Appendix I

Noise Calculation Worksheets

New Beatrice West Project

Noise Calculations Worksheets

Provided by Acoustical Engineering Services

Ambient Noise Measurements

AES
Acoustical Engineering Services

Project: Beatrice
Location: R1
Date: 2/2/2021

Time	Leq	Lmax
10:33:50 AM	49.4	56.4
10:34:00 AM	51.4	56.3
10:34:10 AM	48.8	50
10:34:20 AM	49.6	50.6
10:34:30 AM	52.2	55.8
10:34:40 AM	65.8	73.4
10:34:50 AM	58.8	63.3
10:35:00 AM	51.1	52.9
10:35:10 AM	49	49.7
10:35:20 AM	49.5	52.1
10:35:30 AM	49.7	51.8
10:35:40 AM	55.2	59.1
10:35:50 AM	49.2	51.3
10:36:00 AM	49	49.4
10:36:10 AM	49.9	50.5
10:36:20 AM	50.2	52.9
10:36:30 AM	59.3	63.6
10:36:40 AM	58.9	62.8
10:36:50 AM	49.8	50.5
10:37:00 AM	49.4	50.8
10:37:10 AM	56.9	60.8
10:37:20 AM	58.7	62.7
10:37:30 AM	52.1	54.7
10:37:40 AM	58.3	62.6
10:37:50 AM	55.6	57
10:38:00 AM	55.7	57.1
10:38:10 AM	58.4	60.5
10:38:20 AM	56	57.4
10:38:30 AM	53	56.3
10:38:40 AM	56.7	61.6
10:38:50 AM	49.9	50.8
10:39:00 AM	55.5	61.7
10:39:10 AM	55.1	61.6
10:39:20 AM	49.1	49.8
10:39:30 AM	51.5	56.9
10:39:40 AM	55.2	60.1
10:39:50 AM	51.8	57.9
10:40:00 AM	59	63.6
10:40:10 AM	57.3	62.6
10:40:20 AM	49.6	52.4

10:40:30 AM	51.4	56.9
10:40:40 AM	62.1	66.5
10:40:50 AM	53	59.2
10:41:00 AM	58.5	66.6
10:41:10 AM	61	65.7
10:41:20 AM	62.6	66.6
10:41:30 AM	58.5	61.8
10:41:40 AM	49.4	51.9
10:41:50 AM	47.8	48.5
10:42:00 AM	48.1	48.6
10:42:10 AM	53.8	57.5
10:42:20 AM	56.9	60.9
10:42:30 AM	48.7	51.3
10:42:40 AM	47.8	49.6
10:42:50 AM	47.6	48.3
10:43:00 AM	48	48.4
10:43:10 AM	48.5	49.4
10:43:20 AM	49.7	50.9
10:43:30 AM	60.4	65.5
10:43:40 AM	51.9	56.9
10:43:50 AM	49.2	50.3
10:44:00 AM	56.5	60.8
10:44:10 AM	66.1	74.3
10:44:20 AM	80.8	84.3
10:44:30 AM	68.2	75.1
10:44:40 AM	55.6	58.5
10:44:50 AM	49.6	51.8
10:45:00 AM	49.6	50.4
10:45:10 AM	51.8	58
10:45:20 AM	49.1	49.4
10:45:30 AM	48.8	49
10:45:40 AM	48.8	49.9
10:45:50 AM	49.1	51.3
10:46:00 AM	49.4	51.4
10:46:10 AM	48.4	49.1
10:46:20 AM	48.6	48.9
10:46:30 AM	49.4	49.9
10:46:40 AM	50	50.3
10:46:50 AM	50.1	50.4
10:47:00 AM	51.7	55.4
10:47:10 AM	57.5	59.6
10:47:20 AM	65.9	69.1
10:47:30 AM	77.3	82.9
10:47:40 AM	67	73.6
10:47:50 AM	58.9	65.4

10:48:00 AM	52	54.9
10:48:10 AM	49.6	50.3
10:48:20 AM	52.6	55.6
10:48:30 AM	56.3	60.3
10:48:40 AM	49.7	50.1
	57.4	

Time	Leq	Lmax
10:20:23 PM	51.5	55.4
10:20:33 PM	49.2	52
10:20:43 PM	47.8	48.1
10:20:53 PM	47.8	49.2
10:21:03 PM	47.6	47.9
10:21:13 PM	48.1	48.6
10:21:23 PM	48.4	49.8
10:21:33 PM	49.9	50.7
10:21:43 PM	50.3	50.8
10:21:53 PM	49.4	50.7
10:22:03 PM	47.8	48.8
10:22:13 PM	48.4	49.1
10:22:23 PM	47.7	48.8
10:22:33 PM	47.9	48.5
10:22:43 PM	47.7	49.1
10:22:53 PM	46.7	47.3
10:23:03 PM	47.2	47.9
10:23:13 PM	47.6	47.9
10:23:23 PM	48.4	48.8
10:23:33 PM	48.5	49.6
10:23:43 PM	48.6	49.4
10:23:53 PM	49.3	50.1
10:24:03 PM	49.4	50
10:24:13 PM	48.6	49.5
10:24:23 PM	48	48.2
10:24:33 PM	47.6	48.2
10:24:43 PM	47.4	48.3
10:24:53 PM	48.5	49.1
10:25:03 PM	49.2	50.2
10:25:13 PM	49.8	50.2
10:25:23 PM	49.5	49.9
10:25:33 PM	48.7	49.5
10:25:43 PM	49.1	49.6
10:25:53 PM	49.5	50.1
10:26:03 PM	49.1	49.5
10:26:13 PM	49.3	49.7
10:26:23 PM	54.1	61.1

10:26:33 PM	60.8	65.3
10:26:43 PM	55	60.1
10:26:53 PM	48.9	49.4
10:27:03 PM	53.9	63.6
10:27:13 PM	60.6	65.9
10:27:23 PM	48.6	49.8
10:27:33 PM	50	51.9
10:27:43 PM	57.9	61.9
10:27:53 PM	60.8	65.6
10:28:03 PM	49.3	51.3
10:28:13 PM	48.3	49.1
10:28:23 PM	47.8	48.1
10:28:33 PM	47.9	48.7
10:28:43 PM	48.5	49
10:28:53 PM	48.7	51.2
10:29:03 PM	48.2	48.6
10:29:13 PM	48.8	49.5
10:29:23 PM	48.5	49.4
10:29:33 PM	47.7	48
10:29:43 PM	48.2	48.8
10:29:53 PM	47.6	48.3
10:30:03 PM	47.2	47.8
10:30:13 PM	47.6	48.7
10:30:23 PM	49.5	50.4
10:30:33 PM	60.1	64.3
10:30:43 PM	59.2	63.4
10:30:53 PM	55.8	61.6
10:31:03 PM	47.6	48.6
10:31:13 PM	47.7	48.3
10:31:23 PM	48.6	53
10:31:33 PM	47.3	48.3
10:31:43 PM	48	50
10:31:53 PM	51.3	55.6
10:32:03 PM	49.6	51.9
10:32:13 PM	50.1	51.9
10:32:23 PM	49.6	52.8
10:32:33 PM	46.2	46.5
10:32:43 PM	46.9	47.7
10:32:53 PM	47.9	48.4
10:33:03 PM	48	48.7
10:33:13 PM	47.3	48.1
10:33:23 PM	47.1	48.3
10:33:33 PM	47.8	48.4
10:33:43 PM	48	48.7
10:33:53 PM	47.1	48.2

AES
ACOUSTICAL ENGINEERING SERVICES

10:34:03 PM	47.7	49.3
10:34:13 PM	54.6	59.4
10:34:23 PM	50.4	57.1
10:34:33 PM	45.5	46
10:34:43 PM	46.2	47.2
10:34:53 PM	47.4	48.3
10:35:03 PM	48.8	49.5
10:35:13 PM	58	61.8
	51.8	

AES
Acoustical Engineering Services

Project: Beatrice
Location: R2
Date: 2/2/2021

Time	Leq	Lmax
11:36:29 AM	51.3	53.5
11:36:39 AM	51.3	54.5
11:36:49 AM	50.9	53.1
11:36:59 AM	49.6	50.7
11:37:09 AM	49.8	50.4
11:37:19 AM	49.2	50.6
11:37:29 AM	50.4	51.3
11:37:39 AM	49.7	50.9
11:37:49 AM	51.5	53
11:37:59 AM	53.2	54.8
11:38:09 AM	54.8	57
11:38:19 AM	57.5	59
11:38:29 AM	72.7	77.4
11:38:39 AM	62.8	70.4
11:38:49 AM	60	60.9
11:38:59 AM	57.4	58.8
11:39:09 AM	53.3	56.7
11:39:19 AM	49.8	51.6
11:39:29 AM	50.6	53.6
11:39:39 AM	50.8	53.9
11:39:49 AM	50.4	51.6
11:39:59 AM	49.8	50.7
11:40:09 AM	53.2	57.2
11:40:19 AM	55.8	60.7
11:40:29 AM	50.5	52
11:40:39 AM	50.1	51.6
11:40:49 AM	49.7	50.8
11:40:59 AM	50.3	51.6
11:41:09 AM	48.5	49.4
11:41:19 AM	47.9	49
11:41:29 AM	48.9	50.2
11:41:39 AM	51.1	52
11:41:49 AM	51	53
11:41:59 AM	50.1	51.3
11:42:09 AM	49.5	50.2
11:42:19 AM	50.4	51.8
11:42:29 AM	57.2	63.3
11:42:39 AM	53.1	60.6
11:42:49 AM	47.6	49.3
11:42:59 AM	48.8	50.5

11:43:09 AM	54.9	58.5
11:43:19 AM	48.8	50.7
11:43:29 AM	48.9	51.6
11:43:39 AM	49.6	51.9
11:43:49 AM	50.3	52.1
11:43:59 AM	52.3	55.2
11:44:09 AM	59.4	62.4
11:44:19 AM	56.8	60.3
11:44:29 AM	50.7	52.4
11:44:39 AM	51	52.4
11:44:49 AM	49.2	50.3
11:44:59 AM	48.4	50.9
11:45:09 AM	49.6	51.1
11:45:19 AM	50	51.8
11:45:29 AM	51.3	54.5
11:45:39 AM	53.3	58.1
11:45:49 AM	50	52.9
11:45:59 AM	56.6	61.1
11:46:09 AM	51.4	56.4
11:46:19 AM	49.1	50.4
11:46:29 AM	48.3	50.4
11:46:39 AM	47.3	48.4
11:46:49 AM	48.1	49
11:46:59 AM	48.7	50.2
11:47:09 AM	49.4	50.6
11:47:19 AM	49	50.6
11:47:29 AM	51	52.1
11:47:39 AM	50.4	51.4
11:47:49 AM	51.9	54.2
11:47:59 AM	51.2	53.6
11:48:09 AM	50.9	53.7
11:48:19 AM	48.9	50.8
11:48:29 AM	50.7	53.1
11:48:39 AM	48.9	50.2
11:48:49 AM	47.4	49
11:48:59 AM	48.6	50.4
11:49:09 AM	48.1	49.7
11:49:19 AM	49.8	51.2
11:49:29 AM	49.3	51.4
11:49:39 AM	48.6	50.7
11:49:49 AM	45.8	46.7
11:49:59 AM	46.4	48.1
11:50:09 AM	49	50.3
11:50:19 AM	48	49
11:50:29 AM	48.7	49.5

11:50:39 AM	47.6	48.6
11:50:49 AM	46.9	48.4
11:50:59 AM	49.2	52.3
11:51:09 AM	50.2	51.6
11:51:19 AM	53.3	56
	55.8	

Time	Leq	Lmax
11:18:04 PM	50.2	50.8
11:18:14 PM	49.8	50.2
11:18:24 PM	49.7	50.9
11:18:34 PM	51	51.9
11:18:44 PM	51.7	52.7
11:18:54 PM	51.1	52.1
11:19:04 PM	51.8	52.6
11:19:14 PM	51.2	52.2
11:19:24 PM	52	52.8
11:19:34 PM	52.1	52.9
11:19:44 PM	52.1	52.8
11:19:54 PM	51.5	51.9
11:20:04 PM	50.6	51.5
11:20:14 PM	51.2	52.7
11:20:24 PM	51.6	53
11:20:34 PM	50.7	51.9
11:20:44 PM	49.9	50.5
11:20:54 PM	49.3	50.2
11:21:04 PM	49.6	51.4
11:21:14 PM	49.6	50.6
11:21:24 PM	50	50.8
11:21:34 PM	51.4	56.6
11:21:44 PM	49	49.7
11:21:54 PM	49.2	49.9
11:22:04 PM	49.1	49.9
11:22:14 PM	49	50.2
11:22:24 PM	50.1	50.3
11:22:34 PM	50.5	51.4
11:22:44 PM	50.8	52.1
11:22:54 PM	50.7	52.1
11:23:04 PM	49.8	50.7
11:23:14 PM	51.3	52.1
11:23:24 PM	51.3	51.9
11:23:34 PM	51.7	52.3
11:23:44 PM	50.4	51.3
11:23:54 PM	50.9	51.4
11:24:04 PM	52	53.7

11:24:14 PM	53.1	53.7
11:24:24 PM	53.9	55
11:24:34 PM	53.9	54.4
11:24:44 PM	53	53.8
11:24:54 PM	51.9	52.6
11:25:04 PM	50.6	52.2
11:25:14 PM	51.4	53.8
11:25:24 PM	52.2	53.5
11:25:34 PM	51.5	52.4
11:25:44 PM	52.8	54.3
11:25:54 PM	51.5	52.6
11:26:04 PM	51.5	52.5
11:26:14 PM	51.2	52
11:26:24 PM	51	51.7
11:26:34 PM	54.2	60.6
11:26:44 PM	51.6	52.7
11:26:54 PM	51.7	52.5
11:27:04 PM	51	51.6
11:27:14 PM	51.9	53.3
11:27:24 PM	53.2	53.9
11:27:34 PM	53.4	54.5
11:27:44 PM	52.4	53.7
11:27:54 PM	51.5	52.3
11:28:04 PM	50.6	51.7
11:28:14 PM	51.9	53.2
11:28:24 PM	51	52.5
11:28:34 PM	51.6	52.5
11:28:44 PM	51.5	52.4
11:28:54 PM	51.4	52.6
11:29:04 PM	52.3	53.6
11:29:14 PM	51.7	52.8
11:29:24 PM	51.9	52.8
11:29:34 PM	51.4	52.4
11:29:44 PM	51.2	51.7
11:29:54 PM	51.7	52.4
11:30:04 PM	52.8	54
11:30:14 PM	51.4	52.3
11:30:24 PM	50.3	51.4
11:30:34 PM	51.2	52.5
11:30:44 PM	53.2	54.7
11:30:54 PM	53.5	54.3
11:31:04 PM	54	54.7
11:31:14 PM	54.5	55
11:31:24 PM	54.8	55.5
11:31:34 PM	53.3	55

