San Francisco Planning

49 South Van Ness Avenue, Suite 1400
San Francisco, CA 94103
628.652.7600
www.sfplanning.org

DISCRETIONARY REVIEW ABBREVIATED ANALYSIS

HEARING DATE: February 4, 2021

Record No.:	**2018-011022DRP**
Project Address:	**2651-2653 Octavia Street**
Permit Application:	2018.0803.6504
Zoning:	RH-2 [Residential House, Two-Family] 40-X Height and Bulk District
Block/Lot:	0554 / 002
Project Sponsor:	Jane Cote-Cook 2651 Octavia Street San Francisco, CA 94123
Staff Contact:	David Winslow – (628) 652-7335 david.winslow@sfgov.org
Recommendation:	Do Not Take DR and Approve

Background

This project was heard February 6, 2019 as a public request for Discretionary Review (DR) and approved by the Planning Commission without taking DR (4- 1, with Commissioner Moore dissenting). Subsequently, the September 5, 2019 categorical exemption issued for the proposed project was appealed to the Board of Supervisors (Board). On July 28, 2020, the board overturned the September 5, 2019 categorical exemption. In its motion (Motion No. M20-129), the Board directed the Planning Department to "analyze the potential historic resource impacts of the Project on the character-defining features of the adjacent Golden Gate Valley Branch Library – specifically, to consider whether the potential impacts of the Project on the lighting inside the library's main reading room would significantly impact those character defining features." As a result, the September 5, 2019 review was rescinded. To address the Board's direction, the Planning Department performed additional review for the proposed project and issued a new categorical exemption on January 27, 2021. No changes have been made to the proposed project since the July 28, 2020 appeal hearing before the Board.

Project Description

The project proposes to construct a 4th floor vertical and horizontal addition to an existing 3 -story, two- family house and a horizontal addition to the rear that incorporates decks at the step backs. A roof deck is also proposed

Site Description and Present Use

The site is a 25' wide x 125' deep steeply lateral sloping lot with an existing 3-story 2-family home built in 1950 and is categorized as a 'B' – Potential Historic Resource present.

Surrounding Properties and Neighborhood

The immediately adjacent set of buildings on this block of Octavia Street are 3-stories at the street face and step consistently down with the slope of the street to the 2-story corner public library. The library occupies the full lot and has a 15' side setback at the interior lot line to accommodate south facing windows. The adjacent residential buildings on Octavia define the mid-block open space consistently and extend further into the rear than the subject property.

Building Permit Notification

Type	Required Period	Notification Dates	DR File Date	DR Hearing Date	Filing to Hearing Date
311 Notice	30 days	October 8, 2019–November 9, 2020	11.9. 2020	2.4. 2021	87 days

Hearing Notification

Type	Required Period	Required Notice Date	Actual Notice Date	Actual Period
Posted Notice	20 days	January 15, 2021	January 15, 2021	20 days
Mailed Notice	20 days	January 15, 2021	January 15, 2021	20 days
Online Notice	20 days	January 15, 2021	January 15, 2021	20 days

Public Comment

	Support	Opposed	No Position
Adjacent neighbor(s)	0	0	1
Other neighbors on the block or directly across the street	0	0	0
Neighborhood groups	0	0	0

Environmental Review

The Department has determined that the proposed project is exempt/excluded from environmental review, pursuant to CEQA Guideline Section 15301 (Class One - Minor Alteration of Existing Facility, (e) Additions to existing structures provided that the addition will not result in an increase of more than 10,000 square feet).

DR Requestor

Paul Guermonprez on behalf of the of 2634 Octavia Street HOA, 1791-1795 Green Street HOA, neighbors across the street and to the East of the proposed project.

DR Requestors' Concerns and Proposed Alternatives

DR requestor is concerned that the proposed project:

1. Refusal to consult neighbors;
2. Results in loss of natural light to the library;
3. Proposed project is out architectural character of context, specifically with impact to the scale of the block;
4. Project goes against the City's Climate change policy by blocking solar access to the library's solar panels.
5. The elevator and roof deck exceed the allowed height restrictions and the proposed roof deck will create privacy and noise impacts
   Loss of light, view, and real estate value for neighbors

Proposed alternatives:

remove additional floor from project

See attached *Discretionary Review Application,* dated October 21, 2019.

Project Sponsor's Response to DR Application

The design has been extensively reviewed by Planning preservation staff and RDAT and complies with the letter and intent of the Planning Code and Residential Design Guidelines. The proposed design responds to and fits the adjacent context, and there are no exceptional or extraordinary circumstances.

See attached Responses to Discretionary Review, dated November 7, 2019 and January 21, 2021

Department Review

The Department's review of this confirmed that this meets the Residential Design Guidelines related to architectural character, scale, and preservation of access to light. The project sponsor has designed a building that adds to the existing building and maintains the scale of the street and access to light and midblock open space. As such Staff deems there are no exceptional or extraordinary circumstances.
Specifically, staff finds:

1. The refusal to consult the neighbors is not a requirement after project pre-application meeting, nor does the Department have any means to determine if and how the efforts were conducted.

2. The Golden Gate Valley Branch public library, a potential landmark, is a non-complying structure, which was designed to ensure its own access to light by providing a 15' side setback to the south. As documented in the January 27, 2021 categorical exemption, the Department determined that the proposed project is exempt from CEQA as a Class 1 categorical exemption for existing facilities. The Department also determined that the project would not result in a significant impact on historic resources, including the adjacent Golden Gate Valley Branch Library, because the project meets the Secretary of the Interior's Standards for Rehabilitation (Standards). The proposed project is retaining the character-defining features of the subject property as outlined in the Standard's analysis completed by

preservation staff and therefore does not require further evaluation. As discussed in the preservation review memo, prepared by Allison Vanderslice dated January 26, 2021, the adjacent Golden Gate Valley Branch Library is an individually significant historic resource and is currently undergoing landmarking. The Department determined that the library's reading room is a character-defining feature of the adjacent library, although interior light levels are not. The proposed project will reduce some of the natural light provided to the reading room through the half windows on the south elevation of the library. The Department determined that the project would result in a minimal reduction of natural light to the library's reading room and would not result in a significant impact to any of the library's character defining features.

In order to fulfill the Board's direction, a daylight study was prepared for the project and supported the conclusion that the proposed project would not substantially reduce the indoor light levels in the library's reading room. The proposed project will not result in any other changes to the adjacent library.

Because the 2019 DR approval, which relied on the September 5, 2019 categorical exemption, constituted the approval action for CEQA, we are asking the Commission to review the project in light of the new categorical exemption and approve the project relying on the new categorical exemption.

3. The proposed design of the 4th story extends the existing angled roof to incorporate the vertical addition in a way that maintain the form, scale at the street and roof features of the existing building front. A single 10' wide garage door replaces a double garage door at the ground level, and the entry is widened. The windows sizes and proportions are of similar scale and form as the neighboring are proposed to be maintained.

4. Solar panels are not protected by state or local law as doing so would allow them to act as de facto impediments to development.

5. The Code allows certain projections to exceed the height limit. The roof deck is set back 5' from side, front, and rear building edges, and because of the roof slope is set back approximately 20' from the front building wall, so as to pose minimal impacts to the neighbors with respect to noise and privacy.

6. The loss of light due to this addition is not exceptional or extraordinary. The proposed setback and the width of the street provide a more than reasonable distance to ameliorate the effects of the additional story with respect to light. Per San Francisco policy, views are not protected, nor are economic values evaluated.

Recommendation: Do Not Take DR and Approve

Attachments:

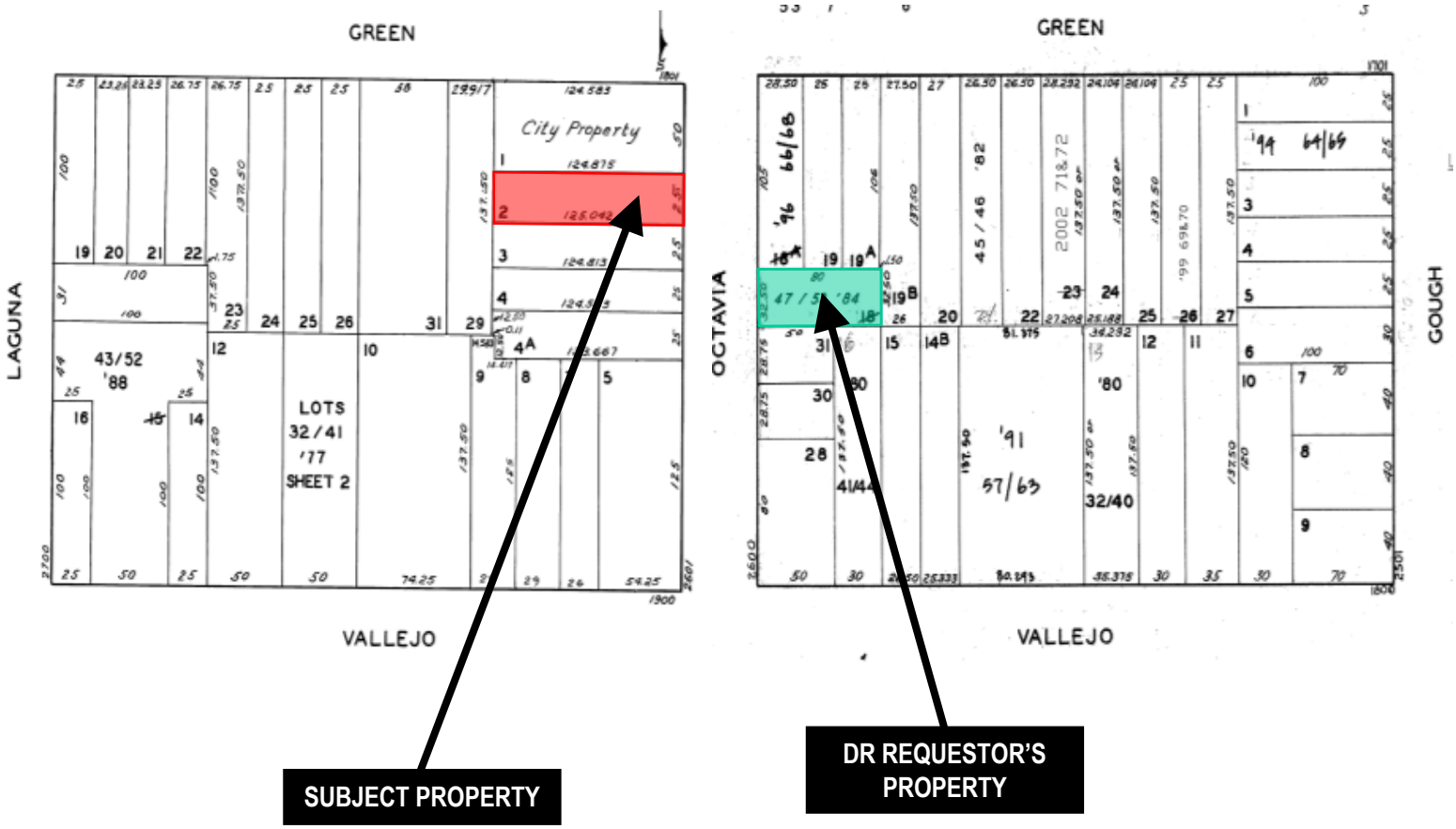
Block Book Map
Sanborn Map
Zoning Map
Aerial Photographs
Context Photographs
Section 311 Notice
CEQA Determination
DR Application
Responses to DR Application, dated November 7, 2019 and January2 1, 2021
311 plans
Revised light study dated 12.13.2020

Exhibits

Discretionary Review Hearing
Case Number 2018-011022DRP
2651 Octavia Street

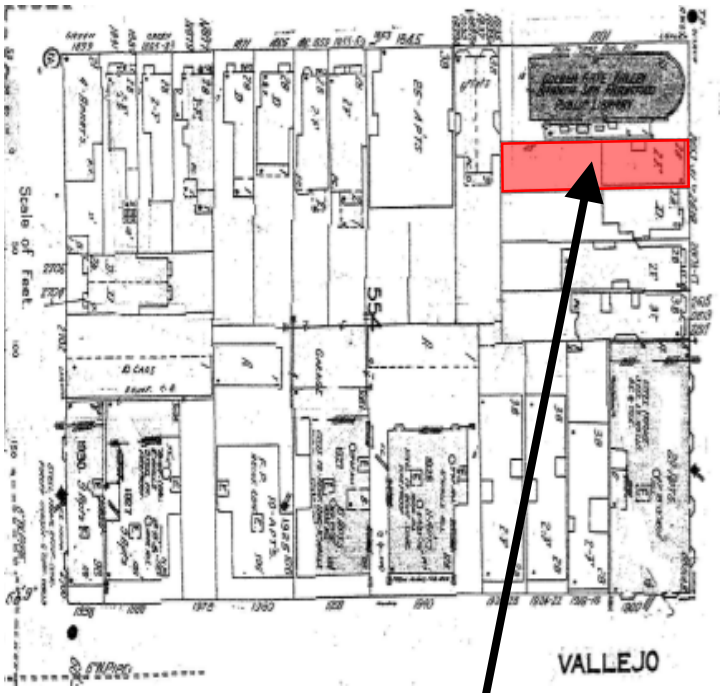
SAN FRANCISCO
PLANNING DEPARTMENT

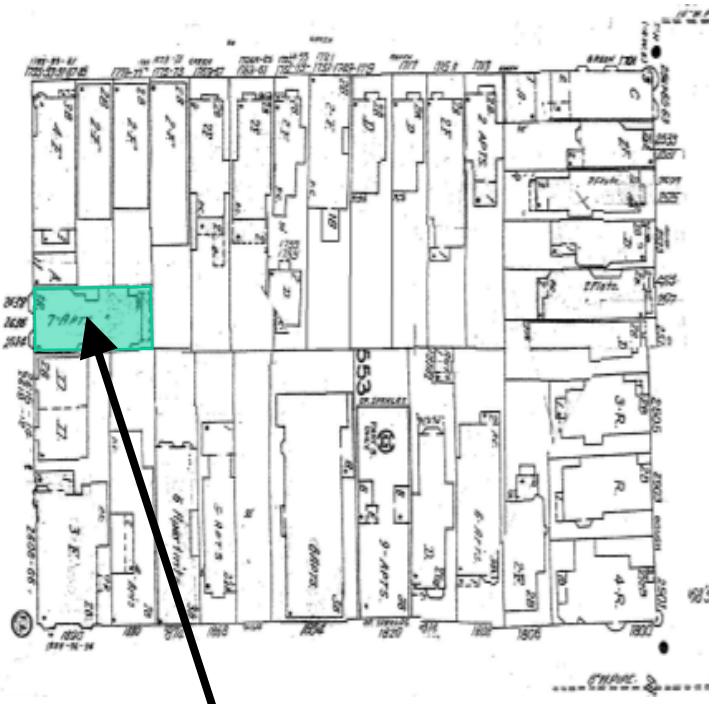
Parcel Map



Discretionary Review Hearing
Case Number 2018-011022DRP
2651 Octavia Street

Sanborn Map*



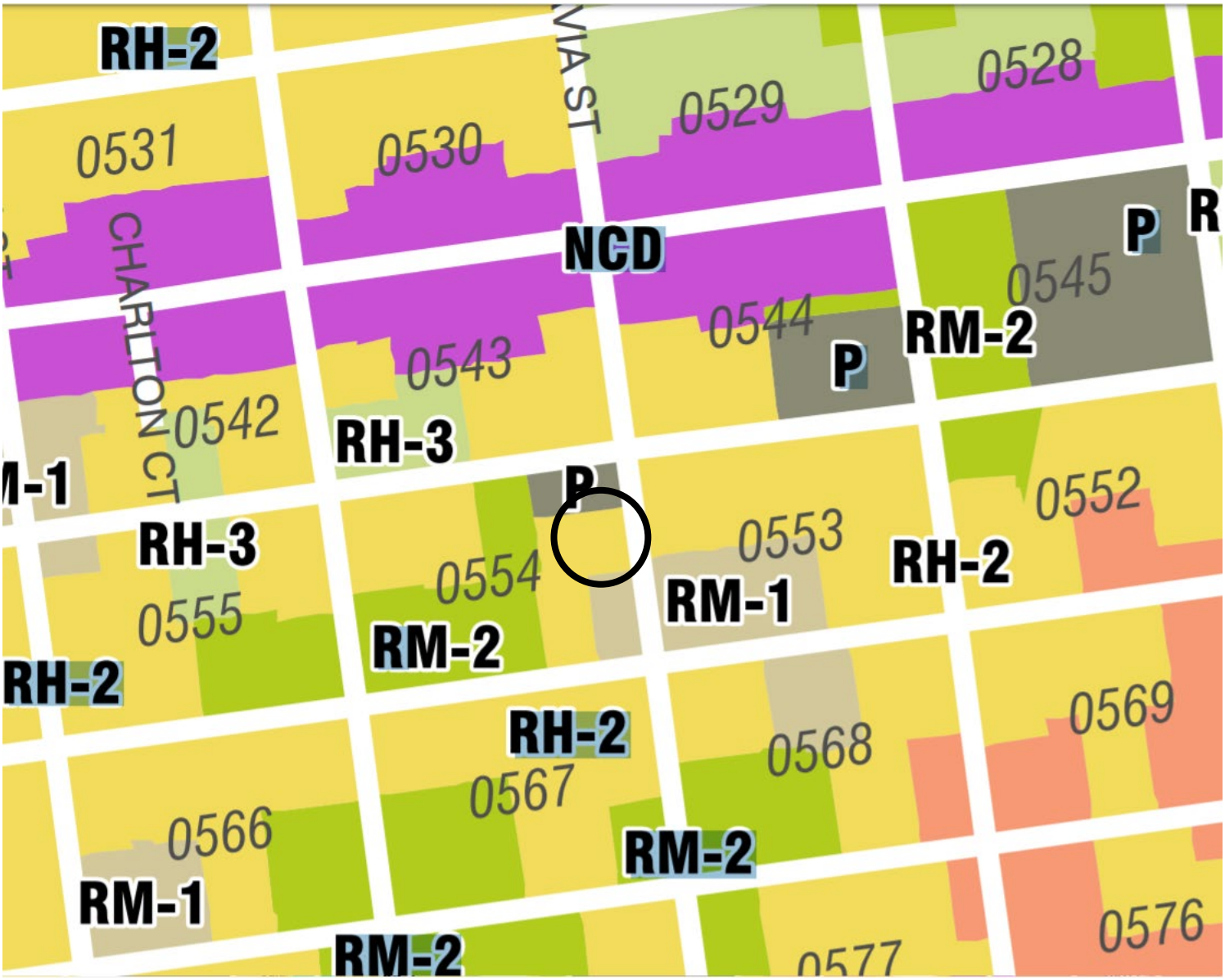


SUBJECT PROPERTY

DR REQUESTOR'S PROPERTY

**The Sanborn Maps in San Francisco have not been updated since 1998, and this map may not accurately reflect existing conditions.*

Zoning Map



Discretionary Review Hearing
Case Number 2018-011022DRP
2651 Octavia Street

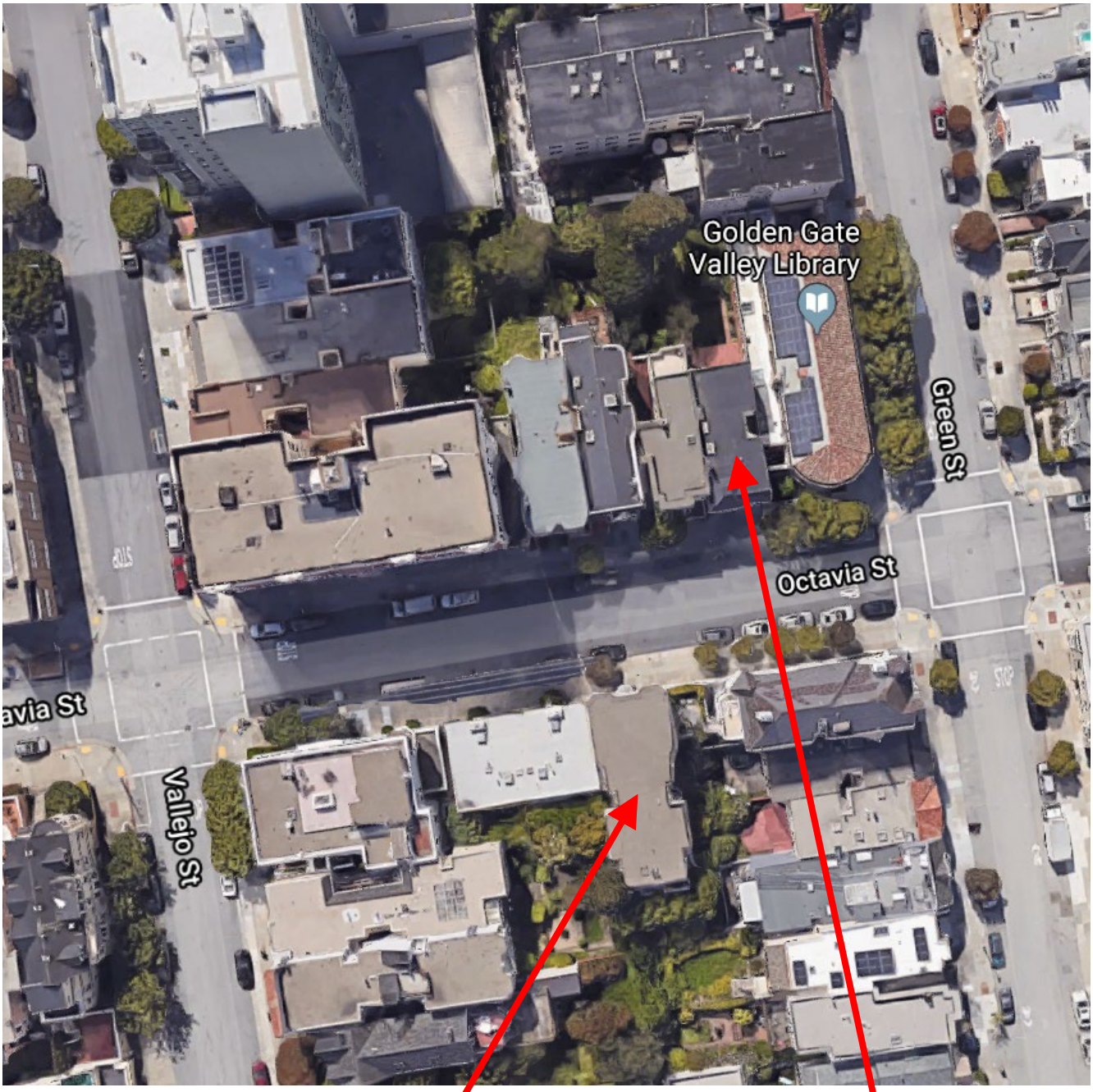
SAN FRANCISCO
PLANNING DEPARTMENT

Aerial Photo

Discretionary Review Hearing
Case Number 2018-011022DRP
2651 Octavia Street

SAN FRANCISCO
PLANNING DEPARTMENT

Aerial Photo



DR REQUESTOR'S PROPERTY

SUBJECT PROPERTY

Discretionary Review Hearing
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2651 Octavia Street

SAN FRANCISCO
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Aerial Photo

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Aerial Photo

SUBJECT PROPERTY

DR REQUESTOR'S PROPERTY

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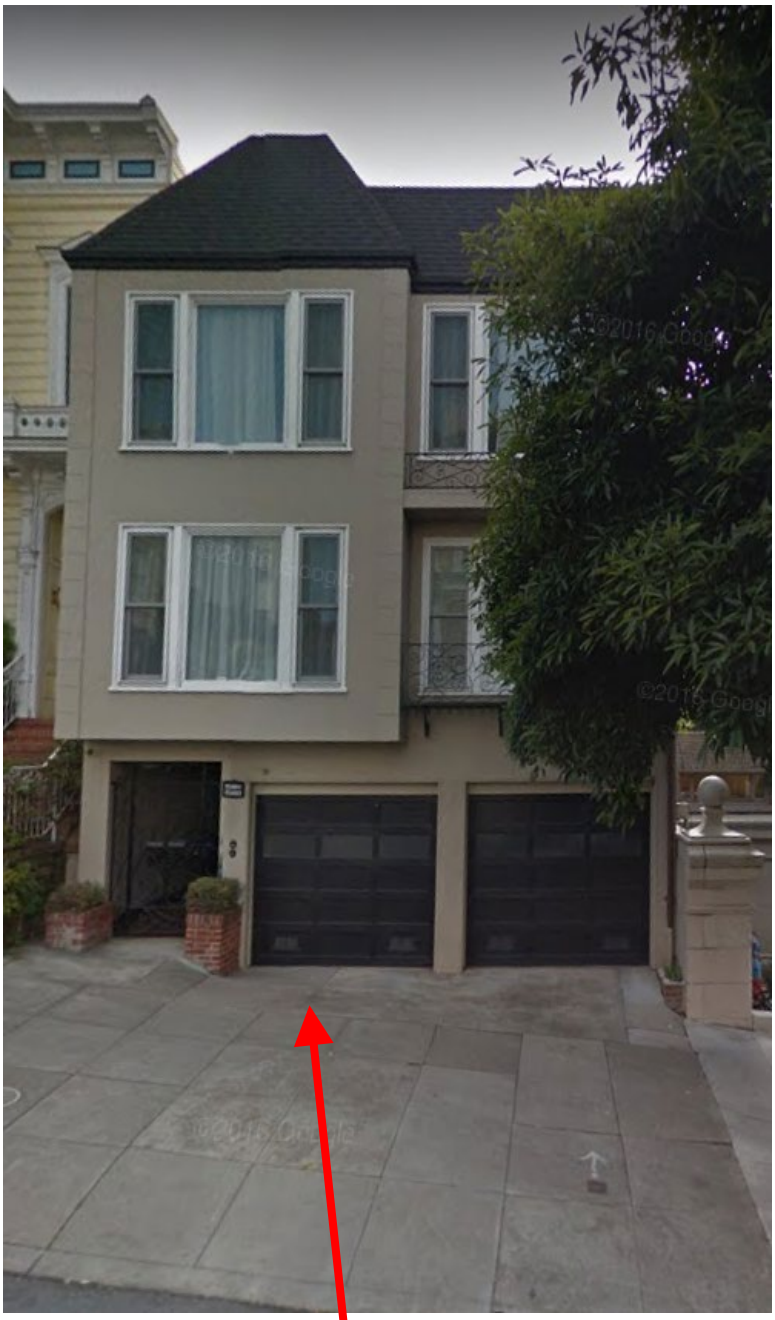
Case Number 2018-011022DRP
2651 Octavia Street

SAN FRANCISCO
PLANNING DEPARTMENT

Site Photo



SUBJECT PROPERTY

Discretionary Review Hearing
Case Number 2018-011022DRP
2651 Octavia Street

SAN FRANCISCO
PLANNING DEPARTMENT

1650 Mission Street Suite 400 San Francisco, CA 94103

NOTICE OF BUILDING PERMIT APPLICATION (SECTION 311)

On **August 3, 2018,** Building Permit Application No. **2018.08.03.6405** was filed for work at the Project Address below**.**

Notice Date: 9/19/2019 **Expiration Date: 10/21/2019**

PROJECT INFORMATION		APPLICANT INFORMATION	
Project Address:	**2651 - 2653 Octavia Street**	Applicant:	**Jane Cote-Cook**
Cross Street(s):	**Green Street / Vallejo Street**	Address:	**2651 Octavia Street**
Block/Lot No.:	**0554 / 002**	City, State:	**San Francisco CA**
Zoning District(s):	**RH-2 / 40-X**	Telephone:	**(415) 510-1610**
Record Number:	**2018-011022PRJ**	Email:	**jcotecook@aol.com**

You are receiving this notice as an owner or occupant of property within 150 feet of the proposed project. **You are not required to take any action.** For more information about the proposed project, or to express concerns about the project, please contact the Applicant listed above or the Planner named below as soon as possible. If you believe that there are exceptional or extraordinary circumstances associated with the project, you may request that the Planning Commission review this application at a public hearing for Discretionary Review. Requests for a Discretionary Review hearing must be filed during the 30-day review period, prior to the close of business on the Expiration Date shown above, or the next business day if that date is on a week-end or a legal holiday. If no Requests for Discretionary Review are filed, this project will be approved by the Planning Department after the Expiration Date.

Members of the public are not required to provide personal identifying information when they communicate with the Commission or the Department. All written or oral communications, including submitted personal contact information, may be made available to the public for inspection and copying upon request and may appear on the Department's website or in other public documents.

PROJECT SCOPE

☐ Demolition	☐ New Construction	✓ Alteration
☐ Change of Use	✓ Facade Alteration(s)	☐ Front Addition
✓ Rear Addition	☐ Side Addition	✓ Vertical Addition

PROJECT FEATURES	EXISTING	PROPOSED
Building Use	Residential	No Change
Front Setback	Approx. 3 feet	Approx. 3 feet
Building Depth	Approx. 56 feet 9 inches	Approx. 76 feet 3 inches
Rear Yard	Approx. 65 feet 3 inches	Approx. 45 feet 9 inches
Building Height	Approx. 37 feet (to roof)	Approx. 40 feet
Number of Stories	3	4
Number of Dwelling Units	2	No Change
Number of Parking Spaces	2	2

PROJECT DESCRIPTION

The proposed project is to construct vertical and horizontal additions to an existing three-story, two-unit residential building. The proposed project will also include new decks at the rear and roof (with elevator penthouse), facade modifications (new front entry, garage opening, window modifications), and interior renovations. See attached plans.

The issuance of the building permit by the Department of Building Inspection or the Planning Commission project approval at a discretionary review hearing would constitute as the Approval Action for the project for the purposes of CEQA, pursuant to Section 31.04(h) of the San Francisco Administrative Code.

To view plans or related documents, visit sf-planning.org/notices and search the Project Address listed above. Once the property is located, click on the dot(s) to view details of the record number above, its related documents and/or plans.

For more information, please contact Planning Department staff:
Sharon M. Young, (415) 558-6346, sharon.m.young@sfgov.org

GENERAL INFORMATION ABOUT PROCEDURES

Reduced copies of the proposed project plans have been included in this mailing for your information. If you have questions about the plans, please contact the project Applicant listed on the front of this notice. You may wish to discuss the plans with your neighbors or neighborhood association, as they may already be aware of the project. If you have general questions about the Planning Department's review process, contact the Planning Information Center (PIC) at 1660 Mission Street, 1st Floor (415) 558-6377 or pic@sfgov.org. If you have specific questions about the proposed project, you should contact the planner listed on the front of this notice.

If you believe that the impact on you from the proposed project is significant and you wish to seek to change the project, there are several procedures you may use. **We strongly urge that steps 1 and 2 be taken.**

1. Request a meeting with the project Applicant to get more information and to explain the project's impact on you.
2. Contact the nonprofit organization Community Boards at (415) 920-3820, or online at www.communityboards.org for a facilitated discussion in a safe and collaborative environment. Community Boards acts as a neutral third party and has, on many occasions, helped reach mutually agreeable solutions.
3. Where you have attempted, through the use of the above steps or other means, to address potential problems without success, please contact the planner listed on the front of this notice to discuss your concerns.

If, after exhausting the procedures outlined above, you still believe that exceptional and extraordinary circumstances exist, you have the option to request that the Planning Commission exercise its discretionary powers to review the project. These powers are reserved for use in exceptional and extraordinary circumstances for projects which generally conflict with the City's General Plan and the Priority Policies of the Planning Code; therefore the Commission exercises its discretion with utmost restraint. This procedure is called Discretionary Review. If you believe the project warrants Discretionary Review by the Planning Commission, **you must file a Discretionary Review application prior to the Expiration Date shown on the front of this notice.** Discretionary Review applications are available at the Planning Information Center (PIC), 1660 Mission Street, 1st Floor, or online at www.sfplanning.org). **You must submit the application in person** at the Planning Information Center (PIC), with all required materials and a check payable to the Planning Department. To determine the fee for a Discretionary Review, please refer to the Planning Department Fee Schedule available at www.sfplanning.org. If the project includes multiple building permits, i.e. demolition and new construction, a **separate request for Discretionary Review must be submitted, with all required materials and fee, for each permit that you feel will have an impact on you. Incomplete applications will not be accepted.**

If no Discretionary Review Applications have been filed within the Notification Period, the Planning Department will approve the application and forward it to the Department of Building Inspection for its review.

BOARD OF APPEALS

An appeal of the Planning Commission's decision on a Discretionary Review case may be made to the **Board of Appeals within 15 calendar days after the building permit is issued** (or denied) by the Department of Building Inspection. Appeals must be submitted in person at the Board's office at 1650 Mission Street, 3rd Floor, Room 304. For further information about appeals to the Board of Appeals, including current fees, contact the Board of Appeals at (415) 575-6880.

ENVIRONMENTAL REVIEW

This project has undergone preliminary review pursuant to California Environmental Quality Act (CEQA). If, as part of this process, the Department's Environmental Review Officer has deemed this project to be exempt from further environmental review, an exemption determination has been prepared and can be obtained through the Exemption Map at www.sfplanning.org. An appeal of the decision **to exempt the proposed project from CEQA may be made to the Board of Supervisors within 30 calendar days** after the project approval action identified on the determination. The procedures for filing an appeal of an exemption determination are available from the Clerk of the Board at City Hall, Room 244, or by calling (415) 554-5184.

Under CEQA, in a later court challenge, a litigant may be limited to raising only those issues previously raised at a hearing on the project or in written correspondence delivered to the Board of Supervisors, Planning Commission, Planning Department or other City board, commission or department at, or prior to, such hearing, or as part of the appeal hearing process on the CEQA decision.

San Francisco Planning

49 South Van Ness Avenue, Suite 1400
San Francisco, CA 94103
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CEQA Exemption Determination

PROPERTY INFORMATION/PROJECT DESCRIPTION

Project Address		Block/Lot(s)
2651-2653 OCTAVIA ST		0554002
Case No.		**Permit No.**
2018-011022ENV		201808036405
■ **Addition/ Alteration**	☐ **Demolition (requires HRE for Category B Building)**	☐ **New Construction**

Project description for Planning Department approval.

The proposed project would construct a fourth-floor-level vertical and horizontal addition to an existing 37-foot-tall (inclusive of a seven-foot-tall mansard roof), three-story, 4,151-gross-square-foot two-family residence constructed in 1950, resulting in a 40-foot-tall (exclusive of a 3.5-foot-tall parapet and clear glass guardrail on the roof deck), four-story, 6,512-gross-square-foot two family residence.

The project construction would involve localized excavation for new foundation and possible excavation to replace existing foundations in kind, resulting in a total of approximately 15 to 30 cubic yards of soil excavated. The average depth of excavation would be 1.5 feet, with a maximum depth of 2 feet.

STEP 1: EXEMPTION TYPE

The project has been determined to be exempt under the California Environmental Quality Act (CEQA).

■	**Class 1 - Existing Facilities.** Interior and exterior alterations; additions under 10,000 sq. ft.
☐	**Class 3 - New Construction.** Up to three new single-family residences or six dwelling units in one building; commercial/office structures; utility extensions; change of use under 10,000 sq. ft. if principally permitted or with a CU.
☐	**Class 32 - In-Fill Development.** New Construction of seven or more units or additions greater than 10,000 sq. ft. and meets the conditions described below: (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations. (b) The proposed development occurs within city limits on a project site of no more than 5 acres substantially surrounded by urban uses. (c) The project site has no value as habitat for endangered rare or threatened species. (d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality. (e) The site can be adequately served by all required utilities and public services. **FOR ENVIRONMENTAL PLANNING USE ONLY**
☐	**Other ____**
☐	**Common Sense Exemption (CEQA Guidelines section 15061(b)(3)).** It can be seen with certainty that there is no possibility of a significant effect on the environment. **FOR ENVIRONMENTAL PLANNING USE ONLY**

STEP 2: ENVIRONMENTAL SCREENING ASSESSMENT

TO BE COMPLETED BY PROJECT PLANNER

☐	**Air Quality:** Would the project add new sensitive receptors (specifically, schools, day care facilities, hospitals, residential dwellings, and senior-care facilities within an Air Pollution Exposure Zone? Does the project have the potential to emit substantial pollutant concentrations (e.g. use of diesel construction equipment, backup diesel generators, heavy industry, diesel trucks, etc.)? (*refer to The Environmental Information tab on the San Francisco Property Information Map)*
☐	**Hazardous Materials:** If the project site is located on the Maher map or is suspected of containing hazardous materials (based on a previous use such as gas station, auto repair, dry cleaners, or heavy manufacturing, or a site with underground storage tanks): Would the project involve 50 cubic yards or more of soil disturbance - or a change of use from industrial to residential? **Note that a categorical exemption shall not be issued for a project located on the Cortese List** *if box is checked, note below whether the applicant has enrolled in or received a waiver from the San Francisco Department of Public Health (DPH) Maher program, or if Environmental Planning staff has determined that hazardous material effects would be less than significant.* *(refer to The Environmental Information tab on the San Francisco Property Information Map)*
☐	**Transportation:** Does the project involve a child care facility or school with 30 or more students, or a location 1,500 sq. ft. or greater? Does the project have the potential to adversely affect transit, pedestrian and/or bicycle safety (hazards) or the adequacy of nearby transit, pedestrian and/or bicycle facilities?
☐	**Archeological Resources:** Would the project result in soil disturbance/modification greater than two (2) feet below grade in an archeological sensitive area or eight (8) feet in a non-archeological sensitive area? If yes, archeology review is required.
☐	**Subdivision/Lot Line Adjustment:** Does the project site involve a subdivision or lot line adjustment on a lot with a slope average of 20% or more? (*refer to The Environmental Information tab on the San Francisco Property Information Map*) **If box is checked, Environmental Planning must issue the exemption.**
☐	**Average Slope of Parcel = or > 25%, or site is in Edgehill Slope Protection Area or Northwest Mt. Sutro Slope Protection Area:** Does the project involve any of the following: (1) New building construction, except one-story storage or utility occupancy, (2) horizontal additions, if the footprint area increases more than 50%, or (3) horizontal and vertical additions increase more than 500 square feet of new projected roof area? (*refer to The Environmental Planning tab on the San Francisco Property Information Map*) **If box is checked, a geotechnical report is likely required and Environmental Planning must issue the exemption.**
☐	**Seismic Hazard:** ☐ **Landslide or** ☐ **Liquefaction Hazard Zone:** Does the project involve any of the following: (1) New building construction, except one-story storage or utility occupancy, (2) horizontal additions, if the footprint area increases more than 50%, (3) horizontal and vertical additions increase more than 500 square feet of new projected roof area, or (4) grading performed at a site in the landslide hazard zone? *(refer to The Environmental tab on the San Francisco Property Information Map)* **If box is checked, a geotechnical report is required and Environmental Planning must issue the exemption.**
Comments and Planner Signature (*optional*):	

STEP 3: PROPERTY STATUS - HISTORIC RESOURCE

TO BE COMPLETED BY PROJECT PLANNER

PROPERTY IS ONE OF THE FOLLOWING: *(refer to Property Information Map)*	
☐	**Category A:** Known Historical Resource. **GO TO STEP 5.**
■	**Category B:** Potential Historical Resource (over 45 years of age). **GO TO STEP 4.**
☐	**Category C:** Not a Historical Resource or Not Age Eligible (under 45 years of age). **GO TO STEP 6.**

STEP 4: PROPOSED WORK CHECKLIST

TO BE COMPLETED BY PROJECT PLANNER

Check all that apply to the project.	
☐	1. **Change of use and new construction.** Tenant improvements not included.
☐	2. **Regular maintenance or repair** to correct or repair deterioration, decay, or damage to building.
☐	3. **Window replacement** that meets the Department's *Window Replacement Standards*. Does not include storefront window alterations.
☐	4. **Garage work.** A new opening that meets the *Guidelines for Adding Garages and Curb Cuts*, and/or replacement of a garage door in an existing opening that meets the Residential Design Guidelines.
☐	5. **Deck, terrace construction, or fences** not visible from any immediately adjacent public right-of-way.
☐	6. **Mechanical equipment installation** that is not visible from any immediately adjacent public right-of-way.
☐	7. **Dormer installation** that meets the requirements for exemption from public notification under *Zoning Administrator Bulletin No. 3: Dormer Windows*.
☐	8. **Addition(s)** that are not visible from any immediately adjacent public right-of-way for 150 feet in each direction; does not extend vertically beyond the floor level of the top story of the structure or is only a single story in height; does not have a footprint that is more than 50% larger than that of the original building; and does not cause the removal of architectural significant roofing features.
Note: Project Planner must check box below before proceeding.	
■	Project is not listed. **GO TO STEP 5.**
☐	Project **does not conform** to the scopes of work. **GO TO STEP 5**.
☐	Project involves **four or more** work descriptions. **GO TO STEP 5.**
☐	Project involves **less than four** work descriptions. **GO TO STEP 6.**

STEP 5: ADVANCED HISTORICAL REVIEW

TO BE COMPLETED BY PRESERVATION PLANNER

Check all that apply to the project.	
☐	1. **Reclassification of property status**. *(Attach HRER Part I)* ☐ Reclassify to Category A a. Per HRER b. Other *(specify)*: ☐ Reclassify to Category C *(No further historic review)*
☐	2. Project involves a **known historical resource (CEQA Category A)** as determined by Step 3 and conforms entirely to proposed work checklist in Step 4.
☐	3. **Interior alterations to publicly accessible spaces that do not** remove, alter, or obscure **character defining features**.
☐	4. **Window replacement** of original/historic windows that are not "in-kind" but are consistent with existing historic character.
☐	5. **Façade/storefront alterations** that do not remove, alter, or obscure character-defining features.

☐	6. **Raising the building** in a manner that does not remove, alter, or obscure character-defining features.
☐	7. **Restoration** based upon documented evidence of a building's historic condition, such as historic photographs, plans, physical evidence, or similar buildings.
■	8. **Work consistent** with the *Secretary of the Interior Standards for the Treatment of Historic Properties* (*Analysis required*): See the attached preservation review memo for historic resource analysis of the subject property and the adjacent Golden Gate Valley Branch Library.
☐	9. **Work compatible** with a historic district (Analysis required):
☐	10. **Work that would not materially impair** a historic resource (Attach HRER Part II).
	Note: If ANY box in STEP 5 above is checked, a Preservation Planner MUST sign below.
■	**Project can proceed with exemption review**. The project has been reviewed by the Preservation Planner and can proceed with exemption review. **GO TO STEP 6.**
Comments (*optional*):	
Preservation Planner Signature:	Allison Vanderslice

STEP 6: EXEMPTION DETERMINATION

TO BE COMPLETED BY PROJECT PLANNER

■	**No further environmental review is required. The project is exempt under CEQA. There are no unusual circumstances that would result in a reasonable possibility of a significant effect.**	
	Project Approval Action: Planning Commission discretionary review decision	**Signature:** Kei Zushi 01/27/2021
	Once signed or stamped and dated, this document constitutes an exemption pursuant to CEQA Guidelines and Chapter 31of the Administrative Code. In accordance with Chapter 31 of the San Francisco Administrative Code, an appeal of an exemption determination to the Board of Supervisors can only be filed within 30 days of the project receiving the approval action. Please note that other approval actions may be required for the project. Please contact the assigned planner for these approvals.	

STEP 7: MODIFICATION OF A CEQA EXEMPT PROJECT

TO BE COMPLETED BY PROJECT PLANNER

In accordance with Chapter 31 of the San Francisco Administrative Code, when a California Environmental Quality Act (CEQA) exempt project changes after the Approval Action and requires a subsequent approval, the Environmental Review Officer (or his or her designee) must determine whether the proposed change constitutes a substantial modification of that project. This checklist shall be used to determine whether the proposed changes to the approved project would constitute a "substantial modification" and, therefore, be subject to additional environmental review pursuant to CEQA.

MODIFIED PROJECT DESCRIPTION

Modified Project Description:

DETERMINATION IF PROJECT CONSTITUTES SUBSTANTIAL MODIFICATION

Compared to the approved project, would the modified project:	
☐	Result in expansion of the building envelope, as defined in the Planning Code;
☐	Result in the change of use that would require public notice under Planning Code Sections 311 or 312;
☐	Result in demolition as defined under Planning Code Section 317 or 19005(f)?
☐	Is any information being presented that was not known and could not have been known at the time of the original determination, that shows the originally approved project may no longer qualify for the exemption?
If at least one of the above boxes is checked, further environmental review is required.	

DETERMINATION OF NO SUBSTANTIAL MODIFICATION

☐	The proposed modification would not result in any of the above changes.
If this box is checked, the proposed modifications are exempt under CEQA, in accordance with prior project approval and no additional environmental review is required. This determination shall be posted on the Planning Department website and office and mailed to the applicant, City approving entities, and anyone requesting written notice. In accordance with Chapter 31, Sec 31.08j of the San Francisco Administrative Code, an appeal of this determination can be filed to the Environmental Review Officer within 10 days of posting of this determination.	

Planner Name:	**Date:**

San Francisco Planning

49 South Van Ness Avenue, Suite 1400
San Francisco, CA 94103
628.652.7600
www.sfplanning.org

Historic Preservation Review Memorandum

2651-2653 Octavia Street (PLANNING CASE NO. 2018-011022ENV)
Prepared By Allison Vanderslice, CEQA Cultural Resources Team Manager, on January 26, 2021

Introduction

The San Francisco Planning Department (the planning department) published a Categorical Exemption for the proposed project on September 5, 2019 (Planning Department Case No. 2018-011022PRJ). The Categorical Exemption was appealed and heard by the Board of Supervisors (the board) on July 28, 2020. The board upheld the appeal and on September 22, 2020 approved Motion No. M20-129, which stated, "[T]he Planning Department did not document that it analyzed the potential impacts of the Project on the character-defining features of the adjacent Golden Gate Valley Branch Library, a Category A Known Historic Resource, prior to issuing the Categorical Exemption Determination . . . The Board directs the Planning Department to analyze the potential historic resource impacts of the Project on the character-defining features of the adjacent Golden Gate Valley Branch Library – specifically, to consider whether the potential impacts of the Project on the lighting inside the library's main reading room would significantly impact those character defining features." Accordingly, the planning department has prepared this memo to evaluate the potential impacts on historic resources that could result from the 2651-2653 Octavia Street project.

No changes have been made to the scope of the proposed project since the appeal hearing before the board on July 28, 2020.

Background

Before the planning department issued the September 5, 2019 Categorical Exemption for this project (Planning Department Case No. 2018-011022PRJ), several rounds of design revisions were made at the direction of planning department preservation staff. Based on these design revisions, the planning department preservation staff determined that the proposed alteration including both a horizontal and vertical addition at 2651-2653 Octavia Street would be minimally visible and meet the Secretary of the Interior's Standards for Rehabilitation (Secretary's Standards). This review took into account the subject property and its environment, including the adjacent Golden Gate Valley Library located at 1801 Green Street, an individually-eligible historic resource. This determination is documented in this memo.

Based on the planning department process, as the project was found to meet the Secretary's Standards, an historic resource evaluation of the subject property is not required and the need for a Historic Resource Determination (HRD) or Historic Resource Evaluation (HRE) was not triggered.

Before the planning department issued the September 5, 2019 Categorical Exemption for this project (Planning Department Case No. 2018-011022PRJ), the project sponsor worked with planning department staff to revise the proposal to avoid removal of historic materials and alteration of features that characterize the property and its

environment. As originally designed, the project proposed to remove the mansard roof, false parapet, and stucco quoining and construct a rooftop addition with decks at the third and fourth story roofs. Based on staff recommendations and multiple design meetings with the project sponsor, the proposal was revised to retain the mansard roof, false parapet, and stucco quoining, and have a compatible fenestration pattern on the visible portion of the north elevation. In addition, the revised proposal reduced the mass of the rooftop addition and set it back by 15 feet from the front elevation and also set it back at the rear elevation, eliminated the third-story roof deck and set back, and reduced the size of the fourth-story roof deck.

The Golden Gate Valley Library is directly adjacent to 2651-2653 Octavia Street and stands at the corner of Octavia and Green streets. The main reading room in the Golden Gate Valley Library is contained in the one-story plus high basement portion of the building and fronts on both Octavia and Green streets. The library also has a one-story, flat roofed portion at the south elevation. This one-story portion helps to protect the historic integrity of the library from the mass of the proposed rooftop and rear additions to the existing residence at the subject property by providing a separation between the subject property and the main volume of the library.

This separation minimizes the effect of the proposed rooftop and rear additions on the amount of available light to the reading room. There are four full height windows and one half size window at the north elevation of the reading room. The west elevation has one full height window and the east elevation has three full height windows. The south elevation has four half size windows. The proposed project may have the potential to reduce light to some of the half windows at the south elevation of the library. The project will not block light to the library's windows on the east, north and west elevations, thus providing ample light to the reading room.

Project Description

The proposed project would construct a fourth-floor-level vertical and horizontal addition to an existing 37-foot-tall (inclusive of a seven-foot-tall mansard roof), three-story, 4,151-gross-square-foot two-family residence constructed in 1950, resulting in a 40-foot-tall (exclusive of a 3.5-foot-tall parapet and clear glass guardrail on the roof deck), four-story, 6,512-gross-square-foot two family residence.

Golden Gate Valley Library and Article 10 Landmarking

The Golden Gate Valley Library stands adjacent to the proposed project site at the southwest corner of Green and Octavia streets. As part of a discontiguous grouping of Carnegie libraries[1] in San Francisco, the Golden Gate Valley Library is an individually significant resource and eligible for landmarking under Article 10 of the San Francisco Planning Code. At the time the other Carnegie libraries were landmarked, the Golden Gate Valley branch was under rehabilitation. The building was proposed for landmark designation upon completion of construction activities. The planning department expects to move forward with landmarking in Summer/Fall 2021.

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[1] The San Francisco Carnegie libraries are significant for their architecture and their association with the patterns of social and cultural history of San Francisco, particularly with the contesting of political and cultural power between working class based groups and middle class based Progressives; architectural embodiment of Progressive and City Beautiful tenets of civic grandeur used as a means of social organization, particularly to the acculturation of working class and immigrant populations; architectural embodiment of the distinctive characteristics of branch libraries, especially those delineated in "Notes of the Erection of Library Buildings."

Character defining features of the six landmark-designated Carnegie libraries in San Francisco include the following:

Landmark #234, Mission Branch, 300 Bartlett Street - character defining features include exterior composition and materials, spatial volume and ornamental ceiling of the main reading room.

Landmark #235, Chinatown Branch, 1135 Powell Street - character defining features include exterior composition and materials, spatial volume, and ornamental ceiling of the main reading room.

Landmark #239, Sunset Branch, 1305 18th Avenue – character defining features include exterior composition and materials, the paneled vestibule, the spatial volume and ornamental ceiling of the main reading room, and the glazed and paneled partition between the main reading room and the children's room.

Landmark #240, Presidio Branch, 3150 Sacramento Street – character defining features include exterior composition and materials, spatial dimensions of Sacramento Street set back, the paneled vestibule, the spatial volume and ornamental ceiling of the main reading room, and the glazed and paneled partition between the main reading room and the children's room.

Landmark #247, Richmond Branch, 351 9th Avenue – character defining features include exterior composition and materials, spatial dimensions and mature palm trees of the 9th Avenue set back, paneled vestibule, and spatial volume and ornamental ceiling of the main reading room.

Landmark #259, Noe Valley Branch, 451 Jersey Street – character defining features include the exterior composition and materials, the paneled vestibule, the primary stairway, the spatial volume of the main reading room, the ornamental ceiling of the main reading room, the glazed and paneled partition between the main reading room and the children's room.

As presented above, character defining features are similar for all the Carnegie libraries. Indoor light levels are not character defining features of any of the six Carnegie libraries that have been landmarked in San Francisco. The character defining features of the Golden Gate Valley Library that would likely be included in the landmark designation are the exterior composition and materials, paneled vestibule, spatial volume and ornamental ceiling of the main reading room. The draft Landmark Designation Report for the Golden Gate Valley Branch San Francisco Public Library by Bridget Maley dated July 22, 2020[2] includes the following features to be preserved: Exterior composition and materials, especially the window pattern and terra cotta detailing; Basilica shaped-plan; Small alley at south side and courtyard at west side; West side courtyard gates of similar terra cotta material; Interior entry vestibule and stair; The spatial volume of the Main Reading Room; The ornamental ceiling of the Main Reading Room, and Built in shelving around the Main Reading Room. Notably, indoor light levels are not included as a character-defining feature in this draft designation report. Thus, it is unlikely that indoor light levels will be included as a character defining feature of the Golden Gate Valley Library in the final designation report.

[2] Bridget Maley, Draft Landmark Designation Report, Golden Gate Valley Branch, San Francisco Public Library, 1801 Green Street, San Francisco, CA, July 22, 2020, available online at https://sfplanninggis.org/PIM/.

The landmarking of the Golden Gate Valley Library would not change the planning department's review process for this project. Specifically, no Historic Preservation Commission (HPC) hearing is required to complete the planning department's environmental review for the proposed work at the 2651-2653 Octavia Street project site.

Secretary of the Interior's Standards for Rehabilitation

As discussed above, planning department preservation staff determined that the proposed project would meet the Secretary's Standards. A full analysis documenting that the proposed project complies with the Secretary's Standards is provided below. Character-defining features for the Golden Gate Valley Library in the below analysis are based on those identified in the draft landmark designation report discussed above and character-defining features identified in previous Carnegie library landmarks. The below analysis also relies upon those character defining features identified in the Department's 2008 Historic Resource Evaluation Response for the renovation of the library (Planning Department Case 2008.0239E) which included the following: the exterior composition and materials, the spatial volume of the main reading room, and the ornamental ceiling of the main reading room.

