D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

121-0248-0

INTERDEPARTMENT CORRESPONDENCE

FILE PEIR-285-1(286) Fulton & DeKalb Counties

OFFICE Materials & Research
Forest Park, GA

DATE October 21, 1987

FROM David A. Mitchell, Chief, Geotechnical Engineering Bureau

TO Charles Lewis, State Bridge and Structural Design Engineer

SUBJECT Bridge Foundation Investigation
I-285 over Peachtree-Dunwoody Road (Widening), Bridge #7

As requested, a bridge foundation investigation has been made at the above listed site. The results of this work are attached.

If any additional information is needed, please advise.

Tom Scruggs, P.E.
Engineering Design Unit

TES:gt

Attachment

copy: Paul Mullins

BRIDGE FOUNDATION INVESTIGATION

PROJECT NO.: PEIR-285-1(286, Fulton-DeKalb Counties

LOCATION: See Map I-285 over Peachtree-Dunwoody Rd.(Widening)Br.#7

GEOLOGIC FORMATION: Biotitic Gneiss of Georgia Piedmont Region

NOTABLE SUBSURFACE FEATURES: Rock near Elevation 915-925 overlain by Saprolite and sandy silt.

MAXIMUM PILE DESIGN LOADS

TIMBER =		12" MS=	12" PSC=	10 BP42 =	55 Tons
END BEARING-(70%)		14" MS=	14" PSC=	12 BP 53=	70 Tons
		16" MS=	16" PSC=		
FRICTION- (30%)		18" MS=	18" PSC=	14 BP 73=	96 Tons

FOUNDATION RECOMMENDATIONS

BENT	SPREAD FTG. (BEARING)	PILE FTG. (PILE TYPE)	PILE BENT (PILE TYPE)
1-4	( )	(H)	( )
	( )	( )	( )
	( )	( )	( )
	( )	( )	( )
	( )	( )	( )

ELEVATIONS

BENT	BOTTOM of FTG.	MINIMUM TIP	ESTIMATED TIP
1		940	915-920
2		930	915-920
3		930	923-928
4		940	925-930

P.D.O. - Driving resistance after minimum tip elevations have been achieved.

Waiting Period - A 30 day waiting period is recommended before driving piles through new endfills at Bents 1 and 4.

Balken Piles - As an alternate, Balken piles may be used in pile footings at all bents with the following recommended loads:

Pile Size	Maximum Design Load
9"	55 Tons
11"	63 Tons
14"	70 Tons

Recommended tip elevations are:

Bent	Minimum Tip	Estimated Tip
1	940	920-925
2	930	920-925
3	930	925-930
4	940	925-930

The Department of Transportation in making this [illegible] available to contractors assumes [illegible] for its accuracy.

No [illegible] of the contract- [illegible]

[illegible] report is not [illegible] Plans and Spec- [illegible]

