# Section 23.0 | Project Description

### 3.1 2.1 OVERVIEW OF THE PROJECT

The proposed Los Angeles Aerial Rapid Transit Project (proposed Project) would connect Los Angeles Union Station (LAUS) to Dodger Stadium property via an aerial gondola system. The proposed Project would also include an intermediate station at the southernmost entrance of the Los Angeles State Historic Park. The proposed Project would provide an aerial rapid transit (ART) option for visitors to Dodger Stadium, while also providing access between the Dodger Stadium property, the surrounding communities, including Chinatown, Mission Junction, Elysian Park, and Solano Canyon, and the Los Angeles State Historic Park, to the regional transit system accessible at LAUS. The aerial gondola system would be approximately 1.2 miles and consist of cables, three passenger stations, a non-passenger junction, towers, and gondola cabins. When complete, the proposed Project would have a maximum capacity of approximately 5,000 people per hour per direction, and the travel time from LAUS to Dodger Stadium would be approximately seven minutes. The proposed Project would provide pedestrian improvements, including hardscape and landscape improvements, as well as amenities at the Los Angeles State Historic Park. The ART system has the ability to overcome grade and elevation issues between LAUS and Dodger Stadium and provide safe, zero emission, environmentally friendly, and high-capacity transit connectivity in the Project area that would reduce greenhouse gas (GHG) emissions as a result of reduced vehicular congestion in and around Dodger Stadium and on neighborhood streets, arterial roadways, and freeways. The proposed Project would operate daily to serve existing residents, workers, park users, and visitors to Los Angeles.

### 3.2 2.2 ART BACKGROUND

Forms of aerial transit technology have been available and utilized for the last 100 years. Modern applications have seen the evolution of aerial transit technology as a feasible mode of urban rapid transit. The two primary types of aerial transit used in urban environments are tramways and detachable gondolas. In an aerial transit system, cabins are suspended above grade by cables strung between stations and towers. The system is typically electrically powered and is propelled by turning a motorized wheel. Figure 3-1-2-1 provides a general overview of how these aerial technology components integrate with each other to deliver a complete aerial system.



Figure <u>3-1</u> 2-1: Aerial System Key Components

As shown in Table <u>3-1</u> <u>2-1</u>, modern aerial transit systems are currently operating in several urban locations around the world. Examples of two systems in the United States include the Portland Aerial Tram in Portland, Oregon, and the Roosevelt Island Tramway in New York, New York. An aerial tram system typically has two cabins that shuttle back and forth between two end terminals. An aerial gondola system includes multiple cabins that travel on a continuously circulating cable, which allows for an overall higher system capacity and ability to move more people per hour in each direction. A gondola system also provides flexibility in the ability to add or subtract gondola cabins from the system in order to accommodate demand.

Established aerial gondola transit systems worldwide, such as in La Paz, Bolivia, and Mexico City, Mexico, are being used as rapid transit for the urban population that they serve. The proposed Project would employ a Tricable Detachable Gondola system (also known as "3S").<sup>1,2</sup> 3S Gondola system cabins carry approximately 30 to 40 passengers, more than monocable systems, allowing for higher capacity passenger transport. Similar to the systems used in Koblenz, Germany, Phu Quoc, Vietnam, and Toulouse, France, the <u>proposed</u> Project is expected to provide a smoother, more stable ride than would a monocable system.

## 3.3 2.3 PROJECT LOCATION

The proposed Project is located in the City of Los Angeles, situated northeast of downtown Los Angeles. Figure <u>3-2</u> 2-2 shows the regional location of the proposed Project. The proposed Project would commence adjacent to LAUS and El Pueblo de Los Angeles (El Pueblo) and terminate at Dodger Stadium, with an intermediate station at the southernmost entrance of the Los Angeles State Historic Park. The proposed Project would include three stations, a non-passenger junction, and three cable-supporting towers at various locations along the alignment. As shown in Figure <u>3-3</u> 2-3, the proposed Project location would generally be located within public right-of-way (ROW) or on publicly owned property, following Alameda Street and then continuing along Spring Street in a northeast direction through the community of Chinatown to the southernmost corner of the Los Angeles State Historic Park and the Los Angeles County Metropolitan Transportation Authority (Metro) L Line (Gold) to the intersection of North Broadway and Bishops Road. At this intersection, the proposed Project alignment would turn and continue northwest following Bishops Road toward its terminus at Dodger Stadium, located in the Elysian Park community. Figure <u>3-4</u> 2-3 provides an overview of the proposed Project location. A more detailed description of the proposed alignment and Project components is provided in Section <u>3.5</u> 2-6.

### 3.3.1 2.3.1 Local Community Context

The proposed Project would be located within the City of Los Angeles, within the downtown, El Pueblo, Chinatown, Mission Junction, and Elysian Park neighborhoods. A portion of the proposed Project would travel over the Los Angeles State Historic Park. The proposed Project would cross over SR-110 near Dodger Stadium.

<sup>&</sup>lt;sup>1</sup> The naming convention for this system is derived from the German word "seil", which translates in English to "rope". Hence, Tricable Detachable Gondola systems are known as a "3S" systems due to the use of three ropes, or cables.

<sup>&</sup>lt;sup>2</sup> <u>Modern applications of aerial transit technology continue to evolve and improve. The Project Sponsor may evaluate similar, feasible technological advancements for urban aerial rapid transit for the proposed Project.</u>

Downtown is characterized by high-density commercial and residential uses and is considered the governmental, financial, and industrial hub of Los Angeles.<sup>3</sup> In the Project area, the El Pueblo de Los Angeles (described further in Section <u>3.3.3</u> <del>2.3.3</del> below) is located in the Civic Center district of the Central City Community Plan Area. The Civic Center district is physically bisected by US Route 101 (US-101), which separates El Pueblo from the southern portion of the Civic Center. The Civic Center contains the concentration of civic buildings, including city, county, state, and federal buildings, in downtown, such as City Hall, Kenneth Hahn Hall of Administration, the Hall of Records, and the Federal Court House.

<sup>&</sup>lt;sup>3</sup> City of Los Angeles Department of City Planning, Central City Community Plan, January 2003, <u>A</u>available at: https://planning.lacity.org/plans-policies/community-plan-area/central-city, <u>A</u>accessed March 4, 2022.

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Table 3-1 2-1: ART Precedents										
Location	Photo	Year Opened	Technology	Capacity (persons per hour, per direction)	Distance	Annual Ridership Estimates	Time	Cabin Size		
Portland, Oregon		2007 <sup>1</sup>	Reversible Tramway <sup>1</sup>	980 <sup>8</sup>	0.62 miles <sup>1</sup>	2.1 million (2016) <sup>12</sup>	4 minutes <sup>1</sup>	79 people <sup>1</sup>		
Roosevelt Island, New York		1976 (upgraded 2010) <sup>2</sup>	Reversible Tramway <sup>2</sup>	1,500 <sup>9</sup>	0.59 miles <sup>11</sup>	2.7 million (2014) <sup>16</sup>	3 minutes <sup>11</sup>	110 people <sup>11</sup>		
La Paz <i>,</i> Bolivia		2014 <sup>3</sup> (newest line added 2019) <sup>17</sup>	Monocable Detachable Gondola <sup>3</sup>	3,000 <sup>10</sup>	20.3 miles <sup>10</sup>	101 million (gondola network, 2019) <sup>13</sup>	5-17 minutes <sup>10</sup>	10 people <sup>3</sup>		
London, England		2012 <sup>4</sup>	Monocable Detachable Gondola⁴	2,500 <sup>4</sup>	0.68 miles <sup>4</sup>	1. <del>2</del> 5 million (20 <u>23<del>19</del>)<sup>14</sup></u>	5 minutes <sup>8</sup>	10 people <sup>4</sup>		
Mexico City, Mexico <u>(Mexicable)</u>		2016 <sup>5</sup> (new <u>est line</u> <u>added</u> in 202 <u>3</u> ) <sup>26</sup>	Monocable Detachable Gondola <sup>5</sup>	3,000 <sup>5</sup>	<u>8.3 miles<sup>5, 26</sup></u>	7.3 million (2019) <sup>15</sup>	17 <u>-29</u> minutes <sup>5, 26</sup>	10 people⁵		
<u>Mexico City,</u> <u>Mexico</u> (Cablebus)		2021 <sup>23, 24</sup> (new line to open in 2023) <sup>25</sup>	<u>Monocable Detachable</u> <u>Gondola<sup>24</sup></u>	<u>4,000<sup>24</sup></u>	<u>12.26 miles<sup>23</sup></u>	<u>Not available</u>	<u>26-40 minutes<sup>23, 24</sup></u>	<u>10 people<sup>24</sup></u>		

Location	Photo	Year Opened	Technology	Capacity (persons per hour, per direction)	Distance	Annual Ridership Estimates	Time	Cabin Size		
Koblenz, Germany		2010 <sup>6</sup>	Tricable Detachable Gondola (3S) <sup>6</sup>	3,800 <sup>6</sup>	0.55 miles <sup>6</sup>	not available	4 minutes <sup>20</sup>	35 people <sup>20</sup>		
Phu Quoc, Vietnam		20187	Tricable Detachable Gondola (3S) <sup>7</sup>	3,5007	4.9 miles <sup>7</sup>	not available	16 minutes <sup>7</sup>	30 people <sup>7</sup>		
Toulouse, France		2022 <sup>21</sup>	3S <sup>21</sup>	2,000 <sup>21</sup>	1.67 miles <sup>21</sup>	2.5 million <sup>22</sup>	10 minutes <sup>21</sup>	34 people <sup>21</sup>		
Source: Protent Advial Trans_Learn Mores—4. Available at: http://www.gobytram.com/abut.Accessed November 2023. Rossewit Stand Operating Corporation, History—4.4. Available at: https://www.dospdimary.com/en/doppelmayr.com/en/dopp										



Figure 3-2 2-2: Regional Location Map



Figure 3-3 2-3: Proposed Project Location

LAUS, Chinatown, the Los Angeles State Historic Park, and the Mission Junction neighborhood are located within the Central City North Community Plan Area, which is characterized by low-rise multi-family residential neighborhoods, commercial districts, and industrial uses. The area around LAUS is characterized by transit activity, residential, commercial, and office uses. In the Chinatown community, land uses transition from industrial uses to low-rise commercial and residential uses. The commercial district in Chinatown consists of low-rise buildings with pedestrian-oriented storefronts. As described in the Central City North Community Plan, the businesses in this district provide services for the Chinese population that has historically resided in the area, with restaurants, retail businesses, banks, and professional offices making up an ethnically distinct commercial district that attracts people from throughout the region.<sup>4</sup> Industrial uses in the Project area are primarily centered around the former site of the historic Southern Pacific Railroad Company's River Station railyard, which is located on the presentday site of the Los Angeles State Historic Park. Mission Junction, the area south and southeast of the Los Angeles State Historic Park, includes a mix of low-rise commercial and retail business, light industrial/ warehouse uses, and multi-family residential uses. Farther to the south is the William Mead Homes public housing complex, which is operated by the City Housing Authority and contains over 400 residential units. The Los Angeles State Historic Park is discussed further in Section 3.3.4 2.3.4. On May 3, 2023, the Los Angeles City Council approved the Downtown Community Plan (known as DTLA 2040) and new Zoning Code for the Downtown Community Plan Area. DTLA 2040 consolidates the Central City Community Plan and Central City North Community Plan areas. Following the City Council's approval, the City has entered the implementation phase for DTLA 2040, which the City has indicated can take approximately six months to a year.<sup>5</sup> After this process, the City Council will bring DTLA 2040 and the new Zoning Code into effect. The analysis in this EIR is based on the current applicable land use and zoning designations for the Central City Community Plan and Central City North Community Plan areas.

The Elysian Park community is located north of downtown Los Angeles and is characterized by mediumdensity residential neighborhoods, open space areas, and commercial corridors. The Elysian Park community includes Dodger Stadium (discussed further in Section <u>3.3.5</u> <del>2.3.5</del> below), Elysian Park, and Solano Canyon.<sup>6</sup> Dedicated in 1886, Elysian Park is the oldest and second largest park in the City and features hiking trails, a bike path, horseshoe pits, picnic tables, restroom facilities, a recreation center, Little League baseball fields, Grace E. Simons Lodge event venue, Radio Hill Gardens, Chavez Ravine Arboretum and the Chavez Ravine Disc Golf Course.<sup>7</sup> Located in the southeastern portion of the Elysian Park community, Solano Canyon consists of a low-density single-family residential neighborhood, directly east of Dodger Stadium.

