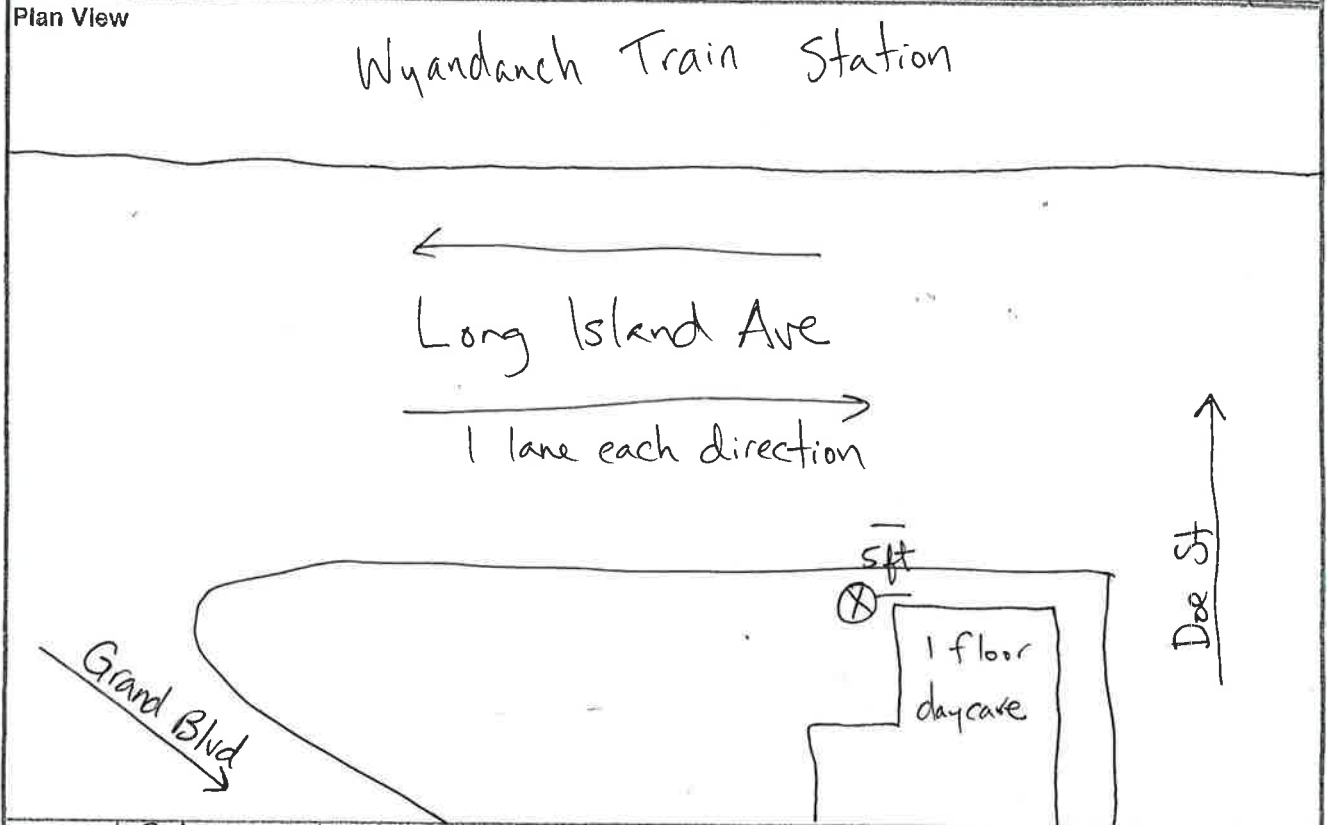


APPENDIX 6

Noise

Field Data Sheets

Project Name	Wyandanch Intermodal Station	Date	7/9/08, 7/10/08
Location	Long Island Ave btw Doe St & Grand	# Site	1
Equipment	B & K 2260	Observer:	Christian



