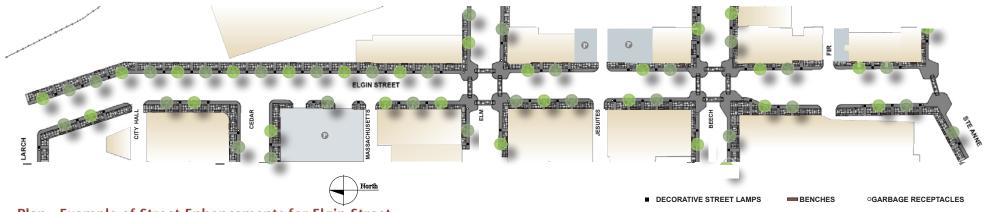
APPENDIX

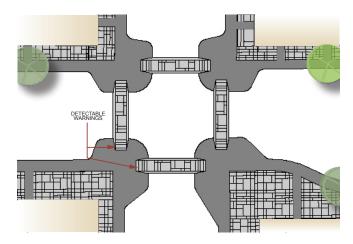
- a. Sample Streets
- b. Technical Sketches
- c. Product Information
- d. Proposed Dark Skies By-law
- e. Proposed Sign By-law
- f. Public Consultation



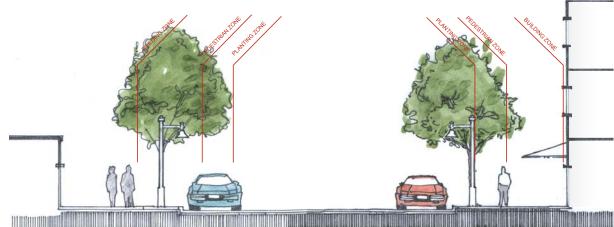