11:31:44 PM	52.4	53.5
11:31:54 PM	51.4	53.2
11:32:04 PM	52.1	53.3
11:32:14 PM	51	52.4
11:32:24 PM	52.5	54
11:32:34 PM	52.7	53.4
11:32:44 PM	53.1	54
11:32:54 PM	53.4	54.3
	51.8	

AES
Acoustical Engineering Services

Project: Beatrice
Location: R3
Date: 2/2/2021

Time	Leq	Lmax
10:55:12 AM	50.4	51
10:55:22 AM	50.8	52.6
10:55:32 AM	50.6	52
10:55:42 AM	50.6	52.5
10:55:52 AM	51.9	53
10:56:02 AM	49.6	50.9
10:56:12 AM	50	51.8
10:56:22 AM	52.4	55.9
10:56:32 AM	53.3	55.2
10:56:42 AM	60.5	63.5
10:56:52 AM	53.1	56.9
10:57:02 AM	51.1	52.2
10:57:12 AM	49.6	51
10:57:22 AM	50.6	51.2
10:57:32 AM	50.1	51.2
10:57:42 AM	49.4	50.6
10:57:52 AM	50.2	51.1
10:58:02 AM	51	52.8
10:58:12 AM	60.6	65.2
10:58:22 AM	56.9	60.5
10:58:32 AM	58.2	61.8
10:58:42 AM	51.6	53.4
10:58:52 AM	50.2	51.1
10:59:02 AM	50.9	52.1
10:59:12 AM	61.2	65.1
10:59:22 AM	53.3	55.9
10:59:32 AM	53	54.1
10:59:42 AM	51.9	52.2
10:59:52 AM	50.9	52
11:00:02 AM	50.4	51.3
11:00:12 AM	55.9	58.7
11:00:22 AM	57.6	59.7
11:00:32 AM	61.7	65.5
11:00:42 AM	67.2	69.6
11:00:52 AM	59	64.6
11:01:02 AM	56.4	60.4
11:01:12 AM	50.4	53.2
11:01:22 AM	51.8	53.6
11:01:32 AM	55.6	58.2
11:01:42 AM	59	62.8

11:01:52 AM	60.9	65.3
11:02:02 AM	54.2	57.5
11:02:12 AM	51	51.8
11:02:22 AM	61.4	64.8
11:02:32 AM	59.9	64.3
11:02:42 AM	51.6	53.7
11:02:52 AM	50.2	50.9
11:03:02 AM	50.9	52.5
11:03:12 AM	50	51.7
11:03:22 AM	57.1	67.3
11:03:32 AM	62.6	68.1
11:03:42 AM	53.2	56.8
11:03:52 AM	61	64.9
11:04:02 AM	50.4	51.6
11:04:12 AM	61.9	66.9
11:04:22 AM	53.9	60.1
11:04:32 AM	49.9	54
11:04:42 AM	52	55
11:04:52 AM	50	51.1
11:05:02 AM	54	61
11:05:12 AM	49.9	50.8
11:05:22 AM	50.7	52.8
11:05:32 AM	51	53.1
11:05:42 AM	49.4	52
11:05:52 AM	48.1	50
11:06:02 AM	51	58
11:06:12 AM	60.8	63.1
11:06:22 AM	58.4	61.9
11:06:32 AM	61.5	65.6
11:06:42 AM	59.9	62
11:06:52 AM	53.5	58.6
11:07:02 AM	53.7	57.4
11:07:12 AM	54.3	57.6
11:07:22 AM	58.3	63.5
11:07:32 AM	55.2	61.8
11:07:42 AM	52.6	57.1
11:07:52 AM	54.6	60.2
11:08:02 AM	55.1	57.8
11:08:12 AM	52	54.9
11:08:22 AM	50.6	51.9
11:08:32 AM	53.9	55.9
11:08:42 AM	64.4	67.2
11:08:52 AM	60.8	62.9
11:09:02 AM	62.3	64.4
11:09:12 AM	59.6	62

11:09:22 AM	58.8	61.8
11:09:32 AM	55.6	56.7
11:09:42 AM	61.6	65.6
11:09:52 AM	53.8	56.5
11:10:02 AM	54	54.8
	57.2	

Time	Leq	Lmax
10:38:59 PM	55.4	60.1
10:39:09 PM	58.9	63.7
10:39:19 PM	52.1	55.1
10:39:29 PM	53.1	56.1
10:39:39 PM	51	52.3
10:39:49 PM	51.2	52.2
10:39:59 PM	50.6	51.3
10:40:09 PM	50.4	51.9
10:40:19 PM	49.6	50.1
10:40:29 PM	49.8	51.9
10:40:39 PM	49.9	51.6
10:40:49 PM	49.6	50.5
10:40:59 PM	50.3	52.6
10:41:09 PM	49.9	52.7
10:41:19 PM	49.6	50.9
10:41:29 PM	49.8	50.4
10:41:39 PM	50.9	51.5
10:41:49 PM	50.8	51.4
10:41:59 PM	49.2	50.7
10:42:09 PM	49.2	50.1
10:42:19 PM	51	58.9
10:42:29 PM	73.2	78.9
10:42:39 PM	55.1	61.9
10:42:49 PM	52.1	53.8
10:42:59 PM	50.4	51.3
10:43:09 PM	50.1	50.7
10:43:19 PM	50.9	52.3
10:43:29 PM	50.6	51.6
10:43:39 PM	53	55.9
10:43:49 PM	51.7	55.4
10:43:59 PM	49.9	51
10:44:09 PM	49.6	50.2
10:44:19 PM	49.6	50.5
10:44:29 PM	56.6	62.1
10:44:39 PM	59.4	63.8
10:44:49 PM	55.8	61.5
10:44:59 PM	48.7	50.5

10:45:09 PM	58.6	62.9
10:45:19 PM	53.2	58
10:45:29 PM	49.1	50.2
10:45:39 PM	48.9	49.3
10:45:49 PM	49.5	50.6
10:45:59 PM	49.6	50.4
10:46:09 PM	49.4	50.2
10:46:19 PM	49.5	50.4
10:46:29 PM	49.3	49.7
10:46:39 PM	48.7	49
10:46:49 PM	49.7	52.3
10:46:59 PM	50.7	52.1
10:47:09 PM	49.1	50.5
10:47:19 PM	48.6	49
10:47:29 PM	49.3	50
10:47:39 PM	49.7	50.3
10:47:49 PM	49.3	50.4
10:47:59 PM	49.1	50.2
10:48:09 PM	49.6	51
10:48:19 PM	50	50.7
10:48:29 PM	51.9	53.5
10:48:39 PM	57	59.9
10:48:49 PM	57.6	62
10:48:59 PM	54.3	61
10:49:09 PM	48.9	49.5
10:49:19 PM	49.6	50.6
10:49:29 PM	49.9	51
10:49:39 PM	49.2	49.7
10:49:49 PM	57.9	65
10:49:59 PM	59.9	66.1
10:50:09 PM	50.3	51.9
10:50:19 PM	50.4	54
10:50:29 PM	65	70.8
10:50:39 PM	58.8	64
10:50:49 PM	57.1	63.8
10:50:59 PM	49.6	50.2
10:51:09 PM	49.8	50.1
10:51:19 PM	50.3	51.3
10:51:29 PM	53.2	55.7
10:51:39 PM	54.4	55.7
10:51:49 PM	51.9	53.8
10:51:59 PM	50.3	50.7
10:52:09 PM	50.6	51.4
10:52:19 PM	50.4	51.5
10:52:29 PM	49.5	49.8

10:52:39 PM	49.4	50.6
10:52:49 PM	49.8	50.3
10:52:59 PM	50.1	50.6
10:53:09 PM	50.4	52
10:53:19 PM	51.5	52.5
10:53:29 PM	52.7	54.5
10:53:39 PM	55.3	58.7
10:53:49 PM	49.5	50.4
	53.5	

AES
Acoustical Engineering Services

Project: Beatrice
Location: R4
Date: 2/2/2021

Time	Leq	Lmax
11:15:37 AM	51.6	53.9
11:15:47 AM	53.9	56
11:15:57 AM	62.6	67
11:16:07 AM	61.2	65.3
11:16:17 AM	59.3	65.3
11:16:27 AM	50.8	52.7
11:16:37 AM	50.2	51.1
11:16:47 AM	49.9	51.6
11:16:57 AM	51.9	55.7
11:17:07 AM	54.6	56.4
11:17:17 AM	54.2	55.6
11:17:27 AM	54.2	55.2
11:17:37 AM	53.1	54.4
11:17:47 AM	52.2	53.8
11:17:57 AM	50.9	52.2
11:18:07 AM	55.2	64.5
11:18:17 AM	56.1	63.3
11:18:27 AM	60	67
11:18:37 AM	56.6	64.3
11:18:47 AM	50.7	51.9
11:18:57 AM	56.6	63.2
11:19:07 AM	58.6	63.2
11:19:17 AM	56.3	58.8
11:19:27 AM	57.3	60.7
11:19:37 AM	56.9	61.6
11:19:47 AM	64.4	69.2
11:19:57 AM	52.6	55.1
11:20:07 AM	51.3	53.5
11:20:17 AM	59.2	62.1
11:20:27 AM	54.1	58.1
11:20:37 AM	56.3	61.7
11:20:47 AM	55	59
11:20:57 AM	56.9	59.7
11:21:07 AM	52.7	54.1
11:21:17 AM	53.3	55
11:21:27 AM	53.8	54.5
11:21:37 AM	53.5	54.5
11:21:47 AM	59.9	66.7
11:21:57 AM	61.2	67.3
11:22:07 AM	53.8	55

11:22:17 AM	54.9	55.9
11:22:27 AM	54.5	55.5
11:22:37 AM	64.6	71.1
11:22:47 AM	64.8	71.2
11:22:57 AM	71.8	76.1
11:23:07 AM	58.9	67.4
11:23:17 AM	54.1	55.9
11:23:27 AM	53.4	55.3
11:23:37 AM	53	54.3
11:23:47 AM	53.3	54.9
11:23:57 AM	52.6	53.3
11:24:07 AM	53	53.5
11:24:17 AM	52.3	53.5
11:24:27 AM	51.8	53
11:24:37 AM	53	54.5
11:24:47 AM	51.9	52.6
11:24:57 AM	53.3	54.8
11:25:07 AM	53.9	56
11:25:17 AM	53.8	55.6
11:25:27 AM	54.2	54.6
11:25:37 AM	53.7	54.3
11:25:47 AM	54	55.2
11:25:57 AM	53.6	55.2
11:26:07 AM	54	55
11:26:17 AM	52.6	53.4
11:26:27 AM	52.9	53.8
11:26:37 AM	52.5	53.8
11:26:47 AM	61.5	66
11:26:57 AM	56.8	63.9
11:27:07 AM	52.2	53.8
11:27:17 AM	53.7	55.8
11:27:27 AM	53.9	55.8
11:27:37 AM	53.5	55.3
11:27:47 AM	52.9	55.9
11:27:57 AM	52.1	53.4
11:28:07 AM	53.1	57.2
11:28:17 AM	53.6	54.4
11:28:27 AM	54.4	56.3
11:28:37 AM	54.7	57.2
11:28:47 AM	53.9	55.7
11:28:57 AM	54.1	55.3
11:29:07 AM	54	55.3
11:29:17 AM	53.8	54.3
11:29:27 AM	52.7	53.9
11:29:37 AM	51.6	53.1

11:29:47 AM	55.1	57.6
11:29:57 AM	53.1	55.8
11:30:07 AM	52.5	54.5
11:30:17 AM	50.8	51.3
11:30:27 AM	52.4	54.3
	57.7	

Time	Leq	Lmax
10:58:11 PM	60.8	65.2
10:58:21 PM	61	65.2
10:58:31 PM	58.9	60.3
10:58:41 PM	58.4	59.4
10:58:51 PM	58.6	59.4
10:59:01 PM	58	59.4
10:59:11 PM	58.4	59.5
10:59:21 PM	58.5	61.7
10:59:31 PM	58.1	61.5
10:59:41 PM	56.9	58.3
10:59:51 PM	57.8	58.6
11:00:01 PM	56.4	57.9
11:00:11 PM	55.9	57.2
11:00:21 PM	55.9	56.7
11:00:31 PM	57.6	61.4
11:00:41 PM	56.5	58.5
11:00:51 PM	56.5	59.2
11:01:01 PM	58.1	62.4
11:01:11 PM	59.6	61
11:01:21 PM	59.4	61.7
11:01:31 PM	58.7	60.8
11:01:41 PM	57.5	58.7
11:01:51 PM	57.8	60.5
11:02:01 PM	58.1	60.9
11:02:11 PM	56.2	58.5
11:02:21 PM	58.7	61.1
11:02:31 PM	63.5	67.2
11:02:41 PM	60.4	64.6
11:02:51 PM	59.5	62.3
11:03:01 PM	57.3	60.4
11:03:11 PM	59.1	62
11:03:21 PM	60.1	62
11:03:31 PM	63.3	65.7
11:03:41 PM	59.5	61.1
11:03:51 PM	61.3	64
11:04:01 PM	61.1	63.2
11:04:11 PM	58.9	62.2

11:04:21 PM	60.7	62.9
11:04:31 PM	60.8	63.7
11:04:41 PM	57.8	59.8
11:04:51 PM	61	63
11:05:01 PM	59.1	62.8
11:05:11 PM	58.9	62.6
11:05:21 PM	57.1	58.8
11:05:31 PM	60.3	63.1
11:05:41 PM	61.2	63.5
11:05:51 PM	61.1	63.1
11:06:01 PM	61	65.8
11:06:11 PM	59	61.1
11:06:21 PM	58.3	60.9
11:06:31 PM	62.3	64.9
11:06:41 PM	60.6	63.8
11:06:51 PM	59.8	64.1
11:07:01 PM	58.1	60.9
11:07:11 PM	59.1	63.9
11:07:21 PM	59	60.8
11:07:31 PM	60.2	62.4
11:07:41 PM	59.2	61.6
11:07:51 PM	60.1	61.8
11:08:01 PM	60.6	64.7
11:08:11 PM	59.1	60.3
11:08:21 PM	58.1	60.5
11:08:31 PM	59.2	62
11:08:41 PM	57.9	59.2
11:08:51 PM	56.1	57.7
11:09:01 PM	55.6	57.2
11:09:11 PM	55.9	57.4
11:09:21 PM	56.2	57.2
11:09:31 PM	58.8	63.5
11:09:41 PM	57.4	59.7
11:09:51 PM	57.7	59.6
11:10:01 PM	57.3	60.6
11:10:11 PM	56.9	59.2
11:10:21 PM	56.7	58.5
11:10:31 PM	59.6	62.6
11:10:41 PM	57.5	61.7
11:10:51 PM	56.1	58.6
11:11:01 PM	58.5	59.8
11:11:11 PM	57.6	60
11:11:21 PM	58.7	62.7
11:11:31 PM	58.6	63.4
11:11:41 PM	60	63.6

