

September 18, 2019

Jamshid Shirali, P.E.  
TxDOT Dallas District Lab  
Mesquite, Texas

**GEOTECHNICAL INVESTIGATION**

CSJ 0197-02-124

US 175

Kaufman County, Texas

Contract 36-7IDP5043-6615 WA#14  
D&S Engineering Labs #G16-3003-14

Mr. Shirali,

Transmitted herewith is the Pavement Data Report for the boring explored, including WINCORE boring log, together with laboratory test data, pavement core photograph and .clg file as requested for this project within Work Authorization #14 of our contract.

GPS Coordinates of the as-drilled boring location are shown on the WINCORE log, as well as on the laboratory test data summary sheet. Project location sheets provided with WA#14 are also included for reference.

We appreciate this opportunity to be of service. Please let us know if you have any questions or require additional information.

Respectfully submitted,  
D&S Engineering Labs, LLC

*September 19, 2019*

A circular professional engineer seal for the State of Texas. The seal features a five-pointed star in the center, surrounded by the text 'STATE OF TEXAS' and 'PROFESSIONAL ENGINEER'. The name 'MARK G. THOMAS' and license number '103791' are prominently displayed in the center of the seal.

*Mark G. Thomas*

Mark G. Thomas, P.E., P.G.  
Principal Geotechnical Engineer



\*\*BORING LOCATIONS ARE INTENDED FOR GRAPHICAL REFERENCE ONLY\*\*



KAUFMAN COUNTY

PROJECT LOCATION  
US 175  
CSJ: 0197-02-124

TEXAS

SHEET NO.

**G1**

DATE DRILLED  
September 4 - 6, 2019



\*\*BORING LOCATIONS ARE INTENDED FOR GRAPHICAL REFERENCE ONLY\*\*



KAUFMAN COUNTY

PLAN OF BORINGS

US 175  
**PAVEMENT AND CORE BORING LOCATIONS**  
 CSJ: 0197-02-124

TEXAS

SHEET NO.

**G2**

DATE DRILLED  
 September 4 - 6, 2019



**\*\*BORING LOCATIONS ARE INTENDED FOR GRAPHICAL REFERENCE ONLY\*\***



**KAUFMAN COUNTY**

PLAN OF BORINGS

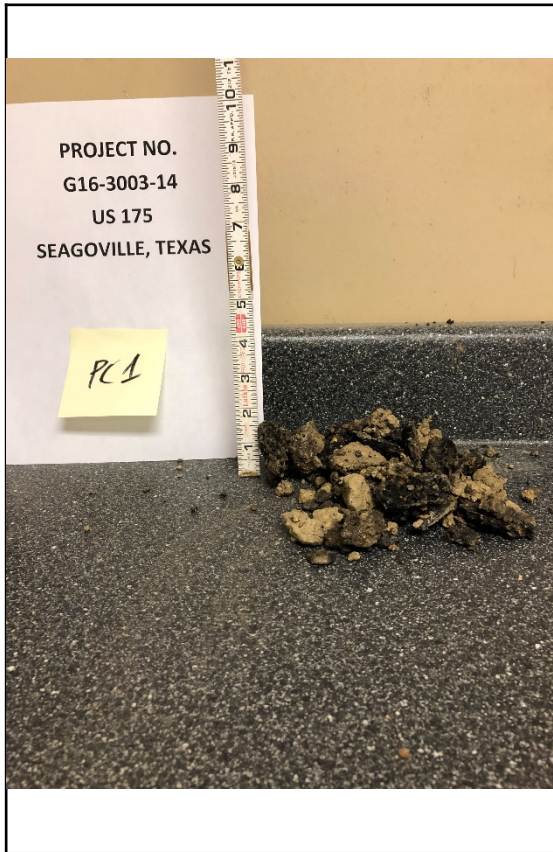
**US 175  
PAVEMENT AND CORE BORING LOCATIONS  
CSJ: 0197-02-124**

