

W

Appendix W: LIGHTING EVALUATION REPORT



Engineering
for **people**

Street Lighting

Photometric Report

Lakeshore Road West & Clarkson Road Reconstruction

City of Mississauga

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Lakeshore Rd and Clarkson Rd Reconstruction

Ref. Number : B001266

Prepared by : Yan Jiang

File : [B001266 Lighting Calc_e01.AGI](#)

Client :



Date : 9/23/2022

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PHOTOMETRIC REQUIREMENTS

Lakeshore Road West

Street Identification : Arterial
Sector : Urban
Pedestrian Conflict Identification : Medium
Existing Lighting Level : N/A Lux

Avg. Maintained Luminance - Lavg : 0.9 cd/m²
Uniformity - Lavg/Lmin : 3
Uniformity - Lmax/Lmin : 5
Veiling Luminance Ratio - Lvmax/Lavg : 30 %

Avg. Maintained Illuminance - Eavg : 13 Lux
Uniformity - Eavg/Emin : 3

Lakeshore Road West & Clarkson Road N & S Intersection

Street Identification : Arterial/Arterial
Sector : Urban
Pedestrian Conflict Identification : Medium
Existing Lighting Level : N/A Lux

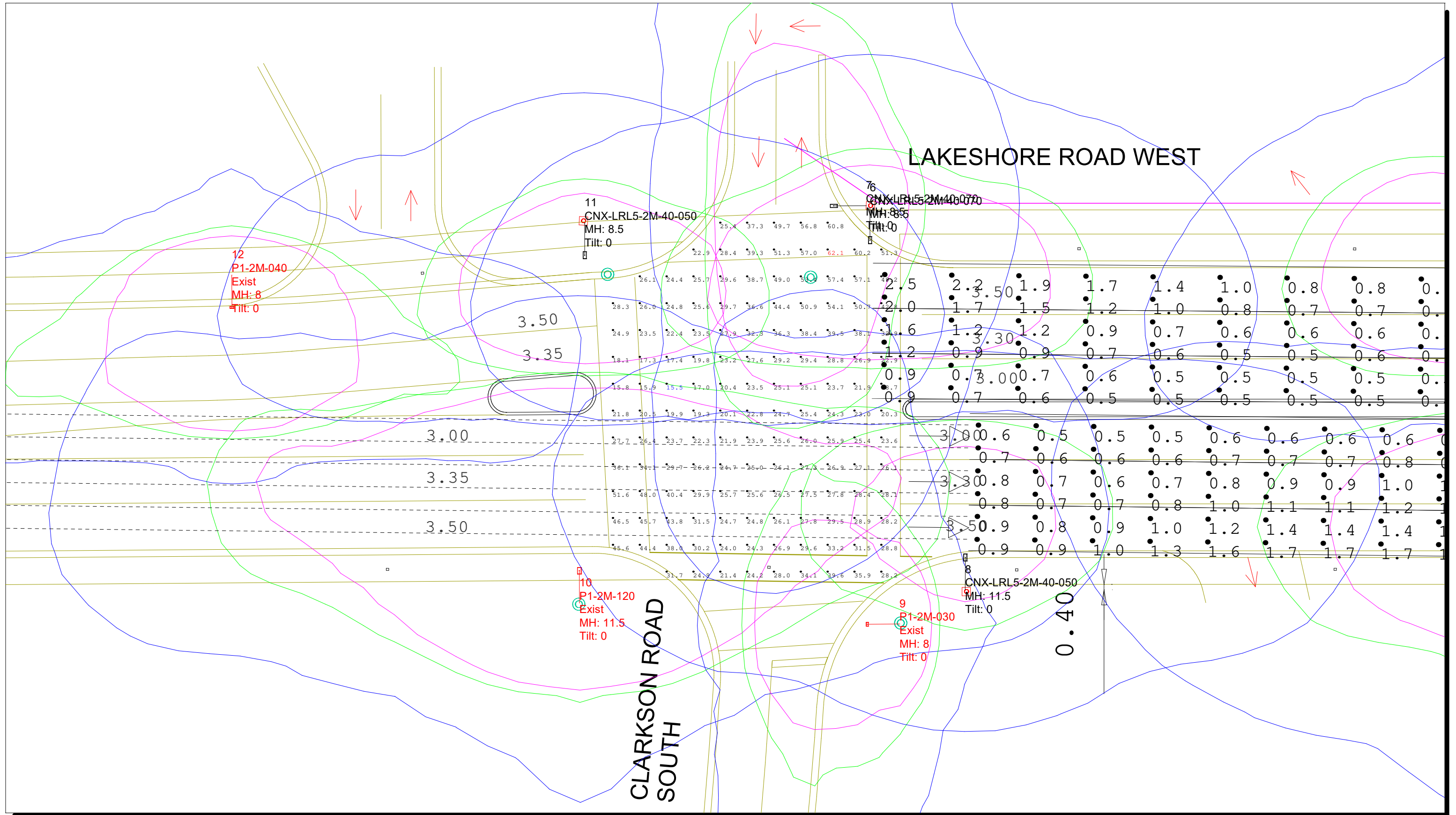
Avg. Maintained Illuminance - Eavg : 26 Lux
Uniformity - Eavg/Emin : 3

