



**CITY OF KIRKLAND**  
**Planning and Building Department**  
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## MEMORANDUM

**To:** Design Review Board

**From:** Scott Guter, AICP, Senior Planner

**Date:** August 8, 2019

**File No.:** DRV19-00306

**Subject:** **KIRKLAND URBAN SOUTH (PHASE 2) PROJECT  
DESIGN RESPONSE CONFERENCE**

### **I. MEETING GOALS**

At the August 19, 2019 Design Review Board (DRB) meeting, the DRB should continue the Kirkland Urban South Design Response Conference from July 15, 2019 and determine if the project is consistent with the design guidelines contained in the Kirkland Parkplace Mixed-Use Development Master Plan and Design Guidelines, as adopted in Kirkland Municipal Code (KMC) Section 3.30.040.

During the Design Response Conference, the DRB should provide feedback on the applicant's response to the key points brought up by the DRB at the July 15, 2019 meeting.

### **II. PROPOSAL**

The subject property is located at 200 Peter Kirk Lane (see Attachment 1). Natasha Morris with CollinsWoerman has applied for a Design Response Conference for a new 7-story mix use commercial building with below grade parking on the subject property (see Attachment 2). The project consists of 250,000 SF of office space, a 54,000 SF theater, 6,000 SF of retail, and approximately 700 parking stalls. Parking will primarily be provided below grade with approximately 80 surface parking stalls.

### **III. DESIGN RESPONSE CONFERENCE**

The Design Review Board reviews projects for consistency with design guidelines for the Kirkland Parkplace Mixed Use Development Master Plan and Design Guidelines, as adopted in Kirkland Municipal Code Chapter 3.30.

In response to the DRB comments made at the Design Response Conference meeting on July 15, 2019 the applicant submitted revised drawings (Attachment 2). The list below summarizes the key points that the DRB discussed at the meeting on July 15, 2019.

The DRB discussed the presented design and provided the applicant the following comments that should be addressed:

#### **A. Building Design**

- Blank Wall Treatment.

The applicant should provide treatment to the north and east podium elevations to address the blank walls.

- Pedestrian Bridge.

The applicant should develop a more interesting "signature" design.

- Glare Study.

During the CDC conference the Board expressed concern with glare from the project impacting the park. A glare study was requested.

**B. Site Planning**

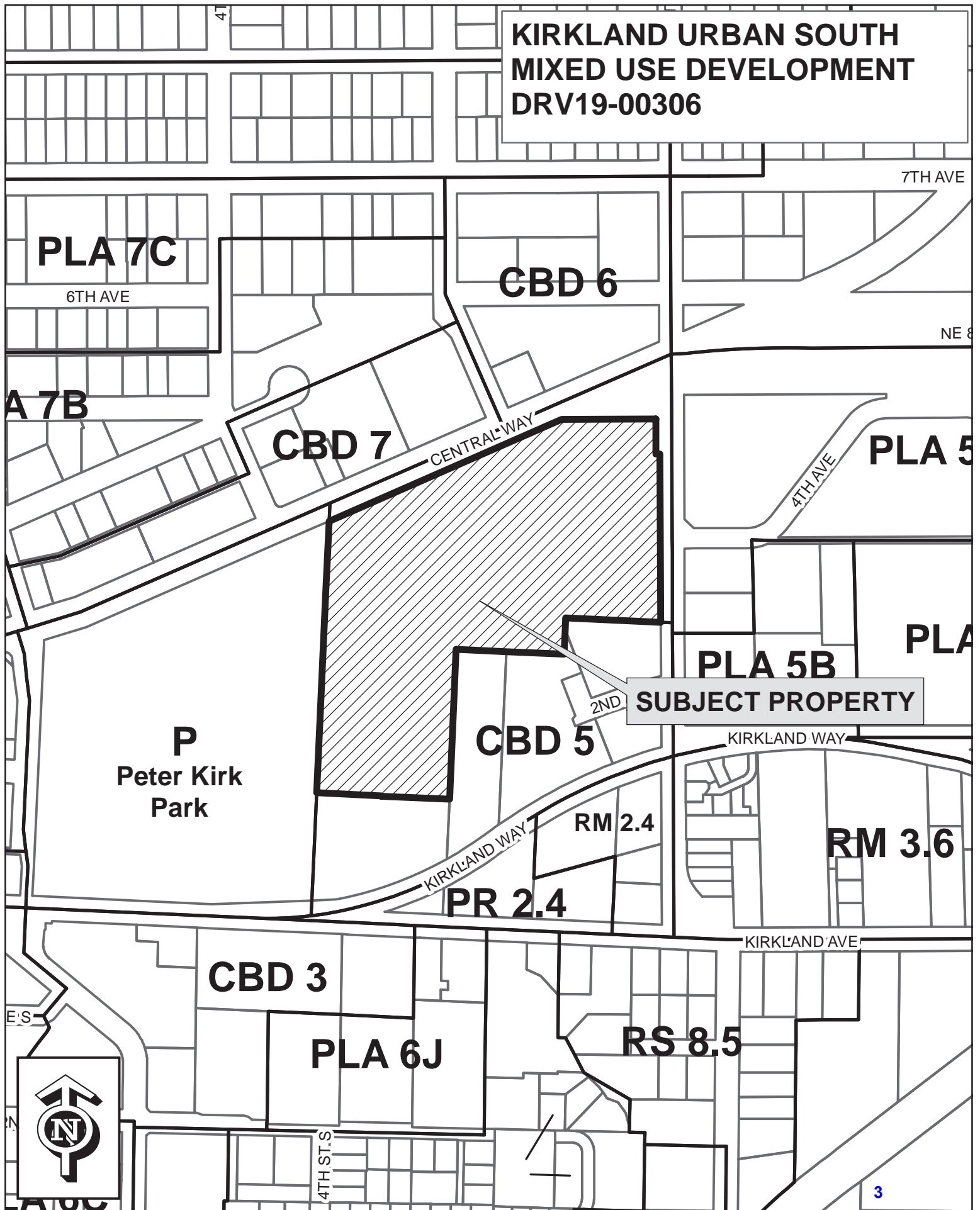
- Landscaping.

The applicant should look for an opportunity to add coniferous trees to the project site.

