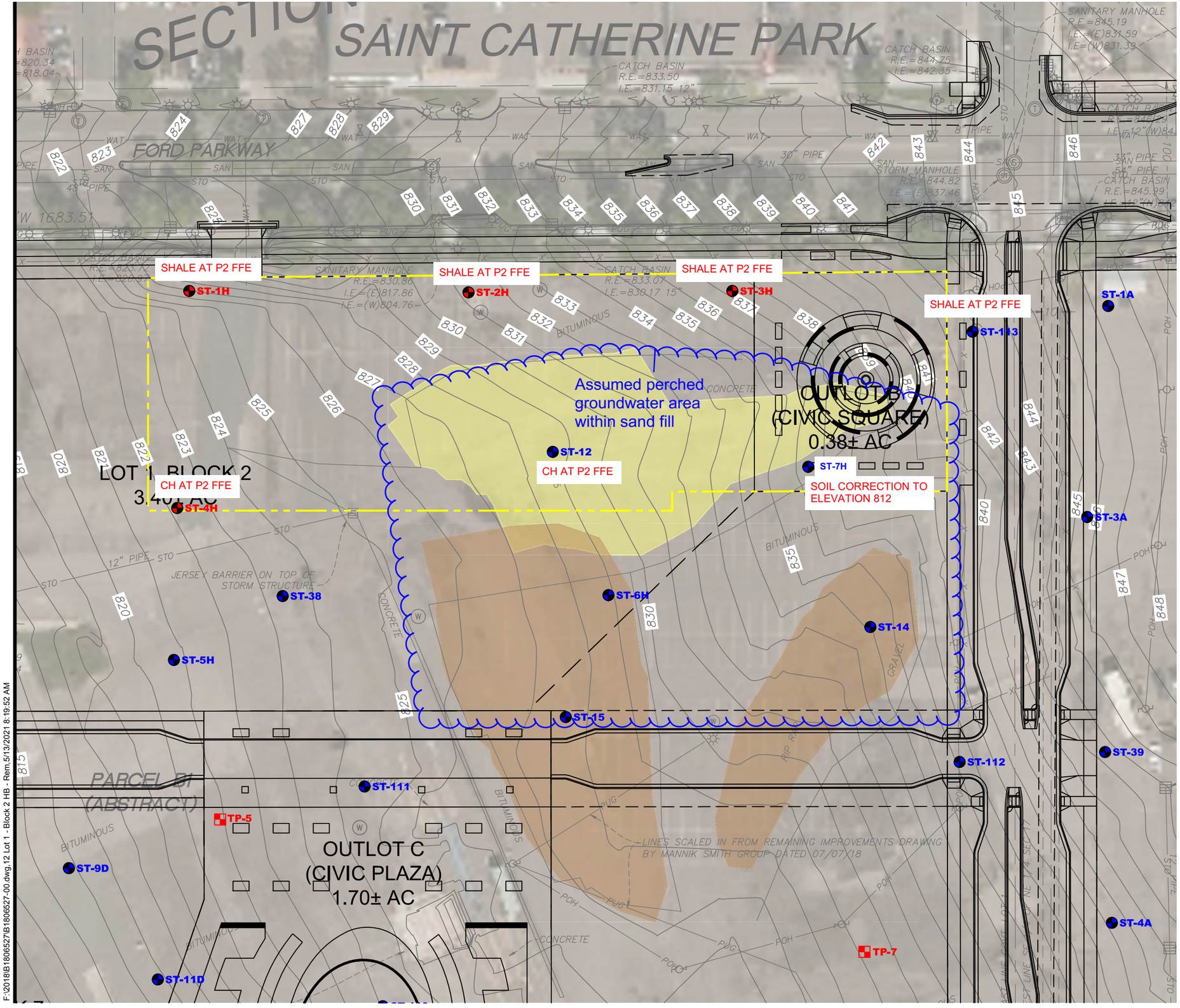

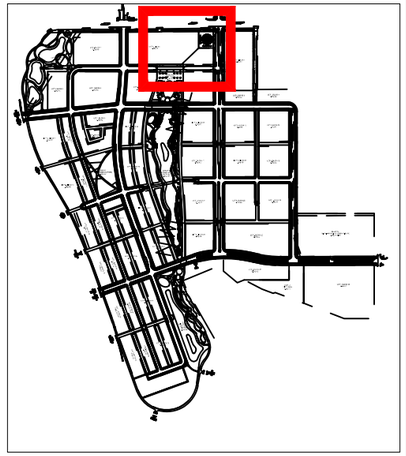

SHEET LOCATION

DENOTES APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING (PERFORMED FOR CURRENT PROJECT)

DENOTES APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING (PERFORMED FOR OTHER PROJECTS)

DENOTES APPROXIMATE LOCATION OF TEST PIT

CONSOLIDATED IMPACT AREAS

ISOLATED IMPACT AREAS

SDRAP ADDENDUMS

30' 0 60'

SCALE: 1" = 60'

BRAUN INTERTEC
The Science You Build On.
11001 Hampshire Avenue S
Minneapolis, MN 55438
952.995.2000
braunintertec.com

Drawing Information

Project No:	B1806527.12
Drawing No:	B1806527-00
Drawn By:	BJB
Date Drawn:	7/30/19
Checked By:	JJV
Last Modified:	5/13/21

Project Information

Project Paul
Lot 1, Block 2,
Highland Bridge,
Multi-Family (North)

2152 Ford Parkway

Saint Paul, Minnesota

Remedial Activities Completed

F:\2018\B1806527\B1806527-00.dwg,12 Lot 1 - Block 2 HB - Rem,5/13/2021 8:19:52 AM

WEST - EAST

Elevation, feet

ML FFE: 840 to 838

Perched Groundwater in Fill

P2 FFE: 816 to 818

Soil Correction below P2 FFE to remove old fill

EXISTING FILL

FAT CLAY

SHALE

LIMESTONE

ST-4H

ST-1H

ST-2H

ST-12

ST-3H

ST-7H

ST-113

FENCE DIAGRAM
GEOTECHNICAL EVALUATION
HIGHLAND BRIDGE - BLOCK 2, LOT 1, MULTI-FAMILY (NORTH)