Sidewalk / Bikeway

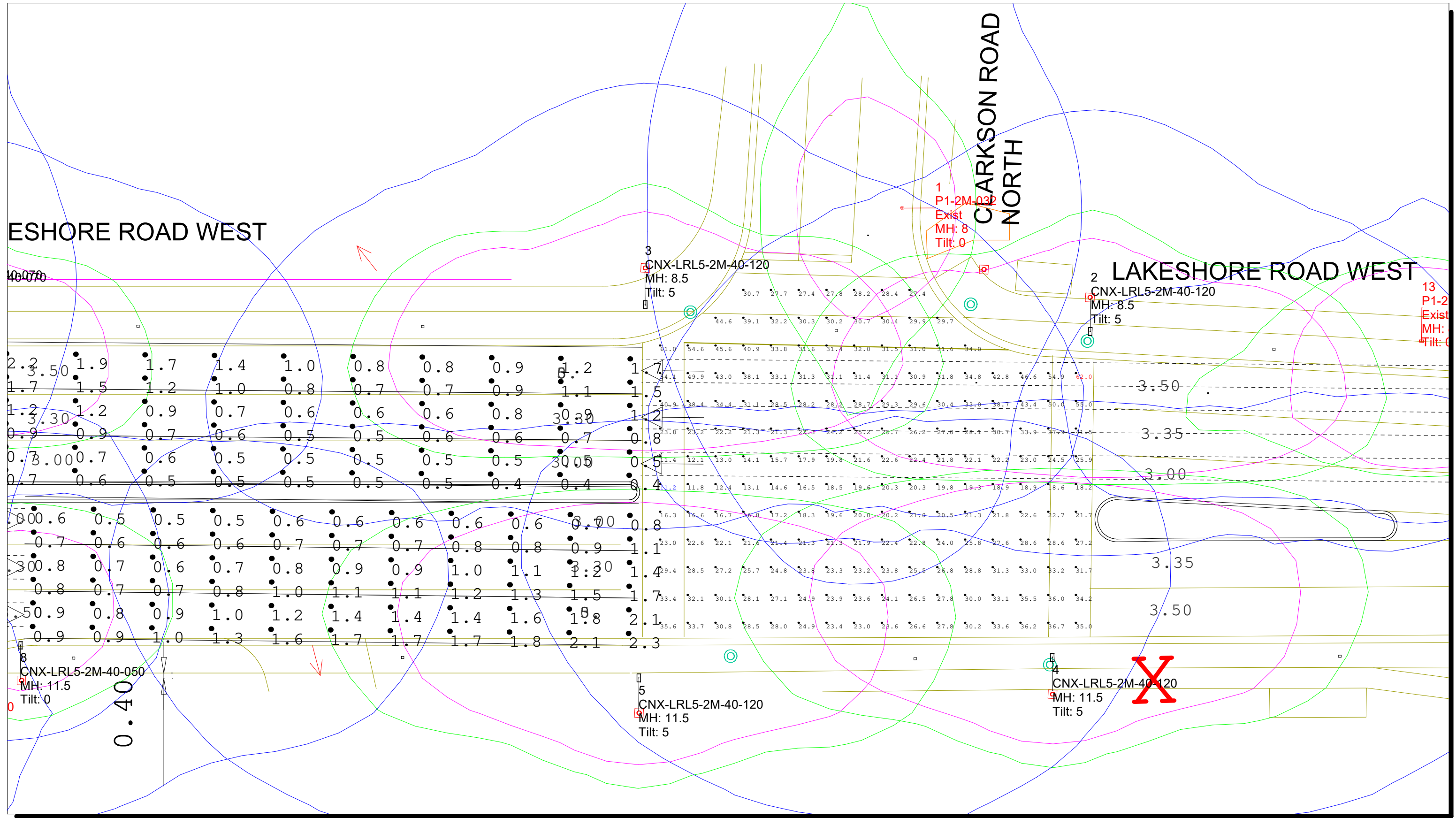
Sector : Urban
Pedestrian Conflict Identification : Medium

