

1948

Year

Job No.

Changes

County

MONTGOMERY

013828

Project

Identification

MOT-25-(2.12-3.51)(4.53-4.7)

MOT-19-SEC-0-1(PT)

MIAMISBURG(PT)N(PT)

File No.

FEP-26 4F-02  
5B-038

Proj. No.

Begin Sta. 196+00 End Sta. 395+00 Length 3.7 Miles

Drafting By

E.B.

Completion Date

3/-/48

Drafting Hours

Topo Sheet

	RECON	AUGER	CORE	DRIVE ROD	RESISTIVITY
By		H.W.E.			
Dates		2/9/48- 2/20/48			
No. of Holes or Soundings		28			
Footage		130.2			
Samples Tested		40			



Samples Accounted For

Transmittal Date 3-24-48

No. of Tracings 2 Filed with year 4-M-28

Revisions

Remarks

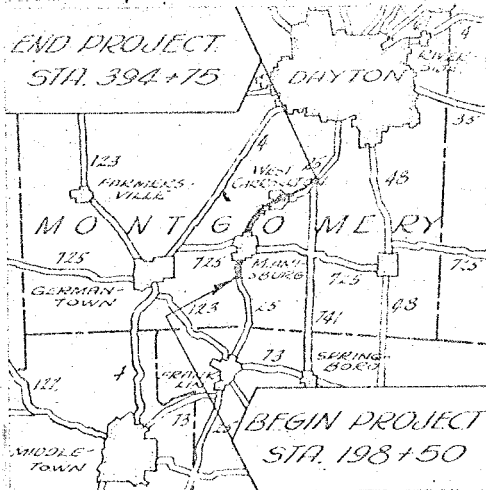
FET-28

Refer to

DO NOT WRITE IN THIS SPACE

Length	Auger Data			Core Data			Drive Rod Data		Resistivity
	No. of Holes	Footage	Samples	No. of Holes	Footage	Samples	No. of Soundings	Footage	No. of Locations
3.7	28	130.2	40	—	—	—	—	—	—

\* See Reverse Side

[illegible]

PLACE

013828

# INDEX

PAGE

MONTGOMERY - 19 { <sup>G</sup>Gramsburg  
N 2

~~CLARK - 11 15~~

~~WILLIAMS - 11 26~~

~~DAVIS - 11 78~~

#8

W  
Sta 199 12' RT

00-1.0 BERM MAT

- 1 11 1.0-2.5 Br Silt Clay w Rock
- 2 2 2.5-3.5 Br Silt Clay w Frag
- 3 15 3.5-4.5 Br Silt Clay w Rock Frag
- 4 15 4.5-5.0 Blom Silt Clay

DENI Sta 202 12' RT

0.0-1.0 BERM MAT

- 5 15 1.0-2.5 Br Silt Clay
- 6 11 2.5-3.5 Br Silt Clay w Gr
- 15 3.5-4.5 LIKE #3
- 5 7 4.5-5.0 Br Silt Clay w Gr
- 150 Stopped on Gr



3

Sta 205 12' RT

0.0-1.6 BERM MAT.

1 8 1.6-2.5 SAND & GRAVEL

11 9 2.5-4.0 Br SILT Clay

17 10 4.0-5.0 Br SILT Clay w Gr

Stopped on Gr.

Sta 208 12' RT

0.0-1.5 BERM MAT

1 1.5-5.0 LIKE #8

Stopped in Gr.

Sta 211 12' RT

0.0-0.5 BERM MAT

1 0.5-3.5 LIKE #8

3 19 3.5-5.0 SAND & GRAVEL

Sta 214 12' RT

0.0 0.5 BERM MAT

1 0.5-2.0 LIKE #8

Stopped on Big Rock

-1

JAN 21, 1948  
MONTGOMERY CO  
SN 19 SEC C-1 PT  
MIDMISBURG (PT) N (PT)

CREW

E. H. CH

-1

NAGNER

LUCAS

-2

-2

Sta 217 12' RT  
0.0-0.4 BERM MAT.

11/2 0.4-1.5 BROWN SILT-CLAY w. ROCK FRAG  
2/3 1.5-2.5 BROWN SANDY SILT-CLAY w. ROCK FRAG  
2/4 2.5-5.0 BROWN SANDY SILT-CLAY w. GRAVEL



-2

FEB 2, 1948  
MONTGOMERY  
SH 9 SEC 0 (PT)  
Gr. FROZEN 30 IN MIAMI BURG  
LARGE ROCK IN NE (PT) N (PT):

3

Report 4 Elliott  
W. J. ALGER  
L. W. ALGER

-2

4

Sta 222 12' RT

0.0 - 0.6 BERM MAT.

2 15 0.6 - 2.0 Br Silt Clay w Rock Frag.

2 16 2.0 - 3.0 Sand + Gr w Rock Frag.

9 17 3.0 - 3.5 CINDERS + Br Silt Clay

9 18 3.5 - 5.0 Gray Silt Clay w Rock Frag.

Sta 227 12' RT.

0.0 - 0.8 BERM MAT

2 0.8 - 3.5 LIKE # 15

15 19 3.5 - 5.0 Br Silt Clay

-3 E1E

FEB 3 1948  
MONTGOMERY  
3/19 SEC O-1  
(P4) MIAMI SBURG  
(P4) N(P4)

-12 E1E

36" FROZEN  
File 219-

ENIDH  
WASNER  
LUCAS

D6N.

232 12' RT

0.0 - 0.9 B M.

1622 0.9 - 3.0 Br Silt Clay

1521 3.0 - 4.0 Br Silt Clay

1622 4.0 - 5.0 Br Silt Clay

4' FILL

FEB. 16, 1948  
MONTGOMERY  
S1219 SEC 0-16(7)FILL ENDS ST<sup>g</sup> 235'ELLIOTT MIDWINTER  
WAGNER FT. N(14)  
LUCKS

1

Sta 237 12' RT

0.0-0.5 B.M.

223 0.5-2.5 Sand & Gr

1624 2.5-5.0 Br Silty Clay

Sta 242 12' RT

0.0-0.5 B.M.

2 0.5-2.5 LIKE #23

1525 2.5-3.5 Br Silty Clay w Gr

16 3.5-5.0 LIKE #24

Sta 245+85 12' RT

0.0-0.5 B.M.

2 0.5-2.5 LIKE #23

16 2.5-3.5 LIKE #24

1526 3.5-5.0 Br. Silty Clay

Sta 300+50 M

0.0-0.3 B.M.

