

Design Guidelines for Street Lighting Supplement 2026



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Introduction

The City of Calgary Street Lighting Design Guideline Supplement (the “Supplement”) provides additional design guidance, technical clarifications, and operational requirements to accompany the City of Calgary’s existing street lighting standards, standard specifications, and design guidelines.

This Supplement shall be read in conjunction with the current City of Calgary Design Guidelines for Street Lighting, City of Calgary Standard Specifications for Street Lighting Construction, the Canadian Electrical Code, and all applicable provincial and national standards and codes. It does not replace or supersede any requirement contained within those documents.

Where a conflict exists between the Supplement and any applicable design guideline, specification, or standard, the more stringent requirement shall govern, and the City of Calgary shall be consulted for clarification prior to proceeding with a design.

This Supplement is a living document. It reflects the state of City requirements as of the effective date shown on the document cover. Requirements are subject to revision; users are responsible for confirming they are referencing the current version. The current version will be maintained and distributed by the City of Calgary.

Questions regarding this Supplement or its application should be directed to streetlighting@calgary.ca.

Purpose

The purpose of this Supplement is to provide design guidance, technical clarifications, and supplementary requirements for street lighting projects within the City of Calgary. The Supplement addresses specific design considerations, operational requirements, and submission expectations that complement the existing street lighting standards and design guidelines.

The Supplement is intended to:

- Provide additional guidance not fully addressed within the base Design Guidelines;
- Clarify the City's expectations for street lighting design submissions;
- Document current operational and technical requirements based on City experience;
- Improve the consistency and quality of street lighting design submissions received from consultants and developers.
- Reduce design review iterations by clearly communicating City requirements in advance of submission; and
- Support the safe and efficient operation and maintenance of the City's street lighting infrastructure.

This Supplement applies to all parties involved in street lighting design, submission, and construction within the City of Calgary, including:

- Consulting professionals responsible for street lighting design;
- Developers and project managers overseeing subdivision or land development projects;
- Contractors responsible for street lighting construction and installation;
- City of Calgary project managers, reviewers, and inspectors; and
- Any other party submitting a street lighting design or requesting materials from the City

Compliance with this Supplement is mandatory for all street lighting design submissions to the City of Calgary.

Definitions and Abbreviations

Abbreviation	Definition
AGI	AGi32 photometric calculation software
APRCON	Approved Construction Drawing
AS-BUILT	Final as-constructed drawings reflecting actual field conditions as installed
BILD	Building Industry and Land Development
CAB	Street Light Cabinet
CAD	Computer-Aided Design
CCC	Construction Completion Certificate
DB2	Direct Burial Type 2 conduit
DDS	Design & Incremental Cost Data Sheet
DGSS	Design Guidelines for Subdivision Servicing
EPC	ENMAX Power Corporation
GIS	Geographic Information System
HDPE	High-Density Polyethylene
IES	Illuminating Engineering Society of North America
IFR	Issued for Review
MDA	Master Development Agreement

Abbreviation	Definition
MPLA	Multi-Party Line Assignment
MR	Multi-Residential
PEC	Photoelectric Cell
PER	Photoelectric Relay
QUE	Qualified Utility Employee
SL	Street Light
ULA	Utility Line Assignment
URD	Underground Residential Development
USEI90	Underground Shielded Electric, 90°C rated

1. Third-Party Street Lighting Design Authorization Conditions

Intent

The City of Calgary wishes to partner with developers and associated stakeholders to address safety and legislative compliance issues related to street lighting infrastructure in new subdivisions. This document summarizes The City's systems and processes to support street lighting in new developments.

Project Initiation

Notification of the street light designer (either The City of Calgary or a third-party street light consultant), is required a minimum of 15 business days before the Underground Residential Distribution Integrated Design Process (UIDP) Co-Location meeting.

This notification is required directly to streetlighting@calgary.ca, separately from the UIDP checklist, and must include the following:

- Subdivision name and phase #
- The developer's legal entity and contact information
- The prime consultant's company name and contact information
- The street lighting & electrical design consultant (i.e., The City of Calgary Street Lighting & Electrical department or an approved Street Lighting Design Permit Holder)

Failure to identify any of the preceding requirements by the deadline will result in the automatic assignment of street lighting design to The City of Calgary. Following the missed deadline (i.e. fourteen (14) business days prior to the UIDP Co-Location meeting), The City of Calgary will provide a fee letter to the Developer via email informing them of The City's automatic assignment as designer. For clarity in respect to design costs, The City utilizes a cost recovery model.

ULA (Utility Line Assignment)/UAP (Utility Alignment Permit)

Approved Street Lighting Design Permit Holders will be granted access to the Calgary Rights-of-Way Management (CROWM) portal to apply for and manage approved street lighting UAPs on The City's behalf.

Approved Street Lighting Design Permit Holders must maintain full compliance with City bylaws and UAP requirements and conditions. There is zero tolerance for non-compliant ULA applications. Consultants are notified in advance of any expiring or non-compliant ULA applications via CROWM's automated messaging system.

Outstanding ULAs Pre-2026

Approved Street Lighting Design Permit Holders will have until December 31, 2026 to resolve any non-compliant ULA applications outstanding as of January 1, 2026 to The City of Calgary Street Lighting & Electrical Team's satisfaction. The City will provide a list of non-compliant ULA applications by September 30, 2026 and work with the street light consultant to determine a resolution for each instance.

