EXHIBIT J

ZONING COMMISSION
District of Columbia
CASE NO.20-31B
EXHIBIT NO.2E

PERKINS EASTMAN
Human by Design

JONATHAN CECI LANDSCAPE ARCHITECTS

APRIL 04, 2023

THE ALAN AND AMY MELTZER CENTER FOR ATHLETIC PERFORMANCE (MELTZER CENTER) AND SPORTS CENTER ANNEX (SCAN)

LIGHTING STUDY

EXTERIOR LIGHTING GOALS

- ADDRESS PUBLIC SAFETY BY PROVIDING ADEQUATE ILLUMINATION.
- ENHANCE CHARACTER OF BOTH OPEN SPACES AND BUILDINGS.
- LIMIT LIGHT TRESPASS IN SKY AND BEYOND PROPERTY LINES.
- PROVIDE FULL CUT-OFF LUMINAIRES WHERE APPLICABLE (WASHINGTON GLOBE CAMPUS STANDARD – NOT APPLICABLE).
- PROVIDE ENERGY CODE CONTROLS TO DIM EXTERIOR LUMINAIRES AFTER MIDNIGHT.
- PROVIDE 3000K OR 3500K COLOR TEMPERATURE FOR WARM/NEUTRAL ILLUMINATION.

MELTZER CENTER/ SCAN PROJECT – LIGHTING DIAGRAM

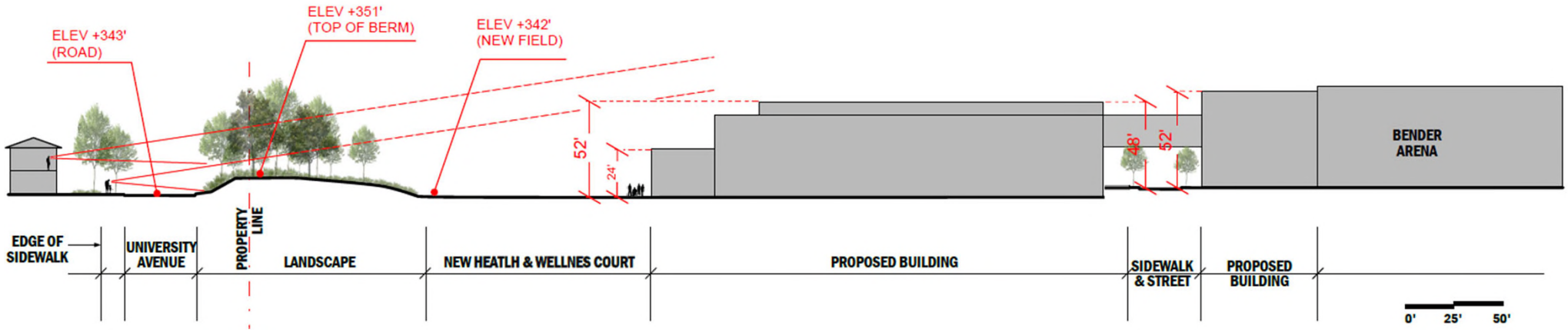
5 NEW LANDSCAPE INFILLS AT EXISTING EMPTY SPACES

4 EXISTING NATURAL BERM AT PROPERTY LINE

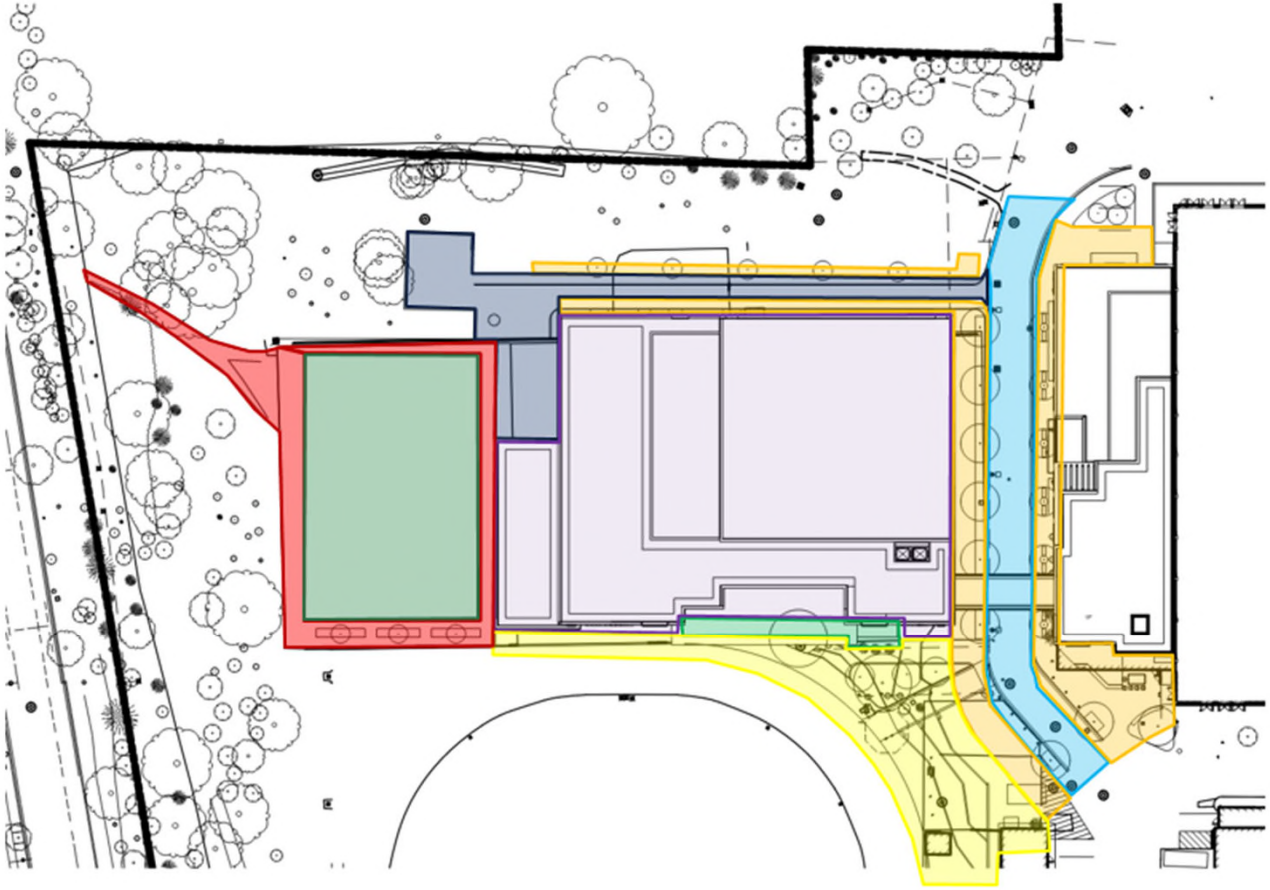
3 OCCUPANCY SENSORS IN BUILDINGS

2 AUTOMATED BLACK-OUT SHADES AT 2ND LEVEL FACING UNIVERSITY AVE.

1 BUILDING LOCATIONS EXCEED PROPOSED 110' MIN. SETBACK



EXTERIOR LIGHTING GOALS



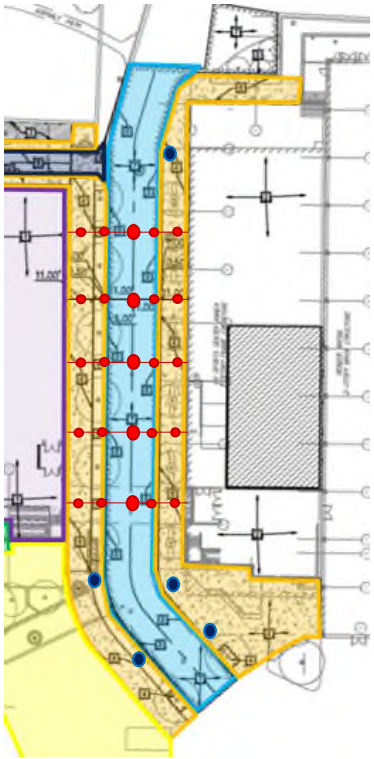
LIGHT LEVEL RECOMMENDATIONS

ILLUMINATING ENGINEERING SOCIETY HANDBOOK AND AU DESIGN GUIDELINES

AREA	FC
ROAD	5-10
SERVICE ROAD	3-5
