Six Flags Ride Project
Draft Initial Study Mitigated Negative Declaration

Lead Agency:
City of Vallejo
555 Santa Clara Street
Vallejo, California 94590

Technical Assistance:
Stantec Consulting Services Inc.
1340 Treat Boulevard, Suite 300
Walnut Creek, California 94597

October 22, 2018

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Acronyms

Applicant	Six Flags Discovery Kingdom
AB	Assembly Bill
BAAQMD	Bay Area Air Quality Management District
BMP	best management practices
CAAQS	California Ambient Air Quality Standards
CAP	Climate Action Plan
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
City	City of Vallejo
CMA	Congestion Management Agency
CMP	Congestion Management Program
CNPS	California Native Plant Society
CO	Carbon monoxide
dB	Decibel
dBA	A-weighted sound level
DOC	California Department of Conservation
DPM	Diesel Particulate Matter
EIR	Environmental Impact Report
EPA	U. S. Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FMMP	Farmland Mapping and Monitoring Program
GCP	General Construction Permit
GHG	Greenhouse Gas
Go-Kart Ride	Thunder Road Speedway Go-Kart Track Ride
HCP	Habitat Conservation Plan
I-80	Interstate 80
ISMND	Initial Study Mitigated Negative Declaration
Leq	equivalent continuous sound level
Lmax	maximum instantaneous noise level occurring over a sample period
MLD	most likely descendant
MRP	Municipal Regional Stormwater Permit
MTCO2e	million metric tons of carbon dioxide equivalent
NAAQS	National Ambient Air Quality Standards
NOA	naturally occurring asbestos
NO_2	Nitrogen dioxide

NOx	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
Pb	lead
PCE	passenger car equivalents
$PM_{2.5}/PM_{10}$	Particulate matter
Ppb	parts per billion
ppm	parts per million
PRC	Public Resources Code
proposed project	Six Flags Ride Project
QSI	Qualified Safety Inspector
RCNM	Roadway Construction Noise Model
ROG	Reactive Organic Gases
SCWA	Solano County Water Agency
SFBAAB	San Francisco Bay Area Air Basin
SIP	State Implementation Plans
SO_2	sulfur dioxide
STA	Solano Transportation Author
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
Theme Park	Six Flags Discovery Kingdom Theme Park
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VMT	Vehicle Miles Traveled

INITIAL STUDY MITIGATED NEGATIVE DECLARATION

PROJECT TITLE: Six Flags Ride Project

PROJECT DESCRIPTION: The Six Flags Ride Project (proposed project) involves the construction of a new roller coaster ride at the Six Flags Discovery Kingdom Theme Park. The proposed project would replace the Thunder Road Speedway Go-Kart Track Ride with a new roller coaster ride that would be approximately 117 feet tall. The construction and operation of the proposed project requires the approval of a Major Use Permit to amend the master plan and a Site Development permit to allow the construction of the roller coaster ride from the City of Vallejo Planning Commission.

PROJECT LOCATION: The proposed project is located within the existing 135-acre Six Flags Discovery Kingdom Theme Park at 1001 Fairgrounds Drive in Vallejo, California.

NAME OF LEAD AGENCY:
City of Vallejo
555 Santa Clara Street
Vallejo, CA 94590

LEAD AGENCY CONTACT INFORMATION:
Michelle Hightower, Senior Planner
Phone: (707) 648-4506
Email: Michelle.Hightower@cityofvallejo.net

NAME OF AGENCY CARRYING OUT PROJECT:
Six Flags Discovery Kingdom
1001 Fairgrounds Drive
Vallejo, CA 94589

DETERMINATION: The City of Vallejo has determined that a) all potentially significant or significant impacts evaluated in the Initial Study Mitigated Negative Declaration (ISMND) have been analyzed; and b) with respect to each significant impact on the environment, either of the following apply: 1) changes or alterations have been required in or incorporated into the proposed project that avoid or mitigate the significant impacts to a level of less than significant; or 2) those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency. The ISMND and supporting documents are available at the City of Vallejo Community and Economic Development Department, located at 555 Santa Clara Street, Vallejo, CA 94590, and City of Vallejo's website.

By: _____ Date: October 22, 2018
Michelle Hightower, Senior Planner

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1.0 PROJECT INFORMATION

1.1 PROJECT TITLE

Six Flags Ride Project

1.2 LEAD AGENCY NAME AND ADDRESS

City of Vallejo
555 Santa Clara Street
Vallejo, CA 94590

1.3 LEAD AGENCY CONTACT

Michelle Hightower, Senior Planner
Planning & Development Services Department,
Planning Division
Phone: (707) 648-4506
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1.4 APPLICANT NAME AND ADDRESS

Jim Fend, Director of Maintenance and Construction
Six Flags Discovery Kingdom
1001 Fairgrounds Drive
Vallejo, CA 94589

1.5 GENERAL PLAN DESIGNATION AND ZONING

The project site is currently designated Retail/Entertainment in the City of Vallejo's (City) General Plan 2040 and zoned Public Facilities by the Vallejo Municipal Code Zoning Ordinance.

1.6 PURPOSE

The purpose of the Six Flags Ride Project (proposed project) is to replace the Thunder Road Speedway Go-Kart Track Ride (Go-Kart Ride) at Six Flags Discovery Kingdom Theme Park (Theme Park) with a new roller coaster ride that is approximately 117 feet in height. This Draft Initial Study Mitigated Negative Declaration (ISMND) has been prepared to evaluate the project for potential environmental effects in compliance with the California Environmental Quality Act (CEQA). The City is the lead agency under CEQA and has the principal responsibility for carrying out or approving a project that may have a significant effect on the environment. This ISMND has been prepared in anticipation of determining that all potentially significant impacts from implementing the project can be mitigated to less than significant levels. This document has been prepared in accordance with CEQA, Public Resources Code (PRC) Section §21000 et seq., and the State CEQA Guidelines, California Code of Regulations (CCR), Title 14, Section §15000 et seq.

1.7 PROJECT LOCATION

The proposed project is located within the existing 135-acre Theme Park (Assessor Parcel Number 005-223-410 and -370). The Theme Park is located along Fairgrounds Drive, between State Route 37 and Interstate 80 (I-80), in Vallejo, California (Figure 1.0-1).

1.8 EXISTING SETTING

The project site consists of a 0.94-acre area in the southeast portion of the Theme Park and is currently occupied by the Go-Kart Ride. The 135-acre Theme Park contains over 40 rides and attractions that include thrill rides, other rides and play areas, wildlife exhibits, food and game concessions, and live entertainment (Six Flags 2018). Ride attractions at the Theme Park range from 25 feet to 150 feet in height. The project site is adjacent to other theme park rides including "The Joker" roller coaster ride and the "Superman Ultimate Flight" roller coaster ride, which are 100 and 150 feet tall, respectively. The project site is bordered by Fairgrounds Drive to the east and the Theme Park visitor parking lot to the south.

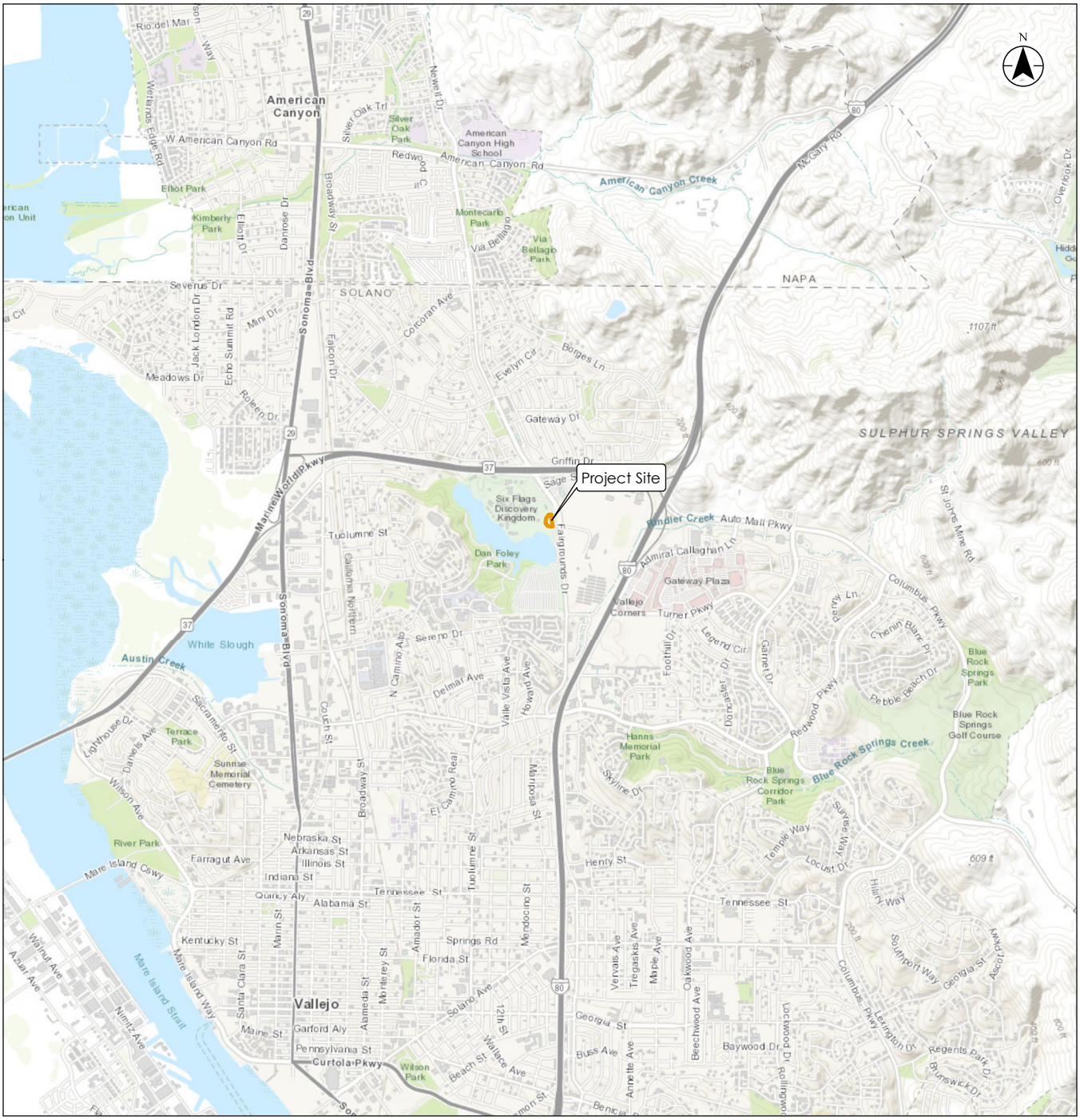
The project site is paved and includes the concrete track for the Go-Kart Ride which is bordered by a series of tires. The starting line for the Go-Kart Ride and the entrance are covered by metal awnings. Two storage buildings and an area to store the go-karts are adjacent to the east side of the track. Landscaping and ornamental trees are planted in the center of the track. There are existing light poles (at least 6 feet tall) within the landscaped areas and along the inner perimeter of the track for nighttime lighting.

Six Flags is open year-round on weekends typically from 11:00 a.m. to 6:00 p.m. Daily operations begin Memorial Day weekend and continue through mid-August. From May through August, the Theme Park is open daily from 10:30 a.m. to 8:00 p.m. In addition, Six Flags is open during holidays when the Theme Park hosts annual special events such as July 4th Fest, Halloween Fright Fest, and Holiday in the Park.

1.9 SURROUNDING LAND USES

The surrounding land uses include:

- **North.** North of the project site is the existing 150-foot-high Superman Ultimate Flight roller coaster and approximately 62-foot-high Harley Quinn Crazy Coaster. Farther north, the Theme Park's northern boundary is bordered by State Route 37.
- **South.** Directly south of the project site is a visitor parking lot and the Dolphin Discovery Classroom/Dolphin Photo attraction, which is located along the Theme Park's southern boundary. Lake Chabot is located approximately 300 feet south of the project site.
- **East.** To the east of the project site is the Solano County Fairgrounds which is separated from the project site by Fairgrounds Drive. This area comprises the Solano 360 Specific Plan Area and currently contains the County Exhibition Hall, several smaller buildings, the former racetrack and horse stables area, and fairgrounds parking lot which is often used for overflow parking for Six Flags. The Courtyard by Marriott Hotel is northeast of the project site.
- **West.** Attractions including the Penguin water ride and the Joker roller coaster are west of the project site. The roller coaster is approximately 100 feet tall. Lake Chabot is adjacent to the western boundary of the Theme Park. Single family residences and the Vallejo Water Treatment Facility are west of Lake Chabot, approximately 0.50 mile west of the project site.



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Project Location

Vallejo, California

Client/Project

Six Flags Ride Project

Figure No.

1.0-1

Title

Regional Overview

Notes

1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
2. Base features produced under license with the Ontario

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1.10 REQUIRED PERMITS AND APPROVALS

This ISMND will be used by the City, as the Lead Agency, to evaluate the potential environmental impacts of the proposed project. For the proposed project to be implemented, a series of actions and approvals are required. Anticipated project approvals/actions include, but are not limited to, the following:

- Adoption of the Mitigated Negative Declaration: City of Vallejo Planning Commission
- Approval of a Major Use Permit and Site Development Permit: City of Vallejo Planning Commission
- Stormwater Control Plan and an Operations and Maintenance Plan: City of Vallejo

1.11 CEQA AND PUBLIC AND AGENCY REVIEW

CEQA requires that proponents disclose the significant impacts to the environment from a proposed project. The intent of CEQA is to foster good planning and to consider environmental issues during the planning process. The City is the Lead Agency under CEQA for the preparation of this ISMND. The CEQA Guidelines (Section 21067) define the Lead Agency as: "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment." Approval of the proposed project is considered a public agency discretionary action and, therefore, the proposed project is subject to compliance with CEQA. The City has directed the preparation of an analysis to comply with CEQA.

Stantec has prepared this document at the direction of the City. The purpose of this document is to disclose the environmental consequences of implementing the proposed project to decision-makers and the public. The public, City residents, and other local and state resource agencies will be given the opportunity to review and comment on this document during a 20-day public-review period. Comments received during the review period will be considered by the City prior to certification of this ISMND and project approval.

The public review period will commence on October 22, 2018, and end on November 15, 2018, pursuant to CEQA Guidelines Section 15105. Written comments (including via e-mail), must be received by 5 p.m. on November 15, 2018. Written comments should be addressed to:

Michelle Hightower, Senior Planner
Planning & Development Services Department
Planning Division
555 Santa Clara Street
Vallejo, CA 94590
Phone: (707) 648-4506
Email: Michelle.Hightower@cityofvallejo.net

The ISMND and supporting documents are available at the City of Vallejo, located at the above address and on the City of Vallejo's website.

1.12 SCOPE OF THIS STUDY

As the Lead Agency under CEQA, the City is responsible for compliance with the environmental review process prescribed by the CEQA guidelines. This Initial Study focuses on the environmental issues identified as potentially significant in the CEQA checklist and by CEQA guidelines. This Initial Study evaluates potentially significant effects on the environment and identifies mitigation measures to mitigate the effects to a point where clearly no significant effect on the environment would occur. A complete Project Description is included in Section 2.0. A Summary of the environmental impact findings and mitigation measures are included in Section 3.0. Evaluations of the CEQA Appendix G checklist questions are analyzed in Section 4.0 and references are included at the end of each resource section.

1.13 DOCUMENT ORGANIZATION

This Draft ISMND is organized as follows:

Section 1.0: Project Information. This section introduces the proposed project and describes the purpose and organization of this document.

Section 2.0: Project Description. This section describes the purpose and need for the proposed project, identifies project objectives, and provides a detailed description of the proposed project.

Section 3.0: Summary of Findings: Impacts and Mitigations. This section provides a summary of the impacts and mitigation measures identified in the ISMND.

Section 4.0: Environmental Checklist and Environmental Evaluation. This section presents an analysis of a range of environmental issues identified in the CEQA Environmental Checklist and determines if the proposed project would result in no impact, a less than significant impact, a less than significant impact with mitigation incorporated, or a potentially significant impact for each topic. If impacts are determined to be potentially significant after incorporation of applicable mitigation measures, an Environmental Impact Report (EIR) would be required. For this proposed project, however, mitigation measures have been incorporated, where needed, that would reduce all potentially significant impacts to a less than significant level. References are included at the end of each resource section.

Section 5.0: List of Preparers. This section identifies the report preparers.

1.14 REFERENCES

Six Flags Discovery Kingdom. 2018. About Six Flags Discovery Kingdom. Accessed July 6, 2018. https://www.sixflags.com/discoverykingdom/attractions/newfor2019.

2.0 PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

The proposed project is to remove the existing Go-Kart Ride and construct a new a new roller coaster ride in the southeast area of the Theme Park (Figure 2.0-1). The new roller coaster structure would be approximately 117 feet tall and include a control center on a 0.94-acre site (Figure 2.0-2, Figure 2.0-3). The construction and operation of the proposed project requires the approval of a Major Use Permit and Site Development Permit from the City.

2.2 GENERAL PLAN LAND USE DESIGNATION AND ZONING

The General Plan 2040 land use designation for the project site is Retail/Entertainment (City of Vallejo 2017). The Retail/Entertainment designation is defined as follows:

"The Retail/Entertainment designation provides for general retail, services, and entertainment for local residents as well as consumers and visitors from the wider region. Permitted land uses include shopping centers, auto sales, amusement parks, hotels, restaurants, service stations, marine-related operations, offices, general retail, personal and business services, and similar commercial uses. The maximum permitted floor area ratio in the Retail/Entertainment designation is 1.5."

The zoning for the project site is Public Facilities and Quasi-Public Facilities District (PF) and is defined as follows:

> *"The purpose of the Public Facilities and Quasi-Public Facilities District is to create and establish regulations for a public and quasi-public facilities zoning district, in which parks, governmental, educational, public utility and other community facilities of a public nature are the principal use. The intent of this district is to implement those policies of the land use element of the Vallejo general plan which relate to governmental, and quasi-governmental services, schools, parks and open space areas."*

The General Plan 2040 update was adopted by City Council in August 2017. At that time, an Interim Zoning Policy was also adopted to provide consistency with the Vallejo Municipal Code Zoning Ordinance until an update of the Zoning Code is adopted. Based on the Interim Zoning Policy, the PF zone is consistent with the General Plan 2040 Retail/Entertainment land use designation.

A Major Use Permit was granted in 2005 (Use Permit #04-0011) as the master plan for the Theme Park. This Use Permit defines the Theme Park by four zones (Figure 2.0-4) which identify specific performance standards, height limitations, intensities, and type of activities that can occur within each zone. New attractions and improvements are required to meet the standards for each of the four zones as follows:

- **Zone 1** fronts Lake Chabot, extending from the northwest near State Route 37 to the southeast edge of the current park attractions. The purpose of this zone is to buffer Lake Chabot, Dan Foley Park, and the residences to the south and west from the more active areas of Six Flags. The attractions are low impact and predominantly passive. The maximum height for open air rides in this zone is 25 feet.

- **Zone 2** includes the interior portion of the park, north of Zone 1. Animal exhibits and mild to moderate intensity attractions are integrated to buffer residential neighborhoods to the south and west. The maximum height of open air rides in this zone is 75 feet.
- **Zone 3** is located north of Zone 2. Moderate to intense attractions occupy this zone. The maximum height of open air rides in this zone is 100 feet.
- **Zone 4** is located adjacent to State Route 37 and Fairgrounds Drive. Moderate to intense attractions are developed in this zone with State Route 37 as the buffer for residential areas to the north. The maximum height for open air rides in this zone is 150 feet.

The project site is within an undefined zone of the Theme Park (Figure 2.0-4). Therefore, Six Flags Discovery Kingdom (Applicant) is proposing to designate this undefined area as Zone 4, which allows for open air rides between 100 feet and 150 feet tall. The designation of this undefined area as Zone 4 requires the approval of a Major Use Permit to amend the master plan and a Site Development Permit to allow the construction of the roller coaster ride from the City of Vallejo Planning Commission.

2.3 PROJECT COMPONENTS

2.3.1 Proposed Roller Coaster Structure

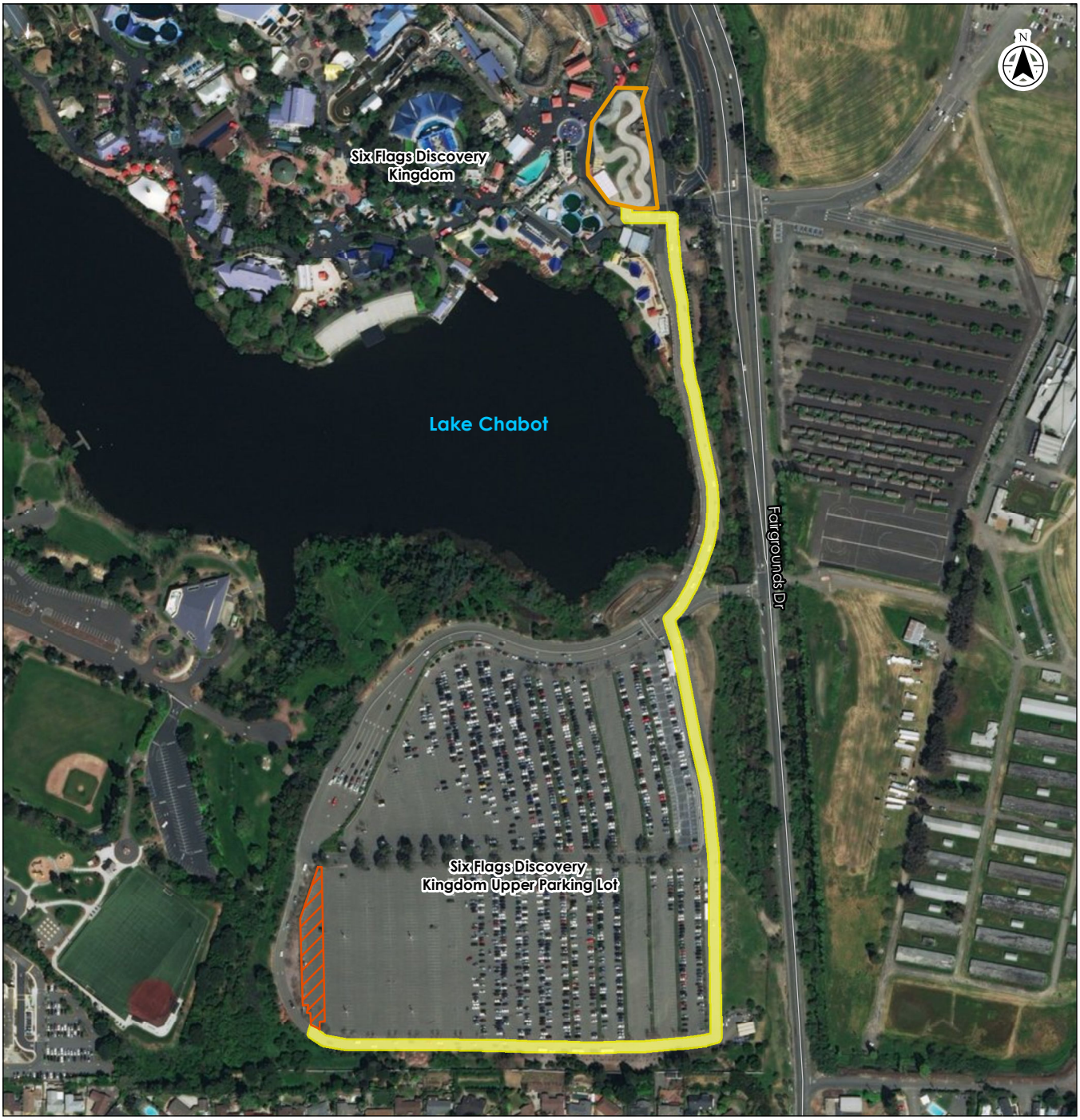
The new steel roller coaster track would be approximately 117 feet tall (Figure 2.0-3). The total area of the proposed roller coaster structure would be 9,720 square feet. The steel roller coaster track would consist of a lattice frame track and support structure accompanied with five ride vehicles to provide seats for up to eight passengers. The ride vehicles would primarily consist of steel with fiberglass parts and include steel restraints. The roller coaster tracks and the ride vehicles would be painted with black and yellow accents.

