Appendix J. Noise Technical Memorandum

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Harris & Associates

MEMORANDUM

To: Jordan Moore, Senior Planner, City of San Diego
From: Sharon Toland, Noise Specialist, Harris & Associates
RE: Revised De Anza Cove Amendment to the Mission Bay Park Master Plan – Noise Impacts
Date: March 6, 2023
CC: Kelsey Hawkins, Project Manager, Harris & Associates
Att: Figures; 1, 2019 Noise Technical Report

A Noise Technical Report for the De Anza Cove Amendment to the Mission Bay Park Master Plan was prepared by Dudek in April 2019. Since the preparation of the 2019 Noise Technical Report, the project has been revised to accommodate additional marshland habitat (De Anza Natural Amendment to the Mission Bay Park Master Plan). The purpose of this memorandum is to compare the components of the Updated Project (Proposed Project) to the Previous 2019 Project (2018 Proposal) to identify previous analysis that applies to the Proposed Project components and provide additional noise analysis for the Proposed Project to reflect revised components and environmental setting. The 2019 Noise Technical Report for the 2018 Proposal is included as Attachment 1 to this memorandum.

Environmental Setting

The Proposed Project area is in the northeastern corner of Mission Bay Park in the City of San Diego (City) (Figure 1, Regional Location). The Proposed Project area is approximately 505.2 acres, including both land and water areas. It includes the Kendall-Frost Marsh Reserve/Northern Wildlife Preserve (KFMR/NWP), Campland on the Bay (Campland), Pacific Beach Tennis Club, athletic fields, Mission Bay Golf Course and Practice Center, and De Anza Cove area, including a vacated mobile home park and supporting infrastructure, Mission Bay RV Resort, public park, public beach, parking, and water areas (Figure 2, Project Location). The Proposed Project area falls within the boundaries of Mission Bay Park, a regional park that serves San Diego residents and visitors.

Description of the Proposed Project

The Proposed Project is an amendment to the Mission Bay Park Master Plan (MBPMP) to update existing language in the MBPMP and add new language and recommendations pertaining to the project area to serve local and regional recreation needs while preserving and enhancing the natural resources of the De Anza Cove area. The Proposed Project expands the Proposed Project area's natural habitat and improves water quality through the creation of additional wetlands while implementing nature-based solutions to protect the City against the risk of climate change, in line with the City's Climate Resilient SD Plan. The Proposed Project would enhance the existing regional parkland by providing a variety of uses, including low-cost visitor guest accommodations (recreational vehicles and other low-cost camping facilities), active and passive recreational opportunities to enhance public use of the area, and improvements to access to recreational uses. Finally, the Proposed Project would recognize the history and ancestral homelands of the Iipay-Tipay Kumeyaay people, providing opportunities to partner and collaborate on the planning and restoration of the area. The Proposed Project would include a combination of habitat restoration, active recreation, low-cost visitor guest accommodations, and open beach and regional parkland and would modify the open water portions of De Anza Cove (Figure 3, Site Plan). The proposed land use designations for the Proposed Project area are summarized in Table 1, Proposed Land Use Acreages.

The Proposed Project would include wetlands enhancement and restoration within the existing KFMR/NWP, the area currently occupied by Campland, the eastern side of Rose Creek, and the areas in De Anza Cove currently occupied by the vacated mobile home park and open water (Figure 3). The Proposed Project would provide a total of approximately 227.4 acres of wetlands, consisting of approximately 30.7 acres in the area currently occupied by Campland, approximately 86.8 acres of wetlands at the existing KFMR/NWP, and approximately 109.8 acres of other new wetlands. Approximately 37.4 acres of upland habitat, including dune, sage, and buffer area, would also be provided. Two new upland islands would be created: one in the area currently occupied by Campland and the other in the De Anza Cove area at the eastern terminus of the vacated mobile home park. Two possible locations for a new Interpretive Nature Center have been identified: one at the northwestern edge of the restoration area along Pacific Beach Drive and another within the regional parkland area just north of the open beach. The nature center and its parking/service areas would be buffered by native vegetation. The open water area of De Anza Cove would be increased to approximately 95.9 acres with the creation of new east and west outfalls that would allow water and sediment flows to proposed wetlands on either side of Rose Creek.

In addition, the Proposed Project would incorporate a range of active recreational uses on approximately 60.1 acres in the northeastern area of the Proposed Project area (Figure 3). A portion of the Mission Bay RV Resort and the vacated mobile home park would be replaced with approximately 48.5 acres of low-cost visitor guest accommodations land use. A new channel connecting Rose Creek to the De Anza Cove water area would be constructed at approximately Lilac Drive, creating a new island that would be accessed via two new bridges. Approximately 26.3 acres of regional parkland would be enhanced with new recreational amenities and opportunities. Three open beach areas totaling approximately 5.5 acres would be provided with access to De Anza Cove. The Proposed Project would also include approximately 2.6 acres for boat facilities and a clubhouse that could potentially be co-located with another user or public use. Two potential water lease locations would be located in the cove. Water quality design features are proposed along the edges of the active recreational areas. The proposed water quality detention basins would be of differing sizes and would capture and treat stormwater before flowing into Mission Bay. New water quality basins would be located to treat the entire Proposed Project area in accordance with local and state requirements.

Multi-use paths would be throughout areas proposed for active recreation, regional parkland, low-cost visitor guest accommodations, and dune and upland areas and along the beach shorelines. Vehicular access to the Proposed Project area would be provided from Pacific Beach Drive, Grand Avenue, and North Mission Bay Drive. Service roads, vehicular access, and parking would be in areas proposed for low-cost visitor guest accommodation, regional parkland, boating, and active recreation.

Table 1 also provides a comparison of the Proposed Project's proposed land uses to the 2018 Proposal's proposed land uses, summarizing the changes in land use designations and acreages between the Proposed Project and the 2018 Proposal. Overall, the Proposed Project area (approximately 505.2 total acres) is larger compared to the 2018 Proposal area (approximately 457 total acres) because the Proposed Project would provide additional opportunities for habitat enhancement (open water). The Proposed Project includes additional enhancement and restoration opportunities, including approximately 177.9 acres of expanded marshland and upland habitat, compared to the approximately 131 acres of marshland and upland habitat under the 2018 Proposal. The additional wetland enhancement would occur on either side of the connection to Rose Creek and as part of the redesign of the open water portion of the Proposed Project area, which includes an approximately 40-acre increase in open water compared to the 2018 Proposal. In addition, the Proposed Project reduces the amount of active recreational activities and eliminates the 1-acre restaurant lease space. Overall, the Proposed Project provides more habitat restoration and greater protection of natural resources compared to the 2018 Proposal.

Table 1. Proposed Land Use Acreages

Land Use	Proposed Project (Acres)	2018 Proposal (Acres)
KFMR/NWP	86.8	90
Expanded Marshland/Habitat	140.5[1]	124
Upland Habitat (Dune, Sage) and Buffer Area	37.4	—
Low-Cost Visitor Guest Accommodations	48.5	—
Guest Housing	—	50
Regional Parkland	26.3	8
Boat Facilities/Clubhouse	2.6	—
Interpretive Nature Center (1 Location)[2]	—	—
Boat Rental Lease – Land Boat Rental Lease – Water	— —	1 4
Water Leases (2 Locations)[3]	2.1	—
Active Recreation	60.1	Not a Part
Athletic Fields/Tennis, Golf Course, and Water Quality Design Feature	—	63
Open Water	95.9	55
Open Beach	5.5	7
Road[4]	1.6	19
Natural Recreation	—	24
Upland/Developed	—	7
Coastal Landscape	—	4
Restaurant Lease	—	1
Total	**505.2**	**457**

Notes: KFMR/NWP = Kendall-Frost Marsh Reserve/Northern Wildlife Preserve

[1] Expanded wetlands includes approximately 30.7 acres currently occupied by Campland and approximately 109.8 acres of other new wetlands.

[2] Area for the Interpretive Nature Center has not been determined, and programming for the center is assumed to occur after adoption of the amendment as part of a future General Development Plan. Two alternative locations are shown, allowing for the final location to be determined in the General Development Plan process.

[3] Lease areas overlap with other land uses; therefore, acreages are not included in the total.

[4] Service roads, vehicular access, and parking would be in areas proposed for low-cost visitor guest accommodations, regional parkland, boating, and active recreation, subject to future design and subsequent approvals.

Thresholds of Significance

The 2018 Proposal was analyzed for each of the following potential impacts based on the City's California Environmental Quality Act (CEQA) Significance Determination Thresholds (City of San Diego 2022) and Appendix G of the CEQA Guidelines:

1. Result in or create a significant increase in the existing ambient noise levels
2. Result in an exposure of people to current or future transportation noise levels which exceed guidelines established in the Noise Element of the General Plan
3. Result in land uses which are not compatible with aircraft noise levels as defined by an adopted Airport Land Use Compatibility Plan (ALUCP)
4. Result in the exposure of people to noise levels which exceed property line limits established in the Noise Abatement and Control Ordinance of the City's Municipal Code

5. Result in the exposure of people to significant temporary construction noise
6. Result in the exposure of people to significant temporary construction groundborne vibration

For each issue addressed in the 2019 Noise Technical Report for the 2018 Proposal, the following analysis summarizes the noise impacts of the 2018 Proposal and provides a comparison to the potential impacts of the Proposed Project.

Impact 1: Would the project result in or create a significant increase in the existing ambient noise level?

Summary of 2018 Proposal Impacts

Operational noise related to the 2018 Proposal was addressed in terms of off-site project-related traffic noise and on-site operational noise. Impacts to sensitive wildlife were addressed in the 2018 Proposal's Biological Technical Report.

Regarding traffic noise, the 2018 Proposal was determined to result in a net reduction in vehicle trips compared to existing conditions. Refer to Attachment 1 for a comparison of 2018 Proposal traffic volumes compared to baseline conditions. As such, traffic-related noise would decrease slightly as a result of the 2018 Proposal, and 2018 Proposal-related traffic noise would be less than significant.

The 2018 Proposal included guest accommodations that could result in operational noise; however, the 2018 Proposal would replace existing camping accommodations, and the new campsites would be farther from off-site noise-sensitive land uses than under existing conditions. Additionally, the number of campsites and total area of developed land would be reduced compared to existing conditions. The 2018 Proposal included enhanced recreational opportunities, additional athletic fields, a ranger station, a boat rental facility, restaurant, restrooms, and picnic shelters. It was determined that the removal of the developed areas of Campland, the vacant mobile home park, the RV park, and the boat and ski areas (open water) would result in the relocation of existing on-site noise sources away from nearby noise-sensitive receivers and a corresponding net reduction in noise from the 2018 Proposal area to adjacent noise-sensitive land uses. Therefore, operational noise impacts would be less than significant.

Proposed Project Consistency Evaluation

The Transportation Impact Analysis for the Proposed Project (CR Associates 2023) determined that implementation of the Proposed Project would also result in a net decrease in vehicle trips compared to existing conditions. The Proposed Project would result in a net decrease of 2,134 trips on weekdays and 2,818 trips on weekends. Therefore, traffic-related noise would also decrease slightly to and from the Proposed Project area, as well as along the adjacent roadways, as a result of the Proposed Project, and Proposed Project-related traffic noise would be less than significant.

The Proposed Project does not include any new active uses that were not addressed for the 2018 Proposal. Similar to the 2018 Proposal, the Proposed Project would replace existing active uses with similar uses, but total development would decrease. Noise-generating uses, such as campsites, would be farther away from sensitive receptors compared to existing conditions. Therefore, operational noise impacts would be less than significant.

Impact 2: Would the proposed project result in an exposure of people to current or future transportation noise levels which exceed guidelines established in the Noise Element of the General Plan?

Summary of 2018 Proposal Impacts

The 2019 Noise Technical Report for the 2018 Proposal determined that, as discussed above, because the 2018 Proposal would result in an overall reduction in vehicle trips, the 2018 Proposal would not result in the exposure of people to current or future transportation noise levels that exceed standards established in the Transportation Element of the City's General Plan. Noise compatibility impacts associated with operation of the 2018 Proposal would be less than significant.

Proposed Project Consistency Evaluation

The Proposed Project would also result in a net decrease in vehicle trips compared to existing conditions (CR Associates 2022). Noise compatibility impacts associated with operation of the Proposed Project would be less than significant.

Impact 3: Would the proposed project result in land uses which are not compatible with aircraft noise levels as defined by an adopted ALUCP?

