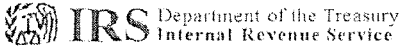


515-523 East 73rd Street and 512-518 East 74th Street (Manhattan Block 1485, Lots 11, 14, 40)
Variance Application

Item 5

Certificate of Occupancy

<u>Address</u>	<u>Block, Lot</u>	<u>Certificate of Occupancy Number</u>
517 East 73 rd Street	1485, 11	41731
523 East 73 rd Street	1485, 14	93347
512-518 East 74 th Street	1485, 40	52677



Department of the Treasury
Internal Revenue Service

P.O. Box 2508
Cincinnati OH 45201

In reply refer to: 0248421964
Nov. 16, 2011 LTR 4168C E0
13-1624135 000000 00

00018054
BODC: TE

NEW YORK SOCIETY FOR THE RELIEF OF
RUPTURED & CRIPPLED MAINTAINING
THE HOSPITAL FOR SPECIAL SURGERY
% PAYROLL DEPT
535 E 70TH ST
NEW YORK NY 10021-4823



003262

Employer Identification Number: 13-1624135
Person to Contact: MS. MITCHELL
Toll Free Telephone Number: 1-877-829-5500

Dear TAXPAYER:

This is in response to your Nov. 04, 2011, request for information regarding your tax-exempt status.

Our records indicate that you were recognized as exempt under section 501(c)(3) of the Internal Revenue Code in a determination letter issued in JANUARY 1946.

Our records also indicate that you are not a private foundation within the meaning of section 509(a) of the Code because you are described in section(s) 509(a)(1) and 170(b)(1)(A)(iii).

Donors may deduct contributions to you as provided in section 170 of the Code. Bequests, legacies, devises, transfers, or gifts to you or for your use are deductible for Federal estate and gift tax purposes if they meet the applicable provisions of sections 2055, 2106, and 2522 of the Code.

Please refer to our website www.irs.gov/eo for information regarding filing requirements. Specifically, section 6033(j) of the Code provides that failure to file an annual information return for three consecutive years results in revocation of tax-exempt status as of the filing due date of the third return for organizations required to file. We will publish a list of organizations whose tax-exempt status was revoked under section 6033(j) of the Code on our website beginning in early 2011.

0248421964
Nov. 16, 2011 LTR 4168C E0
13-1624135 000000 00
00018055

NEW YORK SOCIETY FOR THE RELIEF OF
RUPTURED & CRIPPLED MAINTAINING
THE HOSPITAL FOR SPECIAL SURGERY
% PAYROLL DEPT
535 E 70TH ST
NEW YORK NY 10021-4823

If you have any questions, please call us at the telephone number
shown in the heading of this letter.

Sincerely yours,



S. A. Martin, Operations Manager
Accounts Management Operations

515-523 East 73rd Street and 512-518 East 74th Street (Manhattan Block 1485, Lots 11, 14, 40)

Variance Application to NYC Board of Standards and Appeals

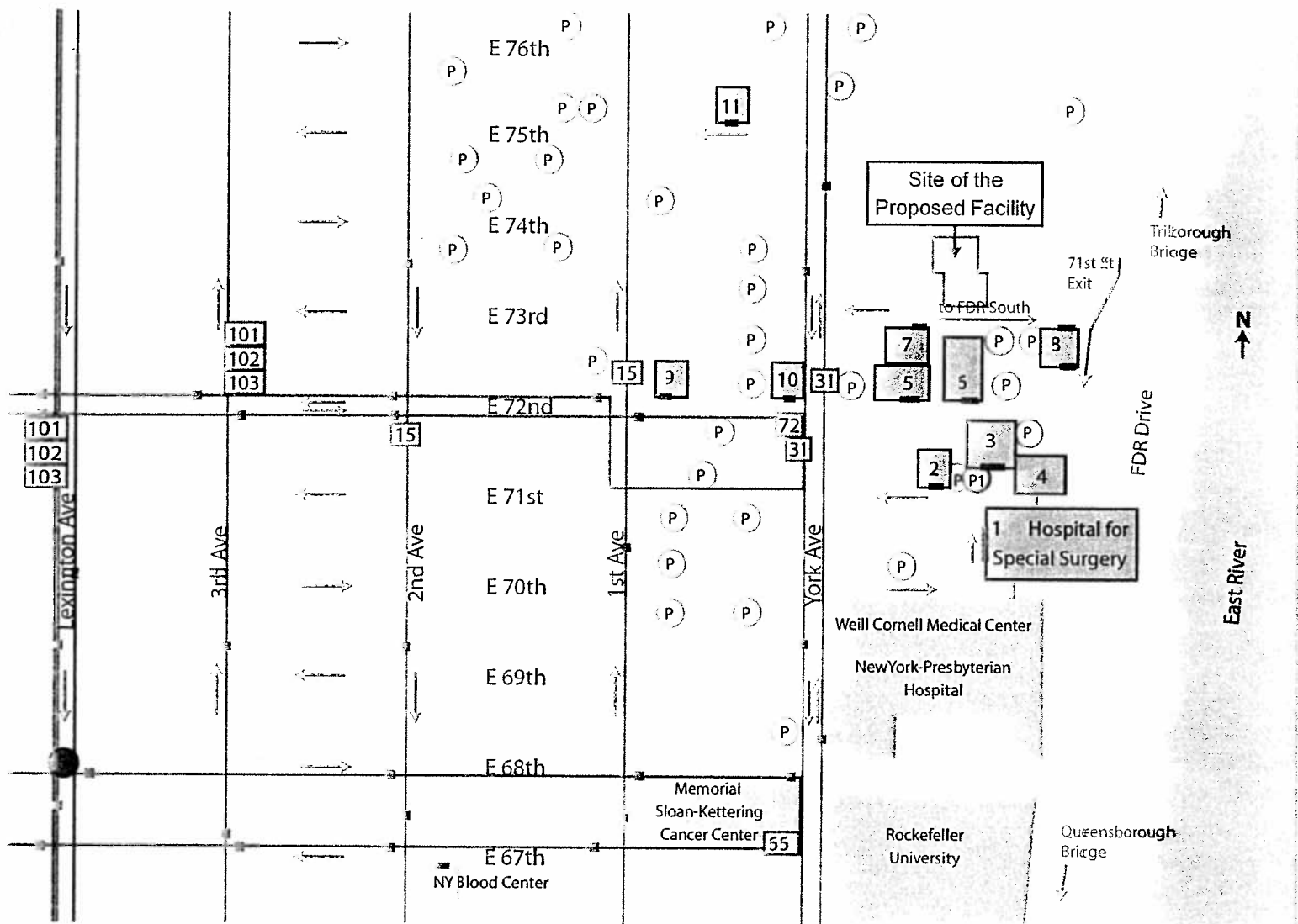
List of Exhibits

1. Department of Buildings Objections
2. Affidavit of Ownership
- 3, 4. Statement of Facts and Findings
5. Certificate of Occupancy
6. Evidence of Uniqueness
7. Financial Feasibility Study: N/A
8. Zoning Map
9. BSA Zoning Analysis Form
10. Tax Map
11. Radius Diagram/ Land Use Map
12. Photographs
13. Existing Condition Plans
14. Conforming (As-of-Right) Plans
15. Proposed Conditions Plans
16. List of Affected Property Owners and Tenants
17. CEQR Application: Provided under separate cover

515-523 East 73rd Street and 512-518 East 74th Street (Manhattan Block 1485, Lots 11, 14, 40)
Variance Application

Item 1

Department of Buildings Objections



(P) Parking Garage

● Subway

55 Crosstown Bus

72 Crosstown Bus

101 Limited Bus

102 Local Bus

103 Local Bus

31 Local Bus

15 Limited/Local Bus

1 Hospital for Special Surgery
535 East 70th St

2 Human Resources / Education Division / Occupational Health
517 East 71st St

3 Belaire Building / Belaire Guest Facility
525 East 71st St
P1) Belaire Building Garage

4 Caspary Research Building
541 East 71st St

5 River Terrace
519 East 72nd St

5 East River Professional Building
523 East 72nd St

7 Dana Center
510 East 73rd St

3 East River Place
525 East 72nd St

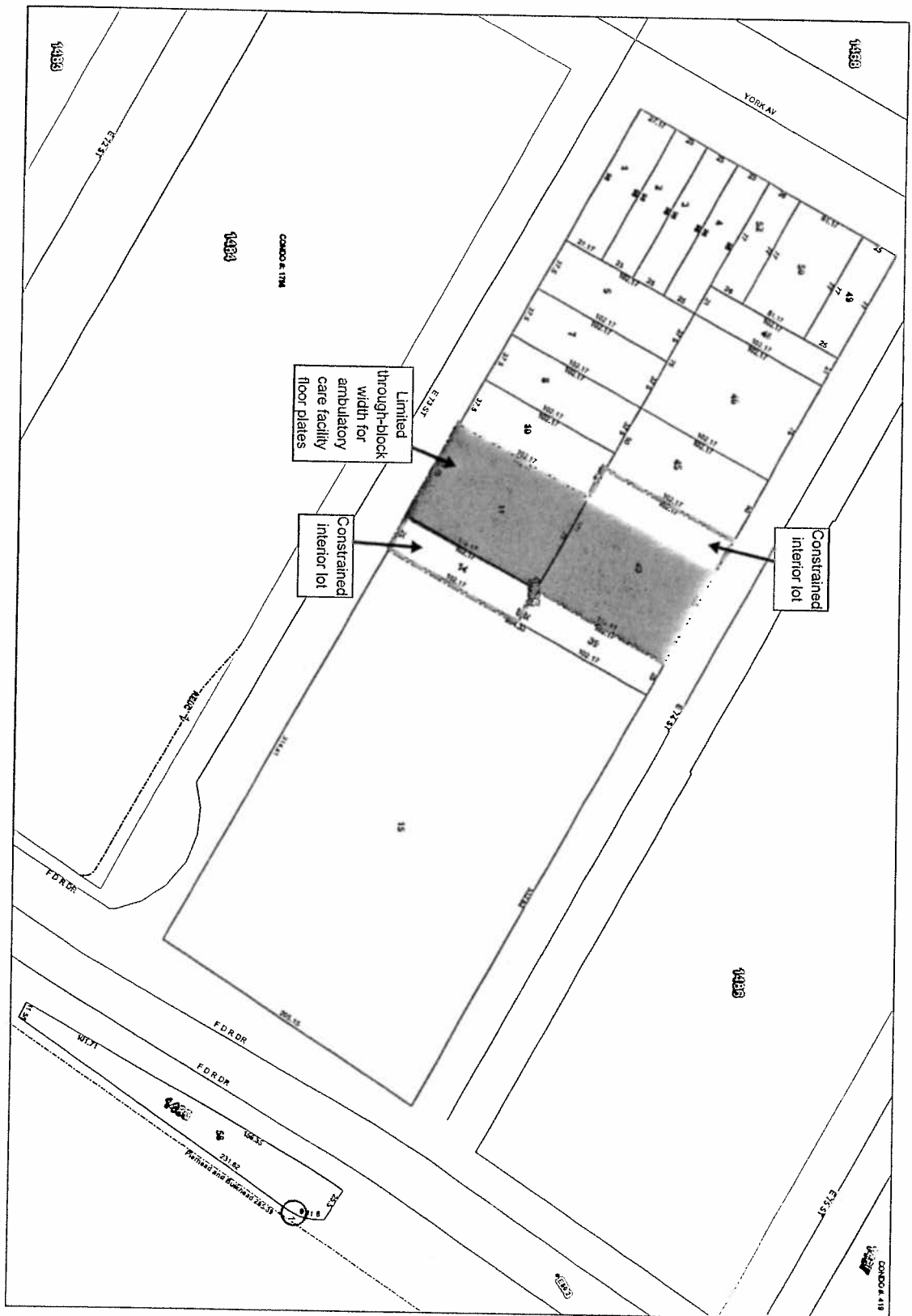
9 External Affairs / Development Office
403 East 72nd St

10 Ambulatory Care Center
475 East 72nd St

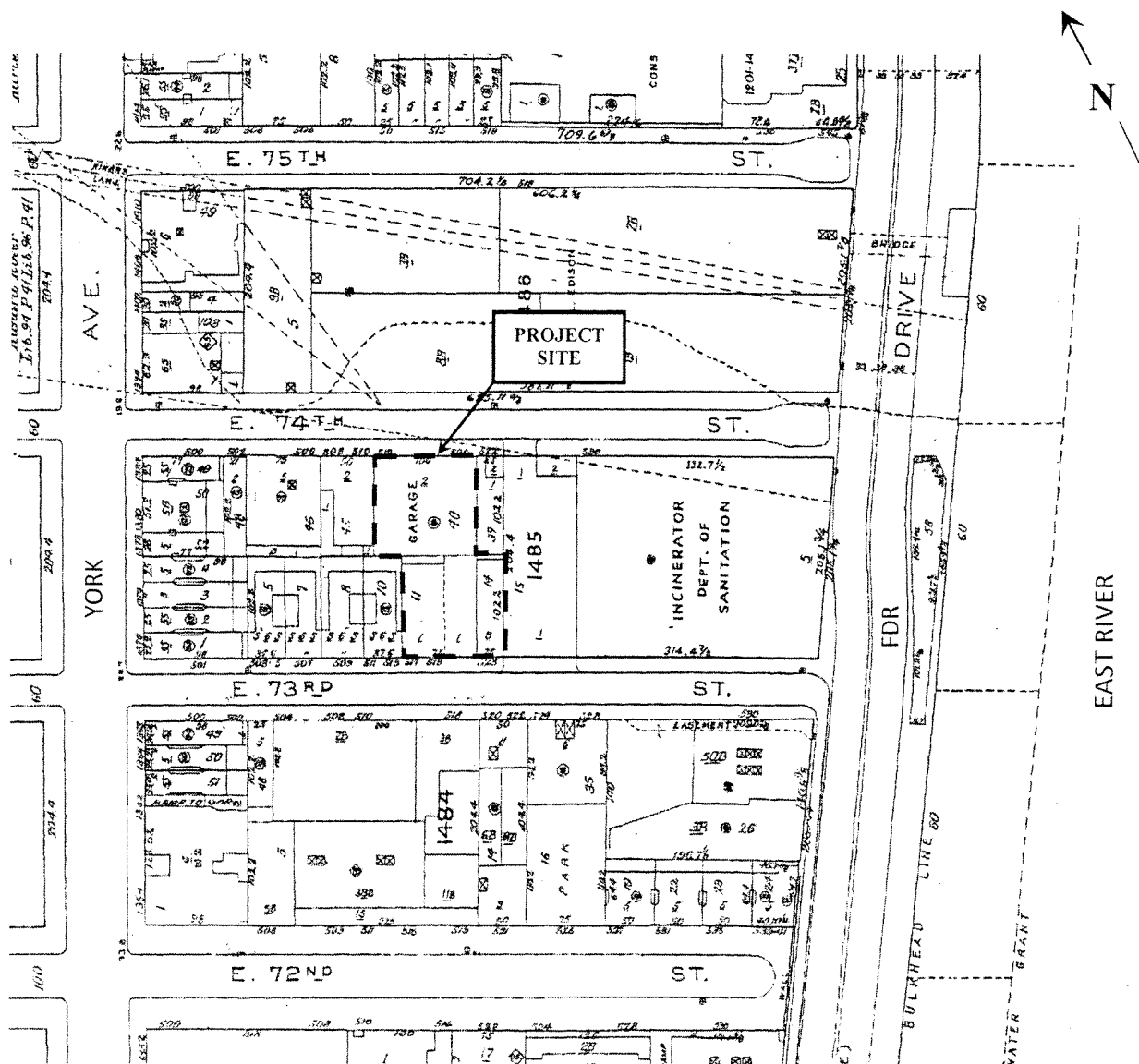
11 Special Procedures Unit
429 East 75th St



- Legend**
- Streets
 - Masellaneous lot
 - 1 Possession Blocks
 - 1 Boundary Lines
 - 1 Lot Face Possession Blocks
 - Regular
 - Underwater
 - Tax Lot Polygon
 - Certs Number
 - Tax Block Polygon



EXHIBITS



SOURCE:

Sanborn Manhattan Land Book
of the City of New York, Ed. 23, Plate 109
Revised 2002-2003

73RD/74TH STREET PROJECT

NEW YORK

NEW YORK

HAUG PROPERTIES, LLC

NEW YORK

NEW YORK

MUESER RUTLEDGE CONSULTING ENGINEERS

225 WEST 34TH STREET, NEW YORK, NY 10122

SCALE

MADE BY: SMR

DATE: 05-09-11

FILE NO.

