

June 18, 2024

To: Plan Holders for Improvements to the

Washington County Airport Mineral Point, Missouri MoDOT Project No. 24-060A-1 & 24-060A-2

Transmitted herewith is **Addendum No. 3** to the Issued for Bid Contract Documents, Specifications and Plans dated May 28, 2024, for Improvements to the Washington County Airport.

Schedule I: Runway 2/20 Reconstruction
Schedule II: Runway 2/20 Widening and Taxiway Reconstruction
Schedule III: Apron Reconstruction
Schedule IV: Runway Lighting Rehabilitation
Schedule V: Runway Guidance Signs
Bid Alternate No. 1: Full Depth Reclamation



Sincerely,

Woolpert, Inc.

Laura Koonce, P.E. Project Manager





ADDENDUM NO. 3 TO CONTRACT DOCUMENTS, SPECIFICATIONS AND PLANS FOR IMPROVEMENTS TO THE WASHINGTON COUNTY AIRPORT MINERAL POINT, MISSOURI MODOT PROJECT NO. 24-060A-1 & 24-060A-2

To All Bidders: You are requested to make all changes and/or additions contained in this addendum to the Bidding Documents. Failure to acknowledge this Addendum in Proposal shall result in rejection of bid. Bidders are informed that the above referenced Contract Documents, Specifications and Plans are modified as follows as of June 18, 2024:

1. PLANS

G002A - (2 of 150) Index of Drawings

Revision: The Index of Drawings table has been updated

Justification: Sheets G027 through G031 have been added to the index of drawings.

G025 - (15 of 150) Geotechnical Investigation, Bore Logs

Revision: The geotechnical investigation bore logs have been added.

Justification: The geotechnical investigation bore logs have been included in the plan sheets.

G026 - (16 of 150) Geotechnical Investigation, Bore Logs

Revision: The geotechnical investigation bore logs have been added.

Justification: The geotechnical investigation bore logs have been included in the plan sheets.

G027 - (17 of 150) Geotechnical Investigation, Bore Logs

Revision: The geotechnical investigation bore logs have been added and this sheet has been added. *Justification:* The geotechnical investigation bore logs have been included in the plan sheets.

G028 - (18 of 150) Geotechnical Investigation, Bore Logs

Revision: The geotechnical investigation bore logs have been added and this sheet has been added. *Justification:* The geotechnical investigation bore logs have been included in the plan sheets.

G029 - (19 of 150) Geotechnical Investigation, Bore Logs

Revision: The geotechnical investigation bore logs have been added and this sheet has been added. *Justification:* The geotechnical investigation bore logs have been included in the plan sheets.

G030 - (20 of 150) Geotechnical Investigation, Bore Logs

Revision: The geotechnical investigation bore logs have been added and this sheet has been added. *Justification:* The geotechnical investigation bore logs have been included in the plan sheets.

G031 - (21 of 150) Geotechnical Investigation, Bore Logs

Revision: The geotechnical investigation bore logs have been added and this sheet has been added. *Justification:* The geotechnical investigation bore logs have been included in the plan sheets.

The final questions will be accepted until 4:00 p.m. (CT) Thursday, June 20, 2024.

** END OF ADDENDUM NO. 3 *

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ISSUED FOR BID

THESE DRAWINGS ARE FOR PURPOSES ONLY. THEY WERE PREPARED BY OR UNDER THE SUPERVISION OF:

RA K. KOONCE	2022012014	05/28/24
1E	REG. NO.	DATE

FOR AND ON BEHALF OF WOOLPERT

WOOLPERT



DES:N.B.B.				ISSUE RECORD
	NO.	BY	DATE	DESCRIPTION
DR: V.S.B.	1	L.K.K.	05/28/24	ISSUED FOR BID
	/2\	L.K.K.	06/11/2024	ADDENDUM NO. 1
CH: C.L.G.	4	L.K.K.	06/18/2024	ADDENDUM NO. 3
APP: L.K.K.				

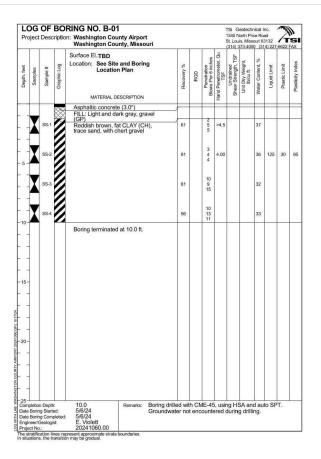
RUNWAY 2/20 RECONSTRUCTION & WIDENING AND APRON RECONSTRUCTION

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MoDOT PROJ. NO. WOOLPERT PROJ. NO. 24-060A-1 & 24-060A-2 1015274



			ORING NO. B- tion: Washington C Washington C					3	1340 N St. Lou	eotechi lorth Pri is, Miss 373-400	ce Ro ouri 6:	ad 3132		SI
Dapth, feet	saudines	Sample # Graphic Log	MATERIAL	DESCRIPTION	Recovery %	RoD	Penetration Blows Per 6 inches	8	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
1	s	S-1	Asphaltic concr Aggregate Bas Reddish brown trace gravel an		89		19 22 19				15	30	16	14
- - 5 -	s	S-2	Reddish brown trace sand, with	, fat CLAY (CH), n chert gravel	89		5 10 8				12			
2	s	S-3			94		4 7 9				29			
-	s	S-4			89		6 5 6	2.50			22			
			Boring terminal	ed at 10.0 It.										
	oring S oring C or/Geo	Started: Complet	10.0 5/7/24 ed: 5/7/24 E. Violett 20241060.00	Remarks: Boring drill Groundwal	ed wi	th CM	/E-45 ounte	, using	ng HS durini	SA an g drilli	d au ng.	to SF	PT.	

				RING NO. B-02 n: Washington Cou Washington Cou	nty Airport				3	1340 N St. Lou	eotechi lorth Pri is, Miss 73-400	ce Ro ouri 6	TS 7-6622 FAX		
Depth, feet	Samples	Sample #	Graphic Log	Surface El.TBD Location: See Site Location MATERIAL DE	Plan	Recovery %	ROD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
			XX	Asphaltic concrete		\rightarrow	_	-							F
	X	SS-1		FILL: Tan and dark CLAY (CL), with sa Reddish brown, fa trace sand, with ch	CLAY (CH),	89		5 9 8	>4.5			17			
5 -	X	SS-2				56		2 3 4	2.75			20			
. J. J.	X	SS-3				100		2 3 5	2.50			36			
10-	X	SS-4				100		2 3 3	2.25			43			
115-				Boring terminated	et IV.OTC										
Date Date	Borin Borin eer/C	n Depth g Start g Com Geologi	ed: pleted:	10.0 5/6/24 5/6/24 E. Violett 20241060.00	Remarks: Boring Ground	drilled wit lwater no	h CN t enc	ME-45 ounte	i, usii ered	ng HS durin	SA an g drilli	d au ng.	to SF	PT.	

				RING NO. B-0 n: Washington Con Washington Con	unty Airport					1340 N St. Lou	eotechi lorth Pri is, Miss 173-400	ce Ro ouri 6	ad 3132		S
Depth, feet	Samples	Sample #	Graphic Log	Surface El.:TBD Location: See Site Location MATERIAL D		Recovery %	RQD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
			***	Asphaltic concret	e (3.25") CLAY (CL), with	+						F			
	X	SS-1		gravel, trace sand Gray and brown, trace sand and g	lean CLAY (CL).	61		2 3	1.00			29			
5 -	X	SS-2		Reddish brown, f trace sand, with o	at CLAY (CH), chert gravel	94		2 2	1.25			28	63	17	46
		ST-3				73			4.50	0.79	106	19			
9 54	Y	SS-4				81		4 6 8	3.75			40			
15-				Boring terminated	at 10,0 ft.										
25-			Ш	10.0		-911		15 /5	200						
Date Date	Borin Borin	n Depth ig Start ig Com Seologi	ed: pleted:	10.0 5/7/24 5/7/24 E. Violett	Remarks: Boring d Groundy	rilled wil vater no	t end	ME-45 counte	, usir ered	ng HS during	sA an g drilli	d au ng.	to SF	41.	