Street Lighting Design Permit

Termination clause from Street Lighting Design Permit:

If the street lighting design permit holder fails to perform any of its material obligations after having been given thirty (30) days prior written notice in respect of such failure, or such longer period of time as mutually agreed by the parties, The City of Calgary, at its sole discretion, may terminate this permit. In the case that a terminated permit holder has outstanding project submission requirements, The City of Calgary will work with the permit holder to either allow the permit holder to complete all outstanding requirements within a City of Calgary determined period of time or assume those requirements from the permit holder. The City of Calgary will calculate any costs incurred due to resolution of outstanding permit holder requirements and present those costs as a termination invoice. Upon notice of termination, The City of Calgary will halt approval of any outstanding Utility Alignment Permit (UAP) Applications, and completely remove permit holder access to the Street Lighting Calgary Rights-of-Way Management (CROWM) system, the Street Lighting GIS portal, and the Street Lighting approval submission folder.

Warning System – ULA Submissions

The ULA team provides a 7-day grace period to consultants to fix missed deadline non-compliances. When an application is deemed ULA non-compliant and the grace period has passed, there is no ULA resolution.

When the City of Calgary Street Lighting & Electrical Team becomes aware of a non-compliance, street light consultants will be given thirty (30) days' notice to explain the non-compliance and request a review. Developers and prime consultants engaged in active projects with the non-compliant street light consultants will be notified by the City of Calgary immediately.

Non-excused non-compliance of all ULA submissions are subject to Street Lighting Design Permit termination. Street light consultants that design twenty (20) or more street light projects per year and receive three (3) non-excused non-compliances of all ULA submissions for a third-

party street light consulting company within twelve (12) months will result in automatic termination. Street light consultants that design nineteen (19) or less street light projects per year and receive two (2) non-excused non-compliance of all ULA submissions for a third-party street light consulting company within twelve (12) months will result in automatic termination. The consultant will be prohibited from obtaining a permit for two (2) years from the termination date.

Non-excusable ULA non compliances include:

- Missed deadlines.
- Failure to apply for an excavation permit in areas that are not subject to a Development Agreement.
- Design deviations that were not pre-approved by the City of Calgary Street Lighting & Electrical department. Contractor field changes completed without the consultant's knowledge will be considered a mitigating factor and must be identified in the Review Request.

All non-compliances will be reviewed and assessed at the discretion of the City of Calgary.

Developers who retain street light consultants and receive a combined total of three (3) non-excused ULA non-compliances within a twelve (12) month period will be prohibited from participating in the developer-choice model for street light design for a period of twelve (12) months following written notification from the City of Calgary. During this period, all street lighting designs for the developer will be completed by The City of Calgary. This restriction applies solely to street lighting design services. During the restriction period, the Developer remains responsible for retaining a contractor holding a valid and subsisting Street Lighting & Electrical Construction Permit issued by The City to construct all street lighting and electrical infrastructure. No other aspect of the UIPD process, or any contractual arrangements between the Developer and other utilities will be affected by this restriction.

Zero Tolerance – Record Drawings

Street light record drawings must be submitted to streetlighting@calgary.ca at the end of the project in both authenticated pdf and CAD formats.

When the City of Calgary Street Lighting & Electrical Team becomes aware of the completion of a project and a failure of the street light consultant to submit records, the street light consultant will be given ninety (90) days' notice to submit the records to streetlighting@calgary.ca. Developers and prime consultants engaged in active projects with the non-compliant street light consultant will be notified by the City of Calgary immediately.

There is no tolerance for failure to submit a record drawing. This requirement does not reset annually. Failure to submit an acceptable record drawing within ninety (90) days of construction completion will result in the automatic termination of the Street Lighting Design Permit. The street lighting consultant will be ineligible to obtain a new Street Lighting Design Permit until the outstanding record drawing has been submitted and accepted by The City of Calgary. Following permit termination, the consultant must submit a new Street Lighting Design Permit application and obtain approval from The City prior to undertaking any new Street Lighting Design Permit work.

If the consultant has not received as-built drawings from the contractor within the ninety (90) day period, the consultant must contact streetlighting@calgary.ca before the submission deadline to request an extension. The consultant will provide the contractor's name and contact information, and The City will follow up with the contractor directly. Where an extension is granted due to the late receipt of as-built drawings from the contractor, the record drawing submission deadline will be extended by thirty (30) days from the date the as-built drawings are received by the consultant.

Developers who retain street light consultants and receive a combined total of two (2) record non-compliances within a twelve (12) month period will be prohibited from participating in the developer-choice model for street light design for a period of twelve (12) months following written notification from the City of Calgary. During this period, all street lighting designs for the developer will be completed by The City of Calgary. This restriction applies solely to street lighting design services. During the restriction period, the Developer remains responsible for retaining a contractor holding a valid and subsisting Street Lighting & Electrical Construction Permit issued by The City to construct all street lighting and electrical infrastructure. No other aspect of the UIPD process, or any contractual arrangements between the Developer and other utilities will be affected by this restriction.

