

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 170
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-170
LINE _____
STA _____
OFFSET ft

ACTUAL COORDINATES (N) 1,045,129.550 (E) 1,083,117.340 DATUM NAD83
DATE START 13-SEP-2020 DATE FINISH 13-SEP-2020
SURF. ELEV. 606.29
DEPTH TO WATER 20.9

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					0%	(0.00) Gray Sandy GRAVEL (D-NW)	
5.0	J2	17	13	60		14%	(5.00) Black SILT W/ Gravel, Root Fibr, Creosote & Asphalt (FILL) (M-NPL)	
10.0	J3	20	17	50		14%	(10.00) Black CINDERS (Possible Fill) (M-NPL)	
15.0	J4	5	6	25		15%	(15.00) Brown Clayey SILT With Pockets Of Pulverized Asphalt (P.F.) (M-LPL)	
20.0	J5	1	3	1		17%	(20.00) Brown Clayey SILT W/ Gravel Pcs & Pockets Of Pulverized Asphalt (Fil) (M-PL)	
25.0								

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DRILL RIG OPERATOR Larry Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 22-DEC-2020
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 3 HOLE FH-B-170

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 170
REGION 5
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PROJECT BUFFALO SKYWAY

HOLE FH-B-170
LINE _____
STA _____
OFFSET ft

ACTUAL COORDINATES (N) 1,045,129.550 (E) 1,083,117.340 DATUM NAD83
DATE START 13-SEP-2020 DATE FINISH 13-SEP-2020
SURF. ELEV. 606.29
DEPTH TO WATER 20.9

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
			6	12	18	24			
25.0	J6	20	20	20	50		34%	(25.00) Brown Silty CLAY With Large Wood Pieces (P.F.) (M-PL)	
30.0	J7	20	25	30			40%	(30.00) Gray Silty CLAY With Large Wood Pieces (Possible Fill) (M-PL)	
35.0	J8	1	1	1			40%	(35.00) Brown Clayey SILT (Strong Chemical Odor) (Possible Fill) (M-LPL)	
40.0	J9	1	1	1			26%	(40.00) Brown And Gray Layered Silty CLAY/ Clayey SILT W/ Gravel (STRONG Chem. Odor) (FILL) (M-PL)	
45.0	R1							(45.00) Run #1 Drilled from 45'0" To 50'0" ROCK REC. 56.4" 94% 7 pieces, no Rqd info	
50.0									

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DRILL RIG OPERATOR Larry Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
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SHEET 2 OF 3 HOLE FH-B-170

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 170
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-170
LINE _____
STA _____
OFFSET ft

ACTUAL COORDINATES (N) 1,045,129.550 (E) 1,083,117.340 DATUM NAD83
DATE START 13-SEP-2020 DATE FINISH 13-SEP-2020
SURF. ELEV. 606.29
DEPTH TO WATER 20.9

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
	50.0	R2						(50.00) Run #2 Drilled from 50'0" To 55'0" ROCK REC. 45.6" 76% 7 pieces and fragments, no Rqd info
	55.0							

BOTTOM OF HOLE AT 55.00 ft

1. Automatic hammer used.
2. First sample taken from augers.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
13-Jul-20	10:00	55.00	45.00	20.90		

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DRILL RIG OPERATOR Larry Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 22-DEC-2020
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 3 OF 3 HOLE FH-B-170

SM 282 E 12/02

PSN 12794 BORNUM 172
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-172
 LINE _____
 STA _____
 OFFSET ft _____
 SURF. ELEV. 607.9
 DEPTH TO WATER SEE NOTE

ACTUAL COORDINATES (N) 1,045,108.310 (E) 1,082,929.730 DATUM NAD83
 DATE START 18-AUG-2020 DATE FINISH _____
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					0%	(0.00) Gray Crushed CONCRETE With Asphalt Pieces (Possible Fill) (D-NW)	
5.0	J2	11	11	11		8%	(5.00) Brown Gravelly SAND, Silty With Asphalt Pieces (Possible Fill) (M-NPL)	
10.0	J3	10	10	10		8%	(10.00) Brown Silty GRAVEL, Sandy (M-NPL)	
15.0	J4	10	8	9		11%	(15.00) Brown Sandy SILT With Gravel Pieces (M-NPL)	
20.0	J5	2	2	2		25%		
25.0								

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 14-DEC-2020
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 3 HOLE FH-B-172

SM 282 E 12/02

PSN 12794 BORNUM 172
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-172
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 607.9
 DEPTH TO WATER SEE NOTE

ACTUAL COORDINATES (N) 1,045,108.310 (E) 1,082,929.730 DATUM NAD83
 DATE START 18-AUG-2020 DATE FINISH _____
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
25.0	J6	9	6	7		26%	(25.00) Brown Silty CLAY With Gravel Pieces, Creosote And Root Fiber (P.F.) (M-PL)	
30.0	J7	7	7	7		27%	(30.00) Brown Layered Silty CLAY / Clayey SILT (M-PL)	
35.0	J8	WOH	1	2		34%		
40.0	J9	3	6	3		35%		
45.0	R1						(43.40) Run #1 Drilled from 43'5" To 48'5" ROCK REC. 60" 100% no piece count	
50.0	R2						(48.40) Run #2 Drilled from 48'5" To 53'5" ROCK REC. 60" 100% 18 pieces	

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 14-DEC-2020
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

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SHEET 2 OF 3 HOLE FH-B-172

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 REGION 5
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 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
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 SUBSURFACE EXPLORATION LOG



HOLE FH-B-172
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 607.9
 DEPTH TO WATER SEE NOTE

ACTUAL COORDINATES (N) 1,045,108.310 (E) 1,082,929.730 DATUM NAD83
 DATE START 18-AUG-2020 DATE FINISH _____
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
	50.0								

 BOTTOM OF HOLE AT 53.50 ft

1. Automatic hammer used.
2. J1 off auger.
3. Refusal at 43.4'.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
22-Jul-20	02:20	53.40	43.40	9.80		

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 14-DEC-2020
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

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SHEET 3 OF 3 HOLE FH-B-172

SM 282 E 12/02

PSN 12794 BORNUM 176
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-176
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 609.21
 DEPTH TO WATER 25

ACTUAL COORDINATES (N) 1,045,082.810 (E) 1,082,538.080 DATUM NAD83
 DATE START 13-JUL-2020 DATE FINISH 13-JUL-2020
 CASING O. D. 8 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0							(0.00) 1.0' BLACKTOP	
		J1	26	17	24	9%	(1.00) Brown Silty GRAVEL, Sandy With Concrete Pieces (Possible Fill) (M-NPL)	
5.0		J2	8	10	18	7%	(5.00) Brown Silty GRAVEL, Sandy (M-NPL)	
10.0		J3	8	16	13	9%	(10.00) Brown Gravelly SILT, Sandy With Root Fibers (M-NPL)	
15.0		J4	3	3	5	11%	(15.00) Brown Gravelly SILT, Sandy (M-NPL)	
20.0		J5	4	6	5	15%	(20.00) Brown And Black Gravelly SAND, Silty With Creosote (POSSIBLE Fill) (M-NPL)	
25.0								

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DRILL RIG OPERATOR E. Dorn
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 22-DEC-2020
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-176

SM 282 E 12/02

PSN 12794 BORNUM 176
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-176
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 609.21
 DEPTH TO WATER 25

ACTUAL COORDINATES (N) 1,045,082.810 (E) 1,082,538.080 DATUM NAD83
 DATE START 13-JUL-2020 DATE FINISH 13-JUL-2020
 CASING O. D. 8 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
			6	12	18	24			
25.0	J6	WOH		2	3			29%	(25.00) Brown Silty CLAY With Cinders, Slag And Creosote (Possible Fill) (M-PL)
30.0	J7	9	9	9				98%	(30.00) Black WOOD (POSSIBLE Fill) (M-NPL)
35.0	J8	1	2	2				28%	(35.00) Brown Layered Silty CLAY / Clayey SILT With Wood Pieces (M-PL)
40.0	R1								(37.80) At 37.8' POSSIBLE ROCK, Refusal W/ Augers Use Rollerbit To Wash Out To 38' (38.00) Run #1 Drilled from 38'0" To 43'0" ROCK REC. 60" 100% 9 pieces and fragments NWD4 DOUBLE TUBE SWIVEL
45.0	R2								(43.00) Run #2 Drilled from 43'0" To 47'0" ROCK REC. 48" 100% 5 pieces and fragments NWD4 DOUBLE TUBE SWIVEL

BOTTOM OF HOLE AT 47.00 ft

1. Automatic hammer used.
2. Wash water added 37'8".
3. Run #1 ran out of water only got 4' of 5' run. End of day.

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 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 22-DEC-2020
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-176

SM 282 E 12/02

PSN 12794 BORNUM 178
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-178
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 612.33
 DEPTH TO WATER SEE NOTE

ACTUAL COORDINATES (N) 1,044,981.690 (E) 1,082,403.750 DATUM NAD83
 DATE START 26-JUN-2020 DATE FINISH 26-JUN-2020
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
0.0	J1					5%	(0.00) Gray Crushed CONCRETE (Possible Fill) (M-NPL)	
5.0	J2	15	15	15		13%	(5.00) Brown And Black Clayey Cinders CINDERS With Gravel Pieces, Asphalt Lumps And Slag (P.F.) (M-LPL)	
10.0	J3	10	17	25		16%	(10.00) Brown Sandy CINDERS, Silty With Gravel Pieces And Wood Pieces (P.F.) (M-NPL)	
15.0	J4	13	15	20		12%	(15.00) Brown And Gray Gravelly SILT, Clayey With Cinders And Wood (P.F.) (M-LPL)	
20.0	J5	10	5	10		15%	(20.00) Brown Gravelly SILT, Sandy With Cinders (Possible Fill) (M-LPL)	
25.0								

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 3 HOLE FH-B-178

SM 282 E 12/02

STATE OF NEW YORK
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SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 178
REGION 5
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PROJECT BUFFALO SKYWAY

HOLE FH-B-178
LINE _____
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OFFSET ft
SURF. ELEV. 612.33

ACTUAL COORDINATES (N) 1,044,981.690 (E) 1,082,403.750 DATUM NAD83
DATE START 26-JUN-2020 DATE FINISH 26-JUN-2020
DEPTH TO WATER SEE NOTE

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
			6	12	18	24			
25.0	J6	10	8	7			20%	(25.00) Brown And Gray Clayey SILT With Cinders (Possible Fill) (M-NPL)	
30.0	J7	10	15	15			20%	(30.00) Brown Layered Silty CLAY/ Clayey SILT (M-PL)	
35.0	J8	5	15	10			27%	(35.00) Brown Silty CLAY (M-PL)	
40.0	J9	2	17	19			31%		
45.0	R1							(42.00) Run #1 Drilled from 42'0" To 47'0" ROCK REC. 60" 100% 5 pieces and fragements	
50.0	R2							(47.00) Run #2 Drilled from 47'0" To 52'0" ROCK REC. 60" 100% 10 pieces and fragements	

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DRILL RIG OPERATOR L. Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 01-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 3 HOLE FH-B-178

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 178
REGION 5
COUNTY ERIE
PIN 5134.48