### 3.3.2 2.3.2 Los Angeles Union Station

Located at 800 North Alameda Street, LAUS is southern California's primary transportation hub and is a City-designated Historic-Cultural Monument. LAUS provides local and regional access via multiple modes

<sup>&</sup>lt;sup>4</sup> City of Los Angeles Department of City Planning, Central City North Community Plan, <u>A</u>available at: https://planning.lacity.org/planspolicies/community-plan-area/central-city-north, <u>A</u>accessed March 4, 2022.

<sup>&</sup>lt;sup>5</sup> See City of Los Angeles Department of City Planning. 2023. Downtown Los Angeles Community Plan Update. Available at: https://planning.lacity.org/plans-policies/community-plan-update/downtown-los-angeles-community-plan-update#about. Accessed August 2023.

<sup>&</sup>lt;sup>6</sup> City of Los Angeles Department of City Planning, 2004. Silver Lake-Echo Park-Elysian Valley Community Plan, August 2004, <u>A</u>available at: https://planning.lacity.org/plans-policies/community-plan-area/silver-lake-echo-park-elysian-valley, <u>A</u>accessed August <u>16</u>, 2022.

<sup>&</sup>lt;sup>7</sup> City of Los Angeles Department of Recreation and Parks<sub>7</sub>. <u>2006.</u> Elysian Park Master Plan, June 2006, <u>A</u>-vailable at: https://www.elysianpark.org/s/EP1\_Introduction.pdf, <u>A</u>-ccessed August <del>16,</del> 2022.

of transport and service providers, such as Metro, Metrolink, Amtrak, and municipal and private bus operators, all of which converge at the station. LAUS connects multiple counties, including Los Angeles, Orange, Riverside, San Bernardino, Ventura, and San Diego, via an extensive regional and commuter rail and bus system. Additionally, LAUS connects riders across the Country via Amtrak. LAUS currently attracts up to 36 million transit riders per year; this equates to approximately 100,000 people per day whose journeys depart, transfer, or arrive in Los Angeles via LAUS. By 2040, it is projected that the usership of LAUS will double, where it is anticipated the station will serve up to 72 million people per year, translating to approximately 200,000 daily riders.<sup>8</sup>

Metro purchased LAUS in 2011 and prepared the LAUS Master Plan, which encompasses approximately 38-acres, to guide transforming the station into a world-class transportation facility.<sup>9</sup> According to the LAUS Master Plan, the three programmatic goals for LAUS include (1) transit optimization; (2) creating a great destination; and (3) improved connectivity. In order to accommodate the projected users of LAUS and to improve safety, Metro is developing a number of projects in and around LAUS to increase its functionality as a transportation hub and allow for more connectivity with the surrounding community. Metro's LAUS Forecourt and Esplanade Improvements Project is currently being developed in coordination with the City of Los Angeles, and would include repurposing the existing northwestern parking lot at LAUS into a pedestrian forecourt and gathering space, as well as pedestrian and bicycle enhancements along Alameda Street and Los Angeles Street.<sup>10</sup>

In 2015, Metro, in collaboration with the City of Los Angeles, completed the Connect US Action Plan, outlining active transportation strategies to connect people to LAUS, the 1st/Central Regional Connector Station, and the historic neighborhoods surrounding them. The Connect US Action Plan seeks to "transform streets into safer and more beautiful places to walk and bike" and "unify the historic/cultural neighborhoods of El Pueblo, Chinatown, Cornfield Arroyo Seco, Boyle Heights, Arts District, Little Tokyo, and Civic Center." The Connect US Action Plan identified potential pedestrian and bicycle linkages including a proposed esplanade with a walkway and bike path along Alameda Street from the Arts District to College Street, which may be extended north to the Los Angeles State Historic Park.

### 3.3.3 2.3.3 El Pueblo de Los Angeles

El Pueblo de Los Angeles (El Pueblo), also known as the Los Angeles Plaza Historic District, is a national and state registered Historical Monument and City-designated Historic-Cultural Monument located in downtown Los Angeles directly west of LAUS. El Pueblo is historically significant as the birthplace of the City of Los Angeles, established in September 1781 by settlers from present day northern Mexico.<sup>11</sup> The

<sup>&</sup>lt;sup>8</sup> Los Angeles County Metropolitan Transportation Authority, Los Angeles Union Station Master Plan<sub>72</sub> Los Angeles Union Station Design Report, <u>A</u>available at: https://www.metro.net/projects/la-union-station/, <u>A</u>accessed March 4, 2022 This document is no longer available online. The Transforming Los Angeles Union Station summary is available at: http://libraryarchives.metro.net/DPGTL/unionstation/2015transforming-los-angeles-union-station-summary-report.pdf. Accessed November 2023.

<sup>&</sup>lt;sup>9</sup> Los Angeles County Metropolitan Transportation Authority, Los Angeles Union Station Master Plan<del>, available at:</del> <u>http://www.metro.net/projects/la union station/. This document is no longer available online. The Transforming Los Angeles Union Station summary is available at: http://libraryarchives.metro.net/DPGTL/unionstation/2015-transforming-los-angeles-union-station-summary-report.pdf. Accessed November 2023.</u>

<sup>&</sup>lt;sup>10</sup> Los Angeles County Metropolitan Transportation Authority<u>-, 2018.</u> Los Angeles Union Station Forecourt and Esplanade Improvements Project Final Environmental Impact Report, March 2018, <u>Aa</u>vailable at: https://www.metro.net/about/lausfei/LAUSFEI-FEIR. https://www.dropbox.com/sh/55np14p60s3tch0/AABwyW69bkwUScao1ov2-

kD2a/Environment%20Documents?dl=0&subfolder\_nav\_tracking=1, Aaccessed March 4, 2022.

<sup>&</sup>lt;sup>11</sup> City of Los Angeles<sub>7</sub>. El Pueblo de Los Angeles Historical Monument, About Us<sub>7</sub>. <u>A</u>available at: https://elpueblo.lacity.org/about-us<sub>7</sub>. <u>Aa</u>ccessed March 4<sub>7</sub> 2022.

Historic District comprises approximately 9.5 acres and is generally bounded by Cesar E. Chavez Avenue to the north, Los Angeles Street and Alameda Street to the east, Arcadia Street to the south, and Spring Street to the west. El Pueblo currently serves as a living museum, attracting over two million visitors per year to its many historic features, including Olvera Street, which is a pedestrian-oriented marketplace containing restaurants, craft shops, and other retail businesses reflecting the Mexican heritage of the City. This area attracts visitors from throughout the region, as well as tourists from around the world. El Pueblo includes the Avila Adobe, the City's oldest surviving residence; Pico House, built by the last governor of California under Mexican rule, and the City's first grand hotel; the Plaza Firehouse, the City's first firehouse; and Our Lady Queen of Angels Catholic Church, the City's oldest church and the only building at El Pueblo still used for its original purpose.<sup>12</sup>

### 3.3.4 2.3.4 Los Angeles State Historic Park

Previously known as the "Cornfields," the Los Angeles State Historic Park is located on the historical site of the Southern Pacific Railroad's River Station, which is a City-designated Historic-Cultural Monument. Since 2005, the site has undergone significant rehabilitation and repurposing into public open space and parkland. In 2014, the Los Angeles State Historic Park was closed to undergo significant renovation. Since its re-opening in 2017, the Los Angeles State Historic Park has welcomed visitors and the local community for passive recreation opportunities, offers guided tours and hosts community events. The Los Angeles State Historic Park hosts various events throughout the year including craft markets, concerts, movie nights, and festivals. These events attract visitors from the surrounding local communities and throughout the region. The revitalized green space provides a location for Angelenos to exercise and socialize in a landscaped setting, within a region that has been historically limited in terms of access to parkland.

Los Angeles State Historic Park comprises 32 acres of open space. The site is bounded by the Metro L Line (Gold) ROW and Broadway to the north, the channelized Los Angeles River to the east, Spring Street and commercial/industrial uses to the south, and Metro L Line (Gold) ROW and commercial/industrial uses to the south, and Metro L Line (Gold) ROW and commercial/industrial uses to the south are available from the majority of the site.

The Los Angeles State Historic Park is located adjacent to the Mission Junction neighborhood of the City's Cornfield Arroyo Seco Specific Plan (CASP) Area. The intent of the CASP is to revitalize an underserved vehicular-oriented industrial area by encouraging development of mixed-use, pedestrian-oriented neighborhoods, with higher densities around transit. The area adjacent to the Los Angeles State Historic Park is being intensified with a number of recently approved mixed-use developments, which include both residential units and commercial office spaces.

### <u>3.3.5</u> 2.3.5 Dodger Stadium

Originally opened in 1962, Dodger Stadium is located at 1000 Vin Scully Avenue and is home to the Los Angeles Dodgers Major League Baseball (MLB) team. The stadium is located on the hillside of Chavez Ravine and overlooks downtown Los Angeles to the south and the San Gabriel Mountains to the north. It is the third oldest continually used ballpark in MLB and has hosted more than 147 million fans since its

<sup>&</sup>lt;sup>12</sup> City of Los Angeles<sub>7</sub>. El Pueblo de Los Angeles Historical Monument, History, <u>A</u>available at: https://elpueblo.lacity.org/history-el-pueblo, <u>A</u>accessed March 4, 2022.

opening in 1962.<sup>13</sup> Dodger Stadium is the largest MLB stadium in terms of capacity, with approximately 56,000 seats. In addition to MLB games, other special events are hosted at Dodger Stadium throughout the year. The stadium is directly surrounded by surface parking and is accessible via SR-110, US Route 101 (US 101), and Interstate 5 (I-5) freeways as well as surface streets. It is located within the hills of Elysian Park, and is also surrounded by densely populated residential neighborhoods including Solano Canyon, Echo Park, Elysian Park, Silver Lake, Chinatown, and Angelino Heights.

### 3.3.6 2.3.6 Project Purpose, Need, and Objectives

The proposed Project would consist of cables, three passenger stations, a non-passenger junction, three towers, and gondola cabins. The proposed Project alignment would extend approximately 1.2 miles beginning near El Pueblo and LAUS on Alameda Street and ending at the Dodger Stadium property. Alameda Station would be located on Alameda Street adjacent to the planned LAUS Forecourt and Placita de Dolores between Los Angeles Street and Cesar E. Chavez Avenue. Alameda Tower would be located on the Alameda Triangle, a City ROW between Alameda Street, North Main Street, and Alhambra Avenue. Alpine Tower would be located on a City-owned parcel, currently being used as non-public parking storage for City vehicles, at the northeast corner of Alameda Street and Alpine Street, adjacent to the Metro L Line (Gold). Chinatown/State Park Station would be located adjacent to Spring Street in the southernmost portion of the Los Angeles State Historic Park. Broadway Junction is a non-passenger junction that would be located at the intersection of North Broadway and Bishops Road. Stadium Tower would be located on hillside private property north of Stadium Way between the Downtown Gate and SR-110. Dodger Stadium Station would be located in the southeast portion of the Dodger Stadium property near the Downtown Gate.

### 3.3.7 2.3.7 Purpose and Need

The proposed Project would improve mobility and accessibility for the region by providing a daily, high capacity aerial rapid transit connection between the regional transit system at LAUS, Dodger Stadium, Los Angeles State Historic Park, Elysian Park, and surrounding communities via the intermediate Chinatown/ State Park Station. The proposed Project would include a mobility hub at Chinatown/State Park Station. The proposed Project would also provide a mobility hub at the Dodger Stadium property to provide connectivity to Elysian Park and the surrounding communities. The proposed Project is needed to alleviate existing congestion and associated air pollution while providing safe, zero emission, environmentally friendly, and high-capacity transit connectivity in the Project area that would reduce GHG emissions as a result of reduced vehicular congestion in and around Dodger Stadium and on neighborhood streets, arterial roadways, and freeways.

Dodger Stadium draws large regional crowds, with approximately 100 baseball games and other events each year. The vast majority of visitors drive their personal vehicles to access the venue. These vehicles create congestion on the surface streets leading up to and around Dodger Stadium, including Sunset Boulevard/Cesar E. Chavez from LAUS and throughout the surrounding communities. In addition to traffic delays in and around local streets, congestion occurs on the nearby freeways, including SR-110, I-5, and US 101. The communities in the vicinity of the proposed Project alignment were identified as being in the

<sup>&</sup>lt;sup>13</sup> Major League Baseball<sub>7</sub> Dodger Stadium History<sub>7</sub> <u>A</u>available at: https://www.mlb.com/dodgers/ballpark/information/history<sub>7</sub> <u>A</u>accessed March 4, 2022.