SAMPLE STREET | STREETSCAPE ENHANCEMENT | ELGIN STREET



Plan - Example of Street Enhancements for Elgin Street

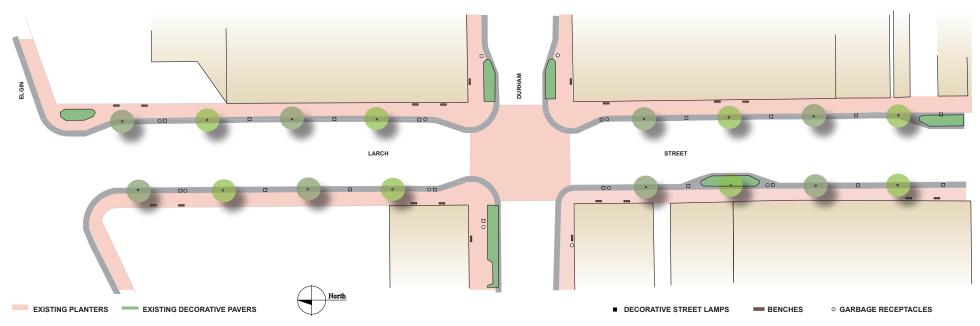


Plan View of Typical Cross Walk Treatment



Typical Section of Steetscape Enhancement

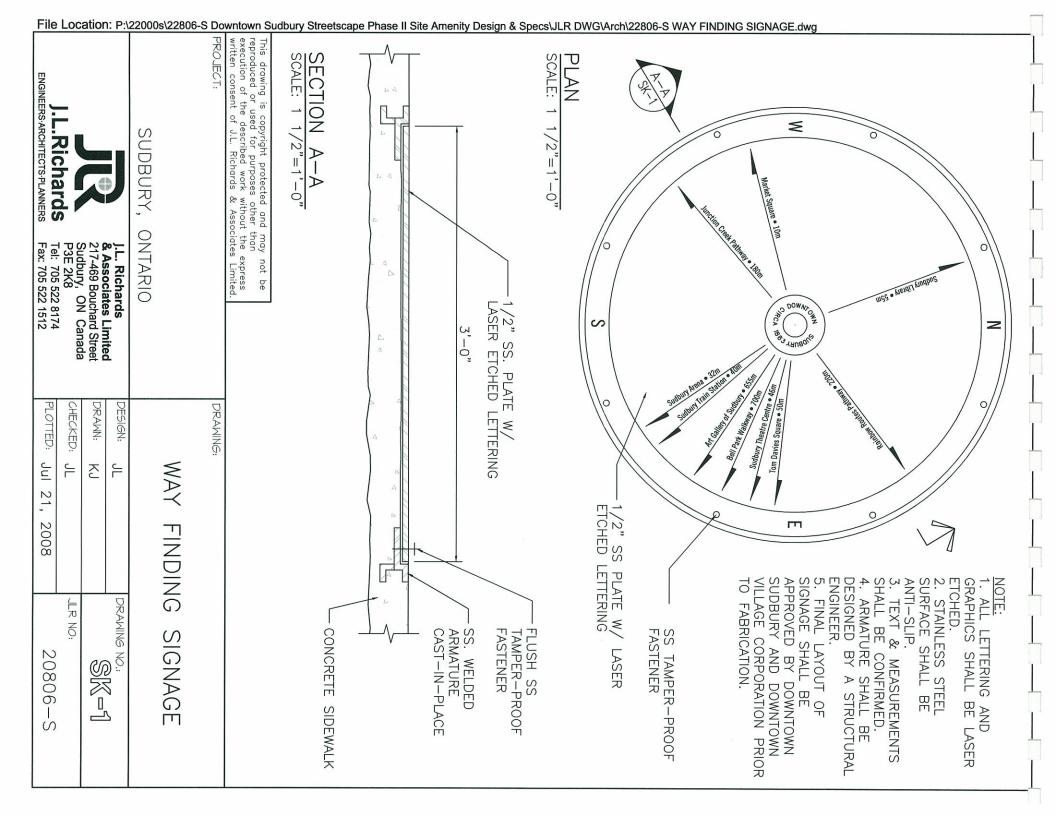
