

April 27, 2021

Mr. Grant Becklund
30811 Garbani Road
Winchester, CA 92596

**Subject: Jurupa Valley Storage – Baseline Noise Prediction, City of Jurupa Valley, CA –
Memorandum #1**

Dear Mr. Grant Becklund:

MD Acoustics, LLC (MD) is pleased to provide this Memorandum #1 as it relates to the proposed Jurupa Valley Storage located east of the Interstate 15 Freeway between 68th Street and River Drive in the City of Jurupa Valley, CA. MD has evaluated the predicted traffic noise levels associated with the adjacent I-15 Freeway to the project site and surrounding uses. MD utilized traffic noise modeling software based on the FHWA-77-108 noise prediction modeling. The FHWA model arrives at the predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). The traffic data for the I-15 Freeway was obtained from Caltrans Annual Average Daily Traffic (AADT) <https://dot.ca.gov/programs/traffic-operations/census>.

MD projected the noise level 175-feet north of the centerline of the I-15 Freeway (project site's southern property line). The predicted Community Noise Exposure Level (CNEL) is 76.5 dBA with peak levels reaching up to 77.1 dBA and minimum levels of 67.6 dBA. Table 1 provides a summary of the traffic noise results. The traffic input data and calculations are provided in Appendix A.

Table 1: Traffic Noise Prediction Summary (dBA)

Roadway	Distance to Receptor (ft)	ADT	CNEL
I-15 Freeway	175	152,000	76.5

MD is pleased to provide baseline noise prediction memo. If you have any questions regarding this memorandum, please call our office at (805) 426-4477.

Sincerely,
MD Acoustics, LLC



Mike Dickerson, INCE
Principal

Appendix A
Traffic Counts and Prediction Model

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT: JURUPA VALLEY STORAGE	JOB #: 0398-2020-04
ROADWAY: I-15 FREEWAY	DATE: 21-Apr-21
LOCATION: 5FT ABOVE GROUND @ 175 FROM CENTERLINE OF FREEWAY	ENGINEER: M. Dickerson

NOISE INPUT DATA

ROADWAY CONDITIONS	RECEIVER INPUT DATA
ADT = 152,000	RECEIVER DISTANCE = 175
SPEED = 65	DIST C/L TO WALL = 175
PK HR % = 10	RECEIVER HEIGHT = 5.0
NEAR LANE/FAR LANE DIS = 115	WALL DISTANCE FROM RECEIVER = 0
ROAD ELEVATION = 0.0	PAD ELEVATION = 0.0
GRADE = 0.0 %	ROADWAY VIEW: LF ANGLE= -90
PK HR VOL = 15,200	RT ANGLE= 90
	DF ANGLE= 180

SITE CONDITIONS	WALL INFORMATION
AUTOMOBILES = 15	HTH WALL = 0.0
MEDIUM TRUCKS = 15 (10 = HARD SITE, 15 = SOFT SITE)	AMBIENT= 0.0
HEAVY TRUCKS = 15	BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA	MISC. VEHICLE INFO																																				
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>VEHICLE TYPE</th> <th>DAY</th> <th>EVENING</th> <th>NIGHT</th> <th>DAILY</th> </tr> </thead> <tbody> <tr> <td>AUTOMOBILES</td> <td>0.775</td> <td>0.129</td> <td>0.096</td> <td>0.8854</td> </tr> <tr> <td>MEDIUM TRUCK</td> <td>0.848</td> <td>0.049</td> <td>0.103</td> <td>0.0545</td> </tr> <tr> <td>HEAVY TRUCKS</td> <td>0.865</td> <td>0.027</td> <td>0.108</td> <td>0.0601</td> </tr> </tbody> </table>	VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY	AUTOMOBILES	0.775	0.129	0.096	0.8854	MEDIUM TRUCK	0.848	0.049	0.103	0.0545	HEAVY TRUCKS	0.865	0.027	0.108	0.0601	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>VEHICLE TYPE</th> <th>HEIGHT</th> <th>SLE DISTANCE</th> <th>GRADE ADJUSTMENT</th> </tr> </thead> <tbody> <tr> <td>AUTOMOBILES</td> <td>2.0</td> <td>165.31</td> <td>--</td> </tr> <tr> <td>MEDIUM TRUCKS</td> <td>4.0</td> <td>165.29</td> <td>--</td> </tr> <tr> <td>HEAVY TRUCKS</td> <td>8.0</td> <td>165.31</td> <td>0.00</td> </tr> </tbody> </table>	VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT	AUTOMOBILES	2.0	165.31	--	MEDIUM TRUCKS	4.0	165.29	--	HEAVY TRUCKS	8.0	165.31	0.00
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NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	74.3	72.4	70.6	64.6	73.2	73.8
MEDIUM TRUCKS	68.4	66.9	60.5	59.0	67.4	67.6
HEAVY TRUCKS	72.3	70.9	61.8	63.1	71.4	71.6
NOISE LEVELS (dBA)	77.1	75.4	71.5	67.6	76.1	76.5

