

IV. Environmental Impact Analysis

D.1. Natural Light (Shading)

1. Introduction

This section describes the potential for the Proposed Project to block direct sunlight onto nearby land uses that are sensitive to the effects of shading. Shading refers to the effect of shadows cast upon adjacent areas by proposed structures. Shadows may provide positive effects, such as cooling effects during warm weather, or negative effects, such as the loss of natural light necessary for solar energy purposes, or the loss of warming influences during cool weather. Shadow effects depend on several factors, including the local topography, height and bulk of a project's structural elements, sensitivity of adjacent land uses, season, and duration of shadow projection. According to the L.A. CEQA Thresholds Guide, facilities and operations sensitive to the effects of shading include: routinely useable outdoor spaces associated with residential, recreational, or institutional (e.g., schools, convalescent homes) land uses; commercial uses such as pedestrian-oriented outdoor spaces or restaurants with outdoor dining areas; nurseries; and existing solar collectors. These uses are considered sensitive because sunlight is important to function, physical comfort, or commerce. The L.A. CEQA Thresholds Guide provides guidance for analyzing conditions throughout the year. For the purposes of this analysis, the two solstices (i.e., summer and winter) and two equinoxes (i.e., spring and fall) are analyzed to describe the variety of conditions that occur during the course of the year.

Shading of existing sensitive uses can occur with the development of new structures generally located to the south of these uses (i.e., southwest through southeast compass points) due to the angle of the sun within the Los Angeles area. Nonetheless, the relative effects of shading from structures are site-specific.

2. Environmental Setting

a. Winter and Summer Solstices

The "solstice" is defined as either of the two points on the ecliptic (i.e., the path of the earth around the sun) that lie midway between the equinoxes (separated from them by an angular distance of 90 degrees). At the solstices, the sun's apparent position on the celestial sphere reaches its greatest distance above or below the celestial equator—about 23.5 degrees of the arc. At the winter solstice, around December 21, the sun is directly

overhead the Tropic of Capricorn at noon; this marks the beginning of winter in the Northern Hemisphere. At the summer solstice, around June 21, the sun is directly overhead the Tropic of Cancer at noon. In the Northern Hemisphere, the longest day and shortest night of the year occur on this date, marking the beginning of summer. Measuring shadow lengths for the winter and summer solstices represents the extremes of the shadow patterns that occur throughout the year. Shadows cast on the summer solstice are the shortest shadows of the year, becoming progressively longer until the winter solstice, when the shadows are the longest of the year.

b. Fall and Spring Equinoxes

At the time of the fall equinox, around September 22, and the spring equinox, around March 21, night and day are nearly the same length and the sun crosses the celestial equator moving southward or northward (in the Northern Hemisphere). The fall equinox (also referred to as the autumnal equinox) marks the first day of the season of autumn and the spring equinox (also referred to as the vernal equinox) marks the first day of the season of spring.

c. Existing Shadow Environment

The Project Site occupies the southwestern most portion of the Central City Community Plan Area (Community Plan Area). The Community Plan Area includes the City's Downtown area as well as the following neighborhoods and districts: Civic Center; Bunker Hill; Little Tokyo; Financial District; Jewelry District; South Park; and Convention Center/STAPLES Center/L.A. LIVE. The topography in the vicinity of the Project Site is flat. Shadows in the vicinity of the Project Site are characteristic of a downtown, urban environment. Several blocks northeast of the Project Site, the dense pattern of high-rise and mid-rise buildings in the Financial District creates a sweeping shadow fan that rotates toward the west, north, and east, according to the movement of the sun. The 54-story Marriott/Ritz Tower, located at L.A. LIVE immediately north of the Project Site, is the closest high-rise building to the Project Site. This tower is located southwest and just outside of the concentration of high-rise buildings in the core of the Financial District. As such, it generates a prominent shadow in the immediate vicinity of the Project Site. This shadow is visible on the aerial view of the Project Site provided in Figure II-4 of Section II, Project Description, of this Draft EIR. Shadows are also generated by the mid-rise buildings that comprise L.A. LIVE. Areas to the east of the Project Site receive more natural light exposure due to the presence of surface parking lots and mostly low-rise buildings that are occasionally punctuated by mid- and high-rise buildings. To the south and west of the Project Site, the elevated SR-110 Freeway, I-10 Freeway, and I-110/SR-110 and I-10 Freeway interchange create shading on the roadways and properties

below. Land uses south and west of the freeways generally consist of low- and mid-rise uses that do not generate unique or unusual shadow patterns.

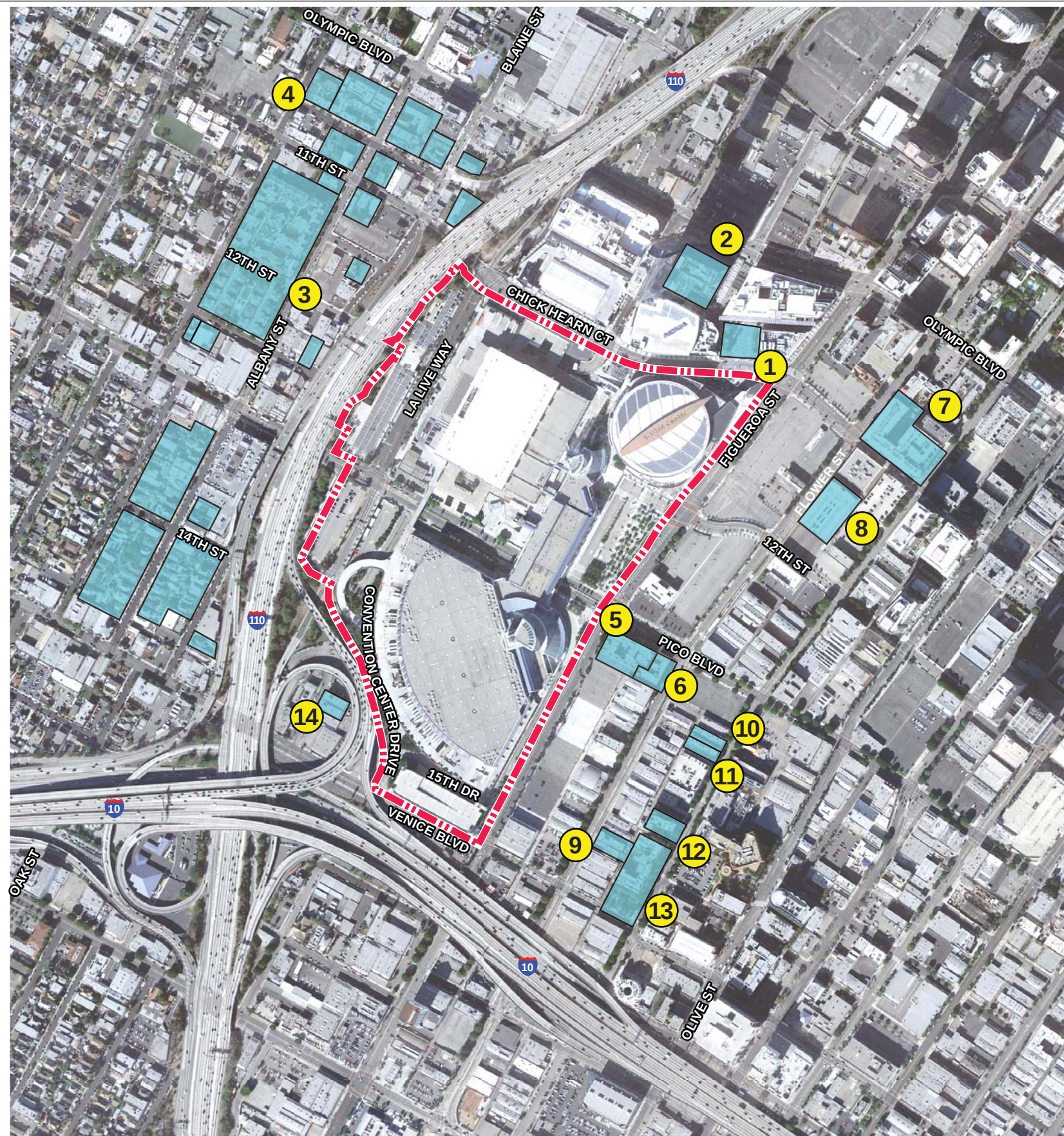
Existing structures on the Project Site include the Los Angeles Convention Center (the Convention Center), STAPLES Center, and supporting parking facilities. Depending on the time of day and season, shadows cast from these mid-rise uses either fall within the boundaries of the Project Site, or extend onto adjacent roadways and properties to the north, east, and west of the Project Site. Existing shadows from Project Site generally do not extend beyond L.A. LIVE to the north, Flower Street to the east, and the SR-110 Freeway embankment to the west.

As previously noted, shade-sensitive uses under the L.A. CEQA Thresholds Guide include routinely useable outdoor spaces associated with residential, recreational, or institutional (e.g., schools, convalescent homes) land uses; commercial uses such as pedestrian-oriented outdoor spaces or restaurants with outdoor dining areas; nurseries; and existing solar collectors. These uses are considered sensitive because sunlight is important to function, physical comfort, or commerce. As shown on Figure IV.D.1-1 on page IV.D.1-4, shade-sensitive uses in the area of potential impact include:

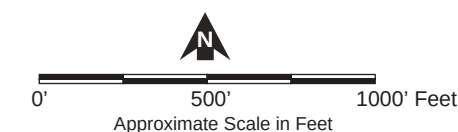
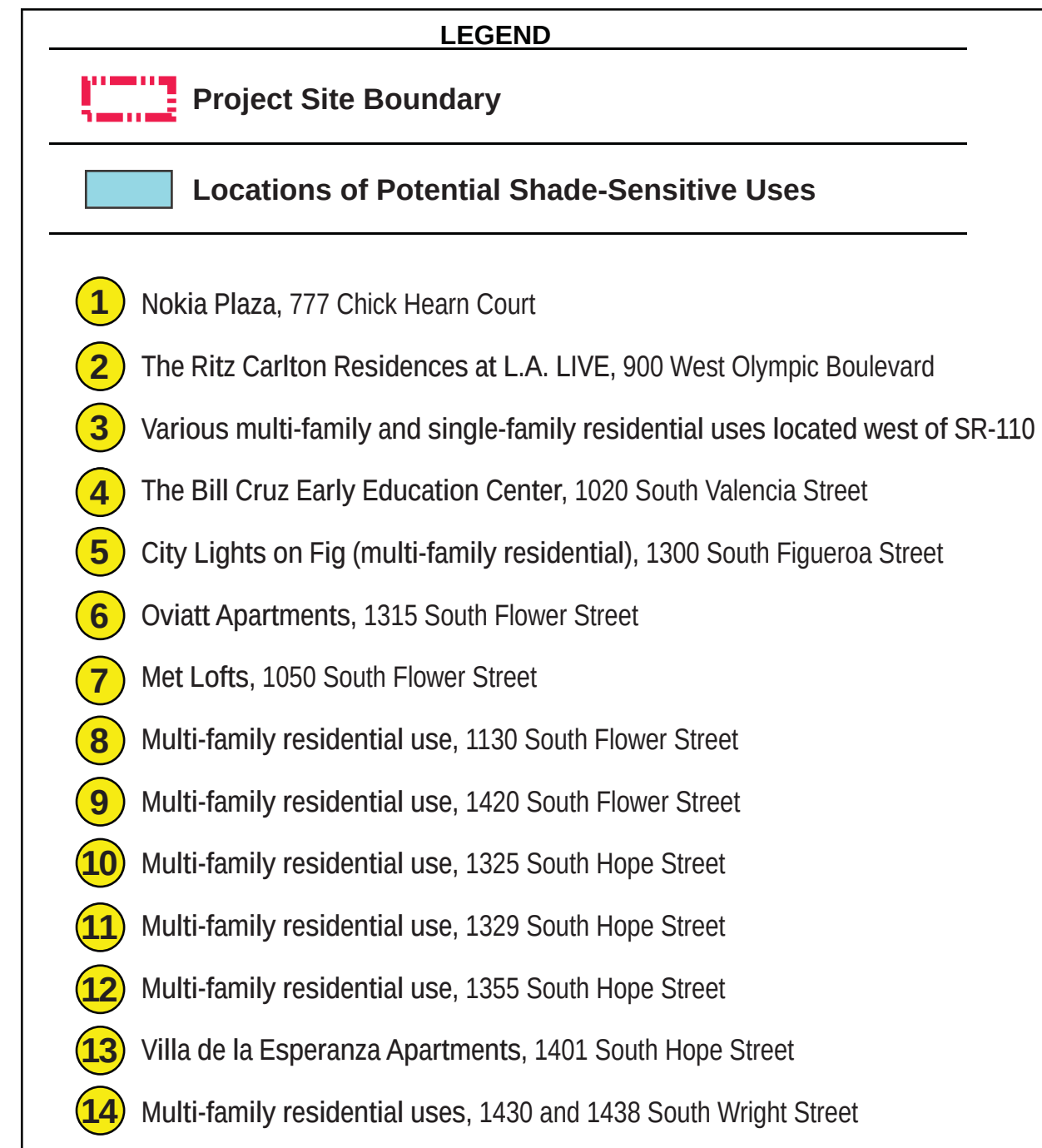
1. Nokia Plaza L.A. LIVE (Nokia Plaza), a pedestrian-oriented outdoor space and adjacent outdoor dining areas located immediately north of the Project Site at L.A. LIVE (777 Chick Hearn Court);
2. The Ritz-Carlton Residences at L.A. LIVE (Ritz Residences), a multi-family residential use located immediately north of the Project Site in L.A. LIVE (900 West Olympic Boulevard);¹
3. Various multi-family and single-family residential uses located west of the SR-110 Freeway;²
4. The Bill Cruz Early Education Center, a school located west of the SR-110 Freeway (1020 South Valencia Street);
5. City Lights on Fig, a multi-family residential use located immediately east of the Project Site (1300 South Figueroa Street);

¹ The residential uses in the Marriott/Ritz Tower are located on the 27th floor and above. Thus, this analysis addresses whether Project shadows reach this portion of the building.

² Due to the number of residential uses located west of SR-110, these uses are collectively referred to as Sensitive Use No. 3 for ease of reference. However, the following analysis considers each residential property to be an individual sensitive use.



Source: Google Earth, 2011; Matrix Environmental, 2012.



6. Oviatt Apartments, a multi-family residential use located east of the Project Site (1315 South Flower Street);
7. Met Lofts, a multi-family residential use located east of the Project Site (1050 South Flower Street);
8. A multi-family residential use located east of the Project Site (1130 South Flower Street);
9. A multi-family residential use located east of the Project Site (1420 South Flower Street);
10. A multi-family residential use located east of the Project Site (1325 South Hope Street);
11. A multi-family residential use located east of the Project Site (1329 South Hope Street);
12. A multi-family residential use located east of the Project Site (1355 South Hope Street);
13. Villa de la Esperanza Apartments, a multi-family residential use located two blocks east of the Project Site (1401 South Hope Street); and
14. Multi-family residential uses located at 1430 and 1438 South Wright Street.

d. Regulatory Framework

There are no regulations concerning shading at the local, regional, or statewide levels. Shading impacts are addressed through CEQA review, pursuant to guidance in the L.A. CEQA Thresholds Guide, as further discussed below in Section IV.D.1(3)(b), Thresholds of Significance.

3. Environmental Impacts

a. Methodology

Shading impacts are evaluated in accordance with the L.A. CEQA Thresholds Guide. In determining the effects of shading, the shadows of structures on the Project Site after implementation of the Proposed Project are modeled and plotted for representative hours during the winter solstice, summer solstice, fall equinox and the spring equinox. Specifically, shadow lengths are plotted for the following time periods by season:

Season	Date	Time of Day
Winter Solstice (PST)	December 21	9 A.M. PST to 3 P.M. PST
Summer Solstice (PDT)	June 21	9 A.M. PDT to 5 P.M. PDT
Fall Equinox (PDT)	September 21	9 A.M. PDT to 5 P.M. PDT
Spring Equinox (PDT)	March 21	9 A.M. PDT to 5 P.M. PDT

PST = Pacific Standard Time
 PDT = Pacific Daylight Savings Time

These hours represent the period of the day relevant to the assessment of impacts pursuant to the thresholds of significance set forth in the L.A. CEQA Thresholds Guide (referred to above and discussed below). For the purpose of establishing the hours in which significant impacts may occur, winter is described as occurring during Pacific Standard Time, which occurs between the first Sunday of November through the second Sunday in March; and the remaining seasons are described as occurring during Pacific Daylight Time, which occurs between the second Sunday in March and the first Sunday of November.³

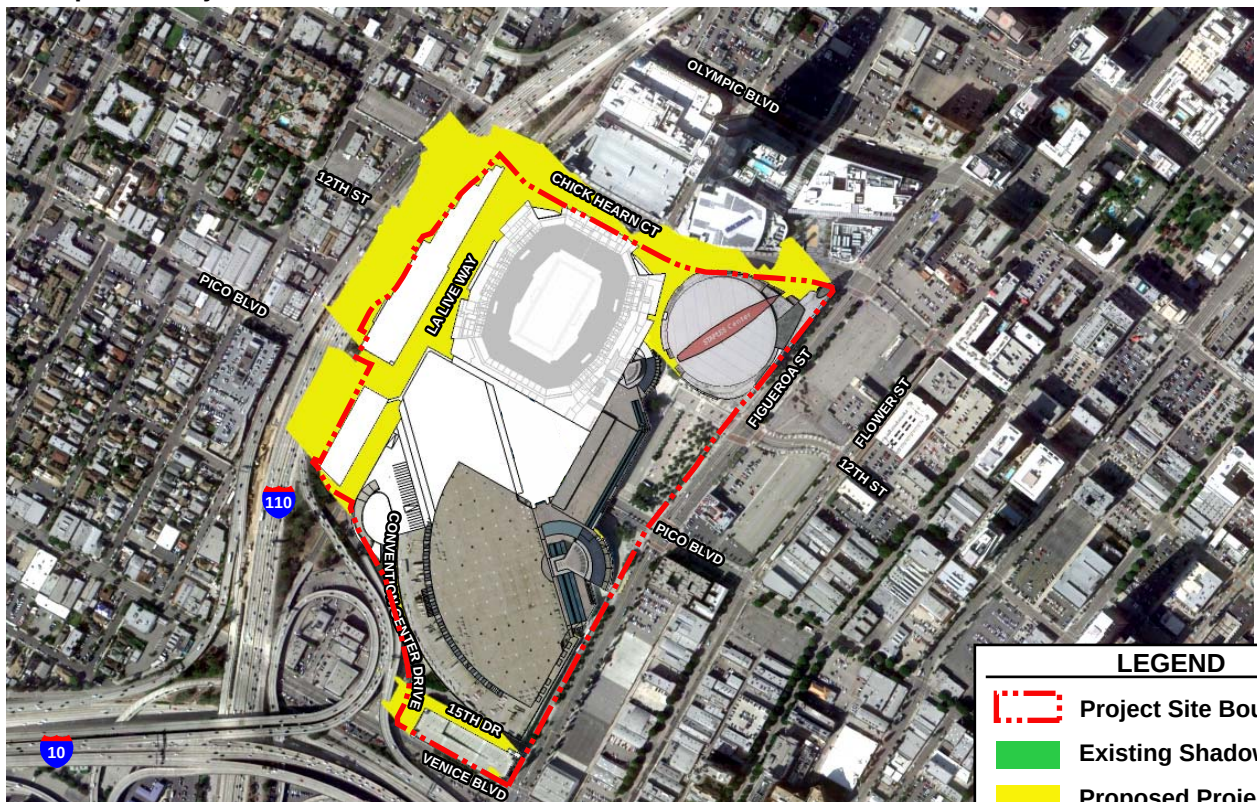
Figure IV.D.1-2 through Figure IV.D.1-20 on pages IV.D.1-7 through IV.D.1-25 depict the projected shadows of the proposed on-site structures for selected hours in response to the significance thresholds established for this issue. The projected shadows are based on an accurate 3D model of the Proposed Project that identifies the specific building footprints and maximum building heights. Based on the projected shadows, the Proposed Project's incremental effect on the duration of shading on each of the identified sensitive uses is determined and assessed against the thresholds of significance outlined below.

³ Timeframes have been adjusted from those specified in the L.A. CEQA Thresholds Guide to account for the new Daylight Savings time period (second Sunday in March through the first Sunday in November), which went into effect in 2007 (per the Energy Policy Act of 2005) to reduce energy consumption. Prior to this change, the spring equinox (March 21) occurred within Pacific Standard Time; as such, spring and fall equinox shadows varied by one hour.

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

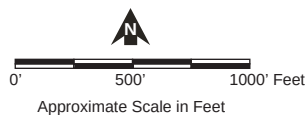
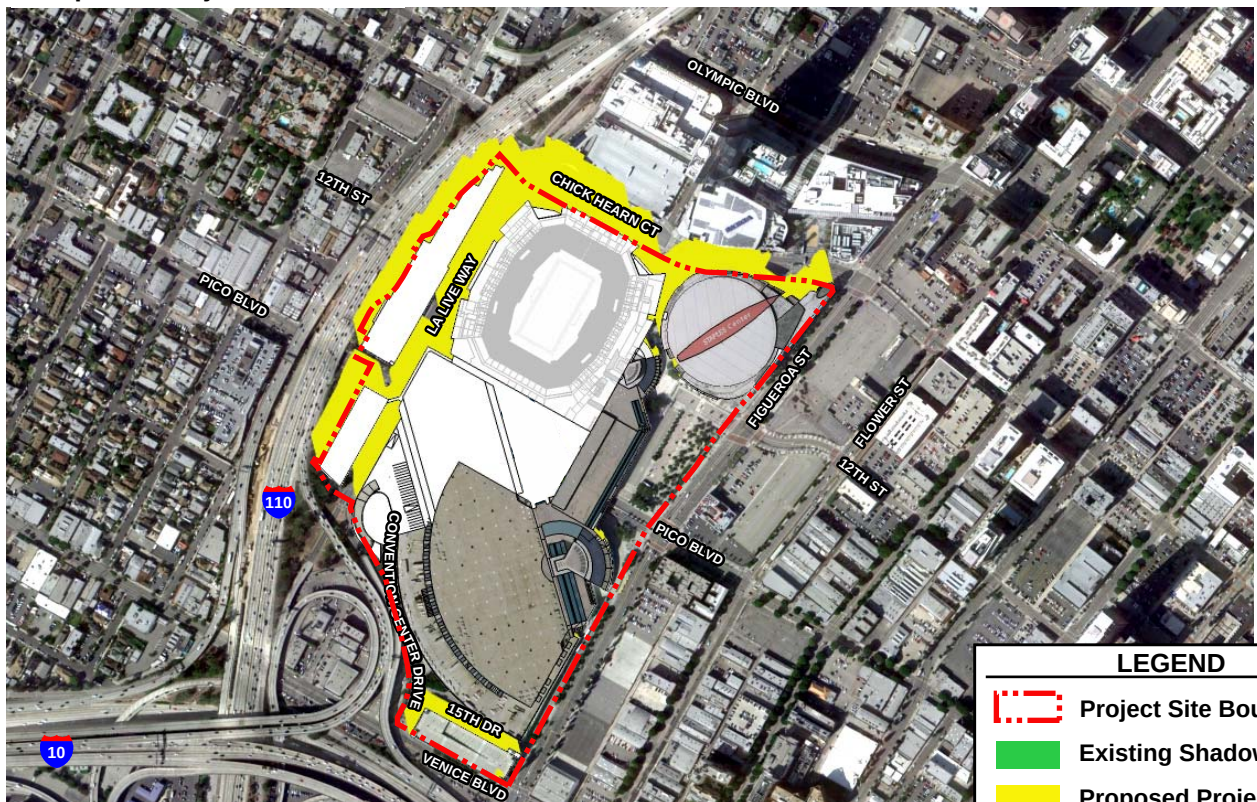