**IV.**

**ATTACHMENTS**

1. Vicinity Map
2. Revised Plan Set with Glare Study dated August 6, 2019









SUBMITTAL DATE: 8/6/2019

TEEN  
UNION BUILDING

# Kirkland Urban South

KIRKLAND, WA  
DRV19-00138

DESIGN RESPONSE CONFERENCE #2:  
8/19/2019

W  
COLLINS  
ERMAN

# **Kirkland Urban South** | Site Plan & Landscape Concepts



## SITE PLAN + LANDSCAPE CONCEPTS

### Overall Site Plan



### Observations

In Phase One, the northeast corner of the site contains open space and planting that acts as an extension of the greenbelt adjacent to Central Way. This transitions to a variety of open spaces within the project, including residential open space, and more urban plazas in the center of the site and west of QFC. Kirkland Urban South brings the green of the park up into the building at multiple levels, from the base to the top floor by providing a combination of usable decks and extensive planting that helps to moderate the transition from the Park to the buildings upper levels.



## SITE PLAN + LANDSCAPE CONCEPTS

Overall Plan





## SITE PLAN + LANDSCAPE CONCEPTS

Terraces and Roof Levels





## SITE PLAN + LANDSCAPE CONCEPTS

### At Grade Materials

#### STANDARD CONCRETE - PEDESTRIAN AND VEHICULAR



2'X2' SCORED  
CONCRETE



SCORED CONCRETE  
CROSSINGS

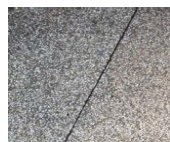


CONCRETE ROAD

#### SPECIALTY CONCRETE



SANDBLASTED  
FINISH PAVING  
FIELD



TOP SEEDED FINISH  
ACCENT BANDS



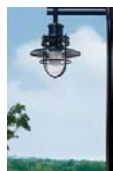
INTEGRAL BUFF  
COLOR  
(DAVIS PALOMINO OR  
SIM.)



