APPENDIX D

Noise Calculations

Field Noise Measurement Data Sheets

DUDEK
CREATOR OF KERATA TECHNOLOGY

FIELD DATA REPORT

Field Noise Measurement Data

Record: 298	
Project Name	*Fullerton college*
Project #	*9422*
Observer(s)	*Connor Burke*
Date	*2017-01-30*
autoemail	*cburke@dudek.com*

Meteorological Conditions	
Temp (F)	*78*
Humidity % (R.H.)	*47*
Wind	*Calm*
Wind Speed (MPH)	*2*
Wind Direction	*East*
Sky	*Sunny*

Instrument and Calibrator Information	
Instrument Name List	*(ENC) Rion NL-52*
Instrument Name	*(ENC) Rion NL-52*
Instrument Name Lookup Key	*(ENC) Rion NL-52*
Manufacturer	*Rion*
Model	*NL-52*
Serial Number	*553896*
Calibrator Name	*(ENC) LD CAL150*
Calibrator Name	*(ENC) LD CAL150*
Calibrator Name Lookup Key	*(ENC) LD CAL150*
Calibrator Manufacturer	*Larson Davis*
Calibrator Model	*LD CAL150*
Calibrator Serial #	*5152*
Pre-Test (dBA SPL)	*94*
Post-Test (dBA SPL)	*94*
Windscreen	*Yes*
Weighting?	*A-WTD*
Slow/Fast?	*Slow*
ANSI?	*Yes*

Recordings	
Record #	*1*
Site ID	*ST2*
Site Location	*Latitude:33.873830,* *Longitude:-117.915960,* *Altitude:35.780683,* *Speed:0.000000,* *Horizontal Accuracy:5.000000,* *Vertical Accuracy:3.000000,* *Time:10:41:45 AM PST*
Begin (Time)	*10:40:00*
End (Time)	*10:50:00*
Leq	*62.8*
Lmax	*79.3*
Lmin	*46*
Other Lx?	*L90, L50, L10*
L90	*51.9*
L50	*60.9*
L10	*65.1*
Other (Specify Metric)	

powered by ZerionSoftware

Primary Noise Source	*Traffic*
Other Noise Sources (Background)	*Birds, Distant Conversations / Yelling, Distant Traffic, Rustling Leaves*
Is the same instrument and calibrator being used as previously notated?	*Yes*
Are the meteorological conditions the same as previously notated?	*Yes*

Source Info and Traffic Counts	
Distance to Roadway - Centerline/Edge of Pavement	*Centerline*
Roadway Type	*40*
Estimated Vehicle Speed (MPH)	*40*
Count Duration (Min)	*10*
Speeds Estimated by:	*Driving the Pace*

Traffic Counts	
Counting Both Directions?	*Yes*
Autos	*1*
Number of Vehicles - Autos	*180*
Medium Trucks	*1*
Number of Vehicles - Medium Trucks	*1*
Motorcyles	*1*
Number of Vehicles - Motorcyles	*1*

Description / Photos

Site Photos

Photo

Comments / Description	*Facing north towards Fullerton college.*

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Recordings	
Record #	*2*
Site ID	*ST3*
Site Location	*Latitude:33.875099, Longitude:-117.913826, Altitude:32.628265, Speed:0.000000, Horizontal Accuracy:5.000000, Vertical Accuracy:6.000000, Time:11:04:14 AM PST*
Begin (Time)	*11:04:00*
End (Time)	*11:14:00*
Leq	*49.1*
Lmax	*62.5*
Lmin	*42.4*
Other Lx?	*L90, L50, L10*
L90	*45.1*
L50	*47.1*
L10	*51.8*
Other (Specify Metric)	
Primary Noise Source	*Traffic*
Other Noise Sources (Background)	*Birds, Distant Conversations / Yelling, Distant Traffic, Rustling Leaves*
Is the same instrument and calibrator being used as previously notated?	*Yes*
Are the meteorological conditions the same as previously notated?	*Yes*

Description / Photos

Site Photos	
Photo	
Comments / Description	*Facing west towards Berkeley ave.*

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CREATOR OF KERATA TECHNOLOGY

FIELD DATA REPORT

Recordings	
Record #	*3*
Site ID	*ST4*
Site Location	*Latitude:33.876943, Longitude:-117.913889, Altitude:50.873291, Speed:0.000000, Horizontal Accuracy:5.000000, Vertical Accuracy:3.000000, Time:11:18:13 AM PST*
Begin (Time)	*11:18:00*
End (Time)	*11:28:00*
Leq	*49.8*
Lmax	*86.8*
Lmin	*39.2*
Other Lx?	*L90, L50, L10*
L90	*42.4*
L50	*46.9*
L10	*53.2*
Other (Specify Metric)	
Primary Noise Source	*Traffic*
Other Noise Sources (Background)	*Birds, Distant Conversations / Yelling, Distant Dog Barking, Rustling Leaves*
Is the same instrument and calibrator being used as previously notated?	*Yes*
Are the meteorological conditions the same as previously notated?	*Yes*

Description / Photos

Site Photos

Photo

Comments / Description	*Facing west towards Berkeley Ave.*

powered by ZerionSoftware

DUDEK
CREATOR OF KERATA TECHNOLOGY

FIELD DATA REPORT

Recordings	
Record #	*4*
Site ID	*ST5*
Site Location	*Latitude:33.879623, Longitude:-117.915615, Altitude:53.062866, Speed:0.000000, Horizontal Accuracy:5.000000, Vertical Accuracy:6.000000, Time:11:35:12 AM PST*
Begin (Time)	*11:34:00*
End (Time)	*11:44:00*
Leq	*63.7*
Lmax	*75.5*
Lmin	*42.7*
Other Lx?	*L90, L50, L10*
L90	*52.1*
L50	*61.1*
L10	*67.3*
Other (Specify Metric)	
Primary Noise Source	*Traffic*
Other Noise Sources (Background)	*Birds, Distant Conversations / Yelling, Rustling Leaves*
Is the same instrument and calibrator being used as previously notated?	*Yes*
Are the meteorological conditions the same as previously notated?	*Yes*