Figure IV.D.1-2
Existing and Proposed Project Shadows
During Winter Solstice
9:00am

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

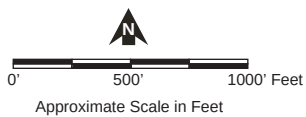
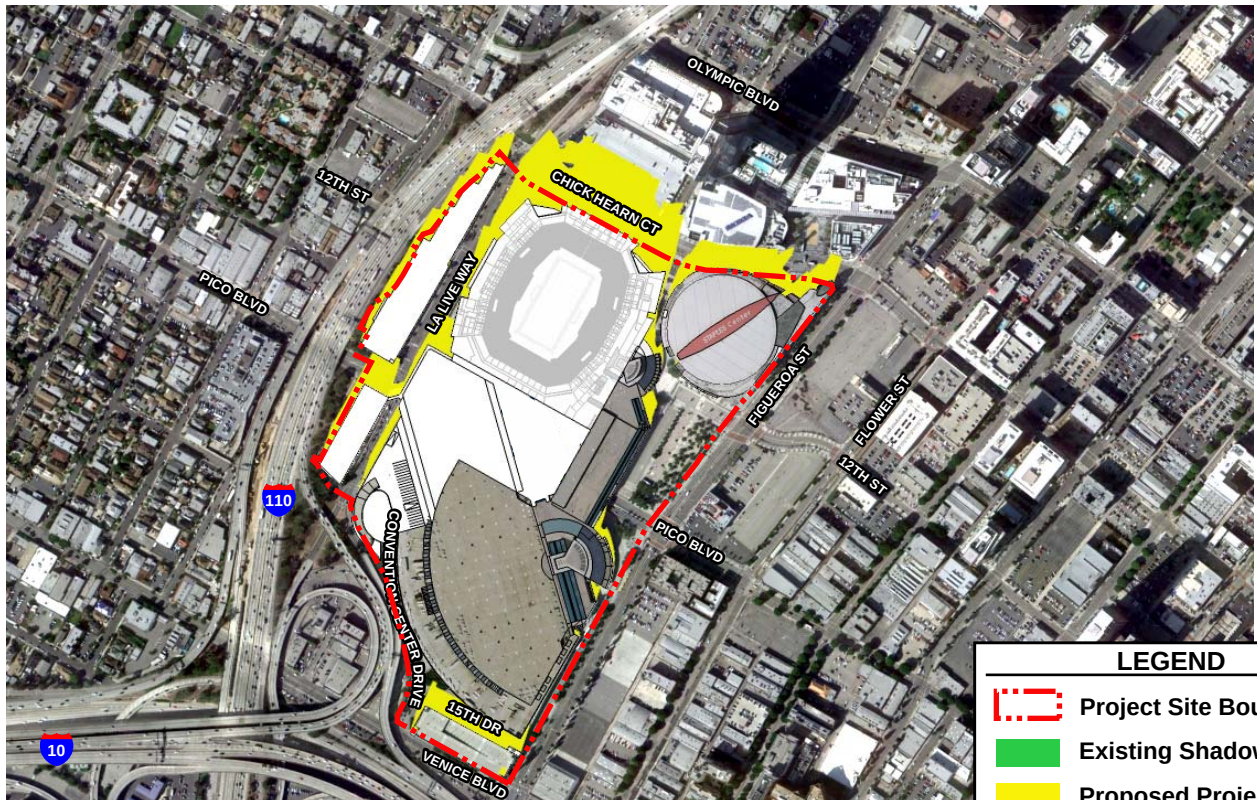


Figure IV.D.1-3
Existing and Proposed Project Shadows
During Winter Solstice
11:00am

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

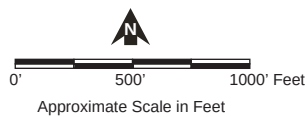
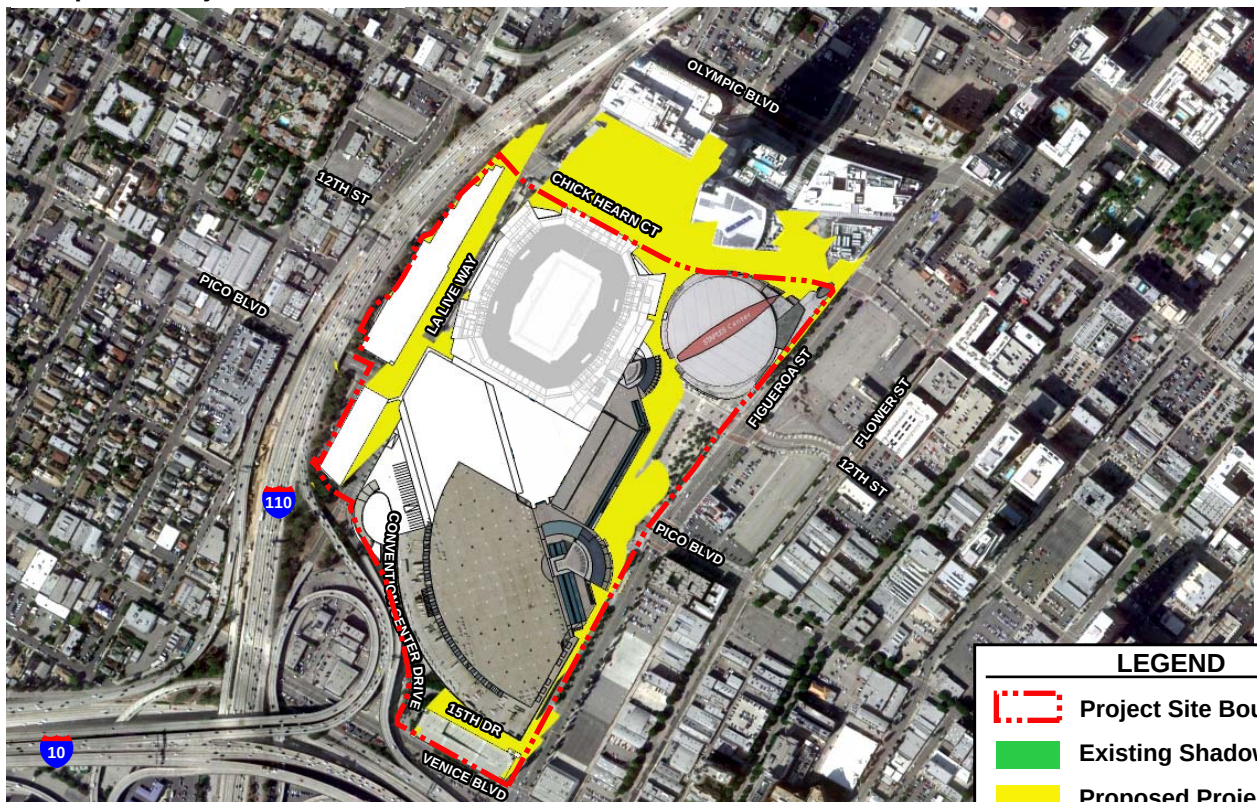


Figure IV.D.1-4
Existing and Proposed Project Shadows
During Winter Solstice
1:00pm

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

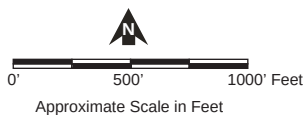
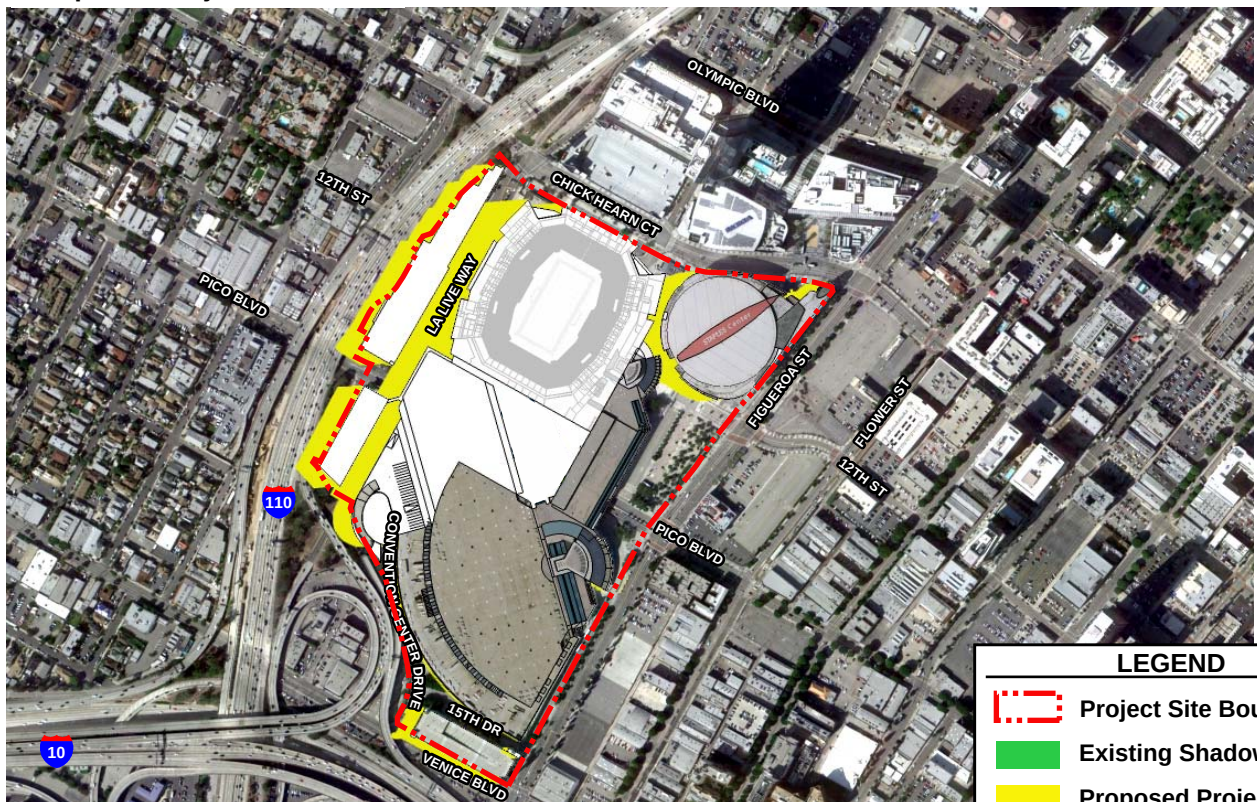


Figure IV.D.1-5
Existing and Proposed Project Shadows
During Winter Solstice
3:00pm