HOLE FH-B-178
LINE _____
STA _____
OFFSET ft

PROJECT BUFFALO SKYWAY
ACTUAL COORDINATES (N) 1,044,981.690 (E) 1,082,403.750 DATUM NAD83 SURF. ELEV. 612.33
DATE START 26-JUN-2020 DATE FINISH 26-JUN-2020 DEPTH TO WATER SEE NOTE

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
	50.0							

BOTTOM OF HOLE AT 52.00 ft

1. Automatic hammer used.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
26-Jun-20	14:30	52.00	42.00	5.70		NO

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DRILL RIG OPERATOR L. Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 01-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

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SHEET 3 OF 3 HOLE FH-B-178

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 PIN 5134.48
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STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-183
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 606.09

ACTUAL COORDINATES (N) 1,045,131.850 (E) 1,081,787.580 DATUM NAD83 DEPTH TO WATER SEE NOTE
 DATE START 17-JUL-2020 DATE FINISH 17-JUL-2020
 CASING O. D. 8 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
	0.0						(0.00) 1' BLACKTOP	
		J1	14	20	9	12%	(1.00) Brown And Black Sandy SILT W/ Gravel Pcs, Concrete Pcs & Coal (Possible Fill) (M-NPL)	
	5.0							
		J2	17	25	19	12%	(5.00) Brown And Black Sandy CINDERS With Slag (Possible Fill) (M-NPL)	
	10.0							
		J3	5	5	6	17%	(10.00) Gray Silty CLAY With Gravel Pieces, Cinders, Slag (Possible Fill) (M-PL)	
	15.0							
		J4	3	3	3	15%	(15.00) Brown Sandy SILT With Gravel Pieces And Cinders (Possible Fill) (M-NPL)	
	20.0							
		J5	5	6	8	15%	(20.00) Brown Sandy SILT (M-NPL)	
	25.0							

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DRILL RIG OPERATOR E. Backer
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-183

SM 282 E 12/02

PSN 12794 BORNUM 183
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-183
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 606.09
 DEPTH TO WATER SEE NOTE

ACTUAL COORDINATES (N) 1,045,131.850 (E) 1,081,787.580 DATUM NAD83
 DATE START 17-JUL-2020 DATE FINISH 17-JUL-2020
 CASING O. D. 8 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
25.0	J6	WOR					25%	(25.00) Brown Layered Silty CLAY/ Clayey Silt (M-PL)	
30.0	J7	50	WOR			3			
35.0	R1						16%	(30.00) Brown Layered Silty CLAY/ Clayey Silt With Angular Gravel Pieces (M-PL) (30.50) Run #1 Drilled from 30'6" To 35'6" ROCK REC. 58.8" 98% 7 pieces NWD4 DOUBLE TUBE SWIVEL	
40.0	R2							(35.50) Run #2 Drilled from 35'6" To 40'6" ROCK REC. 60" 100% 8 pieces and fragments NWD4 DOUBLE TUBE SWIVEL	

BOTTOM OF HOLE AT 40.50 ft

- Automatic hammer used.
- At 30.5' refusal, auger to 30.5 and wash out with rollerbit to 30.5
- Run 1 no RQD info.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
17-Jul-20	09:00	30.50	30.00	26.90		

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DRILL RIG OPERATOR E. Backer
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-183

SM 282 E 12/02

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 185
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

HOLE FH-B-185
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 603.62

ACTUAL COORDINATES (N) 1,045,278.070 (E) 1,081,158.680 DATUM NAD83
 DATE START 25-JUN-2020 DATE FINISH 25-JUN-2020
 DEPTH TO WATER NONE

CASING O. D. 7 5/8 in I. D. 4 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					16%	(0.00) Gray Crushed CONCRETE With Pieces Of Asphalt (Possible Fill) (M-NPL)	
5.0	J2	5	5	5		10%	(5.00) Dark Brown Sandy GRAVEL, Silty With Cinders (Possible Fill) (M-NPL)	
10.0	J3	2	2	27		14%	(10.00) Brown And Black Clayey SILT With Gravel Pieces, Red Brick And Cinders (P.F.) (M-LPL)	
15.0	J4	5	10	11		22%	(15.00) Brown Silty CLAY (M-PL)	
20.0	J5	15	10	10		10%	(20.00) Brown Clayey SILT With Gravel Pieces (M-LPL)	

BOTTOM OF HOLE AT 22.70 ft

1. Automatic hammer used.
2. At 22.7' rock and bottom of hole.

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 1 HOLE FH-B-185

SM 282 E 12/02

PSN 12794 BORNUM 188
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-188
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 606.57

ACTUAL COORDINATES (N) 1,045,499.900 (E) 1,080,651.480 DATUM NAD83 DEPTH TO WATER NONE
 DATE START 14-JUL-2020 DATE FINISH 14-JUL-2020
 CASING O. D. 8 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
	0.0						(0.00) .8' BLACKTOP	
		J1	27	50			(1.00) Brown Sandy Concrete PIECES, Silty With Root Fibers (POSSIBLE Fill) (M-NPL)	
	5.0							
		J2	14	11	10	15%	(5.00) Brown Sandy Concrete PIECES, Silty (Possible Fill) (M-LPL)	
	10.0							
		J3	6	6	10	13%	(10.00) Brown Clayey SILT, Sandy With Gravel Pieces (M-LPL)	
	15.0							
		J4	9	10	11	10%	(15.00) Brown Gravelly SILT, Clayey With Concrete Pieces (Possible Fill) (M-LPL)	
	20.0							
		J5	WOH	6	9	20%	(20.00) Brown And Black CINDERS With Pocket Of Silty Clay (M-PL)	
	25.0							

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DRILL RIG OPERATOR T. Hill
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-188

SM 282 E 12/02

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 188
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

HOLE FH-B-188
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,045,499.900 (E) 1,080,651.480 DATUM NAD83
 DATE START 14-JUL-2020 DATE FINISH 14-JUL-2020
 SURF. ELEV. 606.57 DEPTH TO WATER NONE

CASING O. D. 8 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
25.0	J6	10	9	12		22%	(25.00) Brown Layered Silty CLAY / Clayey SILT (M-PL)	
30.0	J7	1	1	1		25%		
35.0	J8 R1	50				6%	(35.00) Gray Silty GRAVEL, Clayey (M-EPL) (35.20) Run #1 Drilled from 35'2" To 40'2" ROCK REC. 60" 100% 12 pieces and fragments	
40.0	R2						(40.20) Run #2 Drilled from 40'2" To 45'2" ROCK REC. 57.6" 96% 12 pieces and fragments	
45.0								

BOTTOM OF HOLE AT 45.20 ft

1. Automatic hammer used.
2. At 35.2 wash water added.
3. At 35', 50 blows for .2' penetration.

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DRILL RIG OPERATOR T. Hill
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-188

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 189
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-189
LINE _____
STA _____
OFFSET ft

ACTUAL COORDINATES (N) 1,045,472.170 (E) 1,080,392.820 DATUM NAD83
DATE START 17-JUL-2020 DATE FINISH 17-JUL-2020
SURF. ELEV. 604.64
DEPTH TO WATER 20.7

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0-6	6-12	12-18	18-24		
0.0		J1					1%	(0.00) Brown Crushed CONCRETE With Asphalt Pieces (Possible Fill) (D-NW)
5.0		J2	9	10	30		14%	(5.00) Black And Gray Sandy CINDERS, Gravelly With Pockets Of Clayey SILT (P.F.) (M-LPL)
10.0		J3	7	8	16		18%	
15.0		J4	7	9	16		16%	(15.00) Brown Clayey SILT With Gravel Pieces And Cinders (Possible Fill) (M-LPL)
20.0		J5	10	12	14		17%	(20.00) Brown Clayey SILT With Gravel Pieces, Wood Pieces And Cinders (P.F.) (M-LPL)
25.0								

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DRILL RIG OPERATOR L. Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 01-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-189

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 189
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-189
LINE _____
STA _____
OFFSET ft

ACTUAL COORDINATES (N) 1,045,472.170 (E) 1,080,392.820 DATUM NAD83
DATE START 17-JUL-2020 DATE FINISH 17-JUL-2020
SURF. ELEV. 604.64
DEPTH TO WATER 20.7

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
			6	12	18	24			
25.0	J6	10	10	10	20		20%	(25.00) Brown Silty CLAY With Gravel Pieces And Cinders (Possible Fill) (M-PL)	
30.0	J7	8	10	15			22%	(30.00) Brown Silty CLAY (M-PL)	
35.0	J8	1	1	1			27%	(35.00) Brown Varved Silty CLAY/ Clayey SILT (M-PL)	
40.0	J9	31	37				26%		

BOTTOM OF HOLE AT 42.00 ft

1. Automatic hammer used.
2. At 42.0' rock and bottom of hole.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
17-Jul-20	07:30	42.00	42.00	20.70		

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DRILL RIG OPERATOR L. Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 01-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-189

SM 282 E 12/02

PSN 12794 BORNUM 192
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-X-192
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 601.14
 DEPTH TO WATER SEE NOTE

ACTUAL COORDINATES (N) 1,045,654.710 (E) 1,080,017.050 DATUM NAD83
 DATE START 14-JUL-2020 DATE FINISH 14-JUL-2020
 CASING O. D. 8 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
	0.0						(0.00) .8' BLACKTOP Auger Through Pavement	
		J1	23	25	7	17%	(1.00) Brown And Black Sandy CONCRETE PIECES , Silty With Cinders (Possible Fill) (M-NPL)	
	5.0							
		J2	11	12	7	13%	(5.00) Brown And Black Silty SLAG With Cinders (Possible Fill) (M-NPL)	
	10.0							
		J3	10	7	7	17%	(10.00) Gray Silty CLAY, Sandy W/ Gravel Pcs, Concrete Pcs & Cinders (P.F.) (M-PL)	
	15.0							
		J4	5	7	9	15%	(15.00) Brown Silty CLAY With Gravel Pieces And Cinders (Possible Fill) (M-PL)	
	20.0							
		J5	2	5	6	19%	(20.00) Brown Layered Clayey SILT / Silty CLAY With Gravel Pieces And Cinders (P.F.) (M-PL)	
	25.0							

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DRILL RIG OPERATOR E. Backer
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 3 HOLE FH-X-192

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 192
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-X-192
LINE _____
STA _____
OFFSET ft

ACTUAL COORDINATES (N) 1,045,654.710 (E) 1,080,017.050 DATUM NAD83 SURF. ELEV. 601.14
DEPTH TO WATER SEE NOTE
DATE START 14-JUL-2020 DATE FINISH 14-JUL-2020

CASING O. D. 8 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
25.0	J6	6	5	6		27%	(25.00) Brown Varved Silty CLAY / Clayey SILT (M-PL)	
30.0	J7	WOH	2	2		27%	(30.00) Brown Silty CLAY (M-PL)	
35.0	J8	WOH	WOH	WOH		33%		
40.0	J9	WOH	WOH	WOH		30%		
45.0	J10	WOH	2	5		34%		
50.0								

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DRILL RIG OPERATOR E. Backer
SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 01-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 3 HOLE FH-X-192

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 192
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-X-192
LINE _____
STA _____
OFFSET ft
SURF. ELEV. 601.14