**TEXAS**

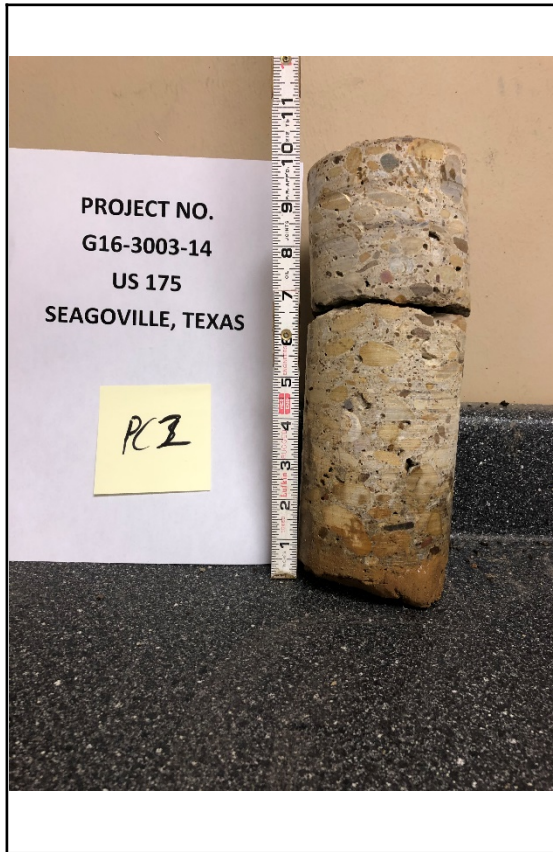
**SHEET NO.**

**G3**

DATE DRILLED  
September 4 - 6, 2019



PC 1

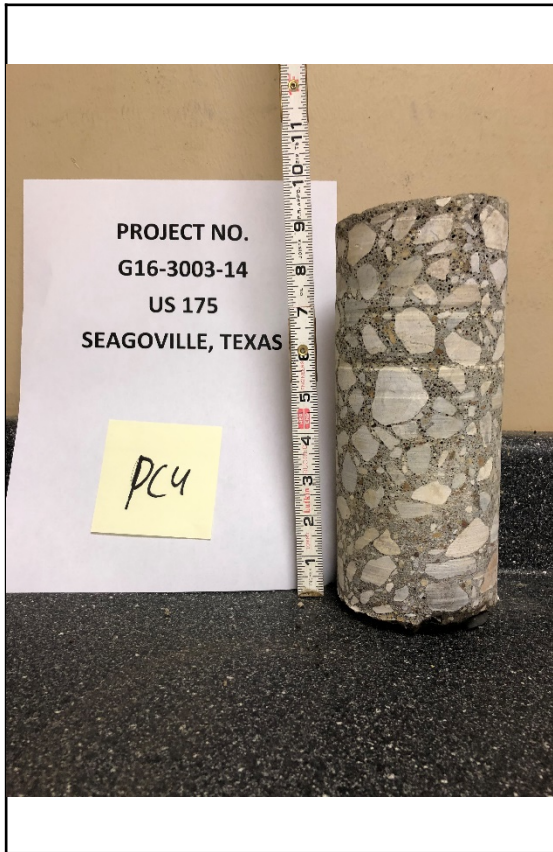


PC 2

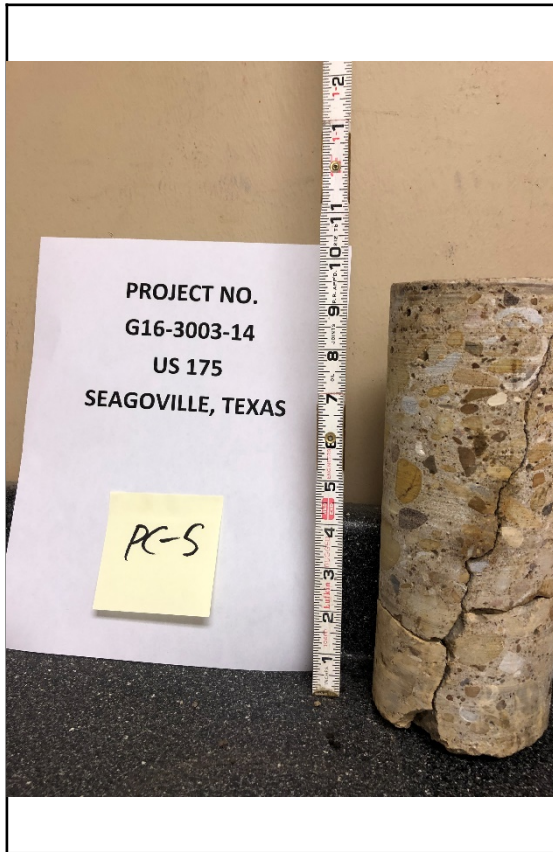


PC 3

Boring	Description
PC1	Asphalt, 2.5 inches
PC2	Concrete, 9.75 inches
PC3	Concrete, 9.5 inches