2152 FORD PARKWAY
ST. PAUL, MINNESOTA

Project No: B1806527.12
Scale: Vert=6 ft Hor NTS
Date: 5-13-21
Figure:

11X17 ELEVATION-TITLE BLOCK 06527.12.GPJ BRAUN_V8_CURRENT.GDT 5/13/21 13:33

BRAUN INTERTEC

LOG OF BORING

Braun Project B1806527.12
GEOTECHNICAL EVALUATION
Highland Bridge - Block 2, Lot 1, Multi-Family (North)
2152 Ford Parkway
St. Paul, Minnesota

BORING: **ST-4H**

LOCATION: N: 146075, E: 548929. See attached sketch.

DRILLER: J. Tatro | METHOD: 3 1/4" HSA, Autohammer | DATE: **4/29/21** | SCALE: **1" = 4'**

Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	Tests or Notes
821.9	0.0					
820.9	1.0	FILL	FILL: Silty Sand, fine- to coarse-grained, with Gravel, dark brown, moist.			
		FILL	FILL: Silty Sand, fine- to medium-grained, intermixed with Fat Clay, trace Gravel, brown and gray, moist.	19		
817.4	4.5	CH	FAT CLAY, brown, gray and olive, moist, very stiff. (Weathered Shale Bedrock)	19		qp=3 tsf
815.4	6.5	SH	SHALE, occasional Limestone fragments, gray, dry, hard. (Decorah Shale Bedrock)	75/7"		
				74/11"		
				88/11"		
				85/10"		
				50/4"		
798.3	23.6			50/2"		
			END OF BORING.			
			Auger met refusal at the 23.6-foot depth.			
			Water not observed while drilling.			
			Boring immediately backfilled with bentonite grout.			

