.67	2.67	CL	A-4(7)	ML-CL
6	0- 2		109.8	16.5	4.8	3.8	4.9	21.0	41.4	28.9	12.1	30.4	8.1	27.6	26.2	1.58	2.70	CL	A-4(8)	ML-CL
	2- 4		112.1	16.1	5.8	6.0	8.4	19.4	35.3	30.9	16.5	27.4	6.9	23.9	24.1	1.63	2.69	C	A-4(7)	ML-CL
	4- 8	08+	0.0	0.0	0.0	47.7	1.3	11.5	17.3	22.2	14.3	39.4	18.6	25.7	23.8	1.66	2.74	CG	A-6(12)	GC
7	0- 2		109.8	16.5	4.8	3.8	4.9	21.0	41.4	28.9	12.1	30.4	8.1	27.6	26.2	1.58	2.70	CL	A-4(8)	ML-CL
	2- 6	06+	112.1	16.1	5.8	6.0	8.4	19.4	35.3	30.9	16.5	27.4	6.9	23.9	24.1	1.63	2.69	C	A-4(7)	ML-CL
8	0- 2		109.8	16.5	4.8	3.8	4.9	21.0	41.4	28.9	12.1	30.4	8.1	27.6	26.2	1.58	2.70	CL	A-4(8)	ML-CL
	2- 4		112.1	16.1	5.8	6.0	8.4	19.4	35.3	30.9	16.5	27.4	6.9	23.9	24.1	1.63	2.69	C	A-4(7)	ML-CL
	4- 6	06+	0.0	0.0	0.0	47.7	1.3	11.5	17.3	22.2	14.3	39.4	18.6	25.7	23.8	1.66	2.74	CG	A-6(12)	GC
9	0- 2		109.8	16.5	4.8	3.8	4.9	21.0	41.4	28.9	12.1	30.4	8.1	27.6	26.2	1.58	2.70	CL	A-4(8)	ML-CL
	2- 8	08+	112.1	16.1	5.8	6.0	8.4	19.4	35.3	30.9	16.5	27.4	6.9	23.9	24.1	1.63	2.69	C	A-4(7)	ML-CL
10	0- 2		0.0	0.0	0.0	0.0	7.5	40.3	30.3	21.9	9.2	26.8	4.0	24.1	26.2	1.56	2.64	CL	A-4(3)	ML-CL
	2- 8	08+	117.4	12.8	6.0	1.4	14.3	23.9	30.6	29.8	16.4	26.9	8.8	20.4	22.0	1.69	2.69	CL	A-4(5)	CL
11	0- 4	04+	0.0	0.0	0.0	0.0	7.1	38.6	30.0	24.3	12.7	22.0	6.2	17.8	18.1	1.81	2.69	CL	A-4(4)	ML-CL
12	0- 4		0.0	0.0	0.0	0.0	7.1	38.6	30.0	24.3	12.7	22.0	6.2	17.8	18.1	1.81	2.69	CL	A-4(4)	ML-CL
	4- 8	08+	0.0	0.0	0.0	0.0	34.6	48.5	4.5	12.4	10.0	0.0	0.0	0.0	24.9	1.61	2.68	S	A-2-4(0)	SM
13	0- 2		0.0	0.0	0.0	0.0	7.5	40.3	30.3	21.9	9.2	26.8	4.0	24.1	26.2	1.56	2.64	CL	A-4(3)	ML-CL
	2- 6	06+	117.4	12.8	6.0	1.4	14.3	23.9	30.6	29.8	16.4	26.9	8.8	20.4	22.0	1.69	2.69	CL	A-4(5)	CL

COUNTY- HENDERSON

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
1	0-10		0.0	0.0	0.0	0.0	4.8	46.8	23.6	24.8	16.8	20.5	4.3	16.8	21.6	1.66	2.59	SCL	A-4(5)	SM-SC
	10-20	20+	0.0	0.0	0.0	0.0	4.1	77.5	8.6	9.8	4.2	0.0	0.0	0.0	23.6	1.63	2.65	S	A-2-4(0)	SM
2	0-10		116.1	14.0	6.1	0.0	0.8	26.0	49.0	24.2	16.0	24.5	8.0	18.3	20.8	1.70	2.63	CL	A-4(7)	CL
	10-15	15+	121.7	11.9	7.7	0.0	4.4	52.6	12.0	31.0	12.2	24.1	6.7	18.5	21.7	1.65	2.57	SC	A-4(2)	SM-SC
3	0- 8	08+	116.1	14.0	6.1	0.0	0.8	26.0	49.0	24.2	16.0	24.5	8.0	18.3	20.8	1.70	2.63	CL	A-4(7)	CL
4	0- 6		116.1	14.0	6.1	0.0	0.8	26.0	49.0	24.2	16.0	24.5	8.0	18.3	20.8	1.70	2.63	CL	A-4(7)	CL
	6-16	16+	121.7	11.9	7.7	0.0	4.4	52.6	12.0	31.0	12.2	24.1	6.7	18.5	21.7	1.65	2.57	SC	A-4(2)	SM-SC
5	0- 8		114.4	13.7	4.0	0.0	1.9	20.3	41.6	36.2	24.6	31.9	13.9	18.9	21.2	1.70	2.66	C	A-6(9)	CL
	8-15	15	121.7	11.9	7.7	0.0	4.4	52.6	12.0	31.0	12.2	24.1	6.7	18.5	21.7	1.65	2.57	SC	A-4(2)	SM-SC
6	0- 5		108.7	15.4	12.7	0.0	0.1	10.3	63.2	26.4	16.4	31.4	9.8	22.8	25.1	1.60	2.67	SICL	A-4(8)	ML-CL
	5-15	15+	117.7	13.2	7.3	0.0	2.3	39.5	30.4	27.8	18.8	26.2	10.3	17.3	19.2	1.76	2.66	CL	A-4(8)	CL
7	0-10		108.7	15.4	12.7	0.0	0.1	10.3	63.2	26.4	16.4	31.4	9.8	22.8	25.1	1.60	2.67	SICL	A-4(8)	ML-CL
	10-18	18+	115.5	14.4	3.1	0.0	4.4	18.2	35.6	41.8	22.6	33.4	14.1	21.1	17.0	1.84	2.68	C	A-6(11)	CL
8	0- 6	06+	115.5	14.4	3.1	0.0	4.4	18.2	35.6	41.8	22.6	33.4	14.1	21.1	17.0	1.84	2.68	C	A-6(11)	CL
9	0- 4	04+	110.1	16.6	6.7	0.0	0.5	12.1	62.4	25.2	19.6	30.2	9.1	22.6	24.0	1.63	2.68	SICL	A-4(8)	ML-CL
10	0- 6		110.1	16.6	6.7	0.0	0.5	12.1	62.4	25.2	19.6	30.2	9.1	22.6	24.0	1.63	2.68	SICL	A-4(8)	ML-CL
	6-18		122.0	11.8	12.0	0.0	5.3	66.1	12.0	16.6	9.8	18.4	5.2	14.2	21.6	1.67	2.67	SL	A-4(0)	SM-SC
	18-22	22+	121.7	12.3	3.8	0.0	1.9	35.9	32.2	50.0	15.6	25.7	9.2	17.7	16.6	1.85	2.67	CL	A-4(5)	CL
11	0- 6		110.1	16.6	6.7	0.0	0.5	12.1	62.4	25.2	19.6	30.2	9.1	22.6	24.0	1.63	2.68	SICL	A-4(8)	ML-CL
	6-11	11+	122.0	11.8	12.0	0.0	5.3	66.1	12.0	16.6	9.8	18.4	5.2	14.2	21.6	1.67	2.67	SL	A-4(0)	SM-SC
12	0-11		0.0	0.0	0.0	0.0	2.3	11.5	57.8	28.4	21.0	32.5	9.1	24.9	26.3	1.58	2.70	SICL	A-4(8)	ML-CL
	11-20	20+	0.0	0.0	0.0	0.0	8.1	69.7	10.4	11.8	5.2	0.0	0.0	0.0	22.4	1.65	2.62	SL	A-2-4(0)	SM
13	0-12		115.6	13.8	9.2	0.0	2.2	19.6	52.0	26.2	18.2	29.4	10.6	20.2	21.6	1.69	2.66	SICL	A-6(9)	CL
	12-22	22+	121.2	12.0	17.0	0.0	5.3	70.7	12.0	12.0	6.2	18.0	2.5	16.5	19.3	1.74	2.62	SL	A-4(0)	SM
14	0- 8		114.8	13.6	7.7	0.0	0.8	19.0	51.4	28.8	19.8	25.1	7.7	18.7	20.9	1.71	2.66	SICL	A-4(8)	CL
	8-22	22+	120.1	12.8	3.7	0.0	1.1	60.7	15.4	22.8	10.8	22.4	6.4	17.5	22.6	1.67	2.66	SCL	A-4(1)	SM-SC
15	0- 5	05+	108.9	15.9	2.9	0.0	0.4	16.2	51.0	32.4	22.6	32.6	12.7	22.0	22.6	1.67	2.68	C	A-6(9)	CL
16	0- 7	07+	116.2	12.4	17.3	0.0	0.9	16.9	55.0	27.2	20.6	28.7	11.7	18.2	19.3	1.75	2.64	SICL	A-6(9)	CL
17	0- 5	05+	0.0	0.0	0.0	0.0	0.4	7.8	60.6	31.2	20.6	30.9	7.8	24.6	26.8	1.55	2.65	SIC	A-4(8)	ML-CL
18	0-10	10+	109.4	16.4	5.6	0.0	0.5	9.9	60.2	29.4	27.2	34.1	14.2	22.2	25.2	1.59	2.65	SICL	A-6(10)	CL
19	0-15		108.5	17.1	6.5	0.0	0.1	9.3	64.2	26.4	21.2	32.2	8.8	22.1	25.7	1.58	2.66	SICL	A-4(8)	ML-CL
	15-20	20+	113.4	15.2	1.2	0.0	0.9	10.3	36.8	52.0	27.2	31.5	10.0	20.8	15.2	1.59	2.65	C	A-4(8)	ML-CL
20	0- 6	06+	112.4	16.2	8.4	0.0	1.0	7.0	61.4	30.6	21.4	30.6	8.9	22.5	24.8	1.61	2.68	SIC	A-4(8)	ML-CL
21	0-15	15+	112.4	15.1	6.0	0.0	0.4	8.0	66.8	24.8	18.4	31.1	10.9	21.5	23.0	1.65	2.66	SICL	A-6(8)	CL
22	0- 6	06+	111.4	15.3	4.9	0.0	0.3	6.1	68.8	24.8	18.4	29.0	7.6	22.6	24.9	1.59	2.65	SICL	A-4(8)	ML-CL
23	0- 6	06+	110.3	15.0	10.5	0.0	0.6	3.8	68.8	26.8	20.4	31.3	9.7	22.6	24.8	1.60	2.65	SICL	A-4(8)	ML-CL
24	0- 1		104.7	18.0	17.4	0.0	0.8	13.0	65.6	20.6	10.6	2.8	0.5	25.8	24.7	1.60	2.64	SICL	A-4(8)	ML
	1- 7	07+	109.2	17.0	9.4	0.0	0.3	7.1	63.6	29.0	20.0	3.5	1.3	24.8	21.6	1.69	2.66	SICL	A-6(9)	ML
25	0- 2		104.7	18.0	17.4	0.0	0.8	13.0	65.6	20.6	10.6	2.8	0.5	25.8	24.7	1.60	2.64	SICL	A-4(8)	ML
	2- 4		109.2	17.0	9.4	0.0	0.3	7.1	63.6	29.0	20.0	3.5	1.3	24.8	21.6	1.69	2.66	SICL	A-6(9)	ML
	4-10	10+	111.6	15.4	7.3	0.0	0.3	13.1	61.6	25.0	17.0	3.3	1.3	24.0	23.7	1.64	2.68	SICL	A-6(9)	ML
26	0- 4		109.8	17.2	8.8	0.0	0.2	10.6	60.2	29.0	20.0	3.6	1.4	24.5	23.4	1.65	2.69	SICL	A-6(10)	ML
	4-12	12+	114.8	14.3	7.6	0.0	0.6	17.2	57.2	25.0	17.0	3.1	1.2	21.4	19.1	1.75	2.63	SICL	A-6(9)	ML
27	0-10	10+	109.8	17.2	8.8	0.0	0.2	10.6	60.2	29.0	20.0	3.6	1.4	24.5	23.4	1.65	2.69	SICL	A-6(10)	ML
28	0- 5		109.8	17.2	8.8	0.0	0.2	10.6	60.2	29.0	20.0	3.6	1.4	24.5	23.4	1.65	2.69	SICL	A-6(10)	ML
	5-10	10+	114.8	14.3	7.6	0.0	0.6	17.2	57.2	25.0	17.0	3.1	1.2	21.4	19.1	1.75	2.63	SICL	A-6(9)	ML
29	0-10		108.6	17.5	12.5	0.0	0.8	9.0	51.2	29.0	21.0	3.7	1.4	25.5	26.5	1.58	2.72	SICL	A-6(10)	ML
	10-14	14+	110.6	17.0	5.4	0.0	0.9	16.9	49.2	33.0	23.0	3.8	1.8	21.8	18.7	1.79	2.69	C	A-6(11)	ML
30	0- 8	08+	108.6	17.5	12.5	0.0	0.8	9.0	51.2	29.0	21.0	3.7	1.4	25.5	26.5	1.58	2.72	SICL	A-6(10)	ML
31	0- 3		108.6	17.5	12.5	0.0	0.8	9.0	51.2	29.0	21.0	3.7	1.4	25.5	26.5	1.58	2.72	SICL	A-6(10)	ML
	3- 6		110.6	17.0	5.4	0.0	0.9	16.9	49.2	33.0	23.0	3.8	1.8	21.8	18.7	1.79	2.69	C	A-6(11)	ML
	6-22	22+	113.0	15.4	9.4	0.0	0.4	17.0	62.4	20.2	12.0	3.1	1.0	23.6	23.5	1.65	2.69	SICL	A-4(8)	ML
32	0- 4	04+	107.6	18.2	10.7	0.0	0.1	8.1	61.0	30.8	24.6	4.1	1.8	26.1	24.6	1.58	2.71	SIC	A-7-6(11)	ML
33	0-14		114.4	15.7	5.2	0.0	1.2	15.6	46.6	35.6	26.6	3.5	1.8	19.3	17.6	1.82	2.68	C	A-6(11)	ML
	14-16	16+	113.0	15.4	9.4	0.0	0.4	17.0	62.4	20.2	12.0	3.1	1.0	23.6	23.5	1.65	2.69	SICL	A-4(8)	ML
34	0- 4	04+	107.6	18.2	10.7	0.0	0.1	8.1	61.0	30.8	24.6	4.1	1.8	26.1	24.6	1.58	2.71	SIC	A-7-6(11)	ML
35	0-15	15+	113.0	15.4	9.4	0.0	0.4	17.0	62.4	20.2	12.0	3.1	1.0	23.6	23.5	1.65	2.69	SICL	A-4(8)	ML
36	0- 4		107.6	18.2	10.7	0.0	0.1	8.1	61.0	30.8	24.6	4.1	1.8	26.1	24.6	1.58	2.71	SIC	A-7-6(11)	ML
	4-13		113.0	15.4	9.4	0.0	0.4	17.0	62.4	20.2	12.0	3.1	1.0	23.6	23.5	1.65	2.69	SICL	A-4(8)	ML
	13-17		114.4	15.7	5.2	0.0	1.2	15.6	46.6	35.6	26.6	3.5	1.8	19.3	17.6	1.82	2.68	C	A-6(11)	ML
	17-20	20+	122.9	11.6	12.0	0.0	2.2	63.8	15.0	19.0	10.0	2.1	0.6	18.0	17.8	1.80	2.65	SL	A-2-4(0)	SM
37	0- 4		113.0	15.4	9.4	0.0	0.4	17.0	62.4	20.2	12.0	3.1	1.0	23.6	23.5	1.65	2.69	SICL	A-4(8)	ML
	4- 5	05+	114.4	15.7	5.2	0.0	1.2	15.6	46.6	35.6	26.6	3.5	1.8	19.3	17.6	1.82	2.68	C	A-6(11)	[illegible]
38	0-10	10+	107.8	17.5	5.5	0.0	1.1	8.7	65.6	24.6	16.6	3.5	1.0	26.1	27.1	1.55	2.67	SICL	A-4(8)	ML
39	0-10		107.8	17.5	5.5	0.0	1.1	8.7	65.6	24.6	16.6	3.5	1.0	26.1	27.1	1.55	2.67	SICL	A-4(8)	ML
	10-13	13+	121.2	12.9	7.3	0.0	2.0	53.8	19.6	24.6	15.6	2.5	1.0	17.1	17.2	1.82	2.65	SCL	A-4(2)	SM
40	0- 4		106.0	18.9	1.9	0.0	0.8	12.6	30.1	56.5	32.2	5.6	3.4	25.8	21.4	1.70	2.75	C	A-7-6(16)	ML
	4-11		107.8	17.5	5.5	0.0	1.1	8.7	65.6	24.6	16.6	3.5	1.0	26.1	27.1	1.55	2.67	SICL	A-4(8)	ML
	11-14	14+	121.2	12.9	7.3	0.0	2.0	53.8	19.6	24.6	15.6	2.5	1.0	17.1	17.2	1.82	2.65	SCL	A-4(2)	SM
41	0- 8		107.8	17.5	5.5	0.0	1.1	8.7	65.6	24.6	16.6	3.5	1.0	26.1	27.1	1.55	2.67	SICL	A-4(8)	ML
	8-16	16+	121.2	12.9	7.3	0.0	2.0	53.8	19.6	24.6	15.6	2.5	1.0	17.1	17.2	1.82	2.65	SCL	A-4(2)	SM
42	0- 3		106.0	18.9	1.9	0.0	0.8	12.6	30.1	56.5	32.2	5.6	3.4	25.8	21.4	1.70	2.75	C	A-7-6(16)	ML
	3- 9	09+	107.8	17.5	5.5	0.0	1.1	8.7	65.6	24.6	16.6	3.5	1.0	26.1	27.1	1.55	2.67	SICL	A-4(8)	ML
43	0- 6	06+	106.0	18.9	1.9	0.0	0.8	12.6	30.1	56.5	32.2	5.6	3.4	25.8	21.4	1.70	2.75	C	A-7-6(16)	ML
44	0- 3		107.8	17.5	5.5	0.0	1.1	8.7	65.6	24.6	16.6	3.5	1.0	26.1	27.1	1.55	2.67	SICL	A-4(8)	ML
	3- 9	09+	106.0	18.9	1.9	0.0	0.8	12.6	30.1	56.5	32.2	5.6	3.4	25.8	21.4	1.70	2.75	C	A-7-6(16)	ML
45	0- 5	05+	106.0	18.9	1.9	0.0	0.8	12.6	30.1	56.5	32.2	5.6	3.4	25.8	21.4	1.70	2.75	C	A-7-6(16)	ML
46	0- 1		112.3	19.9	10.6	0.0	0.2	9.6	67.2	23.0	17.0	3.6	1.3	25.8	22.7	1.67	2.69	SICL	A-6(9)	ML
	1-20	20+	108.6	18.2	7.8	0.0	0.5	11.3	56.0	32.2	22.2	3.2	0.9	24.8	26.1	1.58	2.69	SIC	A-4(8)	ML
47	0- 4		108.6	18.2	7.8	0.0	0.5	11.3	56.0	32.2	22.2	3.2	0.9	24.8	26.1	1.58	2.69	SIC	A-4(8)	ML
	4- 5	05+	110.7	17.0	7.5	0.0	1.7	29.1	36.6	32.6	23.6	3.8	2.1	20.2	18.7	1.78	2.67	C	A-6(11)	ML
48	0- 7		112.3	19.9	10.6	0.0	0.2	9.6	67.2	23.0	17.0	3.6	1.3	25.8	22.7	1.67	2.69	SICL	A-6(9)	ML
	7-10	10+	108.6	18.2	7.8	0.0	0.5	11.3	56.0	32.2	22.2	3.2	0.9	24.8	26.1	1.58	2.69	SIC	A-4(8)	ML
49	0- 4		112.3	19.9	10.6	0.0	0.2	9.6	67.2	23.0	17.0	3.6	1.3	25.8	22.7	1.67	2.69	SICL	A-6(9)	ML
	4-30	30+	108.6	18.2	7.8	0.0	0.5	11.3	56.0	32.2	22.2	3.2	0.9	24.8	26.1	1.58	2.69	SIC	A-4(8)	ML
50	0-12		112.3	19.9	10.6	0.0	0.2	9.6	67.2	23.0	17.0	36.0	13.0	25.8	22.7	1.67	2.69	SICL	A-6(9)	ML-CL
	12-15	15+	110.7	17.0	7.5	0.0	1.7	29.1	36.6	32.6	23.6	38.0	21.0	20.2	18.7	1.78	2.67	C	A-6(11)	CL
51	0- 6	06+	112.3	19.9	10.6	0.0	0.2	9.6	67.2	23.0	17.0	36.0	13.0	25.8	22.7	1.67	2.69	SICL	A-6(9)	ML-CL
52	0- 8	08+	108.0	18.3	20.0	0.0	0.2	15.2	62.4	22.2	14.2	34.0	12.0	25.6	24.6	1.62	2.69	SICL	A-6(9)	ML-CL
53	0- 5	05+	107.9	17.4	9.8	0.0	0.6	9.4	62.0	28.0	19.0	33.0	11.0	23.6	22.7	1.66	2.66	SICL	A-6(8)	ML-CL
54	0- 3		108.0	18.3	20.0	0.0	0.2	15.2	62.4	22.2	14.2	34.0	12.0	25.6	24.6	1.62	2.69	SICL	A-6(9)	ML-CL
	3- 8	08+	107.9	17.4	9.8	0.0	0.6	9.4	62.0	28.0	19.0	33.0	11.0	23.6	22.7	1.66	2.66	SICL	A-6(8)	ML-CL

COUNTY- HENDERSON

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
55	0-12		108.0	18.3	20.0	0.0	0.2	15.2	62.4	22.2	14.2	34.0	12.0	25.6	24.6	1.62	2.69	SICL	A-6(9)	ML-CL
	12-15	15+	116.3	13.2	5.2	0.0	2.8	30.6	32.6	34.0	27.0	31.0	14.0	20.9	18.1	1.80	2.67	C	A-6(8)	CL
56	0-14		108.0	18.3	20.0	0.0	0.2	15.2	62.4	22.2	14.2	34.0	12.0	25.6	24.6	1.62	2.69	SICL	A-6(9)	ML-CL
	14-20	20+	107.9	17.4	9.8	0.0	0.6	9.4	62.0	28.0	19.0	33.0	11.0	23.6	22.7	1.66	2.66	SICL	A-6(8)	ML-CL
57	0-10	10+	108.0	18.3	20.0	0.0	0.2	15.2	62.4	22.2	14.2	34.0	12.0	25.6	24.6	1.62	2.69	SICL	A-6(9)	ML-CL
58	0- 4		108.0	18.3	20.0	0.0	0.2	15.2	62.4	22.2	14.2	34.0	12.0	25.6	24.6	1.62	2.69	SICL	A-6(9)	ML-CL
	4- 8		107.9	17.4	9.8	0.0	0.6	9.4	62.0	28.0	19.0	33.0	11.0	23.6	22.7	1.66	2.66	SICL	A-6(8)	ML-CL
	8-15		104.9	18.4	5.2	0.0	1.6	22.3	57.6	18.5	9.2	34.0	7.0	29.9	29.7	1.50	2.70	SIC	A-4(8)	ML
	15-34	34	121.6	12.9	17.0	0.0	5.2	30.9	41.4	22.5	9.2	24.0	8.0	19.2	18.9	1.76	2.64	CL	A-4(8)	CL
59	0- 6	06+	107.9	17.4	9.8	0.0	0.6	9.4	62.0	28.0	19.0	33.0	11.0	23.6	22.7	1.66	2.66	SICL	A-6(8)	ML-CL
60	0-15		108.0	18.3	20.0	0.0	0.2	15.2	62.4	22.2	14.2	34.0	12.0	25.6	24.6	1.62	2.69	SICL	A-6(9)	ML-CL
	15-20	20+	116.3	13.2	5.2	0.0	2.8	30.6	32.6	34.0	27.0	31.0	14.0	20.9	18.1	1.80	2.67	C	A-6(8)	CL
61	0- 7	07+	107.9	17.4	9.8	0.0	0.6	9.4	62.0	28.0	19.0	33.0	11.0	23.6	22.7	1.66	2.66	SICL	A-6(8)	ML-CL
62	0- 4	04+	110.1	15.0	13.0	0.0	1.3	10.6	69.6	18.5	10.2	23.0	3.0	23.3	23.0	1.67	2.71	SIL	A-4(8)	ML
63	0- 4	04+	110.6	15.8	12.5	0.0	0.6	21.3	60.6	17.5	10.2	25.0	5.0	23.6	23.6	1.66	2.73	SIL	A-4(8)	ML-CL
64	0- 5	05+	106.0	18.9	1.9	0.0	0.8	12.6	30.1	56.5	32.2	56.0	34.0	25.8	21.4	1.70	2.75	C	A-7-6(19)	CH
65	0- 2		110.1	15.0	13.0	0.0	1.3	10.6	69.6	18.5	10.2	23.0	3.0	23.3	23.0	1.67	2.71	SIL	A-4(8)	ML
	2- 5	05+	106.0	18.9	1.9	0.0	0.8	12.6	30.1	56.5	32.2	56.0	34.0	25.8	21.4	1.70	2.75	C	A-7-6(19)	CH
66	0- 3		110.1	15.0	13.0	0.0	1.3	10.6	69.6	18.5	10.2	23.0	3.0	23.3	23.0	1.67	2.71	SIL	A-4(8)	ML
	3- 6	06+	110.6	15.8	12.5	0.0	0.6	21.3	60.6	17.5	10.2	25.0	5.0	23.6	23.6	1.66	2.73	SIL	A-4(8)	ML-CL
67	0- 4		116.0	13.8	6.0	0.0	2.0	15.9	33.6	28.5	19.2	30.0	12.0	19.3	23.9	1.64	2.70	CL	A-6(9)	CL
	4- 5	05+	106.0	18.9	1.9	0.0	0.8	12.6	30.1	56.5	32.2	56.0	34.0	25.8	21.4	1.70	2.75	C	A-7-6(19)	CH
68	0- 3		116.0	13.8	6.0	0.0	2.0	15.9	33.6	28.5	19.2	30.0	12.0	19.3	23.9	1.64	2.70	CL	A-6(9)	CL
	3- 5	05+	112.3	15.8	8.0	0.0	1.6	16.3	61.6	20.5	12.8	22.0	1.0	23.7	23.1	1.65	2.74	SICL	A-4(8)	ML
69	0- 3		116.3	13.2	5.2	0.0	2.8	30.6	32.6	34.0	27.0	31.0	14.0	20.9	18.1	1.80	2.67	C	A-6(8)	CL
	3-10	10+	112.3	15.8	8.0	0.0	1.6	16.3	61.6	20.5	12.8	22.0	1.0	23.7	23.1	1.65	2.74	SICL	A-4(8)	ML
70	0- 3		116.0	13.8	6.0	0.0	2.0	15.9	33.6	28.5	19.2	30.0	12.0	19.3	23.9	1.64	2.70	CL	A-6(9)	CL
	3- 8	08+	112.3	15.8	8.0	0.0	1.6	16.3	61.6	20.5	12.8	22.0	1.0	23.7	23.1	1.65	2.74	SICL	A-4(8)	ML
71	0- 6	06+	112.3	15.8	8.0	0.0	1.6	16.3	61.6	20.5	12.8	22.0	1.0	23.7	23.1	1.65	2.74	SICL	A-4(8)	ML
72	0- 3		116.0	13.8	6.0	0.0	2.0	15.9	33.6	28.5	19.2	30.0	12.0	19.3	23.9	1.64	2.70	CL	A-6(9)	CL
	3- 7	07+	112.3	15.8	8.0	0.0	1.6	16.3	61.6	20.5	12.8	22.0	1.0	23.7	23.1	1.65	2.74	SICL	A-4(8)	ML
73	0- 6	06+	116.0	13.8	6.0	0.0	2.0	15.9	33.6	28.5	19.2	30.0	12.0	19.3	23.9	1.64	2.70	CL	A-6(9)	CL
74	0- 4		116.3	13.2	5.2	0.0	2.8	30.6	32.6	34.0	27.0	31.0	14.0	20.9	18.1	1.80	2.67	C	A-6(8)	CL
	4-10	10+	112.3	15.8	8.0	0.0	1.6	16.3	61.6	20.5	12.8	22.0	1.0	23.7	23.1	1.65	2.74	SICL	A-4(8)	ML
75	0- 5	05+	116.0	13.8	6.0	0.0	2.0	15.9	33.6	28.5	19.2	30.0	12.0	19.3	23.9	1.64	2.70	CL	A-6(9)	CL
76	0- 6	06+	112.3	15.8	8.0	0.0	1.6	16.3	61.6	20.5	12.8	22.0	1.0	23.7	23.1	1.65	2.74	SICL	A-4(8)	ML
77	0-11	11+	116.0	13.8	6.0	0.0	2.0	15.9	33.6	28.5	19.2	30.0	12.0	19.3	23.9	1.64	2.70	CL	A-6(9)	CL
78	0-16	16+	112.3	15.8	8.0	0.0	1.6	16.3	61.6	20.5	12.8	22.0	1.0	23.7	23.1	1.65	2.74	SICL	A-4(8)	ML
79	0- 5		106.0	18.9	1.9	0.0	0.8	12.6	30.1	56.5	32.2	56.0	34.0	25.8	21.4	1.70	2.75	C	A-7-6(19)	CH
	5- 9		116.0	13.8	6.0	0.0	2.0	15.9	33.6	28.5	19.2	30.0	12.0	19.3	23.9	1.64	2.70	CL	A-6(9)	CL
	9-11	11+	112.3	15.8	8.0	0.0	1.6	16.3	61.6	20.5	12.8	22.0	1.0	23.7	23.1	1.65	2.74	SICL	A-4(8)	ML
80	0- 5	05	116.0	13.8	6.0	0.0	2.0	15.9	33.6	28.5	19.2	30.0	12.0	19.3	23.9	1.64	2.70	CL	A-6(9)	CL
81	0- 5		116.0	13.8	6.0	0.0	2.0	15.9	33.6	28.5	19.2	30.0	12.0	19.3	23.9	1.64	2.70	CL	A-6(9)	CL
	5- 9	09+	112.3	15.8	8.0	0.0	1.6	16.3	61.6	20.5	12.8	22.0	1.0	23.7	23.1	1.65	2.74	SICL	A-4(8)	ML
82	0- 5	05+	116.0	13.8	6.0	0.0	2.0	15.9	33.6	28.5	19.2	30.0	12.0	19.3	23.9	1.64	2.70	CL	A-6(9)	CL
83	0-10	10+	112.3	15.8	8.0	0.0	1.6	16.3	61.6	20.5	12.8	22.0	1.0	23.7	23.1	1.65	2.74	SICL	A-4(8)	ML
84	0- 5	05+	116.0	13.8	6.0	0.0	2.0	15.9	33.6	28.5	19.2	30.0	12.0	19.3	23.9	1.64	2.70	CL	A-6(9)	CL
85	0- 5	05+	106.0	18.9	1.9	0.0	0.8	12.6	30.1	56.5	32.2	56.0	34.0	25.8	21.4	1.70	2.75	C	A-7-6(19)	CH
86	0- 6	06+	112.3	15.8	8.0	0.0	1.6	16.3	61.6	20.5	12.8	22.0	1.0	23.7	23.1	1.65	2.74	SICL	A-4(8)	ML
87	0- 6	06+	116.0	13.8	6.0	0.0	2.0	15.9	33.6	28.5	19.2	30.0	12.0	19.3	23.9	1.64	2.70	CL	A-6(9)	CL
88	0-18	18+	108.3	17.0	4.7	0.4	1.0	14.1	62.4	22.1	13.1	32.9	10.2	24.4	25.7	1.47	2.60	SICL	A-6(8)	ML-CL
89	0-34	34	108.3	17.0	4.7	0.4	1.0	14.1	62.4	22.1	13.1	32.9	10.2	24.4	25.7	1.47	2.60	SICL	A-6(8)	ML-CL
90	0-22	22+	108.3	17.0	4.7	0.4	1.0	14.1	62.4	22.1	13.1	32.9	10.2	24.4	25.7	1.47	2.60	SICL	A-6(8)	ML-CL
91	0- 8		107.0	17.3	4.2	0.0	0.8	13.0	59.4	26.8	13.8	35.0	15.2	21.3	24.1	1.61	2.63	SICL	A-6(10)	CL
	8-11	11+	0.0	0.0	0.0	0.4	0.4	10.6	66.9	21.7	12.7	28.1	7.8	22.5	34.9	1.39	2.70	SICL	A-4(8)	ML-CL
92	0-11	11+	107.0	17.3	4.2	0.0	0.8	13.0	59.4	26.8	13.8	35.0	15.2	21.3	24.1	1.61	2.63	SICL	A-6(10)	CL
93	0- 8	08+	106.9	18.5	6.0	0.0	0.3	9.5	66.6	23.6	15.6	29.0	6.3	24.1	24.4	1.63	2.71	SICL	A-4(8)	ML-CL
94	0- 7	07+	108.3	16.1	4.1	0.0	0.8	12.0	53.6	33.6	20.8	32.9	9.9	25.1	21.3	1.71	2.69	SIC	A-4(8)	ML-CL
95	0- 9	09+	110.7	15.5	11.3	0.2	0.1	19.5	62.4	17.8	7.8	28.1	7.5	22.8	27.1	1.56	2.70	SIL	A-4(8)	ML-CL
96	0- 9	09+	110.3	15.9	2.7	0.0	0.1	24.7	60.4	14.8	15.8	32.8	10.9	24.9	31.0	1.47	2.70	SIL	A-4(8)	ML-CL
97	0- 9	09+	104.2	18.7	6.3	0.4	0.4	26.9	56.2	16.1	10.2	29.1	8.6	21.8	31.5	1.42	2.57	SIL	A-4(8)	ML-CL
98	0- 8	08+	107.4	17.6	6.8	0.0	0.2	17.6	57.4	24.8	15.8	30.1	8.4	24.5	27.1	1.56	2.70	SICL	A-4(8)	ML-CL
99	0- 7	07+	102.0	20.9	3.7	0.2	0.2	13.0	6 56	21.2	9.0	29.3	9. 7	21.3	2 85	149	2.59	SICL	A-4(8)	CL
100	0- 9	09+	108.9	16.5	6.8	0.0	0.9	14.1	57.0	28.0	16.0	32.0	10.8	23.7	26.4	1.56	2.65	SICL	A-6(8)	CL
101	0-13	13+	110.1	17.0	6.2	0.0	0.3	18.3	55.0	26.4	15.6	31.9	10.8	23.4	24.8	1.62	2.71	SICL	A-6(8)	CL
102	0- 8		110.1	17.0	6.2	0.0	0.3	18.3	55.0	26.4	15.6	31.9	10.8	23.4	24.8	1.62	2.71	SICL	A-6(8)	CL
	8-13	13+	108.3	17.5	6.3	0.8	0.7	11.2	55.6	31.7	21.8	32.8	10.6	24.3	31.1	1.45	2.64	SIC	A-6(8)	ML-CL
103	0-11	11+	108.3	17.5	6.3	0.8	0.7	11.2	55.6	31.7	21.8	32.8	10.6	24.3	31.1	1.45	2.64	SIC	A-6(8)	ML-CL
104	0- 9	09+	111.3	16.1	9.0	0.7	0.3	12.8	60.8	26.4	14.6	29.8	7.5	24.0	25.6	1.61	2.74	SICL	A-4(8)	ML-CL
105	0- 7	07+	106.4	16.4	4.7	0.3	0.4	26.3	57.2	15.8	7.8	29.8	6.0	27.3	31.0	1.46	2.67	SIL	A-4(8)	ML-CL
106	0- 7	07+	110.7	16.6	6.8	0.7	0.5	24.9	48.7	25.2	15.5	33.9	14.0	21.5	24.5	1.64	2.74	CL	A-6(10)	CL
107	0- 6	06+	0.0	0.0	0.0	0.6	0.4	14.4	60.4	24.8	13.8	31.0	10.0	23.9	30.9	1.47	2.69	SICL	A-6(8)	ML-CL
108	0- 8	08+	113.2	15.3	8.3	0.0	0.6	27.4	49.0	23.8	14.0	32.6	12.7	22.0	32.8	1.41	2.62	CL	A-6(8)	CL
109	0- 2		112.6	17.4	7.8	0.0	0.1	30.1	47.6	22.2	14.4	32.9	9.0	26.5	33.0	1.45	2.78	L	A-4(7)	ML-CL
	2- 6	06+	113.2	15.3	8.3	0.0	0.6	27.4	49.0	23.8	14.0	32.6	12.7	22.0	32.8	1.41	2.62	CL	A-6(8)	CL
110	0- 8	08+	112.6	17.4	7.8	0.0	0.1	30.1	47.6	22.2	14.4	32.9	9.0	26.5	33.0	1.45	2.78	L	A-4(7)	ML-CL
111	0-13	13+	110.4	16.9	5.0	0.1	0.9	12.1	58.9	28.0	18.0	30.2	10.5	21.9	25.2	1.59	2.65	SICL	A-6(8)	CL
112	0-15		110.4	16.9	5.0	0.1	0.9	12.1	58.9	28.0	18.0	30.2	10.5	21.9	25.2	1.59	2.65	SICL	A-6(8)	CL
	15-23	23+	108.7	17.9	1.1	2.9	1.8	13.3	37.7	44.3	27.4	38.6	17.9	21.9	18.7	1.82	2.76	C	A-6(11)	CL
113	0- 7	07+	110.4	16.9	5.0	0.1	0.9	12.1	58.9	28.0	18.0	30.2	10.5	21.9	25.2	1.59	2.65	SICL	A-6(8)	CL
114	0- 6	06+	103.4	17.7	3.5	0.0	0.1	17.9	60.0	22.0	13.0	29.2	9.6	21.2	32.7	1.42	2.65	SICL	A-4(8)	CL
115	0-18	18+	103.4	17.7	3.5	0.0	0.1	17.9	60.0	22.0	13.0	29.2	9.6	21.2	32.7	1.42	2.65	SICL	A-4(8)	CL
116	0-15	15+	108.5	16.4	6.8	0.3	0.2	15.6	57.6	26.3	15.6	32.9	10.6	24.8	24.2	1.64	2.72	SICL	A-6(8)	ML-CL
117	0- 7	07+	0.0	0.0	0.0	1.6	3.2	26.3	53.2	15.7	10.8	23.7	6.3	19.5	19.3	1.74	2.62	SIL	A-4(7)	ML-CL
118	0- 7	07+	109.1	16.1	8.0	0.0	0.5	8.7	67.6	24.2	14.2	27.1	5.3	23.6	26.9	1.53	2.60	SICL	A-4(8)	ML-CL
119	0- 9	09+	0.0	0.0	0.0	1.6	3.2	26.3	53.2	15.7	10.8	23.7	6.3	19.5	19.3	1.74	2.62	SIL	A-4(7)	ML-CL
120	0-11	11+	109.1	16.1	8.0	0.0	0.5	8.7	67.6	24.2	14.2	27.1	5.3	23.6	26.9	1.53	2.60	SICL	A-4(8)	ML-CL
121	0- 6	06+	0.0	0.0	0.0	1.6	3.2	26.3	53.2	15.7	10.8	23.7	6.3	19.5	19.3	1.74	2.62	SIL	A-4(7)	ML-CL
122	0-14	14+	109.1	15.3	6.3	0.0	0.3	12.3	64.2	23.8	15.8	34.9	1 2.8	24.7	22.8	1.66	2.67	SICL	A-6(9)	ML-CL
123	0- 8	08+	0.0	0.0	0.0	0.0	0.0	4.0	70.0	26.0	18.0	28.4	6.7	22.6	23.5	1.63	2.64	SICL	A-4(8)	ML-CL
124	0- 9	09+	109.1	15.3	6.3	0.0	0.3	12.3	64.2	23.8	15.8	34.9	12.8	24.7	22.8	1.66	2.67	SICL	A-6(9)	ML-CL
125	0-10	10+	0.0	0.0	0.0	0.0	0.0	4.0	70.0	26.0	18.0	28.4	6.7	22.6	23.5	1.63	2.64	SICL	A-4(8)	ML-CL
126	0-10	10+	109.1	15.3	6.3	0.0	0.3	12.3	64.2	23.8	15.8	34.9	12.8	24.7	22.8	1.66	2.67	SICL	A-6(9)	ML-CL
127	0- 9	09+	108.4	17.2	7.9	0.0	0.0	7.2	69.2	23.6	15.2	32.2	9.7	24.6	26.8	1.56	2.68	SICL	A-4(8)	ML-CL