90 - 100 percentile of communities disproportionately burdened by multiple sources of pollution in the State.<sup>14</sup> As the region's population grows and resulting travel needs continue to increase, the local and regional roadway system is likely to experience greater congestion.<sup>15</sup>

Dodger Stadium is one of the region's most visited venues; however, there are no permanent transit connections to the venue. Currently, Dodger Stadium Express buses provide a connection between LAUS and Dodger Stadium on game days, carrying approximately 1,850 riders on average per game. Other highcapacity venues in the region include the Crypto.com Arena, which hosts the Los Angeles Lakers and Los Angeles Clippers professional basketball teams and Los Angeles Kings professional hockey team; the Los Angeles Memorial Coliseum, which hosted the Los Angeles Rams professional football team between 2016 and 2019 and hosts the University of Southern California collegiate athletic events; and the BMO Banc of California Stadium, home to the Los Angeles Football Club (LAFC). These venues are accessible directly by public transit, including the Metro A Line (Blue) and E Line (Expo). Additionally, the new SoFi Stadium in Inglewood, which began hosting the Los Angeles Rams and Los Angeles Chargers professional football teams in 2020, will be accessible via a planned people mover connecting the future Metro Crenshaw/LAX line station to the stadium.<sup>16, 17</sup> The Intuit Dome, the future home of the Los Angeles Clippers professional basketball team, is anticipated to open in 2024 and will also be served via the planned people mover connecting the future Metro Crenshaw/LAX line station to the center.<sup>18</sup> <sup>19</sup> As such, there is an increased need for Dodger Stadium to seek additional transit connections. Metro acknowledges that there is a need for improved transit options that link with the growing Metro network to meet existing and future travel demands and access to Dodger Stadium.

<sup>&</sup>lt;sup>14</sup> California Office of Environmental Health Hazard Assessment, CalEnviroScreen 4.0 Map, <u>Available at:</u> https://oehha.ca.gov/calenviroscreen/maps-data, <u>Aa</u>ccessed August <u>16,</u>2022.

<sup>&</sup>lt;sup>15</sup> Southern California Association of Governments<sub>7</sub> 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy, or "Connect SoCal." <u>A</u>available at:

https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan\_0.pdf?1606001176, <u>A</u>accessed August <u>11,</u>2022.
 <sup>16</sup> California State Transportation Agency, <u>2020</u>. Transit and Intercity Rail Capital Program, Fourth Round Selected Project – Project Detail Summary, April 2020, <u>A</u>available at: https://calsta.ca.gov/-/media/calsta-media/documents/2020-tircp-detailed-project-award-summary.pdf, <u>A</u>accessed March <u>4</u>, 2022.

<sup>&</sup>lt;sup>17</sup> Los Angeles County Metropolitan Transportation Authority<u>7</u> Crenshaw/LAX Transit Project<u>7</u> Aavailable at: https://www.metro.net/projects/crenshaw\_corridor/<u>7</u> Aaccessed March 4<del>,</del> 2022.

<sup>&</sup>lt;sup>18</sup> IntuitNBA.com, Intuit Dome, Aavailable at: https://www.nba.com/clippers/intuitdome https://www.intuit.com/intuitdome/-, Aaccessed NovemberJune 28, 20223.

<sup>&</sup>lt;sup>19</sup> City of Inglewood<sub>7</sub>. Inglewood Transit Connector Project Final Environmental Impact Report<sub>7</sub>. <u>A</u>available at: https://www.cityofinglewood.org/DocumentCenter/View/17236/ITC\_FEIR\_Feb2022. <u>Accessed November 2023</u>.



Figure 3-4 2-4: Proposed Project Alignment

Within two hours prior to the start of and after a game or event at Dodger Stadium, more than 10,000 people could be transported to the stadium via the proposed Project. The average attendance at a Dodger game was approximately 49,000 for the 2019 season.<sup>20</sup> Given the capacity of this system, approximately 20 percent of the fans could take aerial transit connected to Metro's regional transit system. This would reduce vehicular congestion in and around Dodger Stadium, on neighborhood streets, arterial roadways, and freeways during game and special event days.

When complete, the travel time from LAUS to Dodger Stadium would be approximately seven minutes during peak operations (games/events at Dodger Stadium). By creating a high-quality and high-capacity rapid transit connection between LAUS and Dodger Stadium, the proposed Project would provide a more viable choice in making a trip to a Dodger game or event at the stadium. With Metro's existing and planned expansion of its transit system, coupled with other providers such as Metrolink, Amtrak, and other municipal bus operators whose services all converge at LAUS, the proposed Project provides the opportunity for anyone in the Los Angeles County region to access Dodger Stadium via public transit.

The proposed Project, which would include passenger stations at LAUS, the southern entrance of Los Angeles State Historic Park, and Dodger Stadium, would also provide new connections to and between currently underserved neighborhoods and uses along the proposed alignment, including Chinatown, Mission Junction, the Los Angeles State Historic Park, Elysian Park, and Solano Canyon. With the proposed Project's ability to overcome grade and elevation issues, while providing safe, zero-emissions, environmentally-friendly, and high-capacity transit connectivity, the proposed Project would operate daily to link the Dodger Stadium property and the neighborhoods along the proposed alignment to the region's rapidly growing regional transit system at LAUS.

### 3.3.8 2.3.8 Project Objectives

The overall purpose of the proposed Project is to provide a direct transit connection between LAUS and the Dodger Stadium property via an aerial gondola system and improve connectivity for the surrounding communities by linking to the Los Angeles State Historic Park, Elysian Park, and the neighborhoods along the proposed alignment and the region's rapidly growing regional transit system at LAUS. ART is a proven, zero emission, safe, sustainable, high-capacity, and highly efficient form of transportation that would function as both a reliable rapid transit system and first/last mile connector. The proposed Project would operate daily to serve existing residents, workers, park users, and visitors to Los Angeles.

The proposed Project objectives are as follows:

- Expand mobility options for transit riders through a direct connection between LAUS and Dodger Stadium, a regional event center.
- Attract new transit riders to the Metro system through a unique experience of an aerial transit system connecting to Dodger Stadium.
- Improve the Dodger Stadium visitor experience by providing efficient, high-capacity, and faster alternative access to Dodger Stadium.

<sup>&</sup>lt;sup>20</sup> ESPN.com<sub>7</sub>.2019. MLB Attendance Report – 2019, <u>A</u>available at: http://www.espn.com/mlb/attendance/\_/year/2019, <u>Aa</u>ccessed March 4, 2022.

- Enhance safety of neighborhoods adjacent to Dodger Stadium by reducing the number of vehicles in the area.
- Reduce transportation related pollution and greenhouse gas (GHG) emissions as a result of reduced vehicular congestion in and around Dodger Stadium, on neighborhood streets, arterial roadways, and freeways during game and special event days.
- Increase connectivity of people to the region's public transportation hub at LAUS and the Dodger Stadium property.
- Improve transit rider experience by providing unique scenic views of the Los Angeles area to ART passengers and Dodger fans.
- Bring a world class aerial transit system to the Los Angeles area.
- Enhance community connectivity by providing first/last mile transit and pedestrian access to areas that have historically been underserved, including the Los Angeles State Historic Park and Elysian Park.
- Identify comparable, affordable, and accessible fare opportunities for community and Los Angeles State Historic Park and Elysian Park access.
- Minimize the Project's environmental footprint through the integration of sustainability and environmentally-friendly design features into the materials, construction, operations, and maintenance of the proposed Project.
- Provide a sustainable form of transit by operating the ART system with the use of zero emission electricity with battery storage backup in order to reduce GHG emissions and improve air quality.
- Maximize the Project's alignment along the public ROW and publicly owned property and minimize aerial rights requirements over private properties, taking into account existing and future adjacent land uses.

### 3.4 2.4 DESCRIPTION OF THE PROPOSED PROJECT

The proposed Project would connect LAUS and the Dodger Stadium property through an aerial gondola system. The proposed Project would utilize a detachable "3S", or tricable, technology that enables larger passenger cabins and more carrying capacity than other available aerial technology to support the transit demand created during Dodger games and events at Dodger Stadium. The proposed Project would also provide transit access to the Los Angeles State Historic Park and the surrounding communities. The aerial technology that comprises an aerial gondola system consists of major components connected by the cables (ropeway). The major components of the proposed Project include stations where passengers would enter and exit the system, a non-passenger junction where the alignment turns, towers to support the cables, and cabins in which the passengers ride.

### <u>3.4.1</u> 2.4.1 Design

The proposed Project's design goal is to develop a common architectural design that unifies the overall aerial gondola system, while allowing for each major component to contribute to the respective localized urban condition. Of equal importance is the desire to minimize the perceived scale and mass of the stations and non-passenger junction. The proposed architectural design, therefore, takes advantage of a

simple barrel vault form to provide the minimum enclosure needed to protect the ropeway equipment and provide shade and weather protection to passengers on the boarding platform. This barrel form would utilize a hollow structural steel section structure and metal panel assembly to allow the introduction of custom perforation patterns that take cues from the immediate neighborhood culture, while also providing a visual lightness to the form. The canopy of the non-passenger junction has the potential to diverge from this assembly, utilizing a clipped system of narrow metal tubes to create a pattern, while still achieving a transparency that brings lightness to the form. Rather than proposing a single uniform color palette for the entire system, colors for the material finishes at each station and junction will be selected to be complementary to each of their respective sites and surrounding urban fabric. Each station could also provide an opportunity for site specific artwork that is reflective of the unique neighborhood culture, and could be commissioned from local artists. Figure <u>3-5</u> 2-5 depicts the illustrative design of Alameda Station for the proposed Project.

Each of the towers would be designed so that their bases would not impede adjacent vehicular and pedestrian circulation, while supporting the ropeway and cabins that are primarily aligned above the public ROW. The resulting tower structure gently swoops from the base up to connect to the ropeway. A light-toned gray high performance coating will accentuate the faceted steel panels that comprise the tower's swooping form. The neutral light-tone gray is intended to conform with the surrounding urban environment and will not provide a highly metallic or mirrored finish to minimize glare. Figure 3-6 2-6 depicts the illustrative design of towers for the proposed Project.

### 3.4.2 2.4.2 Cables and Ropeway Technology

Aerial gondola systems are classified based on the number of cables (ropes) used in their operation. The proposed Project would use a detachable 3S system, which relies on three steel cables to support and move the cabins. This tri-cable technology enables the highest capacity of any aerial gondola system, as it is able to accommodate larger cabins and longer spans while providing greater lateral stability.

Due to the length and geometry of the proposed Project, it is anticipated that two ropeway systems would be used. The first section would carry passengers from Alameda Station to Broadway Junction. The second section would carry passengers from Broadway Junction to Dodger Stadium Station. The transition between the two systems would occur in Broadway Junction in a manner inconspicuous to the passengers. No change of cabins would be required to travel through Broadway Junction.

The proposed Project's tri-cable technology would be comprised of two stationary cables (track ropes) that provide support for the running wheels of the cabins, and a third cable (haul rope) that would circulate continuously around the system. The haul rope is looped around two sheaves – the "drive bullwheel" at one station/junction and the "return bullwheel" at the opposing station/junction. The haul rope, which is the propulsion rope, is moved by the turning of the drive bullwheel. The drive bullwheel is turned by motors located at the station or junction. The return bullwheel acts like an idler wheel providing haul rope location control, but no motive power. The haul rope moves at a steady pace around the bullwheels pulling the cabins along the ropeway and in and out of each station or junction. As cabins enter the station, they detach from the haul rope. Once a cabin is detached from the haul rope, the cabin can move at a speed independent of the haul rope, allowing the cabins "online" (i.e., not in a station) to continue to move at a higher speed while the cabins in the station slow down for unloading and loading.

Devices known as slack carriers would be used to support and maintain proper separation between the cables. Slack carries would be attached to the system's two track ropes and provide support sheaves for the haul rope. While the exact quantity and location of the slack carriers along the track ropes would be determined during the design phase of the proposed Project, it is anticipated that slack carriers would be placed approximately every 350-500 feet with adequate separation from the stations, junction, and towers.

One haul rope loop would be for the ropeway system between Alameda Station and Broadway Junction, and one haul rope loop would be for the ropeway system between Broadway Junction and Dodger Stadium Station. For the section from Alameda Station to Broadway Junction, the drive bullwheels and associated motors and drive equipment are anticipated to be at the Broadway Junction and the return bullwheels would be located at Alameda Station. At Chinatown/State Park Station within this section, sheaves would control the haul rope. For the section from Broadway Junction to Dodger Stadium Station, the drive bullwheels and associated motors and drive equipment are anticipated to be at Dodger Stadium Station, and the return bullwheels would be located at Broadway Junction. The track ropes end at stations or the junction. Within the stations or junction, track ropes are wrapped around large bollards. Additional length of track rope is supplied and stored in spools within a station or junction for future use. The system includes a tension system to maintain rope tension and the appropriate ropeway sags.