Standard 1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

The subject property is a two-family residence. It is classified as a potential historic resource. The proposed project will continue the residential use of the property. The proposed project will cause minimal change to the character defining features of the subject property. The mansard roof, false parapet, quoining, and fenestration pattern will be retained. While the proposed project may reduce the amount of natural light into some of the windows on the south elevation of the Golden Gate Valley Library, the proposed project will not change the character defining features of the library because indoor light levels are not character defining features of the library. The exterior composition and materials, and interior volume and ornamental ceiling of the reading room of the library will not be impacted by the proposed project.

Even though indoor light level is not a character defining feature of the library and is therefore not a factor relevant to the determination that the proposed project would not affect the library's historical significance, a daylight impact study was prepared pursuant to the board's findings in support of its action to uphold the appeal of the prior categorical exemption. Planning department preservation and environmental planning staff reviewed the scope of the study to ensure that it would fully address the board's direction to assess the impact of the proposed project on the natural light (daylight) levels and quality at the main floor reading room of the library. The study concluded that the proposed project would not substantially reduce the visual comfort of the library's patrons.[3] Specifically, the study found that the project would reduce the library's averaged indoor illumination levels by 1.8 percent on clear days, 4 percent on overcast days, and 11.1 percent on partially-cloudy days, as compared to the existing conditions. These minimal reductions in the indoor illumination levels would not materially impair any of the character defining features of the library. The daylight impact study further states that the existing indoor illumination levels on overcast and partially-cloudy days require supplemental electrical illumination at all times to provide the necessary illumination recommended for libraries (300-500 LUX). In other words, the lights in the library already have to be turned on during overcast and partially-cloudy days, so library patrons' experience would not be substantially altered by the minimal reduction in indoor illumination levels at those times.

[3] Symphysis, Daylight Impact Analysis Report for 2651-53 Octavia Street, December 13, 2020, available online at https://sfplanninggis.org/PIM/.

Standard 2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

The project sponsor worked with planning department staff to revise the proposal to avoid removal of historic materials and alteration of features that characterize the property. As originally designed, the project proposed to remove the mansard roof, false parapet, and stucco quoining and construct a rooftop addition with decks at the third- and fourth-story roofs. Based on staff recommendations and multiple design meetings with the project sponsor, the proposal was revised to retain the mansard roof, false parapet, and stucco quoining and have a compatible fenestration pattern on the visible portion of the north elevation. In addition, the revised proposal reduced the mass of the rooftop addition and set it back by 15 feet from the front elevation and also set it back at the rear elevation, eliminated the third-story roof deck and set back and reduced the size of the fourth-story roof deck. Thus, the historic character of the property is retained and preserved.

Standard 3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.

The proposed project does not create a false sense of historical development, nor does it add architectural elements from other buildings.

Standard 4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.

Not applicable.

Standard 5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.

The proposed project preserves the distinctive mansard roof, false parapet, quoining, and fenestration pattern that characterizes the property.

Standard 6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

The project proposes to replace deteriorated and incompatible vinyl windows at the front elevation with double-hung, wood-clad windows. Due to the construction date of the property and properties in the surrounding neighborhood, the property likely had double-hung, wood sash windows. The proposed windows will better match historic windows and the character of the property in design, visual qualities and materials. The use of double-hung, wood clad windows comply with the planning department's standards for window replacement.

Standard 7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

Not applicable.

Standard 8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
Not applicable.

Standard 9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
The proposed additions will subsume a small portion of the historic mansard roof for the rooftop addition. However, this portion of the roof is not visible from Octavia Street because it is hidden behind the front portion of the mansard and the false parapet. The majority of the mansard roof, as well as the false parapet will be retained.

The rooftop addition is set back 15 feet from the front elevation of the property. Because Octavia Street slopes downhill to the north, the rooftop addition will be minimally visible behind the library from Green Street. However, the addition is compatible with the massing, size, and scale of the subject property and adjacent buildings to the south. Even with the rooftop addition at the subject property, the height of the buildings on Octavia Street will still appear to step down to the library.

The main reading room in the library is contained in the one-story plus high basement portion of the building. The library also has a one-story, flat roofed portion at the south elevation. This one-story addition helps to protect the historic integrity of the library from the mass of the proposed rooftop and rear additions to the existing residence at the subject property by providing a separation between the subject property and the main volume of the library.

This separation minimizes the effect of the proposed rooftop and rear additions on the amount of available natural light to the library's reading room. There are four full height windows and one half size window at the north elevation of the reading room. The west elevation has one full height window and the east elevation has three full height windows. The south elevation has four half size windows. Based on the size and location of the proposed additions in relationship to the placement of the library windows, the proposed project will result in a minimal reduction of natural light levels to the library's indoor reading room as discussed above. For the same reason stated under Standard 1 above, even if indoor light levels were considered character defining features of the library, the planning department's conclusion is that there would be minimal change to the indoor light levels and that the proposed project would not result in an alteration to the indoor reading room. The project will not block light to the windows on the east, north and west elevations, thus providing ample light to the reading room.

The rear elevation of the existing residence will be removed for the proposed rear addition. The existing rear elevation is not a character defining feature. The existing rear of the building is not visible from Green Street as it is behind the library. The new rear addition may be minimally visible from Green Street. However, the additions will be clad in horizontal wood siding that is compatible with the materials of the subject property and neighborhood.

Standard 10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Given the rear elevation and flat portion of the roof will be removed for the new additions, it would be difficult to remove the new additions in the future. However, the form of the front elevation, a portion of the visible side elevation, as well as the mansard roof, false parapet, quoining, and fenestration pattern will be retained. Thus, the integrity of the visible features of the subject property would be unimpaired even if the new additions were to be removed in the future. This is because the essential form of the original footprint of the property will also be retained within the additions. The adjacent buildings and library would also be unimpaired if the additions were removed in the future.

Impact Analysis to Adjacent Resources

As discussed above, the proposed project meets the Secretary's Standards as the project will not substantially impact the proposed property, nor will it substantially impact the adjacent Golden Gate Valley Library. None of the character defining features of the Golden Gate Valley Library as defined above would be impacted by the proposal. The project will not cause any direct impacts to the adjacent resource as no work is proposed outside of the subject parcel. Additionally, the paneled vestibule, spatial volume and ornamental ceiling of the main reading room would still be visible and able to be experienced by patrons when inside the library after the completion of the proposed project. As discussed above, even if indoor light levels were considered character defining features of the library, the planning department's conclusion that the proposed project would not materially alter any of the library's character defining features would not change

In order to understand project impacts to adjacent resources, the planning department evaluates the project, focusing on setting, one of the seven aspects of historical integrity. Setting is the physical environment of a historic property. Projects can have setting impacts on adjacent resources if they will change the setting of the resources. As the library is in a residential setting and an addition to an adjacent residential property will not change the character of the residential neighborhood, the library would retain its integrity of setting.

Summary

Based on the above analysis, the project meets the Secretary's Standards and will not cause a substantial impact to the subject property and its environment, which includes the adjacent Golden Gate Valley Library and the residential character of the surrounding streets. As discussed above, the character-defining features of the library would not be materially impaired by the proposed project as the library would still be able to convey its historical significance and would retain its historical integrity, including integrity of setting.

As discussed above, planning department preservation staff determined that the proposed residential alteration project would be minimally visible and meets the Secretary's Standards. Following the planning department's normal procedures, the planning department determined that the scope of this project does not require further written analysis on the part of staff, nor does this project require additional historical information from the project sponsor or a consultant report. The landmarking of the library is currently in process, however, no additional historic preservation review process would have been required if landmarking of the library had been completed prior to review of this project.

PROJECT APPLICATION RECORD NUMBER (PRJ)

2018-011022PRJ

San Francisco Planning

DISCRETIONARY REVIEW PUBLIC (DRP)

APPLICATION

Discretionary Review Requestor's Information

Name: Paul Guermonprez for 2634 Octavia Street HOA, 1791-1795 Green Street HOA

Address: 2634 Octavia Street
94123 San Francisco

Email Address: paul.guermonprez@gmail.com

Telephone: 415-758-3366

Information on the Owner of the Property Being Developed

Name: Jane Cote-Cook

Company/Organization: Jane Cote-Cook

Address: 2651 Octavia Street
94123 San Francisco

Email Address: jcotecook@aol.com

Telephone: 415-510-1610

Property Information and Related Applications

Project Address: 2651-2653 Octavia Street - 94123 San Francisco

Block/Lot(s): 0554-002

Building Permit Application No(s): 2018.08.03.6405

ACTIONS PRIOR TO A DISCRETIONARY REVIEW REQUEST

PRIOR ACTION	YES	NO
Have you discussed this project with the permit applicant?		✔
Did you discuss the project with the Planning Department permit review planner?		✔
Did you participate in outside mediation on this case? (including Community Boards)		✔

Changes Made to the Project as a Result of Mediation.
If you have discussed the project with the applicant, planning staff or gone through mediation, please summarize the result, including any changes that were made to the proposed project.

We tried several times to contact the building permit applicant with the information provided on the notice to discuss the project. She never answered and never called back.

DISCRETIONARY REVIEW REQUEST

In the space below and on seperate paper, if necessary, please present facts sufficient to answer each question.

1. What are the reasons for requesting Discretionary Review? The project meets the standards of the Planning Code and the Residential Design Guidelines. What are the exceptional and extraordinary circumstances that justify Discretionary Review of the project? How does the project conflict with the City's General Plan or the Planning Code's Priority Policies or Residential Design Guidelines? Please be specific and site specific sections of the Residential Design Guidelines.

1. Refusal of concertation. 2. Major loss of natural light for the library users. 3. Architectural impact. 4. Loss of light for LEED-Gold solar panel on the library roof. 5. Exceeds 40' height restriction. 6. Loss of vue and value for neighbors.
See attached documents for details and photos.

2. The Residential Design Guidelines assume some impacts to be reasonable and expected as part of construction. Please explain how this project would cause unreasonable impacts. If you believe your property, the property of others or the neighborhood would be unreasonably affected, please state who would be affected, and how.

Unreasonnable impacts: The project would unresoanably impact the Golden Gate Library with a major loss of light for users and LEED-Gold solar panels on the roof. We are regular users of the library. The project would also unreasonnably impact the Octavia roof line and architectural character of the library. We are facing this roof line. See attached documents for details and photos.

3. What alternatives or changes to the proposed project, beyond the changes (if any) already made would respond to the exceptional and extraordinary circumstances and reduce the adverse effects noted above in question #1?

Removal of the additional level from the project is the only way to minimize the unreasonnable effects of the project. Removal of the depth extension would further mitigate the unresoannable effects.

DISCRETIONARY REVIEW REQUESTOR'S AFFIDAVIT

Under penalty of perjury the following declarations are made:

a) The undersigned is the DR requestor or their authorized representation.

Signature	PAUL GUERMONPREZ Name (Printed)

President of 2634 Octavia	415-758-3366	paul.guermonprez@gmail.com
Relationship to Requestor (i.e. Attorney, Architect, etc.)	Phone	Email

RECEIVED

OCT 2 1 2019

CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
PIC

For Department Use Only

Application received by Planning Department:

By: Edgar Orozco Date:

Discretionary Review

To: Planning Commission
Regarding: Construction on 2651-2653 Octavia St,
Permit Application 2018.08.03.6405, Record number 2018-011022PRJ
From: 2634 Octavia Street HOA, 1791-1795 Green Street HOA

After carefully reviewing the impact of the construction proposed by 2651-2653 Octavia St, the 2634 Octavia Street HOA and the 1791-1795 Green Street HOA would like to oppose the construction for the following reasons:

1. **Refusal of concertation:** We tried several times to join the number listed in the permit application for a concertation. We got stonewalled: not answering and they never called back.
2. The construction would infringe on the light to the Golden Gate Valley Library,and cause a **major loss of natural light** for its many daily users. As shown on photo #1 and #2, the current 2651-2653 Octavia building is already blocking half of the light for the main windows. Additional levels would block all direct sunlight to the two windows and the depth extension would also block the light for a third window. The library is the focal point of the neighbourhood, it is a place of culture, learning and exchange plus it is a family-focused center for young children's play and learning groups.
3. **Architectural impact to the roof line and Golden Gate Valley Library:** Octavia St is made of A-shaped buildings of similar height, with an harmonious slope leading to the library. See photo #3. The proposed construction will totally break this harmony and bring a higher and larger rectangle close to the lower round library. It would also start a trend that would drastically change the character of San Francisco.
4. **The construction goes against the city's climate change policy and investments.** If approved, this construction will cause the new solar panels of the Golden Gate Valley Library roof to receive much less sunlight. The library is an LEED certified Gold structure, it will make this public investment less efficient and would show our city's lack of commitment to the climate change fight. See photo #2.
5. **Height restrictions:** The roof top garden appears to exceed the 40' maximum limit and the elevator to this roof top garden also appears to exceed the maximum 40' height restriction.
6. **Loss of value for neighbors:** The construction would cause the owners of the 2634 apartments (long time owners, most middle class workers, some retired) and 1791-1795 Green Street to lose sunset light (for the 2 lower levels) and Golden Gate/bay view (for the 2 upper levels). It means an aggregated loss of real estate value estimated of 640k$ and transfer of that value from the long time middle class neighbors to the new real estate company requesting the permit.

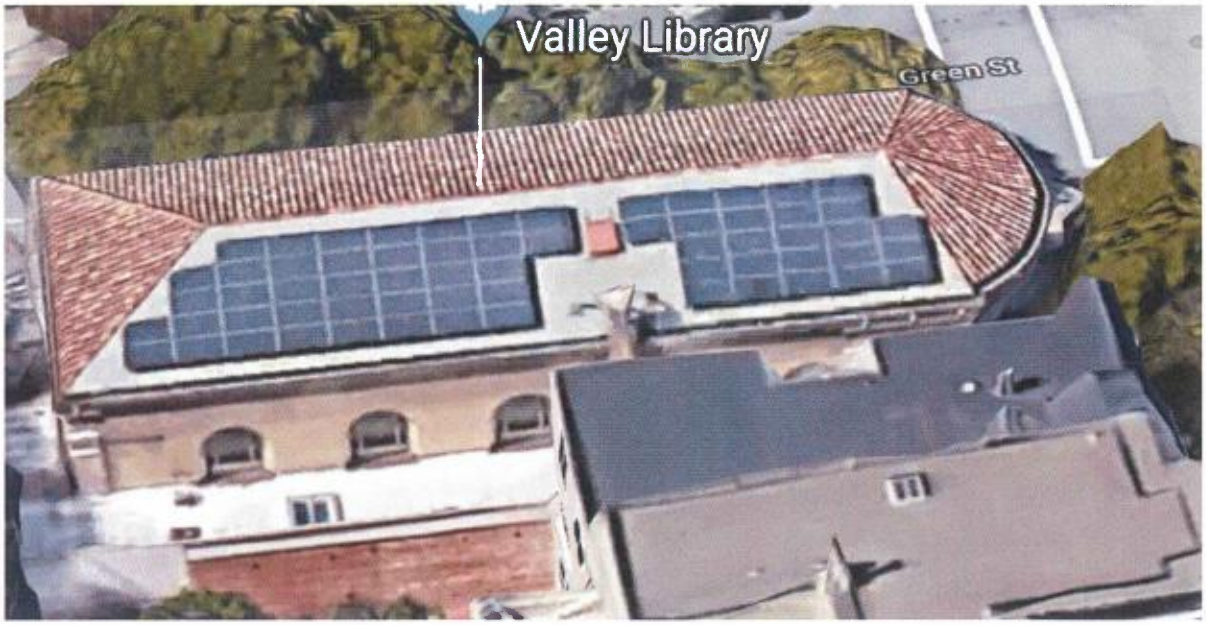
To summarize, allowing this construction would mean prioritizing the speculative gains of a real estate developer over the loss of long time middle class neighbors, public library users, public land value and architectural character for the city. It would set an unstoppable trend in wild architectural modifications, further push the gentrification and transfer of value from old neighbors to new real estate developers.

We urge you to reject this building permit.

Regarding: Construction on 2651-2653 Octavia St,
Permit Application 2018.08.03.6405, Record number 2018-011022PRJ

Photo1: South facing windows of the Golden Gate Valley Library. The additional level would totally block the south natural light.

Photo2 : Sky view of 2651-2653 Octavia St next to the library. The additional level would cause several hours of shade to the solar panels



Regarding: Construction on 2651-2653 Octavia St,
Permit Application 2018.08.03.6405, Record number 2018-011022PRJ

Photo 3: Octavia St roof line is made of 2-levels houses leading to the library. The proposed building would destroy the character of the roof line and create a big square building next to the library.

Photo 4: Library from the Green-Octavia corner, 2nd level height.

Regarding: Construction on 2651-2653 Octavia St,
Permit Application 2018.08.03.6405, Record number 2018-011022PRJ

Letter of authorization

From: 1791-1795 Green Street HOA - President
Subject: Authorization to represent

I, Elizabeth Reilly, president of the 1791-1795 Green Street HOA, authorize Paul Guermonprez, president of the 2634 Octavia Street HOA, to represent us and file the present discretionary review regarding the permit number 2018-08-03-6405.

Elizabeth Reilly,
president of the 1791-1795 Green Street HOA

From: 1791-1795 Green Street HOA - President
Subject: Authorization to represent

Regarding: Construction on 2651-2653 Octavia St,
Permit Application 2018.08.03.6405, Record number 2018-011022PRJ

I, Maureen Holt, CFO of the 1791-1795 Green Street HOA, authorize Paul Guermonprez, president of the 2634 Octavia Street HOA, to represent us and file the present discretionary review regarding the permit number 2018-08-03-6405.

Maureen Holt
1791-1795 Green Street HOA

Regarding: Construction on 2651-2653 Octavia St,
Permit Application 2018.08.03.6405, Record number 2018-011022PRJ

Letter of authorization

From: 2634 Octavia Street HOA - President
Subject: Authorization to represent

After deliberation, the 2634 Octavia Street HOA authorize the president Paul Guermonprez, to represent us and file the discretionary review regarding the permit number 2018-08-03-6405.

Paul Guermonprez
President of the 2634 Octavia Street HOA

RESPONSE TO

DISCRETIONARY REVIEW (DRP)

San Francisco Planning

SAN FRANCISCO PLANNING DEPARTMENT
1650 MISSION STREET, SUITE 400
SAN FRANCISCO, CA 94103-2479
MAIN: (415) 558-6378 SFPLANNING.ORG

Project Information

Property Address: 2651-53 Octavia Street, San Francisco Zip Code: 94123

Building Permit Application(s): 2018.08.03.6405

Record Number: 2018-01102PRJ Assigned Planner: Sharon Young

Project Sponsor

Name: Jane Coté-Cook Phone: (415) 500-1610

Email: jcotecook@aol.com

Required Questions

1. Given the concerns of the DR requester and other concerned parties, why do you feel your proposed project should be approved? (If you are not aware of the issues of concern to the DR requester, please meet the DR requester in addition to reviewing the attached DR application.)

We should be approved to move forward with our plans to improve 2651-53 Octavia, as our plans meet all SF Planning Codes and Guidelines. We feel that the DR requester grossly exaggerates the impact our project will have on the neighborhood, their properties, and the Golden Gate Library. We have responded point by point to the DR applicant in the attached pages.

2. What alternatives or changes to the proposed project are you willing to make in order to address the concerns of the DR requester and other concerned parties? If you have already changed the project to meet neighborhood concerns, please explain those changes and indicate whether they were made before or after filing your application with the City.

We are not willing at this time to make changes to our proposed plans. We have been working for over 13 months with our planner Sharon Young, her supervisor Elizabeth Gordon-Jonckheer, Shannon from Preservation and Luiz from RDAT to create a building that is much improved, minimally impacts our neighbors, and keeps its architectural integrity. Please see the attached pages for details.

3. If you are not willing to change the proposed project or pursue other alternatives, please state why you feel that your project would not have any adverse effect on the surrounding properties. Include an explaination of your needs for space or other personal requirements that prevent you from making the changes requested by the DR requester.

The plans as proposed greatly improve upon the building with added square footage,more usable outdoor space, and street level facade beautification. We hope to occupy the two units with our extended family (my husband and I, elderly parents, and children). The elevator and the elevator penthouse are integral to our plans for ADA mobility. Please see the attached pages for details on why we feel that our project would not have any adverse effect on the surrounding properties.

Project Features

Please provide the following information about the project for both the existing and proposed features. **Please attach an additional sheet with project features that are not included in this table.**

	EXISTING	PROPOSED
Dwelling Units (only one kitchen per unit - additional kitchens count as additional units)	2	2
Occupied Stories (all levels with habitable rooms)	2	4
Basement Levels (may include garage or windowless storage rooms)	1	1
Parking Spaces (Off-Street)	2	2
Bedrooms	4	5
Height	37 feet	40 feet
Building Depth	59' 9"	Varies (see notes #1)
Rental Value (monthly)	?	?
Property Value	3,600,000	4,200,000

I attest that the above information is true to the best of my knowledge.

Signature:

Date: 11/7/19

Printed Name: Jane Coté-Cook

☑ Property Owner
☐ Authorized Agent

If you have any additional information that is not covered by this application, please feel free to attach additional sheets to this form.

Discretionary Review Response
To: Planning Commission
Regarding: Construction on 2651-2653 Octavia St
Permit Application 2018.08.03.6405, Record Number 2018-01102PRJ
From: Jane Cote-Cook, Owner 2651-53 Octavia Street

After carefully reviewing the Discretionary Review packet we have the following response:

1) **Refusal of Concertation**
The representatives from 2634 Octavia HOA and 1791-95 HOA state that they tried to reach out to us regarding the project and "were stonewalled and never called back". However, we received no such phone call, and no messages were left on phone mail. We had four people call us, to which we (owners and/or architects Sarah Roitman and Alan Zee) responded quickly via email or telephone call.

Neighbor #1 - expressed concerns about the added roof top deck and the elevator penthouse. We listened carefully to his concerns, and provided more details with elevation photos. He expressed his thanks and was satisfied with our responses.

Neighbor #2 –concerned over the construction timeline and impact this construction would have on the neighbors. We gave her our proposed timeline, and suggested that we meet prior to construction to discuss ideas on how to mitigate inconvenience to neighbors.

Neighbor #3 –contacted our architects via telephone and said she had questions about our project. Our architects reached out to her on several occasions, and she did not call back.

Neighbor #4 – representative from the Pacific Heights Residents Association called about the 311 notice they received. She was meeting with her board and wanted a clear explanation of the project. Our architect, Sarah Roitman, walked her through the plans. Her specific questions were regarding the setbacks and where our plans accommodated our neighbor's building at 2619 Octavia. She responded positively to the fact that the planning department had thoroughly gone over the plans, that accommodations were met with regard to design within parameters of the neighborhood character. There were no additional comments, objections or questions after this phone call.

2) **Loss of Natural Light to Golden Gate Library**
   a. The top two floors that currently exist and the proposed addition of 2651-53 Octavia are set back 15 feet from the Golden Gate Library, allowing a large "light well" for natural light to the Library.

   b. Currently, it appears that too much light is coming into the library windows, as all the bottom half of the windows that face 2651-53 Octavia Street are covered with a dark grey shade. (See photos attached). There may be many reasons for these shades: Direct sunlight proves to be damaging to the documents and books in the library and the glare from direct sunlight is distracting to users reading at the tables or using their laptops. We believe that our addition of one floor and roof deck (of which the railing will be glass) will not affect the natural light as the light well is 15 feet and the total height of our building will be the same height as 2619 Octavia and lower than the other buildings along the west side of Octavia.

3) Architectural Impact

a. The architects and owners worked diligently for more than one year with the SF Planning Department on the overall façade and addition design. We had multiple meetings with planner Sharon Young and her supervisor Elizabeth Gordon-Jonckheer. There was extensive input from Shannon in Preservation and Luiz from RDAT, after which design changes were made. Thirteen months after we started the process, we received approval from the Planning department, that our design complied with their guidelines, and that we could proceed with the 311 process. A brief summary of the architectural considerations is as follows:

   As suggested in the SF Planning Guidelines, section IV, to keep our building from sticking out in an unsightly way, and to maintain the character of the neighborhood, we set back the addition from the facade. The facade of the 2651-53 Octavia will remain unchanged, with the mansard roof details intact. The new addition will sit **behind** the current mansard roof, and will project up only an additional 3 feet over the mansard detail. This increase will have minimal design impact from the front and sides of the building.

   The windows will be replaced with a better quality; however, the design will be unchanged on the façade. The side windows visible from the street are to compliment the façade and be lined up on all floors.

   To minimize the garage door prominence, we designed 1 door centered on the right bay, reducing it to 10 feet. The curb cut will be reduced to allow for more curb and street parking.

   The front entryway is currently unsightly with a black imposing gate. We designed the front entry way to be a more prominent feature and more in keeping with other buildings in the neighborhood.

   Landscaping was added to the façade to soften the prominence of the building at street level, and add greenery.

b. With the additional floor, 2651-53 Octavia will be approximately the same height as its neighbor, 2619 Octavia Street. See Photo attached.

4) **Climate Change Investments**
   a. Currently, there are no Building Department regulations regarding the protection of sunlight to solar panels.

   b. We hired an independent Bioclimatic Consulting firm, Symphysis to complete a shadow study of our property and its impact on the Golden Gate Library. The complete report can be found at the end of this response. In summary, the shadow impact of the expansion of 2653 Octavia on the Golden Gate Library is minimal – 5.8% decrease is solar generation annually. This decrease of production represents in dollars approximately $178 - $187.

5) **Height Restrictions**
   a. The maximum allowed height of a building is 40 feet, with which 2651-53 complies.

   b. Per Planning code section 260/B/2/A: The following features shall be exempt, without regard to their horizontal area, provided the limitations indicated for each are observed: Railings, parapets and catwalks with a maximum of four feet. The railing/windscreen for the roof deck and garden is under four feet, and we have designed the windscreen is to be glass.

   c. Per planning code 260/B/1/B: This code references elevator, stair and mechanical penthouses, skylights and dormer windows. This exemption of a structure that is built over the 40 ft building height is limited to 10 feet. As designed, our elevator penthouse is below this limit.

6) **Loss of Value for Neighbors**
   a. We believe that the owners of 2634 Octavia and 1791-1795 Green are exaggerating the impact of our addition on their sunlight. Both of these buildings are on the East side of the street, a minimum distance of 67 feet from our building. They will not be adversely affected with limiting sunlight from our project. As well, 2634 Octavia is not directly across from our property, but two doors up the block – with its front door across from 2617 Octavia.
   b. We believe that the owners also exaggerate the impact to their views since the current building height, with the mansard roof detail, is 37 feet, and the addition will only be adding an additional 3 feet, and properly set back from the mansard roof.
   c. The Urban Design Element of the General plan protects views from public spaces, but do not provide for protecting views from private property. (See pg. 11 of the SF Planning Design Guidelines).

In conclusion, the Discretionary Review Applicants are under the impression that we are real estate developers. However, we are long-time 30-year residents of San Francisco, who have lived and raised our family in Pacific Heights. Our plan is to occupy the two units with our extended family (my husband and I, elderly parents, and children). The elevator and the elevator penthouse are integral to our plans for ADA mobility.

The renovation of 2651-53 Octavia achieves our desire to renovate a property that is in disrepair, create a more usable space for our family, and a more appealing building that will add aesthetic value to the neighborhood.

Our plans have been in an extensive review process by the Planning Department for over one year. We have made many changes to enhance the architectural value, neighborhood character, and comply with the San Francisco Building Codes and Design Guidelines. The Discretionary Review comments from representatives of 2634 Octavia HOA and 1791-1795 HOA grossly exaggerate the impact on their buildings and on the Golden Gate Library.

We wish to proceed with our project as it is currently designed. We would like to request an intermediary meeting, and depending on the results of that meeting, plan to attend the Discretionary hearing scheduled on February 6, 2020.

Regards,

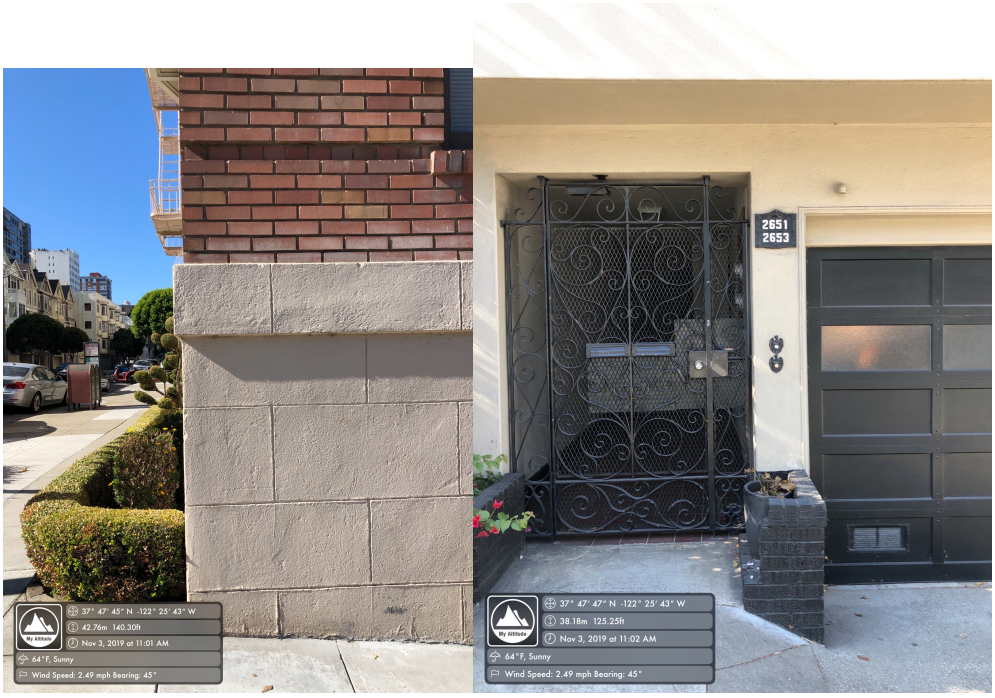
Jane Coté-Cook
Christopher Cook
Cook Family Trust, Owners, 2651-53 Octavia

SF Planning Department Design Guidelines
https://default.sfplanning.org/publications_reports/residential_design_guidelines.pdf

Notes:
The current building depth is 59’ 9” and the proposed building has varied depths depending on the floor. We matched the depths of 2619 (our neighbor to the south) so as not to impact their property in depth.
1st floor: 76’ 2” - Provides for parking garage, storage, elevator, and living space
2nd floor: 70’2” – living spaces, 9’ deck (outdoor space with access to back yard)
3rd floor: 70’ 2” – Living spaces
4th floor: 53’ 1” – living spaces, 10’ deck

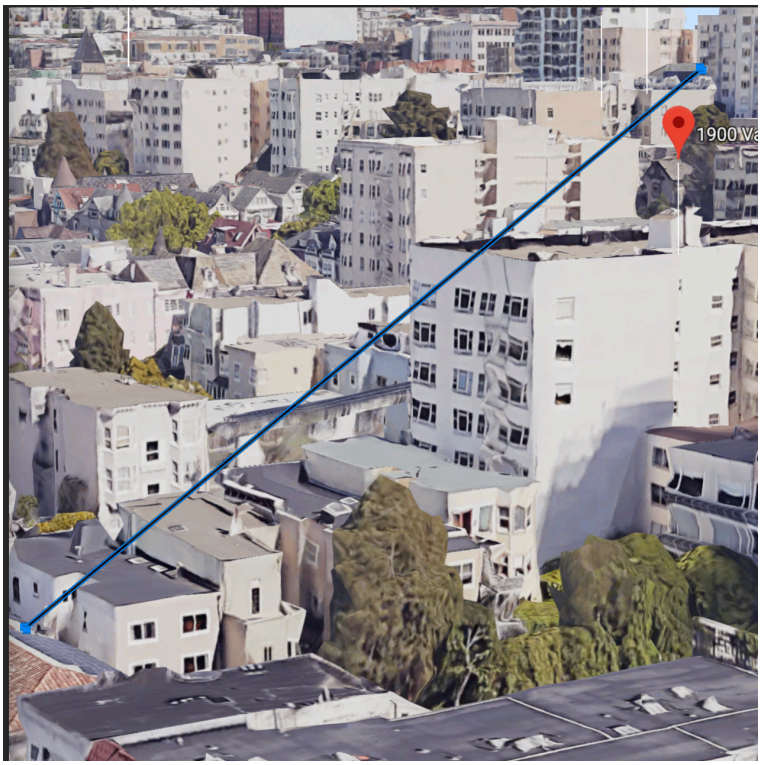
Grey Shades on bottom half of window at Library

Elevation change from Vallejo Street to 2651-53 Octavia Street



View from above 2651-953 Octavia. The 4th floor addition will be behind the mansard roof detail, and its height will be only 3 feet above the highest Mansard detail.

West side of Octavia – 1900 Vallejo looms large at the top of the hill and poses the biggest threat to shadowing of light to the entire block.

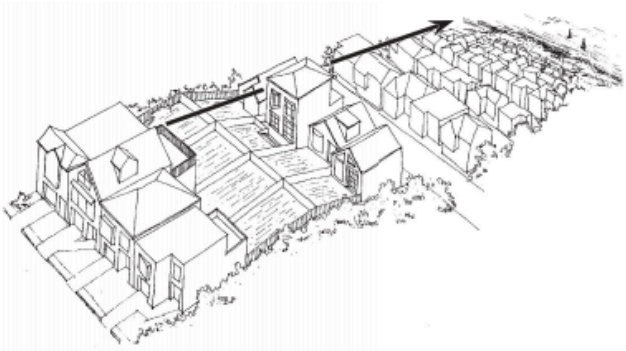


VIEWS

GUIDELINE: Protect major public views from public spaces.

The Urban Design Element of the General Plan calls for the protection of major public views in the City, with particular attention to those of open space and water. Protect major views of the City as seen from public spaces such as streets and parks by adjusting the massing of proposed development projects to reduce or eliminate adverse impacts on public view sheds. The General Plan, Planning Code and these Guidelines do not provide for protecting views from private property.

The Urban Design Element identifies streets that are important for their quality of views (page I.5.16) and identifies outstanding and unique areas that contribute to San Francisco's visual form and character (page I.5.25).

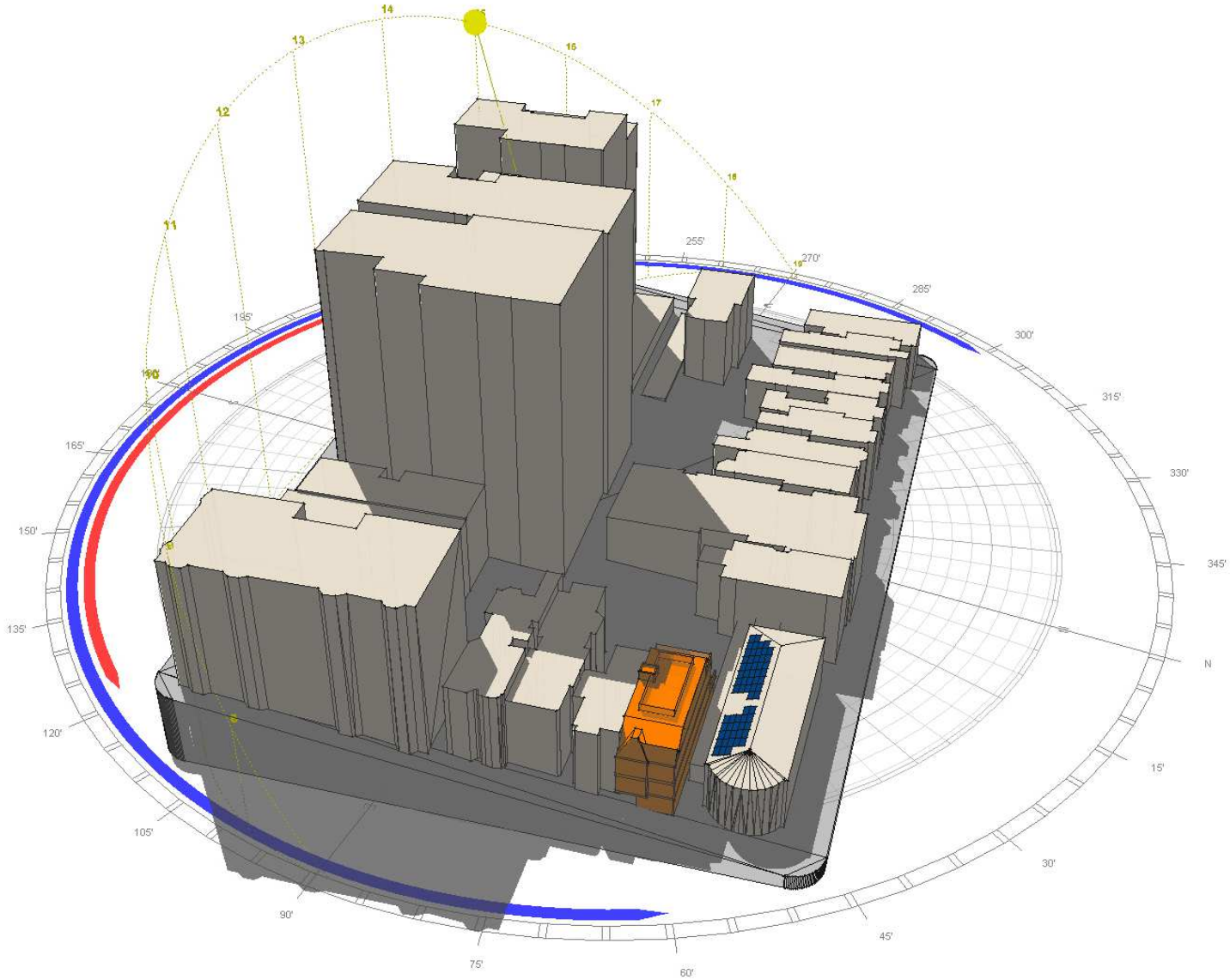


Views from this private building and deck are not protected.

Views from public areas, such as parks, are protected. The massing of this building impacts the view from the public park.

SHADING IMPACT ANALYSIS REPORT

FOR **2653 OCTAVIA STREET** | DECEMBER 1ST 2019



Report prepared by
Olivier PENNETIER, LEED AP, CEA
SYMPHYSIS
Bioclimatic Design Consulting
olivier@symphysis.net

TABLE OF CONTENTS

I. INTRODUCTION & ANALYSIS SUMMARY

SYMPHYSIS was asked to perform a shading analysis to assess the shading impact of a proposed vertical and horizontal addition, located at 2651-2653 Octavia Street, upon the adjacent building's photovoltaic system located on the roof of 1801 Green Street.

After performing the analysis, SYMPHYSIS concludes that **the proposed project at 2653 Octavia Street would reduce solar radiation by an average of 5.8%** on the existing photovoltaic system at 1801 Green Street.

The report herein describes the proposed project, as well as the methodology used for the shading analysis along with its results. ■

Olivier A. Pennetier, MArch, LEED AP
SYMPHYSIS Principal
12/01/2019

CABEC
California Association of Building Energy Consultants
CERTIFIED ENERGY ANALYST
CEA# R16-19-20172

Our services consist of professional opinions and conclusions developed in accordance with generally accepted environmental design, solar engineering and daylighting design principles and practices. Our conclusions and recommendations are based on the information provided by the clients, USGS Digital Elevation Model and publically available Geographic Information System database.

II. PROJECT LOCATION

The proposed project is located at 2653 Octavia Street, in the Northeastern corner of the Pacific Heights neighborhood, block 0554, lot 002. ■

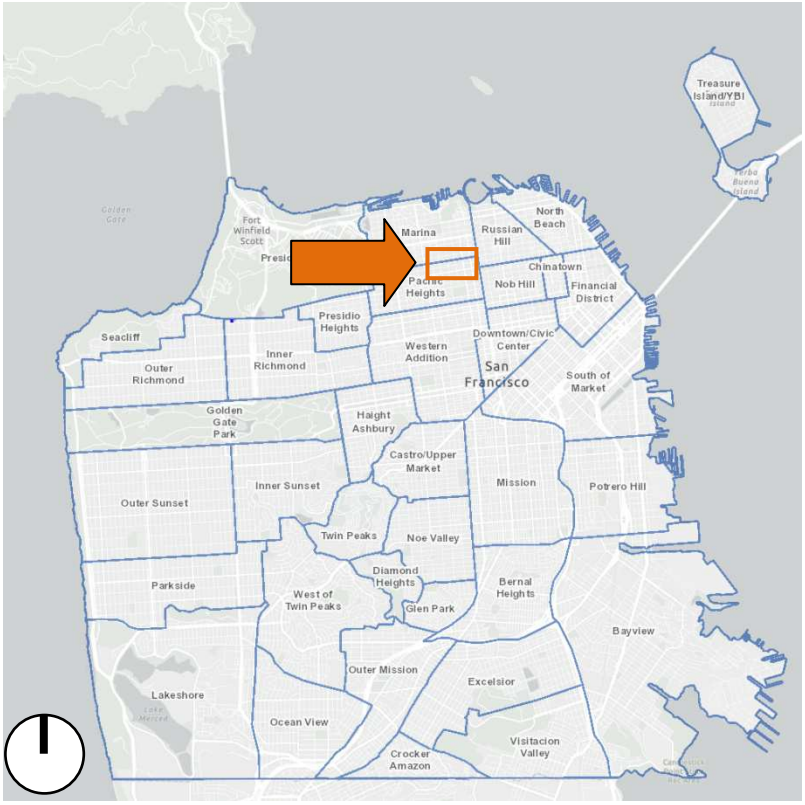


FIGURE 1: LOCATION MAP

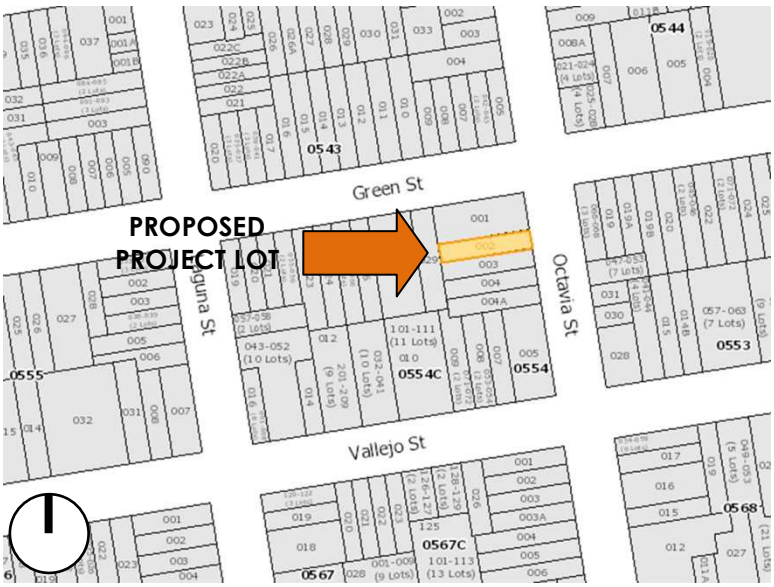


FIGURE 2: BLOCK MAP

III. PROPOSED PROJECT DESCRIPTION

The proposed design features a new fourth story addition on top of an existing 3 story single family residence. The new addition will increase the height of the building to 39'-10 ½".

The following images show the 3D massing models for the existing conditions and proposed design. ■

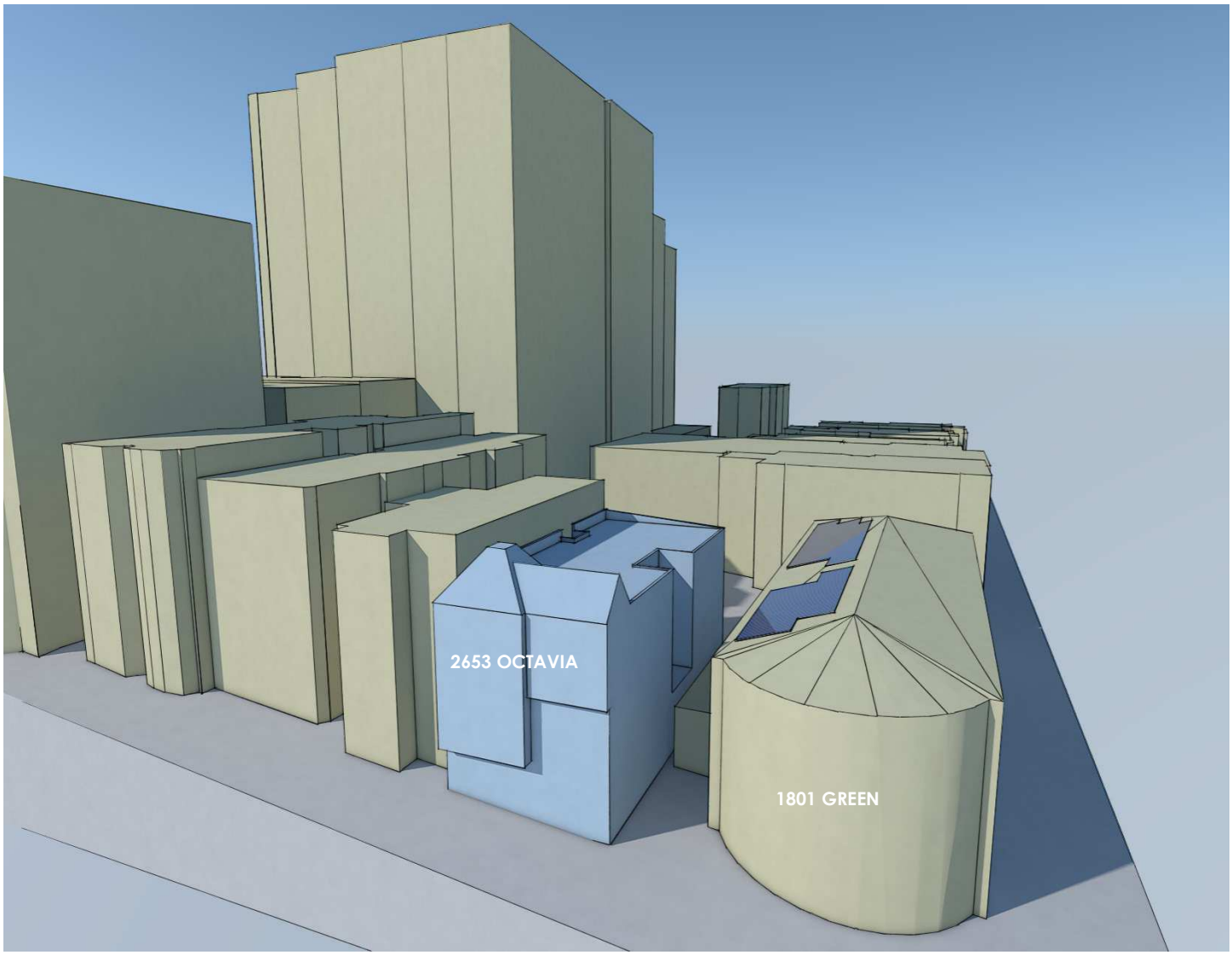


FIGURE 3: 3D MASSING MODEL OF THE EXISTING CONDITIONS.

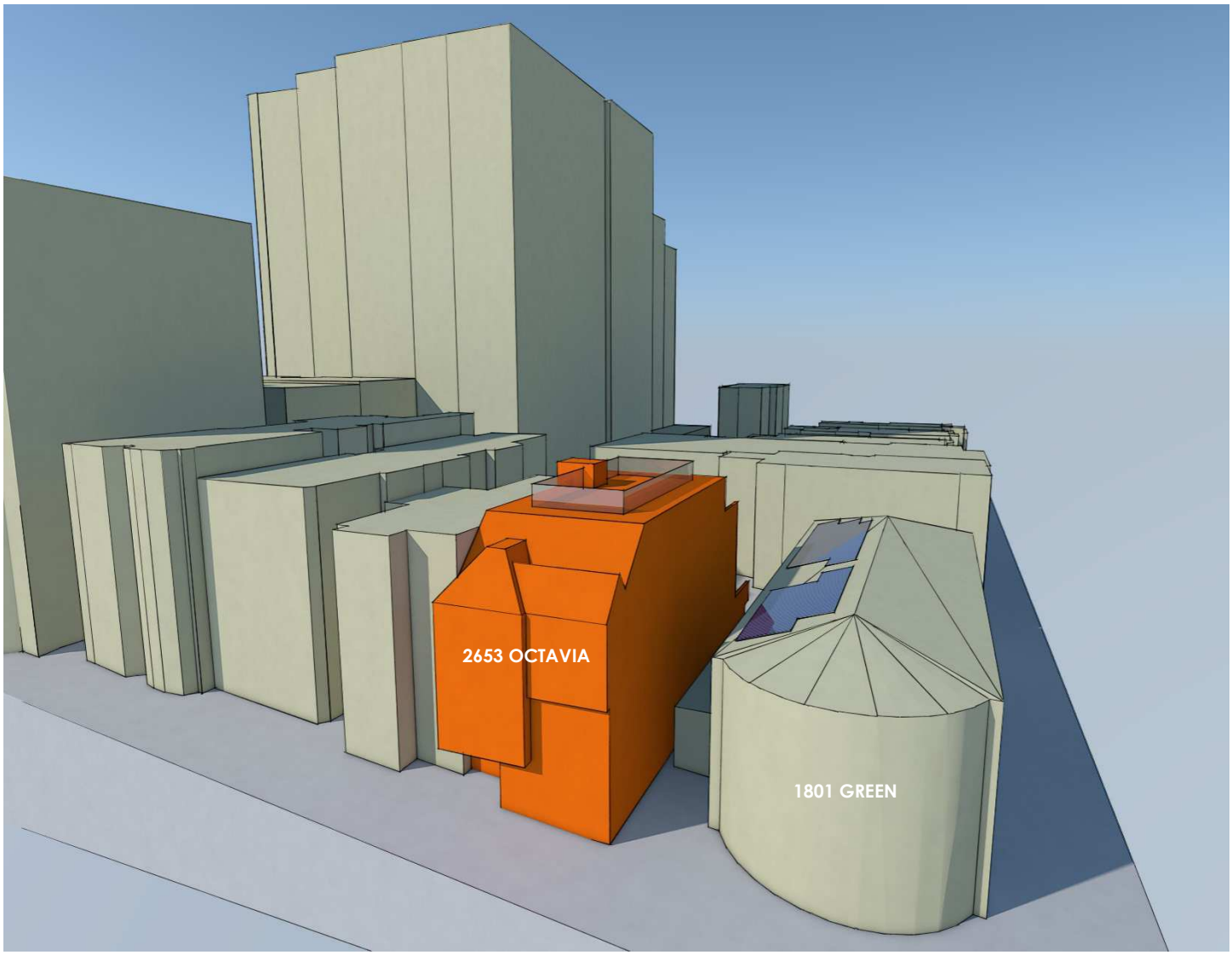


FIGURE 4: 3D MASSING MODEL OF THE PROPOSED DESIGN.

IV. ANALYSIS METHODOLOGY & FINDINGS

SYMPHYSIS utilized various tools to develop this shading impact analysis. Here is a breakdown of the analysis process, and the tools used at each stage of the analysis:

1) A 3D model of the existing and proposed conditions was created within a CAD software (ArchiCAD), using the 2D drawings from the architect of the proposed project. The surrounding buildings were constructed from the latest GIS (Geographic Information System) layer of San Francisco building footprints obtainable at data.sfgov.org. The heights of the buildings were derived from photogrammetric model from Google Earth. The size of the photovoltaic system located on the roof of the neighbor at 1801 Green Street was estimated from aerial photographs.

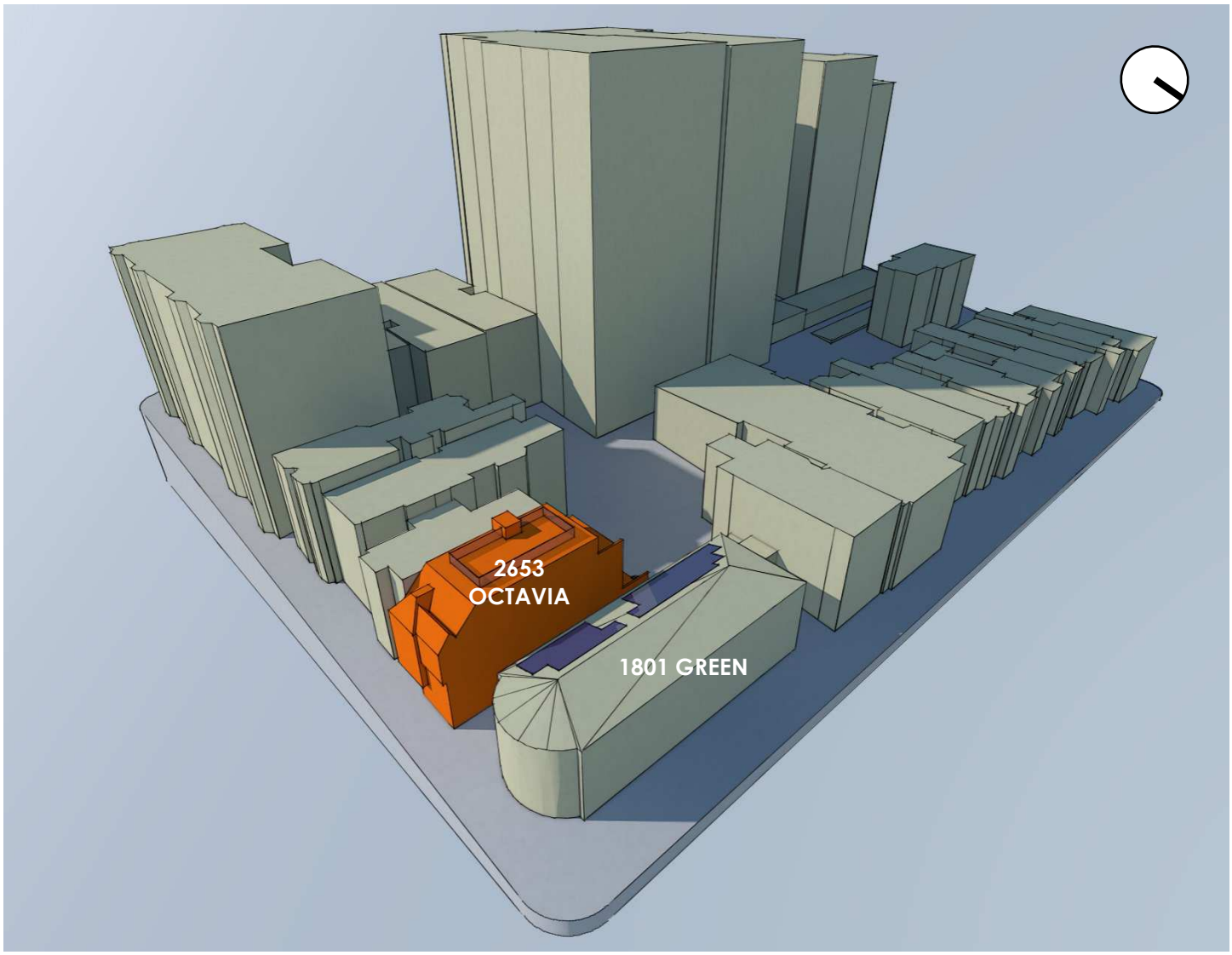


FIGURE 5: 3D MASSING MODEL OF PROPOSED CONDITIONS.

