FINAL INITIAL STUDY &
MITIGATED NEGATIVE DECLARATION

City of Los Angeles
Department of Recreation and Parks
P.O. Box 86328
Los Angeles, CA 90086-0328

ENVIRONMENTAL CHECKLIST	
Project Location:	Griffith Park, City of Los Angeles, CA
Page	1 of 93

Project Title	**Griffith Observatory Circulation and Parking Enhancement Plan**
Lead Agency Name and Address	Los Angeles Department of Recreation and Parks 221 N Figueroa Street Los Angeles, CA 90012
Contact Person	Joe Salaices, Superintendent Griffith Region, Los Angeles DPR 4800 Griffith Park Drive Los Angeles, CA 90027
Phone No.	(323) 661-9465
Project Location	The project area is within Griffith Park and the Los Feliz area of the City of Los Angeles roughly bounded by Mt. Hollywood to the north, Roosevelt Golf Course the east, Los Feliz Boulevard to the south, and Fern Dell Drive to the west.
Project Sponsor's Name	Department of Recreation and Parks City of Los Angeles
Address	P.O. Box 86328 Los Angeles, CA 90086-0328
Zoning	OS – Open Space
General Plan	Open Space
Other Public Agencies whose will review the document for consistency	Los Angeles Fire Department (LAFD)

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1 INTRODUCTION

This Initial Study and Mitigated Negative Declaration (IS/MND) has been prepared in accordance with the California Environmental Quality Act (CEQA) and State Guidelines for Implementation of CEQA. It serves as the environmental document for the proposed Griffith Observatory Circulation Enhancement Plan (project). The primary intent of this document is to (1) determine whether project implementation would result in potentially significant or significant impacts to the environment; and (2) to incorporate mitigation measures into the project design, as necessary, to eliminate the project's potentially significant or significant project impacts or reduce them to a less than significant level.

In accordance with CEQA, projects that have potential to result in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, must undergo analysis to disclose the potential significant effects. The provisions of CEQA apply to California governmental agencies at all levels, including local agencies, regional agencies, State agencies, boards, commissions, and special districts. CEQA requires that an IS be prepared for a discretionary project such as the Griffith Observatory Circulation Enhancement Plan to determine the range of potential environmental impacts of that project and define the scope of the environment review document. As specified in the CEQA Guidelines Section 15064(f), the lead agency may prepare a MND if, in the course of the IS analysis, if it is recognized that the project may have a significant impact on the environment, but that implementing specific mitigation measures (i.e., incorporating revisions into the project) would reduce any potentially significant impacts to a less than significant level. As the lead agency for the proposed project, City of Los Angeles (City) Department of Recreation and Parks (DRP) has the principal responsibility for conducting the CEQA environmental review to analyze the potential environmental effects associated with project implementation. During the review process, it was determined that potential impacts would be reduced to less than significant with the implementation of mitigation measures. The lead agency has incorporated mitigation measures to reduce or eliminate any potentially significant project-related impacts. Therefore, an MND has been prepared for the proposed project.

Responses to Initial Public Concerns: Substantial public comments were received on the Draft IS/MND, primarily related to creation of a formal Hollywood Sign view point and provision of shuttle service on Mt. Hollywood Drive, as well as regarding traffic congestion in and around Griffith Park. Public meetings were held on Wednesday, January 20, 2016 at the Friendship Auditorium located at 3201 Riverside Drive, Los Angeles, CA 90027, which had approximately 200 attendees, and Wednesday, March 9, 2016 at the Chevy Chase Recreation Center, which had approximately 100 attendees. In response, DPR has implemented adjustments to the Project Description to address these concerns (e.g., eliminating Mt. Hollywood Drive shuttle service, and a slight alteration to traffic circulation pattern phasing). Such changes are more fully described in Section 2, *Project Description* below, along with adjustments in analysis within the IS/MND. Detailed responses to 70 public comment letters and emails are provided in Attachment 3, along with appropriate changes in the IS/MND to reflect required adjustments.

1.1 Project Background

Griffith Park is a 4,355-acre public park located in the northern area of the City adjacent to the Hollywood Hills, the City of Glendale, and the Los Feliz neighborhood of the City of Los Angeles. As the largest municipal park with urban wilderness area in the United States, Griffith Park is highly valued by the community for its amenities and close proximity to urban neighborhoods. The Park is also identified as an historic resource by the City. Griffith Park was established in 1896 in honor of Colonel Griffith J. Griffith who granted the majority of the property to the City for use as a public park. The Park has since been maintained by the City as "open space – rustic and available to all" with natural chaparral-covered terrain, landscaped parkland, and picnic areas (LA DRP 2008).

Griffith Park is the largest park in the City of Los Angeles, providing over 4,300 acres of active and passive recreation opportunities, as well as attractions and special events.

The Park provides a wide range of public amenities and attractions, including the Autry Museum of the American West, the Greek Theatre, the Griffith Park & Southern Railroad miniature train ride, the Travel Town Museum, the Los Angeles Zoo, the Los Angeles Equestrian Center, and Griffith Observatory. These facilities host special events throughout the year, such as concerts at the Greek Theatre, performances in the Park, and the Griffith Park Half Marathon. Views of the iconic Hollywood Sign and the skyline of Downtown Los Angeles are available from within the Park's boundary, a significant attraction for tourists. Additionally, the Park provides recreational amenities, such as trails, day use sites and picnic facilities, golf courses, tennis courts, swimming pools, ball fields, campgrounds, and horseback riding stables, and is a popular destination for recreational cyclists. This combination of recreation, events, and attractions draws over ten million visitors per year (LA DRP 2015).

Public access to Griffith Park is available via private automobiles, public transportation, tour buses, and to cyclists and pedestrians. Regional access to the Park is provided via Interstate 5 and State Route 134 with arterial access off of Forest Lawn Drive on the north side of the Park and Los Feliz Boulevard to the south of the Park. Access into the Park is primarily through a system of local roads, collectors, and secondary roads, including Vermont Canyon Road and Fern Dell Drive. Due to the popularity of the Park, the limited number of access roads, narrow road widths, and limited access through residential neighborhoods, traffic congestion and conflicts between the different modes of transportation can occur. Congestion and conflicts are particularly severe along roads leading to Griffith Observatory, such as on West Observatory Road, Vermont Canyon Road, and Western Canyon Road.

In 2014, the City DRP approved *A Vision for Griffith Park, Urban Wilderness Identity* (*Vision*) as a tool to guide long-term Park management and use. The *Vision* was developed through the Griffith Park Working Group to ensure that new development reflects and preserves the natural qualities of the Park. The *Vision* contains goals for the Park's management and identifies specific projects for the Park, including proposed implementation of a remote parking system with shuttles for peak use and development of a comprehensive transportation system to provide multi-modal circulation within the Park, including maintaining the Park's interior paved roads in a manner that encourages use by pedestrians, runners, equestrians, and cyclists, as well as expanding public transit services to the Park.

The *Vision* also states that the Park should remain a distinct entity from the City of Los Angeles so that the wilderness and nature within the Park will continue to contrast to its urban surroundings. For example, commercialized advertisements on its permanent installations would be inappropriate under the *Vision.* Park development would also maximize energy efficiency and minimize pollution, especially with regard to automobile access and congestion.

Roads leading to Griffith Observatory can be severely congested with traffic. Personally-owned vehicles park along both sides of the roadway, leaving a narrow passage for two-way traffic and creating congestion for buses, shuttles and cyclists.

1.2 Project Goals and Objectives

Consistent with the Griffith Park *Vision*, the proposed project has the following objectives:

1. Mitigate the traffic and congestion at Griffith Observatory and along the surrounding roads by developing a comprehensive transportation system that provides circulation within vicinity of Griffith Observatory.
2. Improve multi-modal accessibility for parking and transportation to Griffith Observatory, while protecting the natural environment and urban wilderness identity.
3. Improve traffic flow around Griffith Observatory.
4. Provide improved multi-modal visitor access into the Park and minimize congestion on roads leading into the Park.
5. Coordinate with Los Angeles Department of Transportation (LADOT) and Metropolitan Transit Authority (MTA) to improve DASH and METRO service to Griffith Park to reduce neighborhood and Park road traffic congestion.
6. Facilitate public access to Griffith Observatory via a free or low cost shuttle system with remote parking, by diverting visitors to surface lots at the base of the Park through the implementation of paid parking at the Observatory and adjacent roads.
7. Develop maps and signage that facilitate improved circulation and are consistent with the Park's urban wilderness identity.

1.3 Project Location and Setting

1.3.1 Location

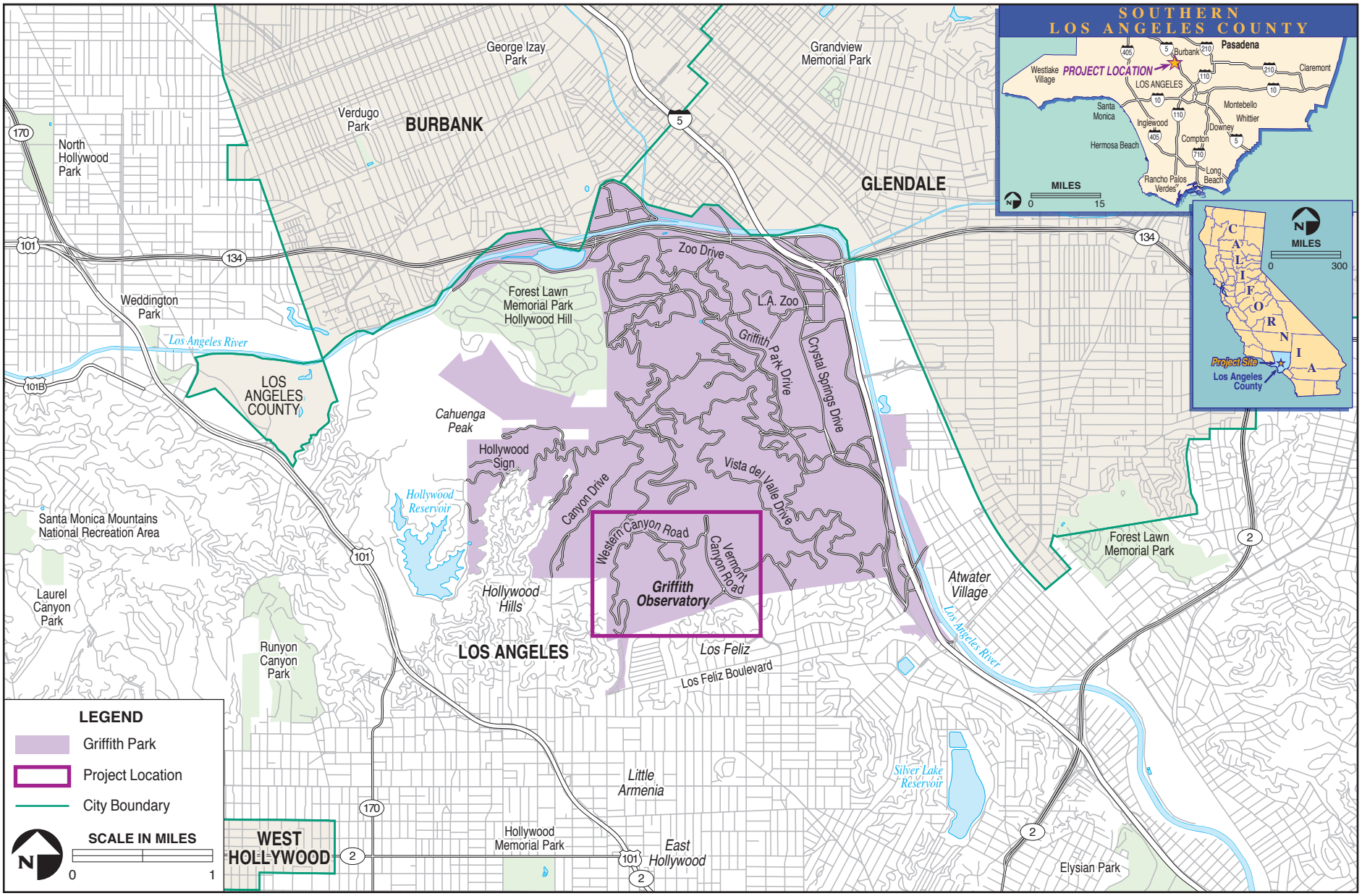
The project is located within the southern portion of Griffith Park addressed as 4730 Crystal Springs Drive in the City of Los Angeles, approximately 4 miles northwest of downtown. Griffith Park lies west of Interstate 5 (I-5), roughly between Los Feliz Boulevard to the south and State Route 134 (SR-134) to the north. The project area is located within the southern portions of Griffith Park roughly bounded by Western Canyon to the west, Vermont Canyon to the east, Mt. Hollywood Drive to the north, and the Park boundary and Los Feliz Boulevard to the south. The freeway off-ramp that most directly leads to the project area from I-5 is Los Feliz Boulevard.

1.3.2 Land Use

The project area is designated and zoned as Open Space by the City. The Open Space land use designation and zoning district is intended to protect and preserve natural resources and natural features of the environment, to provide outdoor recreation opportunities, and to enhance environmental quality. Major land uses within the project area include the Greek Theatre, Roosevelt Golf Course, Vermont Canyon Tennis Courts, and Griffith Observatory, as well as the nearby Hollywood Hills and Los Feliz residential communities outside the Park boundary (Figures 1 and 2).

The Greek Theatre is located at the bottom of Vermont Canyon with access off of Vermont Canyon Road. It hosts approximately 60 to 75 concerts per year and has the ability to host over 5,500 guests during the spring through fall season, though does not always fill to this capacity. Special events typically occur on weekend evenings, however also may occur at any time throughout the week. The Vermont Canyon Tennis Courts and Roosevelt Golf Course are also located in Vermont Canyon proximate to the Greek Theatre and provide recreation facilities for hundreds of users daily. Griffith Observatory lies on the southern edge of a south facing mountain ridge overlooking the Los Angeles basin and hosts approximately 1.3 million visitors annually, including many who come to just enjoy the panoramic view. On a busy Saturday over 20,000 individuals are estimated to visit the Park, which does not include visitation of the Zoo, that on its own can see 10,000-15,000 visitors on a busy day (LA DRP 2015).

For visitors, Griffith Observatory is accessed from Western Canyon Road on the western slope of the mountain ridge that is further connected to both Western Canyon Road to the west and Vermont Canyon Road via the Griffith Park tunnel. Western Canyon Road and Vermont Canyon Road are roadways that lead to Griffith Observatory, traverse adjacent canyons and connect to Los Feliz Boulevard beyond the southern border of the Park. For Park staff, Griffith Observatory is accessed primarily via East Observatory Road that intersects with Vermont Canyon Road on the eastern side of the mountain ridge.



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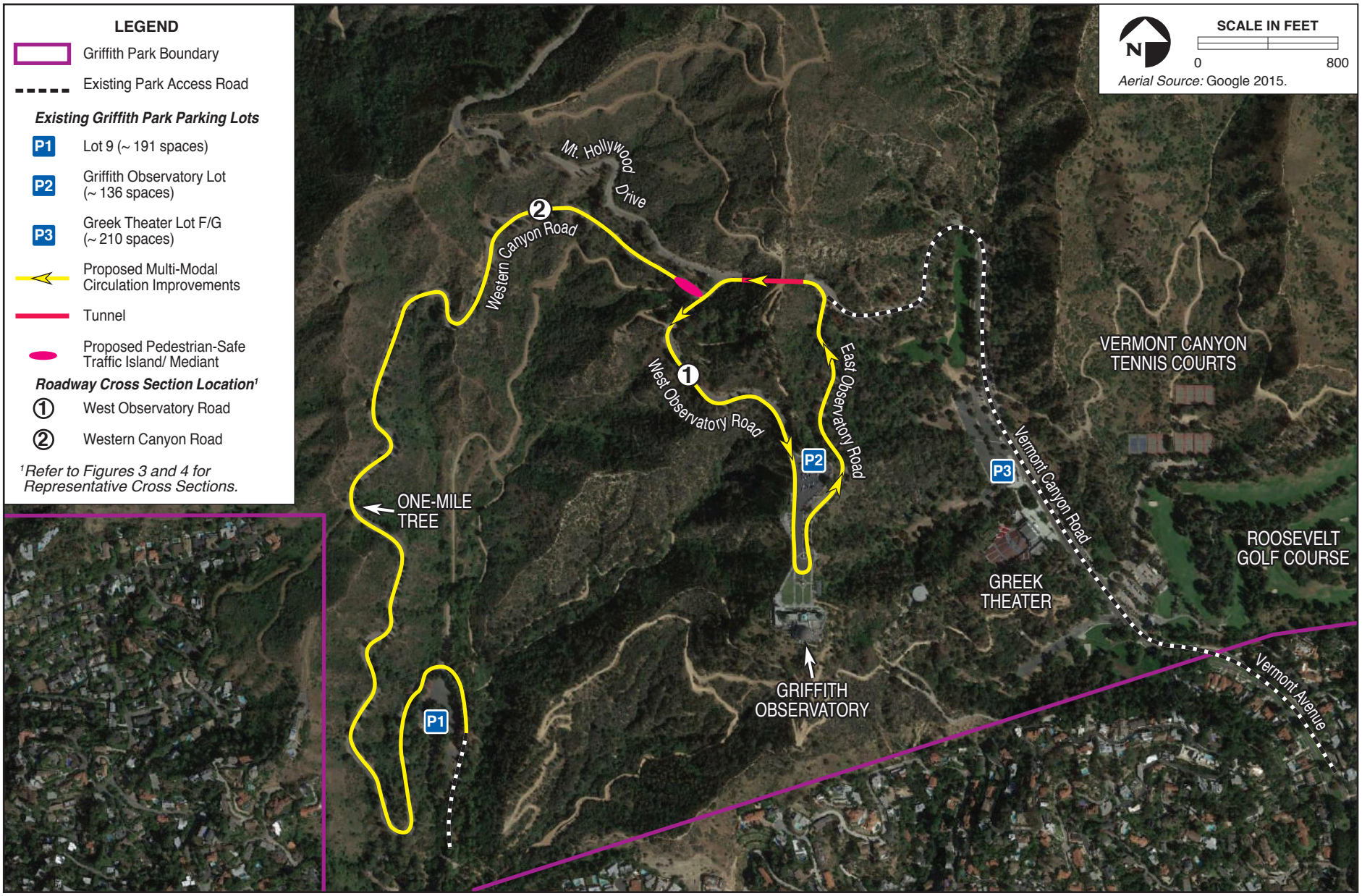
Project Vicinity

FIGURE 1



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Proposed Project Improvements

FIGURE 2

1.3.3 Existing Roads and Parking

The project area primarily includes existing road corridors and parking lots within the southern portion of Griffith Park. Terrain in the project area encompasses a series of steep ridgelines and canyons, with Griffith Observatory ridgeline rising to 1,134 feet above sea level. As a result, the system of older historic access roads are often steep, winding, and narrow with limited shoulders for public parking and few locations for pull-outs and turnarounds. As depicted on Figure 2, key roads within the project area include:

- Western Canyon Road: a 1.4-mile portion of the collector roadway to the west of Griffith Observatory that connects Fern Dell Drive at Los Feliz Boulevard with West Observatory Road.
- Mt. Hollywood Drive: a 0.2-mile segment of roadway within the Park connecting Western Canyon Road with Vermont Canyon Road through a tunnel; beyond this segment, Mt. Hollywood Drive is closed to private vehicles and is used for bicycles and pedestrians north from West Observatory Road to reach trailheads and viewpoints.
- West Observatory Road: a 0.4-mile local road providing access and parking to Griffith Observatory.
- East Observatory Road: a 0.4-mile local road currently closed to the public, with access limited to buses, shuttles, and authorized maintenance vehicles; East Observatory Road is also used for employee parking.
- Vermont Canyon Road: a 0.5-mile portion of the secondary roadway to the east of Griffith Observatory connecting North Vermont Avenue from Los Feliz Boulevard with Mt. Hollywood Drive; this roadway also provides access to the Greek Theatre, Roosevelt Golf Course, and Vermont Canyon Tennis Courts

Currently, personally-owned vehicles have full access along Vermont Canyon, West Observatory, and Western Canyon Roads, although these roads are sometimes closed or have limited access due to congestion; East Observatory Road is closed to personally owned vehicles. The curve that connects West and East Observatory Roads was designed as a two lane, bi-directional road, however has been barricaded for recent years and its closed condition is thus considered the existing condition. For at least 20 years, Park gates have been closed at Western Canyon Road at sundown every night prohibiting cars from traveling up to the Observatory, though this closure is not codified.

Griffith Park does not currently have a complete system of sidewalks and bike lanes along its major roads. Fully developed sidewalks are generally confined to areas near major facilities, such as the Greek Theatre and Griffith Observatory. However, most roadways in the project area support rustic pathways along one side of the road, separated from traffic by a curb. No designated bike lanes exist within the project area and cyclists share the travel lanes with motor vehicles.

Table 1-1 Existing Characteristics of Project Area Roadways

Street Name	Average Road Width	Characteristics	Parking
Western Canyon Road (which becomes Fern Dell Drive outside of the Park boundary)	30’ with 4’ dirt shoulders	Two lane, two-way road	Parallel parking on dirt shoulders
Upper Vermont Canyon Road	35’ with intermittent 4’ dirt shoulder on up-slope side	Two lane, two-way road	Limited parking on intermittent dirt shoulder

Street Name	Average Road Width	Characteristics	Parking
Lower Vermont Canyon Road	75' with 5' pedestrian sidewalk	Four lane, two-way road: one downhill lane, two uphill lanes, one middle buffer/turning lane, angled parking on one side	Paved, angled parking on uphill lane side of roadway
West Observatory Road	35' with 2' dirt shoulder on up-slope side	Two lane, two-way road	Parallel parking on portions of paved down-slope and up-slope sides
East Observatory Road	35' with 4' dirt shoulder on up-slope side	Two lane, two-way road; closed to public	Parallel parking on paved down-slope and portions of up-slope dirt shoulder
Mt. Hollywood Drive (through tunnel)	20' with little to no shoulder, and concrete walls on either side	One lane, two-way road	No public parking

The public also has access to the project area via tour buses or public transit service that is primarily limited to drop offs along the perimeter of the Park.[1] The Los Angeles DASH bus, which is capable of carrying bikes and runs on compressed natural gas (CNG), operates every Saturday and Sunday, except holidays, between 10:00 a.m. and 10:00 p.m. and stops in front of Griffith Observatory along the horseshoe driveway and at the Greek Theatre bus stop approximately every 35 minutes. DASH buses can carry approximately 29 seated passengers and 14 standees. The Los Angeles Department of Transportation (LADOT) DASH connects the project area with the Vermont/Sunset Redline Station that provides a transfer point for regional services provided by LADOT and the Metropolitan Transit Authority (MTA). One-way trips from the Vermont/Sunset METRO station to the Observatory can take approximately 15 minutes without any traffic, and up to 30 minutes with traffic. During special events and some holidays, DASH provides additional services in the project area. DASH is currently working to provide an express route to improve service along this route. In 2015, the DRP briefly operated the Hollywood Sign Shuttle every Saturday and Sunday, from 10:00 a.m. to 2:00 p.m., and on selected holidays for a fee of $7.00. The Hollywood Sign Shuttle was a 21-person vehicle that transported visitors from the Greek Theatre parking lots to the Hollywood Sign Viewing Area on Mt. Hollywood Drive and to Griffith Observatory.