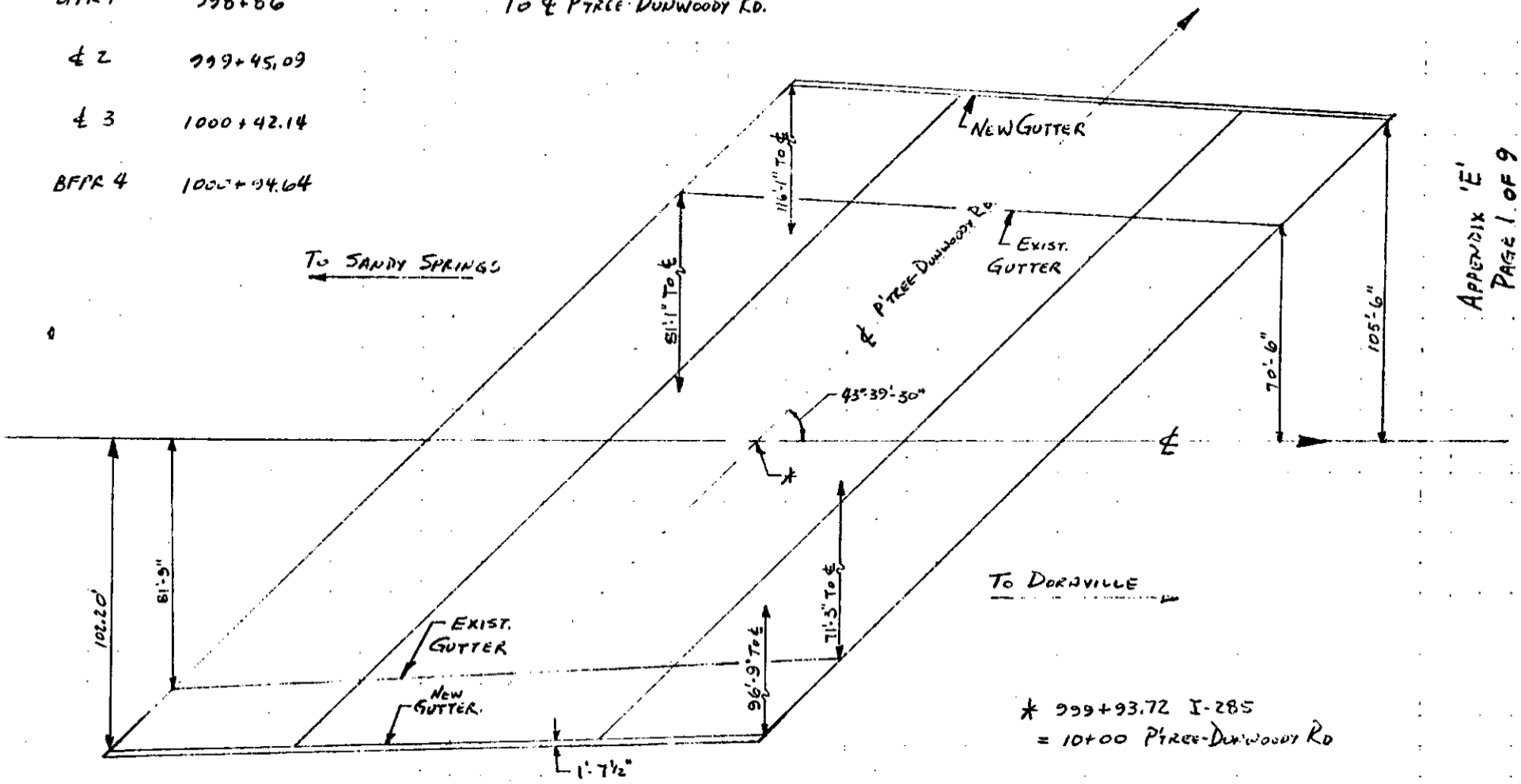
At least one test pile should be driven to help determine order lengths for Balken piles.

Reported By: Tom Scruggs, P.E.

Reviewed By: Warren Bail P.E.

BENT	STA.
BFPR 1	998+86
℄ 2	999+45.09
℄ 3	1000+42.14
BFPR 4	1000+94.64

NOTE: ALL BENTS ARE PARALLEL TO ℄ PEACHTREE-DUNWOODY RD.



