

Appendix D

Noise

PROPRIETARY INFORMATION - NOT FOR CIRCULATION

RECEPTOR NOISE LEVEL CALCULATION FOR YEAR		EXISTING CONDITIONS												2019 NO BUILD					2019 BUILD				
		2019		Volume	%Auto	%Medium	%Heavy	%Bus	PCEs	L _{eq} (1)	Volume	PCEs	Leq(1)	Change	P-G Autos	P-G Medium	P-G Heavy	P-G Bus	Total PCE's	Leq (1)	Change		
Receptor Location	Site	Hour	Volume	%Auto	%Medium	%Heavy	%Bus	PCEs	L _{eq} (1)	Volume	PCEs	Leq(1)	Change	P-G Autos	P-G Medium	P-G Heavy	P-G Bus	Total PCE's	Leq (1)	Change			
FDR	1	Weekday AM	9680	98.0%	0.2%	0.0%	1.9%	12881	79.3	9836	13177	79.4	0.1	0	0	0	0	13177	79.4	0.0			
		Weekday MD	8496	99.3%	0.1%	0.0%	0.6%	9420	78.7	8624	9662	78.8	0.1	0	0	0	0	9662	78.8	0.0			
		Weekday PM	9816	99.5%	0.1%	0.0%	0.4%	10587	79.7	9964	10747	79.8	0.1	0	0	0	0	10747	79.8	0.0			
73rd Street	3	Weekday AM	560	92.2%	5.9%	0.0%	2.0%	1142	64.9	553	1189	65.1	0.2	22	14	0	0	1383	65.8	0.7			
		Weekday MD	351	95.1%	2.4%	0.0%	2.4%	589	65.5	399	681	66.1	0.6	25	14	0	0	888	67.3	1.2			
		Weekday PM	555	93.5%	1.6%	0.0%	4.8%	1119	65.6	624	1258	66.1	0.5	40	8	0	0	1402	66.6	0.5			

MSK CUNY Proportional Modeling L_w Analysis

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Receptor Location	Site	Hour	NB Change	Existing L10	Category (Existing L10 noise levels)	Existing L10 → NB Change = NB L10	Category (NB L10 noise levels)	Build Change	No Build L10	No Build L10 → Build L10 Change = Build L10	Category (B L10 noise levels)	CEQR criteria 45 dB(A)	Building Attenuation required
FDR	1	Weekday AM	0.1	81.5	CLEARLY UNACCEPTABLE	81.6	CLEARLY UNACCEPTABLE	0.0	81.6	81.6	CLEARLY UNACCEPTABLE	45	38
		Weekday MD	0.1	81.4	CLEARLY UNACCEPTABLE	81.5	CLEARLY UNACCEPTABLE	0.0	81.5	81.5	CLEARLY UNACCEPTABLE	45	38
		Weekday PM	0.1	81.6	CLEARLY UNACCEPTABLE	81.7	CLEARLY UNACCEPTABLE	0.0	81.7	81.7	CLEARLY UNACCEPTABLE	45	38
73rd Street	3	Weekday AM	0.2	68.9	MARGINALLY ACCEPTABLE	67.1	MARGINALLY ACCEPTABLE	0.7	67.1	67.8	MARGINALLY ACCEPTABLE	45	0
		Weekday MD	0.6	67.1	MARGINALLY ACCEPTABLE	67.7	MARGINALLY ACCEPTABLE	1.2	67.7	68.9	MARGINALLY ACCEPTABLE	45	0
		Weekday PM	0.5	67.3	MARGINALLY ACCEPTABLE	67.8	MARGINALLY ACCEPTABLE	0.5	67.8	68.3	MARGINALLY ACCEPTABLE	45	0

MSK TNM Analysis for Site 2

Site	Time	Measured Existing (L _{eq})	TNM Existing (L _{eq})	Diff (dBA)	TNM No Build (L _{eq})	Actual No Build (L _{eq})	Increase (dBA)	NoBuild L ₁₀	TNM Build (L _{eq})	Actual Build (L _{eq})	Increase (dBA)	Build L ₁₀
2	AM	66.6	68.7	-2.1	68.8	66.7	0.1	67.8	69.1	67.0	0.3	68.1
	MD	67.5	67.9	-0.4	68.2	67.8	0.3	69.3	68.7	68.3	0.5	69.8
	PM	66.4	68.5	-2.1	68.5	66.4	0.0	67.4	68.9	66.8	0.4	67.8

MSK Building Attenuation - North Façade

Façade Distance from FDR (feet)	Noise Level from FDR (L ₁₀)*	Façade Distance from E74th St (Feet)	Noise Level from E74th St (L ₁₀)	Calculated L ₁₀ (FDR and E74th St)	Attenuation Required (dBA)
5	81.7	20	69.8	82.0	38
7	80.2	20	69.8	80.6	37
10	78.7	20	69.8	79.2	35
15	76.9	20	69.8	77.7	33
20	75.7	20	69.8	76.7	33
25	74.7	20	69.8	75.9	31
30	73.9	20	69.8	75.3	31
35	73.2	20	69.8	74.9	31
40	72.7	20	69.8	74.5	31
45	72.2	20	69.8	74.1	31
50	71.7	20	69.8	73.9	31
55	71.3	20	69.8	73.6	31
60	70.9	20	69.8	73.4	31
65	70.6	20	69.8	73.2	31
70	70.2	20	69.8	73.0	31
75	69.9	20	69.8	72.9	28
80	69.7	20	69.8	72.7	28
85	69.4	20	69.8	72.6	28
90	69.1	20	69.8	72.5	28
95	68.9	20	69.8	72.4	28
100	68.7	20	69.8	72.3	28
105	68.5	20	69.8	72.2	28
110	68.3	20	69.8	72.1	28
115	68.1	20	69.8	72.0	28
120	67.9	20	69.8	72.0	28
125	67.7	20	69.8	71.9	28
130	67.6	20	69.8	71.8	28
135	67.4	20	69.8	71.8	28

* Calculated assuming a 3 dBA dropoff per doubling of distance.

MSK Building Attenuation - South Façade

Façade Distance from FDR (feet)	Noise Level from FDR (L ₁₀)*	Façade Distance from E73rd St (Feet)	Noise Level from E73rd St (L ₁₀)	Calculated L ₁₀ (FDR and E73rd St)	Attenuation Required (dBA)
5	81.7	20	68.9	81.9	38
7	80.2	20	68.9	80.5	37
10	78.7	20	68.9	79.1	35
15	76.9	20	68.9	77.6	33
20	75.7	20	68.9	76.5	33
25	74.7	20	68.9	75.7	31
30	73.9	20	68.9	75.1	31
35	73.2	20	68.9	74.6	31
40	72.7	20	68.9	74.2	31
45	72.2	20	68.9	73.8	31
50	71.7	20	68.9	73.5	31
55	71.3	20	68.9	73.3	31
60	70.9	20	68.9	73.0	31
65	70.6	20	68.9	72.8	28
70	70.2	20	68.9	72.6	28
75	69.9	20	68.9	72.5	28
80	69.7	20	68.9	72.3	28
85	69.4	20	68.9	72.2	28
90	69.1	20	68.9	72.0	28
95	68.9	20	68.9	71.9	28
100	68.7	20	68.9	71.8	28
105	68.5	20	68.9	71.7	28
110	68.3	20	68.9	71.6	28
115	68.1	20	68.9	71.5	NA
120	67.9	20	68.9	71.4	NA
125	67.7	20	68.9	71.4	NA
130	67.6	20	68.9	71.3	NA
135	67.4	20	68.9	71.2	NA

* Calculated assuming a 3 dBA dropoff per doubling of distance.

MSK Building Attenuation - East Façade

Façade Elevation (feet)	Noise Level from FDR (L ₁₀)*	Attenuation Required
0-100	81.7	38
101-top	78.7	35

*Calculated assuming a 3 dBA decrease above 100 ft elevation

MSK Open Space

Façade Distance from FDR (feet)	Noise Level from FDR (L ₁₀)*	Attenuation Required (dBA)
5	81.7	38
7	80.2	37
10	78.7	35
15	76.9	33
20	75.7	31
25	74.7	31
30	73.9	31
35	73.2	31
40	72.7	28
45	72.2	28
50	71.7	28
55	71.3	28

* Calculated assuming a 3 dBA dropoff per doubling of distance.