DASH services currently operate on Saturdays and Sundays from 10:00 a.m. to 10:00 p.m., with stops at Griffith Observatory and the Greek Theatre approximately every 35 minutes.

Parking within the project area includes several developed public parking lots, as well as developed and informal on-road and road shoulder parking (Table 1-2). Public parking lots in the project area are primarily confined to areas served by Vermont Canyon Road near the Greek Theatre or Fern Dell Canyon/Western Canyon Road in the lower reaches of the Park. The Griffith Observatory parking lot is the only developed parking lot in scenic higher elevations of the Park, with parking along the ridgelines and hilltops confined to limited on-road or road shoulder

[1] Higher levels of transit service are provided into the Park during special events and peak seasons.

parking. The lack of developed parking in the Park's steep scenic upper elevation areas creates high demand for limited parking with associated congestion.

Table 1-2 Existing Parking Facilities

Parking Location	Capacity
Section 9 Lot	191[a]
Griffith Observatory Lot (Reserved Parking Lot)	36[b]
Griffith Observatory Lot (Public Parking Lot)	100[b]
Lot F (Greek Theatre Lot)	40[c]
Lot G (Greek Theatre Lot)	170[c]
Mt. Hollywood Drive	12[d]
North Vermont Avenue/Vermont Canyon Road Angled Parking	180[a]
West & East Observatory Road	151[d]
Western Canyon Road	337[d]

[a]Total parking spaces estimated based on aerial photography (Google 2015)
[b]Griffith Observatory Input to Griffith Park Traffic Planning
[c]2014 Greek Theatre Traffic Operations Program
[d]2015 Iteris Traffic Study (Attachment 1)

Griffith Park is a cycling destination, with cyclists accessing the Park from surrounding roadways or parking in remote lots (e.g., Greek Theatre) to access the steep and scenic Park road and trail systems. However, quantified data is not available regarding the average numbers of cyclists using the Park or the split between those that ride or drive to the Park.

Public trails traverse the Park with trailheads distributed along Park roads and near parking areas. The trail system of Griffith Park is extensive, and extends along canyons and ridgelines throughout the project area. There are over 50 miles of trails in Griffith Park. Upper East and Lower West Observatory Trail connects the lower parts of Western Canyon Road and lead up towards Griffith Observatory. West Trail starts near the Section 9 parking lot, and heads up Western Canyon Road to the West Observatory Road/Western Canyon Road junction, then continues further onto the ridge, over the road tunnel, and toward the Mt. Hollywood Summit. Boy Scout Trail leads up the eastern side of the ridge from the lower parts of Vermont Canyon Road to Griffith Observatory. Existing trails are more heavily travelled in the immediate vicinity of the project area than other areas of the Park. Mt. Hollywood Drive, which is closed to personally-owned vehicles, provides access to the interior trails and views of the Hollywood Sign, the Los Angeles skyline and expansive wilderness.

The Griffith Observatory is popular for its panoramic views of Los Angeles and provides a parking lot with 100 public spaces.

The Greek Theatre hosts approximately 60-75 events annually, and is served by two parking lots and angled parking along Vermont Canyon Road.

1.3.4 Surrounding Land Uses

Many visitors use the existing parking and shoulder parallel parking to access the Griffith Park trail systems, such as the West Trail.

The project area is primarily surrounded by the open space and wilderness areas of Griffith Park. Activities in the surrounding area include horseback riding, hiking, theater and the arts, golfing, cycling, and natural habitat areas. Additionally, active use areas in the Vermont Canyon area of Griffith Park include the Bird Sanctuary and nature trail (northeast), the Greek Theatre and Roosevelt Golf Course (east), and Fern Dell Trails Café. Steep hills and ridgelines compose much of the rest of the area.

Land uses to the west and east of the project area outside the Park boundaries are urbanized and include low density, single-family, and multi-family residences. Medium and low density housing is located in the Hollywood Hills neighborhood to the southwest and in the Los Feliz neighborhood to the southeast. Access to the project area is achieved through two established neighborhoods along Vermont Canyon and Western Canyon Roads. Scattered industrial buildings are located further away from the Park boundary.

2 PROJECT DESCRIPTION

The proposed project would involve roadway and parking lot improvements to enhance circulation in the vicinity of Griffith Observatory. There are three primary components to the proposed project: (1) constructing physical improvements to roadways and parking areas to improve multi-modal circulation in the vicinity of Griffith Observatory; (2) installation of pay stations to permit charging of storage for vehicles in the Observatory Parking Lot, along East and West Observatory Roads, and the upper portions of Western Canyon Road, and (3) introducing a free or low cost shuttle system and improvements to existing and historically used public transit services around Griffith Observatory to Park visitors to improve public access, supported by the implementation of specified metered parking locations.

Immediate changes would include enhancement of existing and historically used City public transit services such as DASH and METRO, in addition to modifying West Observatory Road and East Observatory Road into a one-way loop, and installation of solar-powered pay stations. Griffith Observatory shuttle services and changes to Western Canyon Road would not be implemented until a later date, upon completion of traffic flow improvements along Los Feliz Boulevard outside of Los Angeles DRP jurisdiction.

2.1 Physical Circulation Modifications

The proposed project would involve restriping of existing roadways to change West Observatory Road and East Observatory Road from two-lane/two-way roadways to one-lane/one-way roadways. The restriping would involve angled parking along the down-slope side of the road, along with provisions for safe bicycle travel along the access roads, including "sharrow" markings on project roads and within the Griffith Park tunnel.

The proposed project would reconfigure West and East Observatory Road to enable a one-way couplet, with two-way travel maintained through the existing tunnel on Mt. Hollywood Drive.

Over the long term, once traffic mitigation measures are implemented to Los Feliz Boulevard outside of Los Angeles DRP jurisdiction, Western Canyon Road would be modified through installation of a pedestrian-safe median island at the West Observatory Road intersection and changes to indicate marked parallel parking on the up-slope side adjacent to the realigned uphill and downhill lanes. Also over the long term, Western Canyon Road would provide exclusive inbound uphill shuttle, bicycle, and emergency vehicle access, and inclusive downhill access for all vehicles.

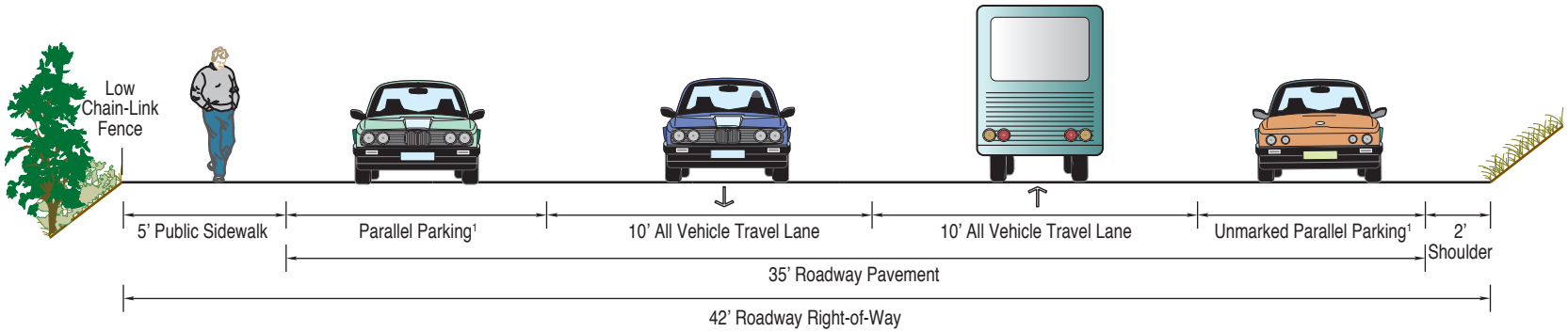
Project improvements would be confined to the existing road right-of-way and would not include any re-grading, expansion, realignment, tree removal, or substantial construction. Details concerning each proposed modification are described below.

2.1.1 Conversion of West Observatory and East Observatory Roads to a One-Way Couplet

The project would immediately convert West Observatory Road and East Observatory Road to a one-way couplet from the junction of these roads with Vermont Canyon Road on the east and Western Canyon Road to the west; these roads would be modified from two-way to one-way to provide a counter-clockwise traffic flow system with West Observatory Road carrying traffic inbound to Griffith Observatory, and East Observatory Road carrying outbound traffic back to Vermont Canyon Road or Mt. Hollywood Drive. This 0.8 mile long, one-way loop would extend from the intersection of Western Canyon Road to Griffith Observatory around to the intersection of East Observatory Road and Mt. Hollywood Drive. Both roads would be designed as follows (Figure 4):

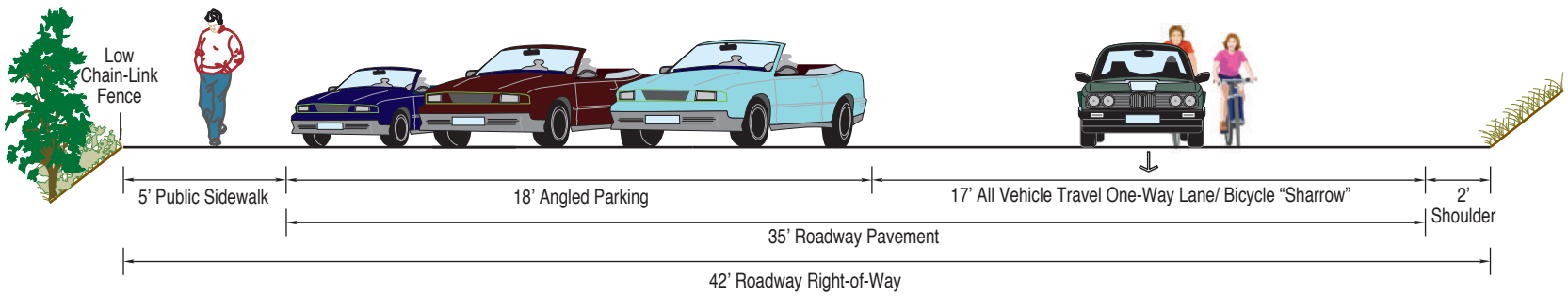
1. Install one 17-foot wide paved vehicle travel lane to carry automobiles, shuttles, and buses on the inside of the loop on both East and West Observatory Roads, with painted stencils and signs to indicate sharing the lane with bicycles (a 'sharrow' lane). The remaining 18 feet of paved surface reserved for 30° angled parking, 21-foot stall depth, 9-foot wide stalls (LADBS 2014), bordering the existing 5-foot wide paved and natural surface trail pedestrian walkways on the down-slope side of the road. The 2-foot wide dirt shoulder against the up-slope side of the road and the fence against the down-slope side next to the pedestrian lane would remain.
2. The Griffith Park tunnel would remain a two-way road and include 'sharrow' markings for bicycle awareness through the tunnel.

EXISTING ROADWAY



[1]Existing parallel parking is flexible and intermittent along West and East Observatory Roads.

PROPOSED ROADWAY CONCEPT



*Also applicable to East Observatory Road.

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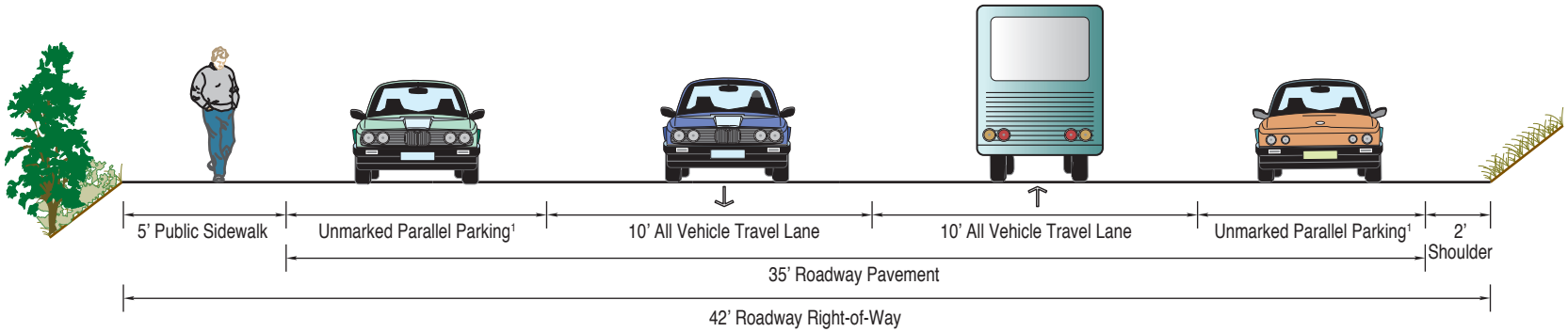
West Observatory Road* Cross Sections

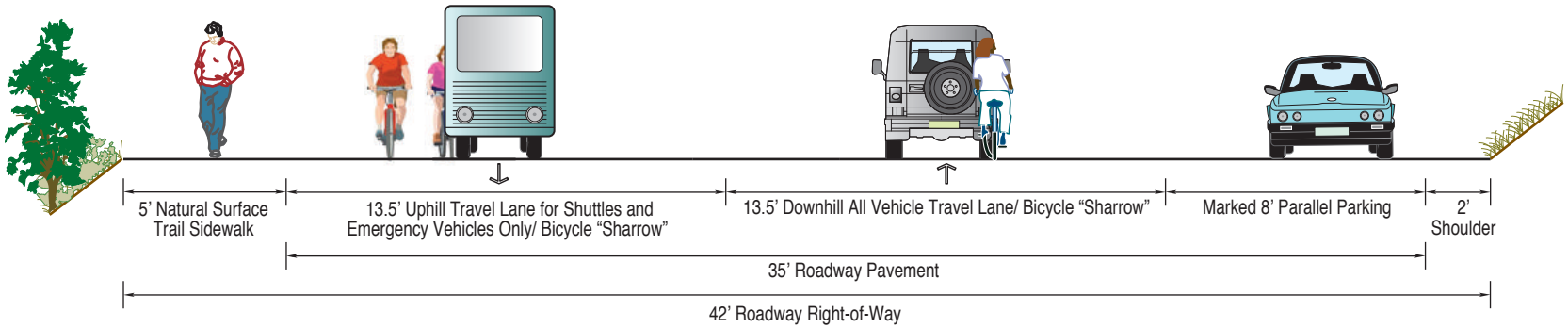
FIGURE 3

EXISTING ROADWAY



[1]Existing parallel parking is flexible and intermittent along Western Canyon Road.

PROPOSED ROADWAY CONCEPT



*Modifications would not be implemented until completion of improvements to Los Feliz Boulevard.

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Western Canyon Road Cross Sections*

FIGURE 4

2.1.2 Western Canyon Road Access Modifications

Over the long term, Western Canyon Road would be modified to indicate exclusive uphill shuttle access, downhill traffic for all vehicles, and marked parallel parking in the downhill direction.

Western Canyon Road would continue to be operated as a two-way road for the foreseeable future. Over the short term, minor improvements to Western Canyon Road would include restriping and installation of signs to provide a 12-foot wide inbound uphill lane on the down-slope side, and a 13-foot wide outbound downhill lane on the up-slope side of the roadway, both open to all vehicle and bicycle access. Parking improvements would include delineation of marked, 8-foot wide, parallel parking spaces that would extend along the downhill, up-slope roadway edge from the West Observatory Road intersection to a major bend located approximately 0.5 miles down Western Canyon Road from its intersection with West Observatory Road, above One Mile Tree – a large oak tree located along this road; stalls would meet or exceed local code for parallel parking stalls. The parking spaces would be accompanied by pay stations, and no parking signs would be installed on both sides of the road from the switchback north of One Mile Tree down to the Section 9 parking lot.

Over the long term, the uphill canyon side lane would be converted to provide exclusive inbound access for vehicles such as shuttles, bicycles, and emergency access vehicles, with no inbound private vehicular access permitted. The downhill up-slope outbound lane would retain access for all vehicles. However, this operational arrangement would not be implemented until traffic mitigation measures have been installed on Los Feliz Boulevard and its connecting roads to reduce the impacts of changes in traffic patterns to adjacent neighborhoods. A system of semi-permanent traffic delineators would be installed to demarcate between the uphill and downhill lanes and channelize traffic. At the top of Western Canyon Road, approaching its intersection with West Observatory Road, a pedestrian-safe traffic median would be installed to direct the flow of traffic.

2.1.3 Mt. Hollywood Drive

Under the proposed project, Mt. Hollywood Drive would continue its operations unchanged. This road would continue to be operated as a rural road/pedestrian and bicycle trail with vehicular access limited to Park emergency and service traffic to respect the wilderness characteristics of more remote areas of the Park. Park Rangers would continue to be stationed at the Mt. Hollywood Drive gate or along the road to enforce public access restrictions (i.e., remain on designated trails) and no smoking restrictions. Habitat protection fencing would continue to be installed or repaired as required to protect sensitive resources, but no specific proposals for new walls or fencing are included in the project. A shuttle stop would be located at the base of Mt. Hollywood Drive near the Griffith Park tunnel on the existing public use roadway, which may be immediately integrated with increased DASH services or eventually installed with Loop Shuttle services as described within Section 2.2, to enable more encompassing hiker and cyclist accessibility to the area.

2.1.4 Solar Powered Pay Stations

Approximately 40 to 50 solar powered pay station terminals would be installed throughout the redesigned roadways, as divided in Table 2-1. Pay by space selection would be implemented, and the stations would be located near light posts for AC and readability. Pay station enforcement would begin in late morning at 11 a.m. and operate until 10:30 p.m. The pay stations would require a four square foot installation slot to securely mount into the existing right of way.

Table 2-1 Pay Station Totals and Locations

Number of Pay Station Terminals	Terminal Locations
4	Disabled Spaces
9	Main Observatory Lot
7-8	West Observatory Road
7-8	East Observatory Road
12-14	Western Canyon Road (before One Mile Tree)[2]
2-3	Reserved Lot
4	Fill in for additional locations

2.1.5 Parking

The proposed project would include changes to existing parking provisions within the Park. The proposed project would allocate 581 existing free public parking spaces to this program in three different parking lots, including the Section 9 parking lot in Fern Dell Canyon, Lots F and G adjacent to the Greek Theatre (which are generally free, except during events when parking spaces in these Lots are sold for a fee), as well as existing angled parking along Vermont Canyon Drive. In addition to this free public parking in the lower reaches of the Park, an estimated 150 metered parking spaces would be provided in higher elevation areas along West Observatory Road and East Observatory Road where space allows along the proposed one-way road system, as detailed in Section XVI, *Transportation/Traffic*. Parking would remain free along Western Canyon Road until future completion of Los Feliz Boulevard area traffic improvements. In addition, approximately 143 parking spaces at Griffith Observatory would be metered. Approximately 26 to 36 automated, solar powered pay stations that accept debit and credit cards as well as cash would be installed within the existing right-of-way along these roads, enforced until 11 p.m. Annual parking permits would be available for tour vans and buses. Proceeds from the metered parking would be used to fund and subsidize the proposed free or low cost shuttle service and the immediately increased services by City DASH and METRO, as described below and to support operations within Griffith Park.

After completion of traffic flow improvements (e.g., signal improvements) along the Los Feliz Boulevard area, as described within Section XVI, *Transportation/Traffic*, parking along Western Canyon Road would be improved through installation of an estimated 130 parking spaces, which would be marked along both sides of Western Canyon Road along with installation of an estimated 12-14 automated, solar powered pay stations. These parking improvements and associated revenues would be integrated into the program described above and coordinated with planned roadway improvements, as described in Section 2.1.2, and Loop Shuttle operations, as described in Section 2.2. Over the long term, these improvements would result in retention provisions of 581 free parking spaces in lower elevations of the Park and provision of 423 metered parking spaces in upper elevation areas with revenues dedicated to improving transit service and reducing Park congestion.

Parking spaces closest to Griffith Observatory would be restriped to provide ADA-accessible parking immediately adjacent to the Observatory. In addition, approximately 65 parking spaces near the Observatory would continue to be reserved for Griffith Park employees and Observatory executive parking, with the exception of peak dates during which employees would utilize lower elevation parking lots 9, F and G and ride shuttles to the observatory. Griffith Observatory will have the ability to issue parking permits to its employees, VIPs, and other designated visitors. Such permits would be provided via an access code to be entered into the pay station or a similar

[2] Over the long term, once traffic mitigation measures are implemented to Los Feliz Boulevard outside of Los Angeles DRP jurisdiction.

procedure which would recognize the person as an employee by their license plate. No RV, bus, or tour shuttle parking would be allowed in stalls, and no unmarked parking would be allowed along the upper roads.

2.1.6 Pedestrian and Bicycle Access

With implementation of West Observatory Road and East Observatory Road's transition to a one-way couplet, a pedestrian path would follow the entire inner loop to Griffith Observatory and would improve safety for pedestrians and cyclists currently utilizing the shoulders of the West and East Observatory Roads.

With implementation of West Observatory Road and East Observatory Road's transition to a one-way couplet, the proposed one-way road system of West and East Observatory Roads with metered angled parking would allow bicyclists and traffic to share the primary lane (a "sharrow" lane) (Figure 4). Signage would be implemented to indicate the presence of bicycle activity on the same road. A 5-foot wide natural surface walkway would be maintained for pedestrians along both East Observatory Road, in addition to an existing sidewalk along West Observatory Road with established fencing to prevent access to the downhill slopes. Posted speed limits would be reduced where appropriate to promote pedestrian and bicycle safety.

After Los Feliz Boulevard alterations are completed, shuttle stops would be located at key destinations along the one-way road system with frequent service during peak times to ease pedestrian access and use. Also, starting at the entrance to the Section 9 parking lot, Western Canyon Road's uphill lane would indicate a 'sharrow' lane with bicycles for the 1.4 mile stretch up to the intersection with West Observatory Road. The downhill lane would also indicate a similar 'sharrow' lane. A 5-foot wide natural surface walkway would be maintained for pedestrians along the downslope side for the length of marked parking. Lastly, crosswalks would be implemented for pedestrian access across a pedestrian-safe median at the top of Western Canyon Road (Figure 4).

All roads would be stenciled with bicycle 'sharrow' markings. Bikes traveling west to east would either need to complete the inner counter-clockwise one-way loop as vehicles must, or through the inside lane of the tunnel. The Mt. Hollywood Drive tunnel would continue providing two-way shared travel for shuttles, automobiles, and bicyclists.

2.2 Improved Regional and Internal Park Transit Services

The proposed project would utilize revenue from pay stations to subsidize increased existing transit services to and within the Park. Initial project improvements would include increased DASH services, which would be updated to include services such as service to the Park seven days a week, as further described within Section 2.2.1, *Increased DASH and METRO Services*. Awareness of the Griffith Park Loop Shuttle and updated DASH services would be integrated via visible signage into the METRO system.

After completion of Los Feliz Boulevard area traffic improvements and modifications as described in Section 2.1.2 to Western Canyon Road are completed, the proposed project would provide an ADA approved, free to low cost shuttle service with bike racks for Park visitors via existing roads. The primary function of this "Loop Shuttle" would be to connect the lower-elevation parking lots with Griffith Observatory and the higher elevation trail access routes, reducing traffic congestion within the roads adjacent to Griffith Observatory. A minimum of four shuttle buses would be required for the "Loop Shuttle" to satisfy approximately 15 to 20 minute headway (waiting time) goals during current peak traffic conditions, as described below, though the quantity of shuttles to be owned and operated by LA DRP is currently undetermined.