COUNTY- HENDERSON

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-RUCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
128	0- 8	08+	0.0	0.0	0.0	0.0	0.0	35.2	32.8	32.0	24.4	27.1	6.8	23.3	22.0	1.61	2.69	CL	A-4(6)	ML-CL
129	0-10	10+	108.8	16.9	3.1	0.0	0.6	14.2	51.8	33.4	21.2	30.4	9.3	25.9	26.0	1.59	2.71	C	A-4(8)	ML-CL
130	0- 7	07+	0.0	0.0	0.0	0.0	1.8	24.4	37.2	36.6	20.8	30.8	9.9	23.7	21.2	1.76	2.79	C	A-4(8)	CL
131	0-11	11+	115.9	14.5	6.2	0.0	4.8	24.6	48.2	22.4	15.0	25.0	6.8	20.6	24.8	1.64	2.75	CL	A-4(7)	ML-CL
132	0-11		115.9	14.5	6.2	0.0	4.8	24.6	48.2	22.4	15.0	25.0	6.8	20.6	24.8	1.64	2.75	CL	A-4(7)	ML-CL
	11-19	19+	121.9	11.8	4.6	0.0	1.5	56.3	19.8	22.4	12.2	21.5	5.7	19.0	18.1	1.81	2.69	SCL	A-4(1)	SM-SC
133	0-16	16+	122.8	11.7	12.3	0.0	8.9	45.5	26.0	19.6	10.2	21.8	6.0	19.5	19.5	1.78	2.73	SL	A-4(2)	SM-SC
134	0- 7	07+	114.2	14.5	10.7	0.0	1.5	19.5	55.4	23.6	12.6	27.4	5.7	24.4	21.7	1.70	2.69	SICL	A-4(8)	ML-CL
135	0- 5	05+	0.0	0.0	0.0	0.0	13.9	38.3	32.4	15.4	10.2	23.0	5.3	20.1	23.1	1.68	2.74	SL	A-4(3)	SM-SC
136	0- 5	05+	0.0	0.0	0.0	0.0	7.6	31.2	39.6	21.6	12.0	24.7	6.5	20.9	20.8	1.73	2.69	CL	A-4(5)	ML-CL
137	0-15		110.0	18.4	1.0	0.0	1.4	13.4	54.8	30.4	17.2	29.8	9.7	26.4	23.9	1.65	2.72	C	A-4(8)	CL
	15-23	23+	116.2	15.1	3.7	0.0	2.2	42.4	21.0	34.4	21.2	29.5	11.7	23.2	17.0	1.86	2.72	C	A-6(5)	CL
138	0- 7	07+	0.0	0.0	0.0	0.0	0.5	25.5	57.6	16.4	8.4	22.9	4.9	21.9	24.4	1.64	2.72	SIL	A-4(8)	ML-CL
139	0-15		113.7	15.1	4.2	0.0	2.2	25.2	44.4	28.2	18.0	28.2	8.4	22.3	16.7	1.88	2.75	L	A-4(8)	CL
	15-27	27+	116.2	15.1	3.7	0.0	2.2	42.4	21.0	34.4	21.2	29.5	11.7	23.2	17.0	1.86	2.72	C	A-6(5)	CL
140	0- 5	05+	0.0	0.0	0.0	0.0	1.6	7.0	49.4	42.0	28.4	31.5	9.4	26.8	24.3	1.64	2.71	C	A-4(8)	ML-CL
141	0- 9	09+	120.3	11.1	7.9	0.0	0.6	9.4	59.0	31.0	16.8	30.3	9.8	24.4	17.5	1.86	2.75	SIC	A-4(8)	CL
142	0-12	12+	0.0	0.0	0.0	0.0	5.3	20.1	48.4	26.2	17.4	30.4	7.9	25.2	24.7	1.63	2.73	CL	A-4(8)	ML-CL
143	0-11	11+	120.3	11.1	7.9	0.0	0.6	9.4	59.0	31.0	16.8	30.3	9.8	24.4	17.5	1.86	2.75	SIC	A-4(8)	CL
144	0- 8	08+	0.0	0.0	50.0	0.0	5.1	9.5	24.2	61.2	43.6	59.0	47.6	61.7	51.7	2.19	2.28	C	A-7-6(20)	CH
145	0-16		113.9	15.8	11.4	0.0	4.8	17.0	53.2	25.0	17.8	30.4	8.9	26.0	24.1	1.65	2.74	SICL	A-4(8)	ML-CL
	16-29	29+	114.1	15.0	4.0	0.0	0.0	31.4	37.4	31.2	21.8	28.8	11.6	22.6	18.5	1.82	2.74	C	A-6(8)	CL
146	0-11	11+	0.0	0.0	0.0	0.0	3.1	9.5	18.4	69.0	38.6	47.1	22.0	33.1	18.6	1.86	2.84	C	A-7-6(14)	CL
147	0-12	12+	112.5	16.0	1.0	0.0	1.9	13.9	59.8	24.4	16.8	30.5	8.4	26.1	22.3	1.72	2.78	SICL	A-4(8)	ML-CL
148	0- 7	07+	0.0	0.0	0.0	0.0	2.7	14.5	51.8	31.0	16.0	26.3	6.8	22.3	24.7	1.62	2.70	C	A-4(8)	ML-CL
149	0- 7	07+	112.5	16.0	1.0	0.0	1.9	13.9	59.8	24.4	16.8	30.5	8.4	26.1	22.3	1.72	2.78	SICL	A-4(8)	ML-CL
150	0-11	11+	0.0	0.0	0.0	0.0	5.4	21.4	48.6	24.6	16.2	26.0	6.9	22.6	22.2	1.70	2.72	CL	A-4(7)	ML-CL
151	0-11		114.9	15.0	11.7	0.0	12.7	13.1	47.2	27.0	17.8	28.4	7.8	24.3	27.3	1.57	2.75	CL	A-4(8)	ML-CL
	11-29	29+	112.9	16.7	2.0	0.0	0.3	17.3	34.6	47.8	29.6	35.6	14.2	28.1	26.5	1.90	2.76	C	A-6(10)	CL
152	0-11	11+	114.9	15.0	11.7	0.0	12.7	13.1	47.2	27.0	17.8	28.4	7.8	24.3	27.3	1.57	2.75	CL	A-4(8)	ML-CL
153	0- 6	06+	0.0	0.0	0.0	0.0	6.2	21.8	35.4	36.6	27.5	36.6	17.4	25.3	18.3	1.83	2.75	C	A-6(10)	CL
154	0- 5	05+	0.0	0.0	0.0	0.0	3.1	42.3	32.4	22.2	16.8	23.6	6.8	19.8	25.2	1.63	2.75	CL	A-4(4)	ML-CL
155	0- 4	04+	0.0	0.0	0.0	0.0	4.1	20.1	44.0	31.8	22.2	29.1	11.0	22.4	22.8	1.69	2.74	C	A-6(8)	CL
156	0- 5	05+	0.0	0.0	0.0	0.0	1.7	30.9	39.8	27.6	17.0	24.8	9.0	19.8	20.5	1.74	2.69	CL	A-4(6)	CL
157	0-18	18+	121.7	11.8	8.1	0.0	1.7	63.7	13.6	21.0	20.8	21.3	5.8	18.9	18.7	1.81	2.74	SCL	A-4(2)	SM-SC
158	0-21		121.7	11.8	8.1	0.0	1.7	63.7	13.6	21.0	20.8	21.3	5.8	18.9	18.7	1.81	2.74	SCL	A-4(2)	SM-SC
	21-41	41+	112.5	16.7	2.4	0.0	6.5	21.5	35.4	36.6	19.2	33.7	13.9	25.6	19.4	1.79	2.74	C	A-6(9)	CL
159	0-12	12+	121.7	11.8	8.1	0.0	1.7	63.7	13.6	21.0	20.8	21.3	5.8	18.9	18.7	1.81	2.74	SCL	A-4(2)	SM-SC
160	0- 8	08+	0.0	0.0	0.0	0.0	6.0	34.8	29.0	30.2	20.0	24.8	7.5	21.8	22.5	1.68	2.70	C	A-4(5)	CL
161	0-10		115.0	13.8	3.8	0.0	2.5	58.9	19.6	19.0	8.4	25.4	4.9	24.1	26.7	1.59	2.75	SL	A-4(1)	SM-SC
	10-18		118.3	11.7	29.5	0.0	1.1	82.7	6.8	9.4	3.6	0.0	0.0	0.0	21.0	1.72	2.68	S	A-2-4(0)	SM
	18-37	37	125.5	10.2	20.4	0.0	9.4	67.4	8.0	15.2	7.6	0.0	0.0	0.0	21.5	1.71	[illegible]	SL	A-2-4(0)	SM
162	0-10	10+	0.0	0.0	0.0	0.0	3.2	5.4	34.4	57.0	24.6	38.3	13.3	31.9	17.6	1.88	2.80	C	A-6(9)	ML-CL
163	0-10		117.7	14.5	9.4	0.0	2.2	65.8	12.8	19.2	11.4	0.0	0.0	0.0	22.9	1.68	2.72	SL	A-2-4(0)	SM
	10-17		110.6	17.1	1.6	0.0	4.2	22.6	23.4	49.8	25.5	36.3	14.8	29.3	15.7	1.94	2.78	C	A-6(10)	CL
	17-31	31+	102.2	20.9	2.2	0.0	10.1	12.9	19.8	57.2	33.4	45.2	18.2	34.4	19.6	1.76	2.69	C	A-7-6(10)	ML-CL
164	0- 6	06+	0.0	0.0	0.0	0.0	4.5	14.1	35.6	45.8	24.0	39.3	15.5	31.8	18.7	1.82	2.76	C	A-6(10)	ML-CL
165	0-14		109.2	15.9	4.7	0.0	0.0	10.8	69.6	19.6	11.6	30.9	8.5	26.7	28.7	1.53	2.71	SIL	A-4(8)	ML-CL
	14-24		115.4	15.9	7.4	0.0	3.1	48.5	20.4	28.0	17.2	28.2	11.2	24.8	23.0	1.71	2.81	SCL	A-6(3)	SC
	24-36	36+	115.0	14.7	2.6	0.0	2.5	18.9	32.2	46.4	23.0	34.1	12.7	26.4	19.3	1.71	2.81	C	A-6(9)	CL
166	0-10	10+	0.0	0.0	0.0	0.0	4.6	19.2	45.0	31.2	18.4	29.4	9.9	25.2	21.0	1.74	2.74	C	A-4(8)	CL
167	0- 8	08+	105.8	18.4	5.3	0.0	1.3	12.7	43.0	44.0	33.2	36.4	14.9	28.1	25.3	1.00	0.0	C	A-6(10)	CL
168	0- 5	05+	0.0	0.0	0.0	0.0	4.4	21.8	51.0	22.8	12.8	27.6	6.4	24.5	23.0	1.65	2.65	SICL	A-4(8)	ML-CL
169	0-14	14+	115.6	15.4	2.3	0.0	2.7	39.7	29.4	28.2	17.4	28.1	8.9	23.8	21.3	1.74	2.76	CL	A-4(5)	CL
170	0-15		115.6	15.4	2.3	0.0	2.7	39.7	29.4	28.2	17.4	28.1	8.9	23.8	21.3	1.74	2.76	CL	A-4(5)	CL
	15-20		120.5	12.9	3.6	0.0	7.0	35.8	31.6	25.6	13.6	26.4	7.6	23.0	21.3	1.73	2.73	CL	A-4(4)	CL
	20-30	30+	118.5	12.8	2.1	0.0	0.5	34.5	27.8	37.2	23.0	28.5	12.2	21.9	15.2	1.95	2.77	C	A-6(8)	CL
171	0- 8	08+	0.0	0.0	0.0	0.0	2.5	8.1	28.8	60.6	28.8	41.8	18.6	3[illegible].9	21.3	1.76	2.73	C	A-7-6(1)	CL
172	0-10		0.0	0.0	0.0	0.0	1.1	16.9	59.2	22.8	13.8	26.4	8.6	21.2	23.4	1.65	2.68	SICL	A-4-(8)	CL
	10-15	15+	0.0	0.0	0.0	0.0	4.3	36.9	29.6	29.2	19.4	31.7	11.6	26.5	19.4	1.79	2.73	CL	A-6(5)	CL
173	0- 8	08+	0.0	0.0	0.0	0.0	1.1	16.9	59.2	22.8	13.8	26.4	8.6	21.2	23.4	1.65	2.68	SICL	A-4-(8)	CL
174	0-10		110.4	15.7	6.1	0.0	0.0	17.0	53.4	29.6	18.6	28.7	8.9	24.8	19.7	1.78	2.73	SICL	A-4(8)	CL
	10-14		97.3	23.9	1.4	0.0	2.5	15.7	15.8	66.0	34.4	48.2	25.7	33.5	20.7	1.78	2.80	C	A-7-6(16)	CL
	14-17	17+	108.5	18.3	1.2	0.0	2.2	22.8	21.8	53.2	26.6	37.3	15.7	29.0	17.2	1.89	2.79	C	A-6(10)	CL
175	0-10		110.4	15.7	6.1	0.0	0.0	17.0	53.4	29.6	18.6	28.7	8.9	24.8	19.7	1.78	2.73	SICL	A-4(8)	CL
	10-15		97.3	23.9	1.4	0.0	2.5	15.7	15.8	66.0	34.4	48.2	25.7	33.5	20.7	1.78	2.80	C	A-7-6(16)	CL
	15-19		108.5	18.3	1.2	0.0	2.2	22.8	21.8	53.2	26.6	37.3	15.7	29.0	17.2	1.89	2.79	C	A-6(10)	CL
	19-26		121.3	11.3	7.2	0.0	1.5	67.5	16.0	15.0	9.4	0.0	0.0	0.0	21.2	1.73	2.72	SL	A-2-4(0)	SM
	26-33	33+	108.5	18.3	1.2	0.0	2.2	22.8	21.8	53.2	26.6	37.3	15.7	29.0	17.2	1.89	2.79	C	A-6(10)	CL
176	0- 7	07+	0.0	0.0	0.0	0.0	1.1	18.9	54.8	25.2	15.0	32.1	9.5	25.7	26.3	1.61	2.78	SICL	A-4(8)	ML-CL
177	0- 7		0.0	0.0	0.0	0.0	1.1	18.9	54.8	25.2	15.0	32.1	9.5	25.7	26.3	1.61	2.78	SICL	A-4(8)	ML-CL
	7-14	14+	0.0	0.0	0.0	0.0	2.0	23.2	33.6	41.2	23.0	34.1	12.4	27.7	25.3	1.62	2.73	C	A-6(9)	CL
178	0- 2		102.8	20.4	2.1	0.0	1.8	13.6	60.0	24.6	21.0	35.4	13.3	28.6	27.7	1.56	2.75	SICL	A-6(9)	CL
	2- 5		116.6	16.0	2.6	0.0	4.5	48.9	20.6	26.0	13.4	28.4	8.3	23.8	23.4	1.69	2.78	SCL	A-4(2)	SC
	5-12	12+	114.9	14.3	1.5	0.0	6.2	14.4	36.0	43.4	20.2	35.2	11.6	27.5	19.4	1.81	2.79	C	A-6(9)	ML-CL
179	0- 8		0.0	0.0	0.0	0.0	2.7	10.7	44.8	41.8	26.4	37.0	15.0	29.7	20.5	1.75	2.72	C	A-6(10)	CL
	8-13	13+	0.0	0.0	0.[illegible]	0.0	1.7	48.9	22.8	26.6	13.4	23.9	6.1	21.3	20.9	1.74	2.73	CL	A-4(3)	SM-SC
180	0- 8	08+	106.9	17.6	5.6	0.0	0.0	10.4	67.8	21.8	13.4	29.9	8.6	26.2	29.4	1.53	2.76	SICL	A-4(8)	ML-CL
181	0- 6	06+	0.0	0.0	0.0	0.0	0.0	10.2	62.6	27.2	11.6	28.9	5.9	26.2	29.0	1.54	2.77	SICL	A-4(8)	ML-CL
182	0-11		106.9	17.6	5.6	0.0	0.0	10.4	67.8	21.8	13.4	29.9	8.6	26.2	29.4	1.53	2.76	SICL	A-4(8)	ML-CL
	11-16		110.4	17.4	2.1	0.0	14.2	21.4	24.4	40.0	25.8	33.5	13.8	27.5	24.0	1.67	2.79	C	A-6(7)	CL
	16-23	23+	117.0	15.4	1.4	0.0	4.5	30.5	19.8	45.2	28.0	32.3	13.2	24.3	17.1	1.87	2.74	C	A-6(7)	CL
183	0- 5	05+	0.0	0.0	0.0	0.0	0.9	11.7	63.2	24.2	16.6	29.6	6.7	25.9	25.2	1.60	2.67	SICL	A-4(8)	ML-CL
184	0-15		106.9	17.6	5.6	0.0	0.0	10.4	67.8	21.8	13.4	29.9	8.6	26.2	29.4	1.53	2.76	SICL	A-4(8)	ML-CL
	15-29	29+	104.1	20.3	1.0	0.0	6.0	13.4	29.0	51.6	34.2	43.2	18.3	32.4	19.4	1.77	2.70	C	A-7-6(12)	ML-CL
185	0-20	20+	106.9	17.6	5.6	0.0	0.0	10.4	67.8	21.8	13.4	29.9	8.6	26.2	29.4	1.53	2.76	SICL	A-4(8)	ML-CL
186	0- 4	04+	0.0	0.0	0.0	0.0	1.9	8.5	63.2	26.4	15.2	30.6	6.6	27.3	28.1	1.54	2.69	SICL	A-4(8)	ML-CL
187	0-18		109.2	17.4	6.3	0.0	0.0	19.0	56.8	24.2	17.0	27.9	5.9	24.2	26.7	1.58	2.73	SICL	A-4(8)	ML-CL
	18-26		106.3	19.0	2.2	0.0	1.7	19.9	34.2	44.2	27.6	34.2	14.4	27.4	21.5	1.69	2.64	CL	A-6(10)	CL
	26-33	33+	109.2	18.7	1.1	0.0	2.1	9.3	25.0	63.6	30.4	42.1	17.2	31.3	16.5	1.87	2.71	C	A-7-6(11)	ML-CL
188	0- 8	08+	0.0	0.0	0.0	0.0	2.0	18.6	52.8	26.6	13.4	27.3	6.4	23.3	24.7	1.64	2.74	SICL	A-4(8)	ML-CL
189	0-25	25+	109.2	17.4	6.3	0.0	0.0	19.0	56.8	24.2	17.0	27.9	5.9	24.2	26.7	1.58	2.73	SICL	A-4(8)	ML-CL
190	0- 6	06+	0.0	0.0	0.0	0.0	0.0	14.6	64.0	21.4	9.8	29.9	6.2	26.5	29.3	1.52	2.74	SICL	A-4(8)	ML-CL
191	0- 6	06+	109.2	17.4	6.3	0.0	0.0	19.0	56.8	24.2	17.0	27.9	5.9	24.2	26.7	1.58	2.73	SICL	A-4(8)	ML-CL

COUNTY- HENDERSON

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
192	0- 6	06+	113.1	15.6	7.7	0.0	0.0	35.6	45.0	19.4	12.0	24.1	5.9	21.4	23.5	1.67	2.73	L	A-4(6)	ML-CL
193	0- 6	06+	0.0	0.0	0.0	0.0	0.8	22.0	31.4	45.8	10.2	38.4	18.1	28.2	17.1	1.87	2.75	C	A-6(11)	CL
194	0- 7	07+	0.0	0.0	0.0	0.0	4.2	44.0	26.6	25.2	17.0	24.1	8.0	21.7	21.7	1.73	2.76	CL	A-4(3)	CL
195	0- 9	09+	0.0	0.0	0.0	0.0	0.0	15.8	43.2	41.0	25.6	32.5	12.3	25.6	21.8	1.74	2.77	C	A-6(9)	CL
196	0-18		0.0	0.0	0.0	0.0	0.0	15.8	43.2	41.0	25.6	32.5	12.3	25.6	21.8	1.74	2.77	C	A-6(9)	CL
	18-24	24+	0.0	0.0	0.0	0.0	0.0	38.4	30.8	30.8	20.0	25.9	8.2	22.2	21.0	1.75	2.75	C	A-4(5)	CL

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FMF	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
1	0- 5	05	121.3	11.9	17.0	0.0	2.4	54.6	20.2	22.8	17.0	19.3	2.9	17.7	27.1	1.54	2.64	SCL	A-4(2)	SM
2	0- 5	05+	121.3	11.9	17.0	0.0	2.4	54.6	20.2	22.8	17.0	19.3	2.9	17.7	27.1	1.54	2.64	SCL	A-4(2)	SM
3	0- 5	05	108.7	16.7	13.5	0.0	0.9	11.0	55.0	33.1	19.5	26.2	6.7	22.5	22.4	1.63	2.57	SIC	A-4(8)	ML-CL
4	0- 1		108.7	16.7	13.5	0.0	0.9	11.0	55.0	33.1	19.5	26.2	6.7	22.5	22.4	1.63	2.57	SIC	A-4(8)	ML-CL
	1- 3	03+	113.0	16.0	12.7	0.0	0.9	27.6	41.0	30.5	18.2	24.1	6.7	21.9	18.8	1.75	2.61	C	A-4(7)	ML-CL
5	0- 6	06	108.7	16.7	13.5	0.0	0.9	11.0	55.0	33.1	19.5	26.2	6.7	22.5	22.4	1.63	2.57	SIC	A-4(8)	ML-CL
6	0- 1		115.0	13.5	10.7	0.0	0.4	63.5	10.1	26.0	15.9	23.7	7.8	22.4	21.9	1.69	2.68	SCL	A-4(0)	SC
	1- 3	03	116.5	13.8	12.2	0.0	0.5	45.6	28.1	25.8	14.8	20.8	5.2	18.3	23.8	1.64	2.69	CL	A-4(4)	ML-CL
7	0- 2		108.3	17.7	10.0	0.0	1.8	11.1	49.5	37.6	26.7	30.0	8.0	23.7	26.0	1.58	2.68	C	A-4(8)	ML-CL
	2- 6	06+	110.5	17.4	4.5	0.0	1.4	24.3	35.7	38.6	27.5	37.5	17.8	22.0	20.2	1.75	2.71	C	A-6(11)	CL
8	0- 4	04+	108.3	17.7	10.0	0.0	1.8	11.1	49.5	37.6	26.7	30.0	8.0	23.7	26.0	1.58	2.68	C	A-4(8)	ML-CL
9	0- 2		108.6	17.3	6.5	0.0	1.0	20.0	50.0	29.0	18.0	31.0	10.4	22.6	26.3	1.57	2.67	CL	A-6(8)	CL
	2- 4		113.4	14.3	10.5	0.0	0.4	30.6	40.0	29.0	18.0	30.0	11.7	19.6	22.5	1.66	2.65	CL	A-6(8)	CL
	4- 6		114.4	14.8	5.0	0.0	1.3	54.0	16.9	27.7	17.8	29.8	11.1	21.3	26.3	1.58	2.70	SCL	A-2-6(2)	SC
	6-10	10+	115.0	13.5	16.0	0.0	0.8	71.2	11.0	17.0	7.0	22.3	2.0	23.4	28.2	1.52	2.66	SL	A-2-4(0)	SM
10	0- 2		108.6	17.3	6.5	0.0	1.0	20.0	50.0	29.0	18.0	31.0	10.4	22.6	26.3	1.57	2.67	CL	A-6(8)	CL
	2- 4		113.4	14.3	10.5	0.0	0.4	30.6	40.0	29.0	18.0	30.0	11.7	19.6	22.5	1.66	2.65	CL	A-6(8)	CL
	4- 8	08+	114.4	14.8	5.0	0.0	1.3	54.0	16.9	27.7	17.8	29.8	11.1	21.3	26.3	1.58	2.70	SCL	A-2-6(2)	SC
11	0- 2		108.6	17.3	6.5	0.0	1.0	20.0	50.0	29.0	18.0	31.0	10.4	22.6	26.3	1.57	2.67	CL	A-6(8)	CL
	2- 4	04+	113.4	14.3	10.5	0.0	0.4	30.6	40.0	29.0	18.0	30.0	11.7	19.6	22.5	1.66	2.65	CL	A-6(8)	CL
12	0- 4		108.3	17.7	10.0	0.0	1.8	11.1	49.5	37.6	26.7	30.0	8.0	23.7	26.0	1.58	2.68	C	A-4(8)	ML-CL
	4-10	10+	110.5	17.4	4.5	0.0	1.4	24.3	35.7	38.6	27.5	37.5	17.8	22.0	20.2	1.75	2.71	C	A-6(111	CL
13	0- 2		108.6	17.3	6.5	0.0	1.0	20.0	50.0	29.0	18.0	31.0	10.4	22.6	26.3	1.57	2.67	CL	A-6(8)	CL
	2- 6	06+	113.4	14.3	10.5	0.0	0.4	30.6	40.0	29.0	18.0	30.0	11.7	19.6	22.5	1.66	2.65	CL	A-6(8)	CL
14	0- 4		113.4	14.3	10.5	0.0	0.4	30.6	40.0	29.0	18.0	30.0	11.7	19.6	22.5	1.66	2.65	CL	A-6(8)	CL
	4-10	10+	114.4	14.8	5.0	0.0	1.3	54.0	16.9	27.7	17.8	29.8	11.1	21.3	26.3	1.58	2.70	SCL	A-2-6(21	SC
15	0- 2		108.6	17.3	6.5	0.0	1.0	20.0	50.0	29.0	18.0	31.0	10.4	22.6	26.3	1.57	2.67	CL	A-6(8)	CL
	2- 6		113.4	14.3	10.5	0.0	0.4	30.6	40.0	29.0	18.0	30.0	11.7	19.6	22.5	1.66	2.65	CL	A-6(8)	CL
	6-12		114.4	14.8	5.0	0.0	1.3	54.0	16.9	27.7	17.8	29.8	11.1	21.3	26.3	1.58	2.70	SCL	A-2-6(2)	SC
	12-14	14+	115.0	13.5	16.0	0.0	0.8	71.2	11.0	17.0	7.0	22.3	2.0	23.4	28.2	1.52	2.66	SL	A-2-4(0)	SM
16	0-20		106.8	18.4	4.0	0.0	6.4	23.3	19.8	50.5	28.7	41.0	18.3	25.3	20.7	1.74	2.72	C	A-7-6(10)	CL
	20-24	24+	113.4	14.3	10.5	0.0	0.4	30.6	40.0	29.0	18.0	30.0	11.7	19.6	22.5	1.66	2.65	CL	A-6(8)	CL
17	0-10	10+	106.8	18.4	4.0	0.0	6.4	23.3	19.8	50.5	28.7	41.0	18.3	25.3	20.7	1.74	2.72	C	A-7-6(10)	CL
18	0- 4		108.6	17.3	6.5	0.0	1.0	20.0	50.0	29.0	18.0	31.0	10.4	22.6	26.3	1.57	2.67	CL	A-6(8)	CL
	4- 8	08+	113.4	14.3	10.5	0.0	0.4	30.6	40.0	29.0	18.0	30.0	11.7	19.6	22.5	1.66	2.65	CL	A-6(8)	CL
19	0-18	18+	106.8	18.4	4.0	0.0	6.4	23.3	19.8	50.5	28.7	41.0	18.3	25.3	20.7	1.74	2.72	C	A-7-6(10)	CL
20	0-20		106.8	18.4	4.0	0.0	6.4	23.3	19.8	50.5	28.7	41.0	18.3	25.3	20.7	1.74	2.72	C	A-7-6(10)	CL
	20-22		108.6	17.3	6.5	0.0	1.0	20.0	50.0	29.0	18.0	31.0	10.4	22.6	26.3	1.57	2.67	CL	A-6(8)	CL
	22-24	24+	113.4	14.3	10.5	0.0	0.4	30.6	40.0	29.0	18.0	30.0	11.7	19.6	22.5	1.66	2.65	CL	A-6(8)	CL
21	0- 2		108.6	17.3	6.5	0.0	1.0	20.0	50.0	29.0	18.0	31.0	10.4	22.6	26.3	1.57	2.67	CL	A-6(8)	CL
	2- 8		113.4	14.3	10.5	0.0	0.4	30.6	40.0	29.0	18.0	30.0	11.7	19.6	22.5	1.66	2.65	CL	A-6(8)	CL
	8-26		114.4	14.8	5.0	0.0	1.3	54.0	16.9	27.7	17.8	29.8	11.1	21.3	26.3	1.58	2.70	SCL	A-2-6(2)	SC
	26-30	30+	113.2	17.1	2.0	0.0	5.2	11.5	36.3	47.0	30.4	39.3	18.1	23.7	24.0	1.65	2.73	CSH	A-6(11)	CL
22	0- 4		108.3	17.7	10.0	0.0	1.8	11.1	49.5	37.6	26.7	30.0	8.0	23.7	26.0	1.58	2.68	C	A-4(8)	ML-CL
	4- 8	08+	110.5	17.4	4.5	0.0	1.4	24.3	35.7	38.6	27.5	37.5	17.8	22.0	20.2	1.75	2.71	C	A-6(11)	CL
23	0- 2		102.7	17.8	7.5	0.0	1.5	12.7	58.5	27.3	12.1	32.7	8.9	25.0	30.7	1.45	2.61	SICL	A-4(8)	ML-CL
	2- 6		110.7	16.8	12.0	0.0	0.6	11.3	49.5	38.6	27.7	37.2	16.4	23.1	21.2	1.71	2.68	C	A-6(11)	CL
	6-12	12+	100.0	22.6	2.0	0.0	0.6	7.3	19.8	72.3	55.4	63.4	36.0	30.4	15.6	1.89	2.68	C	A-7-6(20)	CH
24	0-34		112.1	16.1	4.0	0.0	8.5	17.2	35.7	38.6	25.7	40.4	17.9	25.7	20.4	1.75	2.72	C	A-7-6(11)	CL
	34-36		102.7	17.8	7.5	0.0	1.5	12.7	58.5	27.3	12.1	32.7	8.9	25.0	30.7	1.45	2.61	SICL	A-4(8)	ML-CL
	36-40	40+	110.7	16.8	12.0	0.0	0.6	11.3	49.5	38.6	27.7	37.2	16.4	23.1	21.2	1.71	2.68	C	A-6(11)	CL
25	0-10	10+	112.1	16.1	4.0	0.0	8.5	17.2	35.7	38.6	25.7	40.4	17.9	25.7	20.4	1.75	2.72	C	A-7-6(11)	CL
26	0- 2		102.7	17.8	7.5	0.0	1.5	12.7	58.5	27.3	12.1	32.7	8.9	25.0	30.7	1.45	2.61	SICL	A-4(8)	ML-CL
	2- 4		110.7	16.8	12.0	0.0	0.6	11.3	49.5	38.6	27.7	37.2	16.4	23.1	21.2	1.71	2.68	C	A-6(111	CL
	4- 6		100.0	22.6	2.0	0.0	0.6	7.3	19.8	72.3	55.4	63.4	36.0	30.4	15.6	1.89	2.68	C	A-7-6(20)	CH
	6-32	32+	113.2	17.1	2.0	0.0	5.2	11.5	36.3	47.0	30.4	39.3	18.1	23.7	24.0	1.65	2.73	CSH	A-6(11)	CL
27	0- 8	08+	110.7	16.8	12.0	0.0	0.6	11.3	49.5	38.6	27.7	37.2	16.4	23.1	21.2	1.71	2.68	C	A-6(11)	CL
28	0- 2		102.7	17.8	7.5	0.0	1.5	12.7	58.5	27.3	12.1	32.7	8.9	25.0	30.7	1.45	2.61	SICL	A-4(8)	ML-CL
	2- 4		110.7	16.8	12.0	0.0	0.6	11.3	49.5	38.6	27.7	37.2	16.4	23.1	21.2	1.71	2.68	C	A-6(11)	CL
	4-10		100.0	22.6	2.0	0.0	0.6	7.3	19.8	72.3	55.4	63.4	36.0	30.4	15.6	1.89	2.68	C	A-7-6(20)	CH
	10-30	30+	113.2	17.1	2.0	0.0	5.2	11.5	36.3	47.0	30.4	39.3	18.1	23.7	24.0	1.65	2.73	CSH	A-6(11)	CL
29	0- 4		100.0	22.6	2.0	0.0	0.6	7.3	19.8	72.3	55.4	63.4	36.0	30.4	15.6	1.89	2.68	C	A-7-6(20)	CH
	4-24	24+	113.2	17.1	2.0	0.0	5.2	11.5	36.3	47.0	30.4	39.3	18.1	23.7	24.0	1.65	2.73	CSH	A-6(11)	CL
30	0- 2		102.7	17.8	7.5	0.0	1.5	12.7	58.5	27.3	12.1	32.7	8.9	25.0	30.7	1.45	2.61	SICL	A-4(8)	ML-CL
	2- 4		110.7	16.8	12.0	0.0	0.6	11.3	49.5	38.6	27.7	37.2	16.4	23.1	21.2	1.71	2.68	C	A-6(11)	CL
	4- 6		100.0	22.6	2.0	0.0	0.6	7.3	19.8	72.3	55.4	63.4	36.0	30.4	15.6	1.89	2.68	C	A-7-6(20)	CH
	6-28		113.2	17.1	2.0	0.0	5.2	11.5	36.3	47.0	30.4	39.3	18.1	23.7	24.0	1.65	2.73	CSH	A-6(11)	CL
	28-34		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	COBL	A	SW OR SP
	34-40	40+	113.2	17.1	2.0	0.0	5.2	11.5	36.3	47.0	30.4	39.3	18.1	23.7	24.0	1.65	2.73	CSH	A-6(11)	CL
31	0- 4	04+	88.4	24.1	3.0	0.0	2.6	9.0	31.2	57.2	37.4	58.8	24.0	36.8	32.0	1.38	2.47	C	A-7-5(18)	MH
32	0- 7	07+	107.5	16.4	6.0	0.0	2.8	34.2	33.0	30.0	15.0	30.0	8.7	23.6	27.1	1.54	2.64	CL	A-4(6)	ML-CL
33	0- 2		102.7	17.8	7.5	0.0	1.5	12.7	58.5	27.3	12.1	32.7	8.9	25.0	30.7	1.45	2.61	SICL	A-4(8)	ML-CL
	2- 6		110.7	16.8	12.0	0.0	0.6	11.3	49.5	38.6	27.7	37.2	16.4	23.1	21.2	1.71	2.68	C	A-6(11)	CL
	6- 9		100.0	22.6	2.0	0.0	0.6	7.3	19.8	72.3	55.4	63.4	36.0	30.4	15.6	1.89	2.68	C	A-7-6(20)	CH
	9-24	24+	113.2	17.1	2.0	0.0	5.2	11.5	36.3	47.0	30.4	39.3	18.1	23.7	24.0	1.65	2.73	CSH	A-6(11)	CL
34	0- 1		104.0	16.3	15.5	0.0	3.7	11.5	57.5	27.3	16.2	30.7	8.1	24.3	27.9	1.51	2.61	SICL	A-4(8)	ML-CL
	1- 5	05+	109.2	17.0	7.0	0.0	2.6	12.4	52.0	33.0	22.0	32.4	11.1	23.1	23.9	1.63	2.67	C	A-6(8)	CL
35	0- 6	06+	109.1	16.5	10.0	0.0	1.9	13.1	51.0	34.0	21.0	37.0	16.0	23.7	23.6	1.63	2.66	C	A-6(10)	CL
36	0- 1		104.0	16.3	15.5	0.0	3.7	11.5	57.5	27.3	16.2	30.7	8.1	24.3	27.9	1.51	2.61	SICL	A-4(8)	ML-CL
	1- 3	03+	109.2	17.0	7.0	0.0	2.6	12.4	52.0	33.0	22.0	32.4	11.1	23.1	23.9	1.63	2.67	C	A-6(8)	CL
37	0- 1		104.0	16.3	15.5	0.0	3.7	11.5	57.5	27.3	16.2	30.7	8.1	24.3	27.9	1.51	2.61	SICL	A-4(8)	ML-CL
	1- 5		109.2	17.0	7.0	0.0	2.6	12.4	52.0	33.0	22.0	32.4	11.1	23.1	23.9	1.63	2.67	C	A-6(8)	CL
	5- 7		111.5	19.9	4.5	0.0	3.3	12.7	40.0	44.0	31.0	37.4	18.1	20.8	18.7	1.78	2.67	C	A-6(11)	CL
	7- 9	09+	113.7	17.3	2.5	0.0	5.4	10.4	34.7	49.5	28.7	40.2	18.9	22.8	16.4	1.88	2.72	SH	A-7-6(12)	CL
38	0- 1		104.0	16.3	15.5	0.0	3.7	11.5	57.5	27.3	16.2	30.7	8.1	24.3	27.9	1.51	2.61	SICL	A-4(8)	ML-CL
	1- 5		109.2	17.0	7.0	0.0	2.6	12.4	52.0	33.0	22.0	32.4	11.1	23.1	23.9	1.63	2.67	C	A-6(8)	CL
	5- 7	07+	111.5	19.9	4.5	0.0	3.3	12.7	40.0	44.0	31.0	37.4	18.1	20.8	18.7	1.78	2.67	C	A-6(11)	CL
39	0- 7	07+	107.1	16.4	15.5	0.0	0.8	19.2	52.0	28.0	16.0	29.5	8.4	23.7	27.5	1.53	2.64	SICL	A-4(8)	ML-CL
40	0- 1		106.4	16.4	9.5	0.0	1.0	15.0	56.0	28.0	17.0	32.3	10.0	23.4	26.5	1.35	2.63	SICL	A-6(8)	ML-CL
	2- 3		114.6	14.2	5.5	0.0	1.0	23.8	43.5	31.7	20.8	29.9	10.9	21.4	22.2	1.68	2.68	C	A-6(8)	CL
	3- 4	04+	108.1	18.0	4.0	0.0	2.7	37.7	25.7	33.7	23.8	33.9	13.5	22.0	24.5	1.63	2.71	C	A-6(6)	CL