227 0.3-5.0 Sand & Gr

-12

FEB 17, 1948  
 MONTGOMERY SIDA  
 SEC 0-1 (P+)  
 MIAMISBURG (P+)

-13

ELLIOTT  
 WAGNER  
 LUCAS

MIAMISBURG CITY LIMITS  
 -12

MIAMI CONSERVANCY FILL <sup>512</sup> 330-<sup>512</sup> 341  
 +1 10' FILL CREST AT 335-512  
 RIVER APPROX 400' FT LT.

WATER IN CANAL ~~24~~ 4' FT. &  
 9 HIGHER THAN ROAD

WATER 3.3 FT HIGHER  
 THAN RD 512 330

4

Sta 338 12' Rt

17

00-0.5 B.M.

2 0.5-1.5 Sand &amp; Gr LIKE #27

18 28 1.5-2.0 CINDERS

9 29 2.0-3.5 Br SILT Clay

16 3.5-5.0 LIKE #24

DEN Sta 341 - 25 12' Lt

00-0.5 B.M.

2 0.5-1.5 LIKE #27

9 1.5-5.0 LIKE #29



-4 1/2

8

AT THE CANAL  
WATER LEVEL CANAL 29' ABOVE ROAD  
LEVEL

9

Sta 346 12' Lt  
0.0-0.3 B.M.

✓ 0.3-2.0 LIKE #27

✓ 30 2.0-5.0 Br Silt Clay w R Frag

Sta 351 12' Lt

0.0-0.5 B.M.

✓ 0.5-3.5 LIKE #27

✓ 3.5-5.0 LIKE #30

Sta 356 12' Lt

0.0-0.5 B.M.

✓ 0.5-2.0 LIKE #27

11 31 2.0-3.0 Br Silt Clay w R Frag

9 32 3.0-4.5 SAND & Gr

Stopped in Gr at 4.5

Sta 361 12' Lt

0.0-0.5 B.M.

9 0.5-5.0 LIKE #32

Sta 366 12' Lt

0.0-0.5 B.M.

2 33 0.5-2.0 Br Silt Clay w R Frag

9 2.0-3.0 LIKE #32

9 34 3.0-5.0 Br Silt Clay

-4 E1E

9

594  
38  
81

FEB. 8, 1948  
SH. 9 SEC 0 (RD)  
MONTGOMERY  
MINNEAPOLIS (RD)

CANAL WATER LEVEL E11.14  
21' ABOVE RD 38' WINGIER  
P. & LUCAS

E1E -5

CANAL LEVEL - .5 25 FT. &  
RIVER 60' LT STONE FENCE LINE  
CANAL LEVEL

E1E -H

CANAL E1E + IN 15' RT.

56 E1E -5

22 CANAL E1E + 3 H

E1E -2

CANAL E1E + 4' 35' RT

HYDRAULIC OVERFLOW 365+50'

10

Sta 371 12' Lt

0.0-0.5 B.M.

2 0.5-1.5 LINE #33

9 1.5-2.5 LINE #32

9 2.5-5.0 LINE #34

Sta 376 12' Lt

0.0-0.3 B.M.

2 0.3-1.5 LINE #33

9 1.5-2.0 LINE #32

9 2.0-4.0 LINE #34

15 35 4.0 5.0 Br Silt Clay w R Frag.

ELE. -1.6

14  
CANAL ELE. +4.1' 10' 45" R

EVIDENCE OF RETURN OF BERM  
FROM CANAL WALL BREAKTHROUGH  
LT SIDE OF ROAD CRACKING ON  
EDGE

DITCHING NEEDED FROM 365  
370 RT SIDE OF ROAD

ELE. -4

CANAL ELE +3.8' 40" R

411

Sta 381 12' LT

0.0-0.5 B.M.

2 0.5-2.0 LIKE #33

9 2.0-3.0 LIKE #32

9 3.0-5 LIKE #34

Sta 386 12' LT

0.0-0.9 B.M.

2 0.9-1.5 LIKE #33

9 1.5-3.0 LIKE #34

16 36 3.0-4.5 FILL MATERIAL SOIL

+ ROCK FRAG

Stopped ON A Big Rock

Sta 391 12 LT &amp;

0.0-0.5 B.M.

2 37 0.5-1.5 SAND + GRAVEL

2 1.5-2.7 LIKE #33

9 2.7-5.0 LIKE #34

Sta 394 + 75' 16' LT &amp;

0.0 0.5 B.M.

2 0.5-2.5 LIKE #37

9 2.5-5.0 LIKE #34

Elev -5  
CANAL Elev +4'

FEB. 19, 1948  
MONTGOMERY  
SN 19 0-1 (074)  
MIDMISBURG (17)  
E. HUNT  
WAGNER  
LUCAS

Elev +2  
CANAL Elev 5'

DITCHING & DRAINAGE BADLY NEEDED  
ON LT 383-389

Elev +4  
CANAL Elev +3.6

Elev -3  
CANAL Elev +2.3

12

DENSITY

CONE V-90

Sta 202 12' RT

WT DEN CONE + SAND = 20.33

WT DEN CONE EMPTIED = 14.49

15

WT of SAND USED = 5.84

WT of Soil &amp; SACK = 5.35

WT of SACK = .40

WT of Soil = 4.95

Samples 1 DEN

1 DEN A Jar

Sta 232 12' RT

WT DEN CONE &amp; SAND = 19.93

" " " EMPTIED = 12.67

WT SAND USED = 7.26

16

WT of soil &amp; SACK = 6.52

WT of SACK = .48

WT of Soil = 6.04

2 DEN

2 DEN A



Sta 341 + 25 12' Lt

WT DEN CONE + SAND = 20.96

WT DEN CONE EMPTIED = 4.21

WT SAND = 5.79

|| WT OF SACK + SOIL = 9.59

WT OF SACK = 4.0

WT OF SOIL = 4.19

SAMPLES 3 DEN

3 DEN A

FEB 20, 1948  
MONTGOMERY  
SH 19 0-1 (P)  
MIAMI BURG (P)

ELLIOTT  
WAGNER  
LUCAS

Mr. G. J. Thornmyer, Chief Engineer  
Bureau of Location and Design

19 O-1(Pt), N(Pt)  
MIAMISBURG(Pt)  
Fed. No. S-308(1)  
March 24, 1948  
Mr. P. E. Masheter

R. R. Litehiser per C. H. Shepard

File# 13-3-1, Montgomery

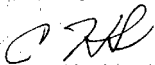
Soil Profile

In accordance with the request of Mr. L. B. Gamble's communication dated December 31, 1947, enclosed are copies of the Soil Profile for the project listed above. Also enclosed are Laboratory Reports No. So. 58916 and 58917 covering results of moisture-density tests.

The profile shows some sections of A-4 and A-7 subgrade soil, with a predominance of A-2 granular material, which should provide good subgrade support for the pavement. No free water was encountered in any of the borings during this investigation.