2.2.1 Increased DASH and METRO Services

LA DRP has entered into tentative agreement with LA DOT in coordination with METRO to improve both regional transit access to the Park through METRO and DASH services, as well as internal transit access within the Park, along with longer term proposals for an internal Park shuttle bus system to further improve transit and reduce congestion as described within Section 2.2.2.

Initially, improved public access to and awareness of public transit services to the Greek Theatre, Griffith Observatory, and other potential upper elevation destinations in the Park such as at the base of Mt. Hollywood Drive, would be provided in conjunction with LA DOT transit operations. Parking program subsidies would allow DASH services to Griffith Park to be substantially increased to include weekday service, a major change from existing weekend-only service to seven-day services, and would increase the frequency of shuttles arriving at Griffith Observatory on weekends from approximately every 35 minutes to approaching every 15 to 20 minutes, dependent on traffic conditions that may increase or decrease this estimated frequency. Pursuant to the project's goals, the increase of public transit opportunities may eventually provide service beginning earlier in the day and provide additional buses to enhance frequency. LA DRP funding of DASH service to the Park would also provide additional shuttles to be added during peak seasons or special events above that currently offered during peak demand services. Lastly, Los Angeles METRO would be able to promote an official "Griffith Observatory" access stop in connection with the DASH service at the Vermont/Sunset Redline Station, as described below.

The DASH Griffith Observatory access route would continue to include the Greek Theatre bus stop during the week, as it currently does on weekends. The increased service would enable Greek Theatre event attendees to use the shuttle during weekday events, with the intent of decreasing neighborhood congestion. During evenings without performances when the Greek Theater parking lots are free, DASH services would be available to convey Griffith Observatory visitors in the evening between this free parking and the Observatory. Demand for weekday service would direct frequency and hours of operation, similar to the above frequency goal, to be posted on DASH, Griffith Observatory, LA DRP tourist websites, and appropriate tourism oriented organizations (e.g., Los Angeles Visitors Bureau, Hotel Association of Los Angeles, etc.), upon completion of an associated schedule. Additional shuttles enabled by pay station revenue would also help to increase DASH service frequency to the Griffith Observatory and Greek Theatre bus stops.

Increased awareness within METRO services via marketing and establishment of an official "Griffith Observatory" or "Griffith Park" access stop would be intended to attract local Los Angeles riders and recreational visitors that may travel from Hollywood, Universal Studios, or Downtown Los Angeles. Posters informing pedestrians of increased access to Griffith Observatory, in addition to a "Griffith Observatory" or "Griffith Park" label added to METRO maps, would be posted within METRO stations with access to the Vermont/Sunset Redline Station as far away as stations within Santa Monica, Long Beach, Pasadena, North Hollywood, Arcadia, and areas in between.

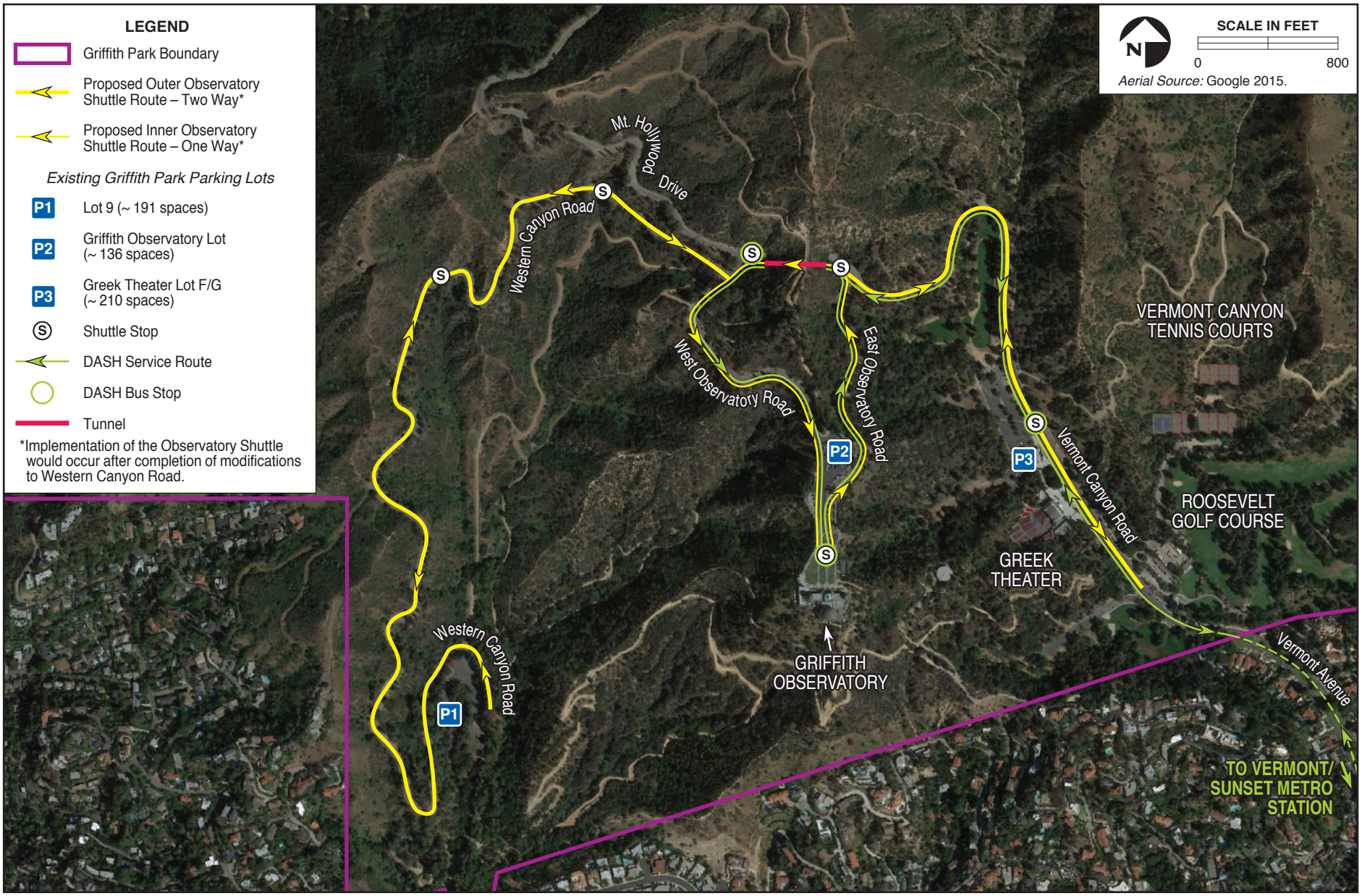
2.2.2 Loop Shuttle Operations

The proposed project would implement this described “Loop Shuttle” service following external improvements to Los Feliz Boulevard and internal changes to Western Canyon Road, utilizing revenue from all proposed solar powered pay stations. A shuttle service would circulate the Loop Shuttle route with an anticipated headway of approximately 15 to 20 minutes between buses. The Loop Shuttle would operate approximately 200 peak days from 10 a.m. to 11 p.m., with the Park expanding or reducing shuttle service during peak times and special operations to meet demand.

This Shuttle would follow a loop route consisting of generally eastward and westward travelling directions, both of which would utilize the modified one-way Observatory Road loop during its trip (Figure 5). Starting at lower Western Canyon Road, the shuttle would travel north on Western Canyon Road for approximately 1.4 miles to the intersection with West Observatory Road, and would pick people up along Western Canyon Road from above One Mile Tree. The Loop Shuttle would then turn right and traverse around West and East Observatory Roads for 0.7 miles to the intersection with Vermont Canyon Road, where it would then continue 0.4 miles down Vermont Canyon Road to the Greek Theatre parking lot. The Loop Shuttle would turn around at Boy Scout Road to begin the westbound leg of its loop. Travelling north on Vermont Canyon Road approximately 0.4 miles through the tunnel to Mt. Hollywood Drive. The Loop Shuttle would then circulate a one-way, one-mile inner loop to reach Griffith Observatory via West and East Observatory Roads before returning to the outer loop. Continuing through the tunnel, the shuttle would return to the Western Canyon Road junction, head downhill, and begin its cycle again. There would be no public shuttle stop at the Section 9 parking lot. Combined east-to-west and west-to-east travelling distances, the Loop Shuttle route would be approximately 5.5 miles long (Google Earth Pro 2015). The Loop Shuttle would stop at 5 shuttle stops serving surrounding trails and recreational uses (Figure 5). Shuttle stops would be rustic and low profile.

Using average weekday peak times of the current traffic conditions without considering the proposed road modifications, it can take up to 15 minutes to travel from Western Canyon Road to the Greek Theatre parking lot on weekdays, and 17 minutes to travel the opposite direction. On weekends, completing a Loop Shuttle route at peak times can take up to 21 minutes heading from Western Canyon Road to the Greek Theatre parking lot, and 29 minutes to travel the opposite direction (Google Earth Pro 2015). An average dwell time of 12 seconds is assumed at each shuttle stop (Dueker et al. 2004).

Using the aforementioned traffic condition predictions and dwell time assumptions, at least three Loop shuttles would be necessary on weekdays in order to enable 15 to 20 minute headways between shuttles during peak traffic times. With the same assumptions, at least four shuttles would be required to provide 15 to 20 minute headways during peak weekend times and operations during “extremely busy” days (Griffith Observatory 2015).



amec foster wheeler

Proposed Shuttle Route

FIGURE 5

2.3 Construction

Construction would last for a duration of up to three months. The construction operations would utilize construction equipment that would facilitate roadway street cleaning, roadway stripe removal, restriping of roads, limited dirt removal for 2x2 holes to install the solar powered pay stations, hauling trucks for materials to the construction site, bus station signs, and roadway recirculation signage. The following construction equipment would be included in construction efforts:

- One (1) Sweeper truck (for street cleaning prior to striping)
- One (1) Ultra-high pressure, low-volume waterblaster (for line removal)
- One (1) Ride-on line striping system (for re-striping)
- One (1) Paint truck (for re-striping)
- Two (2) Work trucks (for worker mobilization)
- Twelve (12) Delivery trucks (peak single-day delivery, maximum 15 miles transport)
- Twelve to Fifteen (12-15) personal worker commute vehicles
- Up to two (2) backhoes or small excavators (for pay station implementation)

2.4 Mitigation

Mitigation efforts are implemented to remediate or lessen the impact of actions which may cause an adverse effect on the environment, including issues related to safety, traffic, sensitive wildlife, and land use practices. The Park currently uses mitigation strategies to ease traffic flow, ensure public safety, and maintain Griffith Park character. These are discussed in the resource related Existing Setting sections of the MND. Further, mitigation techniques are provided within the proposed project, and additional resource-level mitigation measures are detailed within this MND.

<u>Current Park Mitigation Practices</u>

Griffith Park follows goals and objectives as included in the Griffith Park *Vision*, which directs management practices that address Park visitors, existing facilities, the Park's flora and fauna, and multi-modal transportation and circulation.

Additionally, Griffith Park follows the recommended Best Management Practices (BMPs) as indicated in the Griffith Park Wildlife Management Plan (GPWMP) associated with Griffith Park Vision plan. The GPWMP document includes strategies that provide protection and safety to wildlife and the natural setting within the Park.

A traffic management plan was enacted by Griffith Observatory in 2007 that enables active control of traffic on the immediate roads and intersections adjacent to the facility within the Park. The plan established at least three traffic control checkpoints and provided for a myriad of transportation options.

On especially busy days, when congestion can be nearly unmanageable at hilltop intersections, uphill travel on Western Canyon Road can be closed to public traffic at peak visitor hours to alleviate the bottlenecks.

In the immediate vicinity to Griffith Observatory, West Observatory Road can be closed to public, East Observatory Road remains closed to public parking opportunities, and reserved parking is provided for special events, guests, and delivery vehicles.

As a majority of the Park lies within land prone to wildfires, Park Rangers are active within the Park to reduce this wildfire potential, enforcing no smoking policies and supplying safety information to visitors.

Additionally, Park Rangers and police officers provide guidance for congestion, addressing pedestrian, cyclist, and automobile conflicts, and ensuring compliance with Griffith Park policies.

Mitigation within the Proposed Project

Increased visitor access, recirculation efforts, and shuttle service implementation provide a variety of issues and concerns. The proposed project includes measures to reduce the overall impact associated with its implementation, of which include the following:

Traffic congestion is addressed via transitioning to a one-way inner road system adjacent to Griffith Observatory, front-in parking, and pay stations to increase parking stall turnover times and encourage use of the Greek Theatre parking lots, public transit services including DASH and METRO, and shuttle system.

Cyclist and automobile conflict is assuaged through the use of ‘sharrow’ lanes and prominent ‘sharrow’ signage along roadways.

Pedestrian safety is addressed through implementation of crosswalks at the Vermont Canyon Road/East Observatory road intersection, a dedicated pedestrian lane and barrier through the Griffith Park tunnel, and creation of a pedestrian-safe median island at the intersection of Western Canyon Road/West Observatory Road after mitigations are implemented on Los Feliz Boulevard which enable Western Canyon Road alterations.

Additional Mitigation

After consideration of the aforementioned range of mitigation techniques employed by existing Griffith Park programs and those contained within the Project Description, the project has the potential to significantly impact resource areas within the project site and vicinity. As such, the project requires additional mitigation measures in order to decrease these effects to a less than significant level. As defined in CEQA guideline 15370, mitigation includes:

a) Avoiding the impact altogether by not taking a certain action or parts of an action.
b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.

The specific mitigation measures are included within resource areas that may be significantly affected. Section 5.1, *Aesthetics*, Section 5.4, *Biological Resources,* Section 5.5, *Cultural Resources*, Section 5.12, *Noise*, and Section 5.16, *Transportation/Traffic* each include discussion and mitigation techniques that are required to decrease the effects of the proposed project to less than significant.

3 EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses 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).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
    a. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    b. Earlier Analysis Used. Identify and state where they are available for review.
    c. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
5. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
    a. The significance criteria or threshold, if any, used to evaluate each question; and
    b. The mitigation measure identified, if any, to reduce the impact to less than significance

4 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist and discussed on the following pages.

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

5 DETERMINATION:

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____

Paul Davis Date
Environmental Supervisor

5.1 Aesthetics

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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 that would adversely affect day or nighttime views in the area?	☐	☒	☐	☐

5.1.1 Existing Setting

Griffith Park is recognized as an important scenic area within the City. The project area supports scenic natural undeveloped hillsides and habitats as well as developed parkland notable landmarks such as the Greek Theater and Griffith Observatory. However, the roadways leading up the canyon sides to Griffith Observatory are not designated as scenic routes or vistas. The parking lot nearest to Griffith Observatory has scenic views from the sidewalk looking over the Los Angeles basin, however there are no distinct viewing locations until reaching the established Griffith Observatory (Caltrans 2013).

Visitors to the Park wishing to view the Hollywood Sign do so from both the Griffith Observatory and from points along Mt. Hollywood Dr., particularly at an informal viewing area located 0.5 mile uphill from the Mt. Hollywood gate at an open space of compacted dirt leading to a trail. At this informal viewing location, no trees directly impede the view of the Hollywood Sign or opposite view of the Los Angeles Basin; short chaparral bushes border the edges of walkable locations on the sides of the slopes. There is a short natural landscape terrace adjacent to the open space that extends in the same direction as the trail leading to the Bronson caves, known to some visitors as The Quarry. The surrounding site vegetation primarily consists of California chaparral and coastal sage scrub, with low-lying shrubs on the steeper slopes, and taller trees bordering further from the roadways.

Griffith Observatory's location and free public telescopes fulfill the vision of benefactor Griffith J. Griffith in providing quality public access to the night sky. Many hundreds of visitors look through the Observatory's lawn telescopes each evening, 310 nights a year, and thousands attend monthly public star parties with dozens of free telescopes on the lawn. The lawn telescopes offer an opportunity for ADA visitors to enjoy nighttime viewing. The lawn provides a relatively dimly lighted social gathering area, lit only by limited stationary pole lighting, Griffith Observatory building lighting, the Los Angeles basin glow, and moving headlights from the Griffith Observatory parking lot approximately 100 yards away. Occasionally vehicles will also use the West to East Observatory Road 'bend' when accessing the ADA reserved spots, conducting Griffith Observatory operations, and making deliveries and drop-offs, during which these headlights will sweep across the Griffith Observatory lawn and affect nighttime viewing. While Griffith

Observatory does not necessarily have access to crystal clear skies located in more remote mountain or desert locations, the facility boasts impressive views on clear nights for all visitors to enjoy and appreciate the hilltop.

The Mobility section of the *Vision* plan for the Park details that proposed additions to the Park would not support or display commercialized advertisements. These additions include any shuttles, benches, or similar mediums commonly used as advertising space outside the Park boundary in the City. The Plan notes the importance of maintaining the environmental and wilderness cohesiveness of the Park, and to emphasize that difference from the urban sprawl around its edges (LA DRP 2008).

The Design Guidelines section of the *Vision* plan describes the design, sustainability, accessibility, furniture, lighting, preserving native landscaping, and signage allowed by development within the Park (LA DRP 2008).

5.1.2 Discussion

Implementation of the proposed project would include re-striping of paved roads within the existing right-of-way, traffic cones along road center-lines to channelize traffic and installation of 40 to 50 parking pay stations.

a-b. **Less than Significant.** There are no roadways or areas within the project area that are currently designated scenic routes or vistas and proposed project improvements would be located primarily within developed road corridors, creating no addition to designated scenic roads or vistas. Project improvements would not intrude into scenic skylines. There are no designated state scenic highways adjacent to the proposed project area. None of the proposed facilities would remove trees, impede existing views, or otherwise detract from the scenic vistas at photograph locations. Impacts would be less than significant.

c. **Less than Significant.** Proposed facilities such as re-striping, fencing, traffic control cones and parking pay stations would alter the existing aesthetic character of West and East Observatory Roads and eventually Western Canyon Road. However, no vegetation would be removed, no natural hillsides would be disturbed, and development would be confined to existing busy road corridors. Improvements would be minimally intrusive and would be carried out in a manner consistent with the Design Guidelines section of the *Vision* plan and therefore impacts of the proposed project would be less than significant.

d. **Less than Significant with Mitigation.** Implementation of the proposed project would substantially increase the intensity of mobile lighting upon the Griffith Observatory lawn, due to vehicles travelling along the reconfigured one-way road ‘bend’ from West to East Observatory Road. Lights and glare from visitor cars searching for parking would approach closer to the lawn than the existing 100 yard distance from the Griffith Observatory parking lot. The reconfiguration would also increase the frequency that headlights would sweep across the Griffith Observatory lawn in comparison to the current travelers upon East Observatory Road. The mobile sources of light would degrade the nighttime aesthetic and ability for nighttime visitors and public star party attendees. Given Griffith Observatory’s importance to the astronomy community and visitors, the increase of headlight frequency and mobile light sources has the potential to have a significantly adverse effect on existing nighttime views. The potentially significant effects may be reduced to less than significant with implementation of the following mitigation strategy.

Griffith Observatory lawn is used by recreational star gazers and star party attendees adjacent to the West to East Observatory Road ‘bend’, requiring the following mitigation measure:

Mitigation Measure Ae-1: Deploy Mobile Blackout Light Shield. Before nighttime viewing activities, a mobile blackout fence which is stored on-site shall be extended along the edge of the West to East Observatory Road 'bend'.

- The light shield shall be at minimum 80 feet long to extend the length of the lawn edge and prevent direct automobile headlight and glare and minimize increase of sky glow during nighttime viewing activities.

5.2 Agricultural and Forestry Resources

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997), prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. **Would the project:**				
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, forest land (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 forest land or conversion of forest land 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 forest land to non-forest use?	☐	☐	☐	☒

5.2.1 Existing Setting

The project site is entirely located within Griffith Park that is designated by the City of Los Angeles as Open Space (OS) for both land use and zoning (ZIMAS 2015).The site does not contain any Prime Farmland or Farmland of Statewide Importance (California Department of Conservation 2011). There are no agricultural uses for the land, nor any Williamson Act contracts in the area (Department of Conservation 2013). Lastly, Griffith Park does not consist of any forest or timberland areas (Board of Forestry and Fire Protection 2015). Furthermore, the current uses and surrounding urban environment do not make the area suitable for existing or future forest land uses.

5.2.2 Discussion

a. **No Impact.** As described in the environmental setting section, the Department of Conservation lists the entire project area as “Open Space”. The project would not result in a conversion of land classification of the State’s Important Farmland map. Onsite soils are not viable agricultural lands within the fully developed project area and there are no areas designated for agricultural land use. Therefore, no impacts to farmland or agricultural soils would occur.

b-d. **No Impact.** The project area is not presently used for agricultural land or forest land and no such uses would be appropriate given visitor access for natural, outdoor recreational uses. No loss of agricultural or forest land would result from project implementation; therefore, no impacts to agricultural resources would occur.

e. **No Impact.** The project would not result in the conversion of farmland to a non-agricultural use, nor a forest into a non-forested use. The property is not considered viable agricultural land due to the steep terrain, the existing recreational use on site, and the surrounding urban uses. Using standard criteria for assessing agricultural viability (e.g. existing and surrounding land uses, parcel size, soils, water availability, etc.), the project would not affect agricultural resources and will have no impact.

5.3 Air Quality

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. **Would the project:**				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially 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 in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

5.3.1 Existing Setting

The project site is located in the South Coast Air Basin (SCAB) that covers the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties in addition to Orange County. The South Coast Air Quality Management District (SCAQMD) monitors and regulates the local air quality in the Basin and manages the Air Quality Management Plan (AQMP). Air quality is affected by stationary sources (e.g., land use and development) and mobile sources (e.g., motor vehicles). Air quality at a given location is a function of several factors, including the quantity and type of pollutants emitted locally and regionally, and the dispersion rates of pollutants in the region. Primary factors affecting pollutant dispersion are wind speed and direction, atmospheric stability, temperature, the presence or absence of inversions, and topography. Griffith Park is located in the northwestern portion of the Basin, which has moderate variability in temperatures. The Basin frequently experiences weather conditions that trap air pollutants within the Basin, due to temperature inversions and periods of stagnant wind conditions. The air quality within the Basin is influenced by a wide range of emission sources, such as dense population centers, heavy vehicular traffic, industry, and weather.

To protect the public health and welfare, the federal and state governments have identified six criteria air pollutants and a host of air toxics, and established ambient air quality standards through the federal Clean Air Act and the California Clean Air Act. Federal and State criteria air pollutants include Carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter less than 10 microns in diameter (PM_{10}), fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), and sulfur dioxide (SO_2). The air quality impacts are assessed by comparing impacts to baseline air quality levels and applicable ambient air quality standards. Standards are levels of air quality considered safe from a regulatory perspective, including an adequate margin of safety, to protect public health and welfare.