Street Lighting and Electrical on Third-Party Utility Poles

The City maintains a third-party attachment agreement with ENMAX. All requests for street lighting infrastructure on third-party utility poles must be made to the City and shall not be completed by a third-party street lighting consultant. This includes street light sweeps, overhead transformer connections and laterals. The City of Calgary will serve as the street light designer and will comply with the ENMAX Telecom Choice process, including the engagement of an approved ENMAX Telecom Choice Design-Build Contractor (DBC), at the developer's expense. The City of Calgary can design the entire project, or the project scope can be split such that all ENMAX attachment infrastructure is designed by the City, while the remaining stand-alone street lighting infrastructure is designed by a third-party street lighting consultant. The City will establish

the demarcation point between the two design scopes and provide written confirmation to the Developer, prime consultant and third-party street lighting consultant.

The City will assume ownership and maintenance of all infrastructure on third-party utility poles immediately upon CCC acceptance. The developer shall be responsible for all maintenance and administrative costs during the standard two (2) year pre-FAC warranty period.

Street Lighting and Electrical in FAC'd ("Brownfield") Areas

Where street light circuits and infrastructure have been FAC'd, the City retains sole design authority. All requests for street lighting infrastructure additions or modifications on FAC'd electrical circuits must be submitted to the City at streetlighting@calgary.ca. The City of Calgary will serve as the street light designer; or, at its sole discretion, may provide written authorization for the developer to retain a third-party street light consultant under City oversight.

New Street Light Power Services on existing ENMAX transformers

Only the City of Calgary can request new services from existing ENMAX transformers for street light power services. The City of Calgary can design the entire project, or the project scope can be split such that the street light power service is designed by the City, while the remaining street lighting infrastructure is designed by a third-party street lighting consultant. The City will establish the demarcation point (generally at the new cabinet or first street light pole with relay), and provide written confirmation to the Developer, prime consultant, and third-party street lighting consultant. The construction scope can be combined and completed by a single contractor holding a valid and subsisting Street Lighting & Electrical Construction Permit, with City supervision and oversight of the ENMAX power connection scope.

Additional street light poles on existing FAC'd street light circuits – Cabinets and Relays

Only the City of Calgary can make design modifications or additions to FAC'd electrical circuits. The City of Calgary can design the entire project, or the project scope can be split such that all FAC'd attachment infrastructure is designed by the City, while the remaining greenfield street lighting infrastructure is designed by a third-party street lighting consultant. The City will establish the demarcation point between the two design scopes and provide written confirmation to the Developer, prime consultant, and third-party street lighting consultant. The construction scope can be combined and completed by a single contractor holding a valid and subsisting Street Lighting & Electrical Construction Permit, with City supervision, direction and oversight of the FAC'd connections, construction staging and temporary lighting requirements.

The City will assume ownership and maintenance of all infrastructure added to an existing FAC'd relay or FAC'd cabinet immediately upon CCC acceptance. All deficiencies identified during the

CCC inspection must be corrected by the Developer's contractor prior to CCC acceptance (i.e., no deficiencies will be permitted to remain outstanding until FAC). Following CCC acceptance, The City of Calgary will perform all required maintenance, and the Developer shall be responsible for all associated maintenance and administrative costs during the standard two (2) year pre-FAC warranty period.

Where the City determines that a street light consultant has undertaken street lighting design work on FAC'd street light circuits or infrastructure, or past the established demarcation point, without prior written authorization from The City of Calgary Street Lighting & Electrical Team, this will result in immediate removal of the street light consultant from the project. The City of Calgary will complete the remaining project requirements at the developer's expense. The City of Calgary will provide a fee letter to the Developer via email informing them of The City's automatic assignment as designer. For clarity in respect to design costs, The City utilizes a cost recovery model.

More than one (1) removal from an FAC'd area project due to lack of City of Calgary written authorization within a twelve (12) month period for a street light consulting company will result in automatic termination of the consulting company's Street Lighting Design Permit. Following termination, the consultant will be prohibited from obtaining a Street Lighting Design Permit for a period of two (2) years from the termination date.

Developers who retain street light consultants that receive a combined total of two (2) removals from FAC'd area projects due to no City of Calgary written authorization within a twelve (12) month period will be prohibited from participating in the developer-choice model for street light design for a period of twelve (12) months following written notification from the City of Calgary. During this period, all street lighting designs for the developer will be completed by The City of Calgary. This restriction applies solely to street lighting design services. During the restriction period, the Developer remains responsible for retaining a contractor holding a valid and subsisting Street Lighting & Electrical Construction Permit issued by The City to construct all street lighting and electrical infrastructure. No other aspect of the UIPD process, or any contractual arrangements between the Developer and other utilities will be affected by this restriction.

To confirm if a project qualifies for the use of a third-party street light consultant including the identification of the demarcation point, contact streetlighting@calgary.ca.

Street Lighting and Electrical – Non-Standard Installations

Where proposed street lighting or electrical installations involve non-standard conditions (including, but not limited to, new or custom materials not identified in the DDS, custom electrical

wiring configurations, or atypical utility alignments), the City retains sole design authority. The developer or prime consultant must engage the City during the planning of any non-standard street lighting project. All requests involving non-standard installations must be submitted to the City at streetlighting@calgary.ca for review and direction.