CAST IN PLACE CONCRETE  
SEATWALL



CAST IN PLACE CONCRETE  
STEPS



POLE LIGHT  
PEDESTRIAN



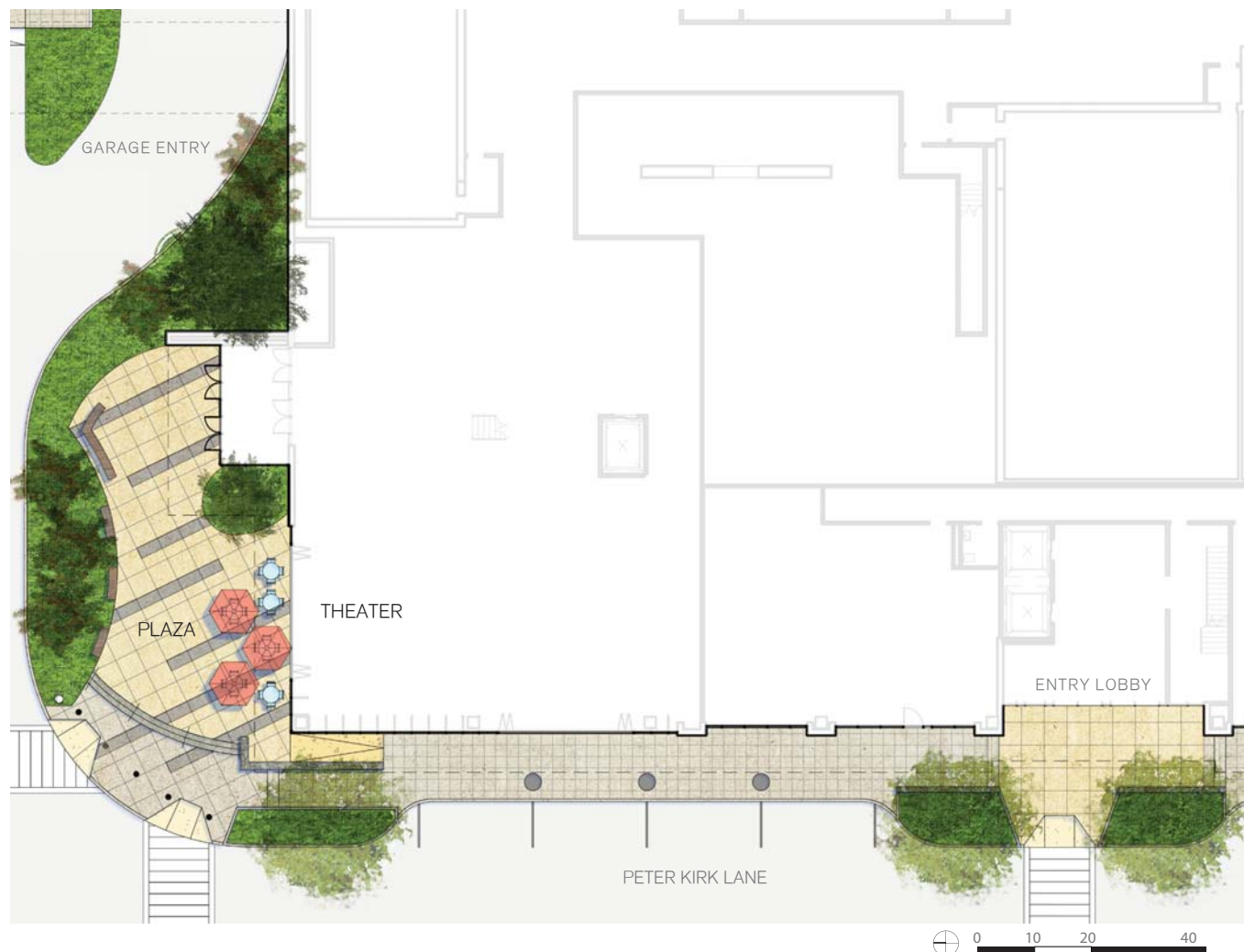
POLE LIGHT



VEHICULAR  
POLE LIGHT



STEP / WALL LIGHT



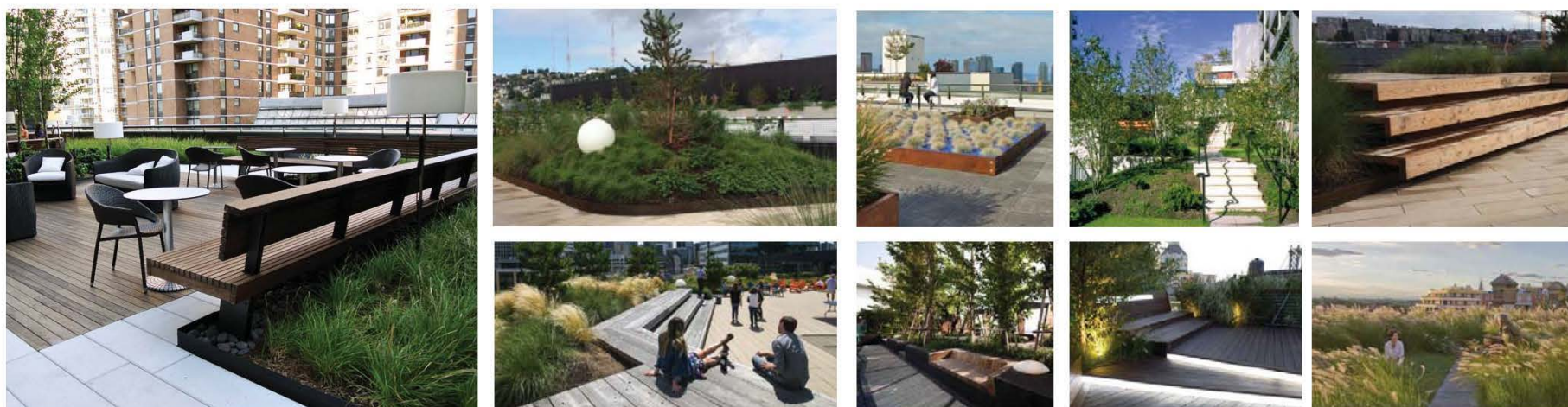
# SITE PLAN + LANDSCAPE CONCEPTS

Site Layering

## OVERALL + AT-GRADE



## TERRACE + ROOF LEVELS





## SITE PLAN + LANDSCAPE CONCEPTS

Terraces and Roof Levels



### PAVING



2' X 2' STANDARD PRECAST PEDESTAL  
PAVER- BLEND OF 2 GRAY COLORS W/  
TAN ACCENT

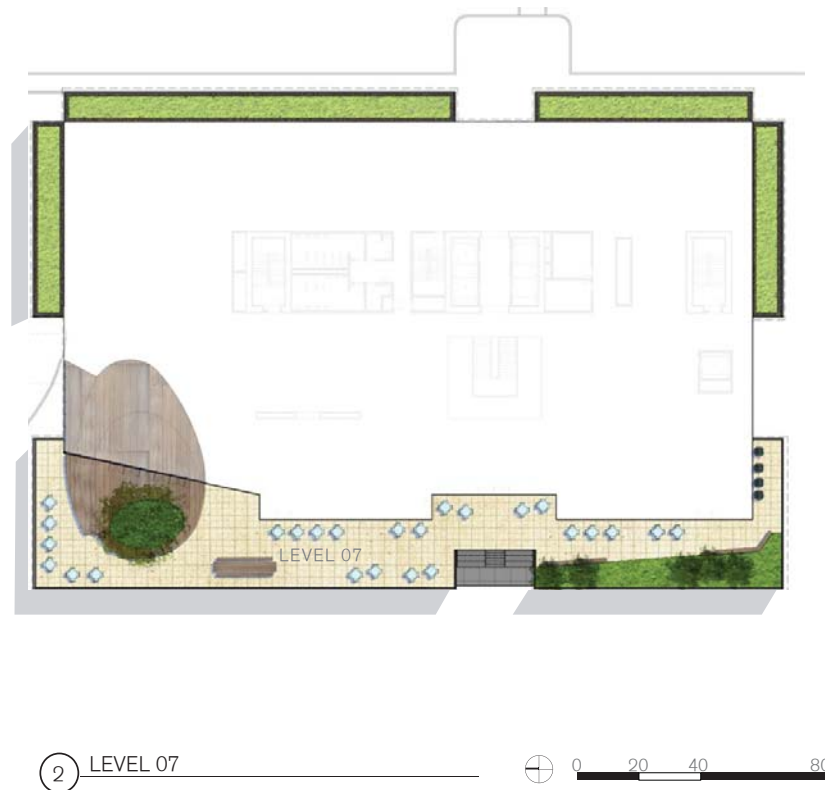
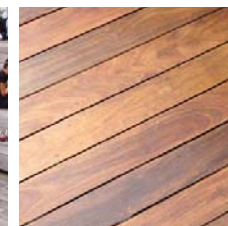


PEDESTAL PAVERS COLORS: GRAY, CHARCOAL, TAN -  
(MUTUAL MATERIALS VANCOUVER BAY SERIES OR SIM.)

### DECKING



1'X3' PLANK PRECAST PAVERS





## SITE PLAN + LANDSCAPE CONCEPTS





## SITE PLAN + LANDSCAPE CONCEPTS

Layered Planting at Grade





## SITE PLAN + LANDSCAPE CONCEPTS

Layered Planting at Terrace and Roof Levels



*Acer circinatum*



*Pinus flexilis*



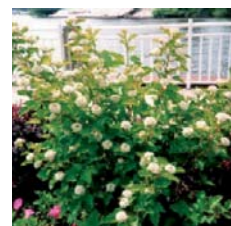
*Betula papyrifera*



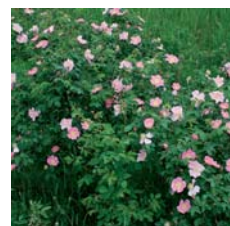
*Cercidiphyllum japonicum*



*Cornus sanguinea* 'Midwinter Fire'



*Physocarpus capitatus*



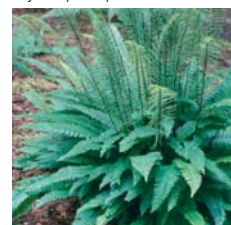
*Rosa nutkana*



*Philadelphus lewisii*



*Deschampsia caespitosa*



*Blechnum spicant*



*Athyrum filix-femina*



*Festuca idahoensis*



*Erigeron speciosus*



*Achillea millefolium*



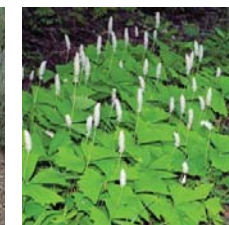
*Ribes sanguineum*



*Iris tenax*



*Armeria maritima*



*Achlys triphylla*



## SKYBRIDGE DESIGN OPTIONS

Original Submittal

The original submittal consists a double truss supporting a roof and floor system. The trusses incorporate vertical members at 30 feet on center with diagonal bracing between each column. The roof is overhanging with a wood soffit. Structural analysis of this design reveals a relatively inefficient structure given the long spans between truss webs. Consequently, the top and bottom members would be significantly larger than depicted (approximately 36 inches deep), and the long diagonals would need to be 12 inch square tube steel members.

Pros: Simple, understated form. Soffit material ties into soffits on several of the office and retail buildings in the project.

Cons: Inefficient structure, somewhat difficult to drain, board suggested design was too plain.