Avg. Maintained Horizontal Illuminance - Ehavg : 5 Lux
Uniformity - Ehavg/Ehmin : 4
Avg. Maintained Vertical Illuminance - Evavg : 2 Lux

DESIGN - PLAN VIEW



DESIGN - ISOMETRIC VIEW



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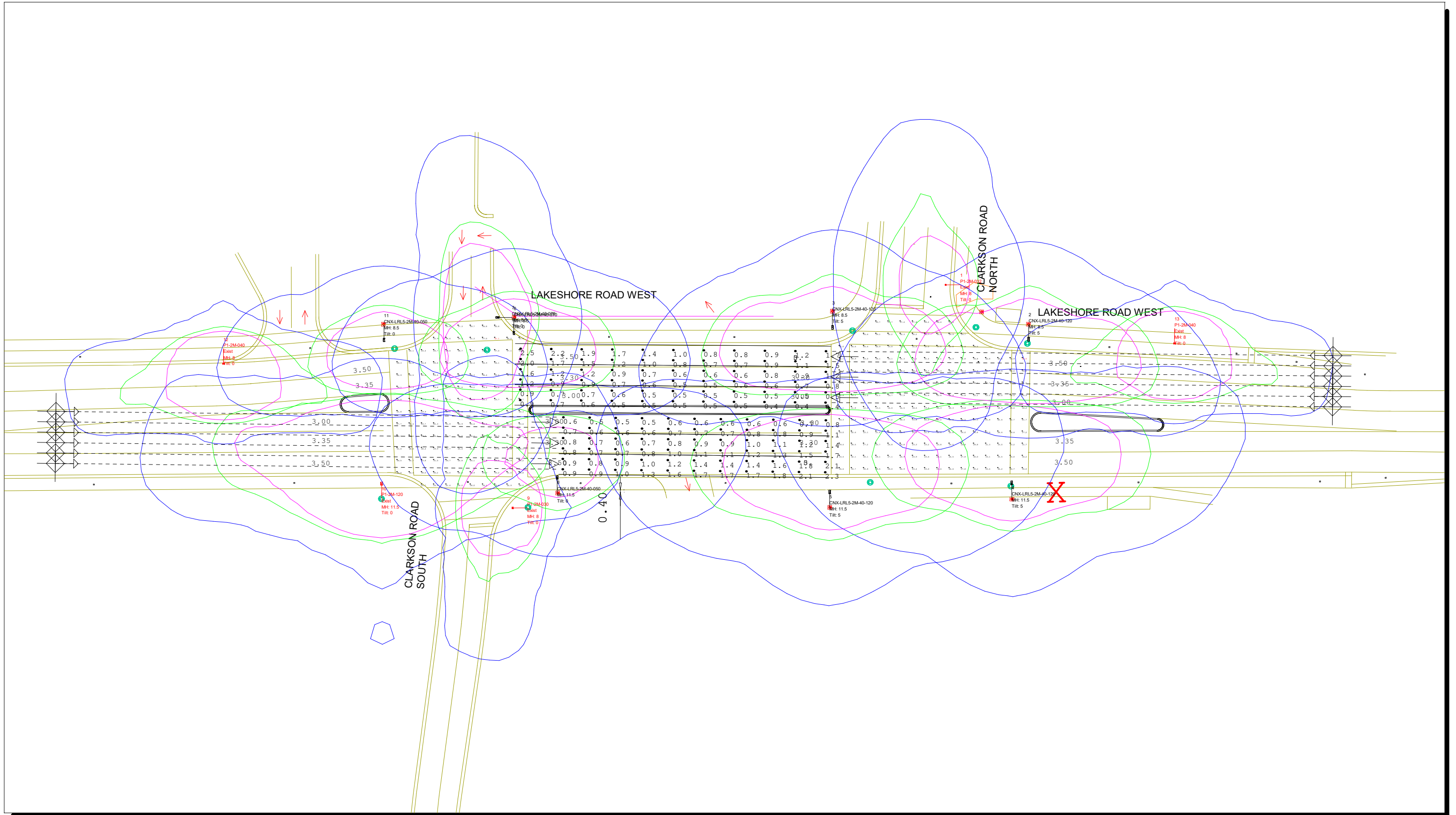
Client :