				RING NO. B-03 n: Washington County Airport Washington County, Missouri					1340 N St. Lou	eotechi lorth Pri is, Miss 373-400	ce Ro ouri 6	ad 3132	-6622	FA
Depth, feet	Samples	Sample #	Graphic Log	Surface EI.:TBD Location: See Site and Boring Location Plan MATERIAL DESCRIPTION	Recovery %	RQD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	The same of the sa
			XX	Asphaltic concrete (3.0")	+		H				F			F
	X	SS-1		FILL: Dark gray, gravelly CLAY (CL), with sand Reddish brown, fat CLAY (CH), trace sand, with chert gravel - reddish brown and gray from 1.2 to 5.0 ft.	56		2 1 4	0.25			20			
5 -	X	SS-2			33		1 1 4	0.25			20			
	X	SS-3			17		5 5 6				28			
10-	X	SS-4			83		3 6 6	>4.5			37			
15-														
Date Date Engli	Borir Borir	n Depth ig Start ig Com Seologi	ed: pleted:	10.0 Remarks: Boring dri 5/6/24 Groundwi E. Violett 20241060.00	lled wi	th Cit	ME-45	i, usi	ng H: durin	SA an g drilli	d au	to SF	РΤ.	

				RING NO. B-0 n: Washington Cou Washington Cou	unty Airport					1340 N St. Lou	eotechr orth Pric is, Misso 73-4000	e Ro ouri 6	ad 3132	-6622	FA
Depth, feet	Samples	Sample #	Graphic Log	Surface El.:TBD Location: See Site Locatio	n Plan	Recovery %	ROD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Management of the second
	X	SS-1		Asphaltic concret Aggregate Base Reddish brown, fi chert gravel, trace	(4.0") at CLAY (CH), with	89		1 1 3	0.75			23			F
 -5-	X	SS-2				86		1 1 2	0.25			29			
	X	SS-3				33		1 2 2				26			
- 10-	X	SS-4		- gray and brown - trace wood frag 10.0 ft.	below 8.5 ft. ments from 8.5 to	100		1 1 3 WH	2.00			27			
- 15- - 15- 		SS-5		Boring terminated	d at 12.0 ft.	17		WH							
- 25 - Com Date Date Engir	Borin Borin	eologi	ed: pleted:	12.0 57724 57724 E. Violett 20241060.00		drilled wit water no							to SF	Υ.	

				RING NO. B-04 n: Washington Cou Washington Cou	nty Airpor						1340 N St. Lou	eotechi lorth Pri is, Miss 173-400	ce Ro	ad 3132	-6622	S
Depth, feet	Samples	Sample #	Graphic Log	Surface El.:TBD Location: See Site Location MATERIAL D	n Plan	g	Recovery %	RQD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	14	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Discriptor Indox
			J.	Asphaltic concret												Е
	X	SS-1		Aggregate Base (Reddish brown, fa trace sand, trace	t CLAY (CI	H),	6		50/1"				14			
		ST-2		- brown and gray, fragments at 3.0	trace wood	d	48			4.25			17	52	16	3
	X	SS-3		Reddish brown, fa trace sand, trace	at CLAY (Cl chert grave	H),	100		7 8 6				41			
- 10-	X	SS-4					100		2 3 4	2.75			34			
Date Date Engi Proje	Borin Borin neer/0		ed: pleted: st:	10.0 5/7/24 5/7/24 E. Violett 20241060.00 present approximate strata in may be gradual.	Remarks:	Boring drill Groundwa Offset 10.0	ter no	t end	ounte	ered	during	g drilli		to SF	PT.	





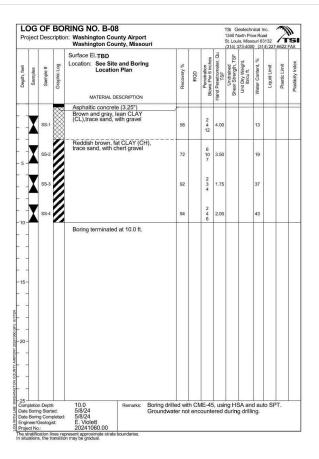
DES:N.B.B.				ISSUE RECORD
	NO.	BY	DATE	DESCRIPTION
DR: V.S.B.	1	L.K.K.		ISSUED FOR BID
	<u>/4\</u>	L.K.K.	06/18/2024	ADDENDUM NO. 3
CH: C.L.G.				
APP: L.K.K.				
AFF. L.N.N.				

GEOTECHNICAL INVESTIGATION BORE LOGS

SHEET NAME G025 SHEET NO.

MoDOT PROJ. NO. 24-060A-1 & 24-060A-2

WOOLPERT PROJ. NO. 1015274 15 of 150



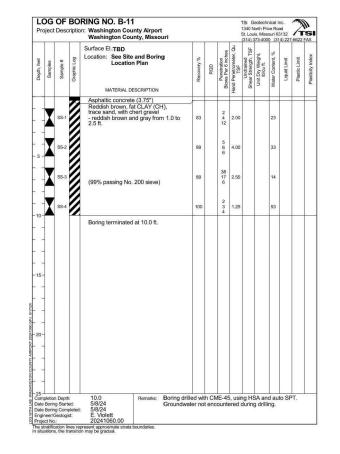
				RING NO. B-12 on: Washington Cou Washington Cou	unty Airport					1340 N St. Loui	eotechi orth Pri is, Miss 73-400	ce Ro ouri 6	ad 3132	-66221	S
Somelon Com	saubies	Sample #	Graphic Log	Surface El.:TBD Location: See Site Locatio	n Plan	Recovery %	RoD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
-	(SS-1		Asphaltic concret Reddish brown, fi trace sand, with c - no gravel from	at CLAY (CH), hert gravel			1 2 3	2.00			51			
-	(SS-2						1 3 3	2.00			46			
-		SS-3						1 3 4	2.00			49			
-		SS-4						1 9 4	1.50			50			
5				Boring terminated	an IOUT.										
ite Bo	oring	Depth Starte Compeologis	ed: pleted:	10.0 5/8/24 5/8/24 E. Violett		drilled wit dwater no							to SF	PT.	

		-		RING NO. B-09 n: Washington Cou Washington Cou	inty Airport					1340 N St. Lou	eotechi lorth Pri is, Miss 173-400	ce Ro	ad 3132		FAX
Depth, feet	Samples	Sample #	Graphic Log	Surface El.:TBD Location: See Site Locatio		Recovery %	RQD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Plaeticity Index
	X	SS-1		FILL: Brown and CLAY (CH), trace	reddish brown, fat sand and gravel	44		2 3 3	3.00			10			
	X	SS-2		Reddish brown at (CH), with chert g	nd gray, fat CLAY ravel, trace sand	33		2 2 3	3.00			31	157	34	12
	Y	ST-3 SS-4				67		2 4 5	2.00			20			
				Boring terminated	a at 10.0 ft.										
Date Date	Borir Borir neer/	n Depth ig Start ig Com Seologi	ed: pleted:	10.0 5/14/24 5/14/24 EV/SLY 20241060.00	Remarks: Boring dr Groundw								to SF	T.	