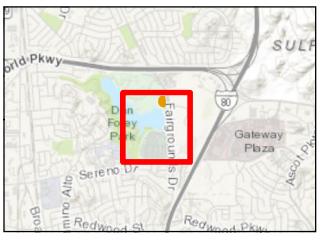
2.3.2 Proposed Control Center

A control center would be installed at the north end of the project site to operate the proposed ride. The size of the control center would be up to 15 feet by 15 feet and approximately 15 feet in height. The control center would be built on a concrete foundation and constructed of wood materials and siding. Other components include the control panels, a storage room, and a sound system cabinet. The control center building would be painted with black and yellow accents to complement the appearance of the roller coaster track.

2.3.3 Project Ingress and Egress

The proposed project would construct a new entrance queue building and queue line area. Access to the ride would be located on the west side of the project site. The queue line sections would lead to an open loading station platform for passengers to load onto the ride vehicles. An open off-loading station platform would be constructed on the east side. Once the ride is over, ride passengers would be directed to exit the project site from the east side of the ride. The exit route would lead passengers to the north side of the entrance queue building which has a retail component, at the western boundary of the project site and allow them to enter back into the Theme Park. The loading and off-loading station platforms would be approximately 55 feet by 35 feet and at grade in height. The entrance building would be themed in grey with black and yellow accents consistent with the overall design of the proposed project.





Legend

- Project Site (1.0 acre)
- Proposed Staging Area (0.50 acre)
- Access Road

0 200 400 Feet

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Project Location

Vallejo, California

Client/Project

Six Flags Ride Project

Figure No.

2.0-1

Title

Project Site Location

Notes

1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
2. Base features produced under license with the Ontario

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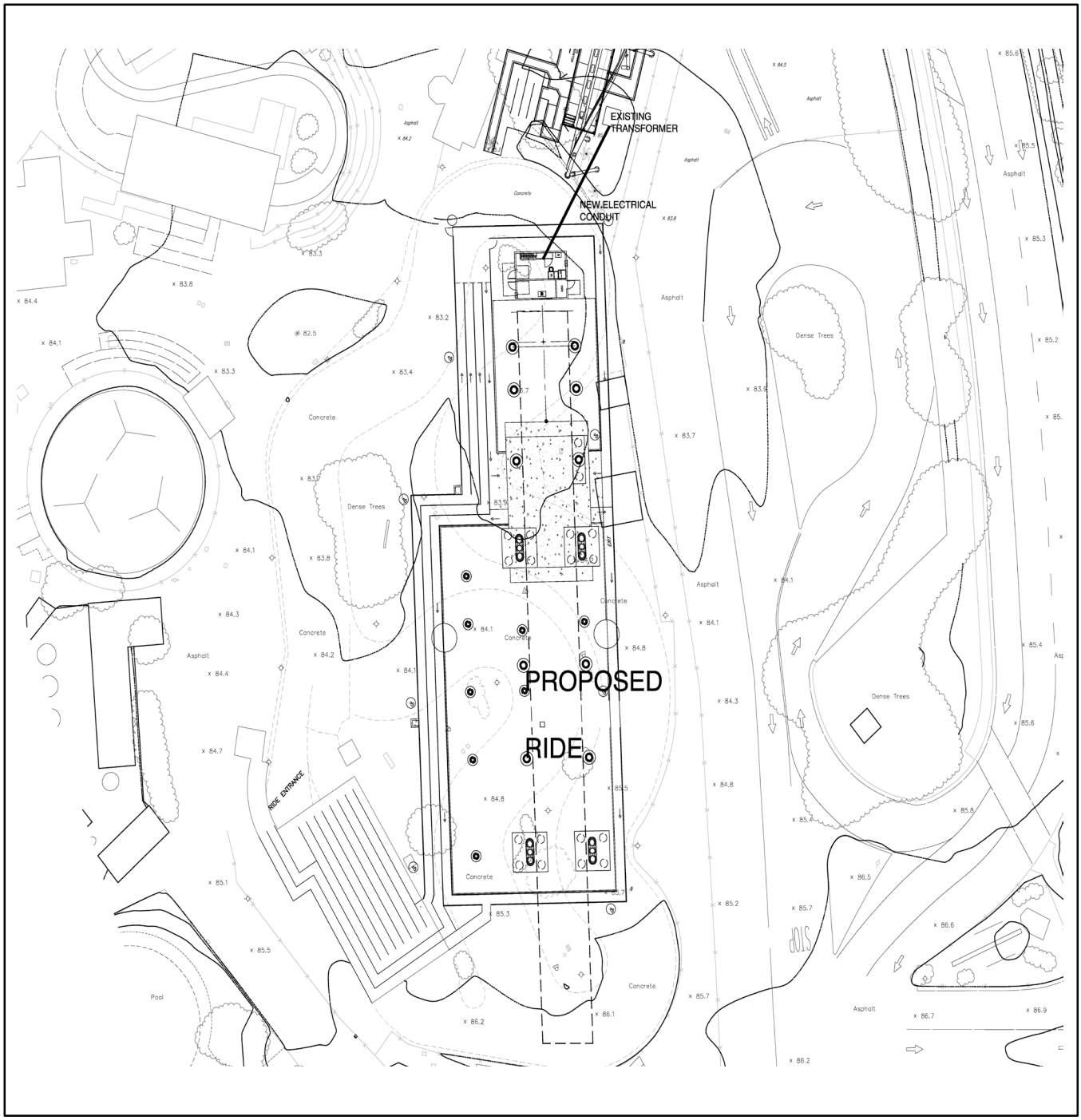

Notes
1. Source: Six Flags Discovery Kingdom

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Project Location

Vallejo, California

Client/Project

Six Flags Ride Project

Figure No.

2.0-2

Title

Preliminary Site Plan

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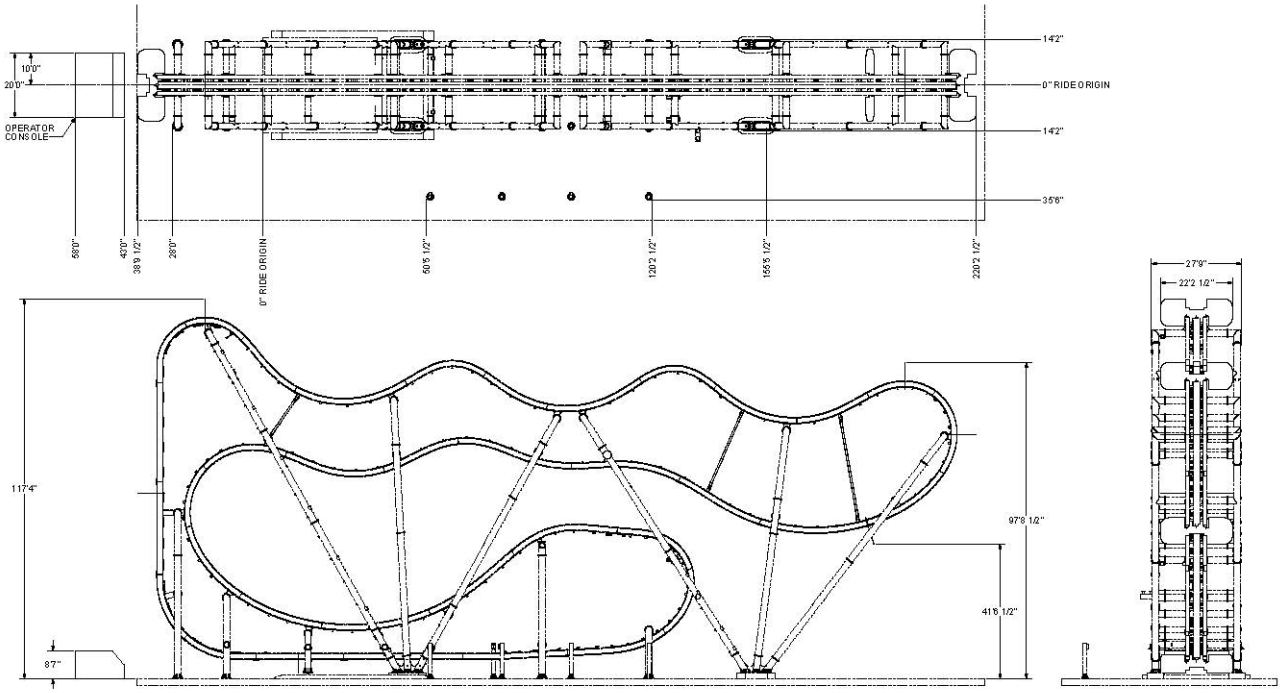

Notes
1. Source: Six Flags Discovery Kingdom

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Project Location

Vallejo, California

Client/Project

Six Flags Ride Project

Figure No.

2.0-3

Title

Proposed Ride Elevation

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Notes
1. Source: Six Flags Discovery Kingdom

Stantec

Project Location

Vallejo, California

Client/Project

Six Flags Ride Project

Figure No.

2.0-4

Title

Six Flags Theme Park Height Zones

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2.3.1 Utilities

The proposed project includes a new underground cable to connect the control center to the on-site transformer. The on-site transformer would provide power to the proposed project and the existing Harley Quinn Roller Coaster to the north. The new cable would be 80 feet in length and enclosed within an underground electrical conduit, approximately 24 inches deep. The proposed underground cable would provide 480 volts of AC power. No additional utility infrastructure development is expected for the proposed project.

2.3.2 Lighting and Sound

For security and safety purposes, the proposed project would incorporate accent lights to illuminate the roller coaster track and loading platforms during nighttime operation. Lighting would also be installed in the control center and along the project site's access paths. The proposed project includes speakers to communicate to ride passengers and to play themed music.

2.4 CONSTRUCTION SCHEDULE AND EQUIPMENT

The anticipated construction schedule for the proposed project would occur over a 9-month period, currently anticipated to begin January 2019, and end early September 2019. Construction of the proposed project would take place during the Theme Park's off-peak season (mid-September through mid-May), Monday through Friday between 7:00 a.m. and 6:00 p.m. However, daytime construction activities may occur on Saturdays in the event weather delays impact the proposed project's construction schedule. Construction of the proposed project would require a crew of up to 12 workers.

During construction of the proposed project the following types of construction equipment would include, but not be limited to, excavator, backhoe, bobcat with hydraulic breaker, 10-wheel dump truck, fork lift, concrete pump and truck, work platforms, hydraulic boom crane, trailer, and flatbed trucks.

2.5 CONSTRUCTION AREAS

2.5.1 Work Area and Staging Area

Staging areas are depicted on Figure 2.0-1. The construction work area and staging area would be located on property owned by Six Flags. The proposed project would not require acquisition of new permanent or temporary easements. The construction work area includes the entire 0.94-acre project site. Staging for the proposed project would be located at the Theme Park's upper parking lot, 0.50 mile south of the project site off Fairgrounds Drive. The staging area would be used to store construction equipment and materials, such as segments of the roller coaster track, ride vehicles, and foundation columns. Construction activities and staging associated with the proposed project would occur in a developed area that has already been disturbed by the development of the Theme Park.

2.5.2 Access Roads

The project site would be accessed via Fairgrounds Drive. The proposed project would not result in roadway closures and all construction-related traffic would be contained within property owned by Six Flags. Construction vehicles would enter the guest parking lot, adjacent to the

southern boundary of the project site, and be directed to the project site. The proposed construction route is depicted on Figure 2.0-1. Existing roadways would be used during construction and would not require the development of additional temporary or permanent access roads.

2.5.3 Site Security

Site security during construction activities would consist of a 6-foot-high temporary chain link fence installed around the perimeter of the project site and staging area. During construction, temporary signs would be placed on the perimeter fences and at all entry points to prohibit public access.

2.6 CONSTRUCTION ACTIVITIES

Construction activities for the proposed project would involve demolition of the Go-Kart Ride, site grading, installation of the project's foundation, additional concrete flatwork for ingress and egress, and installation of the roller coaster track structure and control center. The entire 0.94-acre site would be mostly disturbed during project construction activities. These construction activities are described in further detail in the following sections.

2.6.1 Go-Kart Ride Demolition

Demolition of the Go-Kart Ride would require removal of the following features: concrete race track (24,675 square feet), go-kart loading area and canopy (6,300 square feet), maintenance building and yard area (1,894 square feet), walkway area (1,000 square feet), fuel tank (110 square feet), fencing and railings, and plumbing and electrical. Several existing trees and surrounding shrubs in the center of the track would be removed, and approximately 1,260 square feet of turf in the center of the track would be removed. The final landscape plans would reinstate 550 square feet of turf on the east side, and 500 square feet of drought tolerant vegetation on the north side. The concrete and ancillary components of the go-kart track would be hauled off-site and recycled at the appropriate disposal facility.

2.6.2 Site Grading

Grading activities for the proposed project would be minimal and are anticipated to consist of approximately 400 cubic yards of export. No imported fill would be brought to the project site, other than engineered fill for backfill. The typical maximum depth of cut onsite would be approximately 1.5 feet.

2.6.3 Foundation Work and Ride Assembly

Construction of the proposed project would involve installation of the project's pier footings, steel support columns and anchor bolts, and segments of the steel roller coaster track. The structural components of the proposed roller coaster structure would be pre-fabricated and shipped to the project site. The proposed structural components would be delivered to the project staging area in three phases during the construction period. It is anticipated that up to 15 truck trips total would be required to deliver all project components to the staging area.

The proposed project would install up to 32 pier footings. Each pier footing would be at least 3 feet by 3 feet. Each pier footing would be drilled at a maximum depth of 30 feet. The proposed project would import approximately 250 cubic yards of engineered fill and reinforced with

concrete. The proposed project would import approximately 350 cubic yards of concrete. The 32 steel support columns would be installed and bolted to each pier footing by steel anchor bolts. A crane would be used to assemble the lattice track segments. The lattice track segments would be welded together and bolted to the steel support columns.

2.6.4 Ride Commissioning, Operation, and Maintenance

The proposed project would be tested and inspected by a Qualified Safety Inspector (QSI). The QSI would evaluate the operation to ensure that the ride is safe and meets all applicable design and safety requirements related to permanent amusement rides set forth in CCR Title 8, administered by the California Division of Occupational Safety and Health. Inspections would be conducted by a QSI before the proposed project is placed in operation and opened to the public. The operation of the ride would be inspected annually by a QSI to certify that the proposed project meets industry standards and State regulations (Cal/OSHA 2018).

In addition, the operation of the proposed project would be inspected and tested daily between 7:00 a.m. and 10:00 a.m. by park employees prior to the public visit hours. Daily maintenance activities would require 2 employees and operation of the proposed project would require five employees. The proposed project would install telephones at the ride's dispatch panel, which would be accessed by employees in the event of an emergency. Operation of the proposed project would conform to the Theme Park's existing Safety Plan, which outlines emergency fire response policies and evacuation procedures.

2.7 REFERENCES

California Division of Occupational Safety and Health (Cal/OSHA). 2018. Accessed July 6, 2018. https://www.dir.ca.gov/title8/344_8.html.

City of Vallejo. 2017. Propel Vallejo: General Plan 2040. Accessed July 6, 2018. http://propelvallejo.com/wp-content/uploads/2017/12/Vallejo_General-Plan-2040_FINAL_Amended-171107.pdf.

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3.0 SUMMARY OF FINDINGS: IMPACTS AND MITIGATIONS

Impacts and mitigation measures identified in this report and the completed Initial Study checklist and narrative are summarized below. The mitigation measures listed below represent conditions of the ISMND for the proposed project.

Aesthetics
No significant impacts have been identified; no mitigation is necessary.

Agriculture and Forestry Resources
No significant impacts have been identified; no mitigation is necessary.

Air Quality
Implementation of the following mitigation measure would ensure impacts are less than significant.

Impact AIR-1: Generate fugitive dust during construction.
MM AIR-1: Application of BMPs for Fugitive Dust Control. The following conditions would be included in the General Notes and/or Grading Plan for the proposed project, under the descriptive heading "Dust and Equipment Exhaust Control," and would be implemented during construction activities:

- All material excavated, stockpiled, or graded would be sufficiently watered, treated, or covered to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard. Watering should occur at least twice daily, with complete site coverage.
- All areas with vehicle traffic would be watered or have dust palliative applied as necessary for regular stabilization of dust emissions.
- All onsite and construction traffic would be limited to a speed of 15 miles per hour within the project site and surrounding neighborhood.
- All land clearing, grading, earth moving, or excavation activities in the project area would be suspended as necessary to prevent excessive windblown dust when winds are expected to exceed 20 miles per hour.
- All inactive portions of the construction site would be covered, revegetated, or watered until a suitable cover is established. Alternatively, the Project Contractor may apply County-approved non-toxic soil stabilizers (according to manufacturer's specifications) to all inactive construction areas (previously graded areas that remain inactive for 96 hours) in accordance with the local grading ordinance.
- All material transported off-site would be securely covered to prevent public nuisance or there must be a minimum of two feet of freeboard in the bed of the transport vehicle.
- Paved roads adjacent to the project would be swept at the end of each day, or more frequently if necessary, to remove excessive or visibly raised accumulations of dirt and/or mud that may have resulted from activities at the project site.
- The Project Contractor would re-establish ground cover on the site through revegetation and watering in accordance with the local grading and landscape ordinances.
- All unnecessary vehicle idling would be restricted adjacent to the project site for a period of five minutes.

Impact AIR-2: Violate air quality standards.
Mitigation Measure AIR-1 is required.

Impact AIR-3: Result in cumulative air quality impacts.
Mitigation Measure AIR-1 is required.

Impact AIR-4: Expose sensitive receptors to substantial pollutant concentrations
Mitigation Measure AIR-1 is required.

Biological Resources

Implementation of the following mitigation measure would ensure impacts are less than significant.

Impact BIO-1: Removal of trees or construction in close proximity to trees could cause direct and/or indirect impacts to nesting birds.
MM BIO-1: Avoid Disturbance of Nesting Birds. If project activities occur during the nesting season for native birds (February 1 to August 31), the following measures shall be implemented to avoid or minimize the potential for adverse impacts on nesting migratory birds and raptors:

- Pre-construction nesting bird survey for species protected by the Migratory Bird Treaty Act and California Fish and Game Code shall be conducted by a qualified biologist within a 250-foot radius of proposed construction activities for passerines and a 500-foot radius for raptors no more than 2 weeks prior to the start of construction activities.
- If active nests are found, a qualified biologist shall determine the size of the buffers based on the nesting species and its sensitivity to disturbance. The size of the buffers may be reduced at the discretion of a qualified biologist, but no construction activities shall be permitted within the buffer if they are demonstrated to be likely to disturb nesting birds. Active nest sites shall be monitored periodically to determine time of fledging.

Cultural Resources

Implementation of the following mitigation measure would ensure impacts are less than significant.

Impact CUL-1: Disturbance of previously undiscovered historical resources.
MM CUL-1: Worker Awareness Training. Prior to the start of construction, all field personnel shall receive worker's environmental awareness training on cultural resources. The training, which may be conducted with other environmental or safety trainings, shall provide a description of cultural resources that may be encountered during construction and outline the steps to follow if a discovery is made.

MM CUL-2: Cultural Materials Discovered During Construction. If any cultural resource is encountered during ground disturbance or subsurface construction activities (e.g., excavating, grading), all construction activities within a 50-foot radius of the identified potential resource shall cease until a Secretary of the Interior qualified archaeologist evaluates the item for its significance and records the item on the appropriate State Department of Parks and Recreation 523 series forms. All forms and associated reports shall be submitted to the Northwest Information Center of the California Historical Resource Information System. The archaeologist shall determine whether the resource requires further study. If the qualified archaeologist conducts appropriate technical analyses and determines the resource to be eligible for listing on the California Register of Historic Resources as a unique archaeological resource as defined in PRC Section 15064.5, the archaeologist shall develop a plan for the treatment of the resource. This shall contain appropriate mitigation measures, including avoidance, preservation in place, data recovery excavation, or other appropriate measures outlined in PRC Section 21083.2.

Impact CUL-2: Disturbance of previously undiscovered archaeological resources.
Mitigation Measure CUL-1 and Mitigation Measure CUL-2 are required.