Summary of 2018 Proposal Impacts

The 2018 Proposal proposed land uses consistent with those in the MBPMP, including natural areas, active recreation, and recreational vehicles. Therefore, the 2018 Proposal was determined to be consistent with the existing zoning and underlying community plan for the area. The nearest airports to the 2018 Proposal area are the San Diego International Airport and the Montgomery-Gibbs Executive Airport, each approximately 4 miles from the 2018 Proposal area. Based on the ALUCP's for these airports, the 2018 Proposal area is outside either airport's 65 A-weighted decibels (dBA) community noise equivalent level (CNEL) noise contour (SDCRAA 2010, 2014). No noise compatibility impacts would occur at any of the proposed land uses. Therefore, implementation of the 2018 Proposal was determined to result in a less than significant impact related to exposure to aircraft noise.

Proposed Project Consistency Evaluation

The ALUCPs for the San Diego International Airport and the Montgomery-Gibbs Executive Airport have not been updated since preparation of the 2019 Noise Technical Report for the 2018 Proposal. The Proposed Project area continues to be outside the 65 dBA CNEL noise contour for aircraft noise. Additionally, the Proposed Project would not result in an increase in exposure compared to existing conditions or introduce new land uses that would interfere with flight patterns. Implementation of the Proposed Project would result in a less than significant impact related to exposure to aircraft noise.

Impact 4: Would the proposed project result in the exposure of people to noise levels which exceed property line limits established in the Noise Abatement and Control Ordinance of the City's Municipal Code?

Summary of 2018 Proposal Impacts

The 2018 Proposal included a number of land use functions, including parks, playgrounds, water recreation facilities, a nature preserve/wildlife preserve, and transient housing (i.e., guest housing). As discussed under Impact 1, the 2018 Proposal was determined to result in a reduction in noise from the 2018 Proposal area at adjacent noise-sensitive land uses. Additionally, proposed future uses would be required to be in compliance with the City's Municipal Code, Section 59.5.0401. Thus, it was determined that the 2018 Proposal would not expose people to noise levels in excess of the City's Noise Abatement and Control Ordinance, and impacts would be less than significant.

Proposed Project Consistency Evaluation

As discussed under Impact 1, the Proposed Project does not propose any new active uses that were not addressed for the 2018 Proposal. The Proposed Project would also result in a net decrease in noise generation in the Proposed Project area at adjacent noise-sensitive land uses. Future uses would continue to be subject to the City's Municipal Code, and impacts would be less than significant.

Impact 5: Would the proposed project result in the exposure of people to significant temporary construction noise?

Summary of 2018 Proposal Impacts

Construction of the 2018 Proposal was determined to have the potential to result in temporary localized increases in noise levels from on-site construction equipment and off-site trucks hauling construction materials. Noise generated by construction equipment would occur with varying intensities and durations during the various phases of construction. The typical maximum noise levels at a distance of 50 feet for various pieces of construction equipment anticipated to be used during 2018 Proposal construction are provided in Table 2, Construction Equipment Noise Levels.

Table 2. Construction Equipment Noise Levels

Equipment Type	Maximum Noise Level dBA at 50 Feet
Backhoe	80
Compactor	82
Concrete Mixer	85
Crane	83
Generator	81
Loader	85
Paver	89
Roller	74
Truck	88
Saw	76

Source: Attachment 1.
Notes: dBA = A-weighted decibel

Construction of the 2018 Proposal was anticipated to occur over approximately 5 years. The Federal Highway Administration's Roadway Construction Noise Model (RCNM) was used to estimate construction noise levels at typical distances to the nearest noise-sensitive land uses. Detailed modeling input and output are provided in Attachment 1. Worst-case hourly average noise levels from 2018 Proposal construction would range from approximately 67 dBA to 80 dBA equivalent continuous sound level (time-averaged sound level) (L_{eq}) at the nearest noise-sensitive receivers. Typical hourly construction noise levels would range from approximately 51 to 65 dBA L_{eq}. Worst-case 12-hour average construction noise levels at the nearest noise-sensitive receivers would range from approximately 65 dBA to 78 dBA $L_{eq\ 12\text{-}hr}$. Construction noise impacts during grading and paving were predicted to exceed the City's construction noise standard of 75 dBA $L_{eq\ 12\text{-}hr}$ established in the City's Municipal Code, Section 59.5.0404, by approximately 3 dBA at the nearest sensitive receptors (residences and the school recreational facilities north of the project area). Therefore, this impact was determined to be potentially significant, and Mitigation Measure **MM NOI 5.8-1** was provided to reduce this impact to a level of less than significant.

Mitigation Measure MM NOI 5.8-1

Construction Noise Best Management Practices. During construction of future development within the proposed project area, construction contractors for the project shall implement the following measures to minimize short-term noise levels caused by construction activities. Measures to reduce construction noise shall be included in contractor specifications and shall include but not be limited to the following:

A. Properly outfit and maintain construction equipment with manufacturer-recommended noise reduction devices to minimize construction-generated noise.

B. Operate all diesel equipment with closed engine doors and equip the equipment with factory-recommended mufflers.

C. Employ additional noise attenuation techniques, as needed, to reduce excessive noise levels and bring construction noise into compliance with the City of San Diego's Municipal Code, Section 59.5.0404. Such techniques may include but not be limited to the construction of temporary sound barriers or sound blankets between construction sites and nearby noise-sensitive receptors.

D. Notify in writing adjacent noise-sensitive receptors within 2 weeks of any construction activity, such as jackhammering, concrete sawing, asphalt removal, and largescale grading operations, that would occur within 150 feet of the property line of the nearest noise-sensitive receptor. The extent and duration of the construction activity shall be included in the notification.

E. Designate a "disturbance coordinator" who shall be responsible for receiving and responding to any complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint and, if identified as a sound generated by construction area activities, shall require that reasonable measures, such as providing sound barriers or sound blankets between construction sites and the receptor location, locating noisy equipment as far from the receptor as possible, and/or reducing the duration of the noise-generating construction activity, be implemented to correct the problem.

Proposed Project Consistency Evaluation

Specific construction details, such as schedule and earthwork quantities, are not yet available for the Proposed Project. However, construction of the Proposed Project is anticipated to be substantially similar to construction anticipated for the 2018 Proposal. Construction would occur in the same location and would require the same types of construction activity and construction fleet. Therefore, it would generate similar construction noise. Some additional dredging may be required; however, specifics are currently unknown, and dredging was anticipated for the 2018 Proposal. Maximum daily construction noise from dredging would be similar to the 2018 Proposal. As such, impacts related to construction noise would continue to be potentially significant, and Mitigation Measure **MM NOI 5.8-1** would be required to reduce this impact to a less than significant level.

Impact 6: Would the project result in the exposure of people to significant temporary construction vibration?

Summary of Proposed Project Impacts

The 2019 Noise Technical Report prepared for the 2018 Proposal determined that, at a distance of approximately 105 feet from the nearest project boundary to noise-sensitive receptors, the vibration levels from the heavy construction machinery with the greatest vibration impact anticipated for project construction (a large bulldozer) would be 68 vibration decibels (VdB), or 0.0103 inch per second. Vibration levels of this magnitude would be below the applicable threshold of perception (70 VdB) and well below the damage threshold for fragile structures (0.20 inch per second). While construction vibration levels during any phase may be perceptible at times, demolition and construction phases that have the highest potential of producing vibration (such as bulldozers) would be intermittent and would only occur for short periods of time on a given site within the project area. Impacts from construction-generated vibration were determined to be less than significant.

Proposed Project Consistency Evaluation

As discussed for Impact 5, construction of the Proposed Project would be substantially similar to the 2018 Proposal. As such, impacts from construction-generated vibration would be less than significant.

Summary

The Proposed Project does not include any components that would result in a new noise impact that was not identified for the 2018 Proposal. The Proposed Project would result in less than significant impacts related to permanent increases in ambient noise level, transportation noise levels, aircraft noise, and construction vibration. Temporary construction noise would be less than significant with implementation of Mitigation Measure **MM NOI 5.8-1**.

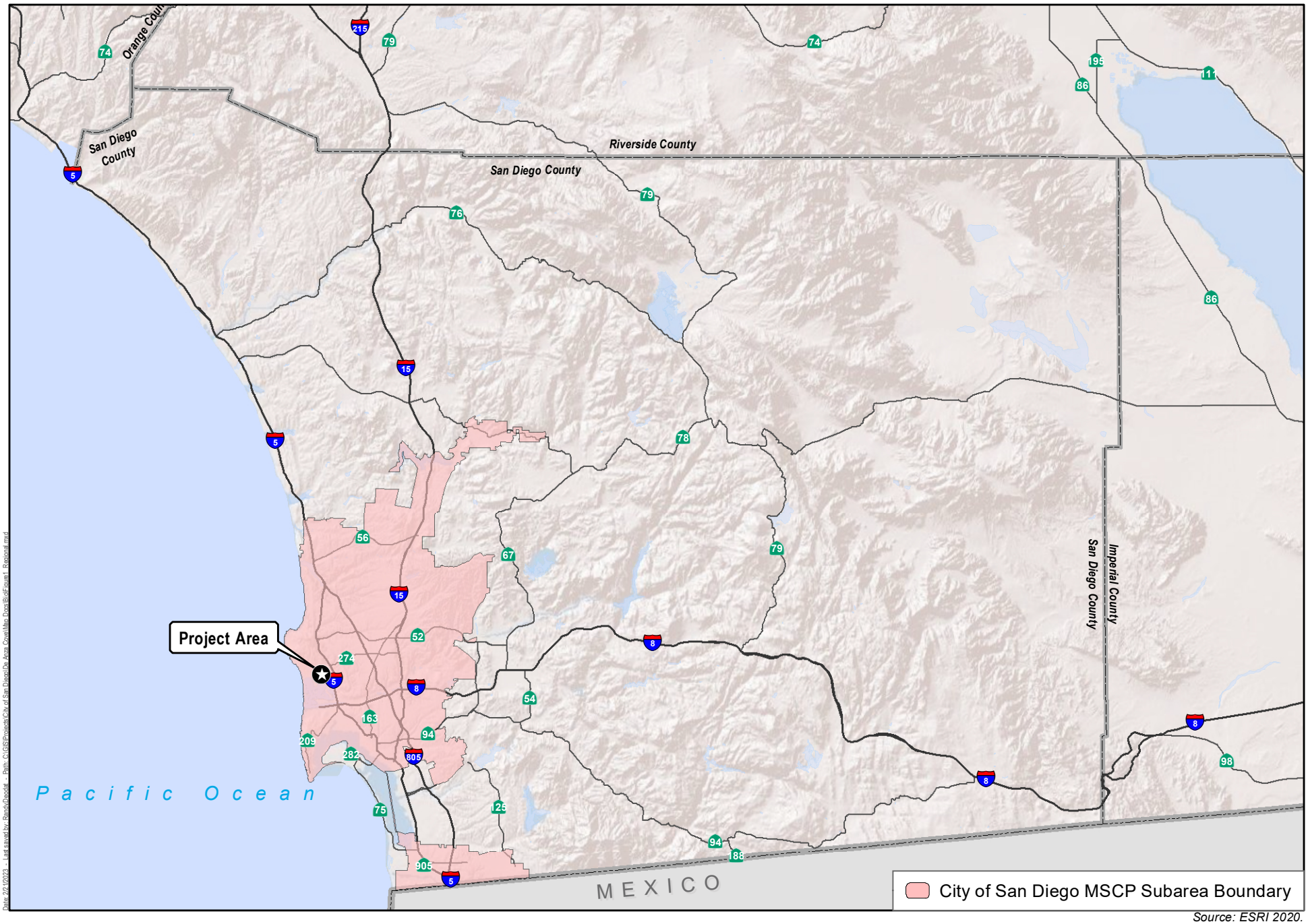
References

City of San Diego. 2022. CEQA Significance Determination Thresholds. September. Accessed March 2023. https://www.sandiego.gov/sites/default/files/september_2022_ceqa_thresholds_final.pdf.

CR Associates. 2023. De Anza Cove Amendment – Transportation Impact Analysis.

SDCRAA (San Diego County Regional Airport Authority). 2010. Montgomery Field – Airport Land Use Compatibility Plan. Adopted January 25. Amended December 20. Accessed March 2023. https://www.san.org/Airport-Projects/Land-Use-Compatibility#7121296-alucps.