The entire South Coast Air Basin is designated as a federal and/or state-level nonattainment area for ozone, $PM_{2.5}$, and PM_{10}. At the federal level, the Basin is designated as an extreme nonattainment area for ozone meaning that federal ambient air quality standards are not expected to be met for several years (US EPA 2015a). Additionally, the Los Angeles County region of the Basin is designated as a moderate nonattainment area for $PM_{2.5}$, nonattainment area for Pb, and as a serious maintenance area for PM_{10} and CO (US EPA 2015b). The basin is in attainment of federal standards for SO_2 and NO_2, a subcategory of NOx. At the state level, the Basin is also designated as a nonattainment area for ozone, $PM_{2.5}$, and PM_{10}. The Basin is in attainment for the state ambient air quality standards for CO, Pb, NO_2, and SO_2 (ARB 2014; SCAQMD 2013).

The SCAQMD has divided the region into 38 source receptor areas (SRAs) in which 32 monitoring stations operate. Griffith Park is located within SRA 1 that covers the Central Los Angeles area. SRA 1 monitors measurements for CO, NO_2, O_3 (1-hr and 8-hr), PM_{10}, and $PM_{2.5}$ (AQMD 2015). Section 5.3.2 identifies the SCAQMD ambient air quality standards for relevant air pollutants. The project area consists almost exclusively of roadway that leads to pollutants from automobile exhaust primarily in the form of VOC, NO_x, CO, and PM (EPA 2015a).

The primary source of air pollutants in the project area is generated by vehicular traffic moving along project area roads. Taking the highest averages from five months of surveys, the Vermont Canyon Road and Western Canyon Road access roadways can currently carry over 9,000 trips each weekend, refer to Section 5.16, *Transportation/Traffic*.

Surrounding development includes residential and limited commercial buildings. Furthermore, sensitive receptors to air quality conditions within the project vicinity include single-family residences and neighborhoods lining the southern border of the project area and located along Vermont Canyon and Western Canyon Roads – two primary Parks entrance roads. The closest residential sensitive receptors to affected project areas are located approximately 150 feet west of Western Canyon Road, while the closest residential sensitive receptors on the eastern side of the project site are located approximately 440 feet south from the proposed shuttle turn-around location at Boy Scout Road.

5.3.2 Emissions Thresholds

Air quality impacts are assessed by comparing impacts to baseline air quality levels and applicable ambient air quality standards. Federal and state air quality standards have been established for various pollutants. Standards are levels of air quality considered safe from a regulatory perspective, including an adequate margin of safety, to protect public health and welfare.

Construction

The SCAQMD's thresholds recommend that projects with construction-related emissions that exceed any of the following regional (mass daily) emissions should be considered potentially significant.

- 550 pounds per day of carbon monoxide (CO)
- 100 pounds per day of nitrogen oxides (NO_X)
- 150 pounds per day of sulfur oxides (SO_X)
- 75 pounds per day of reactive organic gases (VOC)
- 150 pounds per day of Respirable Particulate Matter (PM_{10})
- 55 pounds per day of Fine Particulate Matter ($PM_{2.5}$)

Operational

Localized significance thresholds (LSTs) were developed in response to the SCAQMD Governing Board's Environmental Justice Enhancement Initiative (I-4). LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each SRA, project size, and distance to the sensitive receptor, etc. LSTs are only applicable for emissions of CO, NOx, PM_{10}, and $PM_{2.5}$. LSTs do not apply to emissions from mobile sources such as automobile traffic or public transport (SCAQMD 2014).

A project's localized air quality impact is considered significant if CO emissions create a hotspot where either the California one-hour standard of 20 ppm or the federal and state eight-hour standard of 9.0 ppm is exceeded. This typically occurs at severely congested intersections (Level of Service [LOS] E or worse). Based on analyses of localized concentrations within the San Francisco Bay Area that has similar ambient CO concentrations as the project vicinity, a project would have to increase traffic volumes at affected intersections to more than 31,600 vehicles per hour for a CO hotspot to occur.

The SCAQMD currently recommends that projects with operational emissions that exceed any of the following emissions thresholds should be considered potentially significant.

- 550 pounds per day of CO
- 55 pounds per day of VOC
- 55 pounds per day of NO_X
- 150 pounds per day of SO_X
- 150 pounds per day of PM_{10}
- 55 pounds per day of $PM_{2.5}$

5.3.3 Discussion

The proposed project would involve limited short term construction activities and long term rerouting of existing traffic. However, as discussed below, construction activities would extend for up to three months, would involve limited vehicular traffic and onsite construction vehicles. Project operations are not projected to increase visitation to the Park or lead to any increases in either peak hour or average daily vehicular traffic (Iteris, 2015). However, as discussed further below, project construction would generate limited emissions over the three month construction period and the project would lead to rerouting of existing traffic with limited changes in localized emissions due to traffic patterns for Park users.

a-c **Less than Significant.** The project area is within the South Coast Air Basin that is currently designated as a nonattainment area for state and/or federal standards for ozone, PM_{10}, and $PM_{2.5}$. The proposed project would not increase overall long term vehicular traffic and associated emissions beyond existing levels. Under initial implementation of the project, an increased frequency of DASH bus operations would result in an increase of CNG engine operations and associated emissions. CNG engines are slightly more fuel-efficient than non-compressed natural gas engines, can reduce life cycle GHG emissions, and are comparable to gasoline in regards to vehicle performance (U.S. Department of Energy 2016). However, this increased supply and usage of public transit service would likely be accompanied by a complementary decrease of personal automobile usage to the Park and an associated decrease of emissions. Upon eventual completion of the entire project, existing levels of visitation would continue, with some visitors parking in remote parking lots and riding shuttles into the upper elevations of the Park instead of driving, with a minor potential decrease in direct vehicular emissions within areas of the Park

associated with a limited decrease in vehicular miles traveled. Quantification of such reductions is difficult due to lack of precise data regarding the split of future trips between Park users continuing to drive to the Griffith Observatory parking lot or parking areas along Park roads and those parking remotely and riding the shuttle or other transit services such as the project's increased DASH services or the existing METRO system with increased Griffith Observatory informational awareness.

The project would generate short term construction related air pollutants in the form of vehicle emissions and construction activities. Construction activity would occur upon previously disturbed and paved right-of-way areas. All construction would occur within a period of three months; accordingly, all construction emissions would be temporary and nominal.

The use of heavy-duty construction equipment and vehicle trips would generate emissions such as NO_x and PM_{10}. The amount of air pollution generated from construction would vary substantially from day to day, depending on the level of construction activity. However, a number of state and local regulations would substantially limit the generation of construction emissions related to the proposed project. As required by the U.S. EPA, California ARB, and specified on the CCR Tile Division 3, Chapter 9, Article 4, Sec. 2423(b)(1), all off-road diesel engines are required to meet at a minimum the Tier 3 Emission Standards for off-road compression-ignition Engines (with proper diesel particulate control). By having all heavy-haul vehicles meet this requirement, the potential generation of NO_x and PM_{10} emissions would be reduced and be in compliance with CCR. Additionally, if the construction activity is in compliance with SCAQMD Rule 403, by properly managing all fugitive dust (PM_{10}) through action such as covering up haul trucks carrying dirt and properly cleaning streets in the vicinity, fugitive dust and NO_x emission would be minimized and would not exceed thresholds. Construction emissions would not approach or exceed emission thresholds and impacts would be less than significant (refer to Table 5-1).

Table 5-1 Estimated Construction Emissions for the Proposed Project Site (pounds/day)

Air Pollutant	SCAQMD Thresholds	Estimated Construction Emissions (lb/day)[1]		Exceeds Threshold?
		Winter 2016	Summer 2016	
CO	550	35.77	34.99	No
NO_x	55	29.80	29.53	No
SO_x	150	0.07	0.07	No
VOC	75	3.81	3.72	No
PM_{10}	150	4.08	4.07	No
$PM_{2.5}$	55	2.13	2.13	No

[1] Refer to Attachment 2 for CALEEMOD output sheets; overall emissions based on rounded totals.

As noted above, project operations would not alter existing overall traffic volumes associated with visitation of the Park. Such traffic would continue to generate emissions primarily from the daily vehicle trips, potentially reduced number of personal automobiles used due to increased public transit service, and eventual shuttle service. While operational emissions may decrease incrementally due to fewer visitors driving the last one to two miles from Park entrances to the Observatory and vicinity or to City METRO or DASH stops outside this radius, no firm data is available on this change in traffic patterns.

Further, changes in traffic patterns as a result of charging of storage for vehicles, increased availability and/or usage of transit service, and implementation of the shuttle service are expected to reduce the amount of time spent looking for parking with resultant idling and congestion on Park roads, thus potentially incrementally reducing vehicular pollutant emissions below existing levels.

Therefore, emissions associated with the project construction and operation would be nominal and not exceed thresholds. As result, the project would have less than significant impacts on air quality, and would remain in compliance with the AQMP.

d-e. **Less than Significant.** The proposed project would not generate substantial increases in emissions proximate to sensitive receptors. Project construction would take place well removed from existing neighborhoods as construction activity is generally located more than one mile from and 1,000 feet above most nearby homes. Construction activities and would be confined primarily to existing roads, would last up to three months and would include only limited construction traffic passing through residential neighborhoods.

Over the long term, the project would not increase the total number of automobiles travelling to Griffith Park from outside the Park as no new trip generating attractions are included in the project. As discussed under a-c above, the project would reroute existing traffic patterns and change trip patterns within Griffith Park by potentially shortening trip length as many visitors would park in peripheral lots to avoid parking fees and take advantage of free or low cost shuttle service or utilize the improved connectivity of increased DASH and existing METRO services to the Park. Because there would be no overall increase in traffic, emissions levels within the Park would largely remain the same, and may even decrease depending on the success of public transit improvements.

After improvements to Los Feliz Boulevard, rerouting of traffic from Western Canyon Road to Vermont Canyon Road would incrementally decrease emissions in Ferndale Canyon while slightly increasing emissions in residential neighborhoods along Vermont Canyon Road associated with the potential diversion of almost 1,000 ADT onto the road, though this number may be reduced depending on the success of public transit improvements. Due to this vehicle movement transfer, emissions could likely be increased by approximately 7% to 16% along the Vermont Canyon Road roadway. Qualitatively, cars along the Vermont Canyon Road roadway would not be idling or sitting at a traffic center for a long period of time. No particulate issues would occur, and the capacity transfer would still maintain emissions well within California ARB regulations. The increase would still be well below typical capacity volumes for the street classification, and would remain a street that is not heavily impacted by pollution, especially when compared with other City road collectors.

The project would not increase overall traffic, and therefore, would not contribute to the creation of new CO hotspots or worsening of conditions at existing CO hotspots because the anticipated change in traffic patterns would not substantially affect any existing intersections or create new intersections with more than 31,600 vehicles per hour[3] (Section XVI, *Transportation/Traffic*). The project would also not add stationary facilities that would directly increase emissions, and thus, would not be subject to LSTs. Additionally, with compliance with California ARB and SCAQMD rules, the air quality impacts from construction and operation of the project would be considered less than significant.

[3] (Los Angeles Department of Public Works 2015)

5.4 Biological Resources

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game 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 or regulations, or by the California Department of Fish and Game 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 wetlands, 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?	☐	☐	☒	☐

5.4.1 Existing Setting

The project area encompasses developed road corridors and parking lots and bordering hillsides, ridgelines and more distant ravines that support natural habitats. Visitation to the project area is heavy, with congested conditions along all roadways during peak periods due to high volumes of vehicular traffic, which extend into the evening hours, particularly near the observatory. Existing roads and trails, including the lower reaches of Mt. Hollywood Drive, are heavily used by both pedestrians and bike traffic. Mt. Hollywood Drive is well used bicycle route with dozens to hundreds of riders using this route on a daily basis.

Despite this heavy visitation, the project area is recognized as having high value for native habitats and wildlife species. The project area is located within the Griffith Park Wilderness area as designated by the Griffith Park Vision plan. The Griffith Park Wildlife Management Plan (GPWMP), which is attached to the Vision plan, provides direction for identifying sensitive wildlife

and recommending BMPs where appropriate to help implement the goals of the Vision plan (Cooper Ecological Monitoring, Inc 2008) The GPWMP identifies the existing setting, relevant habitats within the Park, target species (invertebrates, amphibians and reptiles, birds, mammals, and plants), wildlife management goals, and effects from fire.

Habitat

Terrestrial habitats located within the Park include chaparral, coastal sage scrub, oak woodland, sycamore woodland, rocky outcrops, ruderal (human disturbed, weedy), lawns and picnic areas, and remnants of historic plantations habitats. Although the primary project area consist of disturbed road corridors, including paved travel lanes and adjacent rustic pathways and disturbed areas, relevant terrestrial habitats that border or are within the general vicinity of the proposed work areas include the following (Cooper Ecological Monitoring, Inc 2008):

- Chaparral: characterized by tall, dense shrubs with short, thick leaves found throughout Griffith Park slopes, and typically includes California-lilac and oak trees. This environment can provide fuel for extremely damaging fires. While it does not support a large variety of species, its ecological value can be found by its support of songbirds, and small mammals. Project work areas (i.e., road corridors) along all roadways are bordered primarily by chaparral areas.
- Coastal sage scrub: located primarily starting at Vermont Canyon and travelling west to Cahuenga Pass, this threatened habitat type is generally considered degraded and includes succulents, native cactus, and persists on sandy soils. The scrub primarily promotes insect and reptile species. Areas of coastal sage scrub species border all project area roadways, particularly at lower elevations.
- Oak woodland: located around Fern Dell and picnic areas of the Park, this “priority” community has the highest richness of wildlife species of any California habitat, providing food, nesting locations, grounds for hunting prey, and supports a variety of birds, mammals, and amphibians. Oak woodlands tend to border or are proximate only to lower elevation areas that are not within primary construction or activity zones.
- Lawns and picnic areas: sporadic lawns and picnic areas around the edges and lower slopes of Griffith Park have provided landscaped trees and open spaces integrated into the Park. These areas provide habitat for mammals such as mule deer and unique seasonal bird communities such as the wintertime yellow-rumped warbler and summertime red-shouldered hawk. Lawns and picnic areas are generally located at lower elevations along Park entry roads, although there are scattered picnic areas at higher elevations.
- Plantation habitat remnants from early 1900s attempts to landscape Midwestern and Eastern forests with tree-lined paths and shady groves has left a mix of eucalyptus and silk-oak tree species along the accessible areas of the Park. This habitat has done damage to sensitive native scrubland habitats and assisted in the introduction of invasive species into the Park. However, it still provides habitat for hundreds of insects, migrant hummingbirds and songbirds, and small mammals. Plantation habitat remnants are generally located at lower elevations along Park entry roads, although the borders of many upper elevation segments of project area roads in primary construction work areas are planted with pines and eucalyptus trees.

Sycamore woodland, rocky outcrop, and ruderal habitats are primarily confined to canyons, peaks, and riverbanks located elsewhere in Griffith Park - outside of the project roadways. These habitats are generally far removed from project work and activity areas.

Aquatic habitats such as those around the Los Angeles River and Lake Hollywood are more than one mile away from the project area. However, some species associated with these riparian habitats may also utilize the project area. The urban interface zone that surrounds the Park provides a resource-rich area for adapted and non-native species such as coyotes, raccoons, and western gray squirrel. However, species sensitive to human activity can find it inhospitable.

Species

The wildlands of Griffith Park, particularly hillsides, ridges and canyon bottoms in the designated Wilderness Area, which are removed from developed areas that support high levels of human activity, support a diverse array of wildlife species. However, a range of species may also reside in or adjacent to developed areas move from wildland areas into such areas to forage, seek water, etc. In general, developed road corridors and parking lots that constitute the primary project construction and activity zones are relatively inhospitable to wildlife species, especially during daylight hours. Wildlife may use adjacent hillside habitat and cross road corridors, but such areas are generally of low wildlife habitat value.

Invertebrates within Griffith Park provide a notable resource of arthropods (insects and spiders) for the Los Angeles basin, and up to 70 possible butterfly species may appear in Griffith Park. While further surveys are necessary, the diversity of hymenoptera species such as ants, bees, and wasps are lacking within the Park.

Griffith Park is one of the last large havens of sufficient habitat for amphibians and reptiles in the Los Angeles basin and eastern Santa Monica Mountains. The most common reptiles consists of the western fence-lizard, southern alligator lizard, western toad, striped racer, western rattlesnake, and the pacific tree frog, though several less common species are also found within the Park (Cooper Ecological Monitoring, Inc 2010).

Approximately 200 species of birds are witnessed within Griffith Park, with 150 regularly sighted species of birds. Approximately 50 of these bird species utilize Griffith Park for nesting purposes; 60 species remain in the Park year round; 45 species appear primarily in winter; and, 25 species are predictable migrants to the Park. A higher density of bird species can be witnessed along the eastern edge of the Park along the vegetated riverbanks of the Los Angeles River, which is located approximately 1.4 miles from the eastern edge of the project site. Nevertheless, bird species occur within all habitats of the Park.

Griffith Park also provides habitat for a wide range of large terrestrial mammals, including coyotes, raccoons, striped skunks, mule deer and rabbits. Small terrestrial mammals include long-tailed weasels, bats, and rodents. Sufficient habitat also supports large predators, including mountain lions.

Using the County of Los Angeles County General Plan's proposed Significant Ecological Area information for Griffith Park (SEA 37) (LA DRP 2012), the following lists of sensitive plant species and sensitive animal species were compiled in Table 5-2 and Table 5-3:

Table 5-2 Sensitive Plant Species Reported or Have the Potential to Occur

Common Name	Scientific Name	Classification	California Native Plant Society: Rare Plant Rank
Braunton's milk-vetch	*(Astragalus brauntonii)*	FE	1B.1
California Orcutt grass	*(Orcuttia californica)*	FE,SE	1B.1
Coulter's goldfields	*(Lasthenia glabrata ssp. coulteri)*	-	1B.1
Greata's aster	*(Symphyotrichum greatae)*	-	1B.3
Lewis' evening-primrose	*(Camissonia lewisii)*	-	3
Many-stemmed dudleya	*(Dudleya multicaulis)*	-	1B.2
Mesa horkelia	*(Horkelia cuneata ssp. puberula)*	-	1B.1
Nevin's barberry	*(Berberis nevinii)*	FE, SE	1B.1
Palmer's grapplinghook	*(Harpagonella palmeri)*	-	4.2
Parry's spineflower	*(Chorizanthe parryi var. parryi)*	-	1B.1
Plummer's mariposa lily	*(Calochortus plummerae)*	-	1B.2
Round-leaved filaree	*(California macrophylla)*	-	1B.1
San Bernardino aster	*(Symphyotrichum defoliatum)*	-	1B.2
San Fernando Valley spineflower	*(Chorizanthe parryi var. fernandina)*	FC, SE	1B.1
Slender mariposa lily	*(Calochortus clavatus var. gracilis)*	-	1B.2
Southern tarplant	*(Centromadia parryi ssp. australis)*	-	1B.1
Vernal barley	*(Hordeum intercedens)*	-	3.2
White rabbit-tobacco	*(Pseudognaphalium leucocephalum)*	-	2.2
Brewer's redmaids	*(Calandrinia breweri)*	-	4.2
Catalina mariposa lily	*(Calochortus clavatus var. gracilis)*	-	4.2
Clay bindweed	*(Convolvulus simulans)*	-	1B.2
Large-leaved filaree	*(Erodium macrophyllum)*	-	4.2
Southern California black walnut	*(Juglans californica)*	-	4.2
Humboldt lily	*(Lilium humboldtii var. ocellatum)*	-	4.2
Hubby's phacelia	*(Phacelia cicutaria var. hubbyi)*	-	4.2
Cooper's rein-orchid	*(Piperia cooperi)*	-	4.2
San Gabriel Mountains leather oak	*(Quercus durata var. gabrielensis)*	-	4.2

FE = Federally Endangered Species
FC = Federal Candidate Species
SE = State Endangered Species
1A = presumed extinct in California
1B = rare or endangered in California and elsewhere
2 = rare or endangered in California but more common elsewhere
3 = more information needed, a review list
4 = limited distribution
.1 = seriously endangered in California
.2 = fairly endangered in California
.3 = not very endangered in California
Source: *Draft General Plan 2035: Technical Appendix E, 2012 and Rare Plants of Griffith Park, Los Angeles by Daniel S. Cooper, 2010, accessible at:*
https://www.researchgate.net/publication/290193146_Rare_Plants_of_Griffith_Park_Los_Angeles

Table 5-3 Sensitive Animal Species Reported or are Likely to be Present

Common Name	Scientific Name	Classification
American badger	*(Taxidea taxus)*	SSC
Big free-tailed bat	*(Nyctinomops macrotis)*	SSC, WBWG Medium-High
Coast horned lizard	*(Phrynosoma blainvillii)*	BLMS, FSS, SSC
Coast range newt	*(Taricha torosa)*	SSC
Coastal whiptail	*(Aspidoscelis tigris stejnegeri)*	CDFW Special Animals List
Gertsch's socalschemmis spider	*(Socalchemmis gertschi)*	CDFW Special Animals List
Hoary bat	*(Lasiurus cinereus)*	WBWG Medium
Least Bell's vireo	*(Vireo bellii pusillus)*	FE, BCC, SE, AWL, ABC
Los Angeles pocket mouse	*(Perognathus longimembris brevinasus)*	FSS, SSC
Pacific pocket mouse	*(Perognathus longimembris pacificus)*	FE, SSC
Pallid bat	*(Antrozous pallidus)*	FE, BCC, SE, AWL, ABC
Pocketed free-tailed bat	*(Nyctinomops femorosaccus)*	SSC, WBWG Medium
San Diego desert woodrat	*(Neotoma lepida intermedia)*	SSC
Silver-haired bat	*(Lasionycteris noctivagans)*	WBWG Medium
Silvery legless lizard	*(Anniella pulchra pulchra)*	FSS, SSC
Southwestern willow flycatcher	*(Empidonax traillii extimus)*	FE, FSS, SE, AWL, ABC
Two-striped garter snake	*(Thamnophis hammondii)*	BLMS, FSS, SSC
Western mastiff bat	*(Eumops perotis californicus)*	BLMS, SSC, WBWG High
Western pond turtle	*(Emys marmorata)*	BLMS, FSS, SSC
Western spadefoot	*(Spea hammondii)*	BLMS, SSC

ABC = Approximate Bayesian Computation
AWL = Audubon Watch List
BLMS = Bureau of Land Management Special/Sensitive Species
CDFW Special Animals list = California Department of Fish and Wildlife
FE = Federally Endangered
FSS = Federal Sensitive Species
SE = State Endangered
SSC = State Species of Special Concern
WBWG = Western Bat Working Group (includes level of classification)
Source: *Draft General Plan 2035: Technical Appendix E, 2012*

While there are no riparian areas mapped by the U.S. Fish and Wildlife Service within the affected project area, areas of forested and shrub riparian areas do occur along canyon bottoms within the general project area. Vegetation within these riparian areas includes coastal live oak, California Sycamore and various willow species. These intermittent streams flow after major rainfall events and therefore provide important sources of water and habitat, but do support permanent fish or other water dwelling species (USFWS 2015).These habitats are largely confined to Western Canyon outside the affected project area, which support 1.2 acres of intermittent wetlands along approximately 1,000 feet of canyon bottom.