SAMPLE STREET | LIGHT TOUCH ENHANCEMENT | LARCH STREET

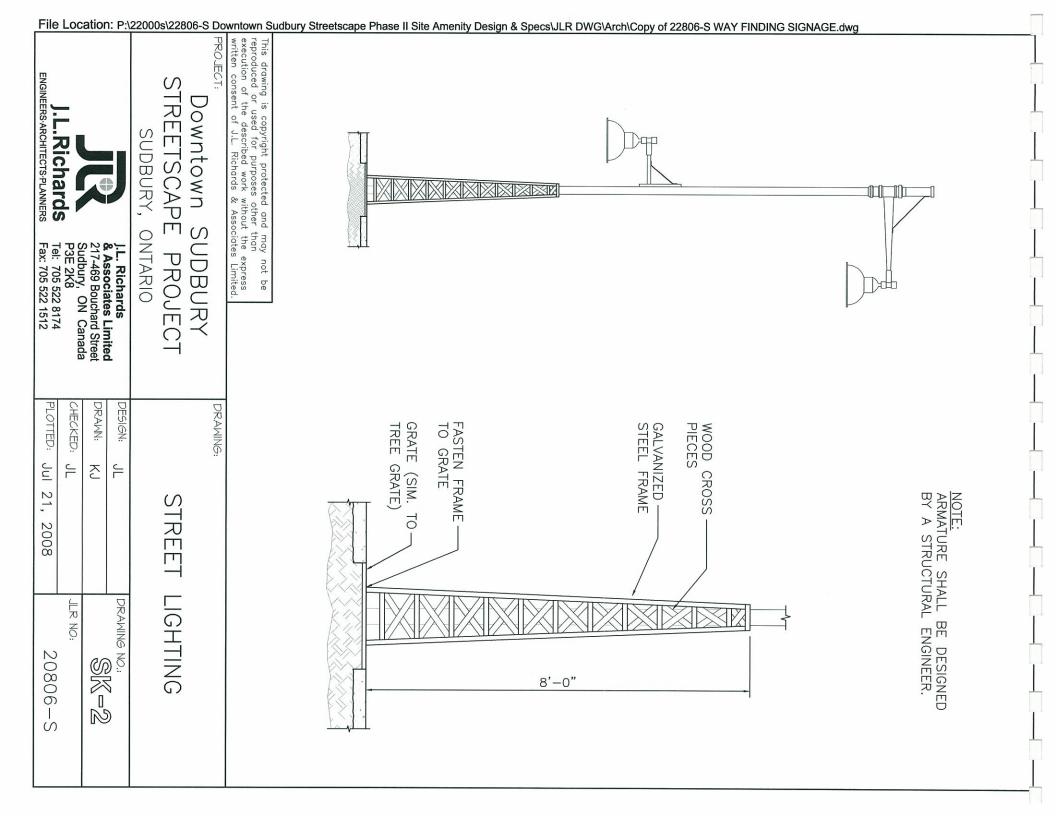


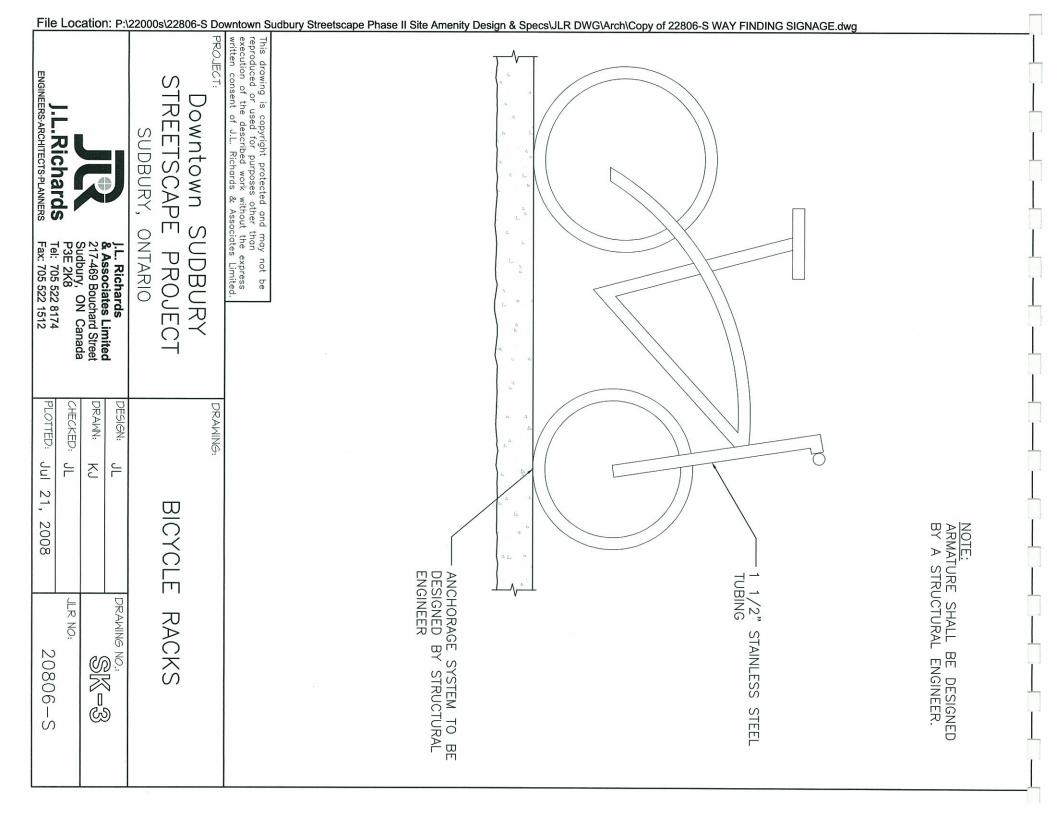
Plan - Example of Street Enhancements for Light Touch Sections such as Larch Street

B. TECHNICAL SKETCHES

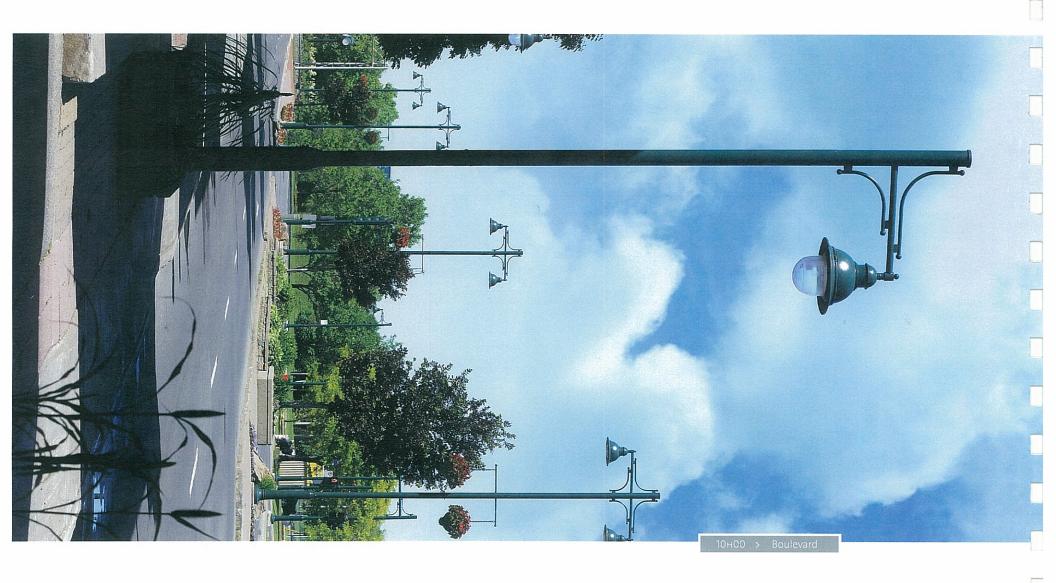
B. TECHNICAL SKETCHES (CON'T)