PC 4

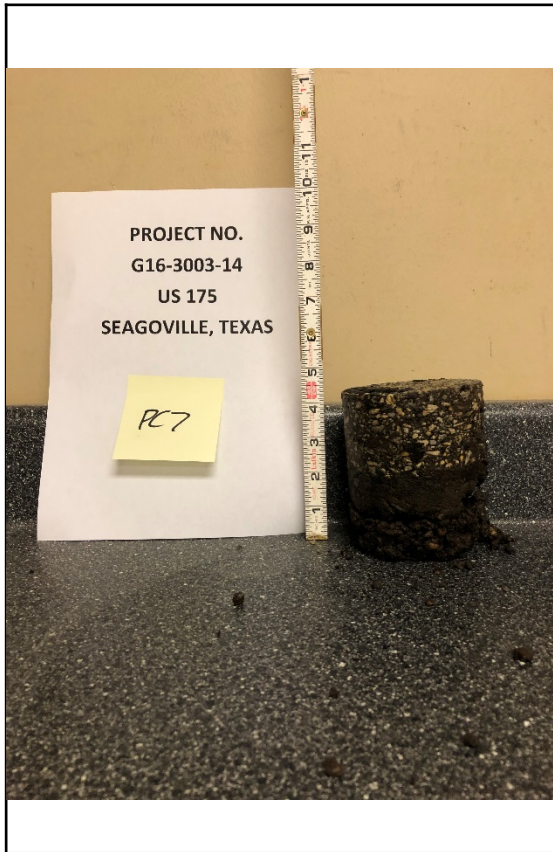


PC 5

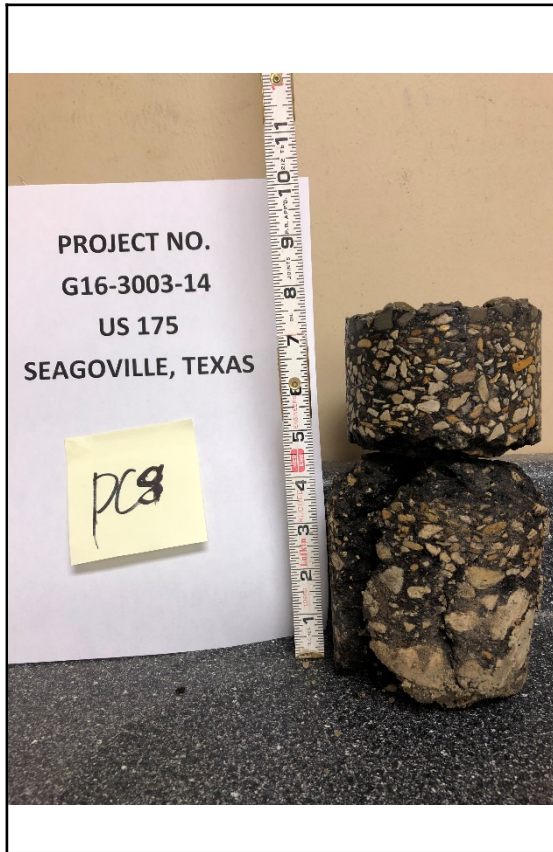


PC 6

Boring	Description
PC4	Concrete, 9 inches
PC5	Concrete, 9.5 inches
PC6	Asphalt, 4 inches; Flexible Base, 3.5 inches



PC 7



PC 8



PC 9

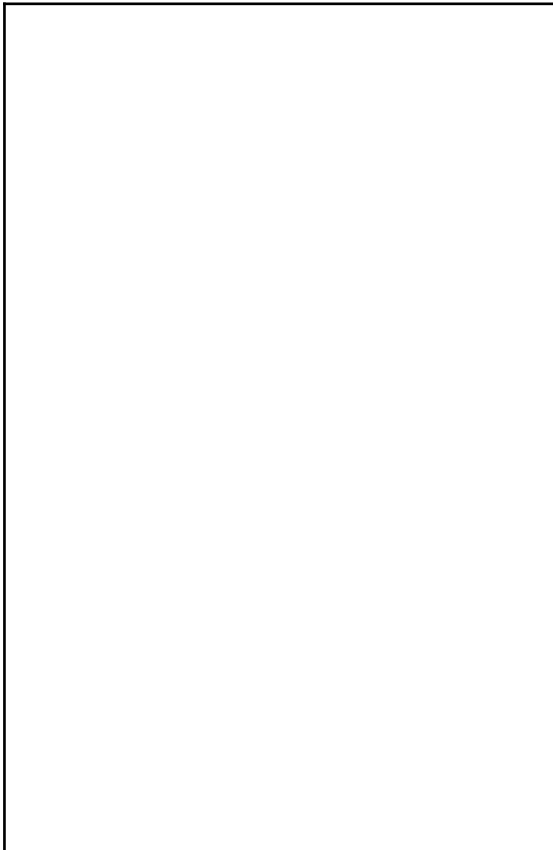
Boring	Description
PC7	Asphalt, 4.5 inches
PC8	Asphalt, 7.5 inches
PC9	Asphalt, 4 inches; Flexible Base, 4 inches