ACTUAL COORDINATES (N) 1,045,654.710 (E) 1,080,017.050 DATUM NAD83 DEPTH TO WATER SEE NOTE
DATE START 14-JUL-2020 DATE FINISH 14-JUL-2020

CASING O. D. 8 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
	50.0	J11	16	18	50	6%	(50.00) Gray Silty GRAVEL, Sandy (M-NPL)	

BOTTOM OF HOLE AT 51.50 ft

1. Automatic hammer used.
2. At 51', 50 blows for .5' penetration.
3. Refusal at 51.5'.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
14-Jul-20	16:30	51.50	50.00	27.90		

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DRILL RIG OPERATOR E. Backer
SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 01-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 3 OF 3 HOLE FH-X-192

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 193
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-193
LINE _____
STA _____
OFFSET ft
SURF. ELEV. 606.73

ACTUAL COORDINATES (N) 1,045,701.490 (E) 1,079,439.930 DATUM NAD83
DATE START 16-JUL-2020 DATE FINISH 16-JUL-2020
DEPTH TO WATER 15.5

CASING O. D. 8 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0							(0.00) Auger Through Pavement .8' BLACKTOP	
		J1	10	17	28	4%	(1.00) Gray Sandy GRAVEL (M-NPL)	
5.0		J2	6	3	3	18%	(5.00) Brown Sandy SILT, Clayey W/ Cinders & Gravel Pieces (Possible Fill) (M-LPL)	
10.0		J3	3	49	16	7%	(10.00) Gray Pulverized CONCRETE With Pockets Of Brown Sandy Silt (POSSIBLE Fill) (M-LPL)	
15.0		J4	1	1	2	17%	(15.00) Brown And Black Silty CLAY With Cinders, Gravel Pieces & Wood (Possible Fill) (M-PL)	
20.0		J5	WOH	WOH	3	23%	(20.00) Brown Layered Silty CLAY / Clayey SILT With Gravel Pieces (M-PL)	
25.0								

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DRILL RIG OPERATOR T. Hill
SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 01-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 3 HOLE FH-B-193

SM 282 E 12/02

PSN 12794 BORNUM 193
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-193
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 606.73

ACTUAL COORDINATES (N) 1,045,701.490 (E) 1,079,439.930 DATUM NAD83 DEPTH TO WATER 15.5
 DATE START 16-JUL-2020 DATE FINISH 16-JUL-2020
 CASING O. D. 8 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
25.0	J6	WOH	1	5			23%	(25.00) Gray, Black And Brown Layered Silty CLAY / Clayey SILT (M-PL)
30.0	J7	6	10	12			24%	(30.00) Brown And Gray Layered Silty CLAY / Clayey SILT (M-PL)
35.0	J8	WOH	WOH	2			29%	(35.00) Brown Silty CLAY With Layers Of Clayey SILT (M-PL)
40.0	J9	WOH	WOH	2			29%	(40.00) Brown Silty CLAY (M-PL)
45.0	J10	WOR	WOH	1			31%	
50.0								

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DRILL RIG OPERATOR T. Hill
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 3 HOLE FH-B-193

SM 282 E 12/02

PSN 12794 BORNUM 193
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-193
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 606.73

ACTUAL COORDINATES (N) 1,045,701.490 (E) 1,079,439.930 DATUM NAD83 DEPTH TO WATER 15.5
 DATE START 16-JUL-2020 DATE FINISH 16-JUL-2020
 CASING O. D. 8 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
50.0	J11	WOR	WOH	WOH			30%	(50.00) Brown Silty CLAY (M-PL)
55.0	J12	WOR	WOR	WOR			21%	(55.00) Brown Layered Silty CLAY / Clayey SILT (M-PL)
60.0	R1							(56.70) Run #1 Drilled from 56'8" To 61'8" ROCK REC. 60" 100% 3 pieces
65.0	R2							(61.70) Run #2 Drilled from 61'8" To 66'8" ROCK REC. 60" 100% 3 pieces

BOTTOM OF HOLE AT 66.70 ft

1. Automatic hammer used.
2. 56.7' top of rock, and wash water added.

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DRILL RIG OPERATOR T. Hill
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 3 OF 3 HOLE FH-B-193

SM 282 E 12/02

PSN 12794 BORNUM 195
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-195
 LINE _____
 STA _____
 OFFSET ft _____
 SURF. ELEV. 583.73
 DEPTH TO WATER NONE

ACTUAL COORDINATES (N) 1,045,858.450 (E) 1,079,455.000 DATUM NAD83
 DATE START 18-AUG-2020 DATE FINISH _____
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
	0.0	J1	2	2	5		24%	(0.00) Dark Brown Sandy SILT With Root Fibers, Plant Stems And Gravel Pieces (M-NPL)
	5.0	J2	4	5	6		22%	(5.00) Brown Silty CLAY With Thin Layers And SILT (M-PL)
	10.0	J3	1	3	4		24%	(10.00) Brown Silty CLAY (M-PL)
	15.0	J4	WOH	WOH	1		29%	
	20.0	J5	WOR	WOH	WOH		26%	
	25.0							

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DRILL RIG OPERATOR V. Tompkins
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-195

SM 282 E 12/02

PSN 12794 BORNUM 195
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-195
 LINE _____
 STA _____
 OFFSET ft _____
 SURF. ELEV. 583.73
 DEPTH TO WATER NONE

ACTUAL COORDINATES (N) 1,045,858.450 (E) 1,079,455.000 DATUM NAD83
 DATE START 18-AUG-2020 DATE FINISH _____
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
	25.0	J6	WOR				27%	(25.00) Brown Silty CLAY (M-PL)
			WOH					
			WOH					
	30.0	J7	WOR	1	2		10%	(30.00) Brown Silty CLAY With Gravel Pieces (M-PL)
								(31.50) Auger Refusal At 32.1
								(32.10) Sampler Refusal At 32.6'

BOTTOM OF HOLE AT 32.60 ft

1. Automatic hammer used.

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DRILL RIG OPERATOR V. Tompkins
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-195

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 197
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-197
LINE _____
STA _____
OFFSET ft
SURF. ELEV. 612.08

ACTUAL COORDINATES (N) 1,045,845.650 (E) 1,079,230.370 DATUM NAD83
DATE START 14-JUL-2020 DATE FINISH 14-JUL-2020
DEPTH TO WATER SEE NOTE

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					1%	(0.00) Gray Sandy Angular GRAVEL With Wood And Asphalt (Possible Fill) (D-NW)	
5.0	J2	20	20	21		3%	(5.00) Black And Gray ASPHALT With Concrete Pieces (Possible Fill) (M-NPL)	
10.0	J3	25	37	25		7%	(10.00) Brown Crushed CONCRETE (Possible Fill) (M-NPL)	
15.0	J4	6	10	20		15%	(15.00) Brown Clayey SILT W/ Gravel Pcs., Asphalt, Cinders & Wood Pcs (P.F.) (M-LPL)	
20.0	J5	5	5	7		15%	(20.00) Brown Clayey SILT With Gravel Pieces And Cinders (POSSIBLE Fill) (M-LPL)	
25.0								

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DRILL RIG OPERATOR L. Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 01-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 3 HOLE FH-B-197

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 197
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-197
LINE _____
STA _____
OFFSET ft
SURF. ELEV. 612.08

ACTUAL COORDINATES (N) 1,045,845.650 (E) 1,079,230.370 DATUM NAD83 DEPTH TO WATER SEE NOTE
DATE START 14-JUL-2020 DATE FINISH 14-JUL-2020

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
	25.0	J6	10	15	15		17%	
	30.0	J7	12	6	11		50%	(30.00) Gray And Black Sandy GRAVEL, Silty With Cinders (Possible Fill) (M-NPL)
	35.0	J8	12	15	20		26%	(35.00) Brown Layered Silty CLAY/ Clayey Silt (M-PL)
	40.0	J9	1	10	10		29%	(40.00) Brown Silty CLAY (M-PL)
	45.0	J10	1	1	1		23%	(45.00) Brown And Gray Silty CLAY (M-PL)
	50.0							

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DRILL RIG OPERATOR L. Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 01-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 3 HOLE FH-B-197

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 197
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-197
LINE _____
STA _____
OFFSET ft
SURF. ELEV. 612.08

ACTUAL COORDINATES (N) 1,045,845.650 (E) 1,079,230.370 DATUM NAD83
DATE START 14-JUL-2020 DATE FINISH 14-JUL-2020
DEPTH TO WATER SEE NOTE

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
			6	12	18	24			
50.0	J11	1	1	5			29%	(50.00) Brown Silty CLAY (M-PL)	
55.0	J12	1	3	5			27%		
60.0	R1							(60.00) Run #1 Drilled from 60'0" To 65'0" ROCK REC. 60" 100% 7 pieces and fragments	
65.0	R2							(65.00) Run #2 Drilled from 65'0" To 70'0" ROCK REC. 60" 100% 9 pieces and fragments	
70.0									

BOTTOM OF HOLE AT 70.00 ft

1. First sample taken from auger.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
14-Jul-20	00:00	70.00	60.00	42.80		

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DRILL RIG OPERATOR L. Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 01-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 3 OF 3 HOLE FH-B-197

SM 282 E 12/02

PSN 12794 BORNUM 205
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-205
 LINE _____
 STA _____
 OFFSET ft _____
 SURF. ELEV. 607.38
 DEPTH TO WATER SEE NOTE

ACTUAL COORDINATES (N) 1,046,076.020 (E) 1,078,339.530 DATUM NAD83
 DATE START 18-AUG-2020 DATE FINISH _____

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					2%	(0.00) Brown Gravelly SAND, Silty (D-NW)	
5.0	J2	10	10	10		7%	(5.00) Brown Gravelly SILT, Clayey With Pieces Of Asphalt (POSSIBLE Fill) (M-LPL)	
10.0	J3	1	2	14		9%	(10.00) Brown Clayey SILT, Gravelly With Traces Of Asphalt (Possible Fill) (M-LPL)	
15.0	J4	7	14	19		10%	(15.00) Brown Clayey SILT, Gravelly (M-LPL)	
20.0	J5	10	10	20		11%		
25.0								

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 3 HOLE FH-B-205

SM 282 E 12/02

PSN 12794 BORNUM 205
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-205
 LINE _____
 STA _____
 OFFSET ft _____
 SURF. ELEV. 607.38
 DEPTH TO WATER SEE NOTE

ACTUAL COORDINATES (N) 1,046,076.020 (E) 1,078,339.530 DATUM NAD83
 DATE START 18-AUG-2020 DATE FINISH _____

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
			6	12	18	24			
25.0	J6	50	50	50	50	50	17%	(25.00) Brown Layered Silty CLAY/ Clayey SILT With Gravel Pieces (M-PL)	
30.0	J7	15	20	20			22%	(30.00) Brown Layered Silty CLAY/ Clayey SILT (M-PL)	
35.0	J8	2	3	3			23%	(35.00) Brown Silty CLAY With Creosote (Possible Fill) (M-PL)	
40.0	J9	WOH	WOH	WOH			36%	(40.00) Brown Silty CLAY (M-PL)	
45.0	J10	1	1	1			36%	(45.00) Brown Layered Silty CLAY/ Clayey SILT (M-PL)	

BOTTOM OF HOLE AT 49.00 ft

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 3 HOLE FH-B-205

SM 282 E 12/02

PSN 12794 BORNUM 205
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-205
 LINE _____
 STA _____
 OFFSET ft _____
 SURF. ELEV. 607.38
 DEPTH TO WATER SEE NOTE

ACTUAL COORDINATES (N) 1,046,076.020 (E) 1,078,339.530 DATUM NAD83
 DATE START 18-AUG-2020 DATE FINISH _____
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		

1. Automatic hammer used.
2. At 49.0' rock and bottom of hole.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
16-Aug-20	10:00	49.00	49.00	NONE		

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 3 OF 3 HOLE FH-B-205

SM 282 E 12/02

PSN 12794 BORNUM 206
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-206
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 608.3

ACTUAL COORDINATES (N) 1,045,963.920 (E) 1,078,265.890 DATUM NAD83
 DATE START 25-JUN-2020 DATE FINISH 25-JUN-2020
 DEPTH TO WATER NONE

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0							(0.00) ASPHALT	
		J1	25	57	34	6%	(1.00) SUBBASE (M-NPL) (1.10) Brown Silty Crushed CONCRETE (Possible Fill)	
5.0		J2	4	7	15	10%	(5.00) Gray Sandy Crushed CONCRETE (POSSIBLE Fill) (M-NPL)	
10.0		J3	32	47	25	13%		
15.0		J4	73			12%		

14

BOTTOM OF HOLE AT 15.10 ft

1. Automatic hammer used.
2. 14.5' auger refusal.
3. 15.1' sampler refusal.
4. Embankment hole. Used polot bit to keep auger clean.