View from Peter Kirk Park



View from access road



View from Building F



## SKYBRIDGE DESIGN OPTIONS

Option 1

Option 1 is a double truss configuration that utilizes an efficient diagonal truss system on each side of the bridge consisting of 18 inch deep wide flange beams top and bottom and 8 inch tubesteel or wide flange diagonal members. The roof system incorporates exposed purlins and wood soffit to tie into the building aesthetic language.

Pros: Efficient Structure, simple roof, elegant form.

Cons: Possibly too simple.



View from Peter Kirk Park



View from access road



View from Bldg F



## SKYBRIDGE DESIGN OPTIONS

### Option 2

Option 2 is also a double truss configuration similar to option 1, but with slightly canted trusses and rounded connections. The roof system incorporates a barrel vaulted form, with a wood soffit and standing seam metal roof.

Pros: Interesting roof form. Relatively efficient structure, easy to drain.

Cons: Costly, roof form not used elsewhere on project.



View from Peter Kirk Park



View from access road



View from Bldg F

## SKYBRIDGE DESIGN OPTIONS

Option 3

Option 3 is similar to option 1, but incorporates a V- shape “butterfly” roof form reminiscent of the escalator canopy in Phase 1, but clad in wood. Exposed metal purlins from a crossing pattern.

Pros: Interesting roof form that ties into Phase 1. Relatively efficient structure.

Cons: Difficult to drain, exposed roof lattice could encourage bird nesting.



View from Peter Kirk Park



View from access road



View from Bldg F

## SKYBRIDGE DESIGN OPTIONS

### Option 4

Option 4 is similar to option 3, but with the butterfly roof valley off-center from the bridge, extending the west overhang several feet.

Pros: Interesting roof that ties into phase one, relatively efficient structure.

Cons: Difficult to drain, exposed roof lattice could encourage bird nesting.



View from Peter Kirk Park



View from access road



View from Bldg F



## SKYBRIDGE DESIGN OPTIONS

Option 5

Option 5 incorporates a slight V-shape, or “butterfly” roof form, oriented 90 degrees from options 3 and 4. The trusses have been modified with additional vertical members and tapered wide flange sections. The wide flange sections will have to be designed based on the smallest section, and so the truss members will be larger than the other options.

Pros: Interesting roof form that ties into phase one.

Cons: Inefficient structure, very costly, somewhat difficult to drain.



View from Peter Kirk Park



View from access road



View from Bldg F

## SKYBRIDGE DESIGN OPTIONS

### Option 6 - Preferred Option

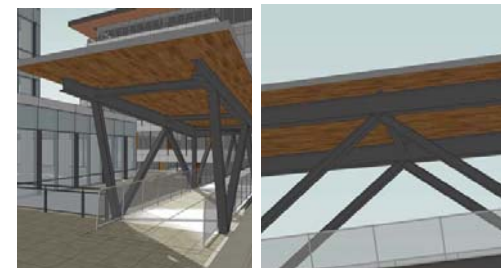
Option 6 is similar in overall form to option5 , but incorporates a more efficient truss configuration, and straight truss sections.

Pros: Interesting roof form that ties into phase one. Efficient structure with slender truss elements.

Cons: Somewhat difficult to drain.



View from Peter Kirk Park



View from access road



View from Bldg F



## GLARE STUDY

Methodology

### PURPOSE OF STUDY:

This study has been performed to investigate the potential for specular glare from the West façade of the NDA Kirkland Urban South Office project onto the adjacent Peter Kirk Park and Lee Johnson baseball field and to evaluate the performance of several glazing products in terms of glare reduction.

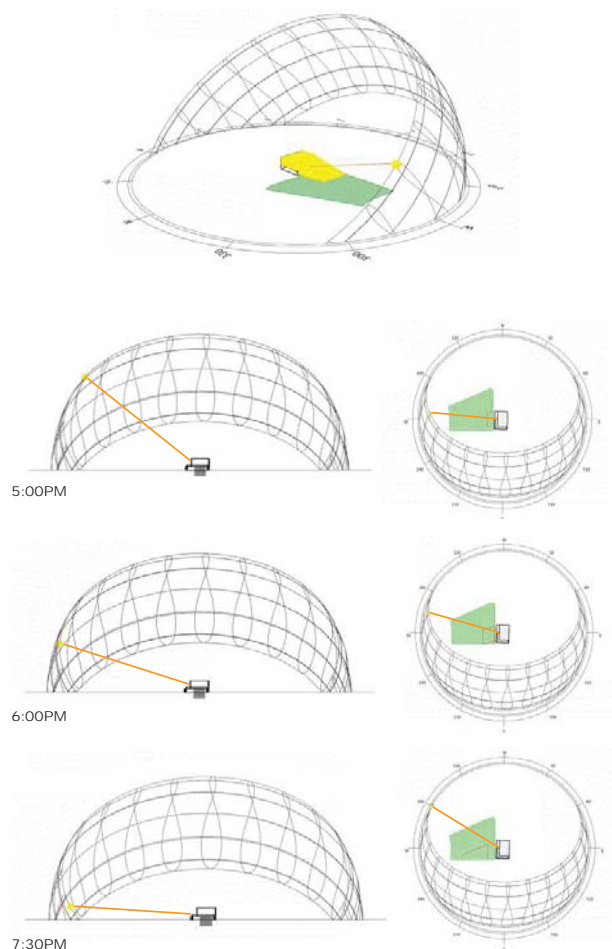
### METHODOLOGY:

In order to evaluate the glare potential onto the site, the following process was used:

1. A 3D model of the building massing and the adjacent park ground plane was created for the sole purpose of the study. The 3D model was created using environmental simulation software and takes into account the latitude and longitude of the project site and the sun's paths through the sky on any given day.
2. Using the 3D model, "glare zones" were identified within the park which represent where a direct reflection of the sun from the west façade of the building would be directed toward the park and potentially produce glare in one's field of view.
3. The glare zones were identified for three days of the year (Summer Solstice, Equinox, Winter Solstice) to represent the full range of the sun's path through the sky throughout the year and subsequent reflections from the west façade.
4. Once glare zones were identified within the park, a perspective view of the building was created from each glare zone to determine the specific location and intensity of the glare from the building façade.
5. The amount of glare was determined by calculating the luminance from the façade for each view, measured in  $\text{cd}/\text{ft}^2$ . These luminance calculations were performed using several different glazing types representing varying levels of exterior reflectance, transmittance and solar heat gain coefficients. To determine if the reflected light is considered a source of glare, a metric called a "glare threshold" is used.
6. **Glare Threshold** - The glare threshold represents the highest allowed ratio between the maximum measured luminance within a field of view and the average luminance of the entire field of view, therefore it is relative. In other words, the amount of perceived glare depends on how much contrast there is between the brightest and darkest things in one's field of view. A good example of this is how a bright street light can appear "glary" when viewed against the backdrop of a dark night sky, but would be hardly perceptible on a bright sunny day. For this study, the glare threshold is determined to be a value 7 times the average luminance of the entire field of view.