COUNTY- HOPKINS

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FMF	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
41	0- 1		106.4	16.4	9.5	0.0	1.0	15.0	56.0	28.0	17.0	32.3	10.0	23.4	26.5	1.35	2.63	SICL	A-6(8)	ML-CL
	2- 3		114.6	14.2	5.5	0.0	1.0	23.8	43.5	31.7	20.8	29.9	10.9	21.4	22.2	1.68	2.68	C	A-6(8)	CL
	3- 4		108.1	18.0	4.0	0.0	2.7	37.7	25.7	33.7	23.8	33.9	13.5	22.0	24.5	1.63	2.71	C	A-6(6)	CL
	4-11	11+	113.7	17.3	2.5	0.0	5.4	10.4	34.7	49.5	28.7	40.2	18.9	22.8	16.4	1.88	2.72	SH	A-7-6(12)	CL
42	0- 3		114.6	14.2	5.5	0.0	1.0	23.8	43.5	31.7	20.8	29.9	10.9	21.4	22.2	1.68	2.68	C	A-6(8)	CL
	3- 4		108.1	18.0	4.0	0.0	2.7	37.7	25.7	33.7	23.8	33.9	13.5	22.0	24.5	1.63	2.71	C	A-6(6)	CL
	4-13	13+	113.7	17.3	2.5	0.0	5.4	10.4	34.7	49.5	28.7	40.2	18.9	22.8	16.4	1.88	2.72	SH	A-7-6(12)	CL
43	0- 1		106.4	16.4	9.5	0.0	1.0	15.0	56.0	28.0	17.0	32.3	10.0	23.4	26.5	1.35	2.63	SICL	A-6(8)	ML-CL
	1- 7		114.6	14.2	5.5	0.0	1.0	23.8	43.5	31.7	20.8	29.9	10.9	21.4	22.2	1.68	2.68	C	A-6(8)	CL
	7- 8		108.1	18.0	4.0	0.0	2.7	37.7	25.7	33.7	23.8	33.9	13.5	22.0	24.5	1.63	2.71	C	A-6(6)	CL
	8-10	10+	121.5	13.0	3.5	0.0	3.7	17.1	38.6	40.6	19.8	33.3	12.9	22.8	15.5	1.91	2.71	SH	A-6(9)	CL
44	0- 1		106.4	16.4	9.5	0.0	1.0	15.0	56.0	28.0	17.0	32.3	10.0	23.4	26.5	1.35	2.63	SICL	A-6(8)	ML-CL
	1- 8		114.6	14.2	5.5	0.0	1.0	23.8	43.5	31.7	20.8	29.9	10.9	21.4	22.2	1.68	2.68	C	A-6(8)	CL
	8- 9		108.1	18.0	4.0	0.0	2.7	37.7	25.7	33.7	23.8	33.9	13.5	22.0	24.5	1.63	2.71	C	A-6(6)	CL
	9-25		121.5	13.0	3.5	0.0	3.7	17.1	38.6	40.6	19.8	33.3	12.9	22.8	15.5	1.91	2.71	SH	A-6(9)	CL
	25-30	30+	119.7	13.1	8.0	0.0	3.2	48.8	21.0	27.0	15.0	22.0	15.6	17.3	18.7	1.78	2.67	SS	A-4(3)	SC
45	0- 1		114.6	14.2	5.5	0.0	1.0	23.8	43.5	31.7	20.8	29.9	10.9	21.4	22.2	1.68	2.68	C	A-6(8)	CL
	1- 2		108.1	18.0	4.0	0.0	2.7	37.7	25.7	33.7	23.8	33.9	13.5	22.0	24.5	1.63	2.71	C	A-6(6)	CL
	2-22	22+	119.7	13.1	8.0	0.0	3.2	48.8	21.0	27.0	15.0	22.0	15.6	17.3	18.7	1.78	2.67	SS	A-4(3)	SC
46	0- 3	03+	113.8	16.8	0.0	0.0	0.8	11.2	51.0	37.0	25.0	34.0	13.0	23.2	22.3	1.67	2.66	C	A-6(9)	CL
47	0- 1		89.9	23.0	5.5	0.0	0.4	13.7	66.7	19.2	8.1	46.2	14.7	34.0	38.5	1.30	2.60	SIL	A-7-5(11)	ML
	1- 6		113.8	16.8	0.0	0.0	0.8	11.2	51.0	37.0	25.0	34.0	13.0	23.2	22.3	1.67	2.66	C	A-6(9)	CL
	6- 7		113.8	16.8	0.0	0.0	3.2	33.4	26.8	36.6	24.8	32.0	15.2	19.1	19.7	1.76	2.70	C	A-6(8)	CL
	7-22	22+	119.7	13.1	8.0	0.0	3.2	48.8	21.0	27.0	15.0	22.0	15.6	17.3	18.7	1.78	2.67	SS	A-4(3)	SC
48	0- 6	06-	107.1	16.4	15.5	0.0	0.8	19.2	52.0	28.0	16.0	29.5	8.4	23.7	27.5	1.53	2.64	SICL	A-4(8)	ML-CL
49	0- 1		89.9	23.0	5.5	0.0	0.4	13.7	66.7	19.2	8.1	46.2	14.7	34.0	38.5	1.30	2.60	SIL	A-7-5(11)	ML
	1- 4		113.8	16.8	0.0	0.0	0.8	11.2	51.0	37.0	25.0	34.0	13.0	23.2	22.3	1.67	2.66	C	A-6(9)	CL
	4- 5		113.8	16.8	0.0	0.0	3.2	33.4	26.8	36.6	24.8	32.0	15.2	19.1	19.7	1.76	2.70	C	A-6(8)	CL
	5-15	15+	119.7	13.1	8.0	0.0	3.2	48.8	21.0	27.0	15.0	22.0	15.6	17.3	18.7	1.78	2.67	SS	A-4(3)	SC
50	0- 2		113.8	16.8	0.0	0.0	0.8	11.2	51.0	37.0	25.0	34.0	13.0	23.2	22.3	1.67	2.66	C	A-6(9)	CL
	2- 3		113.8	16.8	0.0	0.0	3.2	33.4	26.8	36.6	24.8	32.0	15.2	19.1	19.7	1.76	2.70	C	A-6(8)	CL
	3-11	11+	119.7	13.1	8.0	0.0	3.2	48.8	21.0	27.0	15.0	22.0	15.6	17.3	18.7	1.78	2.67	SS	A-4(3)	SC
51	0- 1		89.9	23.0	5.5	0.0	0.4	13.7	66.7	19.2	8.1	46.2	14.7	34.0	38.5	1.30	2.60	SIL	A-7-5(11)	ML
	1- 4		113.8	16.8	0.0	0.0	0.8	11.2	51.0	37.0	25.0	34.0	13.0	23.2	22.3	1.67	2.66	C	A-6(9)	CL
	4- 5		113.8	16.8	0.0	0.0	3.2	33.4	26.8	36.6	24.8	32.0	15.2	19.1	19.7	1.76	2.70	C	A-6(8)	CL
	5-20	20+	119.7	13.1	8.0	0.0	3.2	48.8	21.0	27.0	15.0	22.0	15.6	17.3	18.7	1.78	2.67	SS	A-4(3)	SC
52	0- 6	06	107.7	19.3	1.7	0.0	0.3	7.5	37.8	54.4	24.0	41.8	16.6	28.0	19.1	1.78	2.23	C	A-7-6(11)	ML-CL
53	0- 6		107.7	19.3	1.7	0.0	0.3	7.5	37.8	54.4	24.0	41.8	16.6	28.0	19.1	1.78	2.23	C	A-7-6(11)	ML-CL
	6-15	15+	104.3	19.1	1.5	0.0	0.7	6.5	17.8	75.0	38.2	56.5	28.6	30.5	19.8	1.79	2.77	SHC	A-7-6(18)	MH-CH
54	0-14	14+	107.7	19.3	1.7	0.0	0.3	7.5	37.8	54.4	24.0	41.8	16.6	28.0	19.1	1.78	2.23	C	A-7-6(11)	ML-CL
55	0-14		107.7	19.3	1.7	0.0	0.3	7.5	37.8	54.4	24.0	41.8	16.6	28.0	19.1	1.78	2.23	C	A-7-6(11)	ML-CL
	14-19	19	104.3	19.1	1.5	0.0	0.7	6.5	17.8	75.0	38.2	56.5	28.6	30.5	19.8	1.79	2.77	SHC	A-7-6(18)	MH-CH
56	0-10	10+	107.7	19.3	1.7	0.0	0.3	7.5	37.8	54.4	24.0	41.8	16.6	28.0	19.1	1.78	2.23	C	A-7-6(11)	ML-CL
57	0- 5		107.7	19.3	1.7	0.0	0.3	7.5	37.8	54.4	24.0	41.8	16.6	28.0	19.1	1.78	2.23	C	A-7-6(11)	ML-CL
	5- 9	09+	104.3	19.1	1.5	0.0	0.7	6.5	17.8	75.0	38.2	56.5	28.6	30.5	19.8	1.79	2.77	SHC	A-7-6(18)	MH-CH
58	0- 5	05+	107.7	19.3	1.7	0.0	0.3	7.5	37.8	54.4	24.0	41.8	16.6	28.0	19.1	1.78	2.23	C	A-7-6(11)	ML-CL
59	0- 5		0.0	0.0	0.0	0.0	0.0	28.4	53.2	18.4	10.4	26.5	4.9	23.7	26.2	1.56	2.64	SIL	A-4(7)	ML-CL
	5-18	18	116.7	13.0	14.0	0.0	0.5	52.2	25.2	22.3	10.4	20.6	4.9	19.1	23.9	1.62	2.64	SCL	A-4(3)	SM-SC
60	0- 6	06+	0.0	0.0	0.0	0.0	0.0	28.4	53.2	18.4	10.4	26.5	4.9	23.7	26.2	1.56	2.64	SIL	A-4(7)	ML-CL
61	0- 7		112.2	14.5	5.1	0.0	0.0	28.4	50.6	21.0	9.8	28.0	6.6	23.5	24.3	1.59	2.62	SICL	A-4(7)	ML-CL
	7-10		116.7	13.0	14.0	0.0	0.5	52.2	25.2	22.3	10.4	20.6	4.9	19.1	23.9	1.62	2.64	SCL	A-4(3)	SM-SC
	10-15	15+	120.9	12.0	14.0	0.0	0.0	62.4	18.8	18.8	8.4	19.0	2.7	18.1	17.7	1.74	2.61	SL	A-4(1)	SM
62	0- 5	05	120.9	12.0	14.0	0.0	0.0	62.4	18.8	18.8	8.4	19.0	2.7	18.1	17.7	1.74	2.61	SL	A-4(1)	SM
63	0- 8	08+	102.3	20.0	6.9	0.0	0.0	10.4	56.4	33.2	18.8	30.2	14.6	24.6	35.8	1.36	2.65	SIC	A-6(10)	CL
64	0- 6		102.3	20.0	6.9	0.0	0.0	10.4	56.4	33.2	18.8	30.2	14.6	24.6	35.8	1.36	2.65	SIC	A-6(10)	CL
	6- 8	08	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
65	0- 8	08+	102.3	20.0	6.9	0.0	0.0	10.4	56.4	33.2	18.8	30.2	14.6	24.6	35.8	1.36	2.65	SIC	A-6(10)	CL
66	0- 5		102.3	20.0	6.9	0.0	0.0	10.4	56.4	33.2	18.8	30.2	14.6	24.6	35.8	1.36	2.65	SIC	A-6(10)	CL
	5- 7		120.9	12.0	14.0	0.0	0.0	62.4	18.8	18.8	8.4	19.0	2.7	18.1	17.7	1.74	2.61	SL	A-4(1)	SM
	7-16	16+	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
67	0- 2		102.3	20.0	6.9	0.0	0.0	10.4	56.4	33.2	18.8	30.2	14.6	24.6	35.8	1.36	2.65	SIC	A-6(10)	CL
	2- 4	04+	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
68	0- 2		102.3	20.0	6.9	0.0	0.0	10.4	56.4	33.2	18.8	30.2	14.6	24.6	35.8	1.36	2.65	SIC	A-6(10)	CL
	2- 4	04	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
69	0- 6		102.3	20.0	6.9	0.0	0.0	10.4	56.4	33.2	18.8	30.2	14.6	24.6	35.8	1.36	2.65	SIC	A-6(10)	CL
	6-12	12+	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
70	0- 6		102.3	20.0	6.9	0.0	0.0	10.4	56.4	33.2	18.8	30.2	14.6	24.6	35.8	1.36	2.65	SIC	A-6(10)	CL
	6-10		106.2	18.1	2.7	0.0	0.5	13.9	41.4	38.2	24.6	37.3	14.8	26.1	22.3	1.67	2.66	C	A-6(10)	CL
	10-20	20+	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
71	0- 4	04	106.2	18.1	2.7	0.0	0.5	13.9	41.4	38.2	24.6	37.3	14.8	26.1	22.3	1.67	2.66	C	A-6(10)	CL
72	0- 4		106.2	18.1	2.7	0.0	0.5	13.9	41.4	38.2	24.6	37.3	14.8	26.1	22.3	1.67	2.66	C	A-6(10)	CL
	4-10	10	114.5	13.8	2.2	0.0	0.0	29.2	37.2	33.6	17.6	30.6	7.8	25.2	20.4	1.75	2.72	C	A-4(7)	ML-CL
73	0- 3		121.9	13.0	9.8	0.0	0.0	60.8	21.0	18.2	9.2	20.2	3.3	18.8	19.3	1.75	2.64	SL	A-4(1)	SM
	3- 5	05	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
74	0- 6		114.5	13.8	2.2	0.0	0.0	29.2	37.2	33.6	17.6	30.6	7.8	25.2	20.4	1.75	2.72	C	A-4(7)	ML-CL
	6- 9	09	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
75	0- 2		106.2	18.1	2.7	0.0	0.5	13.9	41.4	38.2	24.6	37.3	14.8	26.1	22.3	1.67	2.66	C	A-6(10)	CL
	2- 8		114.5	13.8	2.2	0.0	0.0	29.2	37.2	33.6	17.6	30.6	7.8	25.2	20.4	1.75	2.72	C	A-4(7)	ML-CL
	8-10	10	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
76	0- 3	03	114.5	13.8	2.2	0.0	0.0	29.2	37.2	33.6	17.6	30.6	7.8	25.2	20.4	1.75	2.72	C	A-4(7)	ML-CL
77	0- 9	09+	106.2	18.1	2.7	0.0	0.5	13.9	41.4	38.2	24.6	37.3	14.8	26.1	22.3	1.67	2.66	C	A-6(10)	CL
78	0-16		106.2	18.1	2.7	0.0	0.5	13.9	41.4	38.2	24.6	37.3	14.8	26.1	22.3	1.67	2.66	C	A-6(10)	CL
	16-20	20+	121.9	13.0	9.8	0.0	0.0	60.8	21.0	18.2	9.2	20.2	3.3	18.8	19.3	1.75	2.64	SL	A-4(1)	SM
79	0- 7	07+	121.9	13.0	9.8	0.0	0.0	60.8	21.0	18.2	9.2	20.2	3.3	18.8	19.3	1.75	2.64	SL	A-4(1)	SM
80	0- 9		106.2	18.1	2.7	0.0	0.5	13.9	41.4	38.2	24.6	37.3	14.8	26.1	22.3	1.67	2.66	C	A-6(10)	CL
	9-19	19+	121.9	13.0	9.8	0.0	0.0	60.8	21.0	18.2	9.2	20.2	3.3	18.8	19.3	1.75	2.64	SL	A-4(1)	SM
81	0- 4		106.2	18.1	2.7	0.0	0.5	13.9	41.4	38.2	24.6	37.3	14.8	26.1	22.3	1.67	2.66	C	A-6(10)	CL
	4- 8	08	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
82	0- 3	03	106.2	18.1	2.7	0.0	0.5	13.9	41.4	38.2	24.6	37.3	14.8	26.1	22.3	1.67	2.66	C	A-6(10)	CL
83	0- 4		106.2	18.1	2.7	0.0	0.5	13.9	41.4	38.2	24.6	37.3	14.8	26.1	22.3	1.67	2.66	C	A-6(10)	CL
	4- 6	06+	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL

COUNTY- HOPKINS

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FMF	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
84	0- 3		106.2	18.1	2.7	0.0	0.5	13.9	41.4	38.2	24.6	37.3	14.8	26.1	22.3	1.67	2.66	C	A-6(10)	CL
	3-21		110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
	21-36	36	121.9	13.0	9.8	0.0	0.0	60.8	21.0	18.2	9.2	20.2	3.3	18.8	19.3	1.75	2.64	SL	A-4(1)	SM
85	0- 5		106.2	18.1	2.7	0.0	0.5	13.9	41.4	38.2	24.6	37.3	14.8	26.1	22.3	1.67	2.66	C	A-6(10)	CL
	5- 7	07+	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
86	0- 6		106.2	18.1	2.7	0.0	0.5	13.9	41.4	38.2	24.6	37.3	14.8	26.1	22.3	1.67	2.66	C	A-6(10)	CL
	6-20		110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
	20-42	42	121.9	13.0	9.8	0.0	0.0	60.8	21.0	18.2	9.2	20.2	3.3	18.8	19.3	1.75	2.64	SL	A-4(1)	SM
87	0- 7	07+	106.2	18.1	2.7	0.0	0.5	13.9	41.4	38.2	24.6	37.3	14.8	26.1	22.3	1.67	2.66	C	A-6(10)	CL
88	0- 8	08	110.9	16.2	5.8	0.0	0.4	20.0	50.5	29.1	13.2	33.3	13.1	22.5	22.4	1.67	2.67	SICL	A-6(9)	CL
89	0- 9	09+	110.9	16.2	5.8	0.0	0.4	20.0	50.5	29.1	13.2	33.3	13.1	22.5	22.4	1.67	2.67	SICL	A-6(9)	CL
90	0-10	10	0.0	0.0	0.0	0.0	0.5	16.5	54.0	29.0	14.0	24.7	4.4	22.0	25.5	1.59	2.69	SICL	A-4(8)	ML-CL
91	0- 5		0.0	0.0	0.0	0.0	0.5	16.5	54.0	29.0	14.0	24.7	4.4	22.0	25.5	1.59	2.69	SICL	A-4(8)	ML-CL
	5-10	10	110.9	16.2	5.8	0.0	0.4	20.0	50.5	29.1	13.2	33.3	13.1	22.5	22.4	1.67	2.67	SICL	A-6(9)	CL
92	0- 6	06	0.0	0.0	0.0	0.0	0.5	16.5	54.0	29.0	14.0	24.7	4.4	22.0	25.5	1.59	2.69	SICL	A-4(8)	ML-CL
93	0- 6	06+	0.0	0.0	0.0	0.0	0.5	16.5	54.0	29.0	14.0	24.7	4.4	22.0	25.5	1.59	2.69	SICL	A-4(8)	ML-CL
94	0-10		0.0	0.0	0.0	0.0	0.5	16.5	54.0	29.0	14.0	24.7	4.4	22.0	25.5	1.59	2.69	SICL	A-4(8)	ML-CL
	10-13		121.9	13.0	9.8	0.0	0.0	60.8	21.0	18.2	9.2	20.2	3.3	18.8	19.3	1.75	2.64	SL	A-4(1)	SM
	13-23	23	110.9	16.2	5.8	0.0	0.4	20.0	50.5	29.1	13.2	33.3	13.1	22.5	22.4	1.67	2.67	SICL	A-6(9)	CL
95	0-10		0.0	0.0	0.0	0.0	0.5	16.5	54.0	29.0	14.0	24.7	4.4	22.0	25.5	1.59	2.69	SICL	A-4(8)	ML-CL
	10-11	11+	121.9	13.0	9.8	0.0	0.0	60.8	21.0	18.2	9.2	20.2	3.3	18.8	19.3	1.75	2.64	SL	A-4(1)	SM
96	0- 6	06	113.4	15.5	4.3	0.0	0.3	39.1	31.6	29.0	15.4	27.0	7.6	21.9	21.3	1.73	2.74	L	A-4(5)	CL
97	0- 7	07	113.4	15.5	4.3	0.0	0.3	39.1	31.6	29.0	15.4	2 .0	7.6	21.9	21.3	1.73	2.74	L	A-4(5)	CL
98	0- 7	07	0.0	0.0	0.0	0.0	0.5	16.5	54.0	29.0	14.0	24.7	4.4	22.0	25.5	1.59	2.69	SICL	A-4(8)	ML-CL
99	0- 6		113.4	15.5	4.3	0.0	0.3	39.1	31.6	29.0	15.4	27.0	7.6	21.9	21.3	1.73	2.74	L	A-4(5)	CL
	6-14	14	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
100	0- 6	06+	0.0	0.0	0.0	0.0	0.5	16.5	54.0	29.0	14.0	24.7	4.4	22.0	25.5	1.59	2.69	SICL	A-4(8)	ML-CL
101	0- 5		0.0	0.0	0.0	0.0	0.5	16.5	54.0	29.0	14.0	24.7	4.4	22.0	25.5	1.59	2.69	SICL	A-4(8)	ML-CL
	5-11	11+	116.9	13.6	0.0	0.0	0.8	35.6	36.4	27.2	18.2	24.2	10.1	16.5	17.4	1.82	2.66	CL	A-6(6)	CL
102	0- 5		0.0	0.0	0.0	0.0	0.5	16.5	54.0	29.0	14.0	24.7	4.4	22.0	25.5	1.59	2.69	SICL	A-4(8)	ML-CL
	5-30	30+	113.4	15.5	4.3	0.0	0.3	39.1	31.6	29.0	15.4	27.0	7.6	21.9	21.3	1.73	2.74	L	A-4(5)	CL
103	0- 5		0.0	0.0	0.0	0.0	0.0	5.6	57.8	36.6	18.2	36.2	10.8	28.6	34.4	1.39	2.66	SIC	A-6(8)	ML-CL
	5-20	20+	116.9	13.6	0.0	0.0	0.8	35.6	36.4	27.2	18.2	24.2	10.1	16.5	17.4	1.82	2.66	CL	A-6(6)	CL
104	0- 5	05+	0.0	0.0	0.0	0.0	0.0	5.6	57.8	36.6	18.2	36.2	10.8	28.6	34.4	1.39	2.66	SIC	A-6(8)	ML-CL
105	0- 7	07+	113.4	15.5	4.3	0.0	0.3	39.1	31.6	29.0	15.4	27.0	7.6	21.9	21.3	1.73	2.74	L	A-4(5)	CL
106	0- 6		113.4	15.5	4.3	0.0	0.3	39.1	31.6	29.0	15.4	27.0	7.6	21.9	21.3	1.73	2.74	L	A-4(5)	CL
	6- 9		109.4	15.8	4.0	0.0	0.0	19.4	54.0	26.6	10.2	29.9	10.1	22.8	31.4	1.44	2.63	SICL	A-6(8)	CL
	9-14	14	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
107	0- 5	05	109.8	16.8	6.6	0.0	0.0	24.4	49.9	25.7	15.2	25.2	7.6	20.0	27.0	1.55	2.67	CL	A-6(8)	CL
108	0- 5		113.4	15.5	4.3	0.0	0.3	39.1	31.6	29.0	15.4	27.0	7.6	21.9	21.3	1.73	2.74	L	A-4(5)	CL
	5- 9		109.8	16.8	6.6	0.0	0.0	24.4	49.9	25.7	15.2	25.2	7.6	20.0	27.0	1.55	2.67	CL	A-6(8)	CL
	9-11	11	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
109	0- 9	09+	0.0	0.0	0.0	0.0	0.0	27.4	34.8	17.8	10.6	23.6	5.3	22.6	22.5	1.66	2.64	SIL	A-4(8)	ML-CL
110	0- 6		0.0	0.0	0.0	0.0	0.0	27.4	34.8	17.8	10.6	23.6	5.3	22.6	22.5	1.66	2.64	SIL	A-4(8)	ML-CL
	6-16	16+	109.4	15.8	4.0	0.0	0.0	19.4	54.0	26.6	10.2	29.9	10.1	22.8	31.4	1.44	2.63	SICL	A-6(8)	CL
111	0- 8	08+	0.0	0.0	0.0	0.0	0.0	27.4	34.8	17.8	10.6	23.6	5.3	22.6	22.5	1.66	2.64	SIL	A-4(8)	ML-CL
112	0- 5	05+	109.4	15.8	4.0	0.0	0.0	19.4	54.0	26.6	10.2	29.9	10.1	22.8	31.4	1.44	2.63	SICL	A-6(8)	CL
113	0-10		109.4	15.8	4.0	0.0	0.0	19.4	54.0	26.6	10.2	29.9	10.1	22.8	31.4	1.44	2.63	SICL	A-6(8)	CL
	10-12	12+	109.8	16.8	6.6	0.0	0.0	24.4	49.9	25.7	15.2	25.2	7.6	20.0	27.0	1.55	2.67	CL	A-6(8)	CL
114	0-17	17	109.4	15.8	4.0	0.0	0.0	19.4	54.0	26.6	10.2	29.9	10.1	22.8	31.4	1.44	2.63	SICL	A-6(8)	CL
115	0- 5		109.4	15.8	4.0	0.0	0.0	19.4	54.0	26.6	10.2	29.9	10.1	22.8	31.4	1.44	2.63	SICL	A-6(8)	CL
	5- 8	08+	113.4	15.5	4.3	0.0	0.3	39.1	31.6	29.0	15.4	27.0	7.6	21.9	21.3	1.73	2.74	L	A-4(5)	CL
116	0- 5		109.4	15.8	4.0	0.0	0.0	19.4	54.0	26.6	10.2	29.9	10.1	22.8	31.4	1.44	2.63	SICL	A-6(8)	CL
	5-12	12	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
117	0- 7	07+	109.4	15.8	4.0	0.0	0.0	19.4	54.0	26.6	10.2	29.9	10.1	22.8	31.4	1.44	2.63	SICL	A-6(8)	CL
118	0- 8		109.8	16.8	6.6	0.0	0.0	24.4	49.9	25.7	15.2	25.2	7.6	20.0	27.0	1.55	2.67	CL	A-6(8)	CL
	8- 9	09	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
119	0- 8	08+	109.8	16.8	6.6	0.0	0.0	24.4	49.9	25.7	15.2	25.2	7.6	20.0	27.0	1.55	2.67	CL	A-6(8)	CL
120	0- 8		109.8	16.8	6.6	0.0	0.0	24.4	49.9	25.7	15.2	25.2	7.6	20.0	27.0	1.55	2.67	CL	A-6(8)	CL
	8-14	14	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
121	0- 7		109.8	16.8	6.6	0.0	0.0	24.4	49.9	25.7	15.2	25.2	7.6	20.0	27.0	1.55	2.67	CL	A-6(8)	CL
	7- 9	09+	110.8	16.5	3.9	0.0	1.4	31.6	38.2	29.8	14.2	33.3	10.1	26.0	22.9	1.66	2.68	CL	A-6(7)	ML-CL
122	0- 6	06	109.8	16.8	6.6	0.0	0.0	24.4	49.9	25.7	15.2	25.2	7.6	20.0	27.0	1.55	2.67	CL	A-6(8)	CL
123	0- 9	09+	109.8	16.8	6.6	0.0	0.0	24.4	49.9	25.7	15.2	25.2	7.6	20.0	27.0	1.55	2.67	CL	A-6(8)	CL
124	0- 5	05	107.1	16.0	5.4	0.0	0.2	12.6	56.8	30.4	21.8	32.7	9.1	28.6	23.3	1.63	2.63	SIC	A-4(8)	ML-CL
125	0- 4	04+	107.1	16.0	5.4	0.0	0.2	12.6	56.8	30.4	21.8	32.7	9.1	28.6	23.3	1.63	2.63	SIC	A-4(8)	ML-CL
126	0- 6	06	107.1	16.0	5.4	0.0	0.2	12.6	56.8	30.4	21.8	32.7	9.1	28.6	23.3	1.63	2.63	SIC	A-4(8)	ML-CL
127	0- 5	05	107.1	16.0	5.4	0.0	0.2	12.6	56.8	30.4	21.8	32.7	9.1	28.6	23.3	1.63	2.63	SIC	A-4(8)	ML-CL
128	0- 7	07	107.1	16.0	5.4	0.0	0.2	12.6	56.8	30.4	21.8	32.7	9.1	28.6	23.3	1.63	2.63	SIC	A-4(8)	ML-CL
129	0- 8	08+	107.1	16.0	5.4	0.0	0.2	12.6	56.8	30.4	21.8	32.7	9.1	28.6	23.3	1.63	2.63	SIC	A-4(8)	ML-CL
130	0- 6	06	107.1	16.0	5.4	0.0	0.2	12.6	56.8	30.4	21.8	32.7	9.1	28.6	23.3	1.63	2.63	SIC	A-4(8)	ML-CL
131	0- 4	04+	107.1	16.0	5.4	0.0	0.2	12.6	56.8	30.4	21.8	32.7	9.1	28.6	23.3	1.63	2.63	SIC	A-4(8)	ML-CL
132	0- 7	07+	104.1	17.6	7.3	0.0	0.5	11.4	63.7	24.4	15.8	30.6	6.3	26.1	26.1	1.57	2.64	SICL	A-4(8)	ML-CL
133	0- 5	05	104.1	17.6	7.3	0.0	0.5	11.4	63.7	24.4	15.8	30.6	6.3	26.1	26.1	1.57	2.64	SICL	A-4(8)	ML-CL
134	0- 4	04+	104.1	17.6	7.3	0.0	0.5	11.4	63.7	24.4	15.8	30.6	6.3	26.1	26.1	1.57	2.64	SICL	A-4(8)	ML-CL
135	0- 5	05	104.1	17.6	7.3	0.0	0.5	11.4	63.7	24.4	15.8	30.6	6.3	26.1	26.1	1.57	2.64	SICL	A-4(8)	ML-CL
136	0- 6	06+	104.1	17.6	7.3	0.0	0.5	11.4	63.7	24.4	15.8	30.6	6.3	26.1	26.1	1.57	2.64	SICL	A-4(8)	ML-CL
137	0- 4		104.1	18.9	4.9	0.0	0.0	11.0	27.0	62.0	39.3	55.2	34.1	28.1	10.2	1.78	0.0	C	A-7-6(19)	CH
	4-13		108.5	16.4	11.0	0.0	0.0	17.0	50.0	33.0	21.8	32.5	14.6	24.6	14.7	1.86	0.0	SIC	A-6(10)	CL
	13-35	35	105.6	12.2	15.5	0.0	0.0	49.0	33.0	18.0	9.2	25.1	8.9	18.5	14.6	1.91	0.0	L	A-4(3)	CL
138	0- 5	05	108.1	18.0	12.5	0.0	0.0	26.0	49.0	25.0	19.7	27.7	10.7	22.3	15.3	1.84	0.0	CL	A-6(8)	CL
139	0- 4	04	106.3	18.8	11.5	0.0	0.0	19.0	50.0	31.0	18.2	33.9	15.1	23.1	14.2	1.81	0.0	SIC	A-6(9)	CL
140	0- 4	04	106.9	16.8	12.0	0.0	0.0	8.0	62.0	30.0	20.0	33.4	14.0	29.8	15.0	1.84	0.0	SIC	A-6(10)	CL
141	0- 5		105.6	12.2	15.5	0.0	0.0	49.0	33.0	18.0	9.2	25.1	8.9	18.5	14.6	1.91	0.0	L	A-4(3)	CL
	5-10	10	106.9	16.8	12.0	0.0	0.0	8.0	62.0	30.0	20.0	33.4	14.0	29.8	15.0	1.84	0.0	SIC	A-6(10)	CL
142	0- 3	03	106.9	16.8	12.0	0.0	0.0	8.0	62.0	30.0	20.0	33.4	14.0	29.8	15.0	1.84	0.0	SIC	A-6(10)	CL
143	0- 6	06	105.6	12.2	15.5	0.0	0.0	49.0	33.0	18.0	9.2	25.1	8.9	18.5	14.6	1.91	0.0	L	A-4(3)	CL
144	0- 6	06	106.9	16.8	12.0	0.0	0.0	8.0	62.0	30.0	20.0	33.4	14.0	29.8	15.0	1.84	0.0	SIC	A-6(10)	CL
145	0- 2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SI	A	SW OR SP
	2- 9		0.0	0.0	0.0	0.0	1.5	21.3	38.0	38.4	25.7	30.2	12.2	0.0	17.1	1.86	2.69	C	A-6(8)	CL
	9-12	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SSI	A	SW OR SP

