Appendix H

Noise Measurement and Analyses Data

- Freq Weight : A
- Time Weight : SLOW
- Level Range : 30-90
- Max dB : 82.0 - 2020/12/11 14:28:18
- Level Range : 30-90
- SEL : 99.5
- Leq : 70.0
-

No.s	Date Time	(dB)
1	2020/12/11 14:24:02	71.4
2	2020/12/11 14:24:05	67.7
3	2020/12/11 14:24:08	71.8
4	2020/12/11 14:24:11	70.9
5	2020/12/11 14:24:14	73.0
6	2020/12/11 14:24:17	70.7
7	2020/12/11 14:24:20	65.6
8	2020/12/11 14:24:23	68.3
9	2020/12/11 14:24:26	67.6
10	2020/12/11 14:24:29	65.1
11	2020/12/11 14:24:32	71.9
12	2020/12/11 14:24:35	70.0
13	2020/12/11 14:24:38	67.1
14	2020/12/11 14:24:41	65.5
15	2020/12/11 14:24:44	70.7
16	2020/12/11 14:24:47	74.5
17	2020/12/11 14:24:50	73.4
18	2020/12/11 14:24:53	74.8
19	2020/12/11 14:24:56	70.4
20	2020/12/11 14:24:59	71.3
21	2020/12/11 14:25:02	74.1
22	2020/12/11 14:25:05	69.4
23	2020/12/11 14:25:08	64.2
24	2020/12/11 14:25:11	66.6
25	2020/12/11 14:25:14	68.8
26	2020/12/11 14:25:17	69.9
27	2020/12/11 14:25:20	63.8
28	2020/12/11 14:25:23	67.5
29	2020/12/11 14:25:26	73.1
30	2020/12/11 14:25:29	69.4
31	2020/12/11 14:25:32	65.8
32	2020/12/11 14:25:35	65.9
33	2020/12/11 14:25:38	62.0
34	2020/12/11 14:25:41	66.4
35	2020/12/11 14:25:44	60.6
36	2020/12/11 14:25:47	59.4
37	2020/12/11 14:25:50	67.6
38	2020/12/11 14:25:53	76.6
39	2020/12/11 14:25:56	77.0
40	2020/12/11 14:25:59	71.1
41	2020/12/11 14:26:02	70.2
42	2020/12/11 14:26:05	67.7
43	2020/12/11 14:26:08	68.3
44	2020/12/11 14:26:11	66.3
45	2020/12/11 14:26:14	70.9
46	2020/12/11 14:26:17	72.6
47	2020/12/11 14:26:20	74.2
48	2020/12/11 14:26:23	69.2
49	2020/12/11 14:26:26	65.5
50	2020/12/11 14:26:29	71.9
51	2020/12/11 14:26:32	67.2
52	2020/12/11 14:26:35	67.5
53	2020/12/11 14:26:38	72.1
54	2020/12/11 14:26:41	75.7
55	2020/12/11 14:26:44	73.1
56	2020/12/11 14:26:47	71.1
57	2020/12/11 14:26:50	73.7
58	2020/12/11 14:26:53	67.5
59	2020/12/11 14:26:56	66.0
60	2020/12/11 14:26:59	71.8
61	2020/12/11 14:27:02	66.3
62	2020/12/11 14:27:05	68.7
63	2020/12/11 14:27:08	69.7
64	2020/12/11 14:27:11	63.4
65	2020/12/11 14:27:14	61.1
66	2020/12/11 14:27:17	57.4
67	2020/12/11 14:27:20	56.0
68	2020/12/11 14:27:23	54.1
69	2020/12/11 14:27:26	53.6
70	2020/12/11 14:27:29	53.0
71	2020/12/11 14:27:32	52.6
72	2020/12/11 14:27:35	54.1
73	2020/12/11 14:27:38	54.7
74	2020/12/11 14:27:41	59.5
75	2020/12/11 14:27:44	58.1
76	2020/12/11 14:27:47	63.2
77	2020/12/11 14:27:50	69.4
78	2020/12/11 14:27:53	72.3
79	2020/12/11 14:27:56	73.8
80	2020/12/11 14:27:59	66.8
81	2020/12/11 14:28:02	66.1
82	2020/12/11 14:28:05	69.1
83	2020/12/11 14:28:08	62.1
84	2020/12/11 14:28:11	63.4
85	2020/12/11 14:28:14	70.7