C. PRODUCT INFORMATION



Domus Series





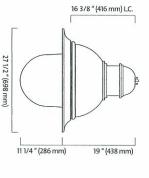
Domus Series

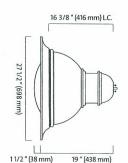
The Domus Series is one of the most versatile luminaires offered by Lumec. This classic shape was one of the first in a line of innovative Lumec designs. Encompassing most of the exclusive Lumec innovations, the Domus can fit into any environment; be it the main street of a small Alaskan village or the downtown of a high-tech center. Combined with today's efficient optics, Domus embodies the tradition of excellence in Lumec products.

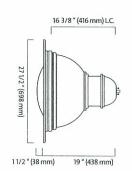
Characteristiques

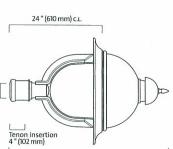
- Constructed from top-quality materials, the Optima Series maintains excellent performance in even the most demanding environment.
- Sealsafe® optical systems (IP66) virtually eliminate Luminaire Dirt Depreciation (LDD)
- > *Tool-free access* to lamp and electrical components for ease of maintenance.
- > SHA and SSA optical chambers reduce glare by using a unique combination of reflectors and internal prism refractors.
- SCB optical chamber offers exceptional performance and cutoff with a combination of a hydro-formed aluminum reflector and a tempered glass lens.
- Dark-sky friendly SG optics provide full-cutoff in five distributions.

> Luminaires (Luminaires are UL and CSA approved)









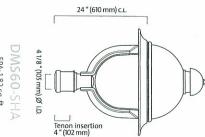
41 1/2 " (1054 mm)

27 3/4" (705 mm)

DMS50-SHA/SSA EPA: 1.35 sq. ft. Weight: 42 lbs (19.1 kg)

EPA: 1.00 sq. ft. Weight: 42 lbs (19.1 kg) DMS50-SCB

DMS50-SCB-FB EPA: 1.00 sq. ft. Weight: 42 lbs (19.1kg)



EPA: 1.82 sq. ft. Weight: 40 lbs (18.1 kg)

> HID Lamps (High Intensity Discharge)

7: Available N/D: Not 1: n/a with SGFM RJ: Redu	400 HPS, mogul N/A	250 HPS, mogul	200 HPS, mogul	150 HPS, mogul	100 HPS, mogul	70 HPS, mogul	50 HPS, mogul	35 HPS, medium	400 MH, mogul N/A	250 MH, mogul	200 MH, mogul	175 MH, mogul	150 MH, medium	100 MH, medium	70 MH, medium	50 MH, medium	SSA3M-PC
N/D: Not available RB: Rem RJ: Reduced Jacket ED28 required	N/A	N/A	N/A	•		<		,	N/A	N/A	N/A	<	•	<	<	<	PC SSA3M-ACDR
RB : Remote ballast required uired	N/A	RB	RB.	RB	RB	RB	RB	RB	N/A	RB	RB	RB	RB	RB	RB	RB	ž
quired	RB ¹	1	~	`	`	<	,	,	RB RJ	`	<	<	•	,	<	`	ž

V QL Lamps

		W.
85QL	25QL	VATTAGE
`	`	SCB5
<	`	SHA

50-60 Hz or DC. Lamp minimum starting temperature -40F (-40 °C). High frequency generator for induction lamp (4000K). Instant start. Operating range

V Optical systems lamps QL (Lamps included)



Sealed optical chamber consisting of a reflector permanently assembled on top of an internal prismatic globe. **SHA optics**

SHA: Asymmetrical > House shield available in option (HS)

Sealed optical chamber consisting of a reflector permanently assembled on top of a tempered-glass sag lens. SCB5 optics

SCB5 Symmetrical

Photometry available on Lumec web site www.lumec.com

V

Voltages
120 / 208 / 240 / 277 / 347* / 480*
'Not available for QL lamp

» multi-tap ballast also available

V Optical systems (Lamps not included)



SHA and SSA optics

Sealed optical chamber consisting of a reflector permanently assembled on top of an internal prismatic globe.