* 999+93.72 I-285
= 10+00 PEACHTREE-DUNWOODY RD

NOTE: C° 30' CURVE RT NOT SHOWN

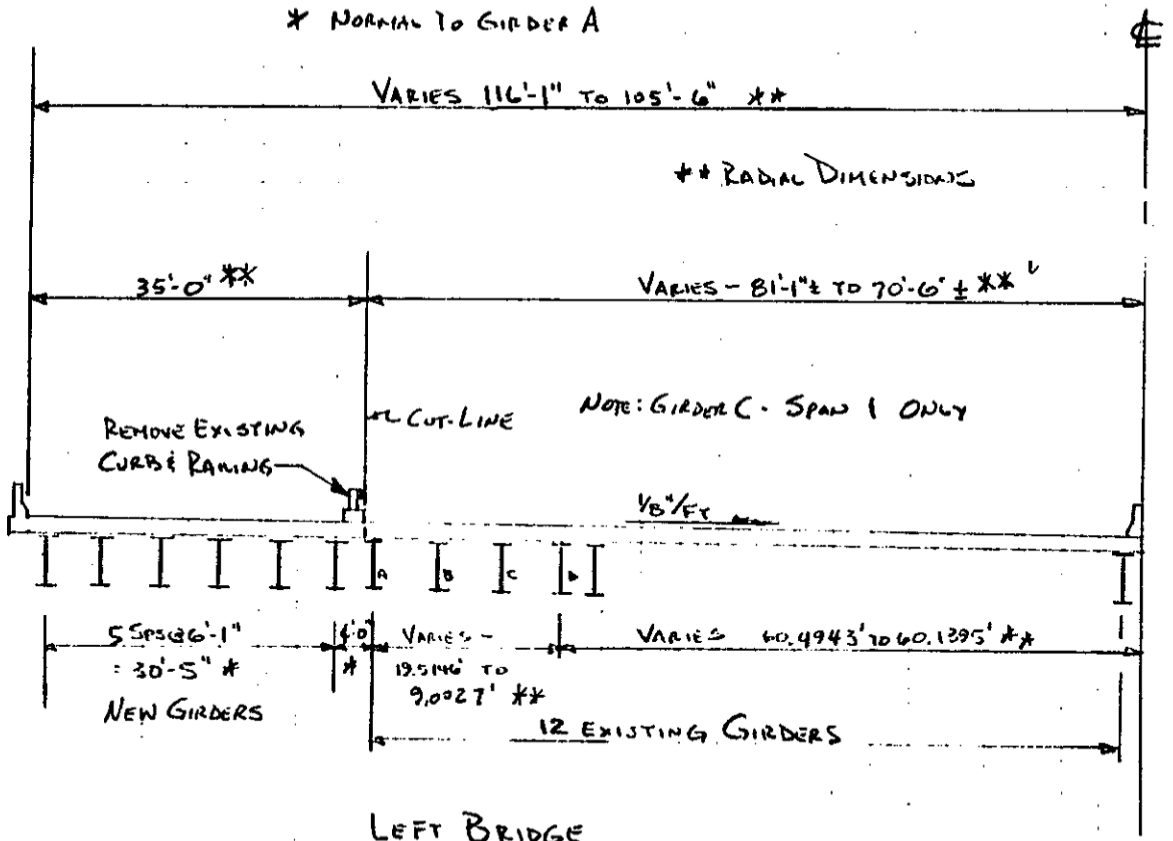
I-285 OVER PEACHTREE-DUNWOODY RD. (M-9219)