86	2020/12/11	14:28:17	76.7
87	2020/12/11	14:28:20	72.6
88	2020/12/11	14:28:23	67.8
89	2020/12/11	14:28:26	72.6
90	2020/12/11	14:28:29	73.3
91	2020/12/11	14:28:32	69.4
92	2020/12/11	14:28:35	68.3
93	2020/12/11	14:28:38	66.9
94	2020/12/11	14:28:41	65.9
95	2020/12/11	14:28:44	64.2
96	2020/12/11	14:28:47	66.3
97	2020/12/11	14:28:50	72.4
98	2020/12/11	14:28:53	74.1
99	2020/12/11	14:28:56	78.6
100	2020/12/11	14:28:59	70.1
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103	2020/12/11	14:29:08	60.1
104	2020/12/11	14:29:11	62.7
105	2020/12/11	14:29:14	64.8
106	2020/12/11	14:29:17	73.3
107	2020/12/11	14:29:20	70.2
108	2020/12/11	14:29:23	68.2
109	2020/12/11	14:29:26	64.6
110	2020/12/11	14:29:29	66.9
111	2020/12/11	14:29:32	68.9
112	2020/12/11	14:29:35	66.8
113	2020/12/11	14:29:38	69.0
114	2020/12/11	14:29:41	68.8
115	2020/12/11	14:29:44	74.4
116	2020/12/11	14:29:47	68.4
117	2020/12/11	14:29:50	68.4
118	2020/12/11	14:29:53	78.2
119	2020/12/11	14:29:56	73.1
120	2020/12/11	14:29:59	70.1
121	2020/12/11	14:30:02	72.3
122	2020/12/11	14:30:05	69.5
123	2020/12/11	14:30:08	72.4
124	2020/12/11	14:30:11	73.4
125	2020/12/11	14:30:14	70.5
126	2020/12/11	14:30:17	70.4
127	2020/12/11	14:30:20	68.5
128	2020/12/11	14:30:23	64.1
129	2020/12/11	14:30:26	64.7
130	2020/12/11	14:30:29	65.8
131	2020/12/11	14:30:32	72.5
132	2020/12/11	14:30:35	71.5
133	2020/12/11	14:30:38	70.6
134	2020/12/11	14:30:41	67.8
135	2020/12/11	14:30:44	66.4
136	2020/12/11	14:30:47	67.1
137	2020/12/11	14:30:50	71.3
138	2020/12/11	14:30:53	71.8
139	2020/12/11	14:30:56	68.5
140	2020/12/11	14:30:59	63.3
141	2020/12/11	14:31:02	62.3
142	2020/12/11	14:31:05	60.5
143	2020/12/11	14:31:08	65.5
144	2020/12/11	14:31:11	70.7
145	2020/12/11	14:31:14	73.0
146	2020/12/11	14:31:17	71.2
147	2020/12/11	14:31:20	78.4
148	2020/12/11	14:31:23	71.8
149	2020/12/11	14:31:26	67.7
150	2020/12/11	14:31:29	73.1
151	2020/12/11	14:31:32	70.7
152	2020/12/11	14:31:35	72.3
153	2020/12/11	14:31:38	72.7
154	2020/12/11	14:31:41	77.8
155	2020/12/11	14:31:44	73.3
156	2020/12/11	14:31:47	74.9
157	2020/12/11	14:31:50	72.7
158	2020/12/11	14:31:53	72.6
159	2020/12/11	14:31:56	66.4
160	2020/12/11	14:31:59	63.6
161	2020/12/11	14:32:02	58.6
162	2020/12/11	14:32:05	57.3
163	2020/12/11	14:32:08	59.0
164	2020/12/11	14:32:11	63.2
165	2020/12/11	14:32:14	72.0
166	2020/12/11	14:32:17	73.4
167	2020/12/11	14:32:20	68.8
168	2020/12/11	14:32:23	72.2
169	2020/12/11	14:32:26	71.4
170	2020/12/11	14:32:29	72.3
171	2020/12/11	14:32:32	72.7
172	2020/12/11	14:32:35	72.9
173	2020/12/11	14:32:38	67.0
174	2020/12/11	14:32:41	71.4
175	2020/12/11	14:32:44	64.9
176	2020/12/11	14:32:47	72.5
177	2020/12/11	14:32:50	66.1
178	2020/12/11	14:32:53	64.1
179	2020/12/11	14:32:56	74.1
180	2020/12/11	14:32:59	66.2
181	2020/12/11	14:33:02	72.1
182	2020/12/11	14:33:05	71.3
183	2020/12/11	14:33:08	67.4
184	2020/12/11	14:33:11	66.4