WALKWAY	5-10
PLAZA	3-5
PATH	3-5
FIELD	20-30
BUILDING ENTRY	10-15
BUILDING FAÇADE	0.5-2

REFERENCE IF TRACK AND FIELD WERE ILLUMINATED:
TRACK AND FIELD – 50FC
SOCCER – 150FC

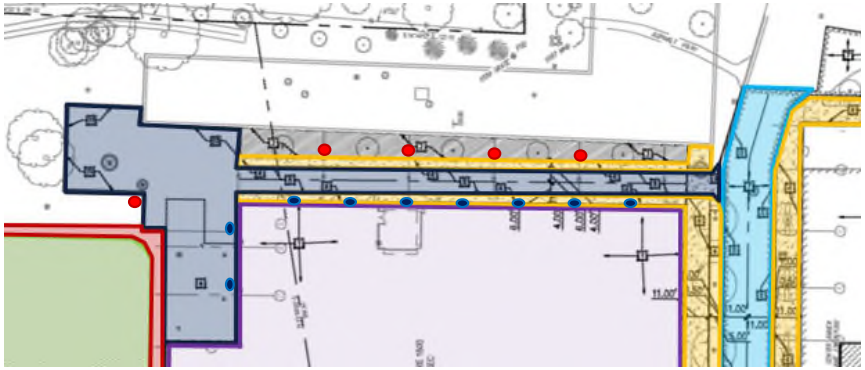
MELTZER CENTER-SCAN ROAD/WALKWAY



1. Catenary Lighting Across the Street between Trees - 3000K/3500K
   Intimacy, visual coherence with bridge, gathering

2. Supplement with Pole Lighting (can also be used in Plaza) - 3000K/3500K

MELTZER CENTER SERVICE ROAD



1. Low-Level Pole Lights on Residential Side for Road and Walkway -

- Full cut-off, backlight control
- Can be removed if residential building in constructed in future
- Can be equipped with motion sensor to dim lighting if no occupancy is on the service road

2. Building-Mounted Wall Luminaires - 3500K

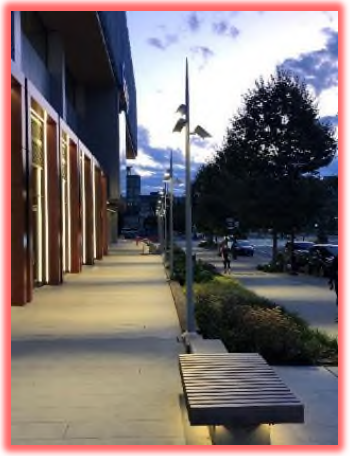
- Scallop lighting pattern on wall
- Can be equipped with motion sensor to dim lighting if no occupancy is on the service road
- Can add uplight component to illuminate mural wall if desired

MELTZER CENTER ENTRY PLAZA

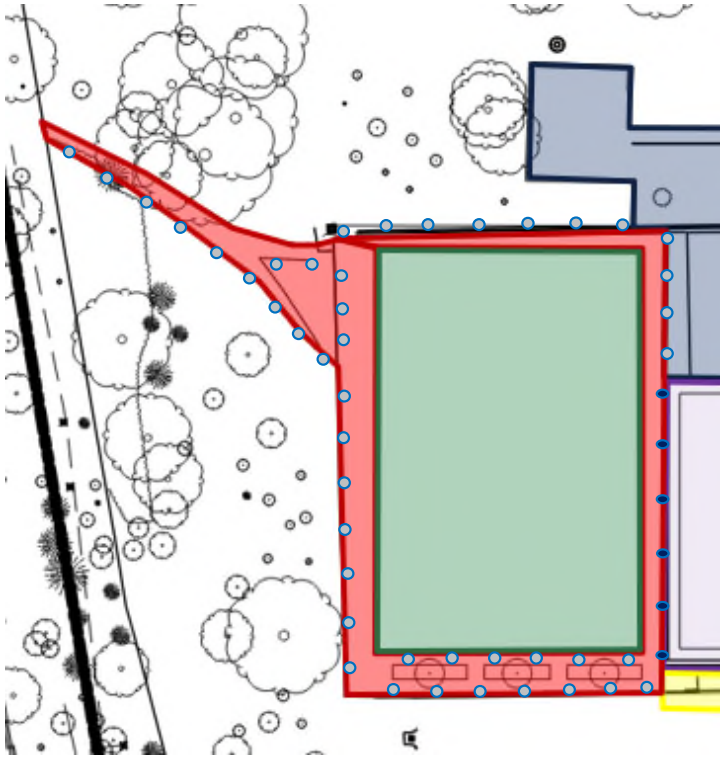
1. Area and Bollard – 3000K/3500K

MELTZER CENTER ENTRY PLAZA

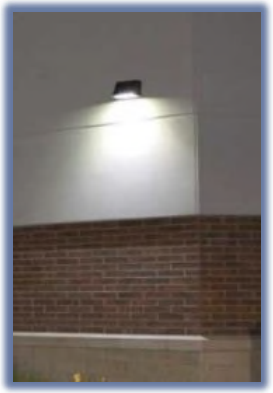
2. Forward throw Step lights - 3000K/3500K
   Linear under-bench/lands MELTZER CENTER tree lighting
   Combo lights for fewer poles