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

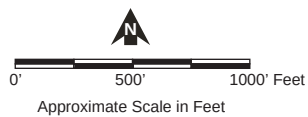
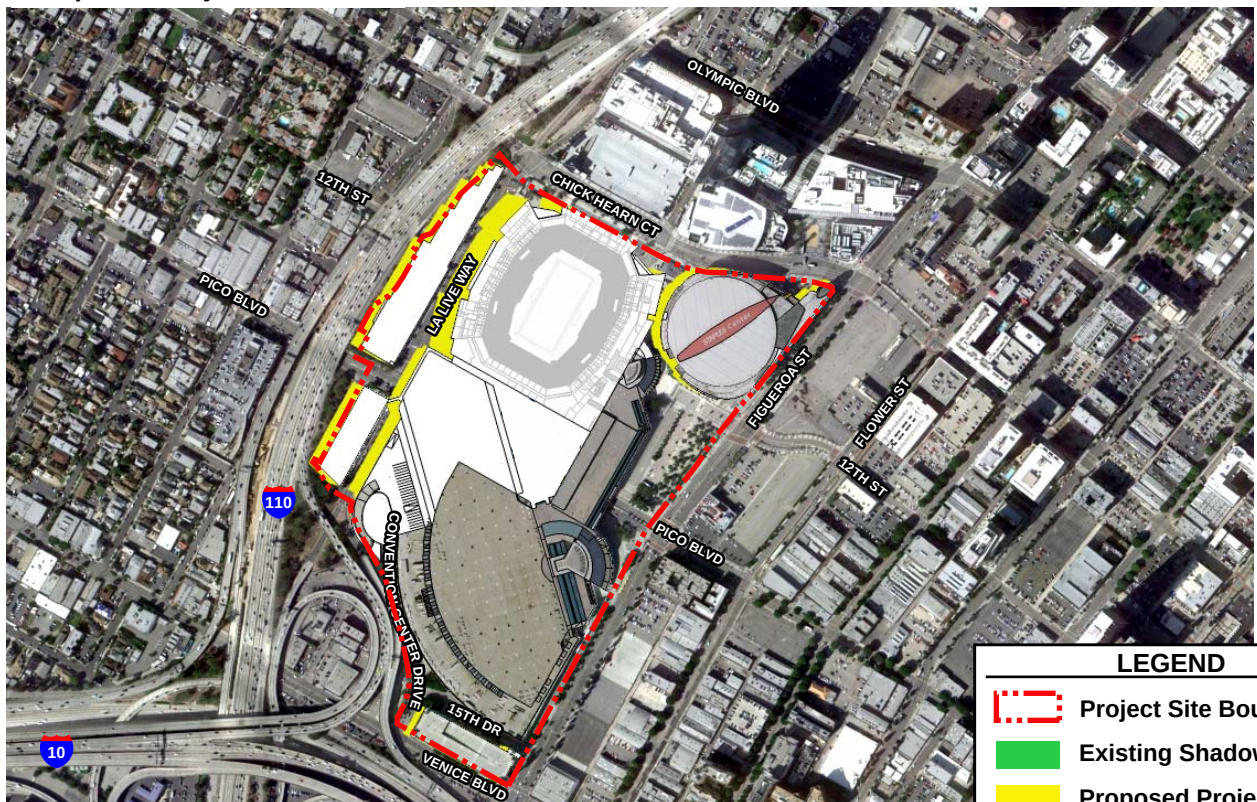


Figure IV.D.1-6
Existing and Proposed Project Shadows
During Summer Solstice
9:00am

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

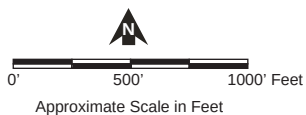
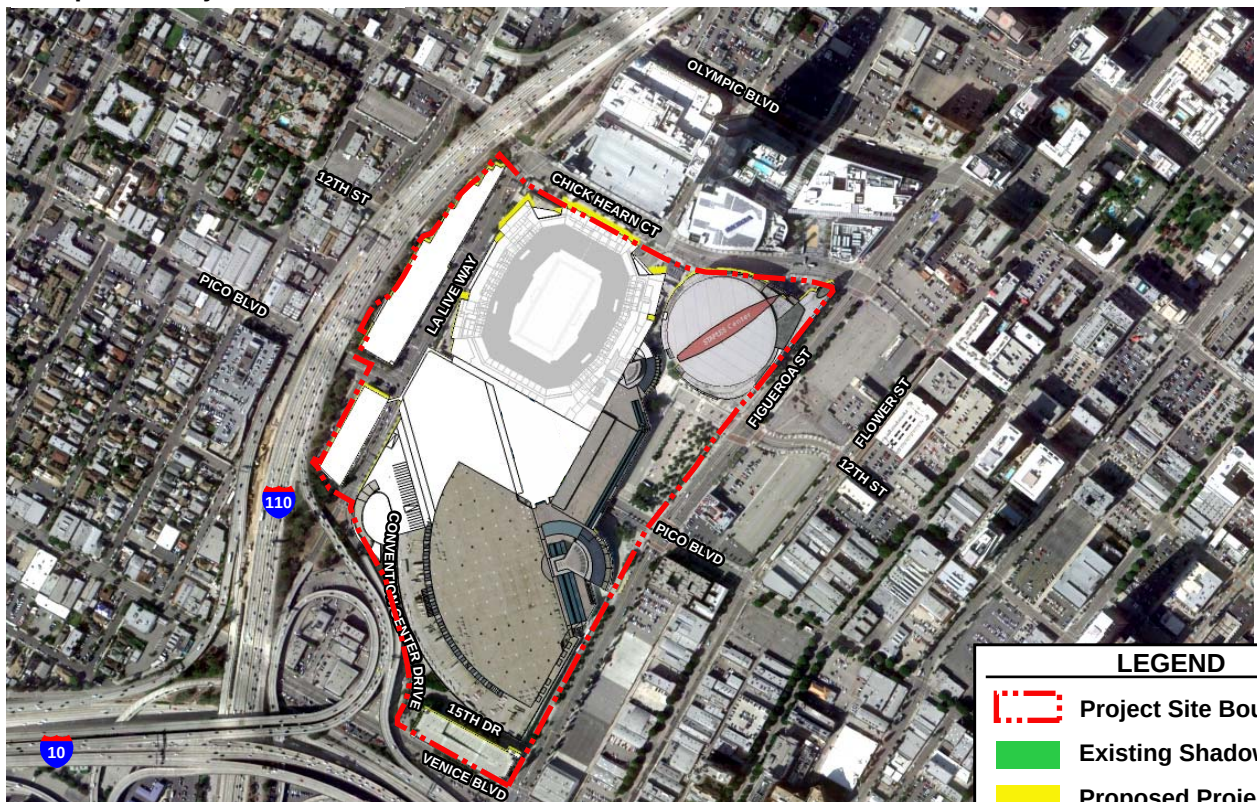


Figure IV.D.1-7
Existing and Proposed Project Shadows
During Summer Solstice
11:00am

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

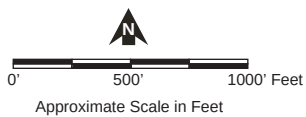
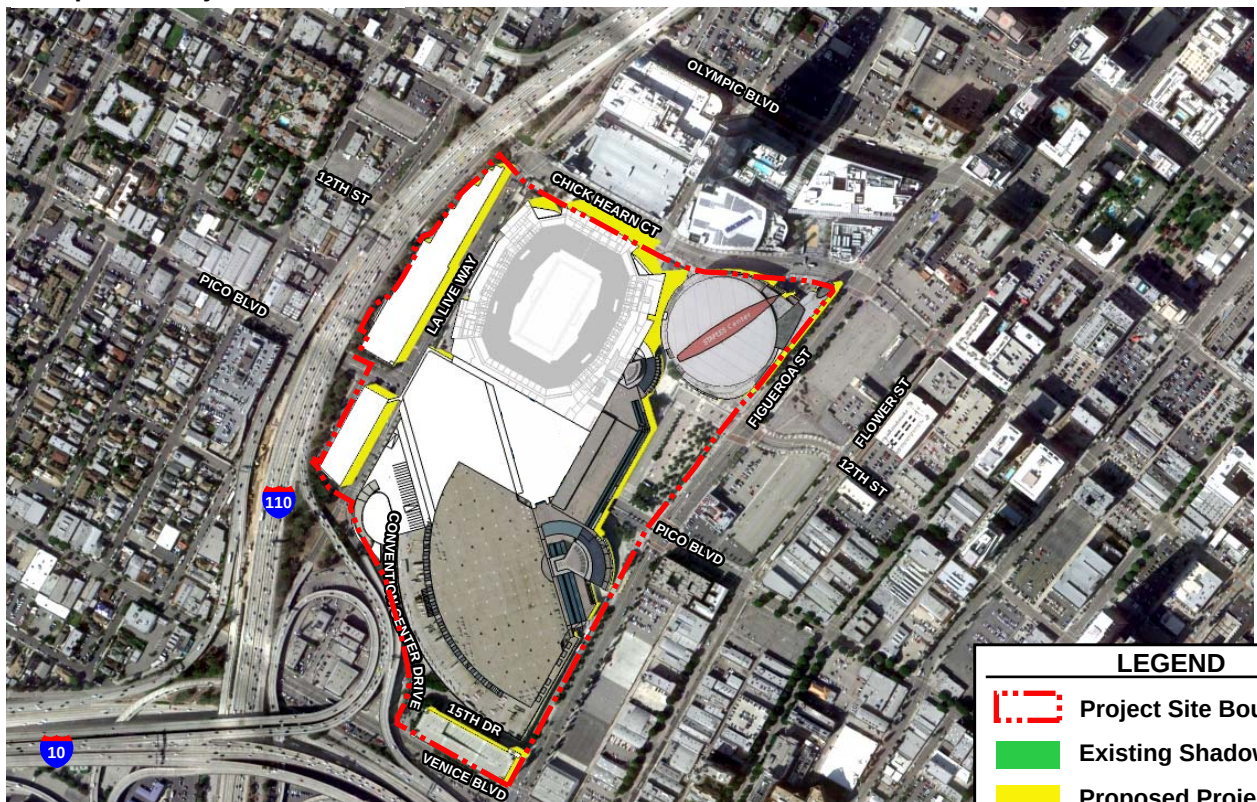


Figure IV.D.1-8
Existing and Proposed Project Shadows
During Summer Solstice
1:00pm

