

GENERAL INFORMATION

INTRODUCTION

The project consists of the proposed extension of 2.7 miles of SR 91, beginning at the junction of SR 91 and USR 20, extending northward, and terminating at Lakeshore Blvd. (SR 283).

Proposed grade indicates fill embankments, maximum 35 feet in height.

GEOLOGY AND OBSERVATIONS OF THE PROJECT

The alignment traverses a portion of the flat, glaciated Lake Plain, where shallow to moderately deep lacustrine and glacial deposits, overlie shales and indurated clays, of Devonian age. Several areas of poor surface drainage were observed along the project.

EXPLORATION

Exploratory borings were made by means of truck-mounted mechanical soil auger and hand auger (in areas of difficult access), between May 14 and 17, 1963.

INVESTIGATIONAL FINDINGS

Materials occurring immediately below proposed grade consist predominantly of silt clays and clays, in the A-6a and A-7-6 classifications, having moisture contents generally in the lower portions of the plastic range, and occasional sandy gravels. Elastic clay was encountered within three feet below proposed grade at stations 263+00 and 267+00.

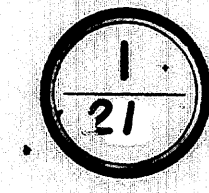
In the embankment foundation areas, materials are predominantly comprised of silt clays, with occasional sandy silts and clays, in the A-4a, A-6a, and A-7-6 classifications, having moisture contents generally in the lower portions of the plastic range. Wet materials were encountered at stations 203+00, 204+50, 223+00, and 244+00. Elastic clays were encountered at stations 206+00, 214+00, 233+00, and 233+00.

LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 183 SAMPLES TESTED

| DESCRIPTION | H. R. B. CLASS | OHIO CLASS | % AGG. | % C. SAND | % F. SAND | % SILT | % CLAY | LIQUID LIMIT | PLASTICITY INDEX | WATER CONTENT | SAMPLES TESTED | |
|---|----------------|------------|--------|-----------|-----------|--------|--------|--------------|------------------|---------------|-----------------------|----|
| Gravel or stone fragments | A-1-a(C) | A-1-a | 68 | 9 | 13 | 1 | 9 | NP | NP | 21 | 2 | |
| Gravel with sand | A-1-b(C) | A-1-b | 47 | 15 | 29 | 3 | 6 | NP | NP | 13 | 1 | |
| Gravel and/or stone fragments with sand and silt | A-2-4(0) | A-2-4 | 40 | 14 | 19 | 12 | 15 | 23 | 4 | 17 | 6 | |
| Sandy silt | A-4(4) | A-4a | 17 | 6 | 21 | 25 | 21 | 25 | 6 | 18 | 21 | |
| Silt and Clay | A-6(8) | A-6a | 12 | 6 | 9 | 21 | 42 | 30 | 12 | 19 | 34 | |
| Silty clay | A-6(11) | A-6b | 11 | 3 | 3 | 29 | 49 | 33 | 17 | 26 | 11 | |
| Elastic clay | A-7-5(13) | A-7-5 | 0 | 1 | 3 | 26 | 66 | 43 | 13 | 30 | 6 | |
| Clay | A-7-6(12) | A-7-6 | 3 | 2 | 3 | 27 | 55 | 44 | 13 | 26 | 25 | |
| Weathered indurated clay | | | | | | | | | | | VISUAL CLASSIFICATION | 2 |
| Weathered shale | | | | | | | | | | | VISUAL CLASSIFICATION | 25 |
| Shale | | | | | | | | | | | VISUAL CLASSIFICATION | |
| Various other materials | | | | | | | | | | | VISUAL CLASSIFICATION | |
| Sod and/or Topsoil | | | | | | | | | | | | |
| Berm material. | | | | | | | | | | | | |
| Auger boring - plan view. | | | | | | | | | | | | |
| Auger boring plotted to vertical scale only. | | | | | | | | | | | | |
| Water content nearly equal to or greater than liquid limit. | | | | | | | | | | | | |
| Indicates a non-plastic material with high water content. | | | | | | | | | | | | |
| Free water. | | | | | | | | | | | | |
| Indicates broken rock interval. | | | | | | | | | | | | |

NOTE: Figures beside borings indicate water content in percent. e.g. 15

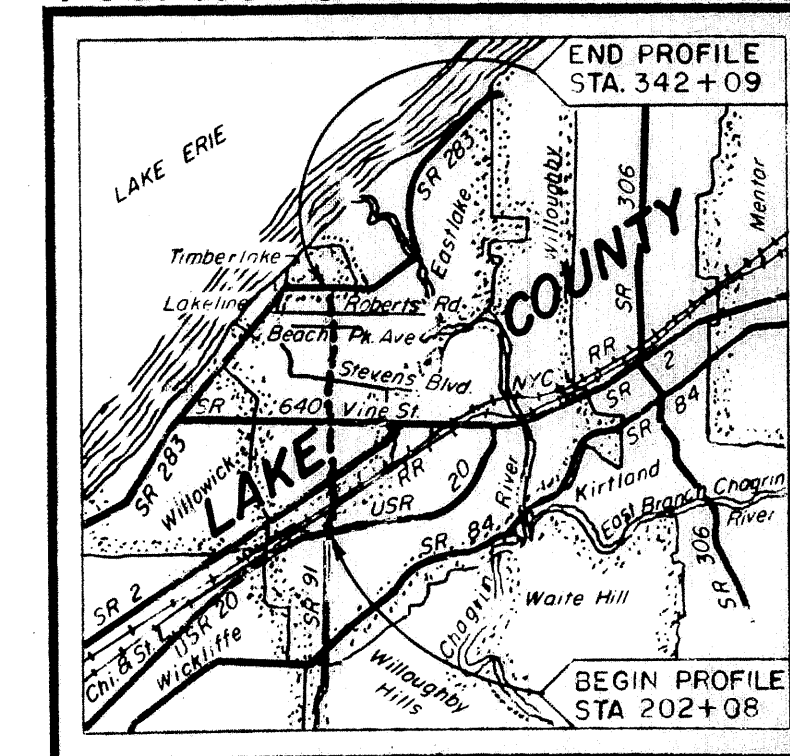
**SOIL PROFILE
LAKE COUNTY
LAK-91-3.84**



OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.

Fed. No. U-



LOCATION MAP

Recon - P.L.H. - 4/16/63
Drilling - L.M.D., J.A.G. - 5/14/63 to 5/17/63
Drafting - C.L.I., F.H.S., E.J.S. - 6/13/63