APPENDIX G:
NOISE MONITORING DATA

Short-Term Noise Measurements

Short-term Site 1

Site ST-1 is located on the northwestern edge of Mulford Point, near the location of the proposed hotel. The existing land use at this short-term location is recreational. This location is also the closest of all short and long-term location sites to the arriving flight path at Oakland International Airport. This site was located on the west side of a parking lot adjacent to Mulford Point Drive, approximately 1500 feet from the main traffic on Monarch Bay Drive.

The noise environment of Site ST-1 is characterized primarily by the sound of close traffic in the parking lot and along Mulford Point Drive, cyclists, pedestrians, idling airplanes at Oakland International Airport, and birds. Intermittent noise from airplanes landing at Oakland International Airport also contributed heavily to the sound profile. Measurements began at 12:18 p.m. on Wednesday, July 16, 2014. Winds were blowing from the west at 1 to 2.5 miles per hour, and the air temperature was approximately 76.5°F. The 15-minute equivalent noise level at this location (L_{eq}) was 57.4 dBA.

Short-term Site 2

Site ST-2 is located in the southwest area of the site, south of Pescador Point Drive. The site is used as a parking lot and boat launch, is adjacent to a scrap yard, and is in close proximity to the golf course and the Marina Inn. The microphone and sound meter were positioned approximately 150 feet from the centerline of Pescador Point Drive and approximately 270 feet from the centerline of Monarch Bay Drive, 150 feet north of the proposed development. This measurement was not taken directly on the proposed development site because the area is currently fenced-off private property.

The noise environment of Site ST-2 is primarily characterized by the sound of passing traffic along Monarch Bay Drive and Pescador Point Drive, and golf course and boat launch activity. The noise environment was also punctuated by planes landing at Oakland International Airport. Measurements began at 11:50 a.m. on Wednesday, July 16, 2014. Winds were blowing from the northwest at 1 to 2.5 miles per hour, and the air temperature was approximately 76.5°F. The 15-minute equivalent noise level at this location (L_{eq}) was 50.7 dBA.

Short-term Site 3

Site ST-3 is representative of noise that could potentially be received by residents living in the South Golf Course Residential Development on Fairway Drive. The microphone and sound meter were positioned approximately 110 feet southwest of the intersection of Monarch Bay Drive and Fairway Drive. Measurements were taken at this location, just outside of the Project site boundary do avoid noise from heavy foot traffic in the immediate vicinity of the microphone and sound meter. The location southwest of the intended site was chosen because it was approximately equidistant from busy streets, was situated behind light trees and a small hill that mimicked the noise barrier caused by the tree line between the golf course and Fairway Drive, and because of a higher level of ambient noise similar to what could be expected by residents living within the golf course.

The noise environment of Site ST-3 is primarily characterized by the sound of traffic along Monarch Bay Drive, vehicles pulling into the parking lot, pedestrian activity, children in the nearby playground, and the golf course driving range. Intermittent noise from airplanes landing at Oakland International Airport was

also audible. Measurements began at 1:00 p.m. on Wednesday, July 16, 2014. Winds were blowing from the west at 3 to 6 miles per hour, and the air temperature was approximately 78.0°F. The 15-minute equivalent noise level (L_{eq}) at this location was 54.2 dBA.

Short-term Site 4

Site ST-4 is representative of noise as received by the residential area immediately to the north of the Project site. This location was on Marina Boulevard approximately 25 feet from centerline, as well as 170 feet from Neptune Drive. The noise environment of Site ST-4 is primarily characterized by the sound of traffic along Marina Boulevard; the noise environment was also punctuated by airplanes landing at Oakland International Airport. Measurements began at 10:20 a.m. on Wednesday, July 16, 2014. Winds were blowing from the west at 3.5 to 7 miles per hour, and the air temperature was approximately 69.0°F. The 15-minute equivalent noise level (L_{eq}) at this location was 63.2 dBA.

Short-term Site 5

Site ST-5 is representative of noise as received by residential sites east of the Project site. Existing land uses in the vicinity of the location were single-family residential and commercial recreation. This location was on the northwest corner of Fairway Drive and Aurora Drive, approximately 30 feet from centerline of Aurora Drive, and 100 feet from the centerline of Fairway Drive. This location is on the eastern edge of the Project site, adjacent to the Mulford Marina Branch Library, which will be renovated as part of the proposed Project.

Site ST-5 is primarily characterized by the sound of traffic along Fairway Drive and, to a lesser extent, Aurora Drive; temporary construction on Aurora Drive; light landscaping equipment from residences and the golf course maintenance building; and patrons entering and leaving the library. Measurements began at 11:15 a.m. on Wednesday, July 16, 2014. Winds were blowing from the southwest at 1 to 2 miles per hour, and the air temperature was approximately 71.0°F. The 15-minute equivalent noise level (L_{eq}) at this location was 55.0 dBA.