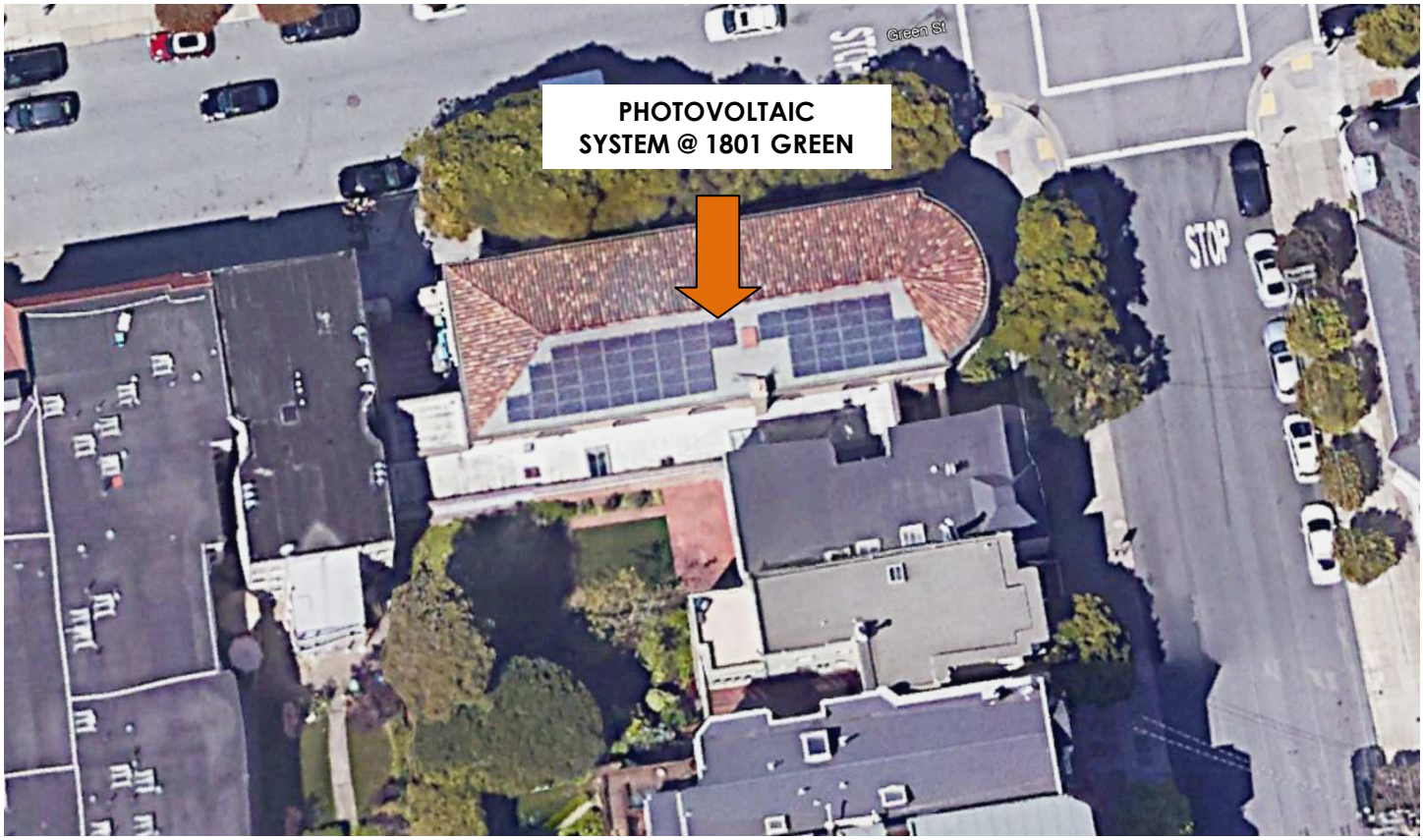


FIGURE 6: AERIAL PHOTOGRAPH OF THE PHOTOVOLTAIC SYSTEM AT 1801 GREEN STREET DATED 03/26/2018.

2) The 3D models were sent into a building performance analysis tool called Autodesk Ecotect to calculate shading and solar radiation specifically on the photovoltaic system of the Golden Gate Valley Library at 1801 Green Street. First the calculations were computed for the existing conditions, then another pass with the proposed design. The difference between the two conditions highlights the areas of the photovoltaic system that are most impacted by the proposed project. The calculations were set for the entire year, and every hours of the day.

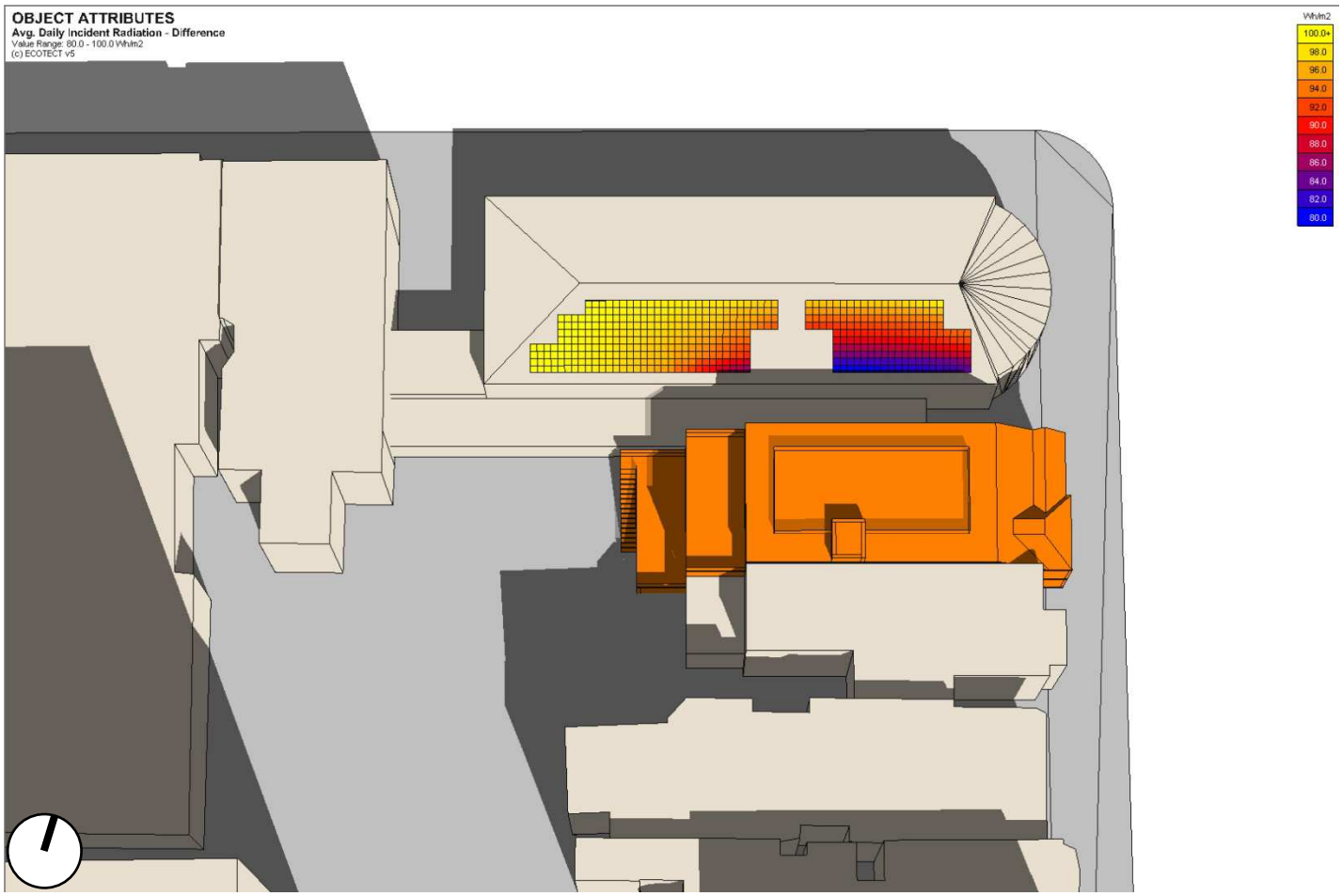


FIGURE 7: PERCENTAGE OF ANNUAL SOLAR RADIATION RECEIVED WITH THE PROPOSED PROJECT COMPARED TO EXISTING CONDITIONS.

After compiling all the results of the various analyses, SYMPHYSIS concludes that the proposed project at 2653 Octavia Street would reduce the amount of solar radiation on the existing photovoltaic system by 5.8%. Most of the shading impact would occur on the lower right (southeastern) panels located closer to the proposed project, and mainly between Fall and Winter, time at which solar radiation is weakest. At most, the solar array would see a 19.8% decrease in solar radiation on lower solar panels. Table 1 below highlights these numbers.

TABLE 1: PERCENTAGE DECREASE IN GLOBAL HORIZONTAL RADIATION AT ROOF LEVEL

	EXISTING CONDITIONS	PROPOSED CONDITIONS	PERCENTAGE DIFFERENCE
SOLAR RADIATION	4,514 Wh/m²/day	4,253 Wh/m²/day	**-5.8%**
East Array	4,596 Wh/m²/day	4,152 Wh/m²/day	-9.7%
West Array	4,452 Wh/m²/day	4,331 Wh/m²/day	-2.7%
SHADING	20.4%	29.0%	**+42.1%**
East Array	17.4%	29.4%	+69.0%
West Array	22.7%	28.7%	+26.4%

Of note, the photovoltaic system is broken down into two arrays. The Eastern array is quite a bit more impacted than the Western array, with a 69% increase in shading on the Eastern array versus a 26.4% shading increase on the Western array. Similarly, the Eastern array would see its incident solar radiation reduced by 9.7%, versus a solar radiation decrease of 2.7% on the Western array. ■

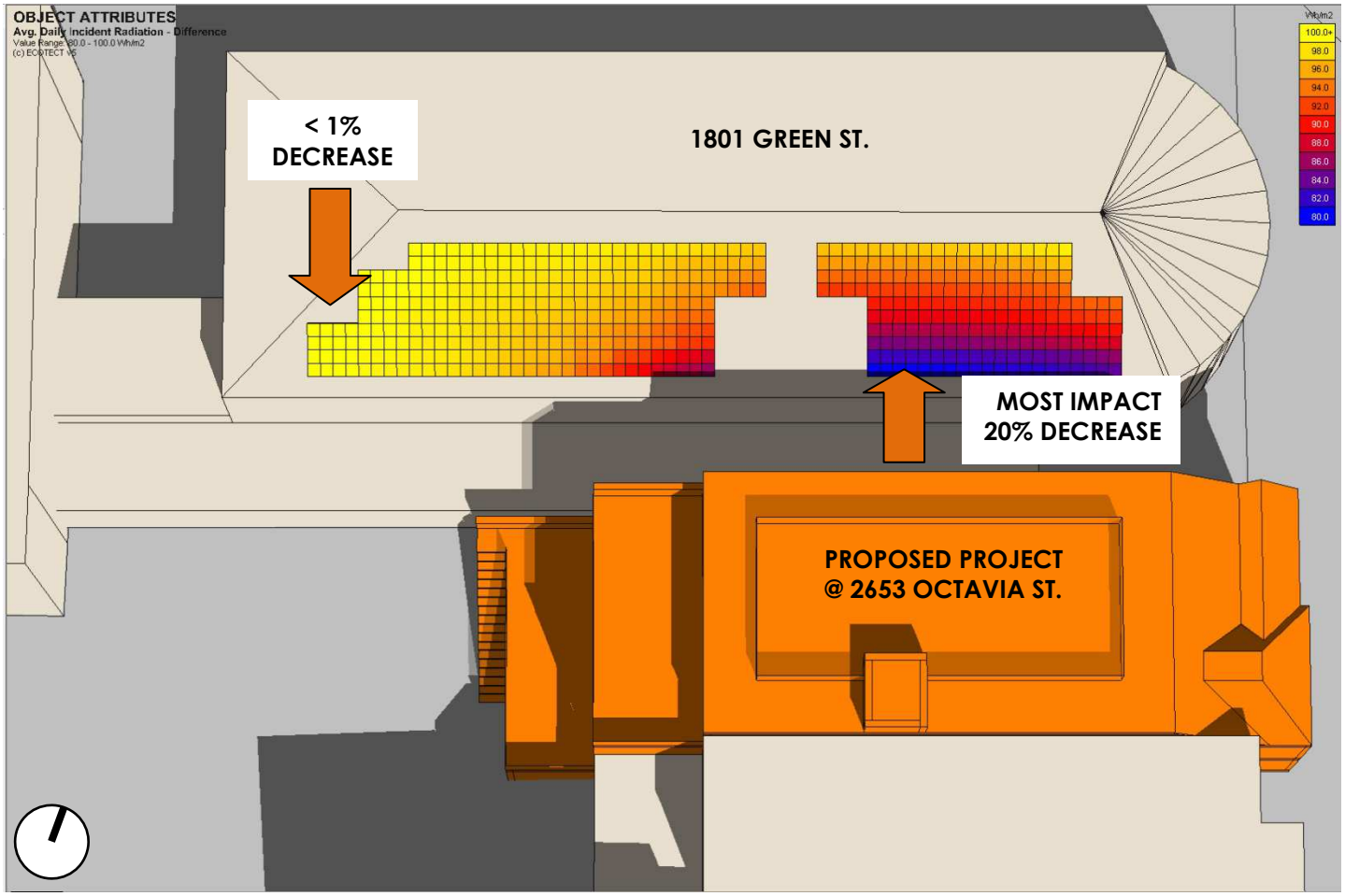


FIGURE 8: PERCENTAGE OF ANNUAL SOLAR RADIATION RECEIVED WITH THE PROPOSED PROJECT COMPARED TO EXISTING CONDITIONS.

The following diagram shows the shading difference between the existing and proposed conditions, highlighting in bright yellow the newly created shade on 1801 Green Street on the worst day of the year (the lowest sun angle on December 21st, and the highest solar radiation at solar noon).

The last diagram shows areas of the project's volume having the most impact on the shading of solar radiation upon the solar arrays. The brightest the dots, the highest-intensity solar radiation are being blocked by the project. As expected, the Northern-most areas of the fourth story addition's volume have the most impact on the solar panels.

A01

WINTER SOLSTICE SHADING ANALYSIS – PROPOSED vs EXISTING

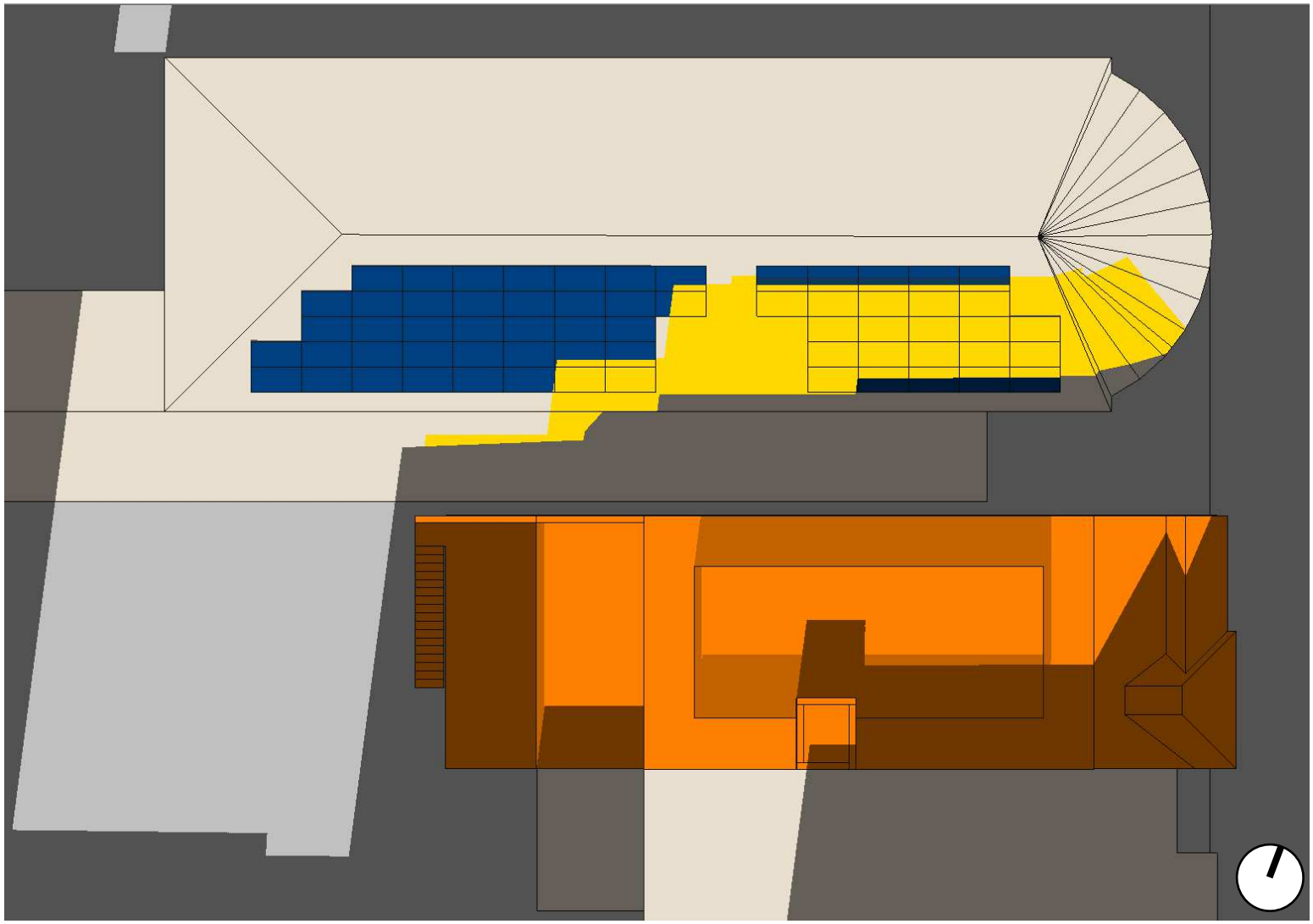
DECEMBER 21ST

12:00 PM Noon

PROPOSED PROJECT @ 2653 OCTAVIA ST.

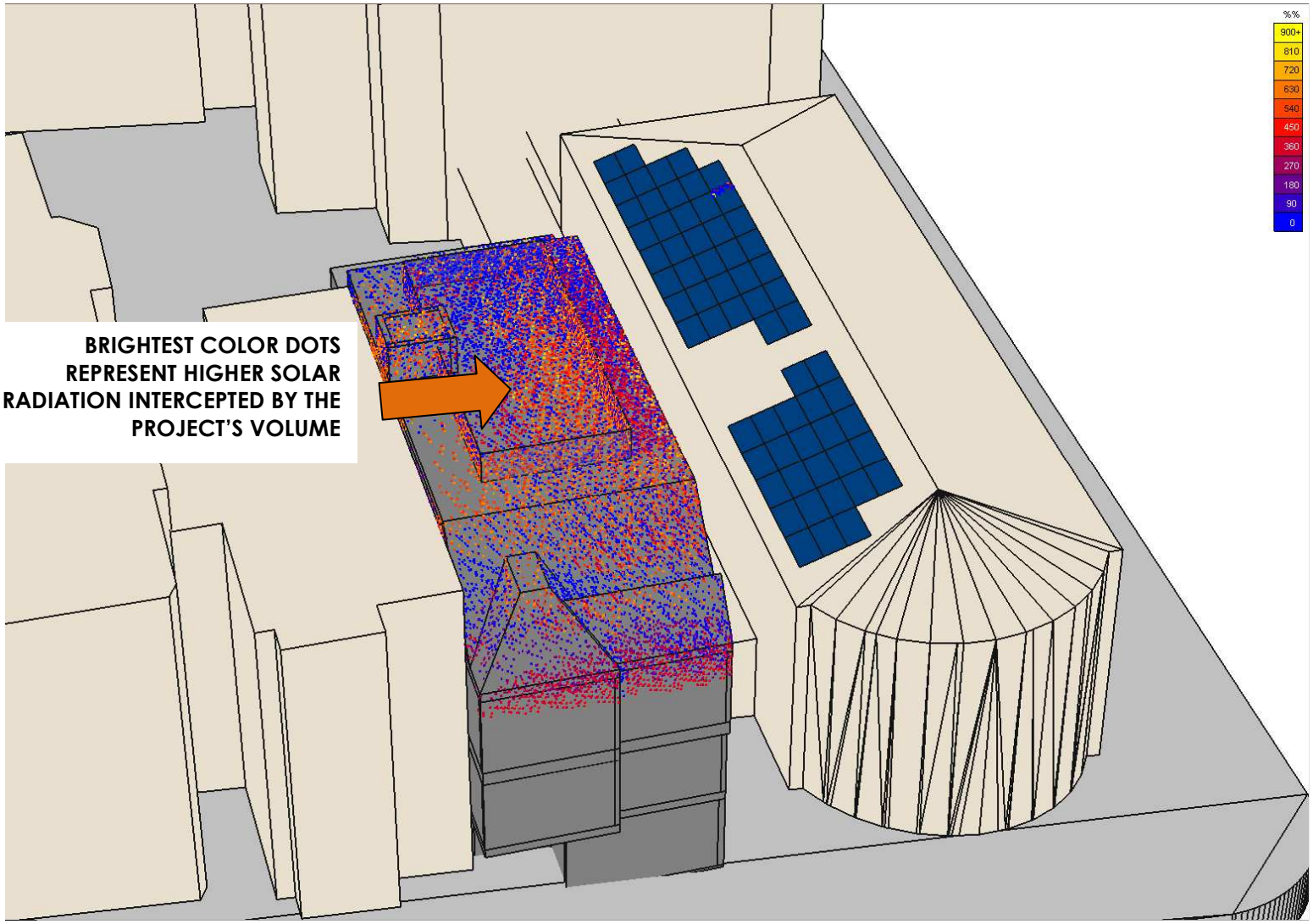
EXISTING SHADING

ADDITIONAL SHADING @ 1801 GREEN ST.



A02

VOLUME IMPACT

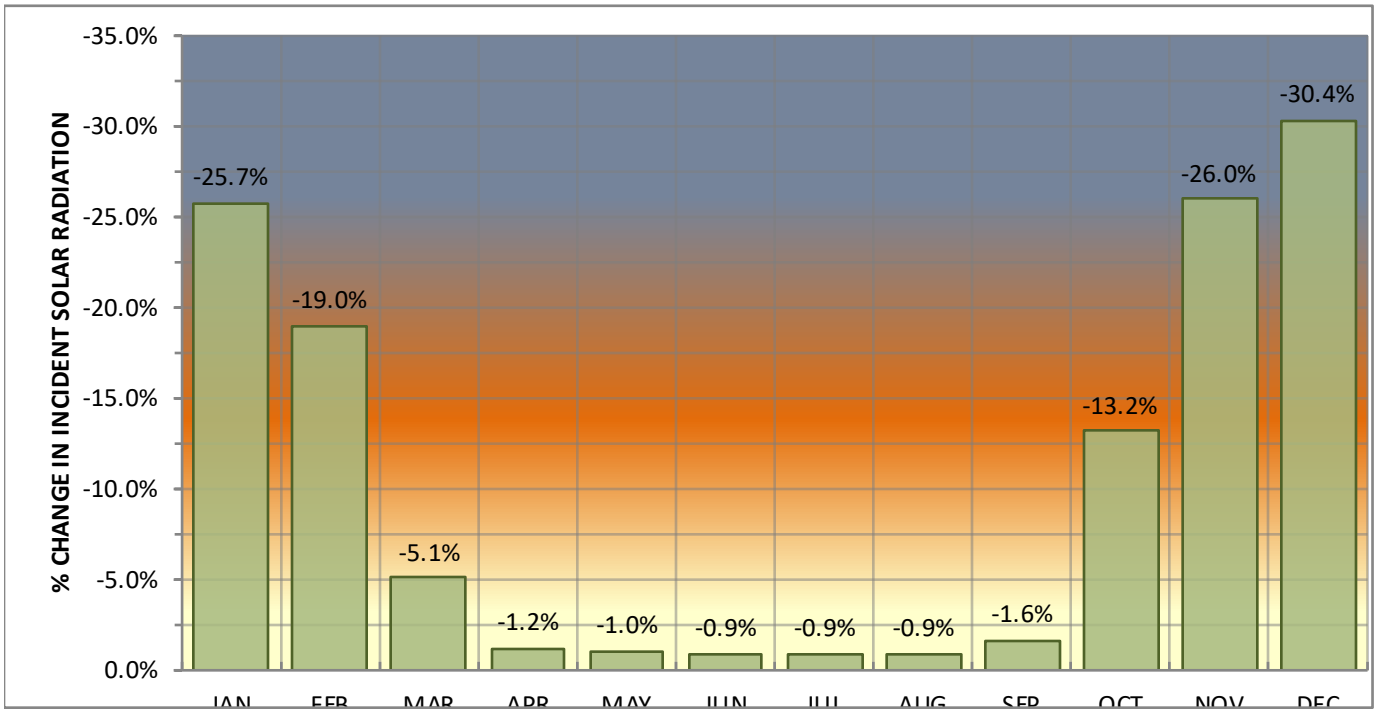


SYMPHYSIS
Bioclimatic Design Consulting
435 S. ALEXANDRIA AVENUE #308
LOS ANGELES CA 90020
www.symphysis.net
info@symphysis.net

Golden Gate Library - 1801 Green Street INCIDENT SOLAR RADIATION (Wh/m2/DAY)			
ANALYSIS PERIOD	EXISTING CONDITIONS	PROPOSED CONDITIONS	% Δ
JAN	1,709	1,270	-25.7%
FEB	2,748	2,226	-19.0%
MAR	4,476	4,248	-5.1%
APR	5,683	5,614	-1.2%
MAY	6,212	6,147	-1.0%
JUN	6,792	6,730	-0.9%
JUL	6,765	6,705	-0.9%
AUG	6,323	6,267	-0.9%
SEP	5,755	5,663	-1.6%
OCT	3,571	3,100	-13.2%
NOV	2,316	1,714	-26.0%
DEC	1,667	1,161	-30.4%
YEAR	4,514	4,253	-5.8%

			Δ
SHADE @ 9AM	30-Sep	8-Sep	
	18-Mar	5-Apr	
NO-IMPACT DAYS	**197**	**157**	40
SHADE @ 10AM	15-Nov	12-Sep	
	5-Feb	2-Apr	
NO-IMPACT DAYS	**284**	**164**	120
SHADE @ 11AM	29-Nov	18-Sep	
	21-Jan	30-Mar	
NO-IMPACT DAYS	**313**	**173**	140
SHADE @ NOON	14-Dec	23-Sep	
	4-Jan	24-Mar	
NO-IMPACT DAYS	**345**	**184**	161
SHADE @ 1PM	25-Sep	26-Sep	
	21-Mar	21-Mar	
NO-IMPACT DAYS	**189**	**190**	-1
SHADE @ 2PM	1-Oct	1-Oct	
	16-Mar	15-Mar	
NO-IMPACT DAYS	**200**	**201**	-1
SHADE @ 3PM	6-Oct	6-Oct	
	11-Mar	11-Mar	
NO-IMPACT DAYS	**210**	**210**	0

The tall buildings (1911, 1921, 1960 and 1990 Vallejo) south of the Golden Gate Library shade the solar panels after 3pm, therefore there is no effect of the Octavia addition during late afternoon and evening hours.


% CHANGE IN INCIDENT SOLAR RADIATION
-35.0%
-30.0%
-25.0%
-20.0%
-15.0%
-10.0%
-5.0%
0.0%
-25.7%
-19.0%
-5.1%
-1.2%
-1.0%
-0.9%
-0.9%
-0.9%
-1.6%
-13.2%
-26.0%
-30.4%
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC

To determine the net dollar effect of shading due to the addition at 2651-53 Octavia, Symphysis compared two methods of radiation calculation. The parameters used is a 15KWh system, with 20% efficacy, existing shading at 20.4% and proposed shading at 29%

1) PV Watts Calculator uses a radiation base of 4.85 Kwh/m2/day.
   This calculator overstates the sunlight conditions as it uses SFO as the locator, which is sunnier place than our district.
2) SFOG.US uses a radiation base of 4.6 Kwh/M2/Day, which is more accurate of the sunlight conditions at 2651-53 Octavia and the Golden Gate Library.

The net effect of the addition at 2651-53 Octavia will be a loss of power generation at the Golden Gate Library of 5.8% annually. Using the commercial electrical rate of $.09 per kWh, this translates to $178-$187 annually.

https://pvwatts.nrel.gov/pvwatts.php

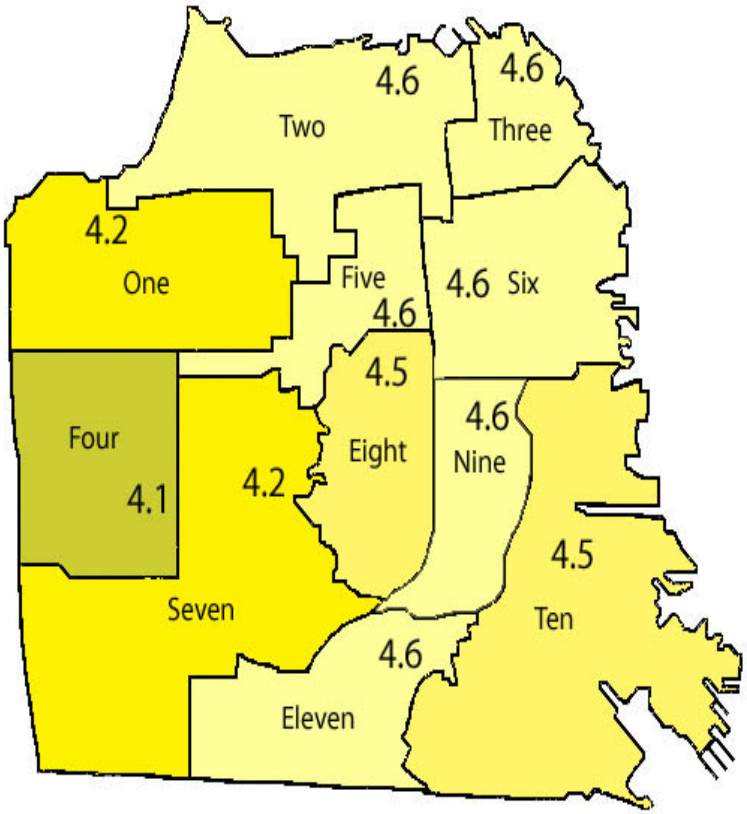
USING PVWATTS 4.85 kWh/M2/DAY BASE RADIATION, 15 KWh System, 20% efficacy

EXISTING CONDITIONS: 20.4% shading				PROPOSED CONDITIONS: 29% shading			
Month	Solar Radiation (kWh / m2 / day)	AC Energy (kWh)	Value ($)	Solar Radiation (kWh / m2 / day)	AC Energy (kWh)	Value ($)	
January	3.14	961	86	3.14	856	77	
February	3.98	1101	99	3.98	981	88	
March	5.53	1,653	148	5.53	1,473	132	
April	6.72	1,948	175	6.72	1,736	156	
May	7.05	2,090	188	7.05	1,862	167	
June	7.39	2,108	189	7.39	1,879	169	
July	6.92	2,020	181	6.92	1,800	162	
August	6.42	1,869	168	6.42	1,665	150	
September	6.26	1,745	157	6.26	1,555	140	
October	5.05	1,487	134	5.05	1,325	119	
November	3.89	1,131	102	3.89	1,007	90	
December	3.15	964	87	3.15	858	77	
Annual	**5.46**	**19,077**	**$1,714**	**5.46**	**16,997**	**$1,527**	**$187**

https://www.sfog.us/solar/sfsolar.htm

USING SFOG.US 4.6 kWh/M2/DAY BASE RADIATION, 15 kWh system, 20% efficacy

EXISTING CONDITIONS: 20.4% SHADING				PROPOSED CONDITIONS:29.0% SHADING			
Month	Solar Radiation (kWh / m2 / day)	AC Energy (kWh)	Value ($)	Solar Radiation (kWh / m2 / day)	AC Energy (kWh)	Value ($)	
January	3.14	913	82	3.14	813	73	
February	3.98	1,046	94	3.98	932	84	
March	5.53	1,570	141	5.53	1,399	125	
April	6.72	1,851	166	6.72	1,649	148	
May	7.05	1,986	179	7.05	1,769	159	
June	7.39	2,003	180	7.39	1,785	161	
July	6.92	1,919	172	6.92	1,710	154	
August	6.42	1,776	160	6.42	1,582	143	
September	6.26	1,658	149	6.26	1,477	133	
October	5.05	1,413	127	5.05	1,259	113	
November	3.89	1,074	97	3.89	957	86	
December	3.15	916	83	3.15	815	73	
Annual	**5.46**	**18,123**	**$1,628**	**5.46**	**16,147**	**$1,451**	**$178**



Discretionary Review Project Sponsor Response
February 4, 2021 Hearing

To: Planning Commission
Regarding: Construction on 2651-2653 Octavia St
Permit Application 2018.08.03.6405, Record Number 2018-01102PRJ
From: Jane Cote-Cook, Owner 2651-53 Octavia Street

Dear Commissioners and Planning Department Staff,

This will be the second time we will be heard before the SF Planning Commission. We have been in the process of trying to obtain permits for our project since August 3rd of 2018, two years and 6 months. Our proposed plans are to enlarge the two units in our building to accommodate multi-generational ADA Compliant living for our family (aging parents, adult disabled child, and temporarily two adult children launching their careers). This was our intent in 2018, and it has become an ever more important goal, as we are living with the limitations of Covid. Below is a link to our proposed plans.

2651-53 Octavia Proposed Plans

At each point during this process, we have met all requirements of the SF building codes and residential design guidelines, and hope to show the Commissioners again, that there is no unusual or extraordinary reason to take this Discretionary Review. We believe that it is critical for the Commission to be aware of the timeline and events of our permit process.

We worked extensively with the planning department for over **15 months**, making all the changes that the Preservation, Planning and Residential Design Advisory staff requested. The Preservation Department was particularly careful and specific about design changes, in consideration that our building was adjacent to the historically significant Golden Gate Valley Library.

On September 25, 2019, the Environmental Department issued a Categorical CEQA exemption for our plans. As we had addressed all concerns with design changes that the preservation department detailed, they saw no further issues that needed to be reviewed.

In December 2019, our neighbors filed for a Discretionary Review of our project.

In preparing for the DR hearing, to defend the specific objections of the DR requestors, that our building would negatively impact the light to the neighboring buildings, and the GG Valley library solar panels, we hired Symphysis, a bioclimatic design consultant, to conduct independent shade studies. From the shade analyses, the difference to light on the library's solar panels is minimal at -5.8% annually. To the neighbor's homes at 1791 Green Street and 2634 Octavia Street, the light difference is -2% to -4.6% annually. In addition, David Winslow and the Preservation Planning staff made an onsite visit to the library, and determined that the effect of our addition to the light in the library would be de minimis, not of any significant consideration.

Links to the shade studies conducted:

Solar Panels Library Analysis

Neighbor Buildings Analysis

On February 6, 2020, one year ago, the planning commission voted 4-1 not to take the DR. There were many points that we defended and for your information, the link to our project sponsor rebuttal is below.

DR Project Sponsor Rebuttal

On March 6, 2020, our neighbors appealed our Categorical CEQA exemption due to the fact that the shade studies that were conducted for the February 6th hearing were done **after** the exemption was issued, and thus were not included in the CEQA investigation. There was no consideration by our neighbors that the shade studies as well as the Planning staff's onsite determination concluded our addition would not affect the light to the Golden Gate Valley Library in a significant way.

Our initial Appeal hearing with the Board of Supervisors was scheduled for April 21, 2020. Due to the Covid-19 stay at home order, it was postponed to July 28, 2020.

At the virtual hearing, the Environmental Planning Department staff stated that "light" is not an architectural characteristic in a historical significance study, and thus does not factor into a determination for a Categorical CEQA exemption. Our project is the **first** in San Francisco where light is being considered in this way. As the project sponsors, we provided the facts of the two shade studies which concluded that our proposed project would have minimal effect on the light to the Golden Gate Valley Library. See the link below for our rebuttal.

Appeal - Project Sponsor Rebuttal

Unfortunately, the Supervisors disagreed with the Environmental Planning Department, disregarded the facts provided by the shade studies and upheld the appeal. They indicated that they would like to see a robust shade study completed on the light for the interior of the library.

In discussing this appeal ruling with Chris Kern of the Environmental Planning Department, he stated again to us that light has **never** been an architectural feature and nor has it been factored into a Categorical determination. The only avenue he proposed to us was to complete a new shade study as requested by the Supervisors and issue another CEQA exemption for my project.

The planning department spent the next three months (at a cost of nearly $12,000 to the city) defining the appropriate scope of the shade study and engaging Symphysis ($1,375) to conduct the analysis. Symphysis completed the shade analyses in early December 2019.

The shade report is extensive and lengthy. The study evaluated over 2400 unique points in the library space in three different sky conditions, various times of the year, and three times of day. Below is the summation of the analyses report by Symphysis:

"After performing the daylighting analysis, SYMPHYSIS concludes that the proposed project at 2653 Octavia Street will not reduce the visual comfort of the library's patrons in any significant way, when compared to the current existing conditions. The proposed project reduces the libraries' averaged illumination levels minimally for clear sky (-1.8%), overcast sky (-4%), and partly cloudy sky (-11.1%). For both the overcast and partly cloudy skies, the existing conditions require electrical illumination at ALL times to provide the necessary illumination recommended for libraries (300-500 LUX), thus even the small reductions with the proposed condition are irrelevant."

"The Daylight Autonomy analysis calculates the percentage of time, during the libraries open hours (10am - 8 pm), when supplemental light is NOT required to meet acceptable illuminance levels. The IES recommended values for libraries are 300 LUX for stacks and 500 LUX for task and reading areas. To calculate an overall difference at the highest-level analysis, we used an average of 400 LUX as our target, and averaged all light sensor points (2,406) in the library.
The analysis shows that there is minimal difference (-1.7 %) between the existing and proposed conditions, when no supplemental lighting is necessary."

Below is the link to the complete detailed analysis:

Interior Library Analysis

In conclusion, it is hard for my husband and I to reconcile that it has taken us 2 ½ years to get to this point, and then there will be at least an additional 3-4 months to prepare and meet with the Supervisors, and if we should finally be approved, another 6 months to flesh out detailed plans that can be ready for construction. It will be approximately 3 ½ years that we will have spent in trying to obtain permits for our project. We estimate that the significant delays will cost us at minimum $150,000 and the Planning Department at least $25,000, in preparation for the 2 DRs, the Appeals, and the shade study analyses. This feels egregious and unfair to us since throughout this process, we have had complied with all planning department design recommendations and have had the full support of the SF Planning staff in all the discretionary reviews and the Appeal with the Supervisors.

Due to the strength of the three exhaustive shade analyses that confirm that there are no unusual or extraordinary decreases in light to the Golden Gate Library, we respectfully request that you NOT take Discretionary Review, and approve our second Categorical CEQA Exemption.

Thank you,

Jane Coté-Cook Christopher Cook

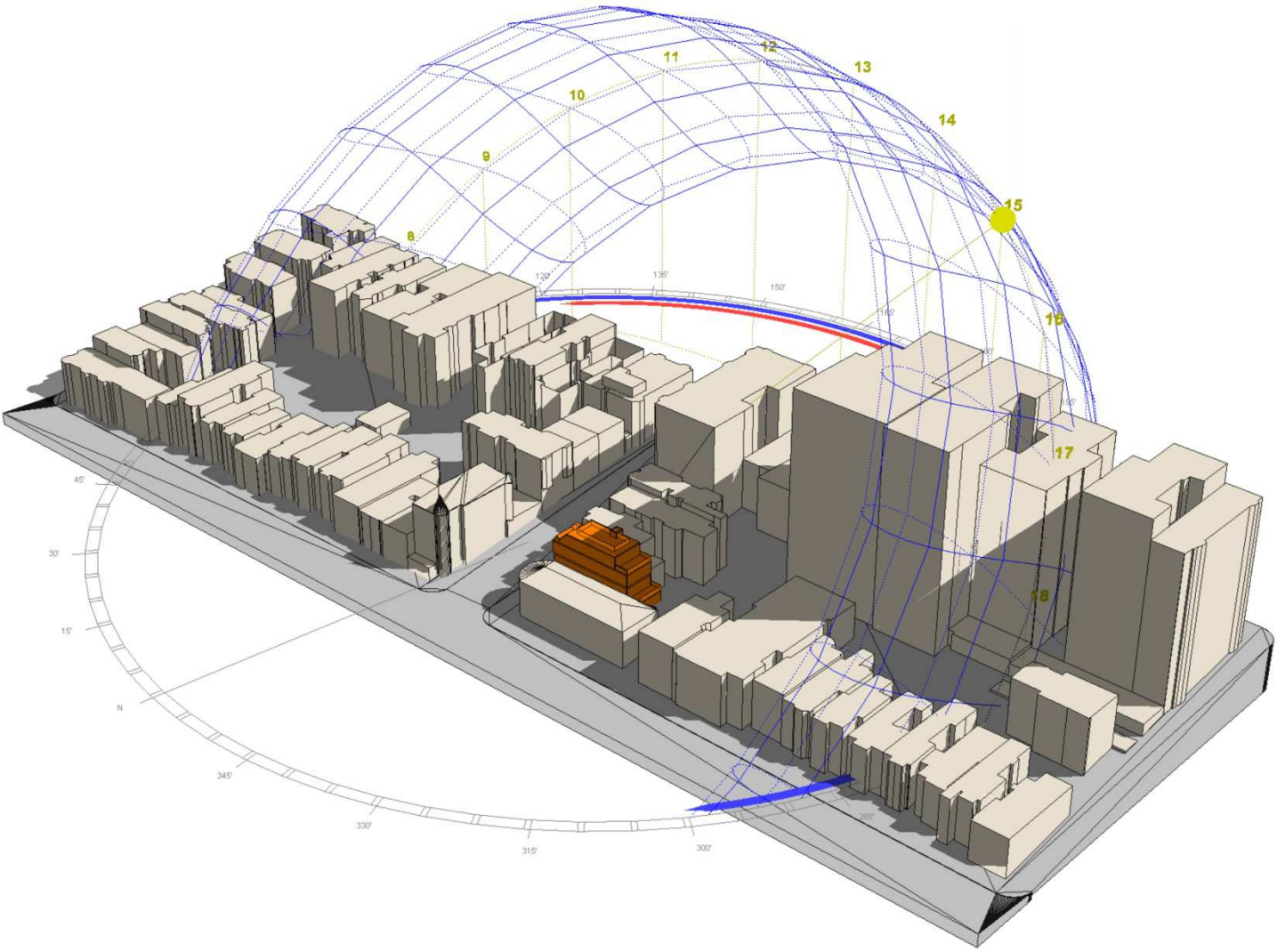
Jane Coté-Cook
415-500-1610

Christopher Cook
415-260-4939

SHADING IMPACT ANALYSIS REPORT

- ADDENDUM -

FOR **2653 OCTAVIA STREET** | JANUARY 23rd 2020



Report prepared by
Olivier PENNETIER, LEED AP, CEA
SYMPHYSIS
Bioclimatic Design Consulting
olivier@symphysis.net

TABLE OF CONTENTS

I. INTRODUCTION & ANALYSIS SUMMARY

SYMPHYSIS was asked to perform a shading analysis to assess the shading impact of a proposed vertical and horizontal addition, located at 2651-2653 Octavia Street, upon the adjacent building facades located at 2634 Octavia and 1791 Green Street

After performing the analysis, SYMPHYSIS concludes that **the proposed project at 2653 Octavia Street would reduce the number of sunlight hours by a maximum of 4.6% on the façade of 2634 Octavia Steet and 2.0% on the facing façade of 1791 Green Street.**

The report herein outlines the results of the analysis. ■

Olivier A. Pennetier, MArch, LEED AP
SYMPHYSIS Principal
01/23/2020

CABEC
California Association of Building Energy Consultants
CERTIFIED ENERGY ANALYST
CEA# R16-19-20172

Our services consist of professional opinions and conclusions developed in accordance with generally accepted environmental design, solar engineering and daylighting design principles and practices. Our conclusions and recommendations are based on the information provided by the clients, USGS Digital Elevation Model and publically available Geographic Information System database.

ADDENDUM TO PREVIOUS ANALYSIS

The 3D modeling was extended to include the block East of the proposed project, which includes the buildings at the concerned properties at 2634 Octavia Street and 1791 Green Street. The following image shows the updated 3D model. ■

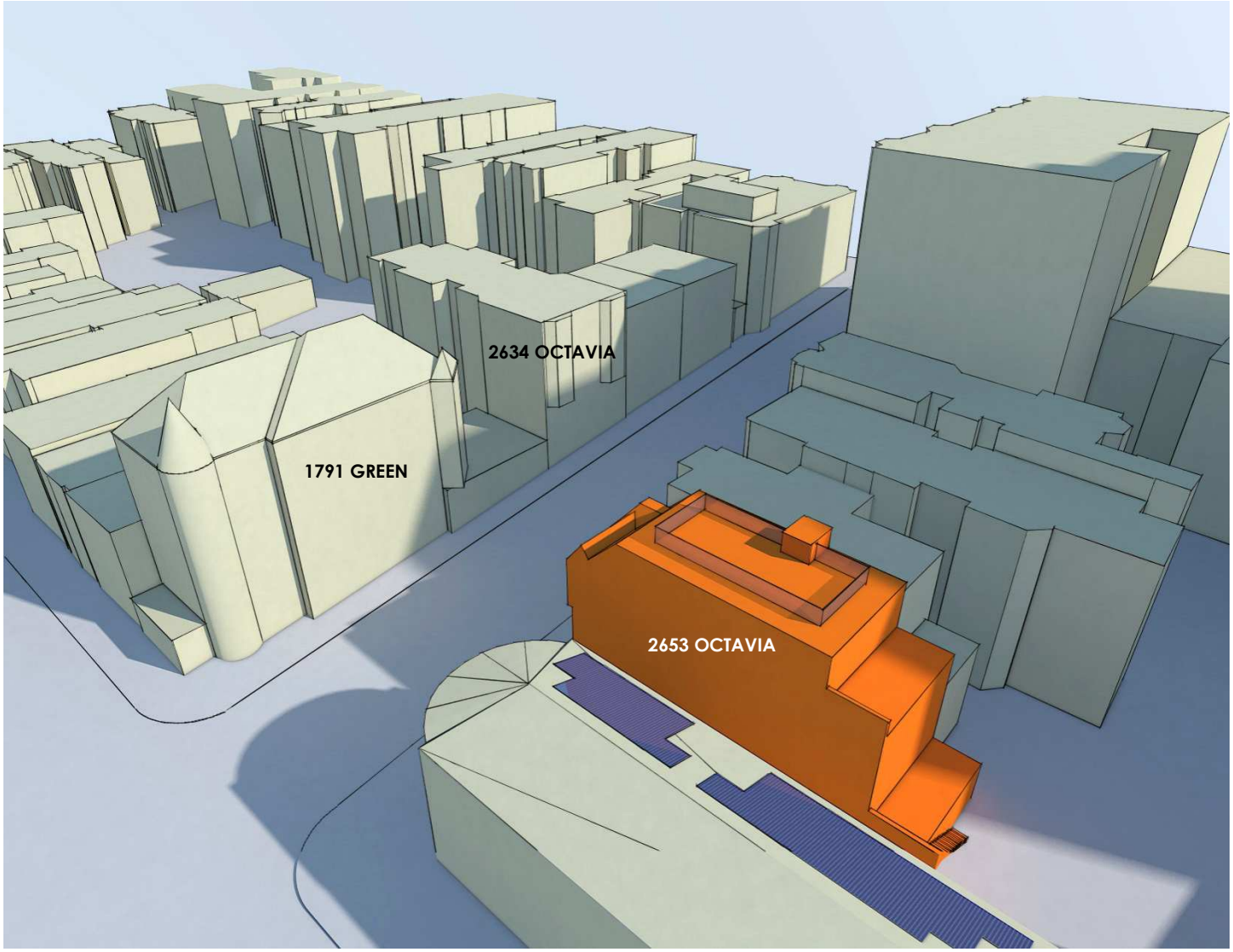


FIGURE 1: 3D MASSING MODEL OF THE PROPOSED CONDITIONS.

II. ADDENDUM TO PREVIOUS FINDINGS

The same methodology as the previous analysis was used to determined the amount of sunlight lost on the concerned properties. The image below is a 06/04/2019 photograph of the block East of the proposed project.

FIGURE 2: AERIAL PHOTOGRAPH OF THE BLOCK EAST OF THE PROPOSED PROJECT DATED 06/04/2019.

After compiling all the results of the analysis, SYMPHYSIS concludes that the proposed project at 2653 Octavia Street would reduce the amount of sunlight on the facing facades only minimally. At its most impacted area, the façade at 2634 Octavia Street would receive 48 hours less of sunlight than it currently does. That is a 4.8% difference with existing conditions. The impact would occur between April 23rd at 7:15 pm and August 25th at 7:15 pm. The impacted area does include the bay window of the first floor at the Northern corner of the building.

The façade facing the proposed project at 1791 Green Street would also be minimally impacted in mid Spring from march 11th at 7:00 pm to April 4th at 7:15 pm, and then again later in mid fall from September 12th at 7:00 pm to October 18th at 7:15 pm. The proposed project would cut out a maximum of 25 hours of sunlight to the facing façade at its most impacted location, which includes windows. That is a 2.0% decrease in sunlight availability from current conditions.

The patio located between the two building at 2634 Octavia and 1791 Green Street would see some minimal impact as well from the proposed project, mainly from May 2nd at 6:45 pm until August 11th at 7:00 pm. The patio would see a

maximum of 26 hours reduction of available sunlight at its most impacted location, which is a reduction of 3.8% from existing conditions.