Impact CUL-3: Disturbance of previously undiscovered human burial sites.
MM CUL-3: Human Burials Encountered During Construction. If ground-disturbing activities uncover previously unknown human remains, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed:

There shall be no further excavation or disturbance of the area where the human remains were found or within 50 feet of the find until the Solano County Coroner and the appropriate City representative are contacted. Duly authorized representatives of the Coroner and the City shall be permitted onto the project site and shall take all actions consistent with Health and Safety Code Section 7050.5 and Government Code Sections 27460, et seq. Excavation or disturbance of the area where the human remains were found or within 50 feet of the find shall not be permitted to re-commence until the Coroner determines that the remains are not subject to the provisions of law concerning investigation of the circumstances, manner, and cause of any death. If the Coroner determines the remains are Native American, the Coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" (MLD) of the deceased Native American. The MLD may make recommendations to the Applicant or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains, and any associated grave goods as provided in PRC Section 5097.98. If the MLD does not make recommendations within 48 hours, the Applicant shall reinter the remains in an area of the project site secure from further disturbance. If the Applicant does not accept the MLD's recommendations, the owner or the MLD may request mediation by NAHC.

Geology and Soils

Implementation of the following mitigation measure would ensure impacts are less than significant.

Impact GEO-2: Potential hazards associated with soil erosion and loss of topsoil
Mitigation Measure HYD-1 is required.

Impact GEO-6: Disturbance of previously undiscovered paleontological resources.
Mitigation Measure CUL-1 and Mitigation Measure CUL-2 are required.

Greenhouse Gas Emissions

Implementation of the following mitigation measure would ensure impacts are less than significant.

Impact GHG-1: Generate greenhouse gas emissions related to project construction activities.
MM GHG-1: The Applicant shall ensure that the following BMPs are incorporated into the construction of the project:

- Improve fuel efficiency from construction equipment:
    - Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than 3 minutes (5-minute limit is required by the state airborne toxics control measure [Title 13, sections 2449(d)(3) and 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site.

    - Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.
    - Train equipment operators in proper use of equipment.
    - Use the proper size of equipment for the job.
    - Use equipment with new technologies (repowered engines, electric drive trains) when available.
- Perform on-site material hauling with trucks equipped with on-road engines (if determined to be less emissive than the off-road engines).
- Use alternative fuels for generators at construction sites such as propane or solar or use electrical power as available.
- Encourage and provide carpools and/or secure bicycle parking for construction worker commutes.
- Recycle or salvage non-hazardous construction and demolition debris (goal of at least 75% by weight).

Impact GHG-2: Compliance with plan policy or regulation
Mitigation Measure GHG-1 is required.

Hazards and Hazardous Materials

No significant impacts have been identified; no mitigation is necessary.

Hydrology and Water Quality

Implementation of the following mitigation measure would ensure impacts are less than significant.

Impact HYD-1: Polluted Discharge related to project construction and operational activities.
MM HYD-1: Submit Final Stormwater Control Plan. Prior to issuance of improvement and grading plans, the Applicant shall submit a final Stormwater Control Plan and an Operations and Maintenance Plan that complies with Provision C.3 of the MRP and the Vallejo Municipal Code Chapter 12.41 (Stormwater Management and Discharge Control), to the satisfaction of the City.

Impact HYD-3: Increase in erosion or siltation on-or off-site during project construction activities.
Mitigation Measure HYD-1 is required.

Impact HYD-4: Increase in surface runoff on-or off-site during project construction activities.
Mitigation Measure HYD-1 is required.

Impact HYD-5: Increase in runoff water which could potentially exceed capacity of existing stormwater drainage systems during construction.
Mitigation Measure HYD-1 is required.

Impact HYD-6: Degrade water quality.
Mitigation Measure HYD-1 is required.

Land Use and Planning

No significant impacts have been identified; no mitigation is necessary.

Mineral Resources

No significant impacts have been identified; no mitigation is necessary.

Noise

Implementation of the following mitigation measure would ensure impacts are less than significant.

Impact NOI-1: Generate excessive noise levels from construction and operation of the proposed project.
MM NOI-1: Construction Noise. The following measures shall be required to reduce the potential construction period noise impacts.

- All construction equipment shall include mufflers.
- Any construction equipment shall be turned-off when not in use.
- Locate noise generating equipment away from line-of-site contact with sensitive noise receptors to the extent feasible.

MM NOI-2: Operational Noise. Plans for all the proposed project shall be submitted to the Planning Division for review and approval that show the implementation of the following noise mitigation measures.

- Use multiple small loudspeakers that are directional and aimed downward toward the queueing area.
- Orient the facilities to eliminate line-of-sight contact between the noise sources and nearby sensitive receptors, to the extent feasible.

Impact NOI-3: Permanent increase in ambient noise levels from operation of the proposed project.
Mitigation Measure NOI-2 is required.

Impact NOI-4: Temporary increase in ambient noise levels from project construction activities.
Mitigation Measure NOI-1 is required.

Population and Housing

No significant impacts have been identified; no mitigation is necessary.

Public Services

No significant impacts have been identified; no mitigation is necessary.

Recreation

No significant impacts have been identified; no mitigation is necessary.

Transportation/Traffic

No significant impacts have been identified; no mitigation is necessary.

Tribal Cultural Resources

Implementation of the following mitigation measure would ensure impacts are less than significant.

Impact TRIB-1: Disturbance of previously undiscovered tribal cultural resources.
MM CUL-4: Cultural Resource Construction Monitoring. Construction monitoring shall be required for all ground-disturbing activities by a tribal monitor from the Yocha Dehe Wintun Nation. A monitoring report shall be completed by the archaeological monitor at the end of construction. This report shall include a brief summary of the monitoring results. The monitoring report shall be kept on file at the City of Vallejo.

Utilities and Service Systems

No significant impacts have been identified; no mitigation is necessary.

4.0 ENVIRONMENTAL CHECKLIST AND ENVIRONMENTAL EVALUATION

The environmental factors checked below would be potentially affected by the proposed project, involving at least one impact that requires mitigation to reduce the impact from "Potentially Significant" to "Less Than Significant" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology/Soils
☐ Greenhouse Gas Emissions	☒ Hazards & Hazardous Materials	☒ Hydrology/Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☒ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☐ Transportation/Traffic	☒ Tribal Cultural Resources	☐ Utilities/Service Systems
☒ Mandatory Findings of Significance		

Evaluation of Environmental Impacts

Section 4.0, Environmental Checklist and Environmental Evaluation presents the environmental checklist form found in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the proposed project. A discussion follows each environmental issue identified in the checklist. Included in each discussion are project-specific mitigation measures recommended as appropriate. For this checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant and for which a feasible mitigation has not been identified. If any potentially significant impacts are identified for any impact category, an EIR must be prepared instead of an ISMND.

Less Than Significant with Mitigation Incorporated: This designation applies where applicable and feasible mitigation measures previously identified in prior applicable EIRs or in the General Plan EIR have reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact" and, pursuant to Section 21155.2 of the PRC, those measures are incorporated into the ISMND. This designation also applies where the incorporation of new project-specific mitigation measures not previously identified in prior applicable EIRs or in the General Plan EIR has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact."

Less Than Significant Impact: Any impact that would not be considered significant under CEQA, relative to existing standards.

No Impact: The proposed project would not have any impact. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

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4.1 AESTHETICS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

4.1.1 Environmental Setting

Visual Character of the Project Site
The project site is in the southeast portion of Six Flags, a 135-acre Theme Park consisting of amusement park rides, attractions, and buildings, with mature trees and landscaping interspersed throughout the site. The Go-Kart Ride currently occupies the project site. Park rides that range from 100 feet to 150 feet tall are located adjacent to the project site. The overall visual character consists of rides of varying heights, steel structures, ornamental trees, and paved surfaces typical of a theme park.

Scenic View Corridors and Scenic Resources
There are no officially designated State Scenic Highways in the City (City of Vallejo 2017; Caltrans 2018). A segment of State Route 37 from Highway 29 to western City limit is eligible for designation as a State Scenic Highway (City of Vallejo 2017; Caltrans 2018). The Theme Park and the immediate surrounding areas are relatively flat, and therefore most of the Theme Park is only visible from the immediate area. However, the tallest rides are partially visible from portions of I-80 and State Route 37. The General Plan does not identify the Theme Park in a designated scenic area (City of Vallejo 2017).

Light and Glare Conditions
Sources of light and glare are abundant at the Theme Park and the surrounding area, including but not limited to street lighting, parking lot lighting, vehicular headlights, internal building lighting, and reflective building surfaces and windows. In addition, the existing Theme Park grounds, rides, and attractions are lit at night when the park is open. Six Flags also provides security lighting and parking lot lighting throughout the park

4.1.2 Methodology

Analysis of the proposed project's visual impacts is based on an evaluation of the changes to the existing visual resources that would result from implementation of the proposed project. In determining the extent and implications of the visual changes, consideration was given to the existing visual quality of the affected environment, specific changes in the visual character, and

quality of the affected environment; the extent to which the affected environment contains places or features that provide unique visual experiences or that have been designated in plans and policies for protection or special consideration; and the sensitivity of viewers, their activities, and the extent to which these activities are related to the aesthetic qualities affected by the proposed project. The existing setting was based on review of documents pertaining to the project site, including the General Plan, General Plan EIR, and project site plans provided by the Applicant.

4.1.3 Environmental Impact Analysis

This section discusses potential impacts related to aesthetics associated with the proposed project and provides mitigation measures where necessary.

Impact AES-1 Have a substantial adverse effect on a scenic vista?

Impact Analysis
The proposed project would involve the construction of a new roller coaster structure that is approximately 117 feet tall in the southeast portion of the Theme Park currently occupied by the Go-Kart Ride which is at grade level. The Theme Park is already developed and designated for entertainment type uses. The project site does not contain any landforms that are considered scenic resources (City of Vallejo 2017). The nearest scenic resource includes Sulphur Springs Mountain, located approximately 2 miles east of the project site. The proposed ride would not result in a significant reduction in views of Sulphur Springs Mountain because the existing mature trees located along Fairgrounds Drive and tall rides obstruct views of the mountain from the project site. Additionally, viewer sensitivity would be considered low from the Theme Park because visitors are more focused on the rides. This precludes the project site from providing a view corridor to the City's scenic resources, including Sulphur Springs Mountain. Therefore, the proposed project would not have a substantial adverse effect on a scenic vista and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact AES-2 Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

Impact Analysis
There are no officially designated state scenic highways in the City (City of Vallejo 2017; Caltrans 2018). The proposed project would require the removal of several existing trees and shrubs in the center of the track; however, none of which is considered exceptional scenic resources or located within a state scenic highway. As such, the proposed project would not damage scenic resources within a state scenic highway and no impacts would occur.

Level of Significant Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact AES-3 Substantially degrade the existing visual character or quality of the site and it surroundings?

Impact Analysis
The proposed project would replace the Go-Kart Ride that occurs at grade level with a structure that is approximately 117 feet tall. Construction activities would occur over a 9-month period and be completed during the Theme Park's off-peak season. Construction activities would involve staging, demolition of the go-kart track, grading, excavating, and installing the roller coaster track and control center. Staging would be located at the Theme Park's upper parking lot, south of the project site. A 6-foot-high temporary chain link fence would be installed around the perimeter of the project site and around the staging area to prohibit public access. Construction activities would be temporarily visible to park visitors. However, all temporary construction equipment, materials, and vehicles would be removed from the project site once construction activities are completed. Due to the temporary nature of construction activities, project construction would have a less than significant impact on the existing visual character and quality of the site and its surroundings.

The proposed project would require the approval of a Major Use Permit to include the project site within the Theme Park's Zone 4 boundary and allow for the construction of a ride that is between 100 feet and 150 feet tall. The proposed project would consist of a new steel lattice frame track that is supported by vertical supports and framing, a control center that is 15 feet by 15 feet to operate the ride, and a new entrance queue building, and queue line area. The proposed project would be painted with colors to complement the overall design of the proposed project and as approved by the City. The proposed project would also reinstate the landscaping by installing turf on the east side of the project site, and incorporating drought tolerant vegetation on the north side of the project site. The new ride would be located near existing rides in the Theme Park that range from 100 feet to 150 feet tall, and therefore the proposed project would be visually similar to existing rides. Furthermore, the design of the proposed project would be required to comply with the development standards of the Zone 4 boundary. As such, the installation of the proposed project would not substantially degrade the existing visual character or quality of the site and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact AES-4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Impact Analysis
The existing sources of nighttime lighting in the vicinity of the project site are typical of an

urbanized area. The Theme Park grounds, rides, and attractions are lit at night when it is open. Six Flags also provides security lighting and parking lot lighting throughout the park. Other sources of nighttime lighting include street lighting and vehicular headlights. The proposed project would include lighting for security and safety purposes. Project lighting would include accent lights to illuminate the roller coaster track and loading platforms during nighttime operation. Lighting would also be installed in the project's control center and along the project site's access paths.

Any proposed video screens, lit signage, laser lights, or spot lights used for the proposed project would be subject to City review as part of the building permit approval process. In addition, the Applicant would be required to prepare a project lighting plan for the City to review, as required under the prior Major Use Permit conditions of approval. The City's review would consider the proximity of adjacent land uses in determining the appropriate location and orientation of such screens and signage and ensure project lighting would not spill off the project boundary and is directed away from adjacent properties and public streets. The proposed project would be below 200 feet tall and would not require additional safety lighting or notification in accordance with the Federal Aviation Administration (FAA) Part 77 regulations. All project lighting and signage would be required to comply with the City's light and glare requirements (Vallejo Municipal Code Section 16.72.100) and be comparable in brightness to the nighttime lighting currently in use at the Theme Park for the lighting of other rides and attractions.

The proposed project would not incorporate large expanses of glass that would increase glare at the project site. The proposed roller coaster structure and control center would be painted and have a matte finish that is similar to existing rides. Compared to the existing sources of light and glare that are in the vicinity of the Theme Park, the proposed project would not result in a substantial source of light and glare and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significant After Mitigation
Less Than Significant Impact.

4.1.4 References

California Department of Transportation (Caltrans). 2018. California Scenic Highway Mapping System- Solano County. Accessed September 10, 2018. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/

City of Vallejo. 2017. Propel Vallejo General Plan 2040. Accessed September 10, 2018. http://propelvallejo.com/wp-content/uploads/2017/11/Vallejo%20General%20Plan%202040_FINAL_Amended%20171107_reduced.pdf.

4.2 AGRICULTURE AND FORESTRY RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forestland or conversion of forestland to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?	☐	☐	☐	☒

4.2.1 Environmental Setting

The Theme Park is classified as Urban and Built-Up Land by the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP) and the General Plan EIR (DOC 2018; City of Vallejo 2016). Agricultural land accounts for less than one percent of the City's total land area and is primarily in the northeastern part of the City (City of Vallejo 2016). There are no lands in the City identified as either Prime Farmland or Farmland of Statewide Importance. Furthermore, the are no lands in the City that are used for timber production, or enrolled in a Williamson Act contract (City of Vallejo 2016; DOC 2014).

4.2.2 Methodology

The following analysis is based on a review of documents pertaining to the project site, including the General Plan, General Plan EIR, DOC FMMP database, and Solano County 2013-2014 Williamson Act Map.

4.2.3 Environmental Impact Analysis

This section discusses potential impacts related to agriculture and forestry resources associated with the proposed project and provides mitigation measures where necessary.

Impact AG-1 Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Impact Analysis
The project site is within the boundary of Six Flags and is classified as Urban Built-Up Land, which does not include active agricultural land (DOC 2018; City of Vallejo 2017). As such, the proposed project would not result in the conversion of prime, unique, or farmland of Statewide Importance, and no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact AG-2 Conflict with existing zoning for agricultural use or a Williamson Act contract?

Impact Analysis
There are no lands in the City that are enrolled in a Williamson Act contract (DOC 2014). Therefore, the proposed project would not conflict with existing agricultural zoning or with a Williamson Act contract. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact AG-3 Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

Impact Analysis
There are no lands in the City that are used for timber production. The proposed project would not conflict with the existing zoning of the site or cause the rezoning of forestland or timberland zoned for timberland production as defined by Government Code section 51104(g). No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact AG-4 Result in the loss of forestland or conversion of forestland to non-forest use?

Impact Analysis
The project site is in a highly urbanized area. There are no forestland resources on or adjoining the project site, or within the general vicinity of the project site. As such, construction of the proposed project would not result in the loss of forestland or conversion of forestland to non-forest use. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact AG-5 Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?

Impact Analysis
The proposed project would not involve changes to the existing environment or result in the conversion of farmland to non-agricultural use or forestland to non-forest use. The proposed project would be consistent with the existing zoning with the approval of a Major Use Permit and Site Development Permit. No impact to agriculture or forestry resources would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

4.2.4 References

California Department of Conservation (DOC). 2014. Solano County Williamson Act FY 2013-2014. Accessed March 15, 2018. ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Solano_13_14_WA.pdf.

_____. 2018. California Important Farmland Finder. Accessed March 15, 2018. https://maps.conservation.ca.gov/DLRP/CIFF/.

City of Vallejo. 2016. Propel Vallejo General Plan 2040 and Sonoma Boulevard Specific Plan Draft EIR. Accessed March 15, 2018. http://propelvallejo.com/wp-content/uploads/2017/12/PropelVallejo_DraftGeneralPlanEIR_160725-1.pdf.

_____. 2017. Propel Vallejo General Plan 2040. Accessed July 6, 2018. http://propelvallejo.com/wp-content/uploads/2017/11/Vallejo%20General%20Plan%202040_FINAL_Amended%20171107_reduced.pdf.

4.3 AIR QUALITY

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☒	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
d) Expose Sensitive Receptors to substantial pollutant concentrations?	☐	☒	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

4.3.1 Environmental Setting

The proposed project is located within the San Francisco Bay Area Air Basin (SFBAAB). SFBAAB is comprises a single air pollution control district, the Bay Area Air Quality Management District (BAAQMD), and consists of Napa, Marin, San Francisco, Contra Costa, Alameda, San Mateo, and Santa Clara counties, the southern portion of Sonoma County, and the western portion of Solano County (CARB 2005a). The San Francisco Bay Area Air Basin is currently designated as a nonattainment area for state and national ozone standards and national particulate matter ambient air quality standards (BAAQMD 2017). Solano County is unclassified for the State $PM_{2.5}$ and federal PM_{10} standards. An unclassified designation indicates that air quality and other relevant information is insufficient to determine whether the area is attainment or nonattainment (California Air Resources Board [CARB] 2017a). According to the BAAQMD, pollutants of greatest concern within the district are ozone and fine particulate matter (BAAQMD 2018).

Ozone is not emitted directly into the air; rather, it is a regional pollutant formed by a photochemical reaction in the atmosphere. Ozone precursors, which include reactive organic gases (ROG) and Nitrogen Oxides (NOx), react in the atmosphere in the presence of sunlight to form ozone. Significant ozone formation generally requires an adequate amount of ozone precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. The conditions for ozone formation are prevalent during the summer when thermal inversions are most likely to occur. PM levels tend to be highest during the winter months when the meteorological conditions favor the accumulation of localized pollutants. This occurs when relatively low inversion levels trap pollutants near the ground and concentrate the pollution (BAAQMD 2015a).

Toxic Air Contaminants
Toxic Air Contaminants are air contaminants not included in the California Ambient Air Quality Standards (CAAQS) but are considered hazardous to human health. TACs are defined by the California Air Resources Board (CARB) as those pollutants that "may cause or contribute to an

increase in deaths or in serious illness, or which may pose a present or potential hazard to human health."

The health effects associated with TACs are generally assessed locally rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage; TACs can also cause short-term acute effects such as eye watering, respiratory irritation, running nose, throat pain, and headaches. For evaluation purposes, TACs are separated into carcinogens and non-carcinogens. Carcinogens are assumed to have no safe threshold below which health impacts would not occur, and the cancer risk is expressed as excess cancer cases per one million exposed individuals (typically over a lifetime of exposure).

Diesel Particulate Matter
Diesel particulate matter is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases: gas and particle. The gas phase is composed of many of the urban hazardous air pollutants, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and polycyclic aromatic hydrocarbons. The particle phase also has many different types of particles that can be classified by size or composition. The size of diesel particulates that are of greatest health concern are those that are in the categories of fine and ultra-fine particles. The composition of these fine and ultra-fine particles may be composed of elemental carbon with adsorbed compounds such as organic compounds, sulfate, nitrate, metals, and other trace elements. Diesel exhaust is emitted from a broad range of diesel engines, such as the on-road diesel engines of trucks, buses, and cars, and off-road diesel engines that include locomotives, marine vessels, and heavy-duty equipment (EPA 2014c).

Asbestos
Asbestos is a fibrous mineral that both naturally occurs in ultramafic rock (a rock type commonly found in California) and is used as a processed component of building materials. Because asbestos has been proven to cause several disabling and fatal diseases, such as asbestosis and lung cancer, it is strictly regulated either based on its natural widespread occurrence or in its use as a building material. In the initial Asbestos National Emission Standards for Hazardous Air Pollutants rule promulgated in 1973, a distinction was made between building materials that would readily release asbestos fibers when damaged or disturbed (friable) and those materials that were unlikely to result in significant fiber release (non-friable). The EPA has since determined that, when severely damaged, otherwise non-friable materials can release significant amounts of asbestos fibers. Asbestos has been banned from many building materials under the Toxic Substances Control Act, the Clean Air Act, and the Consumer Product Safety Act. Naturally occurring asbestos (NOA) is known to occur in many parts of California and is commonly associated with ultramafic or serpentinite rock. According to the USGS Geologic Map, the proposed project is not located in an area known to contain ultramafic or serpentine rock (USGS 2011).

Sensitive Receptors
Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. The project site would not be considered a sensitive receptor. There are existing sensitive receptors in the vicinity of the project site including other residences located to the southwest and southeast of the project site.

Air Quality Standards

According to CARB, "Federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop plans, known as State Implementation Plans (SIPs). A SIP is a prepared by each state describing existing air quality conditions and measure that would be followed to attain and maintain federal standards. The 1990 amendments to the federal Coalition for Clean Air set deadlines for attainment based on the severity of an area's air pollution problem" (CARB 2017b).

The SIP for the State of California is administered by the CARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's SIP incorporates individual federal attainment plans for each regional air district. A SIP is prepared by the regional air district and sent to CARB to be approved and incorporated into the California SIP. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms. The federal and State ambient air quality standards are summarized in Table 4.3-1.