COUNTY- HOPKINS

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
146	0- 3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SI	A	SW OR SP
	3-14		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SSI	A	SW OR SP
	14-28	28	0.0	0.0	0.0	0.0	1.4	56.8	23.7	18.1	12.5	18.3	0.0	0.0	0.0	0.0	0.0	SI	A-2-7(4)	SM
147	0- 3	03	114.1	12.6	0.0	0.0	5.3	43.2	18.9	31.9	17.3	22.6	6.2	0.0	18.3	1.83	2.75	C	A-4(3)	ML-CL
148	0- 4		114.1	12.6	0.0	0.0	5.8	43.2	18.9	31.9	17.3	22.6	6.2	0.0	18.3	1.83	2.75	C	A-4(3)	ML-CL
	4- 8	08	105.1	19.4	0.0	0.0	11.6	20.0	28.5	37.8	24.3	40.8	16.8	0.0	17.6	1.84	2.70	C	A-7-6(11)	ML-CL
149	0- 3	03	114.1	12.6	0.0	0.0	5.8	43.2	18.9	31.9	17.3	22.6	6.2	0.0	18.3	1.83	2.75	C	A-4(3)	ML-CL
150	0- 5	05	116.6	14.1	0.0	0.0	1.8	55.0	9.3	17.8	8.1	34.8	13.5	0.0	18.1	1.79	2.71	C	A-2-4(0)	SC
151	0- 3		114.1	12.6	0.0	0.0	5.8	43.2	18.9	31.9	17.3	22.6	6.2	0.0	18.3	1.83	2.75	C	A-4(3)	ML-CL
	3- 7	07	116.6	14.1	0.0	0.0	1.8	55.0	9.3	17.8	8.1	34.8	13.5	0.0	18.1	1.79	2.71	C	A-2-4(0)	SC
152	0- 3		114.1	12.6	0.0	0.0	5.8	43.2	18.9	31.9	17.3	22.6	6.2	0.0	18.3	1.83	2.75	C	A-4(3)	ML-CL
	3- 8	08	105.1	19.4	0.0	0.0	11.6	20.0	28.5	37.8	24.3	40.8	16.8	0.0	17.6	1.84	2.70	C	A-7-6(11)	ML-CL
153	0- 5	05	110.7	13.6	0.0	0.0	3.4	34.9	19.3	25.9	12.8	24.7	9.0	0.0	19.5	1.73	2.70	SCL	A-4(2)	SC
154	0- 4		110.7	13.6	0.0	0.0	3.4	34.9	19.3	25.9	12.8	24.7	9.0	0.0	19.5	1.73	2.70	SCL	A-4(2)	SC
	4- 8	08	109.3	16.1	0.0	0.0	4.2	35.1	11.3	32.8	19.9	32.0	13.0	0.0	19.2	1.80	2.71	SC	A-6(2)	SC
155	0- 5	05	111.2	14.9	0.0	0.0	5.6	25.9	17.9	20.7	12.4	32.0	13.6	0.0	20.0	1.71	2.68	SCL	A-6(1)	SC
156	0-10	10	107.9	18.6	0.0	0.0	9.7	44.7	13.9	25.6	19.1	28.9	8.9	0.0	17.9	1.82	2.69	SC	A-4(1)	SC
157	0-10	10	107.9	18.6	0.0	0.0	9.7	44.7	13.9	25.6	19.1	28.9	8.9	0.0	17.9	1.82	2.69	SC	A-4(1)	SC
158	0- 2	02	118.2	13.5	0.0	0.0	9.5	15.6	44.7	30.8	21.2	25.6	5.6	0.0	14.5	1.87	2.63	C	A-4(8)	ML-CL
159	0- 3		118.2	13.5	0.0	0.0	9.5	15.6	44.7	30.8	21.2	25.6	5.6	0.0	14.5	1.87	2.63	C	A-4(8)	ML-CL
	3-10	10	108.7	11.5	0.0	0.0	6.2	25.8	49.3	24.9	17.3	32.2	2.5	0.0	20.3	1.69	2.71	SIL	A-4(6)	ML
160	0- 4		111.8	14.3	0.0	0.0	8.1	15.1	34.5	30.7	16.8	36.1	13.2	0.0	16.6	1.87	2.70	C	A-6(6)	ML-CL
	4- 6	06	108.7	11.5	0.0	0.0	6.2	25.8	49.3	24.9	17.3	32.2	2.5	0.0	20.3	1.69	2.71	SIL	A-4(6)	ML
161	0- 4		112.0	16.5	0.0	0.0	4.3	18.4	41.2	34.3	23.5	31.9	6.9	0.0	20.6	1.69	2.65	C	A-4(8)	ML-CL
	4-13	13+	108.7	22.9	0.0	0.0	5.8	17.0	31.9	42.0	31.9	40.2	22.1	0.0	16.2	1.87	2.68	C	A-7-6(13)	CL
162	0- 4		112.4	14.5	14.8	0.0	11.1	25.2	25.0	20.0	14.7	22.4	6.7	0.0	19.7	1.78	2.71	SCL	A-4(2)	SM-SC
	4-15	15+	109.4	16.0	0.0	0.0	0.4	20.6	50.8	28.2	17.6	32.0	14.4	0.0	20.6	1.69	2.63	SICL	A-6(8)	CL
163	0- 6		109.4	16.0	0.0	0.0	0.4	20.6	50.8	28.2	17.6	32.0	14.4	0.0	20.6	1.69	2.63	SICL	A-6(8)	CL
	6-11	11	110.0	18.7	2.6	0.0	2.5	39.7	21.0	32.6	21.1	30.2	8.7	0.0	19.0	1.81	2.75	C	A-4(4)	ML-CL
164	0-10	10	112.4	14.5	14.8	0.0	11.1	25.2	25.0	20.0	14.7	22.4	6.7	0.0	19.7	1.78	2.71	SCL	A-4(2)	SM-SC
165	0- 5		112.4	14.5	14.8	0.0	11.1	25.2	25.0	20.0	14.7	22.4	6.7	0.0	19.7	1.78	2.71	SCL	A-4(2)	SM-SC
	5-11	11	110.0	18.7	2.6	0.0	2.5	39.7	21.0	32.6	21.1	30.2	8.7	0.0	19.0	1.81	2.75	C	A-4(4)	ML-CL
166	0- 6		104.8	16.3	0.0	0.0	9.4	17.2	50.2	22.3	15.1	42.1	9.4	0.0	20.7	1.71	2.69	SICL	A-4(8)	ML
	6-11	11+	107.7	23.4	0.0	0.0	1.9	16.7	48.5	32.6	22.1	40.2	17.1	0.0	20.4	1.70	2.64	C	A-7-6(11)	CL
167	0- 4		113.1	17.4	5.9	0.0	5.8	37.1	8.7	34.5	19.6	36.1	15.1	0.0	20.3	1.70	2.66	SC	A-6(2)	SC
	4-12	12	107.7	23.4	0.0	0.0	1.9	16.7	48.5	32.6	22.1	40.2	17.1	0.0	20.4	1.70	2.64	C	A-7-6(11)	CL
168	0- 7	07	113.1	17.4	5.9	0.0	5.8	37.1	8.7	34.5	19.6	36.1	15.1	0.0	20.3	1.70	2.66	SC	A-6(2)	SC
169	0- 4		113.1	17.4	5.9	0.0	5.8	37.1	8.7	34.5	19.6	36.1	15.1	0.0	20.3	1.70	2.66	SC	A-6(2)	SC
	4- 9	09	104.8	16.3	0.0	0.0	9.4	17.2	50.2	22.3	15.1	42.1	9.4	0.0	20.7	1.71	2.69	SICL	A-4(8)	ML
170	0- 3	03	113.1	17.4	5.9	0.0	5.8	37.1	8.7	34.5	19.6	36.1	15.1	0.0	20.3	1.70	2.66	SC	A-6(2)	SC
171	0- 7	07	104.7	16.9	0.0	0.0	1.0	11.0	57.5	30.5	17.8	33.0	12.0	0.0	20.7	1.69	2.67	SIC	A-6(9)	CL
172	0- 8		104.7	16.9	0.0	0.0	1.0	11.0	57.5	30.5	17.8	33.0	12.0	0.0	20.7	1.69	2.67	SIC	A-6(9)	CL
	8-15	15+	112.7	14.9	0.0	0.0	4.1	19.3	38.4	36.3	22.6	35.0	15.0	0.0	16.9	1.85	2.72	C	A-6(8)	CL
173	0- 5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SICL	A	SW OR SP
	5-10	10	103.5	21.0	0.0	0.0	1.5	24.9	42.4	31.2	19.8	35.1	16.9	0.0	20.6	1.68	2.68	C	A-6(8)	CL
174	0- 4	04	119.4	11.5	13.8	0.0	1.6	68.3	11.2	15.2	7.3	0.0	0.0	0.0	0.0	0.0	2.67	SL	A-2-4(0)	SM
175	0- 4	04	119.4	11.5	13.8	0.0	1.6	68.3	11.2	15.2	7.3	0.0	0.0	0.0	0.0	0.0	2.67	SL	A-2-4(0)	SM
176	0- 4		108.2	19.8	6.9	0.0	3.7	9.7	56.0	30.1	24.6	35.5	12.0	0.0	20.8	1.71	2.67	SIC	A-6(9)	ML-CL
	4- 8	08	113.0	16.6	7.2	0.0	3.4	16.7	30.1	49.8	32.3	37.0	13.0	0.0	20.1	1.72	2.69	C	A-6(8)	ML-CL
177	0- 3	03	112.4	15.1	6.3	0.0	15.8	34.0	14.5	30.5	20.8	28.2	3.4	0.0	19.5	1.77	2.70	SC	A-4(1)	SM
178	0- 4	04	113.7	15.8	16.5	0.0	12.6	34.8	12.4	33.4	22.3	32.9	5.5	0.0	19.2	1.79	2.70	SC	A-4(1)	SM
179	0- 8	08+	110.9	19.7	5.5	0.0	3.4	16.6	30.1	49.9	32.3	37.5	13.2	0.0	15.9	1.86	2.66	C	A-6(8)	ML-CL
180	0-10	10	112.4	15.2	14.9	0.0	3.2	39.0	24.0	25.2	15.1	28.9	10.0	0.0	17.8	1.76	2.69	SCL	A-4(3)	SC
181	0- 6	06	106.1	19.1	13.5	0.0	16.7	34.5	13.3	33.4	20.2	31.8	9.5	0.0	19.3	1.79	2.71	C	A-4(2)	SM-SC
182	0-10	10	113.9	12.7	0.0	0.0	3.3	40.3	30.9	22.3	12.6	24.3	4.1	0.0	16.5	1.86	2.70	CL	A-4(4)	ML-CL
183	0- 8	08	109.8	15.0	0.0	0.0	5.7	28.5	30.5	32.5	24.6	27.1	17.7	0.0	19.3	1.81	2.71	C	A-6(6)	CL
184	0- 6	06	103.0	21.0	3.2	0.0	3.6	11.4	36.6	46.4	28.9	42.4	22.4	0.0	17.2	1.86	2.69	C	A-7-6(13)	CL
185	0- 5		113.9	12.7	0.0	0.0	3.3	40.3	30.9	22.3	12.6	24.3	4.1	0.0	16.5	1.86	2.70	CL	A-4(4)	ML-CL
	5-11		109.8	15.0	0.0	0.0	5.7	28.5	30.5	32.5	24.6	27.1	17.7	0.0	19.3	1.81	2.71	C	A-6(6)	CL
	11-16	16	103.0	21.0	3.2	0.0	3.6	11.4	36.6	46.4	28.9	42.4	22.4	0.0	17.2	1.86	2.69	C	A-7-6(13)	CL
186	0- 5	05	110.1	16.5	5.7	0.0	5.5	18.0	35.2	39.2	20.6	37.1	15.3	0.0	17.9	1.85	2.69	C	A-6(10)	CL
187	0- 9	09	104.3	24.7	0.0	0.0	5.2	23.5	27.1	41.3	28.4	32.4	10.8	0.0	18.6	1.81	2.71	C	A-6(7)	ML-CL
188	0- 5	05	109.8	14.7	5.6	0.0	1.6	30.6	25.8	27.7	19.7	32.3	12.2	0.0	19.3	1.84	2.72	CL	A-6(4)	CL
189	0- 8	08	103.7	21.1	4.9	0.0	3.2	19.9	42.2	33.5	23.5	30.3	11.0	0.0	20.4	1.69	2.65	C	A-6(8)	CL
190	0- 7	07	101.7	26.1	0.0	0.0	1.0	12.8	42.7	43.5	31.9	41.0	18.6	0.0	19.1	1.70	2.67	C	A-7-6(11)	CL
191	0- 4		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SI	A	SW OR SP
	4- 7		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SICL	A	SW OR SP
	7-19	19	118.6	13.0	0.0	0.0	1.0	32.3	35.6	31.1	22.6	75.1	56.2	0.0	20.6	1.68	2.65	C	A-7-6(17)	CH
192	0- 2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SI	A	SW OR SP
	2-12	12	109.8	11.6	0.0	0.0	1.8	15.4	50.1	30.9	19.3	29.4	5.0	0.0	20.7	1.69	2.67	C	A-4(8)	ML-CL
193	0- 3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SI	A	SW OR SP
	3- 8		103.5	22.1	0.0	0.0	6.0	16.0	37.9	34.2	23.5	29.9	11.7	0.0	22.2	1.68	2.69	C	A-6(7)	CL
	8-12	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SI	A	SW OR SP
194	0- 5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SI	A	SW OR SP
	5-14		112.4	16.0	0.0	0.0	10.3	8.5	32.5	43.5	23.9	24.2	1.1	0.0	19.7	1.66	2.70	C	A-4(8)	ML
	14-19	19	107.6	25.3	0.0	0.0	6.6	25.7	15.3	49.4	31.2	37.7	16.0	0.0	23.7	1.57	2.70	C	A-6(6)	CL
195	0- 5	05+	108.4	22.4	0.0	0.0	3.4	36.3	26.5	11.9	19.1	29.8	16.4	0.0	20.2	1.71	2.68	C	A-6(4)	SC
196	0- 7	07+	113.2	15.7	7.5	0.0	2.1	18.3	49.4	28.5	18.5	28.8	4.9	0.0	14.9	1.87	2.69	SICL	A-4(8)	ML-CL
197	0- 5		113.2	15.7	7.5	0.0	2.1	18.3	49.4	28.5	18.5	28.8	4.9	0.0	14.9	1.87	2.69	SICL	A-4(8)	ML-CL
	5- 9	09+	109.8	15.3	6.1	0.0	1.8	25.7	33.5	38.1	26.9	32.4	8.4	0.0	16.9	1.85	2.71	C	A-4(7)	ML-CL
198	0- 4		113.2	15.7	7.5	0.0	2.1	18.3	49.4	28.5	18.5	28.8	4.9	0.0	14.9	1.87	2.69	SICL	A-4(8)	ML-CL
	4- 9		109.8	15.3	6.1	0.0	1.8	25.7	33.5	38.1	26.9	32.4	8.4	0.0	16.9	1.85	2.71	C	A-4(7)	ML-CL
	9-21	21	109.4	16.1	0.0	0.0	24.2	20.3	23.6	41.0	18.1	28.6	14.9	0.0	16.1	1.80	2.69	SHC	A-4(4)	CL
199	0- 5		116.8	13.9	6.5	0.0	2.1	16.7	42.8	38.4	31.4	34.7	9.7	0.0	14.3	1.85	2.64	C	A-4(8)	ML-CL
	5- 8	08	103.2	24.9	1.5	0.0	2.6	20.2	33.1	41.4	34.3	40.3	24.4	0.0	20.0	1.70	2.64	C	A-7-6(14)	CL
200	0- 4		104.9	23.7	5.0	0.0	4.1	16.5	41.9	38.1	27.7	33.0	13.0	0.0	20.3	1.69	2.65	C	A-6(8)	CL
	4- 9	09	103.2	24.9	1.5	0.0	2.6	20.2	33.1	41.4	34.3	40.3	24.4	0.0	20.0	1.70	2.64	C	A-7-6(14)	CL
201	0- 6	06	118.6	13.7	12.5	0.0	0.4	66.4	9.0	21.8	14.2	21.4	0.0	0.0	0.0	0.0	0.0	SCL	A-2(4)	SM
202	0- 6	06	106.4	14.8	5.1	0.0	2.2	36.6	33.3	45.3	18.3	23.9	3.9	0.0	19.0	1.74	2.69	CL	A-4(4)	ML
203	0- 3		116.1	13.2	11.4	0.0	8.6	39.6	30.3	31.7	12.2	25.0	5.3	0.0	18.1	1.80	2.69	SL	A-4(3)	ML-CL
	3- 9	09	106.4	14.8	5.1	0.0	2.2	36.6	33.3	45.3	18.3	23.9	3.9	0.0	19.0	1.74	2.69	CL	A-4(4)	ML
204	0-10	10	106.4	14.8	5.1	0.0	2.2	36.6	33.3	45.3	18.3	23.9	3.9	0.0	19.0	1.74	2.69	CL	A-4(4)	ML

COUNTY- HOPKINS

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
205	0-29	29	116.1	13.2	11.4	0.0	8.6	39.6	30.3	31.7	12.2	25.0	5.3	0.0	18.1	1.80	2.69	SL	A-4(3)	ML-CL
206	0- 4		103.9	17.5	4.8	0.0	2.2	9.7	-56.0	32.1	25.8	34.8	9.5	0.0	24.3	1.61	2.67	SIC	A-4(8)	ML-CL
	4-10	10	105.7	18.9	5.2	0.0	2.2	17.5	27.6	18.5	33.8	35.2	12.1	0.0	20.6	1.70	2.65	C	A-6(8)	SM-SC
207	0- 7	07	104.7	21.9	0.0	0.0	3.8	40.7	25.8	50.4	20.7	27.2	8.3	0.0	17.1	1.84	2.69	CL	A-4(4)	CL
208	0- 8	08	104.7	21.9	0.0	0.0	3.8	40.7	25.8	50.4	20.7	27.2	8.3	0.0	17.1	1.84	2.69	CL	A-4(4)	CL
209	0- 4	04	104.7	21.9	0.0	0.0	3.8	40.7	25.8	50.4	20.7	27.2	8.3	0.0	17.1	1.84	2.69	CL	A-4(4)	CL
210	0-22	22+	106.9	15.1	0.0	0.0	4.6	35.4	34.0	40.0	17.0	23.7	6.6	0.0	18.4	1.79	2.69	CL	A-4(5)	ML-CL
211	0- 7	07	112.8	15.9	0.0	0.0	4.9	36.6	16.0	27.0	14.7	22.6	6.2	0.0	15.4	1.70	2.68	SCL	A-4(2)	SM-SC
212	0- 9	09	0.0	0.0	0.0	0.0	0.3	60.1	13.7	20.6	10.0	24.3	0.0	0.0	21.8	1.66	2.70	SCL	A-2(4)	SM
213	0- 5		112.8	15.9	0.0	0.0	4.9	36.6	16.0	27.0	14.7	22.6	6.2	0.0	15.4	1.70	2.68	SCL	A-4(2)	SM-SC
	5-20	20+	0.0	0.0	0.0	0.0	9.7	19.6	7.3	10.2	6.8	24.0	0.0	0.0	0.0	0.0	0.0	SSS	A-1(0)	SM
214	0- 5		105.1	18.7	0.0	0.0	10.4	16.2	51.2	21.3	14.9	43.2	9.6	0.0	19.4	1.70	2.68	SICL	A-4(8)	ML
	5-20	20+	108.7	17.1	0.0	0.0	6.1	36.8	14.5	33.2	20.1	36.4	14.6	0.0	17.8	1.77	2.70	SC	A-6(2)	SC
215	0- 3		105.1	18.7	0.0	0.0	10.4	16.2	51.2	21.3	14.9	43.2	9.6	0.0	19.4	1.70	2.68	SICL	A-4(8)	ML
	3-15	15+	104.2	17.5	0.0	0.0	0.9	9.1	49.5	40.0	27.9	37.5	8.7	0.0	20.7	1.71	2.68	C	A-4(8)	ML
216	0-16		102.6	20.6	0.0	0.0	0.7	14.6	44.9	39.8	24.8	48.4	25.7	0.0	20.7	1.71	2.68	C	A-7(6)	CL
	16-44	44+	106.8	16.0	0.0	0.0	1.0	5.1	18.7	74.1	42.8	44.5	16.4	0.0	16.4	1.83	2.68	C	A-7(6)	ML-CL
2[illegible]	0-24	24+	103.6	19.9	0.0	0.0	0.7	7.5	30.6	61.2	43.8	50.6	25.4	0.0	21.9	1.64	2.65	C	A-7(6)	CH

COUNTY- MCLEAN

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
1	0- 8	08+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.6	6.6	21.6	29.8	1.4[illegible]	2.68		A-4(4)	SW OR SP
2	0- 7		108.7	15.9	8.5	0.0	0.0	0.0	0.0	0.0	0.0	35.9	13.7	24.1	27.2	1.55	2.68		A-6(5)	SW OR SP
	7-12	12+	103.0	20.7	1.8	0.0	0.0	0.0	0.0	0.0	0.0	55.5	32.5	25.9	14.4	1.95	2.71		A-7-6(14)	SW OR SP
3	0- 6	06+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.9	16.9	21.8	21.4	1.70	2.67		A-6(11)	SW OR SP
4	0- 6	06+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.6	10.3	20.8	26.0	1.58	2.68		A-6(4)	SW OR SP

COUNTY- MUHLENBERG

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	[redacted]	GRAVITY	[redacted]ASSIF[redacted]ON TEXTURAL	AASHO	UNIFIED
1	0- 7		101.8	16.8	0.0	0.0	0.6	14.6	45.3	39.5	26.9	37.0	28.8	0.0	20.8	1.71	2.67	C	A-6(8)	CL
	7-32	32+	106.5	18.5	0.0	0.0	0.2	19.9	42.9	37.0	26.7	33.9	12.1	0.0	20.8	1.65	2.65	C	A-6(8)	ML-CL
2	0-10	10	98.0	19.7	0.0	4.5	3.3	17.2	37.4	37.6	25.5	34.3	16.0	0.0	15.1	1.86	2.66	C	A-6(8)	CL
3	0- 4	04	113.9	14.1	7.5	2.0	8.6	39.6	30.3	31.7	15.1	26.1	6.8	0.0	18.1	1.80	2.67	SL	A-4(3)	ML-CL
4	0- 4	04	116.4	13.5	7.9	14.6	6.1	27.6	25.0	26.7	16.4	25.7	7.1	0.0	19.8	1.20	2.68	CL	A-4(3)	CL
5	0-10	10	112.3	12.2	5.9	19.3	6.7	12.7	26.0	35.3	20.0	31.2	7.0	0.0	18.8	1.60	2.70	C	A-4(5)	ML-CL
6	0-17	17+	111.5	17.1	4.8	1.1	3.7	19.7	35.7	40.3	22.9	34.0	14.5	0.0	17.7	1.90	2.72	C	A-6(8)	CL
7	0- 8		111.4	15.6	4.8	0.0	6.8	10.5	33.1	49.6	25.3	34.5	12.7	0.0	19.1	1.30	2.70	C	A-6(8)	CL
	8-15	15+	107.4	16.2	3.6	1.1	8.1	16.6	15.9	58.3	34.2	36.9	14.2	0.0	18.9	1.50	2.72	C	A-6(8)	ML-CL
8	0- 4		114.9	13.7	5.6	18.8	6.6	21.7	26.8	26.1	13.9	29.6	11.1	0.0	17.7	1.90	2.71	CL	A-6(4)	CL
	4- 9		109.9	16.0	6.0	0.0	3.9	17.1	36.9	42.1	24.8	31.2	7.6	0.0	18.4	1.80	2.72	C	A-4(8)	ML-CL
	9-15	15	119.4	12.2	4.8	2.2	8.1	3.1	39.1	47.5	20.8	28.9	10.9	0.0	17.7	1.90	2.69	C	A-6(8)	CL
9	0- 5	05+	110.2	17.1	4.4	5.4	3.7	7.8	35.6	47.5	27.5	29.7	11.6	0.0	19.1	1.50	2.73	C	A-6(8)	CL
10	0- 5		110.2	17.1	4.4	5.4	3.7	7.8	35.6	47.5	27.5	29.7	11.6	0.0	19.1	1.50	2.73	C	A-6(8)	CL
	5-12	12	107.3	19.1	3.9	2.4	3.7	3.1	37.8	53.0	28.6	38.5	12.8	0.0	17.2	2.20	2.74	C	A-6(8)	ML-CL
11	0-12	12+	120.6	12.0	8.9	2.8	1.7	57.4	13.0	25.1	16.8	21.2	4.0	0.0	17.5	1.80	2.70	SCL	A-4(1)	SM-SC
12	0- 6	06	121.0	10.5	28.8	3.6	15.2	58.8	7.2	15.2	7.5	22.7	0.0	0.0	0	0.0	2.67	SL	A-2	SM
13	0-20	20+	110.5	16.8	3.5	0.6	3.1	23.4	16.3	56.6	36.9	36.8	13.8	0.0	19.8	1.40	2.71	C	A-6(8)	ML-CL
14	0- 4	04+	117.9	13.1	6.8	10.5	3.6	23.4	32.5	30.0	20.4	38.4	16.5	0.0	18.8	1.70	2.71	C	A-6(5)	CL
15	0- 5		117.9	13.1	6.8	10.5	3.6	23.4	32.5	30.0	20.4	38.4	16.5	0.0	18.8	1.70	2.71	C	A-6(5)	CL
	5- 8	08	117.1	12.8	0.0	2.4	4.1	67.	9.3	17.0	8.4	0.0	0.0	0.0	0.0	0.0	2.68	S	A-3	SM
16	0- 3	03	117.9	13.1	6.8	10.5	3.6	23.4	32.5	30.0	20.4	38.4	16.5	0.0	18.8	1.70	2.71	C	A-6(5)	CL
17	0- 4		104.3	20.5	3.0	1.8	5.2	11.1	29.2	52.7	39.3	51.5	28.1	0.0	22.1	0.90	2.74	C	A-7-6(17)	CH
	4- 8	08	108.9	18.0	4.8	9.5	3.6	13.1	16.2	57.6	37.6	37.7	16.0	0.0	19.5	1.40	2.72	C	A-6(8)	CL
18	0-11		0.0	0.0	6.2	1.6	6.3	14.4	40.8	36.9	24.4	31.3	7.4	0.0	16.7	2.20	2.70	C	A-4(8)	ML-CL
	11-15	15	108.9	18.0	4.8	9.5	3.6	13.1	16.2	57.6	37.6	37.7	16.0	0.0	19.5	1.40	2.72	C	A-6(8)	CL
19	0- 4		111.2	15.7	6.5	0.5	1.2	20.0	42.6	35.7	23.8	30.5	6.3	0.0	18.4	1.70	2.70	C	A-4(8)	ML-CL
	4- 8	08	118.3	13.9	6.2	14.6	3.2	35.0	16.9	30.3	19.0	24.2	3.7	0.0	19.6	1.40	2.68	SCL	A-4(2)	SM
20	0-14	14	114.0	14.2	0.0	1.8	3.2	23.4	23.6	48.0	30.8	37.5	9.8	0.0	0.0	0.0	2.69	C	A-4(8)	ML
21	0- 6		109.4	16.9	0.0	0.9	1.0	15.9	56.1	26.9	19.8	28.8	3.9	0.0	18.6	1.60	2.70	SICL	A-4(8)	ML
	6-16	16	114.4	15.5	0.0	1.6	2.2	5.9	36.5	53.8	31.5	37.4	13.6	0.0	18.9	1.50	2.70	C	A-6(8)	ML-CL
22	0-16	16	0.0	0.0	0.0	1.6	1.4	15.0	52.0	30.0	19.4	29.8	7.7	0.0	0.0	0.0	0.0	SICL	A-4(8)	ML-CL
23	0-11	11+	110.9	17.8	0.0	1.2	2.8	7.6	48.6	39.8	25.3	33.6	10.5	0.0	18.7	1.5[illegible]	2.71	C	A-6(8)	ML-CL
24	0-11	11+	109.6	17.5	0.0	7.1	10.3	12.8	36.0	33.8	21.8	35.0	13.4	0.0	18.1	1.80	2.71	C	A-6(7)	CL
25	0-14	14	0.0	0.0	0.0	0.0	0.4	14.6	20.2	64.8	31.5	49.7	27.3	0.0	22.0	1.00	2.72	C	A-7-6(8)	CL
26	0- 3		112.6	16.7	13.5	4.7	4.9	23.0	42.5	24.9	14.3	27.1	7.5	0.0	17.1	2.10	2.73	CL	A-4(6)	CL
	3- 7	07	109.1	15.5	12.9	6.3	2.1	26.9	37.8	26.9	19.2	25.5	3.4	0.0	16.9	1.90	2.73	CL	A-4(6)	ML
27	0-15	15	106.7	18.2	2.9	47.9	8.5	10.9	10.6	22.1	9.4	35.6	3.5	0.0	21.3	1.00	2.71	SCL	A-2-4(0)	GM
28	0- 3	03	0.0	0.0	5.6	6.9	8.4	24.3	35.3	25.1	15.1	24.9	7.6	0.0	16.2	2.40	2.70	CL	A-4(5)	CL
29	0- 4	04	113.2	14.7	6.2	0.4	0.9	45.8	19.7	33.2	20.7	25.1	4.8	0.0	18.7	1.70	2.72	C	A-4(4)	ML-CL
30	0- 4		111.2	13.7	11.5	13.4	3.8	28.7	24.3	29.8	16.5	25.1	9.1	0.0	16.7	2.20	2.70	CL	A-4(4)	CL
	4- 8	08	112.7	16.0	5.4	4.6	5.1	23.9	34.6	31.8	20.0	26.9	7.1	0.0	17.5	1.90	2.73	C	A-4(6)	CL
31	0-20	20	106.7	18.2	2.9	47.9	8.5	10.9	10.6	22.1	9.4	35.6	3.5	0.0	21.3	1.00	2.71	SCL	A-2-4(0)	GM
32	0-12	12	106.7	18.2	2.9	47.9	8.5	10.9	10.6	22.1	9.4	35.6	3.5	0.0	21.3	1.00	2.71	SCL	A-2-4(0)	GM
33	0-30	30+	106.7	18.2	2.9	47.9	8.5	10.9	10.6	22.1	9.4	35.6	3.5	0.0	21.3	1.00	2.71	SCL	A-2-4(0)	GM
34	0-15	15+	106.7	18.2	2.9	47.9	8.5	10.9	10.6	22.1	9.4	35.6	3.5	0.0	21.3	1.00	2.71	SCL	A-2-4(0)	GM
35	0- 4	04	11[illegible].9	15.9	0.0	0.5	1.3	19.9	42.8	35.5	23.1	30.4	6.3	0.0	18.4	1.70	2.70	C	A-4(8)	ML-CL
36	0-25	25+	106.7	18.2	2.9	47.9	8.5	10.9	10.6	22.1	9.4	35.6	3.5	0.0	21.3	1.00	2.71	SCL	A-2-4(0)	GM
37	0-18	18+	106.7	18.2	2.9	47.9	8.5	10.9	10.6	22.1	9.4	35.6	3.5	0.0	21.3	1.00	2.71	SCL	A-2-4(0)	GM
38	0- 9	09+	111.2	15.8	6.5	2.1	9.8	19.3	37.5	31.3	21.6	25.9	8.5	0.0	18.3	2.00	2.74	C	A-4(7)	CL
39	0- 5	05	112.5	17.0	5.9	0.0	0.5	15.7	46.0	37.8	30.[illegible]	26.0	8.4	0.0	17.0	2.20	2.72	C	A-4(8)	CL
40	0- 4		116.3	15.7	5.8	7.8	1.7	32.2	27.1	32.1	19.6	29.3	5.2	0.0	22.1	1.90	2.73	C	A-4(5)	ML-CL
	4- 8	08	113.3	14.2	11.5	3.1	4.2	21.7	45.6	25.4	16.3	25.5	5.4	0.0	19.1	1.50	2.71	CL	A-4(7)	ML-CL
41	0- 4	04	113.3	14.2	11.5	3.1	4.2	21.7	45.6	25.4	16.3	25.5	5.4	0.0	19.1	1.50	2.71	CL	A-4(7)	ML-CL
42	0- 4		111.4	15.3	12.9	3.6	2.1	42.6	29.2	22.5	12.3	25.0	3.0	0.0	19.5	1.50	2.76	CL	A-4(3)	ML
	4- 7		118.0	12.6	11.7	3.4	4.2	25.1	40.4	26.9	19.1	23.7	4.2	0.0	18.4	1.40	2.72	CL	A-4(6)	ML-CL
	7-13	13+	120.1	12.5	0.0	0.8	1.9	61.2	14.2	21.9	11.5	18.5	6.5	0.0	19.1	1.70	2.69	SCL	A-4(0)	SM-SC
43	0- 4	04	119.5	13.1	9.4	0.0	3.0	43.1	24.8	29.1	16.5	27.7	3.5	0.0	19.4	1.60	2.71	CL	A-4(4)	ML
44	0- 5	05	115.7	12.3	12.5	0.3	1.2	60.0	12.4	26.1	17.0	20.9	3.5	0.0	18.9	1.50	2.70	SCL	A-4(1)	SM
45	0-13	13	111.0	16.3	0.0	1.8	2.1	17.7	36.9	41.5	28.8	36.1	11.0	0.0	18.6	1.80	2.74	C	A-4(8)	ML-CL
46	0- 3		116.8	11.9	0.0	1.1	2.3	16.6	45.8	34.2	22.3	32.9	9.8	0.0	19.7	1.40	2.72	C	A-4(8)	ML-CL
	3-12	12	113.0	14.2	0.0	2.1	1.6	24.0	35.0	37.3	26.3	26.5	7.2	0.0	17.4	1.70	2.71	C	A-4(7)	CL
47	0- 4		114.1	16.2	7.5	0.7	0.2	12.2	60.8	36.1	23.7	27.8	5.3	0.0	19.5	1.50	2.71	C	A-4(8)	ML-CL
	4-14	14	113.6	15.1	6.1	0.9	0.6	14.3	44.5	39.7	28.9	31.6	9.6	0.0	20.2	1.30	2.71	C	A-4(8)	ML-CL
48	0-14	14+	0.0	0.0	0.0	2.5	3.6	22.0	44.7	27.2	17.0	24.0	2.4	0.0	20.8	1.10	2.69	CL	A-4(7)	ML
49	0-20		109.4	17.6	5.4	0.0	0.4	25.9	40.0	33.7	23.9	29.0	7.8	0.0	20.5	1.20	2.74	C	A-4(8)	ML-CL
	20-51	51	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible].0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	SICL	A	SW OR
50	0- 4	04	113.7	14.9	6.3	0.0	1.3	10.8	58.3	29.6	15.3	26.6	0.9	0.0	18.8	1.60	2.69	SICL	A-4(8)	ML
51	0- 4	04	120.2	10.3	21.3	8.8	24.7	29.7	18.5	18.3	10.9	24.7	7.8	0.0	16.7	2.20	2.70	SL	A-4(0)	SC
52	0-10	10	0.0	0.0	0.0	0.0	2.2	11.9	54.8	31.1	18.7	26.5	1.8	0.0	20.1	1.30	2.71	SIC	A-4(8)	ML
53	0- 3	03	120.0	11.9	14.7	2.3	2.4	44.6	24.4	26.3	14.8	21.9	1.3	0.0	19.1	1.40	2.70	CL	A-4(3)	ML
54	0- 3		105.8	20.1	5.7	2.7	8.9	14.6	36.0	37.8	20.4	29.4	3.3	0.0	20.6	1.20	2.72	C	A-4(8)	ML
	3- 7	07	120.0	11.9	14.7	2.3	2.4	44.6	24.4	26.3	14.8	21.9	1.3	0.0	19.1	1.40	2.70	CL	A-4(3)	ML
55	0- 5	05	113.7	12.7	9.9	4.0	1.2	42.4	31.3	21.1	10.3	35.6	12.5	0.0	19.9	1.30	2.73	CL	A-6(3)	ML-CL
56	0- 6	06	116.1	12.6	8.7	2.5	1.2	50.1	24.4	21.8	11.6	26.8	7.7	0.0	17.9	1.90	2.75	SCL	A-4(2)	SC
57	0- 4		106.3	18.5	5.5	0.1	1.6	12.5	50.6	35.2	16.6	30.0	9.0	0.0	20.2	1.20	2.69	C	A-4(8)	ML-CL
	4- 8	08	120.0	11.9	17.5	1.0	2.1	60.3	15.9	20.7	12.4	23.1	4.7	0.0	19.5	1.70	2.69	SCL	A-4(0)	SM-SC
58	0- 4	04	111.7	13.5	6.1	0.0	0.8	23.1	39.7	36.4	24.1	25.9	3.7	0.0	21.1	2.00	2.70	C	A-4(8)	ML
59	0- 3		111.7	13.5	6.1	0.0	0.8	23.1	39.7	36.4	24.1	25.9	3.7	0.0	21.1	2.00	2.70	C	A-4(8)	ML
	3- 6	06	118.7	12.7	0.0	1.0	2.0	58.2	14.1	24.7	14.2	17.7	0.0	0.0	0.0	0.0	2.68	SCL	A-4(1)	SM
60	0- 3	03	118.7	12.7	0.0	1.0	2.0	58.2	14.1	24.7	14.2	17.7	0.0	0.0	0.0	0.0	2.68	SCL	A-4(1)	SM
61	0- 4		106.1	19.2	6.6	0.0	0.3	14.7	46.5	38.5	26.4	35.2	5.5	0.0	18.7	1.80	2.69	C	A-4(8)	ML
	4- 7	07	118.3	12.7	12.9	0.0	5.9	3[illegible].0	31.4	23.7	15.7	22.8	2.2	0.0	24.8	1.[illegible]0	2.66	CL	A-4(4)	ML
62	0- 3		109.4	15.7	6.4	0.0	0.4	11.4	53.9	34.3	20.6	33.6	2.8	0.0	20.3	1.70	2.64	C	A-4(4)	ML
	3- 5	05	108.7	15.3	7.1	0.0	0.3	16.4	54.7	28.6	18.1	33.8	7.2	0.0	23.1	1.70	2.58	SICL	A-4(4)	ML
63	0- 2		107.3	19.0	0.0	0.0	0.2	12.4	48.7	38.7	26.4	37.3	10.7	0.0	22.9	1.50	2.65	C	A-6(3)	ML-CL
	2- 7	07	105.[illegible]	20.1	0.0	0.0	0.2	14.9	54.5	30.4	21.5	35.4	8.8	0.0	22.9	1.70	2.64	C	A-4(4)	ML
64	0- 3		103.6	17.7	0.0	0.0	0.8	12.2	63.0	24.0	9.0	29.0	7.4	24.9	32.0	1.44	0.0	SICL	A-4(8)	ML-CL
	3- 6	06	111.6	15.8	0.0	0.0	6.2	14.4	45.1	34.3	23.5	43.4	21.9	25.3	25.5	1.61	0.0	C	A-7-6(14)	CL
65	0- 3	03	109.9	14.5	0.0	0.0	8.7	15.1	53.4	22.8	8.9	25.9	6.2	21.5	27.2	1.55	0.0	SICL	A-4(8)	ML-CL
66	0- 3		109.[illegible]	14.5	0.0	0.0	8.7	15.1	53.4	22.8	8.9	25.9	6.2	21.5	27.2	1.55	0.0	SICL	A-4(8)	ML-CL
	3- 5	05	111.6	15.8	0.0	0.0	6.2	14.4	45.1	34.3	23.5	43.4	21.9	25.3	25.5	1.61	0.0	C	A-7-6(14)	CL
67	0- 5	05	10[illegible].9	14.5	0.0	0.0	8.7	15.1	53.4	22.8	[illegible].9	25.9	6.2	21.5	27.2	1.55	0.0	SICL	A-4(8)	ML-CL

