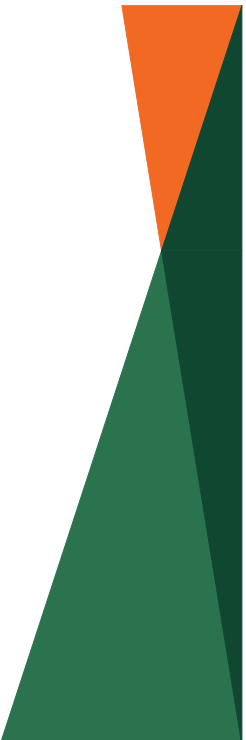


SHEET LOCATION



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

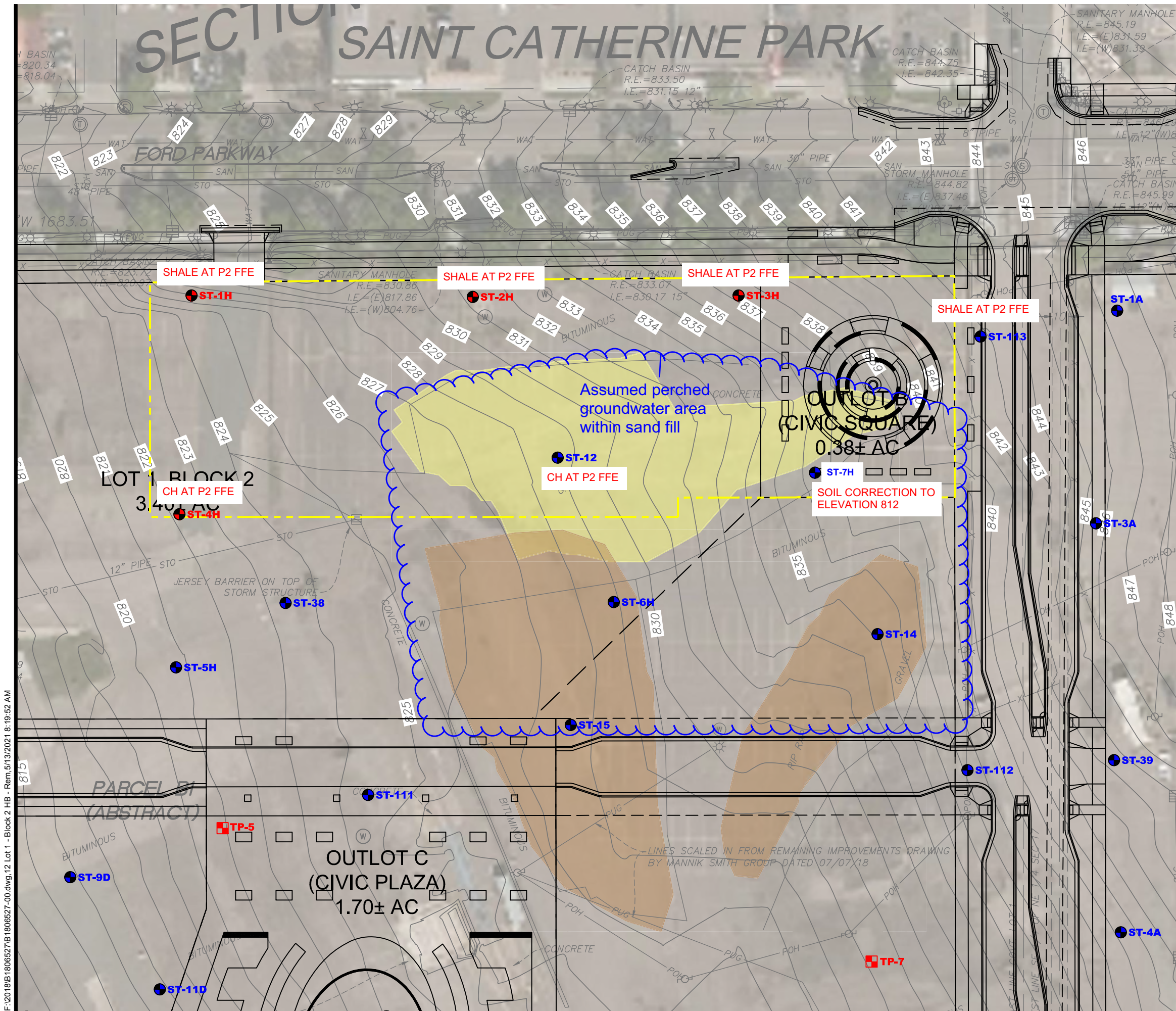
Project Information

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

2152 Ford Parkway

Saint Paul, Minnesota

**Remedial
Activities
Completed**



● 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

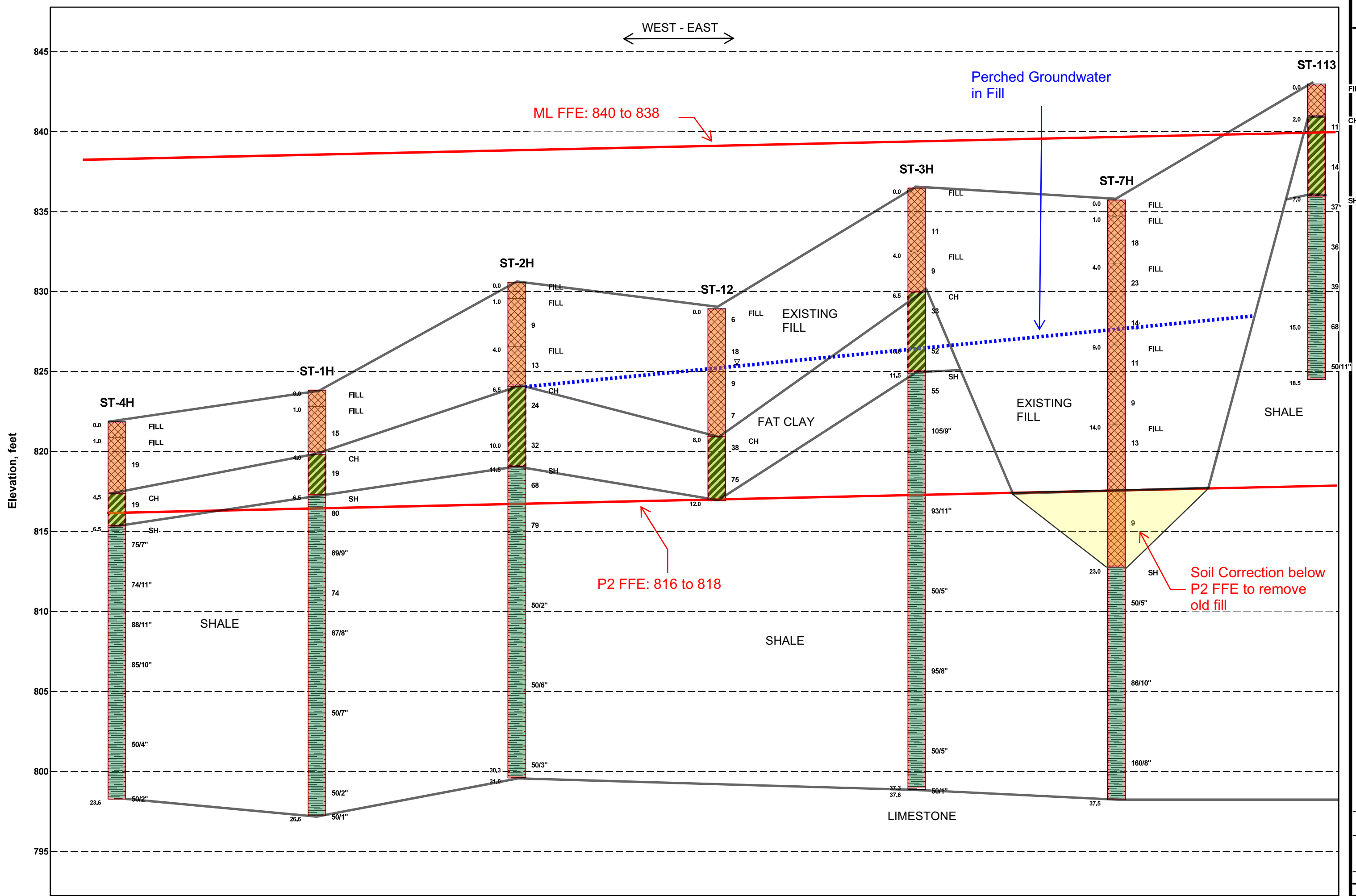
■ SDRAP ADDENDUMS



30' 0 60'

SCALE: 1" = 60'

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



FENCE DIAGRAM
 GEOTECHNICAL EVALUATION
 HIGHLAND BRIDGE - BLOCK 2, LOT 1, MULTIFAMILY (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 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		END OF BORING. Auger met refusal at the 23.6-foot depth. Water not observed while drilling. Boring immediately backfilled with bentonite grout.	50/2"		

LOG OF BORING-DRAFT (See Descriptive Terminology sheet for explanation of abbreviations)

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DRAFT

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'
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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.			
819.8	4.0			15		
		CH	FAT CLAY, olive, brown and gray, moist, very stiff. (Weathered Shale Bedrock)			
817.3	6.5			19		
		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.			

LOG OF BORING-DRAFT (See Descriptive Terminology sheet for explanation of abbreviations)

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DRAFT

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

LOG OF BORING-DRAFT (See Descriptive Terminology sheet for explanation of abbreviations)

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*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.