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#### SECTION 3.0 - PROJECT DESCRIPTION



Figure <u>3-5</u> <del>2-5</del>: Illustrative Design of a Station \*This illustrative design depicts Alameda Station



Figure <u>3-6</u> <del>2-6</del>: Illustrative Design of a Tower

\*This Illustrative design depicts Alameda Tower in the foreground and Alpine Tower in the middle ground.

### 3.4.3 2.4.3 Stations and Junction

The proposed Project would include three passenger stations and one non-passenger junction. The basic elements of each station include mechanical, electrical, and plumbing systems, boarding platforms, and vertical circulation (e.g., stairs, escalators, and elevators). The stations also would include areas for ticketing, fare checking, and queueing (described in Section <u>3.7.2</u> <del>2.8.2</del> below); loading and unloading of passengers; operations; and system equipment. Stations would be secured nightly by closing the vertical access to the platforms. Security monitoring would be provided by staff and by cameras, which would feed into the control rooms constructed at each station and the system control room at Dodger Stadium Station. Each station would be staffed at all times during operations. During non-operational hours, Dodger Stadium Station would be staffed with personnel performing maintenance and other activities, and operators in the control room would monitor activities throughout the proposed Project.

The boarding platforms at Alameda Station and Chinatown/State Park Station would be elevated so that the cabins have sufficient space to travel above people, cars, trees, and other urban elements in the immediate vicinity of these stations. The cabins would descend into the station and ascend as they leave the station. Dodger Stadium Station would be designed so that passengers would unload and load at ground level. The length and sizing of the arrival/departure platforms would be designed to accommodate the space needed for cabin deceleration and acceleration, and would be compliant with the accessibility requirements of the Americans with Disabilities Act (ADA). As cabins enter a station, they would detach from the haul rope and be under the control of tire conveyors, which are made up of a series of tires in stations and junctions that move the cabins, including to decelerate and accelerate, while the cabins are detached from the haul rope. The cabin would slow down as it enters the station to a speed at which the passengers could exit, and the cabin doors would then open allowing passengers to exit and enter the cabin.

At Alameda Station and Dodger Stadium Station, the cabin doors would open, and passengers would unload. The cabins would then execute a U-turn in the station before passing through the load zone for passengers. Upon reaching the end of the load zone, the doors would close. The cabins would then speed up until the cabin speed matches that of the haul rope, and the cabin would reattach to the haul rope and depart the station. At Chinatown/State Park Station, the process would be similar, except the cabins would not execute a U-turn. Rather, they would detach from the haul rope, slow to boarding speed, open the doors for exit and entry, close the doors, speed up, and reattach to the haul rope.

The junction would be a non-passenger facility that is required for the ART system in order to turn the cables of the proposed Project and remain along the alignment. The junction would include mechanical systems, including equipment necessary for the cabins to detach from the haul rope, slow to a speed to turn, accelerate, and then reattach to the haul rope. The junction would also include vertical circulation (i.e., elevators and stairs) for maintenance access.

At each end of a station or junction, the rope position would be controlled by a pressure frame, which would support and guide the ropes. The pressure frames also provide a means for transitioning cabins from the ropes to the station or junction equipment. The approximate lengths of the pressure frames at each of the proposed Project stations and junction are anticipated to be: Alameda Station – 40 feet;

Chinatown/State Park Station – 40 feet (south end) and 60 feet (north end); Broadway Junction – 60 feet (south end) and 40 feet (west end); and Dodger Stadium Station – 60 feet.

Within the stations and junction, overhead bridge cranes would allow the insertion or removal of equipment as may be required for maintenance activities.

### 3.4.4 2.4.4 Towers

The proposed Project would require three towers to be constructed between the stations and the junction. The towers would be designed as monopoles and would support the steel cables required for the 3S system described in Section 3.4.2 2.5.2 above. The towers would be built to current seismic and structural standards.

Additionally, at towers, mechanical equipment would provide rope control and maintenance functions. The track ropes are supported by the profile beams. Between the profile beams, the haul rope rides on a series of wheels, or sheaves, which maintain the rope position. A hoisting gantry is provided at the towers to perform heavy maintenance activities. The ropeway equipment is supported atop the tower by the crossarm.

### <u>3.4.5</u> 2.4.5 Gondola Cabins

The proposed Project would utilize 3S gondola cabins. As discussed in Section <u>3.4.2</u> <del>2.5.2</del>, 3S technology enables larger passenger cabins and, thus, more carrying capacity than other available aerial gondola technology. The 3S cabins typically carry between 30 to 40 passengers each, depending on the exact configuration of seating and cabin amenities selected. The cabins would allow for sitting or standing; would accommodate wheelchairs, baby strollers, and bicycles; and would be fully ADA accessible.

Cabins would feature a ventilation system and sealed windows for viewing purposes, which, for security reasons, would not open. Each cabin would have a security camera on board with a feed to the control room, as well as a "push to talk" button, which would open two-way communications with the control room. The control room would be able to address all cabins at once, or an individually selected cabin. Each cabin would have a set of two sliding doors that open and close automatically under safety controls in stations. Cabin windows <del>could</del> <u>can</u> be equipped with privacy glass that can become opaque while adjacent to sensitive views, and the proposed Project would work with stakeholders adjacent to the proposed Project alignment to identify locations where the use of privacy glass would be warranted.

The cabins would move at a maximum speed of 13.4 miles per hour during peak operations. As they enter a station, the cabins would slow down to a speed of roughly one foot per second (less than one mile per hour) to allow passengers to enter and exit the moving cabin. This is achieved by detaching the cabins from the haul rope in the station. Once a cabin is detached from the haul rope, the cabin can move at a speed independent of the haul rope, allowing the cabins "on line" (i.e., not in a station) to continue to move at a higher speed. If needed, a cabin could be stopped to accommodate passenger boarding. At peak operations, it is anticipated cabins would arrive in a station approximately every 23 seconds and, once a new load of passengers has boarded, the cabin would re-attach to the cable and advance to the next station. Outside of stations, moving cabins would be spaced approximately 450 feet from one another during peak operations.

### 3.4.6 2.4.6 Aerial Clearance

Industry standards for the design and operation of ropeways and cabins are documented in the American National Standards Institute (ANSI) Standard B77.1, which is developed in coordination with manufacturers, consumers, and regulators. ANSI B77.1 regulates vertical and horizontal clearances between the ropeway and cabins to elements such as vehicles, pedestrians, vegetation, buildings, and other structures. ANSI B77.1 provides minimum clearance requirements depending on the nature of the element and whether the clearance is vertical or horizontal.

To define the width of the ropeway path which must be clear of elements, the horizontal clearance outside of the cabin paths as required by the ANSI B77.1 safety standard for passenger ropeways was used.<sup>21</sup> ANSI B77.1 includes two criteria, both of which must be met, for horizontal clearance between the cabin and an adjacent element: when hanging vertically, the cabins must be no closer than five feet to any obstruction that is not part of the ropeway system; and when the cabins are tilted within a prescribed range (as from wind), the cabins must not come into contact with anything. For the proposed Project, the five-foot requirement is slightly wider than the swing requirement, so the five-foot requirement controls the design path width. The proposed Project would include five feet on each side of the vertically hanging cabins for a required aerial clearance width of 53 feet 2 inches. The proposed Project would also include an Additional Separation Buffer. Figure <u>3-7</u> <del>2-7</del> depicts the proposed Project's anticipated aerial rights requirements and the Additional Separation Buffer.

Based on the current design, the Additional Separation Buffer is estimated to be approximately 10 feet on each side of the required aerial clearance width based on applicable standards, requirements, building codes, and guidelines. The proposed Project's Additional Separation Buffer would comply with applicable standards, requirements, building codes, and guidelines as determined by the City of Los Angeles and Metro. The final width of the Additional Separation Buffer would be determined by the appropriate agencies during the permitting process for the proposed Project.

Vertical clearances are dependent upon the nature of the element below the ropeway and cabins. ANSI B77.1 requires the following vertical clearances: vehicles – five feet,<sup>22</sup> vegetation or terrain – five feet; atgrade where pedestrians are present – eight feet; buildings – five feet; and roadways or railways – to be determined with authority having jurisdiction. Subject to these ANSI B77.1 requirements, vehicles, vegetation or terrain, pedestrians, buildings, and roadways or railways are permitted below the ropeway and cabins.

The above discussion addresses ANSI B77.1 - 2017 and ANSI B77.1 – 2022 requirements for clearances. While California has not codified the 2017 or 2022 versions of ANSI B77.1, the State follows industry best practices and the current version of ANSI B77.1 is considered the de facto requirement by the California Division of Occupational Safety and Health (Cal/OSHA), the agency responsible for the regulation of passenger ropeways within California. The proposed Project would meet and anticipates exceeding the ANSI B77.1 – 2017 and ANSI B77.1 – 2022 requirements for clearances.

<sup>&</sup>lt;sup>21</sup> American Nat'l Standards Inst., ANSI B77.1-2017 Passenger Ropeways – Aerial Tramways, Aerial Lifts, Surface Lifts, Tows and Conveyors – Safety Standard. On May 5, 2022, ANSI B77.1-2022 was approved and is in publication. The aerial clearance requirements of ANSI B77.1 are unchanged in the revision from 2017 to 2022.

<sup>&</sup>lt;sup>22</sup> While ANSI B77.1 requires five feet for vehicles, the proposed Project is providing a minimum of 28 feet above roadways.

#### 2.5 PROPOSED PROJECT ALIGNMENT AND COMPONENTS 3.5

The proposed Project "alignment" includes the suspended above-grade cables and cabins following the position of the Project components along the proposed alignment from Alameda Station to Dodger Stadium Station. The proposed alignment and locations, heights, widths, sizes, and design of the Project components listed in Section 3.5.1 2.6.1 are approximate and may change slightly during final design based on the discretionary entitlements, reviews, and approvals required for implementation of the proposed Project.

### 3.5.1 2.5.1 Proposed Project Alignment

The proposed Project alignment described below is preferred because it best accommodates various technical and design objectives and considerations.

The proposed Project alignment was chosen as it maximizes alignment along the public ROW and publicly owned property and minimizes aerial rights over private properties, taking into account existing and future adjacent land uses. Figure 3-8 2-8 shows the portions of the proposed alignment over public ROW and publicly owned property and the portions of the proposed alignment over private property. Proposed Alignment Plan and Profile (Appendix Q) includes additional detail as to the public ROW, publicly owned property and private properties.<sup>23</sup> Additional considerations for the location of the proposed alignment included minimizing utility relocations, reducing changes to travel lanes, parking lanes, and bicycle and pedestrian circulation, location of historic and archaeological resources, and use of uneven or difficult topography. The proposed alignment profile is provided in Proposed Alignment Plan and Profile (Appendix Q).<sup>24</sup>

<sup>&</sup>lt;sup>23</sup> <u>Refer to Appendix O, Supplemental Graphics of Proposed Alignment Plan and Profile, of this Final EIR, for supplemental graphics as to the</u> proposed Project alignment plan and profile, provided in response to comments on the Draft EIR for informational purposes, as larger scale insets of the graphics originally provided in Appendix Q of the Draft EIR. <sup>24</sup> *Ibid*.



Figure 3-7 2-7: ANSI Requirements and Additional Separation Buffer<sup>25</sup>

<sup>&</sup>lt;sup>25</sup> A larger scale inset of this graphic, originally provided in Appendix Q, Proposed Alignment Plan and Profile, of the Draft EIR, has been provided in Appendix O, Supplemental Graphics of Proposed Alignment Plan and Profile, of the Final EIR.





<sup>&</sup>lt;sup>26</sup> A larger scale inset of this graphic, originally provided in Appendix Q, Proposed Alignment Plan and Profile, of the Draft EIR, has been provided in Appendix O, Supplemental Graphics of Proposed Alignment Plan and Profile, of the Final EIR.