## GLARE STUDY

Summer Glare



SUMMER SOLSTICE - JUNE 21



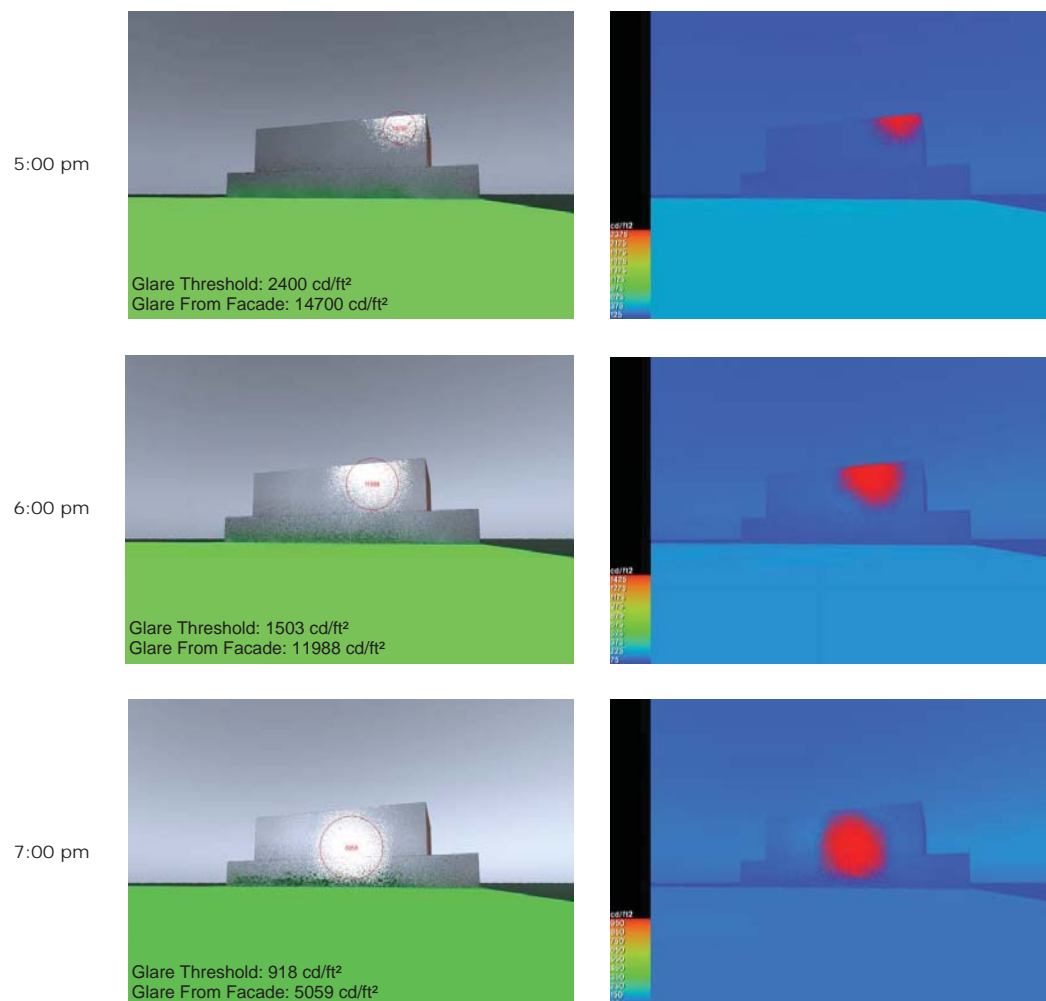
In the summertime, the potential for specular glare from the West facade will be limited to viewpoints which face toward the building and lie within the highlighted areas above, mostly between the hours of 5pm and 8 pm on a clear sunny day.

\*Note that a person standing in the park within one of the highlighted areas would have to also be looking toward the building at an angle which matches the angle of incidence from the sun in order to perceive direct glare



## GLARE STUDY

Summer Glare



### SUMMER SOLSTICE - JUNE 21

The images to the left represent a view of the facade from a location within the glare zone specified on the previous page (refer to the blue arrow).

These simulations were run assuming a clear sunny clear day.

Note that based on historical weather data, June is expected to have a total of 7 clear days, 8 partly cloudy days, and 15 cloudy days.

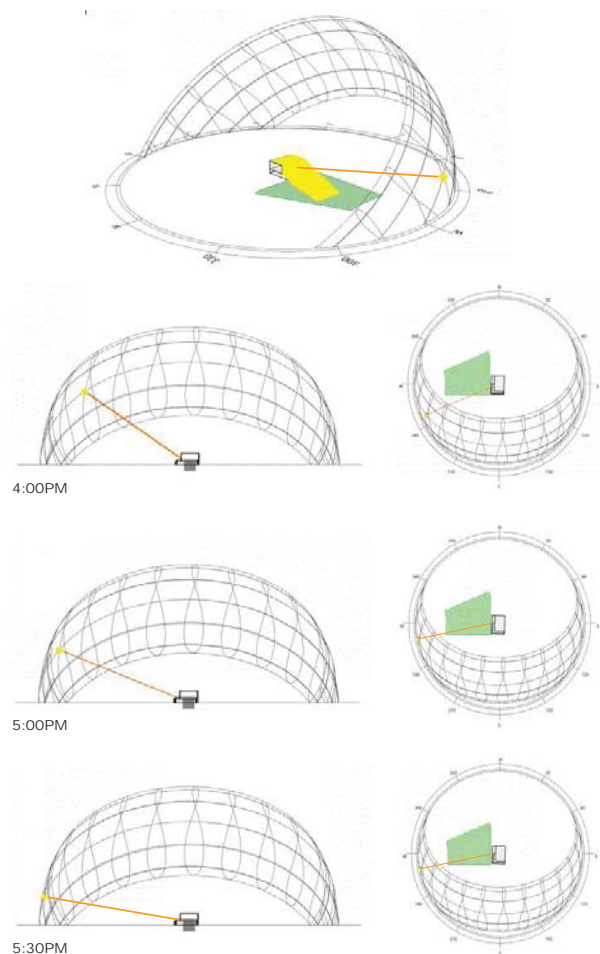
### Conclusion:

Reflected sunlight from the facade exceeds the glare threshold between 5pm and 8pm.

Note that the model does not take into account the amount of solid wall and the shading effect of vegetation, including both deciduous and evergreen trees and shrubs.