(See Descriptive Terminology sheet for explanation of abbreviations)
 LOG OF BORING N:\GINT\PROJECTS\X PROJECTS\2018\06527.GPJ BRAUN_V8_CURRENT.GDT 5/13/21 13:35

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'	
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 75		15	LL=53, PI=25, PI=28
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 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'
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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.			
832.5	4.0	FILL	FILL: Silty Sand, fine- to medium-grained, little Gravel, with Clay inclusions, brown and gray, moist.	11		
830.0	6.5	CH	FAT CLAY, brown, gray and olive, moist, hard. (Weathered Shale Bedrock)	9		
825.0	11.5	SH	SHALE, gray, moist to 12 1/2 feet then dry, hard. (Decorah Shale Bedrock)	33		
			With Limestone fragments at 10 feet.	52		
				55		
				105/9"		
				93/11"		
				50/5"		
				95/8"		

(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

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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'
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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) <i>(continued)</i>			
				50/5"		
798.9	37.6		Piece of Limestone at 37.6 feet. END OF BORING. Auger met refusal at the 37.6-foot depth. Water not observed while drilling. Boring immediately backfilled with bentonite grout.	50/1"		

(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

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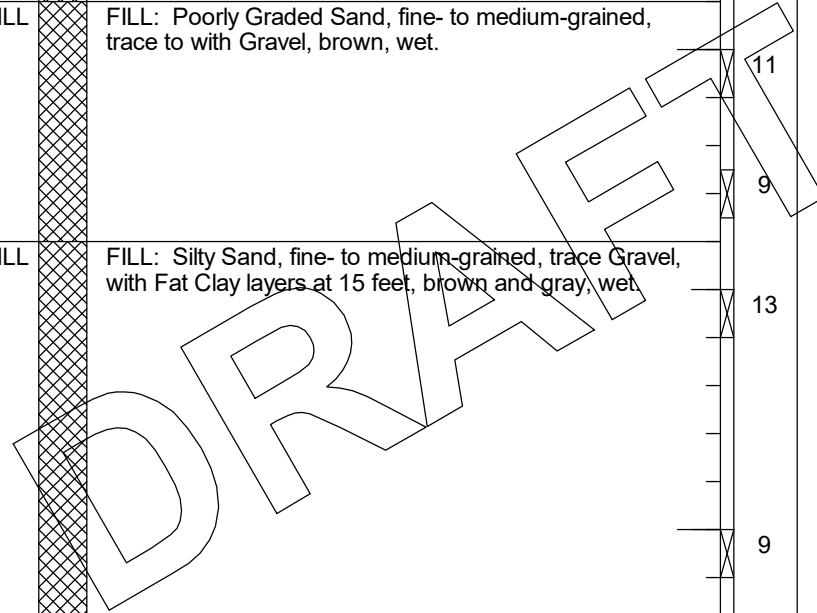
Braun Project B1806527.11 GEOTECHNICAL EVALUATION Highland Bridge - Block 2, Lot 2, Condo (South) 2152 Ford Parkway St. Paul, Minnesota	BORING: ST-7H LOCATION: N: 146100, E: 549315. See attached sketch.
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DRILLER: J. Tatro	METHOD: 3 1/4" HSA, Autohammer	DATE: 4/30/21	SCALE: 1" = 4'
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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)			
		FILL	FILL: Silty Sand, fine- to medium-grained, with Gravel, with Lean Clay inclusions, non- to slightly organic, dark brown, moist.	18		
831.7	4.0	FILL	FILL: Silty Sand, fine- to medium-grained, intermixed with Fat Clay, with Gravel, brown, wet.	23		
		FILL	FILL: Poorly Graded Sand, fine- to medium-grained, trace to with Gravel, brown, wet.	14	▽	
826.7	9.0	FILL	FILL: Silty Sand, fine- to medium-grained, trace Gravel, with Fat Clay layers at 15 feet, brown and gray, wet.	11		
		FILL	FILL: Silty Sand, fine- to medium-grained, trace Gravel, with Fat Clay layers at 15 feet, brown and gray, wet.	9		
821.7	14.0	FILL	FILL: Silty Sand, fine- to medium-grained, trace Gravel, with Fat Clay layers at 15 feet, brown and gray, wet.	13		
		FILL	FILL: Silty Sand, fine- to medium-grained, trace Gravel, with Fat Clay layers at 15 feet, brown and gray, wet.	9		
812.7	23.0	SH	SHALE, occasional Limestone fragments, gray, dry, hard. (Decorah Shale Bedrock)	50/5"		
		SH	SHALE, occasional Limestone fragments, gray, dry, hard. (Decorah Shale Bedrock)	86/10"		

(See Descriptive Terminology sheet for explanation of abbreviations)

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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'
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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)			
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.	160/8"		No recovery.

LOG OF BORING-DRAFT (See Descriptive Terminology sheet for explanation of abbreviations)

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(See Descriptive Terminology sheet for explanation of abbreviations)

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Braun Project B1806527.00 GEOTECHNICAL EVALUATION Project Paul - Infrastructure Phase 966 Mississippi River Boulevard South Saint Paul, Minnesota				BORING: ST-113			
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						
841.0	2.0	FILL	FILL: Silty Sand, fine- to medium-grained, with Gravel, dark brown, moist.				
		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		END OF BORING. Water not observed while drilling. Boring immediately backfilled with bentonite grout.	50/11"		20	