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The proposed Project alignment would extend approximately 1.2 miles beginning near El Pueblo and LAUS on Alameda Street. The proposed Alameda Station would be constructed over Alameda Street between Los Angeles Street and Cesar E. Chavez Avenue, adjacent to the Placita de Dolores and planned LAUS Forecourt. The location of Alameda Station was selected because it maximizes the proposed alignment over public ROW and publicly owned property and minimizes aerial rights over private properties. The Alameda Station location was also selected because of its high visibility and proximity to LAUS and El Pueblo, safe and convenient pedestrian connection to and from the LAUS passenger terminal and El Pueblo, as well as adjacency to public space for passenger access. The location is also compatible with Metro's plans at LAUS, including the planned LAUS Forecourt and Esplanade Improvements Project. Additional considerations include minimizing impacts to historic and archaeological resources.

From Alameda Station, the proposed Project alignment would remain primarily above the public ROW with portions above private property, and travel north along Alameda Street to the proposed Alameda Tower, which would be constructed on the Alameda Triangle, a portion of City ROW between Alameda Street, North Main Street, and Alhambra Street.

From Alameda Tower, the proposed Project alignment would continue north along Alameda Street and cross Alpine Street. The proposed Alpine Tower would be constructed at the corner of Alameda Street and Alpine Street on City-owned property. In the process of selecting tower locations, the proposed Project prioritizes the use of public property and minimizes private land acquisition, and also considers the proposed Project's relationship to existing adjacent and potential future land uses. Technical considerations of tower locations also includes optimizing the height of the towers and minimizing the number of towers. Additionally, the proposed Project limits the bend on the towers to less than two degrees.

From Alpine Tower, the proposed Project alignment would follow the public ROW and continue over the elevated Metro L Line (Gold). North of College Street, Alameda Street becomes Spring Street, and the proposed alignment would generally follow Spring Street in a northeast trajectory until it reaches the southernmost point of Los Angeles State Historic Park, where the proposed Chinatown/State Park Station would be constructed partially on City ROW and partially within the boundaries of the Los Angeles State Historic Park. The Chinatown/State Park Station location minimizes the proposed Project's footprint within the Los Angeles State Historic Park.

The alignment then crosses over the western edge of the Los Angeles State Historic Park and the Metro L Line (Gold) tracks. The Chinatown/State Park Station location avoids adjacent private properties while maintaining transit access to surrounding communities within a half mile walkshed to transit, including the Park, Chinatown, Mission Junction including William Mead Homes, Los Angeles River, and North Broadway.

The proposed Project alignment would continue traveling north towards the intersection of North Broadway and Bishops Road. Broadway Junction would be located at the northern corner of the intersection of North Broadway and Bishops Road (1201 North Broadway). From Broadway Junction, the proposed Project alignment would travel northwest primarily along Bishops Road, with portions above private property, crossing over SR-110 towards Dodger Stadium. The proposed Stadium Tower would be located on hillside private property north of Stadium Way between the Downtown Gate entrance road to

Dodger Stadium and SR-110. The northern terminus of the system would be located in a parking lot at the Dodger Stadium property, where the proposed Dodger Stadium Station would be constructed.

#### 3.5.1.1 2.5.1.1 Alameda Station

Alameda Station would be located on Alameda Street adjacent to the planned LAUS Forecourt and Placita de Dolores between Los Angeles Street and Cesar E. Chavez Avenue. The station would be approximately 173 feet long, 109 feet wide, and 78 feet high at its tallest point, with the passenger loading platform approximately 31 feet above Alameda Street. Vertical circulation elements (i.e., elevators, escalators, stairs) for pedestrian access, which would also serve as queuing areas to the station, would be introduced at-grade north of the Placita de Dolores in a proposed new pedestrian plaza at El Pueblo on the west in an area currently used as a parking and loading area for El Pueblo. Figure  $3-9 \ 2-9$  is an illustrative drawing showing the proposed new pedestrian plaza at El Pueblo. On the east, vertical circulation elements would be introduced at-grade from the planned LAUS Forecourt. Installation of the vertical circulation elements may include removal of approximately 12 trees, removal of parking and loading for El Pueblo, and installation of landscaping and hardscape. Figure  $3-11 \ 2-10$  shows the proposed location of the Alameda Station, and Figure  $3-12 \ 2-11$  shows cross sections of the station.



#### Figure 3-9 2-9: Proposed Pedestrian Plaza at El Pueblo

#### 3.5.1.2 Alameda Tower

Alameda Tower would be located on the Alameda Triangle, a City ROW between Alameda Street, North Main Street, and Alhambra Avenue consisting of a small green space flanked on all sides by roadways. Alameda Tower would be 195 feet tall with the cable suspended 175 feet above-ground. The Alameda Tower would require the removal of approximately 10 trees and vegetation. Implementation of Alameda Tower would include reuse and integration of the existing pavers located at the Alameda Triangle, as well as landscape and hardscape updates to the Alameda Triangle. Figure 3-10 is an <u>illustrative drawing showing the proposed improvements at Alameda Triangle</u>. Figure 3-13 2-12 shows the proposed location of Alameda Tower, and Figure 3-14 2-13 shows the elevation and profile of the tower.



Figure 3-10: Proposed Improvements at Alameda Triangle



Figure 3-11 2-10: Proposed Alameda Station Location





#### Figure 3-12 2-11: Alameda Station Cross Sections



Figure 3-13 2-12: Proposed Alameda Tower Location



Figure 3-14 2-13: Alameda Tower Elevations

#### <u>3.5.1.3</u> <u>2.5.1.2</u> Alpine Tower

Alpine Tower would be located on a City-owned parcel, currently being used as non-public parking storage for City vehicles, at the northeast corner of Alameda Street and Alpine Street, adjacent to the Metro L Line (Gold). Alpine Tower would be 195 feet tall at its tallest point, with the cable suspended 175 feet above ground. Alpine Tower would also include the installation of landscaping and hardscaping near the base of the tower. Figure 3-15 is an illustrative drawing showing the proposed improvements at the location of the Alpine Tower. Figure 3-19 2-14 shows the proposed location of Alpine Tower, and Figure 3-20 2-15 shows the elevation and profile of the tower.



#### Figure 3-15: Proposed Improvements at Alpine Tower

#### 3.5.1.4 2.5.1.3 Chinatown/State Park Station

Chinatown/State Park Station would be located adjacent to Spring Street in the southernmost portion of the Los Angeles State Historic Park. The southern portion of the station would be located on City ROW, while the northern portion of the station would be integrated into the southern boundary of the Los Angeles State Historic Park. The station would be approximately 200 feet long, 80 feet wide, and 98 feet tall at its tallest point, with the passenger boarding platform approximately 50 feet above-grade. Access to the boarding platform would be from the mezzanine via elevators and stairs. Comprised of three levels, elevators and stairs from the ground level would lead up to a mezzanine, 27 feet above-grade, and ramps for the queuing area would lead up to the boarding platform, which is 50 feet above-ground.

Chinatown/State Park Station would also include Park amenities, including approximately 740 square feet of concessions, 770 square feet of restrooms, and a 220 square foot covered breezeway connecting the concessions and restrooms. Additionally, Chinatown/State Park Station would include a mobility hub where passengers would be able to access a suite of first and last mile multi-modal options, such as a bike

share program. Pedestrian access enhancements could include pedestrian improvements between Metro's L Line (Gold) Station and Chinatown/State Park Station consistent with the Connect US Action Plan, including hardscape and landscape improvements, shade structures, and potential seating, as well as support for the future Los Angeles State Historic Park bike and pedestrian bridge. Figure 3-16 is an illustrative drawing showing the view from the Chinatown/State Park Station looking southwest from within the southern portion of the Park, showing pedestrian access enhancements, hardscape, and landscape improvements, potential seating, shade structures, and mobility hub. Figure 3-17 is an illustrative drawing looking northeast from within the southern portion of the Park, showing Park amenities including the restrooms and covered breezeway. Figure 3-18 is an illustrative drawing looking north from within the southern portion of the Park, showing Park amenities including the concession and covered breezeway. Figure 3-21 2-16 is an illustrative drawing of the potential pedestrian improvements between Metro's L Line (Gold) Station and Chinatown/State Park Station. The Chinatown/State Park Station would require the removal of approximately 30 trees and vegetation; however, it would include the installation of landscaping and hardscaping, including integration of the granite pavers. The aerial rights requirements for the proposed Project would require the additional removal of approximately 51 trees within the Los Angeles State Historic Park; however, the proposed Project would include the installation of replacement trees. Chinatown/State Park Station would provide passenger access to Chinatown, the Los Angeles State Historic Park, and to nearby neighborhoods and land uses, including the Mission Junction neighborhood, which includes the William Mead Homes public housing complex. Figure 3-22 2-17 shows the proposed location of Chinatown/State Park Station, and Figure 3-23 2-18 shows cross sections of the station.



Figure 3-16: Proposed Pedestrian Improvements at Chinatown/State Park Station



Figure 3-17: Proposed Park Amenities including Restrooms and Covered Breezeway



Figure 3-18: Proposed Park Amenities including Concession and Covered Breezeway


Figure 3-19 2-14: Proposed Alpine Tower Location



Figure 3-20 2-15: Alpine Tower Elevations



Figure 3-21 2-16: Illustrative Design of Pedestrian Improvements at Chinatown/State Park Station



Figure 3-22 2-17: Proposed Chinatown/State Park Station Location



#### Figure 3-23 2-18: Chinatown/State Park Station Cross Sections

#### 3.5.1.5 2.5.1.4 Broadway Junction

Broadway Junction is a nonpassenger junction that would be located at the intersection of North Broadway and Bishops Road. The junction would primarily be located on privately-owned property with a portion of the junction and overhead cable infrastructure cantilevered and elevated above the public ROW. The existing commercial building located at 1201 N. Broadway would be demolished. Broadway Junction would be approximately 227 feet long, 60 feet wide, and 98 feet high at its tallest point, with the platform approximately 50 feet above the ground. Vertical circulation elements (i.e., elevators and stairs) would be installed on the northwest side of the junction for staff and maintenance access to the platform. The Broadway Junction would require the removal of approximately 25 trees and vegetation. Figure 3-24 is an illustrative drawing showing the Broadway Junction. Figure 3-26 2-19 shows the proposed location of Broadway Junction, while Figure 3-27 2-20 shows cross sections of the junction.



#### Figure 3-24: Proposed Broadway Junction

#### 3.5.1.6 2.5.1.5 Stadium Tower

Stadium Tower would be located on hillside private property north of Stadium Way between the Downtown Gate and SR-110 and would stand 179 feet tall with the cable suspended 159 feet aboveground. Stadium Tower would include removal of approximately 10 trees and vegetation, however, it would include the installation of landscaping near the base of the tower. The surrounding fire buffer area around the Stadium Tower would include the removal of approximately 21 <u>45</u> significant trees and vegetation. Figure 3-25 is an illustrative drawing showing the Stadium Tower view from Arroyo Seco Parkway/SR-110 towards Downtown Los Angeles. Figure 3-28 2-21 shows the proposed location of Stadium Tower, and Figure <u>3-29</u> 2-22 shows the elevation and profile of the tower.



#### Figure 3-25: Proposed Stadium Tower view from Arroyo Seco Parkway/SR-110 towards Downtown Los Angeles

#### 3.5.1.7 2.5.1.6 Dodger Stadium Station

Dodger Stadium Station would be located in the southeast portion of the Dodger Stadium property near the Downtown Gate. This station would be approximately 194 feet long, 80 feet wide, and 74 feet high at its tallest point. Cabins at this station would arrive and depart from an at-grade boarding platform, with the passenger queuing area also at-grade. Dodger Stadium Station would include a subterranean area below the platform for storage and maintenance of cabins, as well as staff break rooms, lockers, and parts storage areas. The cabins would be transferred between the station platform and the subterranean area by way of a cabin elevator. Automated parking and controls would manage the process of storing cabins or returning them to service. Cabins would be returned to and stored at Dodger Stadium Station when the system is not in use.

Restrooms for passenger use would be located at the station. Dodger Stadium Station would also include a pedestrian connection to Dodger Stadium, including hardscape and landscape improvements and potential seating. Figure <u>3-30</u> <del>2-23</del> is an illustrative drawing showing the pedestrian connection between Dodger Stadium Station and Dodger Stadium.



Figure 3-26 2-19: Proposed Broadway Junction Location



Figure 3-27 2-20: Broadway Junction Cross Sections



Figure 3-28 2-21: Proposed Stadium Tower Location



Figure <u>3-29</u> <del>2-22</del>: Stadium Tower Elevations



Figure <u>3-30</u> <del>2-23</del>: Illustrative Drawing of Pedestrian Connection between Dodger Stadium Station and Dodger Station

Dodger Stadium Station would be located adjacent to Dodger Stadium in a portion of the existing parking lot. The <u>proposed</u> Project <u>would</u> include a mobility hub where outside of game day periods, passengers would be able to access a suite of first and last mile multi-modal options, such as a bike share program and individual bike lockers, to access Elysian Park and other nearby neighborhoods, including Solano Canyon. <u>The Project Sponsor would coordinate with the Los Angeles Dodgers on</u> maintaining security for Dodger Stadium and the surrounding surface parking areas.