Short-Term Site 6

Site ST-6 is representative of noise as received by residential uses east of the Project site. Site ST-6 was located front of 2620 West Avenue 134th, on the south side of the street, approximately 20 feet from centerline of West Avenue 134th, and approximately 60 feet from the borderline of the golf course.

The noise environment of Site ST-6 was characterized primarily by the sound of light winds, distant aircraft and traffic, light residential traffic on the street, nearby dogs, residents inside the houses, and occasional noise from people on the golf course. Measurements began at 10:50 a.m. on Wednesday, July 16, 2014. Winds were blowing from the southwest at 1 to 2 miles per hour, and the air temperature was approximately 69.7°F. The 15-minute equivalent noise level (L_{eq}) at this location was 47.5 dBA.

Long-Term Noise Measurement

Long-Term Site 1

Site LT-1 represents the noise environment in the vicinity of the planned development sites in the northern portion of the Project, and captured noise generated by traffic and other activity along Monarch Bay Drive, activity in the El Torito Restaurant parking lot, pedestrian and bicycle activity, golf course

activity, and flights landing at Oakland International Airport. Noise level data over a 24 hour period were acquired, beginning at 9:43 a.m. on Wednesday, July 16, 2014. At the start of the 24-hour measurement period, winds were from the southwest at 3 to 10 miles per hour, and the air temperature was approximately 66.3°F. The 24-hour Day Night Noise Level (L_{dn}) at this location was 61.9 dBA. The highest and lowest hourly Leq levels observed at this location were, respectively, 67.2 dBA during the period of 4:00 p.m. to 5:00 p.m., and 49.8 dBA during the 12:00 a.m. to 1:00 a.m. hour.