185	2020/12/11	14:33:14	72.6
186	2020/12/11	14:33:17	70.6
187	2020/12/11	14:33:20	68.7
188	2020/12/11	14:33:23	68.9
189	2020/12/11	14:33:26	67.3
190	2020/12/11	14:33:29	71.6
191	2020/12/11	14:33:32	76.4
192	2020/12/11	14:33:35	73.6
193	2020/12/11	14:33:38	72.5
194	2020/12/11	14:33:41	74.6
195	2020/12/11	14:33:44	67.9
196	2020/12/11	14:33:47	64.8
197	2020/12/11	14:33:50	67.9
198	2020/12/11	14:33:53	63.9
199	2020/12/11	14:33:56	67.2
200	2020/12/11	14:33:59	72.5
201	2020/12/11	14:34:02	66.7
202	2020/12/11	14:34:05	64.8
203	2020/12/11	14:34:08	60.2
204	2020/12/11	14:34:11	65.7
205	2020/12/11	14:34:14	73.2
206	2020/12/11	14:34:17	73.2
207	2020/12/11	14:34:20	66.2
208	2020/12/11	14:34:23	68.2
209	2020/12/11	14:34:26	61.7
210	2020/12/11	14:34:29	59.2
211	2020/12/11	14:34:32	67.4
212	2020/12/11	14:34:35	65.8
213	2020/12/11	14:34:38	67.3
214	2020/12/11	14:34:41	63.4
215	2020/12/11	14:34:44	59.7
216	2020/12/11	14:34:47	61.4
217	2020/12/11	14:34:50	70.9
218	2020/12/11	14:34:53	69.8
219	2020/12/11	14:34:56	72.5
220	2020/12/11	14:34:59	68.3
221	2020/12/11	14:35:02	75.1
222	2020/12/11	14:35:05	75.0
223	2020/12/11	14:35:08	74.0
224	2020/12/11	14:35:11	72.8
225	2020/12/11	14:35:14	73.4
226	2020/12/11	14:35:17	70.1
227	2020/12/11	14:35:20	73.4
228	2020/12/11	14:35:23	70.8
229	2020/12/11	14:35:26	69.8
230	2020/12/11	14:35:29	68.4
231	2020/12/11	14:35:32	71.0
232	2020/12/11	14:35:35	72.0
233	2020/12/11	14:35:38	69.0
234	2020/12/11	14:35:41	65.7
235	2020/12/11	14:35:44	65.1
236	2020/12/11	14:35:47	70.5
237	2020/12/11	14:35:50	69.8
238	2020/12/11	14:35:53	68.7
239	2020/12/11	14:35:56	66.7
240	2020/12/11	14:35:59	72.5
241	2020/12/11	14:36:02	72.6
242	2020/12/11	14:36:05	67.8
243	2020/12/11	14:36:08	63.1
244	2020/12/11	14:36:11	65.0
245	2020/12/11	14:36:14	67.5
246	2020/12/11	14:36:17	65.6
247	2020/12/11	14:36:20	67.5
248	2020/12/11	14:36:23	68.9
249	2020/12/11	14:36:26	69.4
250	2020/12/11	14:36:29	64.2
251	2020/12/11	14:36:32	63.9
252	2020/12/11	14:36:35	60.7
253	2020/12/11	14:36:38	63.1
254	2020/12/11	14:36:41	68.8
255	2020/12/11	14:36:44	66.1
256	2020/12/11	14:36:47	71.6
257	2020/12/11	14:36:50	67.3
258	2020/12/11	14:36:53	62.7
259	2020/12/11	14:36:56	64.3
260	2020/12/11	14:36:59	69.4
261	2020/12/11	14:37:02	65.9
262	2020/12/11	14:37:05	70.8
263	2020/12/11	14:37:08	68.2
264	2020/12/11	14:37:11	71.1
265	2020/12/11	14:37:14	65.8
266	2020/12/11	14:37:17	65.2
267	2020/12/11	14:37:20	66.6
268	2020/12/11	14:37:23	67.4
269	2020/12/11	14:37:26	63.9
270	2020/12/11	14:37:29	60.7
271	2020/12/11	14:37:32	64.7
272	2020/12/11	14:37:35	70.7
273	2020/12/11	14:37:38	69.6
274	2020/12/11	14:37:41	72.1
275	2020/12/11	14:37:44	70.9
276	2020/12/11	14:37:47	67.1
277	2020/12/11	14:37:50	69.6
278	2020/12/11	14:37:53	70.9
279	2020/12/11	14:37:56	76.0
280	2020/12/11	14:37:59	70.1
281	2020/12/11	14:38:02	68.6
282	2020/12/11	14:38:05	70.4
283	2020/12/11	14:38:08	70.3

284	2020/12/11	14:38:11	72.7
285	2020/12/11	14:38:14	73.0
286	2020/12/11	14:38:17	72.9
287	2020/12/11	14:38:20	74.9
288	2020/12/11	14:38:23	71.0
289	2020/12/11	14:38:26	71.2
290	2020/12/11	14:38:29	76.9
291	2020/12/11	14:38:32	71.5
292	2020/12/11	14:38:35	72.0
293	2020/12/11	14:38:38	69.0
294	2020/12/11	14:38:41	66.5
295	2020/12/11	14:38:44	64.2
296	2020/12/11	14:38:47	72.3
297	2020/12/11	14:38:50	72.0
298	2020/12/11	14:38:53	74.9
299	2020/12/11	14:38:56	73.5
300	2020/12/11	14:38:59	75.8

- Freq Weight : A
- Time Weight : SLOW
- Level Range : 30-90
- Max dB : 65.0 - 2020/12/11 14:55:22
- Level Range : 30-90
- SEL : 79.3
- Leq : 49.8
-