COUNTY- MUHLENBERG

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
68	0- 2		107.3	15.3	0.0	0.0	3.7	19.1	55.4	21.8	7.9	23.4	4.5	21.3	28.9	1.51	0.0	SCL	A-4(8)	ML-CL
	2- 4	04	111.6	15.8	0.0	0.0	6.2	14.4	45.1	34.3	23.5	43.4	21.9	25.3	25.5	1.61	0.0	C	A-7-6(14)	CL
69	0- 2		107.3	15.3	0.0	0.0	3.7	19.1	55.4	21.8	7.9	23.4	4.5	21.3	28.9	1.51	0.0	SCL	A-4(8)	ML-CL
	2- 5	05	111.6	15.8	0.0	0.0	6.2	14.4	45.1	34.3	23.5	43.4	21.9	25.3	25.5	1.61	0.0	C	A-7-6(14)	CL
70	0- 3		105.6	17.3	0.0	0.0	0.7	14.2	55.4	29.7	13.9	32.4	10.7	23.1	32.4	1.40	0.0	SICL	A-6(8)	ML-CL
	3- 6	06	124.9	11.0	0.0	0.0	6.9	53.5	15.8	23.8	14.9	22.6	9.1	15.8	21.6	1.71	0.0	SCL	A-4(1)	SC
71	0- 4	04	124.9	11.0	0.0	0.0	6.9	53.5	15.8	23.8	14.9	22.6	9.1	15.8	21.6	1.71	0.0	SCL	A-4(1)	SC
72	0- 2		105.6	17.3	0.0	0.0	0.7	14.2	55.4	29.7	13.9	32.4	10.7	23.1	32.4	1.40	0.0	SICL	A-6(8)	ML-CL
	2- 4	04	124.9	11.0	0.0	0.0	6.9	53.5	15.8	23.8	14.9	22.6	9.1	15.8	21.6	1.71	0.0	SCL	A-4(1)	SC
73	0- 2		105.6	17.3	0.0	0.0	0.7	14.2	55.4	29.7	13.9	32.4	10.7	23.1	32.4	1.40	0.0	SICL	A-6(8)	ML-CL
	2- 5	05+	124.9	11.0	0.0	0.0	6.9	53.5	15.8	23.8	14.9	22.6	9.1	15.8	21.6	1.71	0.0	SCL	A-4(1)	SC
74	0- 3	03	124.9	11.0	0.0	0.0	6.9	53.5	15.8	23.8	14.9	22.6	9.1	15.8	21.6	1.71	0.0	SCL	A-4(1)	SC
75	0- 1		105.6	17.3	0.0	0.0	0.7	14.2	55.4	29.7	13.9	32.4	10.7	23.1	32.4	1.40	0.0	SICL	A-6(8)	ML-CL
	1- 4	04+	124.9	11.0	0.0	0.0	6.9	53.5	15.8	23.8	14.9	22.6	9.1	15.8	21.6	1.71	0.0	SCL	A-4(1)	SC
76	0- 2	02	116.6	13.7	0.0	0.0	3.4	49.1	17.8	29.7	23.8	32.4	16.0	19.6	27.2	1.55	0.0	SCL	A-6(4)	SC
77	0- 3		106.5	17.6	0.0	0.0	0.3	10.6	52.5	36.6	22.8	39.9	17.1	24.1	29.8	1.50	0.0	C	A-6(11)	CL
	3- 5	05	116.6	13.7	0.0	0.0	3.4	49.1	17.8	29.7	23.8	32.4	16.0	19.6	27.2	1.55	0.0	SCL	A-6(4)	SC
78	0- 2		106.5	17.6	0.0	0.0	0.3	10.6	52.5	36.6	22.8	39.9	17.1	24.1	29.8	1.50	0.0	C	A-6(11)	CL
	2- 4	04	116.6	13.7	0.0	0.0	3.4	49.1	17.8	29.7	23.8	32.4	16.0	19.6	27.2	1.55	0.0	SCL	A-6(4)	SC
79	0- 1		106.5	17.6	0.0	0.0	0.3	10.6	52.5	36.6	22.8	39.9	17.1	24.1	29.8	1.50	0.0	C	A-6(11)	CL
	1- 3	03	116.6	13.7	0.0	0.0	3.4	49.1	17.8	29.7	23.8	32.4	16.0	19.6	27.2	1.55	0.0	SCL	A-6(4)	SC
80	0- 2	02	116.6	13.7	0.0	0.0	3.4	49.1	17.8	29.7	23.8	32.4	16.0	19.6	27.2	1.55	0.0	SCL	A-6(4)	SC
81	0- 1		106.5	17.6	0.0	0.0	0.3	10.6	52.5	36.6	22.8	39.9	17.1	24.1	29.8	1.50	0.0	C	A-6(11)	CL
	1- 4	04	116.6	13.7	0.0	0.0	3.4	49.1	17.8	29.7	23.8	32.4	16.0	19.6	27.2	1.55	0.0	SCL	A-6(4)	SC
82	0- 2	02	116.6	13.7	0.0	0.0	3.4	49.1	17.8	29.7	23.8	32.4	16.0	19.6	27.2	1.55	0.0	SCL	A-6(4)	SC
83	0- 2		106.5	17.6	0.0	0.0	0.3	10.6	52.5	36.6	22.8	39.9	17.1	24.1	29.8	1.50	0.0	C	A-6(11)	CL
	2- 3	03	116.6	13.7	0.0	0.0	3.4	49.1	17.8	29.7	23.8	32.4	16.0	19.6	27.2	1.55	0.0	SCL	A-6(4)	SC
84	0- 3	03+	116.6	13.7	0.0	0.0	3.4	49.1	17.8	29.7	23.8	32.4	16.0	19.6	27.2	1.55	0.0	SCL	A-6(4)	SC
85	0- 3		106.5	17.6	0.0	0.0	0.3	10.6	52.5	36.6	22.8	39.9	17.1	24.1	29.8	1.50	0.0	C	A-6(11)	CL
	3- 6	06	116.6	13.7	0.0	0.0	3.4	49.1	17.8	29.7	23.8	32.4	16.0	19.6	27.2	1.55	0.0	SCL	A-6(4)	SC
86	0- 3	03	116.6	13.7	0.0	0.0	3.4	49.1	17.8	29.7	23.8	32.4	16.0	19.6	27.2	1.55	0.0	SCL	A-6(4)	SC
87	0- 5		107.9	16.0	0.0	0.0	0.3	11.7	61.0	27.0	12.0	28.6	8.3	21.6	28.3	1.52	0.0	SICL	A-4(8)	CL
	5- 6	06	116.7	13.0	0.0	0.0	0.9	51.6	20.8	26.7	13.9	26.8	10.2	18.1	26.9	1.56	0.0	SCL	A-6(2)	SC
88	0- 3		107.9	16.0	0.0	0.0	0.3	11.7	61.0	27.0	12.0	28.6	8.3	21.6	28.3	1.52	0.0	SICL	A-4(8)	CL
	3- 4	04	116.7	13.0	0.0	0.0	0.9	51.6	20.8	26.7	13.9	26.8	10.2	18.1	26.9	1.56	0.0	SCL	A-6(2)	SC
89	0- 7	07+	103.6	19.7	0.0	0.0	4.5	9.3	18.6	67.6	25.5	57.7	28.8	32.8	25.7	1.61	0.0	CSH	A-7-6(20)	MH-CH
90	0- 2		107.9	16.0	0.0	0.0	0.3	11.7	61.0	27.0	12.0	28.6	8.3	21.6	28.3	1.52	0.0	SICL	A-4(8)	CL
	2- 3	03	116.7	13.0	0.0	0.0	0.9	51.6	20.8	26.7	13.9	26.8	10.2	18.1	26.9	1.56	0.0	SCL	A-6(2)	SC
91	0- 3		107.9	16.0	0.0	0.0	0.3	11.7	61.0	27.0	12.0	28.6	8.3	21.6	28.3	1.52	0.0	SICL	A-4(8)	CL
	3- 4	04	116.7	13.0	0.0	0.0	0.9	51.6	20.8	26.7	13.9	26.8	10.2	18.1	26.9	1.56	0.0	SCL	A-6(2)	SC
92	0- 1		107.9	16.0	0.0	0.0	0.3	11.7	61.0	27.0	12.0	28.6	8.3	21.6	28.3	1.52	0.0	SICL	A-4(8)	CL
	1- 2	02	116.7	13.0	0.0	0.0	0.9	51.6	20.8	26.7	13.9	26.8	10.2	18.1	26.9	1.56	0.0	SCL	A-6(2)	SC
93	0- 3	03	107.9	16.0	0.0	0.0	0.3	11.7	61.0	27.0	12.0	28.6	8.3	21.6	28.3	1.52	0.0	SICL	A-4(8)	CL
94	0- 2		107.9	16.0	0.0	0.0	0.3	11.7	61.0	27.0	12.0	28.6	8.3	21.6	28.3	1.52	0.0	SICL	A-4(8)	CL
	2- 3	03	116.7	13.0	0.0	0.0	0.9	51.6	20.8	26.7	13.9	26.8	10.2	18.1	26.9	1.56	0.0	SCL	A-6(2)	SC
95	0- 4		105.9	17.4	0.0	0.0	0.4	10.5	56.4	32.7	14.9	36.4	13.0	24.7	33.6	1.41	0.0	SIC	A-6(9)	ML-CL
	4- 5	05	117.9	13.0	0.0	0.0	0.7	37.9	34.7	26.7	13.9	25.1	9.0	18.3	24.2	1.63	0.0	CL	A-4(5)	CL

COUNTY- OHIO

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
1	0- 5	05+	113.3	15.1	3.8	0.1	1.1	30.5	29.6	38.7	28.0	34.6	15.4	20.1	14.9	1.93	2.69	C	A-6(10)	CL
2	0- 3		113.3	15.1	3.8	0.1	1.1	30.5	29.6	38.7	28.0	34.6	15.4	20.1	14.9	1.93	2.69	C	A-6(10)	CL
	3- 8		118.0	11.8	13.1	0.0	4.2	68.9	15.9	11.0	4.2	19.0	1.3	18.2	20.4	1.73	2.67	SL	A-2-4(0)	SM
	8-17	17+	113.3	14.4	1.8	1.4	13.6	9.9	13.8	51.3	26.2	35.2	17.6	18.9	14.4	1.93	2.67	C	A-6(11)	CL
3	0- 6		113.3	15.1	3.8	0.1	1.1	30.5	29.6	38.7	28.0	34.6	15.4	20.1	14.9	1.93	2.69	C	A-6(10)	CL
	6-11		0.0	0.0	0.0	0.0	0.4	15.9	39.3	44.4	21.8	27.9	4.9	23.8	27.8	1.54	2.69	C	A-4(8)	ML-CL
	11-20	20+	0.0	0.0	0.0	0.0	0.3	35.8	41.8	22.1	14.9	24.4	5.5	0.0	22.1	1.68	2.67	CL	A-4(6)	ML-CL
4	0-10	10+	0.0	0.0	0.0	0.0	0.4	15.9	39.3	44.4	21.8	27.9	4.9	23.8	27.8	1.54	2.69	C	A-4(8)	ML-CL
5	0- 6	06	117.9	11.5	0.8	0.0	2.0	19.8	39.6	38.6	20.0	33.2	15.1	21.0	16.4	1.87	2.70	C	A-6(10)	CL
6	0- 4	04	0.0	0.0	0.0	0.0	0.4	15.9	39.3	44.4	21.8	27.9	4.9	23.8	27.8	1.54	2.69	C	A-4(8)	ML-CL
7	0- 3	03	117.9	11.5	0.8	0.0	2.0	19.8	39.6	38.6	20.0	33.2	15.1	21.0	16.4	1.87	2.70	C	A-6(10)	CL
8	0- 8		117.9	11.5	0.8	0.0	2.0	19.8	39.6	38.6	20.0	33.2	15.1	21.0	16.4	1.87	2.70	C	A-6(10)	CL
	8-18		113.3	15.1	3.8	0.1	1.1	30.5	29.6	38.7	28.0	34.6	15.4	20.1	14.9	1.93	2.69	C	A-6(10)	CL
	18-25	25	108.3	15.5	2.3	2.0	18.6	18.2	19.5	41.7	24.5	43.7	22.5	23.1	16.3	1.86	2.67	C	A-7-6(12)	CL
9	0-20	20+	117.9	11.5	0.8	0.0	2.0	19.8	39.6	38.6	20.0	33.2	15.1	21.0	16.4	1.87	2.70	C	A-6(10)	CL
10	0- 3		113.3	15.1	3.8	0.1	1.1	30.5	29.6	38.7	28.0	34.6	15.4	20.1	14.9	1.93	2.69	C	A-6(10)	CL
	3- 7	07	112.2	15.8	10.1	0.8	7.8	19.1	36.6	35.7	19.5	24.6	6.3	18.9	21.2	1.73	2.73	C	A-4(8)	ML-CL
11	0- 5	05	113.3	15.1	3.8	0.1	1.1	30.5	29.6	38.7	28.0	34.6	15.4	20.1	14.9	1.93	2.69	C	A-6(10)	CL
12	0- 4	04	112.2	15.8	10.1	0.8	7.8	19.1	36.6	35.7	19.5	24.6	6.3	18.9	21.2	1.73	2.73	C	A-4(8)	ML-CL
3	0- 5		112.2	15.8	10.1	0.8	7.8	19.1	36.6	35.7	19.5	24.6	6.3	18.9	21.2	1.73	2.73	C	A-4(8)	ML-CL
	5-17	17	120.8	11.3	1.8	1.8	17.7	29.3	28.7	22.5	10.4	28.2	8.9	21.3	18.0	1.79	2.64	CL	A-4(4)	CL
14	0- 4	04+	112.2	15.8	10.1	0.8	7.8	19.1	36.6	35.7	19.5	24.6	6.3	18.9	21.2	1.73	2.73	C	A-4(8)	ML-CL
15	0- 7	07	112.2	15.8	10.1	0.8	7.8	19.1	36.6	35.7	19.5	24.6	6.3	18.9	21.2	1.73	2.73	C	A-4(8)	ML-CL
16	0- 8		0.0	0.0	0.0	0.0	0.8	26.6	53.1	19.5	9.5	21.9	2.2	21.4	25.2	1.60	2.68	SIL	A-4(7)	ML
	8-16	16+	112.2	15.8	10.1	0.8	7.8	19.1	36.6	35.7	19.5	24.6	6.3	18.9	21.2	1.73	2.73	C	A-4(8)	ML-CL
17	0- 6		0.0	0.0	0.0	0.0	0.8	31.1	42.0	26.1	15.0	23.3	4.0	21.1	20.9	1.70	2.64	CL	A-4(8)	ML-CL
	6-11		0.0	0.0	0.0	0.0	0.2	22.1	49.8	27.9	17.5	24.8	6.3	21.0	19.7	1.75	2.67	CL	A-4(8)	ML-CL
	11-21	21	0.0	0.0	0.0	0.0	0.8	29.1	44.0	26.1	15.6	25.3	5.5	21.2	23.1	1.64	2.64	CL	A-4(7)	ML-CL
18	0- 6		0.0	0.0	0.0	0.0	0.8	26.6	53.1	19.5	9.5	21.9	2.2	21.4	25.2	1.60	2.68	SIL	A-4(7)	ML
	6-12	12+	112.2	15.8	10.1	0.8	7.8	19.1	36.6	35.7	19.5	24.6	6.3	18.9	21.2	1.73	2.73	C	A-4(8)	ML-CL
19	0- 7	07+	115.9	13.9	8.2	0.0	1.2	36.9	23.4	38.5	25.8	24.8	7.4	19.8	18.7	1.79	2.69	C	A-4(5)	CL
20	0- 6	06	115.9	13.9	8.2	0.0	1.2	36.9	23.4	38.5	25.8	24.8	7.4	19.8	18.7	1.79	2.69	C	A-4(5)	CL
21	0- 5	05+	115.9	13.9	8.2	0.0	1.2	36.9	23.4	38.5	25.8	24.8	7.4	19.8	18.7	1.79	2.69	C	A-4(5)	CL
22	0- 4	04	115.9	13.9	8.2	0.0	1.2	36.9	23.4	38.5	25.8	24.8	7.4	19.8	18.7	1.79	2.69	C	A-4(5)	CL
23	0- 6		115.9	13.9	8.2	0.0	1.2	36.9	23.4	38.5	25.8	24.8	7.4	19.8	18.7	1.79	2.69	C	A-4(5)	CL
	6-15	15+	118.0	13.1	10.1	0.0	2.4	73.3	6.9	17.4	5.5	18.8	1.2	18.3	20.6	1.74	2.71	SL	A-1-6(0)	SM
24	0- 2	02	0.0	0.0	0.0	0.0	8.0	81.0	3.4	7.6	3.6	0.0	0.0	0.0	0.0	0.0	2.66	S	A-2-4(0)	
25	0- 6	06	115.9	13.9	8.2	0.0	1.2	36.9	23.4	38.5	25.8	24.8	7.4	19.8	18.7	1.79	2.69	C	A-4(5)	CL
26	0- 4	04+	115.9	13.9	8.2	0.0	1.2	36.9	23.4	38.5	25.8	24.8	7.4	19.8	18.7	1.79	2.69	C	A-4(5)	CL
27	0- 6		115.9	13.9	8.2	0.0	1.2	36.9	23.4	38.5	25.8	24.8	7.4	19.8	18.7	1.79	2.69	C	A-4(5)	CL
	6-10	10+	121.2	11.5	9.2	0.0	1.2	70.0	9.3	19.6	9.5	21.6	5.2	17.4	18.3	1.80	2.68	SL	A-2-4(0)	SM-SC
28	0- 2	02	0.0	0.0	0.0	0.0	1.4	81.4	12.8	4.4	4.2	13.4	0.9	13.0	15.9	1.87	2.66	S	A-2-4(0)	SM
29	0- 7	07+	112.2	16.0	6.3	0.0	0.9	45.6	17.7	35.8	26.0	29.7	12.3	20.1	20.5	1.75	2.73	C	A-6(5)	CL
30	0- 4	04	0.0	0.0	0.0	0.0	3.1	63.0	18.5	15.4	6.3	16.0	0.5	16.1	17.9	1.82	2.70	SL	A-2-4(0)	SM
31	0-11	11	108.6	17.3	1.5	0.1	11.7	23.1	26.6	38.5	25.6	34.9	15.7	21.3	22.9	1.70	2.78	C	A-6(9)	CL
32	0- 5	05+	108.6	17.3	1.5	0.1	11.7	23.1	26.6	38.5	25.6	34.9	15.7	21.3	22.9	1.70	2.78	C	A-6(9)	CL
33	0- 8		108.6	17.3	1.5	0.1	11.7	23.1	26.6	38.5	25.6	34.9	15.7	21.3	22.9	1.70	2.78	C	A-6(9)	CL
	8-15	15+	112.1	15.6	1.7	0.5	13.1	19.7	23.4	43.3	21.9	34.6	14.0	22.9	21.0	1.73	2.72	C	A-6(8)	CL
34	0- 8		115.6	14.2	1.2	0.0	12.9	21.5	35.7	29.9	13.8	33.1	11.2	24.0	23.0	1.71	2.82	C	A-6(7)	ML-CL
	8-29	29+	112.1	15.6	1.7	0.5	13.1	19.7	23.4	43.3	21.9	34.6	14.0	22.9	21.0	1.73	2.72	C	A-6(8)	CL
35	0- 6	06+	0.0	0.0	0.0	0.0	4.2	52.8	28.7	14.3	10.2	28.3	8.1	21.5	22.8	1.66	2.67	SL	A-4(2)	SC
36	0- 3	03	0.0	0.0	0.0	0.0	4.2	52.8	28.7	14.3	10.2	28.3	8.1	21.5	22.8	1.66	2.67	SL	A-4(2)	SC
37	0- 5	05+	0.0	0.0	0.0	0.0	4.2	52.8	28.7	14.3	10.2	28.3	8.1	21.5	22.8	1.66	2.67	SL	A-4(2)	SC
38	0- 7	07+	102.7	20.4	9.1	0.0	0.6	10.3	54.8	34.3	23.7	34.5	11.1	25.7	23.5	1.66	2.72	C	A-6(9)	ML-CL
39	0- 6	06+	0.0	0.0	0.0	0.0	2.6	20.1	36.6	40.7	27.0	39.6	19.0	22.3	23.3	1.68	2.76	C	A-6(12)	CL
40	0- 5	05+	102.7	20.4	9.1	0.0	0.6	10.3	54.8	34.3	23.7	34.5	11.1	25.7	23.5	1.66	2.72	C	A-6(9)	ML-CL
41	0- 5		102.7	20.4	9.1	0.0	0.6	10.3	54.8	34.3	23.7	34.5	11.1	25.7	23.5	1.66	2.72	C	A-6(9)	ML-CL
	5-11		112.9	16.1	6.9	0.3	5.8	35.5	31.7	26.7	15.4	29.7	10.1	21.5	21.7	1.69	2.67	CL	A-6(5)	CL
	11-16	16+	116.5	14.6	1.2	0.1	14.5	25.6	26.6	33.2	14.8	34.2	12.9	21.9	18.4	1.86	2.83	C	A-6(6)	CL
42	0-10	10	0.0	0.0	0.0	1.9	7.7	20.4	34.5	35.5	16.9	34.3	12.3	22.7	16.6	1.85	2.67	C	A-6(8)	ML-CL
43	0- 5	05+	0.0	0.0	0.0	1.9	7.7	20.4	34.5	35.5	16.9	34.3	12.3	22.7	16.6	1.85	2.67	C	A-6(8)	ML-CL
44	0- 3		102.7	20.4	9.1	0.0	0.6	10.3	54.8	34.3	23.7	34.5	11.1	25.7	23.5	1.66	2.72	C	A-6(9)	ML-CL
	3-10	10+	0.0	0.0	0.0	1.9	7.7	20.4	34.5	35.5	16.9	34.3	12.3	22.7	16.6	1.85	2.67	C	A-6(8)	ML-CL
45	0- 7		102.7	20.4	9.1	0.0	0.6	10.3	54.8	34.3	23.7	34.5	11.1	25.7	23.5	1.66	2.72	C	A-6(9)	ML-CL
	7-18	18+	120.8	11.5	19.3	1.9	9.4	69.3	7.7	11.7	5.0	16.8	1.2	16.5	20.8	1.72	2.68	SL	A-2-4(0)	SM
46	0- 6		102.7	20.4	9.1	0.0	0.6	10.3	54.8	34.3	23.7	34.5	11.1	25.7	23.5	1.66	2.72	C	A-6(9)	ML-CL
	6-16		116.2	13.3	11.9	0.3	6.1	64.3	13.6	15.7	7.0	24.4	2.6	23.4	25.5	1.60	2.70	SL	A-2-4(0)	SM
	16-22	22+	114.5	13.3	9.8	0.4	4.6	67.6	15.5	11.9	3.1	23.1	0.7	22.9	26.4	1.58	2.71	SL	A-2-4(0)	SM
47	0- 9	09+	102.7	20.4	9.1	0.0	0.6	10.3	54.8	34.3	23.7	34.5	11.1	25.7	23.5	1.66	2.72	C	A-6(9)	ML-CL
48	0-14		108.9	18.2	2.6	1.1	6.6	16.5	31.0	44.8	31.3	44.4	24.0	23.3	18.2	1.86	2.81	C	A-7-6(14)	CL
	14-24	24+	120.6	11.5	1.3	6.1	22.6	16.3	23.6	31.4	16.2	32.2	15.3	19.1	15.6	1.93	2.76	C	A-6(10)	CL
49	0-11		108.9	18.2	2.6	1.1	6.6	16.5	31.0	44.8	31.3	44.4	24.0	23.3	18.2	1.86	2.81	C	A-7-6(14)	CL
	11-18	18+	116.4	12.4	9.9	4.7	12.5	67.1	7.1	8.6	2.1	21.4	2.9	19.0	24.7	1.62	2.70	S	A-2-4(0)	SM
50	0- 5	05	108.9	18.2	2.6	1.1	6.6	16.5	31.0	44.8	31.3	44.4	24.0	23.3	18.2	1.86	2.81	C	A-7-6(14)	CL
51	0- 6		113.2	15.3	3.1	1.2	9.9	46.2	5.6	37.1	23.2	36.6	14.6	23.9	18.9	1.81	2.75	C	A-6(3)	SC
	6-18	18+	123.7	10.3	0.8	0.8	2.2	44.3	16.6	36.1	20.5	28.4	12.6	17.6	12.9	1.97	2.64	C	A-6(5)	CL
52	0- 7		0.0	0.0	0.0	0.0	5.6	29.3	42.1	23.0	11.2	22.2	3.6	19.5	21.3	1.69	2.64	CL	A-4(6)	ML
	7-20	20+	0.0	0.0	0.0	0.0	1.4	53.6	27.9	17.1	5.2	17.9	2.9	15.7	18.5	1.76	2.61	SIL	A-4(2)	SM
53	0- 2	02+	0.0	0.0	0.0	0.0	0.4	42.6	10.0	47.0	41.2	34.1	9.8	25.7	27.2	1.54	2.65	C	A-4(4)	ML-CL
54	0- 5	05+	113.1	15.7	6.4	0.0	0.4	34.2	29.6	35.8	26.9	31.9	14.3	19.7	19.9	1.76	2.71	C	A-6(8)	CL
55	0- 5	05+	113.1	15.7	6.4	0.0	0.4	34.2	29.6	35.8	26.9	31.9	14.3	19.7	19.9	1.76	2.71	C	A-6(8)	CL
56	0- 9	09	113.1	15.7	6.4	0.0	0.4	34.2	29.6	35.8	26.9	31.9	14.3	19.7	19.9	1.76	2.71	C	A-6(8)	CL
57	0- 9	09+	113.1	15.7	6.4	0.0	0.4	34.2	29.6	35.8	26.9	31.9	14.3	19.7	19.9	1.76	2.71	C	A-6(8)	CL
58	0- 7	07	113.1	15.7	6.4	0.0	0.4	34.2	29.6	35.8	26.9	31.9	14.3	19.7	19.9	1.76	2.71	C	A-6(8)	CL
59	0- 3	03	114.3	15.2	6.9	0.0	1.0	33.1	35.3	30.6	17.9	26.6	11.3	17.6	20.0	1.75	2.69	C	A-6(7)	CL
60	0- 4		114.3	15.2	6.9	0.0	1.0	33.1	35.3	30.6	17.9	26.6	11.3	17.6	20.0	1.75	2.69	C	A-6(7)	CL
	4- 6	06+	0.0	0.0	0.0	0.0	0.2	10.1	36.3	53.4	29.4	33.5	15.4	19.6	16.0	1.84	2.61	C	A-6(10)	CL
61	0- 4		113.1	15.7	6.4	0.0	0.4	34.2	29.6	35.8	26.9	31.9	14.3	19.7	19.9	1.76	2.71	C	A-6(8)	CL
	4-24	24+	118.7	12.2	5.5	0.0	2.0	76.1	9.9	12.0	1.2	18.1	2.1	16.8	21.2	1.71	2.68	SL	A-2-4(0)	SM
62	0- 5	05	0.0	0.0	0.0	0.0	4.0	40.4	37.6	18.0	9.1	19.0	2.0	17.3	19.8	1.76	2.70	L	A-4(4)	ML
63	0- 4	04	114.6	14.3	11.5	0.0	6.0	34.2	33.8	26.0	15.1	23.5	5.6	20.0	18.6	1.79	2.68	CL	A-4(5)	ML-CL
64	0- 3		114.6	14.3	11.5	0.0	6.0	34.2	33.8	26.0	15.1	23.5	5.6	20.0	18.6	1.79	2.68	CL	A-4(5)	ML-CL
	3-16	16+	118.3	12.3	13.3	0.3	2.7	73.2	11.8	12.0	5.1	19.1	2.0	17.8	21.1	1.72	2.70	SL	A-2-4(0)	SM