PEDESTRIAN PATH AND MELTZER CENTER FIELD



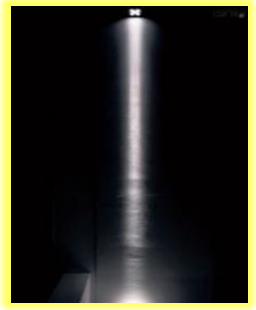
1. Continue pedestrian/bollard family from Plaza – 3000K/3500K
2. 2. Building-Mounted Wall Luminaires - 3500K



MELTZER CENTER BUILDING ENTRY - ARCHITECTURE

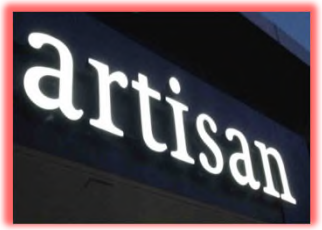
Luminaires to aim down only. Create contrast with non-lit surfaces, but no excessive glare

1. Column Narrow Beam Spotlight - 3000K/3500K
2. Linear wall graze luminaire
3. Canopy downlights
4. Tall Front Canopy (mullion mounted uplight under canopy only)



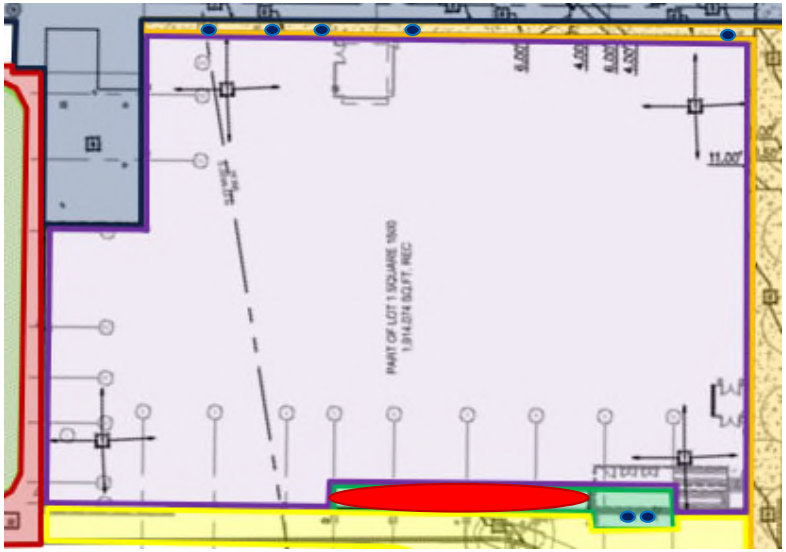
MELTZER CENTER BUILDING - SIGNAGE

1. Illuminated or Backlit letters....or both
2. Cantilevered wall wash luminaires



These are generic examples of illuminated signage options

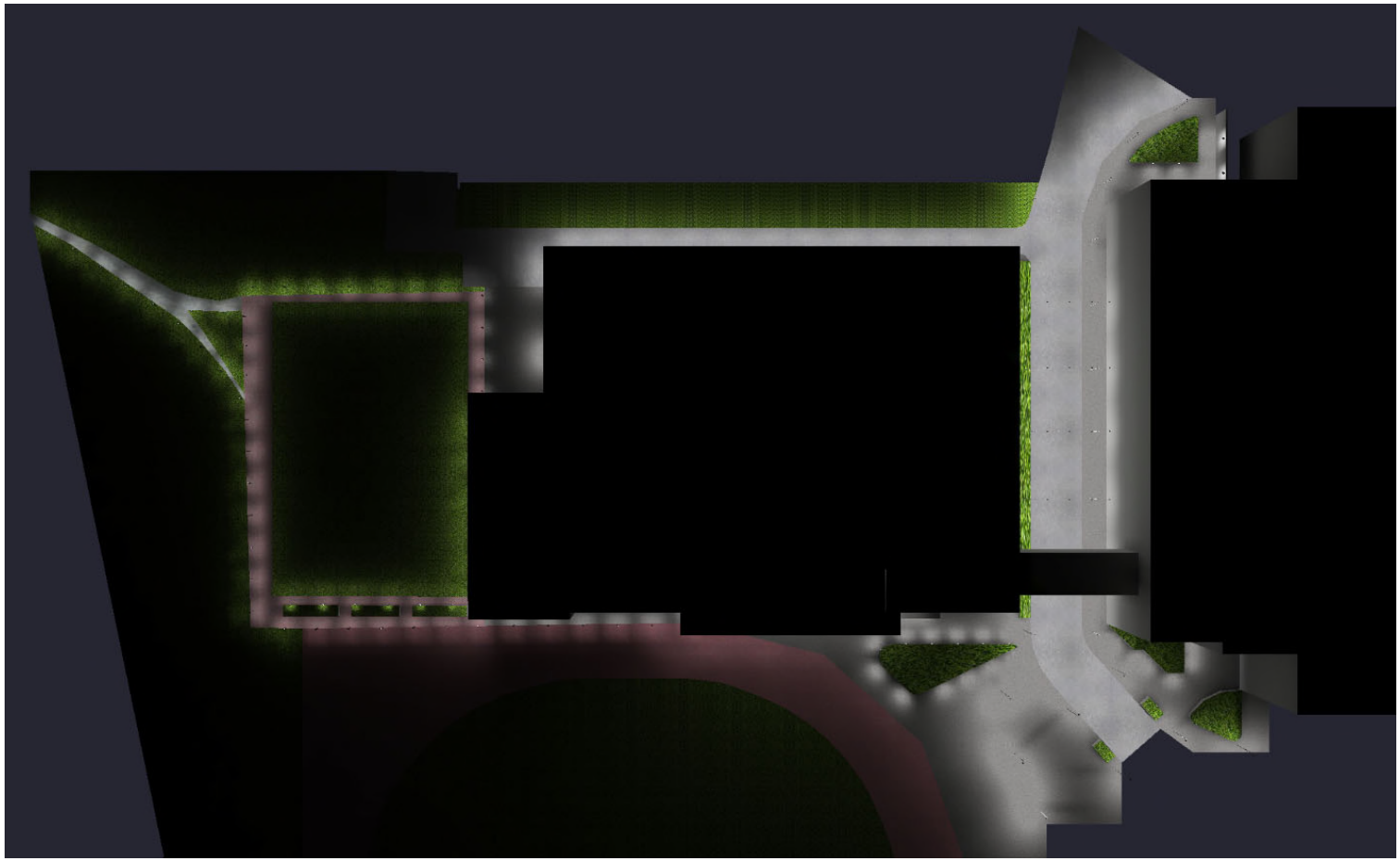
MELTZER CENTER BUILDING - FACADES



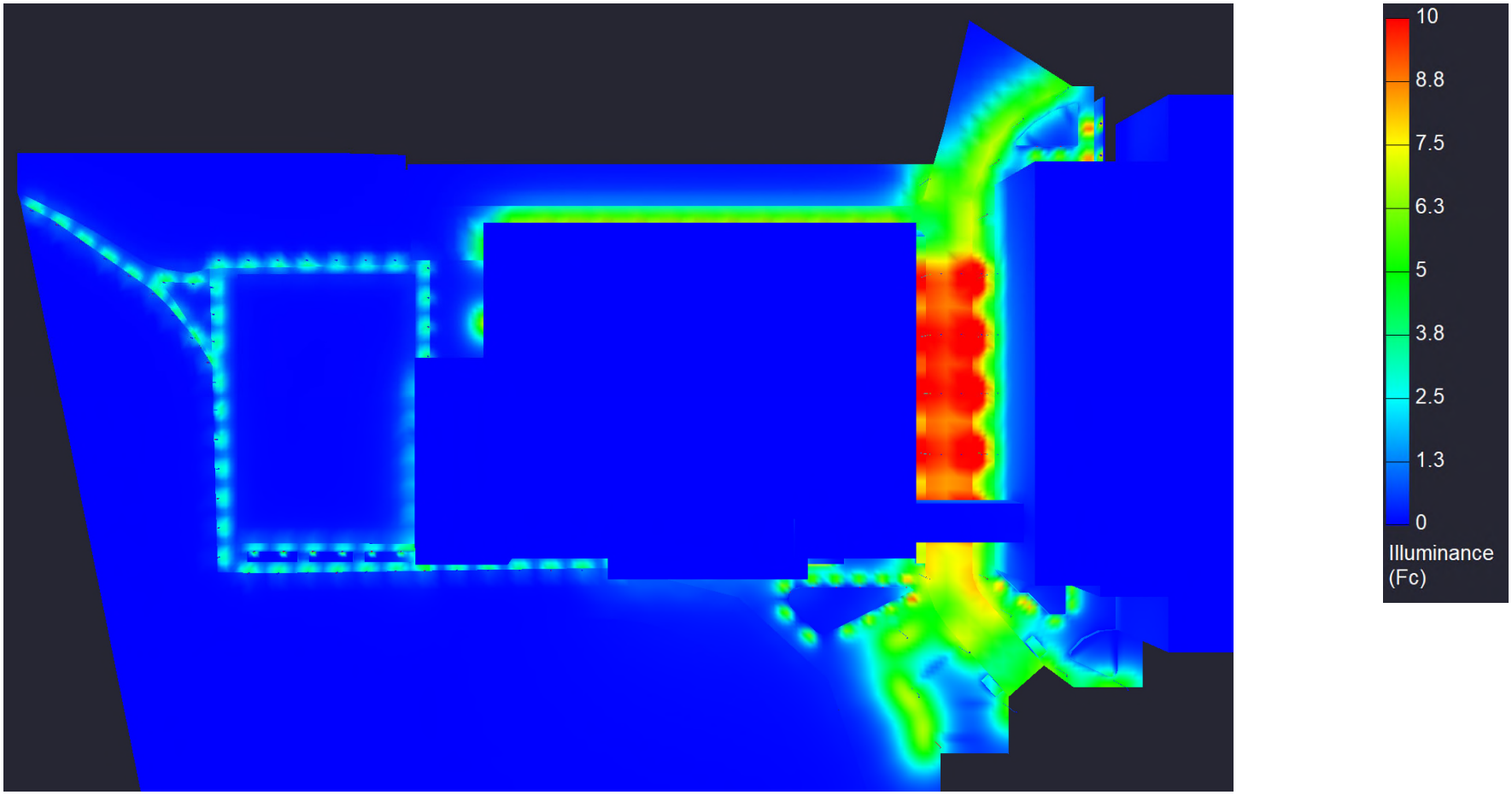
1. Egress lighting at doors - 3000K/3500K
2. Lighting through exterior windows
3. Murals
4. Tall Front Canopy (mullion mounted uplight under canopy only)

Luminaires to aim down
only except under main canopy.