No.s	Date Time	(dB)
1	2020/12/11 14:42:30	50.4
2	2020/12/11 14:42:33	50.5
3	2020/12/11 14:42:36	49.1
4	2020/12/11 14:42:39	50.3
5	2020/12/11 14:42:42	49.1
6	2020/12/11 14:42:45	50.0
7	2020/12/11 14:42:48	49.9
8	2020/12/11 14:42:51	51.1
9	2020/12/11 14:42:54	50.1
10	2020/12/11 14:42:57	50.1
11	2020/12/11 14:43:00	52.5
12	2020/12/11 14:43:03	50.5
13	2020/12/11 14:43:06	52.7
14	2020/12/11 14:43:09	49.6
15	2020/12/11 14:43:12	52.3
16	2020/12/11 14:43:15	49.3
17	2020/12/11 14:43:18	48.9
18	2020/12/11 14:43:21	48.6
19	2020/12/11 14:43:24	48.8
20	2020/12/11 14:43:27	51.0
21	2020/12/11 14:43:30	52.1
22	2020/12/11 14:43:33	51.4
23	2020/12/11 14:43:36	49.1
24	2020/12/11 14:43:39	49.6
25	2020/12/11 14:43:42	51.3
26	2020/12/11 14:43:45	52.7
27	2020/12/11 14:43:48	52.0
28	2020/12/11 14:43:51	51.4
29	2020/12/11 14:43:54	52.4
30	2020/12/11 14:43:57	52.6
31	2020/12/11 14:44:00	53.4
32	2020/12/11 14:44:03	50.6
33	2020/12/11 14:44:06	51.5
34	2020/12/11 14:44:09	49.5
35	2020/12/11 14:44:12	51.0
36	2020/12/11 14:44:15	49.0
37	2020/12/11 14:44:18	49.5
38	2020/12/11 14:44:21	49.1
39	2020/12/11 14:44:24	48.1
40	2020/12/11 14:44:27	49.0
41	2020/12/11 14:44:30	48.5
42	2020/12/11 14:44:33	48.6
43	2020/12/11 14:44:36	48.3
44	2020/12/11 14:44:39	49.2
45	2020/12/11 14:44:42	52.7
46	2020/12/11 14:44:45	48.1
47	2020/12/11 14:44:48	48.1
48	2020/12/11 14:44:51	49.4
49	2020/12/11 14:44:54	54.6
50	2020/12/11 14:44:57	48.8
51	2020/12/11 14:45:00	48.5
52	2020/12/11 14:45:03	48.2
53	2020/12/11 14:45:06	48.5
54	2020/12/11 14:45:09	48.8
55	2020/12/11 14:45:12	48.5
56	2020/12/11 14:45:15	50.7
57	2020/12/11 14:45:18	50.4
58	2020/12/11 14:45:21	49.5
59	2020/12/11 14:45:24	48.9
60	2020/12/11 14:45:27	51.8
61	2020/12/11 14:45:30	50.8
62	2020/12/11 14:45:33	49.7
63	2020/12/11 14:45:36	49.1
64	2020/12/11 14:45:39	47.7
65	2020/12/11 14:45:42	49.3
66	2020/12/11 14:45:45	49.3
67	2020/12/11 14:45:48	48.5
68	2020/12/11 14:45:51	48.8
69	2020/12/11 14:45:54	48.9
70	2020/12/11 14:45:57	49.5
71	2020/12/11 14:46:00	49.8
72	2020/12/11 14:46:03	48.7
73	2020/12/11 14:46:06	49.3
74	2020/12/11 14:46:09	48.4
75	2020/12/11 14:46:12	48.4
76	2020/12/11 14:46:15	49.1
77	2020/12/11 14:46:18	48.3
78	2020/12/11 14:46:21	47.2
79	2020/12/11 14:46:24	48.7
80	2020/12/11 14:46:27	47.7
81	2020/12/11 14:46:30	47.6
82	2020/12/11 14:46:33	49.1
83	2020/12/11 14:46:36	49.5
84	2020/12/11 14:46:39	49.6
85	2020/12/11 14:46:42	49.9

86	2020/12/11 14:46:45	50.7
87	2020/12/11 14:46:48	48.2
88	2020/12/11 14:46:51	48.6
89	2020/12/11 14:46:54	48.7
90	2020/12/11 14:46:57	48.9
91	2020/12/11 14:47:00	47.5
92	2020/12/11 14:47:03	48.0
93	2020/12/11 14:47:06	49.1
94	2020/12/11 14:47:09	47.9
95	2020/12/11 14:47:12	48.3
96	2020/12/11 14:47:15	48.0
97	2020/12/11 14:47:18	49.2
98	2020/12/11 14:47:21	49.9
99	2020/12/11 14:47:24	50.1
100	2020/12/11 14:47:27	49.5
101	2020/12/11 14:47:30	51.1
102	2020/12/11 14:47:33	49.8
103	2020/12/11 14:47:36	50.1
104	2020/12/11 14:47:39	49.5
105	2020/12/11 14:47:42	49.1
106	2020/12/11 14:47:45	49.2
107	2020/12/11 14:47:48	49.0
108	2020/12/11 14:47:51	48.5
109	2020/12/11 14:47:54	48.7
110	2020/12/11 14:47:57	48.4
111	2020/12/11 14:48:00	47.5
112	2020/12/11 14:48:03	49.1
113	2020/12/11 14:48:06	50.1
114	2020/12/11 14:48:09	48.8
115	2020/12/11 14:48:12	50.4
116	2020/12/11 14:48:15	49.8
117	2020/12/11 14:48:18	48.4
118	2020/12/11 14:48:21	48.7
119	2020/12/11 14:48:24	47.6
120	2020/12/11 14:48:27	48.0
121	2020/12/11 14:48:30	46.6
122	2020/12/11 14:48:33	47.5
123	2020/12/11 14:48:36	47.6
124	2020/12/11 14:48:39	47.6
125	2020/12/11 14:48:42	49.1
126	2020/12/11 14:48:45	48.5
127	2020/12/11 14:48:48	48.7
128	2020/12/11 14:48:51	48.2
129	2020/12/11 14:48:54	49.2
130	2020/12/11 14:48:57	49.4
131	2020/12/11 14:49:00	49.6
132	2020/12/11 14:49:03	49.3
133	2020/12/11 14:49:06	55.5
134	2020/12/11 14:49:09	51.8
135	2020/12/11 14:49:12	49.1
136	2020/12/11 14:49:15	46.7
137	2020/12/11 14:49:18	46.4
138	2020/12/11 14:49:21	46.6
139	2020/12/11 14:49:24	47.2
140	2020/12/11 14:49:27	47.6
141	2020/12/11 14:49:30	48.4
142	2020/12/11 14:49:33	48.9
143	2020/12/11 14:49:36	47.6
144	2020/12/11 14:49:39	47.2
145	2020/12/11 14:49:42	47.4
146	2020/12/11 14:49:45	46.8
147	2020/12/11 14:49:48	47.5
148	2020/12/11 14:49:51	50.0
149	2020/12/11 14:49:54	52.4
150	2020/12/11 14:49:57	50.9
151	2020/12/11 14:50:00	47.7
152	2020/12/11 14:50:03	46.8
153	2020/12/11 14:50:06	46.9
154	2020/12/11 14:50:09	47.5
155	2020/12/11 14:50:12	48.4
156	2020/12/11 14:50:15	46.7
157	2020/12/11 14:50:18	47.8
158	2020/12/11 14:50:21	47.8
159	2020/12/11 14:50:24	49.5
160	2020/12/11 14:50:27	48.6
161	2020/12/11 14:50:30	48.5
162	2020/12/11 14:50:33	53.1
163	2020/12/11 14:50:36	53.3
164	2020/12/11 14:50:39	53.1
165	2020/12/11 14:50:42	50.8
166	2020/12/11 14:50:45	47.5
167	2020/12/11 14:50:48	47.4
168	2020/12/11 14:50:51	49.4
169	2020/12/11 14:50:54	50.3
170	2020/12/11 14:50:57	50.4
171	2020/12/11 14:51:00	51.1
172	2020/12/11 14:51:03	49.3
173	2020/12/11 14:51:06	48.7
174	2020/12/11 14:51:09	48.1
175	2020/12/11 14:51:12	47.2
176	2020/12/11 14:51:15	47.7
177	2020/12/11 14:51:18	49.1
178	2020/12/11 14:51:21	50.1
179	2020/12/11 14:51:24	50.4
180	2020/12/11 14:51:27	49.2
181	2020/12/11 14:51:30	50.9
182	2020/12/11 14:51:33	49.1
183	2020/12/11 14:51:36	48.4
184	2020/12/11 14:51:39	49.2