Standard and Non-Standard Materials

Standard decorative materials identified with a rate in the DDS include:

Materials Description	City Drafting Code	City Item ID
9m Black Single Davit (Cranston)	105	171277
9m Black Double Davit (Cranston)	106	171278 & 171279
15m Black Single Davit	127	195513 & 195514
15m Black Double Davit	128	Special Order
LED Black Cobrahead Luminaires	SLB, SMB, SNB, SOB, SPB	198814, 198816, 198818, 198820, 198822
LED Black Cobrahead Luminaires	SQB, SRB, SSB, STB, SUB	Special Order
7.8m Single Davit (McKenzie)	52	151305
7.8m Double Davit (McKenzie)	60	185789
Domus/Domia Luminaires (for use on McKenzie Poles)	OF, OG, OH	185923, 185924, 185925
7m Traditional Pole with Banner Arms	139	19662
Acorn luminaire (for use on Traditional poles)	OU, OV, OW	186136, 186137, 186138
9m Black Square Steel Pole	42	181932
Black Shoebox Luminaires (for use on square steel poles)	SF, TBD, TBD	196685, 196683, 196684

Standard materials not identified in the DDS include:

Materials Description	City Drafting Code	City Item ID
'B' Concrete Base	PCB-B2	194785
'C' Concrete Base	PCB-C2	194786
Wood Pole Sweep	N/A	151364
9m Galvanized Single Davit	9	151321
9m Galvanized Double Davit	10	160360 & 183100
15m Galvanized Single Davit	61	151323 & 151327
15m Galvanized Double Davit	63	160362 & 183100
LED Galvanized Cobrahead Luminaires	SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU	198813, 198815, 198817, 198819, 198821, 198823, 198824, 198825, 198827, 198828
5m Walkway Pole	32	196995
Walkway Luminaire	PM	197846
Walkway Bollard	VT120	201446

In addition, conduit, cabinets, relays, break-away bases, shorting caps, photo-eyes and consumables are considered standard materials when procured through the City of Calgary warehouse.

Contractor-supplied materials considered standard include the Wire Sentry Anti-Theft device, Class 3 wood poles, standard wire gauges/types identified in the Design Guidelines for Street Lighting and any consumables not available through the City of Calgary Warehouse.

Where the developer and prime consultant wish to introduce a new non-standard pole or luminaire to City inventory, they may engage the City of Calgary to research and develop the proposed material, or utilize a third-party street lighting design consultant with the following conditions:

1. A minimum of 12 months' notice is required.
2. Approval will be required by City of Calgary Street Lighting & Electrical and supported by Development Engineering for the new DDS Rate.
3. City of Calgary Street Lighting & Electrical will review the proposed material and determine whether it is suitable for a pilot installation.
4. If approved for a pilot project, the pole or luminaire shall be installed within a single phase of the subdivision. A Pilot Project Evaluation Report shall be completed at CCC by the

designer of record, either the City of Calgary or the third-party street lighting consultant. City of Calgary Street Lighting & Electrical will review the pilot project findings and formally notify the developer if the custom material will be brought into the warehouse and adopted as a standard material. This adoption is at the sole discretion of the City of Calgary.

5. Minimum pole requirements:

- a. 10-year factory warranty (our galvanized steel is expected to last 50-years, warranty is for 10 years);
- b. Must be galvanized steel, powder coated galvanized steel or stainless steel
- c. CSA label applied to the pole (should adhere to class # 3426-03 luminaires-luminaires poles CSA 22.2, CSA G164/ASTM A123, CSA W59, W47.1);
- d. Provide engineered shop drawings showing max fixture weight and effective projected area); mounting height of banners, signs, wind load to be designed to 1/25-year wind;
- e. Must fit and be structurally compatible with current BCD for either the 'B' pre-cast base or 'C' pre-cast base;

6. Minimum luminaire requirements:

- a. Provide the IES file to City of Calgary Street Lighting & Electrical for evaluation;
- b. CSA, CUL, CETL luminaire certification (certification is UL1598); luminaires shall bear CSA, CUL, CETL label;
- c. Temperature rated to -40 degrees Celsius to +40 degrees Celsius
- d. Zero uplight;
- e. IP 66 rated;
- f. 10-year warranty with a stated lifespan of twenty years (100,000 hours);
- g. Backlight no greater than 2, glare no greater than 2;
- h. 1-3G vibration rated;
- i. Photocell receptacle should be NEMA c136.41 (7pin with dimming ability on drivers);
- j. Surge protected to TAC standards;

Custom Electrical Wiring Configurations

Any approved non-standard wiring configurations will be designed and piloted by the City prior to being considered for adoption as an accepted design practice for consultant use. Examples include voltages other than 240V, joint-use street light poles with telecommunications attachments, receptacle-integrated street light poles, and similar non-standard installations.

Custom Utility Alignments

Any approved atypical utility alignments will be designed and piloted by the City prior to being considered for adoption as an accepted design practice for consultant use. Atypical wire alignments are utility alignments that require evaluation through collaborative review with the 4Party Consortium. This does not include alignments identified in the DGSS, previously adopted and pre-approved alignments, or custom alignments that do not affect other shallow utilities.

Pre-FAC Warranty Period Requirements

During the pre-FAC warranty period, developers, prime consultants, and street light consultants shall report the following to The City (streetlighting@calgary.ca):

- Utility Strikes
- Issues with underground utility locates (e.g., missing locates)
- Incidents of wire theft, when known

Pre-FAC Warranty Period PDOR and damage response and 311

Developers, prime consultants, and street light consultants will be notified of any and all damage The City has actioned within pre-FAC project areas. Contacts for all three (3) parties must be provided to The City (streetlighting@calgary.ca) prior to the UIDP Co-Location meeting. The City will provide locations of outages reported by citizens to the three (3) established contacts.