BRIDGES 7LT & RT

PEIR-285-1(266) DEKALB

APPENDIX 'E'
PAGE 1 OF 9

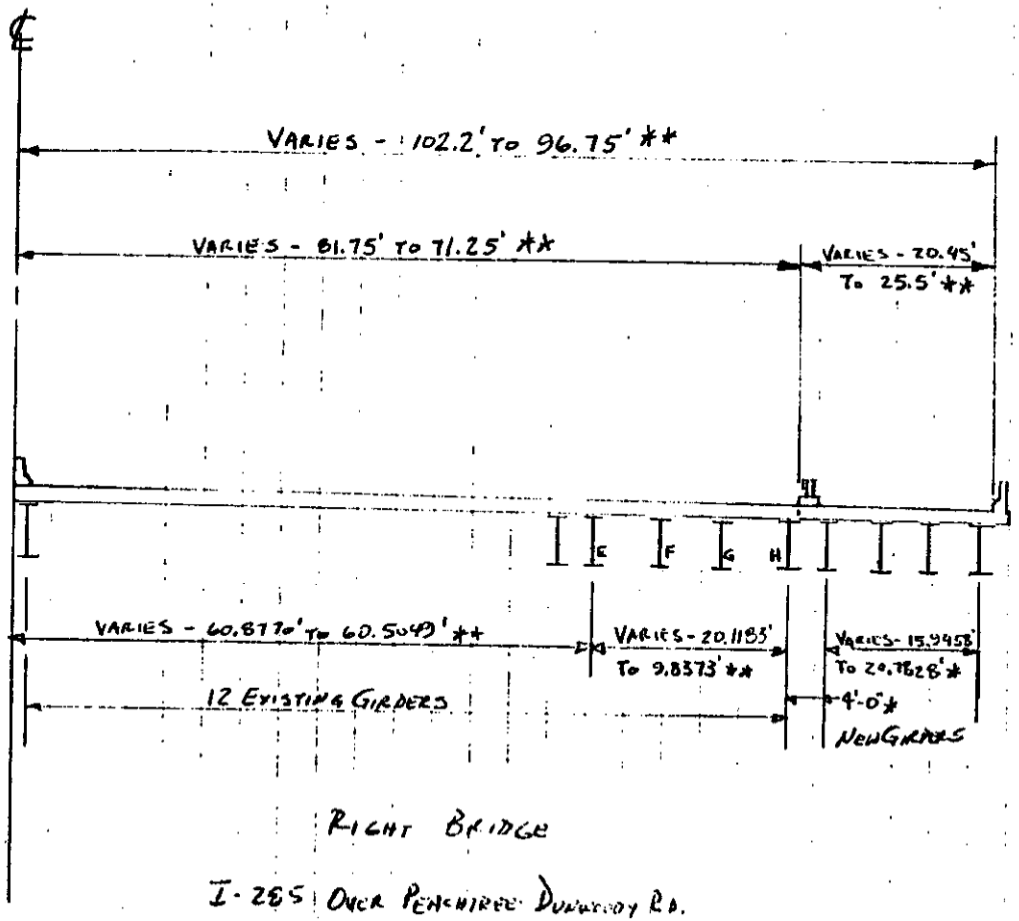
NOTE: NEW GIRDERS PARALLEL TO EXIST GIRDER A
* NORMAL TO GIRDER A



LEFT BRIDGE
I-285 OVER PEACHTREE-DUNWOODY ROAD
NO SCALE

BRIDGE 7LT

PEIR-285-1(286) DEKALB



RIGHT BRIDGE

I-285 OVER PEACHTREE DUNWOODY RD.