SHA3M: Asymmetrical
SSA3M: Asymmetrical
> House shield available in option (HS)

In the above optics, the sleeve and shutter permit exact positioning of the lamp. SHA & SSA refrators available in: ACDR:Acrylique (175 W max.) PC:Polycarbonate Add suffix to optical system code.



SCB optics

Sealed optical chamber consisting of a reflector permanently assembled on top of a tempered-glass sag lens.

SCB3M: Asymmetrical > House shield available in option (HS)

In the above optics, the sleeve and shutter permit exact positioning of the lamp.

> see next page for more optical systems

> Maintenance



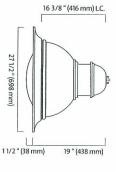
Access to internal component

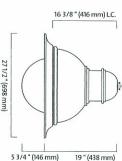
the cover at 90° from the technical ring. then be pivoted along a hinge incorporated in the technical ring. A built-in stopper holds simply applying pressure on the latch located on the technical ring. The hood can The luminaire's hood can be opened by

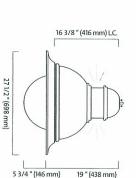


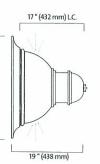
Access to lamp

Quick-disconnect terminals between the lamp and the ballast tray ensure safe and shutter provides easy access to the lamp. A simple quarter-turn of the Sealsafe ® easy lamp replacement.









271/2" (698 mm)

DMS50-SG-SLG

EPA: 1.00 sq. ft. Weight: 42 lbs (19.1 kg)

EPA: 1.20 sq. ft. Weight: 42 lbs (19.1 kg)

DMS50-SG-LR-DL EPA: 1.20 sq. ft. Weight: 42 lbs (19.1 kg)

EPA: 1.20 sq. ft. Weight: 42 lbs (19.1 kg)



SG Optics

Segmented cut-off reflector system set in faceted arc-image duplicating patterns

SGQ: SG1: SG2: SG3: SGFM: > Hous Symmetrical
Symmetrical
Asymmetrical
Asymmetrical
Asymmetrical
Asymmetrical
Forward throw
shield available for SG2 and SG3

* Photometry available on Lumec web site www.lumec.com

V Options de luminaire > Adaptors

- FS Fusing (consult factory)
- SH House shield
- FB Flat base spinning

6

Luminous dome,

MA1

tube from the mounting.

(retrofit adaptor for existing mounting)

npt threaded hole accepting a threaded a mounting adaptor with a 11/4" (32mm) The luminaire is suspended by means of

- (remote ballast for 200 and 250 W 250 W maximum (SG optics only)
- in braket or pole)

F

- (SG optics only) (remote ballast Luminous ring, 250 W maximum for 200 and 250 W
- DL Polycarbonate drop lens, 250 W maximum

in braket or pole)

- SLPC Polycarbonate sag lens, 175 W maximum
- STC Tempered glass sag lens (SG optics only)

> Mountings

SMB

adjustable to more or less 5°.

a decorative side-mounting cast-aluminium adaptor. This adaptor accepts tubes from 15/8" to 23/8" (41 to 60 mm) and is

The luminaire is suspended by means of

de for details and



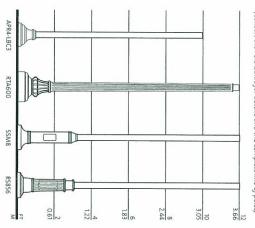








> Poles and Pole options (Consult the Pole Guide for details and the complete line of poles)



Configurations

A	P
2	$\left\{\right.$
2A	<u>C</u> 0
ω	} ∽
3B	$\ \ \triangleright$
4	्रे
≥	

> Finishes

The specially formulated Lumital powder coat finish is available in a range of many standard colors. (Consult Lumrec's Color Chart for complete specifications)