R. R. Litehiser  
Chief Engineer  
Testing and Research Laboratory

Per

  
C. H. Shepard  
Engineer

CHS:je

Enc.

CC: Mr. J. A. Goldschmidt (2)  
Mr. R. S. Fisher  
Mr. August Schofer (3)

# SOIL PROFILE PROJECT SUMMARY

MONTGOMERY County S.H. 19 Sec. 0-1 (PT) MAMISBURG (PT)

Route No. 25 Federal Project No. 5-308 (1)

Length of Project 37 Miles CINCINNATI - DAYTON Road

Present Surface \_\_\_\_\_ Proposed Surface \_\_\_\_\_

Field Work By: H.W. ELLIOT Field Work 11 Days

Field Work Complete FEB. 20, 48 Drafting By: E. BENNETT

Profile Sent Out: \_\_\_\_\_ Lin. Ft. Boring: 130.2

Samples Insp. 94 Samples Tested 40 Total Samples 134

Notes in Book No. 155

Group Number	Number of Samples	Aggregate %	Coarse Sand %	Fine Sand %	Silt %	Clay %	Liquid Limit %	P.I.	Moisture Content %	Density Data			
										No. of Samples	% Comp.	Optimum Moisture %	Dry Wt. #/Cu Ft.
1	1	80	13	2	2	3	19	6	4				
2	10	40	20	8	16	10	27	10	11				
3	1	53	35	3	4	5	21	7	7				
4													
5													
6													
7													
8													
9	5	16	22	19	30	16	23	8	13				
10													
11	6	15	15	13	37	20	31	13	17	1	95.9	16.3	111.5
12													
13													
14													
15	10	9	13	11	42	25	37	16	21	1		16.8	109.3
16	5	3	8	8	52	29	44	21	24	1	97.3	13.2	106.3
17	1	4	5	14	35	32	36	19	20				
18	1	39	31	10	15	5	31	N.P.	15				
19													
20													
21													
22													
23													
24													

Lab. Numbers \_\_\_\_\_

Remarks: \_\_\_\_\_

SAMPLES TESTED  
LAB. No's. 50. 58627-58637 INCL.  
58742-58749 INCL. & 58897-58917 INCL.  
MOISTURE-DENSITY SAMPLES  
LAB. No's. 50. 58915-58917 INCL.

## SUMMARY OF TESTS ON SOIL PROFILE SUBGRADE SAMPLES

MONTGOMERY

County

Note Book No. 135

1
3

S.H. 19

Sec. 0-1 (RT) MARISSBURG (RT)

Lab. No. So.	Field No.	Station No.	Represent. Feet	Mechanical Analysis					Physical Charact.			Density Data		Class. No.	
				Agg. %	C Sand %	F Sand %	Silt %	Clay %	L.L.	P.I.	Water Content	Comp.	Opt.	Max. Dry Ft.	SHTL FRA
58634	8	205+00 12'RT	16-2 1/2	80	13	2	2	3	19	0	4			1	A-1-a(0)
58628	2	189+00 12'RT	22-3 1/2	26	29	17	23	10	29	15	12			2	
58743	13	217+00 12'RT	1 1/2 2 1/2	42	24	8	17	9	25	9	11			"	
58744	14	217+00 12'RT	2 1/2 5	33	27	5	20	9	23	8	9			"	
58745	15	222+00 12'RT	1 1/2 2	40	19	7	21	13	30	11	13			"	
58746	16	222+00 12'RT	2-3	51	18	4	17	10	31	14	8			"	
58700	23	237+00 12'RT	1 1/2 2 1/2	36	15	5	12	12	30	13	8			"	
58704	27	333+50	3-5	51	19	9	15	0	23	6	16			"	
58707	30	346+00 12'LT	2-5	42	31	7	14	6	18	4	9			"	
58710	33	366+00 12'LT	1 1/2 2	64	19	6	7	4	21	4	8			"	
58714	37	391+00 12'LT	1 1/2 1 1/2	51	10	8	12	19	38	18	17			"	
			Sum	356	206	76	164	98	268	102	111				
			Ave.	46	20	8	16	10	27	10	11				A-2-4(0)
58637	11	211+00 12'RT	3 1/2 5	53	35	3	4	5	21	7	7			3	A-1-a(0)
58747	17	222+00 12'RT	3-3 1/2	15	22	12	36	15	28	10	17			9	
58748	18	222+00 12'RT	3 1/2 5	11	30	11	34	14	20	5	11			"	
58706	29	335+00 12'RT	2-3 1/2	16	29	13	28	19	25	9	14			"	
58709	32	356+00 12'LT	3-4 1/2	24	17	18	25	16	21	7	10			"	
58711	34	366+00 12'LT	3-5	13	28	17	28	14	23	8	14			"	
			Sum	79	121	71	151	78	117	39	66				
			No.	5											
			Ave.	16	24	14	30	16	23	8	13				A-4(2)

SUMMARY OF TESTS ON SOIL PROFILE SUBGRADE SAMPLES

MONTGOMERY

County

Note Book No. 165

S.H. 19

Sec. 0-1 (PT) MIAMI SUBURB (PT)

(2)  
3

Lab. No. So.	Field No.	Station No.	Represents Feet	Mechanical Analysis					Physical Charact.			Density Data			Class. No.	
				Agg. %	C Sand %	F Sand %	Silt %	Clay %	L.L.	P.I.	Water Content	Comp.	Opt.	Max. Dry Ft.	SHTL	FRA
58627	1	199400 12 RT	1-2 1/2	24	18	18	25	11	27	11	15					11
58632	6	203400 12 RT	2 1/2	10	23	11	33	23	32	15	18					"
58635	9	205400 12 RT	2 1/2	18	9	9	45	29	35	14	21					"
58742	12	217400 12 RT	4-1 1/2	19	12	9	43	17	33	19	17					"
58908	31	356400 12 LT	2-3	17	13	13	37	20	28	11	15					"
58917	30 DN	341125	1 1/2-2 1/2	10	18	20	35	17	31	12	18	85.9	16.3	111.5		"
			Sum	88	93	80	218	121	186	77	109					
			No.	6												
			Ave	15	15	13	37	20	31	13	17					A-6(6)
								15								
58629	3	199400 12 RT	3 1/2	3	28	11	28	30	35	18	18					15
58630	4	199400 12 RT	4 1/2	1	6	16	46	31	38	16	25					"
58631	5	203400 12 RT	1-2 1/2	2	12	17	44	25	37	15	25					"
58633	7	202400 12 RT	4 1/2	27	25	6	27	15	36	18	18					"
58749	19	227400 12 RT	3 1/2	3	7	6	59	25	36	16	25					"
58898	21	252400 12 RT	3-4	1	4	7	56	32	39	19	19					"
58902	25	242400 12 RT	2 1/2	37	17	5	23	18	37	15	18					"
58903	26	245485 12 RT	3 1/2	6	10	7	54	23	38	15	15					"
58912	35	376400 12 LT	4-5	2	9	19	49	26	39	15	24					"
58915	10 DN	202400 12 RT	1-1 1/2	6	21	15	35	23	37	16	22			16.8	109.3	"
			Sum	88	134	109	421	248	372	163	209					
			No.	10												
			Ave	9	13	11	42	25	37	16	21					A-6(9)
								16								
58897	20	232400 12 RT	A-3	2	9	5	56	28	40	22	18					16
58899	22	232400 12 RT	A-5	1	6	13	50	30	49	20	31					"
58901	24	237400 12 RT		2	7	6	57	28	44	19	28					"
58913	30	356400 12 LT	3-4 1/2	10	16	12	29	33	43	21	21					"
58916	20 DN	232400 12 RT	A-1 1/2	1	3	6	64	26	42	24	20	97.3	18.2	106.3		"
			Sum	14	41	42	256	145	218	106	118					
			No	5												
			Ave	3	8	8	52	29	44	21	24					A-7(12)