SDCRAA. 2014. San Diego International Airport – Airport Land Use Compatibility Plan. Adopted April 3. Amended May 1. Accessed March 2023. https://www.san.org/Airport-Projects/Land-Use-Compatibility#7121296-alucps.

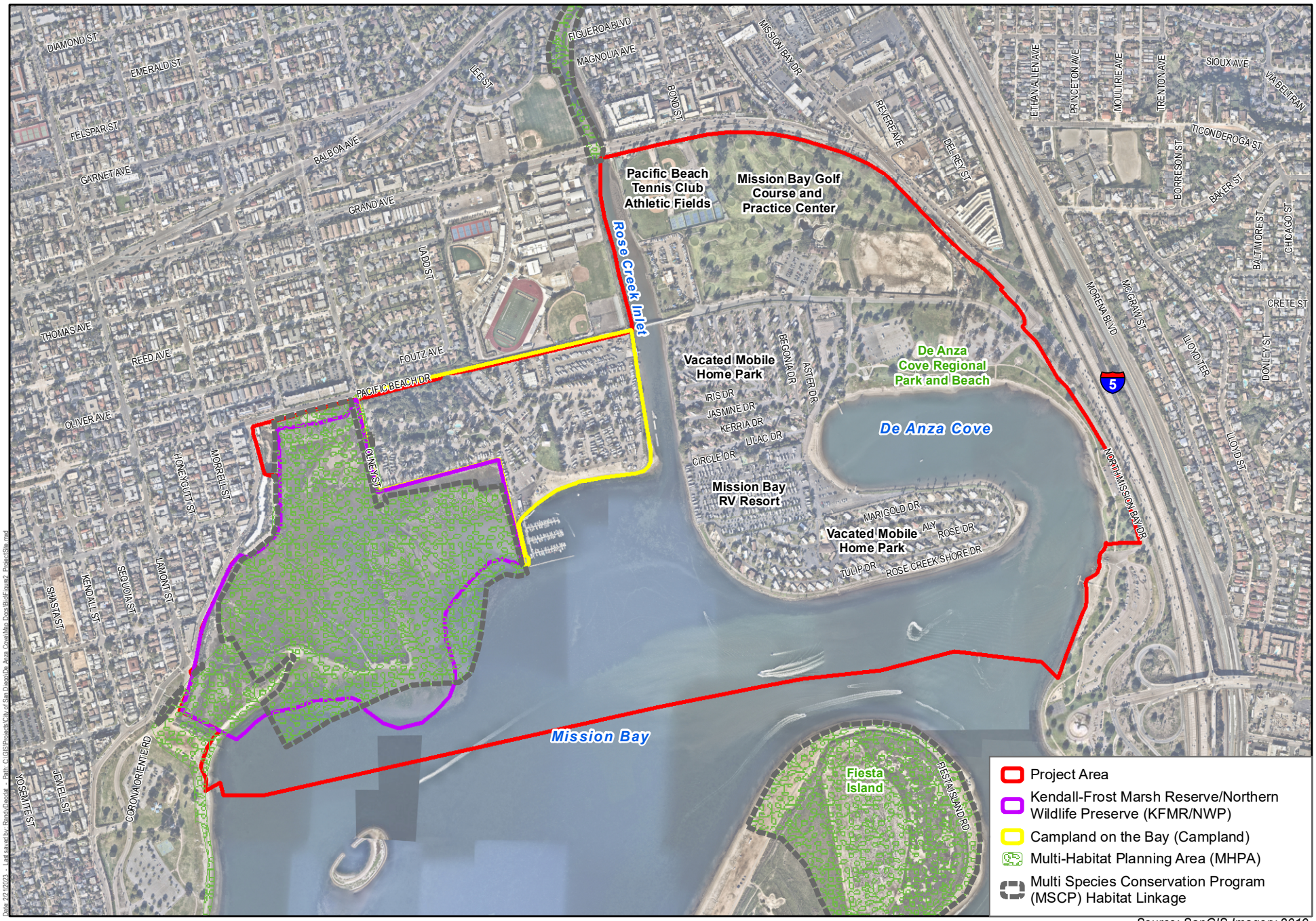


Source: ESRI 2020.

Figure 1

Regional Location

De Anza Natural Amendment to the Mission Bay Park Master Plan



Source: SanGIS Imagery 2019.

N

0 500 1,000

Feet

Figure 2

Project Location

De Anza Natural Amendment to the Mission Bay Park Master Plan

Source: City of San Diego 2023.

N

0 500 1,000

Feet

Figure 3

Site Plan

De Anza Natural Amendment to the Mission Bay Park Master Plan

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Attachment 1. 2019 Noise Technical Report

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Noise Technical Report
for the
De Anza Cove Amendment – Mission Bay Park Master Plan
City of San Diego, California

Prepared for:

City of San Diego – Planning Department
9485 Aero Drive, Suite M.S. 413
San Diego, California 92123

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APRIL 2019

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APPENDICES

FIGURES

TABLES

ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
CEQA	California Environmental Quality Act
City	City of San Diego
CLUP	Comprehensive Land Use Plan
CNEL	Community Noise Equivalent Level
dB	decibel
dBA	A-weighted decibel
KFMR/NWP	Kendall-Frost Marsh Reserve/Northern Wildlife Preserve
L_{eq}	equivalent sound level
L_{eq} (1-hr)	1-hour A-weighted equivalent sound level
L_{max}	maximum sound level during the measurement interval
MBPMP	Mission Bay Park Master Plan
MM	mitigation measure
PPV	peak particle velocity
RCNM	Roadway Construction Noise Model
SDMC	San Diego Municipal Code
VdB	velocity decibel

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SUMMARY

The De Anza Cove Amendment – Mission Bay Park Master Plan (proposed project) area is located in the northeast corner of Mission Bay Park in the City of San Diego (see Figure 1, Regional Location Map). The project area is approximately 318 acres of land and includes approximately 139 acres of open water for a total of approximately 457 acres. The proposed project area includes the Kendall-Frost Marsh Reserve/Northern Wildlife Preserve (KFMR/NWP); Campland on the Bay (Campland) areas; the Mission Bay Tennis Center, Athletic Fields, and Golf Course; and the De Anza Cove Area, which was formerly known as the De Anza Special Study Area (SSA) as designated in the Mission Bay Park Master Plan (MBPMP), including the water area of De Anza Cove (see Figure 2, Vicinity). The proposed project includes recommendations to serve regional recreation needs, including guest housing (recreational vehicles and other low cost camping facilities); improve the park's water quality, including creating additional wetlands; facilitate hydrologic improvements to safeguard the viability of marsh areas; provide a waterfront trail, viewing areas, and other passive recreational features to enhance public use of the area; ensure leaseholds support Mission Bay recreation use; improve access to recreational uses; and improve play areas for regional recreational needs. The proposed project seeks to implement the recommendations of the adopted MBPMP.

The noise impacts analysis provides an evaluation of the potential for significant noise impacts due to construction and/or operation of the proposed project. Construction of the proposed facilities would result in a temporary noise from on-site construction equipment, as well as from off-site trucks hauling construction materials. The analysis concludes that the project-related construction activities noise would create a significant increase in the ambient noise levels and would exceed the City of San Diego's Municipal Code Noise Ordinance standard for construction when these activities take place adjacent to noise-sensitive receivers. This would be a potentially significant noise impact, absent mitigation. Mitigation is provided which would reduce impacts from project-related construction to a less than significant level.

Operational emissions were found to be below the City's significance thresholds; therefore, impacts during proposed project operation would be less than significant.

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SOURCE: City San Diego 2018; ESRI 2018

SD Planning

0 5 10 Miles

FIGURE 1

Regional Location Map

De Anza Cove Amendment to the Mission Bay Park Master Plan

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SOURCE: City San Diego 2018; SANGIS 2017, 2018

SD Planning

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FIGURE 2

Vicinity

De Anza Cove Amendment to the Mission Bay Park Master Plan

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1 INTRODUCTION

The De Anza Cove Amendment – Mission Bay Park Master Plan (proposed project) includes recommendations to serve regional recreation needs, including guest housing (recreational vehicles and other low cost camping facilities); improve the park's water quality, including creating additional wetlands; facilitate hydrologic improvements to safeguard the viability of marsh areas; provide a waterfront trail, viewing areas, and other passive recreational features to enhance public use of the area; ensure leaseholds support Mission Bay recreation use; improve access to recreational uses; and improve play areas for regional recreational needs.

1.1 Purpose

The purpose of this report is to estimate and evaluate the potential noise impacts associated with implementation of the project relative to the City of San Diego's California Environmental Quality Act (CEQA) Significance Determination Thresholds (City of San Diego 2016) and for compliance with applicable state and federal rules and regulations.

1.2 Project Location

The proposed project area is located in the northeast corner of Mission Bay Park in the City of San Diego (City). The project area is approximately 318 acres of land and includes approximately 139 acres of open water for a total of approximately 457 acres. The proposed project area includes the Kendall-Frost Marsh Reserve/Northern Wildlife Preserve (KFMR/NWP); Campland on the Bay (Campland) areas; the Mission Bay Tennis Center, Athletic Fields, and Golf Course; and the De Anza Cove Area, which was formerly known as the De Anza Special Study Area (SSA) as designated in the Mission Bay Park Master Plan (MBPMP), including the water area of De Anza Cove (see Figure 2, Vicinity Map). The existing land uses and associated acreages are described in Table 1.

Table 1
Existing Land Use Acreages

Land Use	Acres
Kendall-Frost Marsh Reserve/Northern Wildlife Preserve (land and water)	90
Campland on the Bay – Land Campland on the Bay – Water	40 6
De Anza Cove Area – Land	100
Mission Bay Tennis Center, Athletic Fields, and Golf Course	63
Open Water	139
Roads and Right-of-Way	19
Total	**457**

The KFMR/NWP is approximately 90 acres and is bordered on the west and north by residential development and roadways, on the east by Campland, and on the south by Mission Bay. The KFMR/NWP consists mostly of vegetated wetland. Campland is approximately 46 acres and is located directly east of KFMR/NWP. Campland is located on City-owned land and is currently a leasehold and a privately operated, recreational vehicle (RV) and tent camping area with condominiums along the northern and western boundaries. The De Anza Cove Area is approximately 100 acres and is located directly east of Campland and Rose Creek and south of North Mission Bay Drive. The De Anza Cove Area consists of an abandoned mobile home park and supporting infrastructure (e.g., roads, utilities, parking lots, and driveways), Mission Bay RV Resort (an existing campground for 260 RV sites), Mission Bay Regional Park area, and a public beach and parking area. North Mission Bay Drive bisects the De Anza Cove Area and recreational areas to the north. The recreational areas are approximately 63 acres and include the Mission Bay Tennis Center, Athletic Fields, and Golf Course (and their respective parking areas).

1.3 Project Description

The proposed project seeks to implement the recommendations of the adopted MBPMP. The following discussion describes the components of the proposed project, which will be analyzed in the Program Environmental Impact Report at a program level; see Figure 3, Site Plan, for proposed land uses and improvements.

The MBPMP assigns land use designations throughout the MBPMP area, including the project area, which are summarized in Table 2 and described in detail below.

Table 2
Proposed Land Use Acreages

Land Use	Acres
Kendall-Frost Marsh Reserve/Northern Wildlife Preserve	90
Expanded Marshland/Habitat	124
Guest Housing	50
Regional Parkland	8
Natural Recreation	24
Upland/Developed	7
Coastal Landscape	4
Restaurant Lease	1
Boat Rental Lease – Land Boat Rental Lease – Water	1 4
Athletic Fields, Golf Course, and Water Quality Design Feature	63
Open Water	55
Open Beach	7

Table 2
Proposed Land Use Acreages

Land Use	Acres
Roads and Right-of-Way	19
Total	**457**

1.3.1 Kendall-Frost Marsh Reserve/Northern Wildlife Preserve Area

The proposed project includes the existing KFMR/NWP and the expansion of wetlands currently occupied by Campland; see Figure 3. The proposed project would follow the MBPMP recommendation to replace the existing Campland area with habitat area, which would include a combination of mudflats, wetlands and upland habitats. This contiguous habitat area would be approximately 124 acres, in addition to the existing 90 acres of KFMR/NWP, for a total of 214 acres.