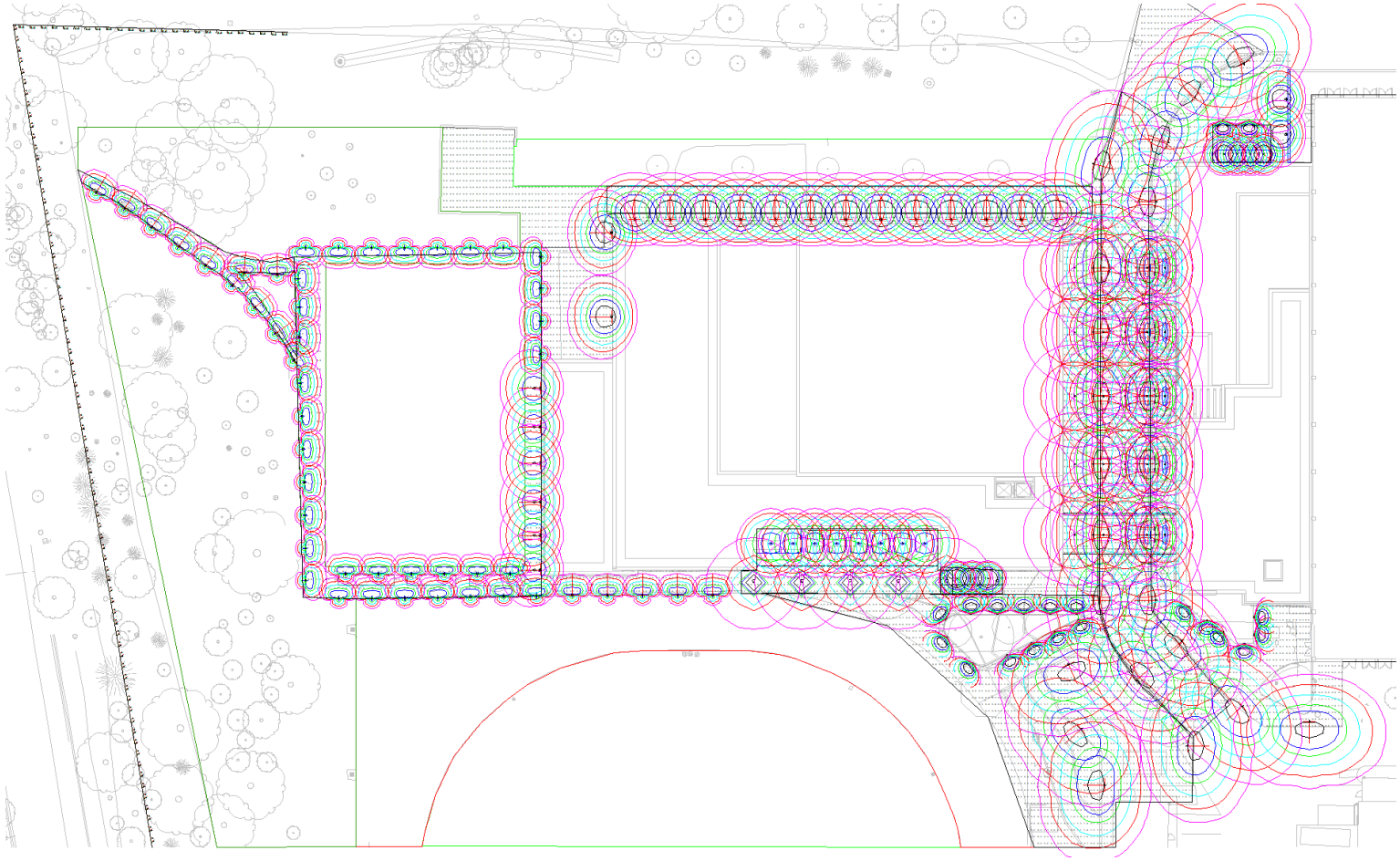
TOP VIEW LIGHT RENDERING



TOP VIEW LIGHT LEVELS

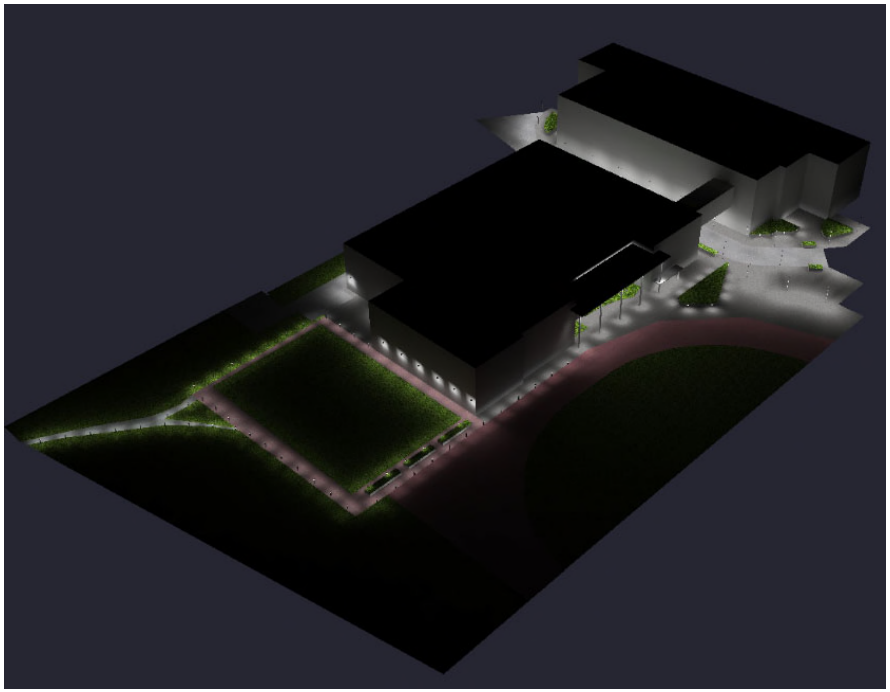


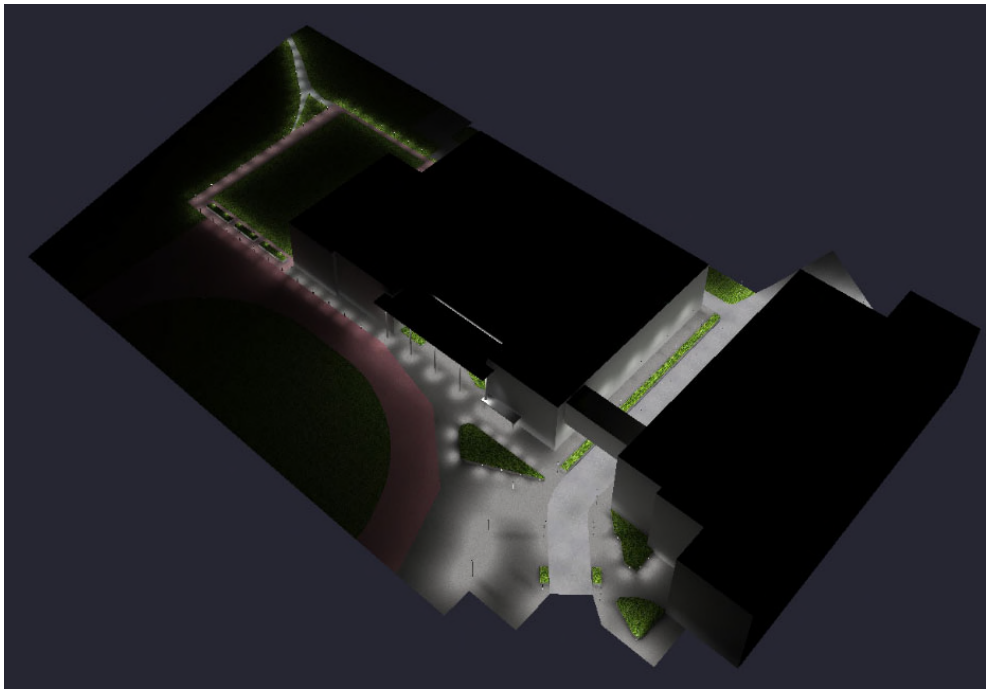
TOP VIEW LIGHT DISTRIBUTION PATTERNS



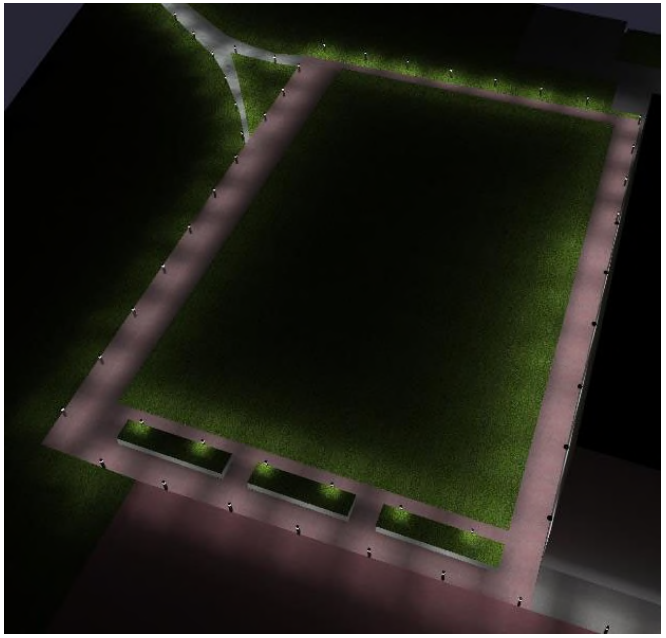
Patterns
5 fc
3 fc
2 fc
1 fc
0.5 fc
0.25 fc