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DRILL RIG OPERATOR V. Tompkins
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 1 HOLE FH-B-206

SM 282 E 12/02

PSN 12794 BORNUM 206.1
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-206A
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 583.8

ACTUAL COORDINATES (N) 1,045,915.520 (E) 1,078,181.670 DATUM NAD83 DEPTH TO WATER SEE NOTE
 DATE START 12-JUN-2020 DATE FINISH 12-JUN-2020
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
	0.0						(0.00) ASPHALT (0.30) CONCRETE (1.00) Brown Clayey SILT With Gravel Pieces (M-LPL)	
		J1				17%		
	5.0						(5.00) Brown Clayey SILT (M-LPL)	
		J2	6	11	11	22%		
	10.0						(10.00) Brown Silty CLAY (M-PL)	
		J3	2	4	11	28%		
	15.0						(15.00) Brown Silty CLAY With Gravel Pieces (M-PL)	
		J4	WOH	WOH	1	28%		
	20.0						(20.00) Brown Silty CLAY (M-PL)	
		J5	WOH	WOH	1	34%		
	25.0							

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-206A

SM 282 E 12/02

PSN 12794 BORNUM 206.1
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-206A
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 583.8

ACTUAL COORDINATES (N) 1,045,915.520 (E) 1,078,181.670 DATUM NAD83 DEPTH TO WATER SEE NOTE
 DATE START 12-JUN-2020 DATE FINISH 12-JUN-2020
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
	25.0	J6	2	13	13		26%	(25.00) Brown Layered Silty CLAY / Clayey SILT With Gravel Pieces (M-PL)

BOTTOM OF HOLE AT 26.50 ft

1. Automatic hammer used.
2. Refusal and rock at 26.5'.
3. Sample 1 off auger.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
12-Jun-20	13:00	26.50	26.50	NONE		

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-206A

SM 282 E 12/02

PSN 12794 BORNUM 209
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-209
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,046,158.430 (E) 1,077,765.820 DATUM NAD83 SURF. ELEV. 605.34
 DATE START 25-JUN-2020 DATE FINISH 25-JUN-2020 DEPTH TO WATER NONE

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					0%	(0.00) Black And Gray Pulverized ASPHALT (Possible Fill) (D-NW)	
5.0	J2	13	16	17		5%	(5.00) Brown Clayey SILT With Gravel Pieces And Asphalt Chunks (Poss. Fill) (M-LPL)	
10.0	J3	5	4	6		12%	(10.00) Brown Silty CLAY With Gravel Pieces And Asphalt (Possible Fill) (M-PL)	
15.0	J4	12	25	20		17%	(15.00) Brown Layered Silty CLAY/ Clayey SILT With Pieces Of Slag (P.F.) (M-PL)	
20.0	J5	6	7	5		10%	(20.00) Brown Silty GRAVEL, Sandy (M-NPL)	
25.0								

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-209

SM 282 E 12/02

PSN 12794 BORNUM 209
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-209
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 605.34
 DEPTH TO WATER NONE

ACTUAL COORDINATES (N) 1,046,158.430 (E) 1,077,765.820 DATUM NAD83
 DATE START 25-JUN-2020 DATE FINISH 25-JUN-2020
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
25.0	J6	5	15	20			24%	(25.00) Black And And Brown Layered Silty CLAY/ Clayey SILT With Pockets Of Cinders (M-PL)	
30.0	J7	6	6	5			26%	(30.00) Brown Silty CLAY (M-PL)	
35.0	J8	2	2	6			25%	(35.00) Brown Silty CLAY With Pockets Of Pulverized Asphalt (Possible Fill) (M-PL)	
40.0									

BOTTOM OF HOLE AT 40.10 ft

1. Automatic hammer used.
2. At 40.1' rock and bottom of hole.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
25-Jun-20	00:00	40.10	40.00	NONE		

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-209

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 210
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-210
LINE _____
STA _____
OFFSET ft
SURF. ELEV. 608.87

ACTUAL COORDINATES (N) 1,046,386.240 (E) 1,077,517.490 DATUM NAD83
DATE START 29-JUN-2020 DATE FINISH 29-JUN-2020
DEPTH TO WATER SEE NOTE

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
	0.0	J1					6%	(0.00) Brown Silty GRAVEL, Clayey With Cinders (Possible Fill) (M-LPL)
	5.0	J2	7	10	5		16%	(5.00) Brown Layered Silty CLAY / Clayey SILT W/Gravel Pcs, Root Fiber & Cinder (P.F) (M-PL)
	10.0	J3	2	4	4		21%	(10.00) Brown Layered Silty CLAY/ Clayey SILT With Gravel Pieces And Asphalt (P.F.) (M-PL)
	15.0	J4	5	10	12		16%	(15.00) Brown Silty CLAY With Gravel Pieces And Unknown Deposit (P.F.) (M-PL)
	20.0	J5	5	5	10		18%	(20.00) Brown Clayey SILT With Gravel Pieces, Slag And Cinders (P.F.) (M-LPL)
	25.0							

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DRILL RIG OPERATOR L. Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich/D.Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 01-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-210

SM 282 E 12/02

PSN 12794 BORNUM 210
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-210
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 608.87
 DEPTH TO WATER SEE NOTE

ACTUAL COORDINATES (N) 1,046,386.240 (E) 1,077,517.490 DATUM NAD83
 DATE START 29-JUN-2020 DATE FINISH 29-JUN-2020
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
25.0	J6	4	6	7		27%	(25.00) Brown And Black CINDERS With Charred Wood, Slag And Glass (P.F.) (M-NPL)	
30.0	J7	15	20	10		22%	(30.00) Brown Layered Silty CLAY/ Clayey SILT (M-PL)	
35.0	J8	9	8	5		26%	(35.00) Brown Silty CLAY With Gravel Pieces (M-PL)	

BOTTOM OF HOLE AT 39.30 ft

- Automatic hammer used.
- Rock and bottom of hole at 39.3'.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
29-Jun-20	12:30	39.30	39.30	28.70		

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich/D.Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 01-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-210

SM 282 E 12/02

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 211
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

HOLE FH-B-211
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 609.7

ACTUAL COORDINATES (N) 1,046,334.130 (E) 1,077,386.580 DATUM NAD83
 DATE START 16-JUL-2020 DATE FINISH 16-JUL-2020
 DEPTH TO WATER 3.9

CASING O. D. 6 1/4 in I. D. 2 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					0%	(0.00) Gray Sandy Crushed CONCRETE With Asphalt Pieces (P.F.) (D-NW)	
5.0	J2	50	50	50		0%	(5.00) Black And Gray Crushed ASPHALT CONCRET (Possible Fill) (D-NW)	
10.0	J3	50	50	50		18%	(10.00) Brown Adn Gray Silty CLAY With Root Fibers (M-PL)	
15.0	J4	20	15	20		11%	(15.00) Brown Clayey SILT With Gravel Pieces And Wood (M-LPL)	
20.0	J5	3	1	21		15%	(20.00) Brown And Black Clayey SILT With Gravel Pieces, Cinders And Creosote (P.F.) (M-LPL)	
25.0								

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DRILL RIG OPERATOR L. Muhammad Sr.
 SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 17-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 3 HOLE FH-B-211

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 211
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-211
LINE _____
STA _____
OFFSET ft
SURF. ELEV. 609.7

ACTUAL COORDINATES (N) 1,046,334.130 (E) 1,077,386.580 DATUM NAD83
DATE START 16-JUL-2020 DATE FINISH 16-JUL-2020
DEPTH TO WATER 3.9

CASING O. D. 6 1/4 in I. D. 2 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
			6	12	18	24			
25.0	J6	7	12	20			25%	(25.00) Brown And Dark Brown Layered Silty CLAY/ Clayey SILT (M-PL)	
30.0	J7						24%	(30.00) Brown Layered Silty CLAY/ Clayey SILT (M-PL)	
35.0	J8						23%	(35.00) Brown Silty CLAY With Gravel Pieces (M-PL)	
40.0	R1							(36.50) Run #1 Drilled from 36'6" To 41'6" ROCK (37.00) REC. 60" 100% 16 pieces and fragments, no RQD info Run #1 Drilled From 37'0" To 41'6" ROCK	
45.0	R2							(41.50) Run #2 Drilled from 41'6" To 46'0" ROCK REC. 54" 100% 3 pieces and fragments, no RQD info	

BOTTOM OF HOLE AT 46.00 ft

1. Automatic hammer used.
2. Diamond bit no. 244038-3.
3. J1 off auger.
4. No sampler blows listed for J7 and J8

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DRILL RIG OPERATOR L. Muhammad Sr.
SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 17-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 3 HOLE FH-B-211

SM 282 E 12/02

PSN 12794 BORNUM 211
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-211
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,046,334.130 (E) 1,077,386.580 DATUM NAD83 SURF. ELEV. 609.7
 DATE START 16-JUL-2020 DATE FINISH 16-JUL-2020
 CASING O. D. 6 1/4 in I. D. 2 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
16-Jul-20	07:00	46.00	37.00	3.90	NO	

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DRILL RIG OPERATOR L. Muhammad Sr.
 SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 17-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 3 OF 3 HOLE FH-B-211

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 214
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-214
LINE _____
STA _____
OFFSET ft
SURF. ELEV. 607.89
DEPTH TO WATER 1

ACTUAL COORDINATES (N) 1,046,606.590 (E) 1,076,922.840 DATUM NAD83
DATE START 29-JUN-2020 DATE FINISH 29-JUN-2020
CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					2%	(0.00) Brown Sandy Angular GRAVEL With Asphalt Pieces (Possible Fill) (D-NW)	
5.0	J2	5	5	5		11%	(5.00) Brown Sandy SILT, Clayey With Gravel Pieces (M-LPL)	
10.0	J3	6	38	10		11%		
15.0	J4	9	18	17		18%	(15.00) Brown Silty CLAY With Asphalt Pieces (Possible Fill) (M-PL)	
20.0	J5	3	5	7		19%	(20.00) Brown Silty CLAY With Asphalt Pieces And Broken Glass (Possible Fil) (M-PL)	
25.0								