NO SCALE

BRIDGE 7 RT

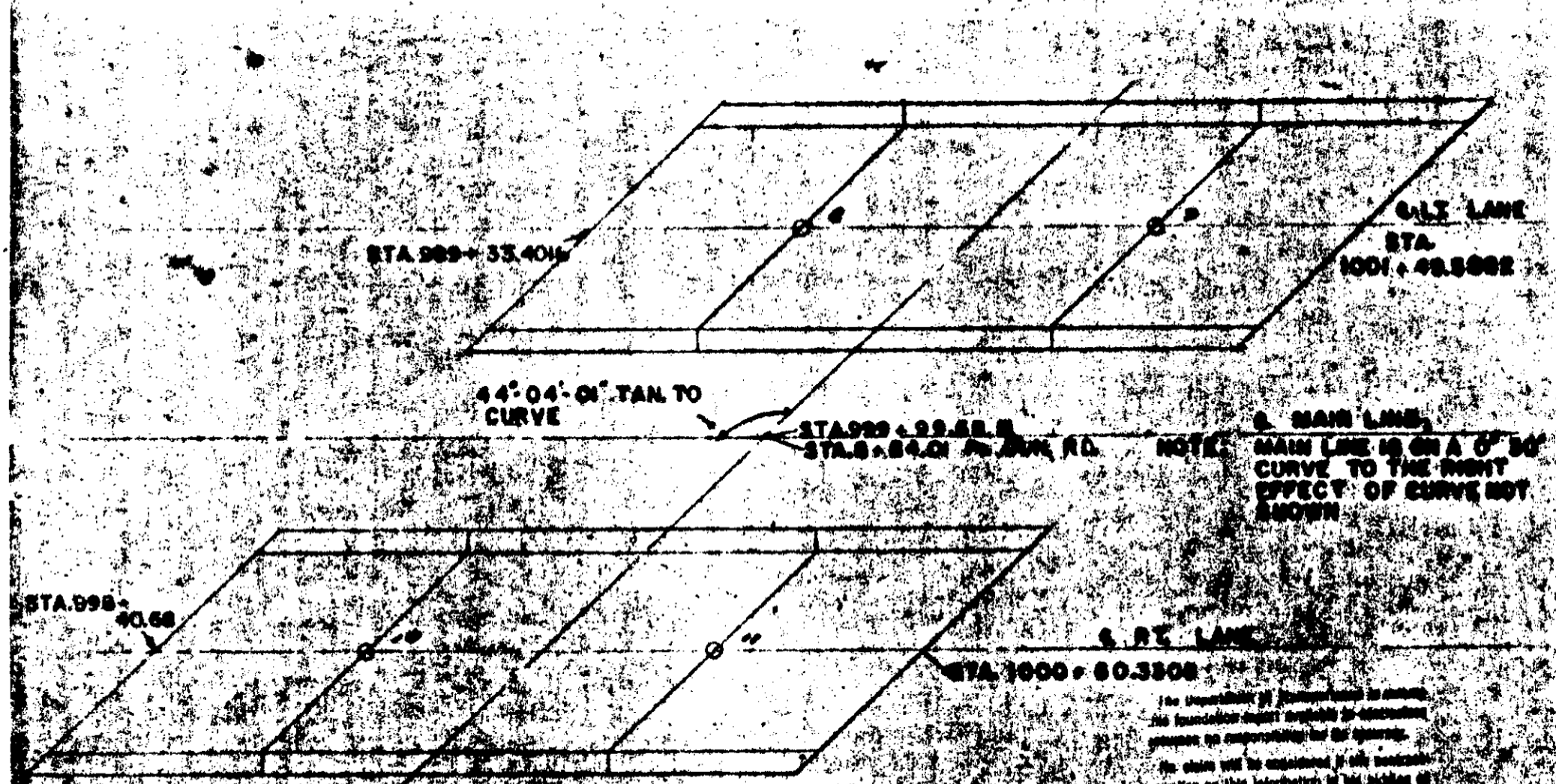
NOTE: GIRDER G SPAN 1 ONLY

** RADIAL DIMENSIONS

* NORMAL TO GIRDER H

PEIR-285-1(286) DEKALB

STATE HIGHWAY DEPARTMENT OF GA.
BRIDGE FOUNDATION INVESTIGATION
BRIDGE OVER PEACHTREE & DUNWOODY RD.
FULTON CO. I-407-1 (4) STA. 999+99.68



The Department of Transportation is [illegible] this foundation report available to contractors [illegible] no responsibility for its accuracy.

No claim will be considered if the contractor relies on this information in his bidding or in his construction operations and finds that it is inaccurate.

This foundation investigation report is not considered as a part of the Plans and Specifications or Contract on this job.

FORM N. D. 495

STATE HIGHWAY DEPARTMENT OF GEORGIA

DIVISION OF TESTS AND INVESTIGATIONS

ATLANTA, GEORGIA

RERORT OF BRIDGE SOUNDING INVESTIGATION

PROJECT NO. I-407-1(4) COUNTY Fulton

STATION NO. 999 + 99.68

LOCATION Peachtree Dunwoody Rd.

BORING NO. 8- Left Lane Pier DATE 6-12-59

ELEV.	BORING LOG	SAMPLE	BLOWS	W	γ	Gs	C	ø	q	BC				REMARKS
400	Ground Elev.													
	Red Sandy Clay													
390	Light Brown Sandy Clay													
	Footing													
	Grey to White Silty Saprolite Slightly Micaceous and Sandy	III* 15	15											
380	Brown to White Granular Saprolite (Granite Gneiss) (Sandy Silt)													
	Saturated													
360	Hard Layers													
	Refusal													* Could not force tube into Soil
340														

The [illegible] of Transportation in making this [illegible] available to contractors assumes no responsibility for its accuracy. No claim will be considered if the contractor relies on [illegible] in his bidding or [illegible] and finds that [illegible]

This [illegible] investigation report is not considered as a part of the Plans and Specifications or Contract on the [illegible]

FORM H. D. 436

STATE HIGHWAY DEPARTMENT OF GEORGIA

DIVISION OF TESTS AND INVESTIGATIONS

ATLANTA, GEORGIA

RERORT OF BRIDGE SOUNDING INVESTIGATION

PROJECT NO. I 407-1 (4) COUNTY Fulton

STATION NO. 999+99.68

LOCATION Peachtree-Dunwoody Road

BORING NO. 9 - Left Lane Pier DATE 6-12-59

ELEV.	BORING LOG	SAMPLE	BLOWS	W	γ	Gs	C	Ø	q	BC	e	S		REMARKS
	Ground Elev.													
960	Red Sandy Clay (moist)													
	Boulder													
	Red Sandy Clay													
950														
	light Brown Sandy Silt Saporlite (FOOTING)													
	Brown to White Slightly Sandy Silt Saporlite	1U 1S	25	[illegible]	[illegible]	[illegible]	[illegible]	15°	30.5	[illegible]	.883	[illegible]		
940									N	E				
	Brown to White highly Granular (Granite Gneiss) Saporlite	2U 2S	17	[illegible]	[illegible]	[illegible]								
930														
	Refusal													

The Department of Transportation in making this [illegible] to contractors assumes no responsibility for its accuracy.