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

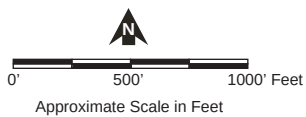
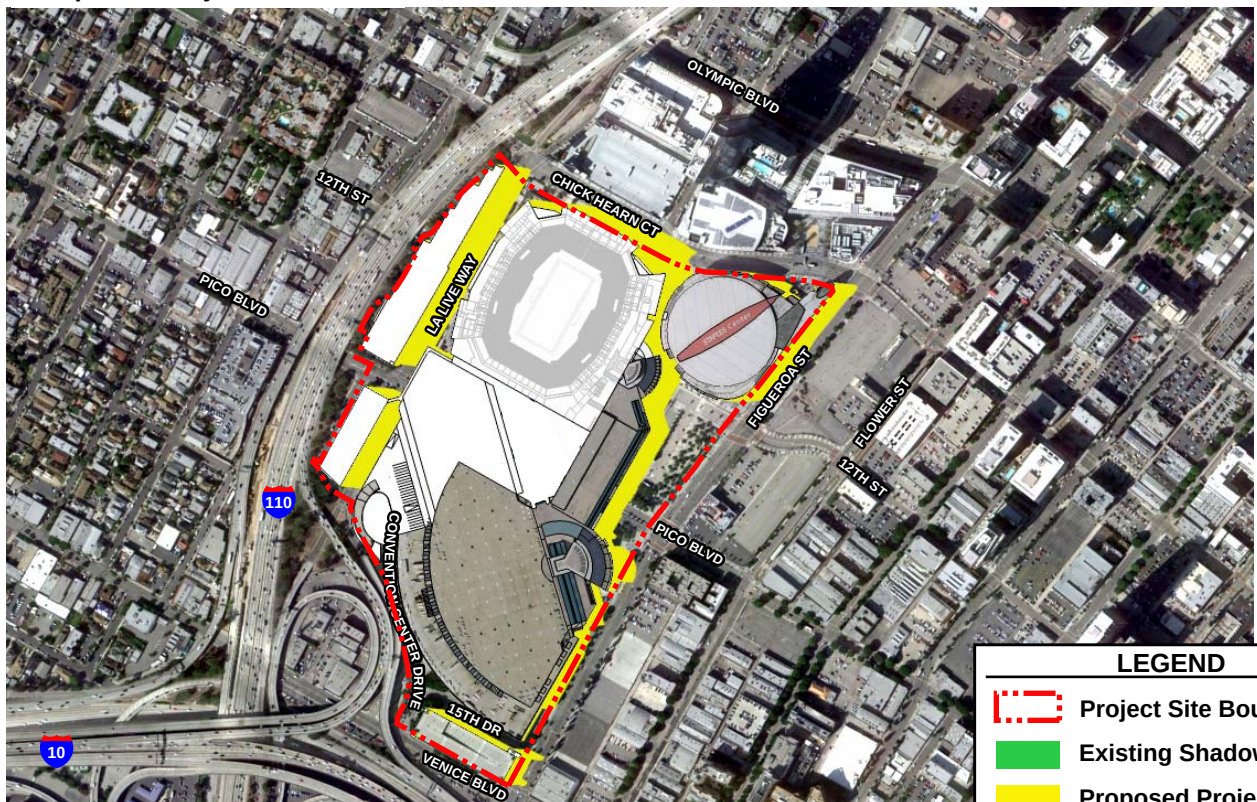


Figure IV.D.1-9
Existing and Proposed Project Shadows
During Summer Solstice
3:00pm

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

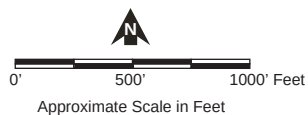


Figure IV.D.1-10
Existing and Proposed Project Shadows
During Summer Solstice
5:00pm

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

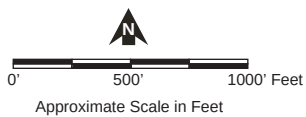
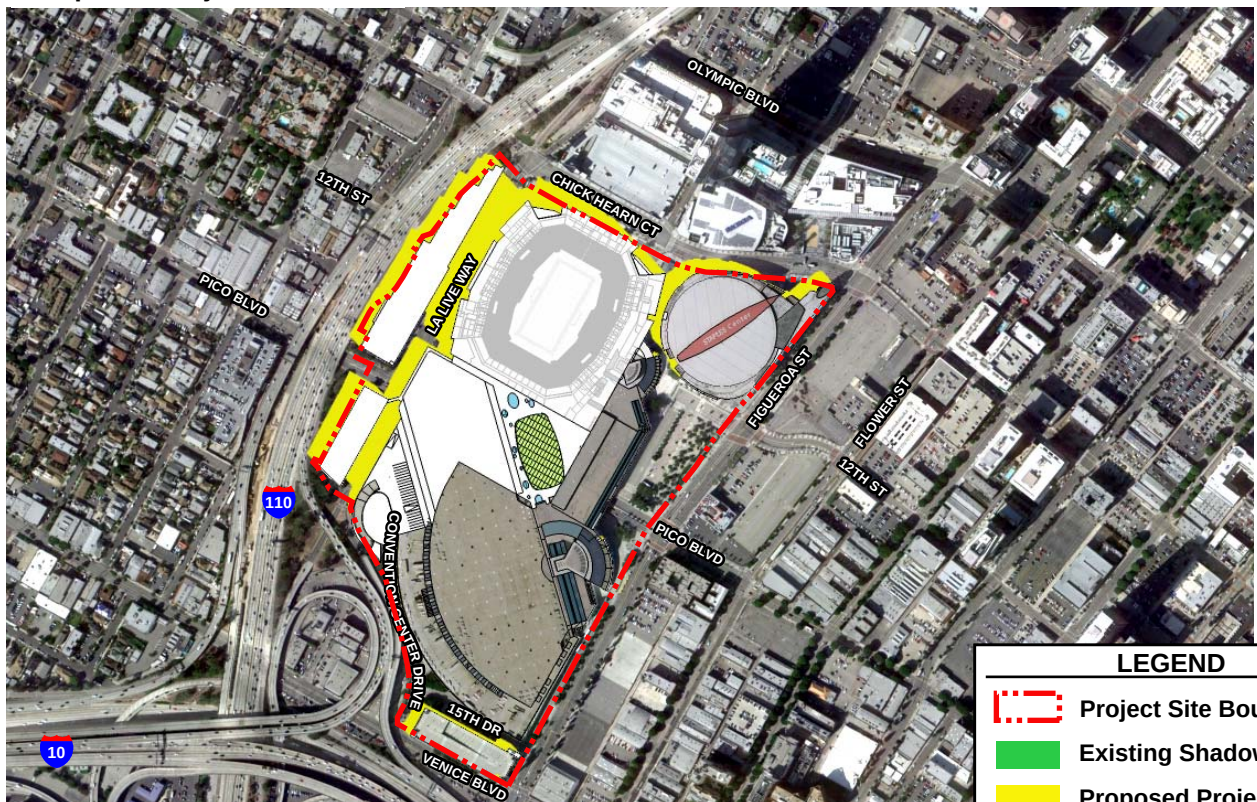


Figure IV.D.1-11
Existing and Proposed Project Shadows
During Fall Equinox
9:00am

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2011.

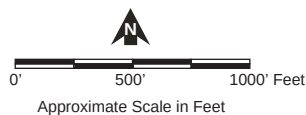


Figure IV.D.1-12
Existing and Proposed Project Shadows
During Fall Equinox
11:00am

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

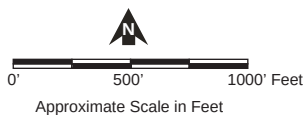
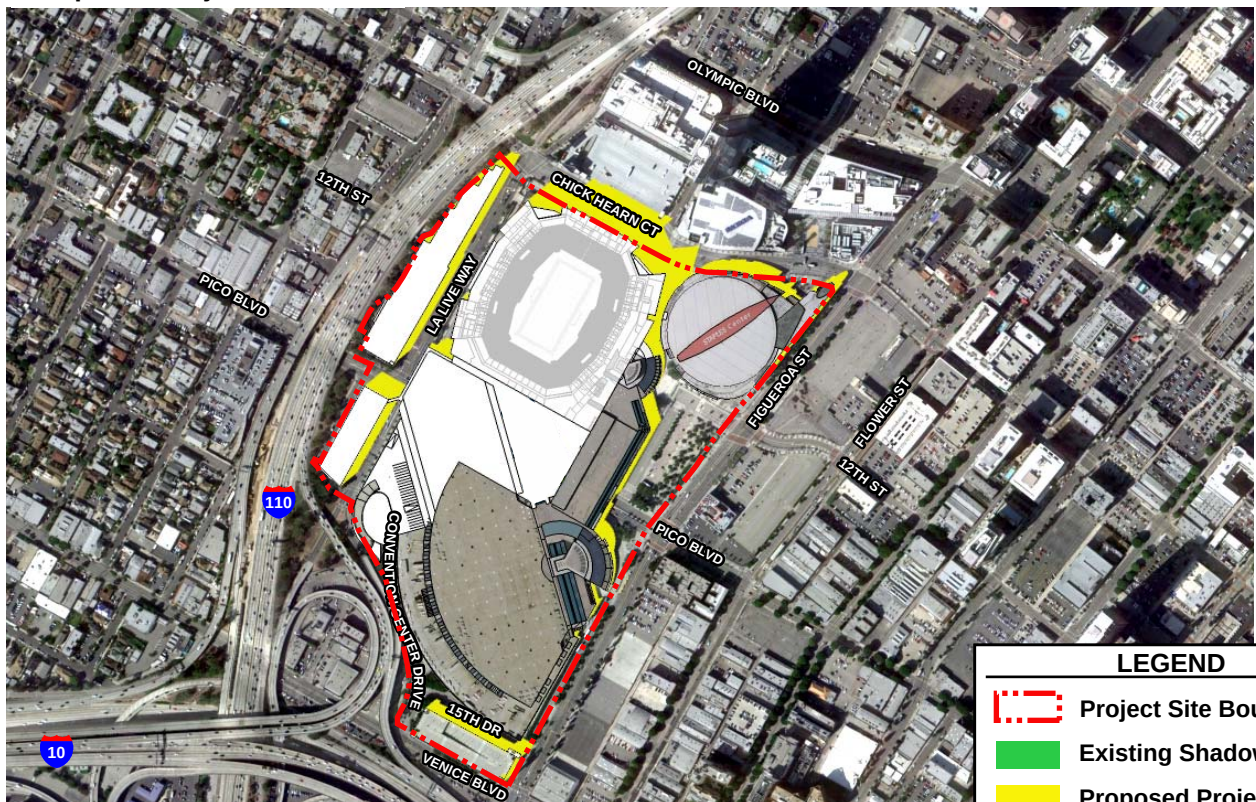


Figure IV.D.1-13
Existing and Proposed Project Shadows
During Fall Equinox
1:00pm

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

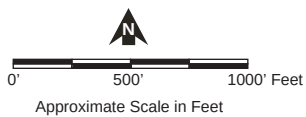
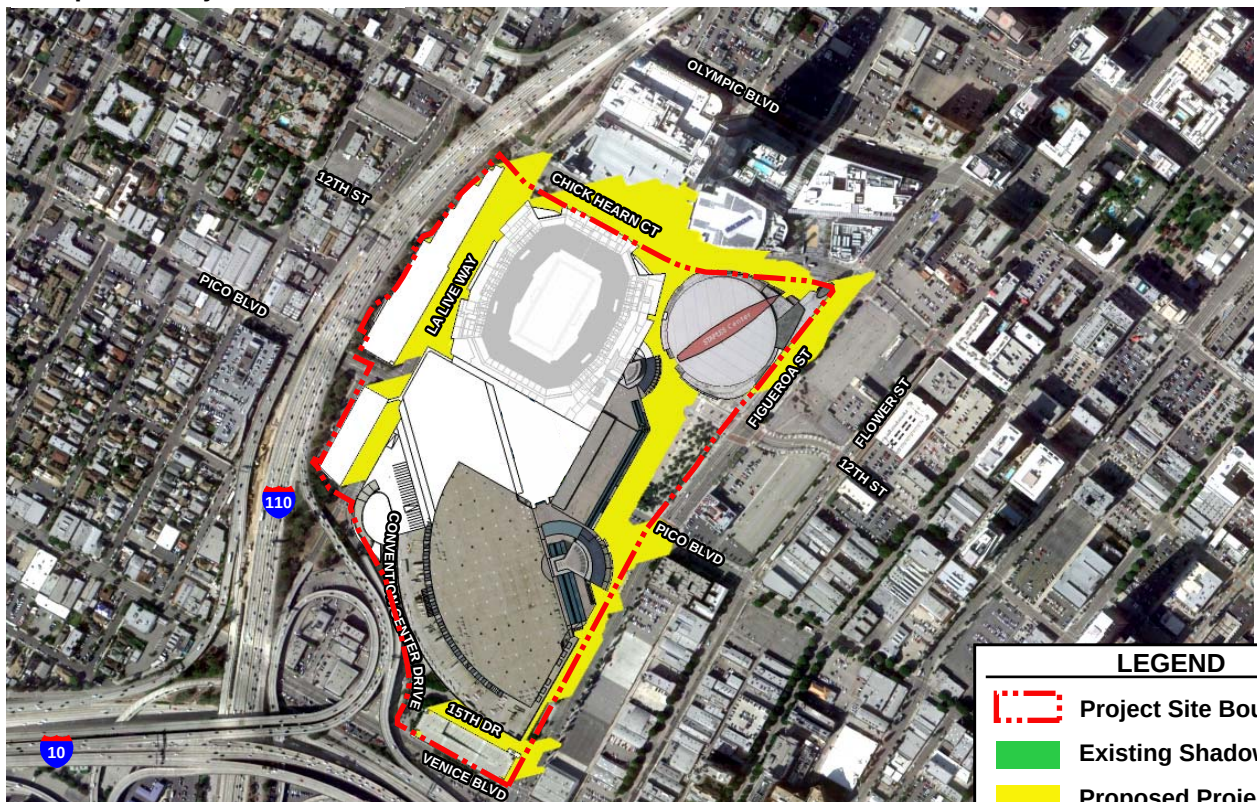