DRAFT

(See Descriptive Terminology sheet for explanation of abbreviations)

LOG OF BORING-DRAFT N:\GINT\PROJECTS\AX PROJECTS\2018\06527.12.GPJ BRAUN_V8_CURRENT.GDT 5/13/21 13:20

BRAUN INTERTEC

LOG OF BORING

Braun Project B1806527.12
GEOTECHNICAL EVALUATION
Highland Bridge - Block 2, Lot 1, Multi-Family (North)
2152 Ford Parkway
St. Paul, Minnesota

BORING: **ST-1H**

LOCATION: N: 146203, E: 548922. See attached sketch.

DRILLER: J. Tatro | METHOD: 3 1/4" HSA, Autohammer | DATE: **4/29/21** | SCALE: **1" = 4'**

Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	Tests or Notes
823.8	0.0					
822.8	1.0	FILL	FILL: Silty Sand, fine- to coarse-grained, with Gravel, brown, moist.			
		FILL	FILL: Sandy Fat Clay, with Gravel, black and brown, moist.	15		
819.8	4.0	CH	FAT CLAY, olive, brown and gray, moist, very stiff. (Weathered Shale Bedrock)	19		
817.3	6.5	SH	SHALE, occasional Limestone fragments, gray, dry, hard. (Decorah Shale Bedrock)	80		
				89/9"		
				74		
				87/8"		
				50/7"		
				50/2"		
797.2	26.6		END OF BORING.	50/1"		
			Auger met refusal at the 26.6-foot depth.			
			Water not observed while drilling.			
			Water not observed to cave-in depth of 20.3 feet immediately after withdrawal of auger.			
			Boring immediately backfilled with bentonite grout.			

DRAFT

(See Descriptive Terminology sheet for explanation of abbreviations)

LOG OF BORING-DRAFT N:\GINT\PROJECTS\AX PROJECTS\2018\06527.12.GPJ BRAUN_V8_CURRENT.GDT 5/13/21 13:20

BRAUN INTERTEC

LOG OF BORING

Braun Project B1806527.12
GEOTECHNICAL EVALUATION
Highland Bridge - Block 2, Lot 1, Multi-Family (North)
2152 Ford Parkway
St. Paul, Minnesota

BORING: **ST-2H**

LOCATION: N: 146209, E: 549103. See attached sketch.

DRILLER: J. Tatro | METHOD: 3 1/4" HSA, Autohammer | DATE: **4/29/21** | SCALE: **1" = 4'**

Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	Tests or Notes
830.6	0.0					
829.6	1.0	FILL	FILL: Sandy Lean Clay, trace roots, dark brown, moist. (Topsoil Fill)			
		FILL	FILL: Fat Clay, little Gravel, slightly organic, black, brown and gray, moist.	9		
826.6	4.0					
		FILL	FILL: Sandy Lean Clay, with Gravel, gray, brown and black, moist.	13		
824.1	6.5					
		CH	FAT CLAY, brown, gray and olive, moist, very stiff to hard. (Weathered Shale Bedrock)	24		
			Only Limestone fragments at 10 feet.	32		
819.1	11.5					
		SH	SHALE, occasional Limestone fragments, gray, dry, hard. (Decorah Shale Bedrock)	68		
				79		
				50/2"		
				50/6"		
				50/3"		
799.6	31.0		Piece of Limestone encountered in sampler at 31 feet.			
			END OF BORING.*			

*Auger met refusal at the 31-foot depth.

Water not observed while drilling.

Water not observed to cave-in depth of 22 1/2 feet immediately after withdrawal of auger.

Boring immediately backfilled with bentonite grout.

DRAFT

(See Descriptive Terminology sheet for explanation of abbreviations)

LOG OF BORING-DRAFT N:\GINT\PROJECTS\AX PROJECTS\2018\06527.12.GPJ BRAUN_V8_CURRENT.GDT 5/13/21 13:20

BRAUN INTERTEC

LOG OF BORING

Braun Project B1806527
GEOTECHNICAL EVALUATION
Project Paul
966 Mississippi River Boulevard S
St. Paul, Minnesota

BORING: **ST-12**

LOCATION: N: 146109.658 E: 549155.979. See attached sketch.

