

LEGEND

- AUGER BORING LOCATION - PLAN VIEW
- PRESS AND/OR DRIVE SAMPLE AND/OR CORE BORING LOCATION - PLAN VIEW
- TOP OF ROCK
- CAPPED PILE
- FOOTING
- FOOTING ON PILE
- HORIZONTAL BAR ON BORING LOG INDICATES THE DEPTH THE SAMPLE WAS TAKEN
- FIGURES BESIDE THE BORING LOG IN PROFILE INDICATE THE NUMBER OF BLOWS FOR STANDARD PENETRATION TEST
X = NO. OF BLOWS FOR FIRST 6"
Y = NO. OF BLOWS FOR SECOND 6"
Z = NO. OF BLOWS FOR THIRD 6"
- W INDICATES FREE WATER ELEVATION
- V INDICATES STATIC WATER ELEVATION

GEOLOGY OF THE SITE

THE PROJECT IS LOCATED ON THE GLACIATED LAKE PLAIN, APPROXIMATELY 0.75 MILES NORTH OF THE LAKE ESCARPMENT MORaine AND FOUR MILES TO THE SOUTH OF LAKE ERIE. THE WISCONSIN AND KANSAN ICE SHEETS PASSED OVER THE AREA AND LEFT ON THE AVERAGE NOT MORE THAN 25 FEET OF GLACIAL DEBRIS WHICH CONSISTS MAINLY OF TILL, THIS IS UNDERLAIN BY BEDROCK CONSISTING OF SILICEOUS SHALES AND THIN, HARD SANDSTONES OF CHAGRIN FORMATION.

EXPLORATION

THE EXPLORATION CONSISTED OF SIX STRUCTURAL AND FOUR ROADWAY TEST BORINGS, MADE BY MEANS OF A MECHANICALLY-POWERED HOLLOW STEM AUGER MOUNTED ON A MOBILE PLATFORM, PERFORMED DURING FEBRUARY AND MARCH, 1993.

INVESTIGATIONAL FINDINGS AND OBSERVATIONS

THE STRUCTURAL BORINGS DISCLOSED INTERVALS OF MEDIUM STIFF TO HARD SANDY SILT, SILT AND CLAY, AND SILTY CLAY; ALSO ENCOUNTERED WAS MEDIUM DENSE TO DENSE SAND AND GRAVEL WITH SAND AND SILT.

THE ROADWAY BORINGS DISCLOSED INTERVALS OF MEDIUM STIFF TO VERY STIFF SANDY SILT, SILT AND CLAY, AND SILTY CLAY, THIS WAS OVERLAID BY ASPHALT AND ROADBASE CONSISTING PRIMARILY OF SAND AND GRAVEL WITH CONCRETE FRAGMENTS.

SOILS ENCOUNTERED ARE CONSIDERED TO BE IN A SOLID CONDITION AS OPPOSED TO SEMI-SOLID OR LIQUID CONDITION.

BEDROCK WAS NOT ENCOUNTERED AT ANY OF THE TEST BORING LOCATIONS WITHIN THE EXPLORED DEPTHS. BASED ON THE INFORMATION OBTAINED FROM THE OHIO GEOLOGICAL SURVEY, BEDROCK IN THE VICINITY OF THE SITE IS ANTICIPATED TO BE PRESENT AT AN APPROXIMATE ELEVATION OF 570.

GROUNDWATER WAS NOT ENCOUNTERED AT ANY OF THE TEST BORING LOCATIONS DURING THE DRILLING OPERATIONS.

SYMBOLS OF ROCK TYPES

- COAL
- WEATHERED MUDSTONE
- MUDSTONE
- WEATHERED SHALE
- SHALE
- CLAYSTONE
- SILTSTONE
- WEATHERED SANDSTONE
- SANDSTONE
- LEACHED DOLOMITE
- DOLOMITE
- LEACHED LIMESTONE
- LIMESTONE
- BOULDERS OR COBBLES

GENERAL INFORMATION

Drive sample / Press sample / Core borings

Drive sample borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O.D., 1-3/8" I.D. split spoon sampler, at 2.5 and/or 5-foot depth intervals, driven by means of a 140 lb. drop hammer with a free fall of 30". The number of blows required to drive the sampler 18" is considered the standard penetration test.

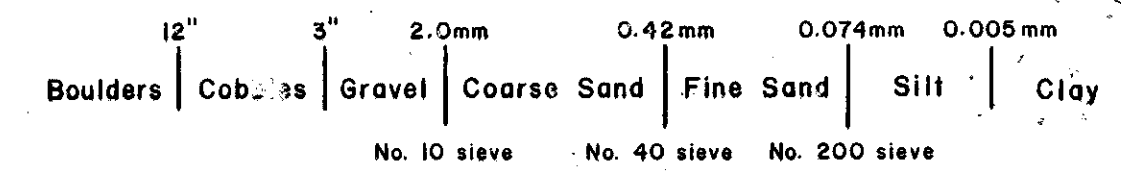
Drive/press borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O.D., 1-3/8" I.D. split spoon sampler, and 3" O.D. thin wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drilling machine.

Core borings are made by means of a mechanically-powered rotary-type drilling machine, employing a NXM core barrel with industrial diamond cutting head.

The boring log sheets display a graphic plot of the information obtained including depth and elevation of the sample, type of sample, the standard penetration test readings in three 6-inch increments, depth and elevation of press samples, field number assigned to samples, sample description - based on laboratory tests utilizing the Casagrande AC classification system - and gradation, plasticity and moisture determinations. Results of strength and consolidation testing, if performed on undisturbed samples, will appear graphically on separate enclosures. Rock samples are displayed on the log sheets including depth and elevation of the sample, amount of recovery and a visual classification based on type, color, degree of hardness, grain size, deterioration, bedding, acid reaction and other qualifying factors.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be utilized, a wash sample is procured and visually classified, in order to determine the general characteristics of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

PARTICLE SIZE DEFINITIONS



NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. R & R INTERNATIONAL, INC. ONLY GUARANTEES THAT DATA WHERE ACTUAL SAMPLES WERE SECURED AND TESTED. VARIATIONS WITHIN THE SAMPLING INTERVALS, AS WELL AS AMONG THE TEST LOCATIONS, MAY AND PROBABLY DO EXIST. INFORMATION PROVIDED HERE IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.

ALL SOIL AND BEDROCK INFORMATION COLLECTED FOR THIS PROJECT, WHICH CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE FOUNDATION INVESTIGATION SHEETS, HAS BEEN SO REPORTED. SOME ADDITIONAL SUBSURFACE INVESTIGATION, SOIL TESTS, AND BEDROCK BORINGS MAY BE AVAILABLE. CONTACT R & R INTERNATIONAL'S CORPORATE OFFICE TO CHECK IF ADDITIONAL INFORMATION IS AVAILABLE.

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STRUCTURE FOUNDATION INVESTIGATION
 BRIDGE NO. LAK-2-955 L/R
 OVER STATE ROUTE 615
 LAKE COUNTY, OHIO

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