ISO LIGHT VIEW FROM N-W AND S-W



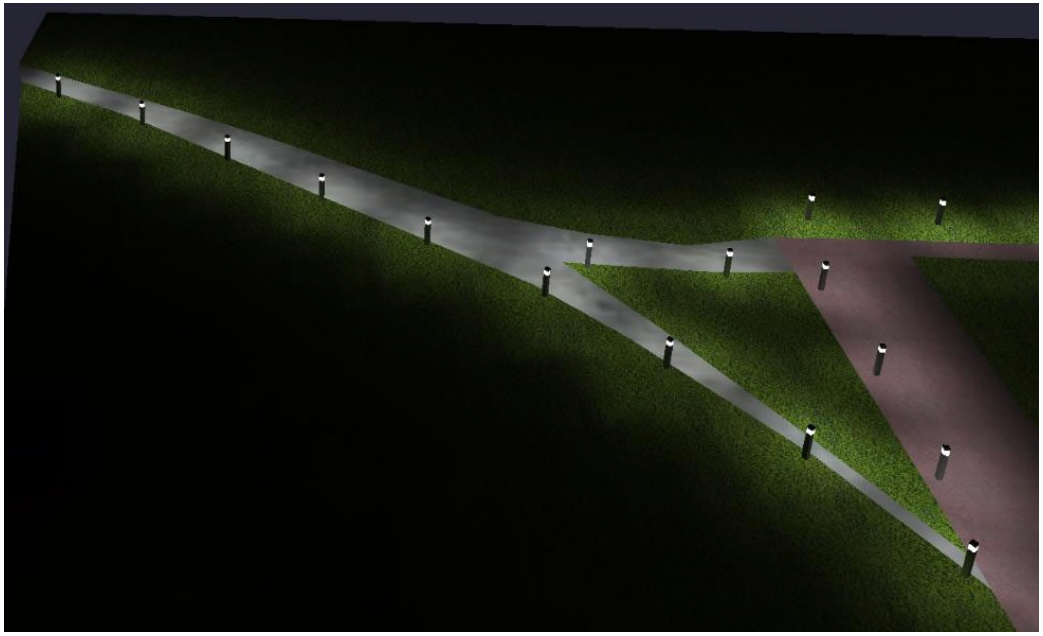


MELTZER CENTER FIELD, WALK, AND PATH – LIGHT PHOTOMETRICS & VIEW



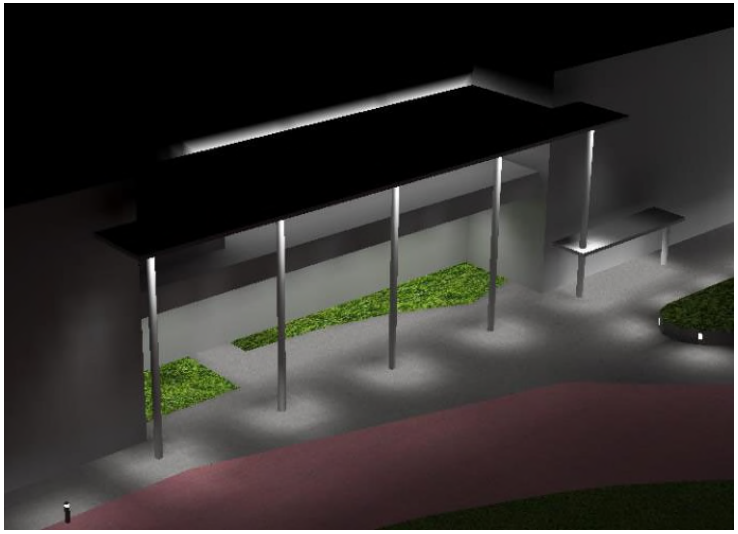
Neighbor Walkway

Illuminance (Fc)
Average = 2.39
Maximum = 6.0



Neighbor Pathway

Illuminance (Fc)
Average = 1.85
Maximum = 4.6

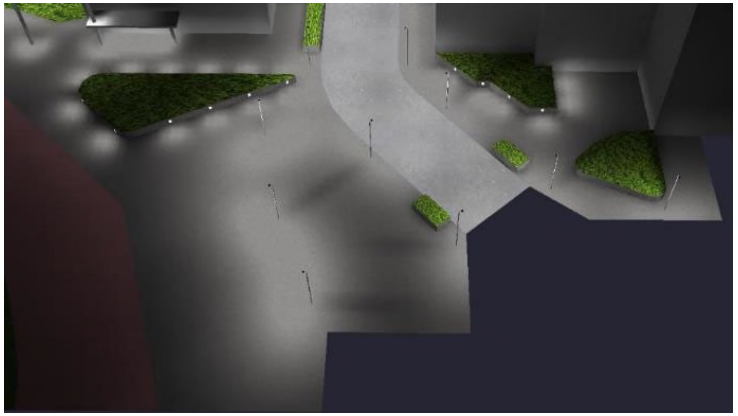


Building Entry

Illuminance (Fc)
Average = 7.84
Maximum = 12.4
Minimum = 2.5

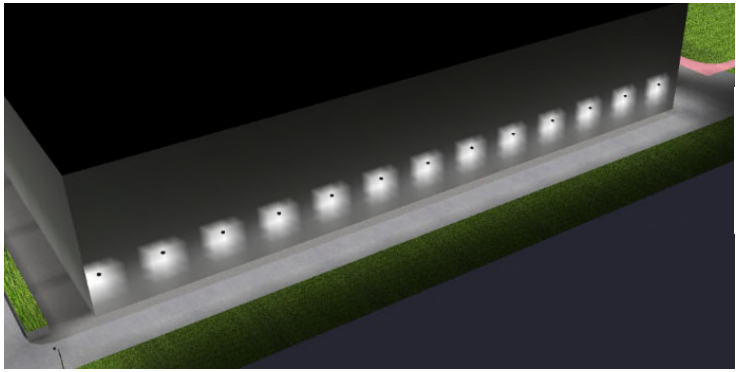