Table 4.3-1: California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards	
		Concentration	Primary	Secondary
Ozone	1 Hour	0.09 ppm (180 µg/m^3)	—	Same as Primary Standard
	8 Hour	0.070 ppm (137 µg/ m^3)	0.070ppm (137 µg/m^3)	
Respirable Particulate Matter	24 Hour	50 µg/m^3	150 µg/m3	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m^3	—	
Fine Particulate Matter	24 Hour	—	35 µg/m^3	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	
Carbon Monoxide	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	—
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	—
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	—	—
Nitrogen Dioxide	1 Hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	—
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary Standard
Sulfur Dioxide	1 Hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	—
	3 Hour	—	—	0.5 ppm (1300 µg/m^3)
	24 Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (for certain areas)	—
	Annual Arithmetic Mean	—	0.030 ppm (for certain areas)	—
Lead	30-Day Average	1.5 µg/m^3	—	—
	Calendar Quarter	—	1.5 µg/m^3	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 µg/m^3	
Visibility-Reducing Particles	8 Hour	See Footnote 1	No National Standards	
Sulfates	24 Hour	25 µg/m^3		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)		

Pollutant	Averaging Time	California Standards	National Standards	
		Concentration	Primary	Secondary
Notes: [1] - In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively. mg/m^3 = milligrams per cubic meter $\mu g/m^3$ =micrograms per cubic meter Source: CARB 2017a				

As summarized in Table 4.3-2, Solano County and the Bay Area Air Quality Management District are currently designated as nonattainment for State ozone and PM_{10} standards, as well as national ozone and $PM_{2.5}$ standards. The County is currently designated unclassified for State $PM_{2.5}$ and federal PM_{10}. The standards for CO, NO_2, SO_2, and lead are being met in the County.

Table 4.3-2: Solano County Area Designations for State and National Ambient Air Quality

Criteria Pollutants	State Designation	National Designation
Ozone	Non-attainment	Non-attainment
PM_{10}	Non-attainment	Unclassified
$PM_{2.5}$	Unclassified	Non-attainment
Carbon Monoxide	Attainment	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified
Sulfates	Attainment	—
Lead	Attainment	Unclassified/Attainment
Hydrogen Sulfide	Unclassified	—
Visibility Reducing Particles	Unclassified	—
Source: CARB 2017b		

Thresholds of Significance

Nearly all development projects in the San Francisco Bay Area Air Basin have the potential to generate air pollutants that may increase the difficultly of attaining federal and State AAQS. Therefore, for most projects evaluation of air quality impacts is required to comply with CEQA. To help public agencies evaluate air quality impacts, the BAAQMD has developed the California Environmental Quality Act Air Quality Guidelines, adopted May 2017. The BAAQMD's Air Quality Guidelines include the recommended thresholds of significance for project-level emissions, as summarized in Table 4.3-3.

Table 4.3-3: BAAQMD Significance Thresholds

Pollutants	Construction	Operation	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (typ)
ROG	54	54	10
NOx	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	82 (Exhaust)	54	10

Pollutants	Construction	Operation	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (typ)
$PM_{10}/PM_{2.5}$	BMPs	None	
Source: BAAQMD 2017			

The BAAQMD has also established thresholds for development projects that have the potential to expose the public to TACs from stationary sources. If a project were to exceed the following thresholds for receptors within a 1,000-foot radius of the project, it would be considered to have a significant air quality impact.

- Non-compliance with a Qualified Community Risk Reduction Plan
- Increased cancer risk of greater than 10.0 in a million
- Increased non-cancer risk of greater than 1.0 Hazard Index (Chronic or Acute)
- Ambient $PM_{2.5}$ increase of greater than 0.3 micrograms/m^3 on an annual average

4.3.2 Methodology

Construction emissions, emissions from soil disturbance, and emissions from vehicle travel on paved and unpaved roads were estimated using CalEEMod version 2016.3.2. The model output and detailed assumptions are provided in Appendix A. Methodology and thresholds for criteria air pollutant impacts and community health risk, as set forth in the BAAQMD's Air Quality Guidelines, were used in this analysis.

4.3.3 Environmental Impact Analysis

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Impact AIR-1 Conflict with or obstruct implementation of the applicable air quality plan?

Impact Analysis
The BAAQMD thresholds of significance for criteria pollutants are applied to evaluate regional impacts of project-specific emissions of air pollutants and their impact on the BAAQMD's ability to reach attainment. Emissions that are above these thresholds have not been accommodated in the air quality plans and would not be consistent with the air quality plans. Air quality modeling was performed using project-specific details to determine whether the proposed project would result in criteria air pollutant emissions more than the applicable thresholds of significance. The proposed project's construction-related emissions are shown in Table 4.3-4 below. The results of the unmitigated emissions modeling were compared to the BAAQMD standards of significance to determine the associated level of impact.

Construction Emissions
The proposed project would generate emissions from construction equipment exhaust, worker travel, materials and equipment deliveries, and fugitive dust. These construction emissions include dust (PM_{10}) as well as other criteria air pollutants from the operation of heavy construction equipment. Construction would occur between January 2019 and May 2019.

During construction, fugitive dust (PM_{10}) would be generated from earth-moving activities. Most of this fugitive dust would remain localized and would be deposited near the project site. The project would involve minimal ground disturbance and would not generate PM_{10} emissions that

exceed the BAAQMD's threshold of significance; however, BAAQMD recommends that all projects implement BMPs to reduce dust emissions and avoid localized health impacts. Mitigation Measure AIR-1 requires the application of BMPs for fugitive dust control. Implementation of Mitigation Measure AIR-1 would ensure that no significant impacts from fugitive dust would occur during construction activities. As shown in Table 4.3-4, the proposed project's emissions would be less than the BAAQMD's thresholds of significance; therefore, impacts would be less than significant.

Table 4.3-4: Construction Emissions Estimates

	ROG	NOx	PM_{10}	$PM_{2.5}$	Fugitive Dust
Total (average daily lbs/day)	10.1	10.8	0.55	0.51	1.4
BAAQMD significance thresholds (average daily lbs/day)	54	54	82	82	BMPs
Significant Impact?	No	No	No	No	No

Operational Emissions

Operational emissions occur over the lifetime of the project and are from two main sources: area sources and motor vehicles, or mobile sources. The operation of the project is expected to result in a finite increase in traffic volumes on the local roadways upon the opening of the new ride. Note that operational emissions have not been estimated for potential stationary source equipment such as generators as none have currently been proposed. Additionally, any stationary source equipment would be subject to BAAQMD permitting requirement. The annual operational emissions for the project are shown in Table 4.3-5.

Table 4.3-5: Operational Emissions Estimates

	ROG	NOx	PM_{10}	$PM_{2.5}$	Fugitive Dust
Total (lbs/day)	5.2	4.2	0.1	0.1	2.3
BAAQMD significance thresholds (lbs/day)	54	54	82	54	None
Total (tons/year)	0.93	0.79	0.02	0.02	0.43
BAAQMD significance thresholds (tons/year)	10	10	15	10	None
Significant Impact?	No	No	No	No	No

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM AIR-1: Application of BMPs for Fugitive Dust Control. The following conditions would be included in the General Notes and/or Grading Plan for the proposed project, under the descriptive heading "Dust and Equipment Exhaust Control," and would be implemented during construction activities:

- All material excavated, stockpiled, or graded would be sufficiently watered, treated, or covered to prevent fugitive dust from leaving the property boundaries and causing a

public nuisance or a violation of an ambient air standard. Watering should occur at least twice daily, with complete site coverage.
- All areas with vehicle traffic would be watered or have dust palliative applied as necessary for regular stabilization of dust emissions.
- All onsite and construction traffic would be limited to a speed of 15 miles per hour within the project site and surrounding neighborhood.
- All land clearing, grading, earth moving, or excavation activities in the project area would be suspended as necessary to prevent excessive windblown dust when winds are expected to exceed 20 miles per hour.
- All inactive portions of the construction site would be covered, revegetated, or watered until a suitable cover is established. Alternatively, the Project Contractor may apply County-approved non-toxic soil stabilizers (according to manufacturer's specifications) to all inactive construction areas (previously graded areas that remain inactive for 96 hours) in accordance with the local grading ordinance.
- All material transported off-site would be securely covered to prevent public nuisance or there must be a minimum of two feet of freeboard in the bed of the transport vehicle.
- Paved roads adjacent to the project would be swept at the end of each day, or more frequently if necessary, to remove excessive or visibly raised accumulations of dirt and/or mud that may have resulted from activities at the project site.
- The Project Contractor would re-establish ground cover on the site through revegetation and watering in accordance with the local grading and landscape ordinances.
- All unnecessary vehicle idling would be restricted adjacent to the project site for a period of five minutes.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact AIR-2 Violate any air quality standard or contribute to an existing or projected air quality violation?

Impact Analysis
Air pollutant emissions have regional effects and localized effects. This analysis assesses the regional effects of the project's criteria pollutant emissions in comparison to BAAQMD thresholds of significance for short-term construction activities. Localized emissions from project construction are also assessed.

Because Solano County is designated no-attainment for state and federal ozone standards and state PM_{10} standards, the primary pollutants of concern during project construction are ROG, NO_X, and PM_{10}.

Regional Impacts
As shown in Table 4.3-4, construction emissions are not expected to generate significant levels of pollutants during construction-related activities. Construction emissions are below the BAAQMD thresholds of significance; therefore, the regional impact is less than significant.

Localized Impacts

Construction Fugitive Dust
During construction (grading), fugitive dust (PM_{10}) would be generated from site grading and other earth-moving activities. Most of this fugitive dust would remain localized and would be deposited near the project site. As shown in Table 4.3-4, PM_{10} emissions would not exceed the BAAQMD threshold of significance; however, even projects not exceeding the thresholds should

implement BMPs to avoid potential localized health impacts. The proposed project has incorporated BMPs through implementation of Mitigation Measure AIR-1.

CO Hotspot
Localized high levels of CO (CO hotspot) are associated with traffic congestion and idling or slow-moving vehicles. BAAQMD has established the following screening threshold to determine whether a project's traffic impact would cause a potential CO hotspot at any given intersection. If either of the following criteria is true of any intersection affected by the project traffic, then the project can be said to have the potential to create a violation of the CO air quality standard:

- The project traffic would increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.

- The project traffic volume would increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

A traffic study was prepared for the operation of the proposed project. It is estimated that the project would result in an additional 450 vehicle trips per day, which is only a 5 percent increase over the existing traffic estimates of 9,000 average daily trip. Therefore, the project would not exceed the BAAQMD screening thresholds for CO. In addition, project construction traffic would be minimal and would not cause any intersections to operate at unacceptable traffic levels. Therefore, the proposed project would not cause a CO standard violation; the impact is less than significant.

Conclusion
Although the project would not exceed any quantitative threshold during construction, the BAAQMD recommends that all projects incorporate fugitive dust and emissions control measures to ensure impacts remain less than significant. Accordingly, the proposed project would incorporate Mitigation Measure AIR-1 to reduce construction impacts to a less than significant level.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure AIR-1 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact AIR-3	**Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

Impact Analysis
A cumulative impact analysis considers a project over time in conjunction with other past, present, and reasonably foreseeable future projects whose impacts might compound those of the project being assessed. Air pollution is largely a cumulative impact. The nonattainment status

of regional pollutants, including ozone and PM_{10}, is a result of past and present development, and, thus, cumulative impacts related to these pollutants could be considered cumulatively significant.

As shown in Impact AIR-1, the projects construction and operational emissions would not exceed BAAQMD thresholds of significance. These thresholds represent the levels above which a project's individual emissions would result in a considerable contribution to the SFBAAB existing non-attainment air quality conditions and, thus, establish a nexus to the regional air quality impacts that satisfies CEQA requirements for evidence-based determinations of significant impacts. Therefore, the proposed project's individual emissions would not be expected to result in a cumulatively considerable contribution to a significant cumulative impact, and impacts would be considered less than significant with mitigation incorporated.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure AIR-1 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact AIR-4 Expose sensitive receptors to substantial pollutant concentrations?

Impact Analysis
This impact addresses whether the project would expose sensitive receptors to construction-generated fugitive dust, construction-generated DPM, operational-related TACs, or operational CO hotspots. Project construction and operational impacts are assessed separately below.

A sensitive receptor is defined as "Facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals, and residential areas" (BAAQMD 2017).

The proposed project is not considered a sensitive receptor. There are no sensitive receptors within 1,000 feet of the project site, as the closest residence is approximately 1,600 feet to the north

Construction Emissions

Naturally-Occurring Asbestos
The CDC maps NOA areas throughout the State of California. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. The risk of disease is dependent upon the intensity and duration of exposure. In California, NOA is most likely to occur in areas of serpentinite, ultramafic rock (igneous rock composed of greater than 90 percent iron-magnesium minerals), and fault/shear zones. Rock units considered to have a moderate likelihood of containing NOA include mafic rock (igneous rock rich in iron-magnesium minerals). Serpentinite, ultramafic, and mafic rock is not mapped within the project area. The closest known occurrence of ultramafic rock outcroppings is in Napa County, approximately 16 miles northwest of the proposed project (USGS 2011). Therefore, there is no potential health hazards resulting from NOA dust. There would be no impact.

Fugitive Dust (PM_{10})
During construction (grading), fugitive dust is generated. As detailed in Impact AIR-1, the project would result in a less than significant dust impact. Compliance with BMPs for dust control would further reduce this impact. Therefore, the project would not expose adjacent receptors to significant amounts of construction dust.

Diesel Particulate Matter (DPM)
As discussed in the BAAQMD 2017 Air Quality Guidelines, construction activity using diesel-powered equipment emits DPM, a known carcinogen. DPM includes exhaust $PM_{2.5}$. A 10-year research program (ARB 1998) demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. Health risks from TACs are a function of both concentration and duration of exposure. Construction diesel emissions are temporary, affecting an area for a period of weeks or months. Additionally, construction-related sources are mobile and transient in nature. Because of the temporary nature of construction emissions and compliance with PM reducing BMPs, construction emissions of DPM would be minimized and the potential health risk impact would be less than significant.

Operational Emissions

CO Hotspots
As discussed in Impact AIR-2, due to the minimal traffic impact from the operation of the project, the proposed project would not cause a CO hotspot violation.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure AIR-1 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact AIR-5 Create objectionable odors affecting a substantial number of people?

Impact Analysis
Odors are generally regarded as an annoyance rather than a health hazard and the ability to detect odors varies considerably among populations and overall is subjective.

BAAQMD recommends operational screening criteria as shown in Table 4.3-6, which are based on distance between types of sources known to generate odor and the receptor. Projects that would site an odor source or a receptor farther than the applicable screening distance would not result in a significant odor impact.

Table 4.3-6: Odor Screening Distances

Odor Generator	Distance (miles)
Wastewater Treatment Facilities	2
Wastewater Pumping Facilities	1
Sanitary Landfill	2

Odor Generator	Distance (miles)
Transfer Station	1
Composting Facility	1
Petroleum Refinery	1
Asphalt Batch Plant	2
Chemical Manufacturing	2
Fiberglass Manufacturing	1
Painting/Coating Operations	1
Rendering Plan	2
Coffee Roaster	1
Confined Animal Facility/Feed Lot/Dairy	1
Green Waste and Recycling Operations	1
Metal Smelting Plant	2
Source: BAAQMD 2017	

Project operations would not be anticipated to produce odorous emissions. Construction activities associated with the project could result in short-term odorous emissions from diesel exhaust associated with construction equipment. However, these emissions would be intermittent and would dissipate rapidly from the source. In addition, this diesel-powered equipment would only be present on site temporarily during construction activities. Therefore, construction would not create objectionable odors affecting a substantial number of people, the project would not create objectionable odors affecting a substantial number of people, and the impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

4.3.4 References

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4.4 Biological Resources

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan?	☐	☐	☒	☐

4.4.1 Environmental Setting

The project site is located at Six Flags in Vallejo, Solano County, California. The Theme Park is in a highly urbanized area of Vallejo that is located south of State Route 37 and adjacent to Fairgrounds Drive. The project site comprises developed land that consists of paved asphalt and structures associated with the existing Thunder Road Speedway Go-Kart Ride, with ornamental landscaping placed within the medians of the go-kart track. The project site is surrounded by other rides located within the Theme Park. Staging areas for the proposed project would be temporarily located in Six Flags' upper parking lot, about 0.50 mile from the project site.

The project site, staging area, and the surrounding area have been extensively developed and, therefore, have a low biotic resource value. However, the project site and the surrounding area support several ornamental trees that offer potential nesting habitat and perching habitat for a variety of common bird species. There are no seasonal wetlands or other aquatic habitat

features within the project site. The nearest waterways are Rindler Creek and Blue Rock Springs Creek, located about 0.25 mile and 0.50 mile south of the project site, respectively (USFWS 2018a). These features have been channelized into a feature known as the Fairgrounds channel and are considered impacted urban creeks. Additionally, Lake Chabot is located about 400 feet southwest of the project site.

4.4.2 Methodology

Stantec completed background desktop research to identify existing biological resources at the project site and surrounding area. Specifically, this research evaluated the potential for the project site to support special-status plant and/or wildlife species and sensitive features, such as wetlands or drainages. Special-status plant and wildlife species were defined in accordance with the CEQA Guidelines, Section 15380, and included:

- Species that are listed, proposed, or designated as candidates for listing as threatened or endangered under the federal Endangered Species Act (ESA).
- Species that are listed, proposed, or designated as candidates for listing as threatened or endangered under the California ESA.
- Wildlife species designated as Fully Protected or Species of Special Concern by the California Department of Fish and Wildlife (CDFW).
- Plant species designated by California Native Plant Society (CNPS) as California Rare Plant Rank 1A, 1B, 2A, 2B, and 3.
- Species that meet the definition of rare, threatened, or endangered under Section 15380 of CEQA Guidelines.
- Species that are considered taxa of special concern by local agencies.

Resources reviewed during the background research included:

- CDFW BIOS California Natural Diversity Database (CNDDB) (CDFW 2018);
- USFWS Information for Planning and Consultation (IPaC) (USFWS 2018b);
- CNPS online version of the Inventory of Rare and Endangered Plants of California (CNPS 2018); species designated as List 1 through 4 by the CNPS were also considered;
- National Wetlands Inventory (USFWS 2018a); and
- Aerial photographs and topographic maps of the project site and surrounding area.

A list of special-status wildlife species with potential to occur in the project site was compiled by performing a CNDDB search and reviewing the USFWS IPaC species list for the project site. The CNDDB search consisted of a 5-mile buffer around the project site and included the following United States Geological Survey (USGS) quadrangles: Cordelia, Benicia, Cuttings Wharf, and Mare Island.

Vegetation Communities and Special-Status Species
Based on the results of the background research (including a search of the CNDDB for a 5-mile radius around the project site [CDFW 2018] and the IPaC database query [USFWS 2018b], Stantec developed a list of 14 special-status plant species (Appendix B, Table 4.4-1) and 24 special-status wildlife species with the potential to occur on the project site (Appendix B, Table 4.4-2). The project site and the surrounding area has been extensively developed and consists of asphalt and structures associated with the Theme Park.

In general, urbanized areas have low to poor wildlife habitat value due to replacement of natural communities, fragmentation of remaining open space areas and parks, and intensive human disturbances (City of Vallejo 2016). The diversity of urban wildlife depends on the extent

and type of landscaping and remaining open space, as well as its proximity to natural habitat. Vegetation at the project site and in the surrounding area consists of a variety of ornamental trees, shrubs, lawn, and no-mow grass. Urban areas such as the project site and the surrounding area would primarily support urban adapted species such as rock dove (*Columbia livia*), northern mockingbird (*Mimus polyglottos*), house finch (*Carpodacus mexicanus*), and mourning dove (*Zenaida macroura*) (City of Vallejo 2016). Urban areas also provide habitat for several species of native mammals, such as black-tailed deer (*Odocoileus hemionus)*, California ground squirrel (*Otospermophilus beecheyi)*, raccoon (*Procyon lotor)*, and striped skunk (*Mephitis mephitis)* (City of Vallejo 2016).

Due to the developed nature of the project site and the surrounding area, it is unlikely that the project site provides appropriate habitat for any special-status plant or wildlife species. However, ornamental landscaping may provide nesting habitat for migratory birds and raptors.

4.4.3 Environmental Impact Analysis

This section discusses potential impacts related to biological resources associated with the proposed project and provides mitigation measures where necessary.

Impact BIO-1 Have a substantial adverse effect, either directly or through habitat modifications on any species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Impact Analysis
The project site is developed and includes extensive areas of asphalt, structures associated with the Go-Kart Ride, and ornamental landscaping. The project site is bordered by Fairgrounds Drive to the east, a paved visitor parking lot to the south, and other rides and attractions to the north and the west. Due to the highly urbanized nature of the project site and the surrounding area, the proposed project would not result in impacts to special-status plant and wildlife species. The project site does not contain suitable habitats that special-status species known to occur in the Bay Area would use, such as grassland habitats, freshwater marshes, brackish and saltwater marshes, lakes, rivers, and streams. However, the project site contains ornamental landscaping that represents suitable habitat for various birds protected under the Migratory Bird Treaty Act. In addition, mature trees along Fairgrounds Drive and near the project site represent potential nesting habitat for migratory birds and raptors.

Construction impacts (such as interruption of breeding) to nesting birds protected under state or federal law is considered a potentially significant impact. Construction of the proposed project would occur for approximately 9 months during the Theme Park's off-season (mid-September through mid-May). As such, the proposed project would be required to implement Mitigation Measure BIO-1 to reduce potentially significant impacts to nesting birds and raptors. Mitigation Measure BIO-1 would apply to ground disturbing activities and any necessary vegetation removal that would occur between February 15 and August 31. Ground disturbance and any necessary vegetation removal that occurs outside of this window would not require mitigation measures. As such, impacts related to special-status species would be less than significant with the implementation of Mitigation Measure BIO-1.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
MM BIO-1: Avoid Disturbance of Nesting Birds. If project activities occur during the nesting

season for native birds (February 1 to August 31), the following measures shall be implemented to avoid or minimize the potential for adverse impacts on nesting migratory birds and raptors:

- Pre-construction nesting bird survey for species protected by the Migratory Bird Treaty Act and California Fish and Game Code shall be conducted by a qualified biologist within a 250-foot radius of proposed construction activities for passerines and a 500-foot radius for raptors no more than 2 weeks prior to the start of construction activities.
- If active nests are found, a qualified biologist shall determine the size of the buffers based on the nesting species and its sensitivity to disturbance. The size of the buffers may be reduced at the discretion of a qualified biologist, but no construction activities shall be permitted within the buffer if they are demonstrated to be likely to disturb nesting birds. Active nest sites shall be monitored periodically to determine time of fledging.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact BIO-2 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish or U.S. Fish and Wildlife Service?