## GLARE STUDY

Spring/Fall Glare



EQUINOX - MARCH/SEPTEMBER 21



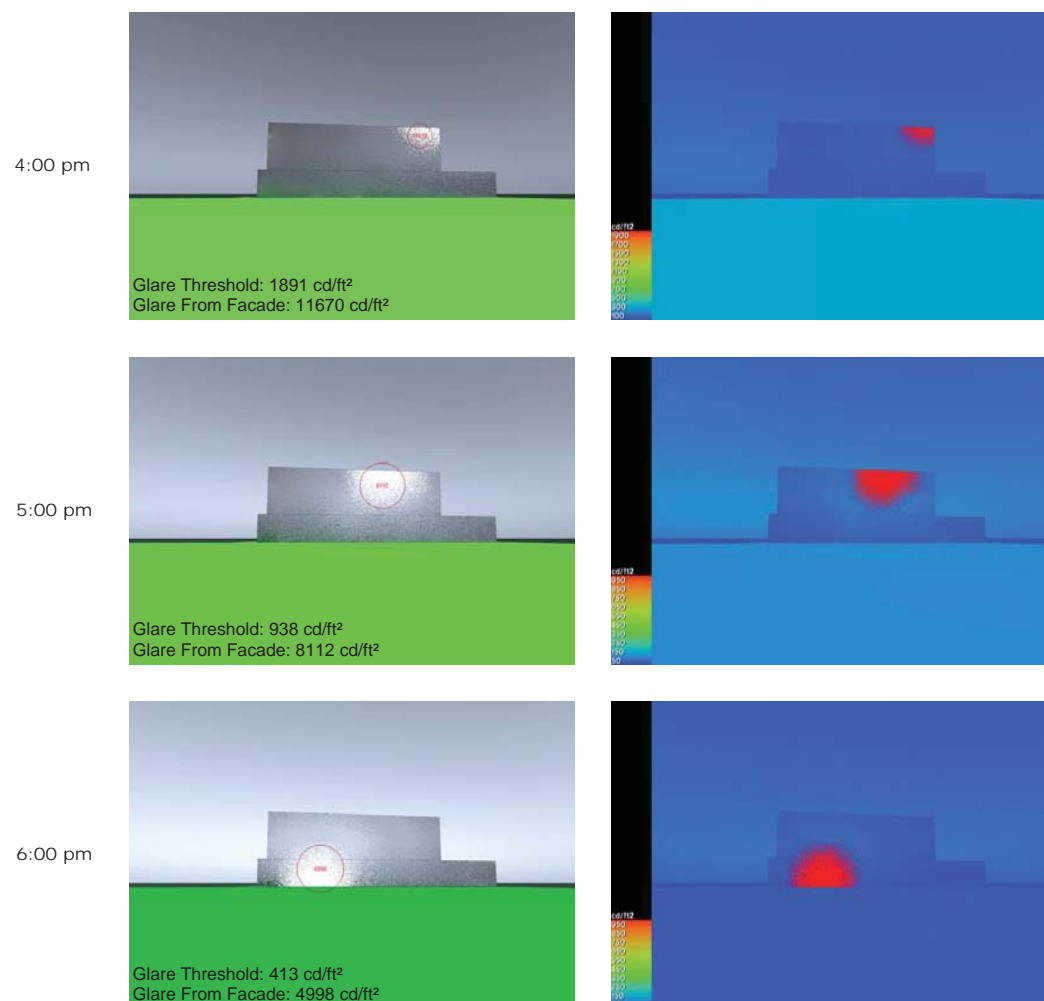
In the spring and fall, the potential for specular glare from the West facade will be limited to viewpoints which face toward the building and lie within the highlighted areas above, mostly between the hours of 4pm and 6 pm on a clear sunny day.

\*Note that a person standing in the park within one of the highlighted areas would have to also be looking toward the building at an angle which matches the angle of incidence from the sun in order to perceive direct glare.



## GLARE STUDY

Spring/Fall Glare



EQUINOX - MARCH/SEPTEMBER 21

The images to the left represent a view of the facade from a location within the glare zone specified on the previous page (refer to the blue arrow).

These simulations were run assuming a clear sunny clear day.

Note that based on historical weather data, March is expected to have a total of 4 clear days, 6 partly cloudy days, and 22 cloudy days. September is expected to have a total of 12 clear days, 8 partly cloudy days, and 9 cloudy days.

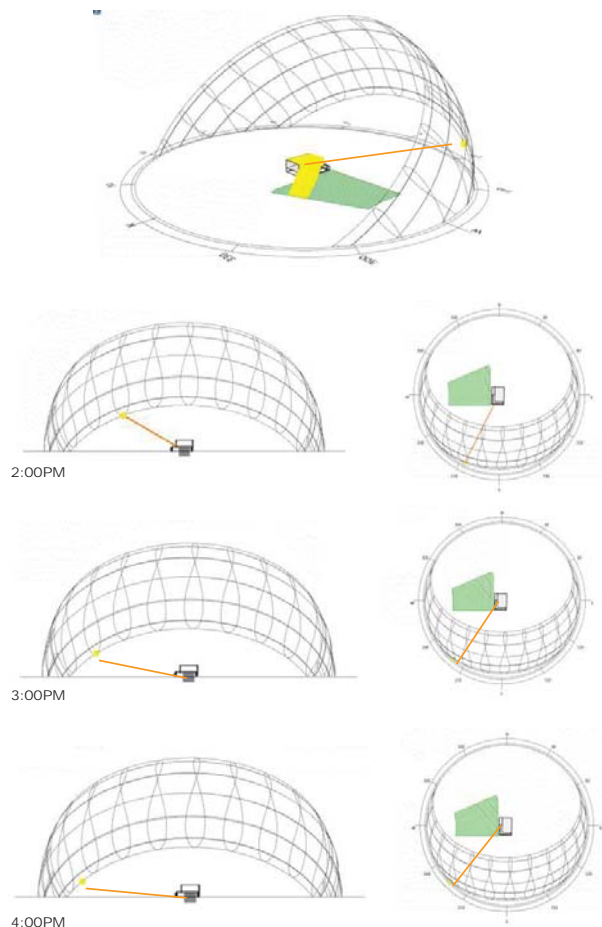
### Conclusion:

Reflected sunlight from the facade exceeds the glare threshold between 4pm and 6pm.