11:11:51 PM	63.8	66.5
11:12:01 PM	61	64.9
11:12:11 PM	62.6	66.8
11:12:21 PM	53.7	56
11:12:31 PM	54.1	55.6
11:12:41 PM	57.2	61.9
11:12:51 PM	59.1	63.2
11:13:01 PM	53.9	57.2
	59.2	

AES
Acoustical Engineering Services

Project: Beatrice
Location: R5
Date: 2/2/2021

Time	Leq	Lmax
10:10:57 AM	53.1	54.8
10:11:07 AM	52.6	54.7
10:11:17 AM	52.6	53.5
10:11:27 AM	53.5	55.9
10:11:37 AM	52.9	54.6
10:11:47 AM	52.1	54.4
10:11:57 AM	55.7	59.4
10:12:07 AM	50.7	51.3
10:12:17 AM	51.3	52.7
10:12:27 AM	52	52.8
10:12:37 AM	51.6	51.9
10:12:47 AM	52.7	53.6
10:12:57 AM	53.9	54.8
10:13:07 AM	53.6	54.6
10:13:17 AM	53.6	54.6
10:13:27 AM	53.7	57.1
10:13:37 AM	54.4	56.3
10:13:47 AM	52.4	52.8
10:13:57 AM	51.8	52.4
10:14:07 AM	52.8	54.3
10:14:17 AM	52.4	53.1
10:14:27 AM	53.8	56.7
10:14:37 AM	51.7	52.6
10:14:47 AM	51.4	51.9
10:14:57 AM	52.1	52.5
10:15:07 AM	54.3	56.8
10:15:17 AM	51.2	52.3
10:15:27 AM	51.5	52.8
10:15:37 AM	51.6	52.3
10:15:47 AM	51	51.6
10:15:57 AM	51.1	51.6
10:16:07 AM	51	51.5
10:16:17 AM	50.8	51
10:16:27 AM	51.4	52.1
10:16:37 AM	51.9	52.7
10:16:47 AM	52.1	53.2
10:16:57 AM	51.7	52.1
10:17:07 AM	51	51.4
10:17:17 AM	51.5	51.8
10:17:27 AM	52.4	53.3

10:17:37 AM	51.6	52.4
10:17:47 AM	53.2	54.8
10:17:57 AM	51.8	52.7
10:18:07 AM	51.7	53.2
10:18:17 AM	53.5	55.6
10:18:27 AM	51.3	51.6
10:18:37 AM	51.8	52.5
10:18:47 AM	52.1	54.6
10:18:57 AM	51.5	53.4
10:19:07 AM	52	53.5
10:19:17 AM	51.9	53.5
10:19:27 AM	50.9	51.2
10:19:37 AM	51.1	52
10:19:47 AM	50.9	51.6
10:19:57 AM	50.7	52.2
10:20:07 AM	51.8	52.3
10:20:17 AM	51.3	51.7
10:20:27 AM	51.4	52.2
10:20:37 AM	51	51.9
10:20:47 AM	51.4	52.2
10:20:57 AM	50.5	51
10:21:07 AM	50.6	51.1
10:21:17 AM	51	51.8
10:21:27 AM	51.9	52.4
10:21:37 AM	54.3	56.7
10:21:47 AM	52.6	53.7
10:21:57 AM	52.7	53.9
10:22:07 AM	50.9	52.1
10:22:17 AM	52.4	53.4
10:22:27 AM	51.7	52.4
10:22:37 AM	52.2	53.1
10:22:47 AM	51.2	52
10:22:57 AM	51.4	52
10:23:07 AM	51.7	52.2
10:23:17 AM	52.4	53.2
10:23:27 AM	52.7	53.2
10:23:37 AM	52.8	55.6
10:23:47 AM	51.9	55.4
10:23:57 AM	51.7	52.9
10:24:07 AM	52.2	52.8
10:24:17 AM	51.1	52.1
10:24:27 AM	52.3	52.9
10:24:37 AM	51.1	52
10:24:47 AM	51.3	52
10:24:57 AM	51.5	52.6

10:25:07 AM	52.7	53.3
10:25:17 AM	53.1	54.4
10:25:27 AM	52.1	53.2
10:25:37 AM	53.4	54.1
10:25:47 AM	51.8	52.6
	52.2	

Time	Leq	Lmax
10:01:10 PM	53	54
10:01:20 PM	52.7	53.8
10:01:30 PM	52.8	53.9
10:01:40 PM	53.1	55.6
10:01:50 PM	53.2	54.5
10:02:00 PM	52.1	53.2
10:02:10 PM	54.8	55.8
10:02:20 PM	53.5	55.2
10:02:30 PM	52.6	53.2
10:02:40 PM	53.5	53.9
10:02:50 PM	53.8	54.6
10:03:00 PM	52.4	53.1
10:03:10 PM	51.9	52.4
10:03:20 PM	52	53.4
10:03:30 PM	52.7	54.7
10:03:40 PM	52.7	54.2
10:03:50 PM	52.3	53
10:04:00 PM	53.2	54.5
10:04:10 PM	51.9	52.3
10:04:20 PM	52.1	52.9
10:04:30 PM	53.7	54.7
10:04:40 PM	52.8	53.4
10:04:50 PM	53	54
10:05:00 PM	52.8	53.8
10:05:10 PM	53	55
10:05:20 PM	52.3	53
10:05:30 PM	52.4	53
10:05:40 PM	52.9	55.5
10:05:50 PM	52.4	54.3
10:06:00 PM	52.4	53.3
10:06:10 PM	52.9	53.5
10:06:20 PM	51.6	52.2
10:06:30 PM	51.9	52.5
10:06:40 PM	52.2	52.9
10:06:50 PM	51.8	52.1
10:07:00 PM	52.4	53.3
10:07:10 PM	52.5	53.2

10:07:20 PM	51.6	52
10:07:30 PM	52.1	52.5
10:07:40 PM	51.6	51.9
10:07:50 PM	51.7	52.1
10:08:00 PM	52.2	53.2
10:08:10 PM	52.4	52.7
10:08:20 PM	52.6	53
10:08:30 PM	52.8	53.2
10:08:40 PM	52.3	53.1
10:08:50 PM	57.9	60.4
10:09:00 PM	54.9	60.2
10:09:10 PM	52.4	52.8
10:09:20 PM	52.9	53.6
10:09:30 PM	53	54.4
10:09:40 PM	51.4	52
10:09:50 PM	51.4	52
10:10:00 PM	51.8	52.2
10:10:10 PM	52.1	52.4
10:10:20 PM	52.4	52.6
10:10:30 PM	52.5	52.9
10:10:40 PM	53.5	55.2
10:10:50 PM	51.7	52
10:11:00 PM	51.6	51.8
10:11:10 PM	52.1	52.5
10:11:20 PM	53	53.8
10:11:30 PM	52.6	53
10:11:40 PM	52.4	52.7
10:11:50 PM	51.9	52.4
10:12:00 PM	53	54.4
10:12:10 PM	52.6	53.1
10:12:20 PM	52	52.4
10:12:30 PM	51.6	51.8
10:12:40 PM	51.9	52.7
10:12:50 PM	52.1	52.7
10:13:00 PM	52.8	53
10:13:10 PM	52.7	53.2
10:13:20 PM	53	53.8
10:13:30 PM	52.4	53.7
10:13:40 PM	52	52.2
10:13:50 PM	52.2	52.8
10:14:00 PM	51.9	52.3
10:14:10 PM	52.4	54
10:14:20 PM	52.6	53.1
10:14:30 PM	52.6	53
10:14:40 PM	53	53.6

10:14:50 PM	52.8	53.4
10:15:00 PM	53	53.6
10:15:10 PM	52.1	52.7
10:15:20 PM	52.6	53.6
10:15:30 PM	53.4	53.9
10:15:40 PM	53.6	55.4
10:15:50 PM	54.6	56.6
10:16:00 PM	53.3	54
	52.7	

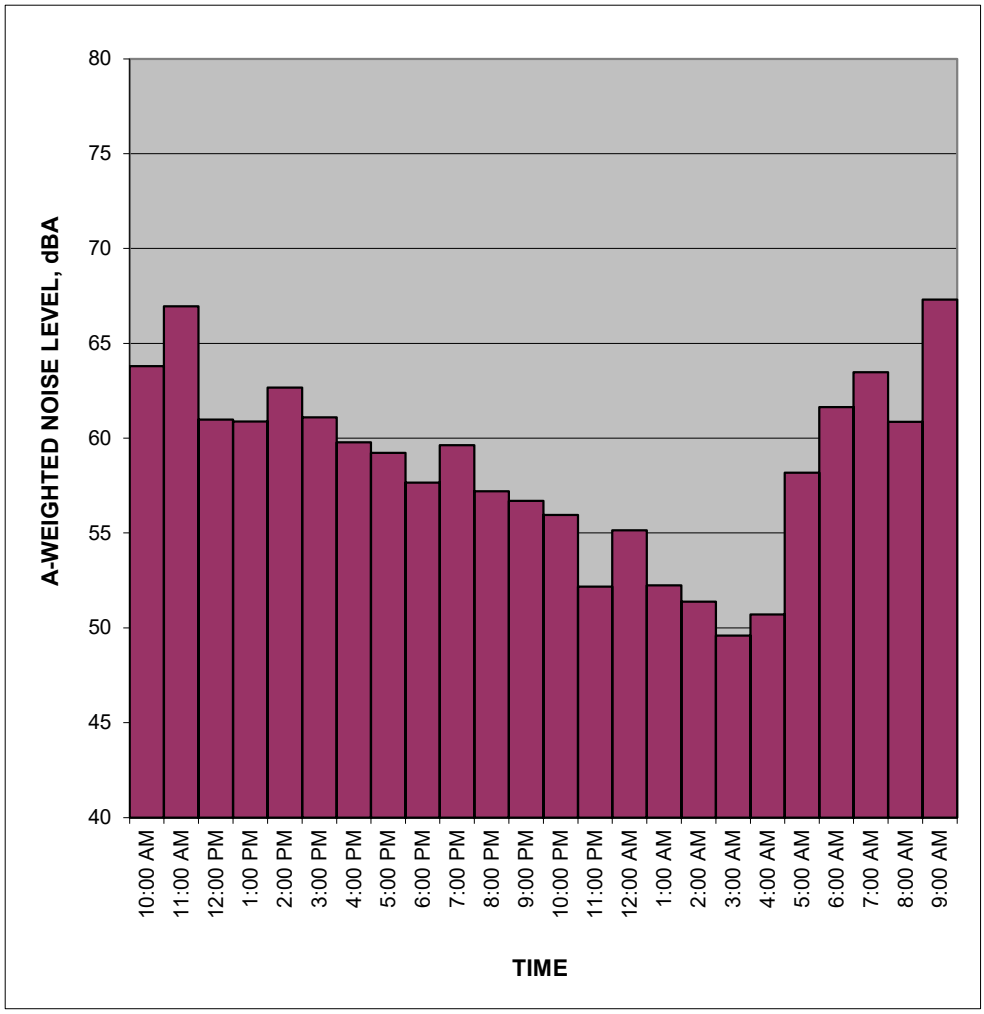
Measured Ambient Noise Levels

AES
Acoustical Engineering Services

Project: Beatrice
Location: P1
Sources: Ambient

Date: 02/02/2021

TIME	HNL, dB(A)
10:00 AM	63.8
11:00 AM	67.0
12:00 PM	61.0
1:00 PM	60.9
2:00 PM	62.7
3:00 PM	61.1
4:00 PM	59.8
5:00 PM	59.2
6:00 PM	57.7
7:00 PM	59.6
8:00 PM	57.2
9:00 PM	56.7
10:00 PM	55.9
11:00 PM	52.2
12:00 AM	55.1
1:00 AM	52.2
2:00 AM	51.4
3:00 AM	49.6
4:00 AM	50.7
5:00 AM	58.2
6:00 AM	61.6
7:00 AM	63.5
8:00 AM	60.9
9:00 AM	67.3
CNEL, dB(A):	**64.3**



NOTES:

Daytime Average Noise Levels: 62.4 dBA
Nighttime Average Noise Levels: 55.9 dBA

Construction Noise & Vibration Calculations

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crushing/Proc. Equipment	1	85	50%	60	0
Concrete Saw	1	90	20%	60	0
Excavator	1	81	40%	85	0
Rubber Tired Loader	1	79	40%	85	0
Rubber Tired Dozer	1	82	40%	110	0
Tractor/Loader/Backhoes	1	84	40%	110	0
Welders	2	74	40%	135	0
Other Equipment	1	85	50%	135	0
	9				

Receptor: ***R1***

Results:

1-hour Leq: 85.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Site Preparation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoes	1	84	40%	60	0
Rubber Tired Dozer	1	82	40%	60	0
Rubber Tired Loader	1	79	40%	85	0
Bore/Drill Rig	1	84	20%	85	0

4

Receptor: ***R1***

Results:

1-hour Leq: 81.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Grader	1	85	40%	60	0
Excavator	1	81	40%	60	0
Rubber Tired Dozer	1	82	40%	85	0
Rubber Tired Loader	1	79	40%	85	0
Tractor/Loader/Backhoes	1	84	40%	110	0
Sweeper	1	82	10%	110	0

6

Receptor: ***R1***

Results:

1-hour Leq: 82.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoes	1	84	40%	60	0
Pump	1	81	50%	60	0
Crane (mobile)	1	81	16%	85	0
Welders	1	74	40%	85	0
Cement and Mortar Mixer	1	80	50%	110	0
Pump	1	81	50%	110	0
Welders	1	74	40%	135	0
Pump	2	81	50%	135	0
	9				

Receptor: ***R1***

Results:

1-hour Leq: **82.2**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	60	0
Sweeper	1	82	10%	60	0
Aerial Lift	1	75	20%	85	0
Dumper/Tenders	1	76	40%	85	0
Crane (mobile)	1	81	16%	110	0
Pump	1	81	50%	110	0
Generator Set	1	81	50%	135	0
Fork Lift	1	75	20%	135	0
Welders	1	74	40%	160	0
Cement and Mortar Mixer	1	80	50%	160	0
Tractor/Loader/Backhoes	1	79	40%	185	0
Air Compressor	1	78	40%	185	0
Fork Lift	1	75	20%	210	0
Welders	2	74	40%	210	0
	15				

Receptor: ***R1***

Results:

1-hour Leq: 81.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: Paving/Landscape

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Roller	1	80	20%	60	0
Paving Equipment	1	77	50%	60	0
Trenchers	1	80	50%	85	0
	3				

