

SM 282 E 12/02

PSN _____ BORNUM FHB-7
DIVISION Syracuse
COUNTY Oneida
PIN S52886
ROUTE Thruway Mainline
MILEPOST 240.48
PROJECT Syracuse Division 2017 Design-Build Bridge Replacements



NEW YORK STATE THRUWAY AUTHORITY
NEW YORK STATE CANAL CORPORATION
SUBSURFACE EXPLORATION LOG



HOLE FH-B
LINE _____
STA _____
OFFSET ft
SURF. ELEV. 500.44, NAD 88
DEPTH TO WATER 24.0

COORDINATES (Lat) 43.127549°N (Long) 75.344975°W
DATE START 12/27/2016 DATE FINISH 12/27/2016

AUGER 4 1/4" I.D. HOLLOW STEM FLIGHT AUGER WT OF HAMMER-CASING _____ lb HAMMER FALL-CASING _____ in
CASING O. D. _____ in I. D. _____ in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in
SAMPLER O. D. 2 in I. D. 1-3/8 in HAMMER TYPE Safety

CASING BLOWS/ft	DEPTH (ft.) BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER (in.)				MOIST. CONT. (%)	Soil Recovery (in.)	Rock Recovery (ft.)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18				
			6	12	18	24				
	0.0									Dark gray asphalt pavement to 1.1 feet. -
										-
	5.0	SS1	7	6	8	16	9.8%	12		Brown (SANDY-SILT) fill with 15 to 25% gravel, little to some sand, compact, massive soil structure, (ML). M - NPL
										-
	10.0	SS2	3	4	4	8	12.2%	12		Brown (SILTY-SAND) fill with 5 to 10% gravel, mostly very fine to fine size sand, trace to little silt, loose, massive soil structure, (SM). M - NPL
										-
	15.0	SS3	9	10	10	13	18.9%	15		Faintly mottled light brown to brown (CLAYEY-SILT) with 3 to 7% gravel, little to some clay, trace sand, very stiff, weakly thinly laminated with very thin silt lenses, (CL). M - PL
										-
	20.0	SS4	4	7	9	12	23.7%	19		Brown to reddish brown (SILTY-CLAY) very stiff, thinly laminated with very thin silt lenses, (CL). W - PL
										-
	25.0	SS5	3	6			21.9%	21		Reddish brown (SILTY-CLAY) stiff, thinly laminated with very thin silt lenses, (CL). M - PL
										-

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DRILL RIG OPERATOR Philip Bence
SOIL & ROCK DESCRIPTION Brandon Mikolin
INSPECTOR Matthew Conley (Stantec)
BIN 5512980
STRUCTURE NAME Judd Rd. (C.R. 157)/Thruway

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AUGER 4 1/4" I.D. HOLLOW STEM FLIGHT AUGER WT OF HAMMER-CASING lb HAMMER FALL-CASING in
CASING O. D. in I. D. in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in
SAMPLER O. D. 2 in I. D. 1-3/8 in HAMMER TYPE Safety

CASING BLOWS/ft	DEPTH (ft.) BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER (in.)				MOIST. CONT. (%)	Soil Recovery (in.)	Rock Recovery (ft.)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18				
			6	12	18	24				
	25.0				7	10				Note: Harder material at 27.5 feet.
	30.0	SS6	4	10	7	45	11.2%	14		Brownish gray (SANDY-SILT) with 5 to 15% gravel, little W - NPL to some sand, compact, massive soil structure, (ML).
	35.0	SS7	22	35	50/4		7.9%	13		Brownish gray (SANDY-SILT) with 10 to 20% gravel, little M - NPL sand, very dense, massive soil structure, (ML).
	40.0	SS8	11	39	52	50/3	4.9%	11		Grayish brown gravelly (SANDY-SILT) with 15 to 40% M - NPL gravel, little sand, very dense, massive soil structure, (ML).
	45.0	SS9	52	50/4			3.1%	3		Same as 39.0-41.0' M - NPL
	50.0	SS10	52	50/3			6.7%	6		Same as 39.0-41.0' M - NPL

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INSPECTOR Matthew Conley (Stantec)
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STRUCTURE NAME Judd Rd. (C.R. 157)/Thruway

CONTRACT CONTRACTOR Earth Dimensions, Inc.

SHEET 2 OF 3 HOLE FH-B

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

CASING BLOWS/ft	DEPTH (ft.) BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER (in.)				MOIST. CONT. (%)	Soil Recovery (in.)	Rock Recovery (ft.)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18				
	50.0		6	12	18	24				
	55.0	SS11	50	50/3			8.8%	8		Brownish gray (SANDY-SILT) with 10 to 20% gravel, little M - NPL sand, very dense, massive soil structure, (ML).
	60.0	SS12	55	50/4			13.1%	16		59.0-60.0' Gray (SILTY-SAND) with mostly very fine to fine size sand, trace silt, very dense, (SP). W - NPL 60.0-61.0' Gray (SANDY-SILT) with 10 to 20% gravel, little sand, very dense, massive soil structure, (ML).
	65.0	SS13	34	16	50	50/4	17.9%	22		Gray (SILTY-SAND) with mostly very fine to fine size sand, trace silt, very dense, (SP). W - NPL

BOTTOM OF HOLE AT 65.90 ft

Note:
Advanced bore hole 4 1/4" ID x 8" OD hollow stem auger casing with 5.0-foot interval sampling to 65.9 feet. Bore hole was backfilled with cuttings and ground surface repaired with a concrete and asphalt patch.

DATE	TIME	DEPTH (ft.)			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
27-Dec-16	09:00	26.00	24.00	24.00	NO	No
27-Dec-16	14:00	65.90	64.00	36.70	NO	No

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SOIL & ROCK DESCRIPTION Brandon Mikolin
INSPECTOR Matthew Conley (Stantec)
BIN 5512980
STRUCTURE NAME
Judd Rd. (C.R. 157)/Thruway

CONTRACT _____ CONTRACTOR Earth Dimensions, Inc.

SHEET 3 OF 3 HOLE FH-B

TWY-CAN SUBSURF EXPLORATION 6K16_BIN-5512980-DRAFTS.GPJ TWYSE1TMPL_V05.GDT 3/31/17

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SUBSURFACE EXPLORATION LOG



HOLE LINE STA _____
FH-B
OFFSET _____ ft
SURF. ELEV. 482.138, NAD 88
DEPTH TO WATER 2.6

COORDINATES (Lat) 43.127252°N (Long) 75.344779°W
DATE START 12/6/2016 DATE FINISH 12/6/2016

AUGER 4 1/4" I.D. HOLLOW STEM FLIGHT AUGER WT OF HAMMER-CASING _____ lb HAMMER FALL-CASING _____ in
CASING O. D. _____ in I. D. _____ in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in
SAMPLER O. D. 2 in I. D. 1-3/8 in HAMMER TYPE Automatic

CASING BLOWS/ft	DEPTH (ft.) BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER (in.)				MOIST. CONT. (%)	Soil Recovery (in.)	Rock Recovery (ft.)	DESCRIPTION OF SOIL AND ROCK
			0 6	6 12	12 18	18 24				
	0.0									-
		SS1	3	4	10		15.6%	16		Brown gravelly (SILTY-SAND) fill with 10 to 25% gravel, W - NPL little to some silt, compact, massive soil structre, (SM).
	5.0					28				-
		SS2	3	13	30		10.5%	14		8.0-8.5' Same as 3.0-5.0' M - LPL 8.5-10.0' Grayish brown (SAND-SILT-CLAY) with 10 to 25% gravel, occasional cobble, little mostly very fine to fine size sand, trace to little clay, dense, massive soil structure, (ML-CL).
	10.0					31				-
		SS3	15	24	28		7.1%	20		Same as 8.5-10.0' M - LPL
	15.0					25				Boulder from 15.5-17.0' -
										-
		SS4	14	21	28		7.7%	24		Same as 8.5-10.0' M - LPL
	20.0					30				-
		SS5	53	50/5			3.8%	11		23.0-23.5' Same as 8.5-10.0' M - LPL 23.5-25.0' Boulder from 23.5-25.0' Note: Auger refusal at 23.5 feet. Advanced bore hole with 3 7/8" fluid rotary drilling methods.
	25.0									-

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DRILL RIG OPERATOR Andrew Kempisty
SOIL & ROCK DESCRIPTION Kyle Shearing
INSPECTOR Joe Dorety (Fisher)
BIN 5512980
STRUCTURE NAME
Judd Rd. (C.R. 157)/Thruway

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AUGER 4 1/4" I.D. HOLLOW STEM FLIGHT AUGER WT OF HAMMER-CASING lb HAMMER FALL-CASING in
CASING O. D. in I. D. in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in
SAMPLER O. D. 2 in I. D. 1-3/8 in HAMMER TYPE Automatic

CASING BLOWS/ft	DEPTH (ft.) BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER (in.)				MOIST. CONT. (%)	Soil Recovery (in.)	Rock Recovery (ft.)	DESCRIPTION OF SOIL AND ROCK
			0 6	6 12	12 18	18 24				
	25.0									-
		SS6	17	41	33	29	10.5%	20		Gray to grayish brown gravelly (CLAYEY-SILT) with 15 to 40% gravel and flat sided stone fragments, occasional cobble, little to some clay, trace sand, hard, massive soil structure, (ML-CL). M - LPL
	30.0									-
		SS7	47	50/4			7.8%	10		Brownish gray gravelly (SAND-SILT-CLAY) with 15 to 30% gravel and flat sided stone fragments, little sand and clay, hard, massive soil structure, (ML-CL). M - LPL
	35.0									-
		SS8	69	50/3			8.2%	9		Same as 33.0-35.0' M - LPL
	40.0									-
		SS9	23	32	35	42	11.0%	24		Gray gravelly (SANDY-SILT) with 10 to 20% gravel and flat sided stone fragments, little sand, trace clay, very dense, massive soil structure, (ML). M - NPL
	45.0									-
		SS10	31	46	54	56	7.9%	20		Brownish gray gravelly (SAND-SILT-CLAY) with 15 to 30% gravel and flat sided stone fragments, little sand and clay, hard, massive soil structure, (ML-CL). M - LPL
	50.0									-

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CONTRACT _____ **CONTRACTOR** Earth Dimensions, Inc.

BOTTOM OF HOLE AT 50.00 ft

DRILL RIG OPERATOR Andrew Kempisty
SOIL & ROCK DESCRIPTION Kyle Shearing
INSPECTOR Joe Dorety (Fisher)
BIN 5512980
STRUCTURE NAME Judd Rd. (C.R. 157)/Thruway

SHEET 2 OF 3 **HOLE** FH-B

TWY-CAN SUBSURF EXPLORATION 6K16_BIN-5512980-DRAFTS.GPJ TWYSE1TMPL_V05.GDT 3/31/17

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LINE _____
STA _____
OFFSET ft
SURF. ELEV. 482.138, NAD 88
DEPTH TO WATER 2.6

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

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

*Note:
Advanced bore hole with 4 1/4" ID x 8" OD hollow stem auger casing with 5.0-foot interval sampling to 23.5 feet. Continued below with 3 7/8" fluid rotary drilling methods with 5.0-foot interval sampling to end of boring at 50.0 feet. Bore hole was backfilled with cuttings to ground surface upon completion.*

DATE	TIME	DEPTH (ft.)			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
06-Dec-16	09:50	3.00	3.00	2.60	No	No
06-Dec-16	14:57	50.00	23.50	6.70	No	No

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SHEET 3 OF 3 HOLE FH-B

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NEW YORK STATE CANAL CORPORATION
SUBSURFACE EXPLORATION LOG



HOLE FH-B
LINE _____
STA _____
OFFSET ft
SURF. ELEV. 504.396, NAD 88
DEPTH TO WATER 9.0

COORDINATES (Lat) 43.126959°N (Long) 75.344772°W
DATE START 12/23/2016 DATE FINISH 12/23/2016

AUGER 4 1/4" I.D. HOLLOW STEM FLIGHT AUGER WT OF HAMMER-CASING lb HAMMER FALL-CASING in
CASING O. D. in I. D. in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in
SAMPLER O. D. 2 in I. D. 1-3/8 in HAMMER TYPE Safety

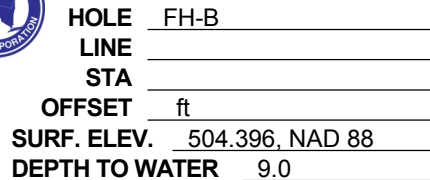
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			0 6	6 12	12 18	18 24				
	0.0									Dark gray asphalt pavement to 1.0 feet. -
										-
	5.0	SS1	10	15	17	11	7.6%	18		Brown (SANDY-SILT) fill with 15 to 25% gravel, little to some sand, trace clay, dense, massive soil structure, (ML). M - LPL
										-
	10.0	SS2	2	1	2	1	20.5%	16		Brown (SILTY-SAND) fill with 3 to 7% gravel, mostly very fine to fine size sand, little silt, very loose, massive soil structure, (SM). W - NPL
										Note: Drilling resistance increase at approximately 12.0 feet. -
	15.0	SS3	3	4	4	4	33.3%	19		14.0-15.0' Same as 9.0-11.0' W - PL 15.0-16.0' Brown (SILTY-CLAY) firm, weakly thinly laminated with very thin silt lenses, (CL).
										-
	20.0	SS4	2	4	5	6	28.8%	20		Brown (SILTY-CLAY) with 3 to 7% gravel, trace sand, stiff, W - PL thinly laminated with very thin silt lenses, (CL).
										-
	25.0	SS5	2	5			27.3%	22		Brownish gray (SILTY-CLAY) with trace sand, stiff, thinly laminated with very thin silt lenses, (CL). W - PL

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ROUTE	Thruway Mainline	
MILEPOST	240.48	
PROJECT	Syracuse Division 2017 Desi	



(Lat) 43.126959°N (Long) 75.344772°W

12/23/2016

12/23/2016

HAMMER FALL-CASING

HAMMER FALL-SAMPLER 30

HAMMER TYPE Safety

CASING BLOWS/ft	DEPTH (ft.) BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER (in.)					MOIST. CONT. (%)	Soil Recovery (in.)	Rock Recovery (ft.)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18					
			6	12	18	24					
	25.0				5	11					Note: Hard below 26.0 feet.
	30.0	SS6	31	33	50/4		6.1%	15			Light brown (SANDY-SILT) with 15 to 30% gravel, little sand, very dense, massive soil structure, (ML).
	35.0	SS7	100/4				7.8%	3			34.0-34.4' Same as 29.0-31.0' 34.4-35.2' Boulder
	40.0	SS8	11	20	16	33	8.2%	16			Brownish gray (SANDY-SILT) with 15 to 30% gravel, little sand, dense, very dense below 41.0 feet, massive soil structure, (ML).
	45.0	SS9	18	22	50/4		7.7%	12			Same as 39.0-41.0'
	50.0	SS10	18	51			4.1%	6			Same as 39.0-41.0'

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HOLE FH-B

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SAMPLER O. D. 2 in I. D. 1-3/8 in HAMMER TYPE Safety

CASING BLOWS/ft	DEPTH (ft.) BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER (in.)				MOIST. CONT. (%)	Soil Recovery (in.)	Rock Recovery (ft.)	DESCRIPTION OF SOIL AND ROCK
			0	6	12	18				
			6	12	18	24				
	50.0				47	50				
	55.0	SS11	9	28	50/3		6.3%	7		Same as 39.0-41.0' M - NPL
		SS12	25				7.5%	6		Same as 39.0-41.0' M - NPL

BOTTOM OF HOLE AT 59.80 ft

Note:
Advanced bore hole with 4 1/4" ID x 8" OD hollow stem auger casing with 5.0-foot interval sampling to 34.4 feet. Continued below with 3 7/8" tricone roller bit using fluid rotary methods and 5.0-foot interval sampling to 59.8 feet. Bore hole was backfilled with cuttings and ground surface repaired with a cement plug and an asphalt patch.

DATE	TIME	DEPTH (ft.)			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
23-Dec-16	09:00	11.00	9.00	9.00	NO	No
23-Dec-16	15:00	59.80	34.40	8.00	NO	No

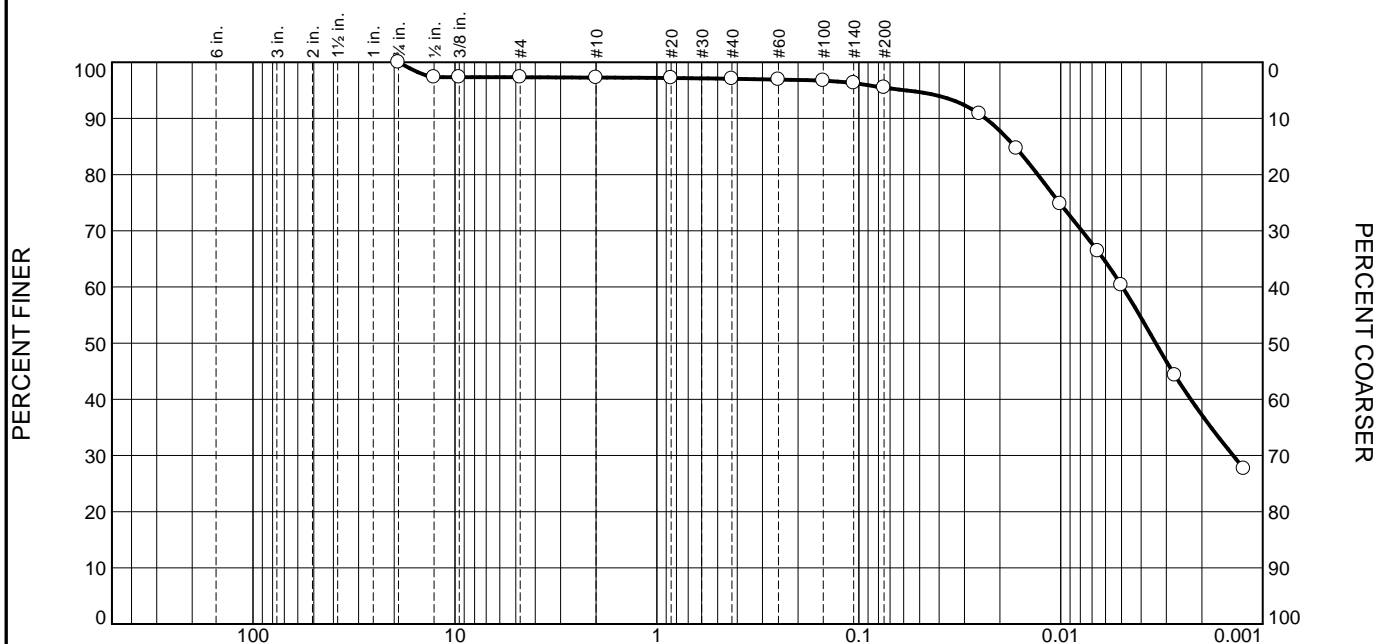
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CONTRACT _____ CONTRACTOR Earth Dimensions, Inc.

SHEET 3 OF 3 HOLE FH-B

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.7	0.0	0.2	1.6	35.2	60.3

TEST RESULTS (D422)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.75"	100.0		
.5	97.3		
.375	97.3		
#4	97.3		
#10	97.3		
#20	97.2		
#40	97.1		
#60	96.9		
#100	96.7		
#140	96.3		
#200	95.5		
0.0253 mm.	90.8		
0.0166 mm.	84.7		
0.0101 mm.	74.8		
0.0066 mm.	66.4		
0.0050 mm.	60.3		
0.0027 mm.	44.3		
0.0012 mm.	27.7		

* (no specification provided)

Material Description		
ID#17-058		
Atterberg Limits (ASTM D 4318)		
PL=	LL=	PI=
Classification		
USCS (D 2487)=	AASHTO (M 145)=	
Coefficients		
D ₉₀ = 0.0236	D ₈₅ = 0.0169	D ₆₀ = 0.0049
D ₅₀ = 0.0034	D ₃₀ = 0.0014	D ₁₅ =
D ₁₀ =	C _u =	C _c =
Remarks		
Date Received: 2/9/17 Date Tested: 2/27/17		
Tested By: ETC		
Checked By: JMA		
Title: LM		

Source of Sample: 6K16 & 7K16
Sample Number: FHB-7, SS4

Date Sampled:

3rd Rock, LLC

Client: Earth Dimensions, Inc.

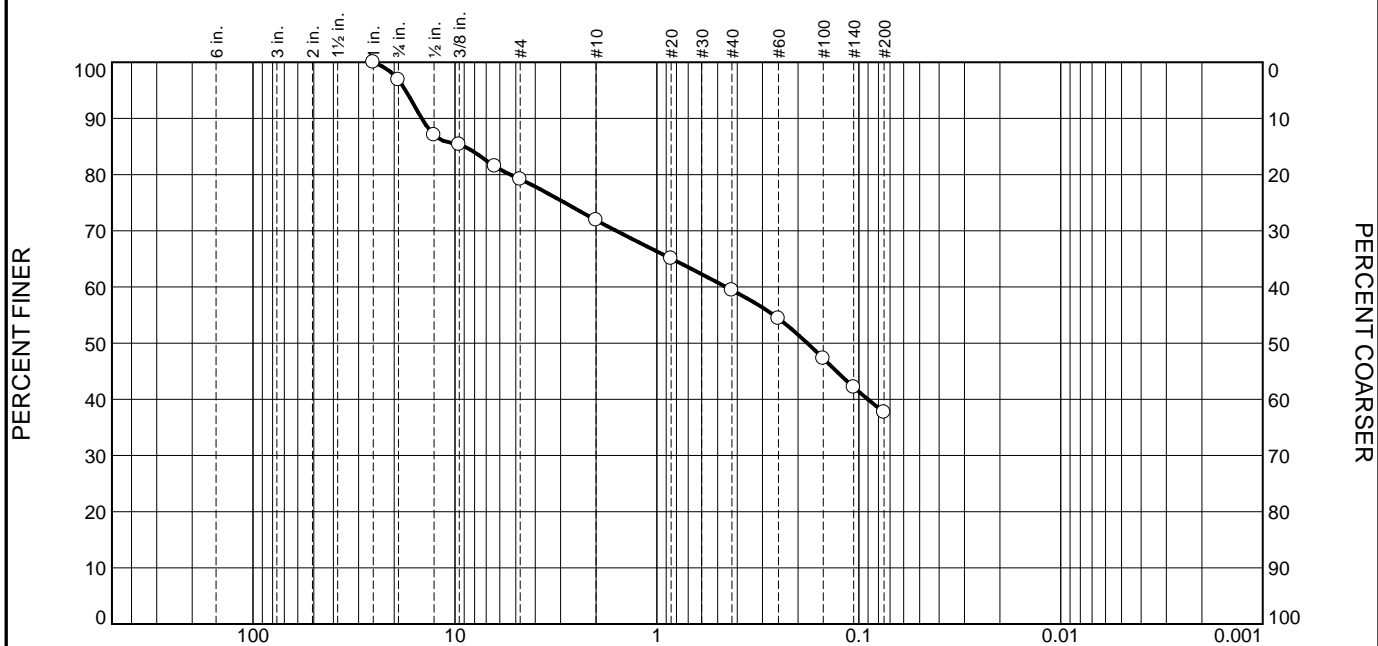
Project: 6K16; 7K16

East Aurora, NY

Project No: 17-002

Figure

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	3.1	17.7	7.3	12.5	21.7	37.7	

TEST RESULTS (D6913)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
1"	100.0		
.75	96.9		
.5	87.0		
.375	85.4		
.25	81.5		
#4	79.2		
#10	71.9		
#20	65.1		
#40	59.4		
#60	54.4		
#100	47.3		
#140	42.1		
#200	37.7		

* (no specification provided)

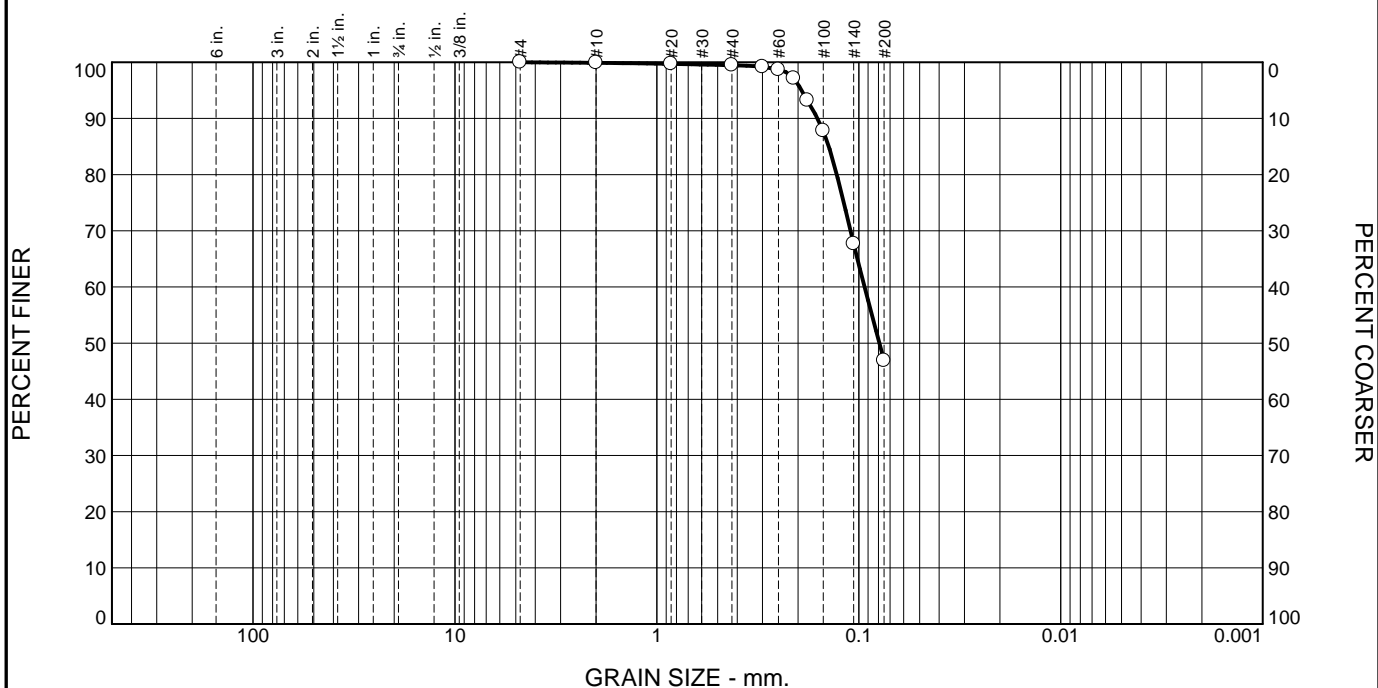
Material Description		
ID#17-041		
Atterberg Limits (ASTM D 4318)		
PL=	LL=	PI=
Classification		
USCS (D 2487)=	AASHTO (M 145)=	
Coefficients		
D ₉₀ = 14.6051	D ₈₅ = 8.9737	D ₆₀ = 0.4550
D ₅₀ = 0.1801	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
Remarks		
Date Received: 2/9/17 Date Tested: 2/23/17		
Tested By: ETC		
Checked By: JMA		
Title: LM		

Source of Sample: 6K16 & 7K16
Sample Number: FHB-7, SS7

Date Sampled:

3rd Rock, LLC East Aurora, NY	Client: Earth Dimensions, Inc. Project: 6K16; 7K16
	Project No: 17-002 Figure

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.1	0.4	52.6	46.9	

TEST RESULTS (D6913)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#4	100.0		
#10	99.9		
#20	99.7		
#40	99.5		
#50	99.2		
#60	98.7		
#70	97.1		
#80	93.2		
#100	87.8		
#140	67.7		
#200	46.9		

* (no specification provided)

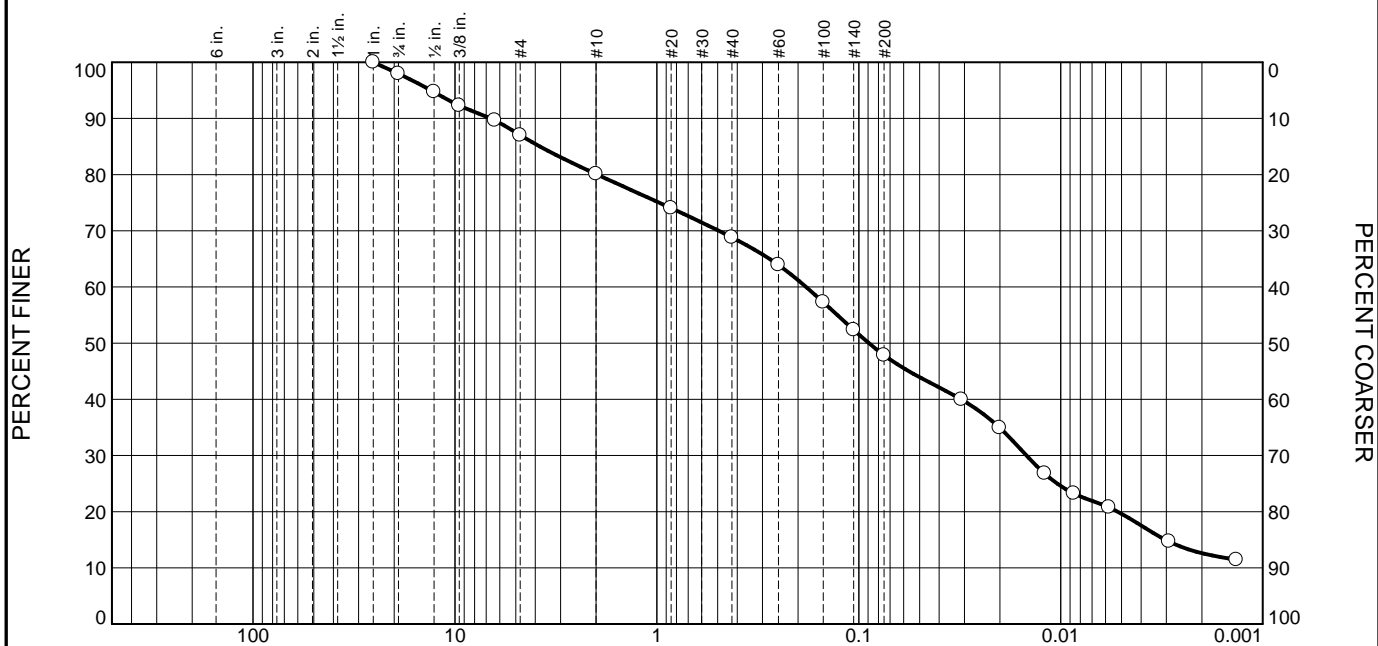
Material Description		
ID#17-042		
Atterberg Limits (ASTM D 4318)		
PL=	LL=	PI=
Classification		
USCS (D 2487)=	AASHTO (M 145)=	
Coefficients		
D ₉₀ = 0.1600	D ₈₅ = 0.1409	D ₆₀ = 0.0937
D ₅₀ = 0.0791	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
Remarks		
Date Received: 2/9/17 Date Tested: 2/28/17		
Tested By: ETC		
Checked By: JMA		
Title: LM		

Source of Sample: 6K16 & 7K16
Sample Number: FHB-7, SS13

Date Sampled:

3rd Rock, LLC		Client: Earth Dimensions, Inc.	
East Aurora, NY		Project: 6K16; 7K16	
		Project No: 17-002	Figure

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	2.0	11.0	6.9	11.3	21.0	28.2	19.6

TEST RESULTS (D422)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
1"	100.0		
.75	98.0		
.5	94.7		
.375	92.3		
.25	89.6		
#4	87.0		
#10	80.1		
#20	74.0		
#40	68.8		
#60	63.9		
#100	57.3		
#140	52.4		
#200	47.8		
0.0310 mm.	39.9		
0.0201 mm.	34.9		
0.0120 mm.	26.8		
0.0086 mm.	23.2		
0.0058 mm.	20.8		
0.0029 mm.	14.7		
0.0014 mm.	11.4		

* (no specification provided)

Material Description		
ID#17-059		
Atterberg Limits (ASTM D 4318)		
PL=	LL=	PI=
Classification		
USCS (D 2487)=	AASHTO (M 145)=	
Coefficients		
D ₉₀ = 6.6593	D ₈₅ = 3.7911	D ₆₀ = 0.1825
D ₅₀ = 0.0892	D ₃₀ = 0.0148	D ₁₅ = 0.0030
D ₁₀ =	C _u =	C _c =
Remarks		
Date Received: 2/9/17 Date Tested: 2/23/17		
Tested By: ETC		
Checked By: JMA		
Title: LM		

Source of Sample: 6K16 & 7K16
Sample Number: FHB-8, SS4

Date Sampled:

3rd Rock, LLC

Client: Earth Dimensions, Inc.

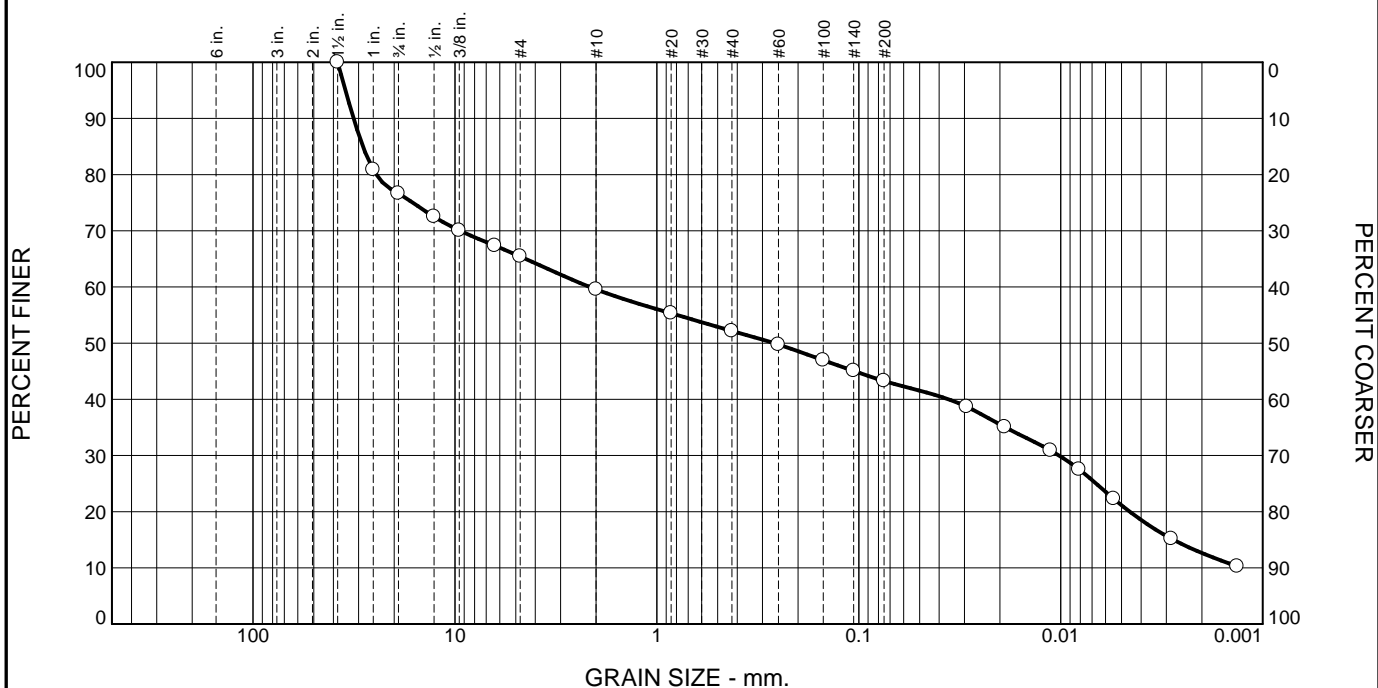
Project: 6K16; 7K16

East Aurora, NY

Project No: 17-002

Figure

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	23.4	11.2	5.8	7.4	8.9	22.2	21.1

TEST RESULTS (D422)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
1.5"	100.0		
1"	80.9		
.75	76.6		
.5	72.5		
.375	70.1		
.25	67.4		
#4	65.4		
#10	59.6		
#20	55.3		
#40	52.2		
#60	49.7		
#100	47.0		
#140	45.1		
#200	43.3		
0.0292 mm.	38.7		
0.0189 mm.	35.1		
0.0112 mm.	30.9		
0.0081 mm.	27.5		
0.0055 mm.	22.3		
0.0028 mm.	15.2		
0.0013 mm.	10.3		

* (no specification provided)

Material Description		
ID#17-060		
Atterberg Limits (ASTM D 4318)		
PL=	LL=	PI=
Classification		
USCS (D 2487)=	AASHTO (M 145)=	
Coefficients		
D ₉₀ = 31.7569	D ₈₅ = 28.5466	D ₆₀ = 2.1490
D ₅₀ = 0.2631	D ₃₀ = 0.0102	D ₁₅ = 0.0028
D ₁₀ =	C _u =	C _c =
Remarks		
Date Received: 2/9/17 Date Tested: 2/23/17		
Tested By: ETC		
Checked By: JMA		
Title: LM		

Source of Sample: 6K16 & 7K16
Sample Number: FHB-8, SS6

Date Sampled:

3rd Rock, LLC

Client: Earth Dimensions, Inc.

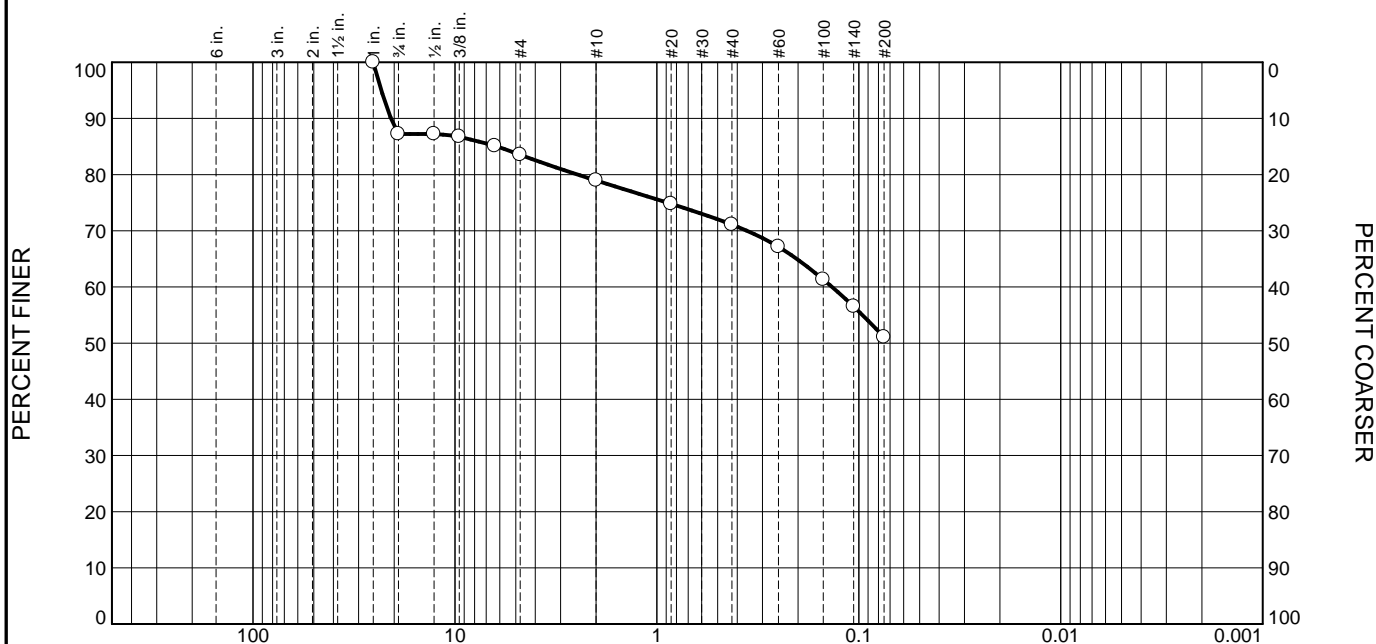
Project: 6K16; 7K16

East Aurora, NY

Project No: 17-002

Figure

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	12.8	3.7	4.5	7.9	20.0	51.1	

TEST RESULTS (D6913)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
1"	100.0		
.75	87.2		
.5	87.2		
.375	86.8		
.25	85.1		
#4	83.5		
#10	79.0		
#20	74.8		
#40	71.1		
#60	67.1		
#100	61.3		
#140	56.5		
#200	51.1		

* (no specification provided)

Material Description
ID#17-043

Atterberg Limits (ASTM D 4318)
PL= LL= PI=

Classification
USCS (D 2487)= AASHTO (M 145)=

Coefficients
D₉₀= 20.7634 D₈₅= 6.2043 D₆₀= 0.1357
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Remarks

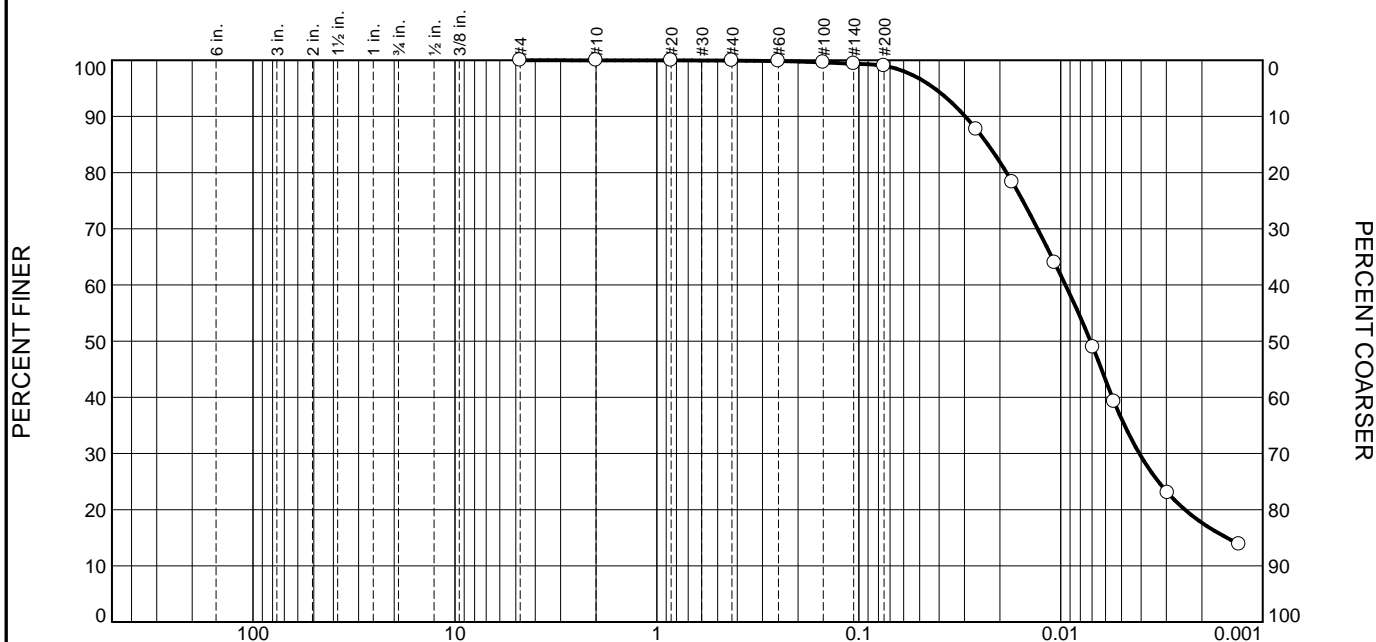
Date Received: 2/9/17 Date Tested: 2/23/17
Tested By: ETC
Checked By: JMA
Title: LM

Source of Sample: 6K16 & 7K16
Sample Number: FHB-8, SS9

Date Sampled:

3rd Rock, LLC East Aurora, NY	Client: Earth Dimensions, Inc. Project: 6K16; 7K16
	Project No: 17-002 Figure

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.1	0.9	62.8	36.2

TEST RESULTS (D422)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#4	100.0		
#10	100.0		
#20	100.0		
#40	99.9		
#60	99.8		
#100	99.6		
#140	99.4		
#200	99.0		
0.0262 mm.	87.7		
0.0174 mm.	78.3		
0.0107 mm.	64.0		
0.0069 mm.	48.9		
0.0054 mm.	39.2		
0.0030 mm.	23.0		
0.0013 mm.	13.9		

* (no specification provided)

Material Description
ID#17-061

Atterberg Limits (ASTM D 4318)
PL= LL= PI=

Classification
USCS (D 2487)= AASHTO (M 145)=

Coefficients
D₉₀= 0.0297 D₈₅= 0.0229 D₆₀= 0.0095
D₅₀= 0.0071 D₃₀= 0.0041 D₁₅= 0.0015
D₁₀= C_u= C_c=

Remarks

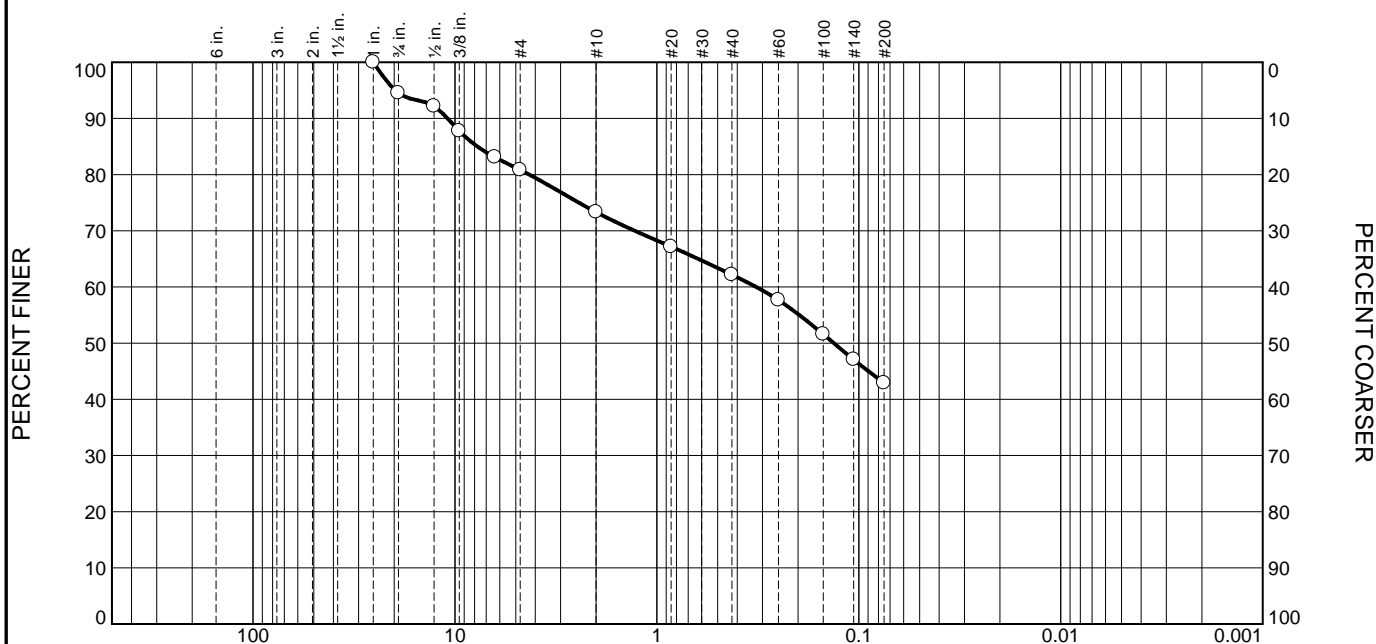
Date Received: 2/9/17 Date Tested: 2/20/17
Tested By: ETC
Checked By: JMA
Title: LM

Source of Sample: 6K16 & 7K16
Sample Number: FHB-9, SS5

Date Sampled:

3rd Rock, LLC East Aurora, NY	Client: Earth Dimensions, Inc. Project: 6K16; 7K16
	Project No: 17-002 Figure

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	5.5	13.7	7.5	11.1	19.3	42.9	

TEST RESULTS (D6913)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
1"	100.0		
.75	94.5		
.5	92.2		
.375	87.8		
.25	83.1		
#4	80.8		
#10	73.3		
#20	67.2		
#40	62.2		
#60	57.7		
#100	51.6		
#140	47.1		
#200	42.9		

* (no specification provided)

Material Description		
ID#17-044		
Atterberg Limits (ASTM D 4318)		
PL=	LL=	PI=
Classification		
USCS (D 2487)=	AASHTO (M 145)=	
Coefficients		
D ₉₀ = 10.8727	D ₈₅ = 7.7411	D ₆₀ = 0.3223
D ₅₀ = 0.1331	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
Remarks		
Date Received: 2/9/17 Date Tested: 3/2/17		
Tested By: ETC		
Checked By: JMA		
Title: LM		

Source of Sample: 6K16 & 7K16
Sample Number: FHB-9, SS8&9

Date Sampled:

3rd Rock, LLC East Aurora, NY	Client: Earth Dimensions, Inc. Project: 6K16; 7K16
	Project No: 17-002 Figure



Water Content Test Results by ASTM D2216

Project: New York State Thruway
EDI Project No.: 6K16
Client: Earth Dimensions, Inc.

Project No: 16-008
Date: 1/4/17

Borehole No.	Sample Nos.	Depth, fbg	Lab ID No.	Natural Water Content, %
FH-B-9	S-1	4-6	16-546	7.6
	S-2	9-11	16-546	20.5
	S-3	14-16	16-546	33.3
	S-4	19-21	16-546	28.8
	S-5	24-26	16-546	27.3
	S-6	29-31	16-546	6.1
	S-7	34-36	16-546	7.8
	S-8	39-41	16-546	8.2
	S-9	44-46	16-546	7.7
	S-10	49-51	16-546	4.1
	S-11	54-56	16-546	6.3
	S-12	59-59.8	16-546	7.5
FH-B-7	S-1	4-6	16-552	9.8
	S-2	9-11	16-552	12.2
	S-3	14-16	16-552	18.9
	S-4	19-21	16-552	23.7
	S-5	24-26	16-552	21.9
	S-6	29-31	16-552	11.2
	S-7	34-36	16-552	7.9
	S-8	39-41	16-552	4.9
	S-9	44-46	16-552	3.1
	S-10	49-51	16-552	6.7
	S-11	54-56	16-552	8.8
	S-12	59-61	16-552	13.1
	S-13	64-65.9	16-552	17.9

3rd Rock, LLC
580 Olean Road
East Aurora, NY 14052
(716)655-4933
(716)655-8638 fax



Water Content Test Results by ASTM D2216

Project: New York State Thruway
EDI Project No.: 6K16
Client: Earth Dimensions, Inc.

Project No: 16-008
Date: 12/15/16

Borehole No.	Sample Nos.	Depth, fbg	Lab ID No.	Natural Water Content, %
FH-B-6	S-1	3-5	16-534	9.5
	S-2	8-10	16-534	6.8
	S-3	13-15	16-534	7.0
	S-4	18-20	16-534	26.9
	S-5	23-25	16-534	25.4
	S-6	28-30	16-534	34.3
	S-7	33-35	16-534	9.4
	S-8	38-40	16-534	7.8
	S-9	43-45	16-534	7.2
	S-10	48-50	16-534	9.4
	S-11	53-55	16-534	6.9
	S-12	59-61	16-534	7.1
	S-13	63-65	16-534	6.9
	S-14	68-68.5	16-534	7.4
FH-B-8	S-1	3-5	16-535	15.6
	S-2	8-10	16-535	10.5
	S-3	13-15	16-535	7.1
	S-4	18-20	16-535	7.7
	S-5	23-25	16-535	3.8
	S-6	28-30	16-535	10.5
	S-7	33-35	16-535	7.8
	S-8	38-40	16-535	8.2
	S-9	43-45	16-535	11.0
	S-10	48-50	16-535	7.9

3rd Rock, LLC
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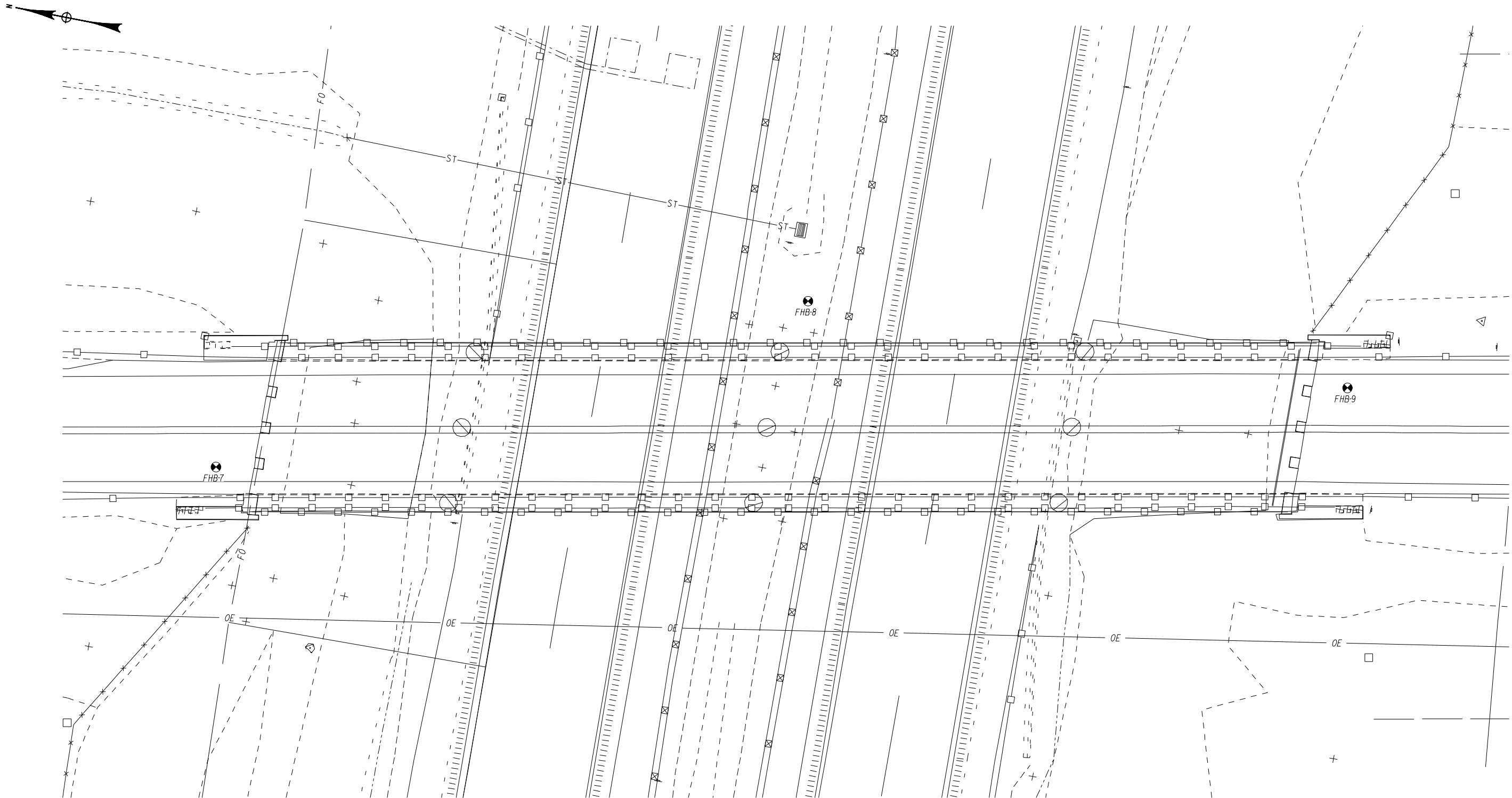
CHECKED BY: D. JENKINSON

DRAFTED BY: K. SHAH

CHECKED BY: D. JENKINSON

DESIGNED BY: K. SHAH

DESIGN SUPERVISOR: M. LAISTNER



SOIL BORING LOCATION PLAN

ALTERED ON:	AFFIXED ON:
SIGNATURE: STAMP:	SIGNATURE: STAMP:

SOIL BORING LOCATION		
BORING	LATITUDE	LONGITUDE
FHB-7	43.127549 N	-75.344975 E
FHB-8	43.127252 N	-75.344779 E
FHB-9	43.126959 N	-75.344772 E



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



TITLE OF PROJECT
JUDD ROAD (C.R. 840) OVER INTERSTATE-90
MP 240.48 / BIN 5512980
LOCATION OF PROJECT
XXXXXX DIVISION
ONEIDA COUNTY, NY
TITLE OF DRAWING
BORING LOCATION PLAN

CONTRACT NUMBER:
TAB 17-X
DATE:
APRIL 2017
DRAWING NUMBER:
BP-04