Impact Analysis
The project site is developed as part of the Theme Park and does not contain any riparian habitat. The site is not located in any other sensitive natural community identified by a local or regional plan, policy, and regulation, or by CDFW and USFWS. Therefore, the proposed project would not impact sensitive habitats.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact BIO-3 Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impact Analysis
The site does not contain any seasonal wetlands or other aquatic habitat features. The nearest wetland feature is Lake Chabot, approximately 400 feet to the southwest of the project site and adjacent to the south and west boundaries of the Theme Park. In addition, Rindler Creek is located 0.25 mile south of the project site and identified as a riverine wetland (USFWS 2018a). As such, the proposed project would not impact federally protected wetlands and would not be subject to regulations covered under Section 404 of the Clean Water Act. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact BIO-4 Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Impact Analysis
The site is in a highly urbanized area and represents low quality for wildlife habitat. Due to the developed nature, the project site and the surrounding area do not provide connectivity to other important habitats worthy of conservation. Individual birds that have adapted to urban settings and migratory birds may potentially use mature ornamental trees at the project site and in the surrounding area for nesting. However, this does not constitute the project site as a wildlife nursery site or a migratory corridor. As such, impacts related to the movement of any native or migratory wildlife species would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact BIO-5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact Analysis
The project site consists of a developed site and does not contain any protected biological resources that are identified by the City's General Plan. The City's Tree Ordinance (Vallejo Municipal Code Chapter 10.12) does not contain any provision for the protection or preservation of ornamental trees that are located on private property. Therefore, the proposed project would not conflict with any local policy or ordinance protecting biological resources, including any policy or ordinance related to tree preservation. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact BIO-6 Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan?

Impact Analysis
The City falls within the jurisdiction of the Solano Multispecies Habitat Conservation Plan (HCP) (SWCA 2012). The HCP has not been formally adopted and is still in draft form. The Solano County Water Agency (SCWA) assumes overall responsibility for coordination, reporting, and oversight of the Conservation Program. According to Figure 1-4 of the HCP, the project site is located within the boundary of the HCP and designated Zone 1-Urban Zone (SWCA 2012). Activities that are covered under Zone 1 include the construction and maintenance of new private infrastructure and facilities. Therefore, activities associated with the proposed project would be consistent with the HCP Covered Activity Zone (Urban Zone). Within this zone, development activities that are consistent with those allowed under the "covered activities" of the Urban Zone as set forth in the HCP are authorized to take endangered, threatened, rare, and other protected species and habitats (SCWA 2012).

The project site and surrounding area has been extensively developed as part of the Theme Park and, therefore, it is unlikely the proposed project would impact special-status species that are covered under the HCP. However, in the unanticipated event a special-status species covered under the HCP may be impacted, the proposed project would be covered under the Solano HCP and required to abide by the mitigation measures and species protection measures

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

4.4.4 References

California Department of Fish and Wildlife (CDFW). 2018. California Natural Diversity Database (BIOS, version 5.58.12f). Accessed September 11, 2018. Electronic database.

California Native Plant Society (CNPS). 2018. Online version of the Inventory of Rare and Endangered Plants of California. Query for the California USGS Quadrangle and eight Surrounding Quadrangles. http://www. Rareplants.cnps.org/advanced.html Accessed September 12, 2018.

City of Vallejo. 2016. Propel Vallejo General Plan 2040 and Sonoma Boulevard Specific Plan Draft EIR. Accessed September 11, 2018. http://propelvallejo.com/wp-content/uploads/2017/12/PropelVallejo_DraftGeneralPlanEIR_160725-1.pdf.

Solano County Water Agency (SCWA). 2012. Solano Habitat Conservation Plan. Accessed September 11, 2018. http://www.scwa2.com/water-supply/habitat/solano-multispecies-habitat-conservation-plan.

U.S Fish and Wildlife Services (USFWS). 2018a. USFWS National Wetlands Inventory. https://www.fws.gov/wetlands/data/Mapper.html. Accessed September 12, 2018.

_____. 2018b. Information for Planning and Consultation (IPac). Accessed September 12, 2018. https://ecos.fws.gov/ipac/

4.5 CULTURAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

4.5.1 Environmental Setting

Cultural resources typically include buildings or structures that are associated with an event or person that have contributed to the shaping or development of the city; objects, such as Native American artifacts discovered at a particular location or area of the city; or an archaeological, geological, or paleontological artifact, such as fossils (City of Vallejo 2017). The City has numerous historical resources and landmarks, including three historic districts—Mare Island Naval Shipyard, Architectural Heritage District, and Saint Vincent's Hill Historic District—that are listed on the National Register of Historic Places (City of Vallejo 2017).

The project site is in a heavily urbanized area and has been developed as part of Six Flags since 1985 (Marine World Joint Powers Authority 1997). Due to the highly disturbed nature of the project site and the surrounding area there are no site features or immediate evidence that would suggest the presence of historic or prehistoric resources on the project site. The City's General Plan has designated the project site for entertainment type uses and does not identify the project site or the Theme Park within a historic district or as a historic landmark (City of Vallejo 2017).

4.5.2 Methodology

Stantec completed background desktop research to identify existing cultural resources at the project site and surrounding area. Based on the developed nature of the project site, the desktop research reviewed existing documents, including the City's General Plan and the General Plan EIR. In addition, Native American outreach efforts were conducted by the City. This included a review of the project site by the Yocha Dehe Wintun Nation Cultural Resources Department. The Department concluded that based on the information provided, the Yocha Dehe Wintun Nation is not aware of any known cultural resources near the project area. Tribal cultural resources may include less tangible resources, such as plant gathering areas, which are not identified during archaeological surveys. These, and Native American consultation efforts, are discussed in more detail in Section 3.17 Tribal Cultural Resources.

4.5.3 Environmental Impact Analysis

This section discusses potential impacts related to cultural resources associated with the proposed project and provides mitigation measures where necessary.

Impact CUL-1 Cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

Impact Analysis
The project site is in a heavily urbanized area and is developed as part of Six Flags. The Theme Park relocated from Redwood City to Vallejo, on the north side of Lake Chabot, in 1985 and has operated continuously on the site since. Over the years, many of the rides and attractions have been changed or been replaced with other attractions. These structures are less than 35 years old and are of no particular architectural style. Therefore, none of the structures on the project site would be eligible for the California or National Registers. Furthermore, the City's General Plan has not identified any of the structures in the Theme Park as architecturally or historically significant. However, subsurface construction activities associated with the proposed project, such as excavating and grading, could potentially damage or destroy previously undiscovered historical resources. If undiscovered subsurface historical resources are inadvertently identified during construction activities, Mitigation Measure CUL-1 and Mitigation Measure CUL-2 are required to reduce potentially significant impacts to a less than significant level.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
MM CUL-1: Worker Awareness Training. Prior to the start of construction, all field personnel shall receive worker's environmental awareness training on cultural resources. The training, which may be conducted with other environmental or safety trainings, shall provide a description of cultural resources that may be encountered during construction and outline the steps to follow if a discovery is made.

MM CUL-2: Cultural Materials Discovered During Construction. If any cultural resource is encountered during ground disturbance or subsurface construction activities (e.g., excavating, grading), all construction activities within a 50-foot radius of the identified potential resource shall cease until a Secretary of the Interior qualified archaeologist evaluates the item for its significance and records the item on the appropriate State Department of Parks and Recreation 523 series forms. All forms and associated reports shall be submitted to the Northwest Information Center of the California Historical Resource Information System. The archaeologist shall determine whether the resource requires further study. If the qualified archaeologist conducts appropriate technical analyses and determines the resource to be eligible for listing on the California Register of Historic Resources as a unique archaeological resource as defined in PRC Section 15064.5, the archaeologist shall develop a plan for the treatment of the resource. This shall contain appropriate mitigation measures, including avoidance, preservation in place, data recovery excavation, or other appropriate measures outlined in PRC Section 21083.2.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact CUL-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Impact Analysis
The project site has been developed as part of Six Flags since 1985. Work associated with changes and updates to the Theme Park has occurred on and near the project site over the last 30 years. Therefore, due to the highly disturbed nature of the project site the proposed project is not anticipated to impact any known or potential archeological resources. However, subsurface

construction activities associated with the proposed project, such as excavating and grading, could potentially damage or destroy previously undiscovered unique archaeological resources. As such, if undiscovered subsurface historical resources are inadvertently identified during construction activities, Mitigation Measure CUL-1 and Mitigation Measure CUL-2 are required to reduce potentially significant impacts to a less than significant level.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure CUL-1 and Mitigation Measure CUL-2 are required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact CUL-3 Disturb any human remains, including those interred outside of dedicated cemeteries?

Impact Analysis
The project site has been developed as part of the Theme Park since 1985. There are no known human remains within the project site and no indications that the project site has been used for burial purposes in the past. Therefore, it is unlikely that human remains would be encountered during construction. However, ground disturbance and subsurface construction activities associated with the proposed project, such as excavating and grading, could potentially disturb previously undiscovered human burial sites. If undiscovered human burial sites are inadvertently identified, the implementation of Mitigation Measure CUL-3 would be required to reduce impacts to a less than significant level by ensuring compliance with Section 7050.5 of the California Health and Safety Code and PRC 5097.98.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
MM CUL-3: **Human Burials Encountered During Construction.** If ground-disturbing activities uncover previously unknown human remains, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed:

There shall be no further excavation or disturbance of the area where the human remains were found or within 50 feet of the find until the Solano County Coroner and the appropriate City representative are contacted. Duly authorized representatives of the Coroner and the City shall be permitted onto the project site and shall take all actions consistent with Health and Safety Code Section 7050.5 and Government Code Sections 27460, et seq. Excavation or disturbance of the area where the human remains were found or within 50 feet of the find shall not be permitted to re-commence until the Coroner determines that the remains are not subject to the provisions of law concerning investigation of the circumstances, manner, and cause of any death. If the Coroner determines the remains are Native American, the Coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" (MLD) of the deceased Native American. The MLD may make recommendations to the Applicant or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains, and any associated grave goods as provided in PRC Section 5097.98. If the MLD does not make recommendations within 48 hours, the Applicant shall reinter the remains in an area of the project site secure from

further disturbance. If the Applicant does not accept the MLD's recommendations, the owner or the MLD may request mediation by NAHC.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

4.5.4 References

City of Vallejo. 2017. Propel Vallejo General Plan 2040. Accessed July 6, 2018. http://propelvallejo.com/wp-content/uploads/2017/11/Vallejo%20General%20Plan%202040_FINAL_Amended%20171107_reduced.pdf.

Marine World Joint Powers Authority. 1997. Marine World Africa Five-Year Master Plan.

4.6 GEOLOGY AND SOILS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving:	☐	☐	☒	☐
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv. Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on strata or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

4.6.1 Environmental Setting

The City is located within a seismically active region and earthquakes have the potential to cause ground shaking of significant magnitude in the area. The California Geological Survey defines an active fault as one that has had surface displacement in the last 11,000 years or has experienced earthquakes in recorded history. The project site does not contain an active fault system. The closest active faults are the West Napa Fault, the Green Valley Fault, and the Hayward/Rodgers Creek Fault, located approximately 2 miles northwest, 6 miles northeast, and

11 miles west of the project site, respectively (DOC 2010). The USGS estimates that the probability of a magnitude 6.7 or greater earthquake within the Bay Area prior to 2036 is 63 percent. The probability of an event of this magnitude is 31 percent along the Hayward/Rodgers Creek Fault and 3 percent along the Green Valley Fault (City of Vallejo 2017). Ground shaking from an earthquake can result in ground failure, including liquefaction, ground-induced landslides, and subsidence. The Theme Park is identified in an area with very low and moderate susceptibility to liquefaction (City of Vallejo 2017). The USGS has not recorded any areas in the City at risk of subsidence (USGS 2018). Additionally, the Theme Park consists of flat topography and is not located in a landslide hazard zone (DOC 2015).

Based on previous geotechnical investigations that have been conducted adjacent to the project site, the project site is likely to consist of Pleistocene-age alluvial fan deposits and bedrock of late-cretaceous Great Valley complex of claystone, siltstone, and sandstone bedrock. The alluvial fan deposits consist of moderately to poorly sorted and moderately to poorly bedded sand, gravel, silt, and clay deposits. The subsurface deposits resemble alluvial fan deposits that are underlain by claystone and mudstone bedrock. In addition, there is potential for undocumented fill to be present at the project site (KC Engineering Company 2018).

4.6.2 Methodology

Previous geotechnical investigations have been conducted at the Theme Park property since 1988. A geotechnical investigation was conducted for the Harley Quinn Skywarp Ride, located directly adjacent to the northern boundary of the project site, in February 2018 by KC Engineering Company. Due to the proximity of this ride to the project site, the subsurface soil conditions are expected to be similar.

In addition, the evaluation of potential geologic and soil impacts from the proposed project was based on a review of the General Plan, General Plan EIR, and geologic maps prepared by the USGS and DOC. The information obtained from these sources was reviewed and summarized to establish existing conditions and to determine potential geology and soils impacts from the proposed project.

4.6.3 Environmental Impact Analysis

This section discusses potential impacts related to geology and soils associated with the proposed project and provides mitigation measures where necessary.

Impact GEO-1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving:

- **i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**
- **ii) Strong seismic ground shaking?**
- **iii) Seismic-related ground failure, including liquefaction?**
- **iv) Landslides?**

Impact Analysis

i. Fault Rupture

There are no Alquist-Priolo Earthquake Fault Zones mapped, or evidence of an active earthquake fault in the City (City of Vallejo 2016). There are no known active faults crossing the project site as mapped and/or recognized by the State of California. As such, impacts related to fault-related surface rupture at the project site would be less than significant.

ii. Ground Shaking

The project site is located within a seismically active region and earthquake related ground shaking should be expected during the design life of the proposed project. The nearest major active faults are the West Napa Fault, the Green Valley Fault, and the Hayward/Rodgers Creek Fault located 2 or more miles away. Additionally, there are several other active faults in the Bay Area region that may produce significant seismic shaking at the project site. The proposed roller coaster design and soils would be evaluated by a structural engineer based on the geotechnical investigation prepared for the Harley Quinn Skywarp Ride. This would ensure that the proposed project is designed to withstand the anticipated ground accelerations at the site. Therefore, impacts related to seismic ground shaking would be less than significant.

iii. Liquefaction

The potential for liquefaction to occur on the project site is moderate (City of Vallejo 2016). According to the Geotechnical Report prepared for the Harley Quinn ride, located directly adjacent to the northern boundary of the site, the project site is in an area underlain by shallow bedrock. Due to the shallow bedrock, there is no potential for liquefaction. Therefore, no impact would occur (KC Engineering Company 2018).

iv. Landslides

The project site and surrounding area are relatively flat. According to the DOC's online Landslide Inventory, no historic landslides have occurred in the project area (DOC 2015). Therefore, no impacts associated with landslides would occur.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact GEO-2 Result in substantial soil erosion or the loss of topsoil?

Impact Analysis
The proposed project would disturb 0.94 acres of land and construction activities could expose soils to wind or water, resulting in the potential for erosion and sedimentation. Implementation of erosion control measures are required by Section 12.41.090 of Vallejo's Municipal Code for any

construction contractor performing work in the City. Therefore, in accordance with Section 12.41.090 the proposed project would be required to implement the best management practices (BMPs) including but not limited to:

- Erosion control at the site;
- Run-on and run-off controls to and from the site;
- Control of sediments and fines on the site;
- Active treatment systems (if necessary);
- Good site management; and
- Non-stormwater management.

In addition, implementation of Mitigation Measure HYD-1 would require submittal of an erosion control plan to the City for review prior to the issuance of a grading permit. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure HYD-1 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact GEO-3 Be located on strata or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Impact Analysis
As previously discussed in Impact GEO-1, the project site is in a seismically active region and may experience ground shaking during the design life of the proposed project. The project site and surrounding area are flat and underlain by shallow bedrock. Therefore, the proposed project would not be in an area that is subject to landslides, liquefaction, or lateral spreading. Based on the findings of the geotechnical investigation conducted adjacent to the project site for the Harley Quinn ride, there is potential for undocumented fills to be present at the project site. Undocumented fills may contain debris that is not suitable for bearing support and would need to be replaced with engineered fill to reduce the potential risk of structural collapse. The proposed roller coaster design and soils would be evaluated by a structural engineer based on the geotechnical investigation prepared for the Harley Quinn Skywarp Ride. This would ensure that the proposed project is designed for potential unstable soils. Therefore, impacts associated with unstable soils would be less than significant with mitigation.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact GEO-4 Be located on expansive soil, as defined in Table 18 1 B of the Uniform Building Code, creating substantial risks to life or property?

Impact Analysis
Based on previous geotechnical investigations, the project site is in an area that contains highly expansive near surface clay soils and undocumented fill (KC Engineering Company 2018). As such, soils at the project site are expected to be subject to volume changes due to variations in moisture content. The proposed roller coaster design and soils would be evaluated by a structural engineer based on the geotechnical investigation prepared for the Harley Quinn Skywarp Ride. This would ensure that the proposed project foundation would withstand expansive soils. Therefore, impacts associated with unstable soils would be less than significant with mitigation. Therefore, impacts related to expansive soils would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact GEO-5 Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Impact Analysis
The proposed project would not require the construction of septic tanks or any other alternative wastewater disposal system. Therefore, impacts associated with soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems would not occur.

Level of Significance before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance after Mitigation
No Impact.

Impact GEO-6 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact Analysis
Based on previous geotechnical studies that have been conducted adjacent to the project site, soils at the project site are likely to consist of highly expansive clay soils underlain by bedrock and undocumented fill (KC Engineering Company 2018). The geologic materials underlying the site are mapped near the transition of Pleistocene-aged alluvial fan deposits and bedrock of the late-cretaceous Great Valley complex of claystone, siltstone, and sandstone bedrock. The alluvial fan deposits consist of moderately to poorly sorted and moderately to poorly bedded sand, gravel, silt, and clay deposits (KC Engineering Company 2018). These landforms,

combined with the highly disturbed nature of the project site, suggest a low to moderate sensitivity for paleontological resources.

However, subsurface construction activities associated with the proposed project, such as excavating and grading, could potentially damage or destroy previously undiscovered paleontological resources. As such, if undiscovered subsurface paleontological resources are inadvertently identified during construction activities, Mitigation Measure CUL-1 and Mitigation Measure CUL-2 are required to reduce potentially significant impacts to a less than significant level.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure CUL-1 and Mitigation Measure CUL-2 are required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

4.6.4 References

California Department of Conservation (DOC). 2010. Fault Activity Map of California (2010). Accessed July 5, 2018. http://maps.conservation.ca.gov/cgs/fam/

_____. 2015. Landslide Inventory (Beta). Accessed July 5, 2018. https://maps.conservation.ca.gov/cgs/lsi/

City of Vallejo. 2016. Propel Vallejo General Plan 2040 and Sonoma Boulevard Specific Plan Draft EIR. Accessed September 11, 2018. http://propelvallejo.com/wp-content/uploads/2017/12/PropelVallejo_DraftGeneralPlanEIR_160725-1.pdf.

_____. 2017. Propel Vallejo General Plan 2040. Accessed July 6, 2018. http://propelvallejo.com/wp-content/uploads/2017/11/Vallejo%20General%20Plan%202040_FINAL_Amended%20171107_reduced.pdf.

KC Engineering Company. 2018. Geotechnical Report on Proposed Harley Quin Skywarp Ride at Discovery Kingdom 1001 Fairgrounds Drive Vallejo, California.

United States Geologic Survey (USGS). 2018. Areas of Land Subsidence in California. Accessed July 5, 2018. https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html.

4.7 GREENHOUSE GASES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☒	☐	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☒	☐	☐

4.7.1 Environmental Setting

The issue of combating climate change and reducing greenhouse gas emissions (GHG) has been the subject of State legislation (AB 32 and Senate Bill [SB] 375). The Governor's Office of Planning and Research has adopted changes to CEQA Guidelines and the environmental checklist that is used for Initial Studies such as this one. The changes to the checklist, which were approved in 2010, are incorporated above in the two questions related to a project's GHG impact. The City adopted its Climate Action Plan (CAP) in March 2012. The CAP was created for Vallejo to remain in compliance with State requirements that address the reduction of major sources of GHG emissions. The CAP is a detailed, long range strategy to reduce GHG emissions and achieve a greater conservation of resources with regards to transportation, land use, waste, and energy.

Greenhouse Gases (GHGs)
GHGs and climate change are cumulative global issues. The CARB and EPA regulate GHG emissions within the State of California and the U.S., respectively. While the CARB has the primary regulatory responsibility within California for GHG emissions, local agencies can also adopt policies for GHG emission reduction. Many chemical compounds in the earth's atmosphere act as GHGs, as they absorb and emit radiation within the thermal infrared range. When radiation from the sun reaches the earth's surface, some of it is reflected into the atmosphere as infrared radiation (heat). GHGs absorb this infrared radiation and trap the heat in the atmosphere. Over time, the amount of energy from the sun to the earth's surface should be approximately equal to the amount of energy radiated back into space, leaving the temperature of the earth's surface roughly constant. Many gases exhibit these "greenhouse" properties. Some of them occur in nature (water vapor, carbon dioxide (CO2), methane [CH4], and nitrous oxide [N_2O]), while others are exclusively human-made (like gases used for aerosols) (EPA 2016).

Emissions Inventories and Trends
California is the second-largest contributor in the U.S. of GHGs and the sixteenth-largest contributor in the world (CARB 2014a). According to the CARB's recent GHG inventory for the State, released May 2014, California produced 459 million metric tons of carbon dioxide equivalent (MTCO2e) in 2012 (CARB 2014a). The major source of GHGs in California is transportation, contributing 37 percent of the State's total GHG emissions in 2012.

Potential Environmental Impacts
For California, climate change in the form of warming has the potential to incur/exacerbate environmental impacts, including, but not limited to, changes to precipitation and runoff patterns, increased agricultural demand for water, inundation of low-lying coastal areas by sea-level rise, and increased incidents and severity of wildfire events (Moser et al. 2009). Cooling of

the climate may have the opposite effects. Although certain environmental effects are widely accepted to be a potential hazard to certain locations, such as rising sea level for low-lying coastal areas, it is currently infeasible to predict all environmental effects of climate change on any one location.