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NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	471	1015	2187	4712
LDN	443	955	2058	4435

AUTOS = 134,581 ~ 88.5%
 MED TRKS = 8,277 ~ 5.45%
 HVY TRKS = 9,142, ~ 6.01%

2018 Daily Truck Traffic

RTE	DIST	CNTY	POST MILE	E G	DESCRIPTION	VEHICLE AADT TOTAL	TRUCK AADT TOTAL	TRUCK % TOT VEH	TRUCK AADT				TOTAL	%	TRUCK AADT				EAL (1000)	YEAR VER/ EST
									By Axle						By Axle					
									2	3	4	5+								
015	08	RIV	3.436	B	SOUTH JCT. RTE. 79	145000	9788	6.75	3,655	697	297	5,140	37.34	7.12	3.03	52.51	2,009	04E		
015	08	RIV	3.436	A	SOUTH JCT. RTE. 79	164000	11562	7.05	4,317	823	350	6,071	37.34	7.12	3.03	52.51	2,373	04E		
015	08	RIV	41.501	B	JCT. RTE. 91	187000	10491	5.61	3,653	1,315	848	4,676	34.82	12.53	8.08	44.57	1,987	00E		
015	08	RIV	44.66	O	FOURTH ST, NORCO	152000	17419	11.46	6,053	2,224	1,359	7,783	34.75	12.77	7.80	44.68	3,280	00E		
015	08	RIV	51.474	A	JCT. RTE. 60	219000	17958	8.20	6,240	2,293	1,401	8,024	34.75	12.77	7.80	44.68	3,404	00E		
015	08	RIV	6.623	B	NORTH JCT RTE. 79	174000	11432	6.57	4,269	814	346	6,003	37.34	7.12	3.03	52.51	2,346	04E		
015	08	RIV	8.737	A	JCT. RTE. 215 NORTH	114000	10260	9.00	4,624	824	418	4,394	45.07	8.03	4.07	42.83	1,815	06E		
015	08	RIV	8.737	B	JCT. RTE. 215 NORTH	198000	10989	5.55	4,103	782	333	5,770	37.34	7.12	3.03	52.51	2,255	04E		
015	08	SBD	R13.779	A	JCT. RTE. 215	168000	23167	13.79	6,718	1,297	556	14,595	29.00	5.60	2.40	63.00	4,950	04E		
015	08	SBD	R136.57	A	BAKER, JCT. RTE. 127	37000	7785	21.04	1,514	378	215	5,678	19.45	4.86	2.76	72.93	2,022	01E		
015	08	SBD	R136.57	B	BAKER, JCT. RTE. 127	38000	7600	20.00	1,478	369	210	5,543	19.45	4.86	2.76	72.93	1,975	01E		
015	08	SBD	16.374	B	JCT. RTE. 215	132000	15114	11.45	4,747	916	349	9,102	31.41	6.06	2.31	60.22	3,311	08V		
015	08	SBD	176.45	B	NIPTON RD	44000	7902	17.96	2,023	259	103	5,516	25.60	3.28	1.30	69.81	1,967	01E		
015	08	SBD	186.23	B	NEVADA STATE LINE	45000	8082	17.96	2,069	265	105	5,642	25.60	3.28	1.30	69.81	2,013	01E		