Figure IV.D.1-14
Existing and Proposed Project Shadows
During Fall Equinox
3:00pm

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

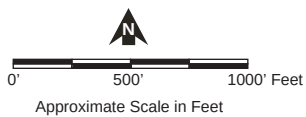
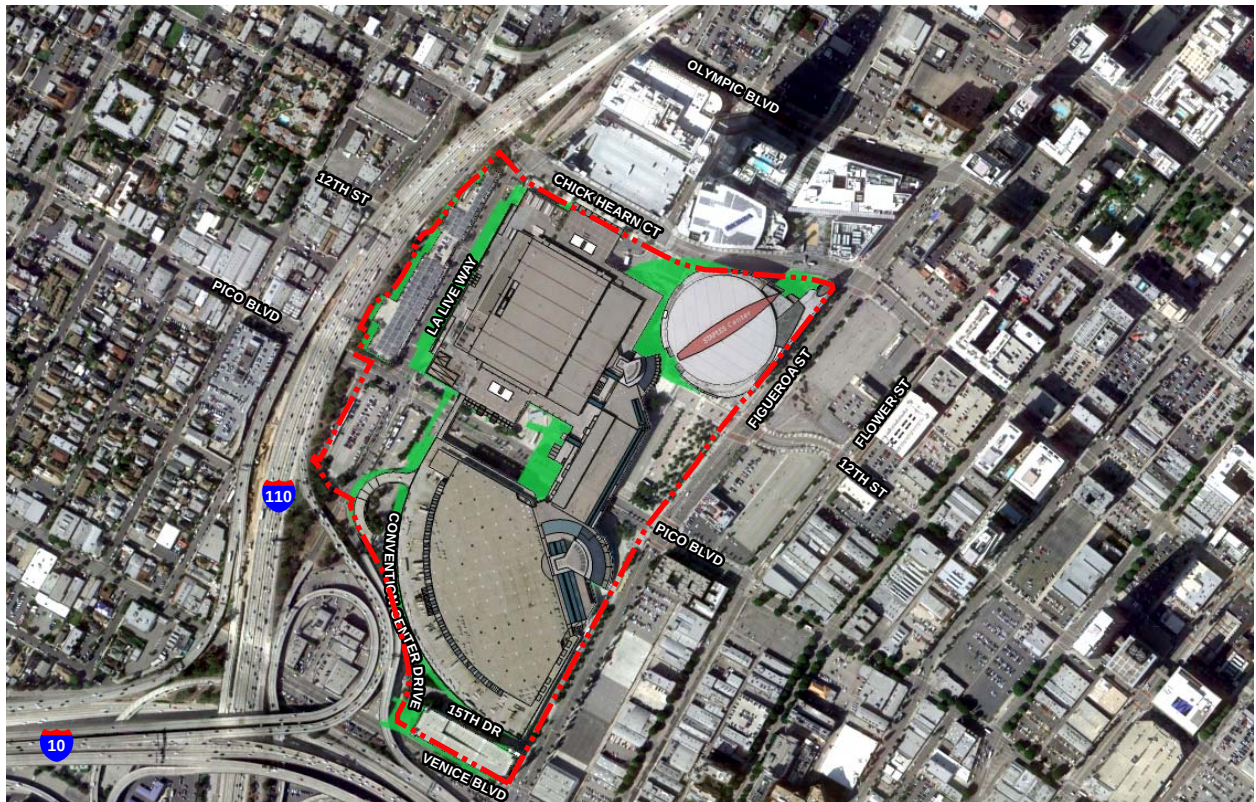
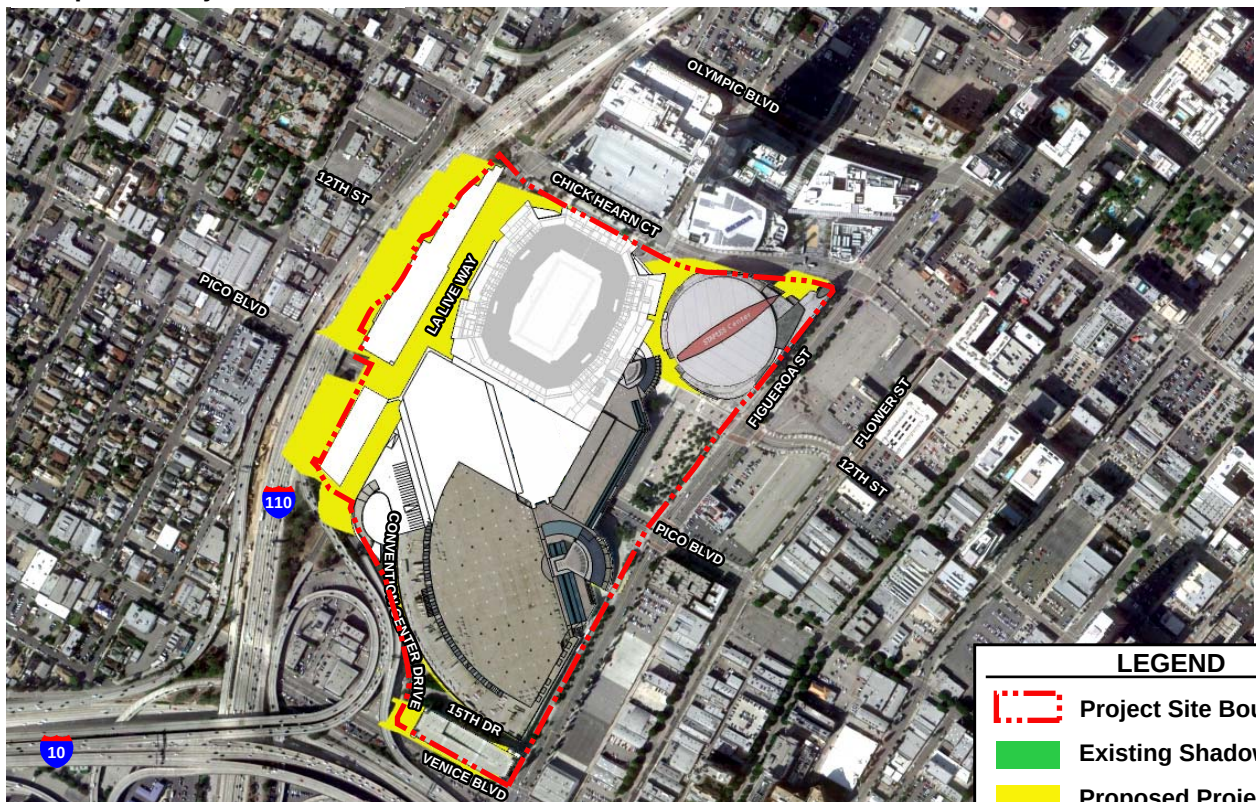


Figure IV.D.1-15
Existing and Proposed Project Shadows
During Fall Equinox
5:00pm

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

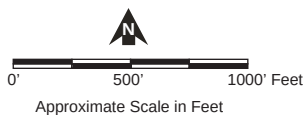
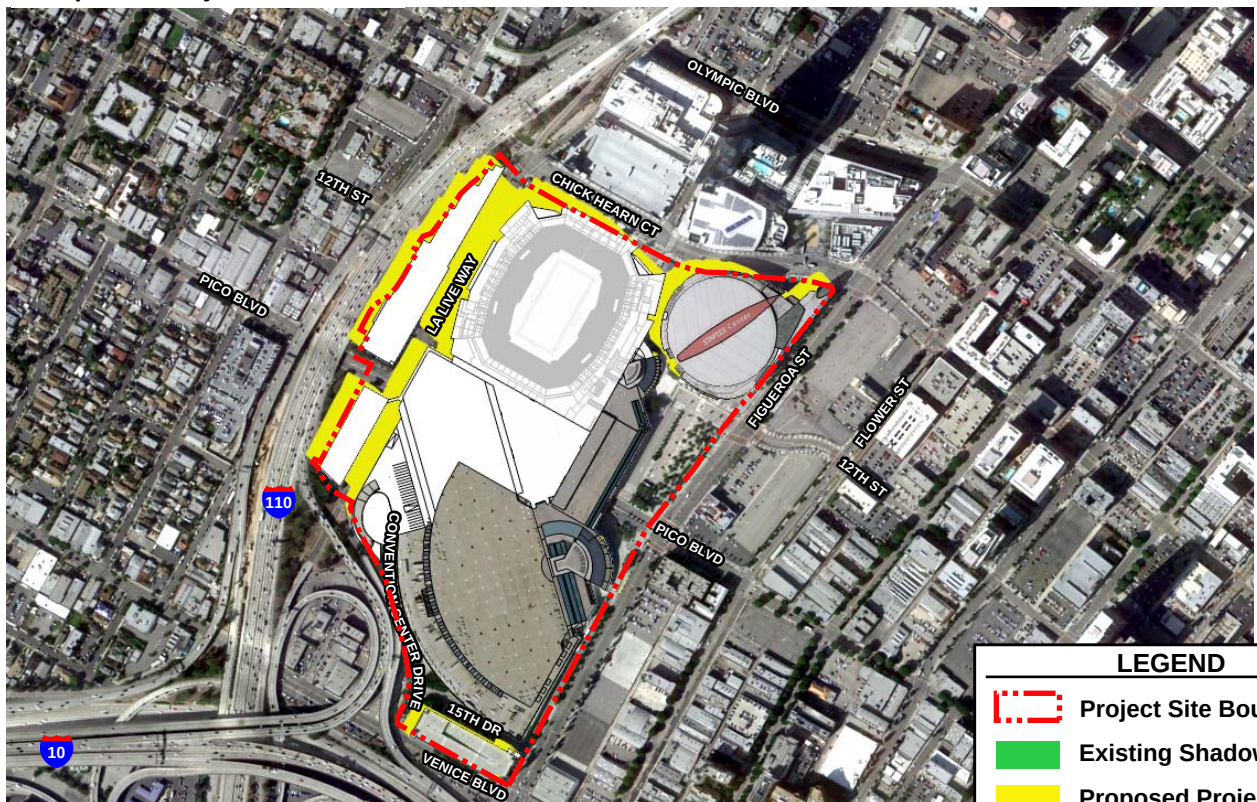


