#### APPENDIX G

SHADOW ANALYSIS

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JANUARY 9, 2024 FINAL



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#### I. INTRODUCTION AND OVERVIEW

This report details the results of an analysis conducted by Prevision Design to identify and characterize the shadow effects that would be caused by the construction of a 153-ft tall mixed-use institutional, academic and student housing project located at 201 Golden Gate Avenue in San Francisco, CA ("the proposed mixed-use development project"). As the proposed mixed-use development project is being developed by the UC College of the Law, San Francisco (UC Law SF) pursuant to an option agreement with property owner Unite Here Local 2, by statute it is not subject to local San Francisco Planning regulations, including shadow regulations under Section 295 of the San Francisco Planning Code. Accordingly, the UC Law SF has voluntarily prepared this study using the San Francisco standards and methodology for reference only.

The shadow analysis focuses specifically on the shadow effects of the project relative to the Turk-Hyde Mini Park, a public open space typically regulated under Section 295 of the San Francisco Planning Code with respect to the addition of net new shadow. This shadow analysis was conducted as generally described in (1) the February 3, 1989 memorandum titled "Proposition K – The Sunlight Ordinance" ("the 1989 memorandum") prepared by the San Francisco Recreation and Parks Department ("RPD") and the San Francisco Planning Department ("Planning"), (2) the July 2014 memorandum titled "Shadow Analysis Procedures and Scope Requirements" ("the 2014 memorandum") prepared by San Francisco Planning, and (3) recent directives from current Planning and RPD staff regarding the appropriate approach, deliverables, and scope of analysis appropriate in consideration of open spaces affected by proposed projects.

This report includes the results and discussion of all criteria factored into the analysis, including discussion of the analysis approach and methodology, the proposed mixed-use development project description, descriptions of the Turk-Hyde Mini Park, and the results of the study, including quantitative and qualitative reporting of net new shadow generated by the proposed mixed-use development project and graphical simulations of the locations and extents of the proposed mixed-use development project's net new shadow relative to existing shadow conditions.

This report does not present opinions nor conclusions on the part of Prevision Design about whether the shadow from the proposed mixed-use development project could or should be considered significant/insignificant or acceptable/unacceptable under the applicable standards.

#### II. REGULATORY STANDARDS AND SIGNIFICANCE CRITERIA

While there are no specific federal nor statewide regulations which regulate solar access nor set net new shadow limits on publicly accessible open spaces, San Francisco has established provisions, policies, and procedures that provide a local framework by which shadow cast by proposed projects on publicly accessible open spaces is evaluated. It should be noted that while this analysis has been performed using San Francisco Planning Department standards as detailed below, the proposed mixed-use development project is not required to adhere to San Francisco Planning Code as it is being developed by UC Law SF.

#### San Francisco General Plan

The Recreation and Open Space Element of the City of San Francisco General Plan (2014) includes Policy 1.9 applicable to potential solar access or shading impacts of new development on public open spaces, excerpted below:

Solar access to public open space should be protected. In San Francisco, presence of the sun's warming rays is essential to enjoying open space. Climatic factors, including ambient temperature, humidity, and wind, generally combine to create a comfortable climate only when direct sunlight is present. Therefore, the shadows created by new development nearby can critically diminish the utility and comfort of the open space.

Shadows are particularly a problem in downtown districts and in neighborhoods immediately adjacent to the downtown core, where there is a limited amount of open space, where there is pressure for new development, and where zoning controls allow tall buildings. But the problem potentially exists wherever tall buildings near open space are permitted.

The City should support more specific protections elsewhere to maintain sunlight in these spaces during the hours of their most intensive use while balancing this with the need for new development to accommodate a growing population in the City.

#### San Francisco Planning Code Section 295

Planning Code Section 295, adopted in 1984 pursuant to voter approval of Proposition K (The Sunlight Ordinance), prohibits the issuance of building permits for structures over 40 feet in height that would cast net new shadow on property under the jurisdiction of, or designated to be acquired by, the Recreation and Park Commission between one hour after sunrise to one hour before sunset at any time of year, unless the Planning Commission determines that the adverse impact of net new shadow would be insignificant.

#### Environmental Impacts under CEQA

CEQA does not recognize casting shadow or shade on an existing building or space as a potentially significant environmental impact. However, due to the dense urban setting and variation of building heights and availability of publicly accessible open spaces, San Francisco considers casting shadows or shade on these spaces to the degree that shadow impacts on open space would be considered an adverse physical impact to the environment.

#### III. ANALYSIS METHODOLOGY

#### Technical Standards

The technical standards for evaluation of shadow effects follow the criteria adopted by the Recreation and Park Commission and the Planning Commission adopted criteria in 1987 and 1989, would only be required to apply to projects subject to the Planning Code and to Planning Commission approval authority. While the proposed mixed-use development project is not subject to these requirements, this analysis does use this methodology, therefore these standards are stated below for reference:

Shadow is quantitatively measured by multiplying the area of the shadow by the amount of time the shadow is present on the open space, in units called square foot-hours (sfh). Determining the annual net new shadow load generated by a project begins with a calculation of the number of square foot-hours that would theoretically fall on a qualifying publicly accessible open space each day from an hour after sunrise to an hour before sunset summed over the course of a year, ignoring all shadow from any source. This total is referred to as the Theoretical Annual Available Sunlight (TAAS) for that park. The second step is the calculation of the baseline (or current) shading conditions, which factors in the square foot-hours of shadow cast by existing buildings and other structures on the open space. Lastly, the shadow effects of the project are calculated, with the difference between the baseline shadow condition and project shadow condition considered being net new project shadow. The amount of shadow is defined as the shadow in square foot-hours cast by the project divided by the TAAS, expressed as a percentage.

Further, in addition to quantitative criteria, the adopted criteria set forth qualitative criteria for evaluation of shadow. Those criteria for assessing net new shadow are based on existing shadow profiles [graphics], important times of day, important seasons in the year, location of the net new shadow, size, and duration of net new shadows and the public good served by buildings casting net new shadow.

#### 3D Modeling Assumptions

For the purposes of this analysis, Prevision Design built a 3D computer model reflecting representation of the local San Francisco urban context and landform surrounding the project site generated by Light Intensity Distance and Ranging [or Laser Imaging Detection and Ranging] (LIDAR). This model is reflective of actual building massing and articulation circa 2011. For new buildings built<sup>1</sup> after that date, Prevision Design generated individual building models using available architectural plans and records. Precise locations, boundaries, and sizes of the affected open spaces are input using GIS data provided by Planning with input and boundary verification by RPD.

The model for the proposed mixed-use development project was provided to Prevision Design on 12/13/2022 and reflects the project design as shown in the Concept Design Package (dated 1/20/2023) prepared by Page Southerland Page, Inc.

#### Qualitative Standards

As part of the qualitative analysis of shadow effects, the value of sunlight is discussed relative to the nature of features being shaded as well as their intensity of use. Benches, picnic tables, children's play areas, and other similar features at which users are more typically stationary for periods of time are typically considered more sensitive to the addition of shadow, whereas transitional spaces (such as entries or walkways), or wooded areas where shade is already a defining condition would typically be considered less sensitive to the addition of shadow. Unprogrammed areas (such as large grassy areas, etc.) could also be considered less sensitive to the addition of new shadow providing there are ample similar features unshaded and nearby at the time where project shadow would affect such features.

<sup>1</sup> Typically, the final form of buildings currently under construction are included as if they are complete for the purposes of this study. However, no such buildings exist within the study area and are therefore not included in this analysis.

#### IV. SCOPE OF WORK AND STUDIES PERFORMED

#### Scope of Work Determination

To establish the scope of review and approach to analysis and deliverables, Prevision Design followed the guidelines as encoded in the 1989 and 2014 memoranda, and recent input and direction from Planning and RPD staff regarding application of standards.

To determine the areas and features that would be affected by net new project shadow, Prevision Design used the 3D context model to generate a full-year shadow fan diagram, which depicts all areas that would receive net *new* shadow from the proposed mixed-use development project (factoring in topography as well the presence of current, intervening shadow cast by existing buildings) between one hour after sunrise through one hour before sunset ("the Section 295 daily analysis period") throughout the year.

Prevision Design additionally conducted a records search for cumulative projects in the vicinity that would potentially also cast net new shadow on the Turk-Hyde Mini Park and confirmed there are no qualifying projects in the current development pipeline.

Based on these factors and conditions, the scope of work for this analysis is as detailed below.

#### Quantitative Calculations

Using the 3D project model and urban context model developed as part of the scoping study, Prevision Design performed snapshot shadow measurements of the areas existing shadow falling on the Turk-Hyde Mini Park at 15-minute intervals within the daily analysis period, repeating these daily measurements every seven days between the Summer Solstice (June 21) and Winter Solstice (December 20). Interim times and dates are extrapolated to approximate shadow conditions on other days and times. This half-year analysis period (between the Summer and Winter Solstices) is referred to by Planning as a "solar year". As the path of the sun is roughly mirrored over the second half of the year (December 21 through June 20), analysis of this half-year period is mirrored to arrive at a full year estimated calculation of the areas and durations of existing shadow that currently falls on the Turk-Hyde Mini Park. In addition to the quantitative analysis of existing shadow conditions, calculations were generated to reflect the existing plus project condition, with the difference between the existing

conditions and those with the project representing the net new shadow effect of the proposed mixed-use development project.

#### Shadow Profile Graphics

To provide a spatial and contextual understanding of the location, size, and features affected by net new shadow, Prevision Design prepared graphics showing "snapshot" shadow profiles at hourly intervals over the entire area affected by project shadow. These graphics differentiate between existing shadow and net new project shadow within the Section 295 daily analysis period on the Summer Solstice (June 21), the approximate equinoxes (March 22/September 20), and the Winter Solstice (December 20) as well the date with the greatest quantitative net new shadow on the Turk-Hyde Mini Park (January 11/November 29). These graphics appear as Exhibits B, C, D and E.

#### Qualitative Analysis

To gain an understanding of how net new shadow may affect existing patterns of park use, Prevision Design conducted six 30-minute site visits to the Turk-Hyde Mini Park to observe the nature and intensity of uses. Two site visits were performed in the morning, two at midday, and two later in the day, with one visit at each time of day on a weekday and one on a weekend.

The qualitative effects of net new shadow on the affected open spaces are discussed based on the size, location, timing, and duration of net new shadow and how such shadow might potentially affect existing observed patterns of use of the affected open spaces.



FIGURE 1: Project Rendering

#### V. PROPOSED MIXED-USE DEVELOPMENT PROJECT

The proposed mixed-use development project would be located at what is currently 201, 209, 215, 243 and 247 Golden Gate Avenue comprising a 26,072-sf development lot (Block 0348, Lots 22, 22A, 23, 24 and 26) in the Downtown/Civic Center neighborhood of San Francisco. The project sponsor is UC Law SF, and the project architect is Page Southerland Page, Inc.

The proposed mixed-use development project involves the demolition of the existing buildings on site and the construction of a new multi-use tower will contain four primary programmatic elements: new union hall space for the Local 2 (the owner of the existing buildings), academic/programmatic space for UC Law SF and its academic partners, campus housing, and a basement with building support and parking.

There are two project scenarios being considered:

- The "Academic Light" Scenario (Variant 1). A 13-story, 150'-tall tower which would consist of an estimated 238,000 total GSF, two (2) floors for Local 2, one (1) floor of academic/programmatic space, ten (10) floors of campus housing, and a basement level with parking, storage and building support spaces.
- The "Academic Heavy" Scenario (Variant 2). A 12-story, 153'-tall tower which would consist of an estimated 236,200 total GSF, two (2) floors for Local 2, four (4) floors of academic/programmatic space, six (6) floors of campus housing, and a basement level with parking, storage and building support spaces.

NOTE: The shadow analysis and the term "proposed mixed-use development project" reflects the "Academic Heavy" Scenario (Variant 2), as it is the larger/taller of the two scenarios. The shadow effects of the "Academic Light" Scenario have not been independently analyzed but would be equal to or lesser than the "Academic Heavy" Scenario as presented.

Figure 1 shows a rendering of the proposed mixed-use development project. Figure 2 shows the location of the proposed mixed-use development project in relationship to nearby public parks and open spaces.



- Proposed Project
- Parks/Open Spaces (Jurisdiction)
  - ① Civic Center Plaza (RPD)
  - 2 Turk-Hyde Mini Park (RPD)
  - 3 United Nations Plaza (DPW)

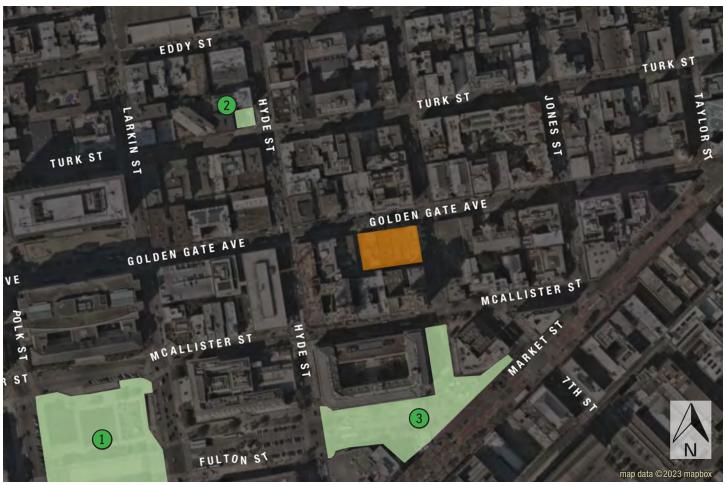


FIGURE 2: Vicinity Map



FIGURE 3: View of Turk-Hyde Mini Park from Hyde Street

#### VI. AFFECTED PARKS AND OPEN SPACES



FIGURE 4: Turk Street View

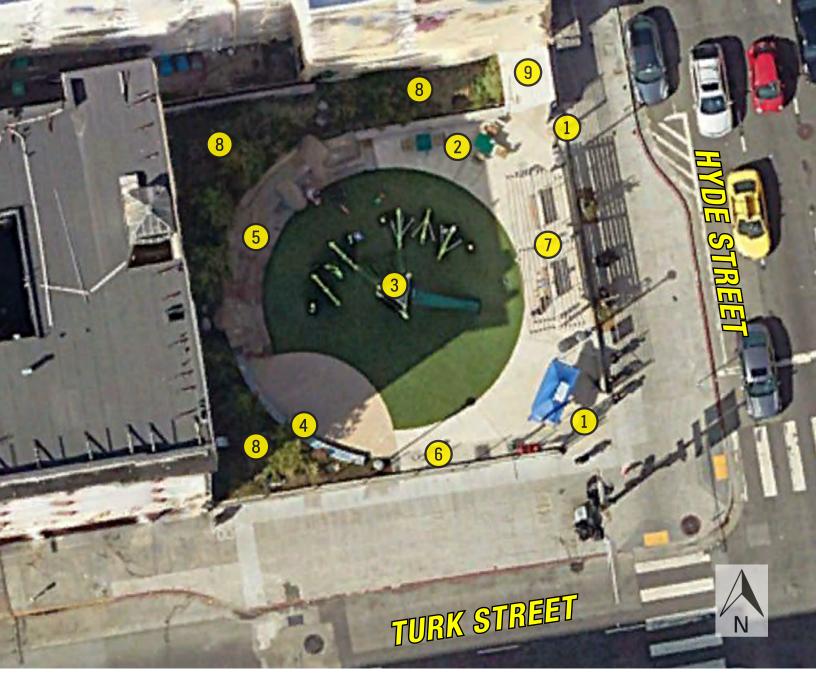
#### Turk-Hyde Mini Park

The Turk-Hyde Mini Park<sup>2</sup> is a public park under the jurisdiction of the Recreation and Park Commission. It is a 0.1-acre<sup>3</sup> (4,546-sf) urban park located in the Downtown/ Civic Center neighborhood of San Francisco on Assessor's Block 0336 / Lot 003 on the northwestern corner of the intersection of Turk and Hyde Streets. The entire park area is fenced, and the official hours of operation are from 9:00 a.m. to 8:00 p.m.

The Turk-Hyde Mini Park was completely renovated and reopened to the public in March of 2020. The park features a central children's play area with several play structures, ringed by bench seating and tables and landscaping. Figures 3 and 4 show photos of the Turk-Hyde Mini Park and Figure 5 shows a park plan.

<sup>&</sup>lt;sup>2</sup>Official Park website: https://sfrecpark.org/facilities/facility/details/TurkHyde-Mini-Park-208

<sup>&</sup>lt;sup>3</sup> Park areas and boundary information are from the "San Francisco Open Space for Shadow Study Analysis" public dataset published and maintained by City and County of San Francisco Planning Department (<a href="https://data.sfgov.org/Geographic-Locations-and-Boundaries/San-Francisco-Open-Space-for-Shadow-Study-Analysis/xk8z-bcqz">https://data.sfgov.org/Geographic-Locations-and-Boundaries/San-Francisco-Open-Space-for-Shadow-Study-Analysis/xk8z-bcqz</a>). Park sizes listed on the RPD website, the SF PIM, or other sources may reflect different areas.



1 Park Entry/Exit

- 2 Picnic Table Areas
- 3 Children's Play Area
- 4 Bench Seating
- 5 Stone Seating
- 6 Drinking Fountain
- 7 Canopy with Benches
- 8 Landscaped Area
- 9 Storage Area

FIGURE 5: Turk-Hyde Mini Park Plan

#### Other Nearby Parks and Open Spaces

As shown by Exhibit A, net new shadow from the proposed mixed-use development project would not affect any other publicly accessible parks or plazas, privately owned publicly accessible open spaces (POPOS), or SFUSD schools participating in the Shared Schoolyard Project.