No claim will be considered if the contractor relies on [illegible] in his bidding or [illegible] that [illegible]

This [illegible] report is not considered as a part of the [illegible] and Specifications [illegible]

FORM H. D. 435

STATE HIGHWAY DEPARTMENT OF GEORGIA

DIVISION OF TESTS AND INVESTIGATIONS

ATLANTA, GEORGIA

RERORT OF BRIDGE SOUNDING INVESTIGATION

PROJECT NO. I-407-1(4) old I-285-1(4)69 COUNTY Fulton

STATION NO. 999 + 99.68

LOCATION Peachtree-Dunwoody Road

BORING NO. 10- Pier, Right Bridge DATE 7-7-59

ELEV.	BORING LOG	SAMPLE	BLOWS	W	γ	Gs	C	ø	q	BC	e	S		REMARKS
	Ground Elev.													
	Red Slightly FOOTING	1U		119.0	29.2	254	1.3	24°	15.6	5.2	161	84.9		
	Micaceous Silty Clay	1S	7											
	Red Brown Slightly Micaceous Silty Clay	2U		95.1	26.4	2.62	0.8	13°	19.1	6.3	1.270	53.9		
940	Red Brown Slightly Micaceous Clay	2S	8											
	Light Brown Micaceous Silty Saporlite	3U		109.5	30.1	2.66	0.4	16°	20.0	6.7	1.292	91.0		
		3S	10											
	White to Brown Granite Gneiss Saporlite													
930	-- Water in Hole	4S	75											
	Several Mica layers													
920														
	Refusal													

The Department of Transportation in making this [illegible] available to contractors assumes [illegible] for its accuracy.

No claim will be considered in the contract or relief on the information in this bridge [illegible] and finds the [illegible]

This [illegible] Investigation report is not considered as a part of the Plans and Specifications of Contract on the job.

FORM H. D. 436

STATE HIGHWAY DEPARTMENT OF GEORGIA

DIVISION OF TESTS AND INVESTIGATIONS

ATLANTA, GEORGIA

RERORT OF BRIDGE SOUNDING INVESTIGATION

PROJECT NO. I-407-1(4) old I-285-1(4)69 COUNTY Fulton

STATION NO. 999 + 99.68

LOCATION Peachtree-Dunwoody Road

BORING NO. 11 Pier, Right Bridge DATE 7-7-59

ELEV.	BORING LOG	SAMPLE	BLOWS	W	γ	Gs	C	ø	q	BC	e	S		REMARKS
960	Ground Elev.													
	Brown Silty Sand													
	Red Slightly Micaeous Sandy Clay													
950														
	Grey Silty Saporlite FOOTING?	1U		118.4	19.2	2.64	0	32°	101	3.3	827	86.6		
	Grey very Micaeous Saporlite	1S	22											
940														
		2U		135.0	19.5	2.63	0	45°	97.8	16.6	–	–		
	Light Grey Granite Gniess Saporlite with Mica layers	2S	40											
930	Frequent hard layers													
	-- Hard Drilling --													
920														
	Refusal?													

[illegible] Department of Tests, [illegible] contractors [illegible] report [illegible] for its accuracy. [illegible] assumes no responsibility for its accuracy. No claim will be considered if the contractor [illegible] in this building or [illegible] operations and finds that [illegible]

This foundation investigation report is not considered as a part of the Plans and Specifications or Contract on the job.

MF No. 612

TEST PILE DATA SHEET

1 of 2

PILE NO. 8 LEFT BRIDGE #24 PROJECT NO. I-285-N(17)24 ct. #2

BENT NO. 3 LOCATION LEFT FORTING COUNTY FULTON & DeKALB

WT. OF HAMMER 2800 lbs. McKIERNAN-TERRY DIESEL

TYPE PILE STEEL "H" SIZE HP12 TIP 10 BUTT 10 LENGTH 45'-0"

Ht. of Hammer Fall	No. Blows	Total Pen. Inches	Avg. Pen. Per Blow	Elev. Tip	Bearing Tons	Ground Elev.	Remarks
-	60	55"	.9168			941.77	CUT-OFF 942.77
* 5'	40	8½"	.2125		35		REACHED Req. Bear.
5'	40	7"	.1750		38		
5'	20	3"	.1500		40		
5'	20	3"	.1500		40		
5'	20	2½"	.1250		43		
5'½	20	2½"	.1250		47		
6'	20	2½"	.1250		52		
6'	20	2¼"	.1125		53		
6'	20	2"	.1000		56		
6'	20	1¾"	.0875		58		
6'	20	2"	.1000		56		
6'½	20	1½"	.0750		66		
6'½	20	1½"	.0750		66		
6'½	20	1½"	.0750		66		
6'	20	1¼"	.0625		64		
6'	20	1¼"	.0625		64		
6'	20	1¼"	.0625		64		
6'	20	1"	.0500		67		
6'	20	1"	.0500		67		
6'	20	1"	.0500		67		JLL