CH'KD BY: RTW

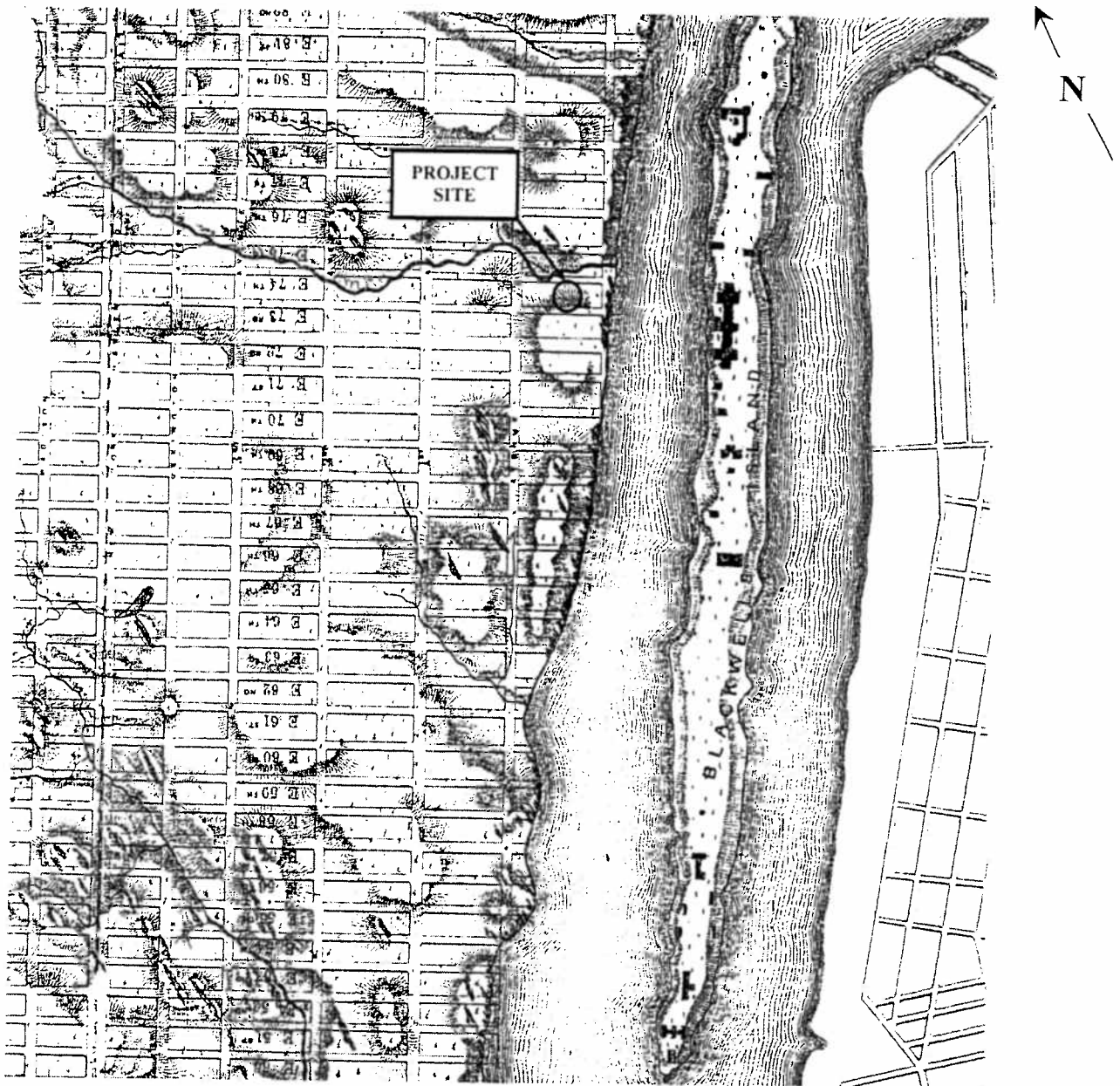
DATE: 05-10-11

11550

SITE LOCATION PLAN

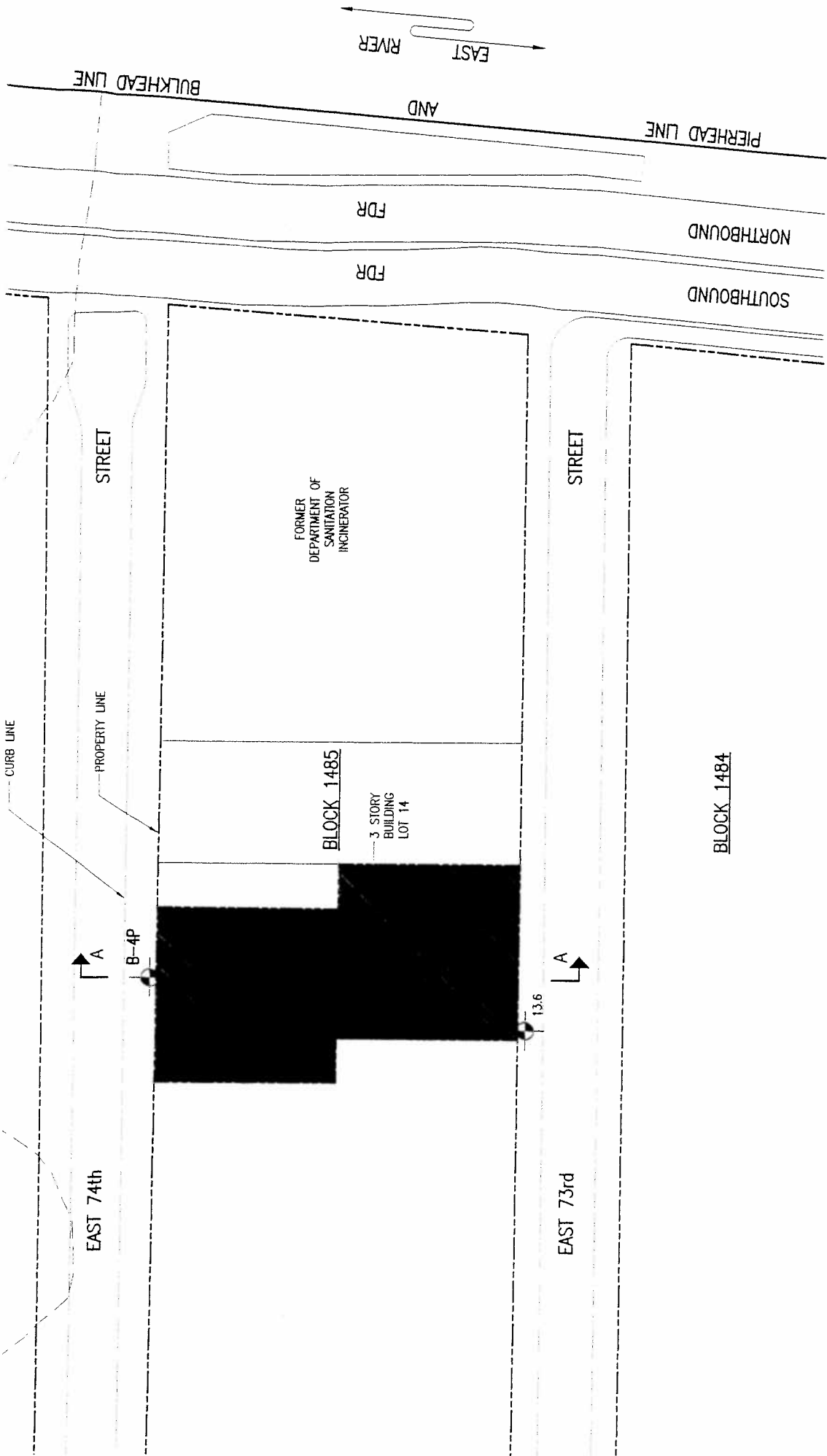
FIGURE NO.

1



SOURCE:

Topographical Atlas of the City of New York
By Egbert L. Viele, dated 1874



FORMER DEPARTMENT OF
SANITATION
INCINERATOR

BLOCK 1485

3 STORY
BUILDING
LOT 14

BLOCK 1484

STREET

STREET

EAST 74th

EAST 73rd

FDR

FDR

SOUTHBOUND

NORTHBOUND

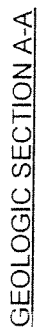
PIERHEAD LINE

BULKHEAD LINE

EAST RIVER

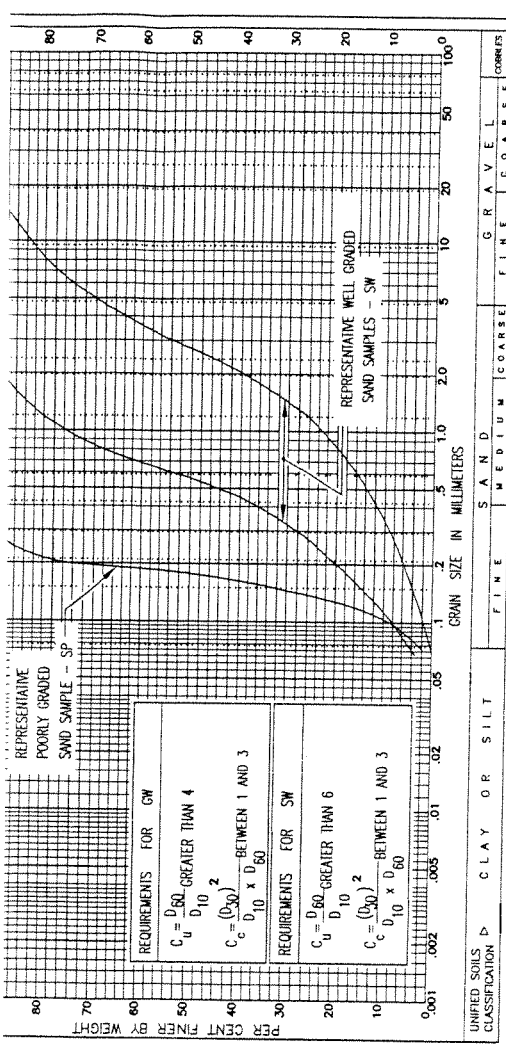
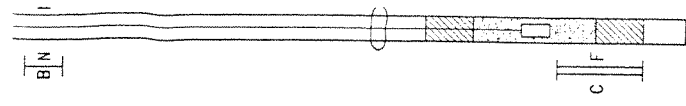
B-4P

13.6



HARD TO MEDIUM HARD, UNWEATHERED
GRAY GNEISSIC SCHIST AND GNEISS,
TO MASSIVE, WEATHERED JOINTS.

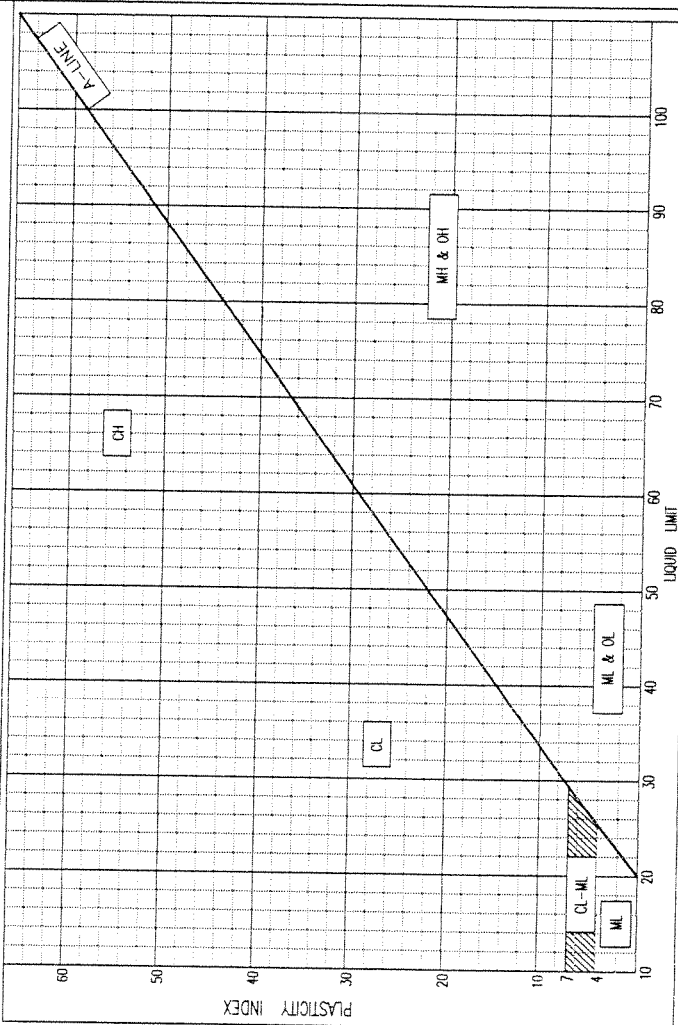
1. FOR SECTION LOCATION, SEE DRAWING NO. B-1.
2. ELEVATIONS ARE REFERENCED TO BOROUGH PRESIDENT OF MANHATTAN DATUM, WHICH IS 2,750 FEET ABOVE MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY IN 1929, NATIONAL GEODETIC VERTICAL DATUM.
3. STRATIFICATIONS SHOWN ARE NECESSARY INTERPOLATIONS BETWEEN BORINGS AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS.
4. PENETRATION RESISTANCES SHOWN ARE NOT STANDARD. PENETRATION TEST RESISTANCE VALUES, A THREE INCH O.D. SPLIT SPOON SAMPLER WAS DRIVEN WITH A 140 LB HAMMER AT BORINGS B-1P AND B-4P, AND A 300 LB HAMMER AT BORINGS B-2 AND B-3 FREE FALLING 24 INCHES, SEE BORING LOGS.
5. SEE DRAWING NO. GS-R FOR BORING LEGEND AND SUMMARY OF UNIFIED SOIL CLASSIFICATION SYSTEM.
6. SEE DRAWING NO. RC-1 FOR ROCK CORE CLASSIFICATION CRITERIA.



DEPENDENT ON PERCENTAGE OF FINES (FRACTION SMALLER THAN NO. 200 SIEVE SIZE) COARSE GRAINED SOILS ARE CLASSIFIED AS FOLLOWS:

GW, GP, SW, SP
 GM, GC, SM, SC
 BORDERLINE CASES REQUIRING USE OF DUAL SYMBOLS, I.E. SP-SW, GP-GM.

LESS THAN 5%
 MORE THAN 12%
 5% TO 12%



USED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES.	PREDOMINANTLY ONE SIZE OR A RANGE OF SIZES WITH SOME INTERMEDIATE SIZES MISSING.
WELS, GRAVEL-SAND-SILT-MIXTURES.	NONPLASTIC FINES OR FINES WITH LOW PLASTICITY (FOR IDENTIFICATION PROCEDURES SEE ML BELOW)
WELS, GRAVEL-SAND-CLAY MIXTURES.	PLASTIC FINES (FOR IDENTIFICATION PROCEDURES SEE CL BELOW)
RAOED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES.	WIDE RANGE IN GRAIN SIZES AND SUBSTANTIAL AMOUNTS OF ALL INTERMEDIATE PARTICLE SIZES.
GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES.	PREDOMINANTLY ONE SIZE OR A RANGE OF SIZES WITH SOME INTERMEDIATE SIZES MISSING.
SANDS, SAND-SILT-MIXTURES.	NONPLASTIC FINES OR FINES WITH LOW PLASTICITY (FOR IDENTIFICATION PROCEDURES SEE ML BELOW)
f SANDS, SAND-CLAY MIXTURES.	PLASTIC FINES (FOR IDENTIFICATION PROCEDURES SEE CL BELOW)
IDENTIFICATION PROCEDURES ON FRACTION SMALLER THAN NO. 40 SIEVE SIZE	
SILTS, SANDY SILTS, ROCK FLOUR, Y SILTS WITH SLIGHT PLASTICITY.	DRY STRENGTH (CRUSHING CHARACTERISTICS), DILATANCY (REACTION TO SHAKING), TOUGHNESS (CONSISTENCY NEAR PL)
CLAYS, OF LOW TO MEDIUM PLASTICITY, VELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS.	NONE TO SLIGHT, QUICK TO SLOW, NONE TO VERY SLOW, SLOW, SLIGHT TO MEDIUM, SLIGHT TO MEDIUM, HIGH TO VERY HIGH, MEDIUM TO HIGH
SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY.	SLIGHT TO MEDIUM, SLIGHT TO MEDIUM, HIGH TO VERY HIGH, MEDIUM TO HIGH
SILTS, MICACEOUS OR DIATOMACEOUS IDY OR SILTY SOILS, ELASTIC SILTS.	SLIGHT TO MEDIUM, SLIGHT TO MEDIUM, HIGH TO VERY HIGH, MEDIUM TO HIGH
CLAYS OF HIGH PLASTICITY, FAT CLAYS.	SLIGHT TO MEDIUM, SLIGHT TO MEDIUM, HIGH TO VERY HIGH, MEDIUM TO HIGH
CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS.	SLIGHT TO MEDIUM, SLIGHT TO MEDIUM, HIGH TO VERY HIGH, MEDIUM TO HIGH
D OTHER HIGHLY ORGANIC SOILS.	READILY IDENTIFIED BY COLOR, ODOR, SPONGY FEEL AND FREQUENTLY BY FIBROUS TEXTURE.

CHARACTERISTICS OF TWO GROUPS ARE DESIGNATED BY COMBINATIONS OF GROUP SYMBOLS, INDEX.

PLASTICITY CHART FOR CLASSIFICATION OF FINE GRAINED SOILS

TERMINOLOGY USED IN MRCE SOIL DESCRIPTIONS

CONSISTENCY OF CLAY AND CLAYEY SILT [†]			IDENTIFICATION CHARACTERISTICS	DESCRIPTION OF CONSTITUENT PERCENTAGES AS USED IN SOIL SAMPLE CLASSIFICATIONS
CONSISTENCY	UNCONFINED COMPRESSIVE STRENGTH (TSF)			

PRIMARY ROCKS	- RINGS WHEN STRUCK WITH BAR - SHARP AND HARD FRACTURE SURFACE WHEN BROKEN MECHANICALLY - MAY BE JOINTED, BUT JOINTS ARE GENERALLY TIGHT. JOINTS MAY BE IRON STAINED. - DOES NOT DISINTEGRATE UPON EXPOSURE - DOES NOT SLAKE IN WATER	75 OR MORE	65 OR MORE	60 OR MORE	50 OR MORE	75 OR MORE	3000
SECONDARY ROCKS	- AS FOR HARD ROCK, EXCEPT: - FABRIC MAY BE IRON STAINED - MAY BE CLOSELY JOINTED, BUT JOINTS ARE GENERALLY TIGHT. JOINTS HAVE SLIGHT WEATHERING OR MAY BE IRON STAINED.	70	50	50	40	1500	
TERTIARY ROCKS	- AS FOR MEDIUM HARD ROCK, EXCEPT: - MODERATELY WEATHERED FABRIC - WEATHERED JOINTS - THUDS WHEN STRUCK BY BAR - CAN BE INDENTED WITH A STEEL NAIL - BREAKS READILY WITH HAMMER - PIECES OF WEATHERED SURFACE CAN BE BROKEN OFF BY HAND - DOES NOT DISINTEGRATE UPON EXPOSURE - UNWEATHERED PIECES DO NOT SLAKE	50	35	35	25	500	
QUARTZITE	- AS FOR INTERMEDIATE ROCK, EXCEPT: - HIGHLY WEATHERED FABRIC - CAN BE BROKEN EASILY, CRUMBLES WITH DIFFICULTY BY HAND - CAN BE SCRAPED BY KNIFE - MAY SOFTEN UPON EXPOSURE - MAY SLAKE IN WATER - STANDARD PENETRATION RESISTANCE EXCEEDS 50 BLOWS/100'	LESS THAN 50	LESS THAN 35	LESS THAN 35	LESS THAN 25	150	
SLATE	- ROCK TEXTURE AND STRUCTURE OFTEN PRESERVED - GENERALLY SOIL-LIKE IN CONSISTENCY - CAN BE CRUMPLED BY SLIGHT HAND PRESSURE - CAN BE PEELED WITH A KNIFE - STANDARD PENETRATION RESISTANCE LESS THAN 50 BLOWS/FOOT	WHEN RECOVERED WITH SOIL SAMPLING TECHNIQUES, DESCRIBED AS FOR SOILS INCLUDING USC GROUP SYMBOLS. (WITH ROCK) ADDED TO DESCRIPTION.					

MATERIAL RECOVERED IN THE	SKETCH SYMBOLS		JOINT ORIENTATION AND CONDITION	
			SURFACE	CONDITION
JME ROCK CORING WITH A DOUBLE USING GOOD CORING TECHNIQUES		Joint	Parallel	Slick
OVERED, EXPRESSED AS A PERCENTAGE		Healed Joint	Curved	Slick
OF THE LENGTHS OF CORE PIECES FOUR		Broken	Irregular	Smooth
SE OF THE TOTAL LENGTH OF CORE DIA		Part of Core Not Recovered	F	Rough

TABLE R-4 ROCK CORE SKETCH KEY

Vertical joints are ignored in RQD and joint frequency evaluations, but are noted in written descriptions and on core sketches.

APPENDIX A

MRCE BORING LOGS

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

PROJECT: 73RD/74TH STREET PROJECT
LOCATION: NEW YORK, NEW YORK

BORING NO. B-1P
SHEET 1 OF 7
FILE NO. 11550
SURFACE ELEV. +19.56
RES. ENGR. DANIEL GEORGE

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
13:30	1D	0.5	10-34	Top 6": Blk f-c sandy gravel, tr silt (Fill) (GP-GM)	**	0.25	DRILLED	**3" Concrete slab at grade.
03-31-11		2.3	176-134	Bot 10": Gray dec rock fgmts, sm f-m sa, tr si (GP-GM)	***	1	AHEAD	***Fill from 0.25' to 1'.
Thurs., Over-	2NR	2.3	103-100/3"	No recovery			SPUN	1D & 2NR: Used 3" spoon & 24" drop.
cast, 42°F		3.0					3"	Drilling with water at 2.3'.
14:45	1C	3.0	REC=32%	Top 5.5": Gray boulders & cobbles	T	5		Change in wash at 5.3'.
09:00		6.7	RQD=0%	Bot 9": Wthd SIW gray gns schist, ClJtd, WJts		6		Run 3C had some soft drilling zones.
04-01-11	2C	6.7	REC=40%	Weathered, slightly weathered to highly				1C, 2C, 3C: Coring times not recorded.
Friday		10.6	RQD=0%	weathered gray gneissic schist, closely jointed				
Overcast,				to broken, iron stained & weathered joints				
Showers								
35°F	3C	10.6	REC=32%	Intermediate to weathered, moderately weathered		10		
		19.2	RQD=18%	to highly weathered gray gneissic schist,				
				closely jointed to broken, weathered & mineral				
				coated joints				
					R1	15		
16:00								
09:45	4C	19.2	REC=55%	Intermediate to weathered, slightly weathered		20	4.75*	*Coring time in minutes per foot.
04-04-11		24.2	RQD=34%	to moderately weathered gray gneissic schist,			5.75*	
Monday				jointed to broken, weathered & mineral coated			4*	
Overcast				joints			3.75*	
45°F							4.5*	
	5C	24.2	REC=88%	Medium hard to intermediate slightly weathered		25	3.5*	
		27.3	RQD=42%	gray gneissic schist, jointed to broken,			4.5*	
				weathered joints			5*	
	6C	27.3	REC=96%	Hard unweathered to slightly weathered gray			2.5*	
		32.3	RQD=96%	gneissic schist, moderately jointed, weathered			3.75*	
				joints		30	4.75*	
							5.75*	
							5*	
	7C	32.3	REC=97%	Hard unweathered gray gneissic schist &			6*	
		37.3	RQD=91%	gneiss, trace pegmatite, jointed, weathered			6.25*	
				joints		35	10*	
							7.25*	
							11.25*	
	8C	37.3	REC=100%	Hard unweathered gray gneiss, jointed	R2		9.5*	
		41.6	RQD=88%				9.25*	
						40	8*	
							6.75*	
	9C	41.6	REC=98%	Hard unweathered gray gneiss & schist gneiss,			4.25*	Used new bit at 41.6'.
		45.8	RQD=98%	jointed, weathered joints			4.5*	
							4.5*	
						45	6.25*	
	10C	45.8	REC=89%	Hard to medium hard unweathered gray gneiss			6.75*	
		50.0	RQD=89%	& schist gneiss, moderately jointed to jointed			7*	
							6.5*	
							6*	
18:00						50	6*	End of Boring at 50'.