#### TURK HYDE MINI PARK ANNUAL SHADOW LOADS / SQUARE FOOT HOURS (sfh)

Existing / Current Shadow

**51.77**%

8,758,804 sfh

Project Net New Shadow

0.03%

4,611 sfh

Existing + Project Shadow

51.80%

8,763,414 sfh

Remaining Sunlight

48.20%

8,155,276 sfh

EXISTING SHADOW DETAILS		
Range in existing shadow area coverage throughout the year	Between 0% - 100%	
Time of year / time of day most affected by existing shadow	Fall / Early Morning	

201 GOLDEN GATE AVENUE NET NEW SHADOW DETAILS			
Days net new shadow would occur (date range)	84 days annually (November 9 - January 31)		
Date(s) with most sfh net new shadow	November 29 & January 11		
Season / Time of day most affected by net new shadow	Fall / Morning		
Area of largest net new shadow (date and time)	699 sf (November 29 & January 11 @ 8:30 AM )		
Percentage of Turk Hyde Mini Park covered by largest shadow	15.36%		
Range in shadow coverage throughout the year (area range)	Between 0% - 15% (0 - 699 sf)		
Average shadow size across affected dates (percent coverage)	228 sf (5.01%)		
Date(s) with the longest duration of net new shadow (duration)	November 22 & January 18 (15 min +/- 14 min)		
Range in daily net new shadow duration across affected dates	Between zero minutes up to 15 min (+/- 14 min)		
Average daily net new shadow duration across affected dates	15.0 minutes		

TABLE 1: Quantitative shadow breakdown for Turk-Hyde Mini Park

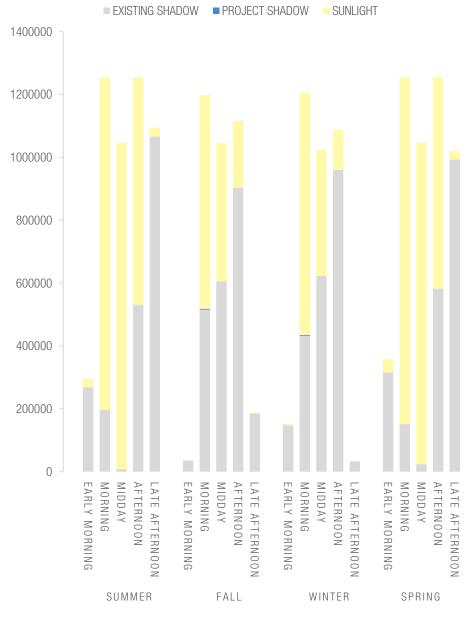
#### VII. TURK-HYDE MINI PARK SHADOW ANALYSIS FINDINGS

Table 1 summarizes the existing condition data and quantitative shadow effects of the proposed mixed-use development project on the Turk-Hyde Mini Park ("the park"). The full quantitative calculations for shadow conditions on the park on all 27 analysis dates are included as Exhibit F.

#### **Existing Conditions**

The park area is 4,546-sf and under current conditions it receives 8,758,804 annual square-foot-hours (sfh) of shadow. Based on a theoretical annual available sunlight (TAAS) of 16,918,691 sfh, the park's current annual shadow load is 51.77%.

#### EXISTING/PROJECT SHADOW VS SUN CHART



SUMMER: Jun 21-Sep 20 FALL: Sep 21-Dec 20 WINTER: Dec 21-Mar 20 SPRING: Mar 21-Jun 20 EARLY MORNING: Before 8 a.m. MORNING: 8 a.m. to 10:30 a.m. MIDDAY: 10:30 a.m. to 1:30 p.m. AFTERNOON: 1:30 p.m. to 4 p.m. LATE AFTERNOON: After 4 p.m.

FIGURE 6: Sun and Shadow SFH by Time of Day and Season

Under existing conditions, the park receives most sunlight during morning to midday hours with the majority of the park in shadow during early mornings and late afternoons year-round. Shadow on the park increases overall during mid fall through midwinter when portions of the park are shaded throughout the day.

# Increase in Shadow from Proposed Mixed-use Development Project

The proposed mixed-use development project would result in additional net new shadow falling on the park, adding approximately 4,611 net new annual sfh of shadow, increasing the annual shadow load by 0.03% over existing levels of shadow. With the addition of the proposed mixed-use development project, the new annual total shadow load of the park would be raised to 51.80%.

#### Timing and Location of Net New Shadow from Proposed Mixed-use Development Project

The park would be affected by net new shadow from the proposed mixed-use development project for short periods of time occurring no earlier than 8 a.m. and not after 9 a.m. between November 9th and January 31st (84 days annually). Project shadow would remain in the park for under 30 minutes on affected dates, with an average duration of around 15 minutes and cover no more than 699-sf (15%) of park area with an average area of 228-sf (5%). The dates most affected by project shadow would be November 29th and January 11th.

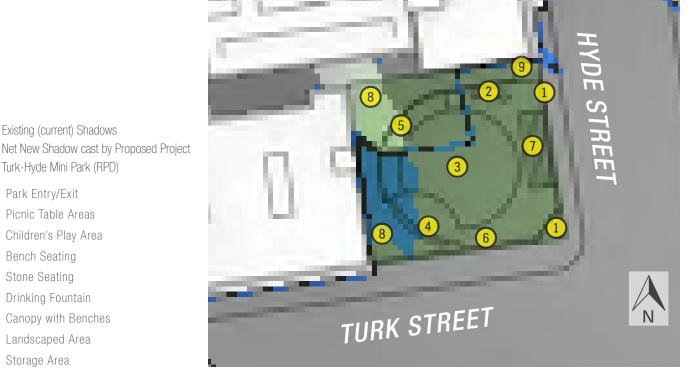


FIGURE 7: Max area of net new shadow (Jan 11/Nov 29 at 8:30 am)

The areas of the park which would be affected by project shadow would be confined to the western half of the mark area and would include landscaped areas, fixed bench and stone seating areas and small portions of the play area (though not the play structures). Exhibit A graphically represents the total aggregate area affected by net new shadow from the proposed mixed-use development project throughout the year.

#### Observed Park Use

Existing (current) Shadows

Park Entry/Exit Picnic Table Areas Children's Play Area Bench Seating Stone Seating Drinking Fountain

Turk-Hyde Mini Park (RPD)

Canopy with Benches Landscaped Area Storage Area

> Within the six 30-minute observation periods conducted by Prevision Design between January 22nd to 27th 2023, the number of users present at the Turk-Hyde Mini Park over the half-hour observation periods ranged from 4 to 14 public visitors<sup>4</sup>. The highest numbers of park visitors were observed in the afternoon periods, with slightly lower levels of use observed during the morning and midday periods. See Table 2 for a full observation count summary.

The portions of the park observed to be the most frequently used included the park entry area, the covered bench area, the picnic tables, and the children's play area. The bench and stone seating areas were observed to have the lowest levels of use across the observation visits.

<sup>&</sup>lt;sup>4</sup> Between one and four park staff members were present during all observation visits. These are noted in the observation log but not counted as public visitors.

#### Project Shadow Characteristics Relative to Park Features and Use

Shadow cast by the proposed mixed-use development project would only occur from November through January during mornings between the hours of 8 and 9 a.m. The areas affected would be in the western half of the park and include landscaped areas, fixed bench and stone seating areas and small portions of the play area.

OBSERVATION TIME	DATE OF VISIT	PARK USERS	TEMP - WEATHER
Weekday Morning (9:45 – 10:15)	Friday	4	52° F
	1/27/2023	(+1 park worker)	Partly Cloudy
Weekday Midday	Monday	10	58° F
(12:20 – 12:50)	1/23/2023	(+1 park worker)	Sunny
Weekday Afternoon	Monday	12	60° F
(1:30 – 2:00)	1/23/2023	(+1 park worker)	Sunny
Weekend Morning (9:30 – 10:00)	Sunday 1/22/2023	6 (+3 park workers)	51° F Partly Cloudy
Weekend Midday	Sunday	4 (+4 park workers)	54° F
(12:00 – 12:30)	1/22/2023		Partly Cloudy
Weekend Afternoon (2:30 – 3:00)	Sunday	14	60° F
	1/22/2023	(+2 park workers)	Partly Cloudy

TABLE 2: Park Use Observations

The landscaped areas are not occupied, so short-duration shadow cast on these features would not affect users experience of the park. The bench and stone seating areas would potentially be more sensitive to the addition of project shadow, however neither of these features were observed to have any users during the morning park observation visits, with users exhibiting a preference at that time of day for other seating areas (such as picnic tables and covered benches)—as such the effect of short-duration morning shadow cast on these features would be likely to have a lesser effect on park users. The children's play area is another feature which would be more sensitive to the addition of project shadow, and while shadow would reach into this area it would be confined to the areas around the edges and not the play structures themselves. Across the observation visits, the primary uses in this area were by children on these structures, so the effect of short-duration shadow cast around the edges of the play area would likely have a lesser effect on park users.

Overall, the shadow cast by the proposed mixed-use development project could be considered less likely to affect the use and enjoyment of the Turk-Hyde Mini Park based on its early morning timeframe, short duration, and lower observed levels of use of the affected park features at that time of day.

### **EXHIBIT A: AGGREGATE SHADOWFAN DIAGRAM**

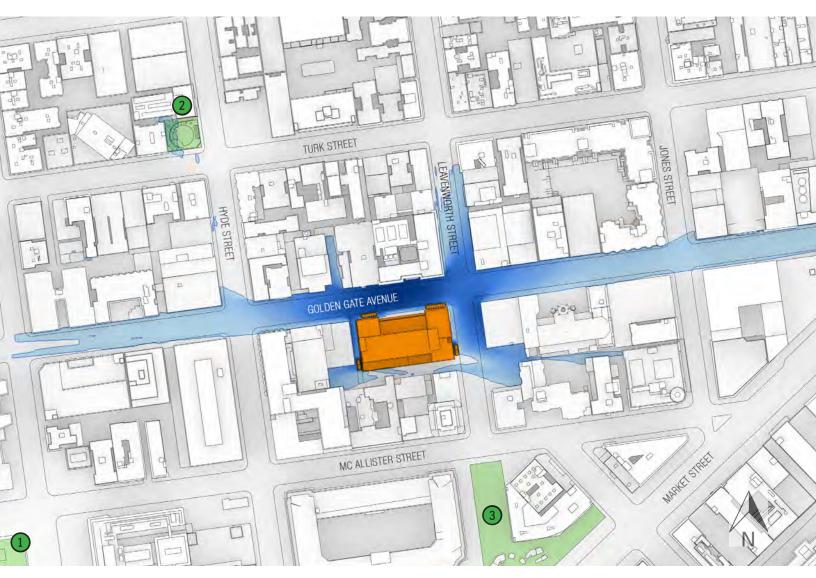
A1 - Annual net new shadow locations from the proposed project

Diagram showing extents of all areas receiving net new shadow from the proposed project at *some* point during the year.



# 1 201 GOLDEN GATE AVENUE

Net New Shadow Fan: Areas Receiving Net New Shadow Annually (factoring in existing shadow)



# EXTENTS OF NET NEW SHADOW CAST BETWEEN 1-HOUR AFTER SUNRISE THROUGH 1-HOUR BEFORE SUNSET ANNUALLY

# Proposed Project Refined Shadow Fan of Proposed Project occasional frequent shadow shadow

# **FULL YEAR**



Open Spaces (Jurisdiction)

- 1 Civic Center Plaza (RPD)
- 2 Turk-Hyde Mini Park (RPD)
- 3 United Nations Plaza (DPW)

# **EXHIBIT B: SHADOW DIAGRAMS ON SUMMER SOLSTICE**

B1 - June 21

Diagrams at one hour intervals starting one hour after sunrise to one hour prior to sunset.



### **B1.1 201 GOLDEN GATE AVENUE**

Shadow diagrams on the Summer Solstice





# **SUMMER SOLSTICE JUNE 21**

6:46 AM





### **B1.2 201 GOLDEN GATE AVENUE**

Shadow diagrams on the Summer Solstice





# **SUMMER SOLSTICE JUNE 21**





# B1.3 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Summer Solstice





# **SUMMER SOLSTICE JUNE 21**





### **B1.4 201 GOLDEN GATE AVENUE**

Shadow diagrams on the Summer Solstice





# **SUMMER SOLSTICE JUNE 21**





### **B1.5 201 GOLDEN GATE AVENUE**

Shadow diagrams on the Summer Solstice





# **SUMMER SOLSTICE JUNE 21**





### **B1.6 201 GOLDEN GATE AVENUE**

Shadow diagrams on the Summer Solstice





### **SUMMER SOLSTICE JUNE 21**





# B1.7 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Summer Solstice





# **SUMMER SOLSTICE JUNE 21**





**B1.8 201 GOLDEN GATE AVENUE** 

Shadow diagrams on the Summer Solstice





**SUMMER SOLSTICE JUNE 21**  1:00 PM

Proposed Project Existing (current) Shadows Net New Shadow cast by Proposed Project Turk-Hyde Mini Park (RPD)



### B1.9 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Summer Solstice





**SUMMER SOLSTICE JUNE 21** 





### B1.10 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Summer Solstice





# **SUMMER SOLSTICE JUNE 21**





# **Q 1 1 1** 201 GOLDEN GATE AVENUE

Shadow diagrams on the Summer Solstice





SUMMER SOLSTICE JUNE 21





# B1.12 **201 GOLDEN GATE AVENUE**Shadow diagrams on the Summer Solstice





# **SUMMER SOLSTICE JUNE 21**





### B1.13 201 GOLDEN GATE AVENUE Shadow diagrams on the Summo





### SUMMER SOLSTICE JUNE 21





#### B1.14 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Summer Solstice





### **SUMMER SOLSTICE JUNE 21**





#### B1.15 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Summer Solstice





**SUMMER SOLSTICE JUNE 21**  7:36 PM

Proposed Project Existing (current) Shadows Net New Shadow cast by Proposed Project Turk-Hyde Mini Park (RPD)

#### **EXHIBIT C: SHADOW DIAGRAMS NEAR EQUINOXES**

C1 - September 20 (Autumnal), March 22 (Vernal) similar

Diagrams at one hour intervals starting one hour after sunrise to one hour prior to sunset.



#### C1.1 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Fall Equinox (Spring sim)





FALL EQUINOX (SPRING SIM) SEPTEMBER 20 & MARCH 22 7:57 AM





**C1.2 201 GOLDEN GATE AVENUE** 

Shadow diagrams on the Fall Equinox (Spring sim)





FALL EQUINOX (SPRING SIM) SEPTEMBER 20 & MARCH 22





C1.3 **201 GOLDEN GATE AVENUE** 

Shadow diagrams on the Fall Equinox (Spring sim)





FALL EQUINOX (SPRING SIM) SEPTEMBER 20 & MARCH 22





C1.4

#### **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Fall Equinox (Spring sim)





FALL EQUINOX (SPRING SIM)
SEPTEMBER 20 & MARCH 22





C1.5

#### **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Fall Equinox (Spring sim)





FALL EQUINOX (SPRING SIM)
SEPTEMBER 20 & MARCH 22





C1.6

#### **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Fall Equinox (Spring sim)





FALL EQUINOX (SPRING SIM)
SEPTEMBER 20 & MARCH 22





#### **C1.7 201 GOLDEN GATE AVENUE**

Shadow diagrams on the Fall Equinox (Spring sim)





FALL EQUINOX (SPRING SIM) SEPTEMBER 20 & MARCH 22





C1.8 **201 GOLDEN GATE AVENUE** 

Shadow diagrams on the Fall Equinox (Spring sim)





FALL EQUINOX (SPRING SIM) SEPTEMBER 20 & MARCH 22





C1.9 **201 GOLDEN GATE AVENUE** 

Shadow diagrams on the Fall Equinox (Spring sim)





FALL EQUINOX (SPRING SIM) SEPTEMBER 20 & MARCH 22





#### C1.10 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Fall Equinox (Spring sim)





FALL EQUINOX (SPRING SIM) SEPTEMBER 20 & MARCH 22





#### C1.11 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Fall Equinox (Spring sim)





FALL EQUINOX (SPRING SIM) SEPTEMBER 20 & MARCH 22





#### C1.12 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Fall Equinox (Spring sim)





FALL EQUINOX (SPRING SIM) SEPTEMBER 20 & MARCH 22





#### C1.13 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Fall Equinox (Spring sim)





FALL EQUINOX (SPRING SIM) SEPTEMBER 20 & MARCH 22 6:09 PM



#### **EXHIBIT D: SHADOW DIAGRAMS ON WINTER SOLSTICE**

D1 - December 20

Diagrams at one hour intervals starting one hour after sunrise to one hour prior to sunset.



### D1.1 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Winter Solstice





### **WINTER SOLSTICE DECEMBER 20 & DECEMBER 21**

8:19 AM





### D1.2 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Winter Solstice





#### **WINTER SOLSTICE DECEMBER 20 & DECEMBER 21**





### D1.3 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Winter Solstice





#### **WINTER SOLSTICE DECEMBER 20 & DECEMBER 21**





#### D1.4 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Winter Solstice





#### **WINTER SOLSTICE DECEMBER 20 & DECEMBER 21**





#### D1.5 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Winter Solstice





#### **WINTER SOLSTICE DECEMBER 20 & DECEMBER 21**





#### D1.6 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Winter Solstice





#### **WINTER SOLSTICE DECEMBER 20 & DECEMBER 21**





### D1.7 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Winter Solstice





#### **WINTER SOLSTICE DECEMBER 20 & DECEMBER 21**





#### D1.8 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Winter Solstice





#### **WINTER SOLSTICE DECEMBER 20 & DECEMBER 21**





#### D1.9 **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Winter Solstice





### **WINTER SOLSTICE DECEMBER 20 & DECEMBER 21**

### 3:54 PM



#### **EXHIBIT E: DAY(S) OF MAXIMUM NET NEW SHADOW**

E1 - January 11 & November 29

Diagrams at one hour intervals starting one hour after sunrise to one hour prior to sunset, and at 15-minute intervals when net new shadow is present.