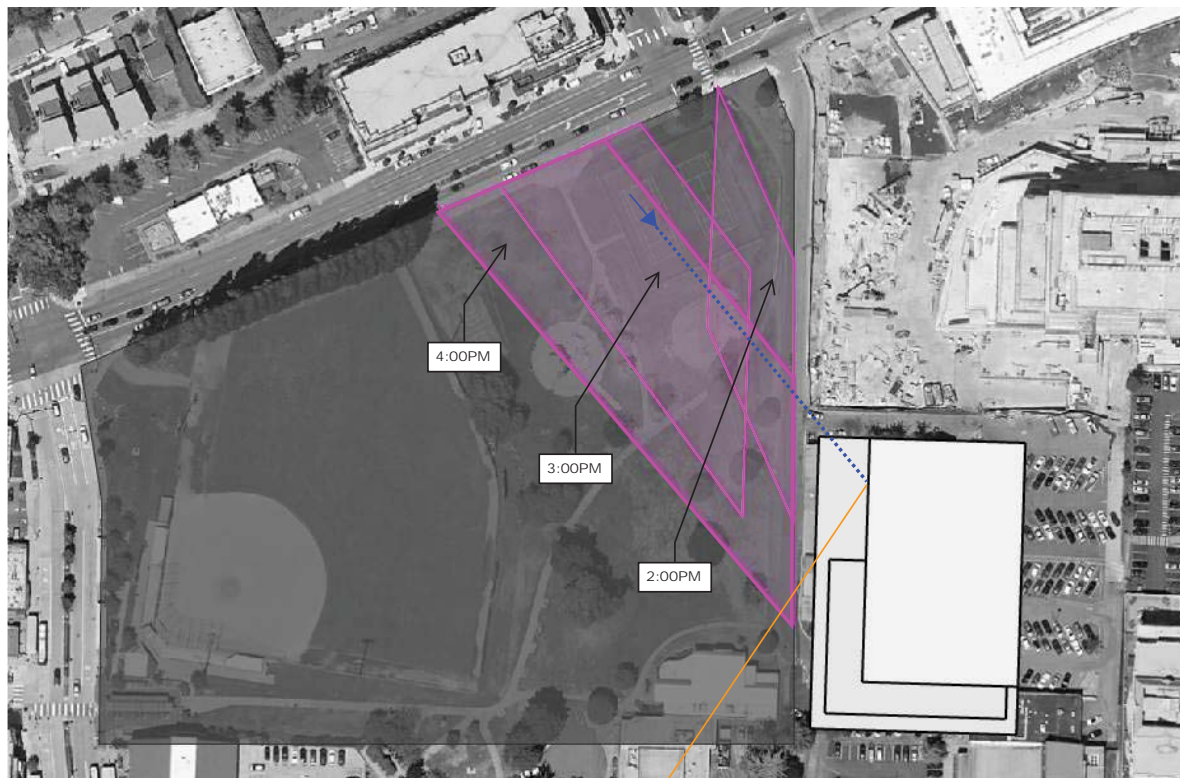
Note that the model does not take into account the amount of solid wall and the shading effect of vegetation, including both deciduous and evergreen trees and shrubs.

## GLARE STUDY

### Winter Glare



WINTER SOLSTICE - DECEMBER 21



In the winter, the potential for specular glare from the West facade will be limited to viewpoints which face toward the building and lie within the highlighted areas above, mostly between the hours of 2pm and 4pm on a clear sunny day.

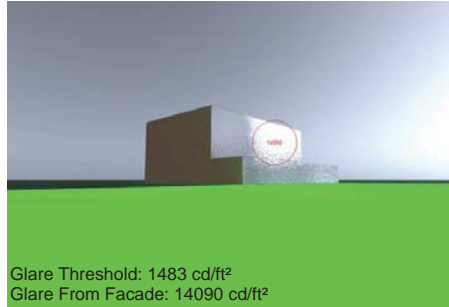
\*Note that a person standing in the park within one of the highlighted areas would have to also be looking toward the building at an angle which matches the angle of incidence from the sun in order to perceive direct glare.



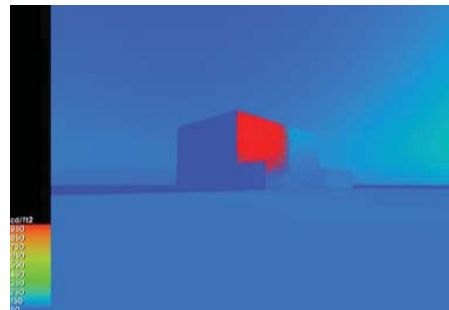
## GLARE STUDY

Winter Glare

2:30 pm



3:00 pm



4:00 pm



### WINTER SOLSTICE - DECEMBER 21

The images to the left represent a view of the facade from a location within the glare zone specified on the previous page (refer to the blue arrow).

These simulations were run assuming a clear sunny clear day.

Note that based on historical weather data, December is expected to have a total of 2 clear days, 4 partly cloudy days, and 25 cloudy days.

### Conclusion:

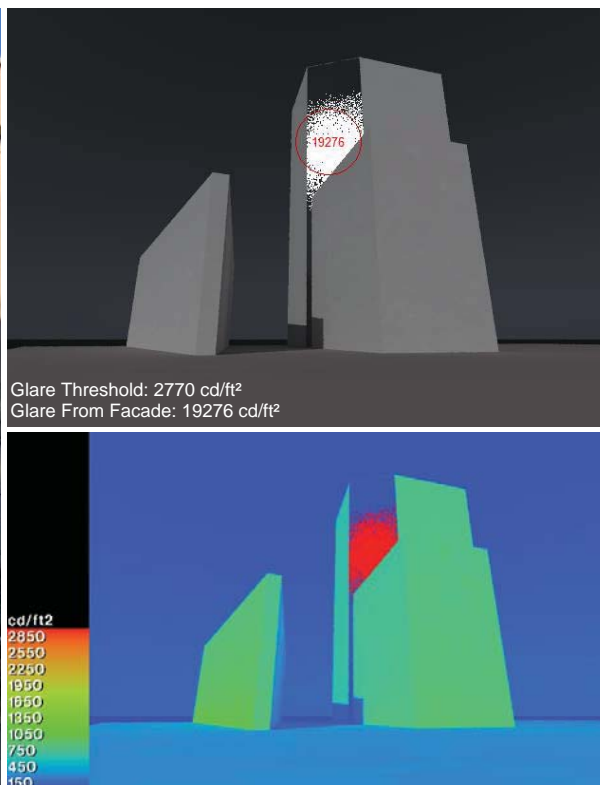
Reflected sunlight from the facade exceeds the glare threshold between 2pm and 4pm.

This condition occurs in the Winter Solstice on one of the few clear days in December and is limited to the far northeastern portion of the park. The area most affected would be the tennis courts, which will most likely not receive heavy use at this time of year.