MUESER RUTLEDGE CONSULTING ENGINEERS
ROCK CORE SKETCH

BORING NO. B-1P
SHEET 2 OF 7
FILE NO. 11550
FACE ELEV. 19.56
RES. ENGR. D. GEORGE

PROJECT 73RD / 74TH STREET PROJECT.

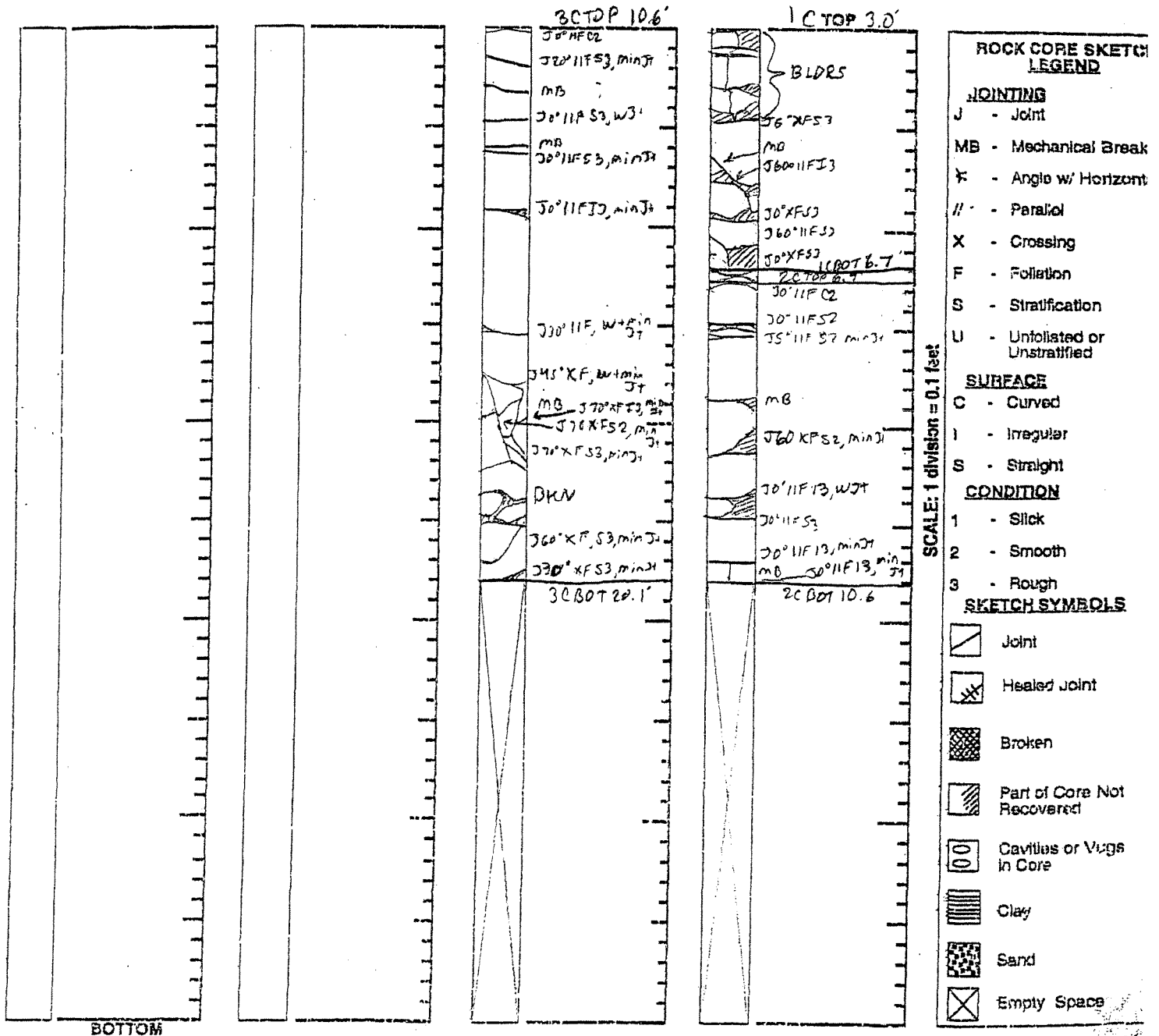
LOCATION NEW YORK, NY

Run No.	REC / RQD

Run No.	REC / RQD

Run No.	REC / RQD
3C	32/18

Run No.	REC / RQD
1C	32/0
2C	40/0



NOTES

BORING NO. B-1P
SHEET 3 OF 7
FILE NO. 1155D
FACE ELEV. 19.56
RES. ENGR. D. GEORGE

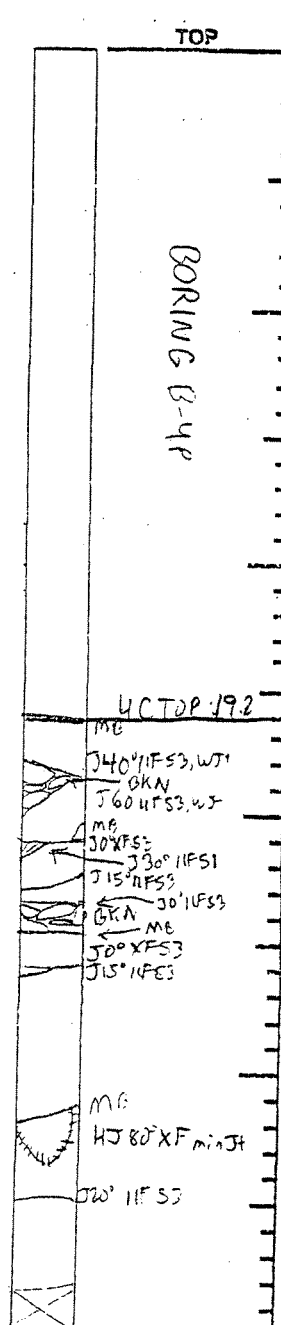
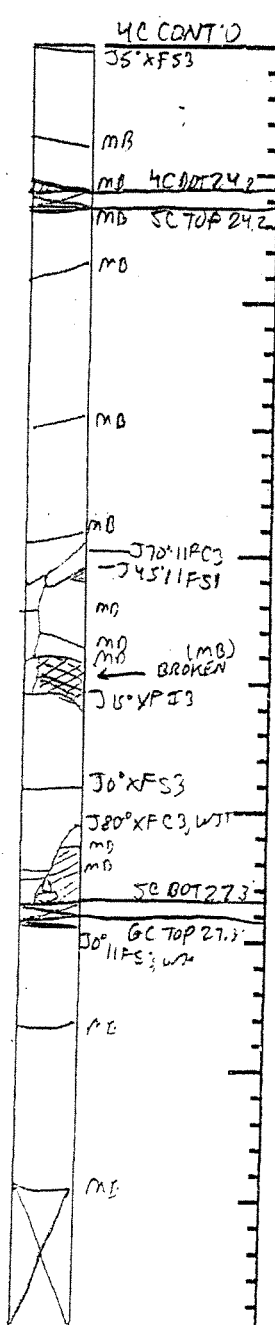
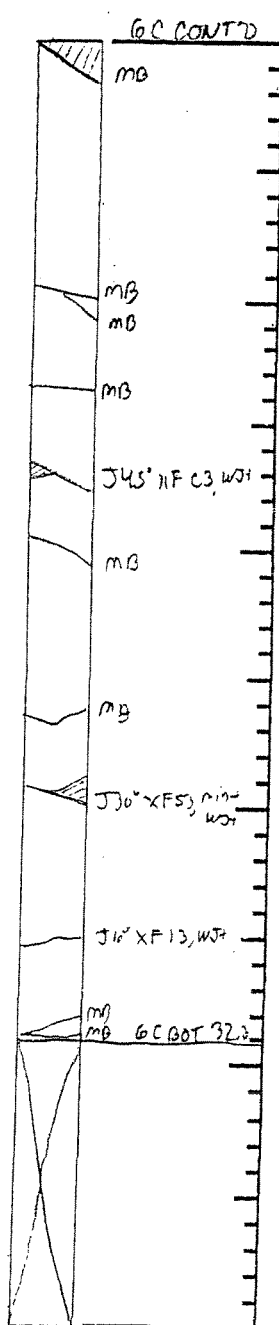
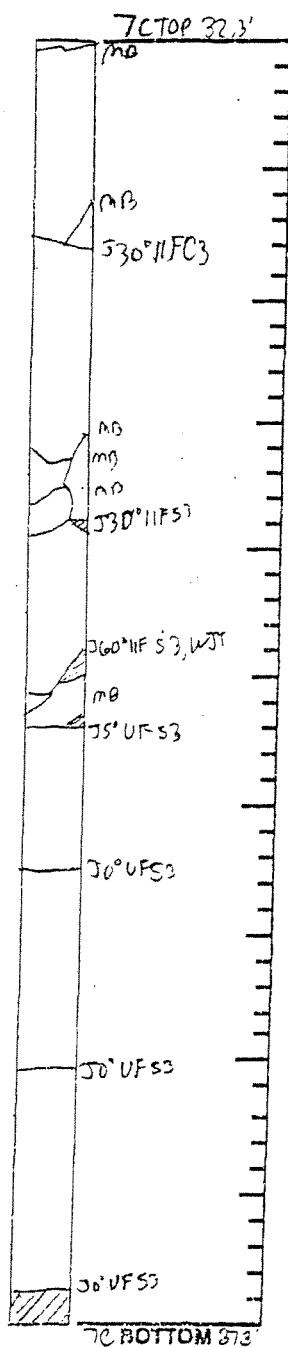
LOCATION NEW YORK, NY

Run No.	REC / RQD
7C	97/91

Run No.	REC / RQD
6C (CONT'D)	

Run No.	REC / RQD
4C (CONT'D)	
5C	88/42
6C	96/96

Run No.	REC / RQD
4C	55/34



- | | |
|---|----------------------------|
|  | Joint |
|  | Healed Joint |
|  | Broken |
|  | Part of Core Not Recovered |
|  | Cavities or Vugs in Core |
|  | Clay |
|  | Sand |
|  | Empty Space |

NOTES

**MUESER RUTLEDGE CONSULTING ENGINEERS
ROCK CORE SKETCH**

BORING NO. B-1P
SHEET 4 OF 7
FILE NO. 11550
SURFACE ELEV. 19.56
RES. ENGR. D. GEORGE

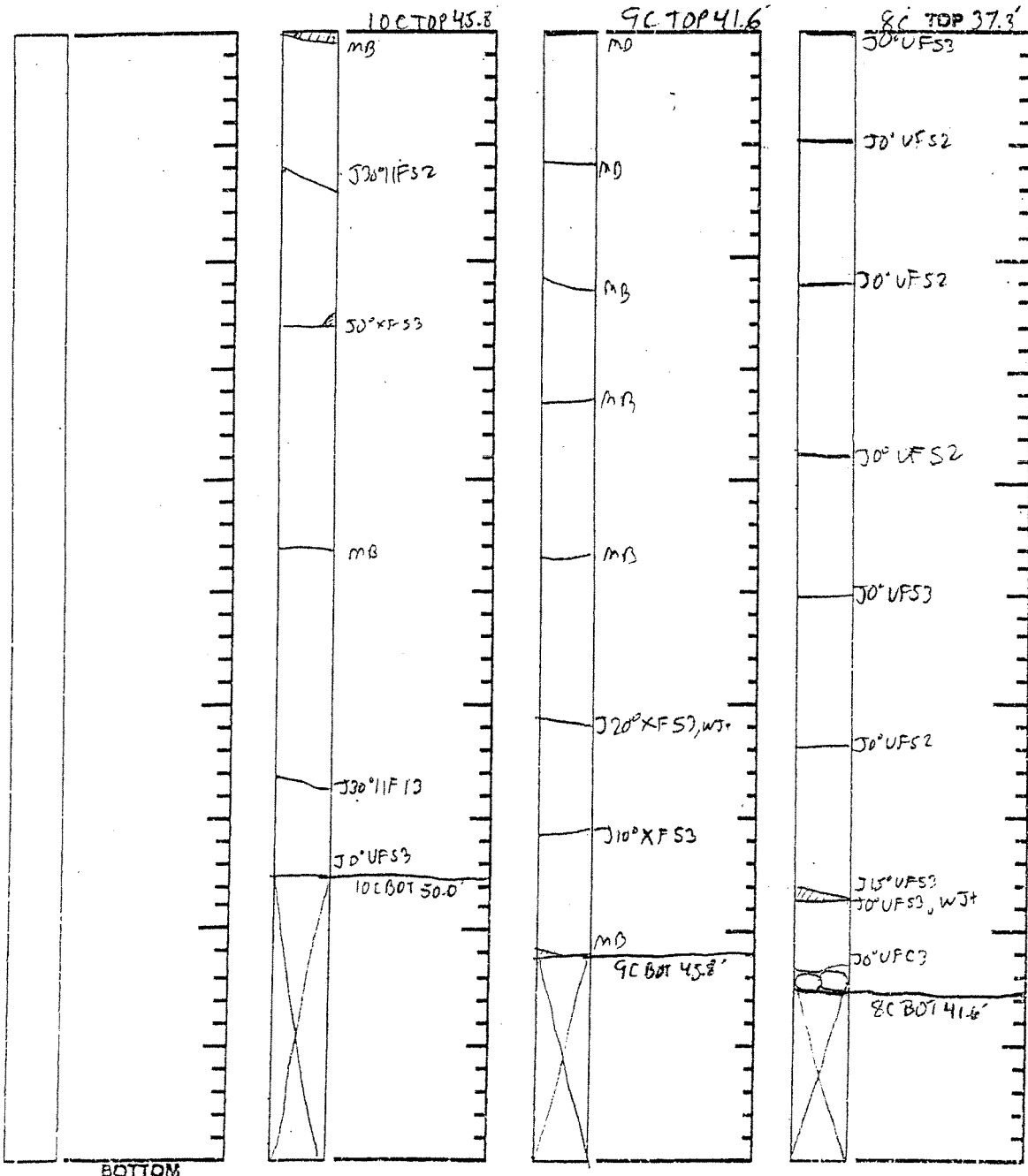
PROJECT 73RD/74TH STREET PROJECT.
LOCATION NEW YORK, NY

Run No.	REC / RQD

Run No.	REC / RQD
10C	89/89

Run No.	REC / RQD
9C	98/98

Run No.	REC / RQD
8C	100/88



**ROCK CORE SKETCH
LEGEND**

JOINTING

- J - Joint
- MB - Mechanical Break
- * - Angle w/ Horizontal
- // - Parallel
- X - Crossing
- F - Foliation
- S - Stratification
- U - Unfoliated or Unstratified

SURFACE

- C - Curved
- I - Irregular
- S - Straight

CONDITION

- 1 - Slick
- 2 - Smooth
- 3 - Rough

SKETCH SYMBOLS

- Joint
- Healed Joint
- Broken
- Part of Core Not Recovered
- Cavities or Vugs in Core
- Clay
- Sand
- Empty Space

SCALE: 1 division = 0.1 feet

NOTES _____

PROJECT 73RD/74TH STREET PROJECT PIEZOMETER NO. B-4P
LOCATION NEW YORK, NY
PIEZOMETER LOCATION SEE BORING LOCATION PLAN DATE OF INSTALLATION 4/4/11
☐ SEE SKETCH ON BACK RES. ENG. D. GEORGE

elevation of rim, ft = _____
 diameter, in = 2, ft = 0.167 = 2r

[illegible]

PIEZOMETER NO. B-1P

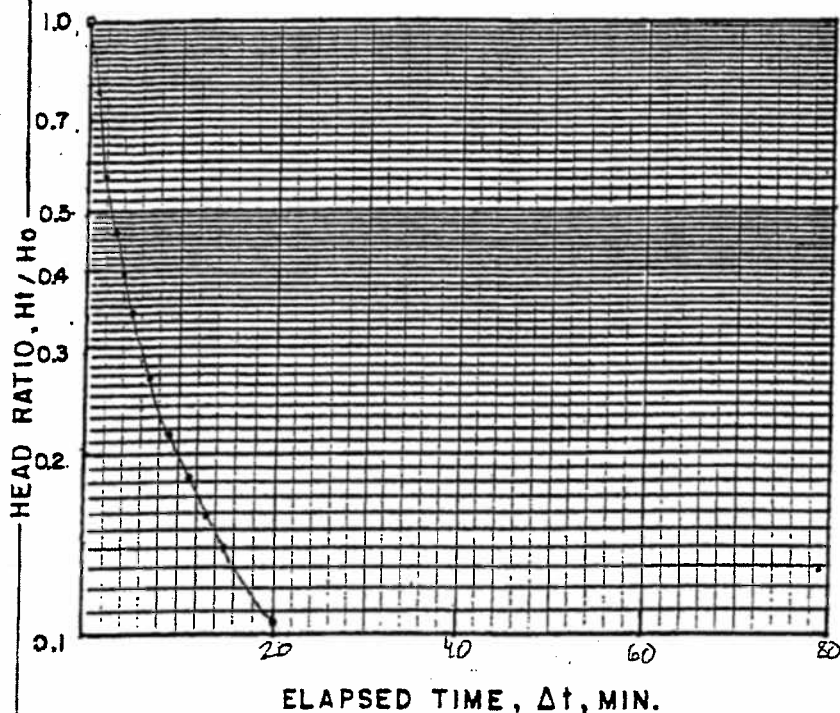
 Sand
  Bentonite

 Gravel
  Grout

VARIABLE HEAD PERMEABILITY TEST

☐ BOREHOLE OR ☒ PIEZOMETER NO. B-1P
 TEST NO. 1

PROJECT 73RD/74TH STREET PROJECT RES. ENG. D. GEORGE
 LOCATION NEW YORK, NY CALC. BY DJG DATE 4/5/11
 PIEZOMETER LOCATION SEE BORING LOCATION PLAN CH'KD BY _____ DATE _____



INTAKE POINT

depth to bottom, ft = 14.2
 depth to top, ft = 4.2
 length, ft = 10 = L
 diameter, in = 2, ft = 0.167 = 2R

STANDPIPE/RISER

diameter, in = 2, ft = 0.167 = 2r
 depth of casing, ft = 34.2
 depth to which stand-
 pipe was bailed, ft = 7.35 = Z

READING TIME			TEST DEPTH- RIM TO WATER ft.	DEPTH- RIM TO TIDE OR GWL ft.	UNBALANCED HEAD H ft.	HEAD RATIO H_1/H_0	REMARKS
DATE	CLOCK	Δt MIN.					
4/5/11	1518			11.07	0		STATIC WATER LEVEL
	1523	0	7.35		3.72	1.00	
	1523.5	0.5	7.80		3.27	0.879	
	1524	1	8.18		2.89	0.777	
	1525	2	8.98		2.09	0.562	
	1526	3	9.35		1.72	0.462	
	1527	4	9.60		1.47	0.395	
	1528	5	9.80		1.27	0.341	
	1536	7	10.07		1.00	0.269	
	1532	9	10.27		0.80	0.215	
	1534	11	10.39		0.68	0.183	
	1536	13	10.48		0.59	0.159	
	1538	15	10.53		0.52	0.140	
	1543	20	10.68		0.39	0.105	
	1548	25	10.78		0.29	0.078	
	1553	30	10.86		0.21	0.057	AVG INF. RATE: 0.0608 FT/MIN
	1607	40	10.92		0.15	0.040	
	1613	50	10.95		0.12	0.032	
	1623	60	11.00		0.07	0.019	

PIEZOMETER NO. B-1P

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT <u>73RD/74TH STREET PROJECT</u> LOCATION <u>NEW YORK, NEW YORK</u> BORING LOCATION <u>SEE BORING LOCATION PLAN</u>	BORING NO. <u>B-1P</u> SHEET <u>7</u> OF <u>7</u> FILE NO. <u>11550</u> SURFACE ELEV. <u>+19.56</u> DATUM <u>BOROUGH PRESIDENT</u> <u>OF MANHATTAN</u>
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BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED	CASING USED	☒ YES	☐ NO	
TRUCK	DURING CORING				
SKID	MECHANICAL	DIA., IN. <u>3</u>			DEPTH, FT. FROM <u>0</u> TO <u>8.4</u>
BARGE	HYDRAULIC <u>X</u>	DIA., IN. _____			DEPTH, FT. FROM _____ TO _____
OTHER	OTHER	DIA., IN. _____			DEPTH, FT. FROM _____ TO _____
	<u>DK-50 (TRACK)</u>				

TYPE AND SIZE OF:	DRILLING MUD USED ☐ YES ☒ NO
D-SAMPLER <u>3" O. D. SPLIT SPOON</u>	DIAMETER OF ROTARY BIT, IN. <u>2-7/8</u>
U-SAMPLER _____	TYPE OF DRILLING MUD _____
S-SAMPLER _____	
CORE BARREL <u>7.3' NX DOUBLE TUBE</u>	AUGER USED ☐ YES ☒ NO
CORE BIT <u>DIAMOND BIT</u>	TYPE AND DIAMETER, IN. _____
DRILL RODS <u>NWJ</u>	
	CASING HAMMER, LBS. _____ AVERAGE FALL, IN. _____
	*SAMPLER HAMMER, LBS. <u>140</u> AVERAGE FALL, IN. <u>24</u>
	*USED DONUT HAMMER

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	CONDITIONS OF OBSERVATION
04-02-11	10:00	20.1	6	3.3	OVERNIGHT WATER LEVEL.
04-03-11	10:00	20.1	6	4.9	OVERNIGHT WATER LEVEL (TAPED 19.9').
04-04-11	07:30	20.1	6	6	OVERNIGHT WATER LEVEL (TAPED 18.9').
04-04-11	15:00	50	8.4	7.4	READING TAKEN AT END OF BORING (TAPED 50.0').