				RING NO. B-1 in: Washington Co					3	1340 N	eotechi Iorth Pri	ce Ro	ad	7	14
	Joor	DOSC	прис	Washington Co						St. Lou (314) 3	is, Miss 73-400	ouri 6	3132 (4) 227	-6622	FAX
Depth, feet	Samples	Sample #	Graphic Log	Surface El.:TBD Location: See Site Location MATERIAL D		Recovery %	RQD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
	X	SS-1		Asphaltic concre Reddish brown, f trace sand, trace - no chert gravel	at CLAY (CH).	89		2 2 2	1.25			46			
5 -	X	SS-2				100		1 2 3	1.50			57			
		ST-3				79			3.75		69	50	150	37	113
10-	X	SS-4		- 7.0" tan, coarse ft.	sand lense at 8.8	94		19 9 4	1.75			39			
15-	X	SS-5				81		2 3 6	2.00			49			
-	X	SS-6	<i>'</i>	Tan and white, co SAND (SP), trace	parse grained e chert gravel	78		11 10 9				7			
-				Boring terminated	d at 20.0 ft.										
ate	Borin	n Depth g Start g Com Seologi	ed: pleted:	20.0 5/9/24 5/9/24 E. Violett		drilled wit water no							to SF	PT.	

				RING NO. B-10 n: Washington Cou Washington Cou	inty Airport					St. Lou	eotecni lorth Pri is, Miss 373-400	ce Ro ouri 6	ad 3132	6622	FA
Depth, feet	Samples	Sample #	Graphic Log	Surface EI.TBD Location: See Site Locatio	n Plan	Recovery %	RoD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/ou ft.	Water Content, %	Liquid Limit	Plastic Limit	
	X	SS-1		Asphaltic concret Reddish brown, fa trace sand, with c	at CLAY (CH).	78		4 6 5	3.00			25			
5 -	X	SS-2				83		2 4 6	2.75			34			
	X	SS-3		- no chert gravel t	from 6.0 to 7.5	100		2 3 3	2.00			53			
10-	X	SS-4		- 6" reddish brown lense at 9.5 ft.	n and tan, sand	100		3 4 5	1.00			39			
15-															
Date Date Engir	Borin	n Depth g Starti g Comp Geologis	ed: oleted:	10.0 5/8/24 5/8/24 E. Violett 20241060.00		rilled wit water no							to SF	T.	

				RING NO. B-14 on: Washington Cou Washington Cou	inty Airport					1340 N St. Lou	eotechi lorth Pri is, Miss 373-400	ce Ro	ad 3132	7-6622	FAX
Depth, feet	Samples	Sample #	Graphic Log	Surface EI.TBD Location: See Site Locatio	n Plan	Recovery %	RoD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/ou ft.	Water Content, %	Liquid Limit	Plastic Limit	Diseffeity Index
	X	SS-1		Reddish brown, fa chert gravel, trace	at CLAY (CH), with e sand	78		1 3 3	2.50			39			
- 5 -	X	SS-2				61		2 2 3	4.25			35			
	X	SS-3		Brown and reddis SAND (SC), trace (36% passing No		100		5 13 50/3*				21			
 - 10-		SS-4		Boring terminated	I at 8.6 ft.	0		50/1				3			
- 15- - 15-															
21 (2 -) -															
-20-															
Date Date	Borin Borin neer/C	Seolog	ted: pleted	8.6 5/14/24 5/14/24 EV/SLY 20241060.00		drilled wit water no							to SF	<u> </u> ≥T.	L





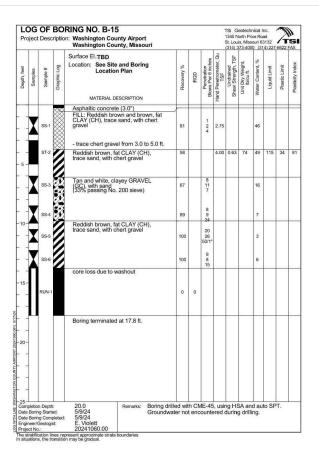


DES:N.B.B.				ISSUE RECORD
	NO.	BY	DATE	DESCRIPTION
DR: V.S.B.	1	L.K.K.		ISSUED FOR BID
	4	L.K.K.	06/18/2024	ADDENDUM NO. 3
CH: C.L.G.				
APP: L.K.K.				

GEOTECHNICAL INVESTIGATION **BORE LOGS**

G026 SHEET NO. MoDOT PROJ. NO. 24-060A-1 & 24-060A-2 WOOLPERT PROJ. NO. 1015274 16 of 150

SHEET NAME



				RING NO. B-19 in: Washington Cou Washington Cou	inty Airport				-	1340 N St. Loui	eotechi orth Pri is, Miss 73-400	ce Ro	ad 3132	-66221	S
and the state of	Samples	Sample #	Graphic Log	Surface El.:TBD Location: See Site Locatio	n Plan	Recovery %	RQD	Penetration Blows Per 6 inches	õ	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
7	X	SS-1		Asphaltic concret Reddish brown, fi trace sand, with c - reddish brown a to 5.0 ft.	at CLAY (CH), hert gravel	83		2 2 1	<0.25			34			
_	X	SS-2				67		WH 1 3	1.50			34			
7	X	SS-3		- trace chert grav from 6.0 to 7.5 ft.	el, and fine roots	89		1 3 3	2.50			20			
	X	SS-4				100		1 3 4	1.50			16			
- - - - - - - - - -				Boring terminated	en 10.0 II.										
ite B	oring oring	eologi	ed: pleted:	10.0 5/9/24 5/9/24 E. Violett 20241060.00	Remarks: Boring di Groundw								to SF	T.	

				RING NO. B-16 n: Washington Cou Washington Cou	inty Airport					1340 N St. Lou	eotechi lorth Pri is, Miss 73-400	ce Ro	ad 3132	-6622	FAX
Depth, feet	Samples	Sample #	Graphic Log	Surface El.; TBD Location: See Site Location MATERIAL D	n Plan	Recovery %	ROD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Disefforty Indox
	X	SS-1		Asphaltic concret Brown, lean CLA' and gravel	e (3.0") (CL), trace sand	6		4 7 8				18			
5 -	X	SS-2		Reddish brown, for trace sand, with co	at CLAY (CH), hert gravel	81		1 2 3	2.00			49			
	X	SS-3				100		1 3 3	2.00			47			
-10-	X	SS-4		Boring terminated		94		2 4 8	3.00			44			
-15-															
Date Date Engli Proje	Borin Borin neer/v	n Depth g Start g Com Geologi	ed: pleted: st:	10.0 5/9/24 5/9/24 E. Violett 20241060.00 present approximate strata	Remarks: Boring di Groundw								to SF	т.	

				RING NO. B-2 n: Washington Co Washington Co	unty Airport					1340 N St. Lou	eotech lorth Pri is, Miss 73-400	ce Ro	ad 3132	-6622	S
Depth, feet	Samples	Sample #	Graphic Log	Surface El.TBD Location: See Site Locatio		Recovery %	RQD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
	X	SS-1		Asphaltic concret Reddish brown, f trace sand, with c - reddish brown a to 5.0 ft.	at CLAY (CH).	56		1 3 2	2.50			24			
- 5 -	X	SS-2				81		2 2 2	2.00			39			
	X	SS-3				11		3 3 3	1.00			22			
10-	X	SS-4				78		1 1 2	<0.25			22			
15-				Boring terminated											
25-			Ш	10.0	Der'	all and a "	h C*	45 45		! "			- CT		
Date Date Engli	Borir Borir	n Depth g Start g Com Seologi	ed: pleted:	5/10/24	Remarks: Boring d Groundv	vater no	t end	ounte	ered	durin	g drilli	u au ing.	IO SF	1.	