The following table summarizes the findings:

TABLE 1: SUNLIGHT HOURS

	EXISTING SUNLIGHT	PROPOSED SUNLIGHT	PERCENTAGE DIFFERENCE	IMPACTED SEASON
2634 OCTAVIA ST.	1,034 HRS	986 HRS	**-4.6%**	April - August
1791 GREEN ST.	1,261 HRS	1,236 HRS	**-2.0%**	March – April & September - October
PATIO	679 HRS	653 HRS	**-3.8%**	May - August

The following image shows the areas of the facades that are most impacted by the proposed project:

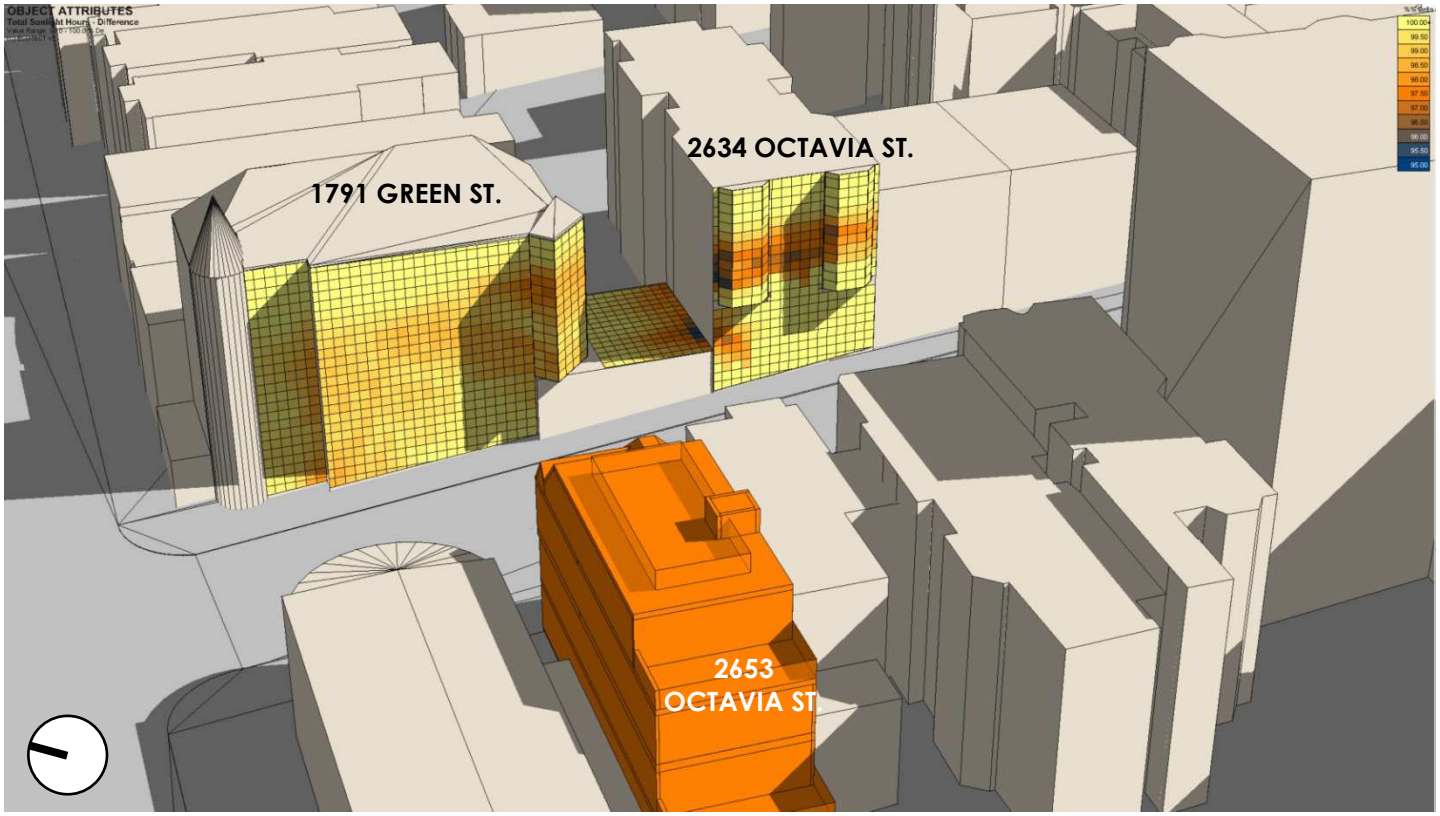


FIGURE 3: AREAS MOST IMPACTED BY THE PROPOSED PROJECT. DARK BLUE REPRESENTS A 5% DECREASE OF SUNLIGHT HOUR.

The following diagram shows the shading difference between the existing and proposed conditions, highlighting in bright yellow the newly created shade on the facades of the facing properties for dates ranging from June 21st to October 21st.

A01

SHADING IMPACT

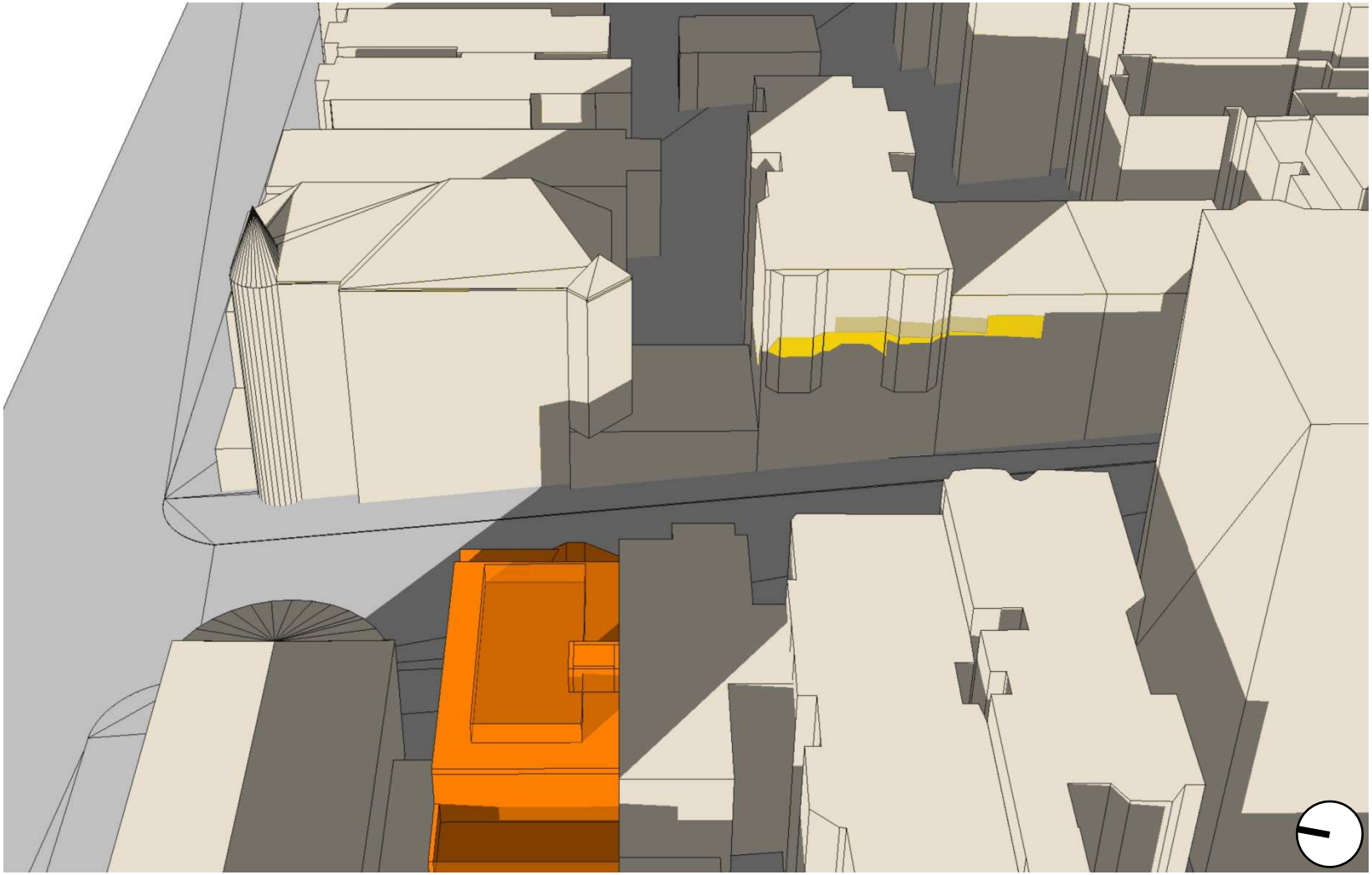
JUNE 21ST

08:15 PM

PROPOSED PROJECT @ 2653 OCTAVIA ST.

EXISTING SHADING

ADDITIONAL SHADING



A02

SHADING IMPACT

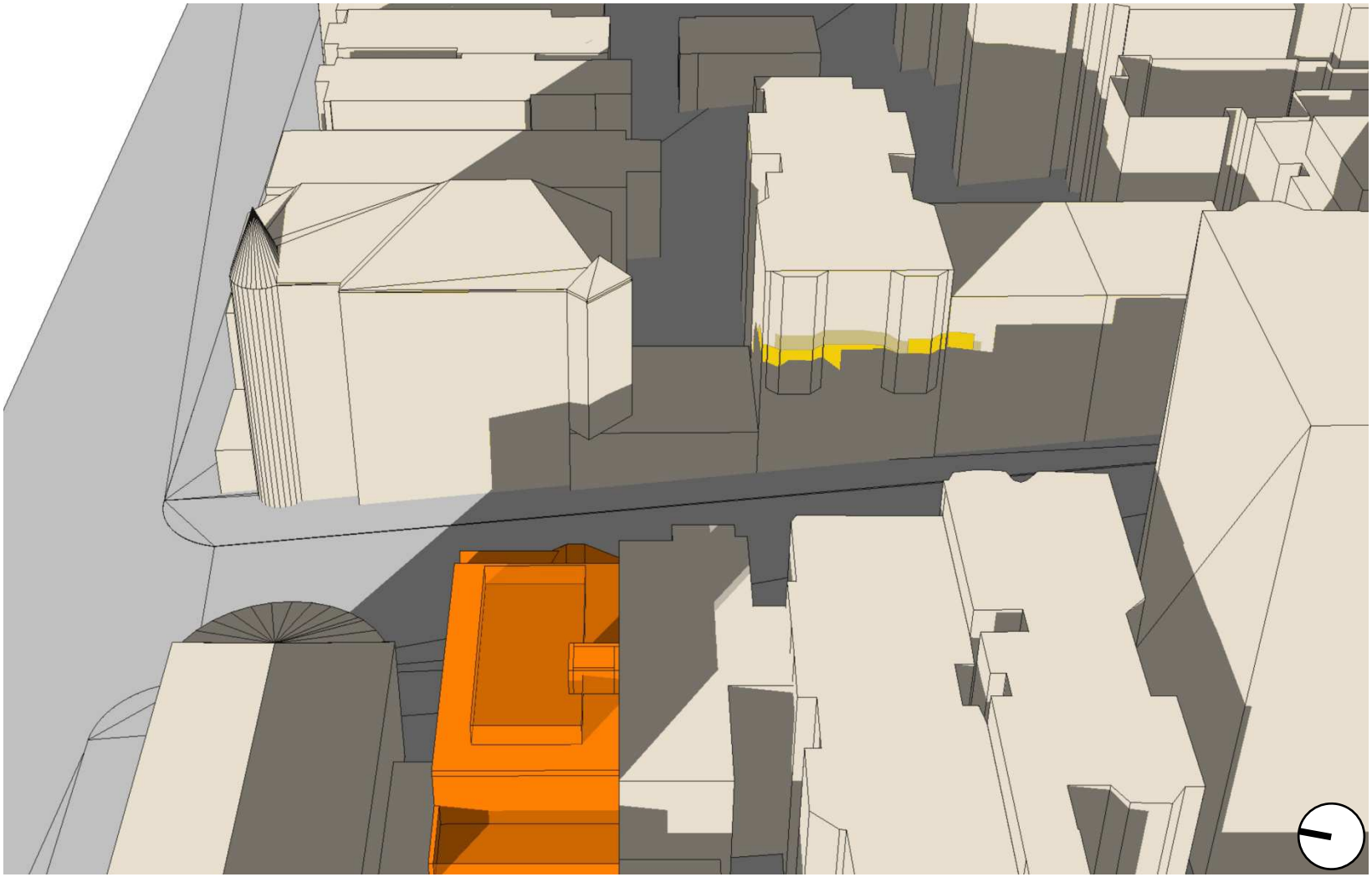
JULY 21ST

08:00 PM

PROPOSED PROJECT @ 2653 OCTAVIA ST.

EXISTING SHADING

ADDITIONAL SHADING



A03

SHADING IMPACT

AUGUST 21ST

07:45 PM

PROPOSED PROJECT @ 2653 OCTAVIA ST.

EXISTING SHADING

ADDITIONAL SHADING

A04

SHADING IMPACT

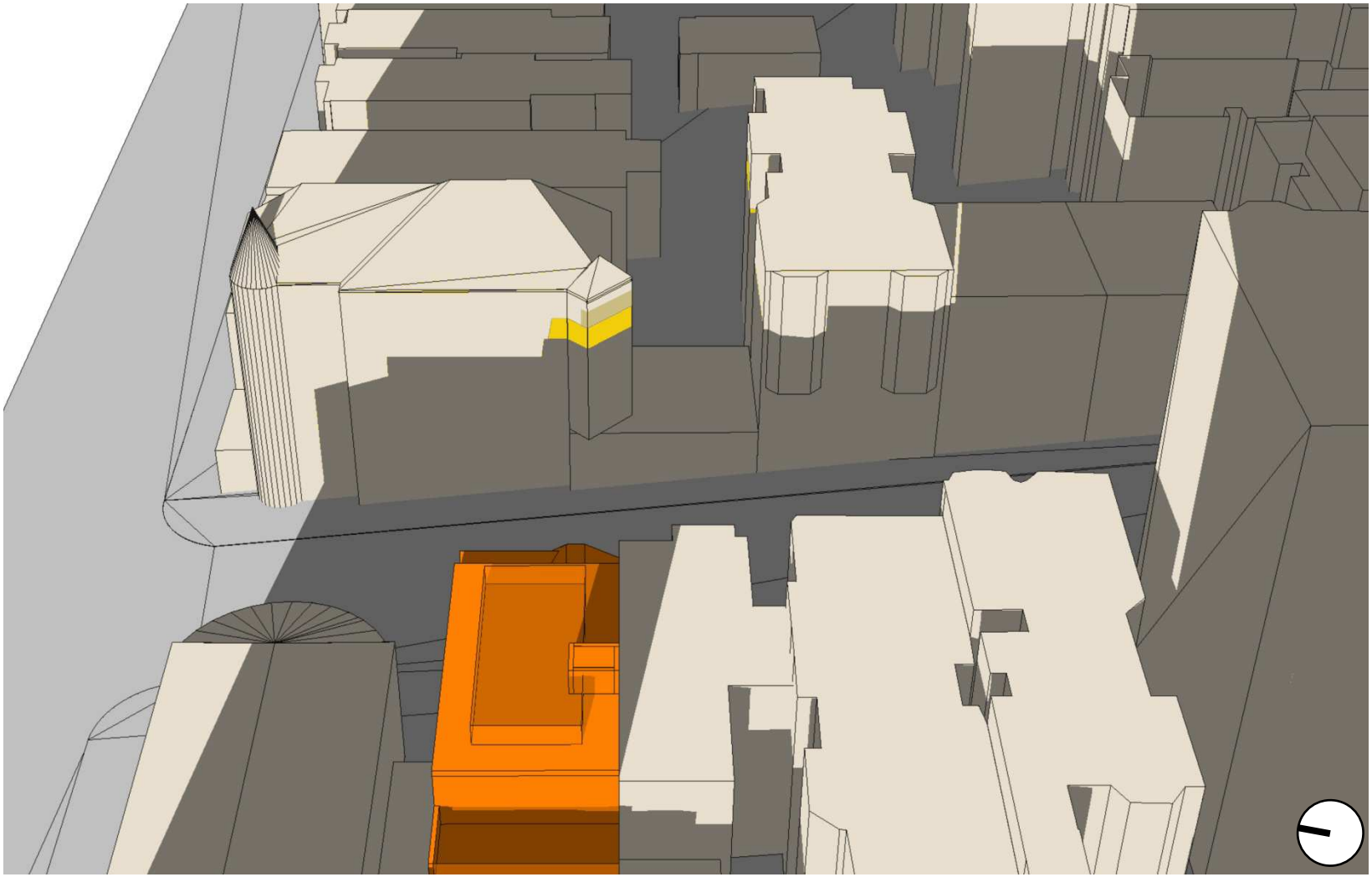
SEPTEMBER 21ST

07:00 PM

PROPOSED PROJECT @ 2653 OCTAVIA ST.

EXISTING SHADING

ADDITIONAL SHADING



A05

SHADING IMPACT

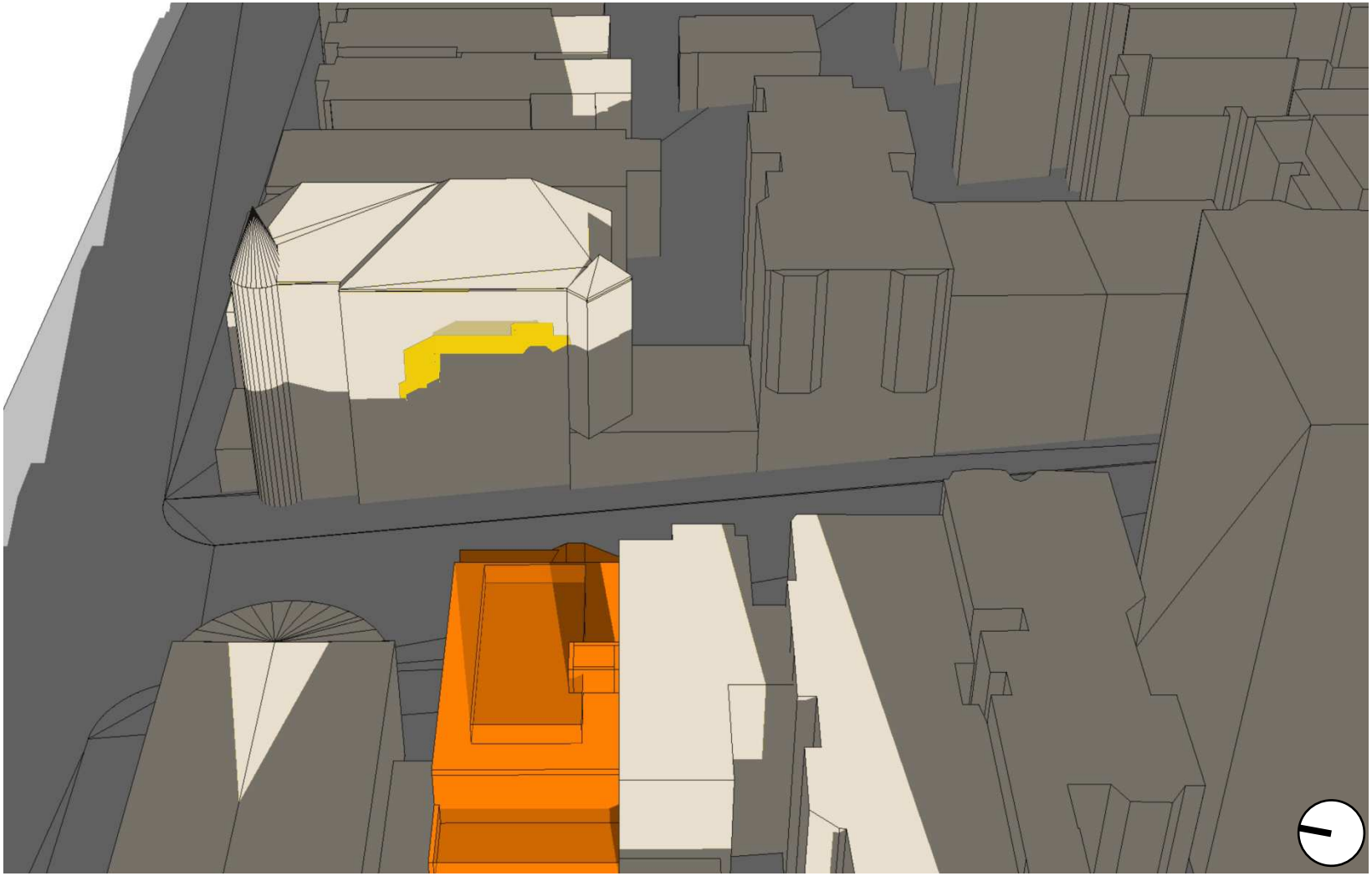
OCTOBER 21ST

06:00 PM

PROPOSED PROJECT @ 2653 OCTAVIA ST.

EXISTING SHADING

ADDITIONAL SHADING



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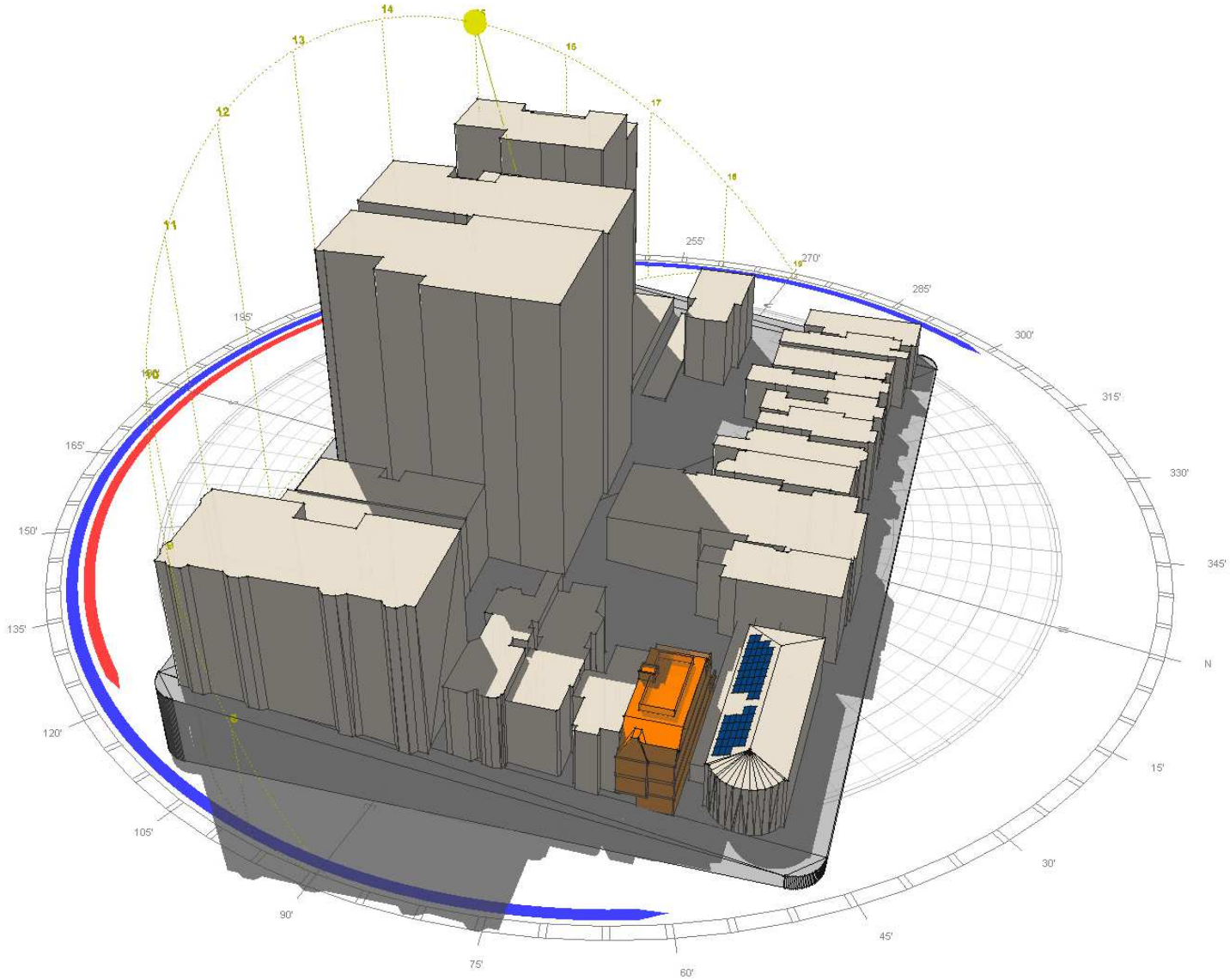
SHADING IMPACT ANALYSIS REPORT

FOR **2653 OCTAVIA STREET** | DECEMBER 1ST 2019



Report prepared by
Olivier PENNETIER, LEED AP, CEA
SYMPHYSIS
Bioclimatic Design Consulting
olivier@symphysis.net

TABLE OF CONTENTS

I. INTRODUCTION & ANALYSIS SUMMARY

SYMPHYSIS was asked to perform a shading analysis to assess the shading impact of a proposed vertical and horizontal addition, located at 2651-2653 Octavia Street, upon the adjacent building's photovoltaic system located on the roof of 1801 Green Street.

After performing the analysis, SYMPHYSIS concludes that **the proposed project at 2653 Octavia Street would reduce solar radiation by an average of 5.8%** on the existing photovoltaic system at 1801 Green Street.

The report herein describes the proposed project, as well as the methodology used for the shading analysis along with its results. ■

Olivier A. Pennetier, MArch, LEED AP
SYMPHYSIS Principal
12/01/2019

CABEC
California Association of Building Energy Consultants
CERTIFIED ENERGY ANALYST
CEA# R16-19-20172

Our services consist of professional opinions and conclusions developed in accordance with generally accepted environmental design, solar engineering and daylighting design principles and practices. Our conclusions and recommendations are based on the information provided by the clients, USGS Digital Elevation Model and publically available Geographic Information System database.

II. PROJECT LOCATION

The proposed project is located at 2653 Octavia Street, in the Northeastern corner of the Pacific Heights neighborhood, block 0554, lot 002. ■

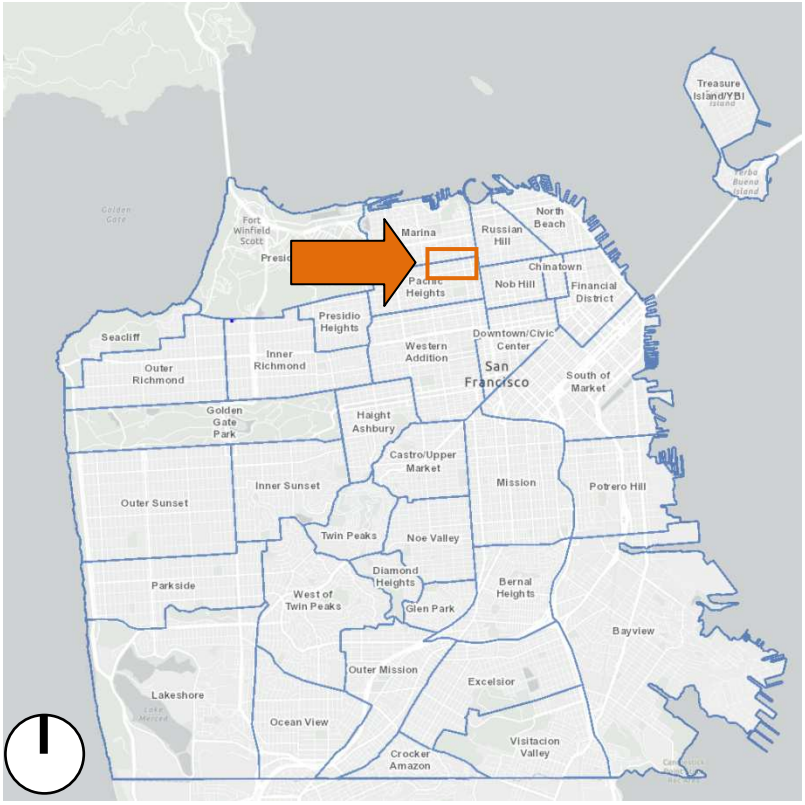


FIGURE 1: LOCATION MAP

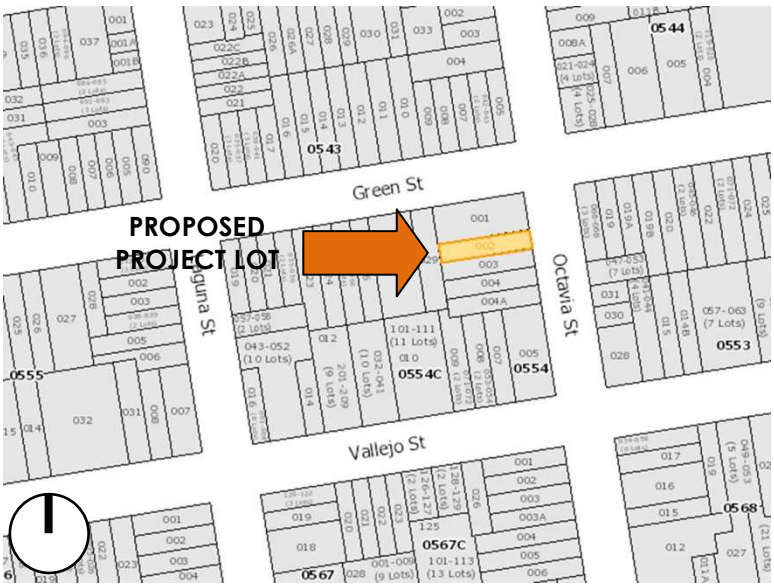


FIGURE 2: BLOCK MAP

III. PROPOSED PROJECT DESCRIPTION

The proposed design features a new fourth story addition on top of an existing 3 story single family residence. The new addition will increase the height of the building to 39'-10 ½".

The following images show the 3D massing models for the existing conditions and proposed design. ■

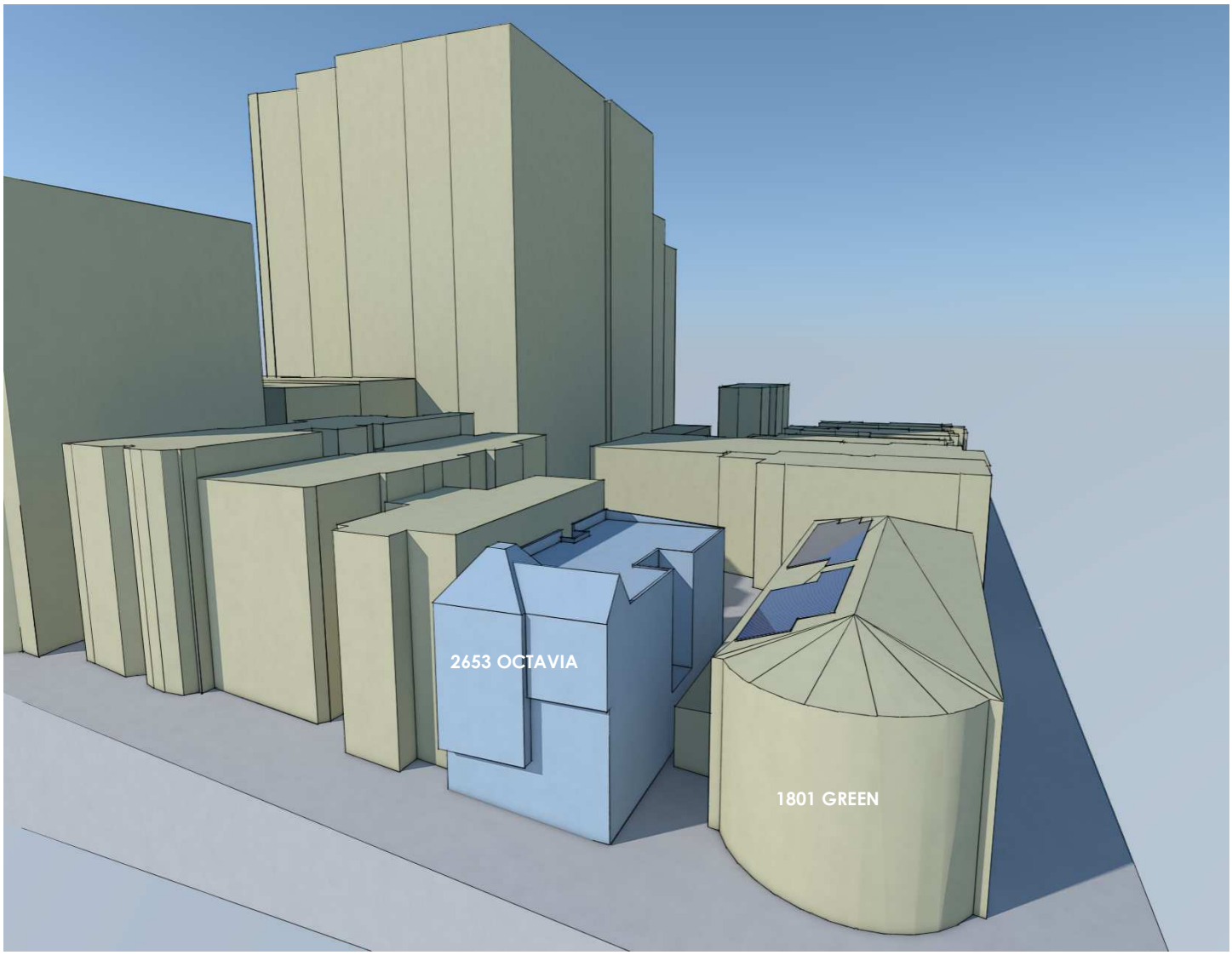


FIGURE 3: 3D MASSING MODEL OF THE EXISTING CONDITIONS.

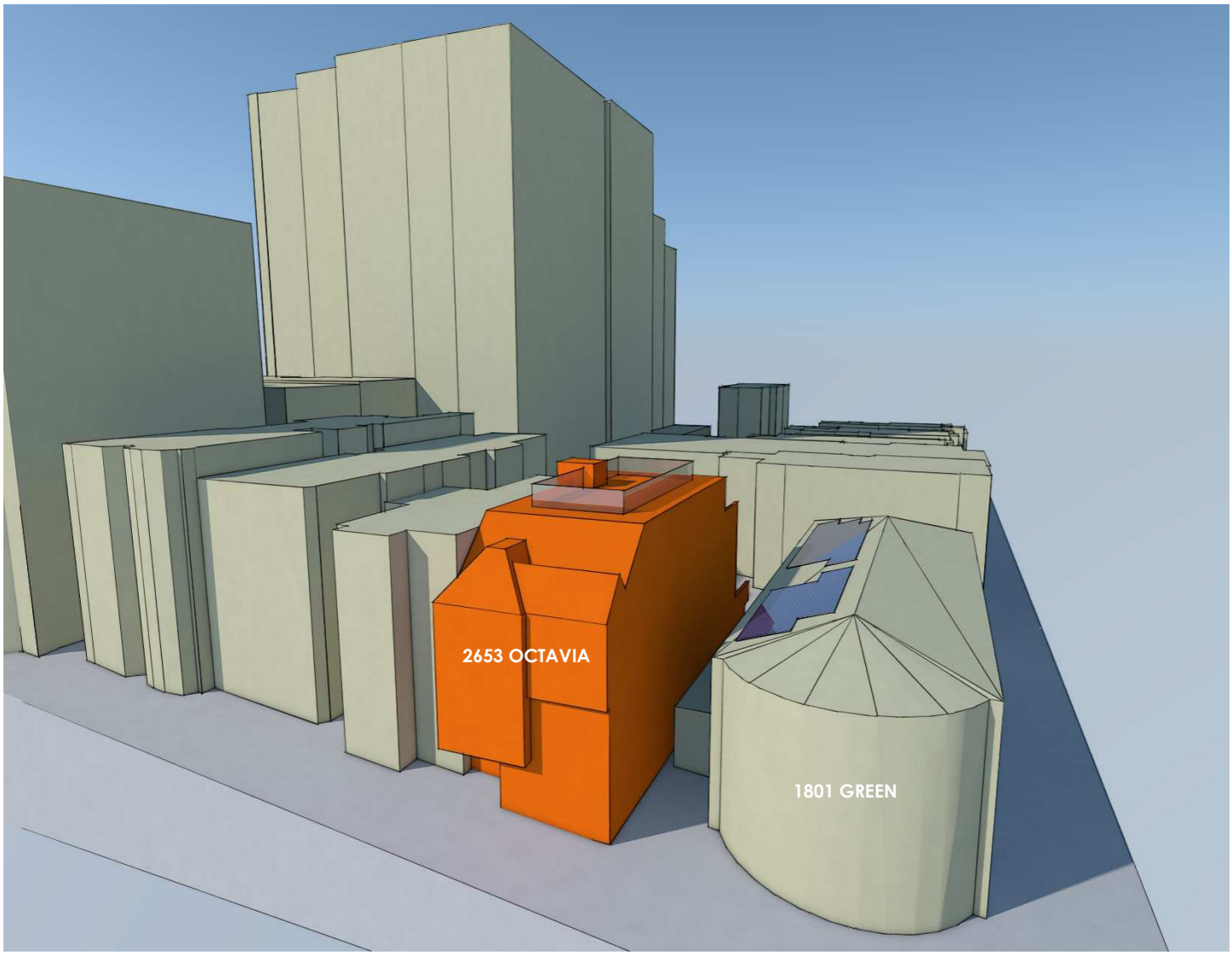


FIGURE 4: 3D MASSING MODEL OF THE PROPOSED DESIGN.

IV. ANALYSIS METHODOLOGY & FINDINGS

SYMPHYSIS utilized various tools to develop this shading impact analysis. Here is a breakdown of the analysis process, and the tools used at each stage of the analysis:

1) A 3D model of the existing and proposed conditions was created within a CAD software (ArchiCAD), using the 2D drawings from the architect of the proposed project. The surrounding buildings were constructed from the latest GIS (Geographic Information System) layer of San Francisco building footprints obtainable at data.sfgov.org. The heights of the buildings were derived from photogrammetric model from Google Earth. The size of the photovoltaic system located on the roof of the neighbor at 1801 Green Street was estimated from aerial photographs.

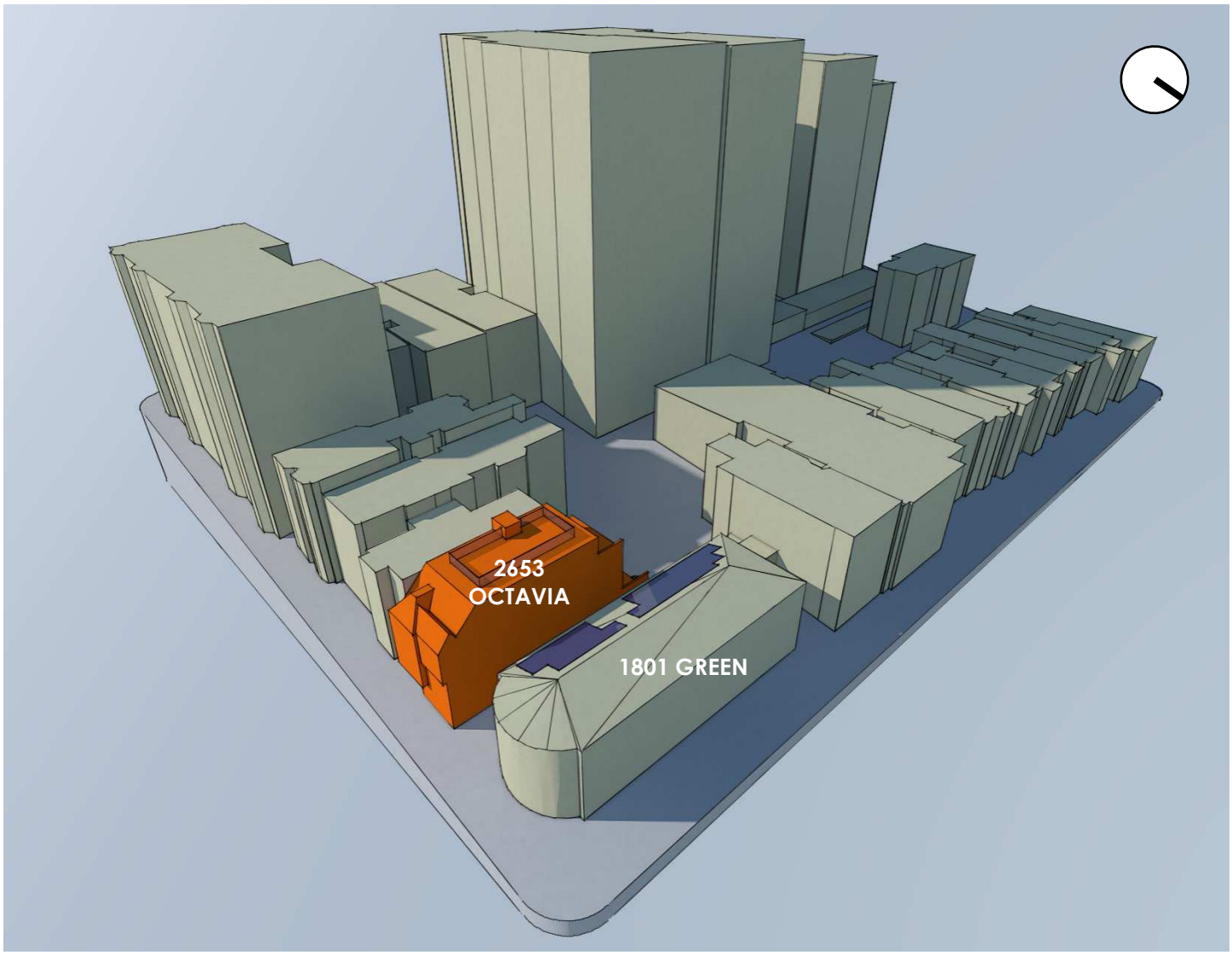


FIGURE 5: 3D MASSING MODEL OF PROPOSED CONDITIONS.

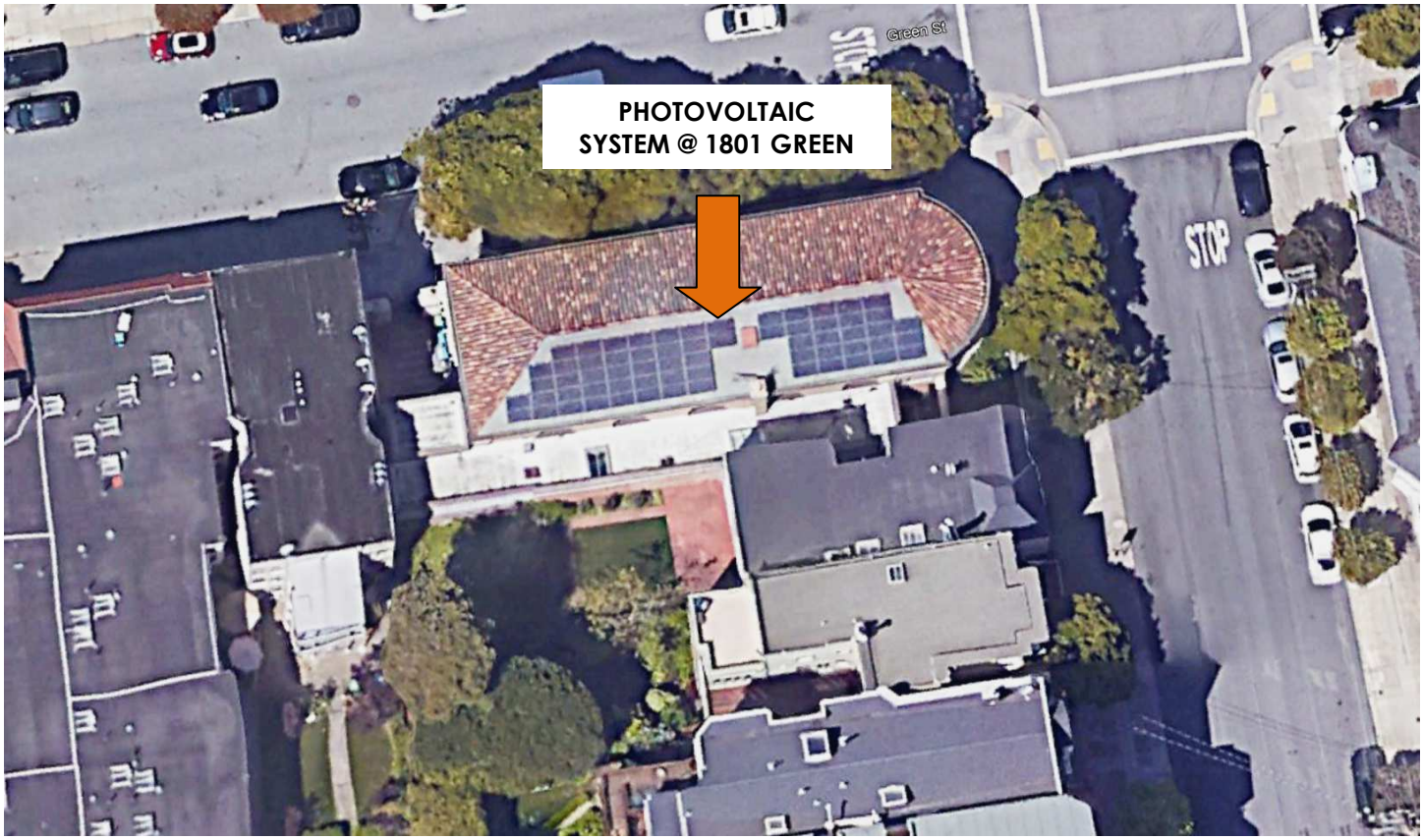


FIGURE 6: AERIAL PHOTOGRAPH OF THE PHOTOVOLTAIC SYSTEM AT 1801 GREEN STREET DATED 03/26/2018.

2) The 3D models were sent into a building performance analysis tool called Autodesk Ecotect to calculate shading and solar radiation specifically on the photovoltaic system of the Golden Gate Valley Library at 1801 Green Street. First the calculations were computed for the existing conditions, then another pass with the proposed design. The difference between the two conditions highlights the areas of the photovoltaic system that are most impacted by the proposed project. The calculations were set for the entire year, and every hours of the day.

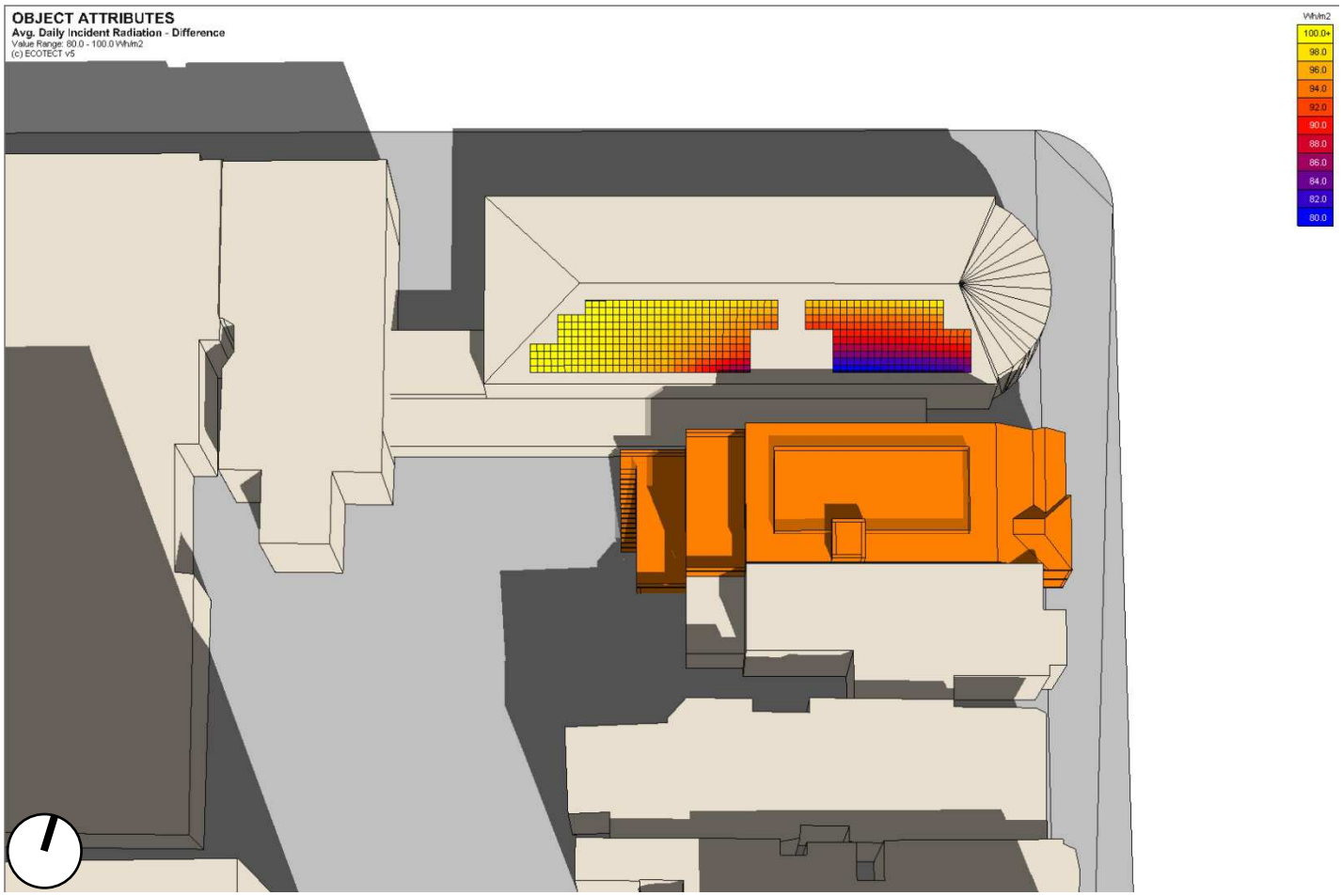


FIGURE 7: PERCENTAGE OF ANNUAL SOLAR RADIATION RECEIVED WITH THE PROPOSED PROJECT COMPARED TO EXISTING CONDITIONS.

After compiling all the results of the various analyses, SYMPHYSIS concludes that the proposed project at 2653 Octavia Street would reduce the amount of solar radiation on the existing photovoltaic system by 5.8%. Most of the shading impact would occur on the lower right (southeastern) panels located closer to the proposed project, and mainly between Fall and Winter, time at which solar radiation is weakest. At most, the solar array would see a 19.8% decrease in solar radiation on lower solar panels. Table 1 below highlights these numbers.

TABLE 1: PERCENTAGE DECREASE IN GLOBAL HORIZONTAL RADIATION AT ROOF LEVEL

	EXISTING CONDITIONS	PROPOSED CONDITIONS	PERCENTAGE DIFFERENCE
SOLAR RADIATION	4,514 Wh/m²/day	4,253 Wh/m²/day	**-5.8%**
East Array	4,596 Wh/m²/day	4,152 Wh/m²/day	-9.7%
West Array	4,452 Wh/m²/day	4,331 Wh/m²/day	-2.7%
SHADING	20.4%	29.0%	**+42.1%**
East Array	17.4%	29.4%	+69.0%
West Array	22.7%	28.7%	+26.4%

Of note, the photovoltaic system is broken down into two arrays. The Eastern array is quite a bit more impacted than the Western array, with a 69% increase in shading on the Eastern array versus a 26.4% shading increase on the Western array. Similarly, the Eastern array would see its incident solar radiation reduced by 9.7%, versus a solar radiation decrease of 2.7% on the Western array. ■

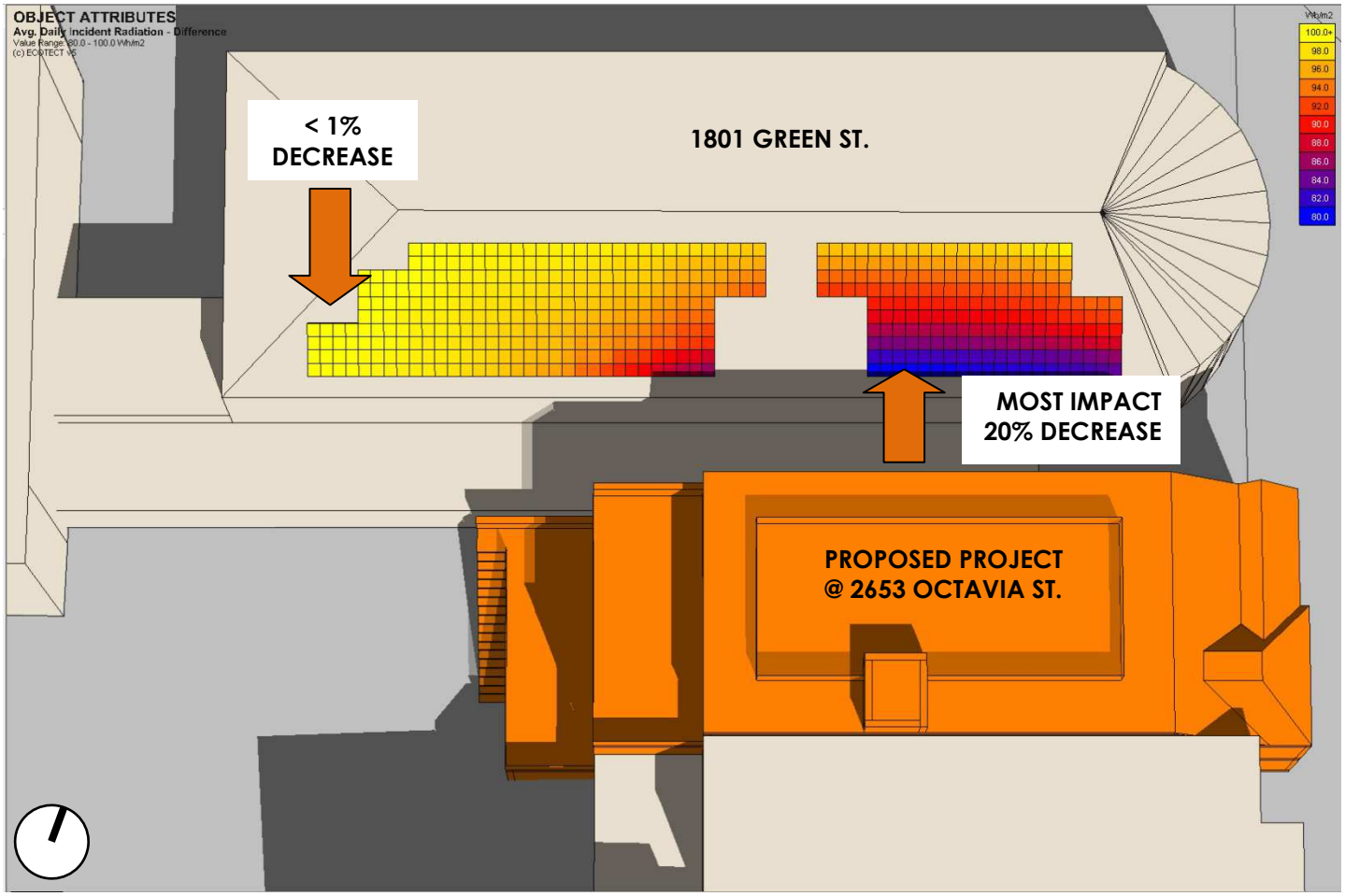


FIGURE 8: PERCENTAGE OF ANNUAL SOLAR RADIATION RECEIVED WITH THE PROPOSED PROJECT COMPARED TO EXISTING CONDITIONS.