Receptor: ***R1***

Results:

1-hour Leq: 76.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crushing/Proc. Equipment	1	85	50%	555	15
Concrete Saw	1	90	20%	555	15
Excavator	1	81	40%	580	15
Rubber Tired Loader	1	79	40%	580	15
Rubber Tired Dozer	1	82	40%	605	15
Tractor/Loader/Backhoes	1	84	40%	605	15
Welders	2	74	40%	630	15
Other Equipment	1	85	50%	630	15
	9				

Receptor: ***R2***

Results:

1-hour Leq: 52.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Site Preparation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoes	1	84	40%	555	15
Rubber Tired Dozer	1	82	40%	555	15
Rubber Tired Loader	1	79	40%	580	15
Bore/Drill Rig	1	84	20%	580	15

4

Receptor: ***R2***

Results:

1-hour Leq: 47.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Grader	1	85	40%	555	15
Excavator	1	81	40%	555	15
Rubber Tired Dozer	1	82	40%	580	15
Rubber Tired Loader	1	79	40%	580	15
Tractor/Loader/Backhoes	1	84	40%	605	15
Sweeper	1	82	10%	605	15

6

Receptor: ***R2***

Results:

1-hour Leq: 49.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoes	1	84	40%	555	15
Pump	1	81	50%	555	15
Crane (mobile)	1	81	16%	580	15
Welders	1	74	40%	580	15
Cement and Mortar Mixer	1	80	50%	605	15
Pump	1	81	50%	605	15
Welders	1	74	40%	630	15
Pump	2	81	50%	630	15
	9				

Receptor: ***R2***

Results:

1-hour Leq: **50.0**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	555	15
Sweeper	1	82	10%	555	15
Aerial Lift	1	75	20%	580	15
Dumper/Tenders	1	76	40%	580	15
Crane (mobile)	1	81	16%	605	15
Pump	1	81	50%	605	15
Generator Set	1	81	50%	630	15
Fork Lift	1	75	20%	630	15
Welders	1	74	40%	655	15
Cement and Mortar Mixer	1	80	50%	655	15
Tractor/Loader/Backhoes	1	79	40%	680	15
Air Compressor	1	78	40%	680	15
Fork Lift	1	75	20%	705	15
Welders	2	74	40%	705	15
	15				

Receptor: ***R2***

Results:

1-hour Leq: **49.6**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: Paving/Landscape

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Roller	1	80	20%	300	5
Paving Equipment	1	77	50%	300	5
Trenchers	1	80	50%	325	5
	3				

Receptor: ***R2***

Results:

1-hour Leq: 58.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crushing/Proc. Equipment	1	85	50%	230	10
Concrete Saw	1	90	20%	230	10
Excavator	1	81	40%	255	10
Rubber Tired Loader	1	79	40%	255	10
Rubber Tired Dozer	1	82	40%	280	10
Tractor/Loader/Backhoes	1	84	40%	280	10
Welders	2	74	40%	305	10
Other Equipment	1	85	50%	305	10
	9				

Receptor: ***R3***

Results:

1-hour Leq: 64.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Site Preparation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoes	1	84	40%	230	10
Rubber Tired Dozer	1	82	40%	230	10
Rubber Tired Loader	1	79	40%	255	10
Bore/Drill Rig	1	84	20%	255	10

4

Receptor: ***R3***

Results:

1-hour Leq: **60.4**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Grader	1	85	40%	230	10
Excavator	1	81	40%	230	10
Rubber Tired Dozer	1	82	40%	255	10
Rubber Tired Loader	1	79	40%	255	10
Tractor/Loader/Backhoes	1	84	40%	280	10
Sweeper	1	82	10%	280	10

6

Receptor: ***R3***

Results:

1-hour Leq: 62.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoes	1	84	40%	230	10
Pump	1	81	50%	230	10
Crane (mobile)	1	81	16%	255	10
Welders	1	74	40%	255	10
Cement and Mortar Mixer	1	80	50%	280	10
Pump	1	81	50%	280	10
Welders	1	74	40%	305	10
Pump	2	81	50%	305	10
	9				

Receptor: ***R3***

Results:

1-hour Leq: **62.1**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	230	10
Sweeper	1	82	10%	230	10
Aerial Lift	1	75	20%	255	10
Dumper/Tenders	1	76	40%	255	10
Crane (mobile)	1	81	16%	280	10
Pump	1	81	50%	280	10
Generator Set	1	81	50%	305	10
Fork Lift	1	75	20%	305	10
Welders	1	74	40%	330	10
Cement and Mortar Mixer	1	80	50%	330	10
Tractor/Loader/Backhoes	1	79	40%	355	10
Air Compressor	1	78	40%	355	10
Fork Lift	1	75	20%	380	10
Welders	2	74	40%	380	10
	15				

Receptor: ***R3***

Results:

1-hour Leq: **61.4**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: Paving/Landscape

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Roller	1	80	20%	230	10
Paving Equipment	1	77	50%	230	10
Trenchers	1	80	50%	255	10

3

Receptor: ***R3***

Results:

1-hour Leq: 56.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crushing/Proc. Equipment	1	85	50%	310	15
Concrete Saw	1	90	20%	310	15
Excavator	1	81	40%	335	15
Rubber Tired Loader	1	79	40%	335	15
Rubber Tired Dozer	1	82	40%	360	15
Tractor/Loader/Backhoes	1	84	40%	360	15
Welders	2	74	40%	385	15
Other Equipment	1	85	50%	385	15
	9				

Receptor: ***R4***

Results:

1-hour Leq: 57.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Site Preparation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoes	1	84	40%	310	15
Rubber Tired Dozer	1	82	40%	310	15
Rubber Tired Loader	1	79	40%	335	15
Bore/Drill Rig	1	84	20%	335	15

4

Receptor: ***R4***

Results:

1-hour Leq: **52.8**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Grader	1	85	40%	310	15
Excavator	1	81	40%	310	15
Rubber Tired Dozer	1	82	40%	335	15
Rubber Tired Loader	1	79	40%	335	15
Tractor/Loader/Backhoes	1	84	40%	360	15
Sweeper	1	82	10%	360	15

6

Receptor: ***R4***

Results:

1-hour Leq: 54.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoes	1	84	40%	310	15
Pump	1	81	50%	310	15
Crane (mobile)	1	81	16%	335	15
Welders	1	74	40%	335	15
Cement and Mortar Mixer	1	80	50%	360	15
Pump	1	81	50%	360	15
Welders	1	74	40%	385	15
Pump	2	81	50%	385	15
	9				

Receptor: ***R4***

Results:

1-hour Leq: 54.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	310	15
Sweeper	1	82	10%	310	15
Aerial Lift	1	75	20%	335	15
Dumper/Tenders	1	76	40%	335	15
Crane (mobile)	1	81	16%	360	15
Pump	1	81	50%	360	15
Generator Set	1	81	50%	385	15
Fork Lift	1	75	20%	385	15
Welders	1	74	40%	410	15
Cement and Mortar Mixer	1	80	50%	410	15
Tractor/Loader/Backhoes	1	79	40%	435	15
Air Compressor	1	78	40%	435	15
Fork Lift	1	75	20%	460	15
Welders	2	74	40%	460	15
	15				

Receptor: ***R4***

Results:

1-hour Leq: **54.2**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: Paving/Landscape

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Roller	1	80	20%	250	5
Paving Equipment	1	77	50%	250	5
Trenchers	1	80	50%	275	5

3

Receptor: ***R4***

Results:

1-hour Leq: 60.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crushing/Proc. Equipment	1	85	50%	70	0
Concrete Saw	1	90	20%	70	0
Excavator	1	81	40%	95	0
Rubber Tired Loader	1	79	40%	95	0
Rubber Tired Dozer	1	82	40%	120	0
Tractor/Loader/Backhoes	1	84	40%	120	0
Welders	2	74	40%	145	0
Other Equipment	1	85	50%	145	0
	9				

Receptor: ***R5***

Results:

1-hour Leq: 84.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Site Preparation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoes	1	84	40%	70	0
Rubber Tired Dozer	1	82	40%	70	0
Rubber Tired Loader	1	79	40%	95	0
Bore/Drill Rig	1	84	20%	95	0

4

Receptor: ***R5***

Results:

1-hour Leq: **80.3**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Grader	1	85	40%	70	0
Excavator	1	81	40%	70	0
Rubber Tired Dozer	1	82	40%	95	0
Rubber Tired Loader	1	79	40%	95	0
Tractor/Loader/Backhoes	1	84	40%	120	0
Sweeper	1	82	10%	120	0

6

Receptor: ***R5***

Results:

1-hour Leq: 81.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractor/Loader/Backhoes	1	84	40%	70	0
Pump	1	81	50%	70	0
Crane (mobile)	1	81	16%	95	0
Welders	1	74	40%	95	0
Cement and Mortar Mixer	1	80	50%	120	0
Pump	1	81	50%	120	0
Welders	1	74	40%	145	0
Pump	2	81	50%	145	0
	9				

Receptor: ***R5***

Results:

1-hour Leq: 81.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Crawler Tractor	1	84	40%	70	0
Sweeper	1	82	10%	70	0
Aerial Lift	1	75	20%	95	0
Dumper/Tenders	1	76	40%	95	0
Crane (mobile)	1	81	16%	120	0
Pump	1	81	50%	120	0
Generator Set	1	81	50%	145	0
Fork Lift	1	75	20%	145	0
Welders	1	74	40%	170	0
Cement and Mortar Mixer	1	80	50%	170	0
Tractor/Loader/Backhoes	1	79	40%	195	0
Air Compressor	1	78	40%	195	0
Fork Lift	1	75	20%	220	0
Welders	2	74	40%	220	0
	15				

Receptor: ***R5***

Results:

1-hour Leq: **79.9**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Construction Phase: Paving/Landscape

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Roller	1	80	20%	70	0
Paving Equipment	1	77	50%	70	0
Trenchers	1	80	50%	95	0
	3				

Receptor: ***R5***

Results:

1-hour Leq: 75.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Beatrice Project

Off-Site Haul Trucks

	Maximum Number of Truck One Way Trips		Worker Trips		Estimated Project Noise Levels (From TNM Outputs), Leq(hr)			
Phase	Per Day	Per Hour (8-hr day)	Daily Employees	Trips during Pk Hr.	Beatrice St.	Westlawn Ave.	Grosvenor Blvd.	Jefferson Blvd.
1. Demolition	38	7	24	10	60.2	59.4	58.0	57.2
2. Site Prep	20	4	8	4	57.9	57.0	54.9	54.9
3. Grading /Excavation	150	25	16	7	65.5	64.7	62.7	62.5
4. Foundation/Concrete Pour	300	38	40	16	67.4	66.5	64.4	64.4
5. Building Construction	100	13	260	104	64.0	63.2	62.2	61.1
6. Arch Coat./Paving/Landscape	20	3	48	20	57.4	56.6	56.2	54.5
** Trucks are one-way*				Ambient, dBA	57.4	57.2	55.8	71.5
*** 6-hours for hauling (demo and grading phases)*				Significance Criteria, dBA	62.4	62.2	60.8	76.5

	Estimated Noise Levels - Project + Ambient, Leq(hr)			
	Beatrice St.	Westlawn Ave.	Grosvenor Blvd.	Jefferson Blvd.
1. Demolition	62.0	61.4	60.0	71.7
2. Site Prep	60.7	60.1	58.4	71.6
3. Grading /Excavation	66.1	65.4	63.5	72.0
4. Foundation/Concrete Pour	67.8	67.0	65.0	72.3
5. Building Construction	64.9	64.2	63.1	71.9
6. Arch Coat./Paving/Landscape	60.4	59.9	59.0	71.6

	Estimated Noise Increase, Leq(hr)			
	Beatrice St.	Westlawn Ave.	Grosvenor Blvd.	Jefferson Blvd.
1. Demolition	4.6	4.2	4.2	0.2
2. Site Prep	3.3	2.9	2.6	0.1
3. Grading /Excavation	8.7	8.2	7.7	0.5
4. Foundation/Concrete Pour	10.4	9.8	9.2	0.8
5. Building Construction	7.5	7.0	7.3	0.4
6. Arch Coat./Paving/Landscape	3.0	2.7	3.2	0.1
Maximum Noise Increase, dBA (Leq)	10.4	9.8	9.2	0.8

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Demo

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

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	50	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **30 September 2021**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Beatrice Project**
RUN: **Off-site Construction - Demo**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	10	35	0	0	7	35	0	0	0	0
	point2	2										

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Demo

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	
Beatrice St.	12	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y
Westlawn Ave.	13	1	250.0	35.0	0.00	4.92	0.00	66	10.0	8.0	Y
Jefferson Blvd.	14	1	250.0	55.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

30 September 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Demo
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	Increase over existing 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
Beatrice St.	12	1	0.0	60.2	66	60.2	10	----	60.2	0.0	8	-8.0
Westlawn Ave.	13	1	0.0	59.4	66	59.4	10	----	59.4	0.0	8	-8.0
Jefferson Blvd.	14	1	0.0	57.2	66	57.2	10	----	57.2	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	3	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

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Demo

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

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	50	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Demo

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	10	35	0	0	4	35	0	0	0	0
	point2	2										

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Demo

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Grosvenor Blvd.	12	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

30 September 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Demo
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	Increase over existing 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
Grosvenor Blvd.	12	1	0.0	58.0	66	58.0	10	----	58.0	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

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Site Prep

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

Roadway		Points					Flow Control				
Name	Width	Name	No.	Coordinates (pavement)						Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	50	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **30 September 2021**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Beatrice Project**
RUN: **Off-site Construction - Site Prep**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	8	35	0	0	4	35	0	0	0	0
	point2	2										

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Site Prep

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	
Beatrice St.	12	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y
Westlawn Ave.	13	1	250.0	35.0	0.00	4.92	0.00	66	10.0	8.0	Y
Jefferson Blvd.	14	1	250.0	55.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

30 September 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Site Prep
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
Beatrice St.	12	1	0.0	57.9	66	57.9	10	----	57.9	0.0	8	-8.0
Westlawn Ave.	13	1	0.0	57.0	66	57.0	10	----	57.0	0.0	8	-8.0
Jefferson Blvd.	14	1	0.0	54.9	66	54.9	10	----	54.9	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	3	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

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Site Prep

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

Roadway		Points					Flow Control				
Name	Width	Name	No.	Coordinates (pavement)						Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	50	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **30 September 2021**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Beatrice Project**
RUN: **Off-site Construction - Site Prep**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	4	35	0	0	2	35	0	0	0	0
	point2	2										

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Site Prep

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	
Grosvenor Blvd.	12	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

30 September 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Site Prep
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	Increase over existing 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
Grosvenor Blvd.	12	1	0.0	54.9	66	54.9	10	----	54.9	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