				RING NO. B-1 n: Washington Cou Washington Cou	inty Airport					St. Lou	eotecni lorth Pri is, Miss 373-400	ce Ro ouri 6	ad 3132	-6622	FA
Depth, feet	Samples	Sample #	Graphic Log	Surface El.:TBD Location: See Site Locatio	n Plan	Recovery %	ROD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Principle of the Paris
0 1 0	X	SS-1		Asphaltic concret Gray and brown, trace sand - trace fine roots	lean CLAY (CL),	89		1 2 3	1.75			23			
5 -	X	SS-2		- trace gravel from	n 3.5 to 5.0 ft.	89		1 3 3	1.25			24			
	X	SS-3		Brown, fat CLAY with chert gravel	(CH), trace sand,	100		1 3 4	2.00			23			
10-	X	SS-4				100		2 6 12	3.00			23			
15															
Date Date	Borin Borin	n Depth g Start g Com Geologi	ed: oleted:	10.0 5/9/24 5/9/24 E. Violett	Remarks: Boring d Grounds								to SF	PT.	L

				RING NO. B-2 n: Washington Cou Washington Cou	unty Airport					1340 N St. Lou	eotechr orth Pric is, Misso 73-400	e Ros	ad 3132	-6622	FA
Depth, feet	Samples	Sample #	Graphic Log		n Plan	Recovery %	ROD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Manager of the State of the Sta
	X	SS-1		Asphaltic concret Reddish brown a (CH), trace sand,	e (2.5") nd gray, fat CLAY with chert gravel	72		1 1 2	<0.25			35			
- 5 -	X	SS-2				56		1 2 3	1.75			38			
	X	SS-3				89		1 6 7	4.25			26			
- 10-	X	SS-4				61		2 4 3	2.50			22			
- 25 - Com	pletio	n Depth	n:	10.0	Remarks: Boring of	drilled wit	h CN	ЛЕ-45	, usi	ng HS	SA and	d au	to SF	PT.	
Date	Borin neer/0	g Start g Com Seologi	pleted:	5/10/24 5/10/24 E. Violett 20241060.00	Ground	water no	t enc	ounte	ered	durin	g drillii	ng.			

				RING NO. B-18 in: Washington Cou Washington Cou	inty Airport					1340 N St. Lou	eotechi lorth Pri is, Miss 173-400	ce Ro ouri 6	ad 3132	-6622	S
Depth, feet	Samples	Samble #	Graphic Log	Surface El.:TBD Location: See Site Location MATERIAL D	n Plan	Recovery %	RQD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Diselicity Indov
	X	SS-1		Asphaltic concret Reddish brown, fa trace sand, with c - reddish brown a to 5.0 ft trace fine roots f	at CLAY (CH), hert gravel nd gray, from 1.0	89		2 2 2	1.25			31			
 -5-		ST-2				67			2.75	0.55	98	25	59	17	4
	X	SS-3				89		2 3 9	3.00			19			
- 10-	X	SS-4		Boring terminated		67		3 6 9	3.25			38			
-15- -15- -20- -25-				•											
	fat.	n Dept		10.0	Remarks: Boring di	rillod with	th Ca	4E 4E	i nei	na Lié	24.00	day	to or	DT.	
Date Date Engir Proje	Borin Borin eer/C ct No	g Star g Com Seolog	ed: pleted st:	5/9/24	Groundy								io of	L.	

REFERENCE

NOTE: ENTIRE SHEET HAS BEEN REVISED 4





	DES:N.B.B.				ISSUE RECORD
1		NO.	BY	DATE	DESCRIPTION
•	DR: V.S.B.	1	L.K.K.		ISSUED FOR BID
		<u>/4</u> \	L.K.K.	06/18/2024	ADDENDUM NO. 3
	CH: C.L.G.				
	APP: L.K.K.				
	AFF. L.N.N.				

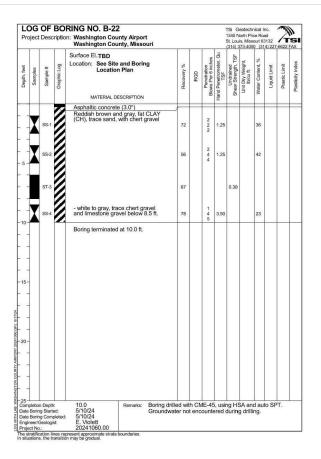
RUNWAY 2/20 RECONSTRUCTION & WIDENING AND APRON RECONSTRUCTION GEOTECHNICAL INVESTIGATION BORE LOGS

MoDOT PROJ. NO. 24-060A-1 & 24-060A-2

BORE LOGS
SHE

WOOLPERT PROJ. NO. 17

SHEET NAME G027 SHEET NO. 17 of 150



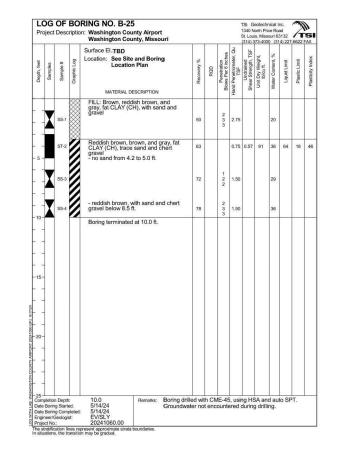
				RING NO. B-2 n: Washington Co Washington Co	unty Airport					1340 N St. Lou	eotechi orth Pri is, Miss 73-400	ce Ro	ad 3132	-6622	S FAX
Depth, feet	Samples	Sample #	Graphic Log	Surface El.:TBD Location: See Site Location MATERIAL D		Recovery %	ROD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
	X	SS-1		Reddish brown, f trace sand, with c - trace fine roots	at CLAY (CH), chert gravel from 1.0 to 5.0 ft.	67		1 2 2	0.50			26			
5 -	X	SS-2				50		WH 1 2	0.25			46	116	29	87
1 - C	X	SS-3				39		WH 1 1	<0.25			28			
-0-	X	SS-4				83		1 3 5	1.00			24			
	X	SS-5		- gray, from 13.9	to 15.0 ft.	100		2 2 4	0.75			24			
-0-	X	SS-6				100		3 4 6	3.50			30			
				Boring terminated	d at 10.0 ft.										
ate ate ngir	Borin Borin	n Depth g Start g Com Geologi	ed: pleted:	10.0 5/10/24 5/10/24 E. Violett 20241060.00		drilled wit water no							to SF	T.	

-				RING NO. B-2: n: Washington Cou Washington Cou	inty Airport					1340 N St. Lou	eotechi lorth Pri is, Miss 373-400	ce Ro ouri 6	ad 3132	-6622	S
Depth, feet	Samples	Sample #	Graphic Log	Surface El.TBD Location: See Site Locatio	e and Boring n Plan ESCRIPTION	Recovery %	ROD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Disoticity Indox
	X	SS-1		Asphaltic concret Reddish brown, fi trace sand, with o	at CLAY (CH),	44		2 2 2	1.75			25			
- 5 -	X	SS-2		- reddish brown a ft.	nd gray, below 3.5	78		1 3 3	1.50			23	133	29	10
	X	SS-3				61		2 5 7	2.00			30			
-10-	X	SS-4				89		1 3 3	2.50			24			
-15-				Boring terminated	at 10.0 II.										
Date Date	Borin Borin neer/C ct No		ed: oleted:	10.0 5/10/24 5/10/24 E. Violett 20241060.00	Remarks: Boring dri Groundw								to SF	T.	