Griffith Park is used as a wildlife corridor that is a spatial linkage that facilitates movement of species between habitat patches across land (EPA 2015b). The corridor linkages are important to species, which travel between large open spaces in the vicinity of Griffith Park, and affect

dispersal routes and healthy genetic wildlife diversity (Cooper Ecological Monitoring, Inc 2007). This importance is demonstrated by the migration of a mountain lion into the Park in 2014.

5.4.2 Discussion

All project improvements would be confined to existing developed road corridors with little or no removal of native vegetation or any trees. Overall visitation to the project area is not anticipated to increase, and the number of vehicles used to access the upper elevations of the Park within the primary project area is anticipated to decrease over time as Park users utilize the shuttle system and improved public transit service.

a. **Less than Significant with Mitigation.** The project area contains potential natural habitats for species identified as a candidate, sensitive, and special status species in local, regional, and federal plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS). Project construction activities could affect such species through limited short term increases in noise and human activity along busy road corridors in the vicinity of sensitive and special status species. While the construction would not remove vegetation or trees and would remain within the previously disturbed right of way, incremental or brief peak increases in noise from construction and human presence along even busy roads can add stress to local animals and sensitive wildlife. Because the project would not increase overall visitation to project area and would potentially reduce automobile traffic in sensitive areas of the Park, operational impacts to sensitive species would be limited.

Indirect impacts could occur due to ongoing visitation and associated human activity, noise, vegetation trampling (e.g., impacts to the extant, though unclassified pincushion flower) and other impacts associated with human disturbance. However, while the project area supports sensitive vegetation, it is already subject to relatively high visitation and ongoing disturbance. In addition, the cyclist and pedestrian trails further in the Park from the potential Mt. Hollywood Drive DASH and/or eventual Loop Shuttle bus stops are generally bordered by very steep slopes that strongly discourage access into most areas of adjacent habitats. In addition, where topography in the vicinity permits access, DRP has erected fencing and signs to avoid or reduce intrusion. Further, DRP also posts a Ranger within the Park about a half mile up Mt. Hollywood Drive which is popularly accessed from around Griffith Observatory during peak use periods to monitor and control access. These measures, combined with the additional mitigation measures detailed below would reduce project impacts to sensitive or special status species to less than significant.

Mitigation Measure Bio-1: Worker Environmental Awareness Program. A Worker Environmental Awareness Program shall be implemented prior to construction, and include the following:

- The Department of Recreation and Parks shall provide Worker Environmental Awareness training to project workers and contractors, including a pre-construction review of protected plant and animal species and a review of BMPs for mitigating impacts to local wildlife.

Mitigation Measure Bio-2: Habitat and Special Status Species. In order to further limit impacts to special status species, which have the potential to inhabit the surrounding Griffith Park areas, the following mitigation is required:

- All construction staging areas for equipment and vehicles shall be located within previously disturbed areas to avoid damage to surrounding sensitive habitats.
- Construction activities shall be limited to daylight hours to the greatest possible extent to prevent potential impacts to special status species.

- DRP shall train shuttle drivers in basic behavioral protocol for Park visitors for integration into educational presentations to visitors using the shuttle service.
- A sign shall be posted at the base of Mt Hollywood Drive directing users to remain on developed trails, carry out trash and avoid smoking.

Mitigation Measure Bio-3: Nesting Birds. Resident and seasonal bird species have the potential to nest in areas adjacent to the project site, requiring the following mitigation implementation:

- Construction should preferably occur outside of nesting bird season (April - May) to the extent possible. However, a Nesting Bird Survey will be performed by a qualified biologist for all construction activities planned within the nesting season prior to the start of construction. If an active bird nest is discovered, a qualified biologist shall determine the species, location, and establish a no-disturbance buffer. Any raptor nest would typically include a 500 foot buffer, while other protected species would include a 300 foot buffer. The no-disturbance buffers would remain in effect until a qualified biologist has determined the nest to be inactive.

b-c. **Less than Significant with Mitigation.** Construction and activity zones within the project area or immediately adjacent areas do not support any riparian habitat, wetlands, or other mapped sensitive natural communities. Primary project construction and activity zones along upper Vermont Canyon and Western Canyon Roads, as well as East and West Observatory Roads, are all located at least 1,000 feet from and several hundred feet above riparian or wetland areas. Further, although the lower reaches of these roads pass closer to such habitats, no construction of substantial changes in activities would occur in these areas; the direct impacts to such habitats would be insignificant. These habitats could be adversely impacted if project construction activities result in fuel spills, trash generation, and increased erosion and subsequent runoff of pollutants into downstream riparian areas or wetlands resulting in impacts to water quality. However, project construction would include only minor excavation and earth disturbance needed to install parking stations, and would include use of standard BMPs for erosion control listed below. Therefore, impacts would be less than significant.

Mitigation Measure Bio-4: Water Quality. The following mitigation measures would be implemented to reduce impacts to downstream riparian and wetland areas:

- All excavation and vegetation removal shall be subject to standard erosion control measure, including:
    - Use of straw bundles or silt fencing to contain sediments.
    - Mulching, hydroseeding, or other methods as determined appropriate by DRP to reduce or avoid longer term post construction erosion.
- Construction debris and waste materials shall be properly collected and disposed of throughout construction operations.
- Leakage from engine blocks or hydraulic systems shall be prevented from dispersal with the use of drip pans.
- Vehicle fueling within Griffith Park shall not occur within 500 feet of riparian and wetland habitats and with proper safeguards (e.g., drainage controls) to ensure that any spilled fuel does not reach such habitats.
- Waste and spills shall immediately be cleaned and properly disposed of at accepted waste disposal locations.

d. **Less than Significant.** Proposed project construction and activity zones are all located along developed road corridors or within parking lots, which while periodically crossed by wildlife are not major migration corridors. Implementation of the proposed project would not interfere with migratory fish or wildlife corridors. Neither barriers to dispersal, nor any modification of existing water or drainage routes would be implemented. Increased shuttle service within the interior of

the Park may incrementally increase disturbance of wildlife crossing the heavily used access roads, however, all roads and parking lots within this project are already very heavily used with thousands of automobiles using them per day. In addition, relatively low DASH bus or eventual Loop Shuttle travel speed, combined with wildlife that is acclimated to existing levels of disturbance, would result in this impact being less than significant.

e. **Less than Significant.** Given that construction and activity zones would be primarily confined to existing road corridors, the proposed project would not conflict with any local policies or ordinances protecting biological resources. The proposed project would incorporate and be consistent with existing policies regarding the protection of biological resources. Therefore, impacts would be less than significant.

f. **Less than Significant.** The proposed project is not located within any approved local, regional, or state Habitat Conservation Plan or Natural Community Conservation Plan. However, the project area is within the proposed Griffith Park Significant Ecological Area (SEA 37) that contains a majority of Griffith Park (LA DRP 2012). The SEA proposal for Griffith Park supports the increasingly rare habitats of the southern California mountain ranges, including the Santa Monica Mountains. Additionally, the Griffith Park *Vision* plan and the associated Griffith Park Wildlife Management Plan details land use, threats to wildlife, and BMPs[4] for projects within Griffith Park. The project would follow the recommended BMPs and support the open space land use designations, resulting in less than significant impacts.

[4] http://www.laparks.org/dos/parks/griffithPK/wildlife/index.html

5.5 Cultural Resources

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

5.5.1 Existing Setting

There is documented evidence for human occupation of southern California mainland for at least 11,000 years. However, many ancient sites may have been lost, inundated, or deeply buried as a result of marine transgression, erosion, aggradations, and other natural forces. Approximately 3,000 years ago, a transfer from mobile populations to stationary groups began, bringing a change in subsistence strategies and specialized labor. Trade and technological advances altered the southern Californian Native American communities to resemble contemporary Gabrielino-Tongva ethnographic populations encountered by the Spanish. The local hunter-gatherer community was geographically split between two primary locations to the west and northeast of Griffith Park, with Fern Dell known as a historical meeting site for the Gabrielino-Tongva populations. Ensuing Spanish (1769-1821), Mexican (1821-1848), and American (1848-present) periods of control each left their associated historical and cultural marks on the Los Angeles and Griffith Park areas. (City of Los Angeles 2013a)

There are at least three cultural and historically protected monuments within the project vicinity (City of Los Angeles 2015).Two cultural survey reports have also been conducted within 1.25 miles of the project area within the past three years (City of Los Angeles 2013a, 2013b).

The City of Los Angeles identified Griffith Park as a Cultural Resource (Resource P-19-175297) and Los Angeles Historic-Cultural Monument (No. 942) in 2009 as the largest urban park for the City of Los Angeles, encompassing approximately 4,300 acres. The Park has remained a recreational space for the surrounding communities since its inception in 1989. The City of Los Angeles also identified Griffith Observatory as a Historic-Cultural Monument (No. 168), operating almost continuously since 1935. Griffith Observatory is the most visited public observatory in the world, and offers free public telescope viewing and education. The Gabrielino Indian Site in the Fern Dell area is another Los Angeles City designated Historic-Cultural Monument (No. 112) in vicinity of the project (City of Los Angeles 2013a, 2015).

The Hollywood Sign and land underneath is also designated as a Historic-Cultural Monument (No. 111) for the City of Los Angeles, providing an iconic mountainside display visible from Griffith Observatory and Mt. Hollywood Drive, in addition to the surrounding areas (City of Los Angeles 2015).

Considering paleontological resources, surface exposure of older quaternary alluvium and Miocene Monterey Formation geology have been observed within various areas of Griffith Park that have a higher likelihood of containing historically important fossils (City of Los Angeles 2013c).

The California Register of Historical Resources provides the grounds for and extent to which historical resources of the State deserve to be protected. California Health and Safety Code Section 7050.5 direct procedures to undertake in the case that human remains are found. California Public Resources Code Section 5097.98 additionally provides procedures that would direct action in the case that Native American remains are discovered.

The City of Los Angeles General Plan states that "Discovery of archaeological materials may temporarily halt the project until the site has been assessed, potential impacts evaluated and, if deemed appropriate, the resources protected, documented and/or removed" (City of Los Angeles 2001a).

5.5.2 Discussion

All project improvements would be confined to existing developed road corridors with little or no excavation or earth disturbance. This would help reduce potential impacts to biological resources. Although these road are part of the historic context of Griffith Park minor excavation, repaving and other repair and maintenance types of activates have historically occurred along such corridors.

a–d. **Less than Significant with Mitigation.** Proposed project construction activities would be confined to existing roadways and occur in previously disturbed areas of existing right-of-ways. Within primary construction and activity zones along upper Vermont Canyon Road, Eastern and Western Observatory Roads, and Western Canyon Road, historic road construction involved substantial earth disturbance through excavation and grading of cut and fill slopes necessary to provide level road beds of 30-40 feet in width across ridges and hillsides. Such past grading and earth disturbance would have removed, damaged or destroyed prehistoric, older historic or paleontological remains within areas proposed for minor excavation (e.g., 2 x 2 foot foundations for parking stations) as part of the project. These roads have been paved, and road shoulders have been covered, compacted, driven on, and hiked upon for the past 50 years at minimum. Further, the steep ridges and hillsides within primary project construction and activity zones are not typically highly sensitive from a pre-historic or historic context being far removed from water and major food sources (e.g., oak groves) and have a lower potential to support cultural resources. Therefore due to the relatively lower sensitivity of and past disturbance to these areas, it is unlikely that significant older historic, prehistoric or paleontological resources would be encountered during the proposed project. However, it should be noted that some features within or adjacent to these road corridors, such as old retaining walls, groves of trees, the tunnel or other features, may be considered part of the historic context of Griffith Park. As discussed below, the proposed project contains provisions that require avoidance to disturbance to retaining walls or other historic features, tree removal or damage to the tunnel. Further, because the potential remains that previously undiscovered resources could be exposed during construction activities, inclusion of standard conditions during discretionary project review and approval relating to protocols for discovery of important historic and pre-historic resources, would ensure that potential impacts to such resources be mitigated to a less than significant level.

While unlikely, there remains the possibility that as yet unidentified archaeological resources that may qualify as historical resources could be encountered as a result of project-related ground-disturbing activities. Impacts to unidentified archaeological resources that qualify as historical

resources could constitute a substantial adverse change in the significance of a historical resource. With the incorporation of *Mitigation Measures Cul-1, Cul-2, Cul-3*, and *Cul-4*, potential impacts to cultural resources that qualify as historical resources would be reduced to less than significant.

Mitigation Measure Cul-1: Pre-Construction Training. Prior to earthmoving activities, a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (2008) shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of cultural resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains (see Mitigation Measure Cul-4). DRP shall ensure that construction personnel are made available for and attend the training and shall retain documentation demonstrating attendance.

Mitigation Measure Cul-2: Inadvertent Archaeological Discoveries. In the event of the discovery of archaeological materials, the construction foreman shall immediately halt all work activities in the vicinity (within approximately 100 feet) of the discovery until it can be evaluated by a qualified archaeologist. After cessation of earthmoving activities, the construction foreman shall immediately contact DRP. Work shall not resume until authorized by DRP and the qualified archaeologist.

If the qualified archaeologist determines that the discovery constitutes a significant resource under CEQA, preservation in place is the preferred manner of mitigation. In the event preservation in place is demonstrated to be infeasible, and data recovery is determined to be the only feasible mitigation option, a detailed Cultural Resources Treatment Plan shall be prepared and implemented by a qualified archaeologist in consultation with DRP. DRP shall consult with appropriate Native American representatives in determining appropriate treatment for unearthed cultural resources if the resources are prehistoric or Native American in origin. Archaeological materials recovered during any investigation shall be put into curation at an accredited facility. The report(s) documenting implementation of the Cultural Resources Treatment Plan shall be submitted to DRP and to the SCCIC.

Mitigation Measure Cul-3: Inadvertent Paleontological Discoveries. In the event fossil materials are exposed during ground disturbing activities, work (within 100 feet of the discovery) shall be halted until a qualified paleontologist meeting the criteria established by the Society for Vertebrate Paleontology is retained to assess the find. If the find is identified as significant, appropriate treatment as determined by the paleontologist shall be implemented prior to the re-commencement of ground disturbance in the area. A report documenting the methods and results of the treatment shall be prepared and submitted to DRP and filed with the local repository.

Mitigation Measure Cul-4: Discovery of Human Remains. If human remains are encountered, DRP shall halt work in the vicinity (within 100 feet) of the find and contact the Los Angeles County Coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5. If the County Coroner determines that the remains are Native American in origin, the Native American Heritage Commission shall be notified, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code Section 5097.98 (as amended by AB 2641). The Native American Heritage Commission shall designate a Most Likely Descendant for the remains per PRC Section 5097.98. DRP shall ensure that the immediate vicinity where the Native American human remains are located is not damaged or disturbed by further development activity, according to generally accepted cultural or archaeological standards or practices, until the landowner has discussed and

conferred with the Most Likely Descendant regarding their recommendations, as prescribed in Public Resources Codes Section 5097.98, taking into account the possibility of multiple human remains.

5.6 Geology and Soils

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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 a geologic unit 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 (1994), 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?	☐	☐	☐	☒

5.6.1 Existing Setting

The geologic setting of the project area is based on existing reports and maps, including the City's General Plan, U.S. Geological Survey (USGS) and California Geological Survey maps; and other available technical documents. The project area is located in Southern California that is a seismically active region at the junction of the North American and Pacific tectonic plates. The project area is also composed of roads and parking lots amongst steep Santa Monica mountain range terrain.

Most of the project area is located outside of fault zone areas. The project area that would experience construction activities is located approximately one-quarter mile away from the

Hollywood fault zone area, though DASH services run through roads which exist above this fault zone area, and METRO services exist beyond and through an assortment of geologic environments outside the project area (ZIMAS 2015). The fault line is east-west oriented, approximately one mile south of the project construction area (USGS 2015) and travels along the base of the mountain range. The Hollywood fault is less than 15,000 years old and is still considered active. The earthquake fault zone does not reach either the lower reaches of Western Canyon Road or the Greek Theatre parking lot locations, and is confined primarily to the areas around Los Feliz Blvd, though it does cross the Griffith Observatory DASH bus route on North Vermont Avenue, south of Los Feliz Blvd and north of Franklin Avenue.

The Section 9 parking lot is not located within any liquefaction or earthquake-induced landslide zones, however the parking lot is surrounded by areas of potential geologic hazards. The Greek Theatre parking lots, along with a majority of Vermont Canyon Road are almost entirely located within a large liquefaction zone. Western Canyon Road and the proposed one-way loop near Griffith Observatory are all located in geologically stable hillsides interspersed with earthquake-induced landslide zones (California Department of Conservation 2014).

5.6.2 Discussion

a(i) - a(iii). **No Impact**. Proposed project improvements would be confined to existing road corridors of Griffith Park and previously disturbed areas of existing right-of-ways, with minimal physical improvements to these areas. No habitable structures are proposed and limited improvements such as striping of parking areas and new parking stations would have limited potential for damage from seismic activity or landslides. Further, damage to such improvements would not create impacts to public health or safety. Finally, the project would not increase overall visitation to the Park, and thus would not increase public exposure to seismic hazards. Similar, project improvements are confined to steep ridges and hillsides not generally prone to liquefaction which is generally confined to unconsolidated fill overlying wetlands or historic wetland or peat soils. The proposed project, therefore, would result in a less than significant impact to earthquake faults or seismic shaking.

a(iv), b, & c. **Less than Significant**. Potential landslide ground failures, soil erosion, and unstable soils occur on steep slopes and represent a risk sporadically throughout the project area. While the project area mountainsides are generally covered with trees and chaparral which maintain the integrity of the slopes, seismically induced slop failure, mudslides and slope failure during heavy rainfall events (especially post fire) may cause slope failures in this area. Nevertheless, the proposed project would be confined to existing roadways of Griffith Park and previously disturbed areas of existing right-of-ways. Although the proposed project would introduce limited improvements to the area, these would not affect potential for landslides and would create only minor potential for increased erosion. The proposed project would result in a less than significant impact to seismic-related ground failure.

d. **No Impact.** No buildings would be constructed as a part of the proposed project, and minimal physical improvements would be implemented. No impact to life or property due to expansive soils would occur as a result of implementing the proposed project.

e. **No Impact.** Though the project area is served by the City's sewer system, the proposed project would not include the use of any septic tanks or alternative wastewater disposal systems. The proposed project would not increase visitation to the Park and there would be no increase in demand for wastewater disposal. Therefore, there would be no impact.

5.7 Greenhouse Gas Emissions

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

5.7.1 Existing Setting

Global climate change can be measured by changes in wind patterns, storms, precipitation, and temperature. Scientific consensus has identified human-related emissions of greenhouse gases (GHGs) above natural levels is a significant contributor to global climate change. GHG are substances that trap heat in the atmosphere and regulate the Earth's temperature, and include water vapor, CO_2, methane (CH_4), nitrous oxide (N_2O), ground level ozone, and fluorinated gases, such as chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and halons. The potential impacts of climate change include severe weather patterns, flooding, reduced quality and availability of water, sea level rise, and beach erosion. Primary activities associated with GHG emissions include transportation, utilities (e.g., power generation and transport), industry, manufacturing, agriculture, and residential. End-use sector sources of GHG emissions in California are as follows: transportation (37 percent), industry (23 percent), electricity generation (20 percent), agriculture and forestry (8 percent), residential (7 percent) and other (5 percent) (ARB 2015).

Assembly Bill (AB) 32 is a California State Law that establishes a comprehensive program to reduce GHG emissions from all sources throughout the state. AB 32 requires the California Air Resources Board (CARB) to develop regulations and market mechanisms to reduce California's GHG emissions to 1990 levels by 2020, representing a 25 percent reduction statewide, with mandatory caps beginning in 2012 for significant emissions sources. The 2015 Energy Report Card for the County of Los Angeles accounted for building energy, on-road transportation, stationary sources, solid waste, water conveyance, ports, off-road transportation, wastewater treatment, agriculture, and the Los Angeles Worlds Airport. Total existing emissions in 2010 were estimated at approximately 99,134,526 metric tons CO_2e (carbon dioxide equivalents). Building energy accounted for 39.2 percent of emissions, followed closely by transportation that represented 33.5 percent. Stationary sources, solid waste, water conveyance, and ports accounted for 19.7 percent, 4.4 percent, 1.1 percent, and 1.1 percent respectively. Off-road transportation, wastewater treatment, agriculture, and Los Angeles Worlds Airport each accounted for less than 1.0 of emissions. Total per capita GHG emissions from the County in 2010 were approximately 10.1 MT CO_2e per person, compared to 12.3 MT CO_2e per person for the state (Institute of the Environment and Sustainability 2015).

As mentioned in Section 5.3, *Air Quality*, the project site is located in the City of Los Angeles that is within the South Coast Air Basin. The Basin is an area of high air pollution potential as it is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. This topography traps the air and its pollutants in the valleys or basins below. The major sources of GHG emissions in the vicinity include motor vehicles and

building energy needs, as well as the construction and maintenance of buildings, streets, and infrastructure.

The SCAQMD has not yet approved a threshold of significance for GHG emissions. The significance threshold considered in this document is based on the work of the California Air Pollution Control Officers Association (CAPCOA). CAPCOA investigated a variety of analytical procedures and ranges of what would be considered significant for a project, and suggests a conservative screening criteria threshold of 900 million tons per year of CO_2e (MT/yr CO_2e) for a development project to be considered potentially significant. CAPCOA notes that a zero threshold would be appropriate for global, cumulative effects from greenhouse gases. Due to the current global situation, any addition of greenhouse gas emissions could be considered significant. Other thresholds that could be used and have been considered outside of SCAQMD thresholds include a 10,000 MT/yr CO_2e measurement by the Market Advisory Committee, or the highest considered threshold of 50,000 MT/yr CO_2e by CAPCOA for large-scale construction projects. As land uses within Griffith Park are for natural open space, the most conservative threshold option of 900 MT/yr CO_2e is appropriate (CAPCOA 2008).

5.7.2 Discussion

a-b. **Less than Significant.** The proposed project would primarily generate increased GHG emissions over the short term related to operation of construction equipment. The total emission from project construction was modeled using CALEEMOD projections for 2016, the anticipated year of construction (Attachment 2). Though future actions on Western Canyon Road do not have a definite installation date due to occurring after completion of improvements to Los Feliz Blvd, potential emissions from these actions were included within the 2016 estimated and modeled time frame and provide a reasonable worst case emissions estimate. Emissions from construction would consist of mobile sources such as haul trucks and other construction equipment. The total estimated emissions from construction activity would be 186.92 MT/yr CO_2e, which is well beneath the conservative CAPCOA significance threshold of 900 MT/yr CO_2e, and would likely be even less without installation of previously-proposed improvements for a “Mt. Hollywood Drive View Point”.

For operational activities, the emission model is based on land use, and displays an emissions estimate based on acreage and minimal land disturbance; however, it was not possible to estimate operational emissions, due to the unforeseen outcomes of traffic, public transit service, and eventual shuttle operations after the project is complete. Without further extensive traffic studies, estimating operational GHG emissions using CALEEMOD would be highly speculative.

Further, the potential operational GHG emissions associated with implementation of the proposed project would depend largely on the change in vehicle use of the access roads and parking lots as a result of the recirculation plan. While the Griffith Park access roads do not directly emit GHGs, the circulation layout dictated by the road striping affects the use and duration of GHG-emitting automobile engines on the roadways. Operational and circulation changes as a result of restriping and implementation of improved public transit service and the eventual shuttle service are expected to reduce the amount of time spent looking for parking and reduce the number of cars causing congestion on the access roads.