### SUMMARY OF TESTS ON SOIL PROFILE SUBGRADE SAMPLES

S.H. 19 Sec. 0-1 (PT) MIAMISBURG (PT)

Note Book No. 155

③

[illegible]

S-308(1)

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
TESTING AND RESEARCH LABORATORY  
OHIO STATE UNIVERSITY CAMPUS  
COLUMBUS 10, OHIO

County, Rt. No. & Sec. MONTGOMERYS.H. 19O-1 (PT) MIAMISBURG (PT)CINCINNATI-DAYTON

Project No. ....

**Report on Soil**Lab. No. So. 58915

Columbus, Ohio, .....

MARCH 24, 1948Sample of SOIL

Proposed Use .....

SOIL PROFILESample No. 1-DEN

From .....

202, 12' RT.

Depth taken .....

Depth from .....

1.0

to .....

1.8

Depth of cut .....

Height of fill .....

Represents .....

Submitted by H. W. ELLIOTTENGR. AIDECOLUMBUS

Ohio.

Sampled .....

Received .....

FEB. 24, 1948**MECHANICAL ANALYSIS**

Coarse Agg.—Particles Larger Than 2mm.

Soil Mortar—Particles Smaller Than 2mm.

SQUARE OPENING		TOTAL % PASSING	
3" - 2"	%	3"	%
2" - 1½"	%	2"	%
1½" - 1"	%	1½"	%
1" - ¾"	%	1"	%
¾" - ½"	%	¾"	%
½" - ⅜"	%	½"	%
⅜" - #4	%	⅜"	%
#4 - #10	%	#4	%
Passing #10	%	#10	%

PARTICLE SIZE		TOTAL % PASSING	
Coarse Sand 2.0-0.25mm.	<u>21</u> %	# 10	<u>94</u> %
Fine Sand 0.25-0.074mm.	<u>15</u> %	# 60	<u>73</u> %
Silt 0.074-0.005mm.	<u>35</u> %	# 200	<u>58</u> %
Clay smaller than 0.005mm.	<u>23</u> %		
Colloids smaller than 0.001mm.	%		

**PHYSICAL CHARACTERISTICS OF MATERIAL PASSING No. 40 SIEVE**

% Pass. No. 40 Sieve	Liquid Limit	Plasticity Index	Shrinkage		Moisture Equivalent	
			Limit	Ratio	Centrifuge	Field
<u>81</u>	<u>37</u>	<u>16</u>				

Water Content as Received 22 %


Specific Gravity .....

Sample Contained Brown silt clayRemarks: S.H.T.L. Class - 15P.R.A. Class - A-6( )**Laboratory Information**

Requisition No. ....

Respectfully submitted,

Purchase Order No. ....

  
 Chief Engineer, Tests and Research
Lab. No. So. 58915



MONTGOMERY CO  
 S.H. 19 SEC. 0-1 (AT) MIAMISBURG (AT)  
 STA. 202, 12' RT.  
 SAMPLE No. 1-DEN.  
 LAB. No. 50. 58915

130

2000

1800

128

1600

126

1400

124

1200

122

1000

120

800

118

600

116

400

114

200

112

0

110

POUNDS PER CUBIC FOOT

POUNDS PER SQUARE INCH

NET  
WEIGHT

PENETRATION  
RESISTANCE

108

106

104

102

100

DRY WEIGHT  
 MAX 109.3%  
 OPT. MOIST 16.8%

MOISTURE - PER CENT OF DRY WEIGHT

8 10 12 14 16 18 20 22 24

BP

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
TESTING AND RESEARCH LABORATORY  
OHIO STATE UNIVERSITY CAMPUS  
COLUMBUS 10, OHIO

County, Rt. No. & Sec. **PORTLAND**  
**S.E. 19**  
**C-1(PT) MIAMIUNION(PT)**  
**CINCINNATI-DAYTON**

Project No. ....

## Report on Soil

Lab. No. So. **58917** ..... Columbus, Ohio, ..... **MARCH 24, 1948**  
Sample of **SOIL** ..... Proposed Use **SOIL PROFILE**  
Sample No. **1-GEN** From **541+25**  
Depth taken ..... Depth from **1.5** to **2.3**  
Depth of cut ..... Height of fill ..... Represents .....  
Submitted by **H. J. ELLIOTT** **ENG. AIDE** **COLUMBUS** Ohio.  
Sampled ..... Received .....

## MECHANICAL ANALYSIS

Coarse Agg.—Particles Larger Than 2mm.

SQUARE OPENING		TOTAL % PASSING	
3" - 2"	%	3"	%
2" - 1½"	%	2"	%
1½" - 1"	%	1½"	%
1" - ¾"	%	1"	%
¾" - ½"	<b>1</b> %	¾"	<b>100</b> %
½" - ⅜"	<b>1</b> %	½"	<b>99</b> %
⅜" - #4	<b>3</b> %	⅜"	<b>96</b> %
#4 - #10	<b>5</b> %	#4	<b>93</b> %
Passing #10	<b>90</b> %	#10	<b>90</b> %

Soil Mortar—Particles Smaller Than 2mm.