Implementation of Dodger Stadium Station would require the removal of parking spaces, as well as removal of approximately 33 trees and vegetation, however, it would include the installation of replacement landscaping. Figure 3-31 2-24 shows the proposed location of Dodger Stadium Station, while Figure 3-32 2-25 shows cross sections of the station.



Figure 3-31 2-24: Proposed Dodger Stadium Station Location



Figure 3-32 2-25: Dodger Stadium Station Cross Sections

### 3.5.1.8 2.5.1.7 Summary of Proposed Project Components

Table 3-2 2-2 provides an overview of the station and junction components associated with the proposed Project. Table 3-3 2-3 provides an overview of the proposed towers associated with the proposed Project.

# 3.6 2.6 RIDERSHIP

The proposed Project would be configured to operate based on the anticipated ridership for Dodger games and special events at Dodger Stadium, events at the Los Angeles State Historic Park, commuters and residents in adjacent neighborhoods, and visitors to Los Angeles. The proposed Project has the flexibility to operate at varying speeds and capacity depending on ridership. The capacity could quickly be increased or decreased to meet demand by increasing or decreasing the number of cabins on the ropeway and the speed of the haul rope. During peak operations, the proposed Project would carry up to approximately 5,000 people per hour per direction, and the travel time from LAUS to Dodger Stadium would be approximately seven minutes. The cabins would move at a maximum speed of 13.4 miles per hour with headways of approximately 23 seconds, which represents the time between cabins. If needed, cabins could be either slowed or stopped in the station for boarding purposes. The time necessary to slow or stop cabins is factored into the overall system capacity of the proposed Project.

The proposed Project would provide service to all pre-season, regular season, and post-season Los Angeles Dodger games and any special events (e.g., concerts, the Los Angeles Marathon) at the Dodger Stadium property. The proposed Project would also provide service to events at the Los Angeles State Historic Park. In addition to providing service on game and special event days at Dodger Stadium and events at the Los Angeles State Historic Park, it is anticipated that the proposed Project would also provide daily service between 6:00am to 12:00am, subject to operational changes in response to ridership demand. Service would be to the following riders:

- Dodger game/Stadium event attendees;
- Dodger game/Stadium event employees;
- Tourists or others who want to ride ART;
- Visitors to the Los Angeles State Historic Park and Elysian Park; and
- Commuters or residents in adjacent neighborhoods, including El Pueblo, Chinatown, Mission Junction, Elysian Park, Echo Park, and Solano Canyon.

The proposed Project would provide an additional transit option to riders along the proposed alignment, as it would provide a direct connection between LAUS and Chinatown and Mission Junction and Elysian Park with Chinatown/State Park Station and Dodger Stadium Station. From Dodger Stadium Station, riders could use the proposed pedestrian connections and/or mobility hub to access Elysian Park and other nearby neighborhoods, including Solano Canyon. It is anticipated that the proposed Project operations would vary the number of cabins in service and speed throughout the day, based on demand.

The proposed Project would allow all residents, employees, and businesses located close to the proposed Project to ride the gondola using their Metro fare at no additional cost under the Community Access Plan. Moreover, transfers to and from the Metro regional transit system and the proposed Project would be free. In addition, the Community Access Plan would honor Metro's numerous discount fare programs for a variety of needs (i.e., senior fares, student fares, etc.). Residents and employees of businesses located within the communities adjacent to the proposed Project alignment would only pay the rate they pay to ride the Metro system. In addition, the proposed Project would be free to ride for anyone with a ticket to a Dodger game.

Location	Passenger Station	Station Size (square feet)	Canopy Size (square feet)	Height of Platform (feet above- ground)	Height of Station (feet above- ground)
Alameda Street between Los Angeles Street and Cesar E. Chavez Avenue	Yes	15,279	19,217ª	31	78
Along Spring Street within the southernmost point of Los Angeles State Historic Park	Yes	22,361°	15,212	50	98
Intersection of North Broadway and Bishops Road	No	12,615	13,331	50	98
Dodger Stadium parking lot	Yes	37,395₫	16,001	At-Grade	74
	Location Alameda Street between Los Angeles Street and Cesar E. Chavez Avenue Along Spring Street within the southernmost point of Los Angeles State Historic Park Intersection of North Broadway and Bishops Road Dodger Stadium parking lot	LocationPassenger StationAlameda Street between Los Angeles Street and Cesar E. Chavez AvenueYesAlong Spring Street within the southernmost point of Los Angeles State Historic ParkYesIntersection of North Broadway and Bishops RoadNoDodger Stadium parking lotYes	LocationPassenger StationStation Size (square feet)Alameda Street between Los Angeles Street and Cesar E. Chavez AvenueYes15,279Along Spring Street within the southernmost point of Los Angeles State Historic ParkYes22,361°Intersection of North Broadway and Bishops RoadNo12,615Dodger Stadium parking lotYes37,395°	LocationPassenger StationStation Size (square feet)Canopy Size (square feet)Alameda Street between Los Angeles Street and Cesar E. Chavez AvenueYes15,27919,217°Along Spring Street within the southernmost point of Los Angeles State Historic ParkYes22,361°15,212Intersection of North Broadway and Bishops RoadNo12,61513,331Dodger Stadium parking lotYes37,395°16,001	LocationPassenger StationStation Size (square feet)Height of Platform 

<sup>b.</sup> Chinatown/State Park Station also includes 1,419 sf of Park Amenities.

<sup>6</sup> The station size square footage for Chinatown/State Park Station includes an approximately 8,063 sf mezzanine.

<sup>d.</sup> The station size square footage for Dodger Stadium Station includes an appromately approximately 24,650 sf subterranean area below

the station's platform for storage and maintenance of cabins, as well as staff break rooms, lockers, and parts storage areas.

Table 3-3 2-3. Flobuseu Flolett Tower Details
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Tower Name	Location	Height to Top of Tower	Cable Height	
Alameda Tower	Alameda Triangle, a City ROW between Alameda Street, North Main Street, and Alhambra Avenue	195 feet	175 feet	
Alpine Tower	Northeast corner of Alameda Street and Alpine Street on a City-owned parcel	195 feet	175 feet	
Stadium Tower	Private property north of Stadium Way	179 feet	159 feet	

#### 3.7 2.7 SYSTEM OPERATIONS

# 3.7.1 2.7.1 Typical Operating Logistics

During operations, the cabins would travel on a continuous loop between Alameda Station and Dodger Stadium Station. Cabins would pass through passenger stations at roughly one foot per second (less than one mile per hour) to allow for unloading and loading. If needed, a cabin could be stopped to accommodate passenger boarding. After the cabins pass through the unload/load zones, the doors would close and the cabins would accelerate to match the line speed of the haul rope before reattaching to the haul rope.

At Alameda Station, arriving cabins (southbound) would decelerate, doors would open, and passengers would unload. The cabins would execute a U-turn in the station before passing through the load zone (for northbound passengers), load passengers (if any), close doors, then accelerate to be reattached to the haul rope.

At Chinatown/State Park Station, cabins would detach from the rope and decelerate to the station speed. Since passenger access would be provided at this station, the cabins would decelerate to about one foot per second (less than one mile per hour) and the doors would open. After traveling through the unload and load zones, the cabin doors would close, and the cabins would accelerate to line speed and then reattach to the haul rope.

At Broadway Junction, where passenger unloading or loading is not proposed, the cabins would detach from the haul rope, decelerate to a speed of approximately six mph, execute a slight turn to follow the alignment, and then re-accelerate and reattach to the haul rope. As described in Section 2.5.2 3.5, Alameda Station to Broadway Junction and Broadway Junction to Dodger Stadium Station systems come together at Broadway Junction. When the cabins detach from the haul rope in the Junction, their move from one haul rope to the other haul rope would not be perceptible by passengers.

At Dodger Stadium Station, the cabins would decelerate, doors would open, and passengers would unload. Since Dodger Stadium Station would be an end station, the cabins would execute a U-turn in the station before passing through the load zone (for southbound passengers), load passengers (if any), close doors, then accelerate and reattach to the haul rope.

As described above, gondola cabins would enter, traverse, and depart stations under fully automated control. Operation of the proposed Project would require approximately 20 personnel. Station attendants would be located within each station to assure safe boarding or to execute stops, if necessary. Attendants would also provide customer interaction and observation; if a passenger needs special assistance, an attendant may either further slow or stop a cabin. A separate operator would sit in a control booth and monitor screens, which would show activities in each cabin and station, as well as the system controls.

# 3.7.2 2.7.2 Queueing and Ticketing/Fare Checking

Queueing areas would be built into and as necessary, adjacent to, each of the stations to provide a gathering place for passengers waiting to enter the stations, thereby preventing crowding of sidewalks and walkways by passengers around stations. Queueing for Alameda Station would occur in the planned LAUS Forecourt area on the east side of Alameda Street, and north of the Placita de Dolores in a proposed new pedestrian plaza at El Pueblo on the west side of Alameda Street. At Chinatown/State Park Station, queueing would occur on the mezzanine and boarding platform levels. At Dodger Stadium Station, the queueing area would be located on the north side of the station in a designated queueing area adjacent to the station.

Ticketing for the proposed Project would use either a chip-based card system or electronic ticketing that could be purchased and saved on a personal mobile device. Using these types of technologies would allow for contactless fare checking at the stations. Riders would pre-purchase their ticket prior to entering the boarding platform and fares would be checked using a card reader/scanner.

# 3.7.3 2.7.3 Signage

Similar to other transit projects that incorporate signage, the proposed Project would include signage to support wayfinding for transit passengers, including information about transit connections and other important information to facilitate transit usage. Private funding for the proposed Project is anticipated to be supported by naming rights and sponsorship revenues, and such sponsors would be recognized in Project signage, which would be designed consistent with applicable Metro, City, and State approval requirements. Such signage may include identification and other static signs, electronic digital displays and/or changeable message light-emitting diode (LED) boards that include both transit information and other content, which may include off-site advertising that generates proceeds to support transit system costs and operations. The digital signage would be limited to the Alameda Station and Dodger Stadium Station. Signage would be architecturally integrated into the design of the ART system including its stations, the junction, towers, and cabins. No digital signage is proposed on the exterior of the cabins. Signage proposed for the exterior of the cabins is static non-illuminated naming rights signage. In addition, directional and pedestrian signage would be placed adjacent to and throughout the proposed Project as necessary to facilitate access and safety, including along the pedestrian improvements between Metro's L Line (Gold) Station and the pedestrian connection between Dodger Stadium Station and Dodger Stadium. Project signage would be illuminated by means of low-level external lighting, internal lighting, or ambient light. Exterior lights would be directed onto signs to minimize off-site glare. Signage would be in conformance with all applicable requirements of the Los Angeles Municipal Code (LAMC), and in accordance with LAMC, lighting intensity will be minimized in order to avoid negative impacts to adjacent residential properties.

# 3.7.4 2.7.4 Lighting

Project lighting would include low-level lighting for security and wayfinding purposes adjacent to and within the stations, junction, towers, within cabins, at the vertical circulation, and areas for ticketing, fare checking, and queueing. In addition, low-level lighting to accent signage, architectural features, landscaping, adjacent pedestrian plazas, Chinatown/State Park Station mobility hub, and Dodger Stadium Station mobility hub would be installed at the stations, junction, and towers. Lighting would also be provided underneath the elevated stations and junction. Lighting for the pedestrian access enhancements, including the pedestrian improvements between Metro's L Line (Gold) Station and the pedestrian connection between Dodger Stadium Station and Dodger Stadium, would include new pole lights for security and wayfinding purposes, as well as low-level lighting to accent signage and landscaping.

Lighting would be low-level and primarily integrated within the architectural features. Exterior lighting would be shielded or directed toward the areas to be lit to limit spillover onto adjacent properties and off-site uses, and would meet all applicable LAMC lighting standards. The lighting would also meet all applicable safety standards.

# 3.7.5 2.7.5 Maintenance

The proposed Project would require routine maintenance that would be performed by the system operator. The overall system would be observed on a daily basis as part of the startup routine.

Routine maintenance activities would generally take place during overnight periods or other scheduled down time. Cabins and their associated grips and hangers would be maintained in the shop at Dodger Stadium Station. A work carrier cabin would be provided to facilitate work at tower equipment. Annual maintenance activities may require crane access at tower locations, including the potential to require the temporary closing of traffic lanes.