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual, on earth. A project's GHG emissions are at a micro-scale relative to global emissions but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact.

4.7.2 Methodology

As discussed in Section 4.3, the proposed project is located within the BAAQMD; therefore, the BAAQMD thresholds are the most appropriate. The BAAQMD established 1,100 $MTCO_2e$ for project operations as a screening level for ensuring 90 percent of the new GHG emissions would be reviewed and assessed for mitigation (BAAQMD 2010). Projects below the 1,100 $MTCO_2e$ would have a less than significant cumulative impact on GHGs. BAAQMD does not presently provide a construction-related greenhouse gas generation threshold but recommends that construction-generated greenhouse gases be quantified and disclosed. BAAQMD also recommends that lead agencies determine the level of significance of construction-generated greenhouse gas emissions in relation to meeting AB 32 greenhouse gas reduction goals. The lead agency is also encouraged to incorporate BMPs to reduce GHG emissions during project construction, as feasible and applicable.

4.7.3 Environmental Impact Analysis

This section discusses potential impacts related to greenhouse gases associated with the proposed project and provides mitigation measures where necessary.

Impact GHG-1	**Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Impact Analysis
The proposed project may contribute to climate change impacts through its contribution of GHGs. The proposed project would generate a variety of GHGs during construction, including several defined by AB 32, such as CO_2, CH4, and N_2O from the exhaust of equipment, construction hauling trips, and worker commuter trips.

Construction Emissions Inventory
Construction emissions would be generated from the exhaust of equipment and the exhaust of construction equipment and material delivery trips and worker commuter trips. $MTCO_2e$ emissions during construction of the project are presented in Table 4.7-1.

Table 4.7-1: Construction Greenhouse Gas Emissions

	$MTCO_2e$
Total	155
BAAQMD significance thresholds	1,100
Significant Impact?	No

During the construction of the project, approximately 155 $MTCO_2e$ would be emitted. Although estimated construction emissions would not exceed the BAAQMD recommended operational significance thresholds, would be temporary, and would occur prior to the year 2020, which is the year by which the State of California is required to reduce its emissions to 1990 levels, BMPs should be incorporated to reduce emissions. These BMPs have been incorporated into the project as Mitigation Measure GHG-1. With implementation of mitigation impacts would be considered less than significant.

Operational Emissions Inventory
Operational emissions occur over the lifetime of the project and are from two main sources: area sources and motor vehicles, or mobile sources. The operation of the project is expected to result in a finite increase in traffic volumes on the local roadways upon the opening of the new ride. Note that operational emissions have not been estimated for potential stationary source equipment such as generators as not have currently been proposed. Additionally, any stationary source equipment would be subject to BAAQMD permitting requirement. Annual GHG ($MTCO_2e$) emissions for operations of the project are presented in Table 4.7-2.

Table 4.7-2: Operational Greenhouse Gas Emissions

	$MTCO_2e$
Total	1,039
BAAQMD significance thresholds	1,100
Significant Impact?	No

Operation of the proposed project would result in approximately 1,039 $MTCO_2e$ emitted annually. Estimated operational emissions would not exceed the BAAQMD recommended significance thresholds; therefore, impacts would be considered less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
MM GHG-1: The Applicant shall ensure that the following BMPs are incorporated into the construction of the proposed project:

- Improve fuel efficiency from construction equipment:
  - Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than 3 minutes (5-minute limit is required by the state airborne toxics control measure [Title 13, sections 2449(d)(3) and 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site.
  - Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified

mechanic and determined to be running in proper condition before it is operated.
    - Train equipment operators in proper use of equipment.
    - Use the proper size of equipment for the job.
    - Use equipment with new technologies (repowered engines, electric drive trains) when available.
- Perform on-site material hauling with trucks equipped with on-road engines (if determined to be less emissive than the off-road engines).
- Use alternative fuels for generators at construction sites such as propane or solar or use electrical power as available.
- Encourage and provide carpools and/or secure bicycle parking for construction worker commutes.
- Recycle or salvage non-hazardous construction and demolition debris (goal of at least 75% by weight).

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact Analysis
BAAQMD's approach to developing a threshold of significance for GHG emissions was to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions. If emissions were less than the 1,100 $MTCO_2e$ screening threshold, then it would be considered to have a less than significant impact. The project's emissions are less than 1,100 $MTCO_2e$; therefore, it would not be considered in conflict with the State's Scoping Plan.

In 2012, the City adopted a CAP to address the reduction of major sources of GHG emissions. An emission target was adopted of 15 percent below 2008 emission levels by 2020 and extends emission reduction goals to 2035. The CAP focuses on practices related to green buildings, energy efficiency, transit-oriented development, mixed use and higher density development, recycling and composting, water conservation, and renewable energy.

The CAP contains a compliance checklist for new development, which is used to determine compliance with the CAP, a qualified Greenhouse Gas Reduction Plan according to BAAQMD guidelines (updated in 2017). The project complies with applicable requirements after application of Mitigation Measure GHG-1. Therefore, the proposed project would not conflict with any applicable plans, policies, or regulations adopted for reducing GHG emissions. Therefore, the impact would be less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Implement Mitigation Measure GHG-1.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

4.7.4 References

Bay Area Air Quality Management District (BAAQMD). 2010. California Environmental Quality Act: Air Quality Guidelines. Accessed September 2018. http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/Draft_BAAQMD_CEQA_Guidelines_May_2010_Final.ashx.

California Air Resources Board (CARB). 2014a. 2014 Edition California Greenhouse Gas Emission Inventory: 2000-2012. Accessed September 2018. http://www.arb.ca.gov/cc/inventory/pubs/reports/ghg_inventory_00-12_report.pdf.

_____. 2014b. First Update to the Climate Change Scoping Plan. Accessed September 2018. https://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm f.

CalEEMod. California Emissions Estimator Model. Version 2016.3.2. Accessed September 2018. http://caleemod.com/.

Environmental Protection Agency (EPA). 2016. Climate Change Indicators. Accessed September 2018. https://www.epa.gov/climate-indicators/climate-change-indicators-atmospheric-concentrations-greenhouse-gases.

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4.8 HAZARDS AND HAZARDOUS MATERIALS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely-hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to *Government Code Section 65962.5* and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

4.8.1 Environmental Setting

Hazardous materials, as defined by the CCR, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. Hazardous materials are grouped into the following four categories, based on their properties:

- Toxic – Causes Human Health Effects

- Ignitable – Has the Ability to Burn
- Corrosive – Causes Severe Burns or Damage to Materials
- Reactive – Causes Explosions or Generates Toxic Gases

Hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. The criteria that define a material as hazardous also define a waste as hazardous. If improperly handled, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust.

4.8.2 Methodology

Preliminary site plan for the proposed project, available literature, including documents published by federal, State, and local agencies, and as applicable the General Plan and General Plan EIR were reviewed for this analysis. The information obtained from these sources was summarized to establish existing conditions and to identify potential environmental impacts. In determining the level of significance.

4.8.3 Environmental Impact Analysis

This section discusses potential impacts related to hazards and hazardous materials associated with the proposed project and provides mitigation measures where necessary.

Impact HAZ-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Impact Analysis
The proposed project would involve the minor transport and use of hazardous substances including, but not limited to, hydraulic fluid, gasoline, diesel fuel, paints, lubricants, and solvents, during both construction and operation activities in very limited quantities. The use of these materials would be managed in accordance with applicable federal, state, and local regulations. In addition, the Theme Park is required to maintain a Hazards Materials Business Plan onsite that addresses storage, use, and disposal of any hazardous substances. Therefore, the proposed project would not create a significant hazard to the public or the environment.

The existing Go-Kart Ride would be demolished. Since the ride was installed in 2002, the potential for exposure to asbestos and lead based paint during construction is precluded. Therefore, impacts related to the routine transport, storage, use, and disposal of hazardous materials would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact HAZ-2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Impact Analysis
As previously noted in Impact HAZ-1, the proposed project would involve the minor use of hazardous materials such as, hydraulic fluid, gasoline, diesel fuel, paints, lubricants, and solvents. The use of these substances would be in accordance with applicable federal, state, and local regulations and the Theme Park's Hazards Materials Business Plan. Therefore, impacts related to the release of hazardous materials into the environment would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact HAZ-3 Emit hazardous emissions or handle hazardous or acutely-hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Impact Analysis
There are no schools within 0.25 mile of the project site. Saint Basil School is more than 1 mile south of the project site. Additionally, the proposed project would not involve the use of significant quantities of hazardous materials. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact HAZ-4 Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Impact Analysis
A search of EnviroStor and GeoTracker in July 2018 revealed that the project site is not listed as a hazardous material release site (DOC 2011; DTSC 2018; SWRCB 2015). In 2001, there was a Leaking Underground Storage Tank case at the Theme Park, adjacent to the boat ramp on Lake Chabot. This site is over 400 feet away from the project site. Following the remediation of this site, the Solano County Department of Environmental Management determined the residual concentrations do not pose a threat to human health or the environment. The Solano County Department of Environmental Management issued a Remedial Action Completion Certificate and Case Closure Letter in 2002 (SCDEM 2002). Furthermore, groundwater in the area slopes away from the project site toward Lake Chabot (Hultgren-Tillis Engineers 1998). The proposed project is not located on a list of hazardous materials sites compiled pursuant to Government

Code Section 65962.5. Therefore, the proposed project would not create a significant hazard to the public or the environment and no impact would occur.

Level of Significance before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance after Mitigation
No Impact.

Impact HAZ-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Impact Analysis
The proposed project is not located within 2 miles of a public airport or public use airport. The closest public airport is the Napa County Airport located approximately 5 miles northwest of the project site. The project site is located outside of the airport's Land Use Compatibility Plan and would not be subject to associated height and density restrictions. Therefore, there would be no impact.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact HAZ-6 For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Impact Analysis
The Sutter Solano Medical Center Heliport is located less than 1 mile southeast of the project site. While the proposed project would involve the construction of a roller coaster structure that would be approximately 117 feet tall, the roller coaster would be similar in height to surrounding rides within the existing Zone 4 boundaries, which allows for structures up to 150 feet tall. Federal Aviation Regulations, Part 77, "Objects Affecting Navigable Airspace" (referred to as FAR Part 77) sets forth standards and review requirements for protecting the airspace for safe aircraft operation, particularly by restricting the height of potential structures and minimizing other potential hazards to aircraft such as reflective surfaces, flashing lights, and electronic interference. These regulations require that the FAA be notified of certain proposed construction projects located within an extended zone defined by an imaginary slope radiating outward for several miles from an airport's runways, or that would otherwise stand at least 200 feet in height above ground. Consistent with the City General Plan policy, the proposed project would be conditioned not to exceed FAR Part 77 surfaces on the site as part of the City's development permit, which would ensure that the proposed ride would not be a hazard to aircraft operation. In addition, the height of project structures would be below 200 feet and would, therefore, not

obstruct navigable airspace as established by Title 14 of the Code of Federal Regulations Part 77 (FAA 2018). As such, the proposed project would not result in a safety hazard for people residing or working in the project area. Therefore, no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact HAZ-7 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact Analysis
The Vallejo Fire Department Station 25 is the nearest fire station, located approximately 1 mile east of the project site. The Vallejo Fire Department considers its service levels adequate for existing developments and response areas. The proposed project would not result in road closures or roadway alterations, and all construction-related traffic would be contained within the Theme Park. The proposed project would, therefore, not interfere with the provision of emergency services or existing evacuation plans. The proposed project would have no impact related to emergency service plans.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact HAZ-8 Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Impact Analysis
While there are wildland areas designated within the southern and eastern boundaries of the City, the project site is not categorized as at risk from wildland fires (City of Vallejo 2017). The project site is located among other amusement park rides in the Theme Park and is not associated with wildland fires. Operation of the proposed project would conform to the Theme Park's existing Safety Plan, which outlines the park's emergency fire response policies and evacuation procedures. No impacts related to wildland fires would occur.

Level of Significance Before Mitigation
No Impact

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

4.8.4 References

California Department of Conservation (DOC). 2011. Asbestos Reports, Maps, and Guidelines for Geologic Investigations. Accessed July 6, 2018. http://www.conservation.ca.gov/cgs/minerals/hazardous_minerals/asbestos.

California Department of Toxic Substances Control (DTSC). 2018. EnviroStor. Accessed July 6, 2018. https://www.envirostor.dtsc.ca.gov/public.

City of Vallejo. 2017. Propel Vallejo General Plan 2040. Accessed July 6, 2018. http://propelvallejo.com/wp-content/uploads/2017/11/Vallejo%20General%20Plan%202040_FINAL_Amended%20171107_reduced.pdf.

Federal Aviation Administration (FAA). 2018. Obstruction Evaluation/Airport Airspace Analysis. 2018. Accessed July 9, 2018. https://oeaaa.faa.gov/oeaaa/external/portal.jsp.

Hultgren-Tillis Engineers. 1998. Geotechnical Investigation, 1998 Rides, Marine World Africa USA. January 26, 1998. Print.

Solano County Department of Environmental Management (SCDEM). 2002. Underground Storage Tank Case Closure Letter. Accessed September 6, 2018. https://geotracker.waterboards.ca.gov/regulators/deliverable_documents/8340345084/10435%20closure.pdf.

State Water Resources Control Board (SWRCB). 2015. GeoTracker. 2015. Accessed July 6, 2018. https://geotracker.waterboards.ca.gov/.

4.9 HYDROLOGY AND WATER QUALITY

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there should be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☒	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☒	☐	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
f) Otherwise substantially degrade water quality?	☐	☒	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation of seiche, tsunami, or mudflow?	☐	☐	☐	☒

4.9.1 Environmental Setting

The site is developed as part of Six Flags and for the most part covered by impermeable surfaces. The project site is in the San Francisco Bay Hydrologic Region, specifically in the Napa River Sub-Area and the Lake Chabot watershed. Lake Chabot is a recreational lake managed by the Greater Vallejo Recreation District and is adjacent to the southern boundary of the Theme Park. Lake Chabot is used as a detention basin and receives stormwater runoff from the nearby creeks, as well as from the project site. Six Flags is served by existing stormwater drainage systems, which are maintained by the Vallejo Flood and Wastewater District.

The NPDES permit program regulates municipal and industrial discharges to surface waters of the United States, including discharges from municipal separate storm sewer systems (City of Vallejo 2016). In California, the NPDES permit program is administered by the SWRCB through the nine Regional Water Quality Control Boards. The City lies within the jurisdiction of the San Francisco Regional Water Quality Control Board and is subject to the waste discharge requirements of the Municipal Regional Stormwater Permit (MRP). Provision C.3 of the MRP addresses post-construction stormwater requirements for new development and redevelopment projects that create and/or replace 10,000 square feet or more of impervious area or special land use categories (i.e., auto service facilities, gasoline stations, restaurants, and uncovered parking lots) that create and/or replace 5,000 square feet of impervious surface (City of Vallejo 2016).

4.9.2 Methodology

Evaluation of potential hydrologic and water quality impacts was based on a review of FEMA FIRMs of the project site, General Plan, and General Plan EIR. The information obtained from these sources was reviewed and summarized to establish existing conditions and to identify potential environmental effects. In determining the level of significance, the analysis assumes that the proposed project would comply with relevant federal, State, and local ordinances and regulations.

4.9.3 Environmental Impact Analysis

This section discusses potential impacts related to hydrology and water quality associated with the proposed project and provides mitigation measures where necessary.

Impact HYD-1 Violate any water quality standards or waste discharge requirements?

Impact Analysis
Construction activities could result in the degradation of water quality, releasing sediment, oil and greases, and other chemicals to nearby water bodies. Specifically, refueling and parking of construction vehicles and other equipment onsite during construction may result in oil, grease, or related pollutant leaks and spills that may discharge into the storm drain system. The proposed project would be required to comply with Provision C.3 of the MRP, and Chapter 12.41 (Stormwater Management and Discharge Control) of Vallejo's Municipal Code. In accordance with these requirements the proposed project would be required to implement Mitigation Measure HYD-1 and submit a Stormwater Control Plan and an Operations and Maintenance Plan to the City. Operation of the proposed project would not result in an increase in new impervious surfaces. The Stormwater Control Plan and Operations and Maintenance Plan would identify appropriate source control, site design, and stormwater treatment measures for construction and operation of the proposed project. Therefore, potential impacts related to

water quality standards would be less than significant with implementation of Mitigation Measure HYD-1.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
MM HYD-1: Submit Final Stormwater Control Plan. Prior to issuance of improvement and grading plans, the Applicant shall submit a final Stormwater Control Plan and an Operations and Maintenance Plan that complies with Provision C.3 of the MRP and the Vallejo Municipal Code Chapter 12.41(Stormwater Management and Discharge Control), to the satisfaction of the City.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact HYD-2 Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there should be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Impact Analysis
New construction could result in impacts related to groundwater if areas currently available for the infiltration of rainfall runoff are reduced and permeable areas are replaced by impermeable surfaces. The project site is within the boundary of the Theme Park, which contains large amounts of impervious surfaces associated with pavement for walkways and foundations for rides and buildings. The proposed project would not result in new impervious surfaces and therefore, not impact the potential for groundwater recharge in the project area. Furthermore, the City does not pump groundwater as part of its water supply, so water used during construction for dust control and cleanup would not impact groundwater levels. As such, the proposed project would not substantially deplete groundwater supplies or substantially interfere with groundwater recharge. No impact would occur.

Level of Significance before Mitigation
No Impact.

Mitigation Measures
No mitigation necessary.

Level of Significance after Mitigation
No Impact.

Impact HYD-3 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Impact Analysis
There are no drainages present on the site. The proposed project would involve excavation, grading, and soil exposure during construction. If not controlled, the transport of these materials into local waterways could temporarily increase suspended sediment concentrations. To minimize such impacts during construction, the proposed project would implement Mitigation Measure HYD-1 in accordance with Provision C.3 of the MRP and Chapter 12.41 of the Vallejo

Municipal Code. Therefore, implementation of Mitigation Measure HYD-1 would control the treatment and flow of site drainage and limit erosion and sediment release into the environment. Therefore, impacts would be less than significant with Mitigation Measure HYD-1 implemented.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measures HYD-1 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact HYD-4 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Impact Analysis
There are no drainages present on the site. The proposed project would disturb 0.94-acres. However, the proposed project would not result in new impervious surfaces or alter existing drainage patterns that could increase the potential for flooding at the site. In addition, the proposed project would implement Mitigation Measure HYD-1 to control the rate or amount of surface runoff at the site during construction and operation activities. Therefore, the proposed project would not substantially increase surface runoff in a manner that would result in flooding on-or off-site. Impacts would be less than significant with the implementation of Mitigation Measure HYD-1.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure HYD-1 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact HYD-5 Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Impact Analysis
The proposed project would disturb 0.94 acres but would not result in new impervious areas. There would be no substantial increase in runoff at the project site that would exceed the capacity of the existing storm drain system. The proposed project would implement Mitigation Measure HYD-1 to control and prevent the release of sediment, debris, and other pollutants from entering the City's storm drain system. Therefore, impacts associated with additional sources of polluted runoff would be less than significant with the implementation of Mitigation Measure HYD-1.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure HYD-1 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact HYD-6 Otherwise substantially degrade water quality?

Impact Analysis
As discussed in Impact HYD-1, the proposed project would be required to implement Mitigation Measure HYD-1 to minimize potential water quality impacts. No other discharges to surface water or groundwater are anticipated during construction. Operation of the proposed project would be similar to the existing conditions at the site and would not generate or release contaminants into the environment that would otherwise substantially impact water quality. Therefore, impacts associated with the degradation of water quality would be less than significant with the implementation of Mitigation Measure HYD-1.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure HYD-1 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact HYD-7 Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Impact Analysis
The proposed project involves the construction of a new roller coaster structure at Six Flags. No housing is proposed as part of the project and, therefore, no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact HYD-8 Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Impact Analysis
The Federal Emergency Management Agency National Flood Insurance Rate Map #06095C0440F indicates the project site is not located within a Flood Hazard Area. The project site is in Zone X,

defined by Federal Emergency Management Agency as areas outside the 100-year flood zone (FEMA 2015). Therefore, no impacts associated with placing structures within a 100-year flood hazard area would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact HYD-9 Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Impact Analysis
The City General Plan indicates that an area adjacent to Lake Chabot is within a potential flood inundation zone. However, the project site is located outside of this zone and would not be impacted by dam failure. Additionally, the project site is located outside of a 100-year floodplain (FEMA 2015). Therefore, no impacts associated with flooding would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation necessary.

Level of Significance After Mitigation
No Impact.

Impact HYD-10 Inundation of seiche, tsunami, or mudflow?

Impact Analysis
Seiche effects locations adjacent to larger water bodies such as lakes or reservoirs; while Lake Chabot could be potentially subject to seiches, wave heights would be negligible, and no flooding is expected to occur (City of Vallejo 2016). The project site is not located in an area at risk for tsunami or in an area subject to mudflows (City of Vallejo 2016). As such, based on the location and topographical characteristics of the site and the surrounding area, the proposed project would not be susceptible to seiche, tsunami, or mudflow. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

4.9.4 References

City of Vallejo. 2016. Propel Vallejo General Plan 2040 and Sonoma Boulevard Specific Plan Draft EIR. Accessed July 6, 2018. http://propelvallejo.com/wp-content/uploads/2017/12/PropelVallejo_DraftGeneralPlanEIR_160725-1.pdf.

_____. 2017. Propel Vallejo General Plan 2040. Accessed July 6, 2018. http://propelvallejo.com/wp-content/uploads/2017/11/Vallejo%20General%20Plan%202040_FINAL_Amended%20171107_reduced.pdf.

Federal Emergency Management Agency (FEMA). 2015. National Flood Layer FIRMette. Accessed July 6, 2018. https://msc.fema.gov/portal/firmette?latitude=38.137392191929955&longitude=-122.23099271691007.

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4.10 LAND USE AND PLANNING

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural communities' conservation plan?	☐	☐	☐	☒

4.10.1 Environmental Setting

The project site is located within the southeast corner of the existing 135-acre Theme Park in Vallejo. The project site is developed and currently occupied by the Go-Kart Ride. Other rides that are north of the project site are over 100 feet high, with the tallest at 150 feet.