Smartsheets

The Smartsheets application is single user only. All files to be uploaded to Smartsheets must be sent to The City (streetlighting@calgary.ca) for upload. The City will timestamp upload time for the prime consultants and street light consultants. The timestamp in the Smartsheets comment will be the time/date that the email was received to streetlighting@calgary.ca

Key Contacts

BILD to establish a working committee of 5 representatives who will speak for industry. Street Lighting & Electrical to provide 5 individuals to represent the City of Calgary. Monthly or quarterly meeting to be scheduled by BILD/City.

Residential Development Street Lighting & Electrical Design Process Requirements

1. Attend monthly project update meetings either in-person or on Teams, at the discretion of the City of Calgary.
2. Coordinate with third-party stakeholders as required.
3. Complete pre-design field review and confirm field visit date on drawing title block.
4. Use field review results and TRACE-ID, records (GIS), and civil design drawings (e.g., civil roadway development drawings) to design street lighting, including photometric and electrical (e.g., voltage drop) analysis as required.
5. Procure sub-consultant services and deliverables as required (e.g., geotechnical investigation).
6. Submit preliminary Co-Location package a minimum of five (5) business days before the scheduled Co-Location meeting. Package includes:
 - a) BlueBeam PDF markup showing light locations and circuitry overlaid onto ENMAX design
 - b) Previous Phase tie-ins
 - c) AGi file
7. Submit revised Co-Location package, incorporating all required City of Calgary's changes, within two (2) business days after receiving City of Calgary Street Lighting & Electrical comments.
8. Attend Co-Location meeting in person.
9. Submit authenticated preliminary design (i.e., IFR) to The City for approval a minimum of seven (7) business days before the UIDP IFR due date. IFR Package includes:
 - a) Drafted/authenticated IFR
 - b) Authenticated AGi
 - c) AGi file (in .agi format)
 - d) Authenticated Voltage drop table

- e) Voltage drop diagram showing longest cable length and voltage drop values
 - 10. Submit revised IFR, incorporating all required City of Calgary's changes, within two (2) business days after receiving City of Calgary Street Lighting & Electrical comments.
 - 11. For offsites and non-URD projects, coordinate with The City to request new electrical transformers from ENMAX, as required, including ENMAX required single line diagram and loading information. *Any designs where new attachments are required to existing ENMAX transformers or on existing ENMAX utility poles cannot be performed by a third-party consultant. See *Street Lighting and Electrical in FAC'd Areas and on Third-Party Utility Poles* above.
 - 12. Create and manage ULA application in CROWM system, and coordinate approvals with existing utility owners as required. streetlighting@calgary.ca shall be included on all ULA applications as an alternate contact.
 - 13. After prime consultant/developer review, submit authenticated preliminary design (i.e., IFR) required changes to The City for approval a minimum of 5 business days before the UIDP RE-IFR due date. RE-IFR Package includes:
 - a) Drafted/authenticated RE-IFR
 - b) Authenticated AGi
 - c) AGi file (in .agi format)
 - d) Authenticated Voltage drop table
 - e) Voltage drop diagram showing longest cable length and voltage drop values
 - 14. Submit authenticated IFC drawing package, complete with schedule of quantities and technical specifications to The City for approval a minimum of 5 business days before the UIDP IFC due date.
 - 15. Provide construction administration support including but not limited to:
 - a) Provide the name and contact information for the consultant's representative from the engineering company named in, and authorized under, the Utility Alignment Permit who is supervising the performance of the approved work.
 - b) While the work approved in the Utility Alignment Permit is being performed, the consultant's representative identified above, or their designate from the same engineering company authorized under the permit, must be available at the physical location of the work within two (2) hours of being contacted by The City.

- c) *Attend UIDP Pre-Construction Meeting in person. Confirm attendance with signature on sign-in sheet and submit a copy to the City of Calgary. Meeting invite will be forwarded by City of Calgary.
- d) Attend site meetings as required.
- e) Submit authenticated construction drawing package revisions for approval by the City of Calgary as required.
- f) Submit ULA deviation requests in CROWM system as required.
- g) *Attend UIDP Post-Construction Meeting in person. Confirm attendance with signature on sign-in sheet and submit a copy to the City of Calgary. Meeting invite will be forwarded by City of Calgary.
- h) *Attend UIDP Project Completion Meeting in person. Confirm attendance with signature on sign-in sheet and submit a copy to the City of Calgary. Meeting invite will be forwarded by City of Calgary.

16. Review and approve contractor as-builts.

17. Complete ENMAX unmetered service request with any add/remove/change loads as required and submit to The City for approval.

18. Submit authenticated record drawing package complete with street lighting asset topographical survey and all completed permits (e.g., electrical and excavation permits) to The City.

*While Approved Street Lighting Design Permit Holders are strongly encouraged to begin attending construction meetings immediately, attendance will not be mandatory until January 1, 2027.