The following diagram shows the shading difference between the existing and proposed conditions, highlighting in bright yellow the newly created shade on 1801 Green Street on the worst day of the year (the lowest sun angle on December 21st, and the highest solar radiation at solar noon).

The last diagram shows areas of the project's volume having the most impact on the shading of solar radiation upon the solar arrays. The brightest the dots, the highest-intensity solar radiation are being blocked by the project. As expected, the Northern-most areas of the fourth story addition's volume have the most impact on the solar panels.

A01

WINTER SOLSTICE SHADING ANALYSIS – PROPOSED vs EXISTING

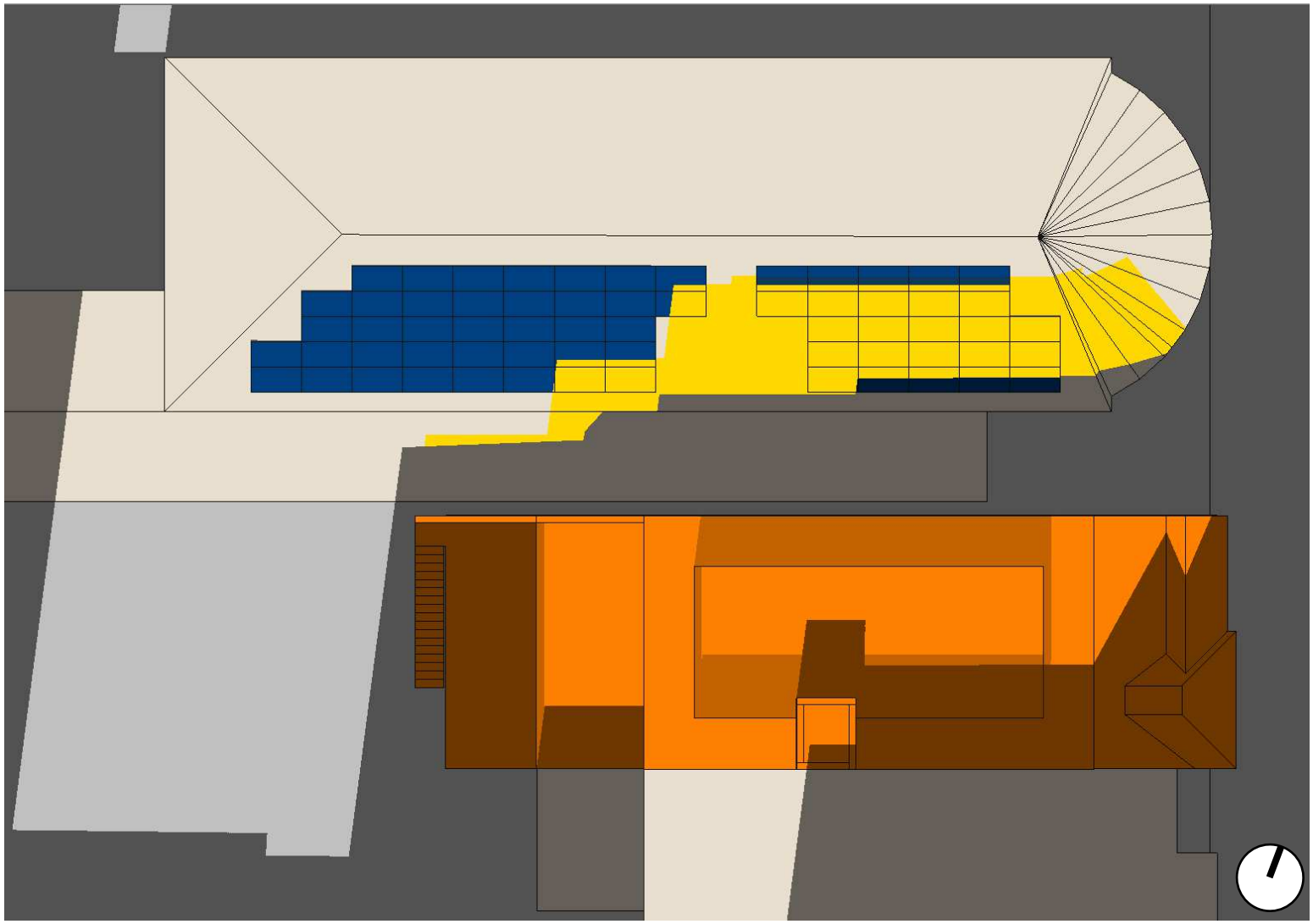
DECEMBER 21ST

12:00 PM Noon

PROPOSED PROJECT @ 2653 OCTAVIA ST.

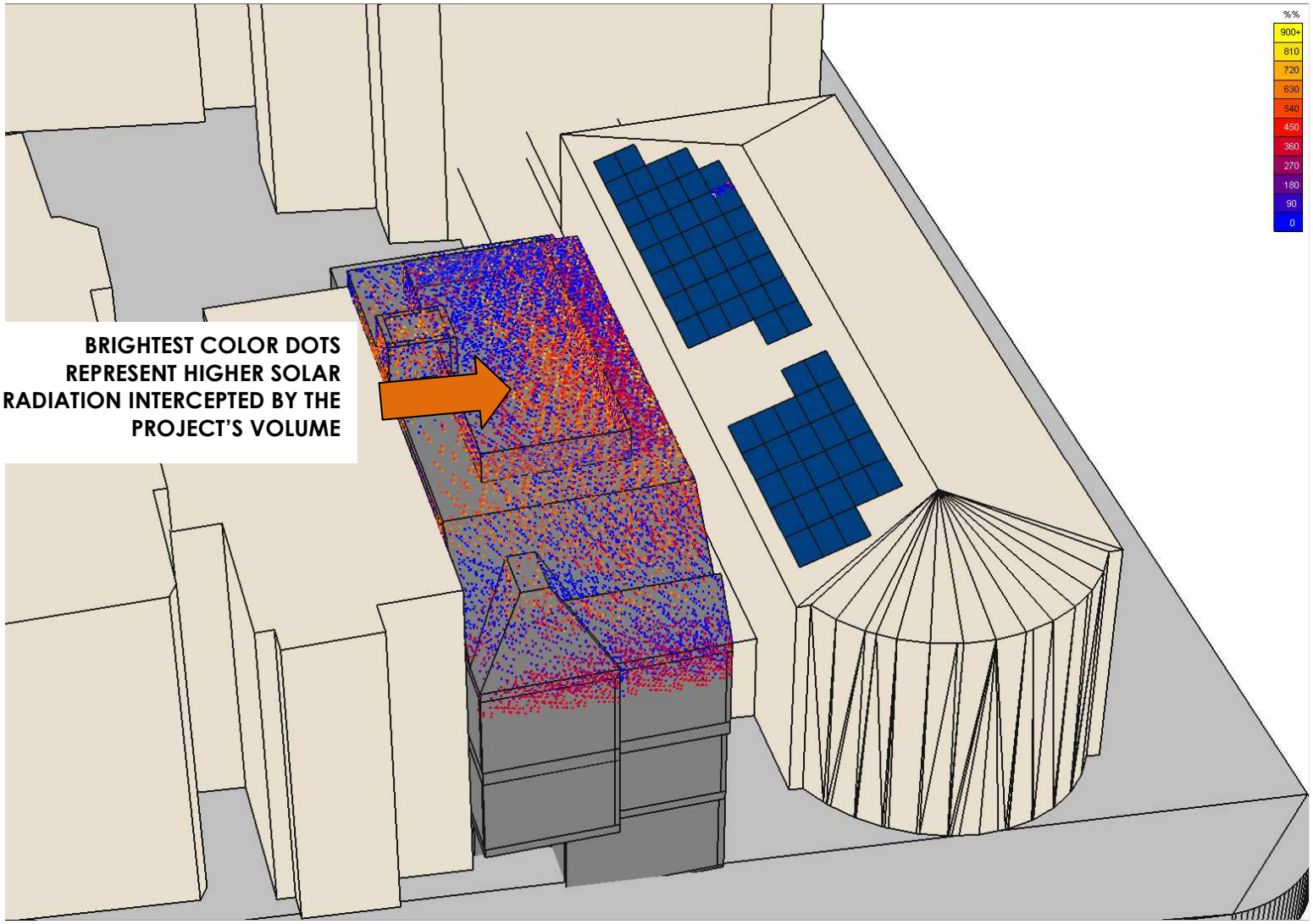
EXISTING SHADING

ADDITIONAL SHADING @ 1801 GREEN ST.



A02

VOLUME IMPACT



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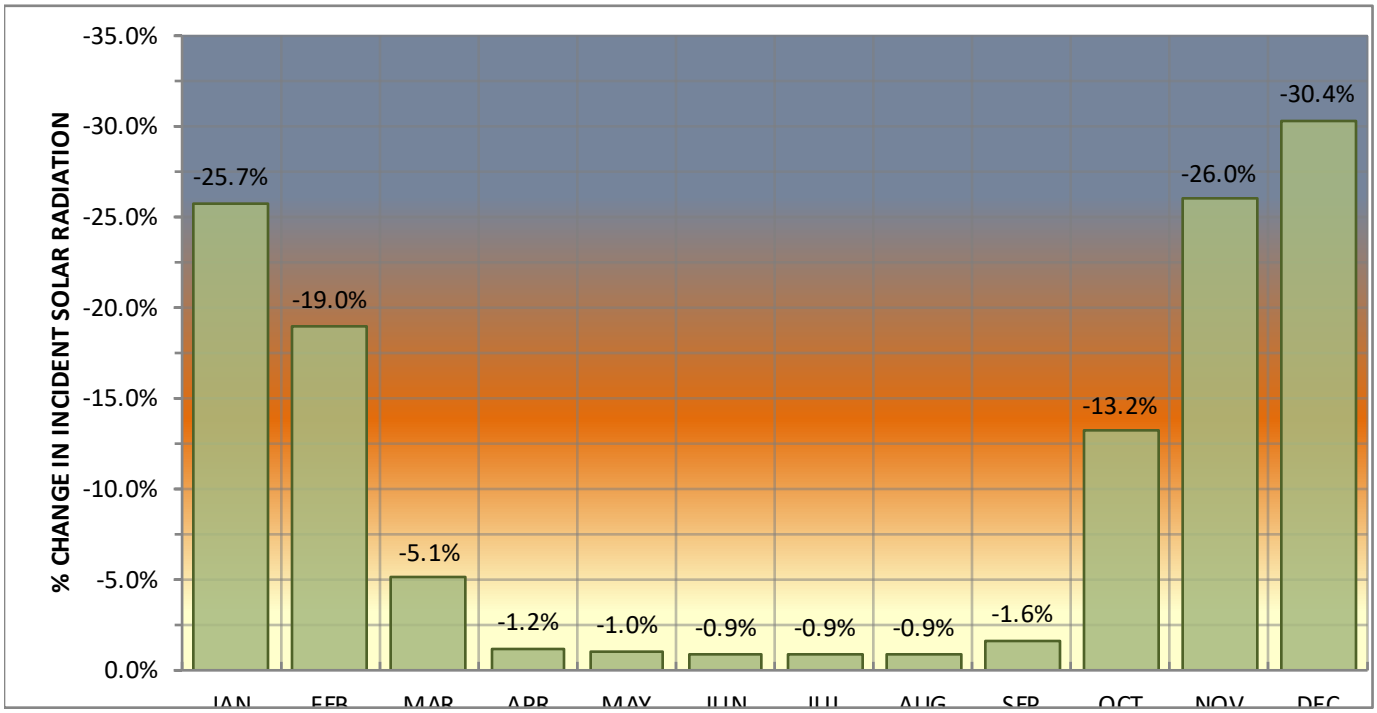
Golden Gate Library - 1801 Green Street INCIDENT SOLAR RADIATION (Wh/m2/DAY)			
ANALYSIS PERIOD	EXISTING CONDITIONS	PROPOSED CONDITIONS	% Δ
JAN	1,709	1,270	-25.7%
FEB	2,748	2,226	-19.0%
MAR	4,476	4,248	-5.1%
APR	5,683	5,614	-1.2%
MAY	6,212	6,147	-1.0%
JUN	6,792	6,730	-0.9%
JUL	6,765	6,705	-0.9%
AUG	6,323	6,267	-0.9%
SEP	5,755	5,663	-1.6%
OCT	3,571	3,100	-13.2%
NOV	2,316	1,714	-26.0%
DEC	1,667	1,161	-30.4%
YEAR	4,514	4,253	-5.8%

			Δ
SHADE @ 9AM	30-Sep	8-Sep	
	18-Mar	5-Apr	
NO-IMPACT DAYS	**197**	**157**	40
SHADE @ 10AM	15-Nov	12-Sep	
	5-Feb	2-Apr	
NO-IMPACT DAYS	**284**	**164**	120
SHADE @ 11AM	29-Nov	18-Sep	
	21-Jan	30-Mar	
NO-IMPACT DAYS	**313**	**173**	140
SHADE @ NOON	14-Dec	23-Sep	
	4-Jan	24-Mar	
NO-IMPACT DAYS	**345**	**184**	161
SHADE @ 1PM	25-Sep	26-Sep	
	21-Mar	21-Mar	
NO-IMPACT DAYS	**189**	**190**	-1
SHADE @ 2PM	1-Oct	1-Oct	
	16-Mar	15-Mar	
NO-IMPACT DAYS	**200**	**201**	-1
SHADE @ 3PM	6-Oct	6-Oct	
	11-Mar	11-Mar	
NO-IMPACT DAYS	**210**	**210**	0

The tall buildings (1911, 1921, 1960 and 1990 Vallejo) south of the Golden Gate Library shade the solar panels after 3pm, therefore there is no effect of the Octavia addition during late afternoon and evening hours.


% CHANGE IN INCIDENT SOLAR RADIATION
-35.0%
-30.0%
-25.0%
-20.0%
-15.0%
-10.0%
-5.0%
0.0%
-25.7%
-19.0%
-5.1%
-1.2%
-1.0%
-0.9%
-0.9%
-0.9%
-1.6%
-13.2%
-26.0%
-30.4%
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC

To determine the net dollar effect of shading due to the addition at 2651-53 Octavia, Symphysis compared two methods of radiation calculation. The parameters used is a 15KWh system, with 20% efficacy, existing shading at 20.4% and proposed shading at 29%

1) PV Watts Calculator uses a radiation base of 4.85 Kwh/m2/day.
   This calculator overstates the sunlight conditions as it uses SFO as the locator, which is sunnier place than our district.
2) SFOG.US uses a radiation base of 4.6 Kwh/M2/Day, which is more accurate of the sunlight conditions at 2651-53 Octavia and the Golden Gate Library.

The net effect of the addition at 2651-53 Octavia will be a loss of power generation at the Golden Gate Library of 5.8% annually. Using the commercial electrical rate of $.09 per kWh, this translates to $178-$187 annually.

https://pvwatts.nrel.gov/pvwatts.php

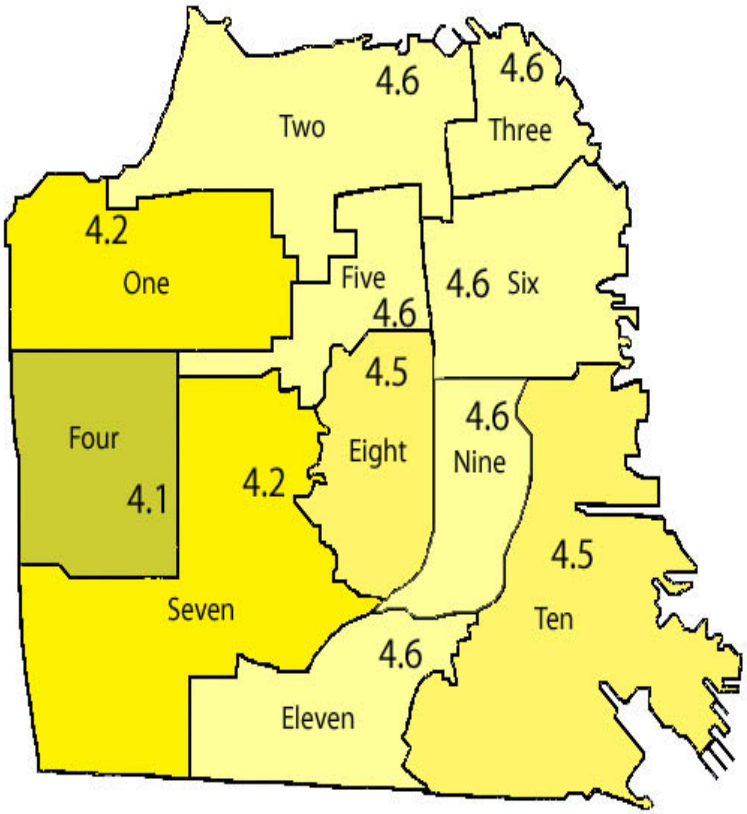
USING PVWATTS 4.85 kWh/M2/DAY BASE RADIATION, 15 KWh System, 20% efficacy

EXISTING CONDITIONS: 20.4% shading				PROPOSED CONDITIONS: 29% shading			
Month	Solar Radiation (kWh / m2 / day)	AC Energy (kWh)	Value ($)	Solar Radiation (kWh / m2 / day)	AC Energy (kWh)	Value ($)	
January	3.14	961	86	3.14	856	77	
February	3.98	1101	99	3.98	981	88	
March	5.53	1,653	148	5.53	1,473	132	
April	6.72	1,948	175	6.72	1,736	156	
May	7.05	2,090	188	7.05	1,862	167	
June	7.39	2,108	189	7.39	1,879	169	
July	6.92	2,020	181	6.92	1,800	162	
August	6.42	1,869	168	6.42	1,665	150	
September	6.26	1,745	157	6.26	1,555	140	
October	5.05	1,487	134	5.05	1,325	119	
November	3.89	1,131	102	3.89	1,007	90	
December	3.15	964	87	3.15	858	77	
Annual	**5.46**	**19,077**	**$1,714**	**5.46**	**16,997**	**$1,527**	**$187**

https://www.sfog.us/solar/sfsolar.htm

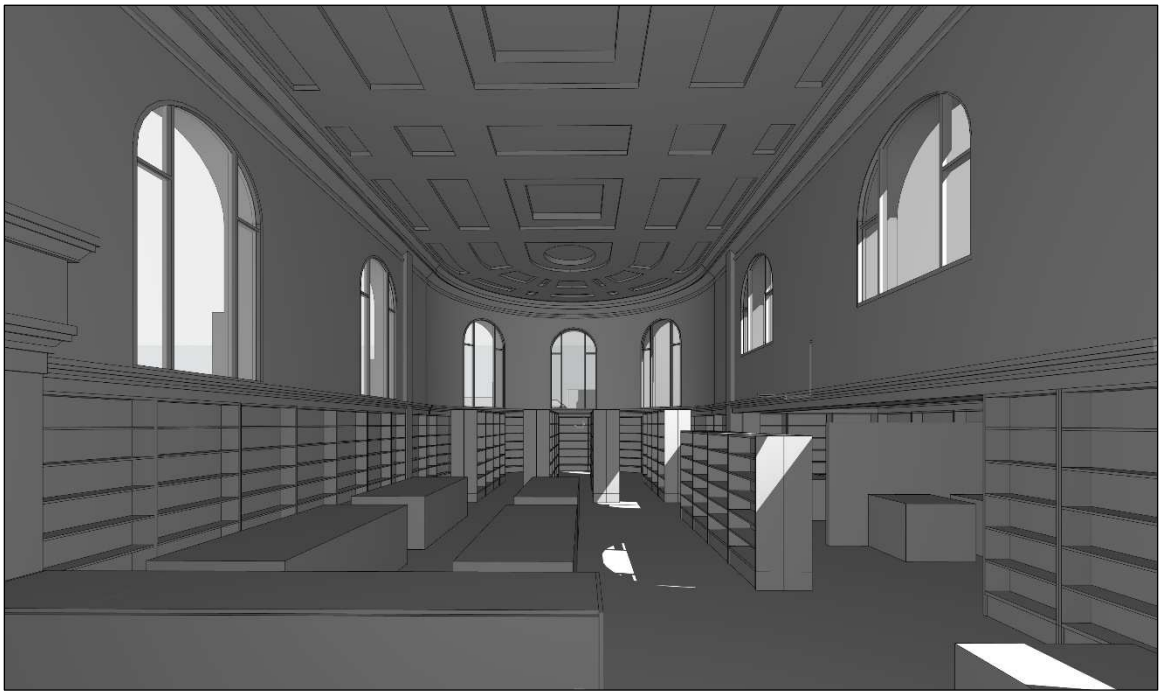
USING SFOG.US 4.6 kWh/M2/DAY BASE RADIATION, 15 kWh system, 20% efficacy

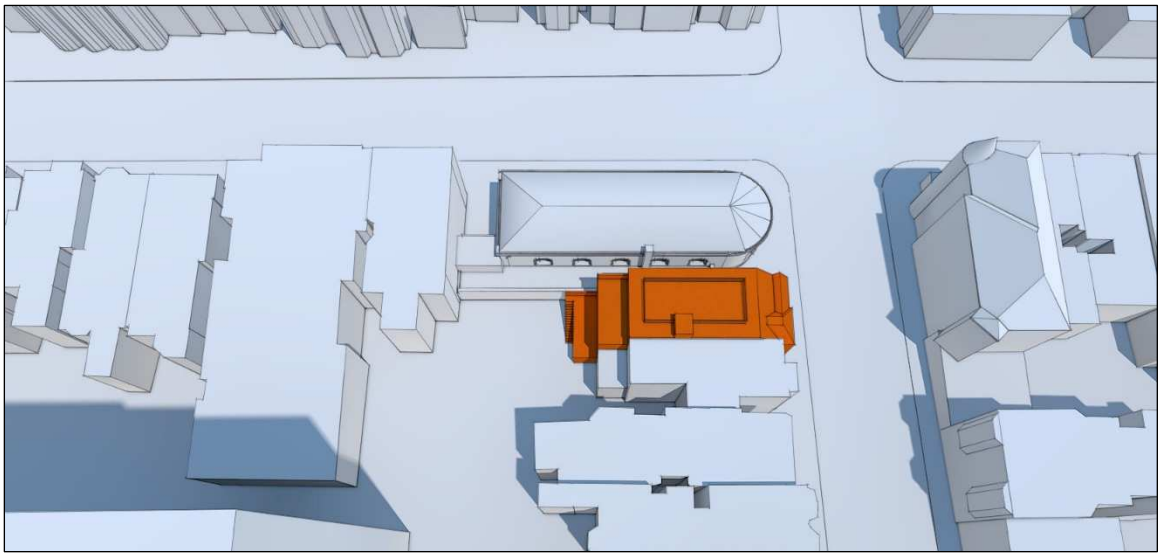
EXISTING CONDITIONS: 20.4% SHADING				PROPOSED CONDITIONS:29.0% SHADING			
Month	Solar Radiation (kWh / m2 / day)	AC Energy (kWh)	Value ($)	Solar Radiation (kWh / m2 / day)	AC Energy (kWh)	Value ($)	
January	3.14	913	82	3.14	813	73	
February	3.98	1,046	94	3.98	932	84	
March	5.53	1,570	141	5.53	1,399	125	
April	6.72	1,851	166	6.72	1,649	148	
May	7.05	1,986	179	7.05	1,769	159	
June	7.39	2,003	180	7.39	1,785	161	
July	6.92	1,919	172	6.92	1,710	154	
August	6.42	1,776	160	6.42	1,582	143	
September	6.26	1,658	149	6.26	1,477	133	
October	5.05	1,413	127	5.05	1,259	113	
November	3.89	1,074	97	3.89	957	86	
December	3.15	916	83	3.15	815	73	
Annual	**5.46**	**18,123**	**$1,628**	**5.46**	**16,147**	**$1,451**	**$178**



DAYLIGHT IMPACT ANALYSIS REPORT

FOR **2651-53 OCTAVIA STREET** | DECEMBER 13TH 2020





Report prepared by
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SYMPHYSIS
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TABLE OF CONTENTS

I. INTRODUCTION & ANALYSIS SUMMARY

SYMPHYSIS was asked to perform a daylight study to assess the impact of the proposed addition project at 2651-2653 Octavia Street (Planning Department Case # 2018-011022PRJ) upon the natural light (daylight) levels and quality at the main floor reading room of the Golden Gate Valley Branch library. Although this study is not required for the proposed project's environmental review under CEQA, it was conducted in response to some of the comments made at the July 28, 2020 public hearing before the San Francisco Board of Supervisors regarding the appeal of the categorical exemption issued by the San Francisco Planning Department on September 5, 2019 for the 2651-2653 Octavia Street project.

After performing the daylighting analysis, SYMPHYSIS concludes that **the proposed project at 2653 Octavia Street will not reduce the visual comfort of the library's patrons** in any significant way, when compared to the current existing conditions. The proposed project reduces the libraries' averaged illumination levels minimally for clear sky (-1.8%), overcast sky (-4%), and partly cloudy sky (-11.1%). For both the overcast and partly cloudy skies, the existing conditions require electrical illumination at ALL times to provide the necessary illumination recommended for libraries (300-500 LUX), thus even the small reductions with the proposed condition are irrelevant.

The report herein describes the proposed project, the methodology used for the daylight study, and the results that led to the conclusion. ■

Olivier A. Pennetier, M.Arch, LEED AP
SYMPHYSIS Principal
12/13/2020

CABEC
California Association of Building Energy Consultants
CERTIFIED ENERGY ANALYST
CEA# R16-19-2017

Our services consist of professional opinions and conclusions developed in accordance with generally accepted environmental design, solar engineering and daylighting design principles and practices. Our conclusions and recommendations are based on the information provided by the clients, USGS Digital Elevation Model and publicly available Geographic Information System database.

II. PROJECT LOCATION

The proposed project is located at 2653 Octavia Street, in the Northeastern corner of the Pacific Heights neighborhood, block 0554, lot 002. ■

FIGURE **1**: LOCATION MAP

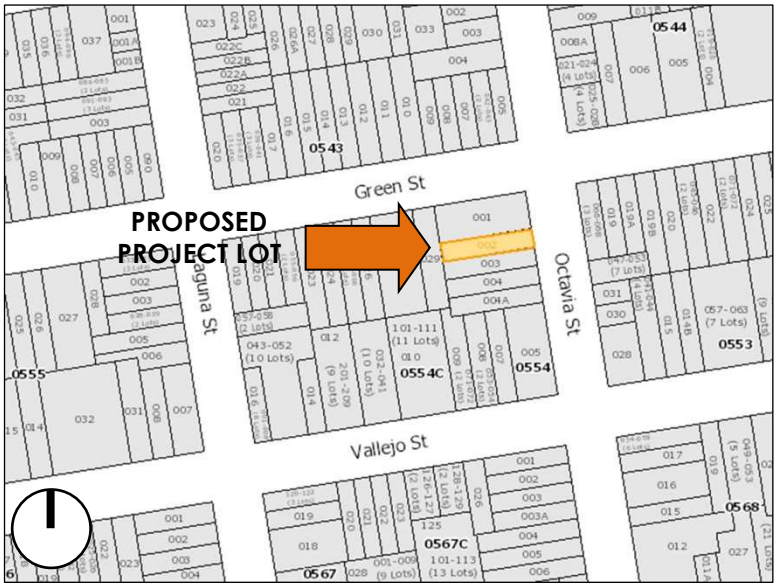


FIGURE **2**: BLOCK MAP

III. PROPOSED PROJECT DESCRIPTION

The proposed design features a new fourth story addition on top of an existing 3 story single family residence. The new addition will increase the height of the building to 39'-10 ½", and the building will be pushed toward the rear yard by an additional 19.5 feet at the lowest level.

The following images show the 3D massing models for the existing conditions and proposed design. ■

FIGURE **3**: 3D MASSING MODEL OF THE EXISTING CONDITIONS.

FIGURE **4**: 3D MASSING MODEL OF THE PROPOSED DESIGN.

FIGURE **5**: AERIAL VIEW OF THE CURRENT CONDITIONS AS OF 07/06/2020.

IV. ANALYSES RESULTS & CONCLUSIONS

This chapter presents the analyses results and conclusions of the study. The methodology used for each analysis is explained briefly in this chapter; for the full detail and description, see chapter V, Analysis Methodology.

A. DAYLIGHT AUTONOMY

The Daylight Autonomy analysis calculates the percentage of time, during the libraries open hours (10am - 8 pm), **when supplemental light is NOT required** to meet acceptable illuminance levels. The IES recommended values for libraries are 300 LUX for stacks and 500 LUX for task and reading areas. To calculate an overall difference at the highest-level analysis, we used an average of 400 LUX as our target, and averaged all light sensor points (2,406) in the library.

In the table below, the analysis shows that there is minimal difference (-1.7 %) between the existing and proposed conditions, when NO supplemental lighting is necessary.

TABLE **1**: DAYLIGHT AUTONOMY VALUES FOR THE **ENTIRE LIBRARY MAIN FLOOR**.

EXISTING DAYLIGHT AUTONOMY	47.80%
PROPOSED DAYLIGHT AUTONOMY	46.97%
% DIFFERENCE	**-1.7%**

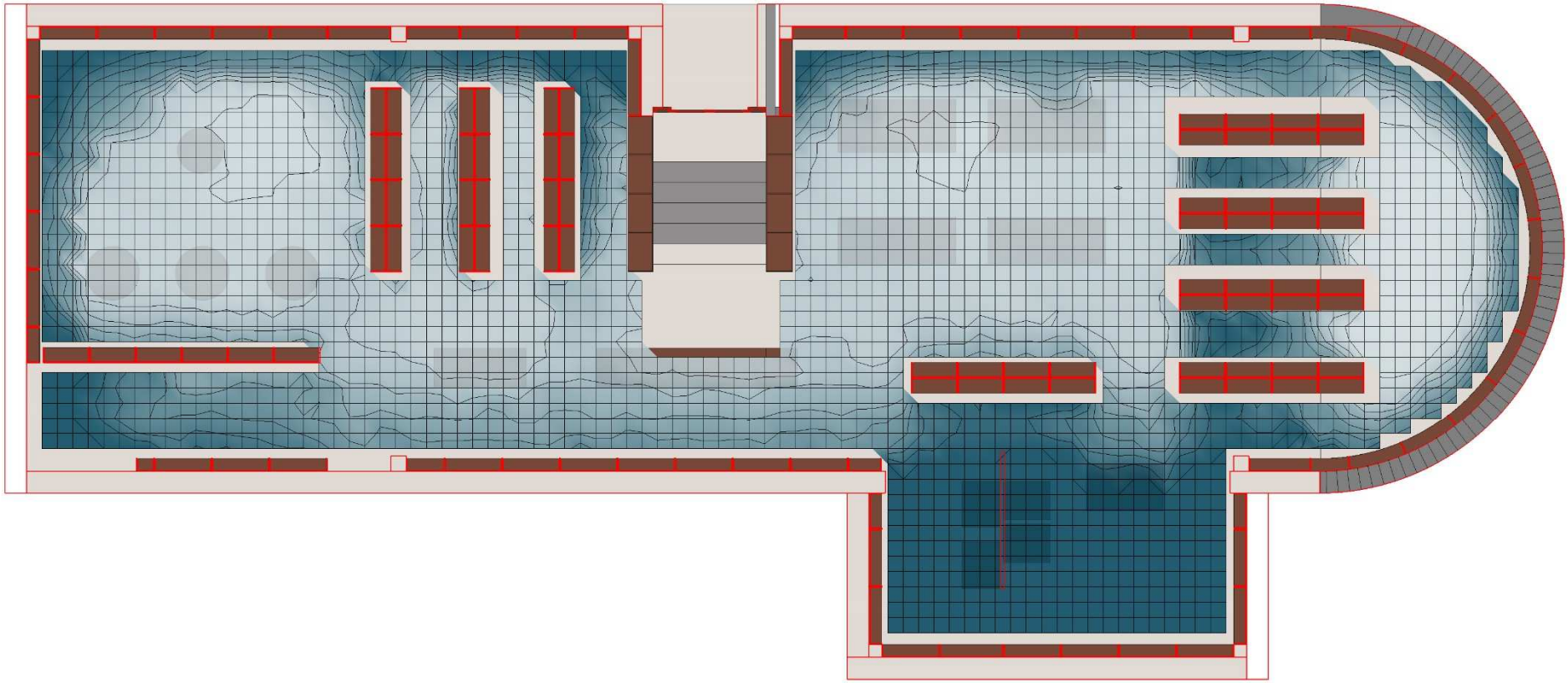
The diagrams below – **A01** (existing) and **A02** (proposed) show the analysis of the annual Daylight Autonomy in specific locations of the library. The darkest blue means that the space requires artificial light 100% of the time and the lightest white means that the space requires supplemental light 0% of the time. Note that there is very little difference between the existing and the proposed conditions and that artificial light is required in all areas of the library at a minimum of 52.2% of the time.

A01

DAYLIGHT AUTONOMY FOR EXISTING CONDITIONS

TARGET:400 LUX 10:00 AM – 08:00 PM | MONDAY THROUGH SUNDAY | ALL YEAR

Daylight Analysis
Daylight Autonomy (400 Lux)
View Range: 0 - 100 %
lu: 03/08/21 v0



% OF TIME AT 400 LUX

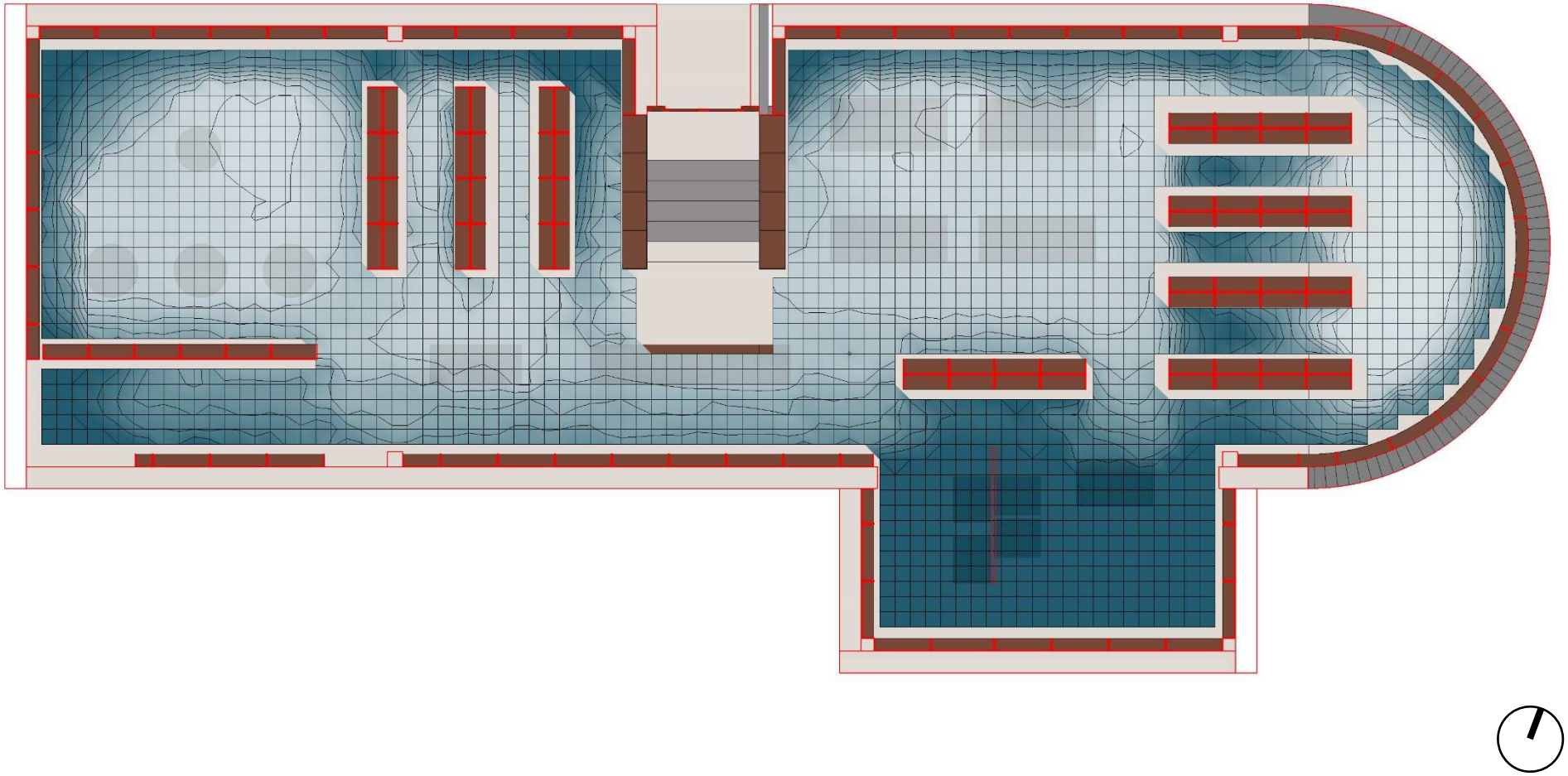
100	90	80	70	60	50	40	30	20	10	0

A02

DAYLIGHT AUTONOMY FOR PROPOSED CONDITIONS

TARGET:400 LUX 10:00 AM – 08:00 PM | MONDAY THROUGH SUNDAY | ALL YEAR

Daylight Analysis
Daylight Autonomy (400 Lux)
View Range: 0 - 100 %
to 2019/12/ v2



% OF TIME AT 400 LUX

100	90	80	70	60	50	40	30	20	10	0

B. ILLUMINANCE ANALYSIS:

Illuminance analysis assesses the light levels on working planes, as defined in the Analysis Methodology, chapter V. For this study, the analysis was completed for the entire library's main floor. Also, to obtain a more granular spatial assessment, analysis was completed separately for the most used areas of the library - the adult reading area and the children reading area.
To encompass a wide range of various daylighting conditions, the study simulated light levels for the following dates and sky conditions:

- Best-case Illuminance - June 21st (highest sun angle), and clear sky for the times 9am, 12pm, and 3pm.
- Intermediate-case Illuminance - September 21st (mid sun angle, which is also similar to March 21st), partly cloudy sky for the times 9am, 12pm, 3pm.
- Worst-case Illuminance - overcast sky, where all days and times are the same since there is no sun.

The following tables and graphs present the results of the illuminance (light levels) calculations for the selected various conditions and locations within the library:

TABLE **2**: AVERAGE ILLUMINANCE (LIGHT LEVELS) VALUES FOR THE **ENTIRE LIBRARY MAIN FLOOR** (LUX).

SKY	**OVERCAST SKY**	**PARTLY CLOUDY SKY**			**CLEAR SKY**		
DAY	*ALL DAYS OF YEAR*	*SEPTEMBER 21ST*			*JUNE 21ST*		
TIME	ALL TIMES OF DAY	9:00 AM	12:00 PM	03:00 PM	9:00 AM	12:00 PM	03:00 PM
EXISTING AVG LUX	110.12	186.88	191.62	116.27	828.52	500.69	374.11
PROPOSED AVG LUX	105.75	177.42	144.94	111.63	812.93	478.36	377.57
% DIFFERENCE	-4.0%	-5.1%	-24.4%	-4.0%	-1.9%	-4.5%	0.9%
DAILY AVERAGE	**-4.0%**	**-11.1%**			**-1.8%**		

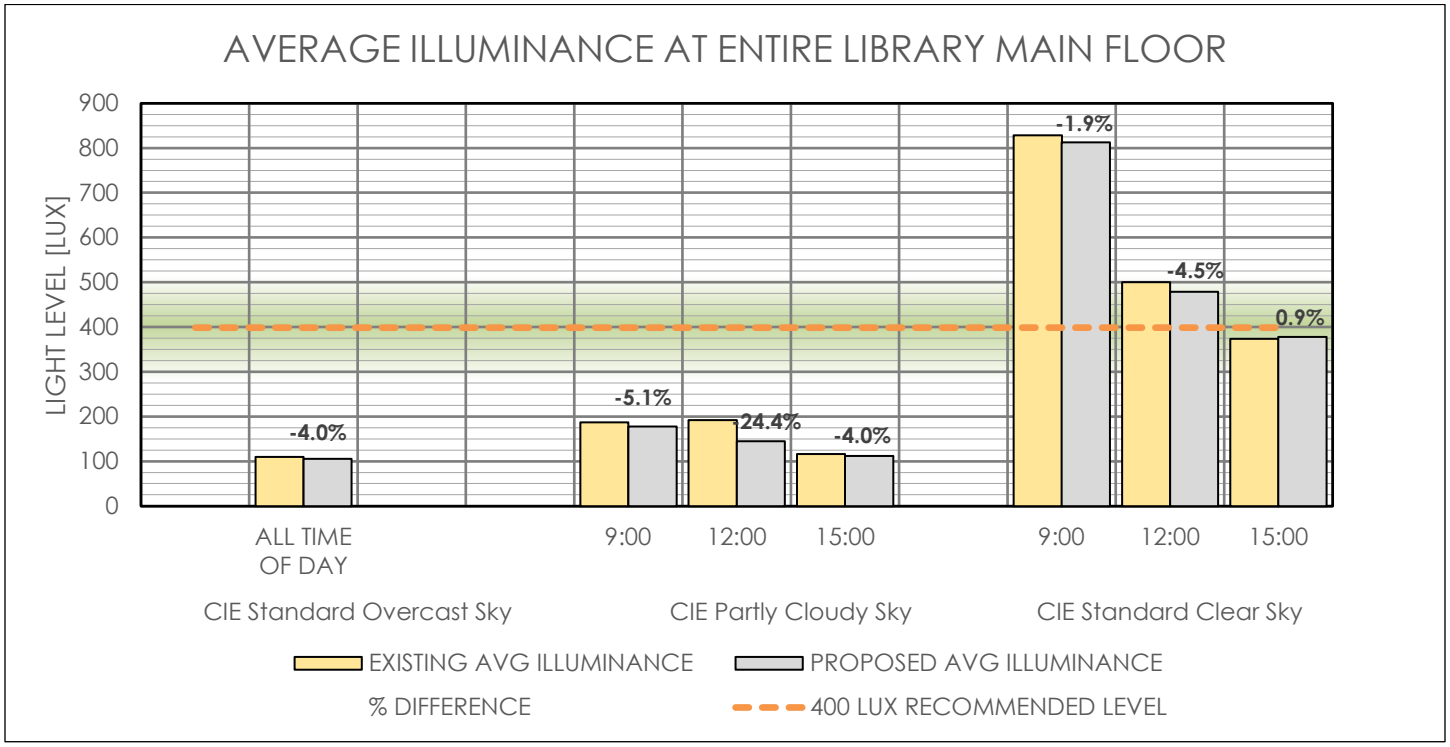


FIGURE **7**: GRAPH OF AVERAGE ILLUMINANCE VALUES FOR THE **ENTIRE LIBRARY MAIN FLOOR.**

The average illumination results show that in the best-case scenario the proposed condition of the library's light is reduced by 1.8%, the intermediate scenario reduction is -11.1% and the worst-case scenario reduction is -4%. **Of importance to note, as indicated by the orange line at 400 LUX, for both the intermediate-case (partly cloudy) and the worst-case (overcast) , the existing and the proposed conditions will require supplemental electric lights to meet the necessary LUX requirement for libraries.**

TABLE **3**: AVERAGE ILLUMINANCE (LIGHT LEVELS) VALUES FOR THE **ADULTS READING AREA** (LUX).

SKY	**OVERCAST SKY**	**PARTLY CLOUDY SKY**			**CLEAR SKY**		
DAY	*ALL DAYS OF YEAR*	*SEPTEMBER 21ST*			*JUNE 21ST*		
TIME	ALL TIMES OF DAY	9:00 AM	12:00 PM	03:00 PM	9:00 AM	12:00 PM	03:00 PM
EXISTING AVG LUX	155.87	148.35	151.01	164.66	532.84	691.07	557.99
PROPOSED AVG LUX	148.08	142.86	129.63	154.6	504.86	635.95	555.46
% DIFFERENCE	-5.0%	-3.7%	-14.2%	-6.1%	-5.3%	-8.0%	-0.5%
DAILY AVERAGE	**-5.0%**	**-8.0%**			**-4.6%**		

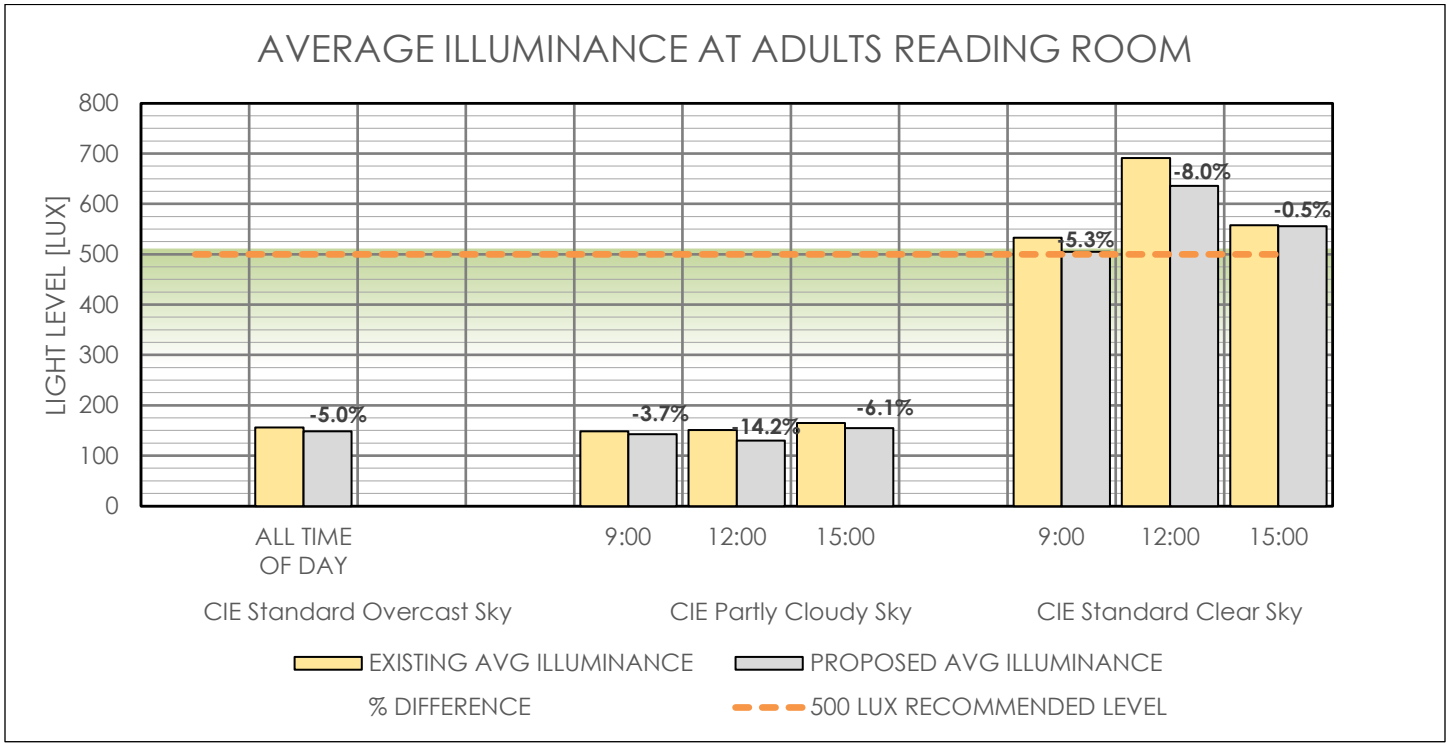


FIGURE **8**: GRAPH OF AVERAGE ILLUMINANCE VALUES FOR THE **ADULTS READING ROOM**.

TABLE **4**: AVERAGE ILLUMINANCE (LIGHT LEVELS) VALUES FOR THE **CHILDREN READING AREA** (LUX).

SKY	OVERCAST SKY	PARTLY CLOUDY SKY			CLEAR SKY		
DAY	*ALL DAYS OF YEAR*	*SEPTEMBER 21ST*			*JUNE 21ST*		
TIME	ALL TIMES OF DAY	9:00 AM	12:00 PM	03:00 PM	9:00 AM	12:00 PM	03:00 PM
EXISTING AVG LUX	128.06	165.49	149.74	131.55	482.92	489.05	393.62
PROPOSED AVG LUX	126.3	146.72	142.29	130.76	468.41	493.6	389.22
% DIFFERENCE	-1.4%	-11.3%	-5.0%	-0.6%	-3.0%	0.9%	-1.1%
DAILY AVERAGE	**-1.4%**	**-5.6%**			**-1.1%**		

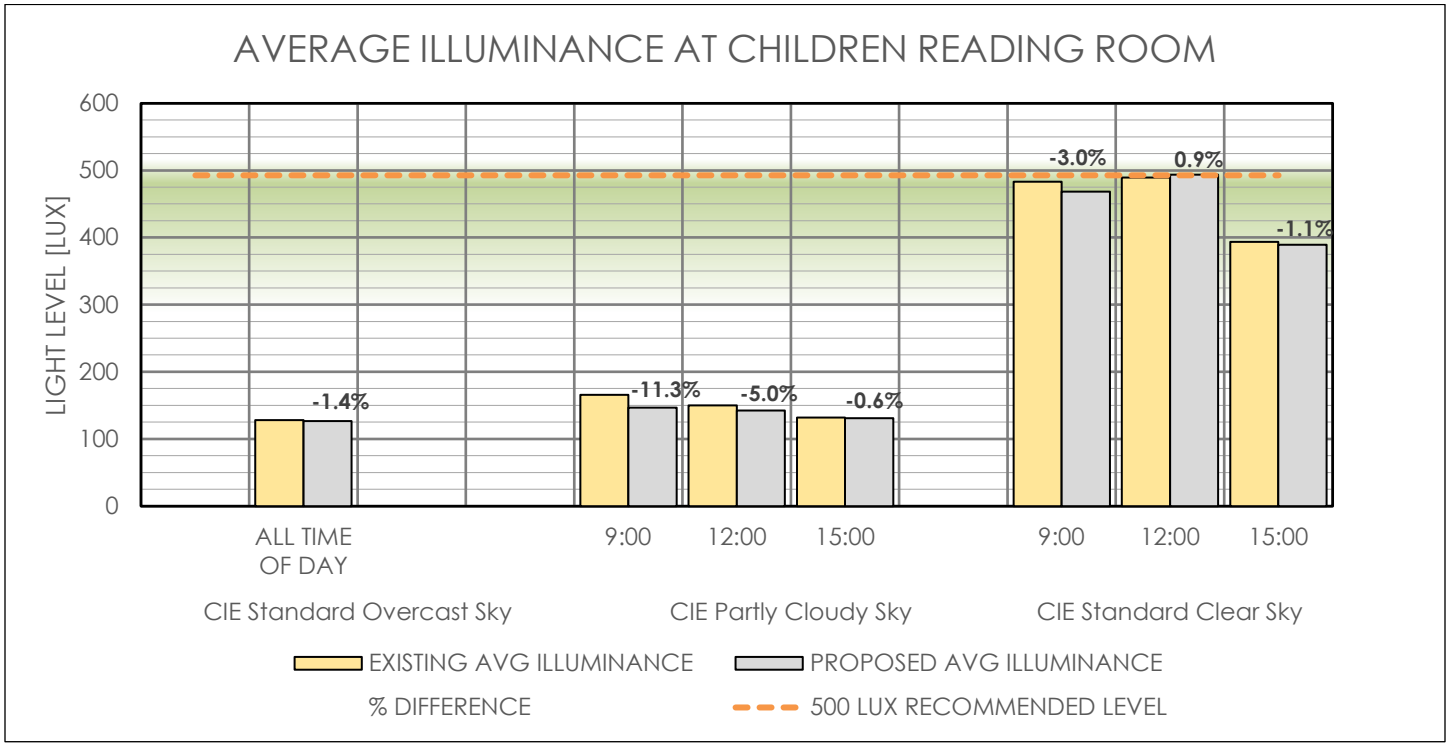


FIGURE **9**: GRAPH OF AVERAGE ILLUMINANCE VALUES FOR THE **CHILDREN READING ROOM**.

Here again, we see the average minimal decreases in light levels:

Adult Reading Area: overcast -5%, partly cloudy -8%, and clear sky -4.6%

Children's Reading area: overcast -1.4%, partly cloudy -5.6% and clear sky -1.1%

For overcast and partly cloudy sky conditions, the average existing light levels within the library reading areas are well below the 500 LUX light levels recommended by the IES for library small print reading areas, therefore supplemental lighting (electrical) is necessary, for BOTH the existing and proposed conditions. As such, the reduction of natural light levels from the proposed condition is irrelevant.

For clear sky conditions in the adult reading area, the proposed light levels fall at or above the IES recommended 500 LUX, so **the small reduction in light would not impact the patrons' visual acuity within the library reading rooms.**

For the clear sky condition in the children's reading area, notice that there was a slight increase in light levels at 12 noon. This is most likely due to the proposed project addition reflecting additional light into the library.

The following diagrams show the **percent difference** in lighting at every light sensor point in the library.