COUNTY- OHIO

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
65	0-11	11	114.6	14.3	11.5	0.0	6.0	34.2	33.8	26.0	15.1	23.5	5.6	20.0	18.6	1.79	2.68	CL	A-4(5)	ML-CL
66	0- 7	07	0.0	0.0	0.0	0.0	4.0	40.4	37.6	18.0	9.1	19.0	2.0	17.3	19.8	1.76	2.70	L	A-4(4)	ML
67	0- 7	07	114.6	14.3	11.5	0.0	6.0	34.2	33.8	26.0	15.1	23.5	5.6	20.0	18.6	1.79	2.68	CL	A-4(5)	ML-CL
68	0- 3		114.6	14.3	11.5	0.0	6.0	34.2	33.8	26.0	15.1	23.5	5.6	20.0	18.6	1.79	2.68	CL	A-4(5)	ML-CL
	3-11	11+	119.6	11.8	13.1	0.0	6.7	71.3	9.8	12.2	7.2	16.5	0.9	16.0	19.4	1.76	2.67	SL	A-2-4(0)	SM
69	0- 7	07	115.9	14.7	11.6	3.6	5.7	43.3	24.1	23.3	15.1	23.7	6.4	19.7	21.3	1.71	2.69	SCL	A-4(3)	SM-SC
70	0- 4	04	115.9	14.7	11.6	3.6	5.7	43.3	24.1	23.3	15.1	23.7	6.4	19.7	21.3	1.71	2.69	SCL	A-4(3)	SM-SC
71	0- 3	03	116.5	15.1	8.4	0.0	2.7	56.0	11.8	29.5	20.7	31.1	13.2	18.9	20.4	1.75	2.72	SCL	A-6(2)	SC
72	0- 9		106.6	17.0	2.9	0.0	0.6	17.5	55.3	26.6	11.9	30.5	6.1	24.4	27.4	1.55	2.69	SICL	A-4(8)	ML-CL
	9-18	18	0.0	0.0	0.0	0.0	0.2	49.4	38.0	12.4	6.2	19.2	2.3	17.5	20.1	1.73	2.65	L	A-4(3)	ML
73	0- 4		106.6	17.0	2.9	0.0	0.6	17.5	55.3	26.6	11.9	30.5	6.1	24.4	27.4	1.55	2.69	SICL	A-4(8)	ML-CL
	4- 8	08+	0.0	0.0	0.0	0.0	0.2	49.4	38.0	12.4	6.2	19.2	2.3	17.5	20.1	1.73	2.65	L	A-4(3)	ML
74	0- 3	03+	106.6	17.0	2.9	0.0	0.6	17.5	55.3	26.6	11.9	30.5	6.1	24.4	27.4	1.55	2.69	SICL	A-4(8)	ML-CL
75	0- 3		114.6	14.3	11.5	0.0	6.0	34.2	33.8	26.0	15.1	23.5	5.6	20.0	18.6	1.79	2.68	CL	A-4(5)	ML-CL
	3- 5	05+	106.6	17.0	2.9	0.0	0.6	17.5	55.3	26.6	11.9	30.5	6.1	24.4	27.4	1.55	2.69	SICL	A-4(8)	ML-CL
76	0- 5	05+	114.6	14.3	11.5	0.0	6.0	34.2	33.8	26.0	15.1	23.5	5.6	20.0	18.6	1.79	2.68	CL	A-4(5)	ML-CL
77	0- 4		106.6	17.0	2.9	0.0	0.6	17.5	55.3	26.6	11.9	30.5	6.1	24.4	27.4	1.55	2.69	SICL	A-4(8)	ML-CL
	4- 7	07	114.6	14.3	11.5	0.0	6.0	34.2	33.8	26.0	15.1	23.5	5.6	20.0	18.6	1.79	2.68	CL	A-4(5)	ML-CL
78	0- 4	04+	114.6	14.3	11.5	0.0	6.0	34.2	33.8	26.0	15.1	23.5	5.6	20.0	18.6	1.79	2.68	CL	A-4(5)	ML-CL
79	0- 6	06	114.6	14.3	11.5	0.0	6.0	34.2	33.8	26.0	15.1	23.5	5.6	20.0	18.6	1.79	2.68	CL	A-4(5)	ML-CL
80	0- 5	05	111.6	16.6	6.3	0.9	5.1	21.0	36.2	36.8	23.5	36.1	14.8	21.9	19.9	1.76	2.71	C	A-6(10)	CL
81	0- 6		111.6	16.6	6.3	0.9	5.1	21.0	36.2	36.8	23.5	36.1	14.8	21.9	19.9	1.76	2.71	C	A-6(10)	CL
	6-13	13+	0.0	0.0	0.0	0.0	0.2	28.0	37.3	34.5	9.9	24.6	3.0	21.9	25.3	1.60	2.69	C	A-4(7)	ML
82	0-12	12+	0.0	0.0	0.0	0.0	0.7	30.0	47.0	22.3	13.1	25.1	4.7	20.8	21.5	1.68	2.63	CL	A-4(7)	ML-CL
83	0- 5		0.0	0.0	0.0	0.0	0.7	30.0	47.0	22.3	13.1	25.1	4.7	20.8	21.5	1.68	2.63	CL	A-4(7)	ML-CL
	5-11	11+	0.0	0.0	0.0	0.0	0.1	54.8	26.9	18.2	13.0	21.8	5.0	18.3	17.7	1.80	2.64	SL	A-4(2)	SM-SC
84	0- 2	02	111.6	16.6	6.3	0.9	5.1	21.0	36.2	36.8	23.5	36.1	14.8	21.9	19.9	1.76	2.71	C	A-6(10)	CL
85	0- 4	04	111.6	16.6	6.3	0.9	5.1	21.0	36.2	36.8	23.5	36.1	14.8	21.9	19.9	1.76	2.71	C	A-6(10)	CL
86	0- 3		111.6	16.6	6.3	0.9	5.1	21.0	36.2	36.8	23.5	36.1	14.8	21.9	19.9	1.76	2.71	C	A-6(10)	CL
	3- 5	05+	0.0	0.0	0.0	0.0	0.2	28.0	37.3	34.5	9.9	24.6	3.0	21.9	25.3	1.60	2.69	C	A-4(7)	ML
87	0- 9	09	111.6	16.6	6.3	0.9	5.1	21.0	36.2	36.8	23.5	36.1	14.8	21.9	19.9	1.76	2.71	C	A-6(10)	CL
88	0-15	15	111.6	16.6	6.3	0.9	5.1	21.0	36.2	36.8	23.5	36.1	14.8	21.9	19.9	1.76	2.71	C	A-6(10)	CL
89	0-14	14	0.0	0.0	0.0	0.0	1.3	27.6	46.9	24.2	17.0	28.1	9.0	20.3	18.9	1.76	2.64	CL	A-4(7)	CL
90	0- 3		111.6	16.6	6.3	0.9	5.1	21.0	36.2	36.8	23.5	36.1	14.8	21.9	19.9	1.76	2.71	C	A-6(10)	CL
	3-15	15	0.0	0.0	0.0	0.0	1.3	27.6	46.9	24.2	17.0	28.1	9.0	20.3	18.9	1.76	2.64	CL	A-4(7)	CL
91	0-10		111.6	16.6	6.3	0.9	5.1	21.0	36.2	36.8	23.5	36.1	14.8	21.9	19.9	1.76	2.71	C	A-6(10)	CL
	10-15	15	0.0	0.0	0.0	1.9	6.4	33.4	26.8	31.5	23.9	33.1	13.1	20.6	21.6	1.69	2.66	C	A-6(6)	CL
92	0- 5	05	111.6	16.6	6.3	0.9	5.1	21.0	36.2	36.8	23.5	36.1	14.8	21.9	19.9	1.76	2.71	C	A-6(10)	CL
93	0- 9	09+	0.0	0.0	0.0	0.0	0.7	17.8	50.3	31.2	17.3	26.3	9.2	19.5	18.3	1.77	2.62	C	A-4(8)	CL
94	0- 7	07	111.6	16.6	6.3	0.9	5.1	21.0	36.2	36.8	23.5	36.1	14.8	21.9	19.9	1.76	2.71	C	A-6(10)	CL
95	0- 5		0.0	0.0	0.0	0.0	2.9	42.0	42.1	13.0	9.0	21.4	3.4	18.3	17.9	1.79	2.63	L	A-4(4)	ML
	5-12		0.0	0.0	0.0	0.0	3.0	59.9	26.9	10.2	7.0	15.7	1.3	14.9	18.6	1.77	2.64	SL	A-4(0)	SM
	12-23	23	0.0	0.0	0.0	0.0	0.1	28.5	38.2	33.2	21.1	29.0	8.6	21.4	21.0	1.69	2.62	C	A-4(7)	CL
96	0- 5		0.0	0.0	0.0	1.4	6.9	40.8	17.3	33.6	25.9	36.2	15.7	21.1	14.9	1.90	2.65	C	A-6(6)	CL
	5-15	15+	0.0	0.0	0.0	0.5	7.7	24.5	23.2	44.1	31.3	40.6	12.4	20.6	12.2	2.03	2.70	C	A-7-6(12)	ML
97	0- 8	08+	0.0	0.0	0.0	0.8	10.7	12.1	21.9	54.5	18.6	45.1	21.0	25.5	19.6	1.79	2.76	C	A-6(10)	CL
98	0-20	20	0.0	0.0	0.0	0.8	10.7	12.1	21.9	54.5	18.6	45.1	21.0	25.5	19.6	1.79	2.76	C	A-6(10)	CL
99	0- 9	09+	0.0	0.0	0.0	0.0	0.4	42.6	10.0	47.0	41.2	34.1	9.8	25.7	27.2	1.54	2.65	C	A-4(4)	ML-CL
100	0- 5		111.6	16.6	6.3	0.9	5.1	21.0	36.2	36.8	23.5	36.1	14.8	21.9	19.9	1.76	2.71	C	A-6(10)	CL
	5-15		123.4	9.9	5.4	0.0	2.9	60.0	15.2	21.9	8.3	20.3	2.1	19.9	18.1	1.79	2.65	SCL	A-4(1)	SM
	15-31	31	122.4	10.0	27.2	0.9	15.5	54.9	13.6	15.1	6.2	20.1	1.6	18.7	19.7	1.76	2.69	SL	A-2-4(0)	SM
101	0- 7	07	111.6	16.6	6.3	0.9	5.1	21.0	36.2	36.8	23.5	36.1	14.8	21.9	19.9	1.76	2.71	C	A-6(10)	CL
102	0-10		111.6	16.6	6.3	0.9	5.1	21.0	36.2	36.8	23.5	36.1	14.8	21.9	19.9	1.76	2.71	C	A-6(10)	CL
	10-13	13	0.0	0.0	0.0	0.2	6.3	16.6	41.7	35.2	19.4	34.3	10.6	25.3	19.7	1.76	2.69	C	A-6(8)	ML-CL
103	0- 5	05+	111.6	16.6	6.3	0.9	5.1	21.0	36.2	36.8	23.5	36.1	14.8	21.9	19.9	1.76	2.71	C	A-6(10)	CL
104	0- 7		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S	A	SW OR SP
	7-13	13+	0.0	0.0	0.0	0.0	1.5	63.5	24.7	10.3	8.2	26.3	8.5	18.9	20.2	1.74	2.68	SL	A-2-4(0)	SC
105	0- 7		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	S	A	SW OR SP
	7-13	13+	0.0	0.0	0.0	0.0	1.5	63.5	24.7	10.3	8.2	26.3	8.5	18.9	20.2	1.74	2.68	SL	A-2-4(0)	SC
106	0- 6		0.0	0.0	0.0	0.0	0.7	15.5	58.1	25.7	15.6	25.8	3.8	22.6	22.4	1.66	2.64	SICL	A-4(8)	ML
	6-14	14+	0.0	0.0	0.0	0.0	1.5	63.5	24.7	10.3	8.2	26.3	8.5	18.9	20.2	1.74	2.68	SL	A-2-4(0)	SC
107	0- 6	06	0.0	0.0	0.0	0.0	3.5	42.3	32.9	21.3	9.5	24.5	4.3	22.4	22.4	1.69	2.72	CL	A-4(4)	ML-CL
108	0- 9		116.6	12.9	9.9	0.0	1.2	37.3	33.4	28.1	18.4	28.1	10.1	19.8	18.3	1.79	2.66	CL	A-6(5)	CL
	9-18	18+	117.8	13.5	5.0	0.0	4.2	58.4	17.9	19.5	8.4	23.8	3.3	21.6	21.0	1.71	2.67	SL	A-4(0)	SM
109	0-10	10	0.0	0.0	0.0	0.0	4.0	9.1	45.6	41.3	30.4	38.8	14.7	27.1	21.7	1.70	2.69	C	A-6(10)	ML-CL
110	0-19	19	0.0	0.0	0.0	0.0	4.0	9.1	45.6	41.3	30.4	38.8	14.7	27.1	21.7	1.70	2.69	C	A-6(10)	ML-CL
111	0- 3		0.0	0.0	0.0	0.1	2.6	22.7	43.7	30.9	23.5	29.0	9.7	21.1	17.5	1.82	2.67	C	A-4(8)	CL
	3- 6		0.0	0.0	0.0	0.7	3.0	0.4	16.1	79.8	49.7	52.5	27.1	26.6	18.0	1.77	2.60	C	A-7-6(17)	CH
	6-10	10+	0.0	0.0	0.0	0.0	0.8	24.0	49.1	26.1	12.7	22.2	1.9	20.8	27.1	1.56	2.70	CL	A-4(8)	ML
112	0-16	16+	0.0	0.0	0.0	0.0	4.0	9.1	45.6	41.3	30.4	38.8	14.7	27.1	21.7	1.70	2.69	C	A-6(10)	ML-CL
113	0- 7		0.0	0.0	0.0	0.0	4.0	9.1	45.6	41.3	30.4	38.8	14.7	27.1	21.7	1.70	2.69	C	A-6(10)	ML-CL
	7-12	12+	0.0	0.0	0.0	0.0	2.8	2.6	33.6	61.0	35.2	42.8	17.6	27.7	18.8	1.79	2.70	C	A-7-6(12)	ML-CL
114	0- 2	02+	0.0	0.0	0.0	0.0	0.8	24.0	49.1	26.1	12.7	22.2	1.9	20.8	27.1	1.56	2.70	CL	A-4(8)	ML
115	0-10	10+	115.9	13.6	7.3	0.0	0.7	39.4	25.9	34.0	23.0	31.2	14.7	18.6	15.2	1.89	2.65	C	A-6(7)	CL
116	0- 2	02+	0.0	0.0	0.0	0.0	7.4	62.8	13.5	16.3	8.7	21.5	3.4	19.9	20.0	1.75	2.69	SL	A-2-4(0)	SM
117	0- 7	07	115.9	13.6	7.3	0.0	0.7	39.4	25.9	34.0	23.0	31.2	14.7	18.6	15.2	1.89	2.65	C	A-6(7)	CL
118	0- 6	06+	115.9	13.6	7.3	0.0	0.7	39.4	25.9	34.0	23.0	31.2	14.7	18.6	15.2	1.89	2.65	C	A-6(7)	CL
119	0- 7	07	115.9	13.6	7.3	0.0	0.7	39.4	25.9	34.0	23.0	31.2	14.7	18.6	15.2	1.89	2.65	C	A-6(7)	CL
120	0- 2		0.0	0.0	0.0	0.0	4.1	27.9	44.3	23.7	15.7	24.8	5.5	20.9	21.0	1.69	2.62	CL	A-4(7)	ML-CL
	2-15	15	0.0	0.0	0.0	0.2	10.4	28.9	29.2	31.3	18.5	26.5	7.9	21.1	19.9	1.74	2.66	C	A-4(5)	CL
121	0- 7	07	111.5	16.4	6.5	0.2	4.9	22.3	40.3	32.3	23.4	31.9	11.7	21.3	21.0	1.71	2.67	C	A-6(9)	CL
122	0- 2	02+	0.0	0.0	0.0	0.9	7.8	36.0	39.1	16.2	8.7	17.6	1.9	15.7	16.0	1.85	2.63	L	A-4(4)	ML
123	0- 4		111.5	16.4	6.5	0.2	4.9	22.3	40.3	32.3	23.4	31.9	11.7	21.3	21.0	1.71	2.67	C	A-6(9)	CL
	4-49	49	119.5	11.4	10.2	0.2	3.1	79.3	5.9	11.5	4.3	16.8	1.4	16.1	17.8	1.80	2.65	S	A-2-4(0)	SM
124	0- 5	05	111.5	16.4	6.5	0.2	4.9	22.3	40.3	32.3	23.4	31.9	11.7	21.3	21.0	1.71	2.67	C	A-6(9)	CL
125	0- 4		111.5	16.4	6.5	0.2	4.9	22.3	40.3	32.3	23.4	31.9	11.7	21.3	21.0	1.71	2.67	C	A-6(9)	CL
	4-13	13	115.7	14.1	16.7	0.0	1.3	73.4	3.4	21.9	18.2	20.8	3.3	19.1	0.0	0.0	2.65	SCL	A-2-4(0)	SM
126	0-14	14+	115.5	13.3	1.2	1.4	5.8	3 0	19.2	42.6	25.5	35.4	14.2	23.7	13.1	2.00	2.71	C	A-6(7)	CL
127	0- 6		111.5	16.4	6.5	0.2	4.9	22.3	40.3	32.3	23.4	31.9	11.7	21.3	21.0	1.71	2.67	C	A-6(9)	CL
	6-26	26	115.7	14.1	16.7	0.0	1.3	73.4	3.4	21.9	18.2	20.8	3.3	19.1	0.0	0.0	2.65	SCL	A-2-4(0)	SM
128	0-14	14+	115.5	13.3	1.2	1.4	5.8	31.0	19.2	42.6	25.5	35.4	14.2	23.7	13.1	2.00	2.71	C	A-6(7)	CL
129	0- 5		115.5	13.3	1.2	1.4	5.8	31.0	19.2	42.6	25.5	35.4	14.2	23.7	13.1	2.00	2.71	C	A-6(7)	CL
	5-13	13+	115.7	14.1	16.7	0.0	1.3	73.4	3.4	21.9	18.2	20.8	3.3	19.1	0.0	0.0	2.65	SCL	A-2-4(0)	SM

COUNTY- OHIO

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
130	0- 9		115.5	13.3	1.2	1.4	5.8	31.0	19.2	42.6	25.5	35.4	14.2	23.7	13.1	2.00	2.71	C	A-6(7)	CL
	9-14		0.0	0.0	0.0	0.0	0.0	50.3	33.7	16.0	10.4	20.8	2.8	18.9	19.3	1.75	2.64	SL	A-4(3)	SM
	14-21		115.5	13.3	1.2	1.4	5.8	31.0	19.2	42.6	25.5	35.4	14.2	23.7	13.1	2.00	2.71	C	A-6(7)	CL
	21-44	44+	0.0	0.0	0.0	0.0	0.0	40.2	37.7	22.1	14.5	22.8	3.8	20.2	19.5	1.74	2.63	CL	A-4(5)	ML
131	0-11		0.0	0.0	0.0	0.0	0.0	50.3	33.7	16.0	10.4	20.8	2.8	18.9	19.3	1.75	2.64	SL	A-4(3)	SM
	11-17	17	115.5	13.3	1.2	1.4	5.8	31.0	19.2	42.6	25.5	35.4	14.2	23.7	13.1	2.00	2.71	C	A-6(7)	CL
132	0- 7		115.5	13.3	1.2	1.4	5.8	31.0	19.2	42.6	25.5	35.4	14.2	23.7	13.1	2.00	2.71	C	A-6(7)	CL
	7-37	37+	0.0	0.0	0.0	0.0	0.0	40.2	37.7	22.1	14.5	22.8	3.8	20.2	19.5	1.74	2.63	CL	A-4(5)	ML
133	0-10		115.5	13.3	1.2	1.4	5.8	31.0	19.2	42.6	25.5	35.4	14.2	23.7	13.1	2.00	2.71	C	A-6(7)	CL
	10-13	13+	111.5	16.4	6.5	0.2	4.9	22.3	40.3	32.3	23.4	31.9	11.7	21.3	21.0	1.71	2.67	C	A-6(9)	CL
134	0-14		0.0	0.0	0.0	0.0	0.2	17.4	50.1	32.3	20.4	30.2	8.4	22.4	19.3	1.75	2.64	C	A-4(8)	ML-CL
	14-18	18+	0.0	0.0	0.0	0.0	0.3	22.9	53.0	23.8	13.1	29.1	9.4	22.1	16.2	1.88	2.70	SICL	A-4(8)	CL
135	0- 8		0.0	0.0	0.0	0.0	0.7	30.6	46.7	22.0	12.4	23.9	4.5	21.5	21.6	1.68	2.64	CL	A-4(7)	ML-CL
	8-14		0.0	0.0	0.0	0.0	1.0	35.4	47.6	16.0	7.2	25.0	4.2	22.3	20.1	1.73	2.65	L	A-4(6)	ML-CL
	14-16		0.0	0.0	0.0	0.0	0.3	36.4	41.6	21.7	15.7	21.0	3.0	18.8	20.8	1.70	2.63	CL	A-4(6)	ML
	16-22	22	0.0	0.0	0.0	0.0	0.8	23.3	53.8	22.1	14.5	25.9	5.0	22.0	19.5	1.74	2.63	SICL	A-4(8)	ML-CL
136	0- 4		115.5	13.3	1.2	1.4	5.8	31.0	19.2	42.6	25.5	35.4	14.2	23.7	13.1	2.00	2.71	C	A-6(7)	CL
	4-10		123.3	11.4	1.2	1.0	13.4	51.3	11.4	22.9	9.8	23.5	5.2	20.5	15.5	1.90	2.69	SCL	A-4(0)	SM-SC
	10-14	14	121.8	11.4	3.0	0.9	14.8	34.0	19.2	31.1	15.8	26.0	7.7	20.5	15.2	1.90	2.67	C	A-4(3)	CL
137	0- 2		114.3	15.0	11.2	0.0	4.6	32.6	37.5	25.3	13.4	23.7	5.9	20.0	20.9	1.73	2.71	CL	A-4(6)	ML-CL
	2- 8		115.5	13.3	1.2	1.4	5.8	31.0	19.2	42.6	25.5	35.4	14.2	23.7	13.1	2.00	2.71	C	A-6(7)	CL
	8-13		123.3	11.4	1.2	1.0	13.4	51.3	11.4	22.9	9.8	23.5	5.2	20.5	15.5	1.90	2.69	SCL	A-4(0)	SM-SC
	13-17	17	121.8	11.4	3.0	0.9	14.8	34.0	19.2	31.1	15.8	26.0	7.7	20.5	15.2	1.90	2.67	C	A-4(3)	CL
138	0- 4	04	115.5	13.3	1.2	1.4	5.8	31.0	19.2	42.6	25.5	35.4	14.2	23.7	13.1	2.00	2.71	C	A-6(7)	CL
139	0- 4		0.0	0.0	0.0	0.0	0.6	17.6	51.7	30.1	17.2	25.8	4.9	22.7	22.0	1.67	2.64	C	A-4(8)	ML-CL
	4-10	10	0.0	0.0	0.0	1.6	20.2	42.7	23.6	12.9	6.6	21.8	3.9	18.8	18.6	1.78	2.66	SL	A-4(1)	SM
140	0- 5	05	114.0	14.9	0.7	0.3	7.3	20.9	40.6	30.9	22.2	29.3	10.9	20.2	21.3	1.71	2.69	C	A-6(8)	CL
141	0- 8	08	114.0	14.9	8.7	0.3	7.3	20.9	40.6	30.9	22.2	29.3	10.9	20.2	21.3	1.71	2.69	C	A-6(8)	CL
142	0- 6	06	114.0	14.9	8.7	0.3	7.3	20.9	40.6	30.9	22.2	29.3	10.9	20.2	21.3	1.71	2.69	C	A-6(8)	CL
143	0- 7		114.0	14.9	8.7	0.3	7.3	20.9	40.6	30.9	22.2	29.3	10.9	20.2	21.3	1.71	2.69	C	A-6(8)	CL
	7-11	11	113.2	14.5	1.1	4.7	12.4	15.3	23.2	44.4	20.4	35.4	13.4	23.0	17.2	1.85	2.71	C	A-6(9)	CL
144	0- 5		112.3	14.6	10.3	0.0	1.7	11.9	52.1	34.3	22.4	32.1	12.0	21.6	18.6	1.77	2.64	C	A-6(9)	CL
	5- 8	08+	114.3	14.4	1.2	0.7	7.4	22.4	25.1	44.4	23.5	34.6	12.9	23.7	15.5	1.90	2.69	C	A-6(8)	CL
145	0- 5		112.3	14.6	10.3	0.0	1.7	11.9	52.1	34.3	22.4	32.1	12.0	21.6	18.6	1.77	2.64	C	A-6(9)	CL
	5-10	10+	114.3	14.4	1.2	0.7	7.4	22.4	25.1	44.4	23.5	34.6	12.9	23.7	15.5	1.90	2.69	C	A-6(8)	CL
146	0- 4	04+	112.3	14.6	10.3	0.0	1.7	11.9	52.1	34.3	22.4	32.1	12.0	21.6	18.6	1.77	2.64	C	A-6(9)	CL
147	0- 2		112.3	14.6	10.3	0.0	1.7	11.9	52.1	34.3	22.4	32.1	12.0	21.6	18.6	1.77	2.64	C	A-6(9)	CL
	2- 3	03	114.3	14.4	1.2	0.7	7.4	22.4	25.1	44.4	23.5	34.6	12.9	23.7	15.5	1.90	2.69	C	A-6(8)	CL
148	0- 7	07	112.3	14.6	10.3	0.0	1.7	11.9	52.1	34.3	22.4	32.1	12.0	21.6	18.6	1.77	2.64	C	A-6(9)	CL
149	0- 4		112.3	14.6	10.3	0.0	1.7	11.9	52.1	34.3	22.4	32.1	12.0	21.6	18.6	1.77	2.64	C	A-6(9)	CL
	4- 7		114.3	14.4	1.2	0.7	7.4	22.4	25.1	44.4	23.5	34.6	12.9	23.7	15.5	1.90	2.69	C	A-6(8)	CL
	7-10	10+	112.3	14.6	10.3	0.0	1.7	11.9	52.1	34.3	22.4	32.1	12.0	21.6	18.6	1.77	2.64	C	A-6(9)	CL
150	0- 3	03	112.3	14.6	10.3	0.0	1.7	11.9	52.1	34.3	22.4	32.1	12.0	21.6	18.6	1.77	2.64	C	A-6(9)	CL
151	0- 6	06	112.3	14.6	10.3	0.0	1.7	11.9	52.1	34.3	22.4	32.1	12.0	21.6	18.6	1.77	2.64	C	A-6(9)	CL
152	0- 4	04	112.3	14.6	10.3	0.0	1.7	11.9	52.1	34.3	22.4	32.1	12.0	21.6	18.6	1.77	2.64	C	A-6(9)	CL
153	0- 4	04	0.0	0.0	0.0	0.0	9.3	10.2	27.7	52.8	29.2	40.0	17.2	25.4	18.5	1.81	2.72	C	A-6(11)	CL
154	0- 6	06	0.0	0.0	0.0	0.0	1.9	21.6	46.2	30.3	18.4	27.0	7.3	20.7	19.5	1.73	2.61	C	A-4(8)	CL
155	0- 5	05	113.9	14.1	5.8	0.0	3.3	24.4	38.0	34.3	22.4	27.1	8.5	19.5	18.3	1.78	2.64	C	A-4(7)	CL
156	0- 2		113.9	14.1	5.8	0.0	3.3	24.4	38.0	34.3	22.4	27.1	8.5	19.5	18.3	1.78	2.64	C	A-4(7)	CL
	2- 5	05	0.0	0.0	0.0	0.2	3.5	28.9	23.9	43.5	27.5	29.9	11.1	20.3	17.5	1.81	2.65	C	A-6(7)	CL
157	0- 6	06+	113.9	14.1	5.8	0.0	3.3	24.4	38.0	34.3	22.4	27.1	8.5	19.5	18.3	1.78	2.64	C	A-4(7)	CL
158	0- 3		0.0	0.0	0.0	0.0	2.6	17.5	48.0	31.9	22.0	39.0	15.6	0.0	0.0	0.0	2.71	C	A-6(10)	ML-CL
	3-11	11+	0.0	0.0	0.0	15.8	23.1	22.9	18.4	19.8	7.9	32.8	13.0	0.0	0.0	0.0	2.74	CLSH	A-6(5)	SC
159	0- 3		105.2	18.7	11.8	0.0	3.9	14.3	52.5	29.3	21.5	40.2	14.7	31.0	27.0	1.56	2.73	C	A-7-6(10)	ML-CL
	3- 6		115.4	12.8	1.6	10.3	20.0	15.7	27.4	26.6	12.5	37.3	15.0	24.7	17.4	1.87	2.75	CSH	A-6(9)	CL
	6-10	10+	108.4	17.6	6.1	0.0	2.2	20.3	50.7	26.8	16.5	35.9	20.6	28.3	24.8	1.62	2.68	SICL	A-6(12)	CL
160	0- 4		0.0	0.0	0.0	7.0	20.8	37.9	19.5	14.8	10.0	21.6	4.7	0.0	0.0	0.0	2.76	SCL	A-4(2)	SM-SC
	4- 7	07+	0.0	0.0	0.0	0.0	2.6	17.5	48.0	31.9	22.0	39.0	15.6	0.0	0.0	0.0	2.71	C	A-6(10)	ML-CL
161	0- 1		105.2	18.7	11.8	0.0	3.9	14.3	52.5	29.3	21.5	40.2	14.7	31.0	27.0	1.56	2.73	C	A-7-6(10)	ML-CL
	1- 6		118.8	13.4	16.4	6.7	27.3	30.6	17.5	17.9	11.4	25.3	6.7	21.8	22.4	1.68	2.71	SCL	A-4(3)	SM-SC
	6- 9	09+	115.4	12.8	1.6	10.3	20.0	15.7	27.4	26.6	12.5	37.3	15.0	24.7	17.4	1.87	2.75	CSH	A-6(9)	CL
162	0- 4		105.2	18.7	11.8	0.0	3.9	14.3	52.5	29.3	21.5	40.2	14.7	31.0	27.0	1.56	2.73	C	A-7-6(10)	ML-CL
	4- 7		118.8	13.4	16.4	6.7	27.3	30.6	17.5	17.9	11.4	25.3	6.7	21.8	22.4	1.68	2.71	SCL	A-4(3)	SM-SC
	7-10	10	117.5	11.9	3.7	15.4	29.8	26.6	17.2	11.0	3.3	30.2	10.7	21.9	20.1	1.72	2.64	CLSH	A-6(4)	SC
163	0- 3		105.2	18.7	11.8	0.0	3.9	14.3	52.5	29.3	21.5	40.2	14.7	31.0	27.0	1.56	2.73	C	A-7-6(10)	ML-CL
	3- 5	05	115.4	12.8	1.6	10.3	20.0	15.7	27.4	26.6	12.5	37.3	15.0	24.7	17.4	1.87	2.75	CSH	A-6(9)	CL
164	0- 3		105.2	18.7	11.8	0.0	3.9	14.3	52.5	29.3	21.5	40.2	14.7	31.0	27.0	1.56	2.73	C	A-7-6(10)	ML-CL
	3- 5		98.2	21.7	2.8	3.7	12.6	14.3	12.2	57.2	40.9	73.4	43.0	33.9	17.1	1.85	2.71	C	A-7-5(20)	CH
	5-10	10	115.4	12.8	1.6	10.3	20.0	15.7	27.4	26.6	12.5	37.3	15.0	24.7	17.4	1.87	2.75	CSH	A-6(9)	CL
165	0-10	10	0.0	0.0	0.0	30.5	22.8	16.3	15.3	15.1	7.9	33.2	13.9	0.0	0.0	0.0	2.72	CL	A-6(6)	SC
166	0- 5	05+	0.0	0.0	0.0	0.0	0.6	16.1	56.1	27.2	17.3	36.9	11.7	0.0	0.0	0.0	2.71	SICL	A-6(9)	ML-CL
167	0- 7	07	0.0	0.0	0.0	0.0	0.6	16.1	56.1	27.2	17.3	36.9	11.7	0.0	0.0	0.0	2.71	SICL	A-6(9)	ML-CL
168	0- 2		0.0	0.0	0.0	30.5	22.8	16.3	15.3	15.1	7.9	33.2	13.9	0.0	0.0	0.0	2.72	CL	A-6(6)	SC
	2- 5	05+	0.0	0.0	0.0	2.3	11.1	12.2	33.0	41.4	22.8	47.5	26.2	0.0	0.0	0.0	2.72	CSH	A-7-6(16)	CL
169	0- 2		0.0	0.0	0.0	2.3	11.1	12.2	33.0	41.4	22.8	47.5	26.2	0.0	0.0	0.0	2.72	CSH	A-7-6(16)	CL
	2- 6	06	0.0	0.0	0.0	0.0	4.9	9.6	21.5	64.0	40.9	76.7	46.1	0.0	0.0	0.0	2.69	C	A-7-5(20)	CH
170	0- 3		0.0	0.0	0.0	30.5	22.8	16.3	15.3	15.1	7.9	33.2	13.9	0.0	0.0	0.0	2.72	CL	A-6(6)	SC
	3- 9	09+	0.0	0.0	0.0	2.3	11.1	12.2	33.0	41.4	22.8	47.5	26.2	0.0	0.0	0.0	2.72	CSH	A-7-6(16)	CL
171	0- 8	08+	105.0	19.0	6.3	0.0	0.2	14.2	54.6	31.0	21.1	38.3	13.2	29.2	26.4	1.57	2.70	SIC	A-6(9)	ML-CL
172	0- 7	07	0.0	0.0	0.0	30.5	22.8	16.3	15.3	15.1	7.9	33.2	13.9	0.0	0.0	0.0	2.72	CL	A-6(6)	SC
173	0- 2	02+	0.0	0.0	0.0	30.5	22.8	16.3	15.3	15.1	7.9	33.2	13.9	0.0	0.0	0.0	2.72	CL	A-6(6)	SC
174	0- 1		109.4	16.7	1.6	0.1	14.3	19.0	25.1	41.5	23.3	43.6	21.7	28.0	14.1	1.99	2.77	CSH	A-7-6(13)	CL
	1- 8		105.0	19.0	6.3	0.0	0.2	14.2	54.6	31.0	21.1	38.3	13.2	29.2	26.4	1.57	2.70	SIC	A-6(9)	ML-CL
	8-12	12	103.8	19.4	2.3	8.1	13.9	10.3	20.6	47.1	31.3	62.1	37.7	31.9	15.5	1.94	2.74	CSH	A-7-6(20)	CH
175	0- 5		105.0	19.0	6.3	0.0	0.2	14.2	54.6	31.0	21.1	38.3	13.2	29.2	26.4	1.57	2.70	SIC	A-6(9)	ML-CL
	5- 6		103.8	19.4	2.3	8.1	13.9	10.3	20.6	47.1	31.3	62.1	37.7	31.9	15.5	1.94	2.74	CSH	A-7-6(20)	CH
	6- 9	09	109.4	16.7	1.6	0.1	14.3	19.0	25.1	41.5	23.3	43.6	21.7	28.0	14.1	1.99	2.77	CSH	A-7-6(13)	CL
176	0- 3		0.0	0.0	0.0	0.0	4.9	9.6	21.5	64.0	40.9	76.7	46.1	0.0	0.0	0.0	2.69	C	A-7-5(20)	CH
	3- 4	04+	0.0	0.0	0.0	2.3	11.1	12.2	33.0	41.4	22.8	47.5	26.2	0.0	0.0	0.0	2.72	CSH	A-7-6(16)	CL
177	0-13	13+	0.0	0.0	0.0	30.5	22.8	16.3	15.3	15.1	7.9	33.2	13.9	0.0	0.0	0.0	2.72	CL	A-6(6)	SC
178	0- 5		0.0	0.0	0.0	0.0	0.6	16.1	56.1	27.2	17.3	36.9	11.7	0.0	0.0	0.0	2.71	SICL	A-6(9)	ML-CL
	5- 8	08+	0.0	0.0	0.0	2.3	11.1	12.2	33.0	41.4	22.8	47.5	26.2	0.0	0.0	0.0	2.72	CSH	A-7-6(16)	CL