As discussed in Section 5.16, *Transportation/Traffic*, project implementation would not increase Park visitation and the average daily and peak hour trips generated by activities affected by the project, particularly visitors to Griffith Observatory. Visitors using Western Canyon Road and Vermont Canyon Road would experience improved access to newly striped parking spots adjacent to Griffith Observatory reducing potential idling. Considering that DASH buses provide

a transportation option for up to 43 individuals and would have the capability to provide a frequency of up to three times per hour, approximately 21 vehicles per trip (conservative estimate of two people/vehicle), or more than 756 vehicles per day, could be removed from the Griffith Park access roads within DASH operational hours with 100 percent utilization. In addition, visitors utilizing remote parking lots and the eventual shuttle service are estimated to take more than 25 GHG-emitting vehicles off the Griffith Park access roads per hour, or more than 425 vehicles per day within the Park's operating hours. The reduction of automobile congestion from both increased DASH services and implementation of a shuttle service would result in an overall reduction of GHG emissions.

Utilization of the free or low cost shuttle, increased DASH service, and higher Griffith Observatory access awareness within METRO services would also be in line with City goals for greater use of public transit opportunities, reduction in the use of automobiles, and thus an overall reduction of GHG emissions. The construction emissions would be short-term and the operation emissions would be minimized. As such, the project would not emit considerable amounts of GHG in conflict with any plan or policy or cause extensive impacts to the environments. Therefore, impacts related to GHGs would be considered less than significant.

5.8 Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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 §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 area or, where such a plan has not been adopted, within two miles of a public airport or a 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?	☐	☐	☒	☐

5.8.1 Existing Setting

The project site has supported open space land use since donation of the Park to the City. According to the State of California EnviroStor Database compliant with Government Code §65962.5, there are no current known hazardous waste clean-up sites within the project area.

However, the project site may support limited potentially hazardous materials such as lead-based paint due to the age older facilities, and asphalt-based contaminants within paved roads. The nearest cleanup sites are tiered permit sites and federal and state response sites with no further action required located approximately 1.0 miles south and 1.5 miles east from the project site (California EnviroStor 2015).

The closest public schools to the project area are Cheremoya Avenue, Grant, Los Feliz, and Franklin Avenue Elementary Schools all approximately one mile to the south (Google Earth Pro 2015). The project site is not located in the vicinity of any public or private airstrip or airport land use plan area. The nearest airport to the project area is Bob Hope Airport, located approximately 5.0 miles to the northwest; however, the project area is not located within its area of influence (Los Angeles County 2009).

Griffith Park is located in operational disaster management area "H" as described in the 2015 *Los Angeles County Operational Area Emergency Response Plan* (OAERP) that gives guidance for emergencies including hazards and threats such as a major earthquake, hazardous material incident, wildland fire, flooding, mudslide, landslide, major air crash, civil unrest, transportation, and terrorism threat. The OAERP additionally outlines management, operations, planning, logistics, finance, recovery, and supporting documentation for the implementation of the plan (Los Angeles County 2015a).

The 2015 OAERP notes that the Santa Monica and San Gabriel Mountains, which includes Griffith Park, are known for the "chaparral-urban interface" between dry vegetation and surrounding urban development. The mountains are subject to dry conditions, seasonal 40 to 50 mile per hour winds, and high temperatures of over 90 degrees that contribute to a much higher threat of wildfire year-round (Los Angeles County 2015a). In addition to high fire hazards associated with wildland vegetation, the project area supports steep slopes potentially prone to slope failure such as landslides and mudslides, especially in burned areas.

5.8.2 Discussion

a–b. **Less than Significant.** Project construction would extend up to three months and typically would require short-term activities involving potentially hazardous materials, including transportation and use of fuel, oil, sealants, paints, and other common hazardous materials. Short-term uses of limited quantities of hazardous materials would be confined to construction areas and within existing roadways and right of ways The use of potentially hazardous materials would be regulated by health and safety requirements under federal, state, and local regulations, including handling, storage, and disposal of the materials, as well as emergency spill response. Compliance with the regulatory codes and existing hazardous materials programs would ensure that impacts would be less than significant.

c. **Less than Significant.** There are no existing or proposed schools within the project area. The nearest public school facilities are at least one mile away from any construction or most operational activities of the proposed project. The increased DASH bus service would travel along North Vermont Avenue, approximately 200 feet east of Los Feliz Elementary School. However, this is an existing and used transit route and the increase in bus traffic may be partially offset by decreased private vehicle travel and the limited increase in bus traffic would not substantially affect the school beyond existing hazards from buses and vehicles travelling along the roads. Construction and operation of the project would not create a hazard through the release of hazardous materials, routine use, transport, or handling of any notable quantities of hazardous materials. Further, as discussed above in Section III, *Air Quality*, construction of the project would involve the use of diesel construction equipment, but none of these emissions would be generated

at levels that are considered hazardous. Therefore, potential impacts associated with the handling or emission of hazardous materials within a quarter-mile of an existing or proposed school would be less than significant.

d. **No Impact.** The project site is not listed on any databases where releases of known hazardous materials have occurred, and is not listed as a site containing historical or existing underground storage tanks, gasoline stations, or drycleaners. The nearest known hazardous materials sites are located more than one mile away. The proposed project operations do not anticipate interaction with hazardous waste sites or producing materials that may require the use of hazardous waste site services. Therefore, no impact would occur.

e-f. **No Impact**. The closest airport to the project site is the Burbank Bob Hope Airport that is located approximately 5 miles northwest of the project site. The project site is not located in the area covered by an airport land use plan or located within two miles of the project site. The project does not involve placing people in proximity to aircraft operations, and no risks to life or property from airport operations could occur as a result of the project. Therefore, there would be no impact to Park visitors or worker from aircraft activities.

g. **Less than Significant.** As further described within Section XVI, *Transportation/Traffic*, the proposed project would provide an exclusive uphill access road for emergency vehicles such as fire trucks, ambulances, and police vehicles along Western Canyon Road. The street system alterations would maintain downhill evacuation roads away from wildland areas along both Western Canyon Road and Vermont Canyon Road. As the proposed circulation plan would enable greater access and easier circulation for emergency vehicles throughout the project site area and along access roads, effects to emergency response plans would be less than significant.

h. **Less than Significant.** The project area includes and is surrounded by hillsides and wildland open space that supports dense chaparral and coastal sage scrub habitats that are highly flammable with potential to be subject to major wildfires. The area is also adjacent to urbanized residential neighborhoods. The proposed project would not increase overall visitation to the Park, but would change the way that the public accesses the upper elevations of the Park through provision of shuttle service. However, such visitation to high fire hazard upper elevation areas of the Park is already ongoing and increases in fire hazards would be incremental. No smoking rules would continue to be strictly enforced by Park Rangers reducing potential increased risk for wildfire. The proposed project would continue Park practice of stationing a ranger to enforce Park policies during the busiest summer days. Section XIV, *Public Services*, expands on Los Angeles Fire Department response times to the project area site. Further, the completed, end-result circulation plan would enable greater access for emergency vehicles after alterations are made to Los Feliz Boulevard to allow Western Canyon Road to offer an exclusive uphill route on Western Canyon Road and enable easier circulation throughout the project area with the initial changes made for front-in parking on West Observatory Road and East Observatory Road. Given limited changes in overall visitation to high fire hazard areas, ongoing and planned Ranger supervision and improved access, effects would be less than significant.

5.9 Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would 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 that 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 that 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 a failure of a levee or dam?	☐	☐	☐	☒
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami or mudflow?	☐	☐	☐	☒

5.9.1 Existing Setting

Regarding water quality, the federal Clean Water Act establishes the framework for regulating discharges to waters of the US in order to protect their beneficial uses. The Porter-Cologne Water Quality Act (Division 7 of the California Water Code) regulates water quality within California and establishes the authority of the State Water Resources Control Board and the nine regional water boards. For storm water, development projects are required by the State Board to provide careful management and close monitoring or runoff during construction, including onsite erosion protection, sediment management and prevention of non-storm discharges. The Regional and State Boards issue National Pollution Discharge Elimination System (NPDES) permits to regulate specific discharges. That permit requires that development projects also provide for ongoing treatment of storm water from the site, using low-impact design (LID), infiltration, or onsite reuse, to address project runoff using specific design criteria.

Griffith Park is generally supported by the Los Angeles County Storm Drain System; the nearest inlets to the drainage system are located outside the Griffith Park perimeter, outside of the project area. Natural drainage is the primary drainage means for water runoff, with the closest drain systems downhill from the project area maintained by LACFCD and the City of Los Angeles (LA County Department of Public Works 2015). Two temporarily flooded, intermittent riverine drainages cross roads located within the project area, extending from above Western Canyon Road down towards the Section 9 parking lot, and along an upper ravine across Mt. Hollywood Road. The streams are not part of the continuous riverine system, act primarily as drainage, do not make contact with other bodies of water, and do not reside above any groundwater reservoirs (California Department of Fish and Wildlife 2015). The project area exists within the northeastern corner of the Santa Monica Bay Calwater HUC8 Watershed (EPA 2015c).

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for the City of Los Angeles, the project area contains one area located within a 100-year flood plain. The majority of Vermont Canyon Road is located within a one percent annual chance flood hazard zone that extends from the valley at the top bend of the road to the intersection with Hillhurst Avenue. (FEMA 2008)

Due to the distance from the ocean, the California Department of Conservation Tsunami Inundation maps for southern California do not include the Griffith Park area. No structures within Griffith Park, including the project area, would be subject to inundation. (California Department of Conservation 2015a)

5.9.2 Discussion

a & f. **No Impact.** No waste water discharge or modifications to discharge systems would occur with implementation of the proposed project. Therefore, there would be no impact to water quality.

b. **Less than Significant**. Limited and temporary alterations to groundwater resources would occur with implementation of the proposed project. While some water resources would be used during construction activities through activities such as power washing striped lines and cleaning the roads to prepare for restriping, the effects would be limited and non-intensive. Additionally, cleaning the acquired shuttles would utilize some water from the Los Angeles City supply, however, the cumulative effects would be minimal. Direct effects to groundwater basins would not occur, as the project area is not located adjacent to or upon any groundwater resources. No alterations would be made to the existing drainage and groundwater percolation systems, and all modifications would be implemented within existing roads and previously disturbed right-of-ways. Cumulatively, there would be a less than significant impact on groundwater supplies.

c. **No Impact**. No alterations would be made to the existing drainage or waterway systems with implementation of the proposed project. While two seasonal drainages cross Western Canyon Road, there would be no physical modifications to the existing drainage system. Therefore, there would be no impact.

d. **Less than Significant**. The proposed project would not include any re-grading or alterations to general drainage runoff within the project area. No physical modifications to the existing drainage systems would occur, and would not affect rates of flooding or drainage from heavy rain events. There would be a less than significant effect to surface runoff as a result of the proposed project.

e. **Less than Significant**. No alterations to existing drainage systems are proposed with implementation of the project. Increased use of the Section 9 and Greek Theatre parking lots in comparison to recent years is anticipated as a result of the proposed project, and would increase the amount of pollutants surface runoff. However, City drainage systems in place outside of the Griffith Park boundary would continue to handle the same rate of drainage that comes from the interior of the Park. Less than significant effects to storm water runoff and drainage systems would occur as a result of the proposed project.

g & h. **No Impact**. While much of Vermont Canyon Road is enveloped by a FEMA 100-year flood plain, no physical modifications or structures are proposed with implementation of the project within this area. Therefore, no impact would occur.

i-j. **No Impact**. The proposed project would be confined to existing roadways of Griffith Park and previously disturbed areas of existing right-of-ways. No new areas of access would be added, and no new buildings would be constructed for the proposed project. Therefore, no increased possibility of flooding would occur due to nearby dams or exposure to tsunami inundation areas, and no impact from inundation would occur.

5.10 Land Use and Planning

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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 community conservation plan?	☐	☐	☒	☐

5.10.1 Existing Setting

Griffith Park includes approximately 4,310 acres in the northern portion of the City of Los Angeles, and is entirely designated as Open Space (OS) in the City's zoning and General Plan (ZIMAS 2015). As such, the Park is the largest area in the City exclusively intended for recreation and environmental protection. The project area currently provides access to the inner area of the Park, and enables urban users to drive the access roads to Griffith Observatory with personally-operated automobiles to utilize the outdoor activities available in the Park.

Bordering Griffith Park, the nearest land uses to the project area are in the Los Feliz and Hollywood Hills areas. According to City zoning, these neighborhoods consist of very-low and low density residential uses. Another half mile south, heavier land uses such as highway-oriented commercial and limited manufacturing begin to appear, and increase more towards the downtown Hollywood and central Los Angeles areas (ZIMAS 2015).

The Park's goals and objectives for the project area are detailed in the *Vision* Plan. Goals include highlighting the difference between the Park's nature and the City's urban environments, increasing public transit, environmentally resurfacing parking lots within the Park, and providing safety to pedestrian, cyclist, and equestrian users. Additional goals and objectives are listed in the Mobility section of the *Vision* Plan (LA DRP 2008).

The project area does not lie within the Airport Influence Area (AIA) of any airfield (Los Angeles County 2015b).

5.10.2 Discussion

a. **No Impact.** The project area primarily consists of existing roads amidst recreational open space. There would be no expansion of the roads, or change in the existing uses. As part of Griffith Park's *Vision*, increased public transit and providing better safety to cyclists and pedestrians would occur as a result of the proposed project. No impact to existing community connectivity is expected as a result of project implementation.

b. **Less than Significant.** The proposed project would be confined to existing roadways of Griffith Park and previously disturbed areas of existing right-of-ways. Additionally, the project would encourage additional use and access to Griffith Park's Open Space areas. The project was developed by the City of Los Angeles Recreation and Parks Department and is in line with the City's and Griffith Park's goals to encourage alternative methods of transport through promoting public transport and bicycle safety.

c. **Less than Significant.** The project would be implemented under the direction of the Los Angeles DRP that protects lands through approved habitat and natural community conservation efforts. This impact would be less than significant.

5.11 Mineral Resources

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource 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?	☐	☐	☐	☒

5.11.1 Existing Setting

There is one Mineral Resource Zone (MRZ) that overlaps the project area – MRZ-3. These zones respectively indicate a high likelihood for mineral deposits, though the importance of these mineral deposits cannot be determined from available data (California Department of Conservation 2013). However, no mineral resource recovery sites have been established or considered in the project area or in the surrounding vicinity (California Department of Conservation 2015b). Additionally, no oil or gas wells are located near or within the project area (DOGGR 2015).

5.11.2 Discussion

a & b. **No Impact**. The proposed project would not result in the loss of availability of a known or locally important mineral resource. Further, the proposed project area currently does not have active aggregate or petroleum mining operations, and given the nature of the project area, no such operations would be explored. Therefore, there would be no impact to mineral resources.

5.12 Noise

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne 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 area or, where such a plan has not been adopted, within two miles of a public airport or a 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?	☐	☐	☐	☒

5.12.1 Existing Setting

Noise is typically defined as unwanted sound that interferes with normal activities or otherwise diminishes the quality of the environment. Prolonged exposure to high levels of noise is known to have several adverse effects on people, including hearing loss, interference with communications and sleep, physiological responses, and annoyance. The noise environment includes background noise generated from both near and distant noise sources, as well as the sound from individual local sources. These sources of noise can vary from an occasional aircraft or train passing by to continuous noise from sources such as traffic on a major road.

The standard unit of measurement of the loudness of sound is the Decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more useable range of numbers in a manner similar to the way that the Richter scale is used to measure earthquakes. In terms of human response to noise, studies have indicated that a noise level increase of 3 dBA is barely perceptible to most people, a 5 dBA increase is readily noticeable, and a difference of 10 dBA

would be perceived as a doubling of loudness. Everyday sounds normally range from 30 to 100 dBA.

The project site is located in the center of Los Angeles, and acts as a transition area between urban city and open space within Griffith Park. Noise at the project site currently consists of the generally-congested roadway traffic along the access roads up to Griffith Observatory. The Western Canyon/Fern Dell Road and Vermont Canyon Roads experience noise from vehicles that travel into the Park. The West Observatory Road to East Observatory Road 'bend' is not currently open to public vehicles, though some Park employees and reserved parking users will infrequently use the 'bend' to gain access to the reserved lot. Sky party attendees experience infrequent noise from these vehicles.

The nearest noise sensitive land uses to the affected project site are residential homes located approximately 400 feet west of Western Canyon Road, while the closest residential sensitive receptors on the eastern side of the project site are located approximately 440 feet south from the proposed and eventual shuttle turn-around location at Boy Scout Road. The nearest location where construction equipment would be used for the implementation of pay stations is near One-Mile Tree, which is located approximately 400 feet from the nearest residential sensitive receptor. The project is not located within the vicinity of a public or private airport land use plan or influence area.

The Los Angeles Municipal Code Section 41.40 *Construction Noise* dictates regulations for construction hours as indicated in Table 5-4:

Table 5-4 Allowable Construction Hours

Days	Allowed Construction Hours
Monday-Friday	7:00 a.m. – 9:00 p.m.
Saturdays and National Holidays	8:00 a.m. – 6:00 p.m.
Sundays	Not permitted

The Los Angeles Municipal Code Section 112.05, *Maximum Noise Level of Powered Equipment or Powered Hand Tools,* details that the maximum noise level powered equipment may produce within a distance of 500 feet from a City residential zone is 75 dBA at a distance of 50 feet, unless compliance is technically infeasible. Technically infeasible means that the noise limitations cannot be attained during use of the equipment even with the use of mufflers, shields, sound barriers and/or other noise reduction techniques.

Construction-related noise and groundborne vibration would be generated by various types of equipment as a result of construction activities anticipated to occur in the project site. Construction noise would primarily occur during street striping removal and pay station installation. However, additional sources of noise may occur from general truck movement and unknown construction sources. The analysis of construction-related noise impacts is qualitative in nature, discussing the potential range of construction-related impacts that could potentially occur from the project site. Construction noise levels for the project are evaluated using data published by the U.S. Department of Transportation, as indicated in Table 5-5:

Table 5-5 Noise Ranges of Typical Construction Equipment

Construction Equipment	Noise Levels in dBA L_{eq} at 50 Feet
Trucks	82–95
Jackhammers	81–98
Generators	71–83
Compressors	75–87
Concrete Mixers	75–88
Concrete Pumps	81–85
Back Hoe	73–95

Note: Machinery equipped with noise control devices or other noise-reducing design features does not generate the same level of noise emissions as that shown in this table.
Source**:** U.S. DOT. *Construction Noise Handbook* (2013)

These noise levels would diminish rapidly with distance from the construction areas, at a rate of approximately 6 dBA per doubling of distance as equipment is generally stationary or confined to specific areas during construction. For example, a noise level of 86 dBA measured at 50 feet from the noise source to the receptor would reduce to 80 dBA at 100 feet from the source to the receptor, and reduce by another 6 dBA to 74 dBA at 200 feet from the source to the receptor. The noise levels from construction at the off-site sensitive uses can be determined with the following equation from the Harris Miller Miller & Hanson Inc. Transit Noise and Vibration Impact Assessment, Final Report:

$$L_{eq} = L_{eq} \text{ at 50 feet} - 20 \text{ Log}(D/50)$$

Where L_{eq} = noise level of noise source, D = distance from the noise source to the receptor, L_{eq} at 50 feet = noise level of source at 50 feet.

Typically, groundborne vibration is of concern in urban areas when heavy construction (e.g., pile driving, major excavation) immediately abuts sensitive uses such as residences. Groundborne vibration typically does not travel far and intensity of vibration is affected by soil type, ground profile, distance to the receptor and the construction characteristics of the receptor building. While groundborne vibration is of much less concern in open space areas, the Caltrans Transportation and Construction Vibration Guidance Manual provides a method to estimate potential effects from project activities based on common human response to conditions and construction equipment. Table 5-6 indicates vibration levels at which humans would be affected. Table 5-7 identifies anticipated vibration velocity levels (in/sec) for standard types of construction equipment based on the previously established 400 foot distance to the nearest sensitive residential receptor.

Table 5-6 Caltrans Vibration Annoyance Potential Criteria

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

Source: Caltrans, 2013. Transportation and Construction Vibration Guidance Manual – Table 20.

Table 5-7 Vibration Source Levels for Construction Equipment

Construction Equipment	Vibration Level (in/sec) at 25 feet	Vibration Level (in/sec) at 50 feet	Vibration Level (in/sec) at 100 feet
Loaded Trucks	0.076	0.035	0.017
Jackhammer	0.035	0.016	0.008

Source: Caltrans, 2013. Transportation and Construction Vibration Guidance Manual – Table 18.

5.12.2 Discussion

a-c. **Less than Significant With Mitigation.** The proposed project would create limited periods of noise and vibration from construction activities. Depending on approval and permit processing, construction for the proposed project is anticipated to begin in 2016, and eventual modifications to Western Canyon Road would occur after completion of alterations to Los Feliz Boulevard at a future date. Consistent with Section 41.40 of the Los Angeles Municipal Code, construction activities would be restricted to the hours of 7:00 a.m. to 9:00 p.m. on weekdays, 8:00 a.m. to 6:00 p.m. on Saturdays and national holidays, and no construction activities would be allowed on Sundays.

The nearest sensitive receptor to construction-related activities is located approximately 400 feet west of the nearest pay station installation location near One- Mile Tree, which would include limited disturbance within the right of way for the installation of the pay station and creation of marked parallel parking. Assuming the loudest equipment would be a back hoe or jackhammer, the loudest noise levels anticipated to occur at nearby sensitive residential receptors would be a maximum of 98 dBA at 50 feet, with a reduction to approximately 56 dBA at 400 feet, which is well within compliance for outside noise standards for a residential areas.

As shown in Table 5-7, vibration from loaded trucks would have the highest chance of affecting noise sensitive areas. However, at 100 feet these vibrations are almost imperceptible, by the criteria indicated in Table 5-6. At the installation planned for the One-Mile Tree pay station location, 400 feet away from noise sensitive land uses, these vibrations would be imperceptible.

The proposed project operations would also result in usual transportation of shuttles, buses, and automobiles along Western Canyon/Fern Dell Roads and Vermont Canyon Road. Increases of up to three CNG powered DASH buses per hour (up to 36 per day) transiting residential streets outside of the Park could incrementally increase noise along these roadways. However, while the limited number of bus trips would not measurably alter existing noise levels, such buses could create nuisance noise in these neighborhoods, particularly during quiet periods between 9 p.m. and cessation of service at approximately 10 p.m. Further, these roads would not experience an unmanageable increase in the number of average daily trips, as further described in Section XVI, *Transportation/Traffic*. Noise along Vermont Canyon Road would incrementally increase after alterations are made to Western Canyon Road due to the potentially increased number of vehicles transferred from Western Canyon/Fern Dell Road, however cars along the Vermont Canyon Road roadway would not be idling or sitting at a traffic center for an increased amount of time. Sky party users on Griffith Observatory lawn would experience slight incremental noise disturbance from vehicles travelling along the West to East Observatory Road ‘bend’, as the road does not allow for high speed travel that may cause excessive noise.