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Grading

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

Roadway		Points					Flow Control			Segment	
Name	Width	Name	No.	Coordinates (pavement) X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	50	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **30 September 2021**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Beatrice Project**
RUN: **Off-site Construction - Grading**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	7	35	0	0	25	35	0	0	0	0
	point2	2										

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Grading

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	
Beatrice St.	12	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y
Westlawn Ave.	13	1	250.0	35.0	0.00	4.92	0.00	66	10.0	8.0	Y
Jefferson Blvd.	14	1	250.0	55.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

30 September 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Grading
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	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Beatrice St.	12	1	0.0	65.5	66	65.5	10	----	65.5	0.0	8	-8.0
Westlawn Ave.	13	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
Jefferson Blvd.	14	1	0.0	62.5	66	62.5	10	----	62.5	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	3	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

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Grading

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

Roadway		Points					Flow Control			Segment	
Name	Width	Name	No.	Coordinates (pavement) X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	50	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **30 September 2021**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Beatrice Project**
RUN: **Off-site Construction - Grading**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	7	35	0	0	13	35	0	0	0	0
	point2	2										

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Grading

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	
Grosvenor Blvd.	12	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

30 September 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Grading
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	Increase over existing 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
Grosvenor Blvd.	12	1	0.0	62.7	66	62.7	10	----	62.7	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

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Foundation

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

Roadway		Points					Flow Control			Segment	
Name	Width	Name	No.	Coordinates (pavement) X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	50	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **30 September 2021**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Beatrice Project**
RUN: **Off-site Construction - Foundation**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	16	35	0	0	38	35	0	0	0	0
	point2	2										

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Foundation

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	
Beatrice St.	12	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y
Westlawn Ave.	13	1	250.0	35.0	0.00	4.92	0.00	66	10.0	8.0	Y
Jefferson Blvd.	14	1	250.0	55.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

30 September 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Foundation
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	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Beatrice St.	12	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0
Westlawn Ave.	13	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	8	-8.0
Jefferson Blvd.	14	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Foundation

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

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	50	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **30 September 2021**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Beatrice Project**
RUN: **Off-site Construction - Foundation**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	16	35	0	0	19	35	0	0	0	0
	point2	2										

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Foundation

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	
Grosvenor Blvd.	12	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

30 September 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Foundation
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
Grosvenor Blvd.	12	1	0.0	64.4	66	64.4	10	----	64.4	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

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Building

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	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	50	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **30 September 2021**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Beatrice Project**
RUN: **Off-site Construction - Building**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	104	35	0	0	13	35	0	0	0	0
	point2	2										

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Building

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	
Beatrice St.	12	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y
Westlawn Ave.	13	1	250.0	35.0	0.00	4.92	0.00	66	10.0	8.0	Y
Jefferson Blvd.	14	1	250.0	55.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

30 September 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Building
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
Beatrice St.	12	1	0.0	64.0	66	64.0	10	----	64.0	0.0	8	-8.0
Westlawn Ave.	13	1	0.0	63.2	66	63.2	10	----	63.2	0.0	8	-8.0
Jefferson Blvd.	14	1	0.0	61.1	66	61.1	10	----	61.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	3	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

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Building

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	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	50	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Building

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	104	35	0	0	7	35	0	0	0	0
	point2	2										

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Building

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	
Grosvenor Blvd.	12	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

30 September 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Building
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	Increase over existing 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
Grosvenor Blvd.	12	1	0.0	62.2	66	62.2	10	----	62.2	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction 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

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Paving/Landscape

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

Roadway		Points					Flow Control			Segment	
Name	Width	Name	No.	Coordinates (pavement) X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	50	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **30 September 2021**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Beatrice Project**
RUN: **Off-site Construction - Paving/Landscape**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	20	35	0	0	3	35	0	0	0	0
	point2	2										

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Paving/Landscape

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	
Beatrice St.	12	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y
Westlawn Ave.	13	1	250.0	35.0	0.00	4.92	0.00	66	10.0	8.0	Y
Jefferson Blvd.	14	1	250.0	55.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

30 September 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Paving/Landscape
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	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Beatrice St.	12	1	0.0	57.4	66	57.4	10	----	57.4	0.0	8	-8.0
Westlawn Ave.	13	1	0.0	56.6	66	56.6	10	----	56.6	0.0	8	-8.0
Jefferson Blvd.	14	1	0.0	54.5	66	54.5	10	----	54.5	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	3	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

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Paving/Landscape

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

Roadway		Points					Flow Control			Segment	
Name	Width	Name	No.	Coordinates (pavement) X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	50	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Paving/Landscape

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	20	35	0	0	2	35	0	0	0	0
	point2	2										

Eyestone Environmental 30 September 2021
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Paving/Landscape

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	
Grosvenor Blvd.	12	1	250.0	30.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

30 September 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Beatrice Project
RUN: Off-site Construction - Paving/Landscape
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	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Grosvenor Blvd.	12	1	0.0	56.2	66	56.2	10	----	56.2	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction 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

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Project: Beatrice Project

Construction Vibration Impacts

Reference Levels at 25 feet are based on FTA, 2006 (Transit Noise and Vibration Impact Assessment)
Calculations using FTA procedure with n= **1.5** (for receptors 25 feet or greater)
n= **1.1** (for receptors less than 25 feet, per Caltrans procedure)

ON-SITE CONSTRUCTION ACTIVITIES

Table 1a: Construction Equipment Vibration Levels (PPV) - Building Damage

Equipment	Reference Vibration Levels at 25 ft., PPV	Estimated Vibration Levels at nearest off-site building structures, distance in feet, PPV							
		Two-story Industrial Building to the North		Four-Story Residential Building to the South		Two-story Industrial Building to the East		Two-story Industrial Building to the West	
		Distance	Level	Distance	Level	Distance	Level	Distance	Level
Large Bulldozer	0.089	80	0.016	60	0.024	265	0.003	70	0.019
Caisson Drilling	0.089	80	0.016	60	0.024	265	0.003	70	0.019
Loaded Trucks	0.076	80	0.013	60	0.020	10	0.208	70	0.016
Jackhammer	0.035	80	0.006	60	0.0094	5	0.206	70	0.008
Small bulldozer	0.003	80	0.001	60	0.001	5	0.0176	70	0.001

Table 1b: Construction Equipment Vibration Levels (PPV) - Building Damage

Equipment	Reference Vibration Levels at 25 ft., PPV	Estimated Vibration Levels at nearest off-site building structures, distance in feet, PPV							
		Five-story Parking Structure to the NE							
		Distance	Level						
Large Bulldozer	0.089	230	0.003						
Caisson Drilling	0.089	230	0.003						
Loaded Trucks	0.076	10	0.208						
Jackhammer	0.035	5	0.206						
Small bulldozer	0.003	5	0.018						

Table 2a: Construction Equipment Vibration Levels (VdB) - Human Annoyance

Equipment	Reference Vibration Levels at 25 ft., VdB	Estimated Vibration Levels at Off-Site Receptors (at note distance in feet), VdB							
		R1		R2		R3		R4	
		Distance	Level	Distance	Level	Distance	Level	Distance	Level
Large Bulldozer	87	60	76	555	47	230	58	310	54
Caisson Drilling	87	60	76	555	47	230	58	310	54
Loaded Trucks	86	60	75	300	54	230	57	240	57
Jackhammer	79	60	68	300	47	230	50	240	50
Small bulldozer	58	60	47	300	26	230	29	240	29

Table 2b: Construction Equipment Vibration Levels (VdB) - Human Annoyance

Equipment	Reference Vibration Levels at 25 ft., VdB	Estimated Vibration Levels at Off-Site Receptors (at note distance in feet), VdB							
		R5							
		Distance	Level	Distance	Level	Distance	Level	Distance	Level
Large Bulldozer	87	70	74						
Caisson Drilling	87	70	74						
Loaded Trucks	86	70	73						
Jackhammer	79	70	66						
Small bulldozer	58	70	45						

Operation Noise Calculations

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Project Composite Noise Calculations (CNEL)

Project: Beatrice Project

Receptor	Ambient	Traffic[a]	Mechanical	Loading	Parking	Outdoor		Project Composite	Ambient + Project	Increase
R1	60.3	60.4	35.5	27.0	53.2	49.2		61.4	63.9	3.6
R1U	60.3	57.7	36.6	25.0	48.4	54.9		59.9	63.1	2.8
R2	59.6	55.6	52.6	22.2	31.9	55.7		59.6	62.6	3.0
R3	61.2	58.6	37.2	25.3	33.1	45.6		58.9	63.2	2.0
R3U	61.2	57.5	49.3	22.2	32.4	56.7		60.5	63.9	2.7
R4	60.4	55.8	45.7	22.6	34.9	54.1		58.3	62.5	2.1
R5	59.3	56.9	51.1	24.2	52.4	55.6		60.6	63.0	3.7

[a] - Project traffic noise levels at each receptor is based on the traffic noise analysis for the roadway segment in front of the receptor, adjusted for distance and barrier (if present), as provided in the table below.
U - Represents upper levels.

		Traffic Noise Levels, CNEL								
Receptor	Roadway Segment	Existing	Existing + Project	Project Only	distance to roadway, ft	Existing	Existing + Project	barrier	distance to Center Line	adj. for distance
R1	Beatrice Ave.	64.6	66.0	60.4	10	64.6	66.0	0	30	0.0
R1U	Beatrice Ave.	61.9	63.3	57.7	36	64.6	66.0	0	30	-2.7
R2	Grosvenor Blvd.	65.7	66.1	55.6	15	66.4	66.8	0	30	-0.7
R3	Westlawn Ave.	62.4	63.9	58.6	25	64.2	65.7	0	30	-1.8
R3U	Westlawn Ave.	61.3	62.8	57.5	38	64.2	65.7	0	30	-2.9
R4	Beatrice Ave.	60.3	61.6	55.8	15	61.0	62.3	0	30	-0.7
R5	Jandy Pl.	57.9	60.4	56.9	25	59.7	62.2	0	30	-1.8

For report, based on the worst-case (highest noise impacts)

Receptor	Ambient	Traffic	Mechanical	Loading	Parking	Outdoor		Project Composite	Ambient + Project	Increase
R1	60.3	60.4	35.5	27.0	53.2	49.2		61.4	63.9	3.6
R2	59.6	55.6	52.6	22.2	31.9	55.7		59.6	62.6	3.0
R3	61.2	57.5	49.3	22.2	32.4	56.7		60.5	63.9	2.7
R4	60.4	55.8	45.7	22.6	34.9	54.1		58.3	62.5	2.1
R5	59.3	56.9	51.1	24.2	52.4	55.6		60.6	63.0	3.7

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Outdoor Mechanical Equipment Noise Calculations

Project: Beatrice Project

	Estimated Noise Levels, Leq from SOUNDPLAN		Hours of Operations Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Leq	CNEL	12	3	9
R1	36.0	35.5	36.0	36.0	0.0
R1U	37.1	36.6	37.1	37.1	0.0
R2	45.9	52.6	45.9	45.9	45.9
R3	37.7	37.2	37.7	37.7	0.0
R3U	42.6	49.3	42.6	42.6	42.6
R4	46.2	45.7	46.2	46.2	0.0
R5	44.4	51.1	44.4	44.4	44.4

*U represents upper levels

Receptor	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	ambient (Leq)	Ambient + Project (Leq)	Increase (Leq)
R1	60.3	60.3	0.0	51.8	51.9	0.1
R1U	60.3	60.3	0.0	51.8	51.9	0.1
R2	59.6	60.4	0.8	51.8	52.8	1.0
R3	61.2	61.2	0.0	53.5	53.6	0.1
R3U	61.2	61.4	0.3	53.5	53.8	0.3
R4	60.4	60.5	0.1	51.8	52.9	1.1
R5	59.3	59.9	0.6	52.2	52.9	0.7

For Report

Receptor	Ambient, (Leq)	Project, (Leq)	Amb+Project, (Leq)	Criteria, (Leq)	Exceedance
R1	51.8	37.1	51.9	56.8	0.0
R2	51.8	45.9	52.8	56.8	0.0
R3	53.5	42.6	53.8	58.5	0.0
R4	51.8	46.2	52.9	56.8	0.0
R5	52.2	44.4	52.9	57.2	0.0

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Acoustical Engineering Services

Loading & Trash Compactor Noise Calculations

Project: Beatrice Project

					Hours of Operations		
Estimated noise levels, Leq (FROM SOUNDPLAN)					Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Loading	Trash Compactor	Total, Leq	CNEL	3	**3**	**0**
R1	29.7	13.8	29.8	27.0	23.8	29.8	0.0
R1U	27.7	10.0	27.8	25.0	21.8	27.8	0.0
R2	15.5	24.4	24.9	22.2	18.9	24.9	0.0
R3	25.9	24.0	28.1	25.3	22.1	28.1	0.0
R3U	24.5	14.3	24.9	22.2	18.9	24.9	0.0
R4	23.6	20.3	25.3	22.6	19.3	25.3	0.0
R5	26.8	14.1	27.0	24.2	21.0	27.0	0.0

*U represents upper levels

Receptor	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	ambient (Leq)	Project (Leq)	Ambient + Project (Leq)	Increase (Leq)
R1	60.3	60.3	0.0	51.8	29.8	51.8	0.0
R1U	60.3	60.3	0.0	51.8	27.8	51.8	0.0
R2	59.6	59.6	0.0	51.8	24.9	51.8	0.0
R3	61.2	61.2	0.0	53.5	28.1	53.5	0.0
R3U	61.2	61.2	0.0	53.5	24.9	53.5	0.0
R4	60.4	60.4	0.0	51.8	25.3	51.8	0.0
R5	59.3	59.3	0.0	52.2	27.0	52.2	0.0

For Report

Receptor	Ambient, (Leq)	Project, (Leq)	Ambient + Project, (Leq)	Criteria, (Leq)	Exceedance
R1	51.8	29.8	51.8	56.8	0.0
R2	51.8	28.1	51.8	56.8	0.0
R3	53.5	24.9	53.5	58.5	0.0
R4	51.8	25.3	51.8	56.8	0.0
R5	52.2	27.0	52.2	57.2	0.0

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ACOUSTICAL ENGINEERING SERVICES

Parking Structure Noise Calculations

Project: Beatrice Project

	Estimated Noise Levels, Leq from SOUNDPLAN		Hours of Operations Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Leq	CNEL	12	3	6
R1	47.9	53.2	47.9	47.9	46.1
R1U	43.1	48.4	43.1	43.1	41.3
R2	26.6	31.9	26.6	26.6	24.8
R3	27.8	33.1	27.8	27.8	26.0
R3U	27.1	32.4	27.1	27.1	25.3
R4	29.6	34.9	29.6	29.6	27.8
R5	47.1	52.4	47.1	47.1	45.3