### E 1. 1 201 GOLDEN GATE AVENUE Shadow diagrams on the Date

Shadow diagrams on the Date of Maximum SFH net new shadow





#### DATE OF MAXIMUM SFH NET NEW SHADOW NOVEMBER 29 & JANUARY 11

# 8:04 AM





### E1.2 201 GOLDEN GATE AVENUE Shadow diagrams on the Date

Shadow diagrams on the Date of Maximum SFH net new shadow





### DATE OF MAXIMUM SFH NET NEW SHADOW NOVEMBER 29 & JANUARY 11

# 8:15 AM





### E1.3 201 GOLDEN GATE AVENUE Shadow diagrams on the Date

Shadow diagrams on the Date of Maximum SFH net new shadow





#### DATE OF MAXIMUM SFH NET NEW SHADOW NOVEMBER 29 & JANUARY 11

# 8:30 AM





E1.4

#### **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Date of Maximum SFH net new shadow





#### DATE OF MAXIMUM SFH NET NEW SHADOW NOVEMBER 29 & JANUARY 11

## 8:45 AM





### E1.5

#### **201 GOLDEN GATE AVENUE**

Shadow diagrams on the Date of Maximum SFH net new shadow





#### DATE OF MAXIMUM SFH NET NEW SHADOW NOVEMBER 29 & JANUARY 11





### E 1.6 201 GOLDEN GATE AVENUE Shadow diagrams on the Date

Shadow diagrams on the Date of Maximum SFH net new shadow





#### DATE OF MAXIMUM SFH NET NEW SHADOW NOVEMBER 29 & JANUARY 11





### E 1.7 201 GOLDEN GATE AVENUE Shadow diagrams on the Date

Shadow diagrams on the Date of Maximum SFH net new shadow





#### DATE OF MAXIMUM SFH NET NEW SHADOW NOVEMBER 29 & JANUARY 11





E 1.8 201 GOLDEN GATE AVENUE Shadow diagrams on the Date

Shadow diagrams on the Date of Maximum SFH net new shadow





DATE OF MAXIMUM SFH NET NEW SHADOW NOVEMBER 29 & JANUARY 11





## E 1.9 201 GOLDEN GATE AVENUE Shadow diagrams on the Date

Shadow diagrams on the Date of Maximum SFH net new shadow





#### DATE OF MAXIMUM SFH NET NEW SHADOW NOVEMBER 29 & JANUARY 11

# 1:00 PM





## E1.10 201 GOLDEN GATE AVENUE Shadow diagrams on the Date

Shadow diagrams on the Date of Maximum SFH net new shadow





#### DATE OF MAXIMUM SFH NET NEW SHADOW NOVEMBER 29 & JANUARY 11

# 2:00 PM





#### **1 1 1** 201 GOLDEN GATE AVENUE

Shadow diagrams on the Date of Maximum SFH net new shadow





#### DATE OF MAXIMUM SFH NET NEW SHADOW NOVEMBER 29 & JANUARY 11

# 3:00 PM





## E1.12 201 GOLDEN GATE AVENUE Shadow diagrams on the Date

Shadow diagrams on the Date of Maximum SFH net new shadow





#### DATE OF MAXIMUM SFH NET NEW SHADOW NOVEMBER 29 & JANUARY 11

# 3:51 PM



#### **EXHIBIT F: QUANTITATIVE SHADOW DATA**

Quantitative Shadow Data for Turk-Hyde Mini Park

Shadow data for existing conditions, net new shadow from project, and cumulative condition shadow

#### **JUNE 21**

Summer solstice Analysis hours: 6:46 AM-7:36 PM (PDT)

1	CI	IADOW/CHNI ICHT DA	ANCE							
	Existing Shadow	Project Shadow	Sunlight Remaining							
	Shadow / Sunlight Balance Key									

Analysis Time	EXISTING SHADOW		PROJECT NET NEW SHADOW		SHADOW/SUNLIGHT BALANCE
	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
6:46 AM	4,546 sf	100.00%	0 sf	0.00%	
7:00 AM	4,546 sf	100.00%	0 sf	0.00%	
7:15 AM	4,546 sf	100.00%	0 sf	0.00%	
7:30 AM	4,215 sf	92.71%	0 sf	0.00%	
7:45 AM	3,884 sf	85.43%	0 sf	0.00%	
8:00 AM	4,071 sf	89.54%	0 sf	0.00%	
8:15 AM	4,546 sf	100.00%	0 sf	0.00%	
8:30 AM	2,576 sf	56.67%	0 sf	0.00%	
8:45 AM	643 sf	14.14%	0 sf	0.00%	
9:00 AM	4 sf	0.08%	0 sf	0.00%	
9:15 AM	3 sf	0.06%	0 sf	0.00%	
9:30 AM	3 sf	0.06%	0 sf	0.00%	
9:45 AM	2 sf	0.05%	0 sf	0.00%	
10:00 AM	3 sf	0.06%	0 sf	0.00%	
10:15 AM	2 sf	0.05%	0 sf	0.00%	
10:30 AM	3 sf	0.06%	0 sf	0.00%	
10:45 AM	3 sf	0.06%	0 sf	0.00%	
11:00 AM	3 sf	0.06%	0 sf	0.00%	
11:15 AM	3 sf	0.06%	0 sf	0.00%	
11:30 AM	3 sf	0.06%	0 sf	0.00%	
11:45 AM	3 sf	0.06%	0 sf	0.00%	
12:00 PM	3 sf	0.07%	0 sf	0.00%	
12:15 PM	3 sf	0.07%	0 sf	0.00%	
12:30 PM	3 sf	0.07%	0 sf	0.00%	
12:45 PM	3 sf	0.07%	0 sf	0.00%	
1:00 PM	5 sf	0.10%	0 sf	0.00%	
1:15 PM	188 sf	4.14%	0 sf	0.00%	
1:30 PM	408 sf	8.98%	0 sf	0.00%	
1:45 PM	630 sf	13.87%	0 sf	0.00%	
2:00 PM	868 sf	19.09%	0 sf	0.00%	
2:15 PM	1,103 sf	24.26%	0 sf	0.00%	
2:30 PM	1,356 sf	29.82%	0 sf	0.00%	
2:45 PM	1,612 sf	35.45%	0 sf	0.00%	
3:00 PM	1,886 sf	41.49%	0 sf	0.00%	
3:15 PM	2,173 sf	47.80%	0 sf	0.00%	
3:30 PM	2,492 sf	54.81%	0 sf	0.00%	
3:45 PM	2,832 sf	62.29%	0 sf	0.00%	
4:00 PM	3,151 sf	69.31%	0 sf	0.00%	
4:15 PM	3,471 sf	76.34%	0 sf	0.00%	
4:30 PM	3,796 sf	83.50%	0 sf	0.00%	
4:45 PM	4,117 sf	90.56%	0 sf	0.00%	
5:00 PM	4,451 sf	97.89%	0 sf	0.00%	
5:15 PM	4,523 sf	99.48%	0 sf	0.00%	
5:30 PM	4,546 sf	100.00%	0 sf	0.00%	
5:45 PM	4,546 sf	100.00%	0 sf	0.00%	
6:00 PM	4,546 sf	100.00%	0 sf	0.00%	
6:15 PM	4,546 sf	100.00%	0 sf	0.00%	
6:30 PM	4,546 sf	100.00%	0 sf	0.00%	
6:45 PM	4,546 sf	100.00%	0 sf	0.00%	
7:00 PM	4,546 sf	100.00%	0 sf	0.00%	
7:15 PM	4,546 sf	100.00%	0 sf	0.00%	
7:36 PM	4,546 sf	100.00%	0 sf	0.00%	
1.30 FIVI	4,540 81	100.00%	0.81	0.00%	

#### **JUNE 28**

Mirror date: June 14

Analysis hours: 6:48 AM-7:36 PM (PDT)

Shadow / Sunlight Balance Key

Existing Shadow Project Shadow Sunlight Remaining

Analysis Time	EXISTING	S SHADOW	PROJECT NET	NEW SHADOW	SHADOW/SUNLIGHT BALANCE
Analysis Time	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
6:48 AM	4,546 sf	100.00%	0 sf	0.00%	
7:00 AM	4,546 sf	100.00%	0 sf	0.00%	
7:15 AM	4,546 sf	100.00%	0 sf	0.00%	
7:30 AM	4,318 sf	94.99%	0 sf	0.00%	
7:45 AM	3,929 sf	86.42%	0 sf	0.00%	
8:00 AM	4,057 sf	89.24%	0 sf	0.00%	
8:15 AM	4,542 sf	99.90%	0 sf	0.00%	
8:30 AM	2,852 sf	62.74%	0 sf	0.00%	
8:45 AM	839 sf	18.46%	0 sf	0.00%	
9:00 AM	4 sf	0.08%	0 sf	0.00%	
9:15 AM	3 sf	0.06%	0 sf	0.00%	
9:30 AM	3 sf	0.06%	0 sf	0.00%	
9:45 AM	2 sf	0.05%	0 sf	0.00%	
10:00 AM	2 sf	0.05%	0 sf	0.00%	
10:15 AM	2 sf	0.05%	0 sf	0.00%	
10:30 AM	3 sf	0.06%	0 sf	0.00%	
10:45 AM	3 sf	0.06%	0 sf	0.00%	
11:00 AM	3 sf	0.06%	0 sf	0.00%	
11:15 AM	3 sf	0.06%	0 sf	0.00%	
11:30 AM	3 sf	0.06%	0 sf	0.00%	
11:45 AM	3 sf	0.06%	0 sf	0.00%	
12:00 PM	3 sf	0.06%	0 sf	0.00%	
12:15 PM	3 sf	0.07%	0 sf	0.00%	
12:30 PM	3 sf	0.07%	0 sf	0.00%	
12:45 PM	3 sf	0.07%	0 sf	0.00%	
1:00 PM	3 sf	0.07%	0 sf	0.00%	
1:15 PM	168 sf	3.69%	0 sf	0.00%	
1:30 PM	387 sf	8.51%	0 sf	0.00%	
1:45 PM	609 sf	13.40%	0 sf	0.00%	
2:00 PM	846 sf	18.61%	0 sf	0.00%	
2:15 PM	1,081 sf	23.77%	0 sf	0.00%	
2:30 PM	1,333 sf	29.31%	0 sf	0.00%	
2:45 PM	1,588 sf	34.92%	0 sf	0.00%	
3:00 PM	1,861 sf	40.94%	0 sf	0.00%	
3:15 PM	2,146 sf	47.20%	0 sf	0.00%	
3:30 PM	2,462 sf	54.14%	0 sf	0.00%	
3:45 PM	2,809 sf	61.78%	0 sf	0.00%	
4:00 PM	3,128 sf	68.80%	0 sf	0.00%	
4:15 PM	3,450 sf	75.89%	0 sf	0.00%	
4:30 PM	3,777 sf	83.07%	0 sf	0.00%	
4:45 PM	4,097 sf	90.11%	0 sf	0.00%	
5:00 PM	4,440 sf	97.66%	0 sf	0.00%	
5:15 PM	4,516 sf	99.34%	0 sf	0.00%	
5:30 PM	4,546 sf	100.00%	0 sf	0.00%	
5:45 PM	4,546 sf	100.00%	0 sf	0.00%	
6:00 PM	4,546 sf	100.00%	0 sf	0.00%	
6:15 PM	4,546 sf	100.00%	0 sf	0.00%	
6:30 PM	4,546 sf	100.00%	0 sf	0.00%	
6:45 PM	4,546 sf	100.00%	0 sf	0.00%	
7:00 PM	4,546 sf	100.00%	0 sf	0.00%	
7:15 PM	4,546 sf	100.00%	0 sf	0.00%	
7:36 PM	4,546 sf	100.00%	0 sf	0.00%	
7.001141	1,0 10 01	100.0070	V 01	0.0070	

Mirror date: June 7

Analysis hours: 6:52 AM-7:36 PM (PDT)

Shadow / Sunlight Balance Key

Existing Shadow Project Shadow Sunlight Remaining

A l	EXISTING	SHADOW	PROJECT NET	NEW SHADOW	SHADOW/SUNLIGHT BALANCE
Analysis Time	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
6:52 AM	4,546 sf	100.00%	0 sf	0.00%	
7:00 AM	4,546 sf	100.00%	0 sf	0.00%	
7:15 AM	4,546 sf	100.00%	0 sf	0.00%	
7:30 AM	4,514 sf	99.29%	0 sf	0.00%	
7:45 AM	4,040 sf	88.87%	0 sf	0.00%	
8:00 AM	4,140 sf	91.06%	0 sf	0.00%	
8:15 AM	4,546 sf	100.00%	0 sf	0.00%	
8:30 AM	3,170 sf	69.73%	0 sf	0.00%	
8:45 AM	1,087 sf	23.90%	0 sf	0.00%	
9:00 AM	22 sf	0.48%	0 sf	0.00%	
9:15 AM	3 sf	0.06%	0 sf	0.00%	
9:30 AM	3 sf	0.06%	0 sf	0.00%	
9:45 AM	2 sf	0.05%	0 sf	0.00%	
10:00 AM	2 sf	0.05%	0 sf	0.00%	
10:15 AM	2 sf	0.05%	0 sf	0.00%	
10:30 AM	2 sf	0.05%	0 sf	0.00%	
10:45 AM	3 sf	0.06%	0 sf	0.00%	
11:00 AM	3 sf	0.06%	0 sf	0.00%	
11:15 AM	3 sf	0.06%	0 sf	0.00%	
11:30 AM	3 sf	0.06%	0 sf	0.00%	
11:45 AM	3 sf	0.06%	0 sf	0.00%	
12:00 PM	3 sf	0.06%	0 sf	0.00%	
12:15 PM	3 sf	0.07%	0 sf	0.00%	
12:30 PM	3 sf	0.07%	0 sf	0.00%	
12:45 PM	3 sf	0.07%	0 sf	0.00%	
1:00 PM	3 sf	0.07%	0 sf	0.00%	
1:15 PM	153 sf	3.36%	0 sf	0.00%	
1:30 PM	372 sf	8.18%	0 sf	0.00%	
1:45 PM	594 sf	13.07%	0 sf	0.00%	
2:00 PM	831 sf	18.27%	0 sf	0.00%	
2:15 PM	1,065 sf	23.43%	0 sf	0.00%	
2:30 PM	1,317 sf	28.97%	0 sf	0.00%	
2:45 PM	1,572 sf	34.57%	0 sf	0.00%	
3:00 PM	1,845 sf	40.57%	0 sf	0.00%	
3:15 PM	2,128 sf	46.81%	0 sf	0.00%	
3:30 PM	2,442 sf	53.72%	0 sf	0.00%	
3:45 PM	2,786 sf	61.28%	0 sf	0.00%	
4:00 PM	3,128 sf	68.79%	0 sf	0.00%	
4:15 PM	3,460 sf	76.11%	0 sf	0.00%	
4:30 PM	3,790 sf	83.36%	0 sf	0.00%	
4:45 PM	4,116 sf	90.53%	0 sf	0.00%	
5:00 PM	4,410 sf	97.00%	0 sf	0.00%	
5:15 PM	4,506 sf	99.11%	0 sf	0.00%	
5:30 PM	4,546 sf	100.00%	0 sf	0.00%	
5:45 PM	4,546 sf	100.00%	0 sf	0.00%	
6:00 PM	4,546 sf	100.00%	0 sf	0.00%	
6:15 PM	4,546 sf	100.00%	0 sf	0.00%	
6:30 PM	4,546 sf	100.00%	0 sf	0.00%	
6:45 PM	4,546 sf	100.00%	0 sf	0.00%	
7:00 PM	4,546 sf	100.00%	0 sf	0.00%	
7:15 PM	4,546 sf	100.00%	0 sf	0.00%	
7:36 PM	4,546 sf	100.00%	0 sf	0.00%	

Mirror date: May 31 Shadow / Sunlight Balance Key
Analysis hours: 6:56 AM-7:33 PM (PDT) Existing Shadow Project Shadow Sunlight Remaining

Analysis Time	EXISTING	SHADOW	PROJECT NET	NEW SHADOW	SHADOW/SUNLIGHT BALANCE
_	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
6:56 AM	4,546 sf	100.00%	0 sf	0.00%	
7:00 AM	4,546 sf	100.00%	0 sf	0.00%	
7:15 AM	4,546 sf	100.00%	0 sf	0.00%	
7:30 AM	4,546 sf	100.00%	0 sf	0.00%	
7:45 AM	4,214 sf	92.70%	0 sf	0.00%	
8:00 AM	4,304 sf	94.67%	0 sf	0.00%	
8:15 AM	4,546 sf	100.00%	0 sf	0.00%	
8:30 AM	3,505 sf	77.10%	0 sf	0.00%	
8:45 AM	1,361 sf	29.94%	0 sf	0.00%	
9:00 AM	104 sf	2.29%	0 sf	0.00%	
9:15 AM	2 sf	0.05%	0 sf	0.00%	
9:30 AM	2 sf	0.05%	0 sf	0.00%	
9:45 AM	2 sf	0.05%	0 sf	0.00%	
10:00 AM	2 sf	0.05%	0 sf	0.00%	
10:15 AM	2 sf	0.05%	0 sf	0.00%	
10:30 AM	2 sf	0.05%	0 sf	0.00%	
10:45 AM	2 sf	0.05%	0 sf	0.00%	
11:00 AM	3 sf	0.06%	0 sf	0.00%	
11:15 AM	3 sf	0.06%	0 sf	0.00%	
11:30 AM	3 sf	0.06%	0 sf	0.00%	
11:45 AM	3 sf	0.06%	0 sf	0.00%	
12:00 PM	3 sf	0.06%	0 sf	0.00%	
12:15 PM	3 sf	0.07%	0 sf	0.00%	
12:30 PM	3 sf	0.07%	0 sf	0.00%	
12:45 PM	3 sf	0.07%	0 sf	0.00%	
1:00 PM	3 sf	0.07%	0 sf	0.00%	
1:15 PM	144 sf	3.16%	0 sf	0.00%	
1:30 PM	362 sf	7.97%	0 sf	0.00%	
1:45 PM	586 sf	12.89%	0 sf	0.00%	
2:00 PM	822 sf	18.09%	0 sf	0.00%	
2:15 PM	1,057 sf	23.26%	0 sf	0.00%	
2:30 PM	1,309 sf	28.80%	0 sf	0.00%	
2:45 PM	1,564 sf	34.40%	0 sf	0.00%	
3:00 PM	1,837 sf	40.41%	0 sf	0.00%	
3:15 PM	2,121 sf	46.65%	0 sf	0.00%	
3:30 PM	2,434 sf	53.54%	0 sf	0.00%	
3:45 PM	2,775 sf	61.05%	0 sf	0.00%	
4:00 PM	3,151 sf	69.30%	0 sf	0.00%	
4:15 PM	3,499 sf	76.96%	0 sf	0.00%	
4:30 PM	3,837 sf	84.39%	0 sf	0.00%	
4:45 PM	4,168 sf	91.68%	0 sf	0.00%	
5:00 PM	4,384 sf	96.44%	0 sf	0.00%	
5:15 PM	4,491 sf	98.77%	0 sf	0.00%	
5:30 PM	4,545 sf	99.97%	0 sf	0.00%	
5:45 PM	4,546 sf	100.00%	0 sf	0.00%	
6:00 PM	4,546 sf	100.00%	0 sf	0.00%	
6:15 PM	4,546 sf	100.00%	0 sf	0.00%	
6:30 PM	4,546 sf	100.00%	0 sf	0.00%	
6:45 PM	4,546 sf	100.00%	0 sf	0.00%	
7:00 PM	4,546 sf	100.00%	0 sf	0.00%	
7:00 PM	4,546 sf	100.00%	0 sf	0.00%	
7:13 PM		100.00%		0.00%	
1.33 PIVI	4,546 sf	100.00%	0 sf	U.UU%	