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DRILL RIG OPERATOR L. Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 16-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-214

SM 282 E 12/02

PSN 12794 BORNUM 214
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-214
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 607.89
 DEPTH TO WATER 1

ACTUAL COORDINATES (N) 1,046,606.590 (E) 1,076,922.840 DATUM NAD83
 DATE START 29-JUN-2020 DATE FINISH 29-JUN-2020
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18			
			6	12	18	24			
	25.0	J6	2	5	5		23%		
	30.0	J7	20	25	20		25%	(30.00) Brown Layered Silty CLAY/ Clayey SILT (M-PL)	
	35.0	J8	8	10	10		19%	(35.00) Brown Fine Sandy SILT With Pockets Of Brown Silty CLAY (M-LPL)	

BOTTOM OF HOLE AT 37.30 ft

1. Automatic hammer used.
2. At 37.3' rock and bottom of hole.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
29-Jun-20	14:38	37.30	37.30	1.00		NO

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 16-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-214

SM 282 E 12/02

PSN 12794 BORNUM 216
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-216
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,046,549.900 (E) 1,076,743.090 DATUM NAD83 SURF. ELEV. 603.36
 DATE START 15-JUL-2020 DATE FINISH 15-JUL-2020 DEPTH TO WATER NONE

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					1%	(0.00) Gray Angular GRAVEL With Asphalt Chunks (Possible Fill) (D-NW)	
5.0	J2	8	12	14		13%	(5.00) Gray Clayey SILT With Gravel Pieces And Asphalt Chunks (Poss. Fill) (M-LPL)	
10.0	J3	6	12	14		14%	(10.00) Brown Clayey SILT With Gravel Pieces And Asphalt (Poss. Fill) (M-LPL)	
15.0	J4	6	9	25		22%	(15.00) Black Silty CLAY W/ Creosote, Red Brick And Gravel Pcs (P.F) (M-PL)	
20.0	J5	11	11	15		12%	(20.00) Brown Sandy SILT With Gravel Pieces And Red Brick (Possible Fill) (M-NPL)	
25.0								

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 16-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-216

SM 282 E 12/02

PSN 12794 BORNUM 216
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-216
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,046,549.900 (E) 1,076,743.090 DATUM NAD83 SURF. ELEV. 603.36
 DATE START 15-JUL-2020 DATE FINISH 15-JUL-2020
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
25.0	J6	5	10	10		20%	(25.00) Brown Layered Silty CLAY/ Clayey SILT With Gravel Pieces (M-PL)	
30.0	J7	16	20	16		23%	(30.00) Brown Layered Silty CLAY/ Clayey SILT (M-PL)	
35.0	J8	50				14%	(35.00) Brown Clayey SILT, Gravelly (M-LPL)	

BOTTOM OF HOLE AT 35.20 ft

1. Automatic hammer used.
2. At 35.0' 50 blows for 0.2' penetration.
3. At 35.2' rock and bottom of hole.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
15-Jul-20	07:30	35.20	35.20	NONE		NO

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 16-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-216

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 217
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-217
LINE _____
STA _____
OFFSET ft

ACTUAL COORDINATES (N) 1,046,666.850 (E) 1,076,686.560 DATUM NAD83 SURF. ELEV. 603.29
DEPTH TO WATER NONE
DATE START 30-JUN-2020 DATE FINISH 30-JUN-2020

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
	0.0	J1					14%	(0.00) Gray Pulverized CONCRETE (Possible Fill) (M-NPL)
	5.0	J2	10	10	10		1%	(5.00) Black ASPHALT (Possible Fill) (D-NW)
	10.0	J3	5	6	35		22%	(10.00) Brown Silty CLAY With Asphalt (Possible Fill) (M-PL)
	15.0	J4	2	4	37		15%	(15.00) Brown Silty CLAY (M-PL)
	20.0	J5	10	10	10		17%	(20.00) Brown Layered Silty CLAY/ Clayey SILT W Gravel Pcs, Asphalt & Root Fbrs (P.F) (M-PL)
	25.0							

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DRILL RIG OPERATOR L. Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 16-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-217

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 217
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-217
LINE _____
STA _____
OFFSET ft

ACTUAL COORDINATES (N) 1,046,666.850 (E) 1,076,686.560 DATUM NAD83
DATE START 30-JUN-2020 DATE FINISH 30-JUN-2020
SURF. ELEV. 603.29 DEPTH TO WATER NONE

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
25.0		J6	10	15	10		21%	(25.00) Brown Layered Silty CLAY/ Clayey SILT With Gravel Pieces (M-PL)
30.0		J7	6	12	12		26%	(30.00) Brown Layered Silty CLAY/ Clayey SILT (M-PL)

BOTTOM OF HOLE AT 34.50 ft

1. Automatic hammer used.
2. At 34.5 rock and bottom of hole.
3. J1 off auger.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
30-Jun-20	09:41	34.50	34.50	NONE		

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DRILL RIG OPERATOR L. Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 16-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-217

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 220
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-220
LINE _____
STA _____
OFFSET ft

ACTUAL COORDINATES (N) 1,046,781.230 (E) 1,076,076.780 DATUM NAD83 SURF. ELEV. 604.49
DEPTH TO WATER NONE
DATE START 20-JUL-2020 DATE FINISH 20-JUL-2020

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					1%	(0.00) Brown Sandy GRAVEL, Silty With Gravel Pieces (Possible Fill) (M-NPL)	
5.0	J2	6	6	8		10%	(5.00) Brown Silty CLAY, Gravelly (M-PL)	
10.0	J3	3	8	24		10%	(10.00) Brown Silty CLAY Fine Gravelly (M-PL)	
15.0	J4	6	12	12		10%	(15.00) Brown Silty CLAY, Gravelly (M-PL)	
20.0	J5	4	8	20		18%	(20.00) Brown Silty CLAY With Gravel Pieces (M-PL)	

BOTTOM OF HOLE AT 24.00 ft

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DRILL RIG OPERATOR L Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 16-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-220

SM 282 E 12/02

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 220
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

HOLE FH-B-220
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,046,781.230 (E) 1,076,076.780 DATUM NAD83
 DATE START 20-JUL-2020 DATE FINISH 20-JUL-2020
 SURF. ELEV. 604.49 DEPTH TO WATER NONE

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		

1. J1 off auger.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
20-Jul-20	10:00	24.00	24.00	NONE	NO	

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DRILL RIG OPERATOR L Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 16-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-220

SM 282 E 12/02

PSN 12794 BORNUM 222
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-222
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 606.78
 DEPTH TO WATER NONE

ACTUAL COORDINATES (N) 1,046,829.960 (E) 1,075,823.950 DATUM NAD83
 DATE START 20-JUL-2020 DATE FINISH 20-JUL-2020
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					1%	(0.00) Gray Gravelly SAND, Silty With Large Asphalt Pieces (Possible Fill) (D-NW)	
5.0	J2	5	7	8		7%	(5.00) Brown Angular Gravelly SILT With Asphalt Pieces (Possible Fill) (M-NPL)	
10.0	J3	10	20	20		10%	(10.00) Brown Angular Gravelly SILT, Clayey (M-LPL)	
15.0	J4	5	15	5		10%		
20.0	J5	10	15	20		13%	(20.00) Brown Clayey SILT With Gravel Pieces (M-LPL)	
25.0								

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 16-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-222

SM 282 E 12/02

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 222
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

HOLE FH-B-222
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,046,829.960 (E) 1,075,823.950 DATUM NAD83
 DATE START 20-JUL-2020 DATE FINISH 20-JUL-2020
 SURF. ELEV. 606.78 DEPTH TO WATER NONE

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
			6	12	18	24			
	25.0	J6	23	11	15		10%	(25.00) Brown Gravelly SILT, Clayey With Concrete Pieces, Glass & Cinders (P.F) (M-LPL)	
	30.0	J7	6	50			33%	(28.60) Brown Silty CLAY With Gravel Pieces And Cinders (Possible Fill) (M-PL)	

BOTTOM OF HOLE AT 30.10 ft

1. Automatic hammer used.
2. At 30.1 rock and bottom of hole.
3. J1 off auger.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
20-Jul-20	11:30	30.10	30.00	NONE		

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 16-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-222

SM 282 E 12/02

PSN 12794 BORNUM 226
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-226
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,046,982.070 (E) 1,075,200.150 DATUM NAD83 SURF. ELEV. 606.36
 DATE START 30-JUN-2020 DATE FINISH 30-JUN-2020 DEPTH TO WATER 12.8
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
	0.0						(0.00) ASPHALT (0.60) SUBBASE	
		J1	1	7	8	4%	(1.70) Gray Sandy Crushed CONCRETE (POSSIBLE Fill) (M-NPL)	
	5.0	J2	6	10	14	8%		
	10.0	J3	16	39	25	10%		
		J4	15	8	6	14%	(12.70) Brown Sandy Crushed CONCRETE With Pockets Of Silty CLAY (Possible Fill) (M-NPL)	
	15.0	J5	4	6	5	18%	(15.00) Brown Gravelly CLAY, Silty With Cinders (Possible Fill) (M-PL)	
	20.0	J6	WOH	3	9	15%	(20.00) Brown Gravelly CLAY, Silty With Wood And Ceramic Pieces (Possible Fill) (M-PL)	
	25.0							

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DRILL RIG OPERATOR V. Tompkins
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 17-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 3 HOLE FH-B-226

SM 282 E 12/02

PSN 12794 BORNUM 226
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-226
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 606.36
 DEPTH TO WATER 12.8

ACTUAL COORDINATES (N) 1,046,982.070 (E) 1,075,200.150 DATUM NAD83
 DATE START 30-JUN-2020 DATE FINISH 30-JUN-2020
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
25.0	J7	8	13	15		18%	(25.00) Brown And Black Silty GRAVEL, Sandy With Cinders (Possible Fill) (M-NPL)	
30.0	J8	4	9	11		25%	(30.00) Brown Silty CLAY, Sandy (M-PL)	
35.0	J9	3	4	6		24%	(35.00) Brown Silty CLAY (M-PL)	
40.0	J10	WOH	WOH	WOH		26%	(40.00) Brown Layered Silty CLAY / Clayey SILT (M-PL)	
45.0	J11	WOR	WOH	WOH		31%	(45.00) Brown Silty CLAY (M-PL)	
50.0	R1						(49.50) Run #1 Drilled from 49'6" To 54'6" ROCK	

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DRILL RIG OPERATOR V. Tompkins
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 17-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 3 HOLE FH-B-226

SM 282 E 12/02

PSN 12794 BORNUM 226
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-226
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 606.36

ACTUAL COORDINATES (N) 1,046,982.070 (E) 1,075,200.150 DATUM NAD83 DEPTH TO WATER 12.8
 DATE START 30-JUN-2020 DATE FINISH 30-JUN-2020
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
	50.0							REC. 58.8" 98% 7 pieces
	55.0	R2						(54.50) Run #2 Drilled from 54'6" To 59'6" ROCK REC. 60" 100% 3 pieces

BOTTOM OF HOLE AT 59.50 ft

1. Automatic hammer used.
2. Embankment hole. Used pilot bit to keep auger clear.
3. Auger refusal at 12.8', sampler pushed through obstruction.
4. 49.5' auger refusal, rock confirmed with sampler.