*U represents upper levels

Receptor	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	ambient (Leq)	Ambient + Project (Leq)	Increase (Leq)
R1	60.3	61.0	0.8	51.8	53.3	1.5
R1U	60.3	60.5	0.3	51.8	52.3	0.5
R2	59.6	59.6	0.0	51.8	51.8	0.0
R3	61.2	61.2	0.0	53.5	53.5	0.0
R3U	61.2	61.2	0.0	53.5	53.5	0.0
R4	60.4	60.4	0.0	51.8	51.8	0.0
R5	59.3	60.1	0.8	52.2	53.4	1.2

For Report

Receptor	Ambient	Project	Amb+Project	Criteria	Exceedance
R1	51.8	47.9	53.3	56.8	0.0
R2	51.8	26.6	51.8	56.8	0.0
R3	53.5	27.8	53.5	58.5	0.0
R4	51.8	29.6	51.8	56.8	0.0
R5	52.2	47.1	53.4	57.2	0.0

AES
ACOUSTICAL ENGINEERING SERVICES

Outdoor Noise Calculations

Project: Beatrice Project

	Estimated noise levels, Leq (FROM SOUNDPLAN)				Hours of Operations Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Amplified Sound System	Occupants	Total, Leq	CNEL	12	**2**	**2**
R1	46.4	39.2	47.2	49.2	47.2	45.4	40.7
R1U	51.5	47.4	52.9	54.9	52.9	51.1	46.4
R2	53.6	37.3	53.7	55.7	53.7	51.9	47.2
R3	42.6	36.9	43.6	45.6	43.6	41.8	37.1
R3U	54.5	41.0	54.7	56.7	54.7	52.9	48.2
R4	51.9	39.6	52.1	54.1	52.1	50.3	45.6
R5	52.8	45.9	53.6	55.6	53.6	51.8	47.1

*U represents upper levels

Receptor	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	ambient (Leq)	Project (Leq)	Ambient + Project (Leq)	Increase (Leq)
R1	60.3	60.6	0.3	51.8	47.2	53.1	1.3
R1U	60.3	61.4	1.1	51.8	52.9	55.4	3.6
R2	59.6	61.1	1.5	51.8	53.7	55.9	4.1
R3	61.2	61.3	0.1	53.5	43.6	53.9	0.4
R3U	61.2	62.5	1.3	53.5	54.7	57.2	3.7
R4	60.4	61.3	0.9	51.8	52.1	55.0	3.2
R5	59.3	60.8	1.6	52.2	53.6	56.0	3.8

For Report

Receptor	Ambient, (Leq)	Project, (Leq)	Ambient + Project, (Leq)	Criteria, (Leq)	Exceedance
R1	51.8	52.9	55.4	56.8	0.0
R2	51.8	53.7	55.9	56.8	0.0
R3	53.5	54.7	57.2	58.5	0.0
R4	51.8	52.1	55.0	56.8	0.0
R5	52.2	53.6	56.0	57.2	0.0

Beatrice Project EIR
Source Levels in dB(A) - Mechanical

Name	Source type	Lw dB(A)	
Mechanical 1	Point	100.0	
Mechanical 2	Point	100.0	
Mechanical 3	Point	100.0	
Mechanical 4	Point	100.0	
Mechanical 5	Point	100.0	
Mechanical 6	Point	100.0	
Mechanical 7	Point	100.0	
Mechanical 8	Point	100.0	
Mechanical 9	Point	100.0	
Mechanical 10	Point	100.0	
Mechanical 11	Point	100.0	
Mechanical 12	Point	100.0	

Source	Source type	Leq,d dB(A)	
Receiver R1 Fl 1.FL Leq,d 36.0 dB(A)			
Mechanical 1	Point	24.8	
Mechanical 2	Point	25.5	
Mechanical 3	Point	26.7	
Mechanical 4	Point	25.8	
Mechanical 5	Point	25.6	
Mechanical 6	Point	25.4	
Mechanical 7	Point	25.4	
Mechanical 8	Point	24.9	
Mechanical 9	Point	24.5	
Mechanical 10	Point	23.8	
Mechanical 11	Point	24.4	
Mechanical 12	Point	24.5	
Receiver R1 Fl 2.FL Leq,d 37.1 dB(A)			
Mechanical 1	Point	26.2	
Mechanical 2	Point	26.7	
Mechanical 3	Point	28.5	
Mechanical 4	Point	26.9	
Mechanical 5	Point	26.6	
Mechanical 6	Point	26.5	
Mechanical 7	Point	26.5	
Mechanical 8	Point	25.8	
Mechanical 9	Point	25.2	
Mechanical 10	Point	24.9	
Mechanical 11	Point	25.0	
Mechanical 12	Point	25.2	
Receiver R2 Fl 1.FL Leq,d 45.9 dB(A)			
Mechanical 1	Point	31.3	
Mechanical 2	Point	31.4	
Mechanical 3	Point	31.0	
Mechanical 4	Point	32.4	
Mechanical 5	Point	33.7	
Mechanical 6	Point	39.0	
Mechanical 7	Point	35.4	
Mechanical 8	Point	37.8	
Mechanical 9	Point	37.8	
Mechanical 10	Point	35.2	
Mechanical 11	Point	33.7	
Mechanical 12	Point	32.5	
Receiver R3 Fl 1.FL Leq,d 37.7 dB(A)			

Source	Source type	Leq,d dB(A)	
Mechanical 1	Point	22.0	
Mechanical 2	Point	22.4	
Mechanical 3	Point	22.3	
Mechanical 4	Point	23.5	
Mechanical 5	Point	24.6	
Mechanical 6	Point	33.8	
Mechanical 7	Point	26.2	
Mechanical 8	Point	28.8	
Mechanical 9	Point	27.9	
Mechanical 10	Point	24.6	
Mechanical 11	Point	23.6	
Mechanical 12	Point	22.5	
Receiver R3 Fl 2.FL Leq,d 42.6 dB(A)			
Mechanical 1	Point	29.2	
Mechanical 2	Point	29.8	
Mechanical 3	Point	31.8	
Mechanical 4	Point	31.4	
Mechanical 5	Point	31.5	
Mechanical 6	Point	37.0	
Mechanical 7	Point	31.9	
Mechanical 8	Point	32.1	
Mechanical 9	Point	31.0	
Mechanical 10	Point	29.4	
Mechanical 11	Point	29.4	
Mechanical 12	Point	28.9	
Receiver R4 Fl 1.FL Leq,d 46.2 dB(A)			
Mechanical 1	Point	30.9	
Mechanical 2	Point	32.1	
Mechanical 3	Point	30.0	
Mechanical 4	Point	35.2	
Mechanical 5	Point	34.9	
Mechanical 6	Point	39.7	
Mechanical 7	Point	36.1	
Mechanical 8	Point	37.8	
Mechanical 9	Point	37.7	
Mechanical 10	Point	34.3	
Mechanical 11	Point	32.5	
Mechanical 12	Point	31.1	
Receiver R5 Fl 1.FL Leq,d 44.4 dB(A)			
Mechanical 1	Point	30.8	

Source	Source type	Leq,d dB(A)	
Mechanical 2	Point	33.5	
Mechanical 3	Point	38.8	
Mechanical 4	Point	35.9	
Mechanical 5	Point	35.3	
Mechanical 6	Point	29.8	
Mechanical 7	Point	33.9	
Mechanical 8	Point	31.6	
Mechanical 9	Point	30.4	
Mechanical 10	Point	30.8	
Mechanical 11	Point	31.5	
Mechanical 12	Point	29.2	

Beatrice Project EIR
Source Levels in dB(A) - People

Name	Source type	Lw dB(A)	
People Level 4 NE	Area	85.2	
People Level 4 SE	Area	89.6	
People Level 4 W	Area	91.8	
People Level 5 E	Area	83.8	
People Level 5 W	Area	87.9	
People Level 6 EN	Area	82.4	
People Level 6 ES	Area	80.4	
People Level 6 W	Area	89.5	
People Level 7	Area	87.8	
People Level 7 EC	Area	79.9	
People Level 7 EN	Area	82.2	
People Level 7 ES	Area	84.2	
People Level 7 WC	Area	83.2	
People Level 7 WS	Area	86.3	
People Level 8 Center	Area	96.4	
People Level 8 NE	Area	87.5	
People Level 8 NW	Area	90.4	

Beatrice Project EIR
Contribution level - People

Source	Source type	Leq,d dB(A)	
Receiver R1 Fl 1.FL Leq,d 39.2 dB(A)			
People Level 4 NE	Area	18.0	
People Level 4 SE	Area	36.3	
People Level 4 W	Area	26.5	
People Level 5 W	Area	20.3	
People Level 5 E	Area	16.4	
People Level 6 W	Area	21.0	
People Level 6 ES	Area	13.7	
People Level 6 EN	Area	13.8	
People Level 7	Area	19.4	
People Level 7 WC	Area	14.9	
People Level 7 WS	Area	27.2	
People Level 7 ES	Area	17.6	
People Level 7 EC	Area	11.9	
People Level 7 EN	Area	13.2	
People Level 8 Center	Area	33.7	
People Level 8 NE	Area	14.6	
People Level 8 NW	Area	20.5	
Receiver R1 Fl 2.FL Leq,d 47.4 dB(A)			
People Level 4 NE	Area	16.6	
People Level 4 SE	Area	46.6	
People Level 4 W	Area	33.7	
People Level 5 W	Area	21.6	
People Level 5 E	Area	15.1	
People Level 6 W	Area	21.7	
People Level 6 ES	Area	13.9	
People Level 6 EN	Area	13.7	
People Level 7	Area	19.6	
People Level 7 WC	Area	15.3	
People Level 7 WS	Area	31.7	
People Level 7 ES	Area	20.1	
People Level 7 EC	Area	12.1	
People Level 7 EN	Area	13.1	
People Level 8 Center	Area	36.1	
People Level 8 NE	Area	14.4	
People Level 8 NW	Area	20.8	
Receiver R2 Fl 1.FL Leq,d 37.3 dB(A)			
People Level 4 NE	Area	26.9	
People Level 4 SE	Area	29.8	
People Level 4 W	Area	10.1	

Source	Source type	Leq,d dB(A)	
People Level 5 W	Area	6.1	
People Level 5 E	Area	22.5	
People Level 6 W	Area	7.9	
People Level 6 ES	Area	22.9	
People Level 6 EN	Area	24.4	
People Level 7	Area	6.6	
People Level 7 WC	Area	1.9	
People Level 7 WS	Area	6.7	
People Level 7 ES	Area	26.9	
People Level 7 EC	Area	21.7	
People Level 7 EN	Area	23.8	
People Level 8 Center	Area	32.3	
People Level 8 NE	Area	28.5	
People Level 8 NW	Area	9.7	
Receiver R3 Fl 1.FL Leq,d 36.9 dB(A)			
People Level 4 NE	Area	29.7	
People Level 4 SE	Area	34.6	
People Level 4 W	Area	18.9	
People Level 5 W	Area	14.9	
People Level 5 E	Area	14.5	
People Level 6 W	Area	16.3	
People Level 6 ES	Area	10.5	
People Level 6 EN	Area	12.2	
People Level 7	Area	14.4	
People Level 7 WC	Area	9.3	
People Level 7 WS	Area	12.5	
People Level 7 ES	Area	24.7	
People Level 7 EC	Area	9.3	
People Level 7 EN	Area	11.2	
People Level 8 Center	Area	23.6	
People Level 8 NE	Area	23.9	
People Level 8 NW	Area	11.8	
Receiver R3 Fl 2.FL Leq,d 41.0 dB(A)			
People Level 4 NE	Area	31.0	
People Level 4 SE	Area	37.1	
People Level 4 W	Area	18.3	
People Level 5 W	Area	14.2	
People Level 5 E	Area	13.6	
People Level 6 W	Area	15.8	
People Level 6 ES	Area	10.1	

Source	Source type	Leq,d dB(A)	
People Level 6 EN	Area	11.7	
People Level 7	Area	14.4	
People Level 7 WC	Area	9.2	
People Level 7 WS	Area	24.7	
People Level 7 ES	Area	28.7	
People Level 7 EC	Area	9.3	
People Level 7 EN	Area	11.3	
People Level 8 Center	Area	36.6	
People Level 8 NE	Area	26.3	
People Level 8 NW	Area	18.8	
Receiver R4 Fl 1.FL Leq,d 39.6 dB(A)			
People Level 4 NE	Area	31.9	
People Level 4 SE	Area	32.7	
People Level 4 W	Area	13.9	
People Level 5 W	Area	10.0	
People Level 5 E	Area	28.6	
People Level 6 W	Area	11.9	
People Level 6 ES	Area	24.7	
People Level 6 EN	Area	28.0	
People Level 7	Area	10.7	
People Level 7 WC	Area	4.9	
People Level 7 WS	Area	15.2	
People Level 7 ES	Area	29.1	
People Level 7 EC	Area	21.7	
People Level 7 EN	Area	25.4	
People Level 8 Center	Area	33.2	
People Level 8 NE	Area	28.2	
People Level 8 NW	Area	11.5	
Receiver R5 Fl 1.FL Leq,d 45.9 dB(A)			
People Level 4 NE	Area	16.0	
People Level 4 SE	Area	23.9	
People Level 4 W	Area	43.5	
People Level 5 W	Area	37.5	
People Level 5 E	Area	13.9	
People Level 6 W	Area	36.5	
People Level 6 ES	Area	10.6	
People Level 6 EN	Area	13.1	
People Level 7	Area	31.5	
People Level 7 WC	Area	29.0	
People Level 7 WS	Area	30.8	

Source	Source type	Leq,d dB(A)	
People Level 7 ES	Area	12.0	
People Level 7 EC	Area	9.6	
People Level 7 EN	Area	11.5	
People Level 8 Center	Area	32.8	
People Level 8 NE	Area	12.8	
People Level 8 NW	Area	29.1	

Beatrice Project EIR
Source Levels in dB(A) - Speakers

Name	Source type	Lw dB(A)	
Speakers Level 4	Point	94.2	
Speakers Level 4	Point	94.2	
Speakers Level 4	Point	94.2	
Speakers Level 4	Point	94.2	
Speakers Level 4	Point	94.2	
Speakers Level 4	Point	94.2	
Speakers Level 4	Point	94.2	
Speakers Level 4	Point	94.2	
Speakers Level 4	Point	94.2	
Speakers Level 4	Point	94.2	
Speakers Level 4	Point	94.2	
Speakers Level 4	Point	94.2	
Speakers Level 4	Point	94.2	
Speakers Level 4	Point	94.2	
Speakers Level 4	Point	94.2	
Speakers Level 5	Point	94.2	
Speakers Level 5	Point	94.2	
Speakers Level 5	Point	94.2	
Speakers Level 5	Point	94.2	
Speakers Level 5	Point	94.2	
Speakers Level 5	Point	94.2	
Speakers Level 6	Point	94.2	
Speakers Level 6	Point	94.2	
Speakers Level 6	Point	94.2	
Speakers Level 6	Point	94.2	
Speakers Level 6	Point	94.2	
Speakers Level 6	Point	94.2	
Speakers Level 6	Point	94.2	
Speakers Level 6	Point	94.2	
Speakers Level 7	Point	99.2	
Speakers Level 7	Point	99.2	
Speakers Level 7	Point	99.2	
Speakers Level 7	Point	99.2	
Speakers Level 7	Point	99.2	
Speakers Level 7	Point	99.2	
Speakers Level 7	Point	99.2	
Speakers Level 7	Point	99.2	
Speakers Level 7	Point	99.2	
Speakers Level 7	Point	99.2	
Speakers Level 7	Point	99.2	