B03

LIGHT LEVELS PERCENTAGE DIFFERENCE [%]

ALL YEAR

OVERCAST SKY – ALL TIMES

Analysis Grid
RAD Illuminance [l]

% DIFFERENCE

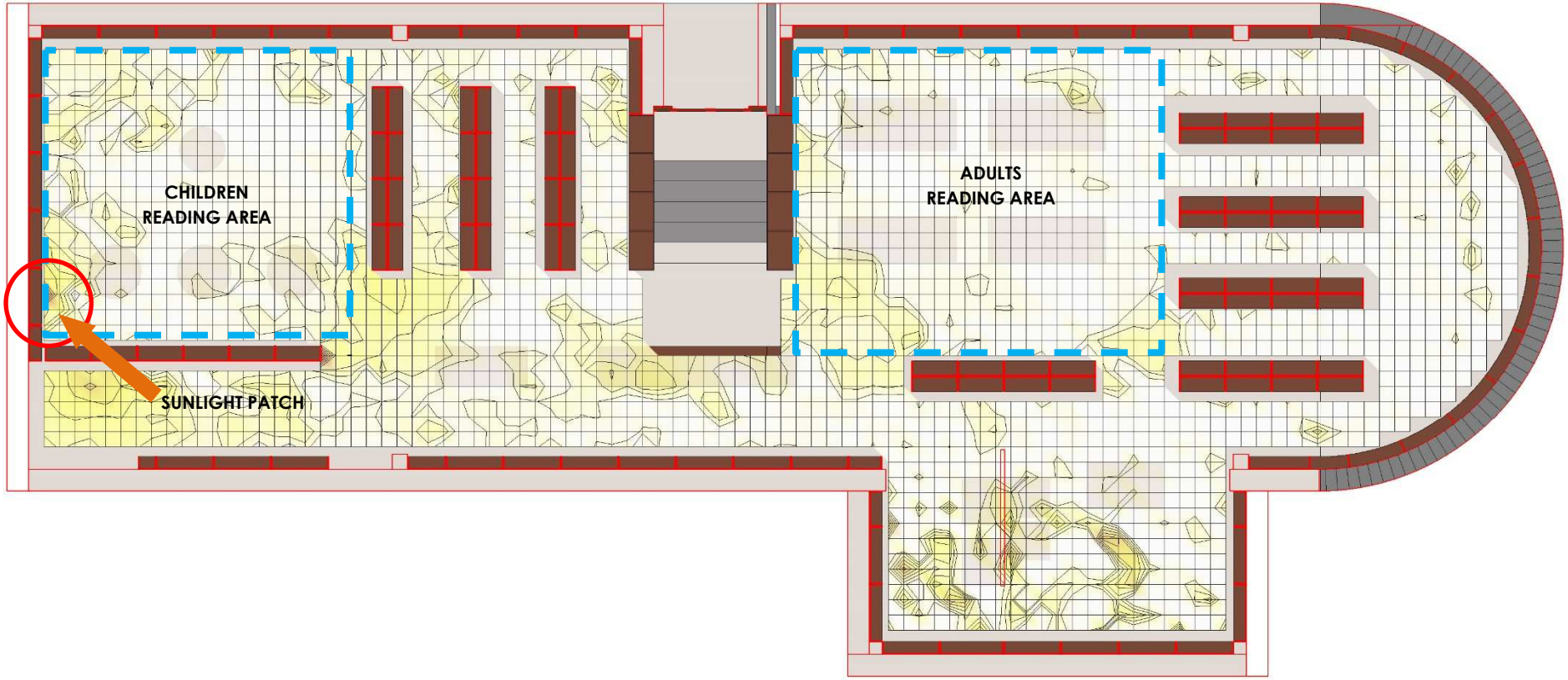
0.00	-0.10	-0.20	-0.30	-0.40	-0.50	-0.60	-0.70	-0.80	-0.90	-1.00

C03

LIGHT LEVELS PERCENTAGE DIFFERENCE [%]

SEPTEMBER 21ST PARTLY CLOUDY SKY – 09:00 AM

Analysis Grid
RAD Illuminance [l]



% DIFFERENCE

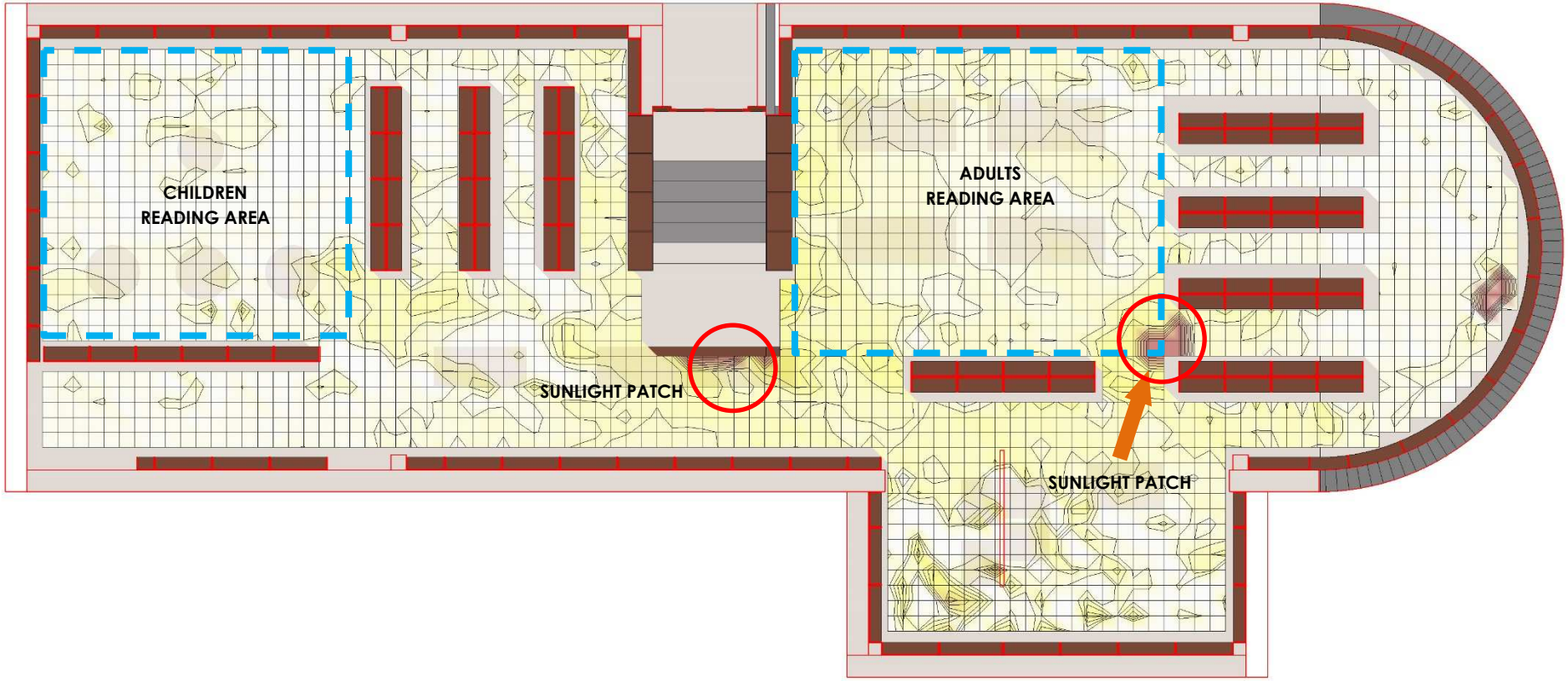
0.00	-0.10	-0.20	-0.30	-0.40	-0.50	-0.60	-0.70	-0.80	-0.90	-1.00

C06

LIGHT LEVELS PERCENTAGE DIFFERENCE [%]

SEPTEMBER 21ST PARTLY CLOUDY SKY – 12:00 PM

Analysis Grid
RAD Illuminance [l]



% DIFFERENCE

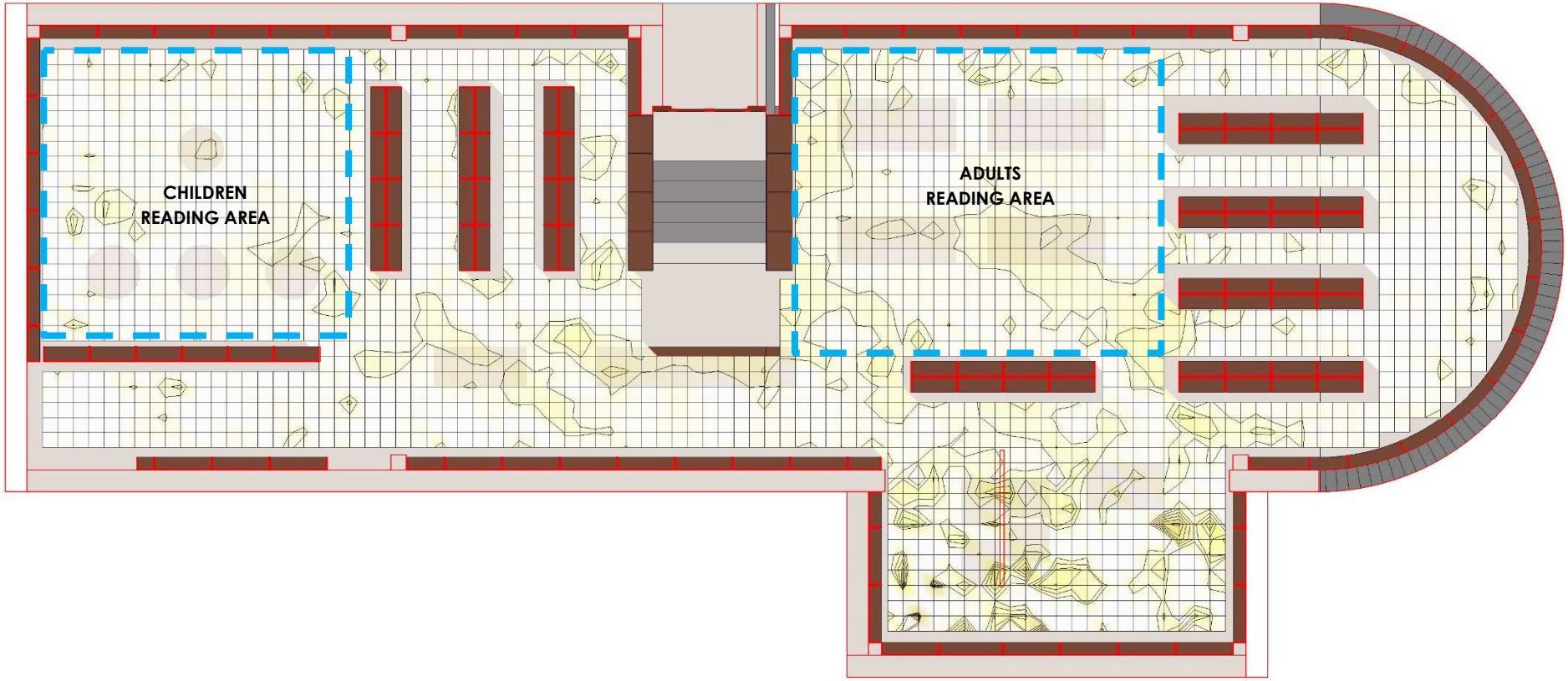
0.00	-0.10	-0.20	-0.30	-0.40	-0.50	-0.60	-0.70	-0.80	-0.90	-1.00

C09

LIGHT LEVELS PERCENTAGE DIFFERENCE [%]

SEPTEMBER 21ST PARTLY CLOUDY SKY – 03:00 PM

Analysis Grid
RAD Illuminance [l]



% DIFFERENCE

0.00	-0.10	-0.20	-0.30	-0.40	-0.50	-0.60	-0.70	-0.80	-0.90	-1.00

D03

LIGHT LEVELS PERCENTAGE DIFFERENCE [%]

JUNE 21ST

CLEAR SKY – 09:00 AM

Analysis Grid
RAD Illuminance [l]

% DIFFERENCE

0.00	-0.10	-0.20	-0.30	-0.40	-0.50	-0.60	-0.70	-0.80	-0.90	-1.00

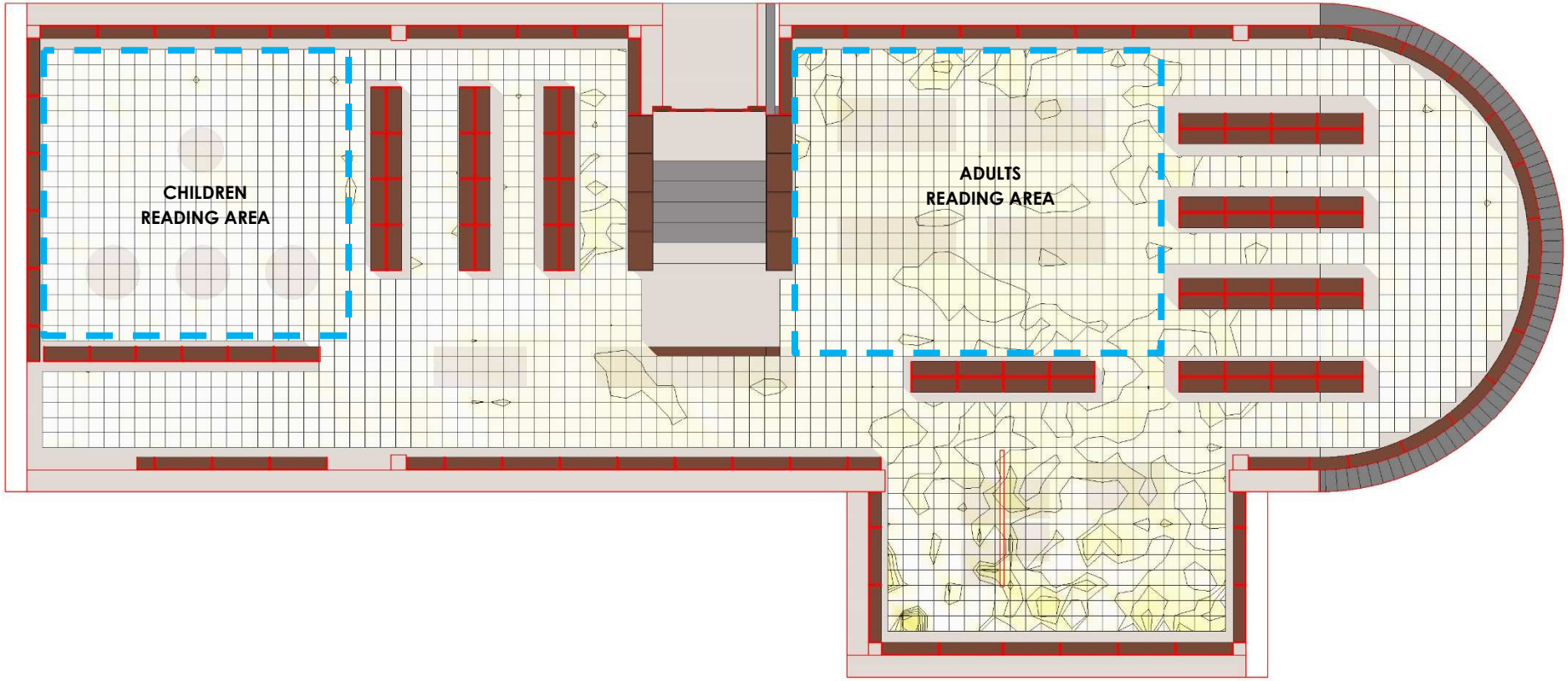
D06

LIGHT LEVELS PERCENTAGE DIFFERENCE [%]

JUNE 21ST

CLEAR SKY – 12:00 PM

Analysis Grid
RAD Illuminance [l]



% DIFFERENCE

0.00	-0.10	-0.20	-0.30	-0.40	-0.50	-0.60	-0.70	-0.80	-0.90	-1.00

D09

LIGHT LEVELS PERCENTAGE DIFFERENCE [%]

JUNE 21ST

CLEAR SKY – 03:00 PM

Analysis Grid
RAD Illuminance [l]

% DIFFERENCE

0.00	-0.10	-0.20	-0.30	-0.40	-0.50	-0.60	-0.70	-0.80	-0.90	-1.00

The next diagrams are in LUX units of illuminance and show the light levels at every point in the library. By placing side by side the existing and proposed diagrams for each light / time scenario, one can easily compare the variant light conditions in the library. Looking at the PDF report on the computer, it is easy to flip between two diagrams, with the same sky / day / time, one existing and one proposed, to visually see the light differences. **When evaluating these diagrams, it is important to be aware of the IES light level threshold for libraries (300 for stacks, circulation desk, computer areas, 400 average of all areas, 500 for reading areas).**

An additional analysis was done for a partly cloudy sky at 12:00 pm under proposed conditions without the book stacks to evaluate their effect on the overall daylight levels within the library's main floor. The result shows that the book stacks can reduce the overall light levels by up to 36.7%.

For any colored area that is below 300, supplemental light is needed in all areas. For the children's and adult's reading areas - the yellow LUX level of 500+ means that NO electrical lights are needed, any other color in those reading areas would suggest that supplemental lighting is necessary.

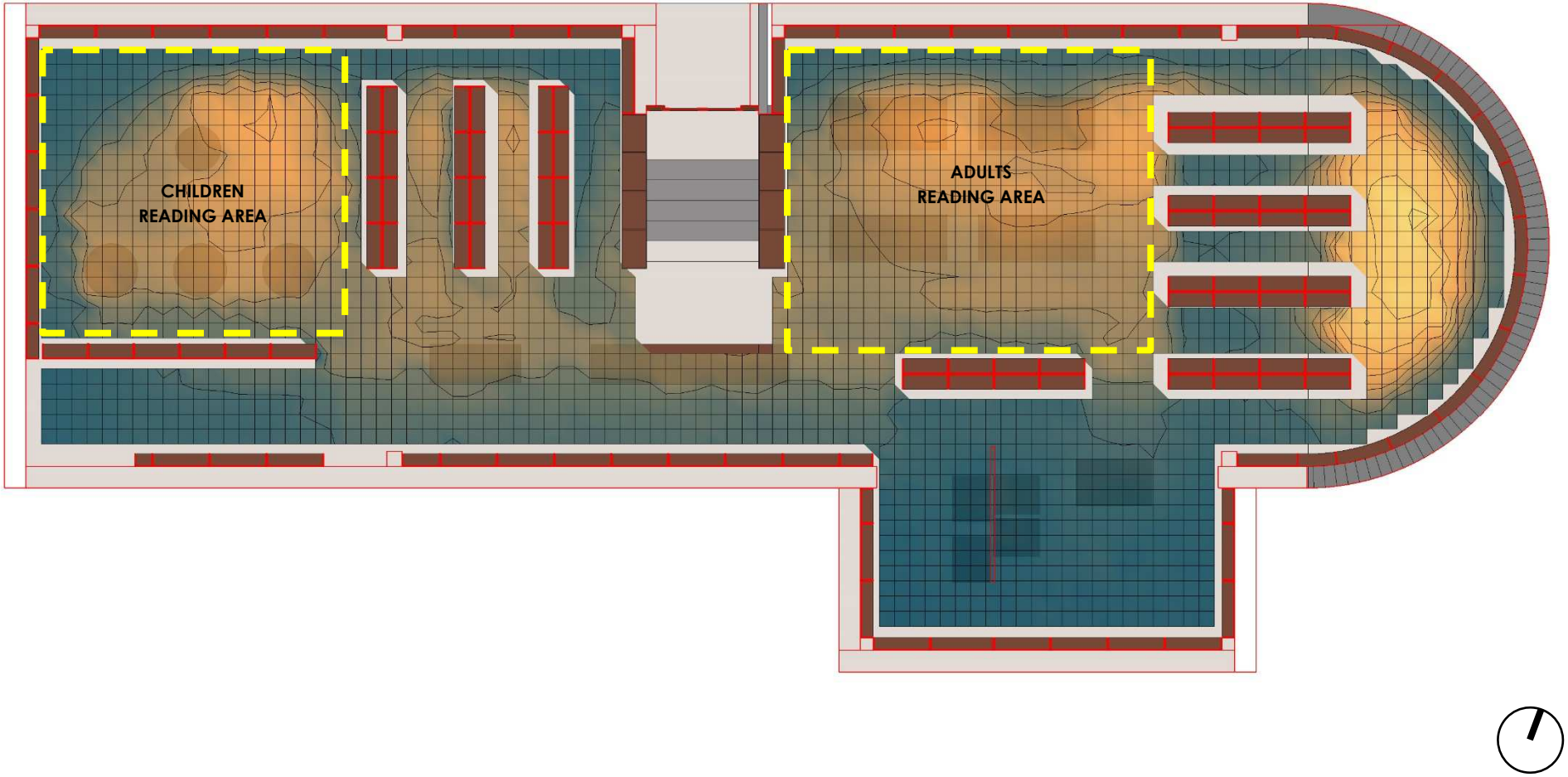
B01

LIGHT LEVELS [LUX] FOR EXISTING CONDITIONS

ALL YEAR

OVERCAST SKY – ALL TIMES

Analysis Grid
RAD Illuminance
Value Range: 0 - 500 Lux
as B01R01.vf



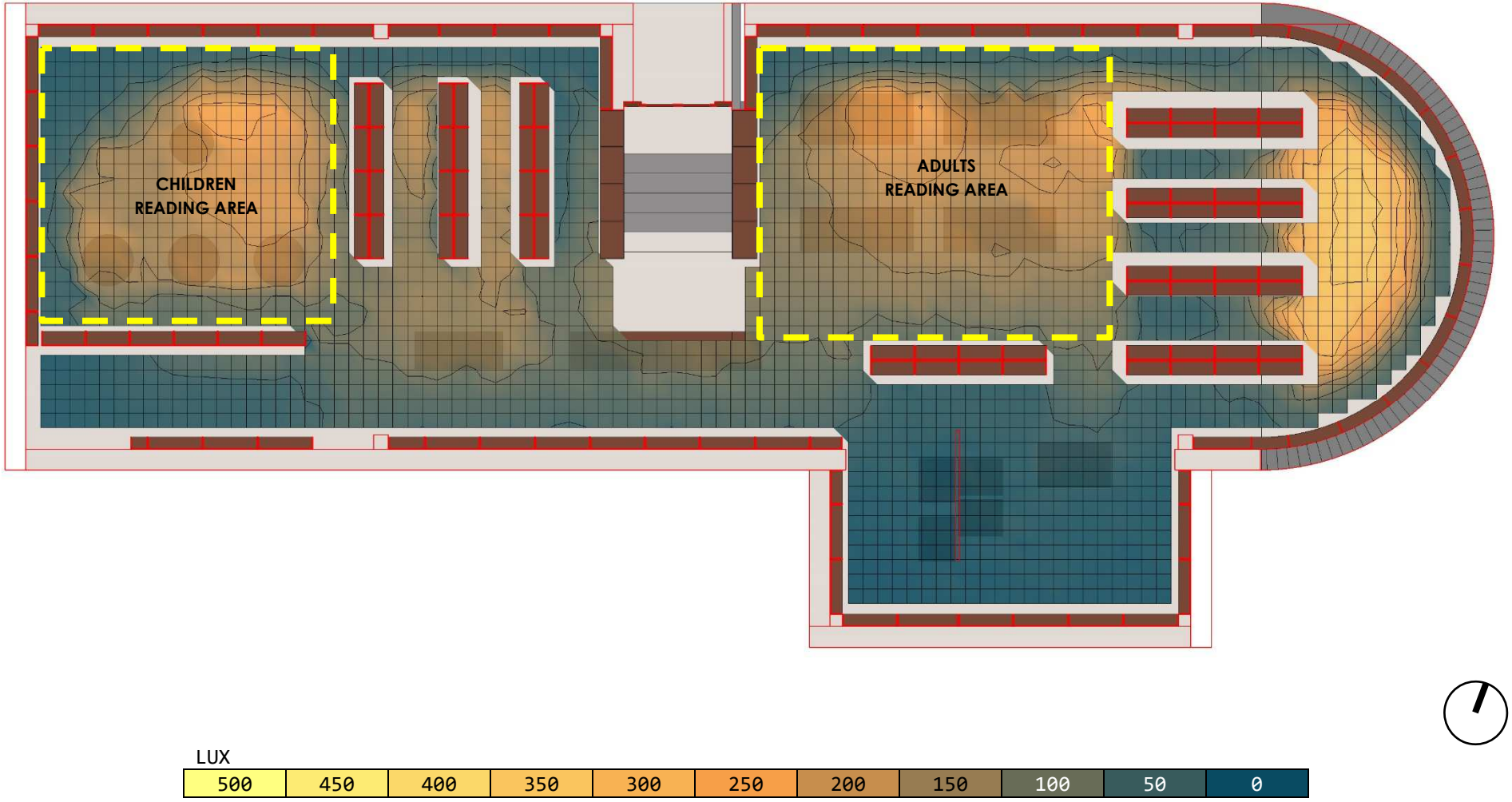
B02

LIGHT LEVELS [LUX] FOR PROPOSED CONDITIONS

ALL YEAR

OVERCAST SKY – ALL TIMES

Analysis Grid
RAD Illuminance
Value Range: 0 - 500 Lux
as B02R0C1.vf

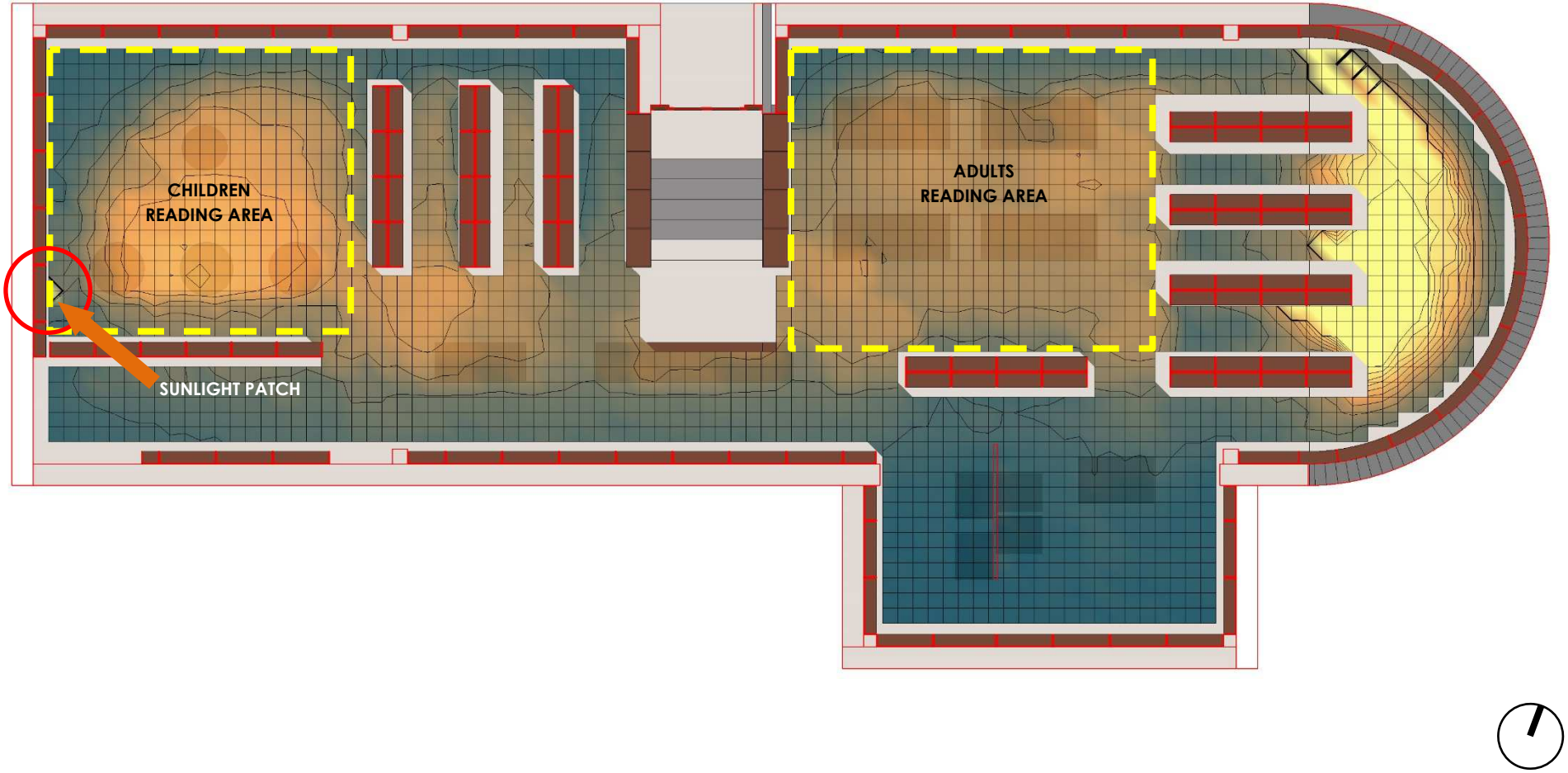


C01

LIGHT LEVELS [LUX] FOR EXISTING CONDITIONS

SEPTEMBER 21ST PARTLY CLOUDY SKY – 09:00 AM

Analysis Grid
RAD Illuminance
Value Range: 0 - 500 Lux
as 800160.1 v8

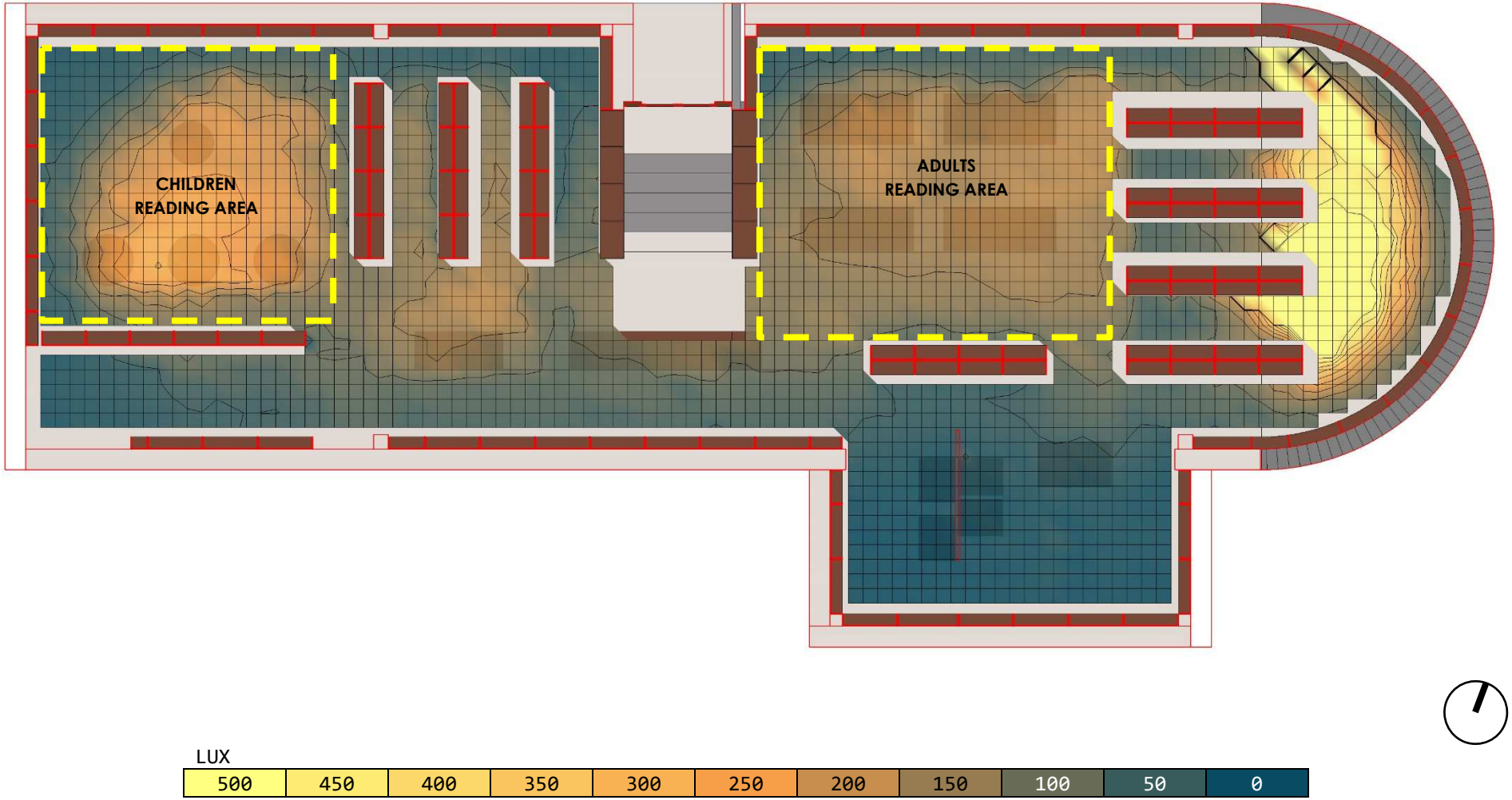


C02

LIGHT LEVELS [LUX] FOR PROPOSED CONDITIONS

SEPTEMBER 21ST PARTLY CLOUDY SKY – 09:00 AM

Analysis Grid
RAD Illuminance



LUX

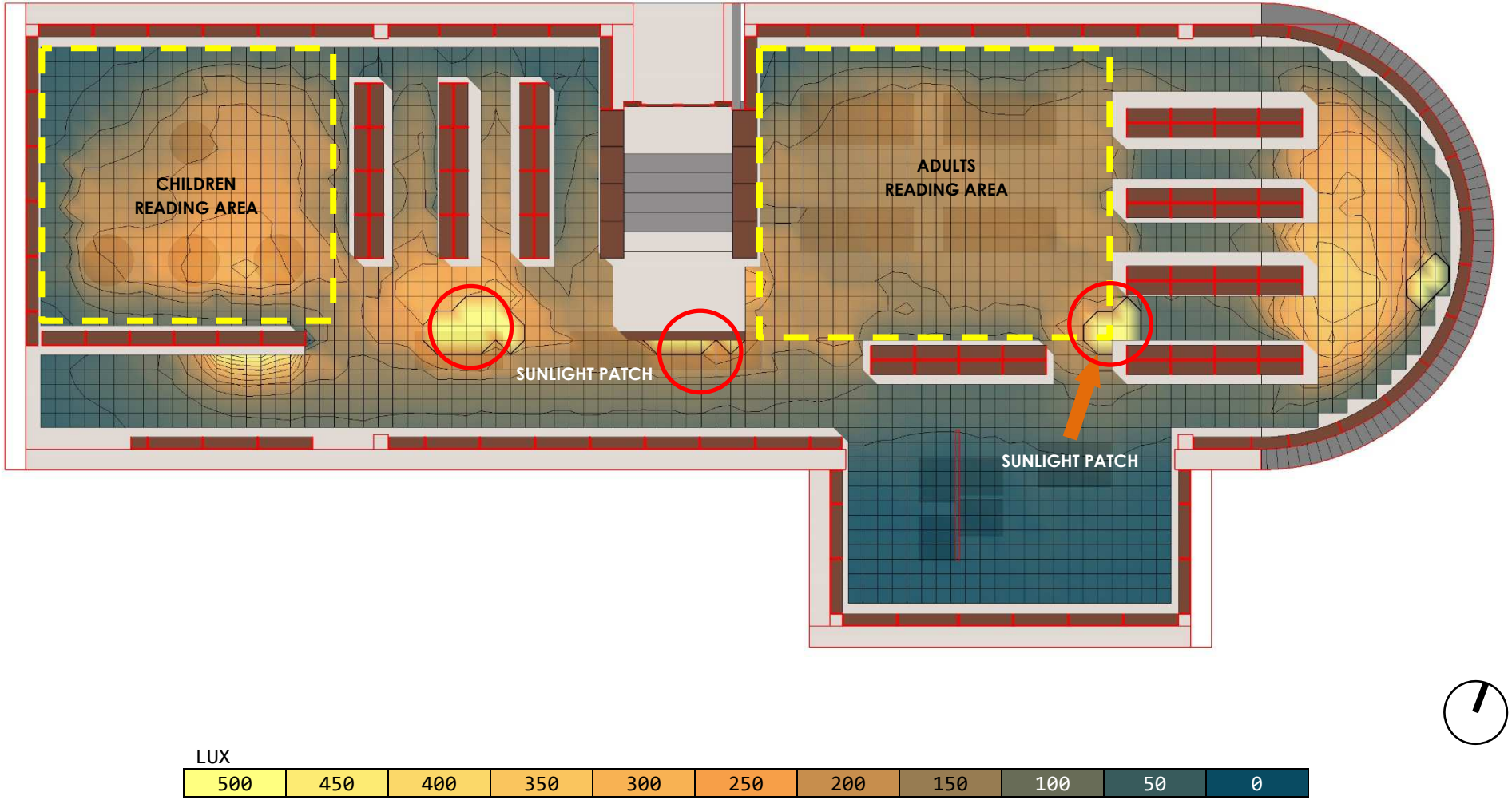
500	450	400	350	300	250	200	150	100	50	0

C04

LIGHT LEVELS [LUX] FOR EXISTING CONDITIONS

SEPTEMBER 21ST PARTLY CLOUDY SKY – 12:00 PM

Analysis Grid
RAD Illuminance



LUX

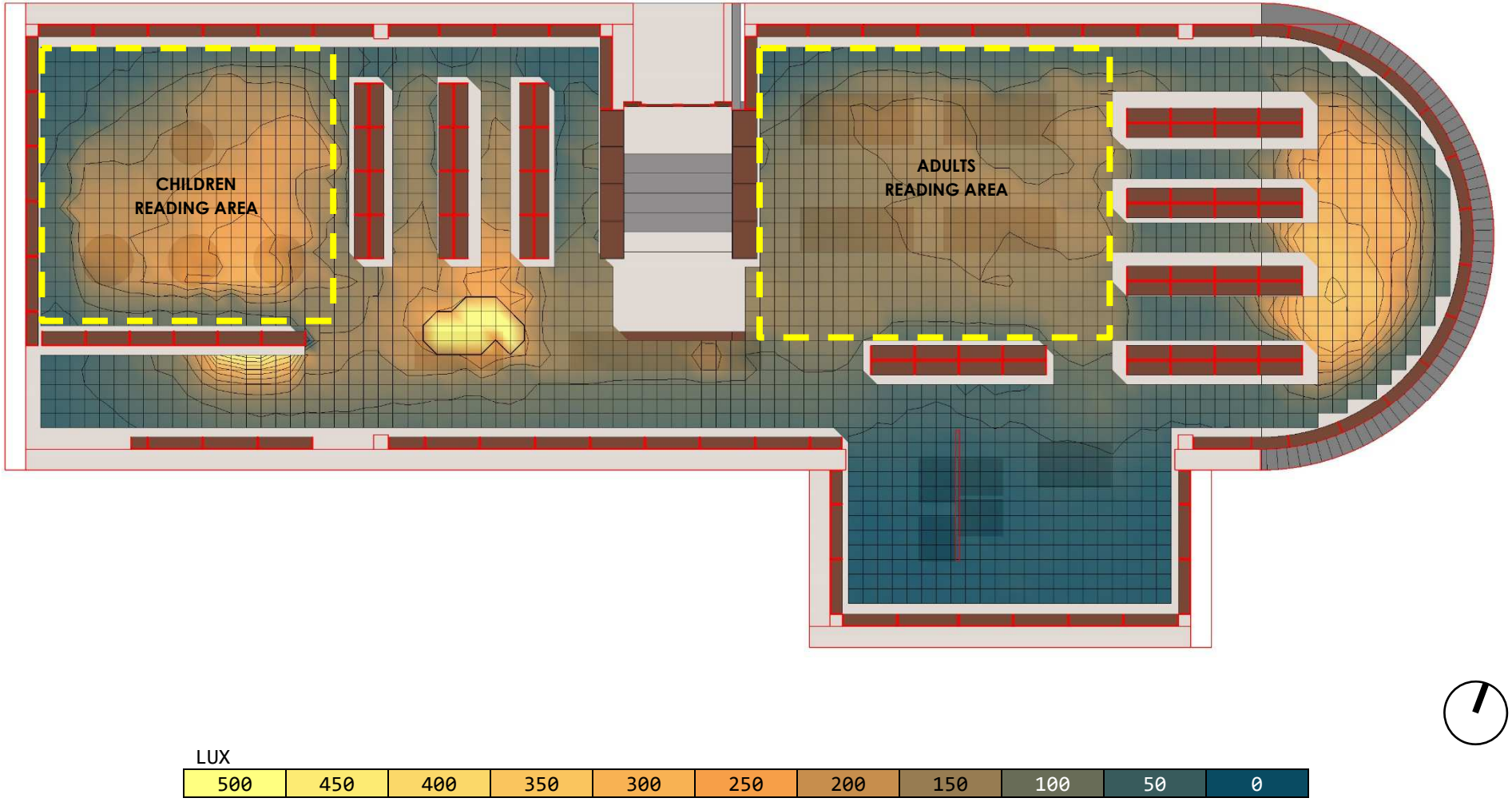
500	450	400	350	300	250	200	150	100	50	0

C05

LIGHT LEVELS [LUX] FOR PROPOSED CONDITIONS

SEPTEMBER 21ST PARTLY CLOUDY SKY – 12:00 PM

Analysis Grid
RAD Illuminance



LUX

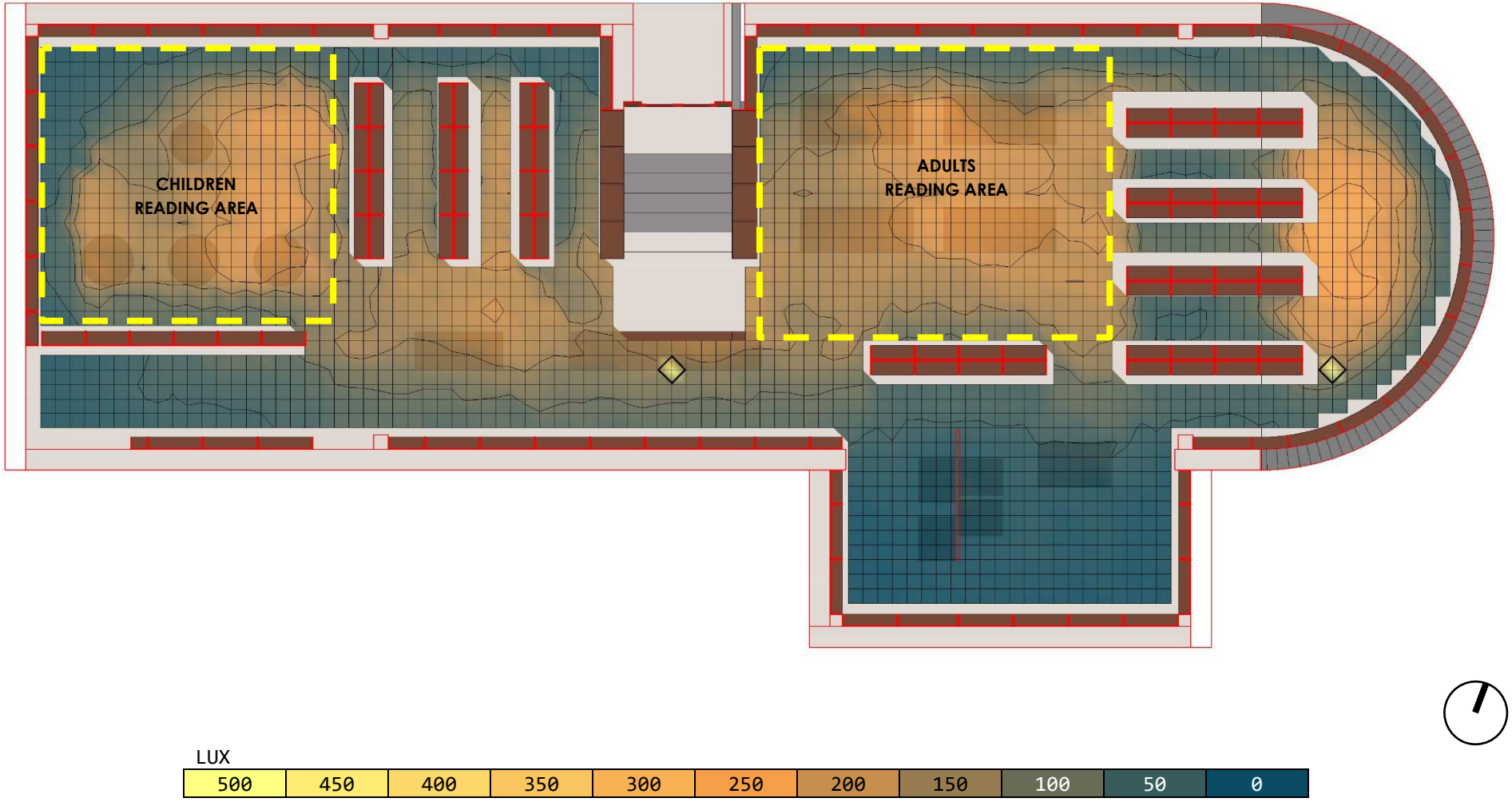
500	450	400	350	300	250	200	150	100	50	0

C07

LIGHT LEVELS [LUX] FOR EXISTING CONDITIONS

SEPTEMBER 21ST PARTLY CLOUDY SKY – 03:00 PM

Analysis Grid
RAD Illuminance



LUX

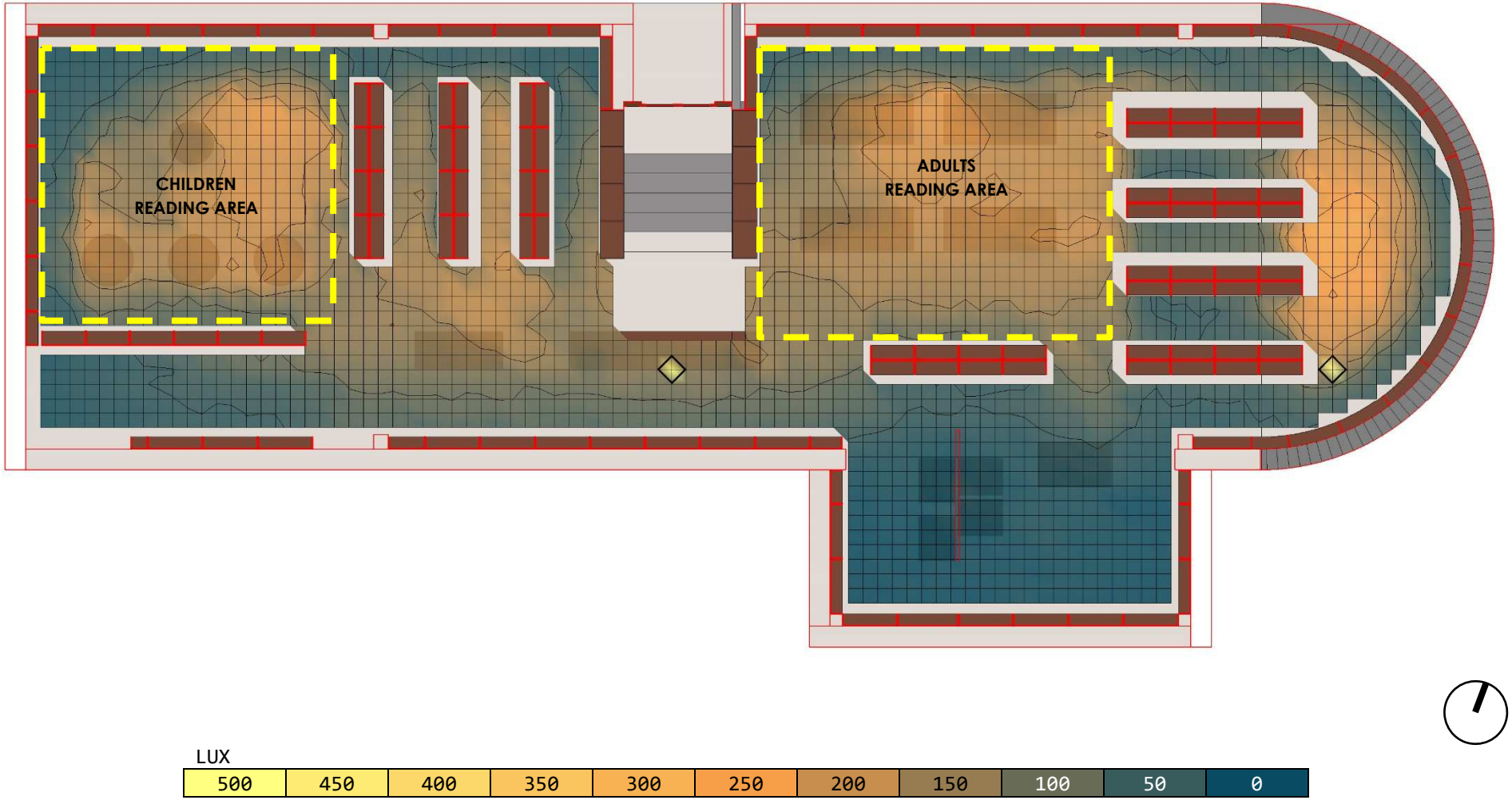
500	450	400	350	300	250	200	150	100	50	0