Deliverables: UIDP Co-Location package, UIDP IFR package(s), UIDP RE-IFR package(s), ENMAX new transformer request(s), CROWM UAP application drawing(s), CROWM UAP application approval, UIDP IFC drawing and specification package, contractor as-built approval, electrical and excavation permits, ENMAX unmetered request, and record drawing package complete with street lighting asset topographical survey.

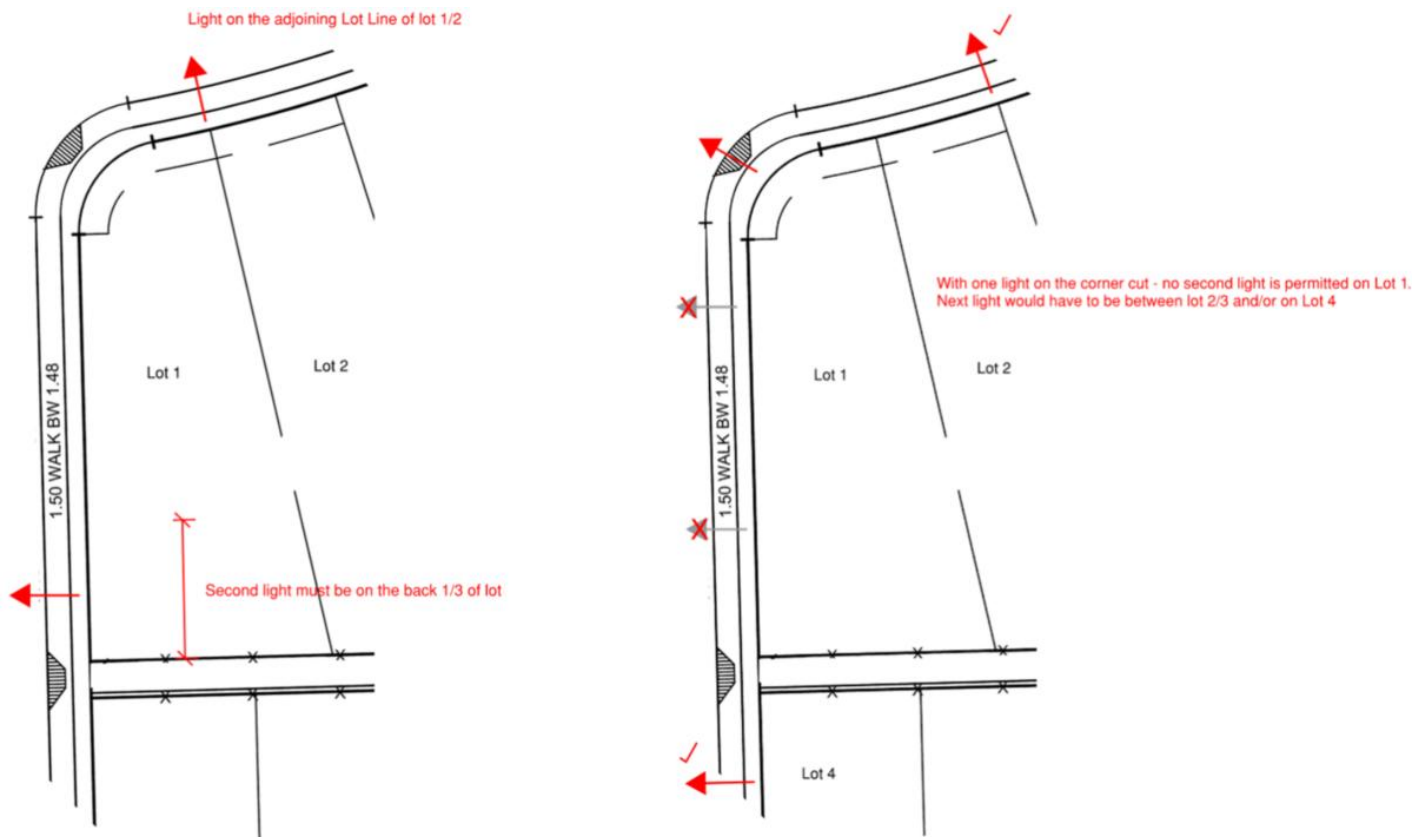
2. Street Lighting Design

Any deviation from the requirements listed in the Supplement requires prior approval from streetlighting@calgary.ca.

- GIS data shall not be relied upon for street lighting designs, as wire representation may be inaccurate. A site visit is required to confirm existing field conditions and circuitry before completing any design. Site visits shall be performed to open handholes, identify conduits, and verify relay and cabinet operation. Prequalified consultants and/or contractors may be provided with keys to confirm existing conditions upon request. Any work (including capping relays) on ENMAX wood poles must be done by an ENMAX approved QUE.
- Where wires extend outside the project boundary and will impact non-project street lights, the consultant shall identify all affected circuits and notify City Street lighting accordingly.
- All branch circuits shall be 3#8 Cu RWU90 RBG. All PER service feeders shall be 3#2 Al RWU90 RBW (or 3C#2 Al USEI90). The minimum conductor size for all cabinet service feeders shall be 3#2 Cu RWU90 RBW.
- Any overhead cable for branch circuits requires prior City of Calgary approval, with a maximum permitted span of 40 m. An intermediate wood pole may be added to meet the 40 m span limit, subject to City of Calgary approval.
- The only acceptable conduit types are 35 mm HDPE for branch circuits and 53 mm HDPE for service feeds. 100 mm DB2 is required for road crossings or secondary services in URD. All conduits shall be procured through City Stores.
- All conduits shall run perpendicular or parallel to the road; diagonal crossings are not permitted. Each conduit shall contain only one circuit. A road crossing may contain two 35 mm HDPE conduits within a single 100 mm crossing, where required.
- Where wireless infrastructure is mounted on poles, all affected circuits require 24/7 power. Install individual photocells on each light and shorting caps on PERs (this creates a normally closed / always-on circuit). For cabinet-controlled lights, disconnect the photocell. Not all luminaires are capable or operate effectively with photocells.
- Acceptable source voltages from ENMAX are 120/240V 1 ϕ and 120/208 3 ϕ . Standard branch circuit luminaire wiring will typically be 2-wire (2 phase conductors and one