Mirror date: May 24

Analysis hours: 7:01 AM-7:30 PM (PDT)

Shadow / Sunlight Balance Key

Existing Shadow Project Shadow Sunlight Remaining

A 1	EXISTING	SHADOW	PROJECT NET	NEW SHADOW	SHADOW/SUNLIGHT BALANCE
Analysis Time	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
7:01 AM	4,546 sf	100.00%	0 sf	0.00%	
7:16 AM	4,546 sf	100.00%	0 sf	0.00%	
7:30 AM	4,546 sf	100.00%	0 sf	0.00%	
7:45 AM	4,399 sf	96.76%	0 sf	0.00%	
8:00 AM	4,505 sf	99.10%	0 sf	0.00%	
8:15 AM	4,546 sf	100.00%	0 sf	0.00%	
8:30 AM	3,710 sf	81.60%	0 sf	0.00%	
8:45 AM	1,610 sf	35.41%	0 sf	0.00%	
9:00 AM	242 sf	5.33%	0 sf	0.00%	
9:15 AM	2 sf	0.05%	0 sf	0.00%	
9:30 AM	2 sf	0.05%	0 sf	0.00%	
9:45 AM	2 sf	0.05%	0 sf	0.00%	
10:00 AM	2 sf	0.05%	0 sf	0.00%	
10:15 AM	2 sf	0.05%	0 sf	0.00%	
10:30 AM	2 sf	0.05%	0 sf	0.00%	
10:45 AM	2 sf	0.05%	0 sf	0.00%	
11:00 AM	3 sf	0.06%	0 sf	0.00%	
11:15 AM	3 sf	0.06%	0 sf	0.00%	
11:30 AM	3 sf	0.06%	0 sf	0.00%	
11:45 AM	3 sf	0.06%	0 sf	0.00%	
12:00 PM	3 sf	0.06%	0 sf	0.00%	
12:15 PM	3 sf	0.07%	0 sf	0.00%	
12:30 PM	3 sf	0.07%	0 sf	0.00%	
12:45 PM	3 sf	0.07%	0 sf	0.00%	
1:00 PM	3 sf	0.07%	0 sf	0.00%	
1:15 PM	142 sf	3.13%	0 sf	0.00%	
1:30 PM	363 sf	7.97%	0 sf	0.00%	
1:45 PM	587 sf	12.92%	0 sf	0.00%	
2:00 PM	824 sf	18.13%	0 sf	0.00%	
2:15 PM	1,060 sf	23.32%	0 sf	0.00%	
2:30 PM	1,313 sf	28.88%	0 sf	0.00%	
2:45 PM	1,568 sf	34.50%	0 sf	0.00%	
3:00 PM	1,843 sf	40.53%	0 sf	0.00%	
3:15 PM	2,127 sf	46.79%	0 sf	0.00%	
3:30 PM	2,442 sf	53.71%	0 sf	0.00%	
3:45 PM	2,783 sf	61.22%	0 sf	0.00%	
4:00 PM	3,167 sf	69.66%	0 sf	0.00%	
4:15 PM	3,558 sf	78.26%	0 sf	0.00%	
4:30 PM	3,926 sf	86.36%	0 sf	0.00%	
4:45 PM	4,261 sf	93.72%	0 sf	0.00%	
5:00 PM	4,401 sf	96.81%	0 sf	0.00%	
5:15 PM	4,436 sf	97.58%	0 sf	0.00%	
5:30 PM	4,541 sf	99.89%	0 sf	0.00%	
5:45 PM	4,546 sf	100.00%	0 sf	0.00%	
6:00 PM	4,546 sf	100.00%	0 sf	0.00%	
6:15 PM	4,546 sf	100.00%	0 sf	0.00%	
6:30 PM	4,546 sf	100.00%	0 sf	0.00%	
6:45 PM	4,546 sf	100.00%	0 sf	0.00%	
7:00 PM	4,546 sf	100.00%	0 sf	0.00%	
7:15 PM	4,546 sf	100.00%	0 sf	0.00%	
7:30 PM	4,546 sf	100.00%	0 sf	0.00%	

Mirror date: May 17

Analysis hours: 7:07 AM-7:25 PM (PDT)

Shadow / Sunlight Balance Key

Existing Shadow Project Shadow Sunlight Remaining

A	EXISTING	SHADOW	PROJECT NET	NEW SHADOW	SHADOW/SUNLIGHT BALANCE
Analysis Time	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
7:07 AM	4,546 sf	100.00%	0 sf	0.00%	
7:15 AM	4,546 sf	100.00%	0 sf	0.00%	
7:30 AM	4,546 sf	100.00%	0 sf	0.00%	
7:45 AM	4,532 sf	99.68%	0 sf	0.00%	
8:00 AM	4,546 sf	100.00%	0 sf	0.00%	
8:15 AM	4,212 sf	92.65%	0 sf	0.00%	
8:30 AM	3,552 sf	78.12%	0 sf	0.00%	
8:45 AM	1,820 sf	40.02%	0 sf	0.00%	
9:00 AM	451 sf	9.91%	0 sf	0.00%	
9:15 AM	2 sf	0.04%	0 sf	0.00%	
9:30 AM	2 sf	0.04%	0 sf	0.00%	
9:45 AM	2 sf	0.04%	0 sf	0.00%	
10:00 AM	2 sf	0.04%	0 sf	0.00%	
10:15 AM	2 sf	0.05%	0 sf	0.00%	
10:30 AM	2 sf	0.05%	0 sf	0.00%	
10:45 AM	2 sf	0.05%	0 sf	0.00%	
11:00 AM	2 sf	0.05%	0 sf	0.00%	
11:15 AM	3 sf	0.06%	0 sf	0.00%	
11:30 AM	3 sf	0.06%	0 sf	0.00%	
11:45 AM	3 sf	0.06%	0 sf	0.00%	
12:00 PM	3 sf	0.06%	0 sf	0.00%	
12:15 PM	3 sf	0.07%	0 sf	0.00%	
12:30 PM	3 sf	0.07%	0 sf	0.00%	
12:45 PM	3 sf	0.07%	0 sf	0.00%	
1:00 PM	3 sf	0.07%	0 sf	0.00%	
1:15 PM	148 sf	3.26%	0 sf	0.00%	
1:30 PM	370 sf	8.13%	0 sf	0.00%	
1:45 PM	596 sf	13.11%	0 sf	0.00%	
2:00 PM	834 sf	18.34%	0 sf	0.00%	
2:15 PM	1,071 sf	23.57%	0 sf	0.00%	
2:30 PM	1,325 sf	29.16%	0 sf	0.00%	
2:45 PM	1,583 sf	34.81%	0 sf	0.00%	
3:00 PM	1,859 sf	40.88%	0 sf	0.00%	
3:15 PM	2,146 sf	47.19%	0 sf	0.00%	
3:30 PM	2,464 sf	54.19%	0 sf	0.00%	
3:45 PM	2,807 sf	61.75%	0 sf	0.00%	
4:00 PM	3,190 sf	70.17%	0 sf	0.00%	
4:15 PM	3,619 sf	79.60%	0 sf	0.00%	
4:30 PM	4,040 sf	88.86%	0 sf	0.00%	
4:45 PM	4,394 sf	96.66%	0 sf	0.00%	
5:00 PM	4,442 sf	97.71%	0 sf	0.00%	
5:15 PM	4,387 sf	96.50%	0 sf	0.00%	
5:30 PM	4,533 sf	99.71%	0 sf	0.00%	
5:45 PM	4,546 sf	100.00%	0 sf	0.00%	
6:00 PM	4,546 sf	100.00%	0 sf	0.00%	
6:15 PM	4,546 sf	100.00%	0 sf	0.00%	
6:30 PM	4,546 sf	100.00%	0 sf	0.00%	
6:45 PM	4,546 sf	100.00%	0 sf	0.00%	
7:00 PM	4,546 sf	100.00%	0 sf	0.00%	
7:15 PM	4,546 sf	100.00%	0 sf	0.00%	
7:25 PM	4,546 sf	100.00%	0 sf	0.00%	

Mirror date: May 10 Shadow / Sunlight Balance Key
Analysis hours: 7:12 AM-7:18 PM (PDT) Existing Shadow Project Shadow Sunlight Remaining

Analysis Time	EXISTING	S SHADOW	PROJECT NET	NEW SHADOW	SHADOW/SUNLIGHT BALANCE
Analysis Time	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
7:12 AM	4,546 sf	100.00%	0 sf	0.00%	
7:15 AM	4,546 sf	100.00%	0 sf	0.00%	
7:30 AM	4,546 sf	100.00%	0 sf	0.00%	
7:45 AM	4,546 sf	100.00%	0 sf	0.00%	
8:00 AM	4,466 sf	98.23%	0 sf	0.00%	
8:15 AM	3,781 sf	83.16%	0 sf	0.00%	
8:30 AM	3,100 sf	68.20%	0 sf	0.00%	
8:45 AM	1,898 sf	41.74%	0 sf	0.00%	
9:00 AM	610 sf	13.42%	0 sf	0.00%	
9:15 AM	1 sf	0.03%	0 sf	0.00%	
9:30 AM	1 sf	0.03%	0 sf	0.00%	
9:45 AM	2 sf	0.04%	0 sf	0.00%	
10:00 AM	2 sf	0.04%	0 sf	0.00%	
10:15 AM	2 sf	0.04%	0 sf	0.00%	
10:30 AM	2 sf	0.05%	0 sf	0.00%	
10:45 AM	2 sf	0.05%	0 sf	0.00%	
11:00 AM	2 sf	0.05%	0 sf	0.00%	
11:15 AM	2 sf	0.05%	0 sf	0.00%	
11:30 AM	3 sf	0.06%	0 sf	0.00%	
11:45 AM	3 sf	0.06%	0 sf	0.00%	
12:00 PM	3 sf	0.06%	0 sf	0.00%	
12:15 PM	3 sf	0.07%	0 sf	0.00%	
12:30 PM	3 sf	0.07%	0 sf	0.00%	
12:45 PM	3 sf	0.07%	0 sf	0.00%	
1:00 PM	3 sf	0.07%	0 sf	0.00%	
1:15 PM	165 sf	3.63%	0 sf	0.00%	
1:30 PM	388 sf	8.54%	0 sf	0.00%	
1:45 PM	617 sf	13.57%	0 sf	0.00%	
2:00 PM	856 sf	18.82%	0 sf	0.00%	
2:15 PM	1,095 sf	24.09%	0 sf	0.00%	
2:30 PM	1,351 sf	29.72%	0 sf	0.00%	
2:45 PM	1,611 sf	35.44%	0 sf	0.00%	
3:00 PM	1,889 sf	41.55%	0 sf	0.00%	
3:15 PM	2,180 sf	47.96%	0 sf	0.00%	
3:30 PM	2,504 sf	55.07%	0 sf	0.00%	
3:45 PM	2,851 sf	62.72%	0 sf	0.00%	
4:00 PM	3,239 sf	71.25%	0 sf	0.00%	
4:15 PM	3,670 sf	80.72%	0 sf	0.00%	
4:30 PM	4,170 sf	91.73%	0 sf	0.00%	
4:45 PM	4,546 sf	100.00%	0 sf	0.00%	
5:00 PM	4,489 sf	98.74%	0 sf	0.00%	
5:15 PM	4,433 sf	97.50%	0 sf	0.00%	
5:30 PM	4,444 sf	97.74%	0 sf	0.00%	
5:45 PM	4,546 sf	100.00%	0 sf	0.00%	
6:00 PM	4,546 sf	100.00%	0 sf	0.00%	
6:15 PM	4,546 sf	100.00%	0 sf	0.00%	
6:30 PM	4,546 sf	100.00%	0 sf	0.00%	
6:45 PM	4,546 sf	100.00%	0 sf	0.00%	
7:00 PM	4,546 sf	100.00%	0 sf	0.00%	
7:00 FM	4,546 sf	100.00%	0 sf	0.00%	
7:13 PM	4,546 sf	100.00%	0 sf	0.00%	
I.IO FIVI	4,040 81	100.0070	0 31	0.0070	

Mirror date: May 3 Shadow / Sunlight Balance Key
Analysis hours: 7:19 AM-7:10 PM (PDT) Existing Shadow Project Shadow Sunlight Remaining

Analysis Time	EXISTING	SHADOW	PROJECT NET	NEW SHADOW	SHADOW/SUNLIGHT BALANCE
Analysis mile	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
7:19 AM	4,546 sf	100.00%	0 sf	0.00%	
7:30 AM	4,546 sf	100.00%	0 sf	0.00%	
7:45 AM	4,546 sf	100.00%	0 sf	0.00%	
8:00 AM	4,073 sf	89.58%	0 sf	0.00%	
8:15 AM	3,301 sf	72.60%	0 sf	0.00%	
8:30 AM	2,536 sf	55.77%	0 sf	0.00%	
8:45 AM	1,742 sf	38.32%	0 sf	0.00%	
9:00 AM	606 sf	13.33%	0 sf	0.00%	
9:15 AM	40 sf	0.88%	0 sf	0.00%	
9:30 AM	1 sf	0.03%	0 sf	0.00%	
9:45 AM	1 sf	0.03%	0 sf	0.00%	
10:00 AM	2 sf	0.04%	0 sf	0.00%	
10:15 AM	2 sf	0.04%	0 sf	0.00%	
10:30 AM	2 sf	0.04%	0 sf	0.00%	
10:45 AM	2 sf	0.05%	0 sf	0.00%	
11:00 AM	2 sf	0.05%	0 sf	0.00%	
11:15 AM	2 sf	0.05%	0 sf	0.00%	
11:30 AM	3 sf	0.06%	0 sf	0.00%	
11:45 AM	3 sf	0.06%	0 sf	0.00%	
12:00 PM	3 sf	0.06%	0 sf	0.00%	
12:15 PM	3 sf	0.06%	0 sf	0.00%	
12:30 PM	3 sf	0.07%	0 sf	0.00%	
12:45 PM	3 sf	0.07%	0 sf	0.00%	
1:00 PM	4 sf	0.09%	0 sf	0.00%	
1:15 PM	191 sf	4.21%	0 sf	0.00%	
1:30 PM	415 sf	9.13%	0 sf	0.00%	
1:45 PM	645 sf	14.19%	0 sf	0.00%	
2:00 PM	886 sf	19.48%	0 sf	0.00%	
2:15 PM	1,129 sf	24.82%	0 sf	0.00%	
2:30 PM	1,388 sf	30.52%	0 sf	0.00%	
2:45 PM	1,650 sf	36.29%	0 sf	0.00%	
3:00 PM	1,931 sf	42.48%	0 sf	0.00%	
3:15 PM	2,229 sf	49.02%	0 sf	0.00%	
3:30 PM	2,558 sf	56.27%	0 sf	0.00%	
3:45 PM	2,912 sf	64.04%	0 sf	0.00%	
4:00 PM	3,308 sf	72.76%	0 sf	0.00%	
4:15 PM	3,748 sf	82.43%	0 sf	0.00%	
4:30 PM	4,225 sf	92.93%	0 sf	0.00%	
4:45 PM	4,546 sf	100.00%	0 sf	0.00%	
5:00 PM	4,544 sf	99.96%	0 sf	0.00%	
5:15 PM	4,488 sf	98.72%	0 sf	0.00%	
5:30 PM	4,448 sf	97.85%	0 sf	0.00%	
5:45 PM	4,508 sf	99.16%	0 sf	0.00%	
6:00 PM	4,546 sf	100.00%	0 sf	0.00%	
6:15 PM	4,546 sf	100.00%	0 sf	0.00%	
6:30 PM	4,546 sf	100.00%	0 sf	0.00%	
6:45 PM	4,546 sf	100.00%	0 sf	0.00%	
7:10 PM	4,546 sf	100.00%	0 sf	0.00%	

Mirror date: April 26

Analysis hours: 7:25 AM-7:02 PM (PDT)