185	2020/12/11 14:51:42	51.9
186	2020/12/11 14:51:45	50.0
187	2020/12/11 14:51:48	49.0
188	2020/12/11 14:51:51	47.8
189	2020/12/11 14:51:54	47.4
190	2020/12/11 14:51:57	46.8
191	2020/12/11 14:52:00	47.4
192	2020/12/11 14:52:03	47.3
193	2020/12/11 14:52:06	47.6
194	2020/12/11 14:52:09	47.5
195	2020/12/11 14:52:12	48.8
196	2020/12/11 14:52:15	48.6
197	2020/12/11 14:52:18	48.2
198	2020/12/11 14:52:21	48.1
199	2020/12/11 14:52:24	47.6
200	2020/12/11 14:52:27	47.0
201	2020/12/11 14:52:30	46.7
202	2020/12/11 14:52:33	47.1
203	2020/12/11 14:52:36	47.2
204	2020/12/11 14:52:39	48.2
205	2020/12/11 14:52:42	47.3
206	2020/12/11 14:52:45	47.6
207	2020/12/11 14:52:48	48.1
208	2020/12/11 14:52:51	47.2
209	2020/12/11 14:52:54	46.0
210	2020/12/11 14:52:57	45.8
211	2020/12/11 14:53:00	46.3
212	2020/12/11 14:53:03	46.0
213	2020/12/11 14:53:06	47.0
214	2020/12/11 14:53:09	49.3
215	2020/12/11 14:53:12	52.7
216	2020/12/11 14:53:15	56.5
217	2020/12/11 14:53:18	52.2
218	2020/12/11 14:53:21	50.5
219	2020/12/11 14:53:24	48.6
220	2020/12/11 14:53:27	51.1
221	2020/12/11 14:53:30	51.1
222	2020/12/11 14:53:33	52.1
223	2020/12/11 14:53:36	51.8
224	2020/12/11 14:53:39	51.3
225	2020/12/11 14:53:42	50.2
226	2020/12/11 14:53:45	48.7
227	2020/12/11 14:53:48	47.9
228	2020/12/11 14:53:51	48.6
229	2020/12/11 14:53:54	51.8
230	2020/12/11 14:53:57	49.9
231	2020/12/11 14:54:00	49.9
232	2020/12/11 14:54:03	50.1
233	2020/12/11 14:54:06	54.4
234	2020/12/11 14:54:09	49.4
235	2020/12/11 14:54:12	48.3
236	2020/12/11 14:54:15	48.4
237	2020/12/11 14:54:18	49.1
238	2020/12/11 14:54:21	53.4
239	2020/12/11 14:54:24	50.9
240	2020/12/11 14:54:27	49.1
241	2020/12/11 14:54:30	47.8
242	2020/12/11 14:54:33	46.5
243	2020/12/11 14:54:36	45.8
244	2020/12/11 14:54:39	47.2
245	2020/12/11 14:54:42	48.7
246	2020/12/11 14:54:45	50.6
247	2020/12/11 14:54:48	48.8
248	2020/12/11 14:54:51	48.5
249	2020/12/11 14:54:54	47.7
250	2020/12/11 14:54:57	46.2
251	2020/12/11 14:55:00	46.3
252	2020/12/11 14:55:03	45.4
253	2020/12/11 14:55:06	46.8
254	2020/12/11 14:55:09	45.7
255	2020/12/11 14:55:12	46.9
256	2020/12/11 14:55:15	46.1
257	2020/12/11 14:55:18	45.3
258	2020/12/11 14:55:21	59.3
259	2020/12/11 14:55:24	61.9
260	2020/12/11 14:55:27	54.6
261	2020/12/11 14:55:30	52.3
262	2020/12/11 14:55:33	52.9
263	2020/12/11 14:55:36	53.2
264	2020/12/11 14:55:39	55.8
265	2020/12/11 14:55:42	49.0
266	2020/12/11 14:55:45	48.2
267	2020/12/11 14:55:48	47.9
268	2020/12/11 14:55:51	49.4
269	2020/12/11 14:55:54	48.6
270	2020/12/11 14:55:57	48.1
271	2020/12/11 14:56:00	47.2
272	2020/12/11 14:56:03	48.0
273	2020/12/11 14:56:06	47.2
274	2020/12/11 14:56:09	47.5
275	2020/12/11 14:56:12	48.4
276	2020/12/11 14:56:15	48.1
277	2020/12/11 14:56:18	48.0
278	2020/12/11 14:56:21	47.2
279	2020/12/11 14:56:24	46.7
280	2020/12/11 14:56:27	45.8
281	2020/12/11 14:56:30	44.9
282	2020/12/11 14:56:33	45.2
283	2020/12/11 14:56:36	46.2