Therefore, the noise that is anticipated to occur from both construction and operations would be nominal to nearby sensitive noise receptors, and would not cause a substantial increase in noise for any extended period of time. Following Sections 41.40 and 112.05 of the Los Angeles Municipal Code, in addition to Mitigation Measure N-1, would reduce the potential impacts to less than significant with mitigation.

Mitigation Measure N-1: Construction Noise Management Plan. A Construction Noise Management Plan shall be prepared by the Department of Recreation and Parks. The Plan would address noise and vibration impacts and outline measures that would be used to reduce impacts. Measures would include:

- To the extent that they exceed the applicable construction noise limits, construction activities shall be restricted to between the hours of 7:00 a.m. and 9:00 p.m., Monday through Friday, and between the hours of 8:00 a.m. and 6:00 p.m., Saturdays and National Holidays, in accordance with Section 41.40 of the Los Angeles Municipal Code.

- The construction contracts shall require implementation of the following construction best management practices (BMPs) by all construction contractors and subcontractors working in or around the project sites to reduce construction noise levels:

    - The contractors and subcontractors shall ensure that construction equipment is properly muffled according to manufactures specifications or as required by the City's Department of Building and Safety, whichever is the more stringent.

    - The contractors and subcontractors shall place noise-generating construction equipment and locate construction staging areas away from sensitive uses, where feasible.

d. **Less than Significant.** Project implementation would result in an incremental changes to operational traffic patterns and noise within the project area, and increase short-term noise levels and groundborne vibration from construction activities. Temporary construction noise impacts would primarily be generated from road stripe removal and pay station installation, which would take place throughout the project site. The City requires appropriate noise reduction and management measures during construction activities, including use of Best Management Practices (BMPs) and conformance with City policies such as restricted hours for construction operations that would maintain temporary noise impacts to an acceptable level. Therefore, impacts would be less than significant.

e-f. **No Impact.** The closest airport to the project site is the Burbank Bob Hope Airport that is located approximately 5 miles northwest of the project site. The project site is not located in the area covered by an airport land use plan or located within two miles of the project site. The project does not involve placing people in proximity to aircraft operations, including noise and vibration occurrences. Therefore, no impacts from aircraft noise would occur.

5.13 Population and Housing

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., 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?	☐	☐	☐	☒

5.13.1 Existing Setting

The number of people that currently have access to Griffith Park is substantial. The 2013 population estimate for the City of Los Angeles is 3,884,307 inhabitants, and Los Angeles County with a population of 10,053,995 (U.S. Census Bureau 2015). The attendance to Griffith Observatory averages at about 1.7 million people per year. Additionally, the unemployment rate in Los Angeles is higher than the national average, with the Bureau of Labor Statistics (BLS) reporting an unemployment rate of 7.3 percent for the Los Angeles – Long Beach – Glendale, Metropolitan Statistical Area in May 2015 compared to 6.4 percent for the State of California and 5.5 percent nationwide (BLS 2015). Free admittance to the Park is a crucial factor to equal opportunity attendance, especially for socioeconomically disadvantaged population groups in the region.

The roads and parking lots within the project area are already established, and are not used as access to residential neighborhoods, though residential areas are located adjacent to the project area extending from the southeast to the southwest. There are no residential land uses within the project area (ZIMAS 2015).

Lastly, the Housing Element of the City's General Plan notes that no socioeconomic group should disproportionally be affected by the potential environmental effects of industrial and commercial projects (Department of City Planning 2002).

5.13.2 Discussion

a, b & c. **No Impact.** The existing land use in the project area is exclusively Open Space, and located next to very-low density residential housing. In addition, the project would not establish new housing or extend any roads. No housing would be demolished, and there would not be any displacement of people. The initial DASH service improvements would increase the frequency of buses travelling to and from the existing and unmodified Vermont/Sunset METRO station, which would incrementally increase the amount of buses travelling through City residential areas by two or three buses per hour. However, this increase would have no effect on population growth, as the bus stops are already in use, the area is very densely developed, and the primary focus of the DASH route would be for access to an Open Space area and Griffith Observatory without the potential for residential development. The eventual shuttle route would not pass through any residential areas, and would similarly have no effect on population growth. As people who visit

the Park come from all socioeconomic classes in the Los Angeles area, no group would be disproportionally affected by the environmental effects of this project. Cumulatively, the proposed project would not affect population or housing located within the project area and there would be no impact.

5.14 Public Services

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project 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:				
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☒	☐
d) Parks?	☐	☐	☒	☐
e) Other public facilities?	☐	☐	☒	☐

5.14.1 Existing Setting

The Los Angeles Fire Department (LAFD) provides fire protection services as well as emergency medical (paramedic) services within the City. Los Angeles City has 106 stations that provide the community with emergency response services. The LAFD has approximately 3,246 personnel, of whom 1,018 are sworn firefighters. Los Angeles Fire Department Station No. 82 is the first-response station as it is located nearest to the project site, approximately 0.8 miles southwest at 5769 Hollywood Boulevard. The second nearest station is located approximately 1.5 miles southeast of the project area, Los Angeles Fire Department Station No. 35 at 1601 Hillhurst Avenue (Los Angeles Fire Department 2015). Both of these stations currently hold an average response time of approximately 6 minutes (Los Angeles Fire Department 2015). Based on a study by the Los Angeles Times Data Desk, which analyzed over one million responses over five years, the average response time to the Griffith Observatory area was estimated at around 14 minutes, 29 seconds (Los Angeles Times Data Desk 2015).

City of Los Angeles Park Rangers, under the Department of Recreation and Parks, provide first response protection for Griffith Park. In addition, City Police Officers in the Office of Public Safety, under the Department of General Services, patrol the City's 400+ parks, including Griffith Park and the Hollywood Sign among other City facilities. Local Rangers around Griffith Observatory would be first responders to any safety incident. Headquarters for the park rangers are located at the Griffith Park Visitor's Center, Park Rangers at 4730 Crystal Springs Drive in the eastern region of the Park, approximately 4.4 miles away from Griffith Observatory via Los Angeles City surface streets. (LA DRP 2015b).

The Los Angeles Police Department (LAPD) provides police protection services within the City, just outside of the project boundary. The surrounding neighborhoods are served between the Hollywood Community Police Station, located approximately 1.8 miles southwest, and the Northeast Community Police Station that is located approximately 2.5 miles east of the project area (LAPD 2015).

The Los Angeles Unified School District (LAUSD) provides public school education to the neighborhoods adjacent to the project area. The LAUSD has over 1,200 schools throughout the district, with more than 900,000 enrolled (Facilities Services Division 2015). The four closest public schools to the project area are Cheremoya Avenue, Grant, Los Feliz, and Franklin Avenue

Elementary Schools, which are approximately one mile south of the project area. Neither Griffith Park nor the project areas support any residential population that use LAUSD schools.

5.14.2 Discussion

a-b. **Less than Significant.** Fire department response times to the base of the Park access roads are in noncompliance of Los Angeles standards. Additionally, response times to Griffith Observatory are more than double the standard time expected within the City of Los Angeles. While response times would not be improved to the level of Los Angeles response time standards, it should be noted that the reconfiguration of the surrounding roadway network and parking scheme would reduce congestion within the Park facilitating better access for emergency vehicles. Once traffic flow alterations are made to Western Canyon Road after completion of Los Feliz Boulevard improvements, allowing exclusive access to shuttle and emergency vehicle traffic on the uphill side of Western Canyon Road would enable more rapid access for emergency vehicles up to the Griffith Observatory and Mt. Hollywood Drive roads. Upon initial implementation of the project, and over the long-term after modifications are made to Western Canyon Road, limited congestion may still remain in the immediate vicinity of Griffith Observatory along the proposed one-way road system for the 0.4 mile length between the Western Canyon Road/West Observatory Road intersection and Griffith Observatory. However, one-way access would correspondingly enable quicker access times on this route, as further detailed in Section XVI, *Transportation/Traffic*. Project construction would consist of short-term activity, in which traffic control plans may require coordination with park rangers. Therefore, the project would have a less than significant impact on safety and emergency services.

c & e. **Less than Significant**. Construction aspects of the proposed project would be confined to existing roadways of Griffith Park and previously disturbed areas of existing right-of-ways. No new residential buildings would be constructed as a part of the proposed project, and thus would not directly increase new permanent populations that may require public facilities or services such as schools, additional parks, or additional employment opportunities. As any increased demand for access to the Park would be small and indirect, the proposed project would have a less than significant effect.

d. **Less than Significant**. As described within Section 2, *Project Description*, the project would involve slightly altered, and an increased amount of, public facilities in the form of an increased frequency of existing DASH services, installation of pay stations, and the establishment of up to seven bus/shuttle stops on the access roads which lead up to Griffith Observatory. Environmental impacts pertaining to the construction and operation of these facilities are discussed throughout this IS/MND, and specifically addressed within Section 5.3, *Air Quality*, Section 5.4, *Biological Resources*, Section 5.12, *Noise*, and Section 5.16, *Transportation/Traffic*, none of which were found to contain significant and unavoidable impacts. Also, the introduction of pay parking will require additional enforcement duties. However, revenue from parking fees would help support the additional enforcement duties, and make the effects of implementing this project less than significant.

5.15 Recreation

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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) Include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☒	☐
c) Substantially conflict with the area's established recreational uses?	☐	☐	☒	☐

5.15.1 Existing Setting

The City of Los Angeles has over 400 established parks, with Griffith Park being the largest of these parks. The project area is entirely contained within this Park that provides 4,310 acres of natural undeveloped open space and parkland, including recreational facilities such as golf courses, a bird sanctuary, mountain trails, Griffith Observatory, picnic tables, and landmarks such as the Hollywood Sign. As such, Griffith Park is one of the most significant recreational destinations in the Los Angeles Basin.

Griffith Park receives millions of visitors annually. During peak periods, existing roads within the Park are impacted by thousands cars daily along sometimes narrow Park roads. The primary project area in higher elevations along upper Vermont Canyon Road, Western Observatory Road, upper Western Canyon Road and Mt. Hollywood Drive includes several recreational facilities and destinations: Griffith Observatory, several trail heads, and a number of picnic areas. As such the project area is used by a variety of user groups such as picnickers, hikers, cyclists, horseback riders, Hollywood Sign enthusiasts and night-sky watchers. Recreational amenities in lower elevation areas near Park entries along Vermont Canyon Road and Western Canyon Road include the Greek Theatre, Roosevelt Golf Course, tennis courts, and several well developed picnic grounds and parking lots, such as Fern Dell.

On busy days, public demand is high for all of these facilities, creating substantial vehicular traffic along Park roads. Demand for parking, particularly at the Griffith Observatory parking lot and along West Observatory Road, upper Vermont Canyon Road, and upper Western Canyon Road, substantially exceeds existing supply of an estimated 488 road-shoulder parking spaces as well as 100 more spaces in the Griffith Observatory lot. This causes congestion and delays in the project area as visitors search for parking. Existing parking is detailed in Table 5-8:

Table 5-8 Estimate Existing Road Shoulder Parking*

Roadway	Existing Spaces
West & East Observatory Road	151
Western Cyn Rd	337
Mt. Hollywood Dr	12
Total	**488**

*Iteris, 2015

During peak periods, DRP employs Rangers and other recreational staff to guide traffic or even close vehicular access to upper elevation areas. Such congestion diminishes the recreational users experience through delays and the presence of traffic jams and idling cars. Further, heavy pedestrian and bicycle traffic is intermingled with vehicular congestion. More remote parking lots at lower elevations such as the Section 9 lot in Fern Dell Canyon and Greek Theatre parking lots are less heavily used during these peak visitor hours.

Griffith Observatory is a primary visitor destination within the project area, attracting visitors from around the world, school groups and the general public who come to see the landmark building, visit the observatory and enjoy unparalleled views of the Los Angeles skyline. The telescope and lawn are also used for public star gazing activities approximately 310 nights per year, until 10:00pm at usual closing time. Additional telescopes are added on the lawn for public viewing, which also enables ADA accessibility during these viewings.

Mt. Hollywood Drive is also a major destination, primarily by visitors seeking views or photographs of the iconic Hollywood Sign. Access along this road is currently limited to emergency vehicle, bicycle, and pedestrian traffic. Primary users include those seeking views of the Hollywood Sign, cyclists riding Park back roads and hikers. There are currently no established view points along this road for viewing the Hollywood Sign; however several locations, particularly a bend in the road at the water tank trail have become visitor-preferred viewing locations.

Informal picnic areas that are developed with benches and trash receptacles are present along the perimeter access roads and inner loop of the project site. The picnic areas provide outdoor areas for parties, group gatherings, family picnics, and a myriad of other uses. At least four picnic areas are present on Vermont Canyon Road, at least two picnic areas are located on Western Canyon Road, and one is located at the intersection of Western Canyon Road and West Observatory Road.

Hikers utilize the hiking trails that weave through the ridgelines and valleys within the project area, and extend outwards into the interior of the Park. At least six trailheads begin from existing parking lots and curbside parking locations, including Lower and Upper West Observatory Trail, Boy Scout Trail, Poison Oak Trail, Mt. Hollywood Trail, Aberdeen Trail, and the Bird Sanctuary nature trail.

Cyclists primarily use the paved surface streets and access roads of Griffith Park. Uphill travel takes place on Vermont Canyon and Western Canyon roads that are currently not marked to include cyclists. Cyclists may also pass through the tunnel from Vermont Canyon Road or turn from Western Canyon Road onto Mt. Hollywood Drive. This continued uphill road reaches the interior of the Park and winds around valleys and ridges for scenic cyclist views. Cyclists may then use the same routes in the downhill direction. The downhill cyclists can reach speeds upwards of 30 miles per hour down these roads. Travel on the West Observatory Roads frequently hampers cyclists by congestion from automotive and pedestrian traffic. The road is not currently

marked or signed for cyclists. However, East Observatory Road is marked for cyclist traffic and remains mostly clear for safe passage.

At least nine services provide horseback riding opportunities for Griffith Park, including both horse and pony rides and rentals (Yelp 2015). The horse tours generally stay confined to existing dirt trails, experiencing interactions with hikers and off-road cyclists along Griffith Park's 54 miles of established equestrian trails. Stabled horses frequent the trails and access routes along Mt. Hollywood Drive, and especially along the northern region of the Park (City of Los Angeles 2001b).

There are no fees for admission to Griffith Park, Griffith Observatory, trails, or picnic areas and all parking is currently free. The *Vision* for Griffith Park maintains that visitation to the Park, recreation within the Park, and enjoyment activities would be free of charge to users in perpetuity. Additionally, the *Vision* advises that "fee-based activities [be] kept to the status quo and such charges held to the minimum necessary for continued operation", and that "Griffith Park's established recreational uses and users be recognized and that the City avoid their displacement" (LA DRP 2008). Nevertheless, high demand, congestion and lack of parking effectively delays or limits access to the Observatory and upper elevation areas during peak periods. Road closures and traffic management required to address major congestion further limits such access, and can delay or even prevent planned family outings to facilities at the upper elevations of the project area. At a minimum, peak period congestion can diminish the recreational experience for Park users.

5.15.2 Discussion

The proposed project would include circulation and parking management improvements designed to address serious ongoing congestion and parking management issues at Griffith Observatory and along adjacent access roads. These changes are designed to improve access to Park facilities by reducing congestion, managing limited available parking at the Observatory and along adjacent access roads. The intent is to improve and the recreational experience of user groups through reducing congestion, and promoting visitor access through immediate improvements to existing DASH services and the eventual use of a free or low cost shuttle system for those parking in remote parking lots along lower Vermont Canyon Road, under immediate project implementation and DASH service improvements, and Western Canyon Road, after completion of improvements to Los Feliz Blvd and installation of the Loop Shuttle. The immediate DASH service improvements and eventual shuttle system funding would be assisted by implementing paid parking at the Observatory and along adjacent roads. Impacts to recreation from these changes are discussed below.

a. **Less than Significant.** The proposed project would reduce currently high levels of congestion at Griffith Observatory parking lot and along adjacent road, which are impacting both Park facilities and resources and the recreational user experience. Roadway surface deterioration and trampling of adjacent vegetation would be reduced through provision of more orderly parking and reduction in congestion. Provision of remote parking at the lower Greek Theatre parking lots, immediate improvements to existing DASH services, and implementation of a free to low cost shuttle service would reduce the number of cars using the roadways up to Griffith Observatory, and thereby reduce congestion and damage to parking facilities, and improve the recreational user experience.

Provision of improved DASH services and eventual regular shuttle service to and from remote lots would reduce congestion and damage to Park facilities along Western Observatory Road, upper Western Canyon Road, and Vermont Canyon Road. Ongoing Ranger supervision during peak periods and implementation of fencing, trash receptacles, and benches would reduce or

avoid damage to Park resources and facilities. Therefore, these changes would result in less than significant impacts.

b. **Less than Significant.** The proposed project would include installation of solar powered pay stations and restriping of roadways and parking areas. These improvements would occur within the existing road corridors with limited potential for adverse physical effects. All improvements would be confined to disturbed areas and little or no native vegetation removed. As discussed elsewhere in this IS/MND (e.g., biological resources), adverse physical effects would be less than significant.

c. **Less than Significant**. The proposed project would entail striping and designation of both parallel and angled formalized parking spots along Western Canyon Road, Vermont Canyon Road, East and West Observatory Roads; East Observatory Road would be opened up to public parking. Overall, these changes would result in an estimated net decrease of approximately 208 available parking spaces along these roads, as indicated in Table 5-9. In addition, free parking along these roads and at the Observatory parking lot would be eliminated, and replaced with paid parking opportunities. These fees would assist funding the improved public transit services and eventual shuttle service, which when combined with new fees and more orderly parking, would reduce congestions in these areas. These changes would impact established recreational uses in a number of ways.

Table 5-9 Existing vs. Proposed Parking Conditions*

Roadway	Existing Spaces	Proposed Spaces	% Reduction
West & East Observatory Roads	151	150	0.01%
Western Canyon Road[1]	337	130	61%
Mt. Hollywood Drive	12	0	100%
Total	**488**	**280**	**43%**

*Iteris Traffic Study estimates, 2015 (Attachment 1)
[1]Implemented after completion of Los Feliz Blvd adjustments

Overall, the change in access to Griffith Park facilities and impacts to established recreational uses through implementation of the proposed project are difficult to quantify. Decreases in available parking would indirectly limit automobile access to the project area, potentially impacting established recreational users. There would also be a perceived loss of convenience for some visitors by having to park remotely and transfer to the increased public transit services along Vermont Canyon Road or the free to low cost shuttle, both of which would require extra action by visitors before enjoying the Park. These real and perceived changes in convenience would be offset by more reliable parking availability in the remote parking lots rather than the current free-for-all and congested parking conditions near the top of the access roads. This would be especially true during peak periods where visitors must search for open parking spaces under congested conditions, or experience road closures due to overflowing parking and congestion. When fully implemented, the proposed project would likely reduce ongoing congestion and limit needed road closures and potentially improve overall access to this area of the Park, even with some real or perceived loss in convenience due to reductions in the overall number of parking spaces on affected roads. Therefore, due to availability of remote parking and free or low cost shuttle service, this decrease in available parking in the project area would not significantly disrupt established recreational uses.

Charging for vehicle parking may also conflict with established recreation uses of the project area, especially for lower income user groups who may be unable to afford parking fees. Assuming an average time spent visiting the Observatory, hiking or picnicking of approximately two to three hours, visitors may need to pay higher prices for the duration of their visit. Fees may deter lower income individuals from using paid parking closer to the Observatory for prolonged periods of time. These groups may prefer to use the free parking lots at the lower Greek Theatre and free angled lower Vermont Canyon Road locations, and ride DASH services or the eventual shuttle to the project area. However, transit dependent individuals who often consist of elderly and lower income households, would benefit from improved public transit service. Also, as parking along Western Canyon Road would remain free until completion of improvements to Los Feliz Blvd, these groups may also decide to park along this roadway instead of closer Griffith Observatory parking opportunities until changes to Western Canyon Road would be implemented. Incremental delays or perceived inconvenience to Park visitors may occur through the use of these remote parking lots as opposed to paying for parking opportunities closer to the upper elevation Griffith Park activities. While lower income visitors would not be displaced from the Park, they may experience some degree of real or perceived loss of access with their personal vehicles. However, the reduction of overall automobile traffic due to utilization of improved public transit services, the eventual shuttle system, and a reduction of parking conflicts due to marked parking locations may ultimately improve total travel time up the access roads as well as Park users overall experience. Therefore, the proposed project would not substantially conflict with established recreation uses of the area or disproportionately impact lower income users.

Accessibility to Park facilities would remain free for visitors using the lots along Vermont Canyon Road and Western Canyon Road. These users will continue to be able to use well developed picnic facilities, green space and access trails for free. These users could also walk or ride bikes into upper areas of the Park or utilize the improved public transit services and the eventual free or low cost shuttle system to access the Observatory or other upper elevation areas. This change in traffic management approach would address serious management issues and degradation of Park facilities and visitors' experience under current peak period conditions. Therefore, given continued free access to well-developed Park facilities and provisions for access to the Observatory and other higher elevation areas, effects of the project on recreational uses would be less than significant.

5.16 Transportation/Traffic

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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 results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due 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 regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

5.16.1 Existing Setting

The proposed project area is located near the southern border of Griffith Park, adjacent to Los Feliz area neighborhoods located off of lower Vermont Canyon Road and the Los Feliz Estates, and the Oaks neighborhoods located off of Fern Dell Drive and lower Western Canyon Road. Both Vermont Canyon Road and Western Canyon Road provide the only access to the project area from surrounding City streets such as Los Feliz Boulevard, Vermont Avenue, and Fern Dell Drive. As discussed below, although generally carrying moderate traffic volumes overall, these roads can experience substantial congestion during peak Park use periods. All physical project improvements are located entirely within Griffith Park.

A traffic study was prepared to evaluate the potential impacts to the traffic and circulation system that serve the project site (see Appendix 1, Iteris 2015). This study addresses existing road conditions, traffic levels and parking as well as the effects of proposed project modifications to circulation and parking on traffic congestion, internal Park circulation, pedestrian and bike facilities and users, and parking facilities. Please refer to the Traffic Study (Attachment 1) for detailed

analysis of transportation related issues. While parking is no longer assessed under transportation within CEQA, its effects are essential to visitor enjoyment and accessibility to Park facilities, and is addressed in Section XV, *Recreation.*

Additionally, a key provision of SB 743, passed in September 2013, is the elimination of vehicle delay and level of service (LOS) as a CEQA significance criterion in urban areas. The basic reason for this change at the State level is the recognition that there can be conflicts between improvements that benefit automobiles versus those that benefit other modes of transportation in urban areas (e.g., widening streets to improve automobile LOS can often be to the detriment of pedestrians), that continued reliance on automobiles is at odds with state objectives to reduce GHGs (through reductions in vehicle miles of travel), and that mitigation for increased vehicle delay often involves measures which may increase auto use and discourage alternative forms of transportation. When employed in isolation, LOS can lead to ad hoc roadway expansions that deteriorate conditions on the network as a whole, or discourage transportation improvements that improve street function overall by providing better level of service for vehicles, but decreasing service for transit pedestrians or bicycles. As level of service determinations often promote wider roads with increased effects to the environment, public health, and fiscal impacts, alternative transit solutions and adherence to the congestion management program are encouraged by the City of Los Angeles to alleviate congested conditions and limit further effects (Los Angeles Department of City Planning 2015).