PC 10



PC 11



Boring	Description
PC10	Asphalt, 13.5 inches
PC11	Asphalt, 12 inches; Flexible Base, 2 inches





**G16-3003-14 TxDOT DFW WA#14 US 175 (CSJ 0197-02-124)**

**Pavement Core Thickness Summary**

Boring ID	Latitude	Longitude	Concrete Core Thickness (inch)	Asphalt Core Thickness (Inch)	Base Thickness (Inch)
PC1	N32.646752	W96.531000	-	2.5	-
PC2	N32.646799	W96.530762	9.75	-	-
PC3	N32.646726	W96.530461	9.5	-	-
PC4	N32.646697	W96.530468	9.0	-	-
PC5	N32.64648	W96.529580	9.5	-	-
PC6	N32.646336	W96.527852	-	4.0	3.5
PC7	N32.644285	W96.515483	-	4.5	-
PC8	N32.643806	W96.513309	-	7.5	-
PC9	N32.643759	W96.513294	-	4.0	4.0
PC10	N32.642954	W96.50972	-	13.5	-
PC11	N32.642949	W96.509535	-	12.0	2.0



# DRILLING LOG

WinCore  
Version 3.1

County Dallas  
Highway US 175  
CSJ 0197-02-124

Hole SC-1  
Structure Pavement  
Station  
Offset

District Dallas  
Date 09/4/19  
Grnd. Elev. 0.0 ft  
GW Elev. N/A

Elev. (ft)	LOG	Texas Cone Penetrometer	Strata Description	Triaxial Test		Properties				Additional Remarks
				Lateral Press. (psi)	Deviator Stress (psi)	MC	LL	PI	Wet Den. (pcf)	
5			CLAY, stiff to very stiff; dark brown, light brown; trace to few calcareous nodules (CH)			27.0	62	40		1' P.P. = 4.5+ 2' P.P. = 3.5 1' Sulfate Content: 120 ppm 3' P.P. = 3.5 4' P.P. = 2.5 3' Sulfate Content: 400 ppm 5' P.P. = 2.5 6' P.P. = 3.0 7' P.P. = 3.5
10						25.9	58	36		7' %Passing No. 200 Sieve = 91% 8' P.P. = 3.0 9' P.P. = 3.0 10' P.P. = 4.0
15										
20										
25										
30										
35										

Remarks: GPS Coordinates: N32.646779, W96.530937  
-dry during drilling  
-dry upon completion



# DRILLING LOG

WinCore  
Version 3.1

County Dallas  
Highway US 175  
CSJ 0197-02-124

Hole SC-2  
Structure Pavement  
Station  
Offset

District Dallas  
Date 09/4/19  
Grnd. Elev. 0.0 ft  
GW Elev. N/A

Elev. (ft)	LOG	Texas Cone Penetrometer	Strata Description	Triaxial Test		Properties				Additional Remarks
				Lateral Press. (psi)	Deviator Stress (psi)	MC	LL	PI	Wet Den. (pcf)	
-2.0			CLAY, very stiff; dark brown; trace to few calcareous nodules and fine roots (CH)			24.5	66	42		1' P.P. = 4.5+
5			CLAY, stiff to very stiff; light brown, brown, reddish brown; few calcareous nodules; trace ferrous nodules (CH)			21.9	54	36		0' Sulfate Content: 100 ppm 2' P.P. = 4.5+ 3' P.P. = 4.5 4' P.P. = 3.0 3' Sulfate Content: 120 ppm 4' %Passing No. 200 Sieve = 95.1 5' P.P. = 4.0 6' P.P. = 4.5+ 7' P.P. = 2.5 8' P.P. = 3.5 9' P.P. = 3.5 10' P.P. = 4.5+
-10.0										
15										
20										
25										
30										
35										