Rope maintenance schedules would be determined through a combination of system design and periodic monitoring. The haul rope would need replacement approximately every five to 10 years. This would require pulling a new haul rope, which would take up to two weeks to complete.

On a periodic basis, the system would undergo formal testing as prescribed by Cal/OSHA and appropriate ropeway standards. This formal testing is required by standards to occur at least every seven years. It is anticipated that the system would be closed to riders for up to two days during the formal testing events.

Backup power would be provided by battery storage located at each station and tower and the nonpassenger junction. The battery storage system would be tested on a regular basis and would provide backup power to allow unloading of the system in the event of a power grid failure.

# 3.7.6 2.7.6 Safety Systems and Ancillary Elements

The proposed Project would be designed to minimize operational disruptions resulting from equipment issues, which are often predictable and avoidable. The <u>proposed</u> Project would focus on avoiding such issues through preventative maintenance and by including redundant equipment.

Operational disruptions resulting from equipment issues would be minimized through robust design and periodic and preventative maintenance. Robust design is an approach where, after the design requirements are engineered, extra design factors are incorporated into the system. Information from other modern urban aerial rapid transit systems as well as the operating history of this system would be taken into account to schedule preventative and periodic maintenance. Combining experience from other systems with historical data from this system's operation would provide an evolving and robust maintenance program. The documentation would reflect daily, weekly, monthly and annual activities. Daily activities would largely focus on inspections to verify normal operation of components prior to public operations. Longer-term activities would generally focus on maintaining, replacing, or rebuilding components. Maintenance recommendations including inspection procedures and scheduled activities are required to be provided by the equipment provider. Compliance with those recommendations is required by Cal/OSHA, the authority responsible for regulating passenger ropeways in California.

To account for the possibility of potential mechanical issues that could potentially interrupt operations, the system would design and implement redundancies. Examples of redundancies include installation of two independent motors so that if the primary motor fails, the second motor would be utilized to unload passengers from the system. Additional redundancies could include elements such as bullwheels, brakes, and conveyors.

# 3.7.7 2.7.7 Emergency Operations Plan

Safety and emergency procedures would be separated into two types: personal events and equipment events. As described in Section <u>3.7.6</u> <del>2.7.7</del>, the proposed Project would be designed to minimize service interruptions resulting from either type of event.

For personal events, such as a medical situation, operators would have the ability to contact local security, law enforcement or other emergency response agencies. In addition to attendants at each station, the system would include video surveillance and audio communications in each station and in each cabin. These features would allow for control room operators to see and communicate with passengers at any point in their trip. The most common passenger need would be assistance with loading or unloading, which the attendant can resolve. The combination of staff and surveillance would allow operators to respond to events as appropriate. Security and response procedures for the larger crowds on event days would be established and followed.

In stations, the video surveillance would also serve to provide equipment monitoring. By observing operations from the control room, the equipment monitoring could allow for faster resolution of any system alarms or faults and may facilitate identification of unscheduled maintenance needs. Video surveillance at towers would be primarily for the purpose of equipment monitoring and diagnosis.

An Emergency Operations Plan would be prepared as part of the proposed Project and would include emergency response protocols and safety procedures developed in conjunction with the operator, system provider, and local authorities (e.g., LAFD and LAPD). The plan would address operational changes and communication protocols required in response to a range of potential emergencies such as a medical emergency in a cabin or in a station or a fire near the alignment. The plan would consider a wide range of scenarios for which default operational responses would be determined. In addition, the plan will include communication protocols with local authorities for further instruction and coordination.

The plan would also address the unlikely scenario where the system cannot be moved to unload passengers normally at stations. As noted above, the robust design, periodic and preventative maintenance, and equipment redundancies are intended to minimize this scenario. However, the plan would include procedures to evacuate passengers directly from cabins, if needed. Such an evacuation would involve emergency response services and would use specialized equipment such as ladder trucks, bucket trucks, or descending devices. An Evacuation Plan would be developed as part of the Emergency Operations Plan as required by industry standard ANSI B77.1 and Cal/OSHA regulations, to describe the preferred methods of evacuation based on the location of cabins, environmental conditions, and unusual terrain. The Evacuation Plan would include the required equipment and procedures for evacuation modes would be performed in advance of opening the system. The Evacuation Plan would document the procedures, equipment and personnel necessary to evacuate the system, as well as provide for documenting of training and practice. Such analysis, practice, and documentation are required by Cal/OSHA.

System components would be equipped with security features to ensure system safety. The gates and entrances to the stations would be locked at night and would be equipped with security features to prevent entrance by unauthorized personnel. The towers would have no publicly accessible gates or

entrances and would be inaccessible to unauthorized personnel. Maintenance doors at the base of the towers will be secured at all times and only accessible by authorized personnel. The system components will be equipped with security cameras to monitor activity at stations, the junction, the towers, and in each cabin.

# 3.7.8 2.7.8 Power Requirements

Operational power requirements can be separated into two categories: normal operations and emergency operations. Power requirements for the proposed Project would be provided by the City of Los Angeles Department of Water and Power's (LADWP) Green Power Program, through a connection to their power grid, and would include the power to operate the gondola system and the non-gondola system components (i.e., lights, ventilation, escalators, elevators). When operating at capacity, normal operations are estimated to require a total of approximately 2.5 megawatts of power.

Power for the cabins is expected to be provided by batteries located on each cabin. The batteries would be charged overnight while the cabins are stored at the subterranean cabin maintenance area below the Dodger Stadium Station. In addition, during operations, the batteries would be continuously charged by the movement of the cabins along the proposed Project alignment

Power requirements for emergency operations consist of the energy needed for operations in the event of a power grid failure. The proposed Project would include the installation of backup battery storage at each station, tower, and junction to provide backup power to allow unloading of the system in the event of a power grid failure. The total backup power required to allow unloading of the system is 1.4 megawatts.

# 3.7.9 2.7.9 Sustainability Features

The proposed Project would provide a sustainable, high-capacity zero emission ART option for visitors to Dodger Stadium, while also providing access between Dodger Stadium, the surrounding communities, and the regional transit system accessible at LAUS. ART technology is quiet, and the proposed Project would reduce VMT and congestion, leading to reduced GHG emissions and improved air quality.

The proposed Project's stations, junction, towers, and gondola cabins would incorporate energy efficient, sustainable, water and waste efficient, and resilient features, as feasible. The proposed stations and junction are designed to be open-air buildings, allowing for passive ventilation strategies and providing direct access to outdoor air and natural daylight, while also providing adequate shade protection from heat. The cabins would be ventilated to enhance air quality for passengers.

The design intent and structural strategy for the stations and towers also provides an efficiency of materials. The steel plate tower forms have been designed as "Monocoque" structures, where structure, form, and finish are unified. Materials for the stations, junction, and towers would be locally sourced where possible, and would include recycled content where possible. Light-toned finish materials will also serve to minimize heat island concerns.

The proposed Project would be designed to comply with all applicable state and local codes, including the City of Los Angeles Green Building and Low-Impact Development (LID) Ordinances.

A comprehensive list of the proposed Project's sustainability features would include the following, which was compiled from features included in the 2019 California Green Building Standards Code, United States Green Building Council Leadership in Energy and Environmental Design (LEED) for New Construction, and The Institute for Sustainable Infrastructure's Envision Rating System.<sup>27,28,29</sup>

- (1) Location/Transportation/Quality of Life
  - Encourage use of alternative modes of transportation.
  - Provide transit connection from the regional transit system accessible at LAUS to Dodger Stadium.
  - Provide opportunity to improve transit to underserved neighborhoods and uses along the alignment, including Chinatown, Mission Junction, Elysian Park, Echo Park, and Solano Canyon.
  - Provide opportunity to improve access to parks and green space.
  - Reduce vehicle trips to Dodger Stadium, Elysian Park, and the Los Angeles State Historic Park.
  - Reduce transportation related pollution and GHG emissions as a result of reduced vehicular congestion in and around Dodger Stadium, on neighborhood streets, arterial roadways, and freeways during game and special event days.
  - Provide a mobility hub at Chinatown/State Park Station and a <del>potential</del> mobility hub at the Dodger Stadium property to support mobility connectivity with the State Park and Elysian Park and surrounding communities, respectively.
  - Utilize 3S gondola system to minimize noise and vibration.
- (2) Sustainable Sites
  - Generally located the proposed Project within public ROW, publicly owned property or on previously developed sites.
  - Avoid utilization of greenfield sites and destruction of prime habitat, thereby avoiding destruction of biodiversity.
  - Site, design, and construct stations, the junction, and towers to minimize impacts to historic and archaeological resources, and to preserve viewsheds and local character.
  - Provide opportunity to enhance open space and green space at the Los Angeles State Historic Park and along the pedestrian pathway connecting Dodger Stadium Station and Dodger Stadium.
  - Design proposed Project to comply with the City's LID Ordinance, when applicable.
  - Select landscape planting palettes and species to be climate appropriate (drought tolerant), non-invasive, and to not require excessive pesticides and fertilizers.
  - Design site development on slopes (Stadium Tower and Dodger Stadium Station) to avoid excessive erosion and landslides.

<sup>&</sup>lt;sup>27</sup> 2019 California Green Building Standards Code<sub>7</sub>. 2019. <u>Aavailable at: https://calgreenenergyservices.com/wp/wp-content/uploads/2019 california green code.pdf</u>. <u>Accessed November 2023</u>.

<sup>&</sup>lt;sup>28</sup> United States Green Building Council Leadership in Energy and Environmental Design for New Construction v4.1, <u>A</u>evailable at: https://www.usgbc.org/leed/v41. <u>Accessed November 2023.</u>

<sup>&</sup>lt;sup>29</sup> The Institute for Sustainable Infrastructure-s. Envision Rating System, <u>Aavailable at: https://sustainableinfrastructure.org/envision/use-envision/. Accessed November 2023.</u>

- Select station, junction, and towers and hardscape materials to reduce Solar Reflective Index values to minimize heat island effect.
- Select lighting to comply with applicable requirements of the Los Angeles Municipal Code, CALGreen, and the California Motor Vehicle Code, so the proposed Project would not create a new source of light trespass or glare.
- (3) Water Efficiency
  - Design landscape planting to utilize drought tolerant plant palettes and low water use irrigation strategies.
  - Utilize municipal reclaimed water sources for irrigation where available and practical.
  - Utilize low flow plumbing fixtures and metered faucets in restrooms.
- (4) Energy Conservation
  - Design open-air station boarding platforms with natural shading and ventilation; air conditioned spaces occur only at cabins, maintenance support spaces, and restrooms.
  - Provide energy efficient LED or low voltage lighting fixtures.
  - Include energy efficient glazing, where it occurs.
  - Utilize Los Angeles Department of Water and Power green power sources.
  - Provide backup power by battery storage as opposed to diesel generators.
- (5) Materials and Resources
  - Sell and/or reuse or recycle more than 62,600 cubic yards of approximately 78,500 cubic yards of construction waste for backfill.
  - Utilize a waste management policy for system construction and operations to reduce volume of waste to landfills.
  - Use materials that are renewable, locally sourced, and/or have recycled content where practical for system construction and operations.
- (6) Indoor Environmental Quality
  - Design open air station boarding platforms, allowing for natural ventilation and natural daylighting.
  - Design mechanically ventilated spaces to comply with ANSI/ASHRAE 62.1 recognized standard for ventilation and indoor air quality and Title-24 residential ventilation requirements standards.
  - Utilize enhanced ventilation rates to improve occupant comfort and health.
  - Prohibit smoking inside common areas of buildings, and within 25 feet of building entries.
  - Specify low VOC products for all finishes.
  - Implement an indoor air quality management plan for enclosed spaces during construction.
  - Install new filtration media in the HVAC system and perform building flush-out prior to occupation of enclosed spaces.
  - Provide individual lighting controls for enclosed spaces where practical.

# 3.8 2.8 CONSTRUCTION

Construction of the proposed Project is anticipated to begin as early as 2024 and take approximately 25 months, including construction, cable installation, and system testing. The detailed construction procedures informing the environmental impact analyses are included in *Construction Assumptions* (Appendix B) to this EIR. A summary of the construction activities is provided below. Construction of the Project components may partially overlap in schedule, especially since construction would occur at several physically separated sites.

Utility relocations would occur prior to construction of the proposed Project components and would be coordinated directly with the utility providers. Following utility relocations, construction would commence. Detailed information on utilities relocations is included in *Construction Assumptions* (Appendix B) to this EIR.