PARTICLE SIZE		TOTAL % PASSING	
Coarse Sand 2.0-0.25mm.	<b>16</b> %	# 10	<b>90</b> %
		# 60	<b>72</b> %
Fine Sand 0.25-0.074mm.	<b>20</b> %	# 200	<b>22</b> %
Silt 0.074-0.005mm.	<b>39</b> %		
Clay smaller than 0.005mm.	<b>17</b> %		
Colloids smaller than 0.001mm.	%		

## PHYSICAL CHARACTERISTICS OF MATERIAL PASSING No. 40 SIEVE

% Pass. No. 40 Sieve	Liquid Limit	Plasticity Index	Shrinkage		Moisture Equivalent	
			Limit	Ratio	Centrifuge	Field
<b>79</b>	<b>31</b>	<b>12</b>				

Water Content as Received **18** % Specific Gravity .....Sample Contained **Brown Silt Clay with some stone fragments.**Remarks: **Composition - 95.9 %****S.E.T.C. Class - 11****P.R.A. Class - A-6(h)**

Requisition No. ....

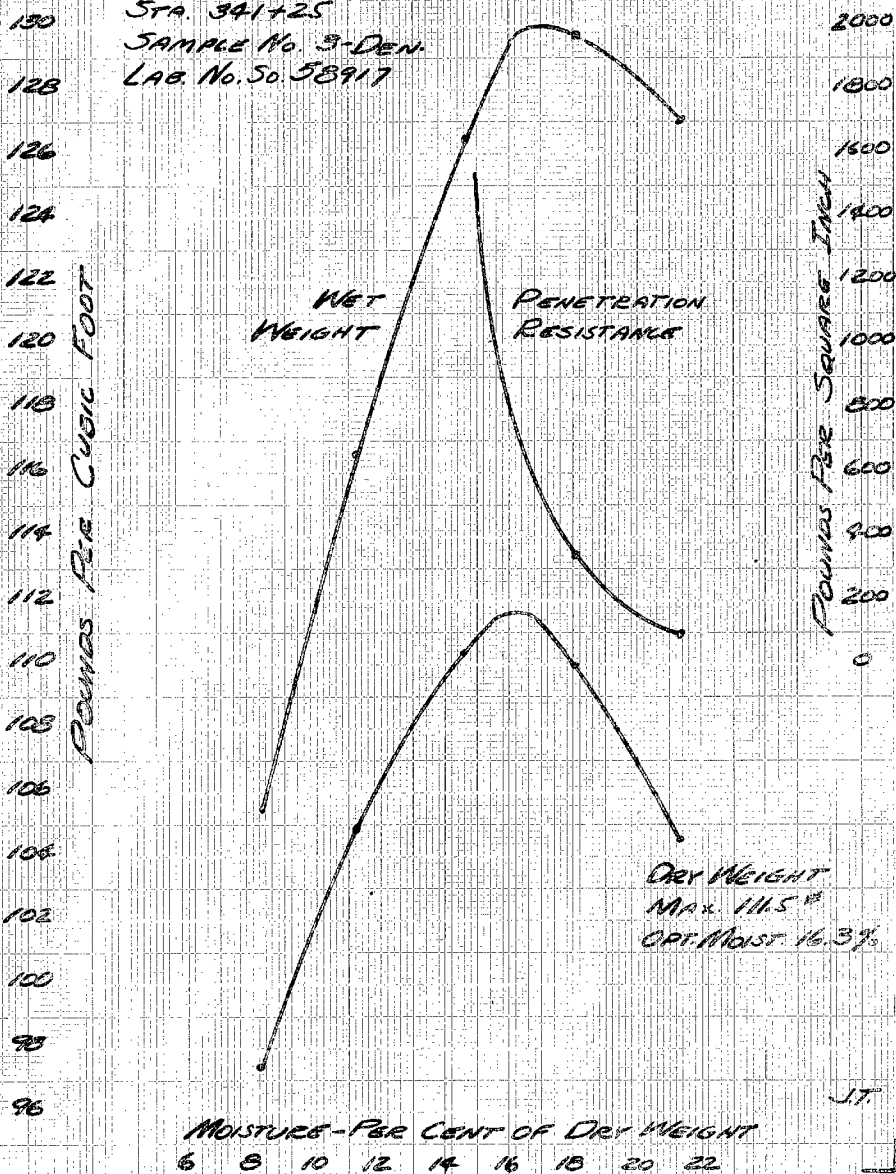
Respectfully submitted, *K. C. Ritchie*

Purchase Order No. ....

Chief Engineer, Tests and Research

Lab. No. So. **58917**

132 MONTGOMERY Co.  
 5H. 19 Sec. 0-11PT) MIAMISBURG (PT)  
 130 STA. 341+25  
 128 SAMPLE No. 3-DEN.  
 LAB. No. 58917



STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
TESTING AND RESEARCH LABORATORY  
OHIO STATE UNIVERSITY CAMPUS  
COLUMBUS 10, OHIOCounty, Rt. No. & Sec. **OTTEGAWA**  
**M. 19****0-1(P)\*1A-1.5(10)(7)**  
**CINCINNATI-DAYTON**

Project No. ....

## Report on Soil

Lab. No. So. **5916** ..... Columbus, Ohio, **ARCH 24, 1948**  
 Sample of **SOIL** ..... Proposed Use **SOIL PROFILE**  
 Sample No. **2-028** From **SP. 12' RT.**  
 Depth taken ..... Depth from **0.4** to **1.5**  
 Depth of cut ..... Height of fill ..... Represents .....  
 Submitted by **H. W. ELLIOTT** **ENGR. AIDE** **COLUMBUS** Ohio.  
 Sampled ..... Received .....

## MECHANICAL ANALYSIS

Coarse Agg.—Particles Larger Than 2mm.

Soil Mortar—Particles Smaller Than 2mm.

SQUARE OPENING	TOTAL % PASSING	PARTICLE SIZE	TOTAL % PASSING
3" -2" ..... %	3" ..... %	Coarse Sand 2.0-0.25mm. <b>3</b> %	# 10 <b>99</b> %
2" -1½" ..... %	2" ..... %		# 60 <b>96</b> %
1½"-1" ..... %	1½" ..... %	Fine Sand 0.25-0.074mm. <b>6</b> %	# 200 <b>90</b> %
1" -¾" ..... %	1" ..... %	Silt 0.074-0.005mm. <b>64</b> %	
¾" -½" ..... %	¾" ..... %	Clay smaller than 0.005mm. <b>26</b> %	
½" - ⅜" ..... %	½" ..... %	Colloids smaller than 0.001mm. .... %	
⅜"-#4 ..... %	⅜" ..... %		
#4-#10 <b>1</b> %	#4 <b>100</b> %		
Passing #10 <b>99</b> %	#10 <b>99</b> %		

## PHYSICAL CHARACTERISTICS OF MATERIAL PASSING No. 40 SIEVE

% Pass. No. 40 Sieve	Liquid Limit	Plasticity Index	Shrinkage		Moisture Equivalent	
			Limit	Ratio	Centrifuge	Field
<b>95</b>	<b>62</b>	<b>24</b>				

Water Content as Received **20** % Specific Gravity .....Sample Contained **Brown Silty Clay**Remarks: **Composition = 97.3 %****L.H.T.L. Class = 16****P.H.A. Class = A-7-6(14)**

Requisition No. ....