Shadow / Sunlight Balance Key

Existing Shadow Project Shadow Sunlight Remaining

Analysis Time	EXISTING	SHADOW	PROJECT NET	NEW SHADOW	SHADOW/SUNLIGHT BALANCE
Allalysis Illile	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
7:25 AM	4,546 sf	100.00%	0 sf	0.00%	
7:30 AM	4,546 sf	100.00%	0 sf	0.00%	
7:45 AM	4,221 sf	92.85%	0 sf	0.00%	
8:00 AM	3,653 sf	80.35%	0 sf	0.00%	
8:15 AM	2,796 sf	61.51%	0 sf	0.00%	
8:30 AM	1,900 sf	41.79%	0 sf	0.00%	
8:45 AM	1,155 sf	25.40%	0 sf	0.00%	
9:00 AM	332 sf	7.31%	0 sf	0.00%	
9:15 AM	1 sf	0.03%	0 sf	0.00%	
9:30 AM	1 sf	0.02%	0 sf	0.00%	
9:45 AM	1 sf	0.03%	0 sf	0.00%	
10:00 AM	2 sf	0.03%	0 sf	0.00%	
10:15 AM	2 sf	0.04%	0 sf	0.00%	
10:30 AM	2 sf	0.04%	0 sf	0.00%	
10:45 AM	2 sf	0.05%	0 sf	0.00%	
11:00 AM	2 sf	0.05%	0 sf	0.00%	
11:15 AM	2 sf	0.05%	0 sf	0.00%	
11:30 AM	3 sf	0.06%	0 sf	0.00%	
11:45 AM	3 sf	0.06%	0 sf	0.00%	
12:00 PM	3 sf	0.06%	0 sf	0.00%	
12:15 PM	3 sf	0.07%	0 sf	0.00%	
12:30 PM	3 sf	0.07%	0 sf	0.00%	
12:45 PM	3 sf	0.07%	0 sf	0.00%	
1:00 PM	6 sf	0.14%	0 sf	0.00%	
1:15 PM	222 sf	4.89%	0 sf	0.00%	
1:30 PM	448 sf	9.86%	0 sf	0.00%	
1:45 PM	679 sf	14.93%	0 sf	0.00%	
2:00 PM	920 sf	20.24%	0 sf	0.00%	
2:15 PM	1,164 sf	25.61%	0 sf	0.00%	
2:30 PM	1,427 sf	31.40%	0 sf	0.00%	
2:45 PM	1,693 sf	37.23%	0 sf	0.00%	
3:00 PM	1,983 sf	43.61%	0 sf	0.00%	
3:15 PM	2,286 sf	50.29%	0 sf	0.00%	
3:30 PM	2,622 sf	57.68%	0 sf	0.00%	
3:45 PM	2,985 sf	65.66%	0 sf	0.00%	
4:00 PM	3,392 sf	74.60%	0 sf	0.00%	
4:15 PM	3,845 sf	84.57%	0 sf	0.00%	
4:30 PM	4,303 sf	94.65%	0 sf	0.00%	
4:45 PM	4,429 sf	97.41%	0 sf	0.00%	
5:00 PM	4,546 sf	100.00%	0 sf	0.00%	
5:15 PM	4,541 sf	99.89%	0 sf	0.00%	
5:30 PM	4,507 sf	99.13%	0 sf	0.00%	
5:45 PM	4,505 sf	99.08%	0 sf	0.00%	
6:00 PM	4,546 sf	100.00%	0 sf	0.00%	
6:15 PM	4,546 sf	100.00%	0 sf	0.00%	
6:30 PM	4,546 sf	100.00%	0 sf	0.00%	
6:45 PM	4,546 sf	100.00%	0 sf	0.00%	
7:02 PM	4,546 sf	100.00%	0 sf	0.00%	

Mirror date: April 19

Analysis hours: 7:31 AM-6:52 PM (PDT)

Shadow / Sunlight Balance Key

Existing Shadow Project Shadow Sunlight Remaining

Analusia Tima	EXISTING SHADOW		PROJECT NET NEW SHADOW		SHADOW/SUNLIGHT BALANCE	
Analysis Time	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun	
7:31 AM	4,165 sf	91.62%	0 sf	0.00%		
7:45 AM	3,714 sf	81.69%	0 sf	0.00%		
8:00 AM	3,198 sf	70.35%	0 sf	0.00%		
8:15 AM	2,268 sf	49.90%	0 sf	0.00%		
8:30 AM	1,249 sf	27.46%	0 sf	0.00%		
8:45 AM	443 sf	9.74%	0 sf	0.00%		
9:00 AM	36 sf	0.80%	0 sf	0.00%		
9:15 AM	1 sf	0.01%	0 sf	0.00%		
9:30 AM	1 sf	0.02%	0 sf	0.00%		
9:45 AM	1 sf	0.03%	0 sf	0.00%		
10:00 AM	2 sf	0.03%	0 sf	0.00%		
10:15 AM	2 sf	0.04%	0 sf	0.00%		
10:30 AM	2 sf	0.04%	0 sf	0.00%		
10:45 AM	2 sf	0.05%	0 sf	0.00%		
11:00 AM	2 sf	0.05%	0 sf	0.00%		
11:15 AM	2 sf	0.05%	0 sf	0.00%		
11:30 AM	3 sf	0.06%	0 sf	0.00%		
11:45 AM	3 sf	0.06%	0 sf	0.00%		
12:00 PM	3 sf	0.06%	0 sf	0.00%		
12:15 PM	3 sf	0.07%	0 sf	0.00%		
12:30 PM	3 sf	0.07%	0 sf	0.00%		
12:45 PM	3 sf	0.07%	0 sf	0.00%		
1:00 PM	38 sf	0.83%	0 sf	0.00%		
1:15 PM	265 sf	5.82%	0 sf	0.00%		
1:30 PM	491 sf	10.79%	0 sf	0.00%		
1:45 PM	722 sf	15.87%	0 sf	0.00%		
2:00 PM	964 sf	21.21%	0 sf	0.00%		
2:15 PM	1,210 sf	26.61%	0 sf	0.00%		
2:30 PM	1,473 sf	32.41%	0 sf	0.00%		
2:45 PM	1,741 sf	38.30%	0 sf	0.00%		
3:00 PM	2,037 sf	44.81%	0 sf	0.00%		
3:15 PM	2,353 sf	51.75%	0 sf	0.00%		
3:30 PM	2,705 sf	59.49%	0 sf	0.00%		
3:45 PM	3,078 sf	67.70%	0 sf	0.00%		
4:00 PM	3,498 sf	76.94%	0 sf	0.00%		
4:15 PM	3,935 sf	86.56%	0 sf	0.00%		
4:30 PM	4,217 sf	92.76%	0 sf	0.00%		
4:45 PM	4,325 sf	95.13%	0 sf	0.00%		
5:00 PM	4,442 sf	97.72%	0 sf	0.00%		
5:15 PM	4,546 sf	100.00%	0 sf	0.00%		
5:30 PM	4,540 sf	99.87%	0 sf	0.00%		
5:45 PM	4,546 sf	100.00%	0 sf	0.00%		
6:00 PM	4,546 sf	100.00%	0 sf	0.00%		
6:15 PM	4,546 sf	100.00%	0 sf	0.00%		
6:30 PM	4,546 sf	100.00%	0 sf	0.00%		
6:45 PM	4,546 sf	100.00%	0 sf	0.00%		
6:52 PM	4,546 sf	100.00%	0 sf	0.00%		

Mirror date: April 12 Shadow / Sunlight Balance Key
Analysis hours: 7:37 AM-6:42 PM (PDT) Existing Shadow Project Shadow Sunlight Remaining

Analysis Time	EXISTING SHADOW		PROJECT NET NEW SHADOW		SHADOW/SUNLIGHT BALANCE	
Analysis mile	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun	
7:37 AM	3,409 sf	74.99%	0 sf	0.00%		
7:45 AM	3,161 sf	69.52%	0 sf	0.00%		
8:00 AM	2,639 sf	58.05%	0 sf	0.00%		
8:15 AM	1,973 sf	43.39%	0 sf	0.00%		
8:30 AM	1,044 sf	22.97%	0 sf	0.00%		
8:45 AM	154 sf	3.39%	0 sf	0.00%		
9:00 AM	1 sf	0.01%	0 sf	0.00%		
9:15 AM	1 sf	0.01%	0 sf	0.00%		
9:30 AM	1 sf	0.02%	0 sf	0.00%		
9:45 AM	1 sf	0.03%	0 sf	0.00%		
10:00 AM	1 sf	0.03%	0 sf	0.00%		
10:15 AM	2 sf	0.04%	0 sf	0.00%		
10:30 AM	2 sf	0.04%	0 sf	0.00%		
10:45 AM	2 sf	0.05%	0 sf	0.00%		
11:00 AM	2 sf	0.05%	0 sf	0.00%		
11:15 AM	2 sf	0.05%	0 sf	0.00%		
11:30 AM	3 sf	0.06%	0 sf	0.00%		
11:45 AM	3 sf	0.06%	0 sf	0.00%		
12:00 PM	3 sf	0.06%	0 sf	0.00%		
12:15 PM	3 sf	0.07%	0 sf	0.00%		
12:30 PM	3 sf	0.07%	0 sf	0.00%		
12:45 PM	3 sf	0.07%	0 sf	0.00%		
1:00 PM	85 sf	1.86%	0 sf	0.00%		
1:15 PM	312 sf	6.85%	0 sf	0.00%		
1:30 PM	539 sf	11.85%	0 sf	0.00%		
1:45 PM	770 sf	16.95%	0 sf	0.00%		
2:00 PM	1,012 sf	22.26%	0 sf	0.00%		
2:15 PM	1,258 sf	27.67%	0 sf	0.00%		
2:30 PM	1,521 sf	33.46%	0 sf	0.00%		
2:45 PM	1,792 sf	39.41%	0 sf	0.00%		
3:00 PM	2,093 sf	46.05%	0 sf	0.00%		
3:15 PM	2,415 sf	53.12%	0 sf	0.00%		
3:30 PM	2,776 sf	61.07%	0 sf	0.00%		
3:45 PM	3,168 sf	69.68%	0 sf	0.00%		
4:00 PM	3,609 sf	79.39%	0 sf	0.00%		
4:15 PM	3,997 sf	87.91%	0 sf	0.00%		
4:30 PM	4,119 sf	90.61%	0 sf	0.00%		
4:45 PM	4,233 sf	93.11%	0 sf	0.00%		
5:00 PM	4,348 sf	95.64%	0 sf	0.00%		
5:15 PM	4,453 sf	97.95%	0 sf	0.00%		
5:30 PM	4,546 sf	99.99%	0 sf	0.00%		
5:45 PM	4,546 sf	100.00%	0 sf	0.00%		
6:00 PM	4,546 sf	100.00%	0 sf	0.00%		
6:15 PM	4,546 sf	100.00%	0 sf	0.00%		
6:30 PM	4,546 sf	100.00%	0 sf	0.00%		
6:42 PM	4,546 sf	100.00%	0 sf	0.00%		

Mirror date: April 5 Shadow / Sunlight Balance Key

Analysis hours: 7:44 AM-6:31 PM (PDT) Existing Shadow Project Shadow Sunlight Remaining

Г	EVICETO	OHA DOW	DDG IFOT	NEW QUADOW	QUADOW/QUAN IQUE DAI ANGE
Analysis Time	EXISTING	T		NEW SHADOW	SHADOW/SUNLIGHT BALANCE
	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
7:44 AM	2,612 sf	57.46%	0 sf	0.00%	
8:00 AM	2,323 sf	51.10%	0 sf	0.00%	
8:15 AM	2,816 sf	61.94%	0 sf	0.00%	
8:30 AM	2,289 sf	50.36%	0 sf	0.00%	
8:45 AM	1,053 sf	23.17%	0 sf	0.00%	
9:00 AM	143 sf	3.14%	0 sf	0.00%	
9:15 AM	1 sf	0.01%	0 sf	0.00%	
9:30 AM	1 sf	0.02%	0 sf	0.00%	
9:45 AM	1 sf	0.03%	0 sf	0.00%	
10:00 AM	1 sf	0.03%	0 sf	0.00%	
10:15 AM	2 sf	0.04%	0 sf	0.00%	
10:30 AM	2 sf	0.04%	0 sf	0.00%	
10:45 AM	2 sf	0.05%	0 sf	0.00%	
11:00 AM	2 sf	0.05%	0 sf	0.00%	
11:15 AM	2 sf	0.05%	0 sf	0.00%	
11:30 AM	3 sf	0.06%	0 sf	0.00%	
11:45 AM	3 sf	0.06%	0 sf	0.00%	
12:00 PM	3 sf	0.06%	0 sf	0.00%	
12:15 PM	3 sf	0.07%	0 sf	0.00%	
12:30 PM	3 sf	0.07%	0 sf	0.00%	
12:45 PM	3 sf	0.07%	0 sf	0.00%	
1:00 PM	135 sf	2.98%	0 sf	0.00%	
1:15 PM	362 sf	7.97%	0 sf	0.00%	
1:30 PM	590 sf	12.98%	0 sf	0.00%	
1:45 PM	823 sf	18.11%	0 sf	0.00%	
2:00 PM	1,067 sf	23.46%	0 sf	0.00%	
2:15 PM	1,315 sf	28.91%	0 sf	0.00%	
2:30 PM	1,578 sf	34.70%	0 sf	0.00%	
2:45 PM 3:00 PM	1,849 sf	40.67% 47.33%	0 sf 0 sf	0.00%	
	2,152 sf			0.00%	
3:15 PM 3:30 PM	2,476 sf 2,844 sf	54.46% 62.55%	0 sf 0 sf	0.00% 0.00%	
3:45 PM	3,242 sf	71.32%	0 sf	0.00%	
4:00 PM	3,679 sf	80.92%	0 sf	0.00%	
4:00 FM	3,897 sf	85.72%	0 sf	0.00%	
4:30 PM	4,046 sf	88.99%	0 sf	0.00%	
4:45 PM	4,046 si 4,546 sf	100.00%	0 sf	0.00%	
5:00 PM	4,346 si 4,326 sf	95.14%	0 sf	0.00%	
5:15 PM	4,374 sf	96.21%	0 sf	0.00%	
5:30 PM	4,374 SI 4,477 Sf	98.47%	0 sf	0.00%	
5:45 PM	4,477 Si 4,546 sf	100.00%	0 sf	0.00%	
6:00 PM	4,546 sf	100.00%	0 sf	0.00%	
6:15 PM	4,546 sf	100.00%	0 sf	0.00%	
6:31 PM	4,546 sf	100.00%	0 sf	0.00%	
U.ST PIVI	4,040 SI	100.00%	U SI	0.00%	

Mirror date: March 29

Analysis hours: 7:50 AM-6:21 PM (PDT)

Shadow / Sunlight Balance Key

Existing Shadow Project Shadow Sunlight Remaining

Analysis Time	EXISTING	SHADOW	PROJECT NET	NEW SHADOW	SHADOW/SUNLIGHT BALANCE
Analysis Time	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
7:50 AM	2,550 sf	56.08%	0 sf	0.00%	
8:00 AM	2,885 sf	63.46%	0 sf	0.00%	
8:15 AM	3,453 sf	75.95%	0 sf	0.00%	
8:30 AM	3,691 sf	81.19%	0 sf	0.00%	
8:45 AM	2,829 sf	62.22%	0 sf	0.00%	
9:00 AM	801 sf	17.62%	0 sf	0.00%	
9:15 AM	1 sf	0.01%	0 sf	0.00%	
9:30 AM	1 sf	0.02%	0 sf	0.00%	
9:45 AM	1 sf	0.03%	0 sf	0.00%	
10:00 AM	1 sf	0.03%	0 sf	0.00%	
10:15 AM	2 sf	0.04%	0 sf	0.00%	
10:30 AM	2 sf	0.04%	0 sf	0.00%	
10:45 AM	2 sf	0.05%	0 sf	0.00%	
11:00 AM	2 sf	0.05%	0 sf	0.00%	
11:15 AM	2 sf	0.05%	0 sf	0.00%	
11:30 AM	3 sf	0.06%	0 sf	0.00%	
11:45 AM	3 sf	0.06%	0 sf	0.00%	
12:00 PM	3 sf	0.06%	0 sf	0.00%	
12:15 PM	3 sf	0.07%	0 sf	0.00%	
12:30 PM	3 sf	0.07%	0 sf	0.00%	
12:45 PM	4 sf	0.08%	0 sf	0.00%	
1:00 PM	188 sf	4.14%	0 sf	0.00%	
1:15 PM	414 sf	9.12%	0 sf	0.00%	
1:30 PM	644 sf	14.16%	0 sf	0.00%	
1:45 PM	878 sf	19.30%	0 sf	0.00%	
2:00 PM	1,122 sf	24.68%	0 sf	0.00%	
2:15 PM	1,372 sf	30.19%	0 sf	0.00%	
2:30 PM	1,637 sf	36.01%	0 sf	0.00%	
2:45 PM	1,914 sf	42.10%	0 sf	0.00%	
3:00 PM	2,222 sf	48.88%	0 sf	0.00%	
3:15 PM	2,550 sf	56.09%	0 sf	0.00%	
3:30 PM	2,916 sf	64.14%	0 sf	0.00%	
3:45 PM	3,317 sf	72.96%	0 sf	0.00%	
4:00 PM	3,670 sf	80.73%	0 sf	0.00%	
4:15 PM	3,808 sf	83.77%	0 sf	0.00%	
4:30 PM	4,271 sf	93.93%	0 sf	0.00%	
4:45 PM	4,546 sf	100.00%	0 sf	0.00%	
5:00 PM	4,546 sf	100.00%	0 sf	0.00%	
5:15 PM	4,546 sf	100.00%	0 sf	0.00%	
5:30 PM	4,402 sf	96.83%	0 sf	0.00%	
5:45 PM	4,497 sf	98.93%	0 sf	0.00%	
6:00 PM	4,546 sf	100.00%	0 sf	0.00%	
6:15 PM	4,546 sf	100.00%	0 sf	0.00%	
6:21 PM	4,546 sf	100.00%	0 sf	0.00%	

Fall equinox (Spring equinox on March 22 similar) Analysis hours: 7:57 AM-6:09 PM (PDT)

Analysis Time	EXISTING	G SHADOW	PROJECT NET	NEW SHADOW	SHADOW/SUNLIGHT BALANCE
	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
7:57 AM	3,389 sf	74.55%	0 sf	0.00%	
8:00 AM	3,507 sf	77.13%	0 sf	0.00%	
8:15 AM	4,193 sf	92.24%	0 sf	0.00%	
8:30 AM	4,546 sf	100.00%	0 sf	0.00%	
8:45 AM	4,462 sf	98.14%	0 sf	0.00%	
9:00 AM	2,126 sf	46.77%	0 sf	0.00%	
9:15 AM	1 sf	0.01%	0 sf	0.00%	
9:30 AM	1 sf	0.02%	0 sf	0.00%	
9:45 AM	1 sf	0.02%	0 sf	0.00%	
10:00 AM	1 sf	0.03%	0 sf	0.00%	
10:15 AM	2 sf	0.04%	0 sf	0.00%	
10:30 AM	2 sf	0.04%	0 sf	0.00%	
10:45 AM	2 sf	0.05%	0 sf	0.00%	
11:00 AM	2 sf	0.05%	0 sf	0.00%	
11:15 AM	2 sf	0.05%	0 sf	0.00%	
11:30 AM	3 sf	0.06%	0 sf	0.00%	
11:45 AM	3 sf	0.06%	0 sf	0.00%	
12:00 PM	3 sf	0.06%	0 sf	0.00%	
12:15 PM	3 sf	0.07%	0 sf	0.00%	
12:30 PM	3 sf	0.07%	0 sf	0.00%	
12:45 PM	20 sf	0.45%	0 sf	0.00%	
1:00 PM	242 sf	5.31%	0 sf	0.00%	
1:15 PM	467 sf	10.26%	0 sf	0.00%	
1:30 PM	696 sf	15.31%	0 sf	0.00%	
1:45 PM	930 sf	20.47%	0 sf	0.00%	
2:00 PM	1,176 sf	25.87%	0 sf	0.00%	
2:15 PM	1,426 sf	31.37%	0 sf	0.00%	
2:30 PM	1,693 sf	37.23%	0 sf	0.00%	
2:45 PM	1,976 sf	43.46%	0 sf	0.00%	
3:00 PM	2,289 sf	50.34%	0 sf	0.00%	
3:15 PM	2,621 sf	57.66%	0 sf	0.00%	
3:30 PM	2,994 sf	65.86%	0 sf	0.00%	
3:45 PM	3,408 sf	74.97%	0 sf	0.00%	
4:00 PM	3,578 sf	78.70%	0 sf	0.00%	
4:15 PM	3,912 sf	86.04%	0 sf	0.00%	
4:30 PM	4,546 sf	100.00%	0 sf	0.00%	
4:45 PM	4,546 sf	100.00%	0 sf	0.00%	
5:00 PM	4,546 sf	100.00%	0 sf	0.00%	
5:15 PM	4,546 sf	100.00%	0 sf	0.00%	
5:30 PM	4,546 sf	100.00%	0 sf	0.00%	
5:45 PM	4,426 sf	97.35%	0 sf	0.00%	
6:00 PM	4,519 sf	99.40%	0 sf	0.00%	
6:09 PM	4,546 sf	100.00%	0 sf	0.00%	