1.3.2 Mission Bay Tennis Center, Athletic Fields, and Golf Course

The northern area currently contains active recreational facilities. The proposed project would incorporate a range of recreational uses, which include the existing Mission Bay Golf Course and Practice Center, currently operated and managed by the City; athletic fields, currently used by Mission Bay Little League; and tennis courts and club house, currently used by the Pacific Beach Tennis Club. While existing recreational opportunities would be retained, several facilities would be upgraded and relocated for better functionality and to enhance public accessibility.

1.3.3 De Anza Cove Area

The De Anza Cove Area is located south of North Mission Bay Drive and east of Rose Creek Channel. The land uses proposed within this area include guest housing, regional parkland, wetland/marshland/natural recreation area, upland/developed and coastal landscape recreation areas, potential restaurant/food service leases, a non-motorized boat lease, and beach and water quality features, which are further explained below; see Figure 3, Site Plan.

Guest Housing

The proposed project would replace the RV campgrounds and vacated De Anza Mobile Home Park with low-cost guest housing. The low-cost guest housing would allow for up to 600 camping sites for RVs, cabins, or other eco-friendly accommodations and associated open space and facilities consistent with camping accommodations. Table 3 shows the number of existing and proposed camping sites provided within the project area.

In addition, surface parking would be provided as needed to meet City requirements for the guest housing component.

Table 3
Existing and Proposed Camping Sites

Types of Sites	Number of Sites
Existing Sites	
Mission Bay RV Resort Sites	260
Campland RV Sites	526
Campland Primitive Camping Sites	30
Existing Total	**816**
Proposed Sites	
De Anza Cove Sites (RVs, cabins or other eco-friendly accommodations)	600
Proposed Total	**600**
Net Change (proposed sites – existing sites)	*(216)*

Regional Parkland, Potential Leases, and Beach

The existing Regional Parkland would be enhanced by new recreational amenities and opportunities. A supervised swimming beach area would be provided at the west end of De Anza Cove. The swimming area will be protected by buffers/safety measures that would separate the swimmers from the boat users. A boat rental facility/dock area is proposed at the east end of De Anza Cove. In the center, recreational amenities would include a passive, "Open Green" area and an "Adventure Play" area. A restaurant that could include both a sit-down dining component and a snack shack, as well as restrooms, and picnic shelters would be provided to support the recreational activities. Additionally, the beach area is proposed to be expanded; see Figure 3, Site Plan. Surface parking would be provided as needed to meet City requirements for the recreational areas.

Wetland/Marshland/Natural Recreation

The wetland/marshland/natural recreation area would be comprised of both upland and marshland areas and naturally vegetated recreational areas and would create a natural interface with the cove and enhance water quality in the bay.

Upland/Developed and Coastal Landscape Recreation Area

The Upland/Developed area and Coastal Landscape Recreation areas would accommodate a proposed multi-use path, mounded landform, and iconic overlook. The mounded landform would feature an elevated, iconic overlook facility. The mounded landform would be accessible from the waterfront trail. Within this area, passive recreation amenities such as overlooks, pathways, picnic

areas, and interpretive signs could be located. This area would serve as a complement to the natural setting of the guest housing and the expanded beach areas on the cove.

Water Quality Features

Water quality-enhancing features are proposed along the outer perimeter of the proposed guest housing and recreational areas. The proposed water quality basins would capture and treat storm water before flowing into Mission Bay. New water quality basins will be located to treat the entire proposed project area per local and state requirements.

The water quality detention basins would be designed with a sediment forebay, a height-appropriate embankment specific for each area of treatment, and a base of the basin to reduce sediment and erosion at the outflow. Native plants would be utilized to reduce sediment and total suspended solids from storm-water. Additional water quality enhancing features would include vegetated areas bordering all development areas to further reduce storm water contamination, including debris and sediment, from reaching Mission Bay.

In addition to water quality detention basins, the proposed project would incorporate site-specific best management practices (BMPs) to enhance water quality. These BMPs include native plants for landscaping, which would not require fertilizers in order to reduce the potential for added nutrients into nearby water bodies, as well as efficient irrigation practices to reduce nutrient runoff. The proposed project would incorporate storm drainage signage featuring a statement such as "NO DUMPING" or "DRAINS TO OCEAN" in order to discourage illegal dumping by visitors.

As a further water quality-enhancing feature, the edges of Rose Creek and along the "boot" of De Anza cove are proposed to be revegetated with marsh, wetland and upland native plants,

Surface Parking

Three surface parking lot areas are proposed in the project area. Parking would be located in conjunction with the athletic areas, within the footprint of the low-cost guest housing area, and two surface parking lots serving the proposed leases and the regional parkland are proposed at De Anza Cove and would be accessible from North Mission Bay Drive.

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SOURCE: City San Diego 2018; SANGIS 2017, 2018

SD Planning

0 500 1,000 Feet

FIGURE 3

Site Plan

De Anza Cove Amendment to the Mission Bay Park Master Plan

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2 FUNDAMENTALS OF NOISE AND VIBRATION

The following is a brief discussion of fundamental noise concepts and terminology.

2.1 Sound, Noise, and Acoustics

Sound is a process that consists of three components: the sound source, sound path, and sound receiver. All three components must be present for sound to exist. Without a source to produce sound, there is no sound. Similarly, without a medium to transmit sound pressure waves, there is no sound. Finally, sound must be received; a hearing organ, sensor, or object must be present to perceive, register, or be affected by sound or noise. In most situations, there are many different sound sources, paths, and receptors rather than just one of each. Acoustics is the field of science that deals with the production, propagation, reception, effects, and control of sound. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired.

2.2 Sound Pressure Levels and Decibels

The amplitude of a sound determines its loudness. Loudness of sound increases with increasing amplitude. Sound pressure amplitude is measured in units of micronewton per square meter, also called micropascal. One micropascal is approximately one-hundred billionth (0.00000000001) of normal atmospheric pressure. The pressure of a very loud sound may be 200 million micropascals, or 10 million times the pressure of the weakest audible sound. Because expressing sound levels in terms of micropascal would be very cumbersome, sound pressure level in logarithmic units is used instead to describe the ratio of actual sound pressure to a reference pressure squared. These units are called bels. To provide a finer resolution, a bel is subdivided into 10 decibels (dB). Because decibels are measured on a logarithmic scale, a doubling of the energy of a noise source, such as a doubled traffic volume, would increase the noise levels by 3 A-weighted decibels (dBA); halving of the energy would result in a 3 dBA decrease.

2.3 A-Weighted Sound Level

Sound pressure level alone is not a reliable indicator of loudness. The frequency, or pitch, of a sound also has a substantial effect on how humans will respond. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness, or human response, is determined by the characteristics of the human ear.

Human hearing is limited not only in the range of audible frequencies, but also in the way it perceives the sound in that range. In general, the healthy human ear is most sensitive to sounds between 1,000 and 5,000 hertz, and it perceives a sound within that range as more intense than a sound of higher or lower frequency with the same magnitude. To approximate the frequency response of the human ear, a series

of sound level adjustments is usually applied to the sound measured by a sound level meter. The adjustments (referred to as a weighting network) are frequency dependent.

The A-scale weighting network approximates the frequency response of the average young ear when listening to ordinary sounds. When people make judgments about the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special situations (e.g., B-scale, C-scale, D-scale), but these scales are rarely used in conjunction with most environmental noise. Noise levels are typically reported in terms of A-weighted sound levels. All sound levels discussed in this report are A-weighted decibels (dBA). Examples of typical noise levels for common indoor and outdoor activities are depicted in Table 4.

Table 4
Typical Sound Levels in the Environment and Industry

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet fly over at 300 meters (1,000 feet)	110	Rock band
Gas lawn mower at 1 meter (3 feet)	100	Food blender at 1 meter (3 feet)
Diesel truck at 15 meters (50 feet), at 80 kilometers per hour (50 miles per hour)	90	Garbage disposal at 1 meter (3 feet)
Noisy urban area, daytime	80	Vacuum cleaner at 3 meters (10 feet);
Gas lawn mower at 30 meters (100 feet)	70	Normal speech at 1 meter (3 feet)
Commercial area	60	Large business office
Heavy traffic at 90 meters (300 feet)	50	Dishwasher next room
Quiet urban, daytime	40	Theater; large conference room (background)
Quiet urban, nighttime	30	Library
Quiet suburban, nighttime	20	Bedroom at night; concert hall (background)
Quiet rural, nighttime	10	Broadcast/Recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: Caltrans 2009.
Notes: dBA = A-weighted decibel

2.4 Human Response to Changes in Noise Levels

Under controlled conditions in an acoustics laboratory, the trained, healthy human ear is able to discern changes in sound levels of 1 dBA when exposed to steady, single-frequency signals in the mid-frequency range. Outside such controlled conditions, the trained ear can detect changes of 2 dBA in normal environmental noise. It is widely accepted that the average healthy ear, however, can barely perceive noise level changes of 3 dBA. A change of 5 dBA is readily perceptible, and a change of 10 dBA is perceived as twice or half as loud. A doubling of sound energy results in a

3 dBA increase in sound, which means that a doubling of sound energy (e.g., doubling the volume of traffic on a road) would result in a barely perceptible change in sound level.

2.5 Noise Descriptors

Additional units of measure have been developed to evaluate the long-term characteristics of sound. The equivalent sound level (L_{eq}) is also referred to as the time-average sound level. It is the equivalent steady-state sound level that in a stated period of time would contain the same acoustical energy as the time-varying sound level during the same time period. The 1-hour A-weighted equivalent sound level, L_{eq} (1-hr), is the energy average of the A-weighted sound levels occurring during a 1-hour period and is the basis for the City's noise ordinance criteria.

People are generally more sensitive and annoyed by noise occurring during the evening and nighttime hours. Thus, another noise descriptor used in community noise assessments—the community noise equivalent level (CNEL)—was introduced. The CNEL scale represents a time-weighted, 24-hour average noise level based on the A-weighted sound level. The CNEL accounts for the increased noise sensitivity during the evening hours (7:00 p.m. to 10:00 p.m.) and nighttime hours (10:00 p.m. to 7:00 a.m.) by adding 5 dBA and 10 dBA, respectively, to the average sound levels occurring during the evening and nighttime hours.

2.6 Sound Propagation

Sound propagation (i.e., the passage of sound from a noise source to a receiver) is influenced by geometric spreading, ground absorption, atmospheric effects, and shielding by natural and/or built features.

Sound levels attenuate (or diminish) at a rate of approximately 6 dBA per doubling of distance from an outdoor point source due to the geometric spreading of the sound waves. Atmospheric conditions such as humidity, temperature, and wind gradients can also temporarily either increase or decrease sound levels. In general, the greater the distance the receiver is from the source, the greater the potential for variation in sound levels due to atmospheric effects. Additional sound attenuation can result from built features such as intervening walls and buildings, and by natural features such as hills and dense woods.

2.7 Groundborne Vibration Fundamentals

Groundborne vibration is a small, rapidly fluctuating motion transmitted through the ground. The strength of groundborne vibration attenuates fairly rapidly over distance. Some soil types transmit vibration quite efficiently; other types (primarily sandy soils) do not. Several basic measurement units are commonly used to describe the intensity of ground vibration. The descriptors used by the

Federal Transit Administration are peak particle velocity (PPV), in units of inches per second, and velocity decibel (VdB).

The calculation to determine PPV at a given distance is as follows:

$$PPV_{dist} = PPV_{ref}*(25/D)^{1.5}$$

where:

PPV_{dist} = the peak particle velocity in inches per second of the equipment adjusted for distance

PPV_{ref} = the reference vibration level in inches per second at 25 feet

D = the distance from the equipment to the receiver

The velocity parameter (instead of acceleration or displacement) best correlates with human perception of vibration. Thus, the response of humans, buildings, and sensitive equipment to vibration is described in this section in terms of the root-mean square velocity level in VdB units relative to 1 micro-inch per second. As a point of reference, the average person can just barely perceive vibration velocity levels below 70 VdB (typically in the vertical direction). The calculation to determine the root-mean square at a given distance is as follows:

$$L_v(D) = L_v(25\ feet) - 30*\log(D/25)$$

where:

$L_v(D)$ = the vibration level at the receiver

$L_v(25\ feet)$ = the reference source vibration level

D = the distance from the vibration activity to the receiver

Typical background vibration levels are between 50 and 60 VdB, and the level for minor cosmetic damage to fragile buildings or blasting generally begins at 100 VdB.

3 REGULATORY SETTING

3.1 Federal

There are no applicable federal regulations related to noise that would apply to the proposed project.