MF No. 612

TEST PILE DATA SHEET

(2 of 2)

PILE NO. 8 PROJECT NO. I-285-1(17)94 Ct. 2

BENT NO. [illegible] LOCATION Lt. Bridge Lt. Footing COUNTY Fulton & Dekalb

WT. OF HAMMER 2600

TYPE PILE Steel "H" SIZE 10 BEAR TIP 10" BUTT 10" LENGTH 45'-0"

Ht. of Hammer Fall	No. Blows	Total Pen. Inches	Avg. Pen. Per Blow	Elev. Tip	Bearing Tons	Ground Elev.	Remarks
6'	20	1"	.0500		67		
6'	20	3/4"	.0375		70		
7'	20	1"	.0500		77		
7'	20	3/4"	.0375		82		
7'	20	1/2"	.0250		82		
7'	20	3/4"	.0375		82		
7'	20	3/4"	.0375		82		
7'	20	3/4"	.0375	933.03		941.77	Cut off 946.77

STATE HIGHWAY RECEIVED JUL 12 '61 LABORATORY

Test Pile Order Length = 30'

MF 612 TEST PILE DATA SHEET PROJECT NO. I 285-1(17)94 64.2 FULTON - DEKALB

PILE NO. 8

BENT NO. 3 LOCATION RIGHT BRIDGE LEFT FOOTING PEACHTREE DUNWOODY RD.

WT. OF HAMMER 2800 LBS McKIERNAN-TERRY DE-30 DIESEL POWER

TYPE PILE STEEL "H" SIZE 10" TIP _____ BUTT _____ LENGTH 36'

HT. Of Hammer Fall	No. Blows	Total Pen. Inches	Avg.Pen. Per Blow	Elev.Tip	Bearing Tons	Ground Elev.	Remarks
—	W/ HAND -	18	—			944.00	CUT OFF ELEV. 945.00
—	2	12	6"				
—	5	18	3.60				
—	4	12	3.00				
—	20	12	0.60				
—	20	13	.65				
—	20	9 1/2	.47				
5	20	8 1/2	.42		22.5		
5	20	7	.35	[illegible]	25		[illegible]
5	20	5 1/4	.26		30		
6	20	4 3/4	.237	935.00	38		Reached Req bearin @ this Elev.
6	20	4 1/2	.225		39		
6	20	3 3/4	.187		43		
6	20	3 1/2	.175		45		
6	20	3	.15		48		
6	20	3	.15		48		
6	20	3	.15		48		
7	20	3	.15		56		
7	20	2 1/2	.125		60		
7	20	2 1/4	.112		62		
7	20	2 1/4	.112		62		
7	20	2 1/4	.112		62		
7	20	2	.10		65		

2 of 2

TEST PILE DATA SHEET

PROJECT NO. I-285-1(17)94 Ot2
Fulton - DeKalb

PILE NO. 8

BENT NO. 3 LOCATION Peachtree-Dunwoody Rd
Right Bridge Left Abutment

WT. OF HAMMER 2800 McKiernan-Terry DE-30 Diesel

TYPE PILE Steel "H" SIZE 10" TIP _____ BUTT _____ LENGTH 36'

Ht. of Hammer Fall	No. Blows	Total Pen. Inches	Avg. Pen. Per Blow	Elev. Tip	Bearing Tons	Ground Elev.	Remarks
7	20	1 3/4	.087		68		
8	20	1 3/4	.087		78		
8	20	1 3/4	.087		78		
8	20	2	.100		75		
8	20	1 3/4	.087		78		
8	20	1 3/4	.087		78		
8	20	1 3/4	.087	931.04	78	944.00	CUT OFF ELEV 945.00

STATE HIGHWAY
RECEIVED
JUL 12 '61
LABORATORY

Note: Test pile order length 30'
Cut off due Stake 16.04

L-402 (E+) Fulton Dehole

1 of 3

MF No. 612

TEST PILE DATA SHEET

PILE NO. 3 PROJECT NO. I285-1(17) 94 CT.2

BENT NO. 1 LOCATION LT. BRdg NO. 24 COUNTY Fulton-Dekalb

WT. OF HAMMER 2800 lb Peachtree-Dunwoody Rd.

