

#62-F-256 M

NEW BRIDGE

COUNTY RD #17

LOT #7 CON #283

HUNTLEY TWP.

BA 1514

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SOIL INVESTIGATIONS

62-F-256 M

REPORT OF SOIL INVESTIGATION

PROPOSED NEW BRIDGE

COUNTY ROAD NO.17

LOT 7, CONCESSIONS 2 & 3

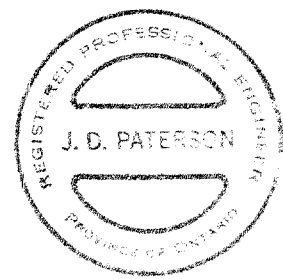
TOWNSHIP OF HUNTLEY

FOR

COUNTY OF CARLETON

REPORT NO. S 269 - 62

OTTAWA, JUNE 6, 1962



Introduction:

At the request of Mr. A. J. Graham, P. Eng., on behalf of the County of Carleton, a soil investigation was conducted at the site of a bridge on County Road 17, Lot 7, Concessions 2 and 3, Township of Huntley.

It is proposed to replace the existing narrow bridge.

At the time of the investigation the road on either side of the bridge was being rebuilt.

Fieldwork Procedure:

Two test holes were put down on diagonally opposite sides of the existing bridge. At each location a cone probe was driven to refusal. Casing was then driven, the soils sampled and bedrock located. The cone probes were driven to check the uniformity of the soils.

The firm of F. E. Johnston was employed for all drilling operations. Their work was supervised at all times by a member of our staff. The equipment used consisted of a standard drilling rig, fully equipped for soil testing and mounted on a trailer.

Sampling and Testing:

Samples of the granular soils were recovered by means of the split spoon sampler. Each sample was retained in a plastic bag. With each sample taken the standard penetration test was conducted and the results are recorded as "N" values.

A core sample of bedrock was recovered by diamond drilling and retained in a core box.

Observations:

(a) Soil Types.

In Hole No. 1 the following soil profile occurs:

- 0 - 1' Peaty topsoil.
- 1' - 3' Soft, weathered, silty clay.
- 3' - 5' Dense sandy glacial till.
- 5' - 9' Very dense, stony, glacial till.
- 9' - 16.4' Bedrock - Limestone with thin shale partings.

In Hole No. 2 the following soil profile occurs:

- 0 - 1' Loamy topsoil.
- 1' - 3' Soft, weathered silty clay.
- 3' - 6' Very dense, stony, glacial till.

Details

Details of the test holes are shown on the Soil Profile and Laboratory Test Sheets which form part of this report.

(b) Groundwater.

The groundwater level at the completion of the investigation was found to be 1 foot below ground surface in Hole No. 1 and 1.5 feet below ground surface in Hole No. 2. The elevation of the groundwater level coincides fairly well with the elevation of the stream.

(c) Test Results.

The standard penetration test results indicate that the glacial till from 3 feet below ground surface is dense to very dense.