 MISSISSAUGA

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DISCLAIMER :
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DESIGN - ISOMETRIC VIEW



LUMINAIRE DEFINITIONS

| Luminaire Schedule | | | | | | | | | | | | |
|--------------------|--------------------|------------------------|-------------|-------------|-------|-----------|-------------|--------------|------------|------------|-------|--|
| Symbol | Label | Filename | Lamp Lumens | Lum. Lumens | LLF | IES Class | Long. Class | Cutoff Class | BUG Rating | Lum. Watts | Tag | |
| —■ | P1-2M-032 | P1-2M-032.IES | N.A. | 7652 | 0.850 | Type II | Medium | N.A. | B2-U0-G2 | 72.32 | Exist | |
| —■ | P1-2M-120 | P1-2M-120.IES | 25035.69 | 25036 | 0.850 | Type II | Short | Full Cutoff | B3-U0-G3 | 262.57 | Exist | |
| —■ | P1-2M-040 | P1-2M-040.IES | N.A. | 8109 | 0.850 | Type II | Medium | N.A. | B2-U0-G1 | 91.24 | Exist | |
| —■ | P1-2M-030 | P1-2M-030.ies | 6460.5 | 6461 | 0.850 | Type II | Short | Full Cutoff | B2-U0-G1 | 67.88 | Exist | |
| —■ | CNX-LRL5-2M-40-120 | CNX-LRL5-2M-40-120.IES | 18467 | 18468 | 0.850 | Type II | Short | Full Cutoff | B3-U0-G3 | 119.022 | | |
| —■ | CNX-LRL5-2M-40-070 | CNX-LRL5-2M-40-070.IES | 10939 | 10938 | 0.850 | Type II | Short | Semi-Cutoff | B2-U0-G2 | 72.0498 | | |
| —■ | CNX-LRL5-2M-40-050 | CNX-LRL5-2M-40-050.IES | 7600 | 7599 | 0.850 | Type II | Short | Semi-Cutoff | B2-U0-G2 | 50 | | |

| Luminaire Schedule | | | | | | | |
|--------------------|--------------------|---------------------------------|-------------|-----|-----|-------|--|
| Symbol | Label | Description | Arrangement | Arm | Qty | Tag | |
| —■ | P1-2M-032 | CNX-LRL4-2M-42-032-M-XXX-700 | SINGLE | 2.4 | 1 | Exist | |
| —■ | P1-2M-120 | CNX-LRL3-P1-2M-42-120-L-700 | SINGLE | 2.4 | 1 | Exist | |
| —■ | P1-2M-040 | CNX-LRL3-P1-2M-42-040-S-XXX-700 | SINGLE | 2.4 | 2 | Exist | |
| —■ | P1-2M-030 | LRL3-P1-2M-42-030-S-XXX-700 | SINGLE | 2.4 | 1 | Exist | |
| —■ | CNX-LRL5-2M-40-120 | | SINGLE | 2.4 | 4 | | |
| —■ | CNX-LRL5-2M-40-070 | | SINGLE | 2.4 | 2 | | |
| —■ | CNX-LRL5-2M-40-050 | | SINGLE | 2.4 | 2 | | |