				RING NO. B-2 n: Washington Cou Washington Cou	inty Airport					1340 N St. Lou	eolechi Iorth Pri is, Miss 173-400	ce Ros ouri 63	ad 3132		S FAX
Depth, feet	Samples	Sample #	Graphic Log	Surface El.:TBD Location: See Site Locatio	n Plan	Recovery %	ROD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
-	X	SS-1		Red and brown, f sand and gravel	at CLAY (CH), with	39		1 3 8	2.50			13			
5 -	X	SS-2		-gravelly from 3.5	to 5.0 ft.	44		4 4 5	2.50			22	57	24	33
	X	SS-3		-trace sand below	6.0 ft.	61		2 5 6	3.00			53			
3	Y	SS-4		Grav. highly weat	hered LIMESTONE	89		3 4 7	2.00			49			
20-				Boring terminated	1000 10										
Date Date Engir	Borin Borin	n Depth g Start g Com Seologi	ed: pleted:	10.0 5/14/24 5/14/24 EV/SLY 20241060.00	Remarks: Boring d Groundv								to SF	РΤ.	

				RING NO. B-24 on: Washington Cou Washington Cou	unty Airport					St. Lou	eotechi lorth Pri is, Miss 373-400	ce Ro ouri 6	ad 3132	-6622	FA
Depth, feet	Samples	Sample #	Graphic Log	Surface El.:TBD Location: See Site Locatio	n Plan	Recovery %	RQD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/ou ft.	Water Content, %	Liquid Limit	Plastic Limit	Discontinuo de deservo
	X	SS-1		Asphaltic concret Reddish brown, fi trace sand, with o	at CLAY (CH).	39		2 1 2	1.50			17			
5 -	X	SS-2		- reddish brown a ft.	nd gray, below 3.5	89		1 3 3	1.25			32			
	X	SS-3				72		1 3 3	2.50			25			
10	X	SS-4		Boring terminated		72		1 2 4	0.50			38			
Comple Date B Date B Engine Project	orin	g Start g Com	ed: pleted	10.0 5/10/24 5/10/24 E. Violett 20241060.00	Remarks: Boring dri Groundwa								to SF	PT.	L

				RING NO. B-28 n: Washington Cou Washington Cou	inty Airport					1340 N St. Lou	eotech lorth Pri is, Miss 73-400	ce Ro ouri 6	ad 3132	-6622	FAX
Depth, feet	Samples	Sample #	Graphic Log	Surface El.:TBD Location: See Site Locatio	n Plan	Recovery %	RoD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/ou ft.	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
	6	AUGER GB-1		Reddish brown, fa trace gravel - trace fine roots t	at CLAY (CH), rom 0 to 1.5 ft.										
5				Boring terminated	at 3.5 ft.										
Date Date	Borin Borin neer/	n Depth ng Starte ng Com Geologie	ed: oleted:	3.0 5/17/24 5/17/24 J. Eifert 20241060.00	Remarks: Boring Ground	drilled wit water no	h po t end	were	d Har ered	nd Au durin	iger, i g drilli	using ing.	FA.		





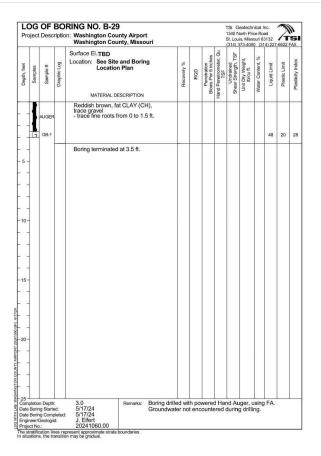


DES:N.B.B.				ISSUE RECORD	ĺ
	NO.	BY	DATE	DESCRIPTION	ĺ
DR: V.S.B.	1	L.K.K.	05/28/2024	ISSUED FOR BID	
	4	L.K.K.	06/18/2024	ADDENDUM NO. 3	ı
CH: C.L.G.					ĺ
					ı
APP: L.K.K.					

GEOTECHNICAL INVESTIGATION **BORE LOGS**

SHEET NAME G028 SHEET NO. 18 of 150

MoDOT PROJ. NO. 24-060A-1 & 24-060A-2 WOOLPERT PROJ. NO. 1015274



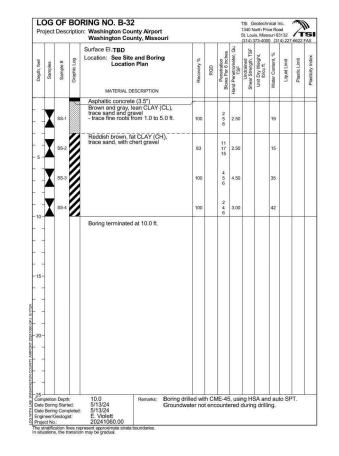
				RING NO. B-33 n: Washington Cou Washington Cou	nty Airport					1340 N St. Lou	eotechr lorth Pri is, Missi 73-400	ce Ros	ad 3132		SI
Depth, feet	Samples	Sample #	Graphic Log	Surface El.:TBD Location: See Site Location MATERIAL DI	n Plan	Recovery %	ROD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
	X	SS-1		Asphaltic concrete Brown and gray, I trace sand and gr Reddish brown, fa trace sand, with c	ean CLAY (CL), avel at CLAY (CH),	100		9 18 21	2.00			19			
5 -	X	SS-2				89		10 9 9				27			
	X	SS-3				100		2 3 4	1.75			52			
10-	X	SS-4				100		2 4 5	2.50			50			
115-				Boring terminated	at 10.0 ft.										
Date Date Engir Proje	Borin Borin neer/C ct No		ed: pleted: st:	10.0 5/13/24 5/13/24 E. Violett 20241060.00 present approximate strata	Ground	drilled wit water no	h CM	/IE-45	i, usii ered	ng HS durin	SA and g drilli	d aut	to SF	PT.	

		-		RING NO. B-30 in: Washington Cou Washington Cou	nty Airport					1340 N St. Lou	eotech lorth Pri is, Miss 373-400	ce Ro	ad 3132	7	5
Depth, feet	Samples	Sample #	Graphic Log	Surface El.,TBD Location: See Site Location MATERIAL DE	Plan	Recovery %	ROD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Diselicity Index
	X	SS-1		Asphaltic concrete Tan, lean CLAY (and gravel - trace fine roots fr	CL), trace sand	67		2 3 3	0.50			22			
- 5 -		ST-2		Reddish brown, fa trace sand, with ch	t CLAY (CH), nert gravel	44			1.00			12	84	26	5
	X	SS-3				94		11 4 4	3.50			25			
-10-	X	SS-4				100		3 3 6	3.50			51			
-15				Boring terminated											
Date Date	Borir Borir	n Depthing Starting Com	ed: pleted:		Remarks: Boring di Groundv								to SF	PT.	
Proje	ct No	Geologi).:		E. Violett 20241060.00 present approximate strata in on may be gradual.											_

_	-	-		RING NO. B-34 n: Washington Cou Washington Cou	inty Airport					1340 N St. Lou	eotechi lorth Pri is, Miss 73-400	ce Ro ouri 6:	ad 3132	-6622	S FAX
Depth, feet	Samples	Sample #	Graphic Log	Surface El.:TBD Location: See Site Location MATERIAL D	n Plan	Recovery %	RQD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
	X	SS-1	Ž	Asphaltic concret Gray, lean CLAY and gravel - trace fine roots f	(CL), trace sand	89		1 1 2	0.50			29			
5 -	X	SS-2		- tan and gray bel	ow 3.5 ft.	94		3 8 20	1.00			18	28	15	13
	X	SS-3		Reddish brown, fa trace sand, with c	at CLAY (CH), hert gravel	89		3 4 6	2.00			35			
10-	X	SS-4				100		2 3 4	3.00			49			
15-				Boring terminated	at 10.0 ft.										
Date Date Engi	Borin Borin	n Depth g Start g Com Geologi	ed: pleted:	10.0 5/14/24 5/14/24 E. Violett 20241060.00	Remarks: Boring d Grounds								to SF	<u> </u> РТ.	