Building Facade

Illuminance (Fc)
Average = 3.71
Maximum = 8.5
Minimum = 1.1



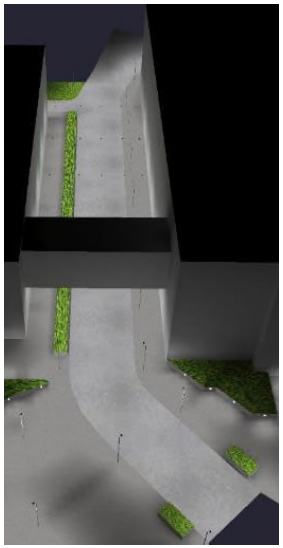
Plaza

Illuminance (Fc)
Average = 2.53
Maximum = 7.8
Minimum = 0.1



Service Road

Illuminance (Fc)
Average = 5.21
Maximum = 7.5
Minimum = 1.3



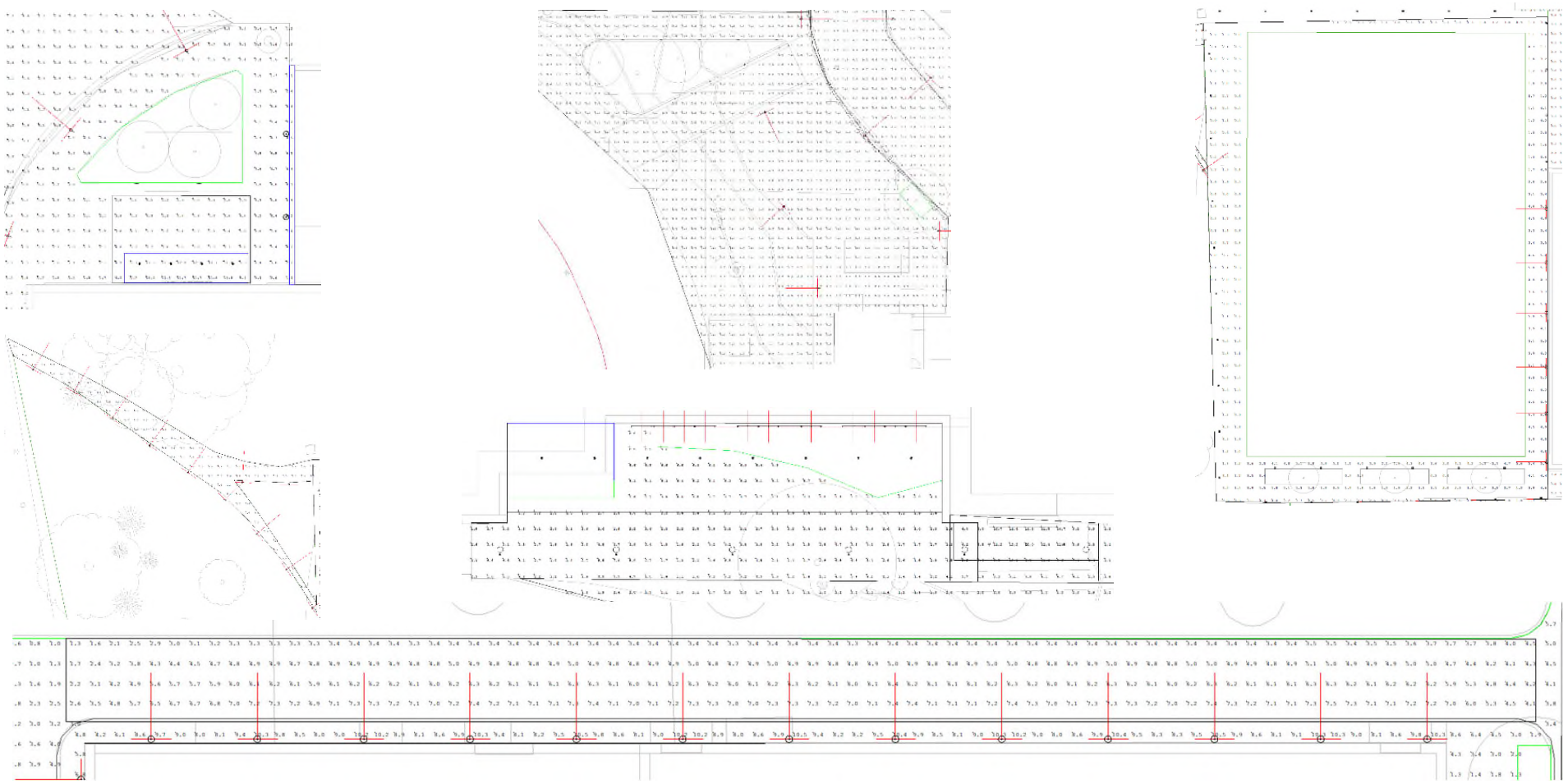
Main Road

Illuminance (Fc)
Average = 7.90
Maximum = 12.4
Minimum = 1.3

SCAN Entry

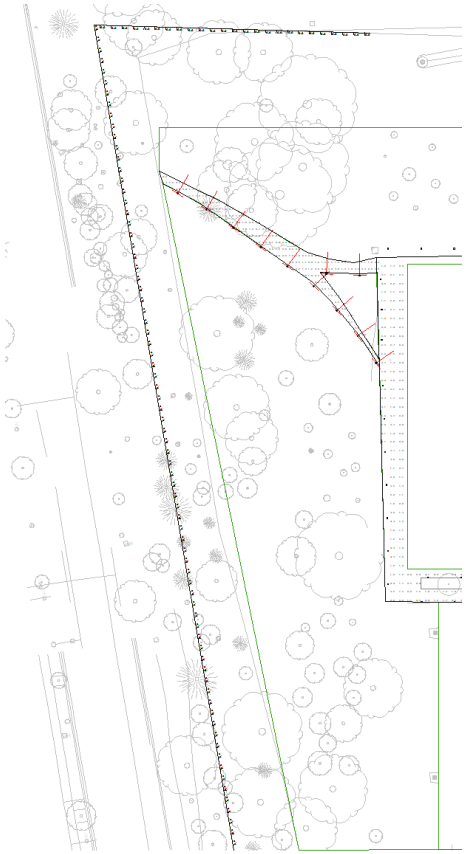
Illuminance (Fc)
Average = 6.94
Maximum = 12.9
Minimum = 2.1