DRILLER: K. Miller | METHOD: 3 1/4" HSA, Autohammer | DATE: **7/19/18** | SCALE: **1" = 4'**

(See Descriptive Terminology sheet for explanation of abbreviations)

Elev. feet	Depth feet	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	MC %	Tests or Notes
828.9	0.0	FILL	FILL: Poorly Graded Sand, fine- to medium-grained, trace Gravel, brown, moist to wet.	6			
				18	▽		
				9			
				7			
820.9	8.0	CH	FAT CLAY, trace Gravel, gray, moist, hard. (Weathered Shale Bedrock)	38		15	LL=53, PI=25, PI=28
				75			
816.9	12.0		END OF BORING.				
			Water observed at 3 1/2 feet with 6 feet of hollow-stem auger in the ground.				
			Water not observed to cave-in depth of 2 feet immediately after withdrawal of auger.				
			Boring then backfilled.				

BRAUN INTERTEC

LOG OF BORING

Braun Project B1806527.12
GEOTECHNICAL EVALUATION
Highland Bridge - Block 2, Lot 1, Multi-Family (North)
2152 Ford Parkway
St. Paul, Minnesota

BORING: **ST-3H**

LOCATION: N: 146210, E: 549268. See attached sketch.

DRILLER: J. Tatro | METHOD: 3 1/4" HSA, Autohammer | DATE: **4/29/21** | SCALE: **1" = 4'**

(See Descriptive Terminology sheet for explanation of abbreviations)

Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	Tests or Notes
836.5	0.0	FILL	FILL: Silty Sand, fine- to medium-grained, trace to with Gravel, non- to slightly organic, black, moist.	11		
832.5	4.0	FILL	FILL: Silty Sand, fine- to medium-grained, little Gravel, with Clay inclusions, brown and gray, moist.	9		
830.0	6.5	CH	FAT CLAY, brown, gray and olive, moist, hard. (Weathered Shale Bedrock)	33		
			With Limestone fragments at 10 feet.	52		
825.0	11.5	SH	SHALE, gray, moist to 12 1/2 feet then dry, hard. (Decorah Shale Bedrock)	55		
				105/9"		
				93/11"		
				50/5"		
				95/8"		

DRAFT

BRAUN INTERTEC

LOG OF BORING

Braun Project B1806527.12
GEOTECHNICAL EVALUATION
Highland Bridge - Block 2, Lot 1, Multi-Family (North)
2152 Ford Parkway
St. Paul, Minnesota

BORING: **ST-3H (cont.)**

LOCATION: N: 146210, E: 549268. See attached sketch.

DRILLER: J. Tatro | METHOD: 3 1/4" HSA, Autohammer | DATE: **4/29/21** | SCALE: **1" = 4'**

Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	Tests or Notes
804.5	32.0		SHALE, gray, moist to 12 1/2 feet then dry, hard. (Decorah Shale Bedrock) *(continued)*			
				50/5"		
798.9	37.6		Piece of Limestone at 37.6 feet.	50/1"		
			END OF BORING.			
			Auger met refusal at the 37.6-foot depth.			
			Water not observed while drilling.			
			Boring immediately backfilled with bentonite grout.			

DRAFT

(See Descriptive Terminology sheet for explanation of abbreviations)

LOG OF BORING-DRAFT N:\GINT\PROJECTS\AX PROJECTS\2018\06527.12.GPJ BRAUN_V8_CURRENT.GDT 5/13/21 13:20

BRAUN INTERTEC

LOG OF BORING

Braun Project B1806527.11
GEOTECHNICAL EVALUATION
Highland Bridge - Block 2, Lot 2, Condo (South)
2152 Ford Parkway
St. Paul, Minnesota

BORING: **ST-7H**

LOCATION: N: 146100, E: 549315. See attached sketch.