3.2 State

Government Code Section 65302(g)

California Government Code Section 65302(g) requires the preparation of a Noise Element, which shall identify and appraise the noise problems in the community. The Noise Element shall recognize the guidelines adopted by the Office of Noise Control in the State Department of Health Services and shall quantify, to the extent practicable, current and projected noise levels for the following sources:

- Highways and freeways
- Primary arterials and major local streets
- Passenger and freight online railroad operations and ground rapid transit systems
- Aviation and airport-related operations
- Local industrial plants
- Other ground stationary noise sources contributing to the community noise environment

3.3 Local

3.3.1 City of San Diego

City of San Diego Municipal Code 59.5.0401 (Noise Ordinance)

Section 59.5.0401 of the San Diego Municipal Code (SDMC) sets forth sound level limits. It is unlawful for any person to cause noise by any means to the extent that the 1-hour average sound level exceeds the applicable limit given in Table 5 at any location in the City of San Diego on or beyond the boundaries of the property on which the noise is produced. The noise subject to these limits is the part of the total noise at the specified location that is due solely to the action of said person/event.

Table 5
City of San Diego Applicable Limits

Land Use	Time of Day	1-Hour Average Sound Level Limit (dBA)
Single-family residential	7:00 a.m.–7:00 p.m.	50

Table 5
City of San Diego Applicable Limits

Land Use	Time of Day	1-Hour Average Sound Level Limit (dBA)
	7:00 p.m.–10:00 p.m.	45
	10:00 p.m.–7:00 a.m.	40
Multi-family residential (up to a maximum density of 1/2,000)	7:00 a.m.–7:00 p.m.	55
	7:00 p.m.–10:00 p.m.	50
	10:00 p.m.–7:00 a.m.	45
All other residential	7:00 a.m.–7:00 p.m.	60
	7:00 p.m.–10:00 p.m.	55
	10:00 p.m.–7:00 a.m.	50
Commercial	7:00 a.m.–7:00 p.m.	65
	7:00 p.m.–10:00 p.m.	60
	10:00 p.m.–7:00 a.m.	60
Industrial or agricultural	Any time	75

Source: City of San Diego 2010.
Notes: dBA = A-weighted decibel.

City of San Diego Municipal Code 59.5.0404 (Noise Ordinance)

Construction Noise

Section 59.5.0404 of the City's Municipal Code sets forth limitations related to construction noise (City of San Diego 2010).

A. It shall be unlawful for any person, between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays, to erect, construct, demolish, excavate for, alter, or repair any building or structure in such a manner as to create disturbing, excessive, or offensive noise unless a permit has been applied for and granted beforehand by the Noise Abatement and Control Administrator. In granting such permit, the Administrator shall consider whether the construction noise in the vicinity of the proposed work site would be less objectionable at night than during the daytime because of different population densities or different neighboring activities; whether obstruction and interference with traffic, particularly on streets of major importance, would be less objectionable at night than during the daytime; whether the type of work to be performed emits noises at such a low level as to not cause significant disturbances in the vicinity of the work site; the character and nature of the neighborhood of the proposed work site; whether great economic hardship would occur if the work were spread over a longer time; and whether proposed night work is in the general

public interest; and he/she shall prescribe such conditions, working times, types of construction equipment to be used, and permissible noise levels as he/she deems to be required in the public interest.

B. Except as provided in Subsection C hereof, it shall be unlawful for any person, including the City of San Diego, to conduct any construction activity so as to cause, at or beyond the property lines of any property zoned residential, an average sound level greater than 75 decibels during the 12-hour period from 7:00 a.m. to 7:00 p.m.

C. The provisions of Subsection B of this section shall not apply to construction equipment used in connection with emergency work, provided the Administrator is notified within 48 hours after commencement of work.

City of San Diego Significance Determination Thresholds

The City has guidance for determination of significance according to CEQA, including what would constitute a significant noise impact (City of San Diego 2016). These thresholds are used in this analysis and are provided in Section 5.2.

4 EXISTING CONDITIONS

The project area is approximately 318 acres of land and includes approximately 139 acres of open water for a total of approximately 457 acres. With the exception of the Kendall-Frost Marsh Reserve/Northern Wildlife Preserve (KFMR/NWP), located on the western portion of the site, the project site is primarily developed with uses including Campland on the Bay (Campland), and other recreational areas. The Campland area currently consists of recreational space, a boat dock, a surface parking lot, and a recreational vehicle (RV) and tent camping area. The KRMR/NWP is currently water and open space. The recreational areas located on the northeastern portion of the site include the Mission Bay Golf Course (currently operated and managed by the City of San Diego), the Mission Bay Athletic Fields (used by Mission Bay Little League), and the Mission Bay Tennis Center (used by the Pacific Beach Tennis Club). The De Anza Cove Area, formerly known as the De Anza Special Study Area, which includes the area south of Mission Bay Drive, is developed with an abandoned trailer park with mobile homes and surface parking lots. The De Anza Cove Area also includes the water area of De Anza Cove. In addition to the areas mentioned above, North Mission Bay Drive traverses the project site.

The project site is bounded by Mission Bay to the south, the I-5 Freeway to the southeast; Mission Bay Senior High School to the northwest; residences and commercial uses to the north and northeast; and residential and commercial uses and Crown Point Park to the west.

4.1 Ambient Noise Monitoring

Noise measurements were made using a Rion NL-52 integrating sound-level meter equipped with a 0.5-inch pre-polarized condenser microphone with pre-amplifier. The sound-level meter meets the current American National Standards Institute standard for a Type 1 (Precision Grade) sound-level meter. The sound-level meter was calibrated before and after the measurements, and the measurements were conducted with the microphone positioned 5 feet above the ground and covered with a windscreen.

Short-term (15 minutes each in duration) noise measurements were conducted at eight locations in and around the project site on November 14, 2018, as depicted on Figure 4, Noise Measurement Locations. A brief description of where each noise measurement was conducted, as well as the measured time-average sound level and maximum sound level during the measurement interval (L_{max}), is summarized in Table 6. Detailed noise measurement data are included as Appendix A to this report.

Table 6
Short-Term Noise Measurement Data Summary

Receptors	Description	Noise Sources Observed	Leq (dBA)	Lmax (dBA)
ST1	North of Pacific Beach Drive, Adjacent to Campland, next to ravine	Traffic, birds, distant aircraft, distant conversations, yelling, distant traffic, rustling leaves	55.4	69
ST2	Bike/walking path south of Mission Bay Senior High School Athletic Fields	Distant traffic, birds, distant traffic, rustling leaves	43.2	54.2
ST3	Center of Campland, 50 feet west of security booth	Traffic, birds, distant aircraft, distant conversations yelling, distant traffic, cars stopping at Campland gate, engine starts, helicopter	55.1	69.8
ST4	Northwest corner of Mission Bay Golf Course Parking Lot	Golf balls, birds, distant aircraft, distant conversations yelling, distant traffic, rustling leaves	48	63.4
ST5	Southwest Corner of De Anza Cove Park Parking Lot	Distant traffic, birds, distant aircraft, distant conversations yelling, distant traffic	49.2	51.6

Table 6
Short-Term Noise Measurement Data Summary

Receptors	Description	Noise Sources Observed	Leq (dBA)	Lmax (dBA)
ST6	Southern parking Lot of Mission Bay RV Resort	Industrial, birds, distant aircraft, distant conversations, yelling, distant dog barking, distant traffic, rustling leaves, construction noise, backup alarms	48.7	60.2
ST7	West of 4323 Mission Bay Dr. San Diego, CA 92109	Traffic	70.6	77.5
ST8	Front lawn South of Bay Inn Apartments	Traffic	62.7	68.6

Source: Appendix A.
Note: L_{eq} = equivalent continuous sound level (time-averaged sound level); L_{max} = maximum sound level during the measurement interval; dBA = A-weighted decibel.

In addition, a long-term noise measurement (24 hours in duration) was conducted from November 14 through November 15, 2018, at the existing Campland location, and designated as LT1 (shown in Figure 4). The summary of the LT1 noise measurement data is provided in Table 7, and the hourly noise data is provided in Appendix A.

Table 7
Long-Term Noise Measurement Data Summary

Receptors	Description	Weighted 24-Hour Noise Level (dBA CNEL)	Lowest Hourly Noise Level (dBA L_{eq})	Highest Hourly Noise Level (dBA L_{eq})
LT1	Center of Campland, 50 feet west of security booth	57.8	42.9 @ 1:00 – 2:00 a.m.	58.8 @ 1:00 – 2:00 p.m.

Source: Appendix A.
Note: L_{eq} = equivalent continuous sound level (time-averaged sound level); dBA = A-weighted decibel; CNEL = Community Noise Equivalent Level.

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SOURCE: City San Diego 2018; SANGIS 2017, 2018

SD Planning

0 500 1,000 Feet

FIGURE 4

Noise Measurement Locations

De Anza Cove Amendment to the Mission Bay Park Master Plan

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5 THRESHOLDS OF SIGNIFICANCE

The City's CEQA Significance Determination Thresholds (City of San Diego 2016) and Appendix G of the CEQA Guidelines contain significance guidelines related to noise. A significant impact related to noise would occur if the proposed project would:

1. Result in or create a significant increase in the existing ambient noise levels;
2. Result in an exposure of people to current or future transportation noise levels which exceed guidelines established in the Noise Element of the General Plan;
3. Result in land uses which are not compatible with aircraft noise levels as defined by an adopted ALUCP;
4. Result in the exposure of people to noise levels which exceed property line limits established in the Noise Abatement and Control Ordinance of the SDMC; or
5. Result in the exposure of people to significant temporary construction noise.

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6 IMPACTS

6.1 Would the project result in or create a significant increase in the existing ambient noise level?

6.1.2. Project-Related Operational Noise

Operational noise related to the proposed project is addressed in terms of off-site project-related traffic noise, and on-site noise.

Project-Related Traffic Noise

Based upon the memorandum provided by the proposed project's traffic consultants (Chen Ryan 2019), the proposed project would generally result in fewer vehicle trips than generated under existing conditions. As shown in Table 8, during weekdays the proposed project would result in approximately 1,936 fewer average daily traffic (ADT) trips compared to existing conditions. During AM and PM peak hours, the proposed project would create 88 and 180 fewer trips, respectively, than existing conditions. This corresponds to a net reduction in vehicle trips of approximately 34 percent.

Table 8
Weekday Proposed Project Trip Generation

Land Use	Units	ADT	AM Peak Hour			PM Peak Hour		
			Trips	*In*	*Out*	*Trips*	*In*	*Out*
Proposed Project Trip Generation								
De Anza Guest Housing	600 sites	5,178	258	103	155	468	234	234
Quality Restaurant	5000 sf	500	5	3	2	40	28	12
Total Gross Project Trips		**5,678**	**263**	**106**	**157**	**508**	**262**	**246**
Existing Uses to Be Removed								
De Anza RV Resort	-260 sites	-2,816	-112	-45	-67	-255	-153	-102
Campland	-556	-4,798	-239	-96	-143	-434	-217	-217
Total Trips to be Removed		**-7,614**	**-351**	**-140**	**-211**	**-688**	**-370**	**-319**
Total Net New Project Trips		**-1,936**	**-88**	**-34**	**-54**	**-180**	**-108**	**-73**

Source: Chen Ryan 2019.
Note: ADT = average daily trips.

Table 9 summarizes the predicted changes in traffic volumes for Saturdays. As shown in Table 9, on Saturdays, there would be a decrease in the number of project-related trips compared to existing conditions. A net reduction of approximately 2,547 ADT would result, and approximately 256 fewer trips would occur during the Saturday mid-day peak hour. This corresponds to a net reduction in vehicle trips of approximately 50% on an ADT basis, and a net reduction in vehicle trips of approximately 60% on a mid-day peak hour basis.

A halving of traffic volume would be needed in order to result in a 3 dB decrease in noise levels (all other things being equal); therefore, a 34 percent decrease in average daily traffic would result in a decrease of approximately 1.3 dB in weekday traffic noise overall. A 50 percent decrease in the daily Saturday traffic would result in a corresponding decrease of approximately 1.8 dB. A change in noise levels of 1 dB is not an audible change, while a change in noise levels of 3dB is considered to be barely audible in the context of community noise. Traffic-related noise would decrease slightly as a result of the proposed project. Therefore, project-related traffic noise would be less than significant.

Table 9
Saturday Proposed Project Trip Generation

Land Use	Units	ADT	Mid-Day Peak Hour PM Peak Hour		
			Trips	*In*	*Out*
Proposed Project Trip Generation					
De Anza Guest Housing	600 sites	4,596	366	220	146
Quality Restaurant	5,000 sf	525	58	34	24
Total Gross Project Trips		**5,121**	**424**	**254**	**170**
De Anza RV Resort		-260 sites	-3,409	-341	-204
Campland		-556 sites	-4,259	-339	-203
Total Trips to be Removed		**-7,668**	**-680**	**-408**	**-272**
Total Net New Project Trips		**-2,547**	**-256**	**-154**	**-102**

Source: Chen Ryan 2019.
Notes: ADT = average daily trips; sf = square feet.

Mitigation Measures

No mitigation is required for the proposed project.

Level of Significance after Mitigation

Impacts associated with the project would be less than significant without mitigation.

Project-Related Operational Noise

As described in Section 1.3, the proposed project would replace the developed Campland area with expansion of the wetlands and habitat area of the KFMR/NWP. This would be in accordance with the current MBPMP recommendation, which designates the area as habitat area. Further, the proposed project would replace the RV campgrounds and vacated De Anza Mobile Home Park with guest housing; up to 600 camping sites for RVs, cabins, or other eco-friendly accommodations and associated open space and facilities consistent with camping accommodations. The proposed guest housing would be located within the "boot" portion of the area, further from adjacent noise-sensitive land uses than currently; furthermore, the project would reduce the overall number of campsites from 816 to 600 sites. Additionally, as shown in Figure 3, Conceptual Land Use Plan, the areas of developed land would be reduced. The project would remove developed areas and replace them with natural habitat and recreation areas that are similar to those found throughout Mission Bay Park.

Changes are also proposed in the northern portion of the project area, where the athletic fields and tennis center would be enhanced with new bike lanes and the Mission Bay Boat and Ski Club would be replaced with additional athletic fields and a ranger station. The project also proposes to enhance the existing De Anza Cove Park area by adding a boat rental facility, restaurant, restrooms and picnic shelters to the park area. Overall, the removal of the developed areas of Campland, the evacuated mobile home park, the RV park, and the Boat and Ski Club is anticipated to result in a relocation of existing on-site noise sources away from nearby noise-sensitive receivers (which are primarily located along the northern and western project boundaries), and a corresponding net reduction in noise from the project site to adjacent noise-sensitive land uses. Therefore, noise impacts from the proposed project would be less than significant.

Mitigation Measures

No mitigation is required for the project.

Level of Significance after Mitigation

Impacts associated with the project would be less than significant without mitigation.

Noise Impacts to Sensitive Wildlife

The City's significance thresholds include noise limits in areas that could potentially affect sensitive wildlife. Demolition of existing Campland and the installation of expanded marshland habitat near the Multi-Habitat Planning Area (MHPA) may require mitigation to reduce noise to less than significant

levels. Noise impacts to the MHPA and sensitive avian species are discussed in greater detail in this project's Biological Technical Report (BTR). Impacts would be less than significant.

Mitigation Measures

Mitigation measures are provided in the project's BTR.

Level of Significance after Mitigation

Impacts associated with the project would be less than significant with provided mitigation.

6.2 Would the proposed project cause exposure of people to current or future transportation noise levels which exceed standards established in the Noise Element of the General Plan?

As discussed above, the proposed project would result in an overall reduction in vehicle trips on weekdays and on Saturdays. Therefore, the proposed project would not result in the exposure of people to current or future transportation noise levels that exceed standards established in the Transportation Element of the General Plan. For a detailed consistency analysis with the General Plan, please refer to Section 5.1, Land Use, of this project's Program Environmental Impact Report. Noise compatibility impacts associated with operation of the proposed project would be less than significant.

6.3 Would the proposed project result in land uses which are not compatible with aircraft noise levels as defined by an adopted ALUCP?

The proposed project includes land uses that are consistent with those within the MBPMP, including natural areas, active recreation, and recreational vehicles. Therefore, the proposed project would be consistent with the existing zoning and underlying community plan for the site. The nearest airports are San Diego International Airport and Montgomery-Gibbs Executive Airport, each located approximately 4 miles from the project site. Based upon the San Diego International Airport's Airport Land Use Compatibility Plan (San Diego County Regional Airport Authority 2014), the proposed project site is just north of the Airport Influence Area, and approximately 2.7 miles outside of the airport's 65 dBA CNEL noise contour. Based upon the Montgomery Field Airport Land Use Compatibility Plan (San Diego County Regional Airport Authority 2010). The proposed project site is just west of the Airport Influence Area, and approximately 3.5 miles outside of the airport's 65 dBA CNEL noise contour. Although aircraft departures are audible throughout the project area, aircraft noise contributes less than 65 dBA CNEL to the noise environment of the planning area. Neither

exterior nor interior noise compatibility impacts would occur at any of the proposed land uses. Therefore, implementation of the proposed project would result in a less-than-significant impact related to exposure to aircraft noise.

Mitigation Measures

No mitigation is required for the proposed project.

Level of Significance after Mitigation

Impacts associated with the proposed project would be less than significant without mitigation.

6.4 Would the proposed project result in the exposure of people to noise levels which exceed property line limits established in the Noise Abatement and Control Ordinance of the SDMC?

The proposed project site would fulfill a number of land use functions, including parks, playgrounds, water recreation facilities, nature preserve/wildlife preserve, and transient housing (i.e., guest housing). As discussed under Issue 1, above, the proposed project is anticipated to result in a reduction, not an in increase, in noise from the project site at adjacent noise-sensitive land uses. Based upon the short-term and long-term noise measurements conducted (see Tables 6 and 7), the project site does not currently exceed City of San Diego noise standards. Additionally, proposed future uses would be required to be in compliance with SDMC Section 59.5.0401. Thus, the proposed project would not expose people to noise levels in excess of the City's noise ordinance, and impacts would be less than significant.

Mitigation Measures

None required.

Level of Significance after Mitigation

Impacts associated with the project would be less than significant without mitigation.

6.5 Would the proposed project result in the exposure of people to significant temporary construction noise?

6.5.1. Project-Related Construction Noise

Construction of the proposed project would result in temporary localized increases in noise levels from on-site construction equipment, as well as from off-site trucks hauling construction

materials.[3] Noise generated by construction equipment will occur with varying intensities and durations during the various phases of construction. The typical maximum noise levels at a distance of 50 feet for various pieces of construction equipment anticipated to be used during construction are depicted in Table 10. Note that these are maximum noise levels, not an average sound level. The equipment operates in alternating cycles of full power and low power, thus, producing noise levels less than the maximum level. The average sound level of the construction activity also depends upon the amount of time that the equipment operates and the intensity of the construction during the time period.

Table 10
Construction Equipment Noise Levels

Equipment Type	Maximum Noise Level dB(A) at 50 feet
Backhoe	80
Compactor	82
Concrete Mixer	85
Crane	83
Generator	81
Loader	85
Paver	89
Roller	74
Truck	88
Saw	76

Source: FTA 2006.

Table 11 provides the construction timeline and potential phasing of the components that would come online to achieve the target milestones. The construction schedule has been developed based on available information provided by the City, typical construction practices, best engineering judgment, and the South Coast Air Quality Management District's California Emissions Estimator Model default equipment where appropriate. Construction phasing is intended to represent a schedule of anticipated activities for use in estimating potential proposed project-generated construction emissions.

Table 11
Construction Phasing Assumptions

Project Component	Construction Start Date	Construction End Date
Demolition	January 2021	April 2021

[3] Materials other than soil. No off-site import or export of soil is anticipated, as soil import and export will be balanced on site.

Table 11
Construction Phasing Assumptions

Project Component	Construction Start Date	Construction End Date
Site Preparation	April 2021	June 2021
Grading	June 2021	November 2021
Building Construction	November 2021	February 2026
Paving	February 2026	May 2026
Architectural Coating	May 2026	September 2026

For the analysis, it is generally assumed that heavy construction equipment would be operating at the site for approximately 8 hours per day, 5 days per week. The proposed construction equipment for the proposed project is shown in Table 12.

Table 12
Construction Scenario Assumptions

Construction Phase (Duration)	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	*Average Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Demolition (70 days)	16	0	3,308	Saws	1	8
				Excavators	3	8
				Rubber-Tired Dozers	2	8
Site Preparation (40 days)	18	0	0	Rubber-Tired Dozers	3	8
				Excavators	2	8
Grading (110 days)	20	0	173,390	Graders	1	8
				Rubber-Tired Dozers	1	8
				Scrapers	2	8
				Tractors/Loaders/ Backhoes	2	8
				Excavators	2	8
Building Construction (1,110 days)	414	104	0	Cranes	1	7
				Forklifts	3	8
				Generator Sets	1	8
				Tractors/Loaders /Backhoes	3	7
				Welders	1	8
Paving (75 days)	16	0	0	Paving Equipment	2	8
				Pavers	2	8
				Rollers	2	8
Architectural Coating (75 days)	84	0	0	Air compressors	1	6

Source: Air Quality Technical Report for the De Anza Cove Amendment – Mission Bay Park Master Plan.

The Federal Highway Administration's Roadway Construction Noise Model (RCNM) (FHWA 2008) was used to estimate construction noise levels at typical distances to the nearest noise-sensitive land uses. Input variables for RCNM consist of the receiver/land use types, the equipment type and number of each (e.g., two excavators, a loader, a dump truck), the duty cycle for each piece of equipment (e.g., percentage of hours the equipment typically works per day), and the distance from the noise-sensitive receiver. The RCNM has default duty cycle values for the various pieces of equipment, which were derived from an extensive study of typical construction activity patterns. Those default duty cycle values were utilized for this analysis. Construction noise levels were assessed at two distances for each construction phase: the distance from the nearest noise-sensitive receivers (for the purposes of the construction analysis, these were typically residential land uses) to the closest construction activities, and the more typical distance between the noise-sensitive receivers and the construction activities (the average distance between the near and far work areas). For this project, the nearest existing noise-sensitive land uses from project-related construction would be residences located to the north of Campland, on the north side of North Mission Bay Drive, at a distance of approximately 105 feet. More typically, construction activities would take place both near and far, at an average distance of approximately 725 feet from the nearest noise-sensitive land uses.

Table 13 summarizes the estimated construction noise levels resulting from the proposed project phases. Complete details of the noise calculations are provided in Appendix B of this document. As shown in Table 13, worst-case hourly average construction noise levels at the nearest noise-sensitive receivers would range from approximately 67 dBA to 80 dBA L_{eq}; more typically, when construction would take place at locations other than the nearest project boundary, hourly construction noise levels would range from approximately 51 to 65 dBA L_{eq}. As also shown in Table 13, worst-case 12-hour average construction noise levels at the nearest noise-sensitive receivers would range from approximately 65 dBA to 78 dBA $L_{eq\ 12\text{-}hr}$. Construction noise impacts during grading and paving are predicted to exceed 75 dBA $L_{eq\ 12\text{-}hr}$. This is considered to be a potentially significant impact. A mitigation measure (MM-NOI-1) is provided that would reduce this impact to a level of less than significant.

Table 13
Construction Noise Modeling Summary Results

Construction Phase	$L_{eq\ 1\text{-}hr}$ (dBA)		$L_{eq\ 12\text{-}hr}$ (dBA)*	
	Nearest Receiver (105')	*Acoustical Center (725')*	*Nearest Receiver (105')*	*Acoustical Center (725')*
Demolition	77	62	75	60
Site Preparation	77	61	75	59
Grading	80	65	**78**	63
Building Construction	75	61	73	59

Table 13
Construction Noise Modeling Summary Results

Construction Phase	$L_{eq\ 1\text{-}hr}$ (dBA)		$L_{eq\ 12\text{-}hr}$ (dBA)*	
	Nearest Receiver (105')	*Acoustical Center (725')*	*Nearest Receiver (105')*	*Acoustical Center (725')*
Paving	79	63	**78**	61
Architectural Coating	67	51	65	49

Source: Appendix B.
Notes: dBA = A-weighted decibel; L_{eq} (1-hr) = 1-hour A-weighted equivalent sound level; L_{eq} (12-hr) = 12-hour A-weighted equivalent sound level; bolded numbers signify that the City of San Diego's construction noise standard of 75 dBA L_{eq} (12-hr) would be exceeded.
* 12-hour average noise levels were derived by averaging the hours of anticipated activity hours over a 12-hour period, in the logarithmic domain. For example, the grading phase, in which a typical 8 hours of work would occur, would produce an hourly noise level when work is in progress of up to approximately 80 dBA Leq, but when averaged over a 12-hour day in which there would be 8 hours of "on" time and 4 hours of "off" time, the average noise level is approximately 78 dBA Leq (12-hour). It was assumed that all construction phases would similarly take place during an 8-hour work day.

Mitigation Measure

MM-NOI-1 Construction contractors for the proposed project shall implement the following measures to minimize short-term noise levels caused by construction activities. Measures to reduce construction noise shall be included in contractor specifications and shall include, but not be limited to, the following:

A. Construction activities shall be limited to the hours between 7:00 a.m. and 7:00 p.m. Construction is not allowed on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays (consistent with Section 59.5.0404 of the Municipal Code).

B. Properly outfit and maintain construction equipment with manufacturer-recommended noise reduction devices to minimize construction-generated noise.

C. Operate all diesel equipment with closed engine doors and equip with factory recommended mufflers.

D. Employ additional noise attenuation techniques as needed to reduce excessive noise levels so that construction noise would be in compliance with Municipal Code Section 59.5.0404. Such techniques shall include, but not be limited to, the construction of temporary sound barriers or sound blankets between construction sites and nearby noise-sensitive receptors.

E. Notify adjacent noise-sensitive receptors in writing within two weeks of any construction activity such as jackhammering, concrete sawing, asphalt removal, and largescale grading operations that would occur within 100 feet of the property line of the nearest noise-sensitive receptor. The extent and duration of the construction activity will be included in the notification.

F. Designate a "disturbance coordinator" who would be responsible for receiving and responding to any complaints about construction noise or vibration. The disturbance coordinator will determine the cause of the noise complaint and, if identified as a sound generated by construction area activities, will require that reasonable measures be implemented to correct the problem.

Level of Significance after Mitigation

Impacts associated with the project would be less than significant with the mitigation provided.

6.5.2. Project-Related Construction Vibration

Groundborne vibration from heavy equipment operations during the course of construction activities under the proposed project was evaluated using the methodology contained in Section 12.2 of the FTA Manual (FTA 2006) and compared with relevant vibration impact criteria. Groundborne vibration information related to the use of heavy construction equipment has been collected by the California Department of Transportation. This information indicates that continuous vibrations with a peak particle velocity of approximately 0.1 inches per second begin to annoy people (Caltrans 2004).

By use of administrative controls, such as scheduling construction activities with the highest potential to produce excessive vibration to hours with least potential to affect nearby properties, perceptible vibration can be kept to a minimum. Thus, impacts from construction-generated vibration would be less than significant, and no mitigation is required.

Mitigation Measures

None required.

Level of Significance after Mitigation

Impacts associated with the proposed project would be less than significant without mitigation.

7 REFERENCES

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APPENDIX A

Ambient Field Noise Measurement Data

DUDEK
CREATOR OF KERATA TECHNOLOGY

FIELD DATA REPORT

Field Noise Measurement Data

Record: 1114	
Project Name	*De anza*
Observer(s)	*Connor Burke*
Date	*2018-11-14*

Meteorological Conditions	
Temp (F)	*73*
Humidity % (R.H.)	*12*
Wind	*Light*
Wind Speed (MPH)	*5*
Wind Direction	*East*
Sky	*Sunny*

Instrument and Calibrator Information	
Instrument Name List	*(ENC) Rion NL-52*
Instrument Name	*(ENC) Rion NL-52*
Instrument Name Lookup Key	*(ENC) Rion NL-52*
Manufacturer	*Rion*
Model	*NL-52*
Serial Number	*553896*
Calibrator Name	*(ENC) LD CAL150*
Calibrator Name	*(ENC) LD CAL150*
Calibrator Name Lookup Key	*(ENC) LD CAL150*
Calibrator Manufacturer	*Larson Davis*
Calibrator Model	*LD CAL150*
Calibrator Serial #	*5152*
Pre-Test (dBA SPL)	*94*
Post-Test (dBA SPL)	*94*
Windscreen	*Yes*
Weighting?	*A-WTD*
Slow/Fast?	*Slow*
ANSI?	*Yes*

Monitoring	
Record #	*1*
Site ID	*ST3*
Site Location Lat/Long	*32.796149, -117.224899*
Begin (Time)	*09:57:00*
End (Time)	*10:12:00*
Leq	*55.1*
Lmax	*69.8*
Lmin	*41.8*
Other Lx?	*L90, L50, L10*
L90	*43.6*
L50	*47.3*
L10	*58*
Other Lx (Specify Metric)	*L*
Primary Noise Source	*Traffic*
Other Noise Sources (Background)	*Birds, Distant Aircraft, Distant Conversations / Yelling, Distant Traffic*
Other Noise Sources Additional Description	*Cars stopping at camp land gate. Engine starts. Helicopter*
Is the same instrument and calibrator being used as previously noted?	*Yes*
Are the meteorological conditions the same as previously noted?	*Yes*

Description / Photos

Site Photos

Photo	
	
Comments / Description	*Facing east*

Monitoring

Record #	*2*
Site ID	*ST2*
Site Location Lat/Long	*32.797600, -117.223636*
Begin (Time)	*10:20:00*
End (Time)	*10:35:00*
Leq	*43.2*
Lmax	*54.2*
Lmin	*40*
Other Lx?	*L90, L50, L10*
L90	*41*
L50	*42.6*
L10	*44.3*
Other Lx (Specify Metric)	*L*
Primary Noise Source	*Distant traffic*
Other Noise Sources (Background)	*Birds, Distant Traffic, Rustling Leaves*
Is the same instrument and calibrator being used as previously noted?	*Yes*
Are the meteorological conditions the same as previously noted?	*Yes*

Description / Photos

Site Photos

Photo	
Comments / Description	*Facing east.*

Monitoring

Record #	*3*
Site ID	*ST1*
Site Location Lat/Long	*32.797032, -117.226383*
Begin (Time)	*10:50:00*
End (Time)	*11:05:00*
Leq	*55.4*
Lmax	*69*
Lmin	*36.2*
Other Lx?	*L90, L50, L10*
L90	*38.7*
L50	*43.2*
L10	*59.2*
Other Lx (Specify Metric)	*L*
Primary Noise Source	*Traffic*
Other Noise Sources (Background)	*Birds, Distant Aircraft, Distant Conversations / Yelling, Distant Traffic, Rustling Leaves*
Is the same instrument and calibrator being used as previously noted?	*Yes*
Are the meteorological conditions the same as previously noted?	*Yes*

DUDEK
CREATOR OF KERATA TECHNOLOGY

FIELD DATA REPORT

Source Info and Traffic Counts

Number of Lanes	*2*
Lane Width (feet)	*10*
Roadway Width (feet)	*20*
Roadway Width (m)	*6.1*
Distance to Roadway (feet)	*20*
Distance to Roadway (m)	*6.1*
Distance Measured to Centerline or Edge of Pavement?	*Edge of Pavement*
Estimated Vehicle Speed (MPH)	*25*

Traffic Counts

Vehicle Count Summary	*A 24, MT 0, HT 0, B 0, MC 0*
Select Method for Recording Count Duration	*Enter Manually*
Counting Both Directions?	*Yes*
Count Duration (minutes)	*15*
Vehicle Count Tally	
Select Method for Vehicle Counts	*Enter Manually*
Number of Vehicles - Autos	*24*
Number of Vehicles - Medium Trucks	*0*
Number of Vehicles - Heavy Trucks	*0*
Number of Vehicles - Buses	*0*
Number of Vehicles - Motorcyles	*0*

Description / Photos

Site Photos

Photo

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CREATOR OF KERATA TECHNOLOGY

FIELD DATA REPORT

Monitoring

Record #	*4*
Site ID	*ST6*
Site Location Lat/Long	*32.794115, -117.216341*
Begin (Time)	*11:15:00*
End (Time)	*11:30:00*
Leq	*48.7*
Lmax	*60.2*
Lmin	*41.2*
Other Lx?	*L90, L50, L10*
L90	*42.7*
L50	*46.3*
L10	*51.2*
Other Lx (Specify Metric)	*L*
Primary Noise Source	*Industrial*
Other Noise Sources (Background)	*Birds, Distant Aircraft, Distant Conversations / Yelling, Distant Dog Barking, Distant Traffic, Rustling Leaves*
Other Noise Sources Additional Description	*Construction noise. Backup alarms.*
Is the same instrument and calibrator being used as previously noted?	*Yes*
Are the meteorological conditions the same as previously noted?	*Yes*

Description / Photos

Site Photos

Photo	
Comments / Description	*Facing north*

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FIELD DATA REPORT

Monitoring	
Record #	*5*
Site ID	*ST5*
Site Location Lat/Long	*32.797343, -117.214696*
Begin (Time)	*11:45:00*
End (Time)	*12:00:00*
Leq	*49.2*
Lmax	*51.6*
Lmin	*47.6*
Other Lx?	*L90, L50, L10*
L90	*48.1*
L50	*48.9*
L10	*50.6*
Other Lx (Specify Metric)	*L*
Primary Noise Source	*Distant traffic*
Other Noise Sources (Background)	*Birds, Distant Aircraft, Distant Conversations / Yelling, Distant Traffic*
Is the same instrument and calibrator being used as previously noted?	*Yes*
Are the meteorological conditions the same as previously noted?	*Yes*

Description / Photos

Site Photos

Photo	
	
Comments / Description	*Facing south*

DUDEK
CREATOR OF KERATA TECHNOLOGY

FIELD DATA REPORT

Monitoring	
Record #	*6*
Site ID	*ST4*
Site Location Lat/Long	*32.799760, -117.217265*
Begin (Time)	*12:10:00*
End (Time)	*12:25:00*
Leq	*48*
Lmax	*63.4*
Lmin	*44*
Other Lx?	*L90, L50, L10*
L90	*44.9*
L50	*46.2*
L10	*49.7*
Other Lx (Specify Metric)	*L*
Primary Noise Source	*Golfballs*
Other Noise Sources (Background)	*Birds, Distant Aircraft, Distant Conversations / Yelling, Distant Traffic, Rustling Leaves*
Is the same instrument and calibrator being used as previously noted?	*Yes*
Are the meteorological conditions the same as previously noted?	*Yes*

Description / Photos

Site Photos

Photo	
Comments / Description	*Facing south*

DUDEK
CREATOR OF KERATA TECHNOLOGY

FIELD DATA REPORT

Monitoring

Record #	*7*
Site ID	*ST7*
Site Location Lat/Long	*32.800996, -117.213878*
Begin (Time)	*12:35:00*
End (Time)	*12:45:00*
Leq	*70.6*
Lmax	*77.5*
Lmin	*57.5*
Other Lx?	*L90, L50, L10*
L90	*65.5*
L50	*69.8*
L10	*72.8*
Other Lx (Specify Metric)	*L*
Primary Noise Source	*Traffic*
Is the same instrument and calibrator being used as previously noted?	*Yes*
Are the meteorological conditions the same as previously noted?	*Yes*

Source Info and Traffic Counts

Number of Lanes	*5*
Lane Width (feet)	*10*
Roadway Width (feet)	*50*
Roadway Width (m)	*15.3*
Distance to Roadway (feet)	*20*
Distance to Roadway (m)	*6.1*
Distance Measured to Centerline or Edge of Pavement?	*Edge of Pavement*
Estimated Vehicle Speed (MPH)	*40*

Traffic Counts

Vehicle Count Summary	*A 700, MT 12, HT 5, B 0, MC 0*
Select Method for Recording Count Duration	*Enter Manually*
Counting Both Directions?	*Yes*
Count Duration (minutes)	*10*
Vehicle Count Tally	
Select Method for Vehicle Counts	*Enter Manually*
Number of Vehicles - Autos	*700*
Number of Vehicles - Medium Trucks	*12*
Number of Vehicles - Heavy Trucks	*5*
Number of Vehicles - Buses	*0*
Number of Vehicles - Motorcyles	*0*

Description / Photos

DUDEK
CREATOR OF KERATA TECHNOLOGY

FIELD DATA REPORT

Site Photos

Photo	

Monitoring

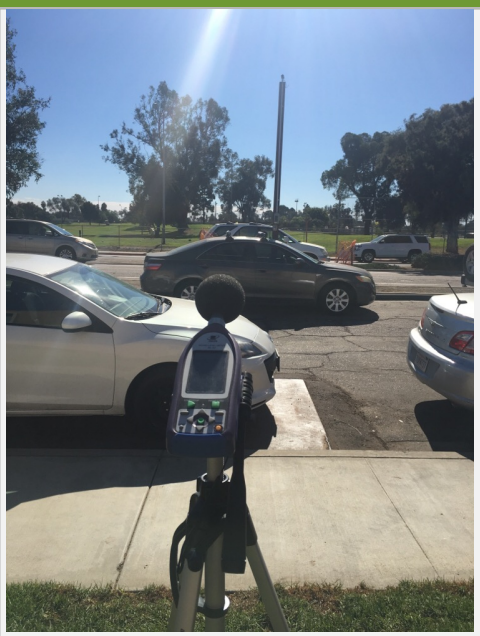
Record #	*8*
Site ID	*ST8*
Site Location Lat/Long	*32.802613, -117.219472*
Begin (Time)	*13:10:00*
End (Time)	*13:20:00*
Leq	*62.7*
Lmax	*68.6*
Lmin	*45.6*
Other Lx?	*L90, L50, L10*
L90	*49.2*
L50	*60.3*
L10	*67.3*
Other Lx (Specify Metric)	*L*
Primary Noise Source	*Traffic*
Other Noise Sources (Background)	*Distant Conversations / Yelling*
Is the same instrument and calibrator being used as previously noted?	*Yes*
Are the meteorological conditions the same as previously noted?	*No*

Source Info and Traffic Counts

Number of Lanes	*4*
Lane Width (feet)	*10*
Roadway Width (feet)	*40*
Roadway Width (m)	*12.2*
Distance to Roadway (feet)	*40*
Distance to Roadway (m)	*12.2*
Distance Measured to Centerline or Edge of Pavement?	*Edge of Pavement*
Estimated Vehicle Speed (MPH)	*40*

Traffic Counts	
Vehicle Count Summary	*A 360, MT 0, HT 0, B 2, MC 0*
Select Method for Recording Count Duration	*Enter Manually*
Counting Both Directions?	*Yes*
Count Duration (minutes)	*10*
Vehicle Count Tally	
Select Method for Vehicle Counts	*Enter Manually*
Number of Vehicles - Autos	*360*
Number of Vehicles - Medium Trucks	*0*
Number of Vehicles - Heavy Trucks	*0*
Number of Vehicles - Buses	*2*
Number of Vehicles - Motorcyles	*0*

Description / Photos

Site Photos	
Photo	
Comments / Description	*Facing south*

APPENDIX B

Construction Noise Modeling
Input/Output

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/3/2019
Case Description: De Anza Cove_Demolition

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Receiver 105'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Chain Saw	No	20		83.7	105	0
Excavator	No	40		80.7	105	0
Excavator	No	40		80.7	125	0
Excavator	No	40		80.7	125	0
Dozer	No	40		81.7	145	0
Dozer	No	40		81.7	145	0

Equipment		Calculated (dBA) *Lmax	Leq	Results Day Lmax	Noise Limits (dBA) Day Leq	Evening Lmax	Evening Leq	Night Lmax
Chain Saw		77.3	70.3	N/A	N/A	N/A	N/A	N/A
Excavator		74.3	70.3	N/A	N/A	N/A	N/A	N/A
Excavator		72.8	68.8	N/A	N/A	N/A	N/A	N/A
Excavator		72.8	68.8	N/A	N/A	N/A	N/A	N/A
Dozer		72.4	68.4	N/A	N/A	N/A	N/A	N/A
Dozer		72.4	68.4	N/A	N/A	N/A	N/A	N/A
	Total	77.3	77	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Acoustical Center 725'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Chain Saw	No	20		83.7	725	0
Excavator	No	40		80.7	725	0
Excavator	No	40		80.7	725	0
Excavator	No	40		80.7	725	0

Dozer	No	40	81.7	725	0	
Dozer	No	40	81.7	725	0	

		Results					
	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Chain Saw	60.5	53.5	N/A	N/A	N/A	N/A	N/A
Excavator	57.5	53.5	N/A	N/A	N/A	N/A	N/A
Excavator	57.5	53.5	N/A	N/A	N/A	N/A	N/A
Excavator	57.5	53.5	N/A	N/A	N/A	N/A	N/A
Dozer	58.4	54.5	N/A	N/A	N/A	N/A	N/A
Dozer	58.4	54.5	N/A	N/A	N/A	N/A	N/A
Total	60.5	61.6	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/3/2019
Case Description: De Anza Cove_Site Preparation

		---- Receptor #1 ----		
	Baselines (dBA)			
Description	Land Use	Daytime	Evening	Night
Nearest Receiver 105'	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Dozer	No	40		81.7	105	0
Dozer	No	40		81.7	105	0
Dozer	No	40		81.7	125	0
Excavator	No	40		80.7	125	0
Excavator	No	40		80.7	145	0

		Results					
	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Dozer	75.2	71.2	N/A	N/A	N/A	N/A	N/A
Dozer	75.2	71.2	N/A	N/A	N/A	N/A	N/A
Dozer	73.7	69.7	N/A	N/A	N/A	N/A	N/A
Excavator	72.8	68.8	N/A	N/A	N/A	N/A	N/A
Excavator	71.5	67.5	N/A	N/A	N/A	N/A	N/A
Total	75.2	76.9	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Acoustical Center 725'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	725	0
Dozer	No	40		81.7	725	0
Dozer	No	40		81.7	725	0
Excavator	No	40		80.7	725	0
Excavator	No	40		80.7	725	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Dozer		58.4	54.5	N/A	N/A	N/A	N/A	N/A
Dozer		58.4	54.5	N/A	N/A	N/A	N/A	N/A
Dozer		58.4	54.5	N/A	N/A	N/A	N/A	N/A
Excavator		57.5	53.5	N/A	N/A	N/A	N/A	N/A
Excavator		57.5	53.5	N/A	N/A	N/A	N/A	N/A
	Total	58.4	61.1	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/3/2019
Case Description: De Anza Cove_Grading

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Receiver 105'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		105	0
Dozer	No	40		81.7	105	0
Scraper	No	40		83.6	125	0
Scraper	No	40		83.6	125	0
Tractor	No	40	84		145	0

Front End Loader	No	40		79.1	145	0
Excavator	No	40		80.7	165	0
Excavator	No	40		80.7	165	0

Results

	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Grader	78.6	74.6	N/A	N/A	N/A	N/A	N/A
Dozer	75.2	71.2	N/A	N/A	N/A	N/A	N/A
Scraper	75.6	71.6	N/A	N/A	N/A	N/A	N/A
Scraper	75.6	71.6	N/A	N/A	N/A	N/A	N/A
Tractor	74.8	70.8	N/A	N/A	N/A	N/A	N/A
Front End Loader	69.9	65.9	N/A	N/A	N/A	N/A	N/A
Excavator	70.3	66.4	N/A	N/A	N/A	N/A	N/A
Excavator	70.3	66.4	N/A	N/A	N/A	N/A	N/A
Total	78.6	79.8	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Acoustical Center 725'	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Grader	No	40	85		725	0
Dozer	No	40		81.7	725	0
Scraper	No	40		83.6	725	0
Scraper	No	40		83.6	725	0
Tractor	No	40	84		725	0
Front End Loader	No	40		79.1	725	0
Excavator	No	40		80.7	725	0
Excavator	No	40		80.7	725	0

Results

	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Grader	61.8	57.8	N/A	N/A	N/A	N/A	N/A
Dozer	58.4	54.5	N/A	N/A	N/A	N/A	N/A
Scraper	60.4	56.4	N/A	N/A	N/A	N/A	N/A
Scraper	60.4	56.4	N/A	N/A	N/A	N/A	N/A
Tractor	60.8	56.8	N/A	N/A	N/A	N/A	N/A
Front End Loader	55.9	51.9	N/A	N/A	N/A	N/A	N/A

Excavator		57.5	53.5	N/A	N/A	N/A	N/A	N/A
Excavator		57.5	53.5	N/A	N/A	N/A	N/A	N/A
	Total	61.8	64.5	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/3/2019
Case Description: De Anza Cove_Building Construction

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Nearest Receiver 105'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	105	0
Man Lift	No	20		74.7	105	0
Man Lift	No	20		74.7	125	0
Man Lift	No	20		74.7	125	0
Generator	No	50		80.6	145	0
Backhoe	No	40		77.6	145	0
Tractor	No	40	84		165	0
Front End Loader	No	40		79.1	165	0
Welder / Torch	No	40		74	165	0

			Results				
	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Crane	74.1	66.1	N/A	N/A	N/A	N/A	N/A
Man Lift	68.3	61.3	N/A	N/A	N/A	N/A	N/A
Man Lift	66.7	59.8	N/A	N/A	N/A	N/A	N/A
Man Lift	66.7	59.8	N/A	N/A	N/A	N/A	N/A
Generator	71.4	68.4	N/A	N/A	N/A	N/A	N/A
Backhoe	68.3	64.3	N/A	N/A	N/A	N/A	N/A
Tractor	73.6	69.7	N/A	N/A	N/A	N/A	N/A
Front End Loader	68.7	64.8	N/A	N/A	N/A	N/A	N/A
Welder / Torch	63.6	59.7	N/A	N/A	N/A	N/A	N/A
Total	74.1	74.8	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Acoustical Center 725'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	725	0
Man Lift	No	20		74.7	725	0
Man Lift	No	20		74.7	725	0
Man Lift	No	20		74.7	725	0
Generator	No	50		80.6	725	0
Backhoe	No	40		77.6	725	0
Tractor	No	40	84		725	0
Front End Loader	No	40		79.1	725	0
Welder / Torch	No	40		74	725	0

	Calculated (dBA)		Results Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Crane	57.3	49.4	N/A	N/A	N/A	N/A	N/A
Man Lift	51.5	44.5	N/A	N/A	N/A	N/A	N/A
Man Lift	51.5	44.5	N/A	N/A	N/A	N/A	N/A
Man Lift	51.5	44.5	N/A	N/A	N/A	N/A	N/A
Generator	57.4	54.4	N/A	N/A	N/A	N/A	N/A
Backhoe	54.3	50.4	N/A	N/A	N/A	N/A	N/A
Tractor	60.8	56.8	N/A	N/A	N/A	N/A	N/A
Front End Loader	55.9	51.9	N/A	N/A	N/A	N/A	N/A
Welder / Torch	50.8	46.8	N/A	N/A	N/A	N/A	N/A
Total	60.8	60.9	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/3/2019
Case Description: De Anza Cove_Paving

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Receiver 105'	Residential	65	60	55

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

All Other Equipment > 5 HP	No	50	85	105	0
All Other Equipment > 5 HP	No	50	85	105	0
Paver	No	50	77.2	125	0
Paver	No	50	77.2	125	0
Roller	No	20	80	145	0
Roller	No	20	80	145	0

Results

	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
All Other Equipment > 5 HP	78.6	75.5	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	78.6	75.5	N/A	N/A	N/A	N/A	N/A
Paver	69.3	66.3	N/A	N/A	N/A	N/A	N/A
Paver	69.3	66.3	N/A	N/A	N/A	N/A	N/A
Roller	70.8	63.8	N/A	N/A	N/A	N/A	N/A
Roller	70.8	63.8	N/A	N/A	N/A	N/A	N/A
Total	78.6	79.3	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Acoustical Center 725'	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
All Other Equipment > 5 HP	No	50	85		725	0
All Other Equipment > 5 HP	No	50	85		725	0
Paver	No	50		77.2	725	0
Paver	No	50		77.2	725	0
Roller	No	20		80	725	0
Roller	No	20		80	725	0

Results

	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
All Other Equipment > 5 HP	61.8	58.8	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	61.8	58.8	N/A	N/A	N/A	N/A	N/A
Paver	54	51	N/A	N/A	N/A	N/A	N/A
Paver	54	51	N/A	N/A	N/A	N/A	N/A
Roller	56.8	49.8	N/A	N/A	N/A	N/A	N/A
Roller	56.8	49.8	N/A	N/A	N/A	N/A	N/A
Total	61.8	62.9	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/3/2019
Case Description: De Anza Cove_Architectural Coating

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Nearest Receiver 105'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	105	0

Results

	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Compressor (air)	71.2	67.2	N/A	N/A	N/A	N/A	N/A
Total	71.2	67.2	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Acoustical Center 725'	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	725	0

Results

	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Compressor (air)	54.4	50.5	N/A	N/A	N/A	N/A	N/A
Total	54.4	50.5	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.