284	2020/12/11	14:56:39	49.2
285	2020/12/11	14:56:42	51.0
286	2020/12/11	14:56:45	49.8
287	2020/12/11	14:56:48	50.0
288	2020/12/11	14:56:51	51.5
289	2020/12/11	14:56:54	49.5
290	2020/12/11	14:56:57	48.6
291	2020/12/11	14:57:00	48.2
292	2020/12/11	14:57:03	47.6
293	2020/12/11	14:57:06	48.1
294	2020/12/11	14:57:09	47.4
295	2020/12/11	14:57:12	47.6
296	2020/12/11	14:57:15	47.8
297	2020/12/11	14:57:18	49.1
298	2020/12/11	14:57:21	49.0
299	2020/12/11	14:57:24	47.7
300	2020/12/11	14:57:27	45.9

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/25/2021
Case Description: Vincent Place Residential Project

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	30.0	0.0
Excavator	No	40		80.7	30.0	0.0
Dozer	No	40		81.7	30.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Concrete Saw	94.0	87.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	85.1	81.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	86.1	82.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	94.0	89.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	50.0	0.0
Excavator	No	40		80.7	50.0	0.0
Dozer	No	40		81.7	50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Calculated (dBA)				Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	89.6	82.6			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	81.7	77.7			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	89.6	84.6			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #3 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Equipment

Impact	Usage	Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding

Description	Device	(%)	(dBA)	(dBA)	(feet)	(dBA)
Concrete Saw	No	20		89.6	150.0	0.0
Excavator	No	40		80.7	150.0	0.0
Dozer	No	40		81.7	150.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA)				Day		Evening		Night	
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	80.0	73.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	71.2	67.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	72.1	68.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.0	75.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/25/2021
Case Description: Cameon Residential Project - Site Preparation

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	30.0	0.0
Tractor	No	40	84.0		30.0	0.0
Front End Loader	No	40		79.1	30.0	0.0
Backhoe	No	40		77.6	30.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Calculated (dBA)	Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	86.1	82.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	88.4	84.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	83.5	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	82.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	88.4	87.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	50.0	0.0
Tractor	No	40	84.0		50.0	0.0
Front End Loader	No	40		79.1	50.0	0.0
Backhoe	No	40		77.6	50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	84.0	83.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #3 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night

Single-Family Residences Residential 65.0 65.0 65.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	150.0	0.0
Tractor	No	40	84.0		150.0	0.0
Front End Loader	No	40		79.1	150.0	0.0
Backhoe	No	40		77.6	150.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Dozer	72.1	68.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	74.5	70.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	69.6	65.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	68.0	64.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	74.5	73.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/25/2021
Case Description: Cameron Residential Project - Grading

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	30.0	0.0
Tractor	No	40	84.0		30.0	0.0
Front End Loader	No	40		79.1	30.0	0.0
Backhoe	No	40		77.6	30.0	0.0
Excavator	No	40		80.7	30.0	0.0
Grader	No	40	85.0		30.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Dozer	86.1	82.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	88.4	84.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	83.5	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	82.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	85.1	81.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

```
  N/A       N/A     N/A     N/A     N/A     N/A     N/A
Grader                    89.4    85.5        N/A     N/A     N/A     N/A     N/A
  N/A       N/A     N/A     N/A     N/A     N/A     N/A
              Total       89.4    90.3        N/A     N/A     N/A     N/A     N/A
  N/A       N/A     N/A     N/A     N/A     N/A     N/A
```

**** Receptor #2 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	50.0	0.0
Tractor	No	40	84.0		50.0	0.0
Front End Loader	No	40		79.1	50.0	0.0
Backhoe	No	40		77.6	50.0	0.0
Excavator	No	40		80.7	50.0	0.0
Grader	No	40	85.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