DRILLER: J. Tatro | METHOD: 3 1/4" HSA, Autohammer | DATE: **4/30/21** | SCALE: **1" = 4'**

Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	Tests or Notes
835.7	0.0					
834.7	1.0	FILL	FILL: Clayey Sand, with Gravel, black, moist. (Topsoil Fill)			
831.7	4.0	FILL	FILL: Silty Sand, fine- to medium-grained, with Gravel, with Lean Clay inclusions, non- to slightly organic, dark brown, moist.	18		
826.7	9.0	FILL	FILL: Silty Sand, fine- to medium-grained, intermixed with Fat Clay, with Gravel, brown, wet.	23 14	▽	
821.7	14.0	FILL	FILL: Poorly Graded Sand, fine- to medium-grained, trace to with Gravel, brown, wet.	11 9		
812.7	23.0	FILL	FILL: Silty Sand, fine- to medium-grained, trace Gravel, with Fat Clay layers at 15 feet, brown and gray, wet.	13 9		
		SH	SHALE, occasional Limestone fragments, gray, dry, hard. (Decorah Shale Bedrock)	50/5" 86/10"		

DRAFT

(See Descriptive Terminology sheet for explanation of abbreviations)

LOG OF BORING-DRAFT N:\GINT\PROJECTS\AX PROJECTS\2018\06527.11.GPJ BRAUN_V8_CURRENT.GDT 5/13/21 13:10

BRAUN INTERTEC

LOG OF BORING

Braun Project B1806527.11
GEOTECHNICAL EVALUATION
Highland Bridge - Block 2, Lot 2, Condo (South)
2152 Ford Parkway
St. Paul, Minnesota

BORING: **ST-7H (cont.)**

LOCATION: N: 146100, E: 549315. See attached sketch.

DRILLER: J. Tatro | METHOD: 3 1/4" HSA, Autohammer | DATE: **4/30/21** | SCALE: **1" = 4'**

Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	Tests or Notes
803.7	32.0					
			SHALE, occasional Limestone fragments, gray, dry, hard. (Decorah Shale Bedrock) *(continued)*	160/8"		
798.2	37.5		END OF BORING. Auger met refusal at the 37 1/2-foot depth. Water observed at 8 feet while drilling. Water not observed to cave-in depth of 6 1/2 feet immediately after withdrawal of auger. Boring immediately backfilled with bentonite grout.			No recovery.

DRAFT

(See Descriptive Terminology sheet for explanation of abbreviations)

LOG OF BORING-DRAFT N:\GINT\PROJECTS\AX PROJECTS\2018\06527.11.GPJ BRAUN_V8_CURRENT.GDT 5/13/21 13:10

BRAUN INTERTEC

LOG OF BORING

Braun Project B1806527.00
GEOTECHNICAL EVALUATION
Project Paul - Infrastructure Phase
966 Mississippi River Boulevard South
Saint Paul, Minnesota

BORING: **ST-113**

LOCATION: N: 146184.534 E: 549417.588. See attached sketch

DRILLER: B. Kammermeier | METHOD: 3 1/4" HSA, Autohammer | DATE: **8/22/19** | SCALE: **1" = 4'**

Elev. feet	Depth feet	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	MC %	Tests or Notes
843.0	0.0						
		FILL	FILL: Silty Sand, fine- to medium-grained, with Gravel, dark brown, moist.				
841.0	2.0						
		CH	FAT CLAY, trace Gravel and Silty Sand lenses, brown and gray, moist, stiff. (Weathered Shale Bedrock)	11		29	q_p=2 1/4 tsf
				14		28	
836.0	7.0						
		SH	SHALE, gray, dry to moist, hard. (Decorah Shale Bedrock)	37*			*No recovery
				36			
				39		22	
			With Limestone fragments at 15 feet.	68			
824.5	18.5			50/11"		20	
			END OF BORING.				
			Water not observed while drilling.				
			Boring immediately backfilled with bentonite grout.				

(See Descriptive Terminology sheet for explanation of abbreviations)

LOG OF BORING N:\GINT\PROJECTS\AX PROJECTS\2018\06527.00.GPJ BRAUN_V8_CURRENT.GDT 5/13/21 13:34