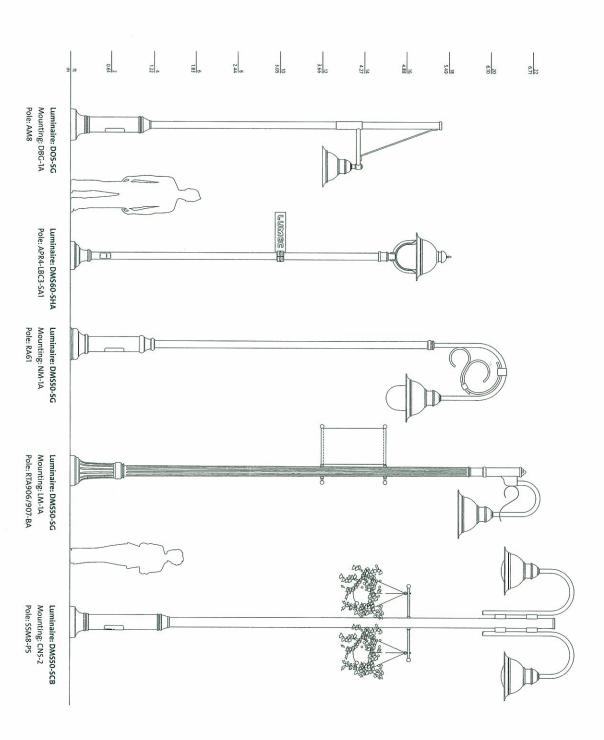
GNTX

Ordering sample

	DMS50	Luminaire	
	100 HPS	Lamp	
Access to ballast The tool-free drop-in unitized ballast tray is slipped into the post top box which rests on the optical support plate. Here again, the use of quick-	SHA3L-ACDR	Optical System	
drop-in uni pped into the sts on the o	120	Voltage	
tized post ptical quick-	SMB	Adaptor	
	FS-LR	Options	
	MR-1A	Mounting & configuration Pole	
	R80-15	Pole	
		711	



disconnect terminals ensures safe and easy ballast maintenance



www.lumec.com

Lumec Head Offic

640, Curé-Boivin Bouleva

Boisbriand, Québe J7G 2A7 Canada

Tel. : (450) 430.7040

A Genlyte Company

















Materials

The MLB400BW bench frame in constructed of H.S. steel tube and flat bar. The seat employs lpe wood slats.

Dimensions

Height: 17.00" (43.2cm) Length:70.00" (177.8cm) Depth: 17.00" (43.2cm) Seat: 17.00" (43.2cm)

Weight

100lbs (45kg.)

Finishes

All steel components are protected with E-Coat rust proofing. The Maglin Powdercoat System provides a durable finish on all metal surfaces. Wood slats are finished with penetrating sealers.

Installations

The MLB400BW park benches are delivered pre-assembled. Holes (0.5") are provided in each foot for securing to base.

Benches | Trash Containers | Bike Racks | Planters | Bollards | Ash Receptacles | Recycling Units | Accessories | Cluster Seating | Site Map | Privacy Policy | Home | Contact Us

MLWR400W-20









MLP400M

MLB 400BW

Materials

The MLB400W bench frame is made from H. S. steel tube and flat bar. The seat and back employ wood slats, steel tube, or lasered steel panels.

Dimensions

Height: 32.00" (81.3cm) Length:70.00" (177.8cm) Depth: 24.75" (62.9cm) Seat: 17.00" (43.2cm)

Weight

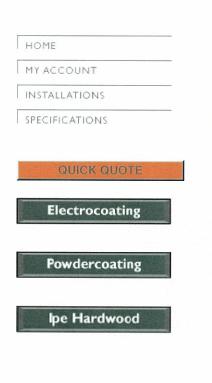
175lbs (80kg.)

Finishes

All steel components are protected with E-Coat rust proofing. The Maglin Powdercoat System provides a durable finish on all metal surfaces. Wood slats are finished with semi gloss or penetrating sealers.

Installations

The MLB400W park benches are delivered pre-assembled. Holes (0.5") are provided in each foot for securing to base.





ASH RECEPTACLES RECYCLING UNITS ACCESSORIES CLUSTER SEATING







Materials

The MLB970W bench ends are made from solid cast aluminum. The seat employs 2.625" x 1" and 5.5" x 1"(actual) lpe slats.

Dimensions

Height: 33.00" (83.8cm) Length:70.00" (177.8cm) Depth: 22.50" (57.2cm)

Weight

135lbs (61kg.)