				RING NO. B-31 n: Washington County Airport Washington County, Missouri						1340 N St. Lou	eotechi lorth Pri is, Miss 373-400	ce Ro ouri 6	ad 3132	-6622	FAX
Depth, feet	Samples	Sample #	Graphic Log	Surface EI.:TBD Location: See Site and Boring Location Plan MATERIAL DESCRIPTION	Recovery %	400	RQD	Blows Per 6 inches Hand Penetrometer, Qu		Undrained Shear Strength, TSF	Unit Dry Weight, Ib/ou ft.	Water Content, %	Liquid Limit	Plastic Limit	Diseticity Index
	X	SS-1		Asphaltic concrete (3.75") Gray, lean CLAY (CL), trace sand and gravel - trace fine roots from 1.0 to 5.0 ft.	67			1 0.	50			23	66	19	4
5 -	X	SS-2			44	2		1 1.	00			25			
	Y	SS-3		 sandy below 6.0 ft. Reddish brown, fat CLAY (CH), 	.94	L		1 7 3.	50			25			
	Y	SS-4		trace sand, with chert gravel	100	E		1	50			28			
15-				Boring terminated at 10.0 ft.											
Date Date Engir Proje	Borin Borin neer/V act No	n Depth ig Starti ig Comp Geologis	ed: pleted: st:	5/13/24 Grou	g drilled w ndwater n	rith ot e	CME	45, ι ntere	isir	ng HS during	SA an g drilli	d au	to SF	PT.	

				RING NO. B-35 n: Washington Cou Washington Cou	inty Airport					1340 N St. Lou	eotechi lorth Pri is, Miss 373-400	ce Ro ouri 6:	ad 3132	-6622	FA
Depth, feet	Samples	Sample #	Graphic Log	Surface El.:TBD Location: See Site Locatio	n Plan	Recavery %	RQD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/ou ft.	Water Content, %	Liquid Limit	Plastic Limit	Dissilate Index
	X	SS-1		Portland cement FILL: Gray, lean 0 sand and gravel - trace fine roots t	CLAY (CL), trace from 1.0 to 2.5 ft.	6		5 4 2				12			
- 5 -	X	SS-2		FILL: Brown, pool GRAVEL (GC) (18% passing No	. 200 sieve)	22		1 2 1				14			
	X	SS-3		Reddish brown, fa trace sand, with c - gravelly from 6.0	at CLAY (CH), hert gravel 0 to 7.5 ft.	89		4 14 12	3.50			21			
- 10-	X	SS-4		Boring terminated		83		3 7 8	2.50			24			
Date Date	Borin Borin eer/0	n Depth g Start g Com Geologi	ed: pleted:	10.0 5/14/24 5/14/24 E. Violett 20241060.00	Remarks: Boring d Groundy								to SF	 PT.	



REFERENCE



WOOLPERT



DES: N.B.B.

NO. BY DATE DESCRIPTION

1 L.K.K. 05/28/2024 ISSUED FOR BID

CH: C.L.G.

APP: L.K.K.

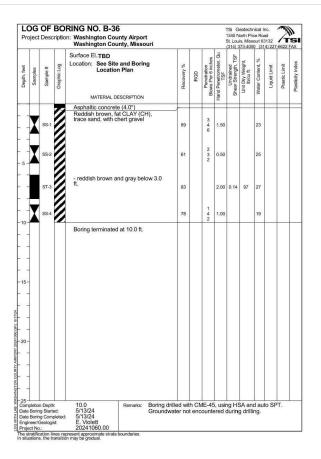
APP: L.K.K.

RUNWAY 2/20 RECONSTRUCTION & WIDENING AND APRON RECONSTRUCTION GEOTECHNICAL INVESTIGATION BORE LOGS

> WOOLPERT PROJ. NO. 1015274

MoDOT PROJ. NO. 24-060A-1 & 24-060A-2 SHEET NAME G029 SHEET NO.

19 of 150



				RING NO. B-40 n: Washington Cou Washington Cou	inty Airport				-	1340 N St. Lou	eotechr Iorth Pri is, Miss 73-400	ce Ro	ad 3132		SI
Depth, feet	Samples	Sample #	Graphic Log	Surface EI.TBD Location: See Site Location MATERIAL DI	n Plan	Recovery %	RQD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
	X	SS-1		Asphaltic concrete FILL: Reddish bro (CH), trace sand	wn, fat CLAY	67		1 2 2	0.50			29	65	19	46
5 -	X	SS-2		- gray, reddish bro below 3.5 ft.	own, and brown	89		1 3 3	2.00			22			
	X	SS-3		FILL: Brown and (CL), with sand ar	gray, lean CLAY nd gravel	72		1 4 9	1.50			17			
10-	X	SS-4		FILL: Reddish bro (CH), trace sand	wn, fat CLAY and chert gravel	100		2 5 8	3.50			21			
115-				Boring terminated											
Date Date Engir	ompletion Depth: 10.0 ate Boring Started: 5/14/24 ate Boring Completed: 5/14/24 agineer/Geologist: E. Violett			5/14/24 5/14/24	Ground	drilled wit water no							to SF	PT.	

				RING NO. B-3 n: Washington Con Washington Con	unty Airport			Is.		1340 N St. Lou	eotech lorth Pri is, Miss 173-400	ce Ro ouri 6	ad 3132		S
Depth, feet	Samples	Sample #	Graphic Log	Surface EI.TBD Location: See Situ Location MATERIAL D	e and Boring n Plan DESCRIPTION	Recovery %	ROD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Diselicity Indox
	X	SS-1		Asphaltic concret FILL: Reddish bro CLAY (CH), trace chunks, with grav	te (3.75") own and brown, fat a sand and asphalt rel	50		3 3 2	2.50			27			
5 -		ST-2		Reddish brown, f trace sand, with o	at CLAY (CH), chert gravel	79			2.25	0.78	104	25			
-	X	SS-3		- reddish brown a 7.5 ft.	and gray from 6.0 to	94		2 3 3	1.00			40			
10-	X	SS-4		- gray from 8.5 to	10.0 ft.	78		2 3 2	0.50			29			
115-				Boring terminated											
Date E	Borine Borine Ber/G	Depth g Start g Comp Seologis	ed: oleted:	10.0 5/14/24 5/14/24 E. Violett 20241060.00	lled wit	th CN t end	ME-45	i, usir	ng HS durin	SA an g drilli	d au	to SF	PT.		

				RING NO. B-4 n: Washington Co Washington Co	unty Airport					1340 N St. Lou	eotechi lorth Pri is, Miss 173-400	ce Ro	ad 3132		SI
Depth, feet	Samples	Sample #	Graphic Log	Surface El.:TBD Location: See Site Locatio		Recovery %	RQD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	LL.	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
	X	SS-1		Asphaltic concret Reddish brown a (CH), trace sand	nd gray, fat CLAY	83		1 1 2	1.00			39	104	27	77
5 -	X	SS-2				78		1 1 2	0.50			39			
	X	SS-3		- with sand and c to 7.5 ft.	hert gravel from 6.0	50		1 2 6	0.25			38			
		ST-4				83			0.50	0.60					
15-				Boring terminated	3 4 100 1.										
Date Date Engli	Borin Borin	eologi	ed: pleted:	10.0 5/14/24 5/14/24 E. Violett 20241060.00	Remarks: Boring dri Groundwa	lled wit ater no	th Cf t end	ME-45	i, usi	ng HS durin	SA an g drilli	d au ng.	to SF	T.	