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DRILL RIG OPERATOR V. Tompkins
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 17-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 3 OF 3 HOLE FH-B-226

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 227
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-227
LINE _____
STA _____
OFFSET ft

ACTUAL COORDINATES (N) 1,047,025.530 (E) 1,075,137.730 DATUM NAD83 SURF. ELEV. 579.5
DEPTH TO WATER NONE
DATE START 09-JUN-2020 DATE FINISH 09-JUN-2020

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					21%	(0.00) Dark Brown Clayey SILT With Wood, Red Brick & Plastic Pcs (P.F.) (M-LPL)	
5.0	J2	8	10	19		18%	(5.00) Brown Silty CLAY (M-PL)	
10.0	J3	5	13	13		23%	(10.00) Dark Brown Silty CLAY (M-PL)	
15.0	J4	2	2	2		29%	(15.00) Brown Silty CLAY With A Thin SILT Layer (M-PL)	
20.0	J5	1	4	7		27%		

BOTTOM OF HOLE AT 21.90 ft

1. Automatic hammer used.
2. J1 off auger
3. At 21.9' rock and bottom of hole.

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DRILL RIG OPERATOR L. Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 17-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-227

SM 282 E 12/02

PSN 12794 BORNUM 227
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-227
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,047,025.530 (E) 1,075,137.730 DATUM NAD83 SURF. ELEV. 579.5
 DATE START 09-JUN-2020 DATE FINISH 09-JUN-2020 DEPTH TO WATER NONE
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
09-Jun-20	10:30	21.90	21.90	NONE		NO

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 17-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-227

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 228
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-228
LINE _____
STA _____
OFFSET ft

ACTUAL COORDINATES (N) 1,046,932.670 (E) 1,075,008.900 DATUM NAD83
DATE START 15-JUL-2020 DATE FINISH 15-JUL-2020
SURF. ELEV. 605.36 DEPTH TO WATER NONE

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					1%	(0.00) Gray Crushed CONCRETE With Asphalt Chunks (Possible Fill) (D-NW)	
5.0	J2	36	40	50		13%	(5.00) Brown Crushed CONCRETE With A Layer Of Silty CLAY (Possible Fill) (M-PL)	
10.0	J3	11	20	20		17%	(10.00) Brown Clayey SILT With Gravel Pieces And Rusted Metal (Possible Fill) (M-LPL)	
15.0	J4	8	10	10		15%	(15.00) Brown Silty CLAY With Gravel Pieces (M-PL)	
20.0	J5	3	6	5		22%		
25.0								

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DRILL RIG OPERATOR L Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 17-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-228

SM 282 E 12/02

PSN 12794 BORNUM 228
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-228
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,046,932.670 (E) 1,075,008.900 DATUM NAD83 SURF. ELEV. 605.36
 DATE START 15-JUL-2020 DATE FINISH 15-JUL-2020 DEPTH TO WATER NONE

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
25.0	J6	2	2	3		16%	(25.00) Brown Layered Silty CLAY / Clayey SILT With Gravel Pieces (M-PL)	
30.0	J7	10	17	4		26%	(30.00) Brown And Black Layered Silty CLAY / Clayey Silt (M-PL)	
35.0	J8	10	17	16		21%	(35.00) Brown Silty CLAY (M-PL)	
40.0	J9	5	6	5		27%	(40.00) Brown Silty CLAY With Thin SILT Layers (M-PL)	

BOTTOM OF HOLE AT 42.50 ft

1. Automatic hammer used.
2. J1 off auger.
3. At 42.5' rock and bottom of hole.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
15-Jul-20	09:30	42.50	42.50	NONE		NO

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DRILL RIG OPERATOR L Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 17-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-228

SM 282 E 12/02

PSN 12794 BORNUM 230
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-230
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 603.05
 DEPTH TO WATER 20

SCALED COORDINATES (N) 1,047,017.470 (E) 1,074,652.690 DATUM NAD83
 DATE START 15-JUL-2020 DATE FINISH 15-JUL-2020
 CASING O. D. 8 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0							(0.00) Auger Through Pavement 1.0' Of BLACKTOP	
		J1	3	11	7	2%	(1.00) Brown Sandy GRAVEL, Silty (M-NPL)	
5.0		J2	10	21	21	7%	(5.00) Gray Sandy CONCRETE PIECES (Possible Fill) (M-NPL)	
10.0		J3	10	12	12	12%	(10.00) Brown Silty Fine SAND, Gravelly, (M-NPL)	
15.0		J4	6	9	7	9%		
20.0		J5	5	6	8	13%		
25.0								

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DRILL RIG OPERATOR E. Dorn
 SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 17-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 3 HOLE FH-B-230

SM 282 E 12/02

PSN 12794 BORNUM 230
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-230
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 603.05
 DEPTH TO WATER 20

SCALED COORDINATES (N) 1,047,017.470 (E) 1,074,652.690 DATUM NAD83
 DATE START 15-JUL-2020 DATE FINISH 15-JUL-2020
 CASING O. D. 8 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
25.0	J6	7	10	8		13%	(25.00) Brown Silty Fine SAND, Gravelly, (M-NPL)	
30.0	J7	2	9	15		22%	(30.00) Brown Silty CLAY (M-PL)	
35.0	J8	5	5	5		25%		
40.0	J9	WOH	1	1		23%	(40.00) Brown Layered Silty CLAY / Clayey SILT With Gravel Pieces (M-PL)	
45.0	J10	WOH	2			26%		
50.0	R1		2				(46.20) Run #1 Drilled from 46'2" To 51'2" ROCK REC. 60" 100% 4 pieces and fragments 3.5ppm	

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DRILL RIG OPERATOR E. Dorn
 SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 17-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 3 HOLE FH-B-230

SM 282 E 12/02

PSN 12794 BORNUM 230
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-230
 LINE _____
 STA _____
 OFFSET ft

SCALED COORDINATES (N) 1,047,017.470 (E) 1,074,652.690 DATUM NAD83 SURF. ELEV. 603.05
 DATE START 15-JUL-2020 DATE FINISH 15-JUL-2020 DEPTH TO WATER 20

CASING O. D. 8 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
	50.0							
		R2						(51.20) Run #2 Drilled from 51'2" To 56'2" ROCK REC. 57.6" 96% 2 pieces and fragments 12.2ppm
	55.0							

BOTTOM OF HOLE AT 56.20 ft

1. Automatic hammer used.
2. J10 to 46.5' with 2 blows from 46.0' but refusal with auger @ 46.2.
3. Washout with rollerbit to 46.2'.
4. Use NWD4 core barrel.
5. Diamond bit 154381F10-Copper
6. Wash water added at 46.2'.
7. Water encountered at 20', no time or other depths given.

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DRILL RIG OPERATOR E. Dorn
 SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 17-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 3 OF 3 HOLE FH-B-230

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 232
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-232
LINE _____
STA _____
OFFSET ft
SURF. ELEV. 594.85

ACTUAL COORDINATES (N) 1,047,322.820 (E) 1,074,183.190 DATUM NAD83
DATE START 30-JUN-2020 DATE FINISH 30-JUN-2020
DEPTH TO WATER NONE

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					9%	(0.00) Brown Silty GRAVEL, Sandy (M-NPL)	
5.0	J2	6	15	20		21%	(5.00) Brown And Black Sandy SILT With Gravel Pieces, Glass Pieces & Creosote (P.F.) (M-NPL)	
10.0	J3	12	20	20		13%	(10.00) Brown Silty Crushed CONCRETE With Red Brick And Gravel Pieces (P.F.) (M-NPL)	
15.0	J4	12	10	13		9%	(15.00) Brown Gravelly SAND, Silty With Red Brick, Glass And Creosote (P.F.) (M-NPL)	
20.0	J5	2	51			25%	(20.00) Brown And Black Silty CLAY With Organics (M-PL)	

BOTTOM OF HOLE AT 21.00 ft

- Automatic hammer used.
- At 21.0' rock and bottom of hole.

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DRILL RIG OPERATOR L. Muhammad Sr.
SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 17-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-232

SM 282 E 12/02

PSN 12794 BORNUM 232
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-232
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,047,322.820 (E) 1,074,183.190 DATUM NAD83 SURF. ELEV. 594.85
 DATE START 30-JUN-2020 DATE FINISH 30-JUN-2020
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
30-Jun-20	10:56	21.00	20.00	NONE		NO

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DRILL RIG OPERATOR L. Muhammad Sr.
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 17-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-232

SM 282 E 12/02

PSN 12794 BORNUM 233
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-233
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 590.55
 DEPTH TO WATER NONE

ACTUAL COORDINATES (N) 1,047,512.100 (E) 1,073,964.660 DATUM NAD83
 DATE START 30-JUN-2020 DATE FINISH 30-JUN-2020
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					3%	(0.00) Gray GRAVEL (M-NPL)	
5.0	J2	50	50	50		13%	(5.00) Dark Brown Angular Gravelly SILT, Clayey With Pieces Of Coal And Root Fibers (P.F.) (M-LPL)	
10.0	J3	6	20	25		28%	(10.00) Black Sandy CINDERS With Glass, Red Brick, Slag And Root Fibers (P.F.) (M-NPL)	
15.0	J4	3	4	6		165%	(15.00) Dark Brown Decomposed WOOD CHIPS (Possible Fill) (M-NPL)	
20.0	J5	10	6	15		23%	(20.00) Brown Silty CLAY (M-PL)	
25.0								

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DRILL RIG OPERATOR L Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 17-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-233

SM 282 E 12/02

PSN 12794 BORNUM 233
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-233
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,047,512.100 (E) 1,073,964.660 DATUM NAD83 SURF. ELEV. 590.55
 DATE START 30-JUN-2020 DATE FINISH 30-JUN-2020
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
	25.0	J6	10	20	17		18%	(25.00) Brown Layered Silty CLAY/ Clayey SILT (M-PL)
	30.0	J7	7	14	20		17%	

BOTTOM OF HOLE AT 32.00 ft

1. Automatic hammer used.
2. At 32.0' rock and bottom of auger.
3. J1 off auger.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
30-Jun-20	12:27	32.00	30.00	NONE		NO

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DRILL RIG OPERATOR L Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 17-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-233

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 235
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-235
LINE _____
STA _____
OFFSET ft
SURF. ELEV. 582.68

ACTUAL COORDINATES (N) 1,047,660.150 (E) 1,073,564.090 DATUM NAD83
DATE START 24-JUN-2020 DATE FINISH 24-JUN-2020
DEPTH TO WATER 3.8

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					5%	(0.00) Gray Silty Angular GRAVEL, Sandy With Root Fibers (M-NPL)	
5.0	J2	2	2	5		24%	(5.00) Brown Silty CLAY With Gravel Pieces, Root Fbrs & Wood Pcs (P.F.) (M-PL)	
10.0	J3	WOH	WOH	3		30%	(10.00) Brown Silty CLAY With Wood Pieces (Possible Fill) (M-PL)	
15.0	J4	3	6	7		70%	(15.00) Brown And Gray Layered Silty CLAY/ Clayey SILT With Organic Matter (M-PL)	
20.0	J5	5	5	6		22%	(20.00) Brown And Gray Silty CLAY (M-PL)	