Source Info and Traffic Counts	
Distance to Roadway (feet)	*10*
Distance to Roadway - Centerline/Edge of Pavement	*Edge of Pavement*
Estimated Vehicle Speed (MPH)	*40*
Count Duration (Min)	*10*

Traffic Counts	
Counting Both Directions?	*Yes*
Autos	*1*
Number of Vehicles - Autos	*130*

Description / Photos

Site Photos

powered by ZerionSoftware

Photo	
Comments / Description	*Facing south towards Berkeley Ave.*

Recordings	
Record #	*5*
Site ID	*ST6*
Site Location	*Latitude:33.879734, Longitude:-117.919037, Altitude:60.629395, Speed:0.180000, Horizontal Accuracy:5.000000, Vertical Accuracy:16.000000, Time:11:50:24 AM PST*
Begin (Time)	*11:50:00*
End (Time)	*12:00:00*
Leq	*54.4*
Lmax	*87.7*
Lmin	*51.5*
Other Lx?	*L90, L50, L10*
L90	*53.3*
L50	*54.1*
L10	*55.2*
Other (Specify Metric)	
Primary Noise Source	*Other*
Primary Noise Source Other	*HVAC noise*
Other Noise Sources (Background)	*Birds, Distant Traffic, Rustling Leaves*
Other Noise Sources Additional Description	
Is the same instrument and calibrator being used as previously notated?	*Yes*
Are the meteorological conditions the same as previously notated?	*Yes*

powered by ZerionSoftware

Description / Photos

Site Photos

Photo	
Comments / Description	*Facing south towards project site*

Site Photos

Photo	
Comments / Description	*Facing south towards HVAC unit*

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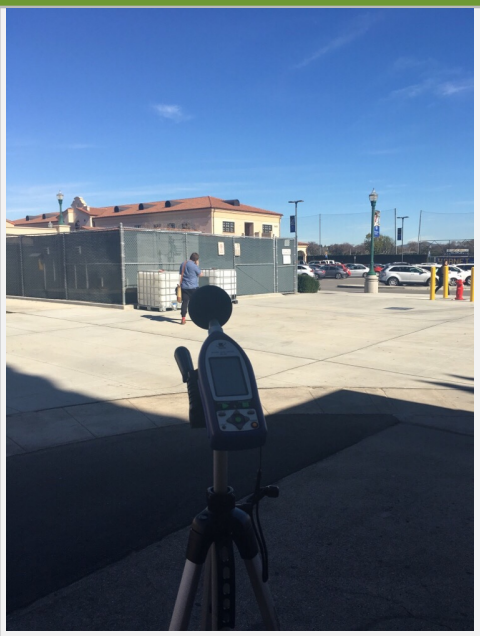
Recordings	
Record #	*6*
Site ID	*ST7*
Site Location	*Latitude:33.875865, Longitude:-117.917519, Altitude:62.412415, Speed:0.000000, Horizontal Accuracy:5.000000, Vertical Accuracy:12.000000, Time:12:10:40 PM PST*
Begin (Time)	*12:10:00*
End (Time)	*12:20:00*
Leq	*56.3*
Lmax	*72.6*
Lmin	*54.4*
Other Lx?	*L90, L50, L10*
L90	*55.1*
L50	*55.9*
L10	*58.0*
Other (Specify Metric)	
Primary Noise Source	*Other*
Primary Noise Source Other	*HVAC/Fans*
Other Noise Sources (Background)	*Distant Conversations / Yelling, Distant Traffic*
Other Noise Sources Additional Description	*Students walking through campus*
Is the same instrument and calibrator being used as previously notated?	*Yes*
Are the meteorological conditions the same as previously notated?	*Yes*

Description / Photos

Site Photos	
Photo	
Comments / Description	*Middle of campus*

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DUDEK
CREATOR OF KERATA TECHNOLOGY

FIELD DATA REPORT

Recordings	
Record #	*7*
Site ID	*ST1*
Site Location	*Latitude:33.874667, Longitude:-117.919949, Altitude:59.978882, Speed:0.160000, Horizontal Accuracy:10.000000, Vertical Accuracy:12.000000, Time:12:26:20 PM PST*
Begin (Time)	*12:26:00*
End (Time)	*12:36:00*
Leq	*66.2*
Lmax	*81.6*
Lmin	*56*
Other Lx?	*L90, L50, L10*
L90	*59.5*
L50	*63.9*
L10	*68.8*
Other (Specify Metric)	
Primary Noise Source	*Traffic*
Other Noise Sources (Background)	*Birds, Distant Conversations / Yelling, Distant Traffic, Rustling Leaves*
Other Noise Sources Additional Description	*Skateboards. Music building.*
Is the same instrument and calibrator being used as previously notated?	*Yes*
Are the meteorological conditions the same as previously notated?	*Yes*

Source Info and Traffic Counts	
Distance to Roadway (feet)	*30*
Distance to Roadway - Centerline/Edge of Pavement	*Edge of Pavement*
Estimated Vehicle Speed (MPH)	*35*
Count Duration (Min)	*10*
Posted Speed Limit Sign (MPH)	*35*

Traffic Counts	
Counting Both Directions?	*Yes*
Autos	*1*
Number of Vehicles - Autos	*130*
Medium Trucks	*1*
Number of Vehicles - Medium Trucks	*2*
Buses	*1*
Number of Vehicles - Buses	*3*
Motorcyles	*1*
Number of Vehicles - Motorcyles	*1*

Description / Photos

powered by ZerionSoftware

Site Photos	
Photo	
Comments / Description	*Facing east towards Lemon St.*

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Traffic Noise Model (TNM) Input/ Output

Dudek 12 May 2017
MG TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: PN 9422.0001
RUN: Fullerton College Existing