Shadow / Sunlight Balance Key

Project Shadow

Sunlight Remaining

Existing Shadow

Mirror date: March 15

Analysis hours: 8:03 AM-5:58 PM (PDT)

Shadow / Sunlight Balance Key

Existing Shadow Project Shadow Sunlight Remaining

Analysis Time	EXISTING	SHADOW	PROJECT NET	NEW SHADOW	SHADOW/SUNLIGHT BALANCE
Analysis Time	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
8:03 AM	4,377 sf	96.27%	0 sf	0.00%	
8:15 AM	4,546 sf	100.00%	0 sf	0.00%	
8:30 AM	4,546 sf	100.00%	0 sf	0.00%	
8:45 AM	4,096 sf	90.10%	0 sf	0.00%	
9:00 AM	2,696 sf	59.29%	0 sf	0.00%	
9:15 AM	288 sf	6.34%	0 sf	0.00%	
9:30 AM	1 sf	0.01%	0 sf	0.00%	
9:45 AM	1 sf	0.02%	0 sf	0.00%	
10:00 AM	1 sf	0.03%	0 sf	0.00%	
10:15 AM	6 sf	0.14%	0 sf	0.00%	
10:30 AM	40 sf	0.89%	0 sf	0.00%	
10:45 AM	66 sf	1.45%	0 sf	0.00%	
11:00 AM	55 sf	1.20%	0 sf	0.00%	
11:15 AM	41 sf	0.91%	0 sf	0.00%	
11:30 AM	3 sf	0.06%	0 sf	0.00%	
11:45 AM	3 sf	0.06%	0 sf	0.00%	
12:00 PM	3 sf	0.06%	0 sf	0.00%	
12:15 PM	3 sf	0.07%	0 sf	0.00%	
12:30 PM	6 sf	0.13%	0 sf	0.00%	
12:45 PM	85 sf	1.87%	0 sf	0.00%	
1:00 PM	306 sf	6.74%	0 sf	0.00%	
1:15 PM	522 sf	11.49%	0 sf	0.00%	
1:30 PM	746 sf	16.40%	0 sf	0.00%	
1:45 PM	980 sf	21.55%	0 sf	0.00%	
2:00 PM	1,225 sf	26.95%	0 sf	0.00%	
2:15 PM	1,474 sf	32.42%	0 sf	0.00%	
2:30 PM	1,744 sf	38.36%	0 sf	0.00%	
2:45 PM	2,030 sf	44.64%	0 sf	0.00%	
3:00 PM	2,345 sf	51.58%	0 sf	0.00%	
3:15 PM	2,680 sf	58.96%	0 sf	0.00%	
3:30 PM	3,061 sf	67.33%	0 sf	0.00%	
3:45 PM	3,320 sf	73.02%	0 sf	0.00%	
4:00 PM	3,544 sf	77.96%	0 sf	0.00%	
4:15 PM	4,546 sf	100.00%	0 sf	0.00%	
4:30 PM	4,546 sf	100.00%	0 sf	0.00%	
4:45 PM	4,546 sf	100.00%	0 sf	0.00%	
5:00 PM	4,546 sf	100.00%	0 sf	0.00%	
5:15 PM	4,546 sf	100.00%	0 sf	0.00%	
5:30 PM	4,546 sf	100.00%	0 sf	0.00%	
5:45 PM	4,546 sf	100.00%	0 sf	0.00%	
5:58 PM	4,440 sf	97.67%	0 sf	0.00%	

PROJECT: 201 Golden Gate Avenue OPEN SPACE: Turk Hyde Mini Park (4,546 sf)

#### **OCTOBER 4**

Mirror date: March 8 Shadow / Sunlight Balance Key
Analysis hours: 8:09 AM-5:47 PM (PDT) Existing Shadow Project Shadow Sunlight Remaining

Analysis Time		SHADOW		NEW SHADOW	SHADOW/SUNLIGHT BALANCE
	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
8:09 AM	4,546 sf	100.00%	0 sf	0.00%	
8:15 AM	4,546 sf	100.00%	0 sf	0.00%	
8:30 AM	4,546 sf	100.00%	0 sf	0.00%	
8:45 AM	3,888 sf	85.51%	0 sf	0.00%	
9:00 AM	1,984 sf	43.64%	0 sf	0.00%	
9:15 AM	432 sf	9.51%	0 sf	0.00%	
9:30 AM	1 sf	0.01%	0 sf	0.00%	
9:45 AM	1 sf	0.02%	0 sf	0.00%	
10:00 AM	2 sf	0.04%	0 sf	0.00%	
10:15 AM	48 sf	1.05%	0 sf	0.00%	
10:30 AM	144 sf	3.17%	0 sf	0.00%	
10:45 AM	234 sf	5.14%	0 sf	0.00%	
11:00 AM	271 sf	5.96%	0 sf	0.00%	
11:15 AM	301 sf	6.62%	0 sf	0.00%	
11:30 AM	284 sf	6.25%	0 sf	0.00%	
11:45 AM	282 sf	6.19%	0 sf	0.00%	
12:00 PM	231 sf	5.09%	0 sf	0.00%	
12:15 PM	193 sf	4.26%	0 sf	0.00%	
12:30 PM	148 sf	3.25%	0 sf	0.00%	
12:45 PM	262 sf	5.75%	0 sf	0.00%	
1:00 PM	436 sf	9.60%	0 sf	0.00%	
1:15 PM	688 sf	15.14%	0 sf	0.00%	
1:30 PM	925 sf	20.35%	0 sf	0.00%	
1:45 PM	1,171 sf	25.75%	0 sf	0.00%	
2:00 PM	1,387 sf	30.51%	0 sf	0.00%	
2:15 PM	1,634 sf	35.94%	0 sf	0.00%	
2:30 PM	1,852 sf	40.74%	0 sf	0.00%	
2:45 PM	2,113 sf	46.48%	0 sf	0.00%	
3:00 PM	2,379 sf	52.32%	0 sf	0.00%	
3:15 PM	2,714 sf	59.70%	0 sf	0.00%	
3:30 PM	3,050 sf	67.09%	0 sf	0.00%	
3:45 PM	3,237 sf	71.20%	0 sf	0.00%	
4:00 PM	3,931 sf	86.47%	0 sf	0.00%	
4:15 PM	4,546 sf	100.00%	0 sf	0.00%	
4:30 PM	4,546 sf	100.00%	0 sf	0.00%	
4:45 PM	4,546 sf	100.00%	0 sf	0.00%	
5:00 PM	4,546 sf	100.00%	0 sf	0.00%	
5:15 PM	4,546 sf	100.00%	0 sf	0.00%	
5:30 PM	4,546 sf	100.00%	0 sf	0.00%	
5:47 PM	4,546 sf	100.00%	0 sf	0.00%	

### OCTOBER 11

Mirror date: March 1 Shadow / Sunlight Balance Key
Analysis hours: 8:16 AM-5:37 PM (PDT) Existing Shadow Project Shadow Sunlight Remaining

<u> </u>	<u> </u>					
Analysis Time	EXISTING	EXISTING SHADOW		PROJECT NET NEW SHADOW		IADOW/SUNLIGHT BALANCE
ministration in the least	Shadow Area	Coverage	Shadow Area	Coverage	Re	elative levels of Shadow vs. Sun
8:16 AM	4,546 sf	100.00%	0 sf	0.00%		
8:30 AM	4,546 sf	100.00%	0 sf	0.00%		
8:45 AM	4,107 sf	90.35%	0 sf	0.00%		
9:00 AM	1,333 sf	29.31%	0 sf	0.00%		
9:15 AM	91 sf	2.00%	0 sf	0.00%		
9:30 AM	1 sf	0.01%	0 sf	0.00%		
9:45 AM	1 sf	0.02%	0 sf	0.00%		
10:00 AM	24 sf	0.54%	0 sf	0.00%		
10:15 AM	122 sf	2.69%	0 sf	0.00%		
10:30 AM	279 sf	6.14%	0 sf	0.00%		
10:45 AM	438 sf	9.64%	0 sf	0.00%		
11:00 AM	528 sf	11.61%	0 sf	0.00%		
11:15 AM	607 sf	13.34%	0 sf	0.00%		
11:30 AM	630 sf	13.85%	0 sf	0.00%		
11:45 AM	668 sf	14.69%	0 sf	0.00%		
12:00 PM	652 sf	14.35%	0 sf	0.00%		
12:15 PM	606 sf	13.33%	0 sf	0.00%		
12:30 PM	573 sf	12.61%	0 sf	0.00%		
12:45 PM	744 sf	16.37%	0 sf	0.00%		
1:00 PM	926 sf	20.37%	0 sf	0.00%		
1:15 PM	1,161 sf	25.53%	0 sf	0.00%		
1:30 PM	1,359 sf	29.90%	0 sf	0.00%		
1:45 PM	1,615 sf	35.52%	0 sf	0.00%		
2:00 PM	1,839 sf	40.45%	0 sf	0.00%		
2:15 PM	2,122 sf	46.68%	0 sf	0.00%		
2:30 PM	2,374 sf	52.21%	0 sf	0.00%		
2:45 PM	2,640 sf	58.06%	0 sf	0.00%		
3:00 PM	2,844 sf	62.55%	0 sf	0.00%		
3:15 PM	3,088 sf	67.92%	0 sf	0.00%		
3:30 PM	3,204 sf	70.48%	0 sf	0.00%		
3:45 PM	3,295 sf	72.48%	0 sf	0.00%		
4:00 PM	3,353 sf	73.76%	0 sf	0.00%		
4:15 PM	4,517 sf	99.36%	0 sf	0.00%		
4:30 PM	4,546 sf	100.00%	0 sf	0.00%	-	
4:45 PM	4,546 sf	100.00%	0 sf	0.00%		
5:00 PM	4,546 sf	100.00%	0 sf	0.00%	1	
5:15 PM	4,546 sf	100.00%	0 sf	0.00%	-	
5:30 PM	4,546 sf	100.00%	0 sf	0.00%	-	
5:37 PM	4,546 sf	100.00%	0 sf	0.00%		
J.J/ 1 IVI	4,040 31	100.0070	U SI	0.0070		

#### **OCTOBER 18**

Mirror date: February 22

Analysis hours: 8:22 AM-5:27 PM (PDT)

Shadow / Sunlight Balance Key

Existing Shadow Project Shadow Sunlight Remaining

Analysis Time	EXISTING	SHADOW	PROJECT NET	NEW SHADOW	SHADOW/SUNLIGHT BALANCE
Analysis Time =	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
8:22 AM	4,546 sf	100.00%	0 sf	0.00%	
8:30 AM	4,546 sf	100.00%	0 sf	0.00%	
8:45 AM	4,450 sf	97.89%	0 sf	0.00%	
9:00 AM	1,960 sf	43.11%	0 sf	0.00%	
9:15 AM	178 sf	3.92%	0 sf	0.00%	
9:30 AM	20 sf	0.45%	0 sf	0.00%	
9:45 AM	10 sf	0.23%	0 sf	0.00%	
10:00 AM	76 sf	1.67%	0 sf	0.00%	
10:15 AM	221 sf	4.87%	0 sf	0.00%	
10:30 AM	437 sf	9.62%	0 sf	0.00%	
10:45 AM	672 sf	14.78%	0 sf	0.00%	
11:00 AM	820 sf	18.03%	0 sf	0.00%	
11:15 AM	950 sf	20.89%	0 sf	0.00%	
11:30 AM	1,013 sf	22.28%	0 sf	0.00%	
11:45 AM	1,092 sf	24.02%	0 sf	0.00%	
12:00 PM	1,112 sf	24.46%	0 sf	0.00%	
12:15 PM	1,046 sf	23.02%	0 sf	0.00%	
12:30 PM	1,024 sf	22.52%	0 sf	0.00%	
12:45 PM	1,232 sf	27.11%	0 sf	0.00%	
1:00 PM	1,418 sf	31.19%	0 sf	0.00%	
1:15 PM	1,662 sf	36.57%	0 sf	0.00%	
1:30 PM	1,860 sf	40.91%	0 sf	0.00%	
1:45 PM	2,112 sf	46.45%	0 sf	0.00%	
2:00 PM	2,337 sf	51.40%	0 sf	0.00%	
2:15 PM	2,629 sf	57.82%	0 sf	0.00%	
2:30 PM	2,853 sf	62.76%	0 sf	0.00%	
2:45 PM	3,117 sf	68.56%	0 sf	0.00%	
3:00 PM	3,330 sf	73.24%	0 sf	0.00%	
3:15 PM	3,442 sf	75.71%	0 sf	0.00%	
3:30 PM	3,449 sf	75.87%	0 sf	0.00%	
3:45 PM	3,411 sf	75.03%	0 sf	0.00%	
4:00 PM	3,382 sf	74.38%	0 sf	0.00%	
4:15 PM	4,110 sf	90.40%	0 sf	0.00%	
4:30 PM	4,546 sf	100.00%	0 sf	0.00%	
4:45 PM	4,546 sf	100.00%	0 sf	0.00%	
5:00 PM	4,546 sf	100.00%	0 sf	0.00%	
5:15 PM	4,546 sf	100.00%	0 sf	0.00%	
5:27 PM	4,546 sf	100.00%	0 sf	0.00%	

#### **OCTOBER 25**

Mirror date: February 15

Analysis hours: 7:30 AM-4:18 PM (PST)

Shadow / Sunlight Balance Key

Existing Shadow Project Shadow Sunlight Remaining

	EVICTIVI	CHADOW	DDO IFOT WET	NEW CHAPOW	1	IADOW/OUNI IOUT D
Analysis Time		SHADOW		NEW SHADOW		IADOW/SUNLIGHT BALA
	Shadow Area	Coverage	Shadow Area	Coverage	Re	elative levels of Shadow vs. Su
7:30 AM	4,546 sf	100.00%	0 sf	0.00%		
7:45 AM	4,546 sf	100.00%	0 sf	0.00%		
8:00 AM	2,686 sf	59.08%	0 sf	0.00%		
8:15 AM	679 sf	14.93%	0 sf	0.00%		
8:30 AM	143 sf	3.15%	0 sf	0.00%		
8:45 AM	43 sf	0.94%	0 sf	0.00%		
9:00 AM	145 sf	3.18%	0 sf	0.00%		
9:15 AM	333 sf	7.31%	0 sf	0.00%		
9:30 AM	606 sf	13.33%	0 sf	0.00%		
9:45 AM	918 sf	20.18%	0 sf	0.00%		
10:00 AM	1,130 sf	24.86%	0 sf	0.00%		
10:15 AM	1,315 sf	28.92%	0 sf	0.00%		
10:30 AM	1,424 sf	31.31%	0 sf	0.00%		
10:45 AM	1,546 sf	34.02%	0 sf	0.00%		
11:00 AM	1,605 sf	35.29%	0 sf	0.00%		
11:15 AM	1,520 sf	33.44%	0 sf	0.00%		
11:30 AM	1,502 sf	33.04%	0 sf	0.00%		
11:45 AM	1,724 sf	37.93%	0 sf	0.00%		
12:00 PM	1,915 sf	42.13%	0 sf	0.00%		
12:15 PM	2,156 sf	47.42%	0 sf	0.00%		
12:30 PM	2,342 sf	51.52%	0 sf	0.00%		
12:45 PM	2,584 sf	56.83%	0 sf	0.00%		
1:00 PM	2,803 sf	61.65%	0 sf	0.00%		
1:15 PM	3,086 sf	67.88%	0 sf	0.00%		
1:30 PM	3,286 sf	72.28%	0 sf	0.00%		
1:45 PM	3,533 sf	77.71%	0 sf	0.00%		
2:00 PM	3,762 sf	82.74%	0 sf	0.00%		
2:15 PM	3,763 sf	82.78%	0 sf	0.00%		
2:30 PM	3,662 sf	80.55%	0 sf	0.00%		
2:45 PM	3,507 sf	77.14%	0 sf	0.00%		
3:00 PM	3,405 sf	74.89%	0 sf	0.00%		
3:15 PM	3,472 sf	76.37%	0 sf	0.00%		
3:30 PM	4,511 sf	99.22%	0 sf	0.00%		
3:45 PM	4,546 sf	100.00%	0 sf	0.00%		
4:00 PM	4,546 sf	100.00%	0 sf	0.00%		
4:15 PM	4,546 sf	100.00%	0 sf	0.00%		
4:18 PM	4,546 sf	100.00%	0 sf	0.00%		

Mirror date: February 8 Shadow / Sunlight Balance Key
Analysis hours: 7:36 AM-4:10 PM (PST) Existing Shadow Project Shadow Sunlight Remaining