Figure IV.D.1-16
Existing and Proposed Project Shadows
During Spring Equinox
9:00am

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

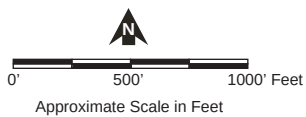
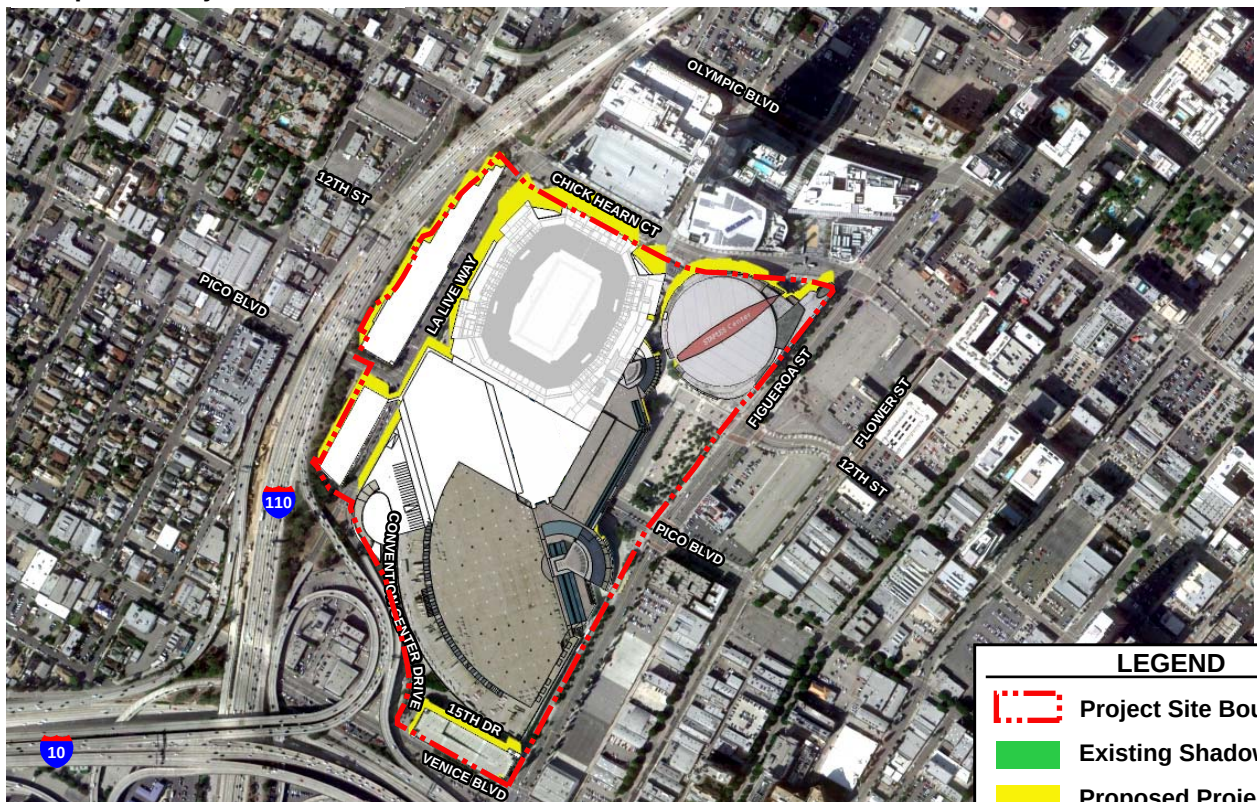


Figure IV.D.1-17
Existing and Proposed Project Shadows
During Spring Equinox
11:00am

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

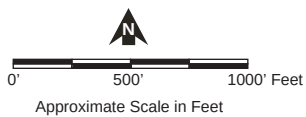
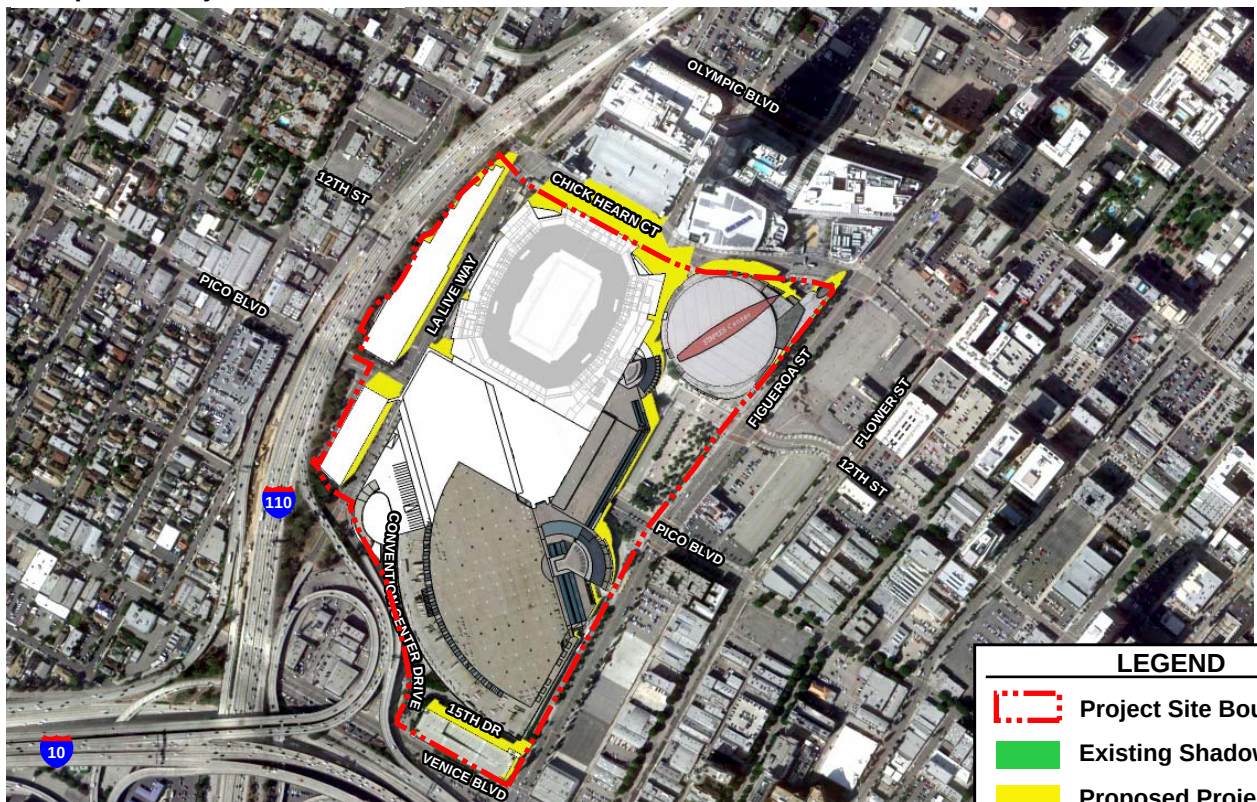


Figure IV.D.1-18
Existing and Proposed Project Shadows
During Spring Equinox
1:00pm

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

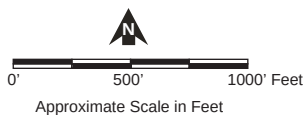
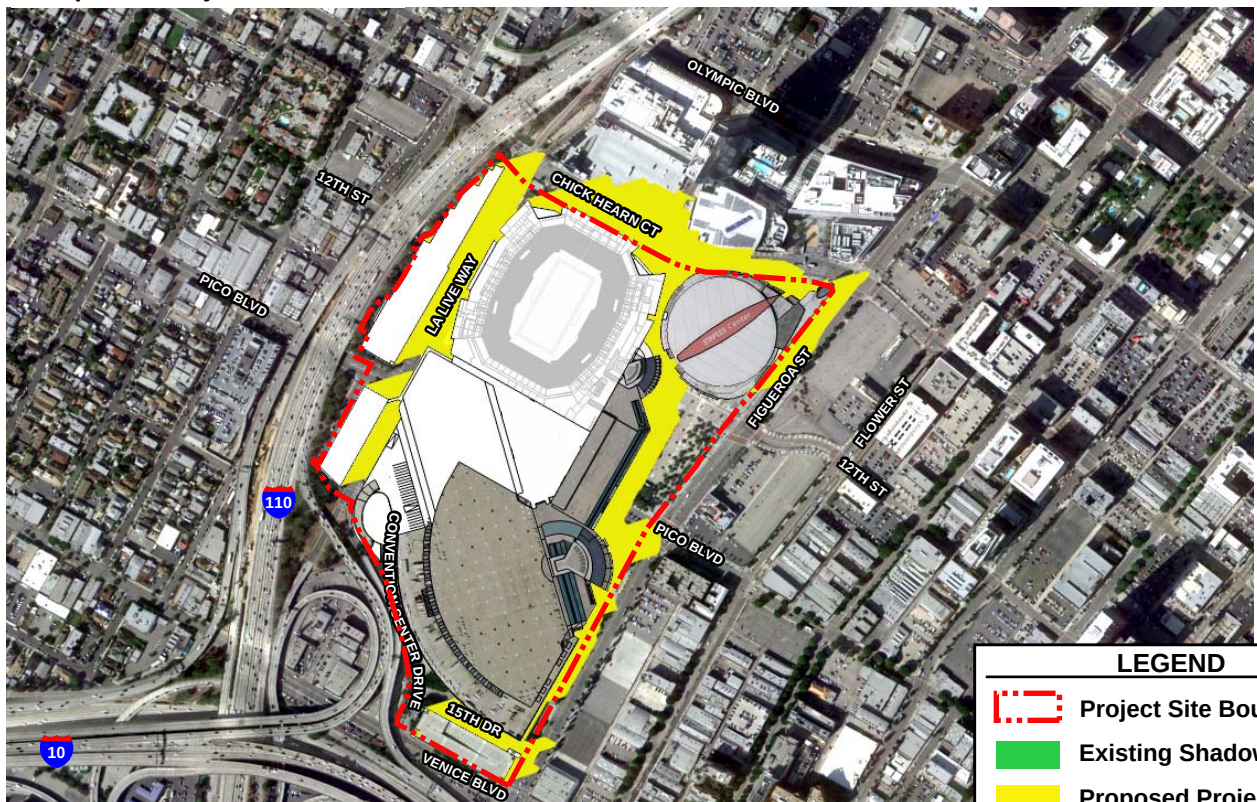


Figure IV.D.1-19
Existing and Proposed Project Shadows
During Spring Equinox
3:00pm

Existing Shadows



Proposed Project Shadows



LEGEND

- Project Site Boundary
- Existing Shadows
- Proposed Project Shadows

Source: Google Sketch Up Pro, 2011; Matrix Environmental, 2012.