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
E. Chapman Ave w of N. Lemon St.	65.0	point1	1	18.1	687.4	165.00				Average	
		point2	2	744.4	691.5	165.00					
E. Chapman Ave - N. Lemon St.to N. Bkly	65.0	point3	3	752.6	692.9	165.00				Average	
		point4	4	2,435.0	710.2	165.00					
E. Chapman Ave e of N. Berkeley Ave	65.0	point5	5	2,459.6	708.9	165.00				Average	
		point6	6	3,261.7	710.6	165.00					
N. Lemon St S. of E. Chapman Ave	50.0	point7	7	749.6	250.8	165.00				Average	
		point8	8	744.1	683.5	165.00					
N. Lemon St n of N. Berkeley Ave	50.0	point13	13	722.3	2,457.8	165.00				Average	
		point14	14	715.7	3,177.5	165.00					
N. Berkeley Ave w of N. Lemon St.	65.0	point15	15	19.1	2,478.7	165.00				Average	
		point16	16	133.7	2,449.2	165.00				Average	
		point17	17	319.5	2,435.3	165.00				Average	
		point18	18	576.4	2,430.1	165.00				Average	
		point19	19	720.5	2,433.5	165.00					
N. Berkeley Ave e of N. Lemon St.	65.0	point21	21	727.5	2,438.8	165.00				Average	
		point22	22	1,119.9	2,442.2	165.00				Average	
		point23	23	1,204.9	2,468.2	165.00				Average	
		point24	24	1,336.2	2,534.5	165.00				Average	
		point25	25	1,429.7	2,608.0	165.00					
N. Berkeley Ave s of E. Chapman Ave.	65.0	point42	42	2,447.2	694.5	165.00				Average	
		point43	43	2,451.3	593.9	165.00				Average	
		point44	44	2,463.7	531.9	165.00				Average	
		point45	45	2,477.5	443.8	165.00				Average	
		point46	46	2,476.8	242.7	165.00					

N. Berkeley Ave n of E. Chapman Ave.	65.0	point26	26	1,431.9	2,610.0	165.00				Average	
		point27	27	1,592.7	2,700.5	165.00				Average	
		point28	28	1,748.4	2,730.4	165.00				Average	
		point29	29	1,939.4	2,728.7	165.00				Average	
		point30	30	2,080.8	2,715.3	165.00				Average	
		point31	31	2,122.8	2,699.6	165.00				Average	
		point32	32	2,205.0	2,655.8	165.00				Average	
		point33	33	2,303.9	2,567.2	165.00				Average	
		point34	34	2,371.5	2,473.3	165.00				Average	
		point35	35	2,411.6	2,390.1	165.00				Average	
		point36	36	2,428.9	2,282.5	165.00				Average	
		point37	37	2,441.0	2,154.5	165.00				Average	
		point38	38	2,446.5	1,666.7	165.00				Average	
		point40	40	2,445.0	1,662.7	165.00				Average	
		point41	41	2,450.5	722.9	165.00					
N. Lemon St Chapman Av - N Berkeley	50.0	point9	9	748.0	705.9	165.00				Average	
		point10	10	741.9	1,765.9	165.00				Average	
		point11	11	740.6	1,771.0	165.00				Average	
		point12	12	731.8	2,420.6	165.00					

Dudek 12 May 2017
MG TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Percentages
PROJECT/CONTRACT: PN 9422.0001
RUN: Fullerton College Existing

Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
E. Chapman Ave w of N. Lemon St.	point1	1	2804	97	30	2	30	1	30	0	0	0	0
	point2	2											
E. Chapman Ave - N. Lemon St.to N. Bkly	point3	3	2667	97	30	2	30	1	30	0	0	0	0
	point4	4											
E. Chapman Ave e of N. Berkeley Ave	point5	5	3439	97	40	2	40	1	40	0	0	0	0
	point6	6											
N. Lemon St S. of E. Chapman Ave	point7	7	3878	97	25	2	25	1	25	0	0	0	0
	point8	8											
N. Lemon St n of N. Berkeley Ave	point13	13	1745	97	25	2	25	1	25	0	0	0	0
	point14	14											
N. Berkeley Ave w of N. Lemon St.	point15	15	3374	97	30	2	30	1	30	0	0	0	0
	point16	16	3374	97	30	2	30	1	30	0	0	0	0
	point17	17	3374	97	30	2	30	1	30	0	0	0	0
	point18	18	3374	97	30	2	30	1	30	0	0	0	0
	point19	19											
N. Berkeley Ave e of N. Lemon St.	point21	21	1401	97	35	2	35	1	35	0	0	0	0
	point22	22	1401	97	35	2	35	1	35	0	0	0	0
	point23	23	1401	97	35	2	35	1	35	0	0	0	0
	point24	24	1401	97	35	2	35	1	35	0	0	0	0
	point25	25											
N. Berkeley Ave s of E. Chapman Ave.	point42	42	301	97	25	2	25	1	25	0	0	0	0
	point43	43	301	97	25	2	25	1	25	0	0	0	0
	point44	44	301	97	25	2	25	1	25	0	0	0	0

	point45	45	301	97	25	2	25	1	25	0	0	0	0
	point46	46											
N. Berkeley Ave n of E. Chapman Ave.	point26	26	1504	97	35	2	35	1	35	0	0	0	0
	point27	27	1504	97	35	2	35	1	35	0	0	0	0
	point28	28	1504	97	35	2	35	1	35	0	0	0	0
	point29	29	1504	97	35	2	35	1	35	0	0	0	0
	point30	30	1504	97	35	2	35	1	35	0	0	0	0
	point31	31	1504	97	35	2	35	1	35	0	0	0	0
	point32	32	1504	97	35	2	35	1	35	0	0	0	0
	point33	33	1504	97	35	2	35	1	35	0	0	0	0
	point34	34	1504	97	35	2	35	1	35	0	0	0	0
	point35	35	1504	97	35	2	35	1	35	0	0	0	0
	point36	36	1504	97	35	2	35	1	35	0	0	0	0
	point37	37	1504	97	35	2	35	1	35	0	0	0	0
	point38	38	1504	97	35	2	35	1	35	0	0	0	0
	point40	40	1504	97	35	2	35	1	35	0	0	0	0
	point41	41											
N. Lemon St Chapman Av - N Berkeley	point9	9	2860	97	25	2	25	1	25	0	0	0	0
	point10	10	2860	97	25	2	25	1	25	0	0	0	0
	point11	11	2860	97	25	2	25	1	25	0	0	0	0
	point12	12											

Dudek						**12 May 2017**					
MG						**TNM 2.5**					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	**PN 9422.0001**										
RUN:	**Fullerton College Existing**										
Receiver											
Name	**No.**	**#DUs**	**Coordinates (ground)**			**Height**	**Input Sound Levels and Criteria**				**Active**
			X	**Y**	**Z**	**above**	**Existing**	**Impact Criteria**		**NR**	**in**
						Ground	**LAeq1h**	**LAeq1h**	**Sub'l**	**Goal**	**Calc.**
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	700.5	937.7	165.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,931.5	633.8	165.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	2,577.4	1,092.2	165.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	2,556.5	1,765.8	165.00	5.00	0.00	66	10.0	8.0	Y
ST5	5	1	2,038.8	2,754.9	165.00	5.00	0.00	66	10.0	8.0	Y
ST6	6	1	992.9	2,785.2	165.00	5.00	0.00	66	10.0	8.0	Y
ST7	7	1	1,455.8	1,365.9	165.00	5.00	0.00	66	10.0	8.0	Y
M1	9	1	688.8	2,537.0	165.00	5.00	0.00	66	10.0	8.0	Y
M2	11	1	412.2	2,540.0	165.00	5.00	0.00	66	10.0	8.0	Y
M3	13	1	373.8	627.2	165.00	5.00	0.00	66	10.0	8.0	Y
M4	15	1	2,404.5	604.0	165.00	5.00	0.00	66	10.0	8.0	Y
M5	17	1	2,622.1	660.9	165.00	5.00	0.00	66	10.0	8.0	Y
M6	19	1	2,498.6	962.8	165.00	5.00	0.00	66	10.0	8.0	Y

Dudek
MG
12 May 2017
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: PN 9422.0001
RUN: Fullerton College Existing
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	66.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0
ST2	2	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0
ST3	3	1	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0
ST4	4	1	0.0	62.2	66	62.2	10	----	62.2	0.0	8	-8.0
ST5	5	1	0.0	67.9	66	67.9	10	Snd Lvl	67.9	0.0	8	-8.0
ST6	6	1	0.0	56.7	66	56.7	10	----	56.7	0.0	8	-8.0
ST7	7	1	0.0	50.2	66	50.2	10	----	50.2	0.0	8	-8.0
M1	9	1	0.0	67.7	66	67.7	10	Snd Lvl	67.7	0.0	8	-8.0
M2	11	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0
M3	13	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
M4	15	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0
M5	17	1	0.0	71.3	66	71.3	10	Snd Lvl	71.3	0.0	8	-8.0
M6	19	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	13	0.0	0.0	0.0
All Impacted	6	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek 12 May 2017
MG TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: PN 9422.0001
RUN: Fullerton College Existing w Proj

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
E. Chapman Ave w of N. Lemon St.	65.0	point1	1	18.1	687.4	165.00				Average	
		point2	2	744.4	691.5	165.00					
E. Chapman Ave - N. Lemon St.to N. Bkly	65.0	point3	3	752.6	692.9	165.00				Average	
		point4	4	2,435.0	710.2	165.00					
E. Chapman Ave e of N. Berkeley Ave	65.0	point5	5	2,459.6	708.9	165.00				Average	
		point6	6	3,261.7	710.6	165.00					
N. Lemon St S. of E. Chapman Ave	50.0	point7	7	749.6	250.8	165.00				Average	
		point8	8	744.1	683.5	165.00					
N. Lemon St n of N. Berkeley Ave	50.0	point13	13	722.3	2,457.8	165.00				Average	
		point14	14	715.7	3,177.5	165.00					
N. Berkeley Ave w of N. Lemon St.	65.0	point15	15	19.1	2,478.7	165.00				Average	
		point16	16	133.7	2,449.2	165.00				Average	
		point17	17	319.5	2,435.3	165.00				Average	
		point18	18	576.4	2,430.1	165.00				Average	
		point19	19	720.5	2,433.5	165.00					
N. Berkeley Ave e of N. Lemon St.	65.0	point21	21	727.5	2,438.8	165.00				Average	
		point22	22	1,119.9	2,442.2	165.00				Average	
		point23	23	1,204.9	2,468.2	165.00				Average	
		point24	24	1,336.2	2,534.5	165.00				Average	
		point25	25	1,429.7	2,608.0	165.00					
N. Berkeley Ave s of E. Chapman Ave.	65.0	point42	42	2,447.2	694.5	165.00				Average	
		point43	43	2,451.3	593.9	165.00				Average	
		point44	44	2,463.7	531.9	165.00				Average	
		point45	45	2,477.5	443.8	165.00				Average	
		point46	46	2,476.8	242.7	165.00					

N. Berkeley Ave n of E. Chapman Ave.	65.0	point26	26	1,431.9	2,610.0	165.00				Average	
		point27	27	1,592.7	2,700.5	165.00				Average	
		point28	28	1,748.4	2,730.4	165.00				Average	
		point29	29	1,939.4	2,728.7	165.00				Average	
		point30	30	2,080.8	2,715.3	165.00				Average	
		point31	31	2,122.8	2,699.6	165.00				Average	
		point32	32	2,205.0	2,655.8	165.00				Average	
		point33	33	2,303.9	2,567.2	165.00				Average	
		point34	34	2,371.5	2,473.3	165.00				Average	
		point35	35	2,411.6	2,390.1	165.00				Average	
		point36	36	2,428.9	2,282.5	165.00				Average	
		point37	37	2,441.0	2,154.5	165.00				Average	
		point38	38	2,446.5	1,666.7	165.00				Average	
		point40	40	2,445.0	1,662.7	165.00				Average	
		point41	41	2,450.5	722.9	165.00					
N. Lemon St Chapman Av - N Berkeley	50.0	point9	9	748.0	705.9	165.00				Average	
		point10	10	741.9	1,765.9	165.00				Average	
		point11	11	740.6	1,771.0	165.00				Average	
		point12	12	731.8	2,420.6	165.00					

Dudek **12 May 2017**
MG **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Percentages
PROJECT/CONTRACT: **PN 9422.0001**
RUN: **Fullerton College Existing w Proj**

Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
E. Chapman Ave w of N. Lemon St.	point1	1	2953	97	30	2	30	1	30	0	0	0	0
	point2	2											
E. Chapman Ave - N. Lemon St.to N. Bkly	point3	3	2699	97	30	2	30	1	30	0	0	0	0
	point4	4											
E. Chapman Ave e of N. Berkeley Ave	point5	5	3584	97	40	2	40	1	40	0	0	0	0
	point6	6											
N. Lemon St S. of E. Chapman Ave	point7	7	3937	97	25	2	25	1	25	0	0	0	0
	point8	8											
N. Lemon St n of N. Berkeley Ave	point13	13	1859	97	25	2	25	1	25	0	0	0	0
	point14	14											
N. Berkeley Ave w of N. Lemon St.	point15	15	3413	97	30	2	30	1	30	0	0	0	0
	point16	16	3413	97	30	2	30	1	30	0	0	0	0
	point17	17	3413	97	30	2	30	1	30	0	0	0	0
	point18	18	3413	97	30	2	30	1	30	0	0	0	0
	point19	19											
N. Berkeley Ave e of N. Lemon St.	point21	21	1465	97	35	2	35	1	35	0	0	0	0
	point22	22	1465	97	35	2	35	1	35	0	0	0	0
	point23	23	1465	97	35	2	35	1	35	0	0	0	0
	point24	24	1465	97	35	2	35	1	35	0	0	0	0
	point25	25											
N. Berkeley Ave s of E. Chapman Ave.	point42	42	328	97	25	2	25	1	25	0	0	0	0
	point43	43	328	97	25	2	25	1	25	0	0	0	0
	point44	44	328	97	25	2	25	1	25	0	0	0	0

	point45	45	328	97	25	2	25	1	25	0	0	0	0
	point46	46											
N. Berkeley Ave n of E. Chapman Ave.	point26	26	1642	97	35	2	35	1	35	0	0	0	0
	point27	27	1642	97	35	2	35	1	35	0	0	0	0
	point28	28	1642	97	35	2	35	1	35	0	0	0	0
	point29	29	1642	97	35	2	35	1	35	0	0	0	0
	point30	30	1642	97	35	2	35	1	35	0	0	0	0
	point31	31	1642	97	35	2	35	1	35	0	0	0	0
	point32	32	1642	97	35	2	35	1	35	0	0	0	0
	point33	33	1642	97	35	2	35	1	35	0	0	0	0
	point34	34	1642	97	35	2	35	1	35	0	0	0	0
	point35	35	1642	97	35	2	35	1	35	0	0	0	0
	point36	36	1642	97	35	2	35	1	35	0	0	0	0
	point37	37	1642	97	35	2	35	1	35	0	0	0	0
	point38	38	1642	97	35	2	35	1	35	0	0	0	0
	point40	40	1642	97	35	2	35	1	35	0	0	0	0
	point41	41											
N. Lemon St Chapman Av - N Berkeley	point9	9	3048	97	25	2	25	1	25	0	0	0	0
	point10	10	3048	97	25	2	25	1	25	0	0	0	0
	point11	11	3048	97	25	2	25	1	25	0	0	0	0
	point12	12											

Dudek 12 May 2017
MG TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: PN 9422.0001
RUN: Fullerton College Existing w Proj

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	700.5	937.7	165.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,931.5	633.8	165.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	2,577.4	1,092.2	165.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	2,556.5	1,765.8	165.00	5.00	0.00	66	10.0	8.0	Y
ST5	5	1	2,038.8	2,754.9	165.00	5.00	0.00	66	10.0	8.0	Y
ST6	6	1	992.9	2,785.2	165.00	5.00	0.00	66	10.0	8.0	Y
ST7	7	1	1,455.8	1,365.9	165.00	5.00	0.00	66	10.0	8.0	Y
M1	9	1	688.8	2,537.0	165.00	5.00	0.00	66	10.0	8.0	Y
M2	11	1	412.2	2,540.0	165.00	5.00	0.00	66	10.0	8.0	Y
M3	13	1	373.8	627.2	165.00	5.00	0.00	66	10.0	8.0	Y
M4	15	1	2,404.5	604.0	165.00	5.00	0.00	66	10.0	8.0	Y
M5	17	1	2,622.1	660.9	165.00	5.00	0.00	66	10.0	8.0	Y
M6	19	1	2,498.6	962.8	165.00	5.00	0.00	66	10.0	8.0	Y

Dudek
MG
12 May 2017
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: PN 9422.0001
RUN: Fullerton College Existing w Proj
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
ST2	2	1	0.0	65.5	66	65.5	10	----	65.5	0.0	8	-8.0
ST3	3	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0
ST4	4	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0
ST5	5	1	0.0	68.3	66	68.3	10	Snd Lvl	68.3	0.0	8	-8.0
ST6	6	1	0.0	56.9	66	56.9	10	----	56.9	0.0	8	-8.0
ST7	7	1	0.0	50.4	66	50.4	10	----	50.4	0.0	8	-8.0
M1	9	1	0.0	67.9	66	67.9	10	Snd Lvl	67.9	0.0	8	-8.0
M2	11	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0
M3	13	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0
M4	15	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
M5	17	1	0.0	71.4	66	71.4	10	Snd Lvl	71.4	0.0	8	-8.0
M6	19	1	0.0	67.6	66	67.6	10	Snd Lvl	67.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	13	0.0	0.0	0.0
All Impacted	7	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek 12 May 2017
MG TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: PN 9422.0001
RUN: Fullerton College Year 2030

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
E. Chapman Ave w of N. Lemon St.	65.0	point1	1	18.1	687.4	165.00				Average	
		point2	2	744.4	691.5	165.00					
E. Chapman Ave - N. Lemon St.to N. Bkly	65.0	point3	3	752.6	692.9	165.00				Average	
		point4	4	2,435.0	710.2	165.00					
E. Chapman Ave e of N. Berkeley Ave	65.0	point5	5	2,459.6	708.9	165.00				Average	
		point6	6	3,261.7	710.6	165.00					
N. Lemon St S. of E. Chapman Ave	50.0	point7	7	749.6	250.8	165.00				Average	
		point8	8	744.1	683.5	165.00					
N. Lemon St n of N. Berkeley Ave	50.0	point13	13	722.3	2,457.8	165.00				Average	
		point14	14	715.7	3,177.5	165.00					
N. Berkeley Ave w of N. Lemon St.	65.0	point15	15	19.1	2,478.7	165.00				Average	
		point16	16	133.7	2,449.2	165.00				Average	
		point17	17	319.5	2,435.3	165.00				Average	
		point18	18	576.4	2,430.1	165.00				Average	
		point19	19	720.5	2,433.5	165.00					
N. Berkeley Ave e of N. Lemon St.	65.0	point21	21	727.5	2,438.8	165.00				Average	
		point22	22	1,119.9	2,442.2	165.00				Average	
		point23	23	1,204.9	2,468.2	165.00				Average	
		point24	24	1,336.2	2,534.5	165.00				Average	
		point25	25	1,429.7	2,608.0	165.00					
N. Berkeley Ave s of E. Chapman Ave.	65.0	point42	42	2,447.2	694.5	165.00				Average	
		point43	43	2,451.3	593.9	165.00				Average	
		point44	44	2,463.7	531.9	165.00				Average	
		point45	45	2,477.5	443.8	165.00				Average	
		point46	46	2,476.8	242.7	165.00					

N. Berkeley Ave n of E. Chapman Ave.	65.0	point26	26	1,431.9	2,610.0	165.00				Average	
		point27	27	1,592.7	2,700.5	165.00				Average	
		point28	28	1,748.4	2,730.4	165.00				Average	
		point29	29	1,939.4	2,728.7	165.00				Average	
		point30	30	2,080.8	2,715.3	165.00				Average	
		point31	31	2,122.8	2,699.6	165.00				Average	
		point32	32	2,205.0	2,655.8	165.00				Average	
		point33	33	2,303.9	2,567.2	165.00				Average	
		point34	34	2,371.5	2,473.3	165.00				Average	
		point35	35	2,411.6	2,390.1	165.00				Average	
		point36	36	2,428.9	2,282.5	165.00				Average	
		point37	37	2,441.0	2,154.5	165.00				Average	
		point38	38	2,446.5	1,666.7	165.00				Average	
		point40	40	2,445.0	1,662.7	165.00				Average	
		point41	41	2,450.5	722.9	165.00					
N. Lemon St Chapman Av - N Berkeley	50.0	point9	9	748.0	705.9	165.00				Average	
		point10	10	741.9	1,765.9	165.00				Average	
		point11	11	740.6	1,771.0	165.00				Average	
		point12	12	731.8	2,420.6	165.00					

Dudek 12 May 2017
MG TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Percentages
PROJECT/CONTRACT: PN 9422.0001
RUN: Fullerton College Year 2030

Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
E. Chapman Ave w of N. Lemon St.	point1	1	3992	97	30	2	30	1	30	0	0	0	0
	point2	2											
E. Chapman Ave - N. Lemon St.to N. Bkly	point3	3	4108	97	30	2	30	1	30	0	0	0	0
	point4	4											
E. Chapman Ave e of N. Berkeley Ave	point5	5	5006	97	40	2	40	1	40	0	0	0	0
	point6	6											
N. Lemon St S. of E. Chapman Ave	point7	7	4727	97	25	2	25	1	25	0	0	0	0
	point8	8											
N. Lemon St n of N. Berkeley Ave	point13	13	1991	97	25	2	25	1	25	0	0	0	0
	point14	14											
N. Berkeley Ave w of N. Lemon St.	point15	15	3757	97	30	2	30	1	30	0	0	0	0
	point16	16	3757	97	30	2	30	1	30	0	0	0	0
	point17	17	3757	97	30	2	30	1	30	0	0	0	0
	point18	18	3757	97	30	2	30	1	30	0	0	0	0
	point19	19											
N. Berkeley Ave e of N. Lemon St.	point21	21	1541	97	35	2	35	1	35	0	0	0	0
	point22	22	1541	97	35	2	35	1	35	0	0	0	0
	point23	23	1541	97	35	2	35	1	35	0	0	0	0
	point24	24	1541	97	35	2	35	1	35	0	0	0	0
	point25	25											
N. Berkeley Ave s of E. Chapman Ave.	point42	42	331	97	25	2	25	1	25	0	0	0	0
	point43	43	331	97	25	2	25	1	25	0	0	0	0
	point44	44	331	97	25	2	25	1	25	0	0	0	0

	point45	45	331	97	25	2	25	1	25	0	0	0	0
	point46	46											
N. Berkeley Ave n of E. Chapman Ave.	point26	26	1655	97	35	2	35	1	35	0	0	0	0
	point27	27	1655	97	35	2	35	1	35	0	0	0	0
	point28	28	1655	97	35	2	35	1	35	0	0	0	0
	point29	29	1655	97	35	2	35	1	35	0	0	0	0
	point30	30	1655	97	35	2	35	1	35	0	0	0	0
	point31	31	1655	97	35	2	35	1	35	0	0	0	0
	point32	32	1655	97	35	2	35	1	35	0	0	0	0
	point33	33	1655	97	35	2	35	1	35	0	0	0	0
	point34	34	1655	97	35	2	35	1	35	0	0	0	0
	point35	35	1655	97	35	2	35	1	35	0	0	0	0
	point36	36	1655	97	35	2	35	1	35	0	0	0	0
	point37	37	1655	97	35	2	35	1	35	0	0	0	0
	point38	38	1655	97	35	2	35	1	35	0	0	0	0
	point40	40	1655	97	35	2	35	1	35	0	0	0	0
	point41	41											
N. Lemon St Chapman Av - N Berkeley	point9	9	3263	97	25	2	25	1	25	0	0	0	0
	point10	10	3263	97	25	2	25	1	25	0	0	0	0
	point11	11	3263	97	25	2	25	1	25	0	0	0	0
	point12	12											

Dudek 12 May 2017
MG TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: PN 9422.0001
RUN: Fullerton College Year 2030

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	700.5	937.7	165.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,931.5	633.8	165.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	2,577.4	1,092.2	165.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	2,556.5	1,765.8	165.00	5.00	0.00	66	10.0	8.0	Y
ST5	5	1	2,038.8	2,754.9	165.00	5.00	0.00	66	10.0	8.0	Y
ST6	6	1	992.9	2,785.2	165.00	5.00	0.00	66	10.0	8.0	Y
ST7	7	1	1,455.8	1,365.9	165.00	5.00	0.00	66	10.0	8.0	Y
M1	9	1	688.8	2,537.0	165.00	5.00	0.00	66	10.0	8.0	Y
M2	11	1	412.2	2,540.0	165.00	5.00	0.00	66	10.0	8.0	Y
M3	13	1	373.8	627.2	165.00	5.00	0.00	66	10.0	8.0	Y
M4	15	1	2,404.5	604.0	165.00	5.00	0.00	66	10.0	8.0	Y
M5	17	1	2,622.1	660.9	165.00	5.00	0.00	66	10.0	8.0	Y
M6	19	1	2,498.6	962.8	165.00	5.00	0.00	66	10.0	8.0	Y

Dudek
MG

12 May 2017
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: PN 9422.0001
RUN: Fullerton College Year 2030
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
ST2	2	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
ST3	3	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8	-8.0
ST4	4	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0
ST5	5	1	0.0	68.3	66	68.3	10	Snd Lvl	68.3	0.0	8	-8.0
ST6	6	1	0.0	57.2	66	57.2	10	----	57.2	0.0	8	-8.0
ST7	7	1	0.0	51.5	66	51.5	10	----	51.5	0.0	8	-8.0
M1	9	1	0.0	68.3	66	68.3	10	Snd Lvl	68.3	0.0	8	-8.0
M2	11	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
M3	13	1	0.0	67.7	66	67.7	10	Snd Lvl	67.7	0.0	8	-8.0
M4	15	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
M5	17	1	0.0	72.9	66	72.9	10	Snd Lvl	72.9	0.0	8	-8.0
M6	19	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	13	0.0	0.0	0.0
All Impacted	8	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

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INPUT: ROADWAYS
PROJECT/CONTRACT: PN 9422.0001
RUN: Fullerton College Year 2030 w Proj

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
E. Chapman Ave w of N. Lemon St.	65.0	point1	1	18.1	687.4	165.00				Average	
		point2	2	744.4	691.5	165.00					
E. Chapman Ave - N. Lemon St.to N. Bkly	65.0	point3	3	752.6	692.9	165.00				Average	
		point4	4	2,435.0	710.2	165.00					
E. Chapman Ave e of N. Berkeley Ave	65.0	point5	5	2,459.6	708.9	165.00				Average	
		point6	6	3,261.7	710.6	165.00					
N. Lemon St S. of E. Chapman Ave	50.0	point7	7	749.6	250.8	165.00				Average	
		point8	8	744.1	683.5	165.00					
N. Lemon St n of N. Berkeley Ave	50.0	point13	13	722.3	2,457.8	165.00				Average	
		point14	14	715.7	3,177.5	165.00					
N. Berkeley Ave w of N. Lemon St.	65.0	point15	15	19.1	2,478.7	165.00				Average	
		point16	16	133.7	2,449.2	165.00				Average	
		point17	17	319.5	2,435.3	165.00				Average	
		point18	18	576.4	2,430.1	165.00				Average	
		point19	19	720.5	2,433.5	165.00					
N. Berkeley Ave e of N. Lemon St.	65.0	point21	21	727.5	2,438.8	165.00				Average	
		point22	22	1,119.9	2,442.2	165.00				Average	
		point23	23	1,204.9	2,468.2	165.00				Average	
		point24	24	1,336.2	2,534.5	165.00				Average	
		point25	25	1,429.7	2,608.0	165.00					
N. Berkeley Ave s of E. Chapman Ave.	65.0	point42	42	2,447.2	694.5	165.00				Average	
		point43	43	2,451.3	593.9	165.00				Average	
		point44	44	2,463.7	531.9	165.00				Average	
		point45	45	2,477.5	443.8	165.00				Average	
		point46	46	2,476.8	242.7	165.00					

N. Berkeley Ave n of E. Chapman Ave.	65.0	point26	26	1,431.9	2,610.0	165.00				Average	
		point27	27	1,592.7	2,700.5	165.00				Average	
		point28	28	1,748.4	2,730.4	165.00				Average	
		point29	29	1,939.4	2,728.7	165.00				Average	
		point30	30	2,080.8	2,715.3	165.00				Average	
		point31	31	2,122.8	2,699.6	165.00				Average	
		point32	32	2,205.0	2,655.8	165.00				Average	
		point33	33	2,303.9	2,567.2	165.00				Average	
		point34	34	2,371.5	2,473.3	165.00				Average	
		point35	35	2,411.6	2,390.1	165.00				Average	
		point36	36	2,428.9	2,282.5	165.00				Average	
		point37	37	2,441.0	2,154.5	165.00				Average	
		point38	38	2,446.5	1,666.7	165.00				Average	
		point40	40	2,445.0	1,662.7	165.00				Average	
		point41	41	2,450.5	722.9	165.00					
N. Lemon St Chapman Av - N Berkeley	50.0	point9	9	748.0	705.9	165.00				Average	
		point10	10	741.9	1,765.9	165.00				Average	
		point11	11	740.6	1,771.0	165.00				Average	
		point12	12	731.8	2,420.6	165.00					

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INPUT: TRAFFIC FOR LAeq1h Percentages
PROJECT/CONTRACT: PN 9422.0001
RUN: Fullerton College Year 2030 w Proj

Roadway	Points												
Name	Name	No.	Segment										
			Total	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			Volume	P	S	P	S	P	S	P	S	P	S
			veh/hr	%	mph	%	mph	%	mph	%	mph	%	mph
E. Chapman Ave w of N. Lemon St.	point1	1	4141	97	30	2	30	1	30	0	0	0	0
	point2	2											
E. Chapman Ave - N. Lemon St.to N. Bkly	point3	3	4139	97	30	2	30	1	30	0	0	0	0
	point4	4											
E. Chapman Ave e of N. Berkeley Ave	point5	5	5151	97	40	2	40	1	40	0	0	0	0
	point6	6											
N. Lemon St S. of E. Chapman Ave	point7	7	4786	97	25	2	25	1	25	0	0	0	0
	point8	8											
N. Lemon St n of N. Berkeley Ave	point13	13	2106	97	25	2	25	1	25	0	0	0	0
	point14	14											
N. Berkeley Ave w of N. Lemon St.	point15	15	3797	97	30	2	30	1	30	0	0	0	0
	point16	16	3797	97	30	2	30	1	30	0	0	0	0
	point17	17	3797	97	30	2	30	1	30	0	0	0	0
	point18	18	3797	97	30	2	30	1	30	0	0	0	0
	point19	19											
N. Berkeley Ave e of N. Lemon St.	point21	21	1605	97	35	2	35	1	35	0	0	0	0
	point22	22	1605	97	35	2	35	1	35	0	0	0	0
	point23	23	1605	97	35	2	35	1	35	0	0	0	0
	point24	24	1605	97	35	2	35	1	35	0	0	0	0
	point25	25											
N. Berkeley Ave s of E. Chapman Ave.	point42	42	358	97	25	2	25	1	25	0	0	0	0
	point43	43	358	97	25	2	25	1	25	0	0	0	0
	point44	44	358	97	25	2	25	1	25	0	0	0	0

	point45	45	358	97	25	2	25	1	25	0	0	0	0
	point46	46											
N. Berkeley Ave n of E. Chapman Ave.	point26	26	1792	97	35	2	35	1	35	0	0	0	0
	point27	27	1792	97	35	2	35	1	35	0	0	0	0
	point28	28	1792	97	35	2	35	1	35	0	0	0	0
	point29	29	1792	97	35	2	35	1	35	0	0	0	0
	point30	30	1792	97	35	2	35	1	35	0	0	0	0
	point31	31	1792	97	35	2	35	1	35	0	0	0	0
	point32	32	1792	97	35	2	35	1	35	0	0	0	0
	point33	33	1792	97	35	2	35	1	35	0	0	0	0
	point34	34	1792	97	35	2	35	1	35	0	0	0	0
	point35	35	1792	97	35	2	35	1	35	0	0	0	0
	point36	36	1792	97	35	2	35	1	35	0	0	0	0
	point37	37	1792	97	35	2	35	1	35	0	0	0	0
	point38	38	1792	97	35	2	35	1	35	0	0	0	0
	point40	40	1792	97	35	2	35	1	35	0	0	0	0
	point41	41											
N. Lemon St Chapman Av - N Berkeley	point9	9	3452	97	25	2	25	1	25	0	0	0	0
	point10	10	3452	97	25	2	25	1	25	0	0	0	0
	point11	11	3452	97	25	2	25	1	25	0	0	0	0
	point12	12											

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INPUT: RECEIVERS
PROJECT/CONTRACT: PN 9422.0001
RUN: Fullerton College Year 2030 w Proj

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	700.5	937.7	165.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,931.5	633.8	165.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	2,577.4	1,092.2	165.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	2,556.5	1,765.8	165.00	5.00	0.00	66	10.0	8.0	Y
ST5	5	1	2,038.8	2,754.9	165.00	5.00	0.00	66	10.0	8.0	Y
ST6	6	1	992.9	2,785.2	165.00	5.00	0.00	66	10.0	8.0	Y
ST7	7	1	1,455.8	1,365.9	165.00	5.00	0.00	66	10.0	8.0	Y
M1	9	1	688.8	2,537.0	165.00	5.00	0.00	66	10.0	8.0	Y
M2	11	1	412.2	2,540.0	165.00	5.00	0.00	66	10.0	8.0	Y
M3	13	1	373.8	627.2	165.00	5.00	0.00	66	10.0	8.0	Y
M4	15	1	2,404.5	604.0	165.00	5.00	0.00	66	10.0	8.0	Y
M5	17	1	2,622.1	660.9	165.00	5.00	0.00	66	10.0	8.0	Y
M6	19	1	2,498.6	962.8	165.00	5.00	0.00	66	10.0	8.0	Y

Dudek
MG
12 May 2017
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: PN 9422.0001
RUN: Fullerton College Year 2030 w Proj
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0
ST2	2	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
ST3	3	1	0.0	63.3	66	63.3	10	----	63.3	0.0	8	-8.0
ST4	4	1	0.0	63.0	66	63.0	10	----	63.0	0.0	8	-8.0
ST5	5	1	0.0	68.7	66	68.7	10	Snd Lvl	68.7	0.0	8	-8.0
ST6	6	1	0.0	57.4	66	57.4	10	----	57.4	0.0	8	-8.0
ST7	7	1	0.0	51.6	66	51.6	10	----	51.6	0.0	8	-8.0
M1	9	1	0.0	68.5	66	68.5	10	Snd Lvl	68.5	0.0	8	-8.0
M2	11	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
M3	13	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0
M4	15	1	0.0	67.6	66	67.6	10	Snd Lvl	67.6	0.0	8	-8.0
M5	17	1	0.0	73.0	66	73.0	10	Snd Lvl	73.0	0.0	8	-8.0
M6	19	1	0.0	68.3	66	68.3	10	Snd Lvl	68.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	13	0.0	0.0	0.0
All Impacted	8	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0