Analysis Time	EXISTING	SHADOW	PROJECT NET	NEW SHADOW	SHADOW/SUNLIGHT BALANCE
Analysis mile	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
7:36 AM	4,546 sf	100.00%	0 sf	0.00%	
7:45 AM	4,546 sf	100.00%	0 sf	0.00%	
8:00 AM	3,826 sf	84.15%	0 sf	0.00%	
8:15 AM	1,288 sf	28.33%	0 sf	0.00%	
8:30 AM	365 sf	8.02%	0 sf	0.00%	
8:45 AM	141 sf	3.10%	0 sf	0.00%	
9:00 AM	221 sf	4.86%	0 sf	0.00%	
9:15 AM	445 sf	9.79%	0 sf	0.00%	
9:30 AM	765 sf	16.84%	0 sf	0.00%	
9:45 AM	1,162 sf	25.55%	0 sf	0.00%	
10:00 AM	1,450 sf	31.89%	0 sf	0.00%	
10:15 AM	1,690 sf	37.17%	0 sf	0.00%	
10:30 AM	1,845 sf	40.57%	0 sf	0.00%	
10:45 AM	2,013 sf	44.29%	0 sf	0.00%	
11:00 AM	2,110 sf	46.41%	0 sf	0.00%	
11:15 AM	2,003 sf	44.06%	0 sf	0.00%	
11:30 AM	1,997 sf	43.93%	0 sf	0.00%	
11:45 AM	2,220 sf	48.84%	0 sf	0.00%	
12:00 PM	2,410 sf	53.02%	0 sf	0.00%	
12:15 PM	2,633 sf	57.92%	0 sf	0.00%	
12:30 PM	2,799 sf	61.57%	0 sf	0.00%	
12:45 PM	3,028 sf	66.59%	0 sf	0.00%	
1:00 PM	3,230 sf	71.06%	0 sf	0.00%	
1:15 PM	3,466 sf	76.25%	0 sf	0.00%	
1:30 PM	3,653 sf	80.36%	0 sf	0.00%	
1:45 PM	3,871 sf	85.15%	0 sf	0.00%	
2:00 PM	4,072 sf	89.57%	0 sf	0.00%	
2:15 PM	4,059 sf	89.29%	0 sf	0.00%	
2:30 PM	3,833 sf	84.31%	0 sf	0.00%	
2:45 PM	3,615 sf	79.51%	0 sf	0.00%	
3:00 PM	3,447 sf	75.81%	0 sf	0.00%	
3:15 PM	3,693 sf	81.23%	0 sf	0.00%	
3:30 PM	4,546 sf	100.00%	0 sf	0.00%	
3:45 PM	4,546 sf	100.00%	0 sf	0.00%	
4:00 PM	4,546 sf	100.00%	0 sf	0.00%	
4:10 PM	4,546 sf	100.00%	0 sf	0.00%	

Mirror date: February 1

Analysis hours: 7:43 AM-4:03 PM (PST)

Shadow / Sunlight Balance Key

Existing Shadow Project Shadow Sunlight Remaining

Analysis Time	EXISTING	SHADOW	PROJECT NET	NEW SHADOW	SHADOW/SUNLIGHT BALANCE
Analysis mile	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
7:43 AM	4,546 sf	100.00%	0 sf	0.00%	
7:45 AM	4,546 sf	100.00%	0 sf	0.00%	
8:00 AM	4,546 sf	100.00%	0 sf	0.00%	
8:15 AM	2,392 sf	52.60%	0 sf	0.00%	
8:30 AM	750 sf	16.49%	0 sf	0.00%	
8:45 AM	314 sf	6.90%	0 sf	0.00%	
9:00 AM	294 sf	6.47%	0 sf	0.00%	
9:15 AM	547 sf	12.03%	0 sf	0.00%	
9:30 AM	900 sf	19.81%	0 sf	0.00%	
9:45 AM	1,380 sf	30.36%	0 sf	0.00%	
10:00 AM	1,775 sf	39.05%	0 sf	0.00%	
10:15 AM	2,093 sf	46.04%	0 sf	0.00%	
10:30 AM	2,290 sf	50.38%	0 sf	0.00%	
10:45 AM	2,498 sf	54.96%	0 sf	0.00%	
11:00 AM	2,625 sf	57.73%	0 sf	0.00%	
11:15 AM	2,489 sf	54.75%	0 sf	0.00%	
11:30 AM	2,485 sf	54.66%	0 sf	0.00%	
11:45 AM	2,712 sf	59.66%	0 sf	0.00%	
12:00 PM	2,898 sf	63.75%	0 sf	0.00%	
12:15 PM	3,102 sf	68.23%	0 sf	0.00%	
12:30 PM	3,247 sf	71.42%	0 sf	0.00%	
12:45 PM	3,465 sf	76.21%	0 sf	0.00%	
1:00 PM	3,648 sf	80.23%	0 sf	0.00%	
1:15 PM	3,830 sf	84.25%	0 sf	0.00%	
1:30 PM	3,997 sf	87.93%	0 sf	0.00%	
1:45 PM	4,179 sf	91.91%	0 sf	0.00%	
2:00 PM	4,300 sf	94.58%	0 sf	0.00%	
2:15 PM	4,325 sf	95.12%	0 sf	0.00%	
2:30 PM	3,984 sf	87.63%	0 sf	0.00%	
2:45 PM	3,713 sf	81.67%	0 sf	0.00%	
3:00 PM	3,574 sf	78.62%	0 sf	0.00%	
3:15 PM	4,137 sf	90.99%	0 sf	0.00%	
3:30 PM	4,546 sf	100.00%	0 sf	0.00%	
3:45 PM	4,546 sf	100.00%	0 sf	0.00%	
4:00 PM	4,546 sf	100.00%	0 sf	0.00%	
4:03 PM	4,546 sf	100.00%	0 sf	0.00%	

Mirror date: January 25

Analysis hours: 7:51 AM-3:57 PM (PST)

Shadow / Sunlight Balance Key

Existing Shadow Project Shadow Sunlight Remaining

Analysis Time	EXISTING	G SHADOW	PROJECT NET	NEW SHADOW	SHADOW/SUNLIGHT BALANCE
Allalysis Tillie —	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun
7:51 AM	4,546 sf	100.00%	0 sf	0.00%	
8:00 AM	4,546 sf	100.00%	0 sf	0.00%	
8:15 AM	3,610 sf	79.41%	45 sf	0.99%	
8:30 AM	1,313 sf	28.88%	0 sf	0.00%	
8:45 AM	1,047 sf	23.04%	0 sf	0.00%	
9:00 AM	2,243 sf	49.34%	0 sf	0.00%	
9:15 AM	630 sf	13.86%	0 sf	0.00%	
9:30 AM	1,007 sf	22.14%	0 sf	0.00%	
9:45 AM	1,533 sf	33.73%	0 sf	0.00%	
10:00 AM	2,025 sf	44.54%	0 sf	0.00%	
10:15 AM	2,468 sf	54.30%	0 sf	0.00%	
10:30 AM	2,729 sf	60.03%	0 sf	0.00%	
10:45 AM	2,992 sf	65.82%	0 sf	0.00%	
11:00 AM	3,157 sf	69.45%	0 sf	0.00%	
11:15 AM	2,999 sf	65.96%	0 sf	0.00%	
11:30 AM	2,979 sf	65.54%	0 sf	0.00%	
11:45 AM	3,207 sf	70.54%	0 sf	0.00%	
12:00 PM	3,377 sf	74.29%	0 sf	0.00%	
12:15 PM	3,560 sf	78.30%	0 sf	0.00%	
12:30 PM	3,682 sf	80.98%	0 sf	0.00%	
12:45 PM	3,874 sf	85.21%	0 sf	0.00%	
1:00 PM	4,025 sf	88.53%	0 sf	0.00%	
1:15 PM	4,145 sf	91.17%	0 sf	0.00%	
1:30 PM	4,277 sf	94.08%	0 sf	0.00%	
1:45 PM	4,421 sf	97.25%	0 sf	0.00%	
2:00 PM	4,443 sf	97.72%	0 sf	0.00%	
2:15 PM	4,506 sf	99.11%	0 sf	0.00%	
2:30 PM	4,141 sf	91.08%	0 sf	0.00%	
2:45 PM	3,822 sf	84.06%	0 sf	0.00%	
3:00 PM	3,819 sf	84.00%	0 sf	0.00%	
3:15 PM	4,517 sf	99.35%	0 sf	0.00%	
3:30 PM	4,546 sf	100.00%	0 sf	0.00%	
3:45 PM	4,546 sf	100.00%	0 sf	0.00%	
3:57 PM	4,546 sf	100.00%	0 sf	0.00%	

Mirror date: January 18
Analysis hours: 7:57 AM-3:54 PM (PST)

Shadow / Sunlight Balance Key							
Existing Shadow	Project Shadow	Sunlight Remaining					
SHADOW/SUNLIGHT BALANCE							
Relative levels of Shadow vs. Sun							

Analysis Time	EXISTING	SHADOW	PROJECT NET NEW SHADOW		SHADOW/SUNLIGHT BALANCE	
Analysis Time	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun	
7:57 AM	4,546 sf	100.00%	0 sf	0.00%		
8:00 AM	4,546 sf	100.00%	0 sf	0.00%		
8:15 AM	4,537 sf	99.79%	0 sf	0.00%		
8:30 AM	2,367 sf	52.07%	23 sf	0.50%		
8:45 AM	2,409 sf	52.99%	0 sf	0.00%		
9:00 AM	4,090 sf	89.97%	0 sf	0.00%		
9:15 AM	686 sf	15.09%	0 sf	0.00%		
9:30 AM	1,075 sf	23.64%	0 sf	0.00%		
9:45 AM	1,597 sf	35.12%	0 sf	0.00%		
10:00 AM	2,097 sf	46.13%	0 sf	0.00%		
10:15 AM	2,598 sf	57.15%	0 sf	0.00%		
10:30 AM	3,063 sf	67.37%	0 sf	0.00%		
10:45 AM	3,430 sf	75.46%	0 sf	0.00%		
11:00 AM	3,638 sf	80.01%	0 sf	0.00%		
11:15 AM	3,487 sf	76.69%	0 sf	0.00%		
11:30 AM	3,415 sf	75.11%	0 sf	0.00%		
11:45 AM	3,655 sf	80.40%	0 sf	0.00%		
12:00 PM	3,808 sf	83.75%	0 sf	0.00%		
12:15 PM	3,967 sf	87.25%	0 sf	0.00%		
12:30 PM	4,059 sf	89.27%	0 sf	0.00%		
12:45 PM	4,222 sf	92.87%	0 sf	0.00%		
1:00 PM	4,327 sf	95.17%	0 sf	0.00%		
1:15 PM	4,401 sf	96.81%	0 sf	0.00%		
1:30 PM	4,474 sf	98.42%	0 sf	0.00%		
1:45 PM	4,543 sf	99.92%	0 sf	0.00%		
2:00 PM	4,545 sf	99.97%	0 sf	0.00%		
2:15 PM	4,546 sf	100.00%	0 sf	0.00%		
2:30 PM	4,303 sf	94.65%	0 sf	0.00%		
2:45 PM	3,944 sf	86.74%	0 sf	0.00%		
3:00 PM	4,049 sf	89.06%	0 sf	0.00%		
3:15 PM	4,546 sf	100.00%	0 sf	0.00%		
3:30 PM	4,546 sf	100.00%	0 sf	0.00%		
3:45 PM	4,546 sf	100.00%	0 sf	0.00%		
3:54 PM	4,546 sf	100.00%	0 sf	0.00%		

Mirror date: January 11

Analysis hours: 8:04 AM-3:51 PM (PST)

Shadow / Sunlight Balance Key

Existing Shadow Project Shadow Sunlight Remaining

Analysis Time	EXISTING SHADOW		PROJECT NET NEW SHADOW		SHADOW/SUNLIGHT BALANCE	
Analysis Time	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun	
8:04 AM	4,546 sf	100.00%	0 sf	0.00%		
8:15 AM	4,546 sf	100.00%	0 sf	0.00%		
8:30 AM	3,424 sf	75.32%	699 sf	15.36%		
8:45 AM	3,256 sf	71.61%	0 sf	0.00%		
9:00 AM	4,473 sf	98.38%	0 sf	0.00%		
9:15 AM	1,520 sf	33.43%	0 sf	0.00%		
9:30 AM	1,102 sf	24.25%	0 sf	0.00%		
9:45 AM	1,616 sf	35.53%	0 sf	0.00%		
10:00 AM	2,106 sf	46.32%	0 sf	0.00%		
10:15 AM	2,606 sf	57.32%	0 sf	0.00%		
10:30 AM	3,077 sf	67.68%	0 sf	0.00%		
10:45 AM	3,548 sf	78.05%	0 sf	0.00%		
11:00 AM	3,990 sf	87.76%	0 sf	0.00%		
11:15 AM	3,930 sf	86.44%	0 sf	0.00%		
11:30 AM	3,733 sf	82.11%	0 sf	0.00%		
11:45 AM	3,914 sf	86.10%	0 sf	0.00%		
12:00 PM	4,069 sf	89.50%	0 sf	0.00%		
12:15 PM	4,223 sf	92.89%	0 sf	0.00%		
12:30 PM	4,324 sf	95.10%	0 sf	0.00%		
12:45 PM	4,458 sf	98.06%	0 sf	0.00%		
1:00 PM	4,546 sf	99.99%	0 sf	0.00%		
1:15 PM	4,546 sf	100.00%	0 sf	0.00%		
1:30 PM	4,546 sf	100.00%	0 sf	0.00%		
1:45 PM	4,546 sf	100.00%	0 sf	0.00%		
2:00 PM	4,546 sf	100.00%	0 sf	0.00%		
2:15 PM	4,546 sf	100.00%	0 sf	0.00%		
2:30 PM	4,461 sf	98.12%	0 sf	0.00%		
2:45 PM	4,088 sf	89.92%	0 sf	0.00%		
3:00 PM	4,192 sf	92.20%	0 sf	0.00%		
3:15 PM	4,546 sf	100.00%	0 sf	0.00%		
3:30 PM	4,546 sf	100.00%	0 sf	0.00%		
3:45 PM	4,546 sf	100.00%	0 sf	0.00%		
3:51 PM	4.546 sf	100.00%	0 sf	0.00%		

#### **DECEMBER 6**

Mirror date: January 4 Shadow / Sunlight Balance Key
Analysis hours: 8:10 AM-3:51 PM (PST) Existing Shadow Project Shadow Sunlight Remaining

Analysis Time	EXISTING SHADOW		PROJECT NET NEW SHADOW		SHADOW/SUNLIGHT BALANCE	
Analysis mine	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun	
8:10 AM	4,546 sf	100.00%	0 sf	0.00%		
8:15 AM	4,546 sf	100.00%	0 sf	0.00%		
8:30 AM	4,214 sf	92.68%	333 sf	7.32%		
8:45 AM	3,972 sf	87.36%	0 sf	0.00%		
9:00 AM	4,474 sf	98.42%	0 sf	0.00%		
9:15 AM	1,735 sf	38.16%	0 sf	0.00%		
9:30 AM	1,089 sf	23.95%	0 sf	0.00%		
9:45 AM	1,593 sf	35.04%	0 sf	0.00%		
10:00 AM	2,077 sf	45.68%	0 sf	0.00%		
10:15 AM	2,570 sf	56.53%	0 sf	0.00%		
10:30 AM	3,038 sf	66.82%	0 sf	0.00%		
10:45 AM	3,516 sf	77.33%	0 sf	0.00%		
11:00 AM	3,968 sf	87.28%	0 sf	0.00%		
11:15 AM	4,134 sf	90.94%	0 sf	0.00%		
11:30 AM	3,979 sf	87.52%	0 sf	0.00%		
11:45 AM	4,140 sf	91.06%	0 sf	0.00%		
12:00 PM	4,263 sf	93.77%	0 sf	0.00%		
12:15 PM	4,361 sf	95.92%	0 sf	0.00%		
12:30 PM	4,409 sf	96.98%	0 sf	0.00%		
12:45 PM	4,497 sf	98.92%	0 sf	0.00%		
1:00 PM	4,546 sf	100.00%	0 sf	0.00%		
1:15 PM	4,546 sf	100.00%	0 sf	0.00%		
1:30 PM	4,546 sf	100.00%	0 sf	0.00%		
1:45 PM	4,546 sf	100.00%	0 sf	0.00%		
2:00 PM	4,546 sf	100.00%	0 sf	0.00%		
2:15 PM	4,546 sf	100.00%	0 sf	0.00%		
2:30 PM	4,546 sf	100.00%	0 sf	0.00%		
2:45 PM	4,220 sf	92.83%	0 sf	0.00%		
3:00 PM	4,261 sf	93.73%	0 sf	0.00%		
3:15 PM	4,546 sf	100.00%	0 sf	0.00%		
3:30 PM	4,546 sf	100.00%	0 sf	0.00%		
3:45 PM	4,546 sf	100.00%	0 sf	0.00%		
3:51 PM	4,546 sf	100.00%	0 sf	0.00%		

#### **DECEMBER 13**

Mirror date: December 28 Shadow / Sunlight Balance Key
Analysis hours: 8:15 AM-3:52 PM (PST) Existing Shadow Project Shadow Sunlight Remaining

Analysis Time	EXISTING SHADOW		PROJECT NET NEW SHADOW		SHADOW/SUNLIGHT BALANCE	
7	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun	
8:15 AM	4,546 sf	100.00%	0 sf	0.00%		
8:30 AM	4,546 sf	100.00%	0 sf	0.00%		
8:45 AM	4,399 sf	96.75%	72 sf	1.59%		
9:00 AM	4,412 sf	97.04%	0 sf	0.00%		
9:15 AM	2,295 sf	50.48%	0 sf	0.00%		
9:30 AM	1,037 sf	22.80%	0 sf	0.00%		
9:45 AM	1,531 sf	33.68%	0 sf	0.00%		
10:00 AM	2,011 sf	44.24%	0 sf	0.00%		
10:15 AM	2,501 sf	55.01%	0 sf	0.00%		
10:30 AM	2,966 sf	65.23%	0 sf	0.00%		
10:45 AM	3,440 sf	75.67%	0 sf	0.00%		
11:00 AM	3,900 sf	85.79%	0 sf	0.00%		
11:15 AM	4,186 sf	92.08%	0 sf	0.00%		
11:30 AM	4,059 sf	89.29%	0 sf	0.00%		
11:45 AM	4,218 sf	92.79%	0 sf	0.00%		
12:00 PM	4,364 sf	95.99%	0 sf	0.00%		
12:15 PM	4,443 sf	97.73%	0 sf	0.00%		
12:30 PM	4,459 sf	98.09%	0 sf	0.00%		
12:45 PM	4,516 sf	99.33%	0 sf	0.00%		
1:00 PM	4,546 sf	100.00%	0 sf	0.00%		
1:15 PM	4,546 sf	100.00%	0 sf	0.00%		
1:30 PM	4,546 sf	100.00%	0 sf	0.00%		
1:45 PM	4,546 sf	100.00%	0 sf	0.00%		
2:00 PM	4,546 sf	100.00%	0 sf	0.00%		
2:15 PM	4,546 sf	100.00%	0 sf	0.00%		
2:30 PM	4,546 sf	100.00%	0 sf	0.00%		
2:45 PM	4,328 sf	95.20%	0 sf	0.00%		
3:00 PM	4,278 sf	94.11%	0 sf	0.00%		
3:15 PM	4,546 sf	100.00%	0 sf	0.00%		
3:30 PM	4,546 sf	100.00%	0 sf	0.00%		
3:45 PM	4,546 sf	100.00%	0 sf	0.00%		
3:52 PM	4,546 sf	100.00%	0 sf	0.00%		