RESULTS

| Calculation Summary | | | | | | | | | | |
|------------------------------|-------------------|---------|-------|------|------|---------|---------|------------|---------|--------|
| Label | CalcType | Units | Avg | Max | Min | Avg/Min | Max/Min | Meter Type | LVRatio | RTable |
| Lakeshore & Clarkson N Inter | Illuminance | Lux | 28.02 | 62.0 | 11.2 | 2.50 | 5.54 | Horizontal | N.A. | N.A. |
| Lakeshore & Clarkson S Inter | Illuminance | Lux | 31.09 | 62.1 | 15.5 | 2.01 | 4.01 | Horizontal | N.A. | N.A. |
| Lakeshore EB_Illum | Illuminance | Lux | 14.09 | 35.8 | 7.3 | 1.93 | 4.90 | Horizontal | N.A. | N.A. |
| Lakeshore EB_Luminance | Luminance | Cd/Sq.m | 1.03 | 2.3 | 0.5 | 2.06 | 4.60 | Horizontal | N.A. | R3 |
| Lakeshore EB_Veil_Lum | Veiling Luminance | Cd/Sq.m | N.A. | N.A. | N.A. | N.A. | N.A. | Horizontal | 0.39 | R3 |
| Lakeshore WB_Illum | Illuminance | Lux | 15.60 | 57.1 | 4.7 | 3.32 | 12.15 | Horizontal | N.A. | N.A. |
| Lakeshore WB_Luminance | Luminance | Cd/Sq.m | 0.91 | 2.5 | 0.4 | 2.28 | 6.25 | Horizontal | N.A. | R3 |
| Lakeshore WB_Veil_Lum | Veiling Luminance | Cd/Sq.m | N.A. | N.A. | N.A. | N.A. | N.A. | Horizontal | 0.44 | R3 |



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LUMINAIRE LOCATION

| Luminaire Location Summary | | | | | | | | | | |
|----------------------------|--------------------|---------|---------|------|---------|------|------|------|----------|---------|
| LumNo | Label | X | Y | Z | Orient | Tilt | Roll | Spin | Switched | Dimming |
| 1 | P1-2M-032 | 43.857 | 16.753 | 8 | 180.336 | 0 | 0 | 0 | On | 1.00 |
| 2 | CNX-LRL5-2M-40-120 | 55.085 | 10.235 | 8.5 | 268.829 | 5 | 0 | 0 | On | 1.00 |
| 3 | CNX-LRL5-2M-40-120 | 22.913 | 12.162 | 8.5 | 270.403 | 5 | 0 | 0 | On | 1.00 |
| 4 | CNX-LRL5-2M-40-120 | 52.321 | -18.062 | 11.5 | 90.543 | 5 | 0 | 0 | On | 1.00 |
| 5 | CNX-LRL5-2M-40-120 | 22.456 | -19.554 | 11.5 | 89.664 | 5 | 0 | 0 | On | 1.00 |
| 6 | CNX-LRL5-2M-40-070 | -29.258 | 11.244 | 8.5 | 270.35 | 0 | 0 | 0 | On | 1.00 |
| 7 | CNX-LRL5-2M-40-070 | -29.547 | 11.411 | 8.5 | 180.213 | 0 | 0 | 0 | On | 1.00 |
| 8 | CNX-LRL5-2M-40-050 | -22.153 | -17.202 | 11.5 | 89.654 | 0 | 0 | 0 | On | 1.00 |
| 9 | P1-2M-030 | -27.045 | -19.755 | 8 | 180.449 | 0 | 0 | 0 | On | 1.00 |
| 10 | P1-2M-120 | -50.9 | -18.187 | 11.5 | 90.276 | 0 | 0 | 0 | On | 1.00 |
| 11 | CNX-LRL5-2M-40-050 | -50.518 | 10.122 | 8.5 | 270.226 | 0 | 0 | 0 | On | 1.00 |
| 12 | P1-2M-040 | -76.818 | 6.24 | 8 | 270.303 | 0 | 0 | 0 | On | 1.00 |
| 13 | P1-2M-040 | 78.957 | 9.548 | 8 | 269.54 | 0 | 0 | 0 | On | 1.00 |