During construction, some parking spaces at Dodger Stadium would be temporarily closed for construction of the Dodger Stadium Station and for overall Project construction trailers, laydown and staging areas, and construction worker parking.

Construction of more than one Project component would occur at the same time, with consideration of available materials, work crew availability, and coordination of roadway closures. Table 3-4 2-4 below includes the estimated duration to complete construction of each of the proposed Project components, the maximum depths of drilled piles, the maximum depth of excavation, the amount of excavation, and the amount of materials (soils and demolition debris) to be exported for each component of the proposed Project.

Component	Construction Duration	Maximum Construction Area	Maximum Depth of Drilled Piles	Maximum Depth of Excavation	Amount of Excavation	Amount of Materials Exported
Alameda Station	17 months	55,600 sq. ft.	125 feet	10 feet	2,728 cubic yards	2,295 cubic yards
Alameda Tower	12 months	40,600 sq. ft.	120 feet	10 feet	2,850 cubic yards	2,292 cubic yards
Alpine Tower	11 months	38,700 sq. ft.	120 feet	10 feet	3,606 cubic yards	2,887 cubic yards
Chinatown/ State Park Station	19 months	69,000 sq. ft.	80 feet	10 feet	6,267 cubic yards	4,567 cubic yards
Broadway Junction	19 months	65,000 sq. ft.	120 feet	7 feet	6,407 cubic yards	5,379 cubic yards
Stadium Tower	12 months	23,500 sq. ft.	120 feet	7 feet	1,286 cubic yards	1,202 cubic yards
Dodger Stadium Station	20 months	142,600 sq. ft.	55 feet	42 feet	44,313 cubic yards	44,001 cubic yards

 Table 3-4
 2-4: Proposed Project Construction Details

Following completion of construction, the gondola cables would be installed, followed by system testing and inspections.

Working hours would vary to meet special circumstances and restrictions, but are anticipated to be consistent with the City's allowable construction hours of Monday through Friday between 7:00 a.m. to 9:00 p.m. and Saturdays and National Holidays between 8:00 a.m. to 6:00 p.m. While not anticipated,

approval would be required from the City of Los Angeles Board of Police Commissioners for any extended construction hours and possible construction on Sundays.

Anticipated closures would include lane closures in which lanes would be closed 24-hours a day during certain phases of construction, or alternating closures during certain phases of construction, in which closures would occur during construction hours for approximately 10 hours a day, and roads would reopen during non-construction hours for approximately 14 hours a day. For alternating closures, during non-construction hours, steel plates would be placed over construction sites to the extent feasible in order to allow for vehicular and pedestrian circulation. The closures and hours would vary between location and phase of construction. The proposed Project would implement a Construction Traffic Management Plan that would include detours and ensure that emergency access is maintained throughout all construction activities.

# 3.9 2.9 PROJECT BUILDOUT

Once constructed, the proposed Project would result in permanent changes to roadways at some locations due to the installation of the stations, junction, and towers within the public ROW. Circulation in the areas around the stations and towers is described below. Figures 3-33 + 26 through 3-39 + 32 depict the proposed Project after buildout.

### 3.9.1 2.9.1 Alameda Station

Following construction of Alameda Station, circulation on Alameda Street between Cesar E. Chavez Avenue and Los Angeles Street would be similar to existing conditions with the exception of a new raised median introduced within the left-turn pocket on Alameda Street, as shown in Figure <u>3-33</u> <del>2-26</del>. The station columns and vertical circulation elements within City ROW would have a footprint of 800 square feet, and the station canopy would have an overhang of 17,180 square feet over City ROW. The escalators and queueing area for the station would be located to the east within an existing LAUS parking lot, and to the west north of the Placita de Dolores of El Pueblo de Los Angeles. The placement of the escalators and queueing on the east side of the station would be designed to accommodate the future development of the planned LAUS Forecourt and Esplanade Improvements Project. The vertical circulation would have a footprint of 1,180 square feet over the planned Forecourt, and the station canopy would have an overhang of 2,040 square feet over the planned Forecourt.

In terms of roadway configuration, and in consideration of the planned Alameda Esplanade project occurring along Alameda Street, Alameda Street would maintain two northbound through lanes, two southbound through lanes, one northbound through-right-turn lane, one northbound left-turn lane, and one southbound left-turn lane.

### 3.9.2 2.9.2 Alameda Tower

Following construction of Alameda Tower, Alameda Street between North Main Street and Alhambra Avenue would be similar to existing conditions with the exception of a new curb extension introduced along the eastern edge of Alameda Street in the vicinity of the tower, which would reduce existing parallel parking by six spaces, as shown in Figure <u>3-34</u> <del>2-27</del>. The tower would have a footprint of 900 square feet within Alameda Triangle, a City ROW.

In terms of roadway configuration, Alameda Street would maintain two northbound through lanes, three southbound through lanes, and one northbound left-turn lane.

### 3.9.3 2.9.3 Alpine Tower

Following construction of Alpine Tower, Alameda Street at its intersection with Alpine Street would be similar to existing conditions, as shown in Figure 3-35 2-28. The tower would have a footprint of 1,030 square feet within a City-owned parcel.

In terms of roadway configuration, Alameda Street would maintain two northbound through lanes, one southbound left-turn lane, two southbound through lanes, one southbound through-right lane, and one northbound left-turn lane. Alpine Street would maintain two westbound through lanes, two eastbound through lanes, one westbound left-turn lane, and one westbound right-turn lane.

### 3.9.4 2.9.4 Chinatown/State Park Station

Following construction of Chinatown/State Park Station, Spring Street at the southern end of the Los Angeles State Historic Park would be similar to existing conditions, as shown in Figure <u>3-36</u> <del>2-29</del>. The station would have a footprint of 2,605 square feet, comprised of 410 square feet located on City ROW and 2,195 square feet in the park. The station canopy would have an overhang of 15,030 square feet, comprised of 5,710 square feet over City ROW and 9,320 square feet over the park. The proposed Project's required aerial clearance width over the Los Angeles State Historic Park would be 53 feet 2 inches wide with an area of approximately 59,470 square feet, plus an Additional Separation Buffer. The aerial clearance would allow the continued use of the park, with certain limitations.

In terms of roadway configuration, Spring Street would maintain two northbound through lanes with a parallel parking lane, two southbound through lanes with a parallel parking lane, and a two-way left turn lane.



Figure 3-33 2-26: Alameda Station Buildout Conditions



Figure 3-34 2-27: Alameda Tower Buildout Conditions



Figure 3-35 2-28: Alpine Tower Buildout Conditions



Figure 3-36 2-29: Chinatown/State Park Station Buildout Conditions

### 3.9.5 2.9.5 Broadway Junction

Following construction of Broadway Junction, buildout conditions would be similar to existing conditions except that the junction would be cantilevered over the intersection of North Broadway and Bishops Road, as shown in Figure <u>3-37</u> <del>2-30</del>. The junction would have a footprint of 1,460 square feet on privately-owned property. The junction canopy would have an overhang of 13,350 square feet.

In terms of roadway configuration, North Broadway would maintain two northbound through lanes, one southbound through-right lane, and one northbound left-turn lane. Bishops Road would maintain one westbound through lane and one eastbound shared left-/right-turn lane.

### 3.9.6 2.9.6 Stadium Tower

Following construction, Stadium Tower would be located completely within the hillside area near Dodger Stadium, as shown in Figure <u>3-38</u> <del>2-31</del>. The tower would have a footprint of 870 square feet within a privately-owned property. No changes to roadway configurations would occur.

### 3.9.7 2.9.7 Dodger Stadium Station

Minor changes would occur in the parking lot where Dodger Stadium Station would be located, as shown in Figure <u>3-39</u> <u>2-32</u>. After completion of construction, the stadium perimeter road would be slightly realigned around Dodger Stadium Station. Approximately 194 existing parking spaces would be removed to accommodate the station, the realigned perimeter road, and the pedestrian pathway connecting the station and Dodger Stadium. Additionally, a new access driveway would be constructed into the hillside from the existing access road below to provide direct access to the basement level of the station for maintenance personnel. The station would have a footprint of 27,770 square feet, of which the station canopy would have an overhang of 16,020 square feet.



Figure 3-37 2-30: Broadway Junction Buildout Conditions



Figure 3-38 2-31: Stadium Tower Buildout Condition



Figure 3-39 2-32: Dodger Stadium Station Buildout Conditions

### 3.10 2.10 REQUIRED PERMITS AND APPROVALS

The Project EIR will provide environmental clearance as needed for all of the potential discretionary entitlements, reviews, and approvals required for implementation of the proposed Project including, but not necessarily limited to, the following:

#### **California Department of Transportation (Caltrans)**

1. Pursuant to the California Streets and Highways Code section 660, approval from Caltrans through an encroachment permit and/or other agreement, form of permission, or approval(s) to access, construct, and/or operate the Project within/over the State transportation system right-of-way.

#### California State Parks

- 2. Approvals determined necessary by the California Department of Parks and Recreation for the Project could include, but not necessarily be limited to:
  - a. Pursuant to Government Code section 14666, an easement and/or aerial easement, to construct and operate the Project within/over the Los Angeles State Historic Park.
  - b. Pursuant to Public Resources Code section 5003.17, a lease or other agreement, to construct and operate the Project within/over the Los Angeles State Historic Park.
  - c. Pursuant to Public Resources Code Section 5003 and Government Code Section 14666, a right of entry, to construct the Project within/over the Los Angeles State Historic Park.
  - d. Pursuant to Public Resources Code section 5002.2, an amendment to the Los Angeles State Historic Park General Plan.

#### California Division of Occupational Safety and Health (Cal/OSHA)

3. Pursuant to Title 8, California Code of Regulations sections 3150 through 3191, approvals from the Amusement Ride & Tramway Division, including a Certificate of Construction.

#### Los Angeles County Metropolitan Transportation Agency (Metro)

- 4. Approvals determined necessary by Metro for the Project, could include, but not necessarily be limited to, the following:
  - a. Pursuant to Public Utilities Code section 130252, submittal, review, and approval of proposed plans for design, construction, and implementation of the Project.
  - b. Pursuant to Public Utilities Code section 130521 and Civil Code section 801, an easement or other agreement or approval to authorize the construction and operation of the Project within a portion of Los Angeles Union Station.
  - c. Pursuant to Public Utilities Code section 130521, an encroachment permit or other agreement or approval to authorize construction and operation of the Project within any Metro L Line (Gold) right-of-way.

#### City of Los Angeles

5. Approvals determined necessary by the City for the Project, could include, but not necessarily be limited to, the following:

- a. Pursuant to Charter section 390 and Los Angeles Administrative Code section 13.4, to the extent applicable, to be processed by the Department of Public Works, Bureau of Engineering and the Department of Transportation, a franchise agreement to operate "upon, over, under, or along any street, highway or other place in the City of Los Angeles."
- b. Pursuant to Los Angeles Administrative Code section 22.109, to the extent applicable, approval of the design from the Cultural Affairs Commission for the Project components located within the public right-of-way.
- c. Approvals, to the extent applicable, to be processed by the Department of City Planning, could include, but not necessarily be limited to, the following:
  - i. Pursuant to LAMC section 11.5.7 the creation of a Specific Plan to provide for consistent application of Project design standards, limitations, and operational measures.
  - ii. Pursuant to LAMC sections 13.11 and 12.32.S, a "SN" Sign District for a comprehensive set of sign regulations on the Project site to permit signage consistent with applicable City requirements.
  - iii. Pursuant to LAMC section 12.24.M, a Plan Approval under the existing 1960 Dodger Stadium Conditional Use Permit ("CUP") to allow Stadium Tower and Dodger Stadium Station. CUP Condition 4 provides for collaboration "in devising mass transportation service to the Stadium site which will be sufficiently efficient to encourage patronage thereof and thus reduce the number of private automobiles driven to the Stadium events."
  - iv. Relief from the River Implementation Overlay District, to allow for Alameda Station, Alameda Tower, and Alpine Tower.
  - v. Relief from the Cornfield Arroyo Seco Specific Plan to allow for Chinatown/State Park Station.
- d. Pursuant to Government Code sections 65864 through 65869.5, a Development Agreement between the Project Sponsor and the City of Los Angeles for 20 years.

Other discretionary and ministerial permits, approvals, consultations, and coordination will or may be required, including, but not limited to, temporary street closure permits, demolition permits, grading permits, excavation permits, archaeological permits, encroachment permits, building permits, dewatering permits, stormwater permits, noise variances, work hour variances, haul routes, sign permits, any operational agreements, consultation with the State Historic Preservation Officer and other agencies, and any applicable permits or clearances related to water and/or energy infrastructure or emergency access.