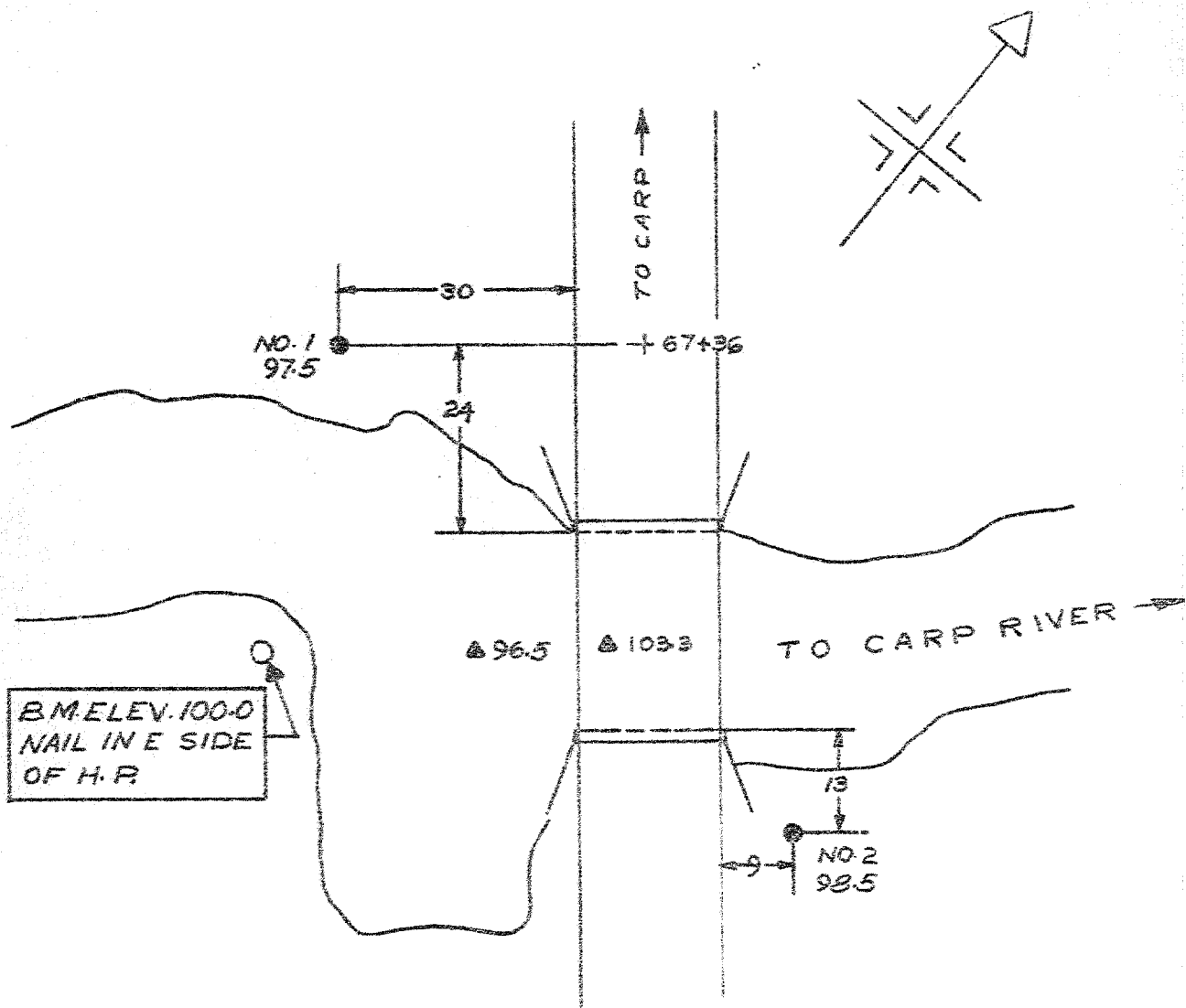
Conclusions and Recommendations:

The glacial till at and below Elevation 94 is suitable soil on which to place the bridge footings. The calculated maximum safe soil loading below Elevation 94 is 4000 pounds per square foot on undisturbed till. During the excavation period care should be taken to ensure that water is not allowed to enter the excavation and saturate the till. Any saturated or disturbed till should be removed prior to the placing of concrete.


J. D. Paterson, P. Eng.

Ottawa, June 6th, 1962.

JDP/MMC.



TEST BORING PLAN
PROPOSED BRIDGE
COUNTY RD. 17
LOT 7 CON 2 & 3
TWP of HUNTLEY

SCALE 1" = 20' MAY 1962

Location: County Road 17, Lot 7, Sec. 24
Township of Berlin

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

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THE UNIVERSITY OF CHICAGO

Blows per Foot	Soil Description Hole No. 1	Samples U's		Depth in Feet	Elev.	Antimony Content % by Weight				
		1/2'	1'			30	40	50	60	70
	Ground Surface			0	97.5					
1	Peaty Topsoil 1									Ground Water Level 1 Foot.
1	Soft weathered silty clay			2						
1	3									
47	Dense, sandy glacial till SS 2 40			4						
43	5									
70	Very dense, stony, glacial till SS 3 79			6						
	9.0 for 0.3'			8	89.5					
	Bedrock			10						
	Limestone with consider- able thin shale partings		Core 94% Recovery	12						
				14						
	16.4			16	81.5					
	Hole No. 2									
					86.5					
1	Loamy Topsoil 1									Ground Water Level 1 Foot.
1	Soft weathered silty clay			2						
12	3 SS 4 47									
60	Very dense stony glacial			4						
80	till									
	6 for 0.3'			6	82.5					