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```
                        Calculated (dBA)          Day            Evening
Night               Day             Evening           Night
                    ----------------    --------------    -------------
--------------    --------------  --------------  --------------
Equipment                   Lmax    Leq         Lmax    Leq     Lmax    Leq     Lmax
  Leq       Lmax    Leq     Lmax    Leq     Lmax    Leq
----------------------  ------  ------      ------  ------  ------  ------  ------
------    ------  ------  ------  ------  ------  ------
Dozer                     81.7    77.7        N/A     N/A     N/A     N/A     N/A
  N/A       N/A     N/A     N/A     N/A     N/A     N/A
Tractor                   84.0    80.0        N/A     N/A     N/A     N/A     N/A
  N/A       N/A     N/A     N/A     N/A     N/A     N/A
Front End Loader          79.1    75.1        N/A     N/A     N/A     N/A     N/A
  N/A       N/A     N/A     N/A     N/A     N/A     N/A
Backhoe                   77.6    73.6        N/A     N/A     N/A     N/A     N/A
  N/A       N/A     N/A     N/A     N/A     N/A     N/A
```

Excavator			80.7	76.7		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader			85.0	81.0		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total			85.0	85.9		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #3 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	150.0	0.0
Tractor	No	40	84.0		150.0	0.0
Front End Loader	No	40		79.1	150.0	0.0
Backhoe	No	40		77.6	150.0	0.0
Excavator	No	40		80.7	150.0	0.0
Grader	No	40	85.0		150.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Dozer	72.1	68.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	74.5	70.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	69.6	65.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	68.0	64.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	N/A	N/A				
Excavator			71.2	67.2	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	N/A				
Grader			75.5	71.5	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	N/A				
		Total	75.5	76.3	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	N/A				

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/25/2021
Case Description: Cameron Residential Project - Building Construction

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	30.0	0.0
Tractor	No	40	84.0		30.0	0.0
Front End Loader	No	40		79.1	30.0	0.0
Backhoe	No	40		77.6	30.0	0.0
Generator	No	50		80.6	30.0	0.0
All Other Equipment > 5 HP	No	50	85.0		30.0	0.0
Welder / Torch	No	40		74.0	30.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq

Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq				
Crane				85.0	77.0			N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				
Tractor				88.4	84.5			N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				
Front End Loader				83.5	79.6			N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				
Backhoe				82.0	78.0			N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				
Generator				85.1	82.1			N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				
All Other Equipment > 5 HP				89.4	86.4			N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				
Welder / Torch				78.4	74.5			N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				
		Total		89.4	90.5			N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				

**** Receptor #2 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

	Equipment					
			Spec	Actual	Receptor	Estimated
	Impact	Usage	Lmax	Lmax	Distance	Shielding
Description	Device	(%)	(dBA)	(dBA)	(feet)	(dBA)
Crane	No	16		80.6	50.0	0.0
Tractor	No	40	84.0		50.0	0.0
Front End Loader	No	40		79.1	50.0	0.0
Backhoe	No	40		77.6	50.0	0.0
Generator	No	50		80.6	50.0	0.0
All Other Equipment > 5 HP	No	50	85.0		50.0	0.0
Welder / Torch	No	40		74.0	50.0	

0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Crane	80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	80.6	77.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	85.0	82.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	74.0	70.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85.0	86.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #3 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)

Crane	No	16		80.6	200.0
Tractor	No	40	84.0		200.0
Front End Loader	No	40		79.1	200.0
Backhoe	No	40		77.6	200.0
Generator	No	50		80.6	200.0
All Other Equipment > 5 HP	No	50	85.0		200.0
Welder / Torch	No	40		74.0	200.0

0.0 0.0 0.0 0.0 0.0 0.0 0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Calculated (dBA) Day Leq	Calculated (dBA) Evening Lmax	Calculated (dBA) Evening Leq	Calculated (dBA) Night Lmax	Calculated (dBA) Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Crane	68.5	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	72.0	68.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	67.1	63.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	65.5	61.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	68.6	65.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	73.0	69.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	62.0	58.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	73.0	74.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/25/2021
Case Description: Cameron Residential Project - Paving

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	30.0	0.0
Pavement Scarafier	No	20		89.5	30.0	0.0
Roller	No	20		80.0	30.0	0.0
Tractor	No	40	84.0		30.0	0.0
Concrete Mixer Truck	No	40		78.8	30.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Paver	81.7	78.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pavement Scarafier	93.9	86.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	84.4	77.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	88.4	84.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	83.2	79.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Total	93.9	89.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	50.0	0.0
Pavement Scarafier	No	20		89.5	50.0	0.0
Roller	No	20		80.0	50.0	0.0
Tractor	No	40	84.0		50.0	0.0
Concrete Mixer Truck	No	40		78.8	50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Calculated (dBA)				Day		Evening		Night						
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver	77.2	74.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pavement Scarafier	89.5	82.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	80.0	73.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	78.8	74.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	89.5	85.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #3 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	150.0	0.0
Pavement Scarafier	No	20		89.5	150.0	0.0
Roller	No	20		80.0	150.0	0.0
Tractor	No	40	84.0		150.0	0.0
Concrete Mixer Truck	No	40		78.8	150.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Calculated (dBA)											
Day			Evening			Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver	67.7	64.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pavement Scarafier	80.0	73.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	70.5	63.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	74.5	70.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	69.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/25/2021