Respectfully submitted, *R.P. Litchner*

Purchase Order No. ....

Chief Engineer, Tests and Research

Lab. No. So. **58926**

MONTGOMERY CO.  
 S.H. 19 SEC. 0-1 (PT) MIAMISBURG (PT)  
 STA. 232, 12' R.  
 SAMPLE No. 2-DEN.  
 LAB. No. SO. 58916

128

126

124

122

120

118

116

114

112

110

108

106

104

102

100

98

96

POUNDS PER CUBIC FOOT

PENETRATION  
 RESISTANCE

WET  
 WEIGHT

POUNDS PER SQUARE INCH

3000

1800

1600

1400

1200

1000

800

600

400

200











0

DRY WEIGHT  
 MAX 106.3%  
 OPT. MOIST 18.2%

MOISTURE - PER CENT OF DRY WEIGHT

10 12 14 16 18 20 22 24

J.T.

LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 40 SAMPLES TESTED											
	* P.R.A. CLASS	S.H.T.L. CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
 GRAVEL	A-1-B(0)	1	80	13	2	2	3	19	6	4	1
 GRAVEL <sup>1/4</sup> SIZE STONE FRAG- MENTS, SAND & SILT	A-2-A(0)	2	46	20	8	16	10	27	10	11	10
 GRAVEL & SAND	A-1-B(0)	3	53	35	3	4	5	21	7	7	1
 BERM MATERIAL		7	CLASSIFIED BY VISUAL INSPECTION								
 SANDY SILT	A-4(2)	9	16	24	14	30	16	23	8	13	5
 SANDY SILT & CLAY	A-6(6)	11	15	15	13	37	20	31	13	17	6
 CLAY & SILT	A-6(9)	15	9	13	11	42	25	37	16	21	10
 CLAY	A-7-6(12)	16	3	8	8	52	29	44	21	24	5
 CLAY	A-6(10)	17	4	15	14	35	32	36	19	20	1
 CINDERS		18	39	31	10	15	5	31	NON-PLASTIC	15	1

— AUGER BORINGS - TO VERTICAL SCALE ONLY

\* P.R.A. CLASSIFICATION IS BASED ON THE 1945 REPORT  
OF THE SOIL CLASSIFICATION COMMITTEE OF THE H.R.B.

SAMPLES TESTED

LAB. NOS. SO. 58627-58637 INCL.  
58742-58749 INCL. & 58897-58917 INCL.  
MOISTURE-DENSITY SAMPLES  
LAB. NOS. SO. 58915-58917 INCL.

### SOIL PROFILE

## MONTGOMERY COUNTY

# S.H. 19

## SEC. 0-1 (PT.), N, MIAMISBURG (PT.)

### STATE HIGHWAY TESTING LABORATORY

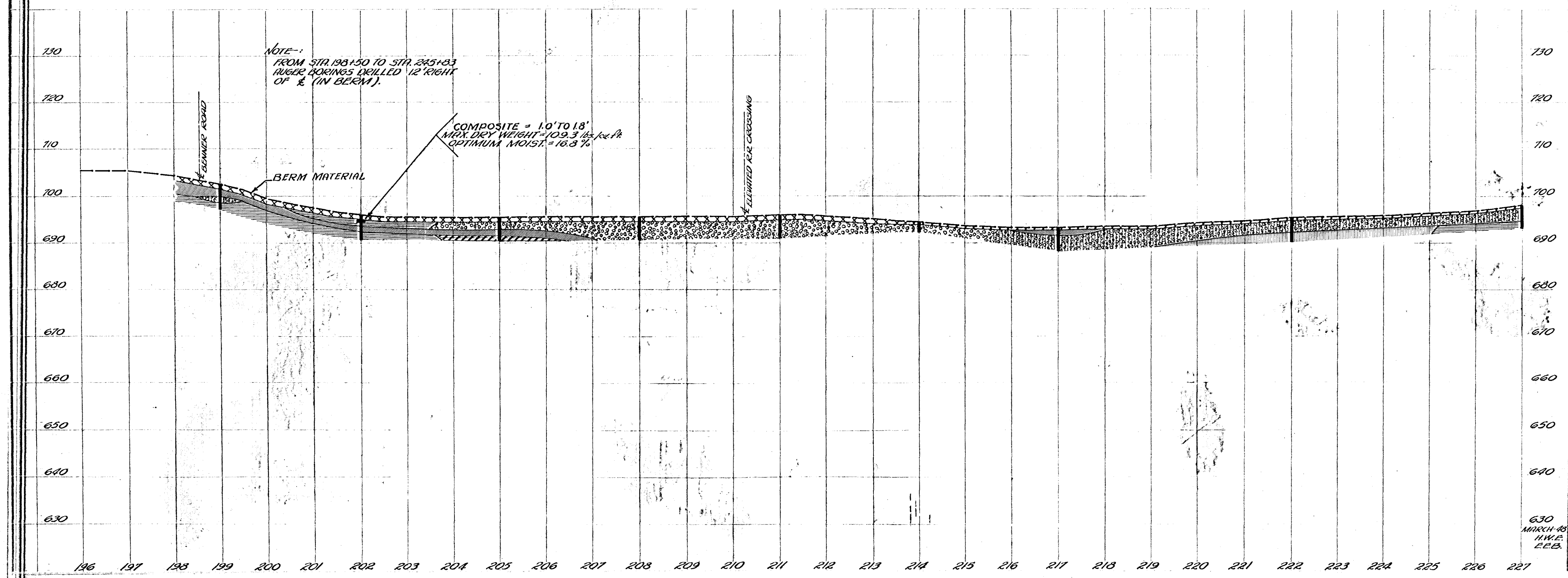
O. S. U. CAMPUS, COLUMBUS, OHIO

1  
2



NOTE: THE INFORMATION SHOWN BY THIS SUB-  
GRADE PROFILE WAS SECURED FOR THE INFORMAT-  
TION OF THE STATE OF OHIO. THE STATE DOES  
NOT GUARANTEE THE CORRECTNESS THEREOF AND  
DOES NOT INCLUDE IT AS A PART OF THE PLANS  
GOVERNING THE CONSTRUCTION OF THE PROJECT