COUNTY- OHIO

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
179	0- 3		0.0	0.0	0.0	30.5	22.8	16.3	15.3	15.1	7.9	33.2	13.9	0.0	0.0	0.0	2.72	CL	A-6(6)	SC
	3- 5	05	0.0	0.0	0.0	2.3	11.1	12.2	33.0	41.4	22.8	47.5	26.2	0.0	0.0	0.0	2.72	CSH	A-7-6(16)	CL
180	0- 4		103.7	19.8	9.7	0.0	0.7	11.1	52.2	36.0	26.4	39.6	14.9	28.3	25.6	1.60	2.73	C	A-6(10)	ML-CL
	4- 7		115.2	14.4	15.0	0.0	3.5	61.1	12.6	22.8	15.8	29.4	8.8	22.7	29.0	1.51	2.68	SCL	A-4(0)	SM-SC
	7-15	15	115.0	12.8	19.0	16.8	16.2	25.0	16.4	25.6	13.7	32.6	15.6	21.3	15.6	1.91	2.78	CSH	A-6(7)	SC
181	0- 4		103.7	19.8	9.7	0.0	0.7	11.1	52.2	36.0	26.4	39.6	14.9	28.3	25.6	1.60	2.73	C	A-6(10)	ML-CL
	4-14	14	115.0	12.8	19.0	16.8	16.2	25.0	16.4	25.6	13.7	32.6	15.6	21.3	15.6	1.91	2.78	CSH	A-6(7)	SC
182	0- 4		0.0	0.0	0.0	0.4	4.4	15.5	16.3	73.4	8.5	29.9	6.5	0.0	0.0	0.0	2.69	SICL	A-4(8)	ML-CL
	4-12	12	0.0	0.0	0.0	0.0	2.0	46.1	41.7	10.2	3.0	0.0	0.0	0.0	0.0	0.0	2.68	L	A-4(4)	ML
183	0- 4		0.0	0.0	0.0	0.0	2.0	46.1	41.7	10.2	3.0	0.0	0.0	0.0	0.0	0.0	2.68	L	A-4(4)	ML
	4-10	10	0.0	0.0	0.0	0.0	1.9	57.5	10.8	29.8	6.1	20.2	2.2	0.0	0.0	0.0	2.70	SL	A-2-4(0)	SM
184	0- 1		0.0	0.0	0.0	0.0	2.0	46.1	41.7	10.2	3.0	0.0	0.0	0.0	0.0	0.0	2.68	L	A-4(4)	ML
	1- 3	03	0.0	0.0	0.0	0.0	1.9	57.5	10.8	29.8	6.1	20.2	2.2	0.0	0.0	0.0	2.70	SL	A-2-4(0)	SM
185	0- 8	08+	0.0	0.0	0.0	0.0	2.0	46.1	41.7	10.2	3.0	0.0	0.0	0.0	0.0	0.0	2.68	L	A-4(4)	ML
186	0- 8	08	0.0	0.0	0.0	0.0	2.0	46.1	41.7	10.2	3.0	0.0	0.0	0.0	0.0	0.0	2.68	L	A-4(4)	ML
187	0- 2		103.7	19.8	9.7	0.0	0.7	11.1	52.2	36.0	26.4	39.6	14.9	28.3	25.6	1.60	2.73	C	A-6(10)	ML-CL
	2- 7		115.2	14.4	15.0	0.0	3.5	61.1	12.6	22.8	15.8	29.4	8.8	22.7	29.0	1.51	2.68	SCL	A-4(0)	SM-SC
	7-10	10	104.4	19.0	1.2	0.0	0.8	11.9	23.5	63.8	47.2	64.4	38.2	32.4	16.1	1.91	2.80	C	A-7-6(20)	CH
188	0- 4		103.7	19.8	9.7	0.0	0.7	11.1	52.2	36.0	26.4	39.6	14.9	28.3	25.6	1.60	2.73	C	A-6(10)	ML-CL
	4- 5		115.2	14.4	15.0	0.0	3.5	61.1	12.6	22.8	15.8	29.4	8.8	22.7	29.0	1.51	2.68	SCL	A-4(0)	SM-SC
	5- 7	07	115.0	12.8	19.0	16.8	16.2	25.0	16.4	25.6	13.7	32.6	15.6	21.3	15.6	1.91	2.78	CSH	A-6(7)	SC
189	0- 2	02	0.0	0.0	0.0	0.4	4.4	15.5	16.3	73.4	8.5	29.9	6.5	0.0	0.0	0.0	2.69	SICL	A-4(8)	ML-CL
190	0- 2		115.2	14.4	15.0	0.0	3.5	61.1	12.6	22.8	15.8	29.4	8.8	22.7	29.0	1.51	2.68	SCL	A-4(0)	SM-SC
	2- 6		103.7	19.8	9.7	0.0	0.7	11.1	52.2	36.0	26.4	39.6	14.9	28.3	25.6	1.60	2.73	C	A-6(10)	ML-CL
	6-14	14	115.0	12.8	19.0	16.8	16.2	25.0	16.4	25.6	13.7	32.6	15.6	21.3	15.6	1.91	2.78	CSH	A-6(7)	SC
191	0- 3		103.7	19.8	9.7	0.0	0.7	11.1	52.2	36.0	26.4	39.6	14.9	28.3	25.6	1.60	2.73	C	A-6(10)	ML-CL
	3- 4		104.4	19.0	1.2	0.0	0.8	11.9	23.5	63.8	47.2	64.4	38.2	32.4	16.1	1.91	2.80	C	A-7-6(20)	CH
	4- 9	09	115.0	12.8	19.0	16.8	16.2	25.0	16.4	25.6	13.7	32.6	15.6	21.3	15.6	1.91	2.78	CSH	A-6(7)	SC
192	0- 3		0.0	0.0	0.0	0.0	3.3	25.8	44.4	26.5	15.6	33.3	13.3	21.5	22.9	1.65	2.67	CL	A-6(8)	CL
	3- 7		109.0	16.0	12.0	0.2	1.6	17.7	53.9	26.6	16.5	34.3	12.0	24.3	23.3	1.67	2.62	SICL	A-6(9)	ML-CL
	7-15	15	118.7	12.8	2.8	0.8	4.5	47.8	23.2	23.7	12.3	27.3	10.5	18.5	16.9	1.84	2.70	SCL	A-6(3)	SC
193	0- 7	07	0.0	0.0	0.0	0.0	1.7	23.2	53.2	21.9	10.2	30.1	6.7	0.0	0.0	0.0	2.66	SICL	A-4(8)	ML-CL
194	0- 4	04	0.0	0.0	0.0	0.4	7.7	18.5	34.6	38.8	20.9	36.4	14.0	0.0	0.0	0.0	2.78	CSH	A-6(10)	CL
195	0- 7		0.0	0.0	0.0	0.0	1.7	23.2	53.2	21.9	10.2	30.1	6.7	0.0	0.0	0.0	2.66	SICL	A-4(8)	ML-CL
	7- 9	09+	0.0	0.0	0.0	0.0	6.0	68.1	20.1	5.8	2.5	0.0	0.0	0.0	0.0	0.0	2.63	SL	A-2-4(0)	SM
196	0- 7	07+	0.0	0.0	0.0	0.0	1.7	23.2	53.2	21.9	10.2	30.1	6.7	0.0	0.0	0.0	2.66	SICL	A-4(8)	ML-CL
197	0- 3		109.0	16.0	12.0	0.2	1.6	17.7	53.9	26.6	16.5	34.3	12.0	24.3	23.3	1.67	2.62	SICL	A-6(9)	ML-CL
	3-10	10	118.7	12.8	2.8	0.8	4.5	47.8	23.2	23.7	12.3	27.3	10.5	18.5	16.9	1.84	2.70	SCL	A-6(3)	SC
198	0- 3		0.0	0.0	0.0	0.0	1.7	23.2	53.2	21.9	10.2	30.1	6.7	0.0	0.0	0.0	2.66	SICL	A-4(8)	ML-CL
	3- 5		0.0	0.0	0.0	0.0	5.1	23.8	35.1	36.0	25.7	41.1	20.1	0.0	0.0	0.0	2.74	C	A-7-6(12)	CL
	5- 7	07+	0.0	0.0	0.0	0.0	6.0	68.1	20.1	5.8	2.5	0.0	0.0	0.0	0.0	0.0	2.63	SL	A-2-4(0)	SM
199	0- 4	04	0.0	0.0	0.0	0.0	1.7	23.2	53.2	21.9	10.2	30.1	6.7	0.0	0.0	0.0	2.66	SICL	A-4(8)	ML-CL
200	0- 5		0.0	0.0	0.0	0.0	1.7	23.2	53.2	21.9	10.2	30.1	6.7	0.0	0.0	0.0	2.66	SICL	A-4(8)	ML-CL
	5-10	10+	0.0	0.0	0.0	0.4	7.7	18.5	34.6	38.8	20.9	36.4	14.0	0.0	0.0	0.0	2.78	CSH	A-6(10)	CL
201	0- 5		107.6	18.2	7.0	0.0	0.0	16.0	53.9	30.1	22.4	41.4	15.8	31.5	26.8	1.56	2.75	SIC	A-7-6(10)	ML-CL
	5- 8		109.7	17.3	1.4	0.0	4.9	15.9	32.2	47.0	20.4	42.7	18.4	29.7	20.8	1.77	2.82	CSH	A-7-6(12)	ML-CL
	8-15	15	0.0	0.0	0.0	0.0	6.0	68.1	20.1	5.8	2.5	0.0	0.0	0.0	0.0	0.0	2.63	SL	A-2-4(0)	SM
202	0- 6		107.6	18.2	7.0	0.0	0.0	16.0	53.9	30.1	22.4	41.4	15.8	31.5	26.8	1.56	2.75	SIC	A-7-6(10)	ML-CL
	6- 9		109.7	17.3	1.4	0.0	4.9	15.9	32.2	47.0	20.4	42.7	18.4	29.7	20.8	1.77	2.82	CSH	A-7-6(12)	ML-CL
	9-12	12	0.0	0.0	0.0	0.0	5.1	13.0	23.8	58.1	35.1	49.5	25.1	30.7	17.2	1.87	2.81	C	A-7-6(16)	CL
203	0- 2		107.6	18.2	7.0	0.0	0.0	16.0	53.9	30.1	22.4	41.4	15.8	31.5	26.8	1.56	2.75	SIC	A-7-6(10)	ML-CL
	2-10	10+	109.7	17.3	1.4	0.0	4.9	15.9	32.2	47.0	20.4	42.7	18.4	29.7	20.8	1.77	2.82	CSH	A-7-6(12)	ML-CL
204	0- 8	08+	0.0	0.0	0.0	0.0	6.0	68.1	20.1	5.8	2.5	0.0	0.0	0.0	0.0	0.0	2.63	SL	A-2-4(0)	SM
205	0- 5		0.0	0.0	0.0	0.0	6.0	68.1	20.1	5.8	2.5	0.0	0.0	0.0	0.0	0.0	2.63	SL	A-2-4(0)	SM
	5- 9	09+	0.0	0.0	0.0	0.0	5.1	23.8	35.1	36.0	25.7	41.1	20.1	0.0	0.0	0.0	2.74	C	A-7-6(12)	CL
206	0- 3		107.6	18.2	7.0	0.0	0.0	16.0	53.9	30.1	22.4	41.4	15.8	31.5	26.8	1.56	2.75	SIC	A-7-6(10)	ML-CL
	3- 4		0.0	0.0	0.0	0.0	5.1	13.0	23.8	58.1	35.1	49.5	25.1	30.7	17.2	1.87	2.81	C	A-7-6(16)	CL
	4-10	10	109.7	17.3	1.4	0.0	4.9	15.9	32.2	47.0	20.4	42.7	18.4	29.7	20.8	1.77	2.82	CSH	A-7-6(12)	ML-CL
207	0- 2		0.0	0.0	0.0	0.0	6.0	68.1	20.1	5.8	2.5	0.0	0.0	0.0	0.0	0.0	2.63	SL	A-2-4(0)	SM
	2- 7	07	0.0	0.0	0.0	0.0	5.1	23.8	35.1	36.0	25.7	41.1	20.1	0.0	0.0	0.0	2.74	C	A-7-6(12)	CL
208	0- 6		0.0	0.0	0.0	0.0	21.2	31.9	26.8	20.1	12.4	32.8	10.4	0.0	0.0	0.0	2.82	CL	A-6(4)	SM-SC
	6-10	10	0.0	0.0	0.0	0.0	5.1	23.8	35.1	36.0	25.7	41.1	20.1	0.0	0.0	0.0	2.74	C	A-7-6(12)	CL
209	0- 8		0.0	0.0	0.0	0.0	6.0	68.1	20.1	5.8	2.5	0.0	0.0	0.0	0.0	0.0	2.63	SL	A-2-4(0)	SM
	8-16	16+	0.0	0.0	0.0	0.0	5.1	23.8	35.1	36.0	25.7	41.1	20.1	0.0	0.0	0.0	2.74	C	A-7-6(12)	CL
210	0- 6		0.0	0.0	0.0	0.0	6.0	68.1	20.1	5.8	2.5	0.0	0.0	0.0	0.0	0.0	2.63	SL	A-2-4(0)	SM
	6-12	12	0.0	0.0	0.0	0.0	5.1	23.8	35.1	36.0	25.7	41.1	20.1	0.0	0.0	0.0	2.74	C	A-7-6(12)	CL
211	0- 5		107.6	18.2	7.0	0.0	0.0	16.0	53.9	30.1	22.4	41.4	15.8	31.5	26.8	1.56	2.75	SIC	A-7-6(10)	ML-CL
	5- 7		0.0	0.0	0.0	0.0	5.1	13.0	23.8	58.1	35.1	49.5	25.1	30.7	17.2	1.87	2.81	C	A-7-6(16)	CL
	7-11	11+	109.7	17.3	1.4	0.0	4.9	15.9	32.2	47.0	20.4	42.7	18.4	29.7	20.8	1.77	2.82	CSH	A-7-6(12)	ML-CL
212	0- 2		107.6	18.2	7.0	0.0	0.0	16.0	53.9	30.1	22.4	41.4	15.8	31.5	26.8	1.56	2.75	SIC	A-7-6(10)	ML-CL
	2- 9	09	109.7	17.3	1.4	0.0	4.9	15.9	32.2	47.0	20.4	42.7	18.4	29.7	20.8	1.77	2.82	CSH	A-7-6(12)	ML-CL
213	0- 3		0.0	0.0	0.0	0.0	2.4	21.6	49.2	26.8	17.9	34.1	11.6	0.0	0.0	0.0	2.75	SICL	A-6(9)	ML-CL
	3- 8	08+	0.0	0.0	0.0	4.1	20.1	20.5	25.0	30.3	16.4	36.9	15.1	0.0	0.0	0.0	2.79	CSH	A-6(9)	CL
214	0- 7		110.0	7.2	0.0	2.8	14.5	16.6	22.1	44.0	30.2	49.7	26.2	34.9	18.5	1.53	2.81	C	A-7-6(17)	CL
	7-10	10+	120.2	12.3	13.0	3.7	17.2	36.7	18.3	24.1	16.8	28.7	13.3	21.4	21.4	1.72	2.78	CLSH	A-6(4)	SC
215	0- 5	05+	0.0	0.0	0.0	0.0	2.4	21.6	49.2	26.8	17.9	34.1	11.6	0.0	0.0	0.0	2.75	SICL	A-6(9)	ML-CL
216	0- 4		0.0	0.0	0.0	0.0	2.4	21.6	49.2	26.8	17.9	34.1	11.6	0.0	0.0	0.0	2.75	SICL	A-6(9)	ML-CL
	4- 6	06+	0.0	0.0	0.0	4.1	20.1	20.5	25.0	30.3	16.4	36.9	15.1	0.0	0.0	0.0	2.79	CSH	A-6(9)	CL
217	0- 3		0.0	0.0	0.0	0.0	2.4	21.6	49.2	26.8	17.9	34.1	11.6	0.0	0.0	0.0	2.75	SICL	A-6(9)	ML-CL
	3- 6	06	0.0	0.0	0.0	1.1	5.1	28.9	23.5	41.4	28.3	28.3	11.1	0.0	0.0	0.0	2.74	C	A-6(8)	CL
218	0-12	12	0.0	0.0	0.0	0.0	2.4	21.6	49.2	26.8	17.9	34.1	11.6	0.0	0.0	0.0	2.75	SICL	A-6(9)	ML-CL
219	0- 5		112.2	15.7	13.0	0.0	4.9	23.3	49.4	22.4	13.3	29.9	7.8	25.5	24.5	1.62	2.72	SICL	A-4(8)	ML-CL
	5- 7		110.0	7.2	0.0	2.8	14.5	16.6	22.1	44.0	30.2	49.7	26.2	34.9	18.5	1.53	2.81	C	A-7-6(17)	CL
	7-14		109.1	16.2	1.4	13.0	11.0	11.1	21.0	43.9	20.3	47.1	20.7	30.1	19.3	1.76	2.79	CSH	A-7-6(13)	ML-CL
	14-20	20	120.2	12.3	13.0	3.7	17.2	36.7	18.3	24.1	16.8	28.7	13.3	21.4	21.4	1.72	2.78	CLSH	A-6(4)	SC
220	0- 4		112.2	15.7	13.0	0.0	4.9	23.3	49.4	22.4	13.3	29.9	7.8	25.5	24.5	1.62	2.72	SICL	A-4(8)	ML-CL
	4- 7		110.0	7.2	0.0	2.8	14.5	16.6	22.1	44.0	30.2	49.7	26.2	34.9	18.5	1.53	2.81	C	A-7-6(17)	CL
	7-15	15	109.1	16.2	1.4	13.0	11.0	11.1	21.0	43.9	20.3	47.1	20.7	30.1	19.3	1.76	2.79	CSH	A-7-6(13)	ML-CL
221	0- 5		0.0	0.0	0.0	0.0	2.4	21.6	49.2	26.8	17.9	34.1	11.6	0.0	0.0	0.0	2.75	SICL	A-6(9)	ML-CL
	5- 9	09	0.0	0.0	0.0	4.1	20.1	20.5	25.0	30.3	16.4	36.9	15.1	0.0	0.0	0.0	2.79	CSH	A-6(9)	CL
222	0- 4		112.2	15.7	13.0	0.0	4.9	23.3	49.4	22.4	13.3	29.9	7.8	25.5	24.5	1.62	2.72	SICL	A-4(8)	ML-CL
	4- 9	09+	120.2	12.3	13.0	3.7	17.2	36.7	18.3	24.1	16.8	28.7	13.3	21.4	21.4	1.72	2.78	CLSH	A-6(4)	SC
223	0- 6	06+	0.0	0.0	0.0	4.1	20.1	20.5	25.0	30.3	16.4	36.9	15.1	0.0	0.0	0.0	2.79	CSH	A-6(9)	CL

COUNTY- OHIO

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
224	0- 3		0.0	0.0	0.0	0.0	2.4	21.6	49.2	26.8	17.9	34.1	11.6	0.0	0.0	0.0	2.75	SICL	A-6(9)	ML-CL
	3- 9	09+	0.0	0.0	0.0	4.1	20.1	20.5	25.0	30.3	16.4	36.9	15.1	0.0	0.0	0.0	2.79	CSH	A-6(9)	CL
225	0- 3		0.0	0.0	0.0	0.0	2.4	21.6	49.2	26.8	17.9	34.1	11.6	0.0	0.0	0.0	2.75	SICL	A-6(9)	ML-CL
	3- 6		0.0	0.0	0.0	1.1	5.1	28.9	23.5	41.4	28.3	28.3	11.1	0.0	0.0	0.0	2.74	C	A-6(8)	CL
	6- 8	08	0.0	0.0	0.0	4.1	20.1	20.5	25.0	30.3	16.4	36.9	15.1	0.0	0.0	0.0	2.79	CSH	A-6(9)	CL
226	0- 3		110.8	16.5	4.6	0.0	1.9	22.0	49.4	26.7	17.2	34.0	12.2	25.7	23.7	1.65	2.71	SICL	A-6(9)	ML-CL
	3- 7	07+	106.8	17.8	0.0	0.0	8.2	12.4	18.4	61.0	43.7	67.2	40.6	34.2	18.5	1.86	2.81	C	A-7-6(20)	CH
227	0- 6		0.0	0.0	0.0	0.0	4.1	29.9	48.3	17.7	6.9	24.7	2.9	0.0	0.0	0.0	2.69	SIL	A-4(7)	ML
	6- 8	08+	0.0	0.0	0.0	3.1	12.6	36.3	26.3	21.7	11.8	24.8	9.9	0.0	0.0	0.0	2.61	SHCL	A-4(4)	SC
228	0- 4		0.0	0.0	0.0	0.0	4.1	29.9	48.3	17.7	6.9	24.7	2.9	0.0	0.0	0.0	2.69	SIL	A-4(7)	ML
	4- 7		0.0	0.0	0.0	1.5	7.4	27.0	34.5	29.6	19.3	37.9	16.9	0.0	0.0	0.0	2.71	C	A-6(10)	CL
	7- 8	08+	0.0	0.0	0.0	3.1	12.6	36.3	26.3	21.7	11.8	24.8	9.9	0.0	0.0	0.0	2.61	SHCL	A-4(4)	SC
229	0- 4		110.8	16.5	4.6	0.0	1.9	22.0	49.4	26.7	17.2	34.0	12.2	25.7	23.7	1.65	2.71	SICL	A-6(9)	ML-CL
	4- 6		106.8	17.8	0.0	0.0	8.2	12.4	18.4	61.0	43.7	67.2	40.6	34.2	18.5	1.86	2.81	C	A-7-6(20)	CH
	6- 8	08+	115.6	13.8	1.6	18.6	20.1	18.0	15.9	27.4	14.1	34.6	14.9	23.6	17.0	1.85	2.77	CSH	A-6(8)	SC
230	0- 6		110.8	16.5	4.6	0.0	1.9	22.0	49.4	26.7	17.2	34.0	12.2	25.7	23.7	1.65	2.71	SICL	A-6(9)	ML-CL
	6- 8		123.8	10.3	2.3	14.7	20.4	36.6	9.8	18.5	9.1	27.0	9.4	19.2	17.7	1.79	2.76	SCLSH	A-4(1)	SC
	8-25		115.6	13.8	1.6	18.6	20.1	18.0	15.9	27.4	14.1	34.6	14.9	23.6	17.0	1.85	2.77	CSH	A-6(8)	SC
	25-33	33+	117.4	11.6	2.0	11.3	24.9	15.1	19.7	29.0	12.7	37.8	16.4	24.2	17.0	1.81	2.72	CSH	A-6(10)	SC
231	0- 5		0.0	0.0	0.0	0.0	4.1	29.9	48.3	17.7	6.9	24.7	2.9	0.0	0.0	0.0	2.69	SIL	A-4(7)	ML
	5- 6	06+	0.0	0.0	0.0	3.1	12.6	36.3	26.3	21.7	11.8	24.8	9.9	0.0	0.0	0.0	2.61	SHCL	A-4(4)	SC
232	0- 3		0.0	0.0	0.0	0.0	4.1	29.9	48.3	17.7	6.9	24.7	2.9	0.0	0.0	0.0	2.69	SIL	A-4(7)	ML
	3-10	10+	0.0	0.0	0.0	0.0	1.2	62.5	12.2	24.1	12.3	26.3	9.5	0.0	0.0	0.0	2.75	SCLSH	A-4(0)	SC
233	0- 4		0.0	0.0	0.0	0.0	4.1	29.9	48.3	17.7	6.9	24.7	2.9	0.0	0.0	0.0	2.69	SIL	A-4(7)	ML
	4- 6	06	0.0	0.0	0.0	3.1	12.6	36.3	26.3	21.7	11.8	24.8	9.9	0.0	0.0	0.0	2.61	SHCL	A-4(4)	SC
234	0- 3		110.8	16.5	4.6	0.0	1.9	22.0	49.4	26.7	17.2	34.0	12.2	25.7	23.7	1.65	2.71	SICL	A-6(9)	ML-CL
	3- 7	07	115.6	13.8	1.6	18.6	20.1	18.0	15.9	27.4	14.1	34.6	14.9	23.6	17.0	1.85	2.77	CSH	A-6(8)	SC
235	0- 2		110.8	16.5	4.6	0.0	1.9	22.0	49.4	26.7	17.2	34.0	12.2	25.7	23.7	1.65	2.71	SICL	A-6(9)	ML-CL
	2- 6		106.8	17.8	0.0	0.0	8.2	12.4	18.4	61.0	43.7	67.2	40.6	34.2	18.5	1.86	2.81	C	A-7-6(20)	CH
	6-15		115.6	13.8	1.6	18.6	20.1	18.0	15.9	27.4	14.1	34.6	14.9	23.6	17.0	1.85	2.77	CSH	A-6(8)	SC
	15-18		123.8	10.3	2.3	14.7	20.4	36.6	9.8	18.5	9.1	27.0	9.4	19.2	17.7	1.79	2.76	SCLSH	A-4(1)	SC
	18-24	24	117.4	11.6	2.0	11.3	24.9	15.1	19.7	29.0	12.7	37.8	16.4	24.2	17.0	1.81	2.72	CSH	A-6(10)	SC
236	0- 2		110.8	16.5	4.6	0.0	1.9	22.0	49.4	26.7	17.2	34.0	12.2	25.7	23.7	1.65	2.71	SICL	A-6(9)	ML-CL
	2- 4		106.8	17.8	0.0	0.0	8.2	12.4	18.4	61.0	43.7	67.2	40.6	34.2	18.5	1.86	2.81	C	A-7-6(20)	CH
	4- 8		123.8	10.3	2.3	14.7	20.4	36.6	9.8	18.5	9.1	27.0	9.4	19.2	17.7	1.79	2.76	SCLSH	A-4(1)	SC
	8-18		115.6	13.8	1.6	18.6	20.1	18.0	15.9	27.4	14.1	34.6	14.9	23.6	17.0	1.85	2.77	CSH	A-6(8)	SC
	18-23	23	117.4	11.6	2.0	11.3	24.9	15.1	19.7	29.0	12.7	37.8	16.4	24.2	17.0	1.81	2.72	CSH	A-6(10)	SC
237	0- 4		0.0	0.0	0.0	0.0	4.1	29.9	48.3	17.7	6.9	24.7	2.9	0.0	0.0	0.0	2.69	SIL	A-4(7)	ML
	4- 6	06+	0.0	0.0	0.0	0.0	1.2	62.5	12.2	24.1	12.3	26.3	9.5	0.0	0.0	0.0	2.75	SCLSH	A-4(0)	SC
238	0- 5	05+	0.0	0.0	0.0	2.7	14.1	35.2	23.5	24.5	14.1	28.6	8.3	0.0	0.0	0.0	2.73	CL	A-4(4)	SC
239	0- 7	07+	0.0	0.0	0.0	0.0	4.1	29.9	48.3	17.7	6.9	24.7	2.9	0.0	0.0	0.0	2.69	SIL	A-4(7)	ML
240	0- 6	06+	0.0	0.0	0.0	0.1	4.9	30.7	47.7	16.6	6.8	28.0	4.8	0.0	0.0	0.0	2.71	L	A-4(6)	ML-CL
241	0- 6	06+	109.1	16.6	14.0	0.0	1.0	15.4	58.5	25.1	15.0	35.0	10.4	28.5	24.8	1.61	2.72	SICL	A-6(8)	ML-CL
242	0- 4		109.9	16.3	5.7	0.0	1.8	18.1	55.4	24.7	12.5	31.4	8.2	25.4	27.2	1.58	2.68	SICL	A-4(8)	ML-CL
	4- 8	0	109.1	16.6	14.0	0.1	1.5	45.8	52.5	11.5	5.3	35.0	10.4	28.5	24.8	1.61	2.72	SICL	A-6(8)	ML-CL
243	0- 3	03+	109.8	17.1	3.0	0.0	1.6	36.4	21.4	40.6	29.5	34.5	16.5	20.3	17.9	1.81	2.68	C	A-6(8)	CL
244	0- 3	03	109.8	17.1	3.0	0.0	1.6	36.4	21.4	40.6	29.5	34.5	16.5	20.3	17.9	1.81	2.68	C	A-6(8)	CL
245	0- 2		108.5	16.9	17.5	0.0	1.2	9.1	57.0	32.7	20.6	34.8	12.1	24.5	25.3	1.60	2.69	SIC	A-6(9)	ML-CL
	2- 3	03+	109.8	17.1	3.0	0.0	1.6	36.4	21.4	40.6	29.5	34.5	16.5	20.3	17.9	1.81	2.68	C	A-6(8)	CL
246	0- 3		108.5	16.9	17.5	0.0	1.2	9.1	57.0	32.7	20.6	34.8	12.1	24.5	25.3	1.60	2.69	SIC	A-6(9)	ML-CL
	3- 5	05	109.8	17.1	3.0	0.0	1.6	36.4	21.4	40.6	29.5	34.5	16.5	20.3	17.9	1.81	2.68	C	A-6(8)	CL
247	0- 2		108.5	16.9	17.5	0.0	1.2	9.1	57.0	32.7	20.6	34.8	12.1	24.5	25.3	1.60	2.69	SIC	A-6(9)	ML-CL
	2- 5	05	109.8	17.1	3.0	0.0	1.6	36.4	21.4	40.6	29.5	34.5	16.5	20.3	17.9	1.81	2.68	C	A-6(8)	CL
248	0- 1		107.8	15.0	13.0	0.0	1.4	27.3	54.1	17.2	8.9	27.7	6.5	22.9	22.8	1.64	2.62	SL	A-4(7)	ML-CL
	1- 7		106.6	17.1	8.5	0.0	0.6	16.8	54.6	28.0	16.8	31.7	9.7	23.9	27.1	1.55	2.67	SICL	A-4(8)	ML-CL
	7- 8	08+	113.7	15.1	5.0	0.0	1.0	28.4	32.6	38.0	24.8	32.4	16.7	20.4	17.8	1.81	2.67	C	A-6(10)	CL
249	0- 3	03+	106.6	17.1	8.5	0.0	0.6	16.8	54.6	28.0	16.8	31.7	9.7	23.9	27.1	1.55	2.67	SICL	A-4(8)	ML-CL
250	0- 6		106.6	17.1	8.5	0.0	0.6	16.8	54.6	28.0	16.8	31.7	9.7	23.9	27.1	1.55	2.67	SICL	A-4(8)	ML-CL
	6- 8	08	113.7	15.1	5.0	0.0	1.0	28.4	32.6	38.0	24.8	32.4	16.7	20.4	17.8	1.81	2.67	C	A-6(10)	CL
251	0- 2	02	111.3	16.2	3.5	0.0	3.2	34.8	15.5	46.5	36.4	35.5	16.6	21.5	20.2	1.74	2.68	C	A-6(8)	CL
252	0- 2		108.5	15.9	9.5	0.0	2.2	15.2	51.6	31.0	16.8	32.6	10.3	24.6	26.2	1.57	2.67	C	A-6(8)	ML-CL
	2- 4	04+	111.3	16.2	3.5	0.0	3.2	34.8	15.5	46.5	36.4	35.5	16.6	21.5	20.2	1.74	2.68	C	A-6(8)	CL
253	0- 3		109.0	17.0	9.0	0.0	1.0	6.6	66.4	26.0	12.5	32.3	10.6	23.2	24.8	1.61	2.68	SICL	A-6(8)	ML-CL
	3- 5	05+	112.2	16.4	5.0	0.0	3.0	14.3	56.2	26.5	12.0	32.9	15.3	21.0	17.5	1.83	2.69	SICL	A-6(8)	CL
254	0- 3	03+	110.1	15.3	8.3	0.0	3.1	8.5	60.4	28.0	11.0	28.7	18.6	21.8	20.5	1.70	2.61	SICL	A-6(11)	CL
255	0- 5	05+	111.9	15.0	9.0	0.0	2.5	9.1	74.4	14.0	2.0	26.3	16.3	21.5	21.7	1.68	2.64	SIL	A-6(9)	CL
256	0- 5	05+	121.9	11.1	10.4	0.0	0.8	54.1	30.1	15.0	9.0	23.3	10.0	14.3	21.8	1.68	2.65	SL	A-2-6(0)	SC
257	0- 1		106.7	16.5	0.0	0.0	1.2	17.2	56.4	25.2	9.0	32.1	9.8	24.2	26.8	1.55	0.0		A-4(8)	ML-CL
	1- 4		106.2	17.5	0.0	0.0	0.4	13.9	51.8	33.9	18.8	36.7	14.3	23.9	24.2	1.63	0.0		A-6(10)	CL
	4- 6	06	99.6	22.9	0.0	0.0	0.9	19.3	26.1	53.7	40.6	53.3	25.4	31.4	22.6	1.68	0.0		A-7-6(17)	MH-CH
258	0- 1		110.5	16.2	0.0	0.0	0.8	30.6	36.4	32.2	20.0	29.9	11.5	20.9	21.2	1.70	0.0		A-6(8)	CL
	1- 2		106.2	17.5	0.0	0.0	0.4	13.9	51.8	33.9	18.8	36.7	14.3	23.9	24.2	1.63	0.0		A-6(10)	CL
	2- 3	03	99.6	22.9	0.0	0.0	0.9	19.3	26.1	53.7	40.6	53.3	25.4	31.4	22.6	1.68	0.0		A-7-6(17)	MH-CH
259	0- 1		107.7	18.1	0.0	0.0	0.7	14.9	56.8	37.6	21.2	38.0	15.8	24.8	22.2	1.65	0.0		A-6(10)	CL
	1- 3	03	94.6	26.0	0.0	0.0	1.9	13.4	15.2	69.5	44.6	67.8	37.1	34.0	20.6	1.74	0.0		A-7-5(20)	CH
260	0- 1	01	94.6	26.0	0.0	0.0	1.9	13.4	15.2	69.5	44.6	67.8	37.1	34.0	20.6	1.74	0.0		A-7-5(20)	CH
261	0- 4	04	107.7	18.1	0.0	0.0	0.7	14.9	56.8	37.6	21.2	38.0	15.8	24.8	22.2	1.65	0.0		A-6(10)	CL
262	0- 2	02	107.7	18.1	0.0	0.0	0.7	14.9	56.8	37.6	21.2	38.0	15.8	24.8	22.2	1.65	0.0		A-6(10)	CL
263	0- 4		112.3	12.2	0.0	19.3	6.7	12.7	26.0	35.3	20.0	31.2	7.0	0.0	18.8	1.60	2.70	C	A-4(5)	ML-CL
	4-13	13	96.7	23.0	2.6	4.5	3.4	7.2	16.2	68.7	40.8	50.4	12.8	0.0	19.9	1.70	2.71	C	A-6(8)	MH
264	0- 8	08	114.1	13.7	5.8	3.4	4.2	25.1	40.4	26.9	19.1	23.7	4.2	0.0	18.4	1.40	2.72	CL	A-4(6)	ML-CL
265	0- 6	06	114.1	13.7	5.8	3.4	4.2	25.1	40.4	26.9	19.1	23.7	4.2	0.0	18.4	1.40	2.72	CL	A-4(6)	ML-CL
266	0- 5	05+	111.6	13.8	8.8	3.0	2.6	45.8	21.6	27.0	15.1	24.4	6.1	0.0	18.1	1.80	2.73	SCL	A-4(3)	SM-SC
267	0-10	10	109.1	16.6	17.8	3.5	1.1	30.1	35.9	29.4	19.6	22.6	5.2	0.0	20.0	1.70	2.68	CL	A-4(6)	ML-CL
268	0-10		114.7	15.0	9.8	2.8	3.1	25.6	40.4	28.1	17.8	27.2	5.5	0.0	14.5	1.80	2.66	CL	A-4(7)	ML-CL
	10-35	35	122.9	12.6	0.0	2.1	36.7	42.0	7.8	11.4	4.9	19.9	1.3	0.0	0.0	0.0	2.70	S	A-2	SM
269	0- 6	06	115.2	11.7	0.0	4.3	5.5	72.0	9.6	8.6	3.4	0.0	0.0	0.0	0.0	0.0	2.66	S	A-3	SM
270	0- 9	09	113.8	14.9	6.7	1.8	1.7	21.0	36.8	38.7	26.2	31.6	8.7	0.0	14.5	1.80	2.64	C	A-4(8)	ML-CL
271	0- 8	08	105.2	19.6	3.5	1.6	2.6	9.0	37.0	49.8	32.5	38.5	11.8	0.0	19.1	1.80	2.70	C	A-6(8)	ML-CL
	12-16	16	109.0	16.0	0.0	2.5	1.0	6.5	23.1	66.9	35.4	41.4	13.0	0.0	16.4	1.90	2.63	C	A-7-6(9)	ML
272	0- 6		105.2	18.7	4.8	0.9	0.7	18.7	28.6	51.1	33.8	39.3	16.6	0.0	18.4	1.80	2.69	C	A-6(10)	CL
	6-12	12	113.4	14.1	0.0	0.2	1.4	16.9	50.7	30.8	17.7	28.7	6.5	0.0	0.0	0.0	2.70	C	A-4(8)	ML-CL