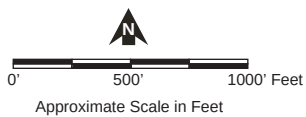


Figure IV.D.1-20
Existing and Proposed Project Shadows
During Spring Equinox
5:00pm

b. Thresholds of Significance

Appendix G of the CEQA Guidelines provides a sample question that addresses impacts with regard to natural light (shading). This question is as follows:

Would the project:

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

In the context of the above question from Appendix G of the CEQA Guidelines, the L.A. CEQA Thresholds Guide states that a project impact would normally be considered significant if shade-sensitive uses would be shaded by project-related structures for more than three hours between the hours of 9:00 A.M. and 3:00 P.M. Pacific Standard Time (between early November and early March), or more than four hours between the hours of 9:00 A.M. and 5:00 P.M. Pacific Daylight Time (between early March and early November).⁴

This threshold is applicable to the following facilities and operations which the L.A. CEQA Thresholds Guide defines as being sensitive to the effects of shading: routinely useable outdoor spaces associated with residential, recreational, or institutional (e.g., schools, convalescent homes) land uses; commercial uses such as pedestrian-oriented outdoor spaces or restaurants with outdoor dining areas; nurseries; and existing solar collectors. These uses are considered sensitive because sunlight is important to function, physical comfort, or commerce. Thus, the Proposed Project would have significant impacts with regard to natural light if the above threshold is exceeded at any shadow-sensitive location in the Proposed Project area.

c. Project Design Features

The Proposed Project would modify the existing arrangement of buildings on the Project Site and would construct additional structures that are greater in height and bulk than what currently exists on-site. As discussed in detail in Section II, Project Description, of this Draft EIR, new construction under the Proposed Project would consist of the following three primary components:

⁴ *Ibid.*

- a new Convention Center building that would replace the existing West Hall and would span Pico Boulevard so as to be contiguous with the existing South Hall (the New Hall);
- a new multi-purpose event center that would be constructed on the former West Hall site (the Event Center); and
- larger, more efficient parking garages west of L.A. Live Way, including the new Bond Street Garage, which would replace the existing Bond Street Parking Lot, and the L.A. Live Way Garage, which would replace the existing Cherry Street Garage.

The Proposed Project would be implemented through the proposed Convention and Event Center Specific Plan (Specific Plan), which would guide the development of the Project Site. The proposed Specific Plan would establish development standards that address, but are not limited to, building height, massing, parking, signage, and lighting. Under the Specific Plan, the proposed new buildings would be subject to maximum building heights, as follows:

1. New Hall—90 feet;
2. Event Center—220 feet; and
3. Parking Garages—90 feet.

d. Project Impacts

As noted above, shade-sensitive uses in the area of potential impact are numbered 1 through 13 in Figure IV.D.1-1 on page IV.D.1-4. The following analysis addresses the Proposed Project's incremental effect on the duration of shading on each of the identified sensitive uses during the winter solstice, summer solstice, fall equinox, and spring equinox.

(1) Winter Solstice

As shown on Figure IV.D.1-2 through Figure IV.D.1-5 on pages IV.D.1-7 through IV.D.1-10, the identified sensitive uses would experience the following shading effects from structures on the Project Site between the hours of 9:00 A.M. and 3:00 P.M. (Pacific Standard Time) during the winter solstice.

Sensitive Use No. 1

Upon completion of the Proposed Project, Nokia Plaza would continue to be shaded to varying degrees by STAPLES Center during each hour between 9:00 A.M. and 3:00 P.M.,

as is the case under existing conditions. No other structures on the Project Site would shade Nokia Plaza. The Proposed Project does not include any physical alterations to the STAPLES Center structure and thus would not change the pattern of shadows that are cast from the STAPLES Center. Therefore, the Proposed Project would not cast any new or additional shadows on Nokia Plaza, and no impact would occur.

Sensitive Use No. 2

Shadows from structures on the Project Site would not reach the Ritz Residences between the hours of 9:00 A.M. and 3:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 3

Shadows from structures on the Project Site would not reach any residential use west of the SR-110 Freeway between the hours of 9:00 A.M. and 3:00 P.M. Therefore, no impact would occur at these sensitive uses.

Sensitive Use No. 4

Shadows from structures on the Project Site would not reach the Bill Cruz Early Education Center between the hours of 9:00 A.M. and 3:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 5

Shadows from structures on the Project Site would not reach the City Lights on Fig multi-family residential use between the hours of 9:00 A.M. and 3:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 6

Shadows from structures on the Project Site would not reach the Oviatt Apartments between the hours of 9:00 A.M. and 3:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 7

Shadows from structures on the Project Site would not reach the Met Lofts between the hours of 9:00 A.M. and 3:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 8

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1130 South Flower Street between the hours of 9:00 A.M. and 3:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 9

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1420 South Flower Street between the hours of 9:00 A.M. and 3:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 10

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1325 South Hope Street between the hours of 9:00 A.M. and 3:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 11

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1329 South Hope Street between the hours of 9:00 A.M. and 3:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 12

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1355 South Hope Street between the hours of 9:00 A.M. and 3:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 13

Shadows from structures on the Project Site would not reach the Villa de la Esperanza Apartments between the hours of 9:00 A.M. and 3:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 14

Shadows from structures on the Project Site would not reach the multi-family residential uses located at 1430 and 1438 South Wright Street between the hours of 9:00 A.M. and 3:00 P.M. Therefore, no impact would occur at this sensitive use.

(2) Summer Solstice

As shown on Figure IV.D.1-6 through Figure IV.D.1-10 on pages IV.D.1-11 through IV.D.1-15, the identified sensitive uses would experience the following shading effects from structures on the Project Site between the hours of 9:00 A.M. and 5:00 P.M. (Pacific Daylight Time) during the summer solstice.

Sensitive Use No. 1

Shadows from structures on the Project Site would not reach Nokia Plaza between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 2

Shadows from structures on the Project Site would not reach the Ritz Residences between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 3

Shadows from structures on the Project Site would not reach any residential use west of the SR-110 Freeway between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at these sensitive uses.

Sensitive Use No. 4

Shadows from structures on the Project Site would not reach the Bill Cruz Early Education Center between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 5

Shadows from structures on the Project Site would not reach the City Lights on Fig multi-family residential use between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 6

Shadows from structures on the Project Site would not reach the Oviatt Apartments between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 7

Shadows from structures on the Project Site would not reach the Met Lofts between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 8

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1130 South Flower Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 9

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1420 South Flower Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 10

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1325 South Hope Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 11

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1329 South Hope Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 12

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1355 South Hope Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 13

Shadows from structures on the Project Site would not reach the Villa de la Esperanza Apartments between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 14

Shadows from structures on the Project Site would not reach the multi-family residential uses located at 1430 and 1438 South Wright Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

(3) Fall Equinox

As shown on Figure IV.D.1-11 through Figure IV.D.1-15 on pages IV.D.1-16 through IV.D.1-20, the identified sensitive uses, selected based on the criteria set forth in the L.A. CEQA Thresholds Guide, would experience the following shading effects from structures on the Project Site between the hours of 9:00 A.M. and 5:00 P.M. (Pacific Daylight Time) during the fall equinox.

Sensitive Use No. 1

Shadows from structures on the Project Site would not reach Nokia Plaza between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 2

Shadows from structures on the Project Site would not reach the Ritz Residences between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 3

Shadows from structures on the Project Site would not reach any residential use west of the SR-110 Freeway between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at these sensitive uses.

Sensitive Use No. 4

Shadows from structures on the Project Site would not reach the Bill Cruz Early Education Center between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 5

Upon completion of the Proposed Project, a shadow from the South Hall of the Convention Center would fall on the corner of the City Lights on Fig multi-family residential use between 4:00 P.M. and 5:00 P.M., as is the case under existing conditions. No other

structures on the Project Site would shade the City Lights on Fig multi-family residential use. As the Proposed Project does not include any physical alterations to the portion of the South Hall structure that is causing the shadow, the Proposed Project would not increase shading at this location. Therefore, the Proposed Project would not cast any new or additional shadows on the City Lights on Fig multi-family residential use, and no impact would occur.

Sensitive Use No. 6

Shadows from structures on the Project Site would not reach the Oviatt Apartments between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 7

Shadows from structures on the Project Site would not reach the Met Lofts between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 8

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1130 South Flower Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 9

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1420 South Flower Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 10

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1325 South Hope Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 11

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1329 South Hope Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 12

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1355 South Hope Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 13

Shadows from structures on the Project Site would not reach the Villa de la Esperanza Apartments between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 14

Shadows from structures on the Project Site would not reach the multi-family residential uses located at 1430 and 1438 South Wright Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

(4) Spring Equinox

As shown on Figure IV.D.1-16 through Figure IV.D.1-20 on pages IV.D.1-21 through IV.D.1-25, the identified sensitive uses would experience the following shading effects from structures on the Project Site between the hours of 9:00 A.M. and 5:00 P.M. (Pacific Daylight Time) during the spring equinox.

Sensitive Use No. 1

Shadows from structures on the Project Site would not reach Nokia Plaza between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 2

Shadows from structures on the Project Site would not reach the Ritz Residences between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 3

Shadows from structures on the Project Site would not reach any residential use west of the SR-110 Freeway between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at these sensitive uses.

Sensitive Use No. 4

Shadows from structures on the Project Site would not reach the Bill Cruz Early Education Center between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 5

Upon completion of the Proposed Project, a shadow from the South Hall of the Convention Center would fall just outside the corner of the City Lights on Fig multi-family residential use between 4:00 P.M. and 5:00 P.M., as is the case under existing conditions. No other structures on the Project Site would shade the City Lights on Fig multi-family residential use. As the Proposed Project does not include any physical alterations to the portion of the South Hall structure that is causing the shadow (which falls just outside of the corner of the building), the Proposed Project would not increase shading at this location. Therefore, the Proposed Project would not cast any new or additional shadows on the City Lights on Fig multi-family residential use, and no impact would occur.

Sensitive Use No. 6

Shadows from structures on the Project Site would not reach the Oviatt Apartments between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 7

Shadows from structures on the Project Site would not reach the Met Lofts between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 8

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1130 South Flower Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 9

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1420 South Flower Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 10

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1325 South Hope Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 11

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1329 South Hope Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 12

Shadows from structures on the Project Site would not reach the multi-family residential use located at 1355 South Hope Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 13

Shadows from structures on the Project Site would not reach the Villa de la Esperanza Apartments between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

Sensitive Use No. 14

Shadows from structures on the Project Site would not reach the multi-family residential uses located at 1430 and 1438 South Wright Street between the hours of 9:00 A.M. and 5:00 P.M. Therefore, no impact would occur at this sensitive use.

(5) Shading Impacts Conclusion

The Proposed Project would have no incremental effect on the shading environments at any of the identified sensitive uses during the winter solstice, summer solstice, fall equinox, or spring equinox. Therefore, significant natural light (shading) impacts would not occur, and no mitigation measures are required.

4. Cumulative Impacts

The geographic context for the cumulative impact analysis for natural light (shading) is the immediate vicinity of the Project Site where related projects may have the potential to combine with Proposed Project shadows to cumulatively create a significant shading

impact. As discussed in Section III.B, Basis for Cumulative Impact Analysis, of this Draft EIR, a total of 133 related projects have been identified within a 3-mile radius of the Project Site. The following eight related projects would be located within proximity to the Project Site so as to have the potential to cast shadows on the shade-sensitive uses identified in this analysis: Related Projects 27, 60, 91, 7, 34, 64, 2, and 65. As stated in the project-level analysis above, the Proposed Project would not cast any new or additional shadows on any of the identified sensitive uses during the winter solstice, summer solstice, fall equinox, or spring equinox. Thus, while the related projects may have the potential to shade some of the identified sensitive uses, there would be no potential for shadows from the related projects to combine with shadows from the Proposed Project and cumulatively create a significant shading impact. In addition, the Proposed Project would also have less than significant impacts with regard to the casting of shadows onto any of the related projects which qualify for consideration as a shadow sensitive use. Therefore, cumulative natural light (shading) impacts would be less than significant, and no mitigation measures are required.

5. Project Design Features and Mitigation Measures

a. Project Design Features

Project Design Feature D.1-1: Project building heights and massing shall substantially conform to the design guidelines and standards set forth in the proposed Convention and Event Center Specific Plan.

b. Mitigation Measures

Impacts associated with natural light (shading) would be less than significant. Therefore, no mitigation measures are required.

6. Level of Significance After Mitigation

Impacts associated with natural light (shading) would be less than significant.