### **DECEMBER 20**

Winter solstice (December 21 similar) Analysis hours: 8:19 AM-3:54 PM (PST)

Court   Cour							
Shadow Area   Coverage   Shadow Area   Coverage   Relative levels of Shadow vs. Sun	Analysis Time	Analysis Time EXISTING SHADOW		PROJECT NET NEW SHADOW		SHADOW/SUNLIGHT BALANCE	
8:30 AM	Analysis mine	Shadow Area	Coverage	Shadow Area	Coverage	Relative levels of Shadow vs. Sun	
8:45 AM	8:19 AM	4,546 sf	100.00%	0 sf	0.00%		
9:00 AM	8:30 AM	4,546 sf	100.00%	0 sf	0.00%		
9:15 AM 3,117 sf 68.55% 0 sf 0.00% 9:30 AM 9:58 sf 21.07% 0 sf 0.00% 1	8:45 AM	4,352 sf	95.72%	195 sf	4.28%		
9:30 AM 958 sf 21.07% 0 sf 0.00% 9:45 AM 1,437 sf 31.61% 0 sf 0.00% 10:00 AM 1,917 sf 42.17% 0 sf 0.00% 10:15 AM 2,406 sf 52.92% 0 sf 0.00% 10:45 AM 3,345 sf 73.57% 0 sf 0.00% 11:00 AM 3,805 sf 83.69% 0 sf 0.00% 11:100 AM 3,805 sf 83.69% 0 sf 0.00% 11:15 AM 4,20 sf 93.28% 0 sf 0.00% 11:30 AM 4,092 sf 90.02% 0 sf 0.00% 11:45 AM 4,173 sf 91.80% 0 sf 0.00% 11:45 AM 4,72 sf 98.86% 0 sf 0.00% 12:00 PM 4,366 sf 96.47% 0 sf 0.00% 12:30 PM 4,472 sf 98.38% 0 sf 0.00% 12:00 PM 4,546 sf 100.00% 0 sf 0.00% 1:15 PM 4,546 sf 100.00% 0 sf 0.00% 1:50 PM 4,546 sf 100.00% 0 sf 0.00% 1:35 PM 4,546 sf 100.00% 0 sf 0.00% 0 sf 0.00% 1:45 PM 4,546 sf 100.00% 0 sf 0.00% 0 sf 0.00% 1:50 PM 4,546 sf 100.00% 0 sf 0.00% 0 sf 0.00% 0 sf 0.00% 1:50 PM 4,546 sf 100.00% 0 sf 0.00%	9:00 AM	4,390 sf	96.56%	0 sf	0.00%		
9:45 AM	9:15 AM	3,117 sf	68.55%	0 sf	0.00%		
10:00 AM 1,917 sf 42.17% 0 sf 0.00% 10:15 AM 2,406 sf 52.92% 0 sf 0.00% 10:30 AM 2,871 sf 63.15% 0 sf 0.00% 10:45 AM 3,345 sf 73.57% 0 sf 0.00% 11:00 AM 3,805 sf 83.69% 0 sf 0.00% 11:15 AM 4,240 sf 93.26% 0 sf 0.00% 11:15 AM 4,240 sf 93.26% 0 sf 0.00% 11:30 AM 4,092 sf 90.02% 0 sf 0.00% 11:45 AM 4,173 sf 91.80% 0 sf 0.00% 11:45 AM 4,173 sf 91.80% 0 sf 0.00% 12:15 PM 4,472 sf 93.36% 0 sf 0.00% 12:15 PM 4,472 sf 93.36% 0 sf 0.00% 12:30 PM 4,546 sf 100.00% 0 sf 0.00% 1:15 PM 4,546 sf 100.00% 0 sf 0.00% 1:30 PM 4,546 sf 100.00% 0 sf 0.00% 1	9:30 AM	958 sf	21.07%	0 sf	0.00%		
10:15 AM	9:45 AM	1,437 sf	31.61%	0 sf	0.00%		
10:30 AM	10:00 AM	1,917 sf	42.17%	0 sf	0.00%		
10:45 AM 3,345 sf 73.57% 0 sf 0.00% 11:00 AM 3,805 sf 83.69% 0 sf 0.00% 11:15 AM 4,240 sf 93.26% 0 sf 0.00% 11:30 AM 4,092 sf 90.02% 0 sf 0.00% 11:45 AM 4,173 sf 91.80% 0 sf 0.00% 11:2:00 PM 4,366 sf 96.47% 0 sf 0.00% 12:30 PM 4,477 sf 98.47% 0 sf 0.00% 12:30 PM 4,546 sf 100.00% 0 sf 0.00% 1:15 PM 4,546 sf 100.00% 0 sf 0.00% 1:30 PM 4,546 sf 100.00% 0 sf 0.00% 1:30 PM 4,546 sf 100.00% 0 sf 0.00% 1:30 PM 4,546 sf 100.00% 0 sf 0.00% 1:45 PM 4,546 sf 100.00%	10:15 AM	2,406 sf	52.92%	0 sf	0.00%		
11:00 AM 3,805 sf 83.69% 0 sf 0.00% 11:15 AM 4,240 sf 93.26% 0 sf 0.00% 11:30 AM 4,092 sf 90.02% 0 sf 0.00% 11:45 AM 4,173 sf 91.80% 0 sf 0.00% 12:00 PM 4,386 sf 96.47% 0 sf 0.00% 12:15 PM 4,472 sf 98.36% 0 sf 0.00% 12:30 PM 4,546 sf 100.00% 0 sf 0.00% 13:15 PM 4,546 sf 100.00% 0 sf 0.00% 13:15 PM 4,546 sf 100.00% 0 sf 0.00% 13:15 PM 4,546 sf 100.00% 0 sf 0.00% 13:30 PM 4,546 sf 100.00% 0 sf 0.00% 13:45 PM 4,546 sf 100.00% 13:45 PM 4,546 sf 100.00	10:30 AM	2,871 sf	63.15%	0 sf	0.00%		
11:15 AM	10:45 AM	3,345 sf	73.57%	0 sf	0.00%		
11:30 AM	11:00 AM	3,805 sf	83.69%	0 sf	0.00%		
11:45 AM       4,173 sf       91.80%       0 sf       0.00%         12:00 PM       4,386 sf       96.47%       0 sf       0.00%         12:15 PM       4,472 sf       98.36%       0 sf       0.00%         12:30 PM       4,477 sf       98.47%       0 sf       0.00%         12:45 PM       4,518 sf       99.38%       0 sf       0.00%         1:00 PM       4,546 sf       100.00%       0 sf       0.00%         1:15 PM       4,546 sf       100.00%       0 sf       0.00%         1:30 PM       4,546 sf       100.00%       0 sf       0.00%         1:45 PM       4,546 sf       100.00%       0 sf       0.00%         2:00 PM       4,546 sf       100.00%       0 sf       0.00%         2:15 PM       4,546 sf       100.00%       0 sf       0.00%         2:30 PM       4,546 sf       100.00%       0 sf       0.00%         2:45 PM       4,431 sf       97.47%       0 sf       0.00%         3:15 PM       4,546 sf       100.00%       0 sf       0.00%         3:30 PM       4,546 sf       100.00%       0 sf       0.00%         3:35 PM       4,546 sf       100.00%	11:15 AM	4,240 sf	93.26%	0 sf	0.00%		
12:00 PM       4,386 sf       96.47%       0 sf       0.00%         12:15 PM       4,472 sf       98.36%       0 sf       0.00%         12:30 PM       4,477 sf       98.47%       0 sf       0.00%         12:45 PM       4,518 sf       99.38%       0 sf       0.00%         1:00 PM       4,546 sf       100.00%       0 sf       0.00%         1:15 PM       4,546 sf       100.00%       0 sf       0.00%         1:30 PM       4,546 sf       100.00%       0 sf       0.00%         1:45 PM       4,546 sf       100.00%       0 sf       0.00%         2:00 PM       4,546 sf       100.00%       0 sf       0.00%         2:15 PM       4,546 sf       100.00%       0 sf       0.00%         2:30 PM       4,546 sf       100.00%       0 sf       0.00%         2:45 PM       4,431 sf       97.47%       0 sf       0.00%         3:15 PM       4,546 sf       100.00%       0 sf       0.00%         3:30 PM       4,546 sf       100.00%       0 sf       0.00%         3:35 PM       4,546 sf       100.00%       0 sf       0.00%         3:35 PM       4,546 sf       100.00%	11:30 AM	4,092 sf	90.02%	0 sf	0.00%		
12:15 PM       4,472 sf       98.36%       0 sf       0.00%         12:30 PM       4,477 sf       98.47%       0 sf       0.00%         12:45 PM       4,518 sf       99.38%       0 sf       0.00%         1:00 PM       4,546 sf       100.00%       0 sf       0.00%         1:15 PM       4,546 sf       100.00%       0 sf       0.00%         1:30 PM       4,546 sf       100.00%       0 sf       0.00%         1:45 PM       4,546 sf       100.00%       0 sf       0.00%         2:00 PM       4,546 sf       100.00%       0 sf       0.00%         2:15 PM       4,546 sf       100.00%       0 sf       0.00%         2:30 PM       4,546 sf       100.00%       0 sf       0.00%         2:45 PM       4,431 sf       97.47%       0 sf       0.00%         3:15 PM       4,546 sf       100.00%       0 sf       0.00%         3:30 PM       4,546 sf       100.00%       0 sf       0.00%         3:35 PM       4,546 sf       100.00%       0 sf       0.00%         3:35 PM       4,546 sf       100.00%       0 sf       0.00%	11:45 AM	4,173 sf	91.80%	0 sf	0.00%		
12:30 PM       4,477 sf       98.47%       0 sf       0.00%         12:45 PM       4,518 sf       99.38%       0 sf       0.00%         1:00 PM       4,546 sf       100.00%       0 sf       0.00%         1:15 PM       4,546 sf       100.00%       0 sf       0.00%         1:30 PM       4,546 sf       100.00%       0 sf       0.00%         1:45 PM       4,546 sf       100.00%       0 sf       0.00%         2:00 PM       4,546 sf       100.00%       0 sf       0.00%         2:15 PM       4,546 sf       100.00%       0 sf       0.00%         2:30 PM       4,546 sf       100.00%       0 sf       0.00%         2:45 PM       4,431 sf       97.47%       0 sf       0.00%         3:00 PM       4,268 sf       93.87%       0 sf       0.00%         3:15 PM       4,546 sf       100.00%       0 sf       0.00%         3:30 PM       4,546 sf       100.00%       0 sf       0.00%         3:45 PM       4,546 sf       100.00%       0 sf       0.00%	12:00 PM	4,386 sf	96.47%	0 sf	0.00%		
12:45 PM       4,518 sf       99.38%       0 sf       0.00%         1:00 PM       4,546 sf       100.00%       0 sf       0.00%         1:15 PM       4,546 sf       100.00%       0 sf       0.00%         1:30 PM       4,546 sf       100.00%       0 sf       0.00%         1:45 PM       4,546 sf       100.00%       0 sf       0.00%         2:00 PM       4,546 sf       100.00%       0 sf       0.00%         2:15 PM       4,546 sf       100.00%       0 sf       0.00%         2:30 PM       4,546 sf       100.00%       0 sf       0.00%         2:45 PM       4,431 sf       97.47%       0 sf       0.00%         3:00 PM       4,268 sf       93.87%       0 sf       0.00%         3:15 PM       4,546 sf       100.00%       0 sf       0.00%         3:30 PM       4,546 sf       100.00%       0 sf       0.00%         3:45 PM       4,546 sf       100.00%       0 sf       0.00%	12:15 PM	4,472 sf	98.36%	0 sf	0.00%		
1:00 PM	12:30 PM	4,477 sf	98.47%	0 sf	0.00%		
1:15 PM       4,546 sf       100.00%       0 sf       0.00%         1:30 PM       4,546 sf       100.00%       0 sf       0.00%         1:45 PM       4,546 sf       100.00%       0 sf       0.00%         2:00 PM       4,546 sf       100.00%       0 sf       0.00%         2:15 PM       4,546 sf       100.00%       0 sf       0.00%         2:30 PM       4,546 sf       100.00%       0 sf       0.00%         2:45 PM       4,431 sf       97.47%       0 sf       0.00%         3:00 PM       4,268 sf       93.87%       0 sf       0.00%         3:15 PM       4,546 sf       100.00%       0 sf       0.00%         3:30 PM       4,546 sf       100.00%       0 sf       0.00%         3:45 PM       4,546 sf       100.00%       0 sf       0.00%	12:45 PM	4,518 sf	99.38%	0 sf	0.00%		
1:30 PM       4,546 sf       100.00%       0 sf       0.00%         1:45 PM       4,546 sf       100.00%       0 sf       0.00%         2:00 PM       4,546 sf       100.00%       0 sf       0.00%         2:15 PM       4,546 sf       100.00%       0 sf       0.00%         2:30 PM       4,546 sf       100.00%       0 sf       0.00%         2:45 PM       4,431 sf       97.47%       0 sf       0.00%         3:00 PM       4,268 sf       93.87%       0 sf       0.00%         3:15 PM       4,546 sf       100.00%       0 sf       0.00%         3:30 PM       4,546 sf       100.00%       0 sf       0.00%         3:45 PM       4,546 sf       100.00%       0 sf       0.00%	1:00 PM	4,546 sf	100.00%	0 sf	0.00%		
1:45 PM       4,546 sf       100.00%       0 sf       0.00%         2:00 PM       4,546 sf       100.00%       0 sf       0.00%         2:15 PM       4,546 sf       100.00%       0 sf       0.00%         2:30 PM       4,546 sf       100.00%       0 sf       0.00%         2:45 PM       4,431 sf       97.47%       0 sf       0.00%         3:00 PM       4,268 sf       93.87%       0 sf       0.00%         3:15 PM       4,546 sf       100.00%       0 sf       0.00%         3:30 PM       4,546 sf       100.00%       0 sf       0.00%         3:45 PM       4,546 sf       100.00%       0 sf       0.00%	1:15 PM	4,546 sf	100.00%	0 sf	0.00%		
2:00 PM       4,546 sf       100.00%       0 sf       0.00%         2:15 PM       4,546 sf       100.00%       0 sf       0.00%         2:30 PM       4,546 sf       100.00%       0 sf       0.00%         2:45 PM       4,431 sf       97.47%       0 sf       0.00%         3:00 PM       4,268 sf       93.87%       0 sf       0.00%         3:15 PM       4,546 sf       100.00%       0 sf       0.00%         3:30 PM       4,546 sf       100.00%       0 sf       0.00%         3:45 PM       4,546 sf       100.00%       0 sf       0.00%	1:30 PM	4,546 sf	100.00%	0 sf	0.00%		
2:15 PM       4,546 sf       100.00%       0 sf       0.00%         2:30 PM       4,546 sf       100.00%       0 sf       0.00%         2:45 PM       4,431 sf       97.47%       0 sf       0.00%         3:00 PM       4,268 sf       93.87%       0 sf       0.00%         3:15 PM       4,546 sf       100.00%       0 sf       0.00%         3:30 PM       4,546 sf       100.00%       0 sf       0.00%         3:45 PM       4,546 sf       100.00%       0 sf       0.00%	1:45 PM	4,546 sf	100.00%	0 sf	0.00%		
2:30 PM       4,546 sf       100.00%       0 sf       0.00%         2:45 PM       4,431 sf       97.47%       0 sf       0.00%         3:00 PM       4,268 sf       93.87%       0 sf       0.00%         3:15 PM       4,546 sf       100.00%       0 sf       0.00%         3:30 PM       4,546 sf       100.00%       0 sf       0.00%         3:45 PM       4,546 sf       100.00%       0 sf       0.00%	2:00 PM	4,546 sf	100.00%	0 sf	0.00%		
2:45 PM     4,431 sf     97.47%     0 sf     0.00%       3:00 PM     4,268 sf     93.87%     0 sf     0.00%       3:15 PM     4,546 sf     100.00%     0 sf     0.00%       3:30 PM     4,546 sf     100.00%     0 sf     0.00%       3:45 PM     4,546 sf     100.00%     0 sf     0.00%	2:15 PM	4,546 sf	100.00%	0 sf	0.00%		
3:00 PM	2:30 PM	4,546 sf	100.00%	0 sf	0.00%		
3:15 PM     4,546 sf     100.00%     0 sf     0.00%       3:30 PM     4,546 sf     100.00%     0 sf     0.00%       3:45 PM     4,546 sf     100.00%     0 sf     0.00%	2:45 PM	4,431 sf	97.47%	0 sf	0.00%		
3:30 PM 4,546 sf 100.00% 0 sf 0.00% 3:45 PM 4,546 sf 100.00% 0 sf 0.00%	3:00 PM	4,268 sf	93.87%	0 sf	0.00%		
3:45 PM 4,546 sf 100.00% 0 sf 0.00%	3:15 PM	4,546 sf	100.00%	0 sf	0.00%		
The state of the s	3:30 PM	4,546 sf	100.00%	0 sf	0.00%		
3:54 PM 4,546 sf 100.00% 0 sf 0.00%	3:45 PM	4,546 sf	100.00%	0 sf	0.00%		
	3:54 PM	4,546 sf	100.00%	0 sf	0.00%		

Shadow / Sunlight Balance Key

Project Shadow

Sunlight Remaining

Existing Shadow



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