Site Name: LT-1

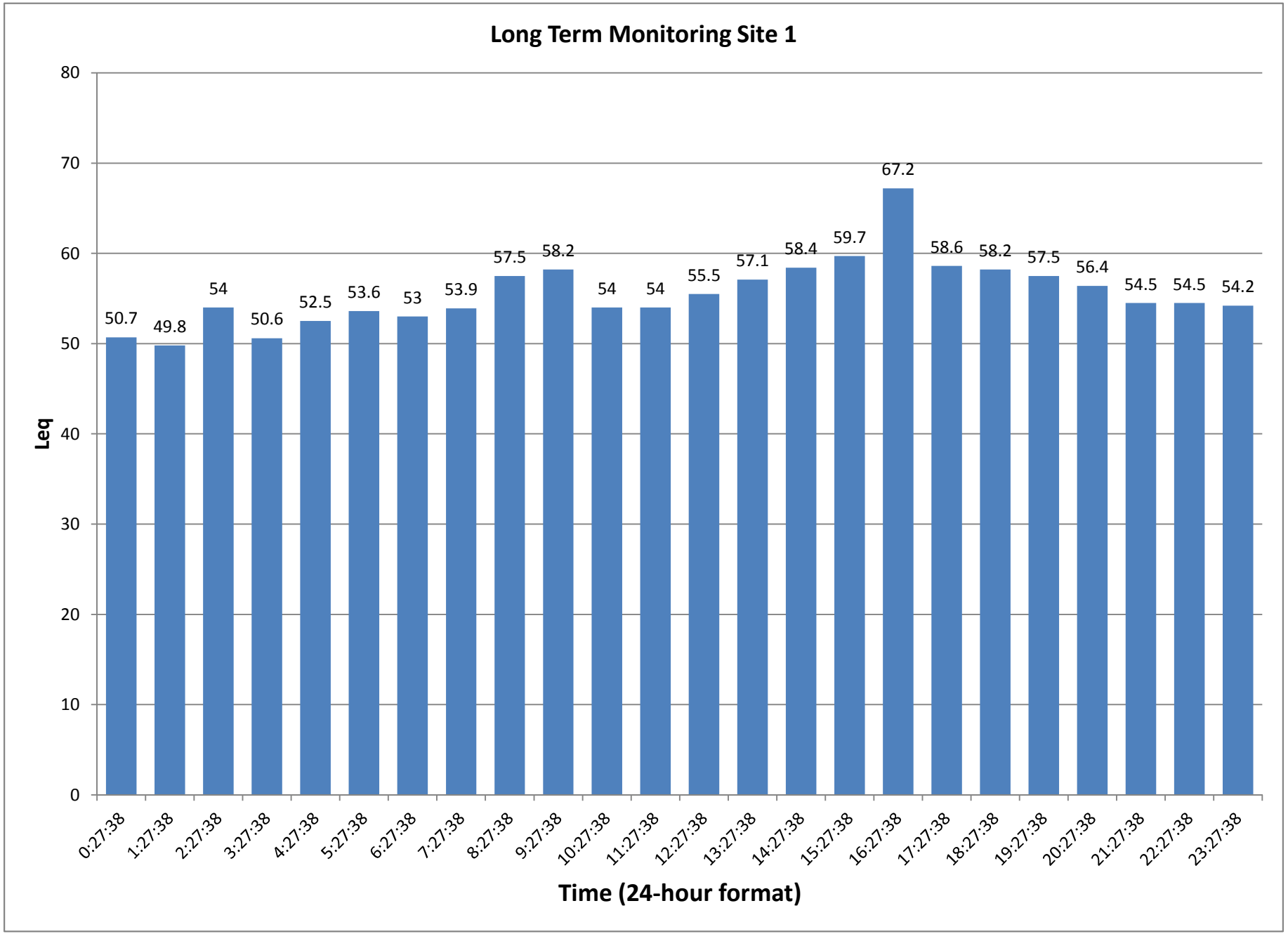
Number of one-hour measurements: 24

Unweighted Leq: 57.7 **CNEL:** 62.2 **LDN:** 61.9

Hour	Time	Leq	CNEL Penal	Adj. Leq	LDN Penalt	Adj. Leq
1	0:27:38	50.7	10	60.7	10	60.7
2	1:27:38	49.8	10	59.8	10	59.8
3	2:27:38	54	10	64.0	10	64.0
4	3:27:38	50.6	10	60.6	10	60.6
5	4:27:38	52.5	10	62.5	10	62.5
6	5:27:38	53.6	10	63.6	10	63.6
7	6:27:38	53	10	63.0	10	63.0
8	7:27:38	53.9	10	63.9	10	63.9
9	8:27:38	57.5	10	67.5	10	67.5
10	9:27:38	58.2	0	58.2	0	58.2
11	10:27:38	54	0	54.0	0	54.0
12	11:27:38	54	0	54.0	0	54.0
13	12:27:38	55.5	0	55.5	0	55.5
14	13:27:38	57.1	0	57.1	0	57.1
15	14:27:38	58.4	0	58.4	0	58.4
16	15:27:38	59.7	0	59.7	0	59.7
17	16:27:38	67.2	0	67.2	0	67.2
18	17:27:38	58.6	0	58.6	0	58.6
19	18:27:38	58.2	0	58.2	0	58.2
20	19:27:38	57.5	5	62.5	0	57.5
21	20:27:38	56.4	5	61.4	0	56.4
22	21:27:38	54.5	5	59.5	0	54.5
23	22:27:38	54.5	10	64.5	10	64.5
24	23:27:38	54.2	10	64.2	10	64.2

Site LT-1 represents the noise environment in the vicinity of the planned development sites in the northern portion of the Project, and captured noise generated by traffic and other activity along Monarch Bay Drive, activity in the El Torito Restaurant parking lot, pedestrian and bicycle activity, golf course activity, and flights landing at Oakland International Airport. Noise level data over a 24 hour period were acquired, beginning at 9:43 a.m. on Wednesday, July 16, 2014. At the start of the 24-hour measurement period, winds were from the southwest at 3–10 mph, and the air temperature was approximately 66.3°F.

LT-1 Histrogram



Site:	ST-1	**Start date:**	7/16/2014
Number of one-minute measurements:	15	**Start time:**	12:18 PM
Average Leq:	57.4		
Estimated ST-4 Ldn:	57.4		

Minute	**L**eq
1	59.6
2	61.3
3	48.2
4	57.7
5	55.6
6	54
7	57.8
8	51
9	55.3
10	50.6
11	54.8
12	55.5
13	52.8
14	62.3
15	60.1

Site ST-1 is located on the northwestern edge of Mulford Point, near the location of the proposed hotel. The existing land use at this short-term location is recreational. This location is also the closest of all short-term and long-term location sites to the arriving flight path at Oakland International Airport. This site was located on the west side of a parking lot adjacent to Mulford Point Drive, approximately 1500 feet from the main traffic on Monarch Bay Drive.
The noise environment of Site ST-1 is characterized primarily by the sound of close traffic in the parking lot and along Mulford Point Drive; cyclists; pedestrians; idling airplanes at Oakland International Airport; and birds. Intermittent noise from airplanes landing at Oakland International Airport also contributed heavily to the sound profile.

Site:	ST-2	**Start date:**	7/16/2014
Number of one-minute measurements:	15	**Start time:**	11:50 AM
Average Leq:	50.7		
Estimated ST-4 Ldn:	50.7		

Minute	**L**eq
1	54
2	46.4
3	48.2
4	55.8
5	52
6	50
7	49.3
8	47.1
9	49.9
10	48.3
11	48.3
12	51.9
13	45.3
14	50.9
15	48.8

Site ST-2 is located in the southwest area of the site, south of Pescador Point Drive. The site is used as a parking lot and boat launch, is adjacent to scrap yard, and is in close proximity to the golf course and the Marina Inn. The microphone and sound meter were positioned approximately 150 feet from the centerline of Pescador Point Drive and approximately 270 feet from the centerline of Monarch Bay Drive, 150 feet north of the proposed development.