The City's 2040 General Plan designates the project site as Retail Entertainment and the City's Zoning Code designates the project site as Public Facilities and Quasi-Public Facilities District. Additionally, the Theme Park's 2005 Use Permit (Use Permit #04-0011) divides the park into four zones; each zone maintains specific performance standards, height restrictions, building intensities, and allowed types of activities. The project site is located within a currently undefined area of the Theme Park. Because the northern section of the undefined area is adjacent to Zone 4, the proposed project would extend the boundary of Zone 4 to include the project site, pending approval of a Major Use Permit from the City which would amend the master plan for the Theme Park. Zone 4 allows structures up to 150 feet tall.

4.10.2 Methodology

Evaluation of potential land use impacts are based on a review of documents pertaining to the proposed project, including the Land Use Element of the General Plan and the Theme Park's Development Agreement and Use Permit #04-0011.

4.10.3 Environmental Impact Analysis

This section discusses potential impacts related to land use and planning associated with the proposed project and provides mitigation measures where necessary.

Impact LU-1 Physically divide an established community?

Impact Analysis
The project site is located within the Theme Park and would not divide an established community. Therefore, the proposed project would have no impact.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact LU-1 Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Impact Analysis
Six Flags is designated Retail Entertainment in the City's General Plan and zoned Public Facilities and Quasi-Public Facilities District. The proposed project would not alter the Theme Park's designation under the City's General Plan and Zoning Code. The proposed project would be compatible with the City's Nature and Built Environment Element Policy NBE-2.5 to "*support a thriving mix of regional retail and entertainment uses near Interstate 80*", since the proposed project would provide a new roller coaster attraction and positively affect the Theme Park's attendance.

A Major Use Permit is required to expand Zone 4 to include the project site. Approval of the Permit would not result in an incompatible land use. The project site is located within the southeast corner of the Theme Park adjacent to Zone 4 and is similar in nature to the rest of Zone 4. Zone 4 includes roller coasters over 100 feet tall. Since the proposed roller coaster structure would be approximately 117 feet tall, it would be compatible with Zone 4's height restriction for structures greater than 150 feet tall and compatible with the other taller rides in Zone 4. The proposed project would comply with the conditions and design requirements set in the Theme Park's Original Use Permit and Development Agreement, such as orientating the proposed project away from residential areas to limit excessive noise exposure, and consistent with all City policies and standards. No impacts would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact LU-3 Conflict with any applicable habitat conservation plan or natural communities conservation plan?

Impact Analysis
The City falls within the jurisdiction of the Solano Multispecies HCP (SCWA 2012). The SCWA is currently preparing the Solano Multispecies HCP that covers the project site. The draft plan identifies the project site as "Developed" but it has not been officially adopted. Based on the review of the draft HCP, the project site is not located within a protected conservation area. The proposed project would have no impact.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

4.10.4 References

Solano County Water Agency. 2012. Solano Multispecies Habitat Conservation Plan. Accessed April 12, 2018. http://www.scwa2.com/water-supply/habitat/solano-multispecies-habitat-conservation-plan.

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4.11 MINERAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the State?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

4.11.1 Environmental Setting

The City is dominated by the combination of developed urban land uses and public open space. The General Plan does not identify any formal mineral resource deposits within the city (City of Vallejo 2016).

4.11.2 Methodology

The following analysis is based on a review of the General Plan and General Plan EIR. The following impact discussions consider the effect of the proposed project related to mineral resources.

4.11.3 Environmental Impact Analysis

This section discusses potential impacts related to mineral resources associated with the proposed project and provides mitigation measures where necessary.

Impact MIN-1 Result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the State?

Impact Analysis
No mineral extraction activities exist on, or near the project site, and mineral extraction is not included as part of the proposed project. Therefore, no impacts would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact MIN-2 Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

Impact Analysis
The General Plan does not identify any formal mineral resource deposits or locally important mineral resource recovery sites at the project site or within the city limits of Vallejo. As such, the proposed project would not result in the loss of availability of a locally important mineral resource recovery site. No impacts would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

4.11.4 References

City of Vallejo. 2016. Propel Vallejo General Plan 2040 and Sonoma Boulevard Specific Plan Draft EIR. Accessed July 6, 2018. http://propelvallejo.com/wp-content/uploads/2017/12/PropelVallejo_DraftGeneralPlanEIR_160725-1.pdf.

4.12 NOISE

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport of public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

4.12.1 Environmental Setting

Characteristics of Noise

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. The zero point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect.

With respect to how humans perceive and react to changes in noise levels, a 1dBA (A-weighted sound levels are expressed as dBA) increase is imperceptible, a 3-dBA increase is barely perceptible, a 5-dBA increase is clearly noticeable, and a 10-dBA increase is subjectively perceived as approximately twice as loud.

Sound levels in dB are calculated on a logarithmic basis and not an arithmetic basis. For example, two 60 dBA sources would produce a total noise of 63 dBA. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness.

The perceived loudness of sound is dependent upon many factors, including sound pressure level and frequency content. The human ear is not equally sensitive to all frequencies in the entire spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called A-weighting, written as dBA and referred to as A-weighted decibels. There is a strong correlation between dBA and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment.

The A- weighted sound level is the basis for various sound level metrics, including the day/night sound level and the Community Noise Equivalent Level, both of which represent how humans are more sensitive to sound at night. In addition, the equivalent continuous sound level (Leq) is the average sound energy of time-varying noise over a sample period and the Lmax is the maximum instantaneous noise level occurring over a sample period.

Existing Ambient Noise Levels
The existing noise environment in a project area is characterized by the area's general level of development due to the high correlation between the level of development and ambient noise levels. Areas that are not urbanized are relatively quiet, while areas that are more urbanized are noisier as a result of roadway traffic, industrial activities, and other human activities. Figure 4.10-1 of the General Plan EIR displays existing noise contours throughout the City. The project site is currently affected by noise generated by State Route 37 and is located at the edge of a 65 dbA Community Noise Equivalent Level contour (City of Vallejo 2016). The General Plan EIR identifies the Theme Park as a commercial/retail land use that has the potential to generate significant levels of noise, which could impact nearby sensitive receptors (City of Vallejo 2016).

Vibration Standards
Vibration is like noise that involves a source, a transmission path, and a receiver. While related to noise, vibration differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system that is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities. The City does not have specific policies pertaining to vibration levels. However, vibration levels associated with construction activities and proposed project operations are addressed as potential noise impacts associated with the proposed project implementation.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 4.12-1 summarizes the general threshold at which human annoyance could occur, which is noted as 0.1 peak particle velocity in inches per second. Table 4.12-2 indicates that the threshold for damage to structures ranges from 0.12 to 2.0 peak particle velocity in inches per second depending on the structure type and condition.

Table 4.12-1: Guideline Vibration Annoyance Potential Criteria

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Notes: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
Source: California Department of Transportation 2013.

Table 4.12-2: Guideline Vibration Damage Potential Criteria

Structure and Condition	Maximum PPV (in/sec)	Transient Sources Continuous/Frequent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structure	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Notes: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
Source: California Department of Transportation 2013.

Sensitive Receptors

The closest noise receptors consist of residential properties located about 0.50 mile south and west of the project site. The Courtyard by Marriott Hotel is approximately 600 feet northeast of the project site, and the single-family homes are approximately 0.25 mile north of the project site across State Route 37.

Local Regulations

The General Plan identifies land use compatibility noise guidelines for noise-sensitive land uses affected by transportation and non-transportation noise sources. The land use compatibility chart is shown below in Table 4.12-3.

Table 4.12-3: Noise and Land Use Compatibility Matrix

Community Noise Exposure Level							
Land Use Receiving the Noise	55	60	65	70	75	80	
Residential-Low Density, Single-Family, Duplex, Mobile Homes							
Residential-Multifamily							
Transient Lodging, Motels, Hotels							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arena, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office, Business, Retail Commercial							
Industrial Manufacturing, Agriculture, Utilities							

Source: City of Vallejo General Plan 2040, 2017

Normally Acceptable
Specified land use is satisfactory, based on the assumption that any buildings involved are of normal construction, without any special noise insulation requirements.

Conditionally Acceptable
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation feature included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditions will normally suffice.

Normally Unacceptable
New construction of development should be discouraged. If new construction does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable
New construction or development generally should not be undertaken.

Previous Noise Studies

Outdoor noise levels at the Courtyard by Marriott Hotel property were previously measured as part of the Solano 360 Specific Plan EIR, certified in 2013. The Solano 360 Specific Plan EIR found that noise levels at the southwest corner of the hotel's parking lot were Lmax of 68.6 dBA and Leq of 55.9 dBA. Additionally, a second noise measurement was taken along Fairgrounds Drive approximately 360 feet northeast of the project site and had a Lmax of 57.5 dBA and a Leq of 51.7 dBA. Both of these noise level surveys were conducted when the Theme Park was closed, so measured noise levels did not include activity from the project site and would have been higher had the Park been in operation.

4.12.2 Methodology

Potential construction noise impacts associated with the proposed project were analyzed using the Federal Highway Administration Roadway Construction Noise Model (RCNM). The RCNM is used as the Federal Highway Administration's national standard for predicting noise generated from construction activities. The RCNM analysis includes the calculation of noise levels (Lmax and Leq) at incremental distances for a variety of construction equipment. The spreadsheet inputs include acoustical use factors, Lmax values, and Leq values at various distances depending on the ambient noise measurement location. For this analysis, it was assumed that a worst-case noise scenario for construction activity would entail the operation of the three noisiest pieces of equipment (bobcat with breaker, concrete pump truck, and excavator) simultaneously. Noise generated from operational activities were evaluated based on existing conditions and anticipated change in the existing noise environment form the proposed project.

4.12.3 Environmental Impact Analysis

This section discusses potential impacts related to noise associated with the proposed project and provides mitigation measures where necessary.

Impact NOI-1 Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact Analysis
Short-Term Construction Noise Impacts

Two types of short-term noise impacts could occur during construction of the proposed project. First, construction crew commutes and the transport of construction equipment and materials to the project site and staging area would incrementally increase noise levels on access roads leading to the project area and project site. The associated short-term noise increase along Fairgrounds Drive could be perceptible at the nearby hotel and residential area to the south of the project site. However, such a noise increase would be instantaneous and short-term and would be considered less than significant.

The second type of short-term noise impact is related to noise generated during construction activities that would include demolition, grading, foundation work, and installation of the track structure and control center. The construction stage has its own mix of equipment and, consequently, its own noise characteristics. These various construction operations would change the character of the noise generated at the project site. Throughout construction, the following types of equipment may be used (with their estimated maximum operational noise level measured at 600 feet from the operating equipment). Table 4.12-4 lists the noise levels from the pieces of equipment that would be used during construction.

Table 4.12-4: Summary of Federal Highway Administration Roadway Construction Noise Model

Type of Equipment	Distance to Nearest Sensitive Receptor	Sound Level at Residence		
		Lmax	Acoustical Use Factor (%)	Leq
Backhoe	600	56.0	40	52.0
Concrete Pump Truck	600	59.8	20	52.8

Type of Equipment	Distance to Nearest Sensitive Receptor	Sound Level at Residence		
		Lmax	Acoustical Use Factor (%)	Leq
Crane	600	59.0	16	51.0
Dump Trump	600	54.9	40	50.9
Excavator	600	59.1	40	55.1
Flat Bed Truck	600	52.7	40	48.7
Man Lift	600	53.1	20	46.1
Mounted Impact Hammer	600	68.7	20	61.7
Pickup Truck	600	53.4	40	49.4
Source: Stantec 2018; Federal Highway Administration 2008				

A reasonable worst-case noise condition for general construction activity is that a bobcat with breaker, concrete pump truck, and excavator would operate simultaneously. This represents a conservative scenario, as it assumes that all three pieces of equipment would be operating at the same time and same place. Construction would occur in sequential phases. Thus, in reality, it is unlikely that the three loudest pieces of equipment would be operating simultaneously at the exact location of the project site closest to the nearest sensitive receptors. Nevertheless, the RCNM calculated that this scenario would result in a combined noise level of 68.7 dBA-Lmax and 64.2 dBA-Leq at 600 feet. These levels would fall into the "Conditionally Acceptable" range for a hotel, as defined in Table 4.12-3. Section 16.72.050 "Noise Performance Standards – Exceptions" of the City of Vallejo Municipal Code, Paragraph C exempts noise from temporary construction or demolition work as long as the work complies with state conditions.

Mitigation Measure NOI-1 would be implemented to reduce construction noise in the proximity of sensitive receptors. The proposed project would comply with all noise reduction measures listed in the Theme Park's Original Use Permit and included as Mitigation Measure NOI-1. Additionally, construction noise would be short-term and intermittent, and construction activity would be limited to weekdays between 7:00 a.m. and 6:00 p.m. Implementation of Mitigation Measure NOI-1 would ensure compliance with the Chapter 12.40.070 of the City of Vallejo Municipal Code. Therefore, short-term construction impacts would be less than significant with mitigation.

Long-Term Operational Noise Impacts

The proposed project includes the operation of the roller coaster ride. Expected noise sources include the cars moving along the track as well as the roller coaster's mechanical lift system and the speaker system that would play theme music and provide ride announcements. The existing noise environment from the Go-Kart Ride currently includes sound levels generated from a similar speaker system and, therefore, the proposed project would not introduce a new sound source. Mitigation measure NOI-2 would ensure that the speaker systems are directed towards the queuing area and sound does not spill over to adjacent areas. As part of the operation of the ride, noise would also be generated from patrons screaming as they ride the attraction. The level of noise generated by a group of screaming people would depend on the ratio of males, females, and children included in the group. To help determine the impact of patron noise on

the neighboring noise-sensitive receivers, "Shouted" voice noise level spectra contained in the paper "Average Speech Levels and Spectra in Various Speaking/Listening Conditions: A Summary of the Pearson, Bennett, & Fidell Report" (American Journal of Audiology 1998) were used as a reference. This paper lists an overall noise level of 81 dB(A) for female shout voice, 86 dBA for male shout voice, and 80 dBA for child shout voice all measured at 3 feet from the person (American Journal of Audiology 1998).

A typical ride car for the proposed ride would hold 32 riders per train. Assuming a worst-case condition of 32 male voices all shouting at once, maximum noise levels from the ride car could reach 101 dBA at 3 feet from the car. As stated previously, the distance from the ride car to the nearest noise-sensitive receiver is approximately 600 feet. Considering the worst-case condition, maximum noise levels from screaming voices could be as high as 55 dBA at the noise sensitive receivers. This short-term intermittent noise level should be below the current maximum levels measured in the project vicinity and considered to be normally acceptable. The noise levels from patrons screaming on the ride should also not be louder than the noise levels currently generated from the existing attractions. Therefore, noise from patrons screaming should have a less than significant impact on the surrounding community.

Noise levels from the roller coaster car operation and the lift system could also generate higher noise levels than the existing ride. A sound level analysis was conducted at another similar roller coaster in the Theme Park that is north of the proposed project (Stutchman Forensic Laboratory 2018). Without the ride in operation, the sound level was measured at 56.2 dBA at a distance of 30 feet from the ride. When the unoccupied ride was in operation the sound level increased to a maximum of 91.3 dBA. This maximum level lasted only an instant before immediately decreasing. A second measurement was taken right next to the ride (about 5' away) and the highest instantaneous sound level was recorded at 95.1 dBA. Since the ride cycles back and forth the sound level fluctuates.

As stated previously, the distance from the ride to the nearest noise-sensitive receiver at the Courtyard by Marriott Hotel is approximately 600 feet. Considering the worst-case condition and based on the noise measurements at the existing ride, maximum noise levels from the ride operation could be as high as 56 dBA at the noise sensitive receivers. This short-term intermittent noise level should be below the current maximum levels measured in the project vicinity and considered to be normally acceptable. As demonstrated in previous noise studies, the existing noise levels at the Marriott Hotel are expected to be higher than Lmax of 57.5 dBA and a Leq of 51.7 dBA when the park, and the existing roller coasters, are in operation.

The noise generated by the proposed project should attenuate and should not result in noise levels that would exceed the existing conditions. Short-term operational noise may be generated when regular or emergency maintenance is needed. However, this is consistent with the existing conditions, as periodic maintenance is currently conducted for the existing Go-Kart Ride and surrounding roller coasters. In addition, the noise generated by the operation of the ride would not exceed the noise performance standards listed in Section 16.72.030 of the City of Vallejo Municipal Code. Therefore, the proposed project is not expected to have a long-term operational impact and impacts would be less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
MM NOI-1: Construction Noise. The following measures shall be required to reduce the potential construction period noise impacts.

- All construction equipment shall include mufflers.
- Any construction equipment shall be turned-off when not in use.
- Locate noise generating equipment away from line-of-site contact with sensitive noise receptors to the extent feasible.

MM NOI-2: Operational Noise. Plans for all the proposed project shall be submitted to the Planning Division for review and approval that show the implementation of the following noise mitigation measures.

- Use multiple small loudspeakers that are directional and aimed downward toward the queueing area.
- Orient the facilities to eliminate line-of-sight contact between the noise sources and nearby sensitive receptors, to the extent feasible.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact NOI-2 Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?

Impact Analysis
During construction of the proposed project, equipment such as excavators, backhoes, flatbed trucks, and hydraulic breakers would be used throughout the project site. Construction equipment that would be used during project construction would generate vibration levels between 0.003 PPV and 0.093 PPV at 25 feet, as shown in Table 4.12-5. All ground-borne vibration levels are below 0.10 PPV, the Federal Transit Administration vibration threshold at which human annoyance could occur; the nearest sensitive receptor would be approximately 600 feet away from the project site, and vibrations from the construction of the project site are not likely to be felt at that distance. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours. Therefore, construction vibrations are not predicted to cause damage to existing buildings or cause annoyance to sensitive receptors. As such, implementation of the proposed project would have a less than significant impact related to vibration.

Table 4.12-5: Vibration Source Levels for Construction Equipment

Type of Equipment	PPV at 25 Feet	PPV at 50 Feet	PPV at 100 Feet	Threshold	Potential to Exceed Threshold
Large Bulldozer	0.089	0.031	0.011	0.10	No
Loaded Trucks	0.076	0.027	0.010	0.10	No
Small Bulldozer	0.003	0.001	0.000	0.10	No
Hydraulic Breaker	0.093	0.043	0.020	0.10	No
Source: Bobcat 2018; Federal Transit Administration 2006					

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact NOI-3 A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Impact Analysis
As discussed in Impact NOI-1, the proposed operation of the proposed project should not produce noise levels that exceed the City's Municipal Code limits at the adjacent noise-sensitive receivers. Additionally, the proposed project's contribution to traffic noise is predicted to be minimal and would not permanently result in an increase in ambient noise levels within the project vicinity. Moreover, Mitigation Measure NOI-2 would further require the proposed project to incorporate components that would reduce noise impacts. Therefore, impacts would be less than significant with mitigation.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure NOI-2 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact NOI-4 A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Impact Analysis
As discussed in Impact NOI-1, construction activities may result in temporary increase in noise levels. The nearest sensitive receptor to the project site is the Courtyard by Marriott Hotel located approximately 600 feet to the northeast. Mitigation Measure NOI-1 would be implemented to minimize impacts from construction generated noise. Therefore, impacts would be less than significant with mitigation incorporated.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure NOI-1 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact NOI-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport of public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Impact Analysis
The nearest public airport to the project site is the Napa County Airport, located approximately 5 miles northwest of the project site. As such, the proposed project would not expose persons residing or working in the project vicinity to excessive aviation noise; there would be no impact.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact NOI-6 For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Impact Analysis
The Sutter Solano Medical Center Heliport is located less than 1 mile southwest of the project site. The proposed project would replace an existing attraction, and noise levels associated with the airstrip would not change for the project site. People working at the project site would not be exposed to excessive noise levels generated by emergency helicopters accessing the hospital. Therefore, no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

4.12.4 References

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4.13 POPULATION AND HOUSING

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

4.13.1 Environmental Setting

According to the U.S. Census, the City's population has grown from 116,760 in 2000 to 118,995 in 2015, an approximately two percent increase. Vallejo is currently the tenth largest city in the San Francisco Bay Area and the largest city in Solano County (City of Vallejo 2017). The population is projected to increase to 131,800 people by 2040, an approximately 12 percent increase (City of Vallejo 2016). This projected rate of increase is lower than the Solano County and Bay Area projected growth rates of approximately 20 percent and 25 percent, respectively. The City estimates that its future population in 2040 would exceed the Association of Bay Area Governments' population estimate by 7,244 people because of policies within the City's 2040 General Plan promoting job and housing availability (City of Vallejo 2016).

4.13.2 Methodology

The following analysis is based on general descriptions in the General Plan and the General Plan EIR. The following impact discussions consider the effect of the proposed project related to employment, population, and housing in the City.

4.13.3 Environmental Impact Analysis

This section discusses potential impacts related to population and housing associated with the proposed project and provides mitigation measures where necessary.

Impact POP-1 Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Impact Analysis
The proposed project does not include housing. While the proposed project could increase the Theme Park's attendance, the proposed project would not directly or indirectly affect the residential population of the City. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact POP-2 Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Impact Analysis
No permanent housing is located within the project site and the proposed project would not remove existing housing. Therefore, the proposed project would not remove existing housing, necessitating the construction of replacement housing elsewhere. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact POP-3 Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?

Impact Analysis
The project site does not contain housing. The proposed project would not displace any people and would not require the construction of replacement housing. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

4.13.4 References

City of Vallejo. 2016. Propel Vallejo General Plan 2040 and Sonoma Boulevard Specific Plan Draft EIR. Accessed April 10, 2018. http://propelvallejo.com/wp-content/uploads/2017/12/PropelVallejo_DraftGeneralPlanEIR_160725-1.pdf.

_____. 2017. Propel Vallejo General Plan 2040. Accessed April 10, 2018. http://propelvallejo.com/wp-content/uploads/2017/11/Vallejo%20General%20Plan%202040_FINAL_Amended%20171107_reduced.pdf.

4.14 PUBLIC SERVICES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

4.14.1 Environmental Setting

The project site is part of Six Flags and is currently served by the City public services departments. The nearest Vallejo Fire Department station is Station 25, approximately 1-mile northwest of the Theme Park. The Vallejo Police Department Station is located at 111 Amador Street, approximately 3 miles south of the project site. The Theme Park does not contain a residential component and, therefore, this precludes further discussion related to schools, parks, and other public facilities.