**FED. NO. S-308 (1)**

LOCATION MAP



# LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 40 SAMPLES TESTED

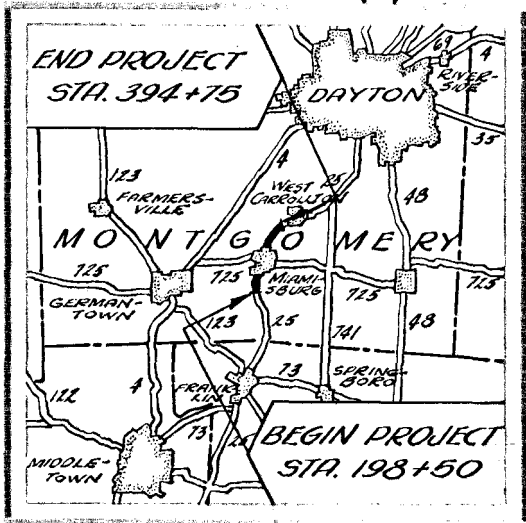
	* P.R.A. CLASS	S.H.T.L. CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
 GRAVEL	A-1-a(0)	1	80	13	2	2	3	19	6	4	1
 GRAVEL $\frac{1}{2}$ or STONE FRAG- MENTS, SAND & SILT	A-2-a(0)	2	46	20	8	16	10	27	10	11	10
 GRAVEL & SAND	A-1-a(0)	3	53	35	3	4	5	21	7	7	1
 BERM MATERIAL		7	CLASSIFIED BY VISUAL INSPECTION								
 SANDY SILT	A-4(2)	9	16	24	14	30	16	23	8	13	5
 SANDY SILT & CLAY	A-6(6)	11	15	15	13	37	20	31	13	17	6
 CLAY & SILT	A-6(9)	15	9	13	11	42	25	37	16	21	10
 CLAY	A-7-6(12)	16	3	8	8	52	29	44	21	24	5
 CLAY	A-6(10)	17	4	15	14	35	32	36	19	20	1
 CINDERS		18	39	31	10	15	5	31 NON-PLASTIC		15	1

| AUGER BORINGS - TO VERTICAL SCALE ONLY

\* P.R.A. CLASSIFICATION IS BASED ON THE 1945 REPORT  
OF THE SOIL CLASSIFICATION COMMITTEE OF THE H.R.B.

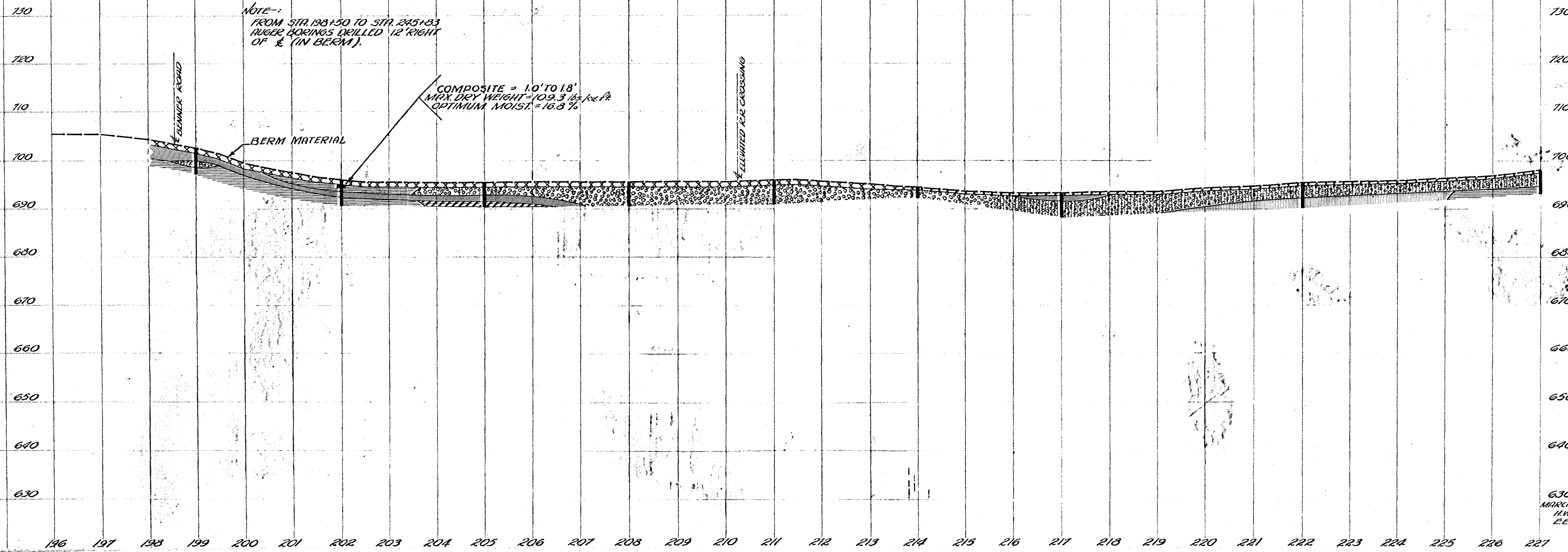
SAMPLES TESTED  
LAB. NO'S 50. 58627-58637 INCL,  
58742-58749 INCL., & 58897-58917 INCL.  
MOISTURE-DENSITY SAMPLES  
LAB. NO'S 50. 58915-58917 INCL.