				RING NO. B-38 n: Washington County Airport Washington County, Missouri					1340 N St. Lou	eotechi lorth Pri is, Miss 373-400	ce Ro ouri 6	ad 3132	6622	FA
Depth, feet	Samples	Sample #	Graphic Log	Surface EI.TBD Location: See Site and Boring Location Plan MATERIAL DESCRIPTION	Recovery %	RQD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Disoffolis Indox
			XX	Asphaltic concrete (3.75")	\rightarrow									F
	X	SS-1		FILL: Reddish brown, lean CLAY (CL), with sand and chert gravel	11		2 2 2				27			
5 -	X	SS-2			6		2 2 3				24			
	X	SS-3		Reddish brown, sandy fat CLAY (CH), with chert gravel	100		6 12 16	>4.50			12			
10-	X	SS-4			83		5 20 23	>4.50			22			
15-														
Date Date Engir	Borin Borin	n Depth g Starti g Comp Geologis	ed: oleted:	5/14/24 Ground	drilled wit water no	th CN	/IE-45	i, usii ered	ng H durin	SA an g drilli	d au ng.	to SF	T.	

				RING NO. B-42 n: Washington Cou Washington Cou	inty Airport					1340 N St. Lou	eotechi orth Pri is, Miss 73-400	ce Ro	ad 3132	-6622	FA
Depth, feet	Samples	Sample #	Graphic Log	Surface El.:TBD Location: See Site Locatio	n Plan	Recovery %	ROD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Management of the Parket
	X	SS-1		Asphaltic concret FILL: Reddish bro (CH), with sand a	e (3.25") own, fat CLAY nd chert gravel	50		1 1 2	0.50			49			
- 5 -	X	SS-2		FILL: Brown and (CL), with sand at	gray, lean CLAY nd gravel	67		1 5 4	1.00			21	39	18	2
	X	SS-3		- reddish brown, below 6.0 ft. Reddish brown, for sand and chert grown.	at CLAY (CH), with	100		5 43 21	2.50			15			
- 10-	X	SS-4				100		7 10 9	3.50			15			
				Boring terminated											
Date Date	Borin Borin eer/0	n Depth g Start g Com Geologi	ed: pleted:	10.0 5/15/24 5/15/24 E. Violett 20241060.00	Remarks: Boring dr Groundw	illed wit ater no	h CN t end	ME-45 ounte	i, usii ered	ng HS durin	SA an g drilli	d au	to SF	PT.	L

		RING NO. B-39 n: Washington Cou Washington Cou	nty Airpor						1340 N St. Lou	eotechi lorth Pri is, Miss 173-400	ce Ro ouri 6	ad 3132	-6622	S
Depth, feet Samples	Graphic Log	Surface El.TBD Location: See Site Location MATERIAL DE	n Plan	g	Recovery %	RQD	Penetration Blows Per 6 inches	3	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Dissiple Index
ss s		Asphaltic concrete Reddish brown, fa trace chert gravel	e (3.25") it CLAY (Cl and sand	1),	31		1 1 2	0.75			45	120	32	8
s - ss					39		WR 1 3	0.25			51			
ss					33		1 3 2	1.00			39			
ss		Boring terminated			33		2 4 9	0.25			32			
-15-														
Date Boring Sta Date Boring Co	ompletion Depth: 10.0 atte Boring Started: 5/14/24 ate Boring Completed: 5/14/24 ngineer/Geologist: E. Violett			Boring drille Groundwate								to SF	PT.	





DES:N.B.B.				ISSUE RECORD	
	NO.	BY	DATE	DESCRIPTION	
DR: V.S.B.	_1	L.K.K.	05/28/2024	ISSUED FOR BID	
	4	L.K.K.	06/18/2024	ADDENDUM NO. 3	ı
CH: C.L.G.					
APP: L.K.K.					
					_

GEOTECHNICAL INVESTIGATION BORE LOGS

MoDOT PROJ. NO. 24-060A-1 & 24-060A-2

SHEET NAME G030 SHEET NO. WOOLPERT PROJ. NO. 1015274 20 of 150

			ORING NO. B-4 ion: Washington Co Washington Co	unty Airport					1340 N St. Lou	eotechi lorth Pri is, Miss 373-400	ce Ro ouri 6	ad 3132		S
Depth, feet	Samples	Graphic Log	Surface EI.TBD Location: See Sit Locatio		Recovery %	RoD	Penetration Blows Per 6 inches	Hand Penetrometer, Qu TSF	Undrained Shear Strength, TSF	Unit Dry Weight, Ib/cu ft.	Water Content, %	Liquid Limit	Plastic Limit	Plasticity Index
-	≤ SS	1	Asphaltic concre FILL: Reddish br CLAY (CL), with	te (3.25") own and gray, lean gravel	100		50/2*				11			
- 5 -	ss	i-2	- sandy below 3.5	5 ft.	67		11 9 12				18			
-	ss	:3	Reddish brown, f trace sand and c	at CLAY (CH), hert gravel	72		3 4 7				42			
10-	ss		-with chert grave		100		2 5 7	4.00			40			
15-														
25 Comple			10.0 5/15/24	Remarks: Boring di									PT.	
Date Boring Started: 5/15/24 Date Boring Completed: 5/15/24 Engineer/Geologist: E. Violett Project No.: 2024/106.00 The stratification lines represent approximate strata boundaries.					rater en	cour	nered	at 4.	.J IL. I	Juli II I G	urill	nıy.		

Unified Soil Classification System, (ASTM D-2487)

Maj	ior Divi		Gro Syml		Typical Names	La	boratory Classification	Criteria
	si nc	Clean gravels (Little or no fines)	G۱	N	Well-graded gravels, gravel- sand mixtures, little or no fines	oanse- 8*	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{1}{D_{10}}$	$\frac{D_{30})^2}{0 \times D_{60}}$ between 1 and 3
(ozi	rse fractionieve size	Clean (Little or	Gl	Р	Poorly graded gravels, gravel- sand mixtures, little or no fines	e size), c	Not meeting all gradation re	equirements for GW
Coarse-grained soils (More than half of materials is larger than No. 200 sieve size)	Gravels More than half of coarse fraction is larger than No. 4 sieve size)	Gravels with fines Appreciable amount of fines)	GM ^a	d	Silty gravels, gravel-sand-silt mixtures	Depending to preventing of the and pared from garda-scie curve. Depending on preventing of first first friends on smaller than No. 200 sieve size), conse- citational solis were classified as follows: GW, GP, SW, SP GW, CE, SW, SP Bedelufer custs requiring dual symbols For the control of the control of the custs requiring dual symbols For the control of the cust requiring dual symbols For the control of the cust requiring dual symbols For the cust required to the custom requir	Atterberg limits below "A" line or P.1. less than 4	Above "A" line with P.1. between 4
ils hin No	ore the	vels with reciable a of fines)		u		rain-siz rr than SW, S SM, S c cases		and 7 are borderline cases requiring use of dual symbols
ined so larger tl	N)	Gra (App	G	C	Clayey gravels, gravel-sand- clay mixtures	vel from grain-size of tion smaller than Nc GW, GP, SW, SP GM, GC, SM, SC Borderline cases re	Atterberg limits below "A" line with P.1. greater than 7	of dual symbols
Coarse-grained soils aterials is larger than	ion is	Clean sands ttle or no fines)	sv	V	Well-graded sands, gravelly sands, little or no fines	nd gravel (fraction lows: GP GB BR	$C_u = \frac{D_{60}}{D_{10}}$ greater than 6; $C_c = \frac{1}{D_{10}}$	D ₃₀) ² between 1 and 3
C nalf of ma	s oarse fract 4 sieve siz	Clean sands (Little or no fines)	SI	P	Poorly graded sands, gravelly sands, little or no fines	of sand ar ge of fines fied as fol	Not meeting all gradation requ	irements for SW
fore than	Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	Sands with fines (Appreciable amount of fines)	SM ^a	d	Silty sands, sand-mix mixtures	Determine percentages of sand and gra Depending on percentage of fines (frac Grained soils are classified as follows: Less than 5 per cent More than 12 per cent 5 to 12 per cent	Atterberg limits about "A" line or P.I. less than 4	Limits plotting in hatched zone with
8	re thar	Sands with fines ppreciable amou of fines)		u	2000 - Control	Determine perce Depending on p Grained soils an Less than 5 per More than 12 pc		P.I. between 4 and 7 are borderline
	(Mo	Sand (Appre	SC	2	Clayey sands, sand-clay mixtures	Detern Depense Graine Less th More t	Atterberg limits about "A" line with P.I. greater than 7	cases requiring use of dual symbols
	ays	less	М	L	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity			
0 sieve size)	Silts and clays	(Liquid limit less than 50)	CI	Ь	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	For cits and fine	sifuction of tine-grained sails grained fraction of course-grained	
No. 20			Ol	L	Organic silts and organic silty clays of low plasticity	Equation Equation Horizont Horizont	tel of PI-4 to LL=25.5	43. M
ined soils smaller than	sk	reater	M	н	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	Equation Vertical than P.	of U-line of LU-16 to PI*Z	
Fine-grained soils (More than half of materials is smaller than No. 200 sieve size)	Silts and clays	(Liquid limit greater than 50)	CI	Н	Inorganic clays of medium to high plasticity, organic silts	¥ 20	ML o OL	OH
halfof		<u> </u>	OI	Н	Organic clays of medium to high plasticity, organic silts	00 10	6 20 30 40 50 40 7 LIQUID LIMIT (LL)	90 90 100 II
(More than	Highly	soils	P	t	Peat and other highly organic soils			