4.14.2 Methodology

The following analysis is based on a review of the General Plan and the General Plan EIR. The following impact discussions consider the effect of the proposed project as it relates to public services.

4.14.3 Environmental Impact Analysis

This section discusses potential impacts related to public services associated with the proposed project and provides mitigation measures where necessary.

Impact PUB-1	**Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:** **Fire protection?** **Police protection?** **Schools?** **Parks?** **Other public facilities?**

Impact Analysis
The proposed project would replace the Go-Kart Ride at Six Flags and construct a new roller coaster ride at Six Flags. The proposed project would not include permanent residential uses that would induce population growth and require the construction of new or the expansion of school facilities, park facilities, or other public facilities. The addition of the proposed ride could increase attendance at the Theme Park. However, this would not substantially increase the need for fire or police protection services. Service response times and ratios would continue similar to existing conditions. Therefore, the proposed project would have no impact on public services.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

4.14.4 References

City of Vallejo. 2016. Propel Vallejo General Plan 2040 and Sonoma Boulevard Specific Plan Draft EIR. Accessed April 10, 2018. http://propelvallejo.com/wp-content/uploads/2017/12/PropelVallejo_DraftGeneralPlanEIR_160725-1.pdf.

4.15 RECREATION

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

4.15.1 Environmental Setting

The Greater Vallejo Recreation District provides park and recreation programs to the City's residents. The nearest park is a community park, Dan Foley Park, situated on 60 acres and about 0.25 mile from the project site. Additionally, North Vallejo Community Park and Crest Ranch Park are located approximately 0.50 mile northeast and north of the project site, respectively.

4.15.2 Methodology

The following analysis is based on a review of the General Plan and the General Plan EIR. The following impact discussions consider the effect of the proposed project as it relates to recreation.

4.15.3 Environmental Impact Analysis

This section discusses potential impacts related to recreational facilities associated with the proposed project and provides mitigation measures where necessary.

Impact REC-1 Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Impact Analysis
The project site is developed as part of Six Flags. Project construction workers are expected to come from the existing regional workforce and would not lead to an increase in demand for recreational facilities. Although the proposed project has the potential to increase the number of people visiting Vallejo, visitors' recreational activity would be contained within the privately-owned theme park and the use of surrounding public parks would be minimal. As a major tourist destination, the Theme Park is accustomed to accommodating large numbers of daily visitors. The Theme Park staff would be responsible for maintaining the project site and the Theme Park to prevent physical deterioration. As such, the proposed project would not lead to the substantial physical deterioration of recreational facilities, and no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact REC-2 Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Impact Analysis
The proposed project would replace the Go-Kart Ride at Six Flags and construct a new roller coaster ride. The proposed project would not include the construction of recreational facilities or require the expansion of recreational facilities. The proposed project would have no impact.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

4.15.4 References

City of Vallejo. 2017. Propel Vallejo General Plan 2040. Accessed July 6, 2018. http://propelvallejo.com/wp-content/uploads/2017/11/Vallejo%20General%20Plan%202040_FINAL_Amended%20171107_reduced.pdf.

4.16 TRANSPORTATION AND TRAFFIC

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

4.16.1 Environmental Setting

The information in this section is summarized from the Traffic Impact Analysis Report included as Appendix C in this document.

Existing Conditions

The Theme Park is located southeast of the State Route 37/Fairgrounds Drive interchange. In the study area, Fairgrounds Drive is a four-lane road with left-turn pockets that narrows to two lanes with turn pockets south of the Theme Park and ends at Redwood Parkway to the south. Coach Lane is an unmarked local street in the east west direction and connects to the land uses east of Fairgrounds Drive. The speed limit on Fairgrounds Drive is 35 miles per hour north of Coach Lane and 30 miles per hour south of Coach Lane. On-street parking is prohibited along Fairgrounds Drive in the project vicinity. Redwood Parkway, known as Redwood Street west of I-80, is a four-lane roadway with turn pockets at the intersections. The speed limit is 35 miles per hour on Redwood Parkway and on-street parking is prohibited.

Access to the theme park is provided along Fairgrounds Drive. The entrance to employee parking and service deliveries is located opposite Sage Drive and the exit from that parking lot is approximately 200 feet south of the entrance. The visitor parking lot entrance is located south of

the Marriott Hotel driveway. Visitors approaching from the north enter the parking lot roadway via a mid-block free right turn, and visitors from the south enter the parking lot roadway via an unprotected left turn on Fairgrounds Drive. There are two exits from the visitor parking lot and both are signalized. The northern exit is located opposite the Solano County Fairgrounds entrance and is used by drivers dropping off or picking up park visitors. The southern exit for the main visitor parking lot is located approximately 1,000 feet south of the northern exit. Additional park parking is available on the Fairgrounds property when needed.

Existing Traffic Volumes
The Theme Park's peak traffic demand is during the weekend. Existing traffic counts were collected during two weekends in September 2018. Mid-block average daily traffic counts were collected Friday, September 7 through Sunday, September 9, 2018 north of and south of the Six Flags driveways, in addition to the visitor parking lot entrance road. These counts were used to determine the peak periods of traffic entering and exiting the theme park, which were determined to be from 10 AM to 12 PM and 6 PM to 8 PM on Sunday. Based on the counts of the parking lot entrance, the Theme Park generates approximately 9,000 visitor trips on a typical Sunday.

Existing intersection turning movement counts were collected at the study intersections corresponding to the peak hours entering (10 AM to 12 PM) and exiting (6 to 8 PM) traffic periods during the September 16, 2018. Methodologies for calculating intersection delay are explained in Appendix C.

Based on the calculations, the intersection of Fairgrounds Drive/I-80 WB Ramps and Redwood Parkway is currently operating at LOS D during the Sunday AM peak hour. At stop-controlled Fairgrounds Drive and Sage Street, the intersection as a whole is operating at LOS B or C during the Sunday peak hours, but the stop controlled westbound left-turn movement is operating at LOS F. The remaining study intersections operate at LOS C or better during the Sunday peak hours. The City identifies LOS D as the threshold for acceptable level of service at intersections. All study intersections currently operate at LOS D or better during the Sunday AM and PM peak hours. However, the westbound stop-controlled movement at Fairgrounds Drive and Sage Street operates at LOS F during the Sunday PM peak hour.

4.16.2 Methodology

The proposed project is expected to create a temporary spike in park attendance due to the initial popularity of the new ride. While a specific increase cannot be determined since it would be a direct function of the popularity of the new ride (which cannot be ascertained ahead of time), for analysis purposes an estimate of five percent increase in Sunday peak hour park visitor traffic was evaluated. Table 4.16-1 summarizes the estimated temporary increase in Sunday peak hour project traffic based on the assumed five percent increase in park visitors. Visitor trips to and from the theme park are estimated to be distributed to all directions via the two nearby freeways, with specific distribution percentages estimated based on existing travel patterns.

Table 4.16-1: Six Flags Ride Project – Estimated Sunday Traffic

	Sunday AM Peak Hour (10 – 11 AM)			Sunday PM Peak Hour (6 – 7 PM)			ADT
	In	Out	Total	In	Out	Total	
Existing Traffic	1,715	146	1,861	111	860	971	9,000
Estimated Temporary Increase (5%)	86	7	93	6	43	49	450

	Sunday AM Peak Hour (10 – 11 AM)			Sunday PM Peak Hour (6 – 7 PM)			ADT
	In	Out	Total	In	Out	Total	
Notes: ADT = average daily traffic Source: Stantec 2018							

4.16.3 Environmental Impact Analysis

This section discusses potential impacts related to traffic and transportation associated with the proposed project and provides mitigation measures where necessary.

Impact TRAN-1 Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel, and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Impact Analysis

Construction
During construction of the proposed project, a crew of up to 12 workers is anticipated. Conservatively assuming one worker per vehicle, up to 12 inbound passenger vehicles during the typical weekday AM peak hour and 12 outbound passenger vehicles would result.

Truck traffic to and from the site during construction will consist of material deliveries to the site and hauling away of construction debris and cut. The site will average 8 trucks daily which is equivalent to approximately 21 inbound passenger vehicles trips per day assuming a passenger car equivalents (PCE) factor of 2.5 passenger vehicles per 3-axle truck. These PCE truck trips will be spread out across the work day (7 AM to 5 PM) with none of the deliveries expected during the typical weekday AM or PM peak hour.

The addition of approximately 21 PCE truck trips, spread throughout the day would not result in significant change in the existing traffic conditions since that volume of traffic would not be perceptible in regard to average vehicle delay. Since construction traffic would be temporary and of short duration, avoid peak commute hours, and be spread across, the proposed project would not cause streets in the project area to exceed LOS thresholds. Therefore, construction impacts would be less than significant.

Operation
As shown in Table 4.16-1, the proposed project would result in a temporary increase of total 450 daily trips, 93 AM peak hour trips, and 49 PM peak hour trips. All of the study intersections would operate at LOS D or better during the Sunday peak hours with the addition of a temporary five percent increase in park visitor traffic. The stop controlled westbound approach at the intersection of Fairgrounds Drive and Sage Street currently operates at LOS F under existing conditions. The projected temporary five percent increase in park visitor traffic will marginally add to the existing LOS F on the westbound approach due to traffic added on Fairgrounds Drive. While this side street would operate at LOS F, the average vehicle delay with project traffic is LOS C. Therefore, the project by itself does not warrant a traffic signal.

Solano Transportation Authority, in conjunction with Caltrans, prepared an EIR for the Redwood Parkway/Fairgrounds Drive Interchange Improvement Project that included signalization of the Fairgrounds Drive/Sage Street intersection which will provide a substantially improved LOS for the intersection. Similarly, Solano 360 Project EIR assumed this traffic signal to be constructed by the

City of Vallejo either concurrently with the Fairgrounds Drive/Redwood Parkway Interchange Improvements Project, or the Solano Fairgrounds Plan development, whichever comes first. In addition, the 1997 Supplemental EIR prepared for the Theme Park (City of Vallejo 1997) identified this impact as potentially significant and unavoidable with the implementation of this mitigation measure to signalize the intersection. As discussed, the 1997 Supplemental EIR identified significant unavoidable traffic impacts and findings of overriding consideration for those impacts. Public Resources Code 21083.3 allows the use of an Initial Study to conclude a significant and unavoidable impact only if a previous EIR identified significant unavoidable effects to a specific resource, which resulted in the Lead Agency adopting overriding considerations. In the case of the proposed project, the 1997 EIR identified such significant and unavoidable effects on traffic impacts related to the intersections discussed above and as such, the City of Vallejo adopted overriding considerations for said unavoidable effects in 1997. Furthermore, as stated in Section 3.9, Land Use and Planning, the proposed project is consistent with the Land Use and Zoning designations of the project site. As such, impacts associated with proposed project would be consistent with those evaluated in the Redwood Parkway/Fairgrounds Drive Interchange Improvement Project EIR and Solano 360 Project EIR. Therefore, since the traffic signal has already been identified as a mitigation measure to be built by the City in the future, concurrent with other projects, and the proposed project by itself does not warrant the traffic signal, operational impacts from the proposed project would be considered less than significant.

The project site is served by both local and regional public transit. Therefore, the project would have no impact on bicycle or public transit facilities.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact TRAN-2 Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Impact Analysis
The Solano Transportation Authority (STA) serves as the Congestion Management Agency (CMA) for Solano County. As the CMA, STA must, under state law, prepare a Congestion Management Program (CMP) and update it every 2 years. The CMP is meant to outline STA strategies for managing the performance of the regional transportation within the County. A CMP must contain several components: traffic LOS standards for State highways and principal arterials; multi-modal performance measures to evaluate current and future systems; a seven-year capital program of projects to maintain or improve the performance of the system or mitigate the regional impacts of land use projects; a program to analyze the impacts of land use decisions; and a travel demand element that promotes transportation alternatives to the single-occupant vehicle. State Route 37 and I-80 are the highways included in the CMP System in the project vicinity (Solano County 2015). However, the proposed project would not result in a significant trip generation on these highways impacting the existing LOS. Therefore, less than significant impact would occur to the CMP system.

The current Solano CMP states a goal of reducing Vehicle Miles Traveled (VMT) by 10 percent (Solano County 2015). The City currently does not have a VMT standard. Nonetheless, the proposed project would not substantially change the existing VMT due to a smaller increase in trips temporarily. Therefore, the project would comply with the Solano CMP and would have a less-than-significant impact.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact TRAN-3 Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?

Impact Analysis
The proposed project is not located within 2 miles of a public airport or public use airport. The closest public airport is the Napa County Airport located approximately five miles northwest of the project site. The Sutter Solano Medical Center Heliport is located less than one mile southwest of the project site. The proposed project would not involve use of air transit, nor is it expected to cause any change in air traffic patterns. The proposed roller coaster would be below 200 feet tall and would not require additional notification in accordance with the FAA Part 77 regulations. As such, the project would not result in any changes to air traffic patterns nor would it result in any associated safety risks. Therefore, there would be no impact.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact TRAN-4 Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Impact Analysis
The proposed project would not result in roadway closures and all construction-related traffic would be contained within property owned by Six Flags. Construction vehicles would enter the guest parking lot, adjacent to the south boundary of the project site, and be directed to the project site. Existing roadways would be used during construction and would not require the development of additional temporary or permanent access roads. The contractor would implement adequate traffic controls to ensure that construction traffic does not conflict with visitor vehicles in the parking lot. Therefore, project construction would not create a transportation hazard, and the impact would be less than significant. During operation, the new roller coaster would integrate into the Theme Park and not require new access roads. Therefore, operation of the project would not increase hazards to a design feature, and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact TRAN-5 Result in inadequate emergency access?

Impact Analysis
No work is proposed within the public right -of -way and all construction activities would be within the Theme Park's property. There would be no change to the existing emergency access for the Theme Park. Therefore, no impact would occur.

Level of Significance Before Mitigation
Less than Significant Impact.

Mitigation Measures
No mitigation is necessary

Level of Significance After Mitigation
Less Than Significant Impact.

Impact TRAN-6 Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Impact Analysis
The proposed project would replace an existing ride and not conflict with adopted policies or plans for alternative transportation. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

4.16.4 References

Solano County. 2015. Solano County Congestion Management Program. Solano Transportation Authority. December 2015. Website: http://www.sta.ca.gov/docManager/1000006383/FINAL%202015%20Solano%20CMP%20011316.pdf. Accessed: October 2, 2018.

City of Vallejo. 1997. Marine World Africa USA Five Year Master Plan – 1997 Supplemental EIR,

4.17 TRIBAL CULTURAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined by Public Resources Code section 21047 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

4.17.1 Environmental Setting

This section describes potential tribal cultural resources at the project site and includes a preliminary analysis of potential impacts to these resources from the construction and operation of project facilities. In accordance with Assembly Bill (AB) 52, the City is required to initiate tribal consultation. AB 52 is to promote the involvement of California Native American tribes in the decision-making process when it comes to identifying and developing mitigation for impacts to resources of importance to their culture.

4.17.2 Methodology

Stantec completed background desktop research to identify existing cultural resources at the project site and surrounding area. Based on the developed nature of the project site, the desktop research reviewed existing documents, including the City's General Plan and the General Plan EIR. The City conducted AB 52 tribal outreach by sending a letter to tribes who have previously expressed an interest in participation by written request. Per the City's requirement of consultation under AB 52, the Yocha Dehe Wintun Nation was contacted about the proposed project with a letter dated September 3, 2018. Per the statute, the Tribe must respond within 30 days in writing. In response to any requests from the Tribe, the City would

provide the tribe with all available appropriate documentation. Planning staff received a response from the Yocha Dehe Wintun Nation on September 21, 2018.

4.17.3 Environmental Impact Analysis

This section discusses potential impacts on tribal cultural resources associated with the project and provides mitigation measures where necessary.

Impact TRIB-1 Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined by Public Resources Code Section 21047 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Impact Analysis
The project site has been previously disturbed as part of the Theme Park and does not exhibit any signs of previously unidentified subsurface tribal cultural resources. In accordance with AB 52, the Yocha Dehe Wintun Nation was contacted for additional information regarding known resources in the project area. The Tribe did not identify any additional cultural resources in the area. However, the Tribe indicated that there was potential for unknown tribal cultural resources to be affected during ground disturbance activities and requested a tribal monitor to be present during construction activities as discussed in Mitigation Measure CUL-4. Impacts would be less than significant with mitigation.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
MM CUL-4: Cultural Resource Construction Monitoring. Construction monitoring shall be required for all ground-disturbing activities by a tribal monitor from the Yocha Dehe Wintun Nation. A monitoring report shall be completed by the tribal monitor at the end of construction. This report shall include a brief summary of the monitoring results. The monitoring report shall be kept on file at the City of Vallejo.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

4.17.4 References

City of Vallejo. 2017. Propel Vallejo General Plan 2040. Accessed July 6, 2018. http://propelvallejo.com/wpcontent/uploads/2017/11/Vallejo%20General%20Plan%202040_FINAL_Amended%20171107_reduced.pdf.

4.18 UTILITIES AND SERVICE SYSTEMS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the proposed project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider that serves or may serve the proposed project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, State, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

4.18.1 Environmental Setting

Existing potable water lines, sanitary sewer lines, and storm drain facilities maintained by the City's Public Works Department Water Division and the Vallejo Sanitation and Flood Control District, serve the Theme Park. Solid waste generated at the Theme Park is collected by Recology Vallejo and deposited either at the Potrero Hills Landfill or the Recology Hay Landfill (City of Vallejo 2016).

4.18.2 Methodology

The following analysis is based on a review the General Plan and the General Plan EIR. The information obtained from these sources was summarized to establish existing conditions and to determine potential impacts related to utilities and service systems.

4.18.3 Environmental Impact Analysis

This section discusses potential impacts related to utilities and services systems associated with the proposed project and provides mitigation measures where necessary.

Impact UTIL-1 Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Impact Analysis
Construction and operation of the proposed project would not generate a substantial amount of wastewater. There may be an increase in the Theme Park's visitor attendance due to the new ride. However, this would not substantially increase wastewater generation at the Theme Park and exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. Therefore, no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact UTIL-2 Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?

Impact Analysis
The proposed project would not result in increased demand for water or wastewater treatment. There could be a temporary increase in the Theme Park's visitor attendance. However, this increase would not be substantial and would not require the construction of new water or wastewater treatment facilities at the Theme Park. Therefore, no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact UTIL-3 Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?

Impact Analysis
The proposed project would replace an existing ride. No new impervious surfaces would be created. Therefore, the proposed project would not substantially increase stormwater runoff at

the project site and the existing storm drainage facilities at the Theme Park would have adequate capacity to serve the proposed project. Impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact UTIL-4 Have sufficient water supplies available to serve the proposed project from existing entitlements and resources, or are new or expanded entitlements needed?

Impact Analysis
The proposed project would not involve the construction or operation of a use that would require new connection to the City's water system. The proposed project would not substantially increase demand on the City's water supplies that could result in additional entitlements and resources. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact UTIL-5 Result in a determination by the wastewater treatment provider that serves or may serve the proposed project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Impact Analysis
The proposed project would not involve the construction or operation of a use that would require any new wastewater service. As such, the proposed project would not increase demand on City facilities or require the construction of new sanitary sewer lines. Therefore, no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact UTIL-6 Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Impact Analysis
The proposed project would generate solid waste during the construction phase. Construction materials and debris would be removed from the project site and disposed at either the Potrero Hill Landfill, or the Recology Hay Road Landfill. These landfills have sufficient capacity to accept solid waste generated by the proposed project (CalRecycle 2018a; CalRecycle 2018b). Once constructed, the proposed project would generate solid waste and recyclable materials similar to the existing conditions. Therefore, no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact UTIL-7 Comply with federal, State, and local statutes and regulations related to solid waste?

Impact Analysis
Construction materials and debris would be removed from the project site and disposed at either the Potrero Hill Landfill or the Recology Hay Road Landfill. The construction contractor would be responsible for recycling and disposing all solid waste in compliance with local, state, and federal statutes and regulations related to the collection and disposal of solid waste. Impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

4.18.4 References

CalRecycle. 2018a. Facility/Site Summary Details: Potrero Hills Landfill (48-AA-0075). Accessed July 9, 2018.http://www.calrecycle.ca.gov/SWFacilities/Directory/48-AA-0075/Detail/.

_____. 2018b. Facility/Site Summary Details: Recology Hay Road (48-AA-0002). Accessed July 9, 2018. http://www.calrecycle.ca.gov/SWFacilities/Directory/48-aa-0002/Detail/.

City of Vallejo. 2016. Propel Vallejo General Plan 2040 and Sonoma Boulevard Specific Plan Draft EIR. Accessed July 6, 2018. http://propelvallejo.com/wp-content/uploads/2017/12/PropelVallejo_DraftGeneralPlanEIR_160725-1.pdf.

4.19 MANDATORY FINDINGS OF SIGNIFICANCE

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulative considerable? ("Cumulative considerable" means that the incremental impacts of a project are considerable when viewed in connection with the impacts of past projects, the impacts of other current projects, and the effects of probable future Projects)?	☐	☒	☐	☐
c) Does the project have environmental impacts which will cause substantial adverse impacts on human beings, either directly or indirectly?	☐	☒	☐	☐

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

Impact Analysis

As evaluated in this ISMND, the proposed project would not substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory. Mitigation Measures BIO-1, CUL-1, CUL-2, CUL-3, and CUL-4 have been included herein to lessen the significance of potential impacts to special-status species and habitats, and inadvertent discovery of cultural resources to reduce potential impacts to cultural resources as less than significant.

b) Does the project have impacts that are individually limited, but cumulative considerable? ("Cumulative considerable" means that the incremental impacts of a project are considerable when viewed in connection with the effects of past projects, the impacts of other current projects, and the impacts of probable future projects)?

Impact Analysis
The proposed project would not result in any new cumulative impacts not previously identified in the General Plan EIR. All cumulative impacts resulting from the proposed project related to air quality, geology, hydrology, noise, public services, and water quality would be mitigated with the implementation of Mitigation Measures AIR-1, GHG-1, HYD-1, and NOI-1.

c) Does the project have environmental impacts which will cause substantial adverse impacts on human beings, either directly or indirectly?

Impact Analysis
All impacts identified in this ISMND are either less than significant after mitigation or less than significant and do not require mitigation. Therefore, the proposed project would not result in environmental effects that cause substantial adverse effects on human beings either directly or indirectly. Impacts would be less than significant with mitigation.

5.0 LIST OF PREPARERS

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