NOTE: No under bench lighting shown at tiered seating



FULL REPORT WITH ALL PHOTOMETRICS TO BE POSTED ON COMMUNITY RELATIONS PORTAL

UNIVERSITY AVENUE PROPERTY LINE LIGHT CALCULATIONS



Field Lights OFF

Obtrusive Light - Compliance Report

LEED v4, LZ2 - Moderate Ambient Lighting
Filename: Site
3/8/2023 1:42:58 PM

Illuminance

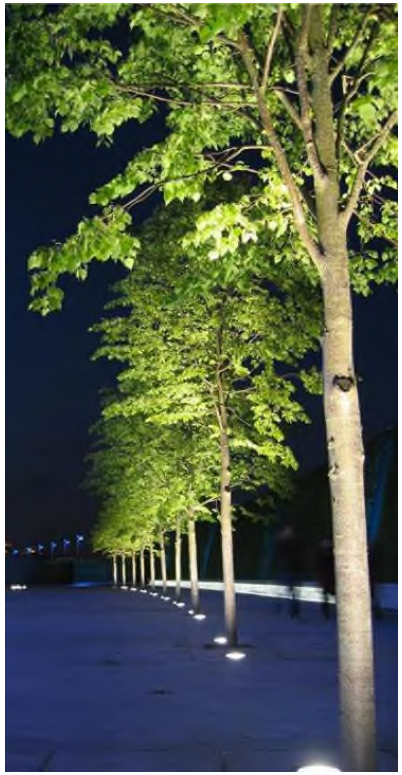
Maximum Allowable Value: 0.1 Fc

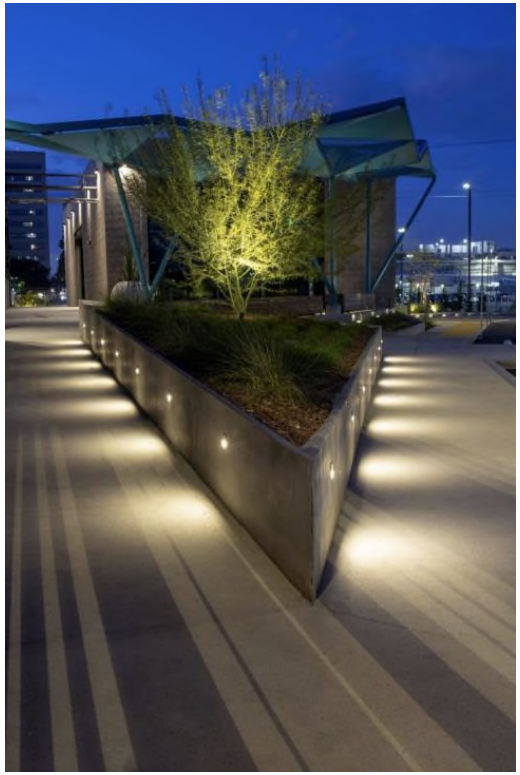
Calculations Tested (2):

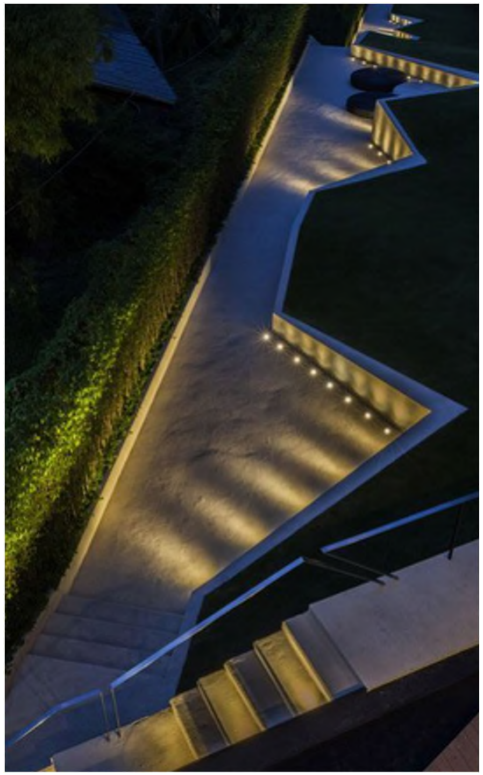
Calculation Label	Test Results	Max. Illum.
ObtrusiveLight_Ill_Seg1	PASS	0.0
ObtrusiveLight_Ill_Seg2	PASS	0.0

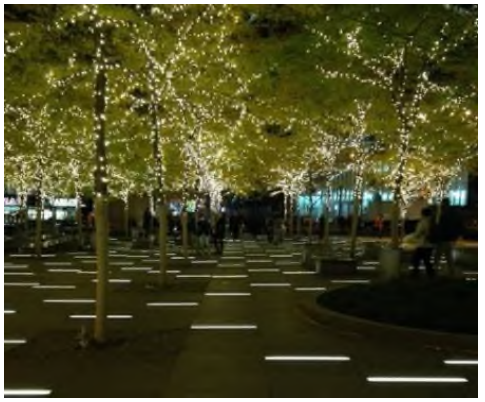
NOTE: No trees or elevations included in lighting model

LIGHTING EXAMPLES









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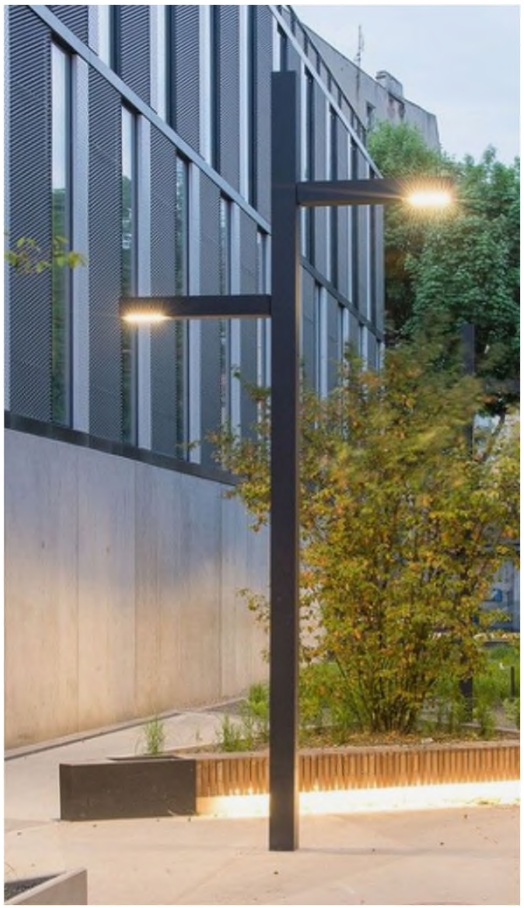

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