## FED. NO. S-308 (1)



LOCATION MAP





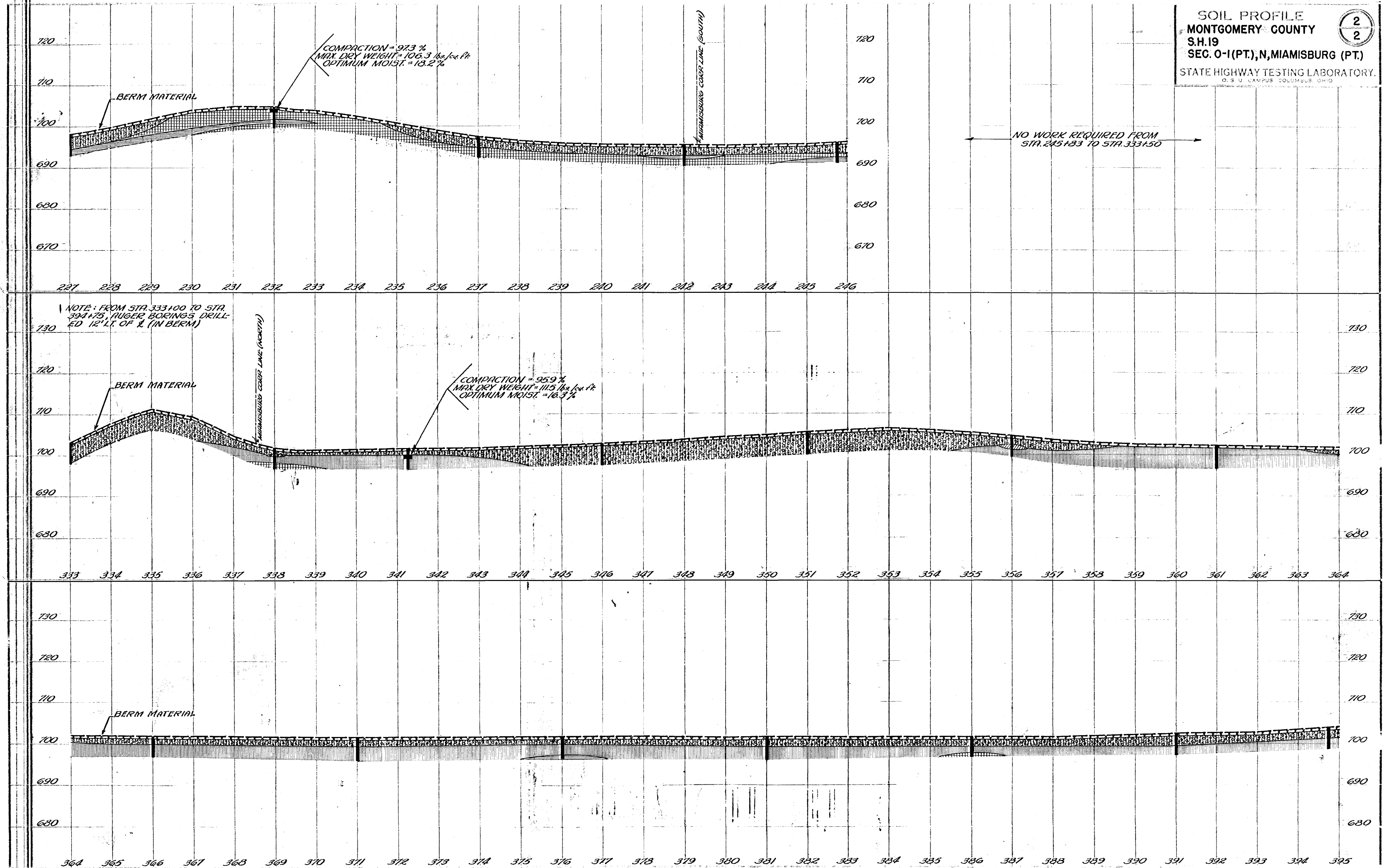
NOTE:  
FROM STA. 198+50 TO STA. 245+83  
AUGER BORINGS DRILLED 12' RIGHT  
OF  $\&$  (IN BERM).

COMPOSITE = 1.0' TO 1.8'  
MAX. DRY WEIGHT = 109.3 lbs/cu ft  
OPTIMUM MOIST. = 16.3 %

BERM MATERIAL

ELEVATED R.R. CROSSING

630  
MARCH 48  
H.W.E.  
E.E.B.



720

710

700

690

680

670

BERM MATERIAL

COMPACTION = 97.3 %  
MAX. DRY WEIGHT = 106.3 lbs./cu. ft.  
OPTIMUM MOIST. = 18.2 %

MIAMIISBURG CORP. LINE (SOUTH)

720

710

700

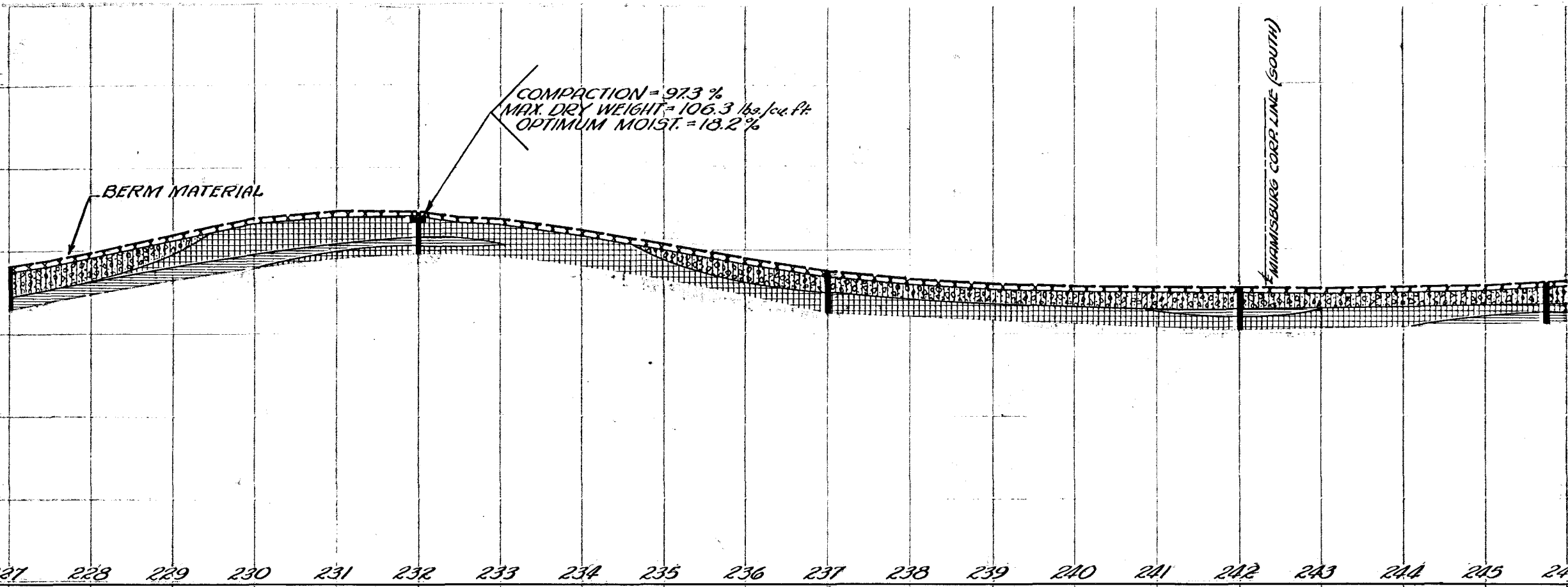
690

680

670

227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246

NOTE: FROM STA 333+00 TO STA



NOTE: FROM STA. 333+00 TO STA.  
394+75, AUGER BORINGS DRILL-  
ED 12' LT. OF & (IN BERM)

WIDENING CORR LINE (NORTH)

BERM MATERIAL

COMPACTION = 95.9 %  
MAX. DRY WEIGHT = 111.5 lbs./cu. ft.  
OPTIMUM MOIST. = 16.3 %