The noise environment of Site ST-2 is primarily characterized by the sound of passing traffic along Monarch Bay Drive and Pescador Point Drive, and golf course and boat launch activity. The noise environment was also punctuated by planes landing at Oakland International Airport. The 15-minute equivalent noise level at this location (L_{eq}) was 50.7 dBA .

Site:	ST-3	**Start date:**	7/16/2014
Number of one-minute measurements:	15	**Start time:**	1:00 PM
Average Leq:	54.2		
Estimated ST-4 Ldn:	54.2		

Minute	**L**eq
1	58.2
2	48.7
3	53.1
4	48.2
5	51.1
6	52.4
7	51
8	52.2
9	61.1
10	54.3
11	50.1
12	52
13	50.2
14	49.4
15	54.8

Site ST-3 is representative of noise that could potentially be received by residents living in the South Golf Course Residential Development on Fairway Drive. The microphone and sound meter were positioned approximately 110 feet southwest of the intersection of Monarch Bay Drive and Fairway Drive. Measurements were taken at this location, just outside of the Project site boundary do avoid noise from heavy foot traffic in the immediate vicinity of the microphone and sound meter. The location southwest of the intended site was chosen because it was approximately equidistant from busy streets, was situated behind light trees and a small hill that mimicked the noise barrier caused by the tree line between the golf course and Fairway Drive, and because of a higher level of ambient noise similar to what could be expected by residents living within the golf course.
The noise environment of Site ST-3 is primarily characterized by the sound of traffic along Monarch Bay Drive, vehicles pulling into the parking lot, pedestrian activity, children in the nearby playground, and the golf course driving range. Intermittent noise from airplanes landing at Oakland International Airport was also audible.

Site:	ST-4	**Start date:**	7/16/2014
Number of one-minute measurements:	15	**Start time:**	10:20 AM
Average Leq:	63.2		
Estimated ST-4 Ldn:	63.2		

Minute	**L**eq
1	63.3
2	63.4
3	61
4	56
5	61.6
6	62
7	67.3
8	64
9	65.1
10	65.6
11	57.3
12	60.6
13	64.5
14	60.5
15	62.9

Site ST-4 is representative of noise as received by the residential area immediately to the north of the Project site. This location was on Marina Boulevard approximately 25 feet from centerline, as well as 170 feet from Neptune Drive. The noise environment of Site ST-4 is primarily characterized by the sound of traffic along Marina Boulevard; the noise environment was also punctuated by airplanes landing at Oakland International Airport.

Site:	ST-5	**Start date:**	7/16/2014
Number of one-minute measurements:	15	**Start time:**	11:15 AM
Average Leq:	55.0		
Estimated ST-4 Ldn:	55.0		

Minute	**L**eq
1	58.5
2	57.9
3	49
4	48.9
5	48.2
6	48.5
7	52.9
8	45.5
9	53.5
10	51.9
11	51.5
12	54
13	52.5
14	60
15	60

Site ST-5 is representative of noise as received by residential sites east of the Project site. Existing land uses in the vicinity of the location were single-family residential and commercial recreation. This location was on the northwest corner of Fairway Drive and Aurora Drive, approximately 30 feet from centerline of Aurora Drive, and 100 feet from the centerline of Fairway Drive. This location is on the eastern edge of the Project site, adjacent to the Mulford Marina Branch Library, which will be renovated as part of the proposed Project.
Site ST-5 is primarily characterized by the sound of traffic along Fairway Drive and, to a lesser extent, Aurora Drive; temporary construction on Aurora Drive; light landscaping equipment from residences and the golf course maintenance building; and patrons entering and leaving the library.

Site:	ST-6	**Start date:**	7/16/2014
Number of one-minute measurements:	15	**Start time:**	10:50 AM
Average Leq:	47.5		
Estimated ST-4 Ldn:	47.5		

Minute	**L**eq
1	43.2
2	45.5
3	41
4	42.7
5	41.1
6	42.5
7	39.2
8	40.5
9	41.2
10	41
11	39.6
12	39.3
13	56.6
14	50.1
15	50.1

Site ST-6 is representative of noise as received by residential uses east of the Project site. Site ST-6 was located front of 2620 West Avenue 134th, on the south side of the street, approximately 20 feet from centerline of West Avenue 134th, and approximately 60 feet from the borderline of the golf course.
The noise environment of Site ST-6 was characterized primarily by the sound of light winds, distant aircraft and traffic, light residential traffic on the street, nearby dogs, residents inside the houses, and occasional noise from people on the golf course.