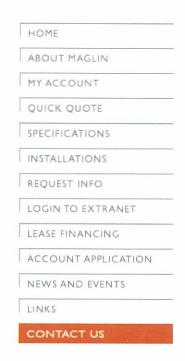
Finishes

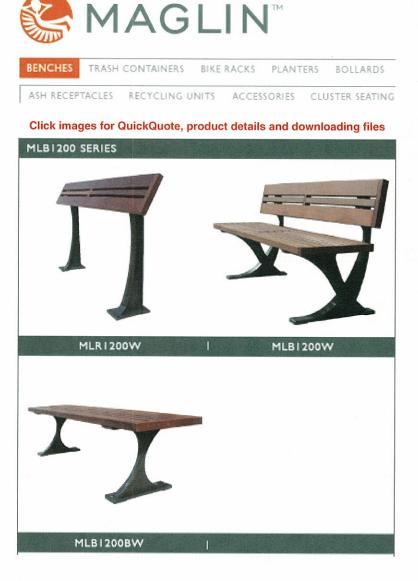
All steel components are protected with E-Coat rust proofing. The Maglin Powdercoat System provides a durable finish on all metal surfaces. Wood slats are finished with penetrating sealers.

Installations

The MLB970W park bench is delivered preassembled. Holes (0.5") are provided in each foot for securing to base.

Benches | Trash Containers | Bike Racks | Planters | Bollards | Ash Receptacles | Recycling Units | Accessories | Cluster Seating | Site Map | Privacy Policy | Home | Contact Us







Park Benches

Stop, rest, wait, relax, reorganize, converse, or people watch - just a sample of the many uses for a Maglin bench. The blend of diverse materials and designs creates a collection with vast applications. All our steel components are E-coated and powder coated providing superior resistance to corrosion.

Benches | Trash Containers | Bike Racks | Planters | Bollards | Ash Receptacles | Recycling Units | Accessories | Cluster Seating | Site Map | Privacy Policy | Home | Contact Us



Powdercoating



ASH RECEPTACLES RECYCLING UNITS





The MRC253 recycling station frame is constructed using heavy duty steel flat bar. Three 20 imperial gallon commercial grade plastic liners and funnel lids are

Materials

Height:38.00" (96.5cm) Width: 60.00" (152.47cm) Depth: 21.00" (53.5cm)

Weight 320lbs (145kg.)

Dimensions

Finishes All Steel components are protected with E-Coat

Rust Proofing. The Maglin Powdercoat System provides a durable finish on all metal surfaces.

The MRC253 recycling station is delivered preassembled. Holes (0.5") are provided in each mounting foot for

Installations

securing to base.

DOWNLOAD PRODUCT FILES



COMPLIMENTARY PRODUCTS









COMPLIMENTARY PRODUCTS

MLB 700AW

MLWR700M-32

MLP700

MLB 700W

Materials

The MLAU700 ash receptacle is constructed using a laser cut sheet metal frame. A durable, fire resistant liner and cast aluminum dome top or tray option is provided.

Dimensions

Height: 28.38" (72.1cm) Diameter:11.95" (30.4cm)

Weight

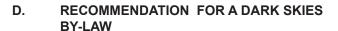
40lbs (18kg.)

Finishes

All Steel components are protected with E-Coat Rust Proofing. The Maglin Powdercoat System provides a durable finish on all metal surfaces.

Installations

The MLAU700 ash receptacle is delivered pre-assembled. Holes (0.5") are provided in each foot for securing to base.



The general purpose and goal of a "Dark Skies By-law" is to protect and promote public health, safety and welfare, quality of life, and the ability to view the night sky, by establishing regulations and a process of review for exterior lighting.

Section 129 of the Municipal Act allows for municipalities to pass by-laws to regulate outdoor illumination, among other issues such as noise, dust and odours. The Municipal Act sets up a permit system for regulating outdoor lighting fixtures. The main tools available to municipalities in Ontario for regulating outdoor lighting include site plan control under the Planning Act and lighting by-laws under the Municipal Act.

Outdoor illumination by-laws address many of the same issues as a site plan control except that the by-law approach allows municipalities to regulate new lighting fixtures for existing development through a permit process.

Benefits

By establishing regulations for lighting, Cities are able to:

- Protect against direct glare and excessive lighting (light pollution)
- Prevent light trespass in all areas; promote efficient and cost effective lighting
- Ensure that sufficient lighting can be provided where needed to promote safety, visibility and security for the properties, businesses and rights of way within the City.
- Protect and reclaim the ability to view the night sky, and thereby help preserve the quality of life within the City.