Note that the model does not take into account the amount of solid wall and the shading effect of vegetation, including both deciduous and evergreen trees and shrubs.

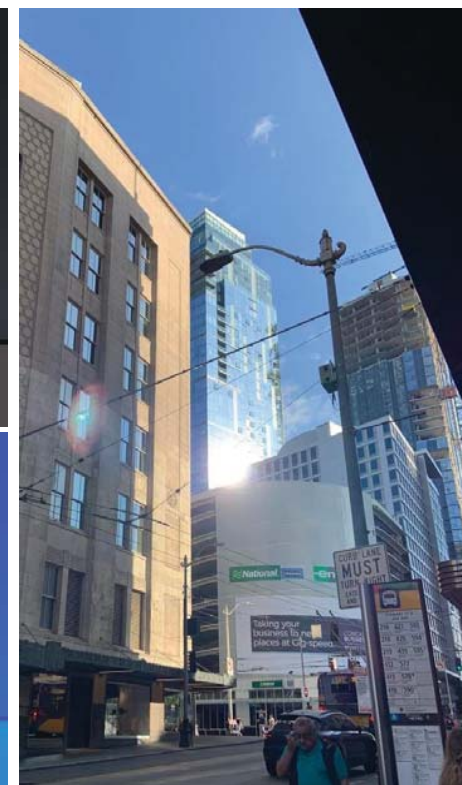
## GLARE STUDY

Real World Examples



The photograph above was taken of Westlake Tower on June 11th on a clear day. Notice the specular glare from the building windows. The perceived glare was considered subjectively harsh when looking directly towards that portion of the building. We were able to reproduce the effect within our environmental simulation software using the same methodology and glass material we used to evaluate the glare from the west-facing facade onto Peter Kirk Park.

Conclusion: the glare produced by this example is significantly higher than the glare that will be produced by the Kirkland Urban South building.



The photograph above was taken from the same location on the street, but looking southwest towards another building.

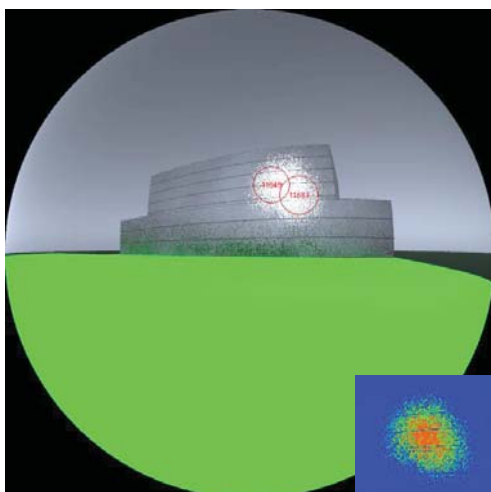


## GLARE STUDY

Glass Type Comparison

The three simulations below represent the same view, but with three different solar glass products for comparison.

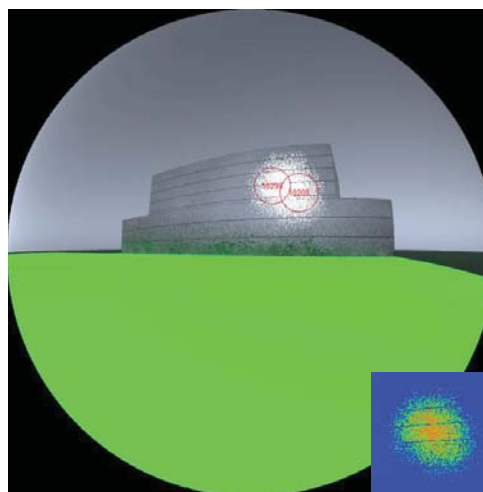
SOLARBAN R100 | CLEAR  
(33% EXTERIOR REFLECTANCE)



Solarban R100 is a highly reflective solar glass with only a 42% visual light transmittance. It performs well thermally, but limits visibility through the glass.



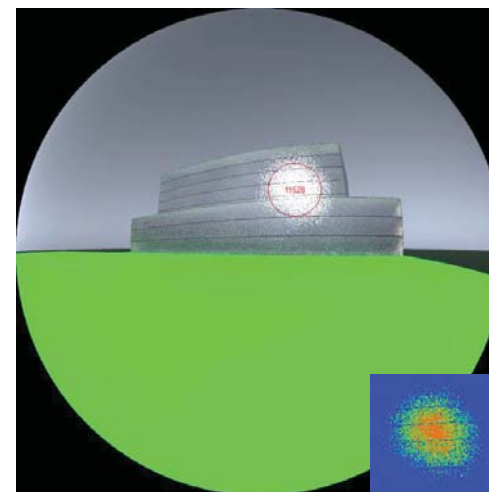
SOLARBAN 70XL | OPTIGRAY  
(8% EXTERIOR REFLECTANCE)



Optigray is a tinted glass that will provide only a modest reduction in perceived glare, but will give the building a dark gray appearance and reduced visibility into the building,



SOLARBAN 72 | STARPIRE  
(13% EXTERIOR REFLECTANCE)



Solarban 72 represents a balance of thermal performance, daylighting and visibility into and out of the office space. It has a relatively low reflectance while maintaining a high degree of visible light transmittance, and low SHGC.



## GLARE STUDY

### Site Photos & Conclusion



View from Peter Kirk Park



View from dugout at Lee Johnson Ballfield

#### Conclusion:

Due to its location and orientation and proximity to Peter Kirk Park and Lee Johnson ballfields, the KU South building (or any other building in this location) will produce some degree of glare noticeable from certain locations throughout the park and ballfields on sunny days throughout the year. Although the building can be modeled, it is difficult to determine whether the glare produced will be at a level that will interfere with use of these public spaces. Although not modeled, trees that are currently within the Park and trees that will be provided with the new building will certainly have a mitigating effect on glare, especially in the spring, summer, and fall months.

The real world analysis comparison of the Westlake Tower indicates that the glare produced by Kirkland Urban South will be significantly less than the glare evident in that building. In addition, glare produced will be limited to a viewpoint that is directly in line with the sun's reflection off the facade, and this viewpoint will change throughout the course of the evening when the glare from the western facade will occur.

Based on the modeled glare scenarios and real world comparisons, utilizing tinted glass will reduce the glare somewhat, but must be evaluated against the loss in interior daylight and dark visual appearance. The preferred glass for the project, Solarban 72 (or equivalent), has a relatively low reflectance and will provide good visibility both into and out of the building. The benefits of switching to a tinted glass do not seem to outweigh the darker appearance.



View from path alongside Lee Johnson Ballfield





ARCHITECTURE PLANNING INTERIORS SUSTAINABILITY

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