Period	PM	164	# Automobile	2	# Medium Truck	1	# Heavy Truck
Time	17:41	2	# Bus		# Motorcycle	2	# Airplane/ Train
L1	82.0	L50	66.4 66.5	Lmin	49.2	Leq	71.2
L10	74.4	L90	55.8	Lmax	88.0	Lpeak	

Note: \Data\Chris\Wyan\0001

Period	AM	174	# Automobile	90	# Medium Truck	92	# Heavy Truck
Time	6:59	23	# Bus		# Motorcycle	3	# Airplane/ Train
L1	78.8 78.9	L50	67.6	Lmin	53.0	Leq	70.5
L10	74.0 74.1	L90	57.4 57.5	Lmax	84.7	Lpeak	

Note: \0003

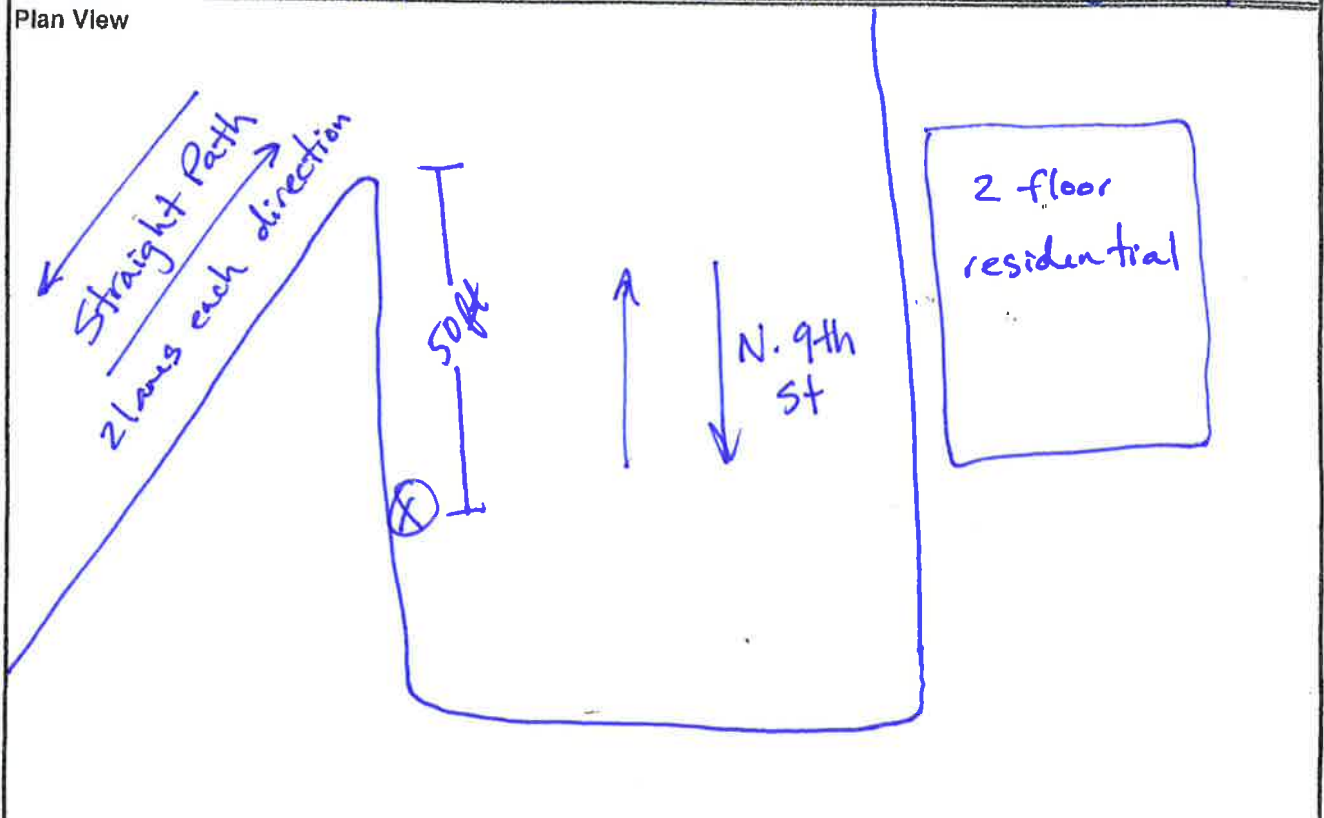
Period			# Automobile		# Medium Truck		# Heavy Truck
Time			# Bus		# Motorcycle		# Airplane/ Train
L1		L50		Lmin		Leq	
L10		L90		Lmax		Lpeak	

Note:

Period			# Automobile		# Medium Truck		# Heavy Truck
Time			# Bus		# Motorcycle		# Airplane/ Train
L1		L50		Lmin		Leq	
L10		L90		Lmax		Lpeak	

Note:

Project Name	Wyandanch Intermodal Station	Date	7/15/08-7/16/08
Location	N. 9th St	# Site	52
Equipment	B&K 2260-outdoor mic kit	Observer:	Christian



Period			# Automobile		# Medium Truck		# Heavy Truck
Time			# Bus		# Motorcycle		# Airplane/ Train
L1		L50		Lmin		Leq	
L10		L90		Lmax		Lpeak	

Note:

Period			# Automobile		# Medium Truck		# Heavy Truck
Time			# Bus		# Motorcycle		# Airplane/ Train
L1		L50		Lmin		Leq	
L10		L90		Lmax		Lpeak	

Note:

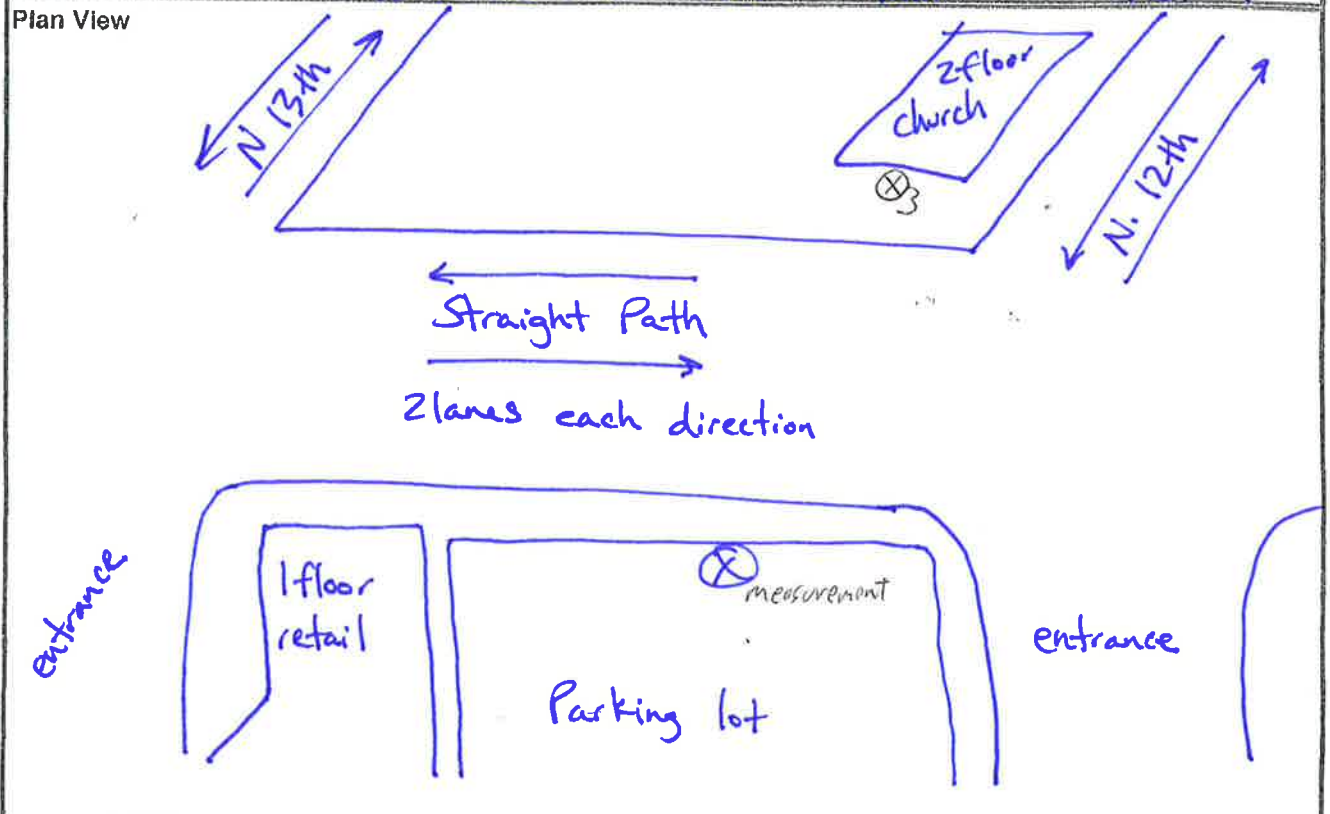
Period			# Automobile		# Medium Truck		# Heavy Truck
Time			# Bus		# Motorcycle		# Airplane/ Train
L1		L50		Lmin		Leq	
L10		L90		Lmax		Lpeak	

Note:

Period			# Automobile		# Medium Truck		# Heavy Truck
Time			# Bus		# Motorcycle		# Airplane/ Train
L1		L50		Lmin		Leq	
L10		L90		Lmax		Lpeak	

Note:

Project Name	Wyandanch Intermodal Station	Date	7/9/08-7/10/08
Location	Parking lot adjacent to Straight Path	# Site	#3
Equipment	B&K 2260-outdoor mic kit	Observer:	Christian



Period			# Automobile		# Medium Truck		# Heavy Truck
Time			# Bus		# Motorcycle		# Airplane/ Train
L1		L50		Lmin		Leq	
L10		L90		Lmax		Lpeak	

Note:

Period			# Automobile		# Medium Truck		# Heavy Truck
Time			# Bus		# Motorcycle		# Airplane/ Train
L1		L50		Lmin		Leq	
L10		L90		Lmax		Lpeak	

Note:

Period			# Automobile		# Medium Truck		# Heavy Truck
Time			# Bus		# Motorcycle		# Airplane/ Train
L1		L50		Lmin		Leq	
L10		L90		Lmax		Lpeak	

Note:

Period			# Automobile		# Medium Truck		# Heavy Truck
Time			# Bus		# Motorcycle		# Airplane/ Train
L1		L50		Lmin		Leq	
L10		L90		Lmax		Lpeak	

Note:

Site 1 Monitoring Results

Town of Babylon BOA
60085-0026

Site	Location	Time	L_{eq}	L₁	L₁₀	
1	Long Island Avenue between Doe Street and Grand Boulevard	WD	AM	70.5	78.9	74.1
			PM	71.2	82.0	74.4

L_{50}	L_{90}	L_{min}	L_{max}
67.6	57.5	53.0	84.7
66.5	55.8	49.2	88.0

Site 2 Monitoring Results

Town of Babylon BOA
60085-0026

Date	Start Time	dBA						
		L _{eq}	L ₁	L ₁₀	L ₅₀	L ₉₀	L _{min}	L _{max}
07/15/2008	07:16:38 PM	62.3	69.4	66.0	60.4	48.9	43.6	80.1
07/15/2008	08:00:00 PM	62.3	70.1	65.6	60.8	49.8	44.1	78.4
07/15/2008	09:00:00 PM	61.4	68.3	64.5	59.4	49.6	46.0	86.4
07/15/2008	10:00:00 PM	61.1	69.0	64.4	58.3	49.1	46.2	81.4
07/15/2008	11:00:00 PM	58.4	66.9	62.9	53.1	47.6	45.5	74.5
07/16/2008	12:00:00 AM	57.0	66.1	61.5	50.0	47.8	46.0	75.8
07/16/2008	01:00:00 AM	55.4	65.0	59.5	50.2	47.3	45.6	73.6
07/16/2008	02:00:00 AM	54.3	64.3	58.7	48.2	47.1	45.6	70.4
07/16/2008	03:00:00 AM	55.1	66.2	57.5	50.5	48.7	47.3	73.9
07/16/2008	04:00:00 AM	57.7	67.6	61.7	52.4	49.7	46.2	76.8
07/16/2008	05:00:00 AM	61.3	70.2	65.4	57.0	51.7	48.7	77.5
07/16/2008	06:00:00 AM	63.3	70.9	67.1	61.2	51.3	48.2	77.3
07/16/2008	07:00:00 AM	66.1	72.9	67.6	62.9	53.3	47.3	93.6
07/16/2008	08:00:00 AM	64.5	71.8	68.0	62.8	54.2	48.6	77.5
07/16/2008	09:00:00 AM	63.8	71.5	67.2	62.0	53.4	50.1	80.2
07/16/2008	10:00:00 AM	62.9	71.5	66.4	60.6	52.1	48.4	77.5
07/16/2008	11:00:00 AM	63.6	72.6	66.9	61.1	52.3	46.8	83.6
07/16/2008	12:00:00 PM	62.8	71.6	66.2	60.6	49.9	43.5	79.9
07/16/2008	01:00:00 PM	62.9	71.4	66.4	60.5	50.3	44.5	77.1
07/16/2008	02:00:00 PM	62.5	69.9	65.8	60.8	51.3	44.1	75.9
07/16/2008	03:00:00 PM	62.7	70.4	65.8	61.1	52.0	45.9	79.1
07/16/2008	04:00:00 PM	63.3	71.0	66.4	61.6	53.7	45.5	80.1
07/16/2008	05:00:00 PM	63.9	71.0	66.8	62.7	54.7	45.0	77.6
07/16/2008	06:00:00 PM	63.6	70.5	66.6	62.5	53.7	44.6	82.2
07/16/2008	07:00:00 PM	67.3	73.1	66.3	61.9	51.6	45.0	97.9

L_{dn} = 66.7

Site 3 Monitoring Results

Town of Babylon BOA
60085-0026

Date	Start Time	dBA						
		L _{eq}	L ₁	L ₁₀	L ₅₀	L ₉₀	L _{min}	L _{max}
07/09/2008	07:00:00 PM	66.7	74.6	70.6	64.0	54.3	48.0	83.9
07/09/2008	08:00:00 PM	66.2	74.7	70.2	62.3	54.0	48.0	88.4
07/09/2008	09:00:00 PM	70.2	78.5	71.5	62.9	53.2	47.1	100.3
07/09/2008	10:00:00 PM	66.2	75.1	70.5	61.9	52.6	46.0	81.9
07/09/2008	11:00:00 PM	63.5	72.3	67.6	57.9	50.2	45.8	88.6
07/10/2008	12:00:00 AM	61.9	72.5	66.1	54.4	46.7	41.4	83.9
07/10/2008	01:00:00 AM	60.3	71.5	64.1	51.4	44.5	40.7	82.3
07/10/2008	02:00:00 AM	58.0	70.3	60.9	47.7	42.2	39.4	82.1
07/10/2008	03:00:00 AM	59.0	70.7	61.2	46.5	41.7	38.9	85.8
07/10/2008	04:00:00 AM	61.7	73.5	65.5	51.9	45.0	41.2	84.9
07/10/2008	05:00:00 AM	66.3	77.4	69.7	59.2	50.8	43.4	88.6
07/10/2008	06:00:00 AM	68.3	77.0	72.0	65.1	56.0	48.7	90.2
07/10/2008	07:00:00 AM	69.2	78.4	72.7	66.2	57.0	48.1	89.6
07/10/2008	08:00:00 AM	68.8	77.5	72.2	65.9	56.7	46.9	86.9
07/10/2008	09:00:00 AM	68.5	78.7	71.6	64.0	54.7	46.2	90.7
07/10/2008	10:00:00 AM	67.2	77.3	70.9	62.9	52.1	45.3	85.1
07/10/2008	11:00:00 AM	67.6	76.7	71.1	63.3	53.4	47.3	91.1
07/10/2008	12:00:00 PM	70.5	79.9	74.5	66.5	54.9	47.5	90.6
07/10/2008	01:00:00 PM	70.5	80.0	74.1	66.4	54.6	46.8	89.1
07/10/2008	02:00:00 PM	71.6	81.3	75.2	67.5	56.0	48.0	93.3
07/10/2008	03:00:00 PM	71.0	80.5	74.6	66.8	56.6	48.7	93.0
07/10/2008	04:00:00 PM	72.4	80.9	74.5	68.0	60.0	49.0	102.9
07/10/2008	05:00:00 PM	70.9	79.3	74.5	68.0	57.5	48.8	92.3
07/10/2008	06:00:00 PM	70.3	77.8	74.2	67.4	56.9	48.6	89.1

L_{dn} = 71.9

TNM Analysis Results

Existing TNM Calculated L_{eq} and Estimated L_{dn} Levels

Receptor Site and Location	FTA Land Use Category	Time	Existing Measured Hourly L _{eq} (dBA)	Existing TNM Hourly L _{eq} (dBA)	Difference (Measured vs. TNM) Hourly L _{eq} (dBA)	Existing Calculated L _{dn} (dBA)
Site 1 - Long Island Avenue between Doe Street and Grand Boulevard	3	AM	70.5	67.2	-3.3	N/A
		PM	71.2	63.5	-7.7	N/A
Site 2 - On North 9th Street approximately 50 feet south of Straight Path	2	AM	66.1	64.0	-2.1	66.7
		PM	63.9	60.9	-3.0	
Site 3 - Straight Path between North 13th and North 12th Streets	3	AM	66.8	65.8	-1.0	N/A
		PM	68.5	64.0	-4.5	N/A

2012 No Build TNM Calculated L_{eq} and Estimated L_{dn} Levels

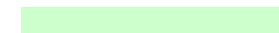
Receptor Site and Location	FTA Land Use Category	Time	Existing Hourly L _{eq} (dBA)	No Build TNM Hourly L _{eq} (dBA)	No Build Hourly L _{eq} (dBA)	No Build L _{dn} (dBA)	Increase (No Build minus Existing) Hourly L _{eq} (dBA)	Increase (No Build minus Existing) L _{dn} (dBA)
Site 1 - Long Island Avenue between Doe Street and Grand Boulevard	3	AM	70.5	66.8	70.1	N/A	-0.4	N/A
		PM	71.2	63.5	71.2	N/A	0.0	N/A
Site 2 - On North 9th Street approximately 50 feet south of Straight Path	2	AM	66.1	64.1	66.2	66.8	0.1	0.1
		PM	63.9	60.9	63.9		0.0	
Site 3 - Straight Path between North 13th and North 12th Streets	3	AM	66.8	65.9	66.9	N/A	0.1	N/A
		PM	68.5	63.9	68.4	N/A	-0.1	N/A

2012 Build TNM Calculated L_{eq} and Estimated L_{dn} Levels

Receptor Site and Location	FTA Land Use Category	Time	Hourly L _{eq} (dBA)	Build TNM Hourly L _{eq} (dBA)	Intermodal Facility Hourly L _{eq} (dBA)	Build Hourly L _{eq} (dBA)	Build L _{dn} (dBA)	Increase (Build minus Existing) Hourly L _{eq} (dBA)	Increase (Build minus No Build) L _{dn} (dBA)
Site 1 - Long Island Avenue between Doe Street and Grand Boulevard	3	AM	70.5	69.2	33.7	72.5	N/A	2.0	N/A
		PM	71.2	63.2	35.5	70.9	N/A	-0.3	N/A
Site 2 - On North 9th Street approximately 50 feet south of Straight Path	2	AM	66.1	63.2	27.1	65.3	66.7	-0.8	-0.1
		PM	63.9	61.6	28.9	64.6		0.7	
Site 3 - Straight Path between North 13th and North 12th Streets	3	AM	66.8	69.6	31.4	70.6	N/A	3.8	N/A
		PM	68.5	68.2	33.2	72.7	N/A	4.2	N/A

Notes

Traffic Decrease on Long Island Avenue
Decrease in traffic on Straight Path



FTA Parking Garage Calculation

2012 Build (AM)

1) Parking Garage

$$\begin{aligned} L_{eq} @ 50 \text{ Feet} &= \text{SEL ref} + \text{CN} - 35.6 \\ &= 92 - 4.80172 = 35.6 \\ &= \boxed{51.6} \\ \text{Usage Factor} &= 1.0 \\ \text{SEL ref} &= 92 \\ \text{\# of autos per hour} &= 331 \\ L_{eq} @ 50 \text{ Feet} &= \boxed{51.6} \end{aligned}$$

Receptor	Distance (feet)	L _{eq} (1-Hour)
1	393	33.7
2	840	27.1
3	514	31.4

2012 Build (PM)

1) Parking Garage

$$\begin{aligned} L_{eq} @ 50 \text{ Feet} &= \text{SEL ref} + \text{CN} - 35.6 \\ &= 92 - 3.03644 = 35.6 \\ &= \boxed{53.4} \\ \text{Usage Factor} &= 1.0 \\ \text{SEL ref} &= 92 \\ \text{\# of autos per hour} &= 497 \\ L_{eq} @ 50 \text{ Feet} &= \boxed{53.4} \end{aligned}$$

Receptor	Distance (feet)	L _{eq} (1-Hour)
1	393	35.5
2	840	28.9
3	514	33.2

FTA Impact Analysis

2014 BUILD ALTERNATIVE

Site #	Time	Existing L_{eq}	Existing L_{dn}	FTA Land Use	Moderate Impact L_{eq}/L_{dn}	Severe Impact L_{eq}/L_{dn}	No Build			Build		
							Project Noise Exposure	Moderate Impact	Severe Impact	Project Noise Exposure	Moderate Impact	Severe Impact
1	AM	70.5	N/A	3	69.7	74.8	0.0	NO	NO	68.2	NO	NO
	PM	71.2			70.0	75.3						
2	AM	66.1	66.7	2	62.0	67.3	49.9	NO	NO	0.0	NO	NO
	PM	63.9										
3	AM	66.8	N/A	3	67.0	72.3	50.5	NO	NO	68.3	YES	NO
	PM	68.5			68.2	73.5						

Threshold of Moderate Impact - Land Use Category 1 and 2

$L_E < 42$ $L_p = 11.450 + 0.953L_E$
 $42 \leq L_E \leq 71$ $L_p = 71.662 - 1.164L_E + 0.018L_E^2 - 4.088 \times 10^{-5}L_E^3$
 $L_E > 71$ $L_p = 65$

Threshold of Severe Impact - Land Use Category 1 and 2

$L_E < 44$ $L_p = 17.322 + 0.940L_E$
 $44 \leq L_E \leq 77$ $L_p = 96.725 - 1.992L_E + 3.02 \times 10^{-2}L_E^2 - 1.043 \times 10^{-4}L_E^3$
 $L_E > 77$ $L_p = 75$

Threshold of Moderate Impact - Land Use Category 3

$L_E < 42$ $L_p = 16.450 + 0.953L_E$
 $42 \leq L_E \leq 71$ $L_p = 76.662 - 1.164L_E + 0.018L_E^2 - 4.088 \times 10^{-5}L_E^3$
 $L_E > 71$ $L_p = 70$

Threshold of Severe Impact - Land Use Category 3

$L_E < 44$ $L_p = 22.322 + 0.940L_E$
 $44 \leq L_E \leq 77$ $L_p = 101.725 - 1.992L_E + 3.02 \times 10^{-2}L_E^2 - 1.043 \times 10^{-4}L_E^3$
 $L_E > 77$ $L_p = 80$