By-law Structure

A "Dark Skies By-law' may have:

- Definitions for types of lighting and lighting issues:
 - Fully Shielded, Glare, Full cut-off fixtures, Light Trespass, Light Pollution, Footcandle, Direct light, Fixture

- Specifics guidelines for components/areas of the downtown:
 - Outdoor vs. Street area lighting, height, type of light, hours to be turned off, shielding
- Exemptions:
 - Sensor activated lighting, Vehiclar lights, Outdoor lights with incandescent lamps to or less than 100 watts, Decorative outdoor lighting with blubs less than 25 watts (such as holiday), Outdoor lighting using only fossil fuels (torches or lanterns)
- · Prohibitions:
 - Laser source light, searchlights
- · Requests for exemption for temporary events
- · Grandfathering provisions

Municipal Examples

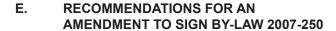
There are two municipalities in Ontario that have recently passed "Dark Skies By-laws" under the new Municipal Act: the Township of Mississippi Mills, which is located in eastern Ontario; and the Township of Central Manitoulin.

Central Manitoulin's by-law is a relatively general with reference to technical provisions.

In contrast, Mississippi Mills' by-law is more specific in nature and provides more guidance/restrictions related to technical requirements.

Richmond Hill had passed a Light Pollution By-law prior to changes to the Municipal Act, and is similar in nature to Mississippi Mills.

- 1. Central Manitoulin "Dark Skies By-law" available at: http://www.centralmanitoulin.ca/downloads/2003-16%20Outdoor%20Lighting%20Control%20Act.pdf
- 2. Mississppi Mills' "Dark Skies By-law" is available at: http://www.srac.ca/im/lpa/miss03-62.doc
- 3. Richmond Hill Light Pollution By-law is available at: http://code.municipalworld.com/richmondhill/1050.pdf



It is recommended that special sign provisions for the Downtown be added through an amendment to the current Sign By-law.

Awnings, Canopy & Marquee Signs:

- Graphic or lettering limited to maximum 20% of surface.
- Must be > 2.5 m above ground.

Poster Signs:

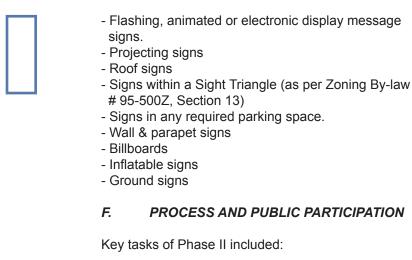
- Adhesive tape may be used to attach the poster.
- The poster should be made of biodegradable material (eg. paper).
- No posters shall be erected :
 - On any tree;
 - On any post or pole on any median, traffic island or central boulevard;
 - On any traffic signal or traffic control device: or
 - On any post or pole not identified or designated by the city.

Sidewalk Signs (Sandwich Boards):

- May not be permanently secured to anything.
- May be placed on public sidewalk, adjacent to curb or front wall of business being advertized but not in the Pedestrian Zone.

Restrict:

- Signs that are out of scale with the buildings, and with neighbouring building and signs.
- Signs of inappropriate materials, such as plastic or vinyl.
- Insertion or attachment of signs in such a way as to inflict damage to the building.
- Internally lit signs.
- Billboard signage using a large portion of the façade as a sign.
- Oversized franchise signage.
- Using more than two signs on a façade.
- Obscuring important architectural detail with the signs.
- Obscuring the sign of an adjacent business owner.
- Paper signage on the inside of the windows.
- Creating visual clutter by providing too much information.



Phase I

general public

Specifications Report

 Review and research of relevant background studies and literature, including the results of

 Preparation of a preliminary Final Site Amenity Design to be used for consultation purposes

· Preparation of a Final Site Amenity Design and

· Consultation with key stakeholders and the

•	Estimated opinion of probable costs
•	Provision of all maps and drawings in digital format

March 13 2008

A series of meetings were held to gain information, including specific technical information related to addressing implementation issues. These included:

Project Initiation with

the Technical Committee

Water 15, 2000	Steering Committee
March 27, 2008	Information Gathering with Steering Committee and Technical Committee
April 24, 2008	Review of Preliminary Final Design with Steering Committee
May 1, 2008	Review of Preliminary Final Design with Steering Committee and

May 5, 2008

Review of Preliminary
Final Design Meeting with
DowntownSudbury, and
the Greater Sudbury
Development Corporation

May 7, 2008

Review of Preliminary
Final Design through
Public Open House

July, 2008

Review Consultation
Results with Steering
Committee

Comments from these meetings were recorded and used to develop the Final Design, and have led to the development of recommendations for implementation.