Remarks: GPS Coordinates: N32.646450, W96.528754  
-dry during drilling  
-dry upon completion



# DRILLING LOG

WinCore  
Version 3.1

County Dallas  
Highway US 175  
CSJ 0197-02-124

Hole SC-3  
Structure Pavement  
Station  
Offset

District Dallas  
Date 09/4/19  
Grnd. Elev. 0.0 ft  
GW Elev. N/A

Elev. (ft)	LOG	Texas Cone Penetrometer	Strata Description	Triaxial Test		Properties				Additional Remarks
				Lateral Press. (psi)	Deviator Stress (psi)	MC	LL	PI	Wet Den. (pcf)	
-6.0			FILL, CLAY; soft; dark brown; trace to few aggregate fragments; trace limestone fragments; with sand (CL)			20.1	33	16		1' P.P. = 0.8 2' P.P. = N/A 1' Sulfate Content: 120 ppm 3' P.P. = 0.5 3' Sulfate Content: 120 ppm 3' %Passing No. 200 Sieve = 73.6 4' P.P. = 3.0 6' P.P. = 0.25 6' %Passing No. 200 Sieve = 94 7' P.P. = 4.0 8' P.P. = 3.5 9' P.P. = 3.5 10' P.P. = 4.5+
-10.0			CLAY, very stiff; dark brown, light brown, brown; trace calcareous nodules (CH)			22.5	50	30		
15										
20										
25										
30										
35										

Remarks: GPS Coordinates: N32.643794, W96.512777  
-dry during drilling  
-dry upon completion



# DRILLING LOG

WinCore  
Version 3.1

County Dallas  
Highway US 175  
CSJ 0197-02-124

Hole SC-4  
Structure Pavement  
Station  
Offset

District Dallas  
Date 09/4/19  
Grnd. Elev. 0.0 ft  
GW Elev. N/A

Elev. (ft)	LOG	Texas Cone Penetrometer	Strata Description	Triaxial Test		Properties				Additional Remarks
				Lateral Press. (psi)	Deviator Stress (psi)	MC	LL	PI	Wet Den. (pcf)	
-1.0			FILL, CLAY; stiff; dark brown; trace aggregate fragments (CH)			23.3	52	30		1' P.P. = 1.5
			CLAY, very stiff; dark brown, brown, light brown; trace calcareous nodules (CH)			21.1	64	41		2' P.P. = 3.5 1' Sulfate Content: 160 ppm 3' P.P. = 4.5+ 3' %Passing No. 200 Sieve = 92.3 3' Sulfate Content: 120 ppm 4' P.P. = 4.5+ 5' P.P. = 4.5+ 6' P.P. = 4.0 7' P.P. = 4.0 8' P.P. = 3.5 9' P.P. = 4.3
-10.0						18.6	55	37		10' P.P. = 3.3

Remarks: GPS Coordinates: N32.643333, W96.511193  
-dry during drilling  
-dry upon completion



**G16-3003-14 TxDOT DFW WA#14 US 175 (CSJ 0197-02-124)**

LAB TEST RESULTS SUMMARY (PAVEMENT SOIL SURVEY BORINGS)										
Boring ID	Latitude	Longitude	Depth (ft.)	Material Description	Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Passing #200	Soluble Sulfate (ppm)
SC1	N32.646779	W96.530937	0 – 1	CLAY (CH)	-	-	-	-	-	120
			3 – 4	CLAY (CH)	27.0	62	22	40	-	400
			7 – 8	CLAY (CH)	25.9	58	22	36	91.0	-
SC2	N32.646450	W96.528754	0 – 1	CLAY (CH)	24.5	66	24	42	-	100
			3 – 4	CLAY (CH)	-	-	-	-	-	120
			4 – 5	CLAY (CH)	21.9	54	18	36	95.1	-
SC3	N32.643794	W96.512777	0 – 1	FILL: CLAY (CL)	-	-	-	-	-	120
			3 – 4	FILL: CLAY (CL)	20.1	33	17	16	73.6	120
			6 – 7	CLAY (CH)	22.5	50	20	30	94.0	-
SC4	N32.643333	W96.511193	0 – 1	FILL: CLAY (CH)	23.3	52	22	30	-	-
			1 - 2	CLAY (CH)	-	-	-	-	-	160
			3 – 4	CLAY (CH)	21.1	64	23	41	92.3	120
			7 – 8	CLAY (CH)	18.6	55	18	37	-	-