*Division of GM and SM groups into subdivisions of d and u are for roads and airficlds only. Subdivision is based on Atterberg limits; suffix d used when LL, is 26 or less and the P.1, is 6 or less the suffix u used when LL, is greater than 28.

*Blonderine classifications, used for sools passessing characteristics of two groups, are designated by combinations of group symbols. For example: GW.4G, well-graded gravel-sand mixture with clay binder.

*T.Gootchialed Georghosise for footnet fleeners lainfed for Linchiseirons second as

LOG OF BORING NO. B-44 Surface El.:TBD Location: See Site and Boring Location Plan Asphaltic concrete (3.75") FILL: Brown and gray, lean CLAY (CL), trace sand -trace chert and quartz fragments from 1.0 to 2.5 ft. Red and brown, lean CLAY (CL), with quartz gravel, trce sand -trace organics below 8.5 ft. Boring terminated at 10.0 ft. Boring drilled with CME-45, using HSA and auto SPT Groundwater not encountered during drilling.

GENERAL NOTES

The number of borings is based on: topographic and geologic factors; the magnitude of structure loading; the size, shape, and value of the structure; consequences of failure; and other structure toating; the size, snape, and vatue of the structure; consequences of railure; and other factors. The type and sequence of sampling are selected to reduce the possibility of undiscovered anomalies and maintain drilling efficiency. Attempts are made to detect and/or identify occurrences during drilling and sampling such as the presence of water, boulders, gas, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation in resistance to driving split-spoon samplers, unusual odors, etc. However, lack of notation regarding these occurrences does not preclude their presence

Although attempts are made to obtain stabilized groundwater levels, the levels shown on the Logs of Boring may not have stabilized, particularly in more impermeable cohesive soils. Consequently, the indicated groundwater levels may not represent present or future levels. Groundwater levels may vary significantly over time due to the effects of precipitation, infiltration, or other factors not evident at the time indicated.

Unless otherwise noted, soil classifications indicated on the Logs of Boring are based on visual observations and are not the result of classification tests. Although visual classifications are performed by experienced technicians or engineers, classifications so made may not be

Generally, variations in texture less than one foot in thickness are described as layers within a stratum, while thicker zones are logged as individual strata. However, minor anomalies and changes of questionable lateral extent may appear only in the verbal description. The lines indicating changes in strata on the Logs of Boring are approximate boundaries only, as the actual material change may be between samples or may be a gradual transition.

Samples chosen for laboratory testing are selected in such a manner as to measure selected physical characteristics of each material encountered. However, as samples are recovered only intermittently and not all samples undergo a complete series of tests, the results of such tests may not conclusively represent the characteristics of all subsurface materials present.

NOTATION USED ON BORING LOGS

APPROXIM	ATE PROPORTIONS			PARTICLE SIZE
TRACE	<15%	BOULI	DERS	>12 Inches
WITH	15-30%	COBBI	LES	12 Inches - 3 Inches
MODIFIER	>30%	GRAV	EL	
			Coarse	3 Inches - 3/4 Inch
			Fine	3/4 Inch - No. 4 Sieve (4.750 mm)
		SAND		
Clay or clayey i	nay be used as major		Coarse	No. 4 - No. 10 Sieve (2.000 mm)
material or mod	ifier, regardless of		Medium	No. 10 - No. 40 Sieve (0.420 mm)
relative proporti	ions, if the clay content is		Fine	No. 40 - No. 200 Sieve (0.074 mm)
sufficient to dor	ninate the soil properties.	SILT		No. 200 Sieve - 0.002 mm
		CLAY		< 0.002 mm

PENETRATION - BLOWS

Number of impacts of a 140-pound hammer falling a distance of 30 inches to cause a standard split-barrel sampler, 1 3/8 inches I.D., to penetrate a distance of 6 inches. The number of impacts for the first 6 inches of penetration is known as the seating drive. The sum of the impacts for the last 12 inches of penetration is the Standard Penetration Test Resistance or "N" value, blows per foot. For example, if blows = 6-8-9, "N" = 8+9 or 17.

OTHER NOTATIONS

Recovery % – length of recovered soil divided by length of sample attempted.

50/2" Impacts of hammer to cause sampler to penetrate the indicated number of inches

WH Sampler penetrated under the static loading of the weight of the drill rods

WH Sampler penetrated under the static loading of the weight of the hammer and drill rods

Sampler penetrated under me static loading the weight of the halfmer and drift for HSA Hollow stem auger drilling method FA Fight auger drilling method with drilling method with drilling mud Automatic hammer used for Standard Penetration Test sample Safety hammer with rope and cathead used for Standard Penetration Test sample

☑ Depth at which groundwater was encountered during drilling

▼ Depth at which groundwater was measured after drilling

X Standard Penetration Test Sample, ASTM D1586

3-inch diameter Shelby Tube Sample, ASTM D1587

G Sample grabbed from auger

NX Size rock core sample







D	ES:N.B.B.				ISSUE RECORD
\vdash		NO.	BY	DATE	DESCRIPTION
DI	R: V.S.B.	1	L.K.K.		ISSUED FOR BID
\vdash		4	L.K.K.	06/18/2024	ADDENDUM NO. 3
C	H: C.L.G.				
\vdash					
ΙAI	PP: L.K.K.				

RUNWAY 2/20 RECONSTRUCTION & WIDENING AND APRON RECONSTRUCTION

GEOTECHNICAL INVESTIGATION

BORE LOGS

SHEET NO. 21 of 150

SHEET NAME

G031

MoDOT PROJ. NO. WOOLPERT PROJ. NO. 1015274 24-060A-1 & 24-060A-2