C08

LIGHT LEVELS [LUX] FOR PROPOSED CONDITIONS

SEPTEMBER 21ST PARTLY CLOUDY SKY – 03:00 PM

Analysis Grid
RAD Illuminance



LUX

500	450	400	350	300	250	200	150	100	50	0

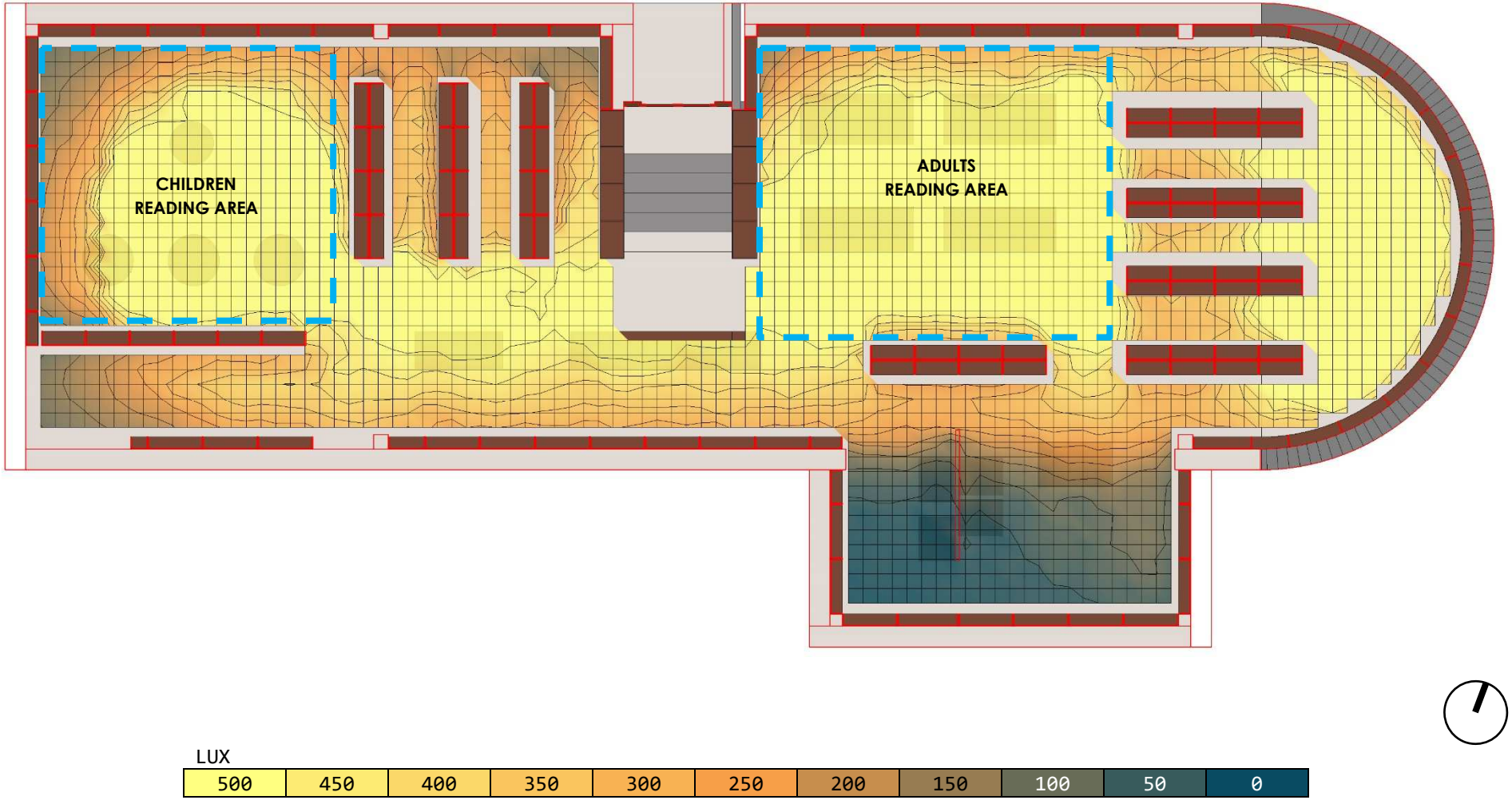
D01

LIGHT LEVELS [LUX] FOR EXISTING CONDITIONS

JUNE 21ST

CLEAR SKY – 09:00 AM

Analysis Grid
RAD Illuminance
Value Range: 0 - 500 Lux
as 800RC1.vf



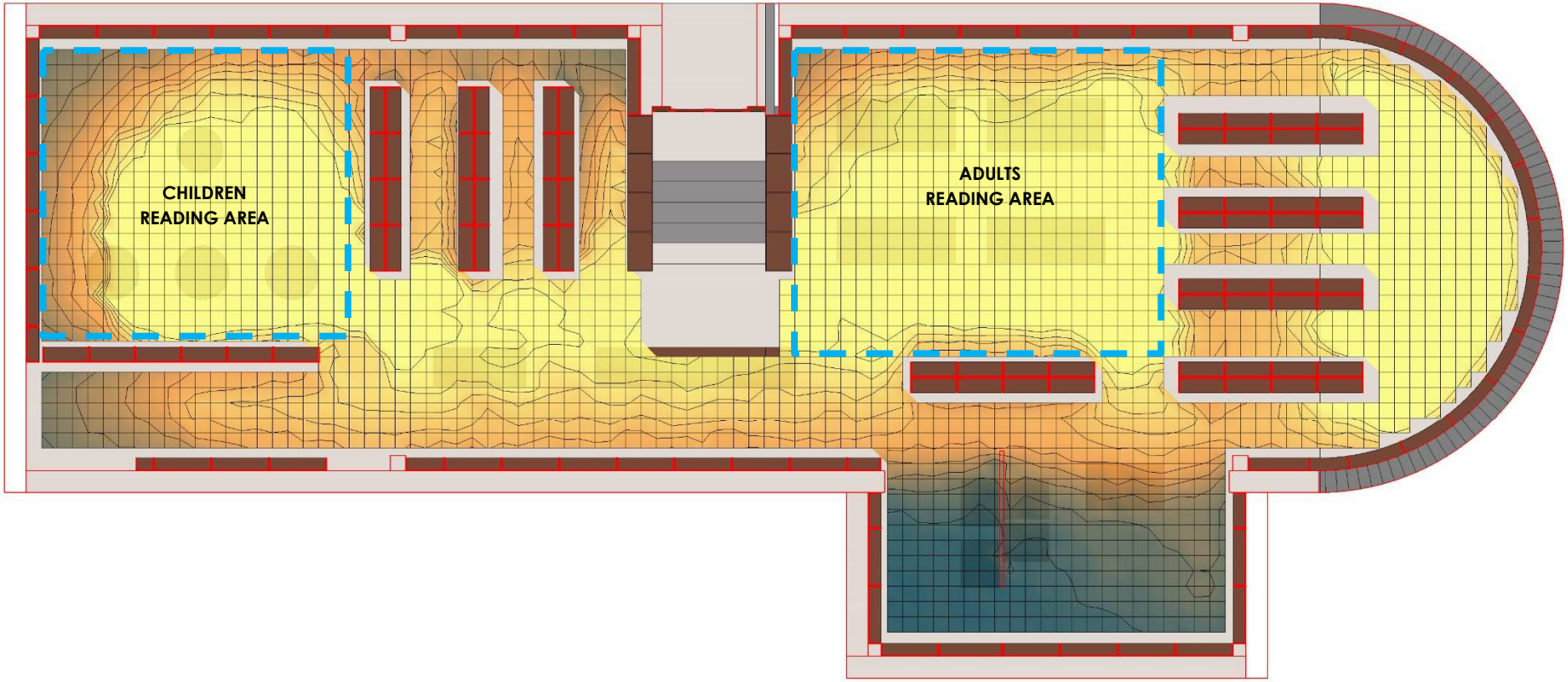
D02

LIGHT LEVELS [LUX] FOR PROPOSED CONDITIONS

JUNE 21ST

CLEAR SKY – 09:00 AM

Analysis Grid
RAD Illuminance
Value Range: 0 - 500 Lux
as 800RC1.vf



LUX

500	450	400	350	300	250	200	150	100	50	0

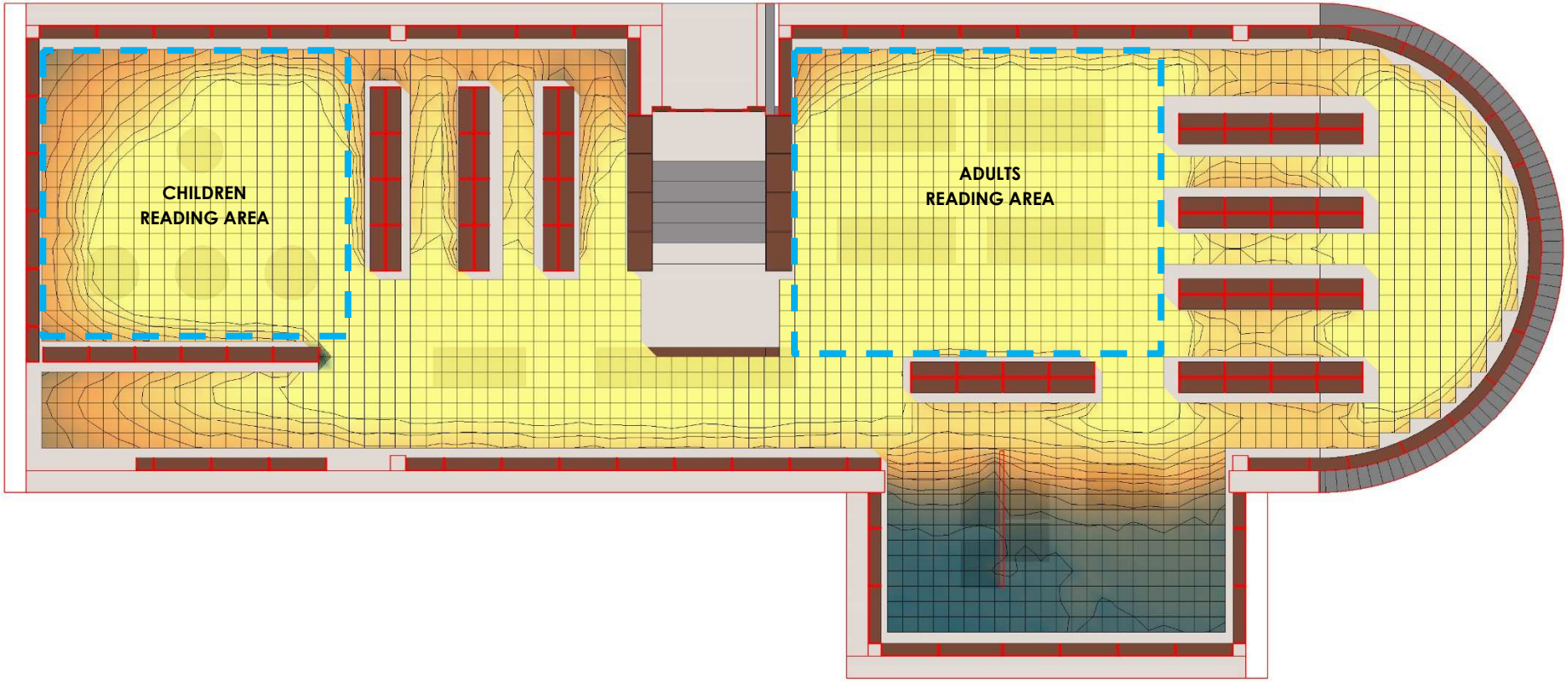
D04

LIGHT LEVELS [LUX] FOR EXISTING CONDITIONS

JUNE 21ST

CLEAR SKY – 12:00 PM

Analysis Grid
RAD Illuminance
Value Range: 0 - 500 Lux
as 800x600 v4



LUX

500	450	400	350	300	250	200	150	100	50	0

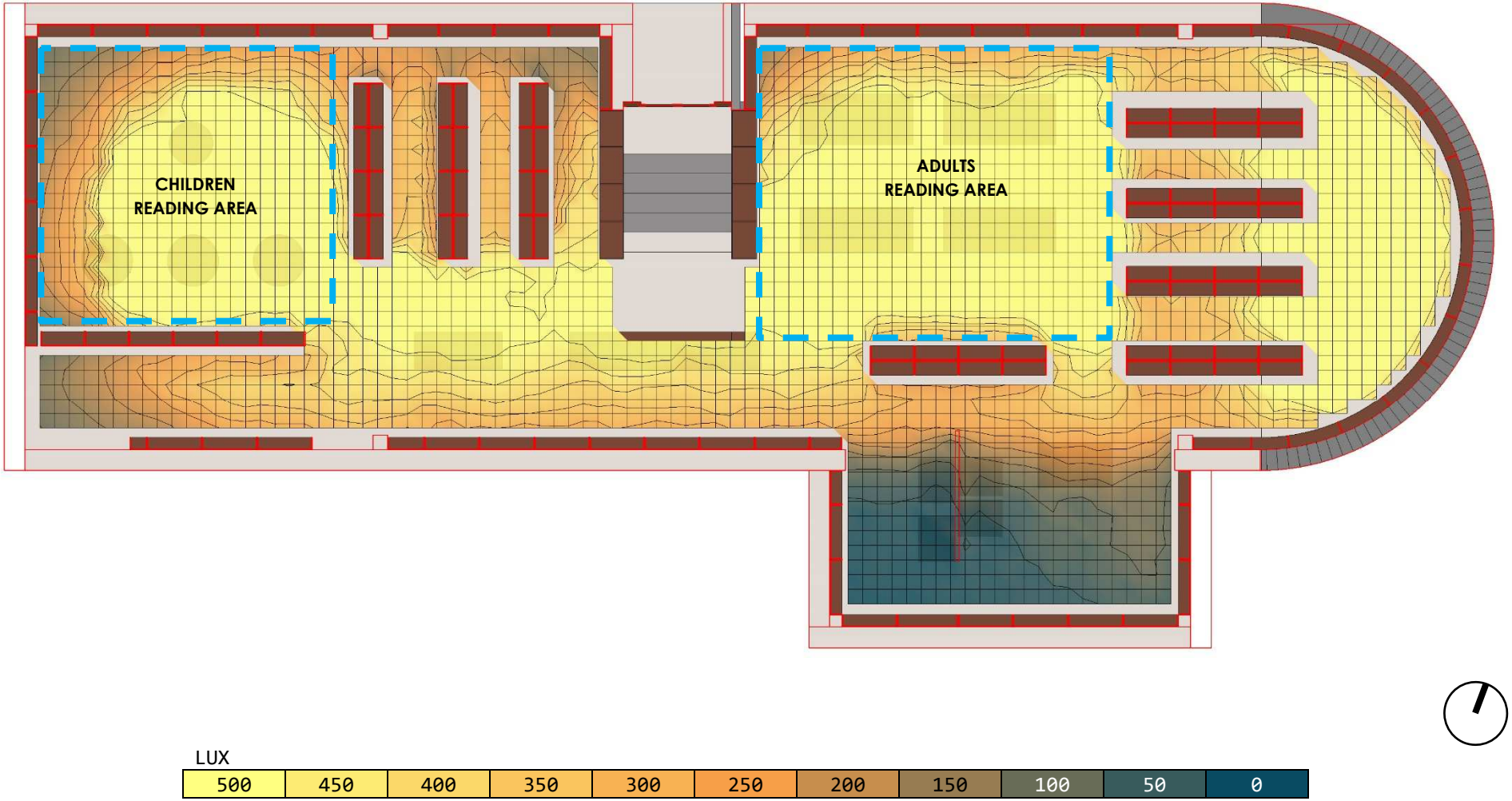
D05

LIGHT LEVELS [LUX] FOR PROPOSED CONDITIONS

JUNE 21ST

CLEAR SKY – 12:00 PM

Analysis Grid
RAD Illuminance
Value Range: 0 - 500 Lux
as 800x600 v4



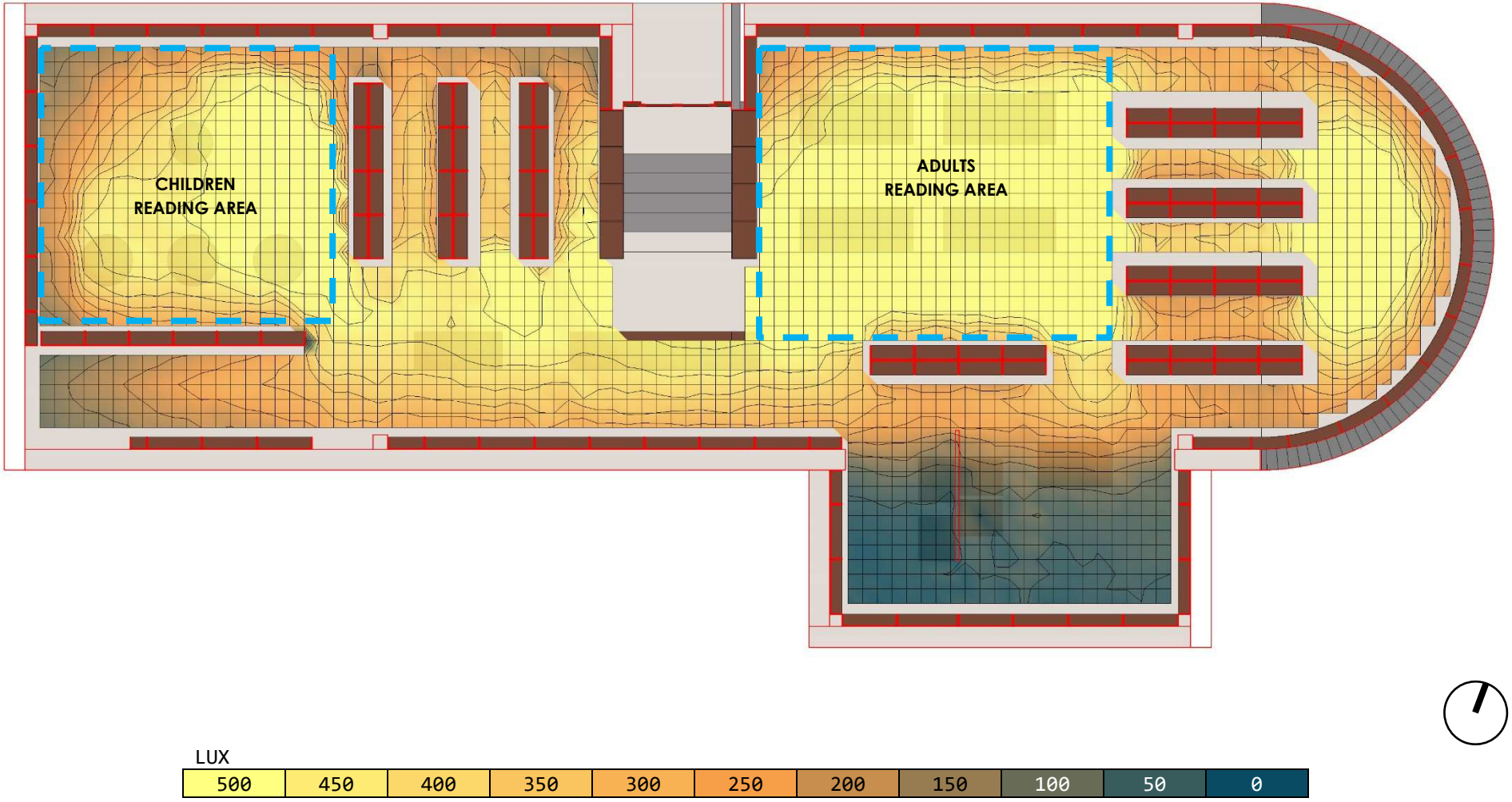
D07

LIGHT LEVELS [LUX] FOR EXISTING CONDITIONS

JUNE 21ST

CLEAR SKY – 03:00 PM

Analysis Grid
RAD Illuminance
Value Range: 0 - 500 Lux
as 800RC1.vf



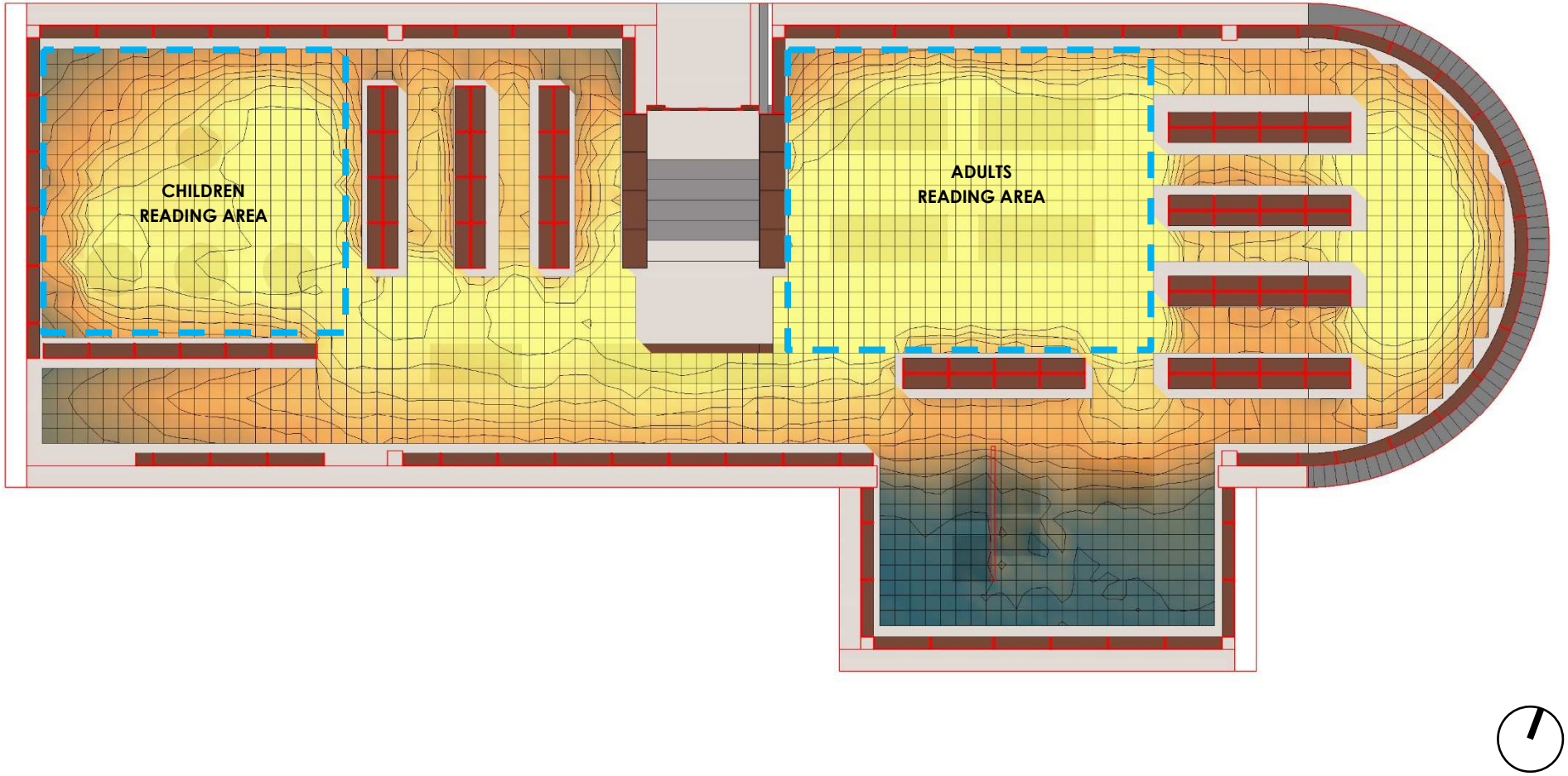
D08

LIGHT LEVELS [LUX] FOR PROPOSED CONDITIONS

JUNE 21ST

CLEAR SKY – 03:00 PM

Analysis Grid
RAD Illuminance
Value Range: 0 - 500 Lux



LUX

500	450	400	350	300	250	200	150	100	50	0

The following images shows the light levels (LUX) at the reading tables with intermediate/ partly cloudy conditions, September 21st at noon under existing conditions:

View point 1 (the adult area)- the minimum LUX is 152 and the max is 189, well below the IES recommended 500 LUX lighting for small print reading.

View Point 2 (the children's area)- the minimum LUX is 180 and the maximum is 206, well below IES the recommended 500 LUX lighting for small print reading.

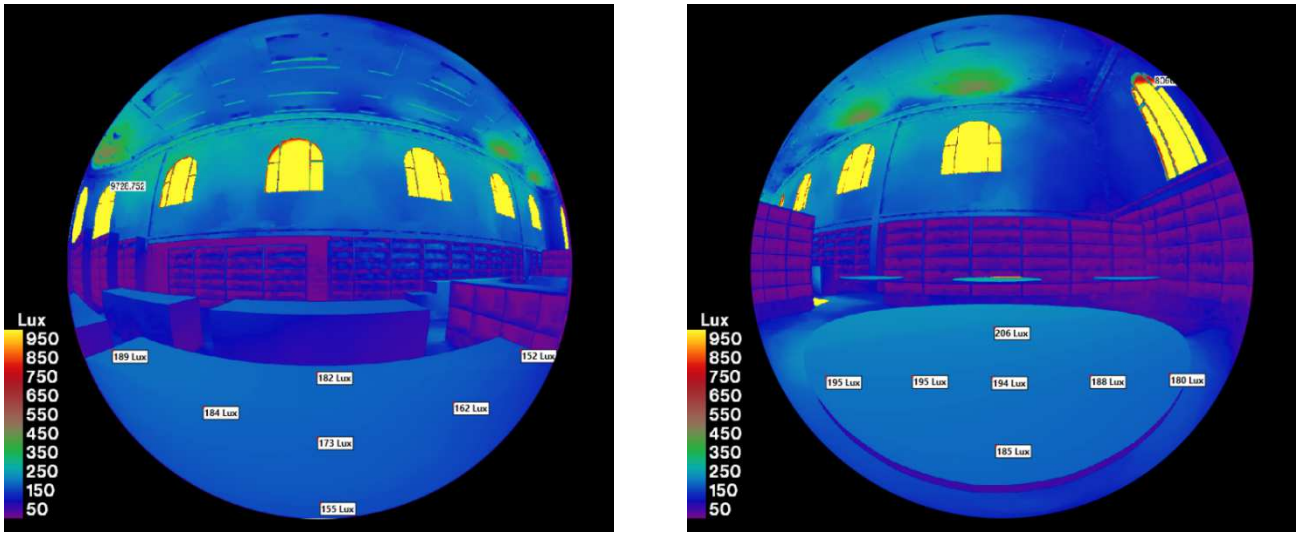


FIGURE **6**: LIGHT LEVELS AT TABLE UNDER EXISTING CONDITIONS ON SEPTEMBER 21ST AT NOON.

C. LUMINANCE & GLARE ANALYSIS:

After calculating luminance fisheye images for the adult and children's area viewpoints, analysis was done to calculate the Daylight Glare Probability (DGP) index. As mentioned in the Analysis Methodology, Chapter V, any DGP over .30 can be a source of unwanted glare by the observer.

The following tables and glare images show the results of the analysis, calculated during clear sky conditions (worst-case for glare), when the sky is at its brightest.

TABLE **5**: DAYLIGHT GLARE PROBABILITY INDEX FOR THE **ADULT READING AREA**.

SKY	**CLEAR SKY**		
DAY	*JUNE 21ST*		
TIME	9:00 AM	12:00 PM	03:00 PM
EXISTING DGP	0.212129	0.207914	0.198932
PROPOSED DGP	0.199746	0.204958	0.202397
% DIFFERENCE	**-5.8%**	**-1.4%**	**1.7%**

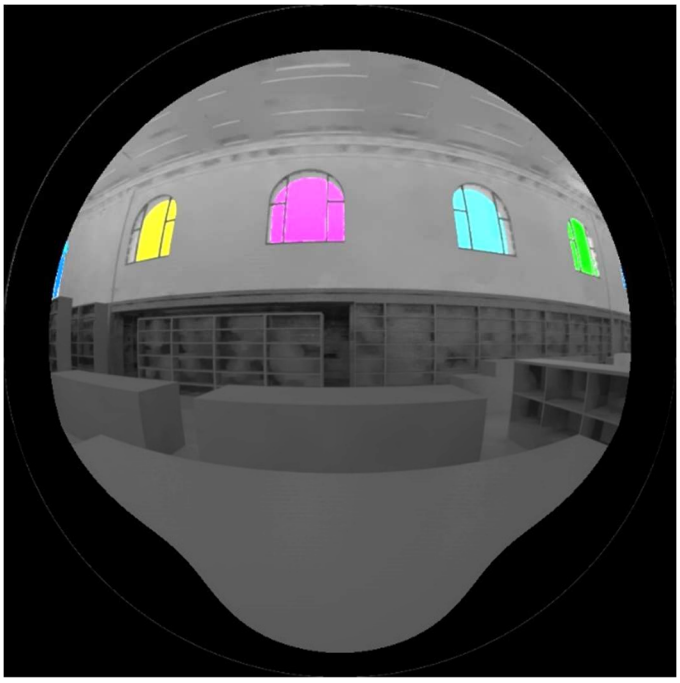


FIGURE **10**: SOURCES OF GLARE POTENTIAL AT THE **ADULT READING AREA**.

TABLE **6**: DAYLIGHT GLARE PROBABILITY INDEX FOR THE **CHILDREN READING AREA**.

SKY	CLEAR SKY		
DAY	*JUNE 21ST*		
TIME	9:00 AM	12:00 PM	03:00 PM
EXISTING DGP	0.190864	0.196406	0.210993
PROPOSED DGP	0.18921	0.195514	0.183943
% DIFFERENCE	-0.9%	-0.5%	-12.8%

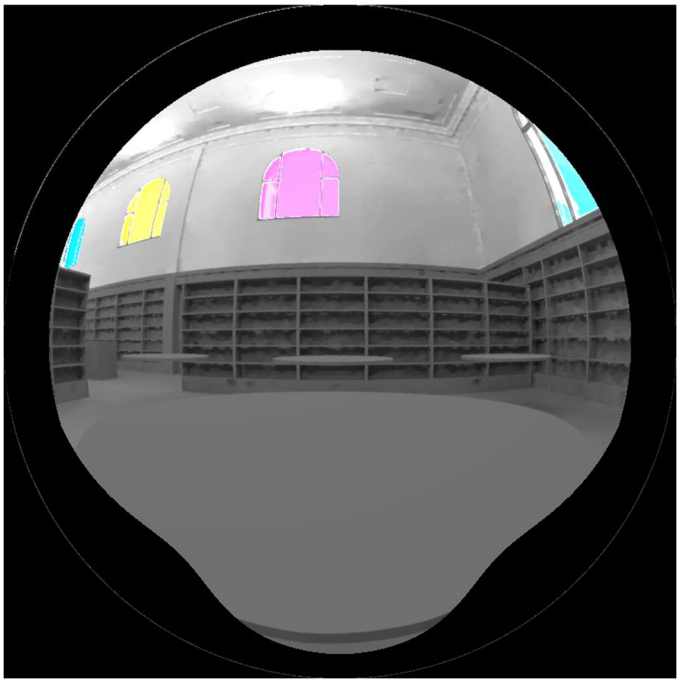


FIGURE **11**: SOURCES OF GLARE POTENTIAL AT THE **CHILDREN READING AREA**.

The proposed project mostly reduces any glare potential to the library, and ALL the DGP values, for both the adult and children's reading areas, are comfortably under the 0.30 threshold, **thus not a significant source of concern for visual comfort for most patrons.** ■

V. ANALYSIS METHODOLOGY

SYMPHYSIS utilized various tools to develop this daylight impact analysis. Here is a breakdown of the analysis process, and the tools used at each stage of the analysis:

A. 3D MODELING:

A 3D model of the existing and proposed conditions was created within a CAD software using the 2D drawings from the architect of the proposed project. For the purposes of this analysis, the "proposed condition" refers to the environment inside the library with the proposed vertical and horizontal addition at 2651-53 Octavia. The "existing condition" refers to the environment in the library currently. The surrounding buildings of blocks were constructed from the latest GIS layer of San Francisco building footprints obtainable at data.sfgov.org. The heights of the buildings were derived from photogrammetric model from Google Earth. Due to highly variability in height, opacity during seasons, growth and maintenance, existing trees were not modeled for this analysis.
The library was modeled using the latest approved building permit set #2009-0527-9175 dated 06/26/09, provided by the Planning Department, Environmental Planning Division, with the approved stamp date of 11/16/2009. The 3D model of the library includes all necessary and relevant details for daylighting analysis: wall thickness, glazing (window) areas, mullions and furniture.

FIGURE **12**: 3D MODELING OF PROPOSED PROJECT AND LIBRARY.

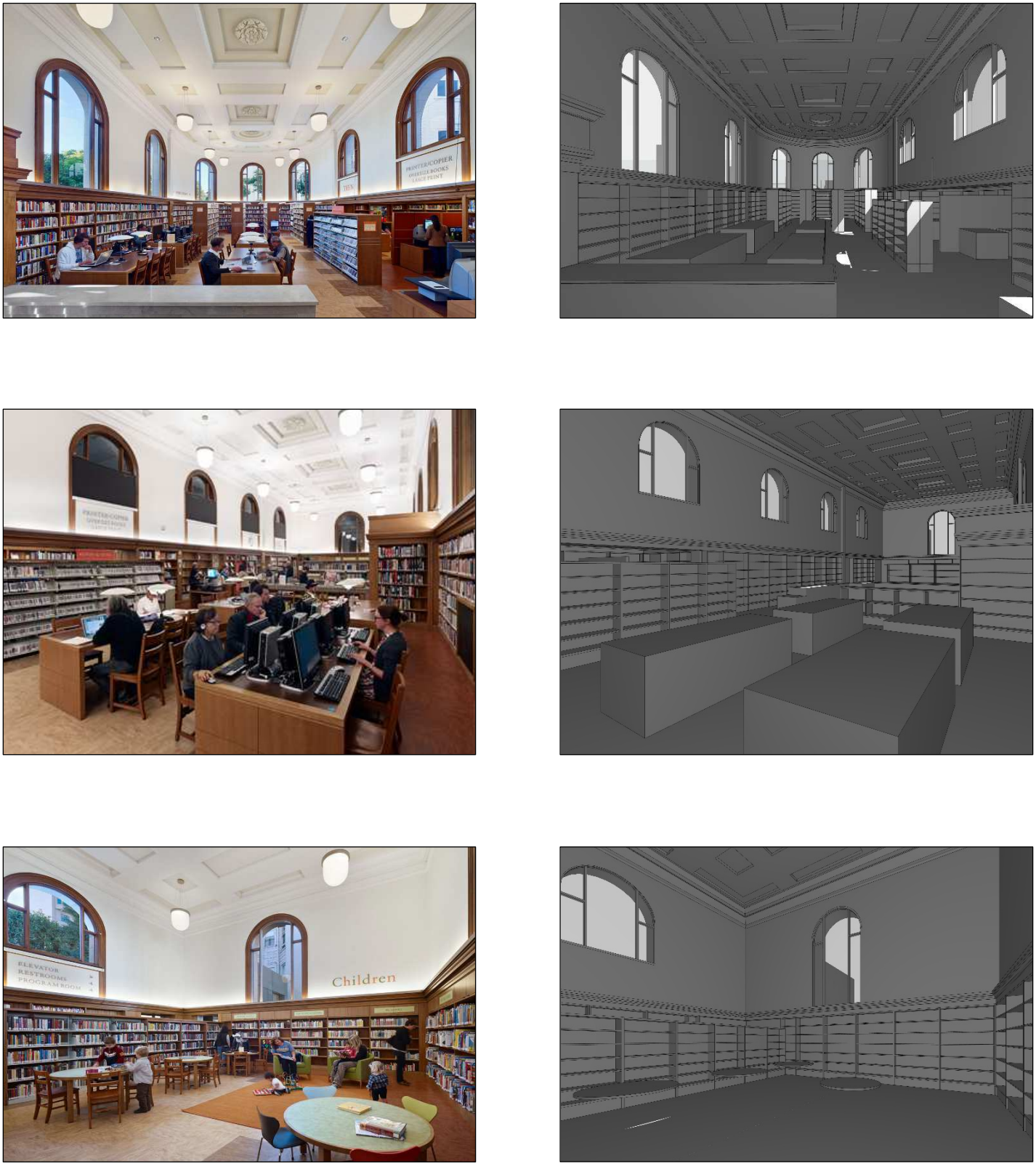
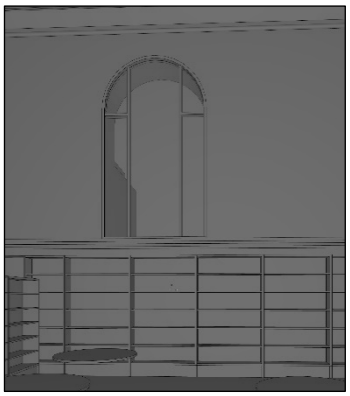
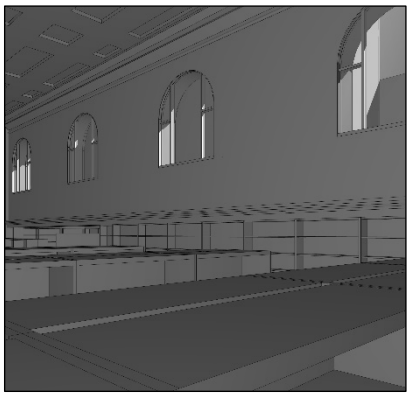


FIGURE **13**: COMPARISONS OF PHOTOGRAPHS VERSUS 3D MODEL.

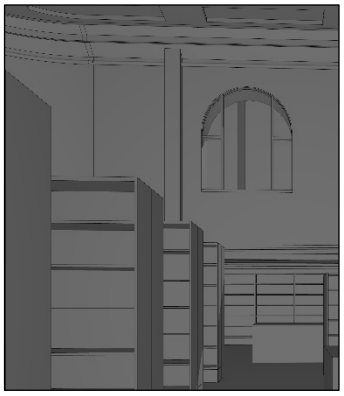
The library's furniture layout has been visually verified against the plans provided by the Planning Department to ensure no changes were made post-renovation. The following photographs were taken between December 2018 and January 2020 to support the validity of the 3D model used in the study:



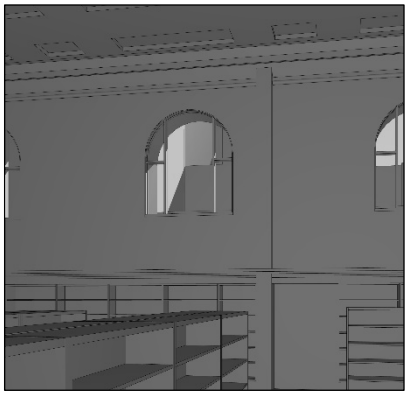
DECEMBER 2018 3D MODEL



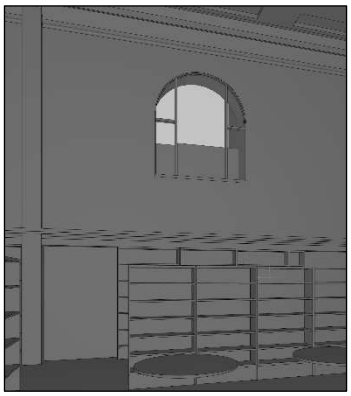
DECEMBER 2018 3D MODEL



DECEMBER 2018 3D MODEL

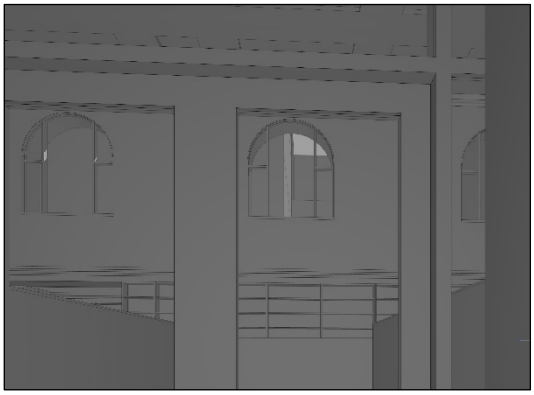


DECEMBER 2018 3D MODEL



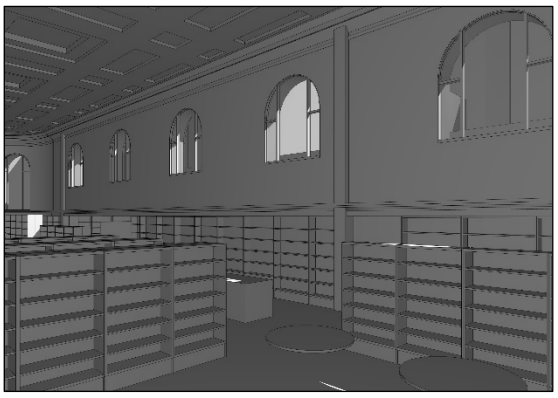
DECEMBER 2018 3D MODEL

NOVEMBER 2019



3D MODEL

JANUARY 2020



3D MODEL

JANUARY 2020

3D MODEL

B. MATERIALS & REFLECTIVITY

The existing materials present within and outside the library affect the overall light levels reaching the library's main reading room. This is due to the inherent reflectivity of every material. It is important to assess the materials present to determine their reflectivity, in order to derive material files that can be read by the daylighting engine, which performs the Radiance calculation.

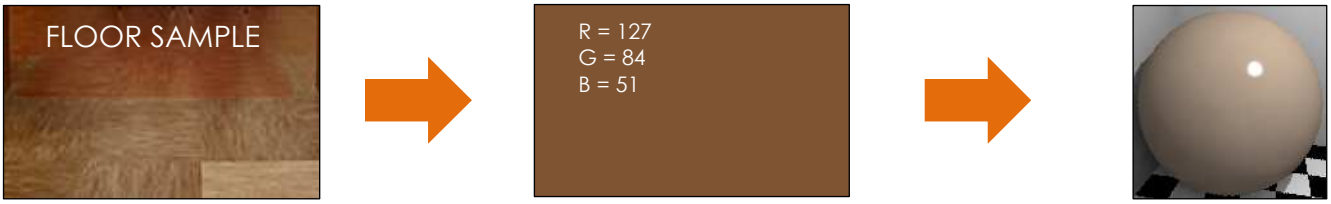
Eleven (11) different materials were identified to conduct this study:

- Library Floor
- Library High Walls
- Library Ceiling
- Library Dark Wood (including low walls and all furniture)
- Library Exterior Walls
- Library Low Roof (low flat roof at South side of the library)
- Exterior Walls of the existing and proposed project (assumed similar)
- Urban Fabric (an average of all buildings surrounding the library)
- Street
- Library Entry Stairs
- Glazing

For each material, a sample image was selected which was most representative of the material's inherent qualities. For the Urban Fabric, aerial photographs were used. The image was processed to derived its average color, using an online tool available here. Using this average color, another tool was used to derive the material file that will be necessary for the calculations.

The glazing material was created using another tool called Glazing Calculator which defines glazing material files for Radiance based on its type, its maintenance factor, and other variables. The calculator derived a final total transmittance (VT) of 0.62, which is very much in line with what typical code compliant glazing would have been in 2009. The Title 24 report refers only to the code maximum Solar Heat gain Coeficient at the time of 0.40. Given that only the southern windows were replaced and the older ones have high transmittance (older windows with no low-e or high SHGC), the value of 0.62 VT was appropriate to the study.

The images below shows evaluation the process:




```
# Reflectance: rho=0.319
void plastic identifier
0
0
5  0.35 0.265 0.2  0.05 0.05
```

FIGURE **14**: DERIVATION OF RADIANCE MATERIAL FILES

A complete list of all the material files can be found in the appendices.

C. ECOTECT PERFORMANCE SIMULATION SOFTWARE

The 3D model was imported into the environmental performance simulation software Autodesk Ecotect for analysis. This software allows the user to setup all the calculation settings required for this study, and acts as a platform to the Radiance lighting simulation engine, as well as the display of the results.

An analysis grid was set up over the entire floor of the library, which consisted of 2,406 sensor points spread one foot apart. The grid was set 3 feet above the finished floor, which is 2" above the highest working surface (information desk is 2' 10" high). Sensors were eliminated under the library's book stacks so that the results were not skewed by "blind sensors".

The image below shows the set-up of the analysis grid on the library floor:

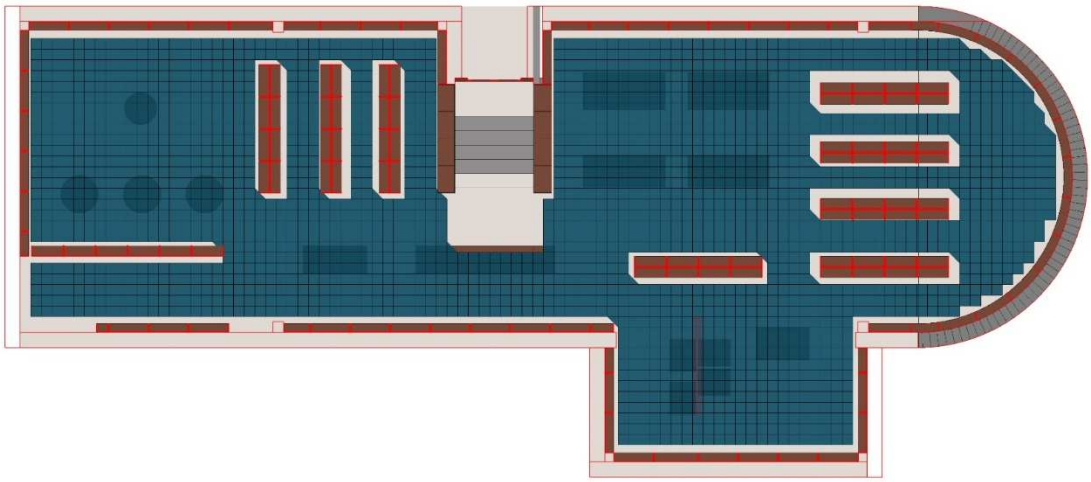


FIGURE **15**: ANALYSIS GRID SETUP ON LIBRARY MAIN FLOOR.

D. RADIANCE CALCULATIONS

For this study, Radiance, the most widely used lighting simulation engine, was selected. Radiance calculates both illuminance and luminance values. Illuminance is the amount of light that reaches a surface plane, such as a desk. It is very important to measure its value and assess whether there is enough light available to perform specific task without impacting visual comfort and acuity. The Illuminating Engineering Society (IES) provides the following recommended illuminance levels for libraries:

TABLE **7**: IES RECOMMENDED LIGHT LEVELS FOR LIBRARIES

SPACE	RECOMMENDED ILLUMINANCE fc (LUX)
Active Book Stacks	6–35 (60-350)
Inactive Book Stacks	5 (50)
Circulation and Reference Desk	30 (300)
Computer Areas	30 (300)
Reading (normal size and contrast)	30 (300)
Reading (very smal size and low contrast)	50 (500)

When light levels fall below these recommended ranges, it becomes necessary to supplement daylight with artificial (electric) light to avoid visual strain.

While most daylight studies perform daylighting analyses for a single worst-case scenario (overcast sky, no sun), this study analyzed 3 different sky conditions for 3 different times of the day, for both existing and proposed conditions, totaling 14 different lighting conditions (since overcast skies have no sun, there are no specific time of day or day of year).

Radiance uses "Standard Skies" to evaluate the luminance distribution from the sky dome under certain conditions. For this study, 3 sky conditions were used:

- CIE Standard Overcast Sky: no sun, brightest at the zenith.
- CIE Intermediate Sky: partly clouded sky with some sun.
- CIE Clear Sky: full sun, clear sky.

Each of these standard skies has a specific embeded algorithm that gives the Radiance engine the proper light distribution over the entire sky dome. In this study, the Intermediate Sky was renamed "partly cloudy" for clarity.

The images below show the 3 standard skies used in this study:

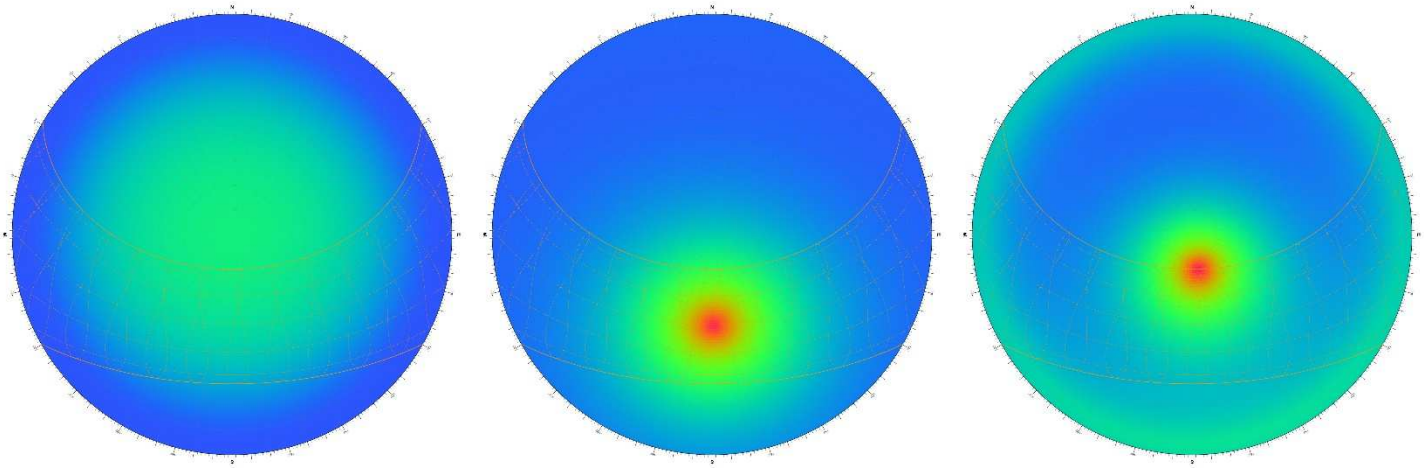


FIGURE **16**: CIE OVERCAST SKY, CIE INTERMEDIATE SKY, CIE CLEAR SKY.

The analysis was conducted for 2 dates of the year to cover a wide variety of sky conditions: June 21st with a clear sky model (best case, highest light levels) and September 21st with a partly cloudy model (intermediate light levels). Because there is no sun on overcast days (worst-case, low light levels), there is minimal variability in light levels during the day, thus this sky condition can be applied to any time of the day and any day of the year. For the clear sky and partly cloudy scenarios, when the sun in present, three times were analyzed 9am, 12pm, and 3pm.

While the standard skies give us the illuminance distribution for each sky condition, it does not give us the illuminance value from the sky itself. This is derived from the Design Sky value, which is the 15th percentile (exceeded 85% of the time) illumination value of the sky, calculated from the San Francisco weather file (USA_CA_San.Francisco.Intl.AP.724940_TMY3.epw). This analysis used a Design Sky value of 8,500 LUX.

Illuminance calculations were completed for each sky condition and time of day described above, for both the existing and proposed conditions, at each of the 2406 sensor points of the analysis grid. After all calculations were completed, the existing condition illuminance results were subtracted from the proposed results then divided by the existing results to create an illumination percentage difference. The percentage difference maps are very useful to identify where reduction of light levels might occur within the library.

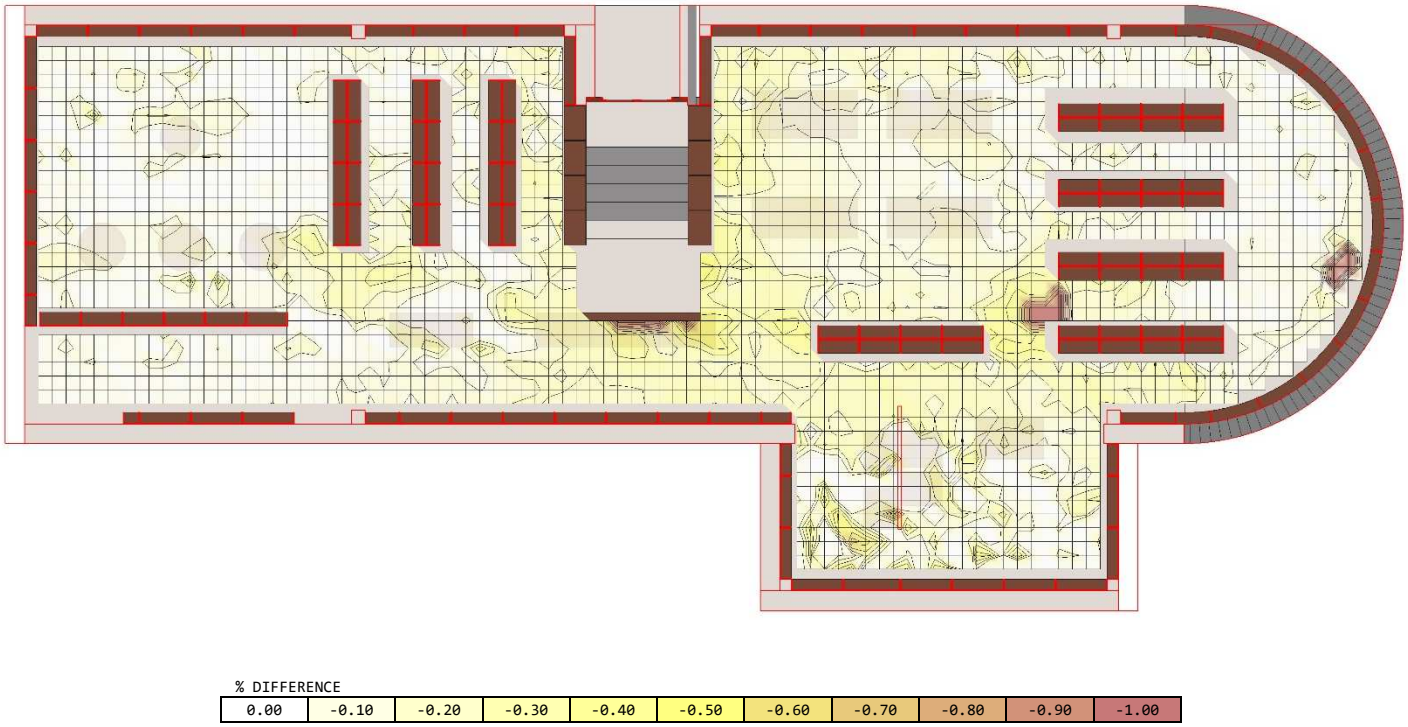


FIGURE **17**: EXAMPLE OF AN ILLUMINATION PERCENTAGE DIFFEERENCE MAP.

Radiance also calculates reflected luminance values, where one can assess the level of brightness within a space and identify potential glare issues that might impact the visual acuity and comfort.

Luminance calculations are best completed using a fisheye image that would represent the field of view of a person in a specific location. For this study, two view points were created, viewpoint 1 at the desk of the adult reading area and viewpoint 2 at the children's area.

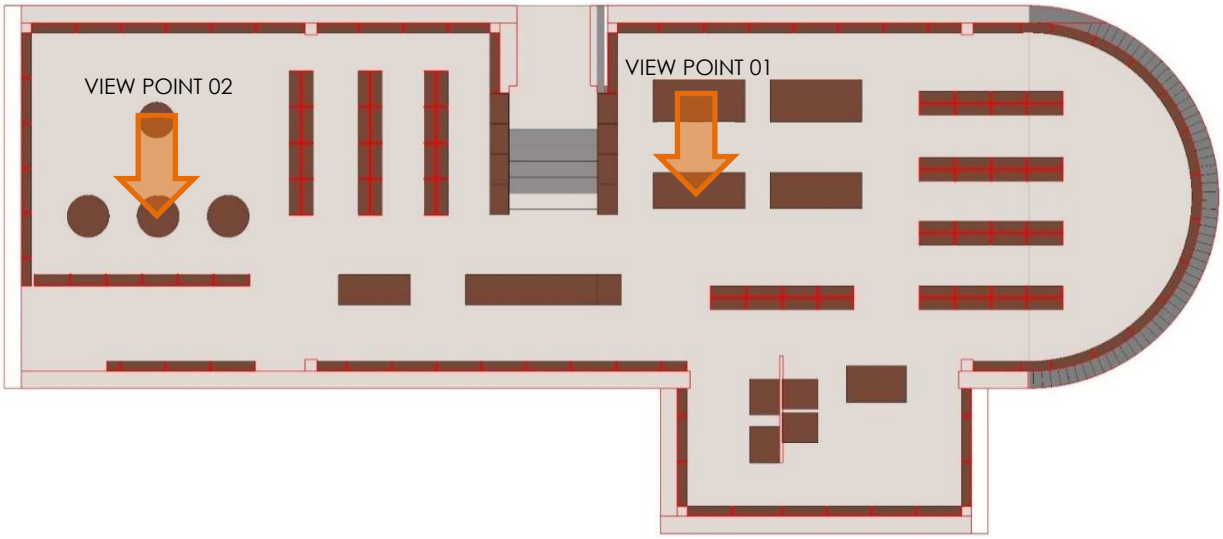


FIGURE **18**: LUMINANCE VIEW POINTS LOCATION.