Case Description: Cameron Residential Project - Architectural Coating

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	30.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Compressor (air)	82.1	78.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	82.1	78.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Compressor (air)	77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #3 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Single-Family Residences	Residential	65.0	65.0	65.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	150.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

	Calculated (dBA)								
	Day		Evening		Night		Day		Evening
Night									
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq			
Compressor (air)	68.1	64.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Total	68.1	64.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A			

Acoustical Surfaces, Inc.

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- Simple and quick installation system
- Lightweight for easy handling
- Unique roll-up design for compact storage and transportation
- Double or triple up for noise 'hot spots'
- Ability to add branding or messages
- Range of accessories available
- Weatherproof – absorbs sound but not water
- Fire retardant
- 1 person can do the job of 2 or 3 people

Why is it all too often we see construction sites with fencing but no regard for sound issues created from the construction that is taking place? This is due to the fact that there has not been an efficient means of treating this type of noise that was cost effective ***until now.***

Echo Barrier temporary fencing is a reusable, outdoor noise barrier. Designed to fit on all types of temporary fencing. Echo Barrier absorbs sound while remaining quick to install, light to carry and tough to last.

BENEFITS: Echo Barrier can help reduce noise complaints, enhance your company reputation, extend site operating hours, reduce project timescales & costs, and improve working conditions.

APPLICATIONS: Echo Barrier works great for construction & demolition sites; rail maintenance & replacement; music, sports and other public events; road construction; utility/maintenance sites; loading and unloading areas; outdoor gun ranges.

DIMENSIONS: 6.56' × 4.49'.

WEIGHT: 13 lbs.

ACOUSTIC PERFORMANCE: 10-20dB noise reduction (greater if barrier is doubled up).

INSTALLATION: The Echo Barrier is easily installed using our quick hook system and specially designed elastic ties.

Echo Barrier Transmission Loss Field Data							
	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz	8KHz
Single Layer	6	12	16	23	28	30	30
Double Layer	7	19	24	28	32	31	32

Barrier Performance Module

This module provides to the user a measure on the barrier's effectiveness on noise reduction. A list of the input/output variables and their definitions, as well as illustrations of different scenarios are provided.

Calculator

View Day/Night Noise Level Calculator (/programs/environmental-review/dnl-calculator/)

View Descriptions of the Input/Output variables.

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the Input and Output variables with the mouse.

WARNING: If there is direct line-of-sight between the Source and the Observer, the module will report erroneous attenuation. “Direct line-of-sight” means if the 5’ tall Observer can see the noise Source (cars, trucks, trains, etc.) over the Barrier (wall, hill/excavation, building, etc.), the current version of Barrier Performance Module will not accurately calculate the attenuation provided. In this instance, there is unlikely to be any appreciable attenuation.

Note: Barrier height must block the line of sight

Input Data

H	10	**R^1**	50
S	10	**D^1**	5
Q		**f**	

O	6	**α**	160

Calculate Output

Output Data

h	4	**R**	50
D	5	**FS**	9.5027

Reduction From Barrier (dB):

-9.5027

Refresh

Note: If you have separate Road and Rail DNL values, please enter the values below to calculate the new combined Road/Rail DNL :

Road DNL:

Rail DNL:

Calculate

Combined Road/Rail DNL with Barrier Reduction:

Input/Output Variables

Input Variables

The following variables and definitions from the barrier being assessed are the input required for the web-based barrier performance module:

- H = Barrier Height
- S = Noise Source Height
- O = Observer Height (known as the receiver)
- R^1 = Distance from Noise Source to Barrier
- D^1 = Distance from the Observer to the Barrier
- α = Line of sight angle between the Observer and the Noise Source, subtended by the barrier at observer's location

Output Variables

Definitions of the output variables from the mitigation module of the Day/Night Noise Level Assessment Tools as part of the Assessment Tools for Environmental Compliance:

- h = The shortest distance from the barrier top to the line of sight from the Noise source to the Observer.
- R = Slant distance along the line of sight from the Barrier to the Noise Source
- D = Slant distance along the line of sight from the Barrier to the Observer

The “actual barrier performance for barriers of finite length” is noted on the worksheets(in the Guidebook) as **FS**.

Groundborne Noise and Vibration Modeling

Notes
The reference distance is measured from the nearest anticipated point of construction equipment to the nearest structure.

	Reference Level Inputs			
Equipment	**PPV_{ref} (in/sec)**	**Lv_{ref} (VdB)**	**RMS_{ref} (in/sec)**	**Reference Distance**
Large bulldozer	0.089	87	0.022	25
Loaded trucks	0.076	83	0.014	25
Small bulldozer	0.003	58	0.001	25

	Vibration Level at Receiver			
Equipment	**Distance (feet)**	**PPV_x (in/sec)**	**Lv_x (VdB)**	**RMS_x (in/sec)**
Large bulldozer	30	0.0728	85	0.018
Loaded trucks	30	0.0622	81	0.012
Small bulldozer	30	0.0025	56	0.001

Source
California Department of Transportation (Caltrans). 2020. Transportation and Construction Vibration Guidance Manual. April 2020. Available at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf. Last Updated: 5/1/2020

Groundborne Noise and Vibration Modeling

Notes
The reference distance is measured from the nearest anticipated point of construction equipment to the nearest structure.

	Reference Level Inputs			
Equipment	**PPV_{ref} (in/sec)**	**Lv_{ref} (VdB)**	**RMS_{ref} (in/sec)**	**Reference Distance**
Large bulldozer	0.089	87	0.022	25
Loaded trucks	0.076	83	0.014	25
Small bulldozer	0.003	58	0.001	25

	Vibration Level at Receiver			
Equipment	**Distance (feet)**	**PPV_x (in/sec)**	**Lv_x (VdB)**	**RMS_x (in/sec)**
Large bulldozer	520	0.0032	58	0.001
Loaded trucks	520	0.0027	54	0.001
Small bulldozer	520	0.0001	29	0.000

Source
California Department of Transportation (Caltrans). 2020. Transportation and Construction Vibration Guidance Manual. April 2020. Available at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf. Last Updated: 5/1/2020