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
273	0-10		107.3	18.8	4.5	10.0	12.1	14.5	30.3	33.1	22.8	25.0	3.0	0.0	14.9	1.90	2.69	C	A-4(6)	ML
	10-27	27	107.8	15.6	0.0	6.8	8.1	15.3	31.0	38.8	25.9	33.8	7.5	0.0	20.6	1.70	2.64	C	A-4(7)	ML
274	0- 3		110.7	16.6	8.0	1.7	2.5	22.5	41.5	31.8	20.6	27.8	5.3	0.0	14.5	1.90	2.66	C	A-4(8)	ML-CL
	3- 6	06	113.1	14.8	7.6	3.5	5.0	41.6	21.7	28.7	19.1	25.6	3.3	0.0	16.6	1.80	2.69	CL	A-4(3)	ML
275	0- 6	06	104.1	21.0	2.2	12.2	4.4	14.0	29.7	39.7	29.5	27.8	5.3	0.0	14.5	1.80	2.63	C	A-4(7)	ML-CL
276	0- 8	08+	112.0	15.8	3.4	2.6	2.6	14.7	40.9	39.2	21.2	33.0	10.0	0.0	16.1	1.80	2.69	C	A-4(8)	ML-CL
277	0-14	14	110.2	16.4	4.8	0.4	0.4	24.5	43.8	30.9	20.3	29.1	5.4	0.0	19.0	1.80	2.72	C	A-4(8)	ML-CL
278	0- 3	03+	113.5	17.6	0.0	1.2	2.8	15.6	44.1	36.3	23.3	30.6	7.5	0.0	21.2	1.90	2.71	C	A-4(8)	ML-CL
279	0- 5		114.4	14.1	0.0	1.3	3.8	39.8	21.1	34.0	20.5	28.9	17.3	0.0	16.9	1.90	2.71	C	A-6(7)	CL
	5-11	11	109.8	14.6	7.1	0.7	1.7	25.1	40.8	31.7	20.9	29.9	6.1	0.0	15.8	1.80	2.66	C	A-4(7)	ML-CL
280	0- 5		114.0	15.3	0.0	7.8	2.0	31.1	37.6	21.5	12.1	25.6	3.2	0.0	19.0	1.80	2.71	CL	A-4(5)	ML
	5-11	11+	114.0	15.0	0.0	7.0	1.7	22.3	36.6	32.4	18.2	29.4	6.0	0.0	19.8	1.80	2.69	C	A-4(7)	ML-CL
281	0- 3		109.1	17.2	5.2	3.5	5.6	19.4	31.6	39.9	27.1	37.3	13.2	0.0	16.6	1.90	2.65	C	A-6(8)	ML-CL
	3-14	14	105.2	20.0	6.8	1.3	1.4	28.0	27.0	42.3	27.3	34.0	10.1	0.0	15.9	1.90	2.63	C	A-6(7)	ML-CL
282	0- 9	09+	109.1	17.2	5.2	3.5	5.6	19.4	31.6	39.9	27.1	37.3	13.2	0.0	16.6	1.90	2.65	C	A-6(8)	ML-CL
283	0- 3		107.2	17.0	4.7	0.1	1.4	15.7	54.4	28.4	16.1	29.6	3.4	0.0	19.3	1.80	2.69	SICL	A-4(8)	ML
	3- 8		107.3	18.4	5.3	0.5	1.1	27.0	23.2	48.2	34.9	35.5	11.3	0.0	18.7	1.90	2.69	C	A-6(7)	ML-CL
	8-12	12+	118.6	13.5	0.0	3.4	3.1	38.9	26.5	28.1	16.4	26.1	4.6	0.0	16.7	1.80	2.70	CL	A-4(4)	ML-CL
284	0- 1		107.2	17.0	4.7	0.1	1.4	15.7	54.4	28.4	16.1	29.6	3.4	0.0	19.3	1.80	2.69	SICL	A-4(8)	ML
	1- 5		107.3	18.4	5.3	0.5	1.1	27.0	23.2	48.2	34.9	35.5	11.3	0.0	18.7	1.90	2.69	C	A-6(7)	ML-CL
	5- 8		110.2	17.0	6.0	0.8	1.3	26.8	33.7	37.4	28.1	31.8	15.0	0.0	18.1	1.80	2.70	C	A-6(9)	CL
	8-11	11+	118.6	13.5	0.0	3.4	3.1	38.9	26.5	28.1	16.4	26.1	4.6	0.0	16.7	1.80	2.70	CL	A-4(4)	ML-CL
285	0- 2		107.2	17.0	4.7	0.1	1.4	15.7	54.4	28.4	16.1	29.6	3.4	0.0	19.3	1.80	2.69	SICL	A-4(8)	ML
	2-10	10+	110.2	17.0	6.0	0.8	1.3	26.8	33.7	37.4	28.1	31.8	15.0	0.0	18.1	1.80	2.70	C	A-6(9)	CL
286	0- 9	09+	110.2	17.0	6.0	0.8	1.3	26.8	33.7	37.4	28.1	31.8	15.0	0.0	18.1	1.80	2.70	C	A-6(9)	CL
287	0- 4		110.8	17.0	7.5	2.6	2.2	20.2	39.5	35.5	16.3	32.0	8.8	0.0	17.1	1.80	2.70	C	A-4(8)	ML-CL
	4-12	12+	113.9	12.8	0.0	3.5	0.8	32.0	39.5	30.2	18.7	39.3	16.6	0.0	19.1	1.70	2.71	C	A-6(9)	CL
288	0- 8	08	106.2	17.1	5.3	1.5	3.4	14.3	47.2	33.6	23.5	30.0	27.2	0.0	14.3	1.80	2.67	C	A-4(8)	CL
289	0- 2		111.9	16.8	4.6	1.7	0.9	14.8	49.9	32.7	23.4	29.7	6.5	0.0	16.4	1.90	2.70	C	A-4(8)	ML-CL
	2- 6	06+	115.7	13.6	0.0	0.1	0.2	23.1	23.5	53.1	36.2	31.4	12.0	0.0	18.6	1.80	2.75	C	A-6(9)	CL
290	0- 4	04	109.6	16.5	6.7	4.6	5.2	23.8	34.6	31.8	20.0	26.9	7.1	0.0	17.5	1.90	2.73	C	A-4(6)	CL
291	0- 8	08+	110.7	14.5	11.3	10.4	6.8	28.7	24.3	29.8	16.5	25.1	9.1	0.0	16.8	2.10	2.71	CL	A-4(4)	CL
292	0- 5	05	116.0	12.7	7.4	1.7	2.3	26.0	37.5	32.5	19.4	29.5	6.6	0.0	18.3	2.00	2.73	C	A-4(7)	ML-CL
293	0- 7	07+	110.1	15.3	6.7	0.7	0.9	51.3	21.1	26.0	13.4	19.5	0.0	0.0	0.0	0.0	2.71	SCL	A-4(3)	SM
294	0- 4	04	110.3	16.9	6.9	0.8	4.1	24.2	40.4	31.3	21.0	27.5	9.0	0.0	17.9	1.90	2.71	C	A-4(7)	CL
295	0- 7	07+	110.2	15.5	9.7	6.3	2.1	26.9	37.8	26.9	19.2	25.5	3.4	0.0	16.9	1.90	2.73	CL	A-4(6)	ML
296	0- 2		110.2	16.0	0.0	0.0	3.9	17.1	36.9	42.1	24.8	31.2	7.6	0.0	18.4	1.80	2.72	C	A-4(8)	ML-CL
	2-10	10+	109.8	17.5	0.0	5.4	3.7	7.8	35.6	47.5	27.5	29.6	11.4	0.0	19.1	1.50	2.73	C	A-6(8)	CL
297	0- 3	03	112.1	13.8	0.0	7.6	3.9	25.9	35.2	27.4	12.8	28.6	5.0	0.0	17.5	1.90	2.70	CL	A-4(6)	ML-CL
298	0- 2	02	108.3	19.3	0.0	1.4	2.5	17.7	37.3	41.1	31.8	34.1	18.0	0.0	18.9	1.60	2.71	C	A-6(9)	CL
299	0- 3	03	108.3	19.3	0.0	1.4	2.5	17.7	37.3	41.1	31.8	34.1	18.0	0.0	18.9	1.60	2.71	C	A-6(9)	CL
300	0- 5	05	108.9	18.0	5.2	9.5	3.6	13.1	16.2	57.6	37.6	37.7	16.0	0.0	19.5	1.40	2.72	C	A-6(8)	CL
301	0- 8	08	113.7	15.8	5.0	5.9	4.3	23.2	17.4	40.2	20.0	26.4	5.0	0.0	19.1	1.50	2.71	C	A-4(5)	ML-CL
302	0- 5	05	109.8	17.1	6.1	1.9	4.2	25.5	36.1	32.3	19.5	29.7	6.5	0.0	17.4	1.70	2.72	C	A-4(6)	ML-CL
303	0- 9	09	110.2	16.8	6.6	2.9	3.1	26.8	34.7	32.5	21.2	29.7	5.5	0.0	17.4	1.80	2.72	C	A-4(6)	ML-CL
304	0- 4	04	112.2	15.9	7.8	1.7	2.1	29.7	34.4	32.1	19.5	29.5	6.2	0.0	17.4	1.70	2.72	C	A-4(6)	ML-CL
305	0- 4	04	112.1	19.5	8.6	3.5	7.9	21.7	37.5	29.4	23.2	30.5	6.4	0.0	17.5	1.70	2.71	CL	A-4(6)	ML-CL
306	0- 4	04	107.3	19.5	7.1	3.3	5.9	25.0	29.1	36.7	23.3	31.0	6.3	0.0	17.8	1.90	2.72	C	A-4(6)	ML-CL
307	0- 6	06	107.2	18.0	6.5	1.7	3.8	16.9	35.8	41.8	26.5	33.8	8.5	0.0	18.6	1.80	2.73	C	A-4(8)	ML-CL
308	0- 4	04	114.2	15.5	0.0	11.5	5.8	29.2	24.1	29.4	16.7	29.3	5.6	0.0	17.1	1.80	2.71	CL	A-4(4)	ML-CL
309	0- 2	02	102.0	22.0	0.0	10.8	2.6	17.3	24.6	44.7	30.8	37.3	5.7	0.0	0.0	0.0	2.72	C	A-4(7)	ML
310	0- 2	02	108.2	18.0	0.0	3.1	6.4	13.0	35.6	41.9	24.6	33.0	6.8	0.0	19.0	1.50	2.71	C	A-4(8)	ML
311	0- 3	03	106.0	18.2	5.9	4.2	4.7	13.8	41.8	35.5	22.8	35.4	8.3	0.0	18.7	1.60	2.72	C	A-4(8)	ML
312	0- 6	06	105.4	19.0	0.0	0.3	0.5	14.2	50.7	34.3	21.4	33.0	6.5	0.0	18.1	1.70	2.71	C	A-4(8)	ML
313	0- 4		105.4	19.0	0.0	0.3	0.5	14.2	50.7	34.3	21.4	33.0	6.5	0.0	18.1	1.70	2.71	C	A-4(8)	ML
	4- 9	09	111.8	16.0	0.0	14.2	7.1	19.2	23.6	35.9	19.5	33.0	9.0	0.0	17.2	1.90	2.72	C	A-4(5)	ML-CL
314	0- 6	06	106.4	18.7	0.0	1.0	1.6	13.9	48.0	35.5	23.1	31.2	5.9	0.0	18.0	1.60	2.70	C	A-4(8)	ML
315	0- 8	08+	111.9	17.0	8.7	0.0	0.5	15.7	46.0	37.8	30.0	26.0	8.4	0.0	17.0	2.20	2.72	C	A-4(8)	CL
316	0- 3	03	109.9	16.0	0.0	0.0	3.9	17.1	36.9	42.1	24.8	31.2	7.6	0.0	18.4	1.80	2.72	C	A-4(8)	ML-CL
317	0- 4	04	107.8	18.2	5.6	3.1	3.7	15.4	35.6	42.2	26.8	37.1	11.2	0.0	18.5	1.80	2.72	C	A-6(8)	ML-CL
318	0-10	10	110.9	16.8	8.3	1.0	4.1	23.2	39.4	32.3	21.0	26.5	8.0	0.0	17.9	1.90	2.71	C	A-4(7)	CL
319	0- 3	03	106.7	18.3	6.4	0.6	1.1	15.9	48.0	34.4	21.7	30.4	4.8	0.0	18.4	1.70	2.70	C	A-4(8)	ML
320	0- 3	03	109.3	17.5	7.3	9.9	4.9	18.7	33.9	32.6	23.3	28.0	15.7	0.0	17.6	1.80	2.71	C	A-6(7)	CL
321	0- 3		121.0	12.0	14.9	13.0	6.6	39.4	18.6	22.4	12.4	21.6	3.0	0.0	19.8	1.90	2.69	SCL	A-4(1)	SM
	3- 9	09	106.0	16.5	0.0	0.3	1.1	13.2	53.3	32.1	19.4	30.4	5.2	0.0	18.8	1.70	2.70	C	A-4(8)	ML
322	0- 2	02	121.0	12.0	14.9	13.0	6.6	39.4	18.6	22.4	12.4	21.6	3.0	0.0	19.8	1.90	2.69	SCL	A-4(1)	SM
323	0- 6	06	105.5	16.5	5.6	1.1	1.5	10.2	30.2	57.0	33.3	41.2	12.1	0.0	21.7	1.00	2.72	C	A-7-6(9)	ML
324	0- 1	01	112.7	13.3	0.0	0.0	3.8	51.2	31.5	13.5	0.6	22.2	4.8	19.1	27.9	1.51	0.0		A-4(2)	SM-SC
325	0- 1	01	112.7	13.3	0.0	0.0	3.8	51.2	31.5	13.5	0.6	22.2	4.8	19.1	27.9	1.51	0.0		A-4(2)	SM-SC
326	0- 1	01	115.9	12.2	0.0	0.0	10.0	55.4	25.6	9.0	0.6	18.7	4.3	16.5	25.0	1.59	0.0		A-2-4(0)	SM-SC
327	0- 1	01	112.7	13.3	0.0	0.0	3.8	51.2	31.5	13.5	0.6	22.2	4.8	19.1	27.9	1.51	0.0		A-4(2)	SM-SC
328	0- 1	01	115.9	12.2	0.0	0.0	10.0	55.4	25.6	9.0	0.6	18.7	4.3	16.5	25.0	1.59	0.0		A-2-4(0)	SM-SC
329	0- 1		112.7	13.3	0.0	0.0	3.8	51.2	31.5	13.5	0.6	22.2	4.8	19.1	27.9	1.51	0.0		A-4(2)	SM-SC
	1- 2	02	108.9	15.7	0.0	0.0	0.1	13.3	56.6	30.0	14.6	32.3	11.6	22.9	26.6	1.55	0.0		A-6(9)	CL
330	0- 1		107.9	16.6	0.0	0.0	1.4	16.0	49.0	33.6	13.6	33.8	12.6	23.4	25.2	1.59	0.0		A-6(9)	CL
	1- 3	03	107.5	17.3	0.0	0.0	1.1	12.3	48.6	38.0	20.6	40.1	16.5	25.5	23.8	1.62	0.0		A-7-6(11)	ML-CL
331	0- 1		107.9	16.6	0.0	0.0	1.4	16.0	49.0	33.6	13.6	33.8	12.6	23.4	25.2	1.59	0.0		A-6(9)	CL
	1- 3		107.5	17.3	0.0	0.0	1.1	12.3	48.6	38.0	20.6	40.1	16.5	25.5	23.8	1.62	0.0		A-7-6(11)	ML-CL
	3- 5	05	108.5	17.3	0.0	0.0	0.4	7.0	30.6	62.0	30.6	45.4	20.7	27.0	16.8	1.83	0.0		A-7-6(13)	CL
332	0- 1		107.9	16.6	0.0	0.0	1.4	16.0	49.0	33.6	13.6	33.8	12.6	23.4	25.2	1.59	0.0		A-6(9)	CL
	1- 5		107.5	17.3	0.0	0.0	1.1	12.3	48.6	38.0	20.6	40.1	16.5	25.5	23.8	1.62	0.0		A-7-6(11)	ML-CL
	5- 7	07+	108.5	17.3	0.0	0.0	0.4	7.0	30.6	62.0	30.6	45.4	20.7	27.0	16.8	1.83	0.0		A-7-6(13)	CL
333	0- 2	02	107.5	17.3	0.0	0.0	1.1	12.3	48.6	38.0	20.6	40.1	16.5	25.5	23.8	1.62	0.0		A-7-6(11)	ML-CL
33	0- 1		107.9	16.6	0.0	0.0	1.4	16.0	49.0	33.6	13.6	33.8	12.6	23.4	25.2	1.59	0.0		A-6(9)	CL
	1- 3	03	107.5	17.3	0.0	0.0	1.1	12.3	48.6	38.0	20.6	40.1	16.5	25.5	23.8	1.62	0.0		A-7-6(11)	ML-CL
335	0- 2	02	107.5	17.3	0.0	0.0	1.1	12.3	48.6	38.0	20.6	40.1	16.5	25.5	23.8	1.62	0.0		A-7-6(11)	ML-CL
336	0- 1	01	107.5	17.3	0.0	0.0	1.1	12.3	48.6	38.0	20.6	40.1	16.5	25.5	23.8	1.62	0.0		A-7-6(11)	ML-CL
337	0- 2	02	108.5	17.3	0.0	0.0	0.4	7.0	30.6	62.0	30.6	45.4	20.7	27.0	16.8	1.83	0.0		A-7-6(13)	CL
338	0- 1		107.9	16.6	0.0	0.0	1.4	16.0	49.0	33.6	13.6	33.8	12.6	23.4	25.2	1.59	0.0		A-6(9)	CL
	1- 2		107.5	17.3	0.0	0.0	1.1	12.3	48.6	38.0	20.6	40.1	16.5	25.5	23.8	1.62	0.0		A-7-6(11)	ML-CL
	2- 3	03	108.5	17.3	0.0	0.0	0.4	7.0	30.6	62.0	30.6	45.4	20.7	27.0	16.8	1.83	0.0		A-7-6(13)	CL

COUNTY- OHIO

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	COMPACTION DATA OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SL	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
339	0- 2	02	107.5	17.3	0.0	0.0	1.1	12.3	48.6	38.0	20.6	40.1	16.5	25.5	23.8	1.62	0.0		A-7-6(11)	ML-CL
340	0- 1		106.6	17.8	0.0	0.0	19.0	43.2	42.2	37.4	21.6	44.0	21.8	24.9	22.1	1.68	0.0		A-7-6(14)	CL
	1- 2	02	106.7	18.7	0.0	0.0	3.0	19.2	30.9	46.9	31.3	50.9	28.0	24.9	19.8	1.75	0.0		A-7-6(17)	CH
341	0- 1		105.2	16.2	0.0	0.0	1.2	22.2	65.2	11.4	0.6	26.5	6.3	21.5	26.5	1.55	0.0		A-4(8)	ML-CL
	1- 2	02	106.6	17.8	0.0	0.0	19.0	43.2	42.2	37.4	21.6	44.0	21.8	24.9	22.1	1.68	0.0		A-7-6(14)	CL
342	0- 1		105.2	16.2	0.0	0.0	1.2	22.2	65.2	11.4	0.6	26.5	6.3	21.5	26.5	1.55	0.0		A-4(8)	ML-CL
	1- 2	02	106.6	17.8	0.0	0.0	19.0	43.2	42.2	37.4	21.6	44.0	21.8	24.9	22.1	1.68	0.0		A-7-6(14)	CL
343	0- 1		106.6	17.8	0.0	0.0	19.0	43.2	42.2	37.4	21.6	44.0	21.8	24.9	22.1	1.68	0.0		A-7-6(14)	CL
	1- 2	02	106.7	18.7	0.0	0.0	3.0	19.2	30.9	46.9	31.3	50.9	28.0	24.9	19.8	1.75	0.0		A-7-6(17)	CH
344	0- 1		106.0	15.6	0.0	0.0	0.9	15.7	61.8	21.6	4.6	30.8	10.7	21.3	26.8	1.54	0.0		A-6(8	CL
	1- 2	02	109.9	17.8	0.0	0.0	0.5	18.9	49.2	31.4	15.6	37.8	14.7	24.9	25.8	1.58	0.0		A-6(10)	ML-CL
345	0- 1		111.2	13.8	0.0	0.0	1.6	45.8	34.2	18.4	1.6	26.5	9.1	19.3	26.5	1.56	0.0		A-4(4)	CL
	1- 2	02	109.9	17.8	0.0	0.0	0.5	18.9	49.2	31.4	15.6	37.8	14.7	24.9	25.8	1.58	0.0		A-6(10)	ML-CL

COUNTY- WEBSTER

SAMPLE NUMBER	SOIL DEPTH (FT)	DEPTH TO BED-ROCK (FT)	COMPACTION DATA DRY UNIT WT (PCF)	OPT MC	CBR	GRADATION PER CENT +2.0 (MM)	2.0-.42 (MM)	.42-.074 (MM)	.074-.005	-.005 (MM)	-.001 (MM)	LL	PI	FME	SI	SR	SPECIFIC GRAVITY	CLASSIFICATION TEXTURAL	AASHO	UNIFIED
1	0- 3	03+	106.0	15.1	6.2	0.0	1.5	10.5	59.3	28.7	20.0	31.1	8.4	23.9	21.9	1.66	2.62	SICL	A-4(8)	ML-CL
2	0- 7	07	106.0	15.1	6.2	0.0	1.5	10.5	59.3	28.7	20.0	31.1	8.4	23.9	21.9	1.66	2.62	SICL	A-4(8)	ML-CL
3	0- 6	06+	106.0	15.1	6.2	0.0	1.5	10.5	59.3	28.7	20.0	31.1	8.4	23.9	21.9	1.66	2.62	SICL	A-4(8)	ML-CL
4	0- 6	06+	106.1	18.5	7.9	0.0	0.7	9.1	59.8	30.4	19.8	35.0	9.9	30.5	25.4	1.58	2.65	SIC	A-4(8)	ML-CL
5	0- 6	06+	106.1	18.5	7.9	0.0	0.7	9.1	59.8	30.4	19.8	35.0	9.9	30.5	25.4	1.58	2.65	SIC	A-4(8)	ML-CL
6	0- 3	03+	106.1	18.5	7.9	0.0	0.7	9.1	59.8	30.4	19.8	35.0	9.9	30.5	25.4	1.58	2.65	SIC	A-4(8)	ML-CL
7	0- 3	03+	106.1	18.5	7.9	0.0	0.7	9.1	59.8	30.4	19.8	35.0	9.9	30.5	25.4	1.58	2.65	SIC	A-4(8)	ML-CL
8	0- 5	05+	106.1	18.5	7.9	0.0	0.7	9.1	59.8	30.4	19.8	35.0	9.9	30.5	25.4	1.58	2.65	SIC	A-4(8)	ML-CL
9	0- 5	05	106.1	18.5	7.9	0.0	0.7	9.1	59.8	30.4	19.8	35.0	9.9	30.5	25.4	1.58	2.65	SIC	A-4(8)	ML-CL
10	0- 4	04+	103.4	18.7	19.5	0.0	0.2	7.6	53.8	33.4	28.8	39.2	12.4	31.8	26.6	1.55	2.66	C	A-6(9)	ML-CL
11	0- 4	04	103.4	18.7	19.5	0.0	0.2	7.6	53.8	33.4	28.8	39.2	12.4	31.8	26.6	1.55	2.66	C	A-6(9)	ML-CL
12	0-12	12+	103.4	18.7	19.5	0.0	0.2	7.6	53.8	33. 4	28.8	39.2	12.4	31.8	26.6	1.55	2.66	C	A-6(9)	ML-CL
3	0- 5		103.4	18.7	19.5	0.0	0.2	7.6	53.8	33.4	28.8	39.2	12.4	31.8	26.6	1.55	2.66	C	A-6(9)	ML-CL
	5-10	10+	117.5	11.6	13.6	0.0	0.9	54.3	23.6	21.2	11.8	19.5	3.6	18.4	18.2	1.79	2.67	SCL	A-4(2)	SM
14	0- 8	08+	117.5	11.6	13.6	0.0	0.9	54.3	23.6	21.2	11.8	19.5	3.6	18.4	18.2	1.79	2.67	SCL	A-4(2)	SM
15	0- 7	07	117.5	11.6	13.6	0.0	0.9	54.3	23.6	21.2	11.8	19.5	3.6	18.4	18.2	1.79	2.67	SCL	A-4(2)	SM
16	0- 6	06+	103.9	16.6	9.6	0.0	0.1	7.8	55.9	36.2	29.5	45.4	21.7	26.2	26.0	1.58	2.68	C	A-7-6(14)	CL
17	0- 5	05	103.9	16.6	9.6	0.0	0.1	7.8	55.9	36.2	29.5	45.4	21.7	26.2	26.0	1.58	2.68	C	A-7-6(14)	CL
18	0- 7	07	103.9	16.6	9.6	0.0	0.1	7.8	55.9	36.2	29.5	45.4	21.7	26.2	26.0	1.58	2.68	C	A-7-6(14)	CL
19	0- 7	07	103.9	16.6	9.6	0.0	0.1	7.8	55.9	36.2	29.5	45.4	21.7	26.2	26.0	1.58	2.68	C	A-7-6(14)	CL
20	0- 9	09+	103.9	16.6	9.6	0.0	0.1	7.8	55.9	36.2	29.5	45.4	21.7	26.2	26.0	1.58	2.68	C	A-7-6(14)	CL
21	0- 7	07	103.9	16.6	9.6	0.0	0.1	7.8	55.9	36.2	29.5	45.4	21.7	26.2	26.0	1.58	2.68	C	A-7-6(14)	CL
22	0-10	10+	103.9	16.6	9.6	0.0	0.1	7.8	55.9	36.2	29.5	45.4	21.7	26.2	26.0	1.58	2.68	C	A-7-6(14)	CL
23	0- 7	07+	103.9	16.6	9.6	0.0	0.1	7.8	55.9	36.2	29.5	45.4	21.7	26.2	26.0	1.58	2.68	C	A-7-6(14)	CL
24	0- 5	05+	103.9	16.6	9.6	0.0	0.1	7.8	55.9	36.2	29.5	45.4	21.7	26.2	26.0	1.58	2.68	C	A-7-6(14)	CL
25	0- 5	05	103.9	16.6	9.6	0.0	0.1	7.8	55.9	36.2	29.5	45.4	21.7	26.2	26.0	1.58	2.68	C	A-7-6(14)	CL
26	0- 6	06+	103.9	16.6	9.6	0.0	0.1	7.8	55.9	36.2	29.5	45.4	21.7	26.2	26.0	1.58	2.68	C	A-7-6(14)	CL
27	0- 6	06+	100.0	20.9	7.0	0.0	0.0	11.1	55.7	33.2	27.5	38.6	16.2	28.6	25.1	1.60	2.68	SIC	A-6(10)	CL
28	0- 7	07	100.0	20.9	7.0	0.0	0.0	11.1	55.7	33.2	27.5	38.6	16.2	28.6	25.1	1.60	2.68	SIC	A-6(10)	CL
29	0- 8	08+	100.0	20.9	7.0	0.0	0.0	11.1	55.7	33.2	27.5	38.6	16.2	28.6	25.1	1.60	2.68	SIC	A-6(10)	CL
30	0- 6		100.0	20.9	7.0	0.0	0.0	11.1	55.7	33.2	27.5	38.6	16.2	28.6	25.1	1.60	2.68	SIC	A-6(10)	CL
	6-18	18	104.5	17.4	4.2	0.0	0.7	12.9	65.4	21.0	15.8	33.4	6.0	29.0	27.2	1.56	2.70	SICL	A-4(8)	ML
31	0- 8	08+	100.0	20.9	7.0	0.0	0.0	11.1	55.7	33.2	27.5	38.6	16.2	28.6	25.1	1.60	2.68	SIC	A-6(10)	CL
32	0- 7	07	100.0	20.9	7.0	0.0	0.0	11.1	55.7	33.2	27.5	38.6	16.2	28.6	25.1	1.60	2.68	SIC	A-6(10)	CL
33	0- 5	05+	100.0	20.9	7.0	0.0	0.0	11.1	55.7	33.2	27.5	38.6	16.2	28.6	25.1	1.60	2.68	SIC	A-6(10)	CL
34	0- 5	05+	105.3	17.7	6.5	0.0	0.0	11.0	59.0	30.0	19.8	32.7	12.5	24.7	22.7	1.61	2.65	SIC	A-6(9)	CL
35	0- 5	05	105.3	17.7	6.5	0.0	0.0	11.0	59.0	30.0	19.8	32.7	12.5	24.7	22.7	1.61	2.65	SIC	A-6(9)	CL
36	0- 5	05+	105.3	17.7	6.5	0.0	0.0	11.0	59.0	30.0	19.8	32.7	12.5	24.7	22.7	1.61	2.65	SIC	A-6(9)	CL
37	0- 8	08+	103.2	19.8	10.6	0.0	0.0	9.4	52.8	37.8	29.8	37.1	13.8	28.5	25.4	1.59	2.67	C	A-6(10)	ML-CL
38	0- 8	08	103.2	19.8	10.6	0.0	0.0	9.4	52.8	37.8	29.8	37.1	13.8	28.5	25.4	1.59	2.67	C	A-6(10)	ML-CL
39	0- 7	07+	103.2	19.8	10.6	0.0	0.0	9.4	52.8	37.8	29.8	37.1	13.8	28.5	25.4	1.59	2.67	C	A-6(10)	ML-CL
40	0- 5	05+	110.2	16.0	5.5	0.0	0.6	9.0	57.0	33.4	27.5	34.0	14.7	29.2	20.7	1.73	2.69	SIC	A-6(10)	CL
41	0- 9		102.0	20.0	8.5	0.0	0.0	19.0	50.4	30.6	21.8	44.5	21.5	29.0	23.3	1.62	2.67	C	A-7-6(13)	CL
	9-17	17+	110.2	16.0	5.5	0.0	0.6	9.0	57.0	33.4	27.5	34.0	14.7	29.2	20.7	1.73	2.69	SIC	A-6(10)	CL
42	0-10	10+	102.0	20.0	8.5	0.0	0.0	19.0	50.4	30.6	21.8	44.5	21.5	29.0	23.3	1.62	2.67	C	A-7-6(13)	CL
43	0- 7		102.0	20.0	8.5	0.0	0.0	19.0	50.4	30.6	21.8	44.5	21.5	29.0	23.3	1.62	2.67	C	A-7-6(13)	CL
	7-11	11+	110.2	16.0	5.5	0.0	0.6	9.0	57.0	33.4	27.5	34.0	14.7	29.2	20.7	1.73	2.69	SIC	A-6(10)	CL
44	0- 5	05	106.8	18.0	5.1	0.0	0.8	13.7	42.1	43.4	17.6	37.6	13.7	26.7	24.9	1.61	2.69	C	A-6(10)	ML-CL
45	0- 5		112.1	15.2	11.3	0.0	0.1	10.5	65.2	24.2	17.0	32.3	10.0	23.8	25.4	1.50	2.67	SICL	A-4(8)	ML-CL
	5-18		119.3	14.0	3.6	.0	10.2	23.2	24.8	41.8	23.0	33.7	15.7	19.8	15.5	1.90	2.69	C	A-6(7)	CL
	18-25	25	119.6	13.3	2.7	0.0	13.4	19.4	24.4	42.8	25.4	35.3	15.4	20.0	15.6	1.91	2.72	SH	A-6(6)	CL
46	0- 4		112.1	15.2	11.3	0.0	0.1	10.5	65.2	24.2	17.0	32.3	10.0	23.8	25.4	1.50	2.67	SICL	A-4(8)	ML-CL
	4-14		119.3	14.0	3.6	0.0	10.2	23.2	24.8	41.8	23.0	33.7	15.7	19.8	15.5	1.90	2.69	C	A-6(7)	CL
47	0-12	12+	108.0	16.3	5.2	0.0	0.7	13.7	65.6	20.0	11.8	26.0	3.9	23.4	26.5	1.55	2.63	SICL	A-4(8)	ML
48	0-10	10+	106.4	17.9	5.8	0.0	0.1	9.3	57.8	32.8	24.4	34.4	11.4	25.2	26.8	1.55	2.65	SC	A-6(10)	ML-CL
49	0-18		109.7	18.4	7.8	0.0	0.7	30.9	41.8	26.6	19.6	25.9	7.3	21.8	27.1	1.55	2.67	CL	A-4(7)	CL
	18-24	24+	112.2	15.7	2.3	0.0	0.6	18.6	22.4	48.4	29.2	38.9	17.9	22.9	17.1	1.83	2.66	C	A-6(9)	CL
50	0-10	10	107.0	17.4	10.0	0.0	0.2	11.2	61.2	27.4	19.4	30.9	7.9	23.8	26.1	1.57	2.66	SICL	A-4(8)	ML-CL
51	0- 8	08+	0.0	0.0	0.0	0.0	18.0	9.0	31.2	58.0	37.6	42.9	19.0	27.7	19.0	1.81	2.76	C	A-7-6(12)	CL
52	0-15		0.0	0.0	0.0	0.0	19.0	9.2	43.5	45.4	25.4	30.8	11.1	21.3	17.1	1.79	2.58	C	A-6(8)	CL
	15-22	22+	0.0	0.0	0.0	0.0	0.5	1.5	34.0	64.0	34.6	36.3	12.3	26.5	18.5	1.77	2.63	C	A-6(8)	ML-CL
53	0-15	15+	0.0	0.0	0.0	0.0	0.1	6.9	15.8	77.2	46.2	46.1	20.9	27.9	16.6	1.87	2.71	C	A-7-6(13)	ML-CL
54	0-12	12+	0.0	0.0	0.0	0.0	0.1	5.9	11.0	83.0	52.6	44.4	19.4	30.3	16.9	1.84	2.67	C	A-7-6(13)	ML-CL
55	0-12		110.8	15.9	6.3	0.0	0.4	6.8	63.8	29.0	20.4	34.0	13.4	22.0	22.4	1.66	2.64	SICL	A-6(11)	CL
	12-19	19+	105.9	19.8	2.2	0.0	1.9	6.9	29.6	61.6	43.4	41.6	20.8	22.7	16.0	1.89	2.71	C	A-7-6(18)	CL
56	0-12		110.8	15.9	6.3	0.0	0.4	6.8	63.8	29.0	20.4	34.0	13.4	22.0	22.4	1.66	2.64	SICL	A-6(11)	CL
	12-18	18+	105.9	19.8	2.2	0.0	1.9	6.9	29.6	61.6	43.4	41.6	20.8	22.7	16.0	1.89	2.71	C	A-7-6(18)	CL
57	0-15		110.8	15.9	6.3	0.0	0.4	6.8	63.8	29.0	20.4	34.0	13.4	22.0	22.4	1.66	2.64	SICL	A-6(11)	CL
	15-25	25+	105.9	19.8	2.2	0.0	1.9	6.9	29.6	61.6	43.4	41.6	20.8	22.7	16.0	1.89	2.71	C	A-7-6(18)	CL
58	0-15		110.8	15.9	6.3	0.0	0.4	6.8	63.8	29.0	20.4	34.0	13.4	22.0	22.4	1.66	2.64	SICL	A-6(11)	CL
	15-25	25+	115.6	15.0	2.6	0.0	1.6	25.8	36.0	36.6	22.2	33.7	13.0	21.4	17.7	1.83	2.71	C	A-6(9)	CL
59	0-10	10+	110.8	15.9	6.3	0.0	0.4	6.8	63.8	29.0	20.4	34.0	13.4	22.0	22.4	1.66	2.64	SICL	A-6(11)	CL
60	0-10	10+	0.0	0.0	0.0	0.0	4.8	46.8	23.6	24.8	16.8	30.5	4.3	16.8	21.6	1.66	2.59	SCL	A-4(3)	SM
61	0-10		0.0	0.0	0.0	0.0	4.8	46.8	23.6	24.8	16.8	30.5	4.3	16.8	21.6	1.66	2.59	SCL	A-4(3)	SM
	10-20	20+	0.0	0.0	0.0	0.0	4.1	77.5	8.6	9.8	4.2	0.0	0.0	0.0	23.6	1.63	2.65	S	A-2-4(0)	SM
62	0-10	10+	0.0	0.0	0.0	0.0	4.8	46.8	23.6	24.8	16.8	30.5	4.3	16.8	21.6	1.66	2.59	SCL	A-4(3)	SM

APPENDIX D

GENERAL ENGINEERING CHARACTERISTICS AND RELATIVE DESIRABILITY RATINGS FOR DISTURBED AND UNDISTURBED SOILS AT RESIDENTIAL BUILDING SITES

PERFORMANCE CHARACTERISTICS OF DISTURBED SOILS AT RESIDENTIAL BUILDING SITES (FROM REFERENCE *12*)

MAJOR DIVISIONS		GROUP SYMBOLS	TYPICAL NAMES OF SOIL GROUPS	GENERAL CHARACTERISTICS: WORKABILITY AS A CONSTRUCTION MATERIAL	COMPACTION CHARACTERISTICS	DRY UNIT WEIGHT (LB PER CU FT): STD. AASHO	DRY UNIT WEIGHT (LB PER CU FT): MOD. AASHO	SHEARING STRENGTH WHEN COMPACTED AND SATURATED	COMPRESSIBILITY WHEN COMPACTED AND SATURATED	EXPANSION POTENTIAL WHEN COMPACTED	PERMEABILITY AND PERCOLATION CHARACTERISTICS WHEN COMPACTED (CM PER SEC)	POTENTIAL FROST ACTION	CORROSION POTENTIAL
Coarse-Grained Soils	Gravels and Gravelly Soils	GW	Well-graded gravels, gravel-sand mixtures, little or no fines	1	1	125-135	125-140	1	1	1	$> 10^{-2}$ Pervious	1	1
		GP	Poorly graded gravels or gravel-sand mixtures, little or no fines	2	2	110-125	110-140	2	1	1	$> 10^{-2}$ Very pervious	1	1
		GM	Silty gravels, gravel-sand-silt mixtures	2	4	115-135	115-145	5	2	1	10^{-3} to 10^{-6} Semi-pervious to impervious	2-3	1
		GC	Clayey gravels, gravel-sand-clay mixtures	2	3	115-130	120-145	6	3	2	10^{-6} to 10^{-8} Impervious	2-3	2
	Sands and Sandy Soils	SW	Well-graded sands, gravelly sands, little or no fines	1	1	105-120	110-130	3	1	1	$> 10^{-3}$ Pervious	1	1
		SP	Poorly graded sands or gravelly sands, little or no fines	3	2	100-120	105-135	4	1	1	$> 10^{-3}$ Pervious	1	1
		SM	Silty sand, sand-silt mixtures	3	4	100-125	100-135	7	3	1	10^{-3} to 10^{-6} Semi-pervious to impervious	4	2
		SC	Clayey sands, sand-clay mixtures	2	3	105-125	110-135	8	3	2	10^{-6} to 10^{-8} Impervious	4	2
Fine-Grained Soils	Silts and Clays, LL < 50%	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with light plasticity	3-4	4-6	85-115	90-125	9	4	2	10^{-3} to 10^{-6} Semi-pervious to impervious	3-5	2
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	3	4	90-120	90-130	9	5	3	10^{-6} to 10^{-8} Impervious	3-4	3
		OL	Organic silts and organic silty clays of low plasticity	4	7	80-100	90-105	9	6	3	10^{-4} to 10^{-6} Semi-pervious to impervious	3-4	4
	Silts and Clays, LL > 50%	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	4	4-8	70-95	80-105	10	6	2	10^{-4} to 10^{-6} Semi-pervious to impervious	3-5	2
		CH	Inorganic clays of high plasticity, fat clays	5	4-7	75-105	85-115	10	7	3	10^{-6} to 10^{-8} Impervious	3	3
		OH	Organic clays of medium to high plasticity, organic silts	5	8	65-100	75-110	10	7	3	10^{-6} to 10^{-8} Impervious	3	4
Highly Organic Soils		Pt	Peat and other highly organic soils	NS	NS	NS	NS	NS	NS	NS	NS	2	5

PERFORMANCE CHARACTERISTICS OF UNDISTURBED SOILS AT RESIDENTIAL BUILDING SITES (FROM REFERENCE *12*)

MAJOR DIVISIONS		GROUP SYMBOLS	RELATIVE DESIRABILITY FOR VARIOUS USES[a]								
			ROADWAYS					FOUNDATIONS	WATER AND SEWERAGE PURPOSES		
			SUBBASE WHEN NOT SUBJECT TO FROST ACTION	BASE WHEN NOT SUBJECT TO FROST ACTION	SUBBASE WHEN SUBJECT TO FROST ACTION	WEARING SURFACE (UNTREATED)	SURFACE STABILIZATION WITH ADDITIVES	LOW BUILDINGS ON COMPACTED FILL	LOW BERM (< 6 ft) FOR SEWAGE LAGOONS	COMPACTED EARTH LINING FOR WATER STORAGE RESERVOIRS AND SEWAGE LAGOONS	DOMESTIC SEWAGE DISPOSAL AREA[b]
Coarse-Grained Soils	Gravels and Gravelly Soils	GW	1	1	1	3	1	1	NS	NS	1
		GP	3	2	3	4	2	2	NS	NS	1
		GM	4	2-4	6	5	1	3	2	4	2
		GC	4	3-4	5	1	2	4	1	1	2
	Sands and Sandy Soils	SW	2	2	2	5	1	2	NS	NS	1
		SP	5	2-4	4	5	1	4	NS	NS	1
		SM	6	3-5	8	6	2	4	4	5	2
		SC	6	5	6	2	2	5	3	2	NS
Fine-Grained Soils	Silts and Clays, LL < 50%	ML	8	NS	10	NS	3	7	6	6	NS
		CL	7	NS	7	7	4	6	5	3	NS
		OL	9	NS	11	NS	5	8	8	7	NS
	Silts and Clays, LL > 50%	MH	10	NS	12	NS	5	9	9	8	NS
		CH	11	NS	9	NS	6	8	7	7	NS
		OH	12	NS	13	NS	6	10	10	NS	NS
Highly Organic Soils		Pt	NS	NS	NS	NS	NS	NS	NS	NS	NS

[a]Numbers in each column indicate relative desirability. The numeral "1" is used for the group or groups usually considered most desirable; higher numbers indicate desirability decreasing with the magnitude of the numbers. The symbol "NS" indicates a soil group is not generally suitable for the use shown or, in the rating of characteristics, its quality is so poor that no relative rating is assigned. In the columns stating the relative ratings of soil groups with reference to unfavorable characteristics, such as compressibility and potential frost action, it should be kept in mind that groups which show little evidence of these unfavorable characteristics are given the lower numerical ratings; on the other hand, where groups are compared with reference to favorable characteristics, such as workability and shearing strength, groups which show greater evidence of these features are given the lower numerical ratings. Numerical comparisons apply only within a single vertical column. It should be clearly recognized that the numerical ratings given are approximate and are intended only as a guide to aid in comparing soils for various purposes.

[b]Fills are not generally suitable for use as domestic sewage disposal areas except for coarse-grained soils on coarse-grained subgrades with favorable topography, and the fills that are used should be large, well designed and properly compacted.

GROUP SYMBOLS	TYPICAL NAMES OF SOIL GROUPS	RELATIVE DESIRABILITY FOR VARIOUS USES*				
		ROADWAY SUBGRADE		FOUNDATIONS FOR LOW BUILDINGS		DOMESTIC SEWAGE DISPOSAL AREA
		NOT SUBJECT TO FROST ACTION	SUBJECT TO FROST ACTION	DENSE OR HARD	LOOSE OR SOFT	
GW	Well-graded gravels, gravel-sand mixtures, little or no fines	1	1	1	1	1
GP	Poorly graded gravels or gravel-sand mixtures, little or no fines	3	3	1	2	1
GM	Silty gravels, gravel-sand-silt mixtures	4	9	2	2	2
GC	Clayey gravels, gravel-sand-clay mixtures	6	5	3	1	2
SW	Well-graded sands, gravelly sands, little or no fines	2	2	1	1	1
SP	Poorly graded sands or gravelly sands, little or no fines	5	4	1	2	1
SM	Silty sand, sand-silt mixtures	6	10	2	2	2
SC	Clayey sands, sand-clay mixtures	7	6	3	2	2
ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	8	11	3	3	2
CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	8	7	3 Expansion very dangerous if dry	3-5	2
OL	Organic silts and organic silty clays of low plasticity	9	12	4 Expansion dangerous	4	2
MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	10	13	5	4	2
CH	Inorganic clays of high plasticity, fat clays	11	8	5 Expansion very dangerous if dry	4 Expansion might be dangerous	NS
OH	Organic clays of medium to high plasticity, organic silts	12	14	6 Expansion dangerous	5	NS
Pt	Peat and other highly organic soils	NS	NS	7	NS	NS

*Numbers in each column indicate relative desirability. The numeral "1" is used for the group or groups usually considered most desirable; higher numbers indicate desirability decreasing with the magnitude of the numbers. **Numerical comparisons apply only within a single vertical column.** The symbol "NS" indicates a soil group is not generally suitable for the use shown. It should be clearly recognized that the numerical ratings given are approximate and are intended only as a guide to aid in comparing soils for various purposes; conditions and environment will often make different numerical sequences not only desirable but necessary.