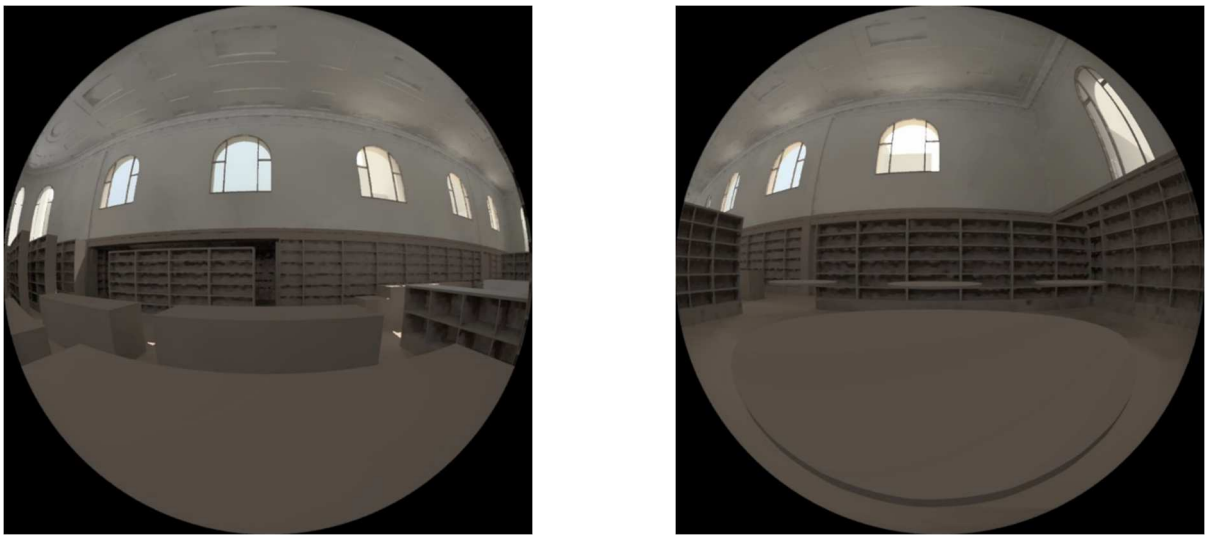


FIGURE **19**: VIEW POINT 01 AND VIEW POINT 02

The viewpoint images are then analyzed to assess any sources of brightness and potential glare. For this study, the appropriate index to use in this study is the Daylight Glare Probability index (DGP). DGP below .30 is imperceivable to the human eye and no glare is perceived. DGP between .30 and .45 is perceivable and a source of concern. DGP above .45 is intolerable.

Finally, a Daylight Autonomy analysis was done for the library's main reading room. Daylight Autonomy analysis calculates the percentage of time daylight levels are above a specified target illuminance value at a specific date and time. This is valuable to determine areas that are below the selected illuminance threshold and require supplemental lighting (electrical lights). For this study, the target illumination value was set to 400 LUX (40 fc) and the time of calculation was set at the library's opening hours of 10:00 am to 8:00 pm for all days of the week, all year long.

Radiance requires many parameters settings in order to do the calculation accurately and efficiently, depending on the size of the model, and the time required for each calculation. For reference, the radiance settings used in this study are included in the appendices. ■

VI. APPENDICES

A. MATERIALS RADIANCE FILES

The following are the Radiance material files that were used in the analysis. Each material includes its color, reflectivity, specularity and roughness:

```
LIBRARY FLOOR
H                          26
S                        0.43
L                        0.35
SPECULARITY              0.05
ROUGHNESS                0.05
REFLECTANCE             0.319
# Reflectance: rho=0.319
void plastic identifier
0
0
5  0.35 0.265 0.2  0.05 0.05
```

```
LIBRARY WALLS
H                          38
S                        0.09
L                        0.83
SPECULARITY              0.02
ROUGHNESS                 0.2
REFLECTANCE             0.811
# Reflectance: rho=0.811
void plastic identifier
0
0
5  0.83 0.803 0.755  0.02 0.2
```

```
LIBRARY CEILING
H                          37
S                        0.11
L                        0.77
SPECULARITY              0.02
ROUGHNESS                 0.2
REFLECTANCE             0.748
# Reflectance: rho=0.748
void plastic identifier
0
0
5  0.77 0.738 0.685  0.02 0.2
```

```
LIBRARY DARK WOOD
H                          22
S                        0.37
L                        0.27
SPECULARITY              0.02
ROUGHNESS                 0.1
REFLECTANCE             0.237
# Reflectance: rho=0.237
void plastic identifier
0
0
5  0.27 0.207 0.17  0.02 0.1
```

```
LIBRARY EXTERIOR WALLS
H                          39
S                        0.15
L                        0.46
SPECULARITY               0
ROUGHNESS                0.12
REFLECTANCE             0.439
# Reflectance: rho=0.439
void plastic identifier
0
0
5  0.46 0.436 0.391  0 0.12
```

```
LIBRARY LOW ROOF
H                          46
S                        0.27
L                        0.79
SPECULARITY              0.01
ROUGHNESS                 0.2
REFLECTANCE             0.745
# Reflectance: rho=0.745
void plastic identifier
0
0
5  0.79 0.74 0.577  0.01 0.2
```

2653 OCTAVIA (E & N)

H	208
S	0.22
L	0.85
SPECULARITY	0.01
ROUGHNESS	0.12
REFLECTANCE	0.745

```
# Reflectance: rho=0.745
void plastic identifier
0
0
5  0.663 0.763 0.85  0.01 0.12
```

URBAN FABRIC

H	48
S	0.11
L	0.46
SPECULARITY	0
ROUGHNESS	0.2
REFLECTANCE	0.45

```
# Reflectance: rho=0.45
void plastic identifier
0
0
5  0.46 0.45 0.409  0 0.2
```

STREET

H	212
S	0.08
L	0.65
SPECULARITY	0
ROUGHNESS	0.3
REFLECTANCE	0.618

```
# Reflectance: rho=0.618
void plastic identifier
0
0
5  0.598 0.622 0.65  0 0.3
```

LIBRARY ENTRY STAIRS

H	330
S	0.01
L	0.56
SPECULARITY	0.05
ROUGHNESS	0.02
REFLECTANCE	0.578

```
# Reflectance: rho=0.578
void plastic identifier
0
0
5  0.56 0.554 0.557  0 0.02
```

```
LIBRARY GLAZING
# Total, dirt-corrected glazing transmittance after CIBSE LG10:1999
# JALOXA LG10 Glazing Calculator for Radiance
# http://www.jaloxa.eu/resources/radiance/lg10_glazing.shtml
# Glazing transmittance (A1.5) => 0.69
# - Double glazing clear float + low E glass
# Percentage loss of daylight compared with clean glazing (A1.5) => 10%
# - Urban
# - Commercial, educational - rooms used by groups of people, office equipment
# Special conditions multiplier for calculating maintenance factor (A1.10) => x 1
# - Normal vertical glazing
# Exposure multiplier for calculating maintenance factor (A1.11) => x 1
# - Vertical glazing
# - Normal exposure for location
# Maintenance factor  ==> 90%

# Total transmittance ==> 0.62
void glass glazing_mat
                                0
                                0
3  0.68 0.68 0.68

RGB adjusted for TVis
                              137
                              137
                              137
                      137,137,137
```

B. RADIANCE SETTINGS

The following Radiance settings were used for the Illumination calculations as well as the Luminance images:

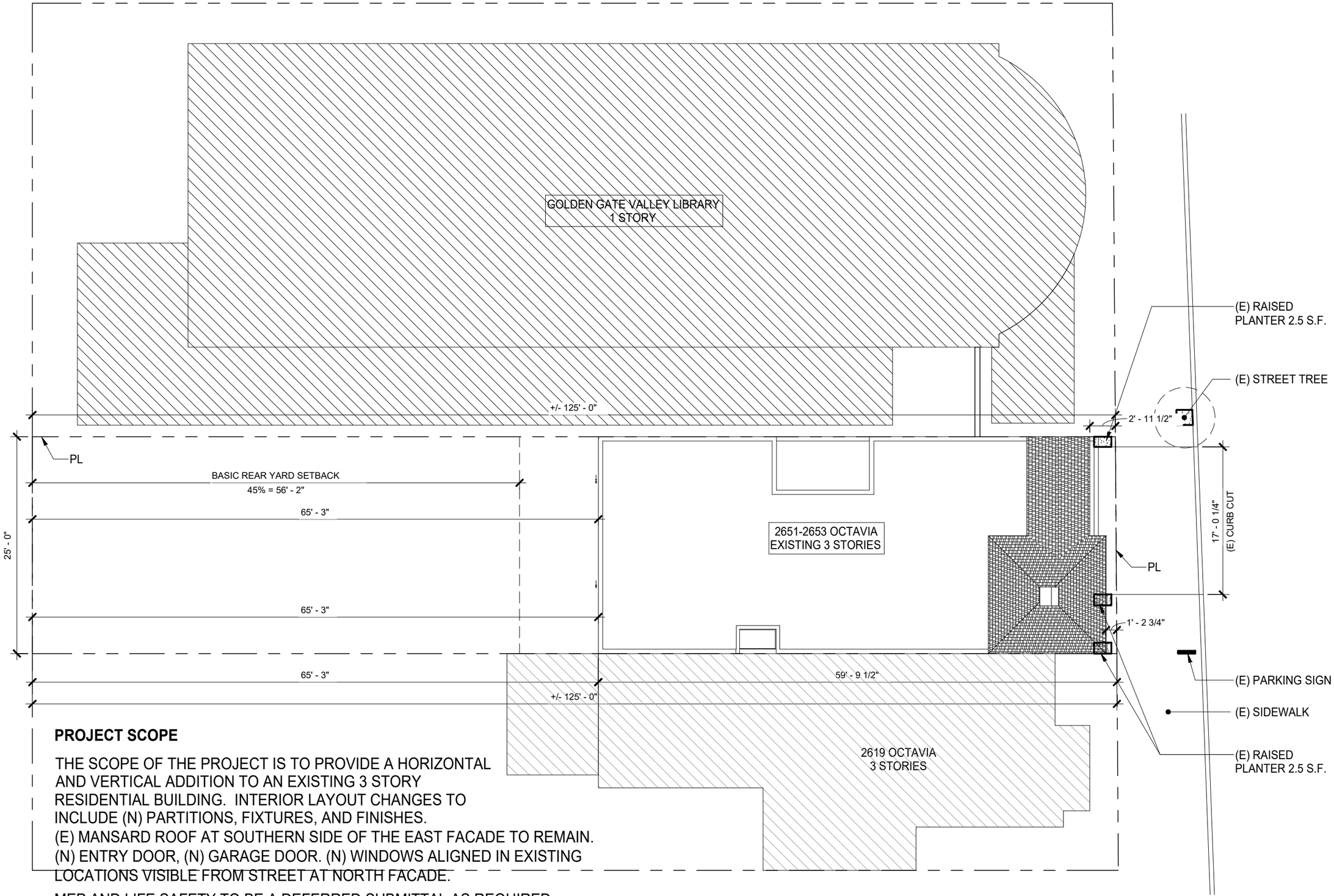
Illuminance Settings:

-dp=256
-ar=200
-ms=0.24
-ds=0
-dt=.2
-dc=.25
-dr=0
-ss=1
-st=.5
-ab=3
-af=RCP.amb
-aa=.25
-ad=256
-as=0
-av=0.01 0.01 0.01
-lr=3
-lw=0.002

Luminance Settings:

-dp=1024
-ar=476
-ms=0.24
-ds=.3
-dt=.1
-dc=.5
-dr=1
-ss=1
-st=.1
-ab=3
-af=RCP.amb
-aa=.15
-ad=768
-as=196
-av=0.01 0.01 0.01
-lr=6
-lw=0.002

SYMPHYSIS
Bioclimatic Design Consulting
435 S. ALEXANDRIA AVENUE #308
LOS ANGELES CA 90020
www.symphysis.net
info@symphysis.net



PROJECT SCOPE

THE SCOPE OF THE PROJECT IS TO PROVIDE A HORIZONTAL AND VERTICAL ADDITION TO AN EXISTING 3 STORY RESIDENTIAL BUILDING. INTERIOR LAYOUT CHANGES TO INCLUDE (N) PARTITIONS, FIXTURES, AND FINISHES.
(E) MANSARD ROOF AT SOUTHERN SIDE OF THE EAST FACADE TO REMAIN.
(N) ENTRY DOOR, (N) GARAGE DOOR. (N) WINDOWS ALIGNED IN EXISTING LOCATIONS VISIBLE FROM STREET AT NORTH FACADE.

MEP AND LIFE SAFETY TO BE A DEFERRED SUBMITTAL AS REQUIRED.

EXISTING SITE PLAN 3/32" SCALE

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OWNER

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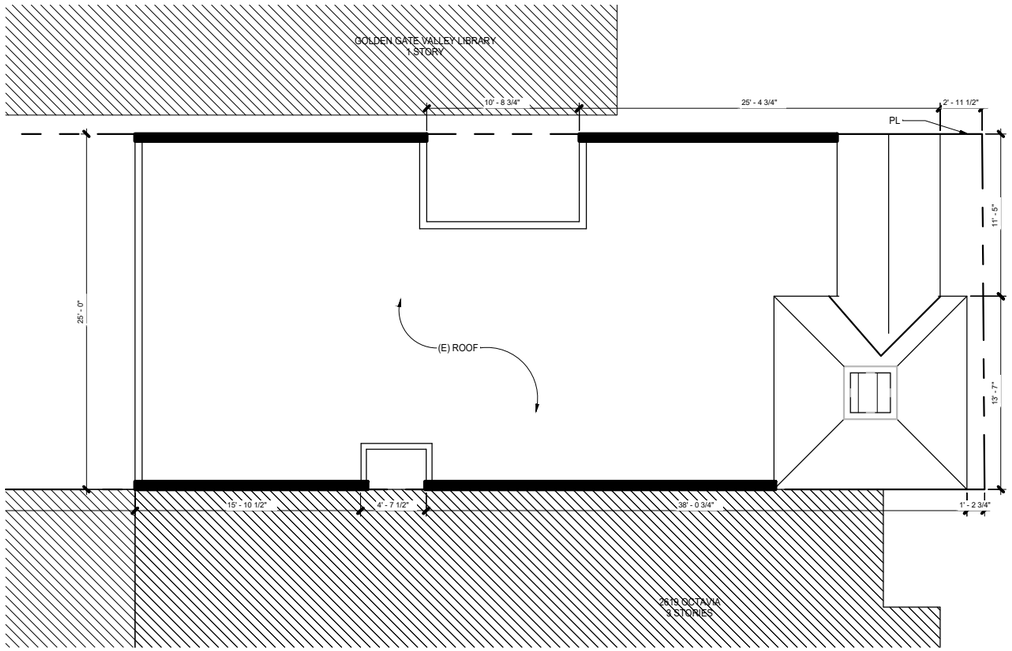
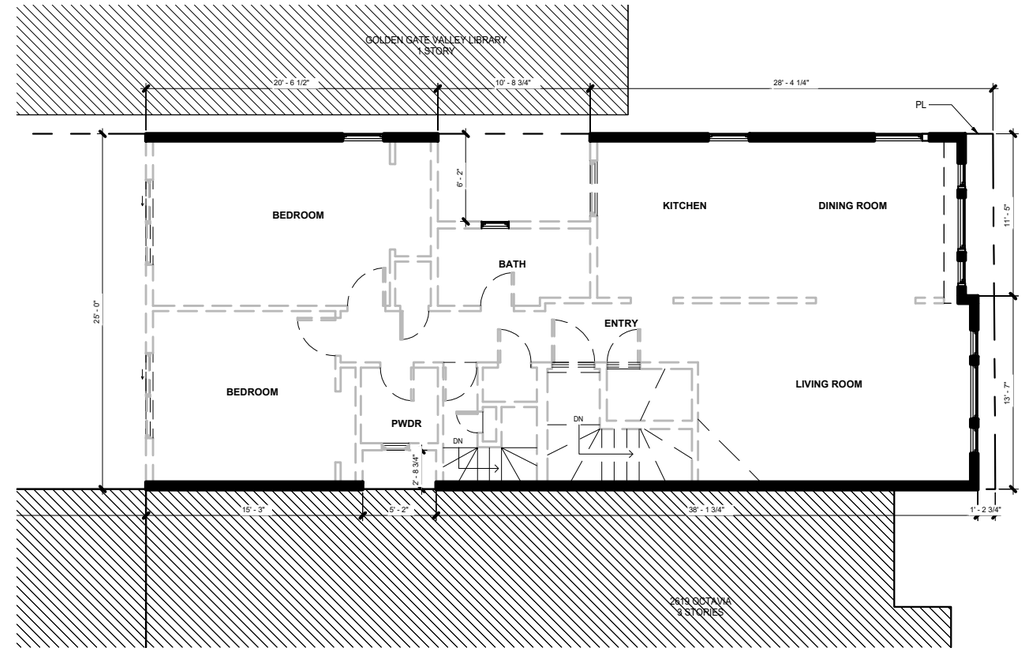
NEIGHBORHOOD NOTIFICATION

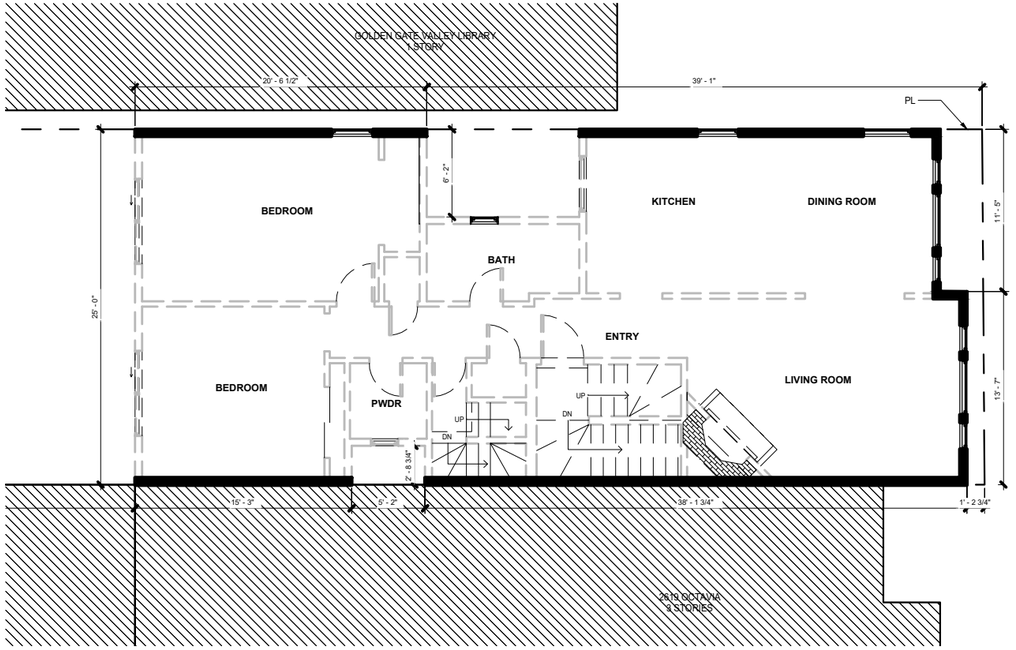
01



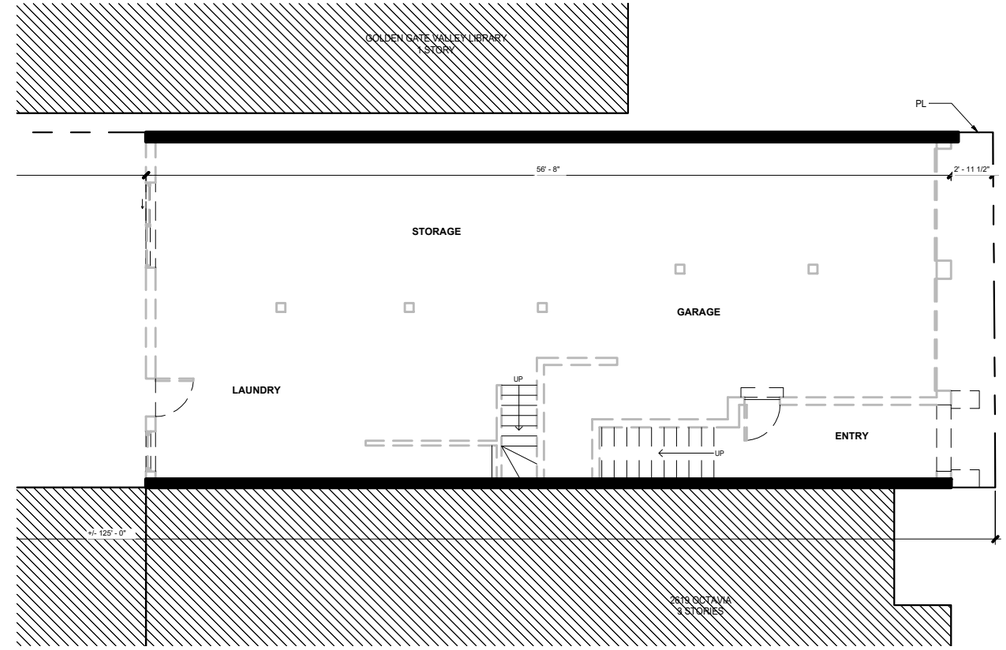
EXISTING ROOF 3/32" SCALE



EXISTING LEVEL 2 3/32" SCALE



EXISTING LEVEL 3 3/32" SCALE



EXISTING LEVEL 1 3/32" SCALE

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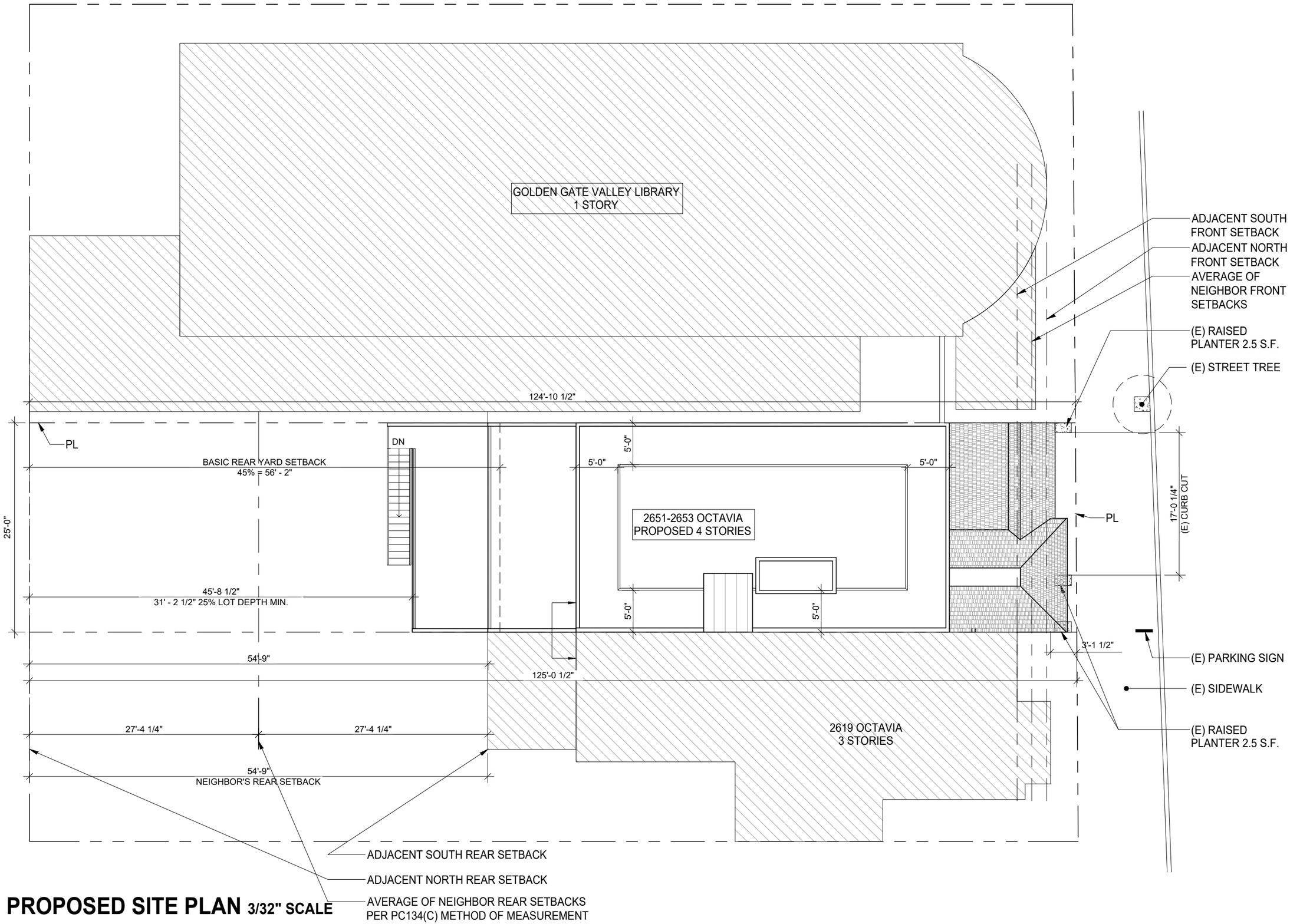

PROPOSED SITE PLAN 3/32" SCALE

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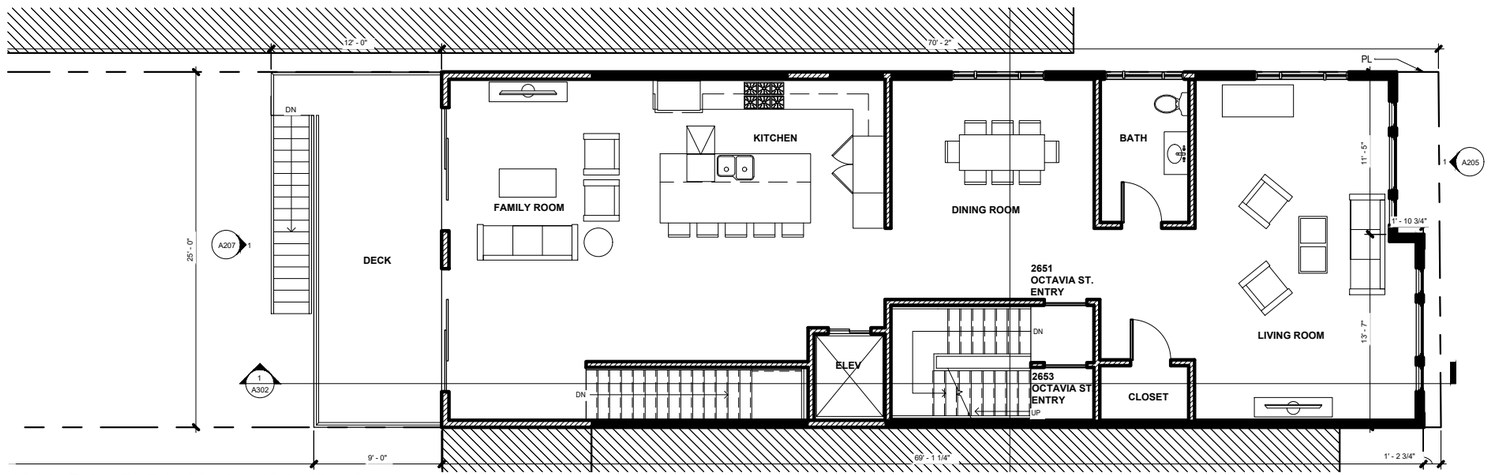
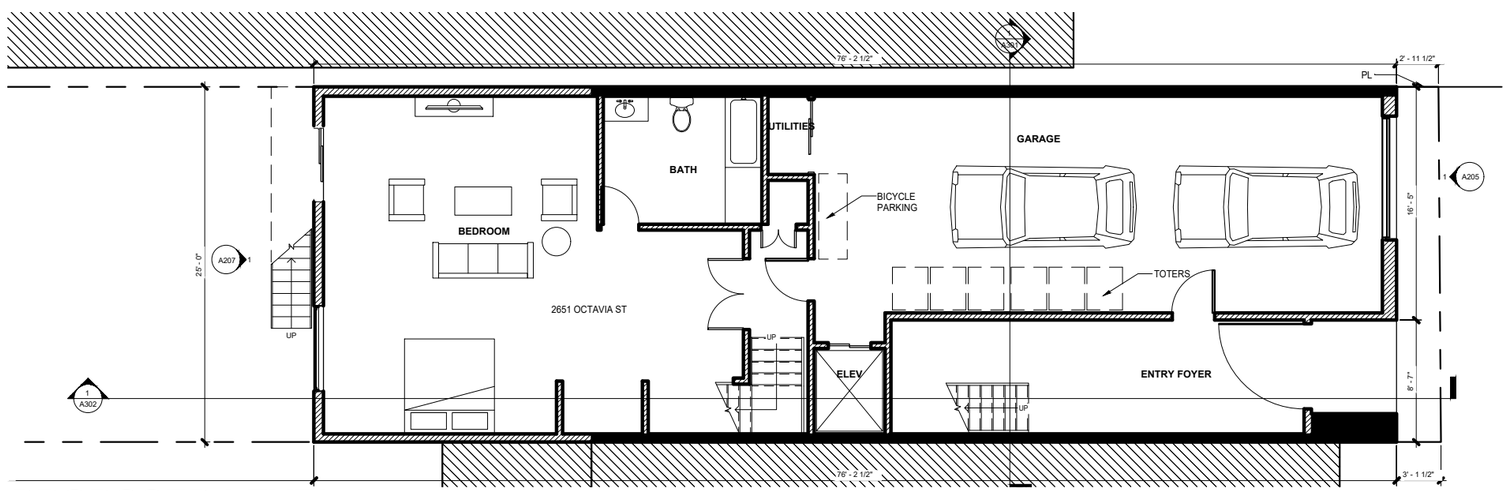


PROPOSED LEVEL 2 3/32" SCALE



PROPOSED LEVEL 1 3/32" SCALE

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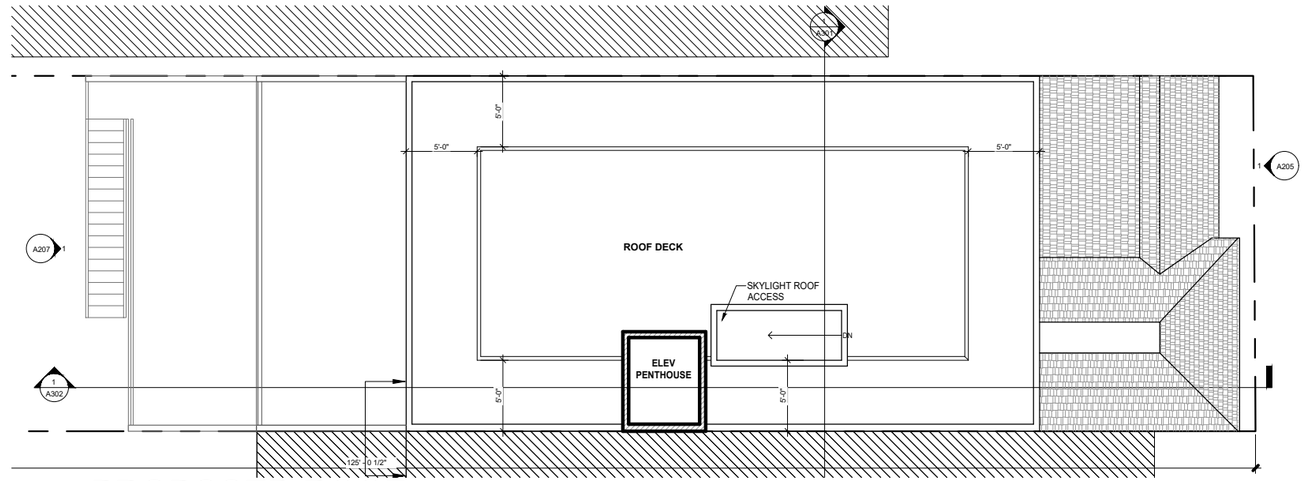
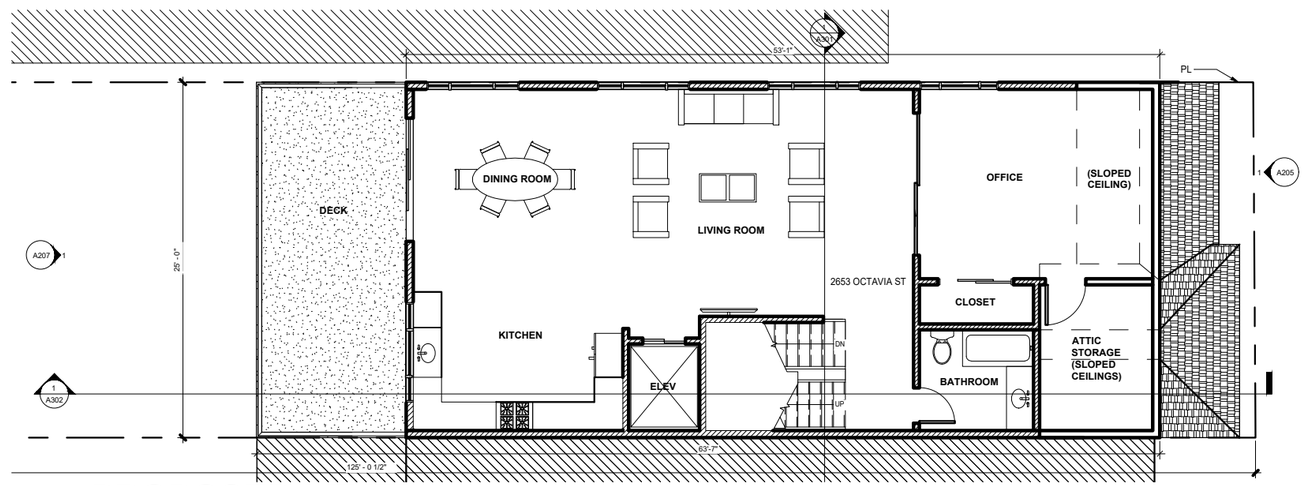
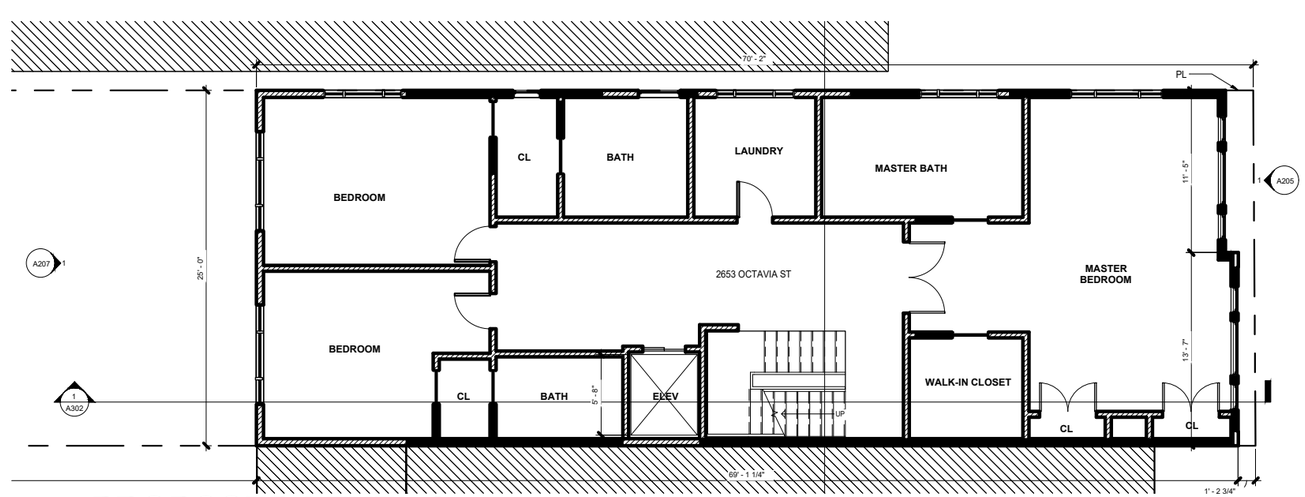


PROPOSED ROOF 3/32" SCALE



PROPOSED LEVEL 4 3/32" SCALE



PROPOSED LEVEL 3 3/32" SCALE

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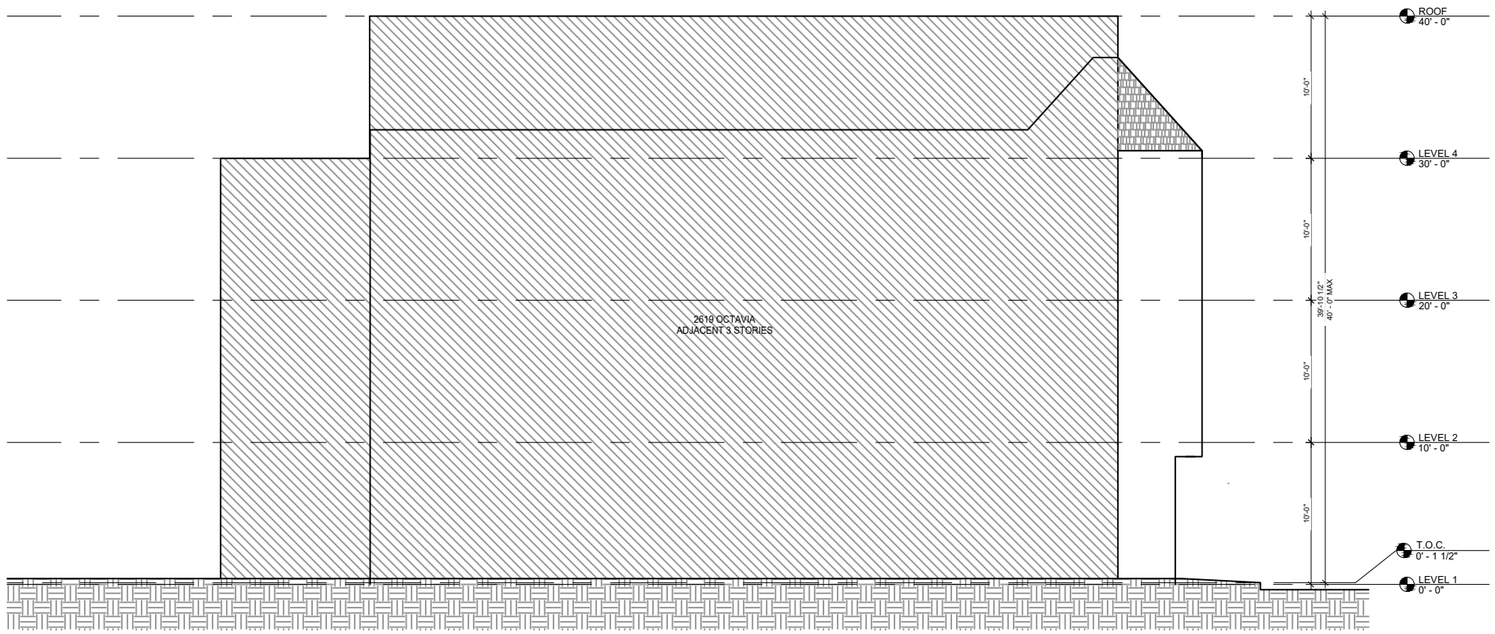
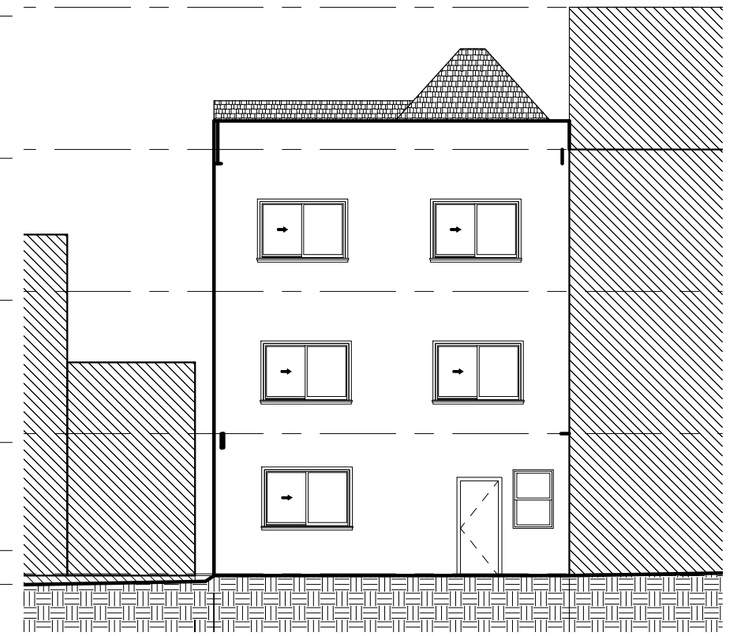


EXISTING SOUTH ELEVATION 3/32" SCALE



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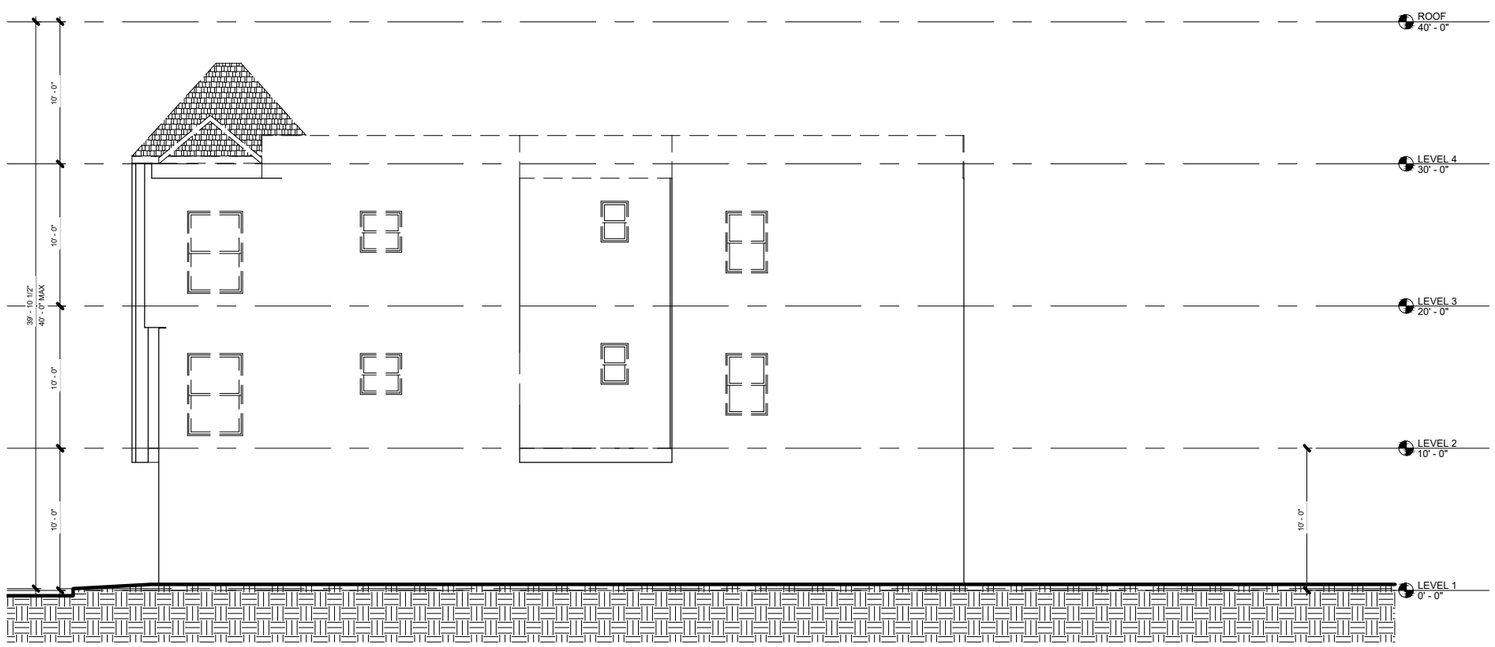

EXISTING NORTH ELEVATION 3/32" SCALE

EXISTING EAST ELEVATION 3/32" SCALE

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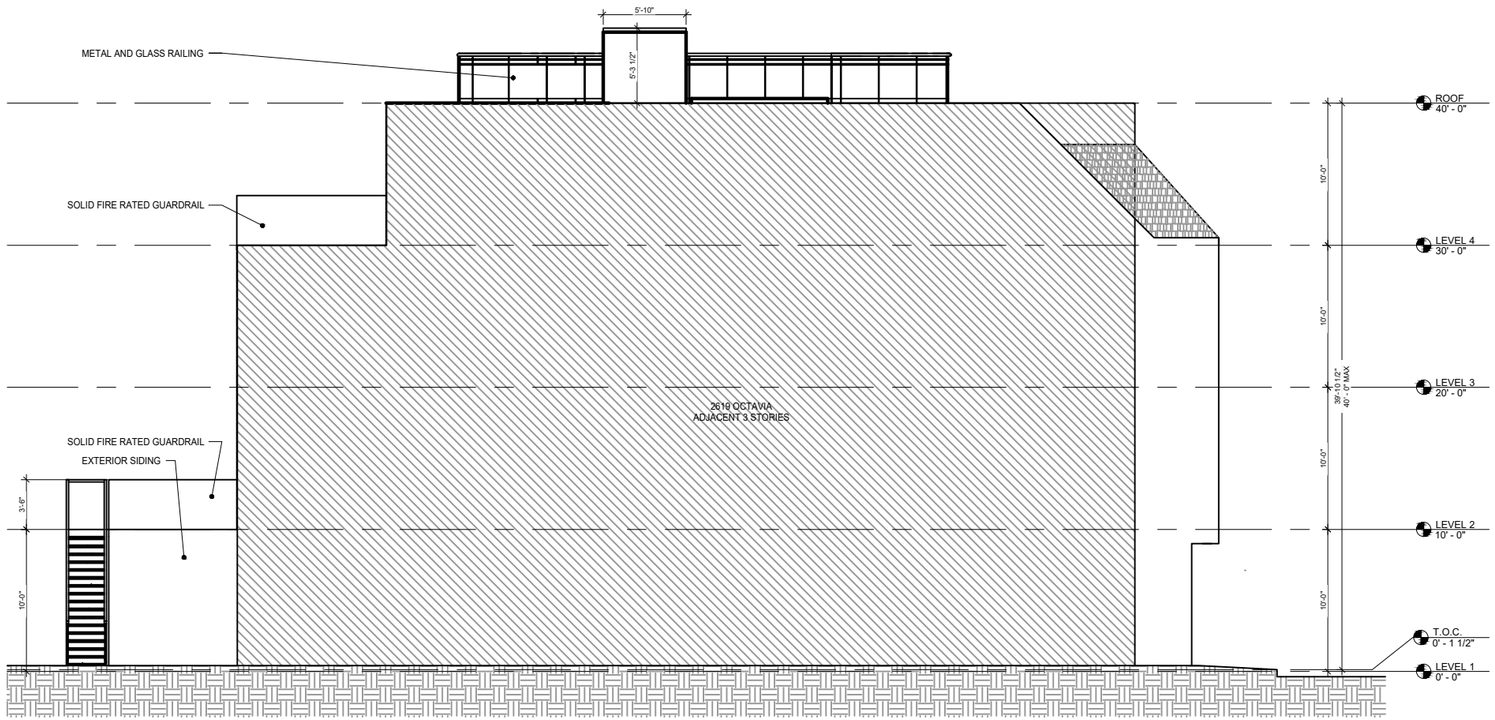
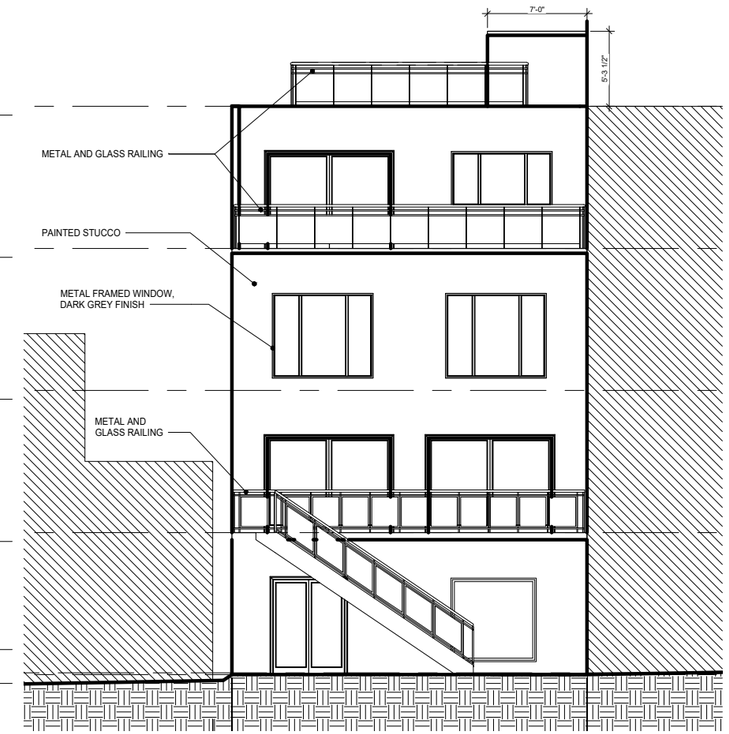


PROPOSED SOUTH ELEVATION 3/32" SCALE



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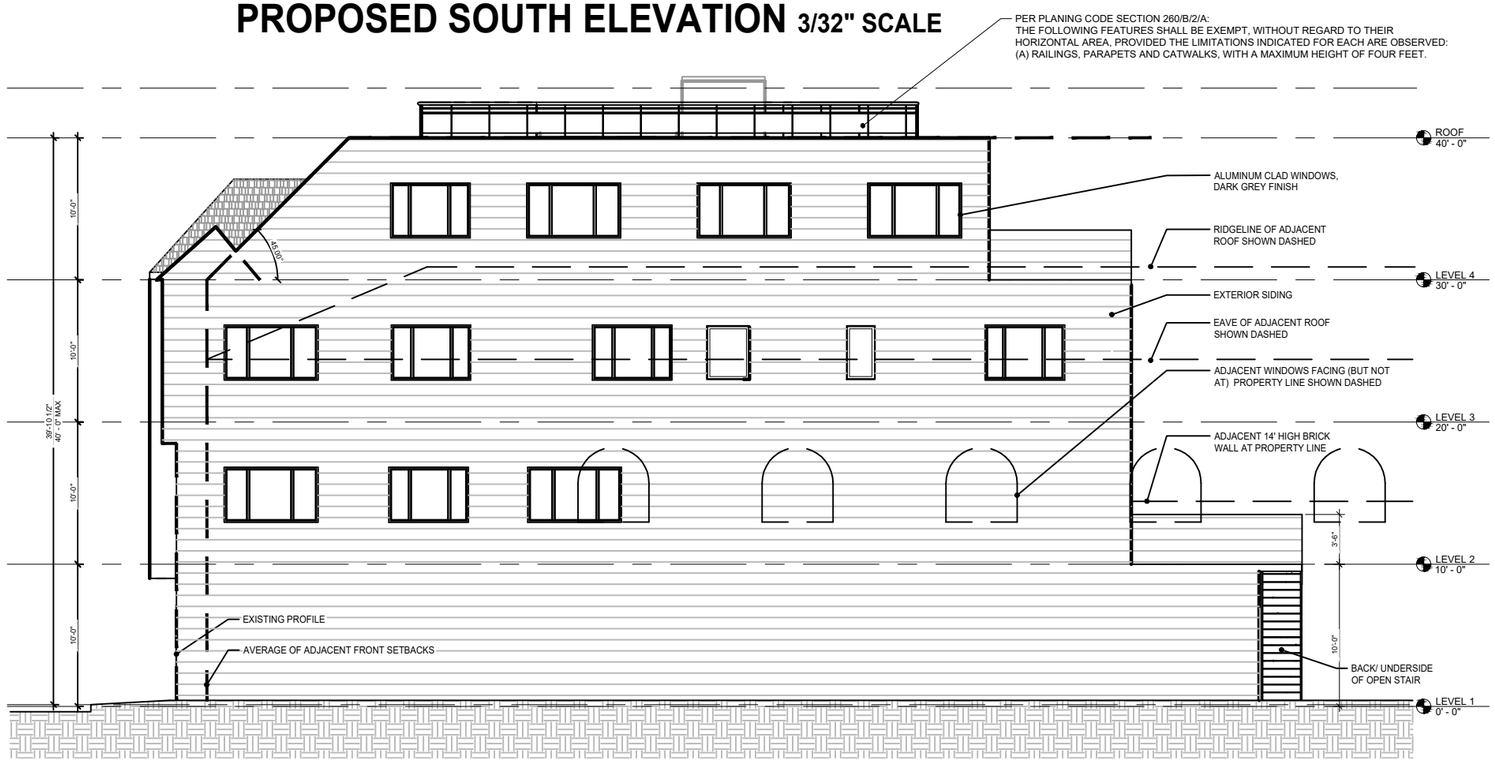

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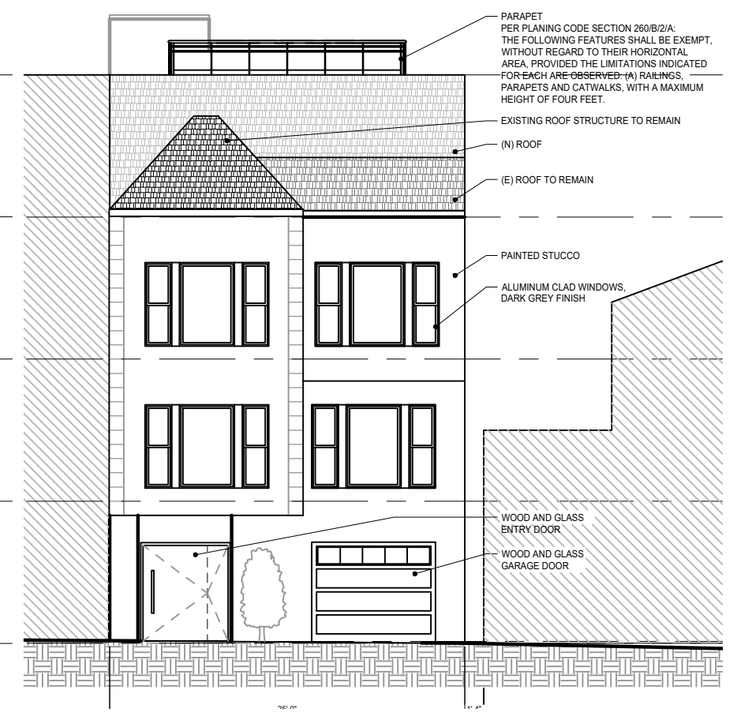

PROPOSED EAST ELEVATION 3/32" SCALE

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