bonding conductor). Designing on existing circuits must bring entire circuit up to Canadian Electrical Code and/or City of Calgary Standards.

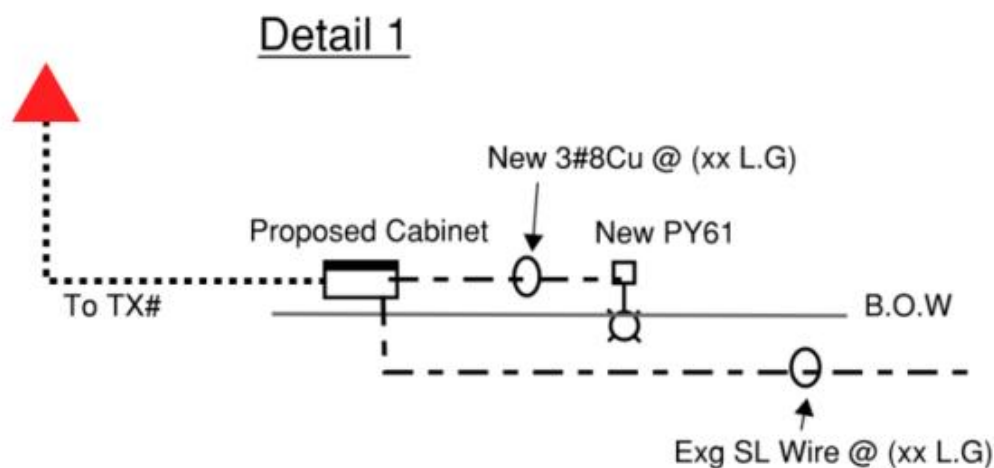
- A maximum of 12 davits per circuit is permitted. Double davits shall be counted as one davit; up to 24 luminaires on 12 davits are permitted, provided voltage drop requirements are satisfied.
- Every street light system must have a neutral wire solidly grounded at the source. A continuous bonding conductor must be present throughout the entire existing circuit and connected to all non-current carrying components.
- Relays and cabinets shall be grounded to a ground plate.
- Relays shall not be placed in the median.
- Two luminaires on a single lot are not permitted. The only exception is one luminaire located in the side yard at the back one-third ($\frac{1}{3}$) of the lot, with the second luminaire positioned on the adjoining lot line:



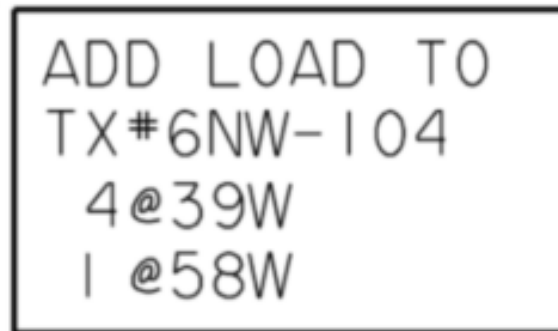
- Design speed and posted speed limits shall be reflected in the street light design criteria.
- Voltage drop shall be limited to a maximum of 2% on the secondary and 3% on the branch circuits of the nominal supply voltage. Voltage drop calculations shall be performed on the secondary and branch circuits and authenticated by a Professional Engineer registered in Alberta.
- AGI calculations shall be provided in both AGI and PDF formats and authenticated by a Professional Engineer registered in Alberta.
- Correction to Page 35 of the Design Guidelines – Illuminance for Intersections;
 - Collector/Local High shall have a minimum illuminance of 21.0 lux/2.0fc,
 - Collector/Local Medium shall have a minimum illuminance of 16.0 lux/1.5 fc,
 - Collector/Local Low shall have a minimum illuminance of 10.0 lux/0.9 fc,
 as per IES Table 12-1.

2.1. Street Lighting Drawing

- All designs must use the City of Calgary Drafting Template. The Drafting Template shall be appended to this Supplement as Appendix A.
- All fields in the title block shall be completed.
- Where drawing details are too small to read on a design scale, a separate zoomed-in viewport should be provided on the design drawing.



- Add Load and Remove Load notes are to be placed beside every transformer on the design (or manhole in the downtown network) where lights will be added or removed on a circuit. The note should clearly indicate the transformer or manhole number. Do not provide the aggregate total; each wattage of light is to be specified individually.