Beatrice Project EIR
Source Levels in dB(A) - Speakers

Name	Source type	Lw dB(A)	
Speakers Level 7	Point	99.2	
Speakers Level 7	Point	99.2	
Speakers Level 7	Point	99.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	
Speakers Level 8	Point	109.2	

Source	Source type	Leq,d dB(A)	
Receiver R1 Fl 1.FL Leq,d 46.4 dB(A)			
Speakers Level 4	Point	9.2	
Speakers Level 4	Point	18.6	
Speakers Level 4	Point	17.9	
Speakers Level 4	Point	12.5	
Speakers Level 4	Point	19.4	
Speakers Level 4	Point	29.7	
Speakers Level 4	Point	34.1	
Speakers Level 4	Point	33.9	
Speakers Level 4	Point	20.7	
Speakers Level 4	Point	16.6	
Speakers Level 4	Point	22.6	
Speakers Level 4	Point	9.8	
Speakers Level 4	Point	10.4	
Speakers Level 5	Point	9.3	
Speakers Level 5	Point	8.2	
Speakers Level 5	Point	8.6	
Speakers Level 5	Point	12.2	
Speakers Level 5	Point	17.6	
Speakers Level 5	Point	18.8	
Speakers Level 6	Point	9.1	
Speakers Level 6	Point	8.4	
Speakers Level 6	Point	21.4	
Speakers Level 6	Point	8.8	
Speakers Level 6	Point	9.4	
Speakers Level 6	Point	7.7	
Speakers Level 6	Point	9.3	
Speakers Level 6	Point	7.2	
Speakers Level 7	Point	13.8	
Speakers Level 7	Point	13.7	
Speakers Level 7	Point	26.1	
Speakers Level 7	Point	16.5	
Speakers Level 7	Point	25.6	
Speakers Level 7	Point	14.0	
Speakers Level 7	Point	14.4	
Speakers Level 7	Point	19.1	
Speakers Level 7	Point	17.5	
Speakers Level 7	Point	27.2	
Speakers Level 7	Point	10.0	
Speakers Level 7	Point	9.9	
Speakers Level 7	Point	15.5	

Source	Source type	Leq,d dB(A)	
Speakers Level 7	Point	11.3	
Speakers Level 7	Point	10.0	
Speakers Level 8	Point	36.9	
Speakers Level 8	Point	28.5	
Speakers Level 8	Point	35.8	
Speakers Level 8	Point	33.6	
Speakers Level 8	Point	29.7	
Speakers Level 8	Point	35.8	
Speakers Level 8	Point	32.8	
Speakers Level 8	Point	30.5	
Speakers Level 8	Point	32.1	
Speakers Level 8	Point	39.0	
Speakers Level 8	Point	30.3	
Speakers Level 8	Point	29.8	
Speakers Level 8	Point	14.7	
Speakers Level 8	Point	14.6	
Speakers Level 8	Point	15.4	
Speakers Level 8	Point	22.7	
Speakers Level 8	Point	35.6	
Speakers Level 8	Point	19.2	
Speakers Level 8	Point	22.0	
Receiver R1 Fl 2.FL Leq,d 51.5 dB(A)			
Speakers Level 4	Point	9.3	
Speakers Level 4	Point	11.7	
Speakers Level 4	Point	27.2	
Speakers Level 4	Point	14.2	
Speakers Level 4	Point	30.9	
Speakers Level 4	Point	37.5	
Speakers Level 4	Point	47.4	
Speakers Level 4	Point	25.9	
Speakers Level 4	Point	14.3	
Speakers Level 4	Point	10.2	
Speakers Level 4	Point	37.2	
Speakers Level 4	Point	11.8	
Speakers Level 4	Point	9.2	
Speakers Level 5	Point	10.0	
Speakers Level 5	Point	11.6	
Speakers Level 5	Point	11.9	
Speakers Level 5	Point	13.4	
Speakers Level 5	Point	17.6	
Speakers Level 5	Point	18.9	

Source	Source type	Leq,d dB(A)	
Speakers Level 6	Point	9.9	
Speakers Level 6	Point	10.8	
Speakers Level 6	Point	22.2	
Speakers Level 6	Point	9.8	
Speakers Level 6	Point	10.3	
Speakers Level 6	Point	8.5	
Speakers Level 6	Point	9.9	
Speakers Level 6	Point	8.0	
Speakers Level 7	Point	14.8	
Speakers Level 7	Point	14.5	
Speakers Level 7	Point	27.1	
Speakers Level 7	Point	17.4	
Speakers Level 7	Point	26.2	
Speakers Level 7	Point	15.1	
Speakers Level 7	Point	15.5	
Speakers Level 7	Point	22.4	
Speakers Level 7	Point	22.6	
Speakers Level 7	Point	33.6	
Speakers Level 7	Point	10.8	
Speakers Level 7	Point	10.8	
Speakers Level 7	Point	18.9	
Speakers Level 7	Point	13.2	
Speakers Level 7	Point	11.3	
Speakers Level 8	Point	38.2	
Speakers Level 8	Point	29.6	
Speakers Level 8	Point	37.0	
Speakers Level 8	Point	34.1	
Speakers Level 8	Point	31.2	
Speakers Level 8	Point	37.8	
Speakers Level 8	Point	35.6	
Speakers Level 8	Point	33.3	
Speakers Level 8	Point	36.2	
Speakers Level 8	Point	44.3	
Speakers Level 8	Point	33.5	
Speakers Level 8	Point	30.8	
Speakers Level 8	Point	15.9	
Speakers Level 8	Point	15.4	
Speakers Level 8	Point	16.5	
Speakers Level 8	Point	24.5	
Speakers Level 8	Point	36.3	
Speakers Level 8	Point	21.1	

Source	Source type	Leq,d dB(A)	
Speakers Level 8	Point	26.4	
Receiver R2 Fl 1.FL Leq,d 53.6 dB(A)			
Speakers Level 4	Point	-7.3	
Speakers Level 4	Point	-7.3	
Speakers Level 4	Point	-2.2	
Speakers Level 4	Point	-7.1	
Speakers Level 4	Point	-7.0	
Speakers Level 4	Point	13.7	
Speakers Level 4	Point	15.7	
Speakers Level 4	Point	31.3	
Speakers Level 4	Point	31.4	
Speakers Level 4	Point	31.6	
Speakers Level 4	Point	26.5	
Speakers Level 4	Point	31.7	
Speakers Level 4	Point	15.6	
Speakers Level 5	Point	-7.2	
Speakers Level 5	Point	-7.2	
Speakers Level 5	Point	-7.3	
Speakers Level 5	Point	-7.1	
Speakers Level 5	Point	17.9	
Speakers Level 5	Point	20.0	
Speakers Level 6	Point	-7.1	
Speakers Level 6	Point	-7.0	
Speakers Level 6	Point	-3.1	
Speakers Level 6	Point	-7.1	
Speakers Level 6	Point	-7.2	
Speakers Level 6	Point	35.3	
Speakers Level 6	Point	35.8	
Speakers Level 6	Point	35.6	
Speakers Level 7	Point	-1.4	
Speakers Level 7	Point	13.8	
Speakers Level 7	Point	2.7	
Speakers Level 7	Point	-1.8	
Speakers Level 7	Point	4.0	
Speakers Level 7	Point	-1.4	
Speakers Level 7	Point	-1.7	
Speakers Level 7	Point	-1.8	
Speakers Level 7	Point	-1.2	
Speakers Level 7	Point	2.4	
Speakers Level 7	Point	38.1	
Speakers Level 7	Point	41.0	

Source	Source type	Leq,d dB(A)	
Speakers Level 7	Point	41.0	
Speakers Level 7	Point	41.5	
Speakers Level 7	Point	41.6	
Speakers Level 8	Point	16.2	
Speakers Level 8	Point	32.2	
Speakers Level 8	Point	29.2	
Speakers Level 8	Point	33.8	
Speakers Level 8	Point	32.2	
Speakers Level 8	Point	32.0	
Speakers Level 8	Point	32.6	
Speakers Level 8	Point	37.9	
Speakers Level 8	Point	35.6	
Speakers Level 8	Point	26.5	
Speakers Level 8	Point	22.7	
Speakers Level 8	Point	25.4	
Speakers Level 8	Point	46.4	
Speakers Level 8	Point	46.1	
Speakers Level 8	Point	46.7	
Speakers Level 8	Point	7.8	
Speakers Level 8	Point	16.8	
Speakers Level 8	Point	12.4	
Speakers Level 8	Point	25.0	
Receiver R3 Fl 1.FL Leq,d 42.6 dB(A)			
Speakers Level 4	Point	4.3	
Speakers Level 4	Point	-0.7	
Speakers Level 4	Point	11.2	
Speakers Level 4	Point	7.5	
Speakers Level 4	Point	0.7	
Speakers Level 4	Point	33.4	
Speakers Level 4	Point	19.9	
Speakers Level 4	Point	30.9	
Speakers Level 4	Point	27.7	
Speakers Level 4	Point	13.9	
Speakers Level 4	Point	34.8	
Speakers Level 4	Point	11.6	
Speakers Level 4	Point	8.9	
Speakers Level 5	Point	0.9	
Speakers Level 5	Point	1.0	
Speakers Level 5	Point	0.4	
Speakers Level 5	Point	0.5	
Speakers Level 5	Point	21.2	

Source	Source type	Leq,d dB(A)	
Speakers Level 5	Point	20.5	
Speakers Level 6	Point	2.5	
Speakers Level 6	Point	1.5	
Speakers Level 6	Point	17.3	
Speakers Level 6	Point	-0.4	
Speakers Level 6	Point	0.1	
Speakers Level 6	Point	6.9	
Speakers Level 6	Point	8.4	
Speakers Level 6	Point	8.8	
Speakers Level 7	Point	5.3	
Speakers Level 7	Point	13.0	
Speakers Level 7	Point	19.0	
Speakers Level 7	Point	5.6	
Speakers Level 7	Point	19.1	
Speakers Level 7	Point	4.8	
Speakers Level 7	Point	4.9	
Speakers Level 7	Point	4.6	
Speakers Level 7	Point	5.0	
Speakers Level 7	Point	5.5	
Speakers Level 7	Point	14.0	
Speakers Level 7	Point	14.3	
Speakers Level 7	Point	28.1	
Speakers Level 7	Point	22.1	
Speakers Level 7	Point	19.3	
Speakers Level 8	Point	28.0	
Speakers Level 8	Point	18.9	
Speakers Level 8	Point	30.1	
Speakers Level 8	Point	27.3	
Speakers Level 8	Point	18.2	
Speakers Level 8	Point	31.6	
Speakers Level 8	Point	28.7	
Speakers Level 8	Point	29.2	
Speakers Level 8	Point	34.1	
Speakers Level 8	Point	29.1	
Speakers Level 8	Point	16.1	
Speakers Level 8	Point	18.8	
Speakers Level 8	Point	18.5	
Speakers Level 8	Point	18.3	
Speakers Level 8	Point	20.9	
Speakers Level 8	Point	11.5	
Speakers Level 8	Point	25.1	

Source	Source type	Leq,d dB(A)	
Speakers Level 8	Point	10.8	
Speakers Level 8	Point	18.3	
Receiver R3 Fl 2.FL Leq,d 54.5 dB(A)			
Speakers Level 4	Point	4.2	
Speakers Level 4	Point	-0.8	
Speakers Level 4	Point	10.9	
Speakers Level 4	Point	6.7	
Speakers Level 4	Point	0.9	
Speakers Level 4	Point	23.9	
Speakers Level 4	Point	21.8	
Speakers Level 4	Point	30.9	
Speakers Level 4	Point	27.5	
Speakers Level 4	Point	18.6	
Speakers Level 4	Point	29.8	
Speakers Level 4	Point	14.0	
Speakers Level 4	Point	7.6	
Speakers Level 5	Point	0.9	
Speakers Level 5	Point	1.2	
Speakers Level 5	Point	0.6	
Speakers Level 5	Point	0.7	
Speakers Level 5	Point	20.9	
Speakers Level 5	Point	20.1	
Speakers Level 6	Point	2.6	
Speakers Level 6	Point	1.8	
Speakers Level 6	Point	17.1	
Speakers Level 6	Point	0.1	
Speakers Level 6	Point	0.7	
Speakers Level 6	Point	7.5	
Speakers Level 6	Point	8.4	
Speakers Level 6	Point	9.1	
Speakers Level 7	Point	6.3	
Speakers Level 7	Point	13.6	
Speakers Level 7	Point	19.7	
Speakers Level 7	Point	6.8	
Speakers Level 7	Point	19.3	
Speakers Level 7	Point	6.3	
Speakers Level 7	Point	6.5	
Speakers Level 7	Point	6.1	
Speakers Level 7	Point	7.1	
Speakers Level 7	Point	9.9	
Speakers Level 7	Point	15.2	

Source	Source type	Leq,d dB(A)	
Speakers Level 7	Point	15.6	
Speakers Level 7	Point	33.6	
Speakers Level 7	Point	29.8	
Speakers Level 7	Point	28.3	
Speakers Level 8	Point	36.7	
Speakers Level 8	Point	28.2	
Speakers Level 8	Point	38.8	
Speakers Level 8	Point	34.8	
Speakers Level 8	Point	29.3	
Speakers Level 8	Point	42.2	
Speakers Level 8	Point	38.7	
Speakers Level 8	Point	46.6	
Speakers Level 8	Point	51.2	
Speakers Level 8	Point	46.9	
Speakers Level 8	Point	32.3	
Speakers Level 8	Point	30.2	
Speakers Level 8	Point	22.0	
Speakers Level 8	Point	20.6	
Speakers Level 8	Point	30.8	
Speakers Level 8	Point	14.1	
Speakers Level 8	Point	32.1	
Speakers Level 8	Point	22.1	
Speakers Level 8	Point	27.2	
Receiver R4 Fl 1.FL Leq,d 51.9 dB(A)			
Speakers Level 4	Point	-5.0	
Speakers Level 4	Point	-4.2	
Speakers Level 4	Point	0.9	
Speakers Level 4	Point	-4.5	
Speakers Level 4	Point	-4.4	
Speakers Level 4	Point	21.6	
Speakers Level 4	Point	22.3	
Speakers Level 4	Point	37.1	
Speakers Level 4	Point	30.1	
Speakers Level 4	Point	29.3	
Speakers Level 4	Point	38.0	
Speakers Level 4	Point	30.5	
Speakers Level 4	Point	14.8	
Speakers Level 5	Point	-2.7	
Speakers Level 5	Point	-4.0	
Speakers Level 5	Point	-4.6	
Speakers Level 5	Point	-4.6	