TYPE PILE Steel "H" SIZE 14 BP 73 TIP 14" BUTT 14" LENGTH 43'-1"

Ht. of Hammer Fall	No. Blows	Total Pen. Inches	Avg. Pen. Per Blow	Elev. Tip	Bearing Tons	Ground Elev.	Remarks
–	2	24"	12.00	965.98		967.98	
5	2	12"	6.00	964.98			
5	2	12"	6.00	963.98			
5	2	12"	6.00	[illegible]			
5	3	12"	4.00	[illegible]			
5	4	12"	3.00	[illegible]			
5	4	12"	3.00	[illegible]			
5	4	12"	3.00	[illegible]			
5	5	12"	2.40	957.98			
5	5	12"	2.40	[illegible]			
5	5	12"	2.40	955.98			
5	6	12"	2.00	[illegible]			
5	6	12"	2.00	[illegible]			
5	5	12"	2.40	[illegible]			
5	5	12"	2.40	[illegible]			
5	6	12"	2.00	950.98			
5	11	12"	1.09	949.98			
5	18	12"	.667	[illegible]			
5	25	12"	.480	[illegible]			
5	30	12"	.40	[illegible]	23		
5	29	12"	.413	[illegible]	23		

HIGHWAY RECEIVED JUL 25 '61 LABORATORY

MF No. 612

TEST PILE DATA SHEET

PILE NO. 3 PROJECT NO. I-285-1(17) 84CT.6

BENT NO. 1 LOCATION Ft. Bridge Rd COUNTY Fulton - DeKalb
Peachtree-Dunwoody Rd

WT. OF HAMMER 2800 lb.

TYPE PILE Steel "H" SIZE 14BP73 TIP 14" BUTT 14" LENGTH 43'-1"

Ht. of Hammer Fall	No. Blows	Total Pen. Inches	Avg. Pen. Per Blow	Elev. Tip	Bearing Tons	Ground Elev.	Remarks
5'	30	12"	.040	964.98	23	967.98	
5'	29	12	.041	963.98	23		
5'	30	12	.040	964.98	23		
5'	28	12	.043	962.98	22		
5'	31	12	.387	961.98	24		
5'	36	12	.033	960.98	27		
5½'	33	12	.036	960.98	27		
5½'	35	12	.034	959.98	28		
5½	36	12	.333	958.98	29		
6	44	12	.272	957.98	35		
6	43	12	.279	934.98	35		
6	41	12	.292	933.98	34		
5½	51	12	.235	932.98	35		
5½	46	12	.250	931.98	34		
6	50	12	.240	930.98	38		
6	56	12	.214	929.98	41		
6	61	12	.171	928.98	45		
6	65	12	.185	927.98	44		
6	10	1½"	.150	927.86	48		
6	10	1½"	.150	927.73	48		
6	10	1½"	.150	927.60	48		

13 of 3

MF No. 612

TEST PILE DATA SHEET

PILE NO. 3 PROJECT NO. I-285-1(17)94 CT.2

BENT NO. 1 LOCATION Lt. Bridge No. 24 COUNTY Fulton - DeKalb
Peachtree - Dunwoody Rd.

WT. OF HAMMER 20001b.

TYPE PILE Steel "H" SIZE 14BP73 TIP 14' BUTT 14" LENGTH 93'-1"

Ht. of Hammer Fall	No. Blows	Total Pen. Inches	Avg. Pen. Per Blow	Elev. Tip	Bearing Tons	Ground Elev.	Remarks
6	10	1.500"	.150"	927.41	48	967.98	
6	10	1.500"	.150"	927.35	48		
6	10	1.500"	.150"	927.23	48		
6	10	1.500"	.150"	927.10	48		
6	10	1.750"	.175"	926.96	45		
6	10	1.500"	.150"	926.38	48		
6	10	1.500"	.150"	926.26	48		
6	10	1.500"	.150"	926.13	48		
6	10	1.500"	.150"	926.01	48		
6	10	1.375"	.138"	925.89	50		
6½	10	1.375"	.138"	925.78	50		
6½	10	1.250"	.125"	925.67	56		REQUIRED BEARING
6	10	1.125"	.113"	925.57	54		
6½	10	1.000"	.100"	925.50	62		
6½	10	1.000"	.100"	925.44	62		
6½	10	1.000"	.100"	925.33	62		
6½	10	1.000"	.100"	925.24	62		
6½	10	.750	.075"	925.18	67		

LENGTH IN PLACE - 90-1"