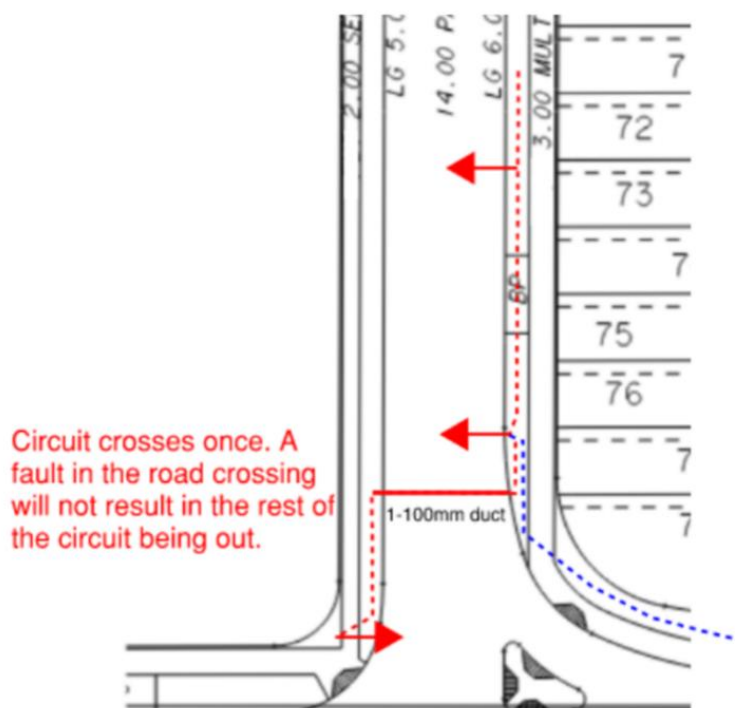
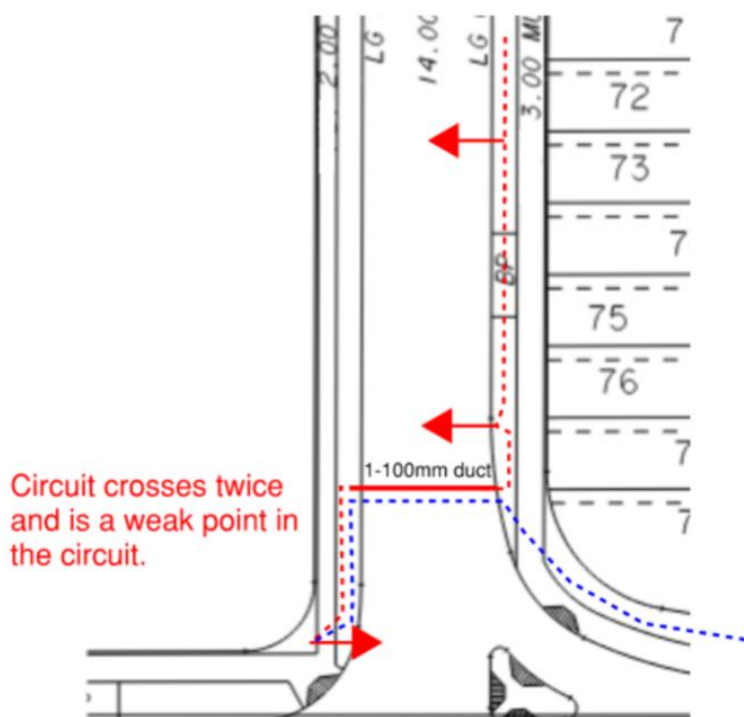


- All easements, including multi-party, single-party, and street lighting easements, shall be shown on the street light design drawing.
- Remove the deep utilities layer from PDFs submitted for review and approval. Where the contractor requires the deep utilities layer, two copies of the drawing shall be provided: one with the deep utilities layer included and one without.

2.2. Underground Residential Development

- Drawing scales shall be 1:500 or 1:1000, as appropriate.
- The use of cabinets is prohibited on local residential roads. On collector roads and higher classifications, a cabinet or relay is acceptable.
- Median lighting is strongly discouraged due to the new cross-sections and tree clearance requirements. Multiple crossings into medians are prohibited with a maximum of two crossings allowed (one on either end) to complete the circuit in and out of the median. If the developer is only completing one side of the road, boulevard lighting will be installed on the developed side but designed for the ultimate road. Design should indicate future light locations marked “future”, and circuitry is not required for future lights. The second developer that completes the ultimate road, will be responsible to meet lux minimums for the entire road. Any discrepancies from the original design’s “future” locations affecting lux levels for the ultimate design will be reviewed by the City of Calgary as required. Moving in and out of the median between intersections is prohibited. Location changes from the median or the boulevard should be done at intersections only.

- One-sided lighting is preferred on local residential roads. Staggered lighting is acceptable but must be designed to minimize road crossings. Multiple unnecessary road crossings used only to minimize single-party trench is prohibited.
- The URD joint trench work MPLA (multi-party line assignment) is applied for by ENMAX on behalf of the 4 parties except street lighting. A URD project will have one application for the joint trench (by ENMAX) for the MPLA and one application (by the SL contractor) for the SL-only trench, SL joint trench, and all SL bases. Street light offsite single party ULA (utility line assignment) is applied for by the street light consultant.
- Branch circuitry should not cross the road twice mid-circuit ('double back' or 'in and out'). Road crossings are a weak point — they must be their own separate branch, so a fault does not take out the whole circuit. A crossing that feeds a single light must be placed at the END of a branch:

