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MEMO

Date: April 26, 2023

To: Natalie Noyes, AICP
Senior Project Manager
David J. Powers & Associates, Inc.

From: Michael Thill
Principal Consultant
Illingworth & Rodkin, Inc.

**SUBJECT: Stratford Preparatory School, 3800 Blackford Avenue, San José, CA –
Traffic Noise Assessment**

Stratford Preparatory School operates a private middle and high school with a total of 534 students (465 middle school and 69 high school students) on the former Blackford High School campus under a lease from the Campbell Union High School District (CUHSD) in compliance with a Conditional Use Permit (CP04-060) that allows operation of a private middle school and high school with up to 800 pre-school and kindergarten through twelfth grade students on the campus. The project proposes to amend the existing conditional use permit to increase the number of students from 800 to 1,349, including approximately 725 middle school students and 624 high school students who primarily attend other nearby Strafford lower school campuses. No physical improvements are proposed. This memo summarizes Illingworth & Rodkin, Inc's (I&R) assessment of traffic noise impacts due to the proposed increase in enrollment.

Regulatory Criteria - City of San José General Plan. The Environmental Leadership Chapter in the Envision San José 2040 General Plan sets forth policies with the goal of minimizing the impact of noise on people through noise reduction and suppression techniques, and through appropriate land use policies in the City of San José. The following policy is applicable to the proposed project:

EC-1.2 Minimize the noise impacts of new development on land uses sensitive to increased noise levels (Categories 1, 2, 3 and 6) by limiting noise generation and by requiring use of noise attenuation measures such as acoustical enclosures and sound barriers, where feasible. The City considers significant noise impacts to occur if a project would:

- Cause the DNL at noise sensitive receptors to increase by five dBA DNL or more where the noise levels would remain “Normally Acceptable;” or
- Cause the DNL at noise sensitive receptors to increase by three dBA DNL or more where noise levels would equal or exceed the “Normally Acceptable” level.

According to Policy EC-1.2 of the City’s General Plan, a significant permanent noise increase would occur if the project would increase noise levels at noise-sensitive receptors by 3 dBA DNL or more where ambient noise levels exceed the “normally acceptable” noise level standard. Where ambient noise levels are at or below the “normally acceptable” noise level standard, noise level increases of 5 dBA DNL or more would be considered significant. The City’s General Plan defines the “normally acceptable” outdoor noise level standard for the nearby residential land uses to be 60 dBA DNL.

Screening Analysis. Traffic data supplied by Hexagon Transportation Consultants were first screened to identify roadway segments in the project vicinity where traffic volumes would substantially increase. An approximate doubling (100% increase) of worst-hour/daily traffic volumes would roughly equate to a 3 dBA DNL increase in traffic noise, an approximate 50% increase in worst-hour/daily traffic volumes would roughly equate to a 2 dBA DNL increase in traffic noise, and an approximate 25% increase in worst-hour/daily traffic volumes would roughly equate to a 1 dBA DNL increase in traffic noise.

The traffic study evaluated AM and PM traffic volumes for existing and background plus project conditions at 16 intersections in the vicinity of the project site. Table 1, below summarizes these data. The screening analysis identified Intersection 14 (Rebecca Way & Blackford Avenue) and Intersection 16 (Hibiscus Lane & Blackford Avenue) as the only intersections where volumes would increase by 50% or more. All other intersections were eliminated from further analysis as project-generated traffic noise levels would be less than 2 dBA DNL.

TABLE 1 Existing and Background Plus Project AM and PM Intersection Volumes

Int #		ExAM	Back+P AM	% inc	ExPM	Back+P PM	% inc
1	Saratoga Avenue & Kiely Boulevard	3116	3452	11%	3611	3897	8%
2	Saratoga Avenue & I-280 NB On-Ramp	3785	4152	10%	3934	4298	9%
3	Saratoga Avenue & I-280 SB Ramps	4869	5516	13%	4775	5256	10%
4	Saratoga Avenue & Moorpark Avenue	4658	5305	14%	4889	5358	10%
5	Saratoga Avenue & Blackford Avenue	3124	3537	13%	3367	3588	7%
6	Saratoga Avenue & Manzanita Drive	2424	2496	3%	2582	2626	2%
7	Saratoga Avenue & Williams Road	3903	4096	5%	3720	3992	7%
8	San Tomas Expwy & Williams Road	5079	5298	4%	5227	5399	3%
9	San Tomas Expwy & Moorpark Avenue	5684	5934	4%	6089	6315	4%
10	Boynton Avenue & Williams Road	1721	1870	9%	1442	1532	6%
11	Boynton Avenue & Blackford Avenue	770	998	30%	508	647	27%
12	Boynton Avenue & Moorpark Avenue	1558	1664	7%	1591	1657	4%
13	Rebecca Way & Moorpark Avenue	1133	1304	15%	1308	1456	11%
14	Rebecca Way & Blackford Avenue	756	1155	53%	378	664	76%
15	Hibiscus Lane & Williams Road	1267	1339	6%	1060	1104	4%
16	Hibiscus Lane & Blackford Avenue	687	1172	71%	465	729	57%

Table 2 shows the roadway speed and volume summary for affected segments of Intersection 14 (Rebecca Way & Blackford Avenue) and Intersection 16 (Hibiscus Lane & Blackford Avenue). As shown in Table 2, only Rebecca Way, north of Blackford Avenue, would experience an increase in noise levels greater than 2 dBA DNL as the Average Daily Traffic (ADT) is anticipated to increase by more than 50%. Intersection 16 was eliminated from further analysis as project-generated traffic noise levels would be less than 2 dBA DNL.

TABLE 2 Existing and Background Plus Project AM and PM Intersection Volumes

Roadway Segment	Average Daily Traffic (vehicles)	Direction	Average Daily Traffic (vehicles)	Average Speed (mph)	85th Percentile Speed (mph)	Project ADT	ADT % Increase with Project Traffic
Blackford Avenue, west of Hibiscus Lane	3,860	EB	1,985	26 mph	31 mph	1,378	36%
		WB	1,875	26 mph	32 mph		
Blackford Avenue, east of Rebecca Way	2,958	EB	1,481	29 mph	34 mph	785	27%
		WB	1,477	28 mph	33 mph		
Hibiscus Lane, south of Blackford Avenue	1,301	NB	716	17 mph	20 mph	208	16%
		SB	585	18 mph	22 mph		
Rebecca Way, north of Blackford Avenue	596	NB	413	17 mph	20 mph	834	140%
		SB	183	16 mph	20 mph		

Detailed Analysis – Rebecca Way. The detailed analysis reviewed the traffic volumes expected along Rebecca Way. This analysis showed that the proposed project would more than double existing traffic volumes during the AM and PM peak hours, however, the traffic volumes would remain relatively low. During the AM peak hour, volumes on Rebecca Way, south of Moorpark, would increase from 155 to 326, and volumes on Rebecca Way, north of Blackford, would increase from 167 to 338. This is an increase of about 171 vehicles. During the PM peak hour, volumes on Rebecca Way, south of Moorpark, would increase from 65 to 213, and volumes on Rebecca Way, north of Blackford, would increase from 40 to 187. This is an increase of about 147 vehicles.

The Federal Highways Administration’s Traffic Noise Model (FHWA TNM) was used to calculate traffic noise levels expected at 50 feet from the centerline of Rebecca Way assuming the worst-case project traffic increment of 171 vehicles/hour. The predicted noise level from the project traffic would be about 51 dBA L_{eq} as shown in Attachment A. Conservatively assuming that this worst-case traffic noise level resulting from the project were to persist between 7AM and 7PM, the calculated DNL would be 48 dBA.

To calculate the actual noise increase expected with the project, one must consider the increase in Rebecca Way traffic volumes as well as the ambient noise levels in the area. Based on ambient noise measurements made in the area (Attachment B) the existing DNL noise level at receptors along Rebecca Way is 59 to 60 dBA. Adding the project DNL (48 dBA) to the existing DNL (59 to 60 dBA) would yield an existing plus project noise level of 59 to 60 dBA DNL.¹ Therefore, the

¹ When two noise levels are 10 dB or more apart, the lower value does not contribute significantly (less than 0.5 dB) to the total noise level. For example, 60 + 70 dB = 70 dB.

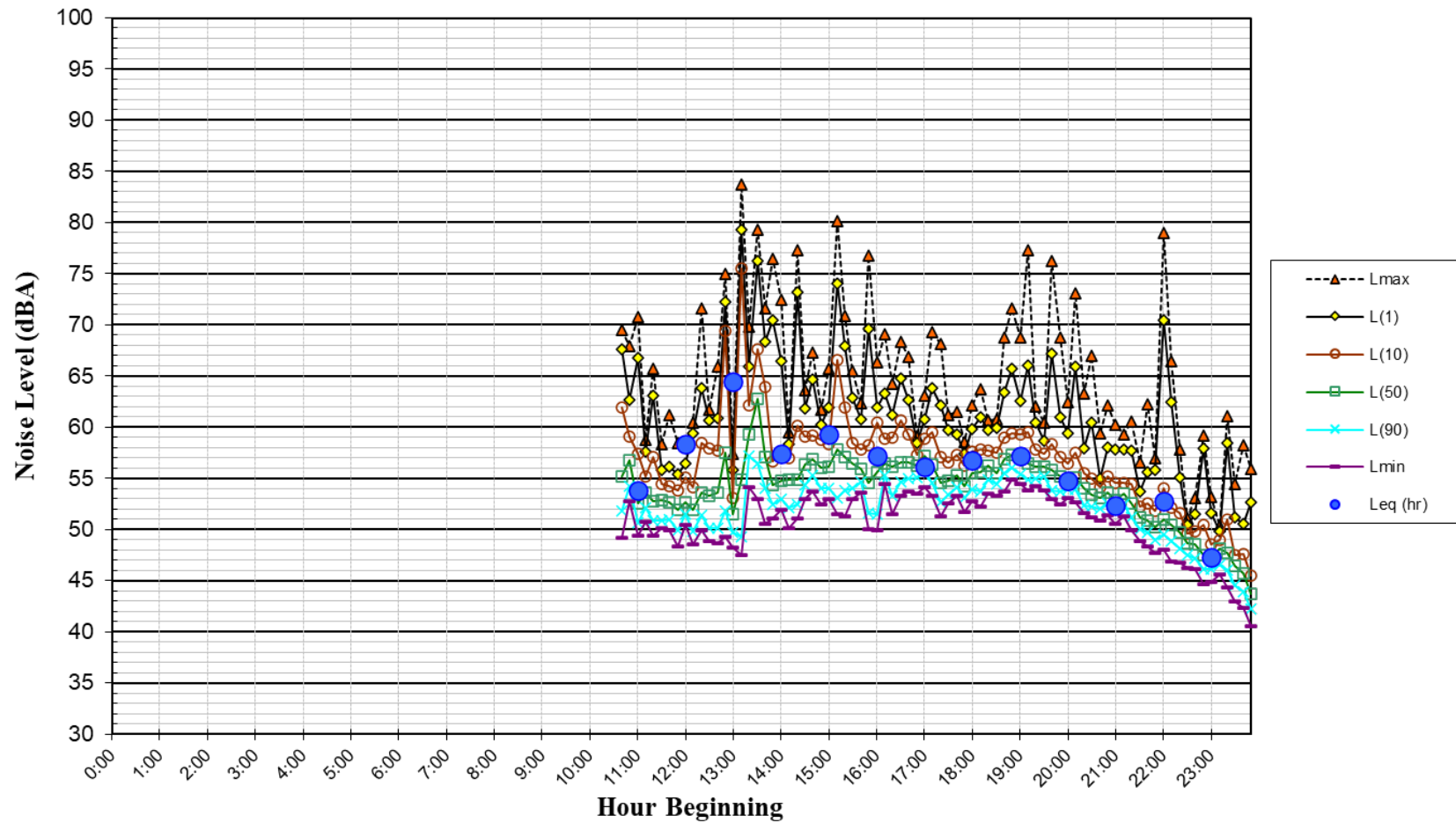
increased traffic along Rebecca Way due to the project would not measurably increase existing DNL noise levels at nearby receptors. This is a less-than-significant impact, and no mitigation would be required.

ATTACHMENT A TNM RESULTS

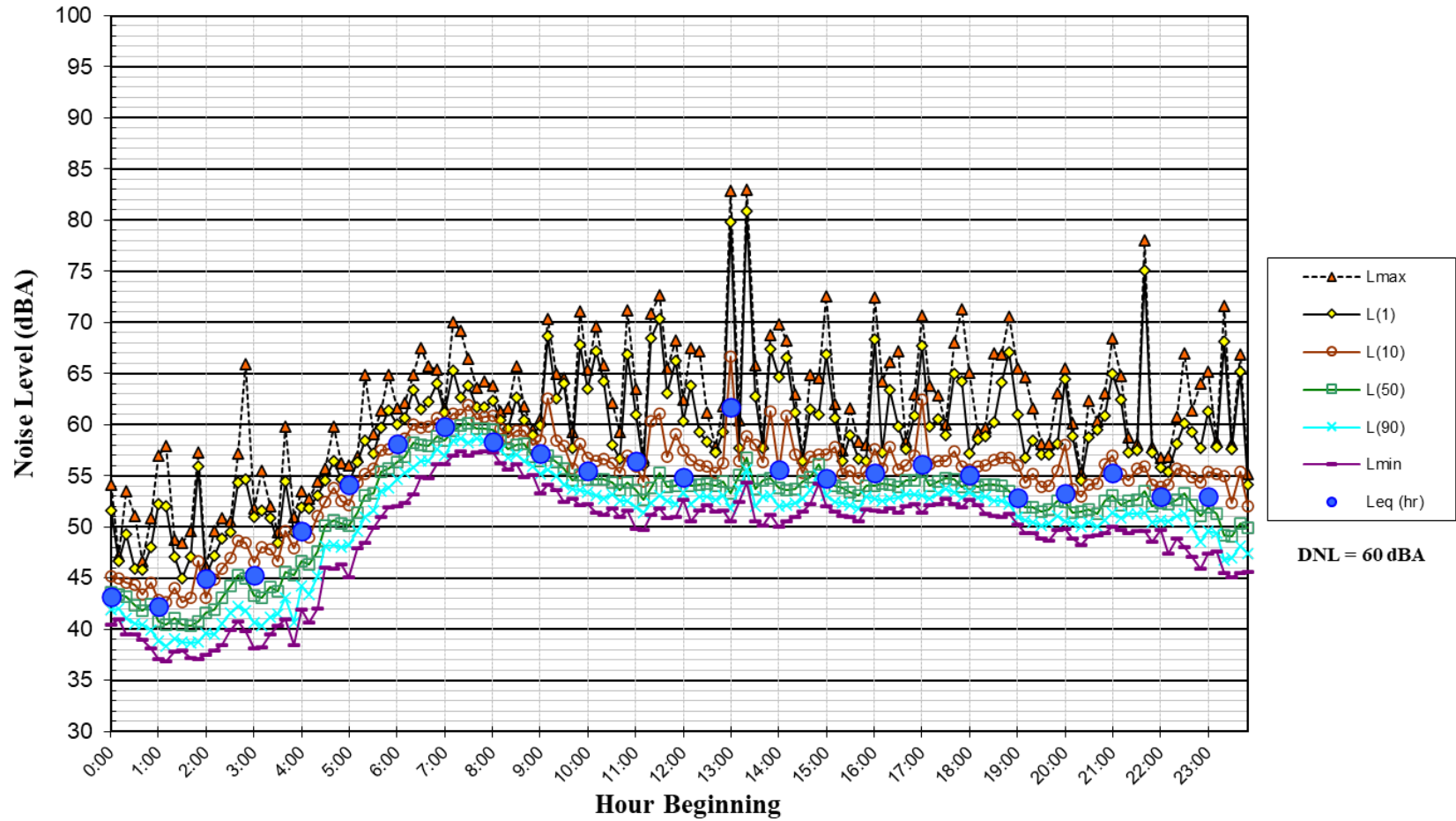
I&R	21 April 2023												
MST	TNM 2.5												
	Calculated with TNM 2.5												
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:	23-048												
RUN:	Stratford School												
BARRIER DESIGN:	INPUT HEIGHTS												
	Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.												
ATMOSPHERICS:	68 deg F, 50% RH												
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h		Increase over existing		Type Impact	With Barrier		Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	51.3	66	51.3	10	—	51.3	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

ATTACHMENT B AMBIENT NOISE DATA

**Noise Levels at Noise Measurement Site LT-1
~45 feet Northeast of Centerline of Rebecca Way
Tuesday, April 4, 2023**



**Noise Levels at Noise Measurement Site LT-1
~45 feet Northeast of Centerline of Rebecca Way
Wednesday, April 5, 2023**



**Noise Levels at Noise Measurement Site LT-1
~45 feet Northeast of Centerline of Rebecca Way
Thursday, April 6, 2023**