Source	Source type	Leq,d dB(A)	
Speakers Level 5	Point	30.2	
Speakers Level 5	Point	28.3	
Speakers Level 6	Point	-2.5	
Speakers Level 6	Point	-4.1	
Speakers Level 6	Point	-2.0	
Speakers Level 6	Point	-4.5	
Speakers Level 6	Point	-4.6	
Speakers Level 6	Point	36.3	
Speakers Level 6	Point	25.4	
Speakers Level 6	Point	35.8	
Speakers Level 7	Point	2.7	
Speakers Level 7	Point	18.8	
Speakers Level 7	Point	9.7	
Speakers Level 7	Point	2.1	
Speakers Level 7	Point	7.2	
Speakers Level 7	Point	0.9	
Speakers Level 7	Point	0.6	
Speakers Level 7	Point	1.3	
Speakers Level 7	Point	2.8	
Speakers Level 7	Point	9.3	
Speakers Level 7	Point	31.4	
Speakers Level 7	Point	37.0	
Speakers Level 7	Point	41.4	
Speakers Level 7	Point	44.2	
Speakers Level 7	Point	40.2	
Speakers Level 8	Point	24.0	
Speakers Level 8	Point	26.8	
Speakers Level 8	Point	25.5	
Speakers Level 8	Point	35.5	
Speakers Level 8	Point	32.9	
Speakers Level 8	Point	37.8	
Speakers Level 8	Point	36.2	
Speakers Level 8	Point	38.6	
Speakers Level 8	Point	39.9	
Speakers Level 8	Point	31.9	
Speakers Level 8	Point	22.9	
Speakers Level 8	Point	23.7	
Speakers Level 8	Point	41.6	
Speakers Level 8	Point	41.3	
Speakers Level 8	Point	39.6	
Speakers Level 8	Point	9.8	

Source	Source type	Leq,d dB(A)	
Speakers Level 8	Point	19.9	
Speakers Level 8	Point	14.6	
Speakers Level 8	Point	23.8	
Receiver R5 Fl 1.FL Leq,d 52.8 dB(A)			
Speakers Level 4	Point	26.1	
Speakers Level 4	Point	46.4	
Speakers Level 4	Point	33.7	
Speakers Level 4	Point	40.1	
Speakers Level 4	Point	40.2	
Speakers Level 4	Point	7.3	
Speakers Level 4	Point	16.2	
Speakers Level 4	Point	-0.1	
Speakers Level 4	Point	1.4	
Speakers Level 4	Point	1.0	
Speakers Level 4	Point	5.2	
Speakers Level 4	Point	14.3	
Speakers Level 4	Point	23.8	
Speakers Level 5	Point	33.2	
Speakers Level 5	Point	37.5	
Speakers Level 5	Point	36.8	
Speakers Level 5	Point	39.6	
Speakers Level 5	Point	7.4	
Speakers Level 5	Point	10.3	
Speakers Level 6	Point	34.1	
Speakers Level 6	Point	32.1	
Speakers Level 6	Point	22.7	
Speakers Level 6	Point	40.1	
Speakers Level 6	Point	35.5	
Speakers Level 6	Point	4.1	
Speakers Level 6	Point	9.5	
Speakers Level 6	Point	8.7	
Speakers Level 7	Point	37.9	
Speakers Level 7	Point	34.2	
Speakers Level 7	Point	28.1	
Speakers Level 7	Point	32.6	
Speakers Level 7	Point	29.3	
Speakers Level 7	Point	37.7	
Speakers Level 7	Point	37.4	
Speakers Level 7	Point	33.6	
Speakers Level 7	Point	32.4	
Speakers Level 7	Point	30.3	

Source	Source type	Leq,d dB(A)	
Speakers Level 7	Point	13.1	
Speakers Level 7	Point	8.0	
Speakers Level 7	Point	4.9	
Speakers Level 7	Point	4.5	
Speakers Level 7	Point	6.9	
Speakers Level 8	Point	34.2	
Speakers Level 8	Point	36.7	
Speakers Level 8	Point	25.5	
Speakers Level 8	Point	30.8	
Speakers Level 8	Point	38.7	
Speakers Level 8	Point	25.8	
Speakers Level 8	Point	37.1	
Speakers Level 8	Point	22.1	
Speakers Level 8	Point	21.4	
Speakers Level 8	Point	25.2	
Speakers Level 8	Point	38.2	
Speakers Level 8	Point	37.6	
Speakers Level 8	Point	13.5	
Speakers Level 8	Point	13.2	
Speakers Level 8	Point	13.6	
Speakers Level 8	Point	34.7	
Speakers Level 8	Point	36.7	
Speakers Level 8	Point	35.9	
Speakers Level 8	Point	40.0	

Beatrice Project EIR
Source Levels in dB(A) - Loading

Name	Source type	Lw dB(A)	
Loading 1	Point	101.9	
Loading 2	Point	101.9	

Source	Source type	Leq,e dB(A)	
Receiver R1 Fl 1.FL Leq,d 29.7 dB(A)			
Loading 1	Point	27.0	
Loading 2	Point	26.5	
Receiver R1 Fl 2.FL Leq,d 27.7 dB(A)			
Loading 1	Point	24.8	
Loading 2	Point	24.6	
Receiver R2 Fl 1.FL Leq,d 15.5 dB(A)			
Loading 1	Point	12.6	
Loading 2	Point	12.4	
Receiver R3 Fl 1.FL Leq,d 25.9 dB(A)			
Loading 1	Point	22.9	
Loading 2	Point	23.0	
Receiver R3 Fl 2.FL Leq,d 24.5 dB(A)			
Loading 1	Point	21.4	
Loading 2	Point	21.5	
Receiver R4 Fl 1.FL Leq,d 23.6 dB(A)			
Loading 1	Point	10.1	
Loading 2	Point	23.4	
Receiver R5 Fl 1.FL Leq,d 26.8 dB(A)			
Loading 1	Point	26.5	
Loading 2	Point	15.2	

Beatrice Project EIR
Contribution level - Parking

Source	Source type	Leq,d dB(A)	
Receiver R1 Fl 1.FL Leq,d 47.9 dB(A)			
Parking Level P1	PLot	46.6	
Parking Level P2	PLot	40.4	
Parking Level P3	PLot	36.8	
Receiver R1 Fl 2.FL Leq,d 43.1 dB(A)			
Parking Level P1	PLot	35.4	
Parking Level P2	PLot	38.2	
Parking Level P3	PLot	40.1	
Receiver R2 Fl 1.FL Leq,d 26.6 dB(A)			
Parking Level P1	PLot	10.4	
Parking Level P2	PLot	19.2	
Parking Level P3	PLot	25.6	
Receiver R3 Fl 1.FL Leq,d 27.8 dB(A)			
Parking Level P1	PLot	20.7	
Parking Level P2	PLot	20.9	
Parking Level P3	PLot	25.6	
Receiver R3 Fl 2.FL Leq,d 27.1 dB(A)			
Parking Level P1	PLot	20.3	
Parking Level P2	PLot	21.4	
Parking Level P3	PLot	24.3	
Receiver R4 Fl 1.FL Leq,d 29.6 dB(A)			
Parking Level P1	PLot	16.7	
Parking Level P2	PLot	22.8	
Parking Level P3	PLot	28.3	
Receiver R5 Fl 1.FL Leq,d 47.1 dB(A)			
Parking Level P1	PLot	43.7	
Parking Level P2	PLot	42.2	
Parking Level P3	PLot	40.4	

Beatrice Project EIR
Source Levels in dB(A) - Parking

Name	Source type	Lw dB(A)	
Parking Level P1	PLot	94.2	
Parking Level P2	PLot	94.4	
Parking Level P3	PLot	95.5	

AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Beatrice

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

EXISTING CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume AM Pk	PM Pk	ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Jandy Place											
- North of Beatrice St.	40	10	30	25	184	105	1,445	10%	0	0	59.7
Westlawn Avenue											
- Bet. Beatrice St. and Jefferson Blvd.	40	10	30	25	373	452	4,125	10%	0	0	64.2
- Bet. Jefferson Blvd. and Millenium Dr.	50	10	35	25	120	170	1,450	10%	0	0	59.0
Grosvenor Boulevard											
- Bet. Hammack St and Beatrice St.	40	10	30	25	548	414	4,810	10%	0	0	64.9
- Bet. Beatrice Ave. and Jefferson Blvd.	40	10	30	25	837	522	6,795	10%	0	0	66.4
Beatrice Street											
- West of Jandy Pl.	40	10	30	25	325	282	3,035	10%	0	0	62.9
- Bet. Jandy Pl. and Westlawn Ave.	40	10	30	25	513	393	4,530	10%	0	0	64.6
- Bet. Westlawn Ave. and Grosvenor Blvd.	40	10	30	25	288	109	1,985	10%	0	0	61.0
Jefferson Boulevard											
- Bet. Village Dr. and Westlawn Ave.	90	10	55	45	3,225	3,379	33,020	10%	0	0	72.5
- Bet. Westlawn Ave. and Grosvenor Blvd.	90	10	55	45	3,177	3,529	33,530	10%	0	0	72.6
- Bet. Grosvenor Blvd. and Centinela Blvd.	90	10	55	45	3,676	3,756	37,160	10%	0	0	73.1

* Estimated based on Google Earth map.

** Calculated using FHWA's TNM Version 2.5 Computer Noise Model.

Date Printed: 5/8/2023

AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Beatrice

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

EXISTING + PROJECT CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume AM Pk	PM Pk	ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Jandy Place											
- North of Beatrice St.	40	10	30	25	302	221	2,615	10%	0	0	62.2
Westlawn Avenue											
- Bet. Beatrice St. and Jefferson Blvd.	40	10	30	25	537	614	5,755	10%	0	0	65.7
- Bet. Jefferson Blvd. and Millenium Dr.	50	10	35	25	138	188	1,630	10%	0	0	59.5
Grosvenor Boulevard											
- Bet. Hammack St and Beatrice St.	40	10	30	25	548	414	4,810	10%	0	0	64.9
- Bet. Beatrice Ave. and Jefferson Blvd.	40	10	30	25	907	592	7,495	10%	0	0	66.8
Beatrice Street											
- West of Jandy Pl.	40	10	30	25	325	282	3,035	10%	0	0	62.9
- Bet. Jandy Pl. and Westlawn Ave.	40	10	30	25	689	567	6,280	10%	0	0	66.0
- Bet. Westlawn Ave. and Grosvenor Blvd.	40	10	30	25	358	179	2,685	10%	0	0	62.3
Jefferson Boulevard											
- Bet. Village Dr. and Westlawn Ave.	90	10	55	45	3,289	3,442	33,655	10%	0	0	72.6
- Bet. Westlawn Ave. and Grosvenor Blvd.	90	10	55	45	3,259	3,610	34,345	10%	0	0	72.7
- Bet. Grosvenor Blvd. and Centinela Blvd.	90	10	55	45	3,828	3,907	38,675	10%	0	0	73.2

* Estimated based on Google Earth map.

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AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Beatrice

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

FUTURE NO PROJECT CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume AM Pk	PM Pk	ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Jandy Place											
- North of Beatrice St.	40	10	30	25	289	294	2,915	10%	0	0	62.7
Westlawn Avenue											
- Bet. Beatrice St. and Jefferson Blvd.	40	10	30	25	478	632	5,550	10%	0	0	65.5
- Bet. Jefferson Blvd. and Millenium Dr.	50	10	35	25	322	459	3,905	10%	0	0	63.3
Grosvenor Boulevard											
- Bet. Hammack St and Beatrice St.	40	10	30	25	576	435	5,055	10%	0	0	65.1
- Bet. Beatrice Ave. and Jefferson Blvd.	40	10	30	25	908	604	7,560	10%	0	0	66.8
Beatrice Street											
- West of Jandy Pl.	40	10	30	25	342	296	3,190	10%	0	0	63.1
- Bet. Jandy Pl. and Westlawn Ave.	40	10	30	25	635	597	6,160	10%	0	0	66.0
- Bet. Westlawn Ave. and Grosvenor Blvd.	40	10	30	25	332	169	2,505	10%	0	0	62.0
Jefferson Boulevard											
- Bet. Village Dr. and Westlawn Ave.	90	10	55	45	3,836	4,188	40,120	10%	0	0	73.4
- Bet. Westlawn Ave. and Grosvenor Blvd.	90	10	55	45	3,817	4,399	41,080	10%	0	0	73.5
- Bet. Grosvenor Blvd. and Centinela Blvd.	90	10	55	45	4,371	4,693	45,320	10%	0	0	73.9

* Estimated based on Google Earth map.

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AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Beatrice

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

FUTURE + PROJECT CONDITIONS

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume AM Pk	PM Pk	ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Jandy Place											
- North of Beatrice St.	40	10	30	25	407	410	4,085	10%	0	0	64.2
Westlawn Avenue											
- Bet. Beatrice St. and Jefferson Blvd.	40	10	30	25	642	794	7,180	10%	0	0	66.6
- Bet. Jefferson Blvd. and Millenium Dr.	50	10	35	25	340	477	4,085	10%	0	0	63.5
Grosvenor Boulevard											
- Bet. Hammack St and Beatrice St.	40	10	30	25	576	435	5,055	10%	0	0	65.1
- Bet. Beatrice Ave. and Jefferson Blvd.	40	10	30	25	978	674	8,260	10%	0	0	67.2
Beatrice Street											
- West of Jandy Pl.	40	10	30	25	342	296	3,190	10%	0	0	63.1
- Bet. Jandy Pl. and Westlawn Ave.	40	10	30	25	811	771	7,910	10%	0	0	67.0
- Bet. Westlawn Ave. and Grosvenor Blvd.	40	10	30	25	402	239	3,205	10%	0	0	63.1
Jefferson Boulevard											
- Bet. Village Dr. and Westlawn Ave.	90	10	55	45	3,900	4,251	40,755	10%	0	0	73.5
- Bet. Westlawn Ave. and Grosvenor Blvd.	90	10	55	45	3,899	4,480	41,895	10%	0	0	73.6
- Bet. Grosvenor Blvd. and Centinela Blvd.	90	10	55	45	4,523	4,844	46,835	10%	0	0	74.1

* Estimated based on Google Earth map.

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