Access to the project area is available via streets stemming from Los Feliz Boulevard, including Western Canyon Road (Fern Dell Drive) and Vermont Canyon Road (Vermont and Hillhurst Avenues). Western Canyon Road and Vermont Canyon Road are two-lane roadways within the Park (Vermont tapers down from a four-lane road to a two-lane road past the Greek Theatre).

While personally-owned vehicles typically have full access along Vermont Canyon, West Observatory, and Western Canyon Roads, these roads sometimes have varied amounts of limited or restricted access due to congestion; East Observatory Road and Mt. Hollywood Drive are continuously closed to personally owned vehicles. Automobiles which travel east along Los Feliz Boulevard utilize a designated left turn lane of 120 feet in length to access Vermont Canyon road and the Park. The 120-foot designated lane, can generally accommodate approximately six cars. The stoplight does not have a dedicated left turn arrow for vehicles turning left into the Park, and so vehicles wait for west bound traffic to finish before crossing the intersection, with potential for delays during peak hour traffic.

In the vicinity of the Park, Vermont Canyon Road is a two lane residential collector road with a wide center median strip separating inbound and outbound traffic A total of six intersections occur along the 3,000 foot long reach between Los Feliz Boulevard and the Park boundary; side street access is stop sign controlled. Posted speed limits are 25 miles per hour. Unmetered parking is permitted on both sides of the street with parking delineated by white painted line in places. Single family residential homes are located along both sides of the street with driveways spaced every 50 to 100 feet. Although the road is designed in a long elliptical curve in this neighborhood, line of sight along the roadway is generally adequate for safe driveway access, particularly given low speeds. Based on data provided in the Traffic Study, Vermont Canyon Road currently carries approximately 4,300 to 7,300 Average Daily Trips (ADT) during weekend peak periods.[5] Based on industry standards, the Traffic Study notes that two lane roadways such as Vermont Canyon Road have a capacity of 13,000 to 17,000 ADT for undivided and divided facilities, so although peak congestion may occur, currently traffic levels are well within overall capacity. Nevertheless,

[5] Weekends are presumed to be the peak travel times for Vermont Canyon road and Fern Dell Drive/ Western Canyon Road due to park access traffic.

although DRP implements extraordinary traffic and parking demand management measures, there are ongoing traffic congestion impacts which the residents along Vermont Canyon Road experience. Greek Theatre shows and concerts can severely affect transportation along this road.

Within Park boundaries, Vermont Canyon Road transits a heavily used area of the Park for about 3,000 feet and transitions into a wide undivided three to four lane road (in places) with both parallel and angled parking along different segments primarily along the east side of the road. Multiple driveways and one large intersection are located along this stretch. This area supports the Greek Theatre, Roosevelt Memorial Golf Course, and other active Park facilities, as well as Parking Lots F and G that serve these uses, as well as the proposed project area. After transiting this area, the road begins its steep ascent to the Observatory and the primary project area, narrowing to a two lane road of approximately 35 feet in width. On-street parking is not permitted along this reach, and the road is bordered by undeveloped hillsides and several small parking areas.

Fern Dell Drive/ Western Canyon Road is a two lane park collector road with a posted speed limit of 25 mph. In contrast to Vermont Canyon Road, this roadway is wholly within Griffith Park north of Los Feliz Boulevard and is bordered by Park uses on both sides; no residences immediately border this roadway and no residential driveways access the street. A total of two intersections exist along the 2,300 foot long reach between Los Feliz Boulevard and the main areas of the Park; side street access is stop sign controlled. Unmetered parking is permitted in most areas along on both sides of the street, although red curbing is in places along narrow segments. Line of sight along the roadway is generally adequate for safe operations, particularly given low speeds. Based on data provided in the Traffic Study, Fern Dell Drive/Western Canyon Road currently carries approximately 1,200 to 1,800 ADT during weekend peak periods. Fern Dell Drive transitions into Western Canyon Road north of Parking Lot 9, which serves surrounding picnic areas and trails, before beginning its steep ascent toward the Observatory.

As set forth in detail in the project description and depicted on Figures 1 and 2, these two primary access roads meet at a circular roadway system within the primary project area, which travels through the Griffith Park tunnel and follows around to Griffith Observatory. Within the primary project area, both of these roads retain approximately 35 feet of paved width and support road shoulder parking along most reaches. Narrow road widths, unregulated road shoulder parallel parking and high demand for access to the Observatory, Hollywood Sign viewing locations, and by hikers, can cause severe congestion in this area in both traffic directions. This requires traffic management by park rangers and sometimes temporary road closures during peak periods.

Existing parking within the primary project area in the vicinity of the Observatory includes the 100 space Observatory parking lot, as well as an estimated 488 road-shoulder spaces on East and West Observatory Roads, Mt. Hollywood Drive, and along approximately 0.7 miles of Western Canyon Road (Table 5-9). These parking areas are unmarked, and the closest parking areas to Griffith Observatory during peak periods are insufficient to meet demand. In addition, public use of these parking spaces can block traffic as drivers attempt to parallel park. Drivers may also misjudge their ability to fit into a parallel space after making the effort to get into the space, and then realizing that the space is too small for their vehicle. While making this attempt to park, the vehicle is blocking traffic, which has been documented to cause substantial traffic backups along these narrow Park roads.

As described within the project area existing setting, DASH services currently serve Griffith Observatory on weekends, travelling from the Vermont/Sunset METRO station outside the project area to the Observatory, primarily along Vermont Avenue and then briefly along Hollywood Boulevard and Sunset Boulevard to turn around. More specifically, along the way from the

METRO station to the Observatory, the DASH service typically stops at approximately four stops: two outside the project area, then at the Greek Theatre and finally at Griffith Observatory. The DASH service may stop at up to ten locations along the route described above, adding two additional stops along Hollywood Boulevard. The return trip is the same. Completing a full loop (a return trip from the METRO station to Griffith Observatory and back, or vice-versa) of the service requires approximately 45 minutes.

5.16.2 Discussion

Operations permitted under the project after alterations made to Western Canyon Road have the potential to increase peak hour traffic on roadways and intersections outside of the project area, such as the Western Canyon Road/Fern Dell Drive and Vermont Avenue intersections with Los Feliz Boulevard. Parking demand is largely generated from visitors during operating hours, and is confined to existing roadway shoulders and various parking lots.

a. **Less than Significant with Mitigation.** Project implementation would not conflict with any 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. Proposed project circulation changes would be confined within Griffith Park and would be generally consistent with the Griffith Park *Vision* for management of traffic and the eventual implementation of a shuttle program to reduce congestion within the Park. In addition, although project proposals to shift to pay parking within the project area may conflict with the letter of the *Vision* to maintain free access to the Park, project actions are required to address real issues that threaten both Park resources and visitor experience (See Section XV, *Recreation* analysis).

In terms of roadway or intersection operations, project implementation would not result in an increase in visitation to the Park with associated increases in ADTs, or peak hour trips with associated increases in congestion. However, project implementation would result in a shift in existing traffic patterns. The proposed changes to the management of Western Canyon Road after completion of improvements to Los Feliz Boulevard would result in a shift of vehicles being diverted east to Vermont Canyon Road.

Converting Western Canyon Road to a one-way outbound traffic flow for visitors after completion of improvements to Los Feliz Boulevard would divert traffic to Vermont Canyon Road throughout the day. Such diversions could potentially impact both traffic volumes on Vermont Canyon Road through adjacent residential neighborhoods and operation of the Vermont Canyon Road/ Los Feliz Boulevard intersection as discussed below.

Based on the existing traffic counts collected in January through May of 2015, traffic volumes along Vermont Canyon Road could increase by 563 to 930 ADTs depending on the time of year, or an increase in volumes over existing levels by 7% to 16% (Table 5-10). The changes would incrementally increase the daily Volume-to-Capacity (V/C) ratio of Vermont Canyon Road at its most constrained location near the Park, where one lane is provided in each direction and no divided median. A daily capacity of 13,000 vehicles per day for the two-lane roadway was assumed based on general industry standards (6,500 passenger cars per lane per hour). As roadway operations would remain well within roadway capacity, and using the above referenced daily capacity of the roadways, this increase would not result in a deficient operation based on industry standards (V/C ratio of 0.90 or higher), and would be assured via MM Trans-1. Therefore, while residents living along these roads would experience incremental increases in congestion, these would not exceed engineering standards in adopted plans or policies.

Such traffic diversions may also affect intersection operations at Vermont Canyon Road and Los Feliz Boulevard, including incremental increases in congestion, vehicle delay and increased east bound turn lane queuing, especially during summer week peak hours when the Western Canyon gate is not currently closed, which would be addressed via MM Trans-1, detailed below. While the Park routinely closes the Western Canyon Road access route at sundown and during peak Park use periods, increase in congestion, delay and queuing may be noticeable on some summer weekday periods. Morning traffic would not necessarily be affected due to the Observatory's opening time at 10 a.m. and noon, which draws an increase of vehicles after morning commuter travel times. Thus, while eventual closure of inbound Western Canyon Road may result in incremental increases of traffic utilizing the Vermont Canyon Road/ Los Feliz Boulevard intersection, this change would be confined to a limited number of summer day p.m. peak hour periods. Traffic volumes during most days would be generally consistent with current, manageable operations. Therefore, impacts would be less than significant with mitigation.

Table 5-10 Existing and Proposed Roadway Analysis

Roadway	ADT Volumes				
	January Weekend Avg	February Weekend Avg	March Weekend Avg	April Weekend Avg	May Weekend Avg
Vermont Cyn Rd (Existing)	7,273	7,252	4,640	5,800	4,374
Western Cyn Rd (Existing)	1,127	1,207	1,480	1,860	1,262
Diverted inbound traffic (50% of Western Cyn)	563	603	740	930	631
Vermont Cyn Rd (Proposed)	7,837	7,856	5,380	6,730	5,005
% Increase With Project	7.7%	8.3%	15.9%	16.0%	14.4%
Existing Vermont Cyn V/C	0.56	0.56	0.36	0.45	0.34
Proposed Vermont Cyn V/C	0.60	0.60	0.41	0.52	0.38

Project implementation would not adversely impact bike, pedestrian or transit systems. Regional transit, bike and pedestrian facilities would remain unaffected as project implementation would not increase Park visitation and demand for such facilities outside the Park. In addition, after completion of improvements to Los Feliz Boulevard, diversion of traffic would not substantially impact demand for transit, bike or pedestrian facilities. Additionally, as noted within Section 5.7, *Greenhouse Gas Emissions*, considering that DASH buses could reduce provide a frequency of up to three times per hour for 43 individuals per trip, then up to 21 vehicles per trip (or approximately 750 vehicles per day) could be removed from the Griffith Park access roads within DASH operational hours with 100 percent utilization, which would additionally reduce the intensity of potential traffic diversions to Vermont Canyon Road. Though the local Griffith Observatory DASH public transit service would be increased to provide seven-day service and increased frequency of transport between the existing Vermont/Sunset METRO station and Griffith Observatory, regional transit routes and scheduling would remain unchanged as would pedestrian

access. As discussed in recreation, project implementation would generally benefit bike and pedestrian circulation within the Park as well as reducing existing congestion, and further discussed in Section (f) below. Therefore, impacts to measures of effectiveness for the performance of existing circulation systems would be less than significant with mitigation.

Mitigation Measure Trans-1: Improvements to Los Feliz Boulevard. Improvements to Los Feliz Boulevard, such that LOS and associated ADT levels would not be significantly impacted by potential traffic rerouting that may occur as a result of this project, shall be implemented in compliance with the City of Los Angeles Mobility Plan and prior to physically or operationally modifying Western Canyon Road as described for this project. Measures to prevent significant traffic impacts to Los Feliz Boulevard and adjacent roadways and neighborhoods such as Vermont Canyon Road, which would be subject to approval beyond the scope of this project and require implementation in conjunction with appropriate City planning entities such as LADOT, would include:

- Left turn lane protection (e.g., left turn signalization);
- Remote parking opportunities (e.g., pony/train overflow lot);
- Improved signal phasing or timing;
- Neighborhood protection measures;
- Local street traffic flow controls; and
- Traffic calming measures.

b. **Less than Significant** As noted above, project implementation would not necessarily increase visitation to the Park and therefore would not increase overall levels of traffic or congestion on any Congestion Management Plan (CMP) Roads or at intersections. Additionally, improvements to Los Feliz Boulevard would be completed prior to any traffic re-routing outside the Park that may affect existing LOS levels, per MM Trans-1. Although the proposed project would result in rerouting of some traffic along Los Feliz Blvd, this roadway is not a designated CMP facility, and therefore no impact to CMP standards would occur.

c. **No Impact.** The proposed project is located approximately 5.0 miles from the nearest airport, and the project does not involve any direct or indirect changes to air traffic patterns or frequency, runway alignments, or flight approach zones. Therefore, this project would have no impact to air transportation.

d. **Less than Significant.** The project would not increase visitation to the Park and overall traffic levels would not increase. However, as discussed above, transferred traffic from Western Canyon Road would increase incrementally along Vermont Canyon Road outside the Park, this road has low speeds and adequate line of sight and any traffic re-routing outside the Park that may affect existing LOS levels would be initiated after improvements to Los Feliz Boulevard are completed. No adverse roadway safety effects are anticipated.

A key project objective is to safely improve the Griffith Park transportation network and interconnectivity, which would be implemented through the use of street signage, restriping, and implementation of plastic delineators. Project construction would be short term and involve very low traffic levels. Construction crews would adhere to standard safety BMPs include posting of signs, use of construction cones, etc., and given the low speed on Park roadways and relatively low existing and construction traffic volumes, construction would not cause substantial conflicts or create safety hazards, resulting in a less than significant impact.

e. **Less than Significant.** As discussed above, the proposed project would result in only minimal increases in traffic on Vermont Canyon Road and would improve circulation within the Park,

avoiding substantial impacts to emergency responses via the eventual exclusive access provided via Western Canyon Road. In addition, as discussed in Section XIV, *Public Services*, emergency response times to Griffith Park and Griffith Observatory are far below the standard for average response times for the two closest fire stations. Nevertheless, the proposed project would eventually improve access for emergency vehicles up Western Canyon Road through exclusive access, whereas prior to this modification, access for emergency vehicles would rely on the existing Vermont Canyon Road route and take advantage of the improved one-way roads of West Observatory Road and East Observatory Road. The 0.4 mile extent of West Observatory Road up to the Observatory may experience limited congestion during peak hours, however the 17 foot travel lane and 2 foot dirt shoulder would provide enough room for automobiles to pull over and allow emergency vehicles through. Additionally, establishment of an ADA accessible location at Griffith Observatory would facilitate better emergency access for ADA visitors due to easier loading and wide curbside entry. As the project would not substantially affect emergency access and traffic flow, this would result in a less than significant impact.

f. **Less than Significant.** The proposed project would be designed to expand alternative transportation opportunities and promote multi-modal transportation within the project area and eventual connectivity to the surrounding areas. The addition of safety elements such as safety crosswalks and the eventual pedestrian median island at the top of Western Canyon Road, would promote pedestrian-friendly transport. Increased public transit services provided by the existing DASH bus system and implementation of the free or low cost shuttle system would provide benefits such as reducing automobile congestion on the access roads within the project site and promote alternative transportation as found in the *Vision*.

Visitors to the Park may currently use the DASH services which stops at the Greek Theatre bus stop and travels up to the Observatory. If visitors do not desire to park at the top of the hill and use the paid parking opportunities, increased DASH services which also stop at the Greek Theatre would likewise increase the opportunities for visitors to use the DASH buses from the generally free lower parking lots near the Greek Theatre. Along Vermont Canyon Road, this DASH access would enable a system of use similar to the eventual Loop Shuttle system along Vermont Canyon Road, with visitors able to park in the generally free lower lots and ride a public transit system to the top. Along Western Canyon Road, prior to its modifications after completion of improvements to Los Feliz Boulevard, the road would continue to offer free parking, providing a free parking option closer to the Observatory along this roadway, though this parking would be slightly further than the proposed paid parking areas along West and East Observatory Road and within the Griffith Observatory parking lot.

Additionally, putting up posters within existing and unmodified METRO stations informing the public of a designated Griffith Observatory stop could alter the way visitors access Griffith Observatory. For instance, visitors from the Universal Studios METRO station at Cahuenga may decide to take the 10 minute ride to the Vermont/Sunset METRO station to reach the Griffith Observatory access stop designated at the Vermont/Sunset METRO station, or a 6 minute ride from Hollywood/Highland, a popular visitor location, to Vermont/Sunset. Those members of the public which decide to use the interconnected public transit services to reach Griffith Observatory may further reduce the potential number of vehicles on the Griffith Park access roads and thus reduce automobile congestion. Since the DASH services would end at approximately 10 p.m., and the METRO ends service from the Vermont/Sunset METRO station after midnight every day of the week, there would be no conflicts for Griffith Observatory visitors to use both services, provided visitors board the final bus from Griffith Observatory to the Vermont/Sunset METRO station around 10 p.m.

With the implementation of the proposed one-way couplet along West and East Observatory Roads, pedestrian and bicycle safety can be expected to improve. West and East Observatory Roads would include “sharrow” markings notifying motorists that cyclists are sharing the road with cars. Added signage and reduction in the posted vehicle speed limits will add to the safety benefits.

Low speeds at the West to East Observatory Road ‘bend’ and parking lot supervision would maintain the safe area around the bend and lawn. While there is concern for erratic, freak accident drivers driving upon the Observatory lawn, this possibility is seen as a very unlikely and low probability event. Nevertheless, the project does not preclude the opportunity for including bollards or preventative precautions upon the existing right of way, and may be implemented upon sufficient interest or concern.

The increase in parking turnover could create an increase in the amount of bike-vehicle conflicts through the Park. In addition, along West and East Observatory Roads, where head-in angled parking is proposed, there is the potential for decreased visibility for vehicles exiting the spaces versus the visibility with parallel parking in current conditions.

The new crosswalks west of the tunnel would improve pedestrian access and safety along West and East Observatory Roads. The addition of a crosswalk~~s~~ at the Western Canyon Road/West Observatory Road intersection would help facilitate the flow of pedestrian traffic.

With implementation of project design, standards, and mitigations, the project would support adopted policies, plans, and programs supporting alternative transportation, and qualify for a less than significant effect.

5.17 Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
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 effects?	☐	☐	☐	☒
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 effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the 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 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?	☐	☐	☒	☐

5.17.1 Existing Setting

Water service to the project area is provided mainly by the Los Angeles Department of Water and Power (LADWP) from the Los Angeles-Glendale Water Reclamation Plant (LADWP 2013). The majority of the water provided to Griffith Park is recycled and used for irrigation for Park Center recreational facilities and the Griffith Park Golf Complex, which is comprised of Wilson and Harding Golf Courses. The reclaimed water is primarily limited to the east side of the Park in lowland areas. For the project area, the Griffith Park South Water Recycling Project (GPSWRP) project is currently expanding the recycled water program to Roosevelt Golf Course and other southern facilities of Griffith Park to offset demand for potable water supplies in Central Los Angeles (LADWP 2015).

Wastewater and solid waste disposal services are also provided by the City. The Los Angeles Regional Water Quality Control Board (RWQCB) in connection with the implementation of the National Pollutant Discharge Elimination System (NPDES) program, impose requirements on the treatment of wastewater and its discharge into local water bodies. The nearest landfill is Scholl Canyon Landfill, located in the City of Glendale at 3001 Scholl Canyon Road, approximately 6.0 miles east of the project area. As of 2011, the landfill's remaining capacity was determined to be 9.9 million cubic yards, with a maximum amount of disposal of 3,400 tons per day, and estimated ceased operations date of April, 2030 (CalRecycle 2015).

Electric power and natural gas services are provided by LADWP and Southern California Gas Company, respectively. Griffith Park is served by a network of utility lines, including electrical, sewer, and water mains. Overhead power lines are anticipated to be moved underground via direction of the *Vision* plan for future projects.

Los Angeles City storm drains begin outside of the Griffith Park boundary, though intermittent roadside and parking lot curbs provide limited direction of storm water and surface runoff drainage within the Park. Additionally, catch basins are located throughout the Park.

5.17.2 Discussion

a-c. **No Impact.** The proposed project would be confined to existing roadways of Griffith Park and previously disturbed areas of existing right-of-ways. No utilities would be constructed as a part of the proposed project, and minimal physical improvements would be implemented. Construction would not require a RWQCB discharge permit. No alterations would be made to the existing water drainage systems that would affect wastewater or storm water facilities. Therefore, no impacts to utility systems would occur as a result of project implementation.

d-e. **Less than Significant.** Limited and temporary alterations to water resources would occur with implementation of the proposed project. While some water resources would be used during construction activities through activities such as power washing to remove striped lines and cleaning the roads to prepare for restriping, the effects would be temporary and non-intensive. Additionally, cleaning the acquired shuttles would utilize some water from the Los Angeles City water supply; however the cumulative effects would be minimal. Therefore, the project would have a less than significant impact on water resources, capacity, or demand.

f. **Less than Significant**. Construction of the proposed project would result in the need for solid waste disposal at the County's landfills. The project construction would generate construction waste such as asphalt and concrete. However, the construction activities would not place a large demand on the landfill. The proposed project would not impact the ability of these landfills to accommodate solid waste generated. Therefore, the proposed project would be served by a landfill with sufficient capacity and would result in a less than significant impact.

g. **Less than Significant.** All waste generated by construction and operation of the proposed project would comply with applicable federal, state, and local statutes and regulations related to solid waste, Section 19.38.030. By City code, recycling and solid waste facilities are required to have solid waste management and diversion strategies consistent with state law, including requirements for construction and non-residential recycling services. As such, the proposed project would require that waste is handled, disposed, and recycled following all applicable policies and guidelines, and then disposed of at an appropriate facility. If the demand for solid waste processing substantially increases, any changes to the City's existing operations would comply with applicable federal, state, and local statutes and regulations related to solid waste. Therefore, the impact to solid waste regulations is less than significant.

5.18 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Source(s)
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 rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐	
b) Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	☐	☐	☒	☐	
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐	

5.18.1 Existing Setting

Not Applicable.

5.18.2 Discussion

a. **Less than Significant.** The project site is located within an area recognized to contain sensitive wildlife species and habitats, as described in Section IV, *Biological Resources*. However, all impacts to the environment have been determined to have no impacts, to be less than significant, or to be less than significant with mitigation. In addition, the proposed project would not cause a fish or wildlife population to drop below self-sustaining levels or threaten to eliminate a plant or animal community.

Section 5.5, *Cultural Resources*, describes the potential for cultural or significant paleontological resources to be encountered due to the proposed project. Because the project activities would be confined to previously-disturbed areas of right-of-way, it is unlikely that cultural or significant paleontological resources would be encountered during the proposed project. Nevertheless, because the potential remains that previously undiscovered resources could be exposed, inclusion of standard mitigation measures during construction would ensure that potential impacts to such resources are less than significant.

b-c. **Less than Significant.** Based on the analysis provided in this MND, the proposed project would not result in any significant impacts on an individual or cumulative level, and would not result in any significant adverse effects on human beings. Therefore, impacts from the proposed project would result in less than significant.

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