BOTTOM OF HOLE AT 21.60 ft

1. Automatic hammer used.
2. At 21.6' rock and bottom of hole.

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DRILL RIG OPERATOR L. Muhammad
SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 18-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-235

SM 282 E 12/02

PSN 12794 BORNUM 235
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-235
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,047,660.150 (E) 1,073,564.090 DATUM NAD83 SURF. ELEV. 582.68
 DATE START 24-JUN-2020 DATE FINISH 24-JUN-2020 DEPTH TO WATER 3.8
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
24-Jun-20	00:00	21.60	20.00	3.80		NO

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich/D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 18-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-235

SM 282 E 12/02

PSN 12794 BORNUM 237
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-237
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 579.39
 DEPTH TO WATER SEE NOTE

ACTUAL COORDINATES (N) 1,047,786.100 (E) 1,073,272.860 DATUM NAD83
 DATE START 24-JUN-2020 DATE FINISH 24-JUN-2020
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1	WOH		5	5		8%	(0.00) Brown Sandy GRAVEL, Silty With Organics (M-NPL)
5.0	J2	2	2	5			21%	(5.00) Brown Gravelly SILT, Clayey With Brick Pieces And Cinders (P.F.) (M-LPL)
10.0	J3	6	3	3			24%	(10.00) Brown Silty CLAY With Gravel Pcs, Creosote & Wood (P.F.) (M-PL)
15.0	J4	3	2	9			16%	(15.00) Brown And Gray Silty Fine SAND W/ Wood Pcs & Pockets Of Brown Silty CLAY (P.F.) (M-LPL)
	J5	2	5				22%	(16.50) Brown Gravelly CLAY, Silty With Wood Pieces And Slag (Possible Fill) (M-LPL)
20.0	R1			REF				(17.40) Run #1 Drilled from 17'5" To 22'5" ROCK REC. 58.8" 98% 7 pieces, no RQD info
	R2							(22.40) Run #2 Drilled from 22'5" To 24'6" ROCK REC. 25.2" 100% 3 pieces
25.0	R3							(24.50) Run #3 Drilled from 24'6" To 26'6" ROCK

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR V. Tompkins
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 18-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____
 BIN 5512290
 SHEET 1 OF 2 HOLE FH-B-237

CONTRACT _____ CONTRACTOR _____

SM 282 E 12/02

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 237
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

HOLE FH-B-237
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 579.39

ACTUAL COORDINATES (N) 1,047,786.100 (E) 1,073,272.860 DATUM NAD83
 DATE START 24-JUN-2020 DATE FINISH 24-JUN-2020
 DEPTH TO WATER SEE NOTE

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
	25.0		6	12	18	24		REC. 24" 100% 3 pieces

BOTTOM OF HOLE AT 26.50 ft

1. Automatic hammer used.
2. At 17.4' auger refusal, suspect rock.
3. Water on sampler from 5.0'-6.5'.
4. Water in sampler at 15.0'-16.5'.

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DRILL RIG OPERATOR V. Tompkins
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 18-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____
 BIN 5512290

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-237

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 239
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-239
LINE _____
STA _____
OFFSET ft

ACTUAL COORDINATES (N) 1,047,990.210 (E) 1,072,949.950 DATUM NAD83
DATE START 21-JUL-2020 DATE FINISH 21-JUL-2020
SURF. ELEV. 585.79
DEPTH TO WATER 4.5

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					0%	(0.00) Gray Sandy GRAVEL With Asphalt Pieces (Possible Fill) (D-NW)	
5.0	J2	10	10	10		11%	(5.00) Brown Crushed CONCRETE With Asphalt Pieces (Possible Fill) (M-NPL)	
10.0	J3	1	3	10		28%	(10.00) Brown Gravelly Fine SAND With Pockets Of Black Clayey SILT (M-LPL)	
15.0	J4	5	3	12		24%	(15.00) Brown And Black Silty Angular GRAVEL, Sandy (M-NPL)	
20.0	J5	7	7	22		22%	(20.00) Gray Angular Gravelly SILT (M-NPL)	

BOTTOM OF HOLE AT 21.50 ft

1. Automatic hammer used.
2. At 22.0' rock and bottom hole.

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DRILL RIG OPERATOR L. Muhammad Sr.
SOIL & ROCK DESCRIPTION D. Landau / T. Kaufmann
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 18-FEB-2021
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-239

SM 282 E 12/02

PSN 12794 BORNUM 239
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-239
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,047,990.210 (E) 1,072,949.950 DATUM NAD83
 DATE START 21-JUL-2020 DATE FINISH 21-JUL-2020
 SURF. ELEV. 585.79
 DEPTH TO WATER 4.5

CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
21-Jul-20	10:00	22.00	22.00	4.50		NO

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR L. Muhammad Sr.
 SOIL & ROCK DESCRIPTION D. Landau / T. Kaufmann
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 18-FEB-2021
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-239

SM 282 E 12/02

PSN 12794 BORNUM 240
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-240
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 581.49
 DEPTH TO WATER 21

ACTUAL COORDINATES (N) 1,047,972.680 (E) 1,072,566.220 DATUM NAD83
 DATE START 07-JAN-2020 DATE FINISH 07-JAN-2020
 CASING O. D. 7 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
			6	12	18	24			
0.0	J1	3	3	7			13%	(0.00) Brown Sandy GRAVEL, Silty With Root Fibers And A Rusy Nail (P.F.) (M-NPL)	
5.0	J2	4	3	2			15%	(5.00) Red Silty CLAY With Concrete Pieces (Possible Fill) (M-PL)	
10.0	J3	50					14%	(10.00) Brown Silty CLAY With Red Brick Pieces And Concrete Pieces (P.F.) (M-PL)	
15.0	J4	15	9	7			21%	(15.00) Brown Silty CLAY (M-PL)	
20.0	J5	7	28	42			6%	(20.00) Gray Gravelly SILT (M-NPL)	
25.0	R1							(21.50) Run #1 Drilled from 21'6" To 26'6" ROCK REC. 57.6" 96% 3 pieces NWD4 DOUBLE TUBE SWIVEL	

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR Eric Albert
 SOIL & ROCK DESCRIPTION D. Landau / T. Kaufmann
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 10-FEB-2020 REVISION # 1
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-240

SM 282 E 12/02

PSN 12794 BORNUM 240
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-240
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,047,972.680 (E) 1,072,566.220 DATUM NAD83
 DATE START 07-JAN-2020 DATE FINISH 07-JAN-2020
 SURF. ELEV. 581.49
 DEPTH TO WATER 21

CASING O. D. 7 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
			6	12	18	24			
	25.0								
		R2						(26.50) Run #2 Drilled from 26'6" To 31'6" ROCK REC. 60" 100% 5 pieces NWD4 DOUBLE TUBE SWIVEL	
	30.0								

BOTTOM OF HOLE AT 31.50 ft

1. Automatic hammer used, and auger
2. At 10.0', 50 blows for .5' penetration.
3. South side of I-190; 300ft east of Chicago St

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DRILL RIG OPERATOR Eric Albert
 SOIL & ROCK DESCRIPTION D. Landau / T. Kaufmann
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 10-FEB-2020 REVISION # 1
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-240

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 241
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-241
LINE _____
STA _____
OFFSET ft

ACTUAL COORDINATES (N) 1,048,127.920 (E) 1,072,450.320 DATUM NAD83
DATE START 06-JAN-2020 DATE FINISH 06-JAN-2020
SURF. ELEV. 580.32
DEPTH TO WATER 15.5

CASING O. D. 7 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
			6	12	18	24			
0.0	J1	6	15	20			11%	(0.00) Brown Sandy SILT With Red Brick Pieces And Root Fibers (P.F.) (M-NPL)	
5.0	J2	23	50				12%	(5.00) Dark Brown Sandy SILT, Gravelly With Red Brick Pieces (P.F.) (M-NPL)	
10.0	J3	4	12	15			17%	(10.00) Brown And Gray Silty CLAY (M-PL)	
15.0	J4	26					8%	(15.00) Tan Clayey SILT, Gravelly (M-LPL)	
20.0	R1							(15.50) Run #1 Drilled from 15'6" To 20'6" ROCK REC. 60" 100% 5 pieces NWD4 DOUBLE TUBE SWIVEL	
25.0	R2							(20.50) Run #2 Drilled from 20'6" To 25'6" ROCK REC. 60" 100% 4 pieces NWD4 DOUBLE TUBE SWIVEL	

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR Eric Albert
SOIL & ROCK DESCRIPTION D. Landau / T. Kaufmann
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 10-FEB-2020 REVISION # 1
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-241

SM 282 E 12/02

PSN 12794 BORNUM 241
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-241
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,048,127.920 (E) 1,072,450.320 DATUM NAD83 SURF. ELEV. 580.32
 DATE START 06-JAN-2020 DATE FINISH 06-JAN-2020
 CASING O. D. 7 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
25.0			6	12	18	24		

BOTTOM OF HOLE AT 25.50 ft

1. Automatic hammer used, and augers.
2. North side of I-190, 185ft east of Chicago St.
3. Refusal 21.5'.

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
06-Jan-20	15:00	25.50	9.00	6.00		

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DRILL RIG OPERATOR Eric Albert
 SOIL & ROCK DESCRIPTION D. Landau / T. Kaufmann
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 10-FEB-2020 REVISION # 1
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-241

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 242
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-242
LINE _____
STA _____
OFFSET ft

ACTUAL COORDINATES (N) 1,048,028.700 (E) 1,072,339.880 DATUM NAD83
DATE START 08-JAN-2020 DATE FINISH 08-JAN-2020
SURF. ELEV. 580.15
DEPTH TO WATER 11

CASING O. D. 7 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
			6	12	18	24			
0.0	J1	3	5	6			17%	(0.00) Brown Silty GRAVEL, Sandy W/Red Brick Pieces And Concrete Pieces(P.F.) (M-NPL)	
5.0	J2	2	2	2			21%		
10.0	J3	1	1	1			33%	(10.00) Black Silty GRAVEL, Sandy With Cinders (POSSIBLE Fill) (M-NPL)	
15.0	J4	7	50				12%	(15.00) Brown Clayey SILT, Gravelly (M-LPL)	
20.0	R1							(16.00) Run #1 Drilled from 16'0" To 20'6" ROCK REC. 50.4" 93.3% 2 pieces NWD4 DOUBLE TUBE SWIVEL	
25.0	R2							(20.50) Run #2 Drilled from 20'6" To 25'6" ROCK REC. 60" 100% 4 pieces NWD4 DOUBLE TUBE SWIVEL	

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR Eric Albert
SOIL & ROCK DESCRIPTION T. Kaufmann / M. Heiser
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 10-FEB-2020 REVISION # 1
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-242

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 242
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-242
LINE _____
STA _____
OFFSET ft

ACTUAL COORDINATES (N) 1,048,028.700 (E) 1,072,339.880 DATUM NAD83
DATE START 08-JAN-2020 DATE FINISH 08-JAN-2020
SURF. ELEV. 580.15
DEPTH TO WATER 11

CASING O. D. 7 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
25.0			6	12	18	24		

BOTTOM OF HOLE AT 25.50 ft

1. Automatic hammer used.
2. Refusal at 16.0'
3. South side of I-190 @ Chicago St.

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR Eric Albert
SOIL & ROCK DESCRIPTION T. Kaufmann / M. Heiser
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 10-FEB-2020 REVISION # 1
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-242

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 243
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-243
LINE _____
STA _____
OFFSET ft
SURF. ELEV. 579.44

ACTUAL COORDINATES (N) 1,048,169.370 (E) 1,072,252.960 DATUM NAD83
DATE START 07-JAN-2020 DATE FINISH 07-JAN-2020
DEPTH TO WATER 14

CASING O. D. _____ in I. D. _____ in WT OF HAMMER-CASING _____ lb HAMMER FALL-CASING _____ in
SAMPLER O. D. _____ in I. D. _____ in WT OF HAMMER-SAMPLER _____ lb HAMMER FALL-SAMPLER _____ in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
			6	12	18	24			
0.0	J1	7	10	12			2%	(0.00) Black Gravelly SAND, Silty With Asphalt Pieces (Possible Fill) (M-NPL)	
5.0	J2	9	3	2			12%		
10.0	J3	1	2	10			31%	(10.00) Dark Brown Gravelly CLAY, Silty (M-PL)	
15.0	R1							(14.00) Run #1 Drilled from 14'0" To 19'0" ROCK REC. 56.4" 94% 9 pieces NWD4 DOUBLE TUBE SWIVEL	
20.0	R2							(19.00) Run #2 Drilled from 19'0" To 24'0" ROCK REC. 56.4" 94% 4 pieces NWD4 DOUBLE TUBE SWIVEL	

BOTTOM OF HOLE AT 24.00 ft

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DRILL RIG OPERATOR Eric Albert
SOIL & ROCK DESCRIPTION D. Landau / T. Kaufmann
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 10-FEB-2020 REVISION # 1
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-243

SM 282 E 12/02

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 243
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

HOLE FH-B-243
 LINE _____
 STA _____
 OFFSET ft _____
 SURF. ELEV. 579.44
 DEPTH TO WATER 14

ACTUAL COORDINATES (N) 1,048,169.370 (E) 1,072,252.960 DATUM NAD83
 DATE START 07-JAN-2020 DATE FINISH 07-JAN-2020
 CASING O. D. _____ in I. D. _____ in WT OF HAMMER-CASING _____ lb HAMMER FALL-CASING _____ in
 SAMPLER O. D. _____ in I. D. _____ in WT OF HAMMER-SAMPLER _____ lb HAMMER FALL-SAMPLER _____ in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		

1. Automatic hammer used.
2. Refusal at 14.0'.
3. North side of I-190, 50ft west of Chicago St.

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DRILL RIG OPERATOR Eric Albert
 SOIL & ROCK DESCRIPTION D. Landau / T. Kaufmann
 REG GEOTECHNICAL
 ENGINEER Todd E. Nelson
 DATE APPROVED 10-FEB-2020 REVISION # 1
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-243

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 244
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-244
LINE _____
STA _____
OFFSET ft

ACTUAL COORDINATES (N) 1,048,084.660 (E) 1,072,124.710 DATUM NAD83
DATE START 10-JAN-2020 DATE FINISH 10-JAN-2020
SURF. ELEV. 578.58
DEPTH TO WATER 21

CASING O. D. 7 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
			6	12	18	24			
0.0	J1	4	8	12			6%	(0.00) Brown Sandy GRAVEL, Silty With Wood Pieces And Cinders (Possible Fill) (M-NPL)	
5.0	J2	12	4	3			14%	(5.00) Brown Silty GRAVEL, Sandy With Cinders (Possible Fill) (M-NPL)	
10.0	J3	6	9	14			16%	(10.00) Brown Silty CLAY (M-PL)	
15.0	J4	1	1	2			17%		
20.0	J5	12	16	20			11%	(20.00) Gray Silty SAND With Gravel Pieces (M-NPL)	
25.0									

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DRILL RIG OPERATOR Eric Albert
SOIL & ROCK DESCRIPTION T. Kaufmann / M. Heiser
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 10-FEB-2020 REVISION # 1
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-244

SM 282 E 12/02

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 244
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

HOLE FH-B-244
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 578.58
 DEPTH TO WATER 21

ACTUAL COORDINATES (N) 1,048,084.660 (E) 1,072,124.710 DATUM NAD83
 DATE START 10-JAN-2020 DATE FINISH 10-JAN-2020
 CASING O. D. 7 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in					MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18	24		
			6	12	18	24			
25.0	J6	7	40	50			12%	(25.00) Gray Silty SAND, Gravelly (M-NPL)	
30.0	R1							(28.00) Run #1 Drilled from 28'0" To 31'6" ROCK REC. 40.8" 97.1% 9 pieces NWD4 DOUBLE TUBE SWIVEL	
35.0	R2							(31.50) Run #2 Drilled from 31'6" To 36'6" ROCK REC. 60" 100% 13 pieces NWD4 DOUBLE TUBE SWIVEL	

BOTTOM OF HOLE AT 36.50 ft

1. Automatic hammer used.
2. Refusal at 28.0'.
3. South side of I-190, 200ft west of Chicago St.

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DRILL RIG OPERATOR Eric Albert
 SOIL & ROCK DESCRIPTION T. Kaufmann / M. Heiser
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 10-FEB-2020 REVISION # 1
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-244

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 245
REGION 5
COUNTY ERIE
PIN 5134.48
PROJECT BUFFALO SKYWAY

HOLE FH-B-245
LINE _____
STA _____
OFFSET ft
SURF. ELEV. 579.71

ACTUAL COORDINATES (N) 1,048,224.840 (E) 1,072,023.090 DATUM NAD83
DATE START 11-JAN-2020 DATE FINISH 11-JAN-2020
DEPTH TO WATER 10.2

CASING O. D. 7 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1	4	2	11		14%	(0.00) Brown And Gray Sandy GRAVEL, Silty With Pieces Of Concrete (Possible Fill) (M-NPL)	
5.0	J2	3	2	3		22%	(5.00) Dark Gray Clayey SILT With Red Brick Pieces (Possible Fill) (M-LPL)	
10.0	J3	1	4	6		24%	(10.00) Dark Gray Clayey SILT, Sandy With Asphalt Pieces (Possible Fill) (M-LPL)	
15.0	J4	1	9	11		23%	(15.00) Red, Gray And Black Silty CLAY With Gravel Pieces (M-PL)	
20.0	J5	5	30	47		6%	(20.00) Gray Fine Sandy SILT, Clayey With Gravel Pieces (M-LPL)	
25.0								

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DRILL RIG OPERATOR Eric Albert
SOIL & ROCK DESCRIPTION D. Landau / T. Kaufmann
REG GEOTECHNICAL ENGINEER Todd E. Nelson
DATE APPROVED 10-FEB-2020 REVISION # 1
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-245

SM 282 E 12/02

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



PSN 12794 BORNUM 245
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

HOLE FH-B-245
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,048,224.840 (E) 1,072,023.090 DATUM NAD83
 DATE START 11-JAN-2020 DATE FINISH 11-JAN-2020
 SURF. ELEV. 579.71
 DEPTH TO WATER 10.2

CASING O. D. 7 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
	25.0	J6	21	20	33		(25.00) Sample NOT RECEIVED	
	30.0	R1					(28.50) Run #1 Drilled from 28'6" To 33'6" ROCK REC. 60" 100% 6 pieces NWD4 DOUBLE TUBE SWIVEL	
	35.0	R2					(33.50) Run #2 Drilled from 33'6" To 38'6" ROCK REC. 60" 100% 7 pieces NWD4 DOUBLE TUBE SWIVEL	

BOTTOM OF HOLE AT 38.50 ft

1. Automatic hammer used.
2. J6 Driller's visual: Gray Gravelly SILT, Sandy
3. Refusal 28.5'.
4. North side of I-190, 400ft west of Chicago St.

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DRILL RIG OPERATOR Eric Albert
 SOIL & ROCK DESCRIPTION D. Landau / T. Kaufmann
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 10-FEB-2020 REVISION # 1
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-245

SM 282 E 12/02

PSN 12794 BORNUM 245.1
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-245A
 LINE _____
 STA _____
 OFFSET ft
 SURF. ELEV. 580.02
 DEPTH TO WATER _____

ACTUAL COORDINATES (N) 1,048,225.170 (E) 1,072,018.940 DATUM NAD83
 DATE START 26-FEB-2020 DATE FINISH 26-FEB-2020
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		
0.0	J1					11%	(0.00) Brown Silty GRAVEL, Sandy With Root Fibers (M-NPL)	
5.0	J2	2	2	2		19%	(5.00) Brown Gravelly CLAY, Silty With Creosote (Possible Fill) (M-NPL)	
10.0	J3	4	6	9		24%	(10.00) Brown And Black Clayey SILT With Gravel Pieces And Slag (Possible Fill) (M-LPL)	
	J4	20	30	34		21%	(11.50) Brown Silty CLAY (M-PL)	
	J5	20	36	60		17%		
15.0	J6	WOH	3	4		22%	(14.50) Brown Layered Silty CLAY/ Clayey SILT (M-PL)	
	J7	7	7	14		12%	(16.00) Brown And Gray Gravelly CLAY, Silty (M-PL)	
	J8	7	15	12		10%	(17.50) Gray Gravelly CLAY, Silty (M-PL)	
20.0	J9	42	49	53		8%	(19.00) Brown Gravelly SILT, Sandy (M-NPL)	

BOTTOM OF HOLE AT 20.50 ft

1. Automatic hammer used.
 2. Diamond Bit. No. 244038-3
 3. J1 off auger.
- *Revised to correct Regional Hole Number from FH-B-245.1 to FH-B-245A

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 28-SEP-2022 REVISION # 1
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 1 OF 2 HOLE FH-B-245A

SM 282 E 12/02

PSN 12794 BORNUM 245.1
 REGION 5
 COUNTY ERIE
 PIN 5134.48
 PROJECT BUFFALO SKYWAY

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE FH-B-245A
 LINE _____
 STA _____
 OFFSET ft

ACTUAL COORDINATES (N) 1,048,225.170 (E) 1,072,018.940 DATUM NAD83 SURF. ELEV. 580.02
 DATE START 26-FEB-2020 DATE FINISH 26-FEB-2020
 CASING O. D. 6 5/8 in I. D. 3 1/4 in WT OF HAMMER-CASING 140 lb HAMMER FALL-CASING 30 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in				MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18		
			6	12	18	24		

DATE	TIME	DEPTH ft			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
26-Feb-20	16:00	20.50	15.00	1.60		NO

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DRILL RIG OPERATOR L. Muhammad
 SOIL & ROCK DESCRIPTION A. Zerebovich / D. Landau
 REG GEOTECHNICAL ENGINEER Todd E. Nelson
 DATE APPROVED 28-SEP-2022 REVISION # 1
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. _____

CONTRACT _____ CONTRACTOR _____

SHEET 2 OF 2 HOLE FH-B-245A