PIEZOMETER INSTALLED	☒ YES	☐ NO	SKETCH SHOWN ON	PIEZOMETER RECORD SHEET 5
STANDPIPE:	TYPE	<u>PVC</u>	ID, IN. <u>2</u>	LENGTH, FT. <u>33.9</u> TOP ELEV. <u>19.3</u>
INTAKE ELEMENT:	TYPE	<u>SLOTTED PVC</u>	OD, IN. <u>2-3/8</u>	LENGTH, FT. <u>10</u> TIP ELEV. <u>5.4</u>
FILTER:	MATERIAL	<u>FILTER SAND</u>	OD, IN. <u>3</u>	LENGTH, FT. <u>48.5</u> BOT. ELEV. <u>-30.4</u>

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING	LIN. FT.	<u>3.0</u>	NO. OF 3" SHELBY TUBE SAMPLES	_____
3.5" DIA. U-SAMPLE BORING	LIN. FT.	_____	NO. OF 3" UNDISTURBED SAMPLES	_____
CORE DRILLING IN ROCK	LIN. FT.	<u>47</u>	OTHER:	_____

BORING CONTRACTOR	WARREN GEORGE, INC.
DRILLER	EDWIN FELICIANO
REMARKS	HELPERS
	SAL LORENZO, JR.
RESIDENT ENGINEER	PIEZOMETER INSTALLED.
CLASSIFICATION CHECK:	DANIEL GEORGE
	DATE <u>04-04-11</u>
	TYPING CHECK: DANIEL GEORGE
	BORING NO. <u>B-1P</u>

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: 73RD/74TH STREET PROJECT
LOCATION: NEW YORK, NEW YORK

BORING NO. B-2
SHEET 1 OF 3
FILE NO. 11550
SURFACE ELEV. +19.95
RES. ENGR. DANIEL GEORGE

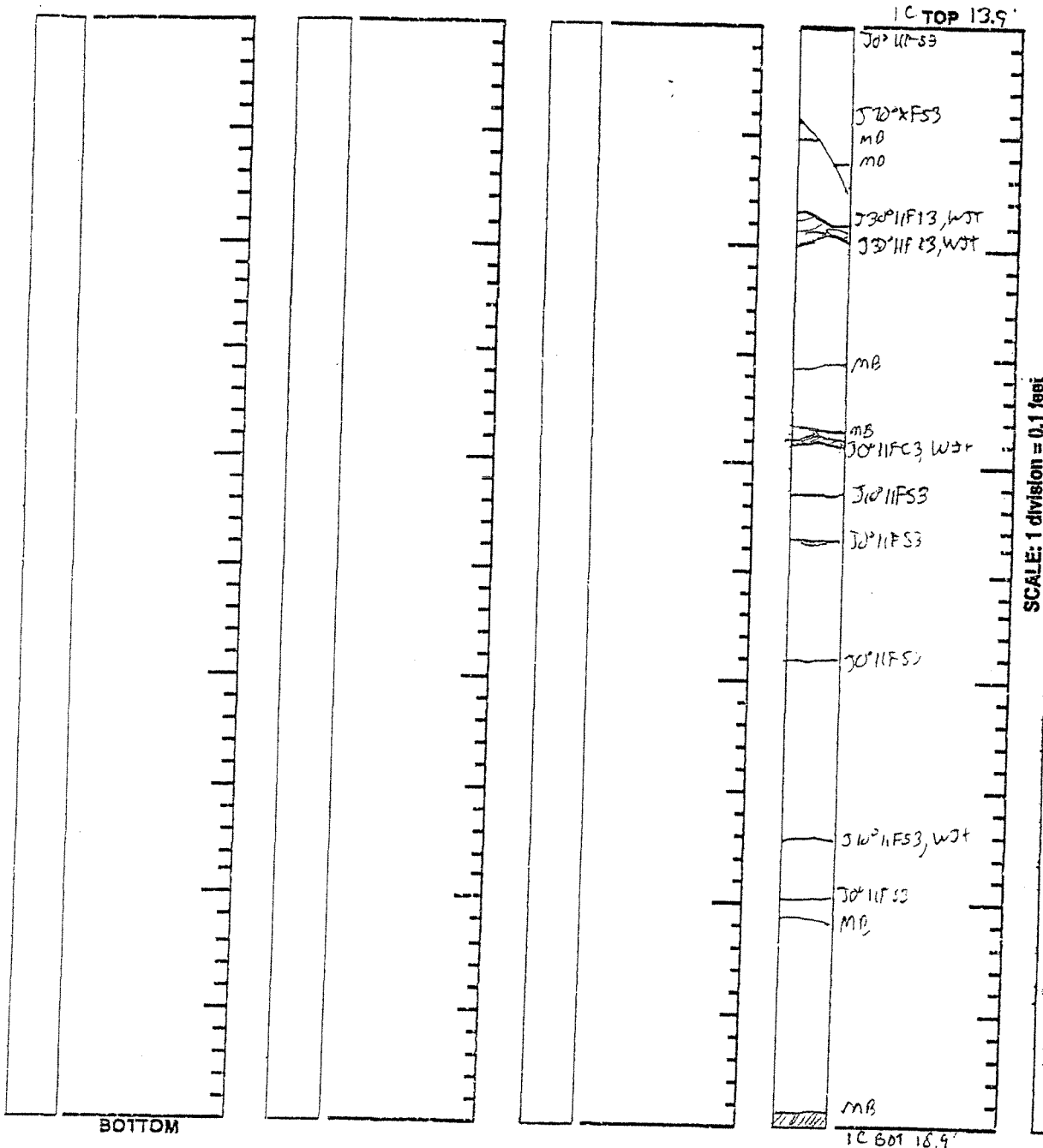
DAILY	SAMPLE			SAMPLE DESCRIPTION	STRATA	CASING		REMARKS
PROGRESS	NO.	DEPTH	BLOWS/6"			DEPTH	BLOWS	
14:05	1D*	0.6	150-59	Black fine to medium sand, some silt, trace	**	0.5	DRILLED	**6" Concrete slab at
03-31-11		2.6	55-24	coarse sand, gravel, brick (Fill) (SM)			AHEAD	grade.
Thursday	2D*	2.6	31-50	Top & Bot:Brn f-m sand, sm gravel, silt (Fill) (SM)			4" 3"	*Used 140 lb. hammer
Indoors		4.6	26-56	Mid 3":Gray rock fgmts, sm f sand (Fill) (GP-GM)				from 0.6' to 1.1' &
45°F, 14:30	3D*	4.6	47-48	Top 0.5": Blk f-m sand, sm silt, tr gvl (Fill) (SM)		5		used 300 lb. hammer
09:00		6.6	50-50	Mid 18": Brn f-m sa, sm gvl, tr silt (Fill) (SP-SM)	F			from 1.1' to 11.9'.
04-01-11				Bot 2": Gray rock fgmts, tr f sand (Fill) (GP)				
Friday	4D*	6.6	54-65	Top & Bot 16.5": Brn f-m sa, sm gvl, tr si (Fill) (SP-SM)				3" Casing jammed
Indoors		8.6	57-94	Mid 4": Red brn f-m sand, tr silt (Fill) (SP-SM)			▼	inside 4" casing at
45°F	5D*	8.6	70-102	Brown fine to medium sand, some silt, trace		10		9.8'; both casings re-
		9.8	100/2"	coarse sand, gravel (Fill) (SM)				moved & 3" casing use-
15:45	6D*	9.8	66-93	Top 22": Brn f-c sand, sm gravel, silt (Fill) (SM)		11.6	▼	to 11.5'.
09:45		11.7	78-120/5"	Bot 1": Gray f-m sand, some silt (SM)	T			Drilling with water at
04-04-11	7D*	11.7	100/2"	Gray fine to medium sand, some silt (SM)		13.9		11.9'.
Monday		11.9				15		7D: Slight petroleum
Indoors	1C	13.9	REC=98%	Hard to medium hard unweathered to slightly	R2			odor; sample wet.
50°F		18.9	RQD=71%					
								3 runs.
16:00						18.9		Coring times not
						20		recorded.
								End of Boring at 18.9'.
					</			

**MUESER RUTLEDGE CONSULTING ENGINEERS
ROCK CORE SKETCH**

BORING NO. B-2
 SHEET 2 OF 3
 FILE NO. 11550
 SURFACE ELEV. 19.95
 RES. ENGR. D. GEORGE

PROJECT 73RD/74TH STREET PROJECT
 LOCATION NEW YORK, NY

Run No.	REC / RQD	Run No.	REC / RQD	Run No.	REC / RQD	Run No.	REC / RQD
						1C	98/71



ROCK CORE SKETCH LEGEND	
JOINTING	
J	- Joint
MB	- Mechanical Break
K	- Angle w/ Horizontal
//	- Parallel
X	- Crossing
F	- Foliation
S	- Stratification
U	- Unfoliated or Unstratified
SURFACE	
C	- Curved
I	- Irregular
S	- Straight
CONDITION	
1	- Slick
2	- Smooth
3	- Rough
SKETCH SYMBOLS	
	Joint
	Healed Joint
	Broken
	Part of Core Not Recovered
	Cavities or Vugs in Core
	Clay
	Sand
	Empty Space

NOTES _____

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT <u>73RD/74TH STREET PROJECT</u> LOCATION <u>NEW YORK, NEW YORK</u> BORING LOCATION <u>SEE BORING LOCATION PLAN</u>	BORING NO. <u>B-2</u> SHEET <u>3</u> OF <u>3</u> FILE NO. <u>11550</u> SURFACE ELEV. <u>+19.95</u> DATUM <u>BOROUGH PRESIDENT</u> <u>OF MANHATTAN</u>
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BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED	CASING USED	☒ YES	☐ NO	
TRUCK	DURING CORING	DIA., IN.			
SKID	MECHANICAL	<u>4</u>			DEPTH, FT. FROM <u>0</u> TO <u>9</u>
BARGE	HYDRAULIC	<u>3</u>			DEPTH, FT. FROM <u>0</u> TO <u>11.5</u>
OTHER	OTHER	DIA., IN.			DEPTH, FT. FROM <u> </u> TO <u> </u>
PORTABLE ELECTRIC					

TYPE AND SIZE OF:	DRILLING MUD USED
D-SAMPLER <u>3" O. D. SPLIT SPOON</u>	☐ YES ☒ NO
U-SAMPLER <u> </u>	DIAMETER OF ROTARY BIT, IN. <u>2-1/2</u>
S-SAMPLER <u> </u>	TYPE OF DRILLING MUD <u> </u>
CORE BARREL <u>2.8' NX SINGLE TUBE</u>	AUGER USED
CORE BIT <u>DIAMOND BIT</u>	☐ YES ☒ NO
DRILL RODS <u>AW</u>	TYPE AND DIAMETER, IN. <u> </u>
*CASING HAMMER, LBS. <u>140</u> AVERAGE FALL, IN. <u>30</u>	
*SAMPLER HAMMER, LBS. <u>140/300</u> AVERAGE FALL, IN. <u>30/24</u>	
*USED DONUT HAMMER	

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	CONDITIONS OF OBSERVATION
04-04-11	07:20	12.5			NO GROUND WATER OBSERVED (TAPED 11').
04-05-11	06:55	18.9	11.5	5.7	OVERNIGHT WATER LEVEL (TAPED 18.6').

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON

STANDPIPE:	TYPE	ID, IN.	LENGTH, FT.	TOP ELEV.
INTAKE ELEMENT:	TYPE	OD, IN.	LENGTH, FT.	TIP ELEV.
FILTER:	MATERIAL	OD, IN.	LENGTH, FT.	BOT. ELEV.

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING	LIN. FT.	<u>13.9</u>	NO. OF 3" SHELBY TUBE SAMPLES
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES
CORE DRILLING IN ROCK	LIN. FT.	<u>5</u>	OTHER:

BORING CONTRACTOR	WARREN GEORGE, INC.
DRILLER	CYRIL FARLEY
REMARKS	HELPERS CEMMIE HARTLEY
TEMPORARY WELL INSTALLED AT END OF BORING FOR WATER SAMPLING. B-2 BACKFILLED & PATCHED ON 04-05-11.	
RESIDENT ENGINEER	DANIEL GEORGE
DATE	04-04-11
CLASSIFICATION CHECK:	CHERYL J. MOSS
TYPING CHECK:	DANIEL GEORGE

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

PROJECT: 73RD/74TH STREET PROJECT
LOCATION: NEW YORK, NEW YORK

BORING NO. B-3
SHEET 1 OF 3
FILE NO. 11550
SURFACE ELEV. +15.83
RES. ENGR. DANIEL GEORGE

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
10:45	1D*	0.4	6-10	Top 1": Brn f-m sa, sm gravel, silt (Fill) (SM)	**	0.3	DRILLED	***3-1/2" Concrete slab at grade.
04-05-11		1.7	100/3"	Mid 5": Brn f-m sa, sm rock fgmts, tr si (SP-SM)	***	1	AHEAD	
Tuesday				Bot 1": Gray rock fragments (GP)	****	1.7	19.25*	***Fill from 0.3' to 1'.
Indoors	1C	1.7	REC=90%	Medium hard to weathered slightly weathered gray gneiss, closely jointed, iron stained & weathered joints	R	2.7		****Decomposed rock from 1' to 1.7'.
65°F, 13:45		2.7	RQD=0%			5		3" Casing driven to 1.8
								*Used 300 lb. hammer; 24" drop from 0.4' to 1.7'.
						10		Top of rock observed at 1.1'; spoon driven adjacent to rock.
								Drilling with water at 1.7'.
						15		Losing water at 1.7'.
								*Coring time in minutes per foot.
								End of Boring at 2.7'.
						20		
						25		
						30		
						35		
						40		
						45		
						50		

**MUESER RUTLEDGE CONSULTING ENGINEERS
ROCK CORE SKETCH**

BORING NO. B-3
SHEET 2 OF 3
FILE NO. 11580
SURFACE ELEV. 15.83
RES. ENGR. D. GEORGE

PROJECT 73RD/74TH STREET PROJECT.

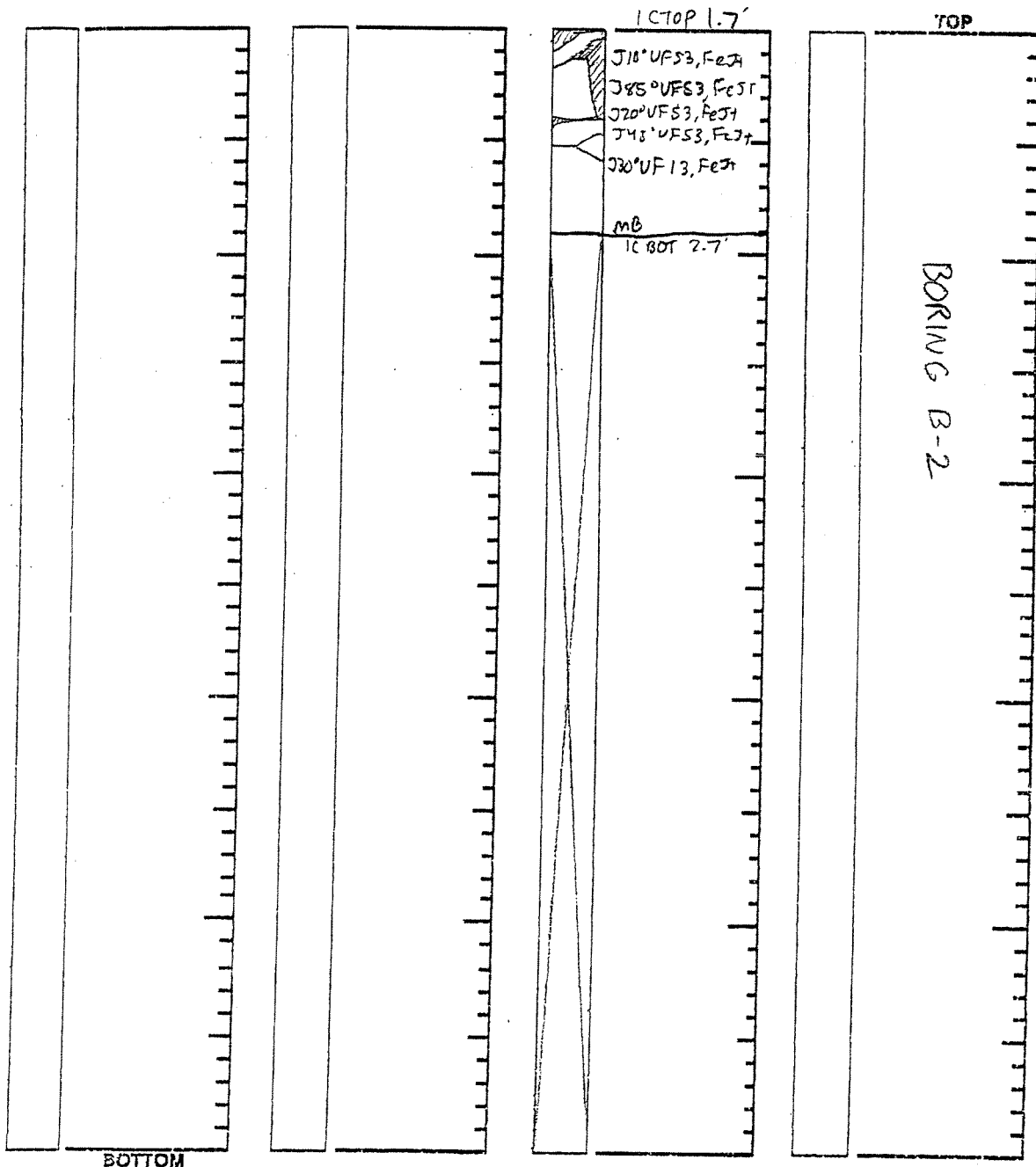
LOCATION NEW YORK, NY

Run No.	REC / RQD

Run No.	REC / RQD

Run No.	REC / RQD
1C	90/0

Run No.	REC / RQD



ROCK CORE SKETCH LEGEND	
JOINTING	
J	- Joint
MB	- Mechanical Break
X	- Angle w/ Horizon
//	- Parallel
X	- Crossing
F	- Foliation
S	- Stratification
U	- Unfoliated or Unstratified
SURFACE	
C	- Curved
I	- Irregular
S	- Straight
CONDITION	
1	- Slick
2	- Smooth
3	- Rough
SKETCH SYMBOLS	
	Joint
	Healed Joint
	Broken
	Part of Core Not Recovered
	Cavities or Vugs in Core
	Clay
	Sand
	Empty Space

NOTES _____

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT <u>73RD/74TH STREET PROJECT</u> LOCATION <u>NEW YORK, NEW YORK</u> BORING LOCATION <u>SEE BORING LOCATION PLAN</u>	BORING NO. <u>B-3</u> SHEET <u>3</u> OF <u>3</u> FILE NO. <u>11550</u> SURFACE ELEV. <u>+15.83</u> DATUM <u>BOROUGH PRESIDENT</u> <u>OF MANHATTAN</u>
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BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED	CASING USED	☒ YES	☐ NO	
TRUCK	MECHANICAL	DIA., IN. <u>3</u>	DEPTH, FT. FROM	<u>0</u>	TO <u>1.8</u>
SKID	HYDRAULIC ☒	DIA., IN. _____	DEPTH, FT. FROM	_____	TO _____
BARGE	OTHER _____	DIA., IN. _____	DEPTH, FT. FROM	_____	TO _____
OTHER	<u>PORTABLE ELECTRIC</u>				

TYPE AND SIZE OF:	DRILLING MUD USED ☐ YES ☒ NO
D-SAMPLER <u>3" O. D. SPLIT SPOON</u>	DIAMETER OF ROTARY BIT, IN. <u>2-1/2</u>
U-SAMPLER _____	TYPE OF DRILLING MUD _____
S-SAMPLER _____	
CORE BARREL <u>2.8' NX SINGLE TUBE</u>	AUGER USED ☐ YES ☒ NO
CORE BIT <u>DIAMOND BIT</u>	TYPE AND DIAMETER, IN. _____
DRILL RODS <u>AW</u>	
	*CASING HAMMER, LBS. <u>300</u> AVERAGE FALL, IN. <u>24</u>
	*SAMPLER HAMMER, LBS. <u>300</u> AVERAGE FALL, IN. <u>24</u>
	*USED DONUT HAMMER _____

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	CONDITIONS OF OBSERVATION
04-05-11	14:30	2.7	1.8	1.1	READING TAKEN AT END OF BORING (TAPED 2.7').

PIEZOMETER INSTALLED ☐ YES ☒ NO **SKETCH SHOWN ON** _____

STANDPIPE:	TYPE _____	ID, IN. _____	LENGTH, FT. _____	TOP ELEV. _____
INTAKE ELEMENT:	TYPE _____	OD, IN. _____	LENGTH, FT. _____	TIP ELEV. _____
FILTER:	MATERIAL _____	OD, IN. _____	LENGTH, FT. _____	BOT. ELEV. _____

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>1.7</u>	NO. OF 3" SHELBY TUBE SAMPLES _____
3.5" DIA. U-SAMPLE BORING	LIN. FT. _____	NO. OF 3" UNDISTURBED SAMPLES _____
CORE DRILLING IN ROCK	LIN. FT. <u>1</u>	OTHER: _____

BORING CONTRACTOR <u>WARREN GEORGE, INC.</u>	
DRILLER <u>CYRIL FARLEY</u>	HELPERS <u>EDWIN FELICIANO</u>
REMARKS <u>BOREHOLE BACKFILLED & SURFACE PATCHED.</u>	
RESIDENT ENGINEER <u>DANIEL GEORGE</u>	DATE <u>04-05-11</u>
CLASSIFICATION CHECK: <u>CHERYL J. MOSS</u>	TYPING CHECK: <u>DANIEL GEORGE</u>

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

PROJECT: 73RD/74TH STREET PROJECT
LOCATION: NEW YORK, NEW YORK

BORING NO. B-4P
SHEET 1 OF 8
FILE NO. 11550
SURFACE ELEV. +15.94
RES. ENGR. DANIEL GEORGE

DAILY	SAMPLE			SAMPLE DESCRIPTION	STRATA	CASING		REMARKS
PROGRESS	NO.	DEPTH	BLOWS/6"			DEPTH	BLOWS	
11:10	1D	0.3	150/6"	Top 2": Blk f-c sand, sm gravel, silt (Fill) (SM)	DR	0.3	DRILLED	**4" Concrete slab at grade. ***Fill from 0.3' to 0.5'. Used 3" casing from 0' to 2.7'. Spoon bouncing at 0.8', 1', 2.9'. Spinned HSA to 1.9'. HSA at 1.9' was removed & 3" casing spun to 2.9'. Change in wash at 13.8' & 14'. *Coring time in minutes per foot.
04-02-11		0.8		Mid 4": Tan & blk rock fgmts, sm f-m sa, tr si (Fill) (GP-GM)		0.5	AHEAD	
Saturday				Bot 1": Tan & blk rock fgmts (Fill) (GP)		2.9	SPUN 3"	
Clear 50°F	2NR	0.8	150/2"	No recovery	R1		5.75*	
14:15		1.0				5	3.25*	
10:15	3D	1.9	25-77	Top 5": Blk gvy f-c sand, sm silt (Fill) (SM)			2.5*	
04-03-11		2.9	100/0"	Bot 7": Tan & blk rock fgmts, sm f-m sa, tr si (GP-GM)			2.5*	
Sunday	1C	2.9	REC=98%	Int to weathered, slightly weathered to MdW gray			3*	
Clear		7.9	RQD=33%	sch gns, sm gns sch, ClJtd to Bkn, WJts			2.5*	
50°F	2C	7.9	REC=99%	Intermediate slightly weathered gray gneissic		10	2.5*	
		12.6	RQD=35%	schist, jointed to broken, iron stained & weathered joints			1.75*	
							2.5*	
	3C	12.6	REC=100%	Hard to medium hard unweathered to slightly		12.5	2.5*	
		18.0	RQD=80%	weathered gray gneissic schist, moderately jointed to jointed, weathered & clay at joints			2.5*	
						15	2*	
							2.25*	
							1.5*	
							3*	
	4C	18.0	REC=98%	Hard unweathered gray gneissic schist, massive	R2		3*	
		23.0	RQD=98%			20	3*	
							4*	
							3.5*	
							3.75*	
	5C	23.0	REC=99%	Do 4C			4*	
		28.0	RQD=99%			25	3.25*	
							2.75*	
							3.25*	
							3*	
	6C	28.0	REC=97%	Hard unweathered gray gneissic schist, blocky to jointed, weathered joints			3.75*	
		33.0	RQD=92%			30	3.25*	
							3.25*	
							2.75*	
							3*	
	7C	33.0	REC=99%	Hard unweathered gray gneissic schist, some pegmatite, blocky to jointed, weathered joints	R2		3.75*	
		38.0	RQD=95%			35	3.5*	
							3.5*	
							3.5*	
							3.75*	
	8C	38.0	REC=100%	Hard unweathered gray gneissic schist, massive			3.25*	
		42.6	RQD=100%			40	2.75*	
							3.25*	
							3.25*	
	9C	42.6	REC=100%	Do 8C			3.5*	
		47.6	RQD=100%				4*	
						45	4*	
							3.25*	
							3.5*	
	10C	47.6	REC=98%	Do 8C			2.75*	
		50.1	RQD=98%				3*	
17:00						50	4*	
						50.1		End of Boring at 50.1'.

**MUESER RUTLEDGE CONSULTING ENGINEERS
ROCK CORE SKETCH**

BORING NO. B-47
SHEET 2 OF 8
FILE NO. 11550
SURFACE ELEV. 15.94
RES. ENGR. D. GEORGE

PROJECT 73RD / 74TH STREET PROJECT.

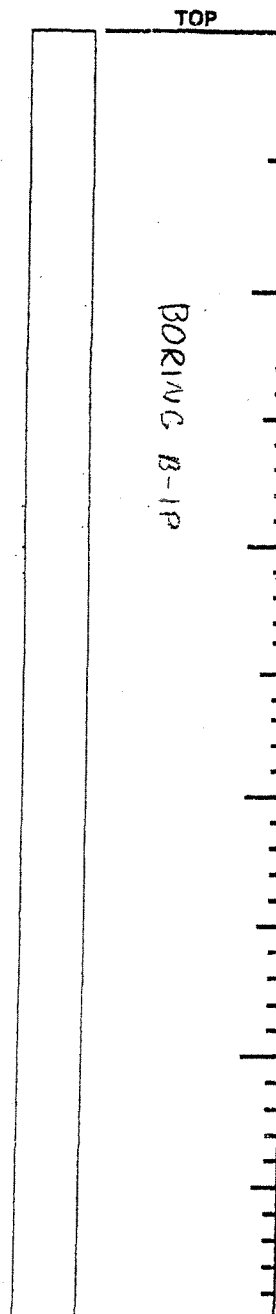
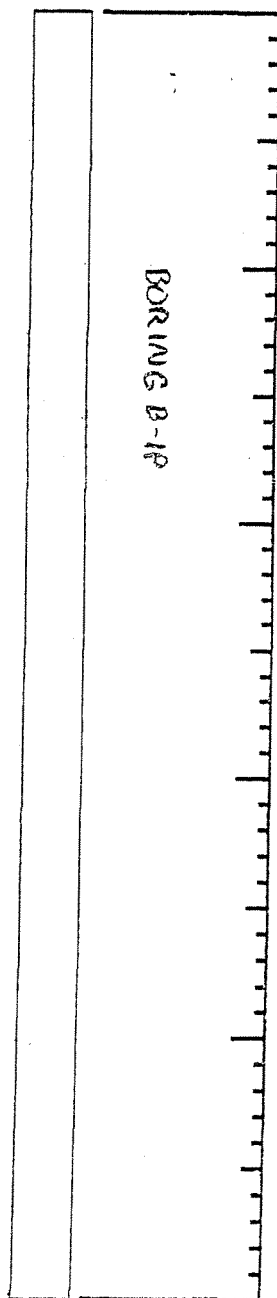
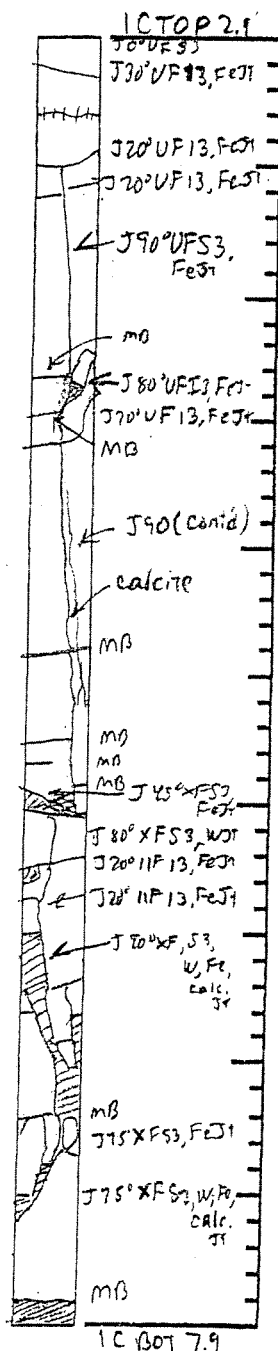
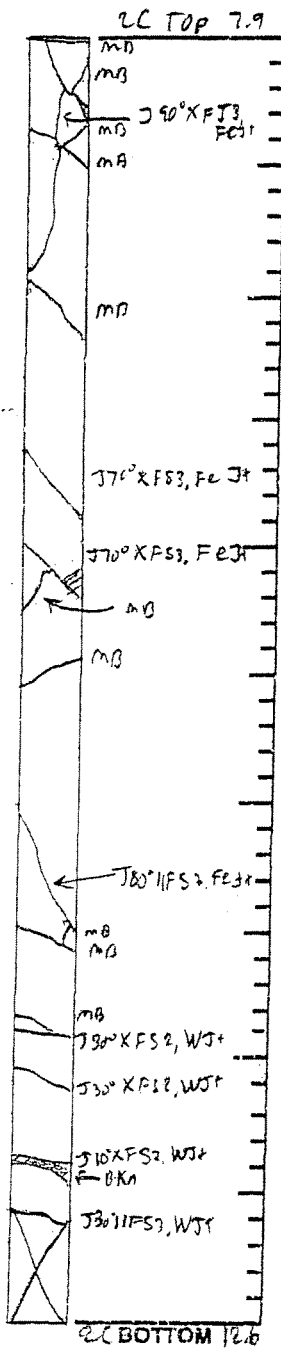
LOCATION NEW YORK, NY

Run No.	REC / RQD
2C	99/35

Run No.	REC / RQD
1C	98/33

Run No.	REC / RQD

Run No.	REC / RQD



SCALE: 1 division = 0.1 feet

**ROCK CORE SKETCH
LEGEND**

JOINTING

- J - Joint
- MB - Mechanical Break
- X - Angle w/ Horizontal
- // - Parallel
- X - Crossing
- F - Foliation
- S - Stratification
- U - Unfoliated or Unstratified

SURFACE

- C - Curved
- I - Irregular
- S - Straight

CONDITION

- 1 - Slick
- 2 - Smooth
- 3 - Rough

SKETCH SYMBOLS

- Joint
- Healed Joint
- Broken
- Part of Core Not Recovered
- Cavities or Vugs in Core
- Clay
- Sand
- Empty Space

NOTES

MUESER RUTLEDGE CONSULTING ENGINEERS
ROCK CORE SKETCH

BORING NO. B-4P

SHEET 3 OF 9

FILE NO. 11550

SURFACE ELEV. 15.94

RES. ENGR. D. GEORGE

PROJECT 73RD/74TH STREET PROJECT

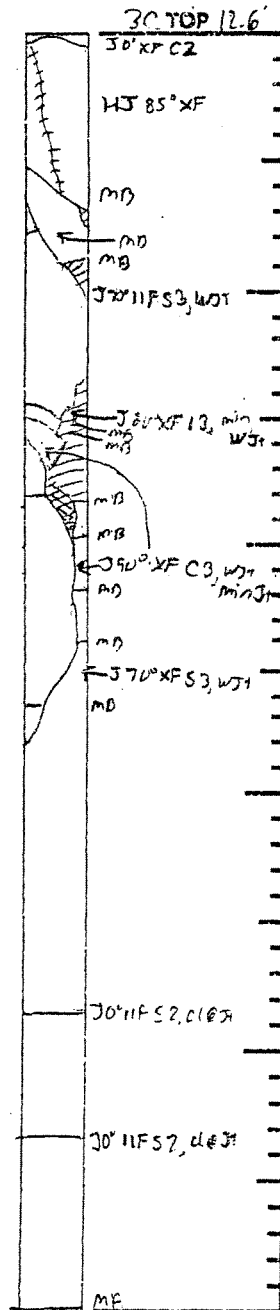
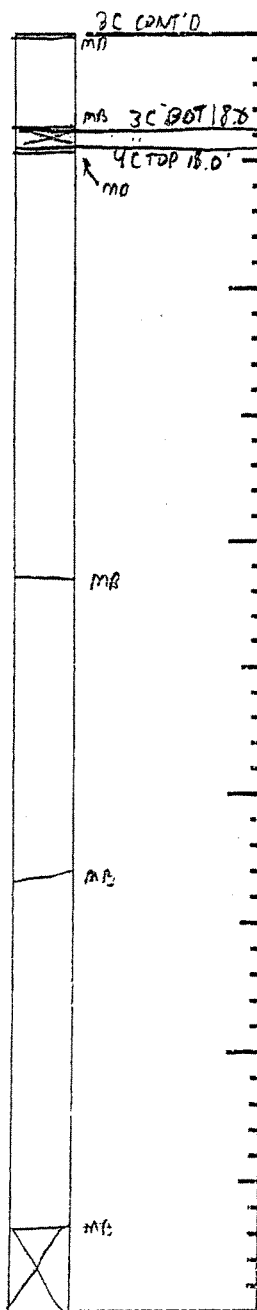
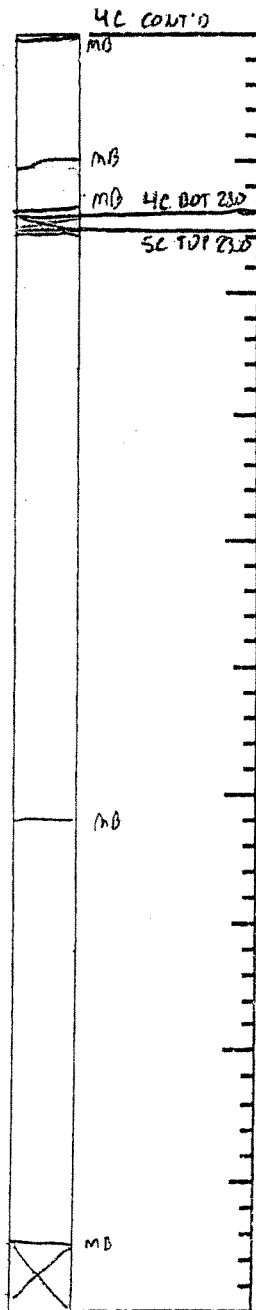
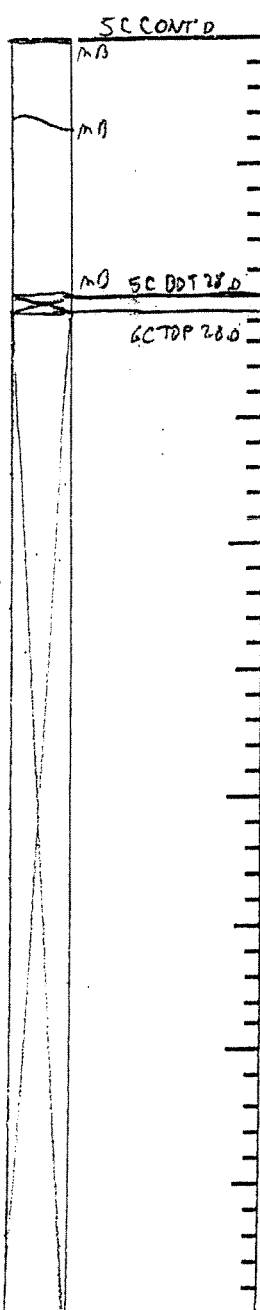
LOCATION NEW YORK, NY

Run No.	REC / RQD
5C CONT'D	

Run No.	REC / RQD
4C (CONT'D)	
5C	99/99

Run No.	REC / RQD
3C (CONT'D)	
4C	98/98

Run No.	REC / RQD
3C	100/80



**ROCK CORE SKETCH
LEGEND**

JOINTING

- J - Joint
- MB - Mechanical Break
- * - Angle w/ Horizontal
- // - Parallel
- X - Crossing
- F - Foliation
- S - Stratification
- U - Unfoliated or Unstratified

SURFACE

- C - Curved
- I - Irregular
- S - Straight

CONDITION

- 1 - Slick
- 2 - Smooth
- 3 - Rough

SKETCH SYMBOLS

- Joint
- Healed Joint
- Broken
- Part of Core Not Recovered
- Cavities or Vugs in Core
- Clay
- Sand
- Empty Space

SCALE: 1 division = 0.1 feet

NOTES _____

**MUESER RUTLEDGE CONSULTING ENGINEERS
ROCK CORE SKETCH**

BORING NO. B-4 P
SHEET 4 OF 8
FILE NO. 11550
SURFACE ELEV. 15.94
RES. ENGR. D. GEORGE

PROJECT 73RD/74TH STREET PROJECT

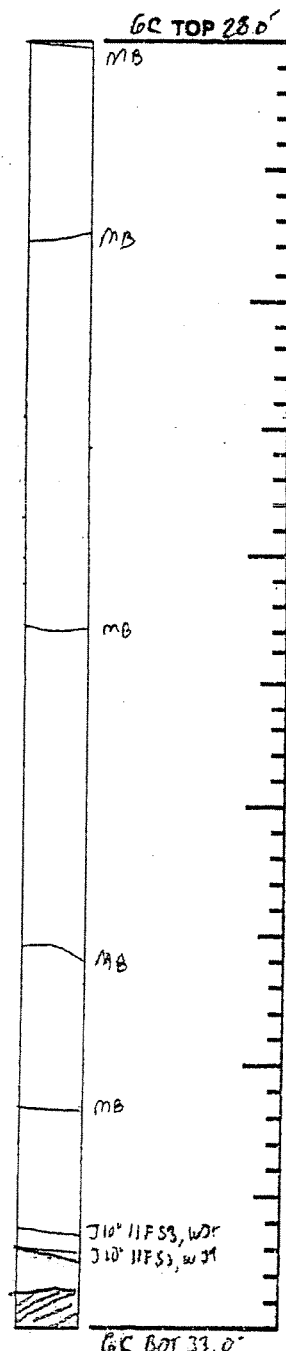
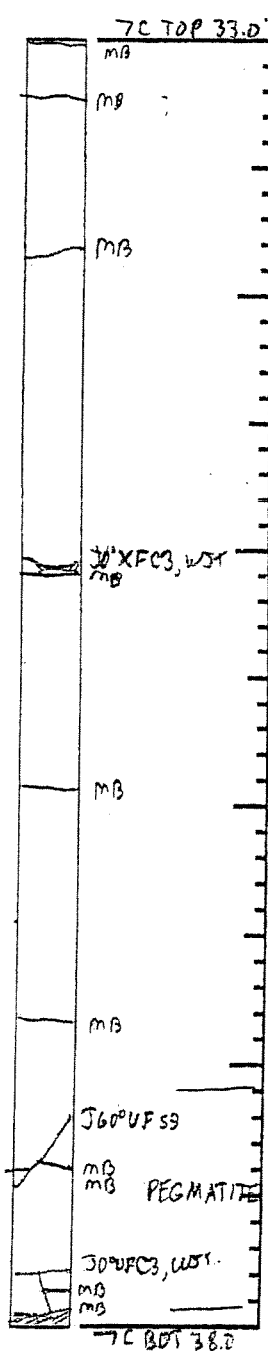
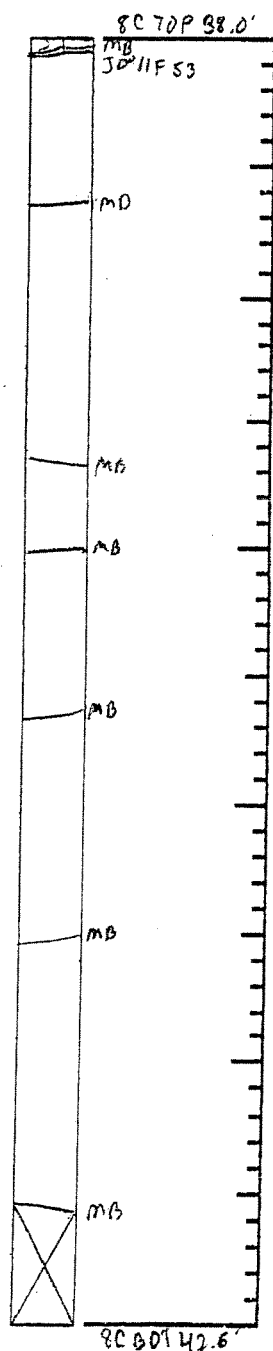
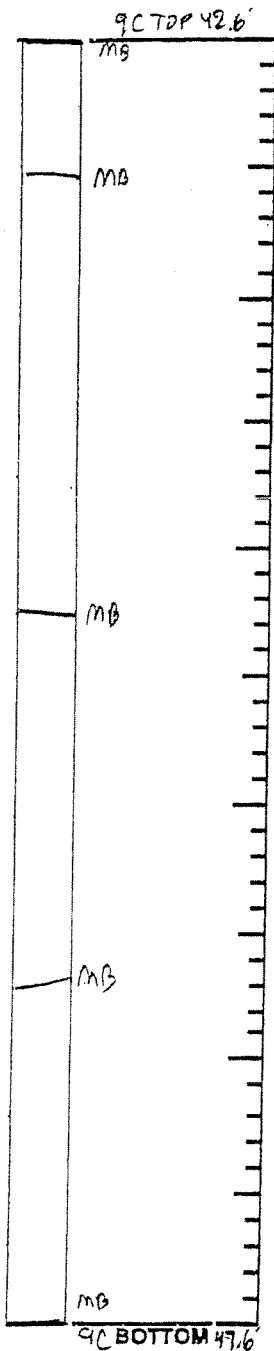
LOCATION NEW YORK, NY

Run No.	REC / RQD
9C	100/100

Run No.	REC / RQD
8C	100/100

Run No.	REC / RQD
7C	99/95

Run No.	REC / RQD
6C	97/92



ROCK CORE SKETCH LEGEND	
JOINTING	
J	- Joint
MB	- Mechanical Break
K	- Angle w/ Horizon
//	- Parallel
X	- Crossing
F	- Foliation
S	- Stratification
U	- Unfoliated or Unstratified
SURFACE	
C	- Curved
I	- Irregular
S	- Straight
CONDITION	
1	- Slick
2	- Smooth
3	- Rough
SKETCH SYMBOLS	
	Joint
	Healed Joint
	Broken
	Part of Core Not Recovered
	Cavities or Vugs in Core
	Clay
	Sand
	Empty Space

NOTES

**MUESER RUTLEDGE CONSULTING ENGINEERS
ROCK CORE SKETCH**

BORING NO. B-4P
SHEET 5 OF 4
FILE NO. USSD
SURFACE ELEV. 15.94
RES. ENGR. D. GEORGE

PROJECT 73RD/74TH STREET PROJECT

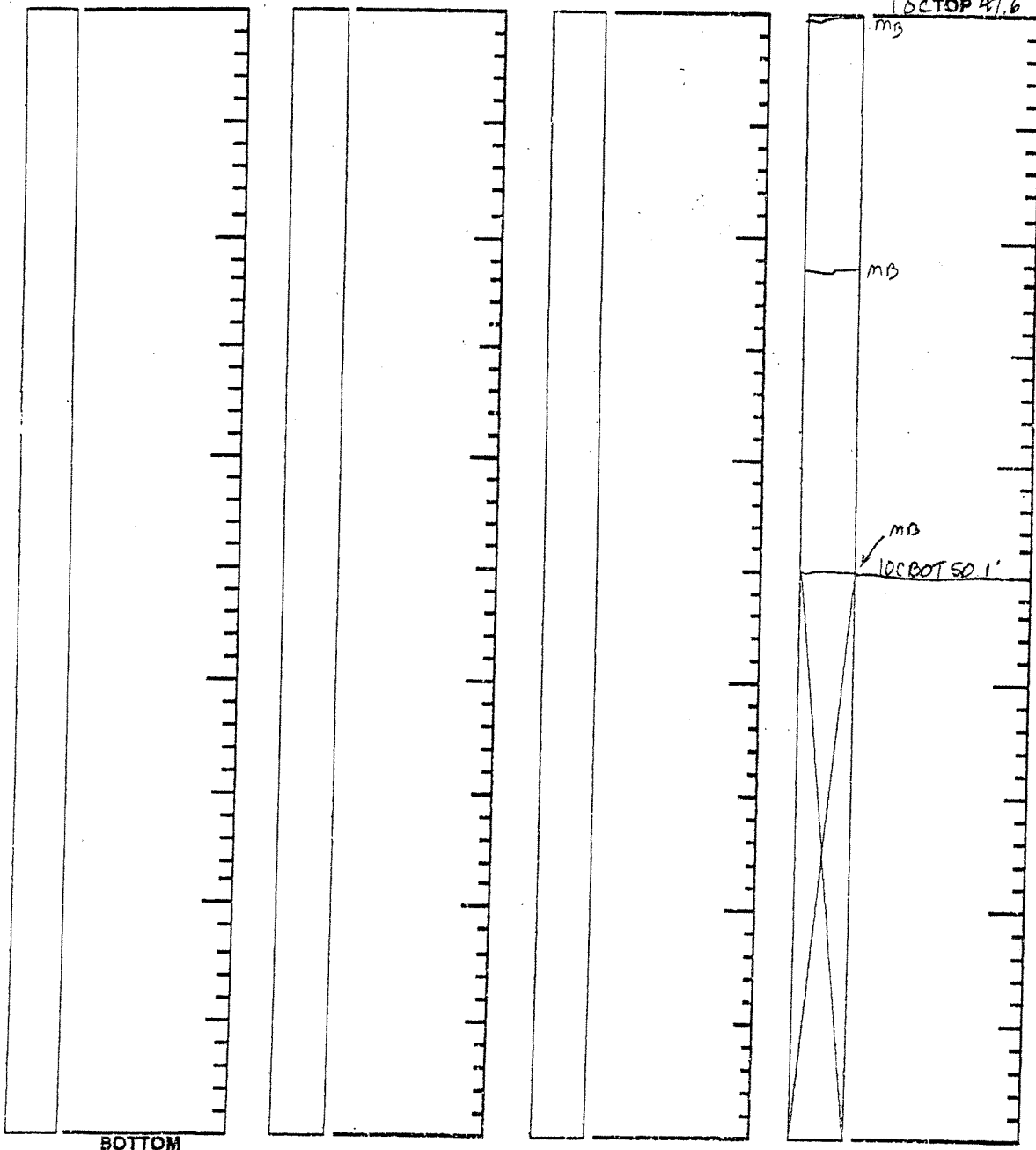
LOCATION NEW YORK, NY

Run No.	REC / RQD

Run No.	REC / RQD

Run No.	REC / RQD

Run No.	REC / RQD
10C	98/98



**ROCK CORE SKETCH
LEGEND**

JOINTING

- J - Joint
- MB - Mechanical Break
- * - Angle w/ Horizontal
- // - Parallel
- X - Crossing
- F - Foliation
- S - Stratification
- U - Unfoliated or Unstratified

SURFACE

- C - Curved
- I - Irregular
- S - Straight

CONDITION

- 1 - Slick
- 2 - Smooth
- 3 - Rough

SKETCH SYMBOLS

- Joint
- Healed Joint
- Broken
- Part of Core Not Recovered
- Cavities or Vugs in Core
- Clay
- Sand
- Empty Space

NOTES

MUESER RUTLEDGE CONSULTING ENGINEERS

PIEZOMETER RECORD

SHEET 1 OF 1
FILE NO. 1550
SUBCODE _____

PROJECT 73RD/74TH STREET PROJECT PIEZOMETER NO. B-4P
LOCATION NEW YORK NY
PIEZOMETER LOCATION SEE BORING LOCATION PLAN DATE OF INSTALLATION 4/3/11
☐ SEE SKETCH ON BACK RES. ENG. D. GEORGE

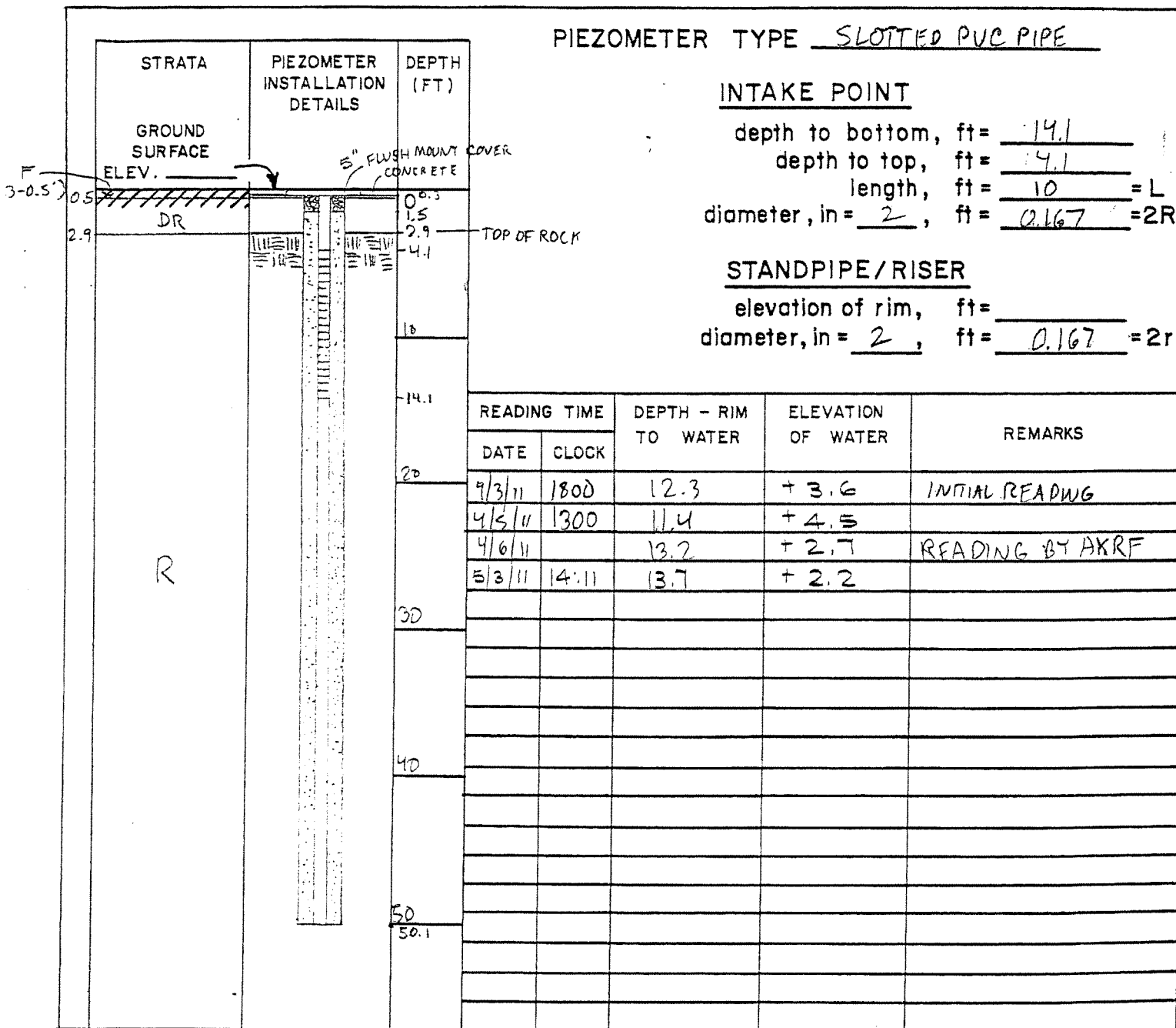
PIEZOMETER TYPE SLOTTED PVC PIPE

INTAKE POINT

depth to bottom, ft = 14.1
depth to top, ft = 14.1
length, ft = 10 = L
diameter, in = 2, ft = 0.167 = 2R

STANDPIPE/RISER

elevation of rim, ft = _____
diameter, in = 2, ft = 0.167 = 2r



Sand Bentonite
 Gravel Grout

GROUND SURFACE ELEV. +15.94

PIEZOMETER NO. B-4P

VARIABLE HEAD PERMEABILITY TEST

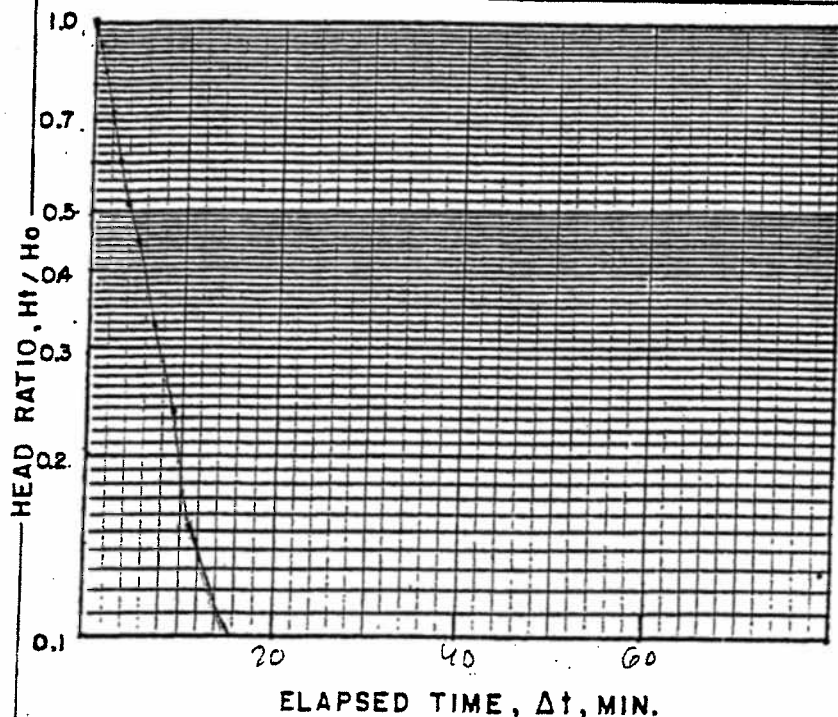
☐ BOREHOLE OR ☒ PIEZOMETER NO. B-4P

TEST NO. 1

PROJECT 73RD/74TH STREET PROJECT RES. ENG. D. GEORGE

LOCATION NEW YORK, NY CALC. BY DJG DATE 4/5/11

PIEZOMETER LOCATION SEE BORING LOCATION PLAN CH'KD BY DATE



INTAKE POINT

depth to bottom, ft = 14.1

depth to top, ft = 4.1

length, ft = 10 = L

diameter, in = 2, ft = 0.167 = 2R

STANDPIPE/RISER

diameter, in = 2, ft = 0.167 = 2r

depth of casing, ft = 50.1

depth to which stand-pipe was boiled, ft = 11.4 = Z

READING TIME			TEST DEPTH- RIM TO WATER ft.	DEPTH- RIM TO TIDE OR GWL ft.	UNBALANCED HEAD H ft.	HEAD RATIO H1/H0	REMARKS
DATE	CLOCK	Δt MIN.					
4/5/11	1300			13.9	0		STATIC WATER LEVEL
	1311	0	11.4		2.5	1.00	
	1311.5	0.5	11.6		2.3	0.920	
	1312	1	11.8		2.1	0.840	
	1313	2	12.1		1.8	0.720	
	1314	3	12.4		1.5	0.600	
	1315	4	12.6		1.3	0.520	
	1316	5	12.78		1.12	0.448	
	1317	7	13.08		0.82	0.328	
	1320	9	13.31		0.59	0.236	
	1322	11	13.52		0.38	0.152	
	1324	13	13.66		0.24	0.096	
	1326	15	13.68		0.22	0.088	
	1331	20	13.65		0.25	0.100	
	1336	25	13.65		0.25	0.100	
	1341	30	13.65		0.25	0.100	AVG INF RATE: 0.0385 FT/MIN
	1351	40	13.66		0.24	0.096	
	1401	50	13.66		0.24	0.096	
	1411	60	13.71		0.19	0.076	

PIEZOMETER NO. B-4P

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT <u>73RD/74TH STREET PROJECT</u> LOCATION <u>NEW YORK, NEW YORK</u> BORING LOCATION <u>SEE BORING LOCATION PLAN</u>	BORING NO. <u>B-4P</u> SHEET <u>8</u> OF <u>8</u> FILE NO. <u>11550</u> SURFACE ELEV. <u>+15.94</u> DATUM <u>BOROUGH PRESIDENT</u> <u>OF MANHATTAN</u>
---	---

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED	CASING USED	☒ YES	☐ NO	
TRUCK	DURING CORING	DIA., IN.			
SKID	MECHANICAL	<u>3</u>			DEPTH, FT. FROM <u>0</u> TO <u>2.7</u>
BARGE	HYDRAULIC	<u>X</u>			DEPTH, FT. FROM <u> </u> TO <u> </u>
OTHER	OTHER	DIA., IN.			DEPTH, FT. FROM <u> </u> TO <u> </u>
	<u>DK-50 (TRACK)</u>				

TYPE AND SIZE OF:	DRILLING MUD USED
D-SAMPLER <u>3" O. D. SPLIT SPOON</u>	☐ YES ☒ NO
U-SAMPLER <u> </u>	DIAMETER OF ROTARY BIT, IN. <u>2-7/8</u>
S-SAMPLER <u> </u>	TYPE OF DRILLING MUD <u> </u>
CORE BARREL <u>7.3' NX DOUBLE TUBE</u>	AUGER USED
CORE BIT <u>DIAMOND BIT</u>	☒ YES ☐ NO
DRILL RODS <u>NWJ</u>	TYPE AND DIAMETER, IN. <u>HSA: BIT 8.5" DIA., 4" I. D.</u>
	CASING HAMMER, LBS. <u> </u> AVERAGE FALL, IN. <u> </u>
	*SAMPLER HAMMER, LBS. <u>140</u> AVERAGE FALL, IN. <u>24</u>
	*USED DONUT HAMMER <u> </u>

WATER LEVEL OBSERVATIONS IN BOREHOLE

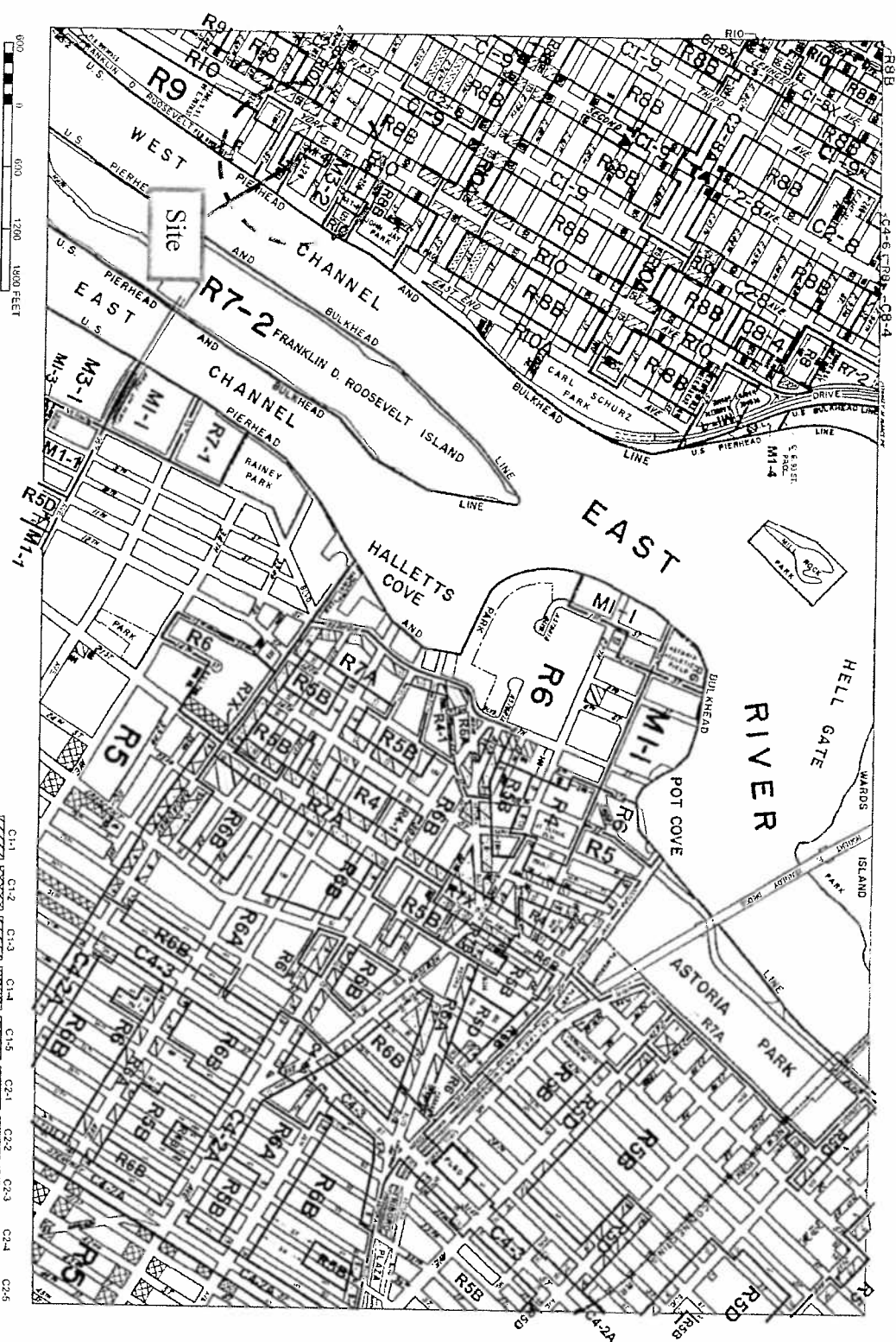
DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	CONDITIONS OF OBSERVATION
04-03-11	17:00	50.1	2.7	9.1	READING TAKEN AT END OF BORING.
04-03-11	18:00	50.1		12.3	READING TAKEN AT END OF WELL INSTALLATION.

PIEZOMETER INSTALLED	☒ YES	☐ NO	SKETCH SHOWN ON	PIEZOMETER RECORD SHEET 6
STANDPIPE:	TYPE	<u>PVC</u>	ID, IN.	<u>2</u>
INTAKE ELEMENT:	TYPE	<u>SLOTTED PVC</u>	OD, IN.	<u>2-3/8</u>
FILTER:	MATERIAL	<u>FILTER SAND</u>	OD, IN.	<u>3</u>
			LENGTH, FT.	<u>49.8</u>
			LENGTH, FT.	<u>10</u>
			LENGTH, FT.	<u>48.6</u>
			TOP ELEV.	<u>15.6</u>
			TIP ELEV.	<u>1.8</u>
			BOT. ELEV.	<u>-34.2</u>

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING	LIN. FT.	<u>2.9</u>	NO. OF 3" SHELBY TUBE SAMPLES	<u> </u>
3.5" DIA. U-SAMPLE BORING	LIN. FT.	<u> </u>	NO. OF 3" UNDISTURBED SAMPLES	<u> </u>
CORE DRILLING IN ROCK	LIN. FT.	<u>47.2</u>	OTHER:	<u> </u>

BORING CONTRACTOR	WARREN GEORGE, INC.
DRILLER	EDWIN FELICIANO/GREG WILLIAMS
REMARKS	HELPERS GREG WILLIAMS/CYRIL FARLEY
	PIEZOMETER INSTALLED.
RESIDENT ENGINEER	DANIEL GEORGE
CLASSIFICATION CHECK:	CHERYL J. MOSS
	TYPING CHECK: DANIEL GEORGE
	DATE 04-03-11
	BORING NO. B-4P



- CH-1 CH-2 CH-3 CH-4 CH-5 CH-6 CH-7 CH-8 CH-9 CH-10 CH-11 CH-12 CH-13 CH-14 CH-15 CH-16 CH-17 CH-18 CH-19 CH-20 CH-21 CH-22 CH-23 CH-24 CH-25 CH-26 CH-27 CH-28 CH-29 CH-30 CH-31 CH-32 CH-33 CH-34 CH-35 CH-36 CH-37 CH-38 CH-39 CH-40 CH-41 CH-42 CH-43 CH-44 CH-45 CH-46 CH-47 CH-48 CH-49 CH-50 CH-51 CH-52 CH-53 CH-54 CH-55 CH-56 CH-57 CH-58 CH-59 CH-60 CH-61 CH-62 CH-63 CH-64 CH-65 CH-66 CH-67 CH-68 CH-69 CH-70 CH-71 CH-72 CH-73 CH-74 CH-75 CH-76 CH-77 CH-78 CH-79 CH-80 CH-81 CH-82 CH-83 CH-84 CH-85 CH-86 CH-87 CH-88 CH-89 CH-90 CH-91 CH-92 CH-93 CH-94 CH-95 CH-96 CH-97 CH-98 CH-99 CH-100

NOTE: Zoning information is shown on this map as a guide only. The official zoning map is the Zoning Resolution of the City of New York, as amended, and the Zoning Map of the City of New York, as amended. For more information, please contact the City Planning Department at (212) 312-1500.

ZONING MAP

THE NEW YORK CITY PLANNING COMMISSION

Major Zoning Classifications:

- R - Residential Single-Family
- C - Commercial
- M - Medium Density Residential
- H - Heavy Industrial
- I - Industrial
- P - Public Use
- U - Urban
- W - Waterfront
- X - Extraordinary
- Y - Yacht
- Z - Zoning

Effective Date(s) of Rezoning:

Effective Date(s) of Rezoning:

Special Requirements:

For more information, please contact the City Planning Department at (212) 312-1500.

MAP KEY

5d	6b	6d
8c	9a	9c
8d	9b	9d

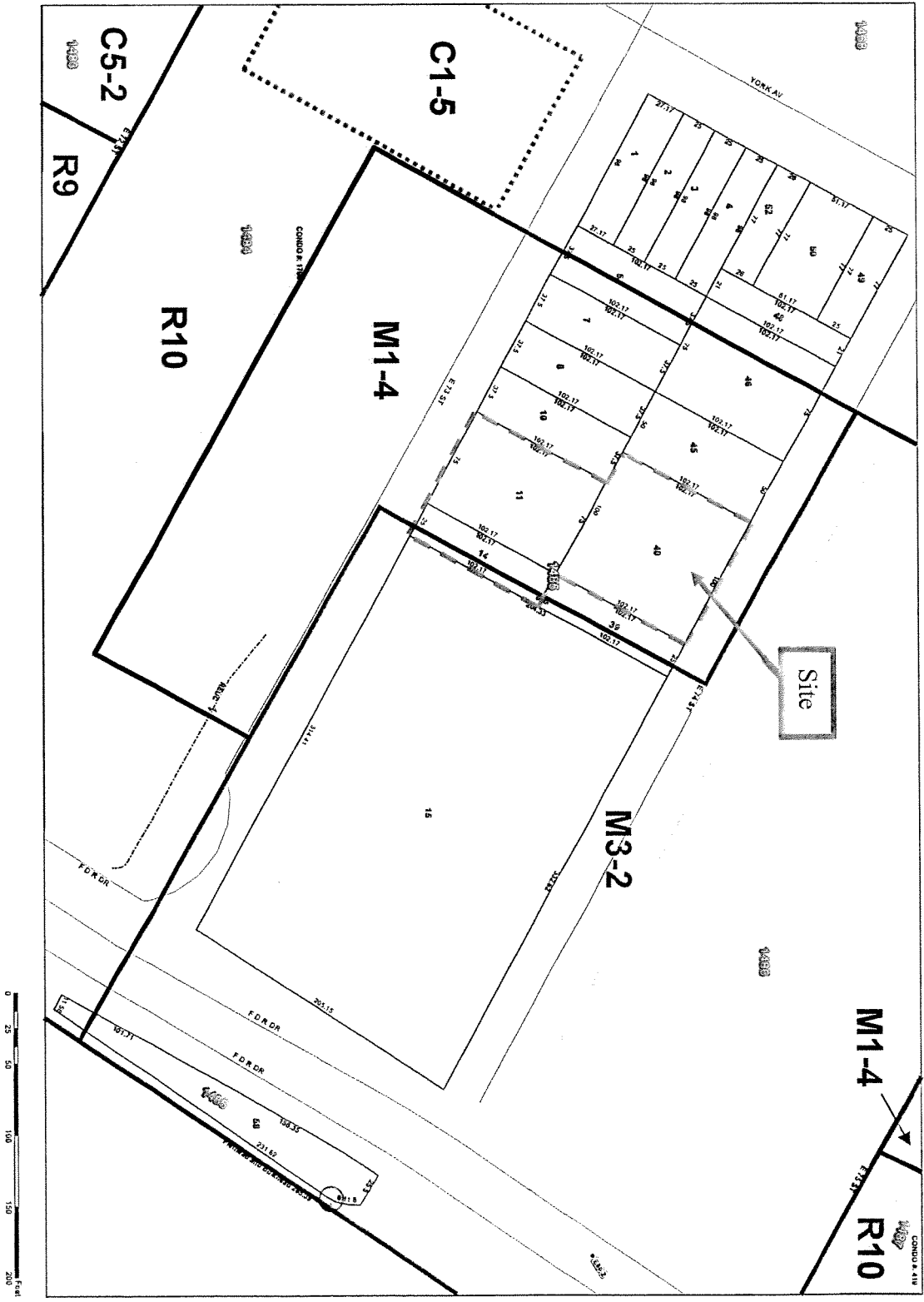
9a

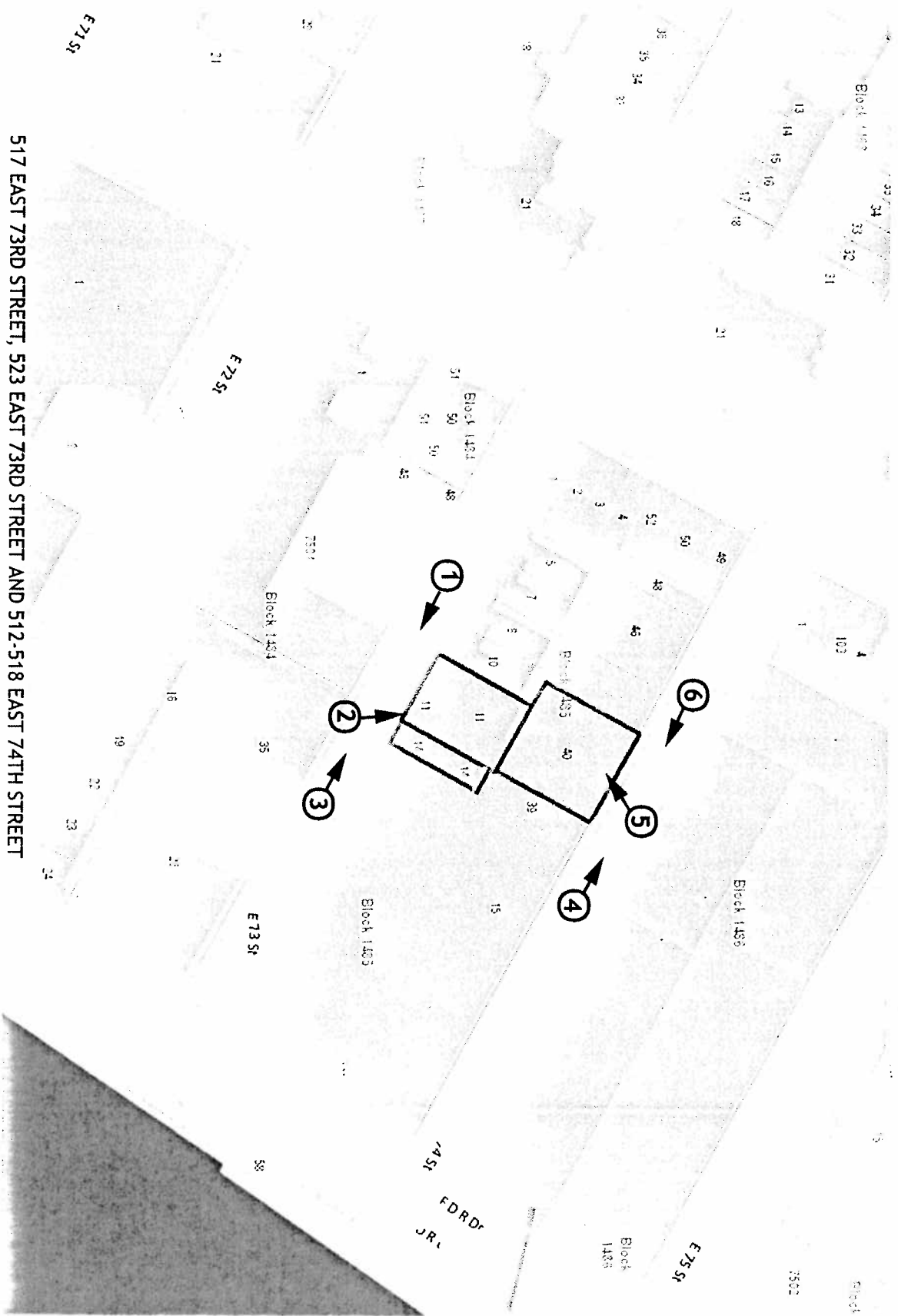


NYC Digital Tax Map
Effective Date : 12-09-2008 12:00:14
End Date : Current
Manhattan Block: 1405



- Legend**
- Streets
 - 1 Possession Hook
 - 1 Boundary Line
 - 1 Lot Easement Possession Hook
 - Regular
 - Underwater
 - Tax Lot Polygon
 - Condo Number
 - Tax Block Polygon
 - 1 Site
 - 1 Commercial overlay





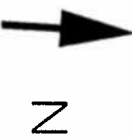
CAMERA POSITION

BOROUGH OF MANHATTAN

LOTS: 11,14,40

BLOCK: 1485

517 EAST 73RD STREET, 523 EAST 73RD STREET AND 512-518 EAST 74TH STREET



PHOTOGRAPH LOCATION POINTS

NOT TO SCALE

Photographed by:

GEORGE CONSTANTINOU

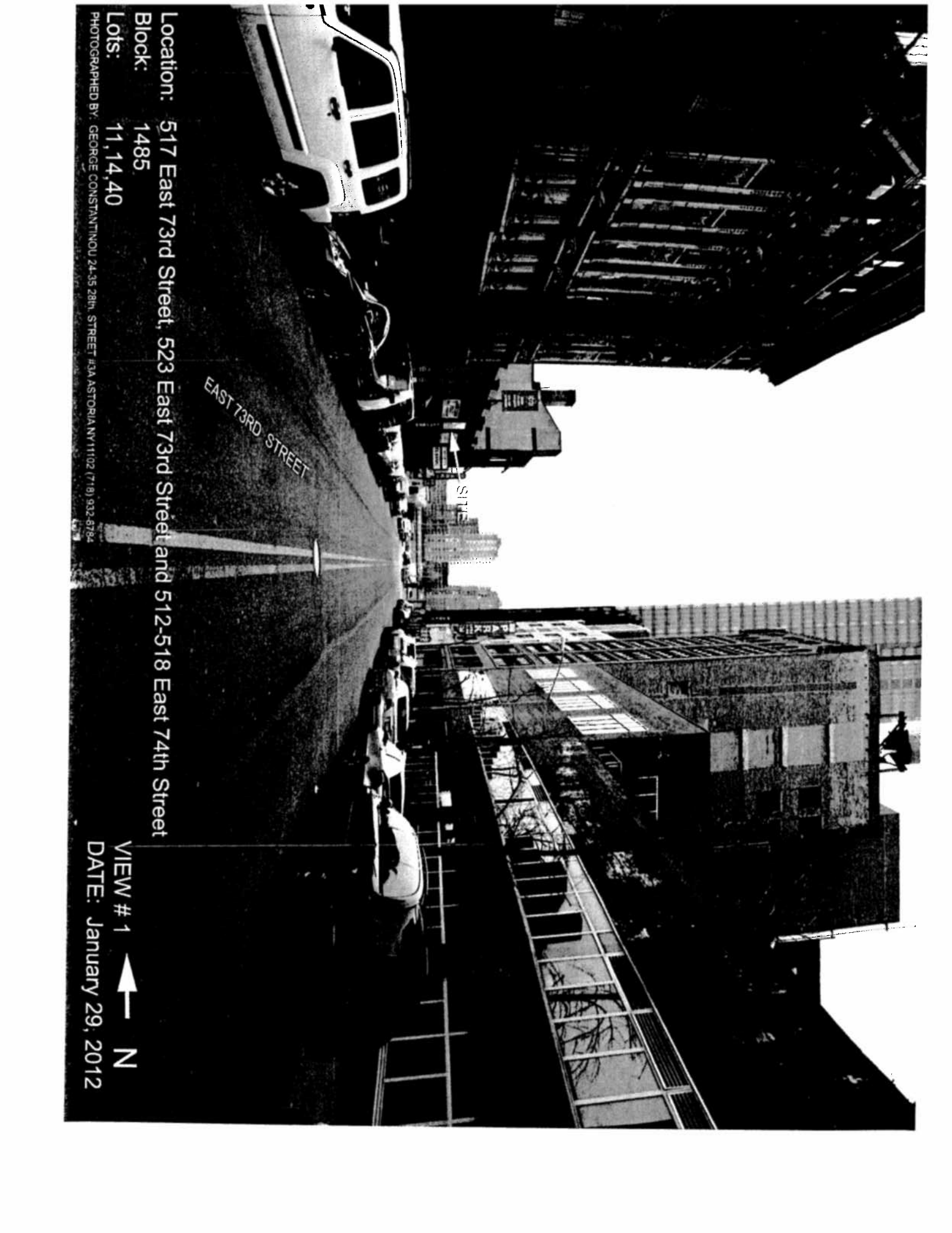
24-35 28TH STREET, #3A

LONG ISLAND CITY, NY 11102

Phone: (718) 932-8784

Fax: (718) 932-3685

Date: January 29, 2012



EAST 73RD STREET

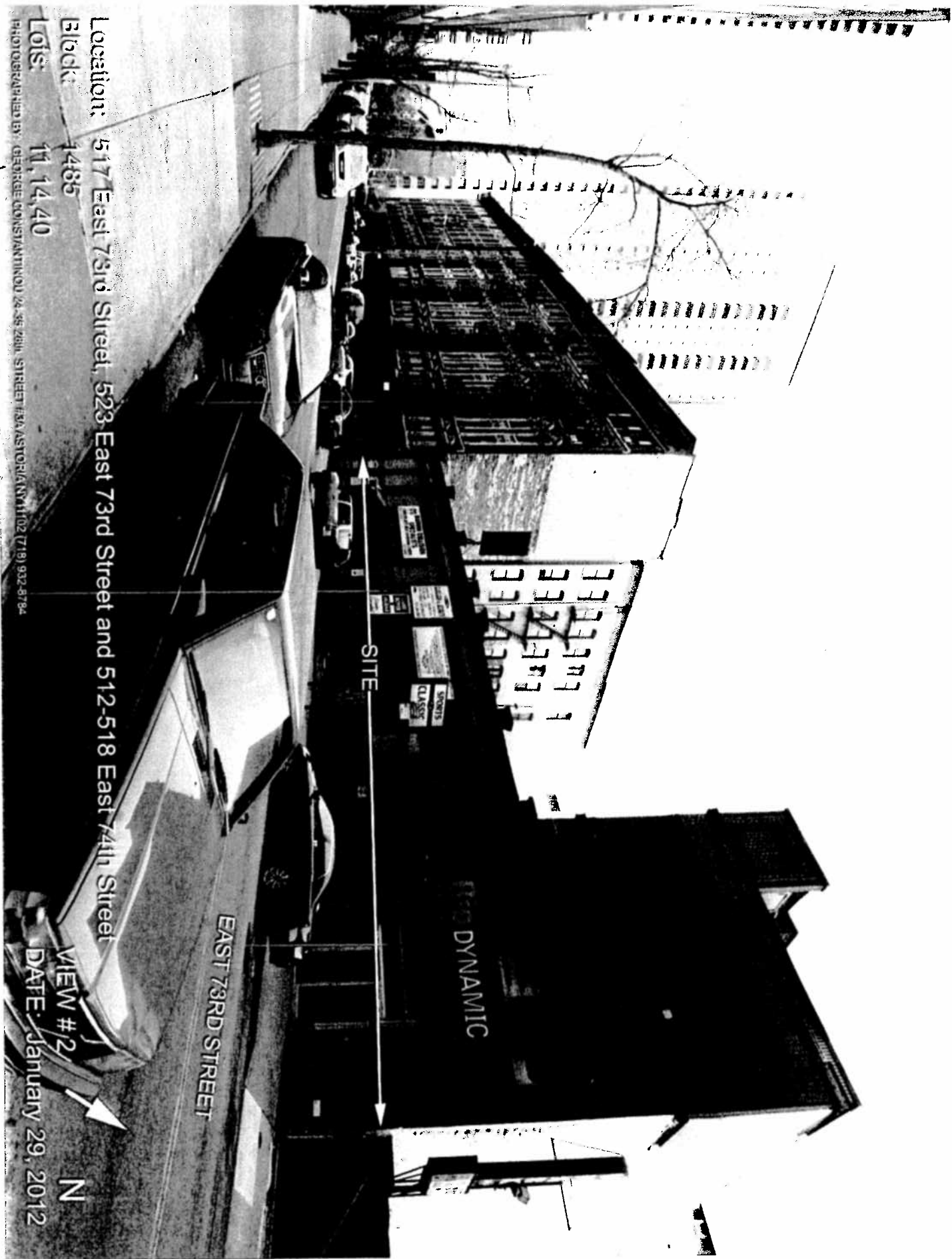
Location: 517 East 73rd Street, 523 East 73rd Street and 512-518 East 74th Street
Block: 1485

Lots: 11,14,40

PHOTOGRAPHED BY: GEORGE CONSTANTINOU 24-35 28th STREET #3A ASTORIA NY 11102 (718) 932-8784

VIEW # 1  N

DATE: January 29, 2012



Location: 517 East 73rd Street, 523 East 73rd Street and 512-518 East 74th Street

Block: 1485

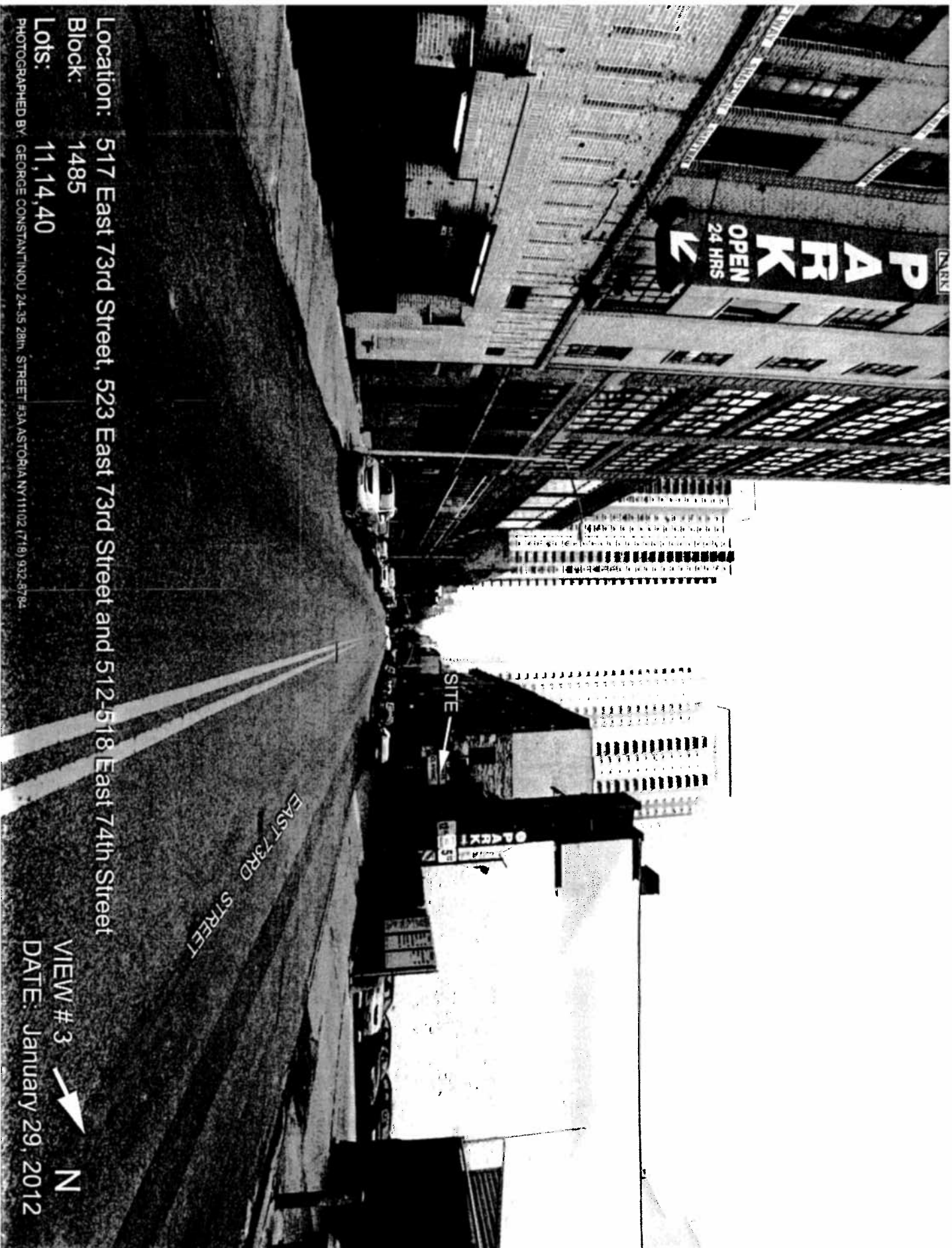
Lots: 11, 14, 40

PHOTOGRAPHED BY: GEORGE CONSTANTINOU 24, 35 28th STREET #3A ASTORIA, OR 97102 (718) 932-8784

VIEW #12

DATE: January 29, 2012

N



Location: 517 East 73rd Street, 523 East 73rd Street and 512-518 East 74th Street

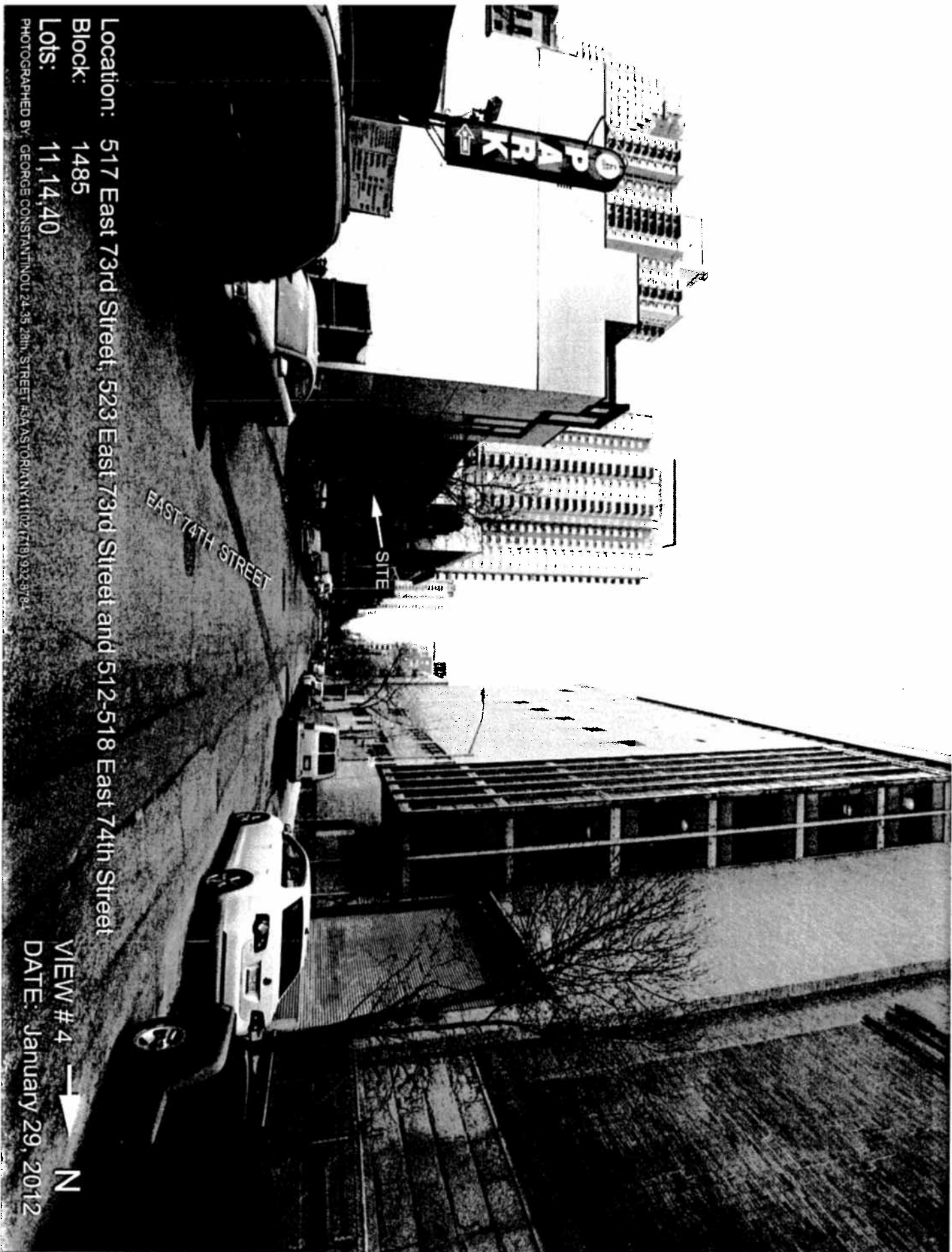
Block: 1485

Lots: 11,14,40

PHOTOGRAPHED BY: GEORGE CONSTANTINOU 24-35 28th, STREET #3A ASTORIA NY 11102 (718) 932-8794

VIEW # 3  N

DATE: January 29, 2012



Location: 517 East 73rd Street, 523 East 73rd Street and 512-518 East 74th Street

Block: 1485

Lots: 11,14,40

PHOTOGRAPHED BY: GEORGE CONSTANTINOU 24-35 28th, STREET #3A ASTORIA, OR 97102 (719) 932-9764

VIEW # 4 → N

DATE: January 29, 2012



Location: 517 East 73rd Street, 523 East 73rd Street and 512-518 East 74th Street
Block: 1485

Block: 1485

Lots: 11, 14, 40
PHOTOGRAPHED BY: GEORGE CONSTANTIN

PHOTOGRAPHED BY: GEORGE CONSTANTINO 24-35 28th STREET #3A ASTORIA 11102 (718) 592-9762

VIEW #5
7
N

DATE: January 29, 2012



Location: 517 East 73rd Street, 523 East 73rd Street and 512-518 East 74th Street

Block: 1485

Lots: 11,14,40

PHOTOGRAPHED BY: GEORGE CONSTANTINO 24-35 28h. STREET #3A ASTORIA NY 11102 (718) 932-8784

VIEW # 6 — N

DATE: January 29, 2012



City Environmental Quality Review
ENVIRONMENTAL ASSESSMENT STATEMENT FULL FORM
Please fill out, print and submit to the appropriate agency (see instructions)

PART I: GENERAL INFORMATION

PROJECT NAME Hospital for Special Surgery Ambulatory Surgery Center

1. Reference Numbers

CEQR REFERENCE NUMBER (To Be Assigned by Lead Agency) TO COME	BSA REFERENCE NUMBER (If Applicable) TO COME
ULURP REFERENCE NUMBER (If Applicable)	OTHER REFERENCE NUMBER(S) (If Applicable) (e.g., Legislative Intro, CAPA, etc.)

2a. Lead Agency Information

NAME OF LEAD AGENCY
New York City Board of Standards and Appeals

NAME OF LEAD AGENCY CONTACT PERSON

Rory Levy

ADDRESS

40 Rector Street

CITY

New York

STATE

NY

ZIP

10005

TELEPHONE

212-788-8749

FAX

212-788-8769

EMAIL ADDRESS

rlevy@bsa.nyc.gov

2b. Applicant Information

NAME OF APPLICANT

Hospital for Special Surgery (HSS)

NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON

**Carol Rosenthal, Partner
Fried, Frank, Harris, Shriver & Jacobson LLP**

ADDRESS

One New York Plaza

CITY

New York

STATE

NY

ZIP

10004

TELEPHONE

212-859-8495

FAX

212-859-4000

EMAIL ADDRESS

Carol.Rosenthal@friedfrank.com

3. Action Classification and Type

SEQRA Classification

☐ UNLISTED

☒

TYPE I: SPECIFY CATEGORY (see 6 NYCRR 617.4 and NYC Executive Order 91 of 1977, as amended):

Health related facility of at least 100,000 sf (43 RCNY 6-15)

Action Type (refer to Chapter 2, "Establishing the Analysis Framework" for guidance)

☒ LOCALIZED ACTION, SITE SPECIFIC

☐ LOCALIZED ACTION, SMALL AREA

☐ GENERIC ACTION

4. Project Description:

See Attachment A, "Project Description."

4a. Project Location: Single Site (for a project at a single site, complete all the information below)

ADDRESS **513-523 East 73rd Street and 512-518 East 74th Street**

NEIGHBORHOOD NAME

Lenox Hill

TAX BLOCK AND LOT

Block 1485, Lots 11, 14, and 40

BOROUGH

Manhattan

COMMUNITY DISTRICT

8

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS

Middle of block bounded by East 74th Street, FDR Drive, East 73rd Street, and York Avenue

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY

M1-4, M3-2

ZONING SECTIONAL MAP NO.

9a

4b. Project Location: Multiple Sites (Provide a description of the size of the project area in both City Blocks and Lots. If the project would apply to the entire city or to areas that are so extensive that a site-specific description is not appropriate or practicable, describe the area of the project, including bounding streets, etc.)

N/A

5. REQUIRED ACTIONS OR APPROVALS (check all that apply)

City Planning Commission:

YES

☐

NO

☒

☐ CITY MAP AMENDMENT

☐ ZONING CERTIFICATION

☐ ZONING MAP AMENDMENT

☐ ZONING AUTHORIZATION

☐ ZONING TEXT AMENDMENT

☐ HOUSING PLAN & PROJECT

☐ UNIFORM LAND USE REVIEW PROCEDURE (ULURP)

☐ SITE SELECTION—PUBLIC FACILITY

☐ CONCESSION

☐ FRANCHISE

☐ UDAAP

☐ DISPOSITION—REAL PROPERTY

☐ REVOCABLE CONSENT

ZONING SPECIAL PERMIT, SPECIFY TYPE

☐ MODIFICATION OF

☐ RENEWAL OF

☐ OTHER

Board of Standards and Appeals:

YES

☒

NO

☐

☐ SPECIAL PERMIT

EXPIRATION DATE

MONTH

DAY

YEAR

☒ VARIANCE (USE)

☒ VARIANCE (BULK)

SPECIFY AFFECTED SECTION(S) OF THE ZONING RESOLUTION

ZR Sections 43-122, 42-12, 43-28(b), 43-23(b), 43-44, and 13-133

April 27, 2012

Department of Environmental Protection:		YES ☐	NO ☒
Other City Approvals: YES ☐ NO ☒			
☐ LEGISLATION	☐ RULEMAKING		
☐ FUNDING OF CONSTRUCTION; SPECIFY	☐ CONSTRUCTION OF PUBLIC FACILITIES		
☐ POLICY OR PLAN; SPECIFY	☐ FUNDING OR PROGRAMS; SPECIFY		
☐ LANDMARKS PRESERVATION COMMISSION APPROVAL (not subject to CEQR)	☐ PERMITS; SPECIFY		
☐ 384(B)(4) APPROVAL	☐ OTHER; EXPLAIN		
☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMD) (not subject to CEQR)			
6. State or Federal Actions/Approvals/Funding:		YES ☒	NO ☐ IF "YES," IDENTIFY
Certificate of Need from the New York State Department of Health (NYSDOH) Financing from the U.S. Department of Housing and Urban Development (HUD)			
7. Site Description: Except where otherwise indicated, provide the following information with regard to the directly affected area. The directly affected area consists of the project site and the area subject to any change in regulatory controls.			
GRAPHICS The following graphics must be attached and each box must be checked off before the EAS is complete. Each map must clearly depict the boundaries of the directly affected area or areas, and indicate a 400-foot radius drawn from the outer boundaries of the project site. Maps may not exceed 11x17 inches in size and must be folded to 8.5x11 inches for submission. See Figures 1 through 4			
☒ Site location map	☒ Zoning map	☒ Photographs of the project site taken within 6 months of EAS submission and keyed to the site location map	
☒ Sanborn or other land use map	☐ Tax map	☐ For large areas or multiple sites, a GIS shape file that defines the project sites	
PHYSICAL SETTING (both developed and undeveloped areas)			
Total directly affected area (sq. ft.): 20,434 (lot area)	Type of waterbody and surface area (sq. ft.): 0	Roads, building and other paved surfaces (sq. ft.): 20,434 (lot area)	
Other, describe (sq. ft.): 0			
8. Physical Dimensions and Scale of Project (if the project affects multiple sites, provide the total development below facilitated by the action)			
Size of project to be developed: ±213,775		(gross sq. ft.)	
Does the proposed project involve changes in zoning on one or more sites? YES ☐ NO ☒		Total square feet of non-applicant owned development:	
If "Yes," identify the total square feet owned or controlled by the applicant:			
Does the proposed project involve in-ground excavation or subsurface disturbance, including but not limited to foundation work, pilings, utility lines, or grading? YES ☒ NO ☐			
If "Yes," indicate the estimated area and volume dimensions of subsurface disturbance (if known):			
Area: ±20,300	sq. ft. (width x length)	Volume: ±345,100	cubic feet (width x length x depth)
Does the proposed project increase the population of residents and/or on-site workers? YES ☒ NO ☐		Number of additional residents?	Number of additional workers? ±50
Provide a brief explanation of how these numbers were determined:			
The proposed project would not include residential uses and would therefore not generate any new residents. Employee estimates for the proposed building are provided by HSS. Compared with the Complying Building, the proposed building would result in approximately 50 additional employees.			
Does the project create new open space? YES ☐ NO ☒ If Yes:		(sq. ft)	
Using Table 14-1, estimate the project's projected operation solid waste generation, if applicable:		7,800¹	(pounds per week)
Using energy modeling or Table 15-1, estimate the project's projected energy use:		46.2 billion²	(annual BTUs)
9. Analysis Year CEQR Technical Manual, Chapter 2			
ANTICIPATED BUILD YEAR (DATE THE PROJECT WOULD BE COMPLETED AND OPERATIONAL): 2016		ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: Approximately 30	
WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? YES ☒ NO ☐		IF MULTIPLE PHASES, HOW MANY PHASES:	
BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE:			
10. What is the Predominant Land Use in Vicinity of Project? (Check all that apply)			
☒ RESIDENTIAL	☐ MANUFACTURING	☒ COMMERCIAL	☒ PARK/FOREST/OPEN SPACE
☒ OTHER, Describe: Transportation and Utility, Institutional, Parking			

¹ Based on a commercial rate of 13 pounds per week per employee, and 600 employees (Source: 2010 CEQR Technical Manual, Table 14-1).

² Based on a rate of 216,300 british thermal units per square foot, and 213,775 square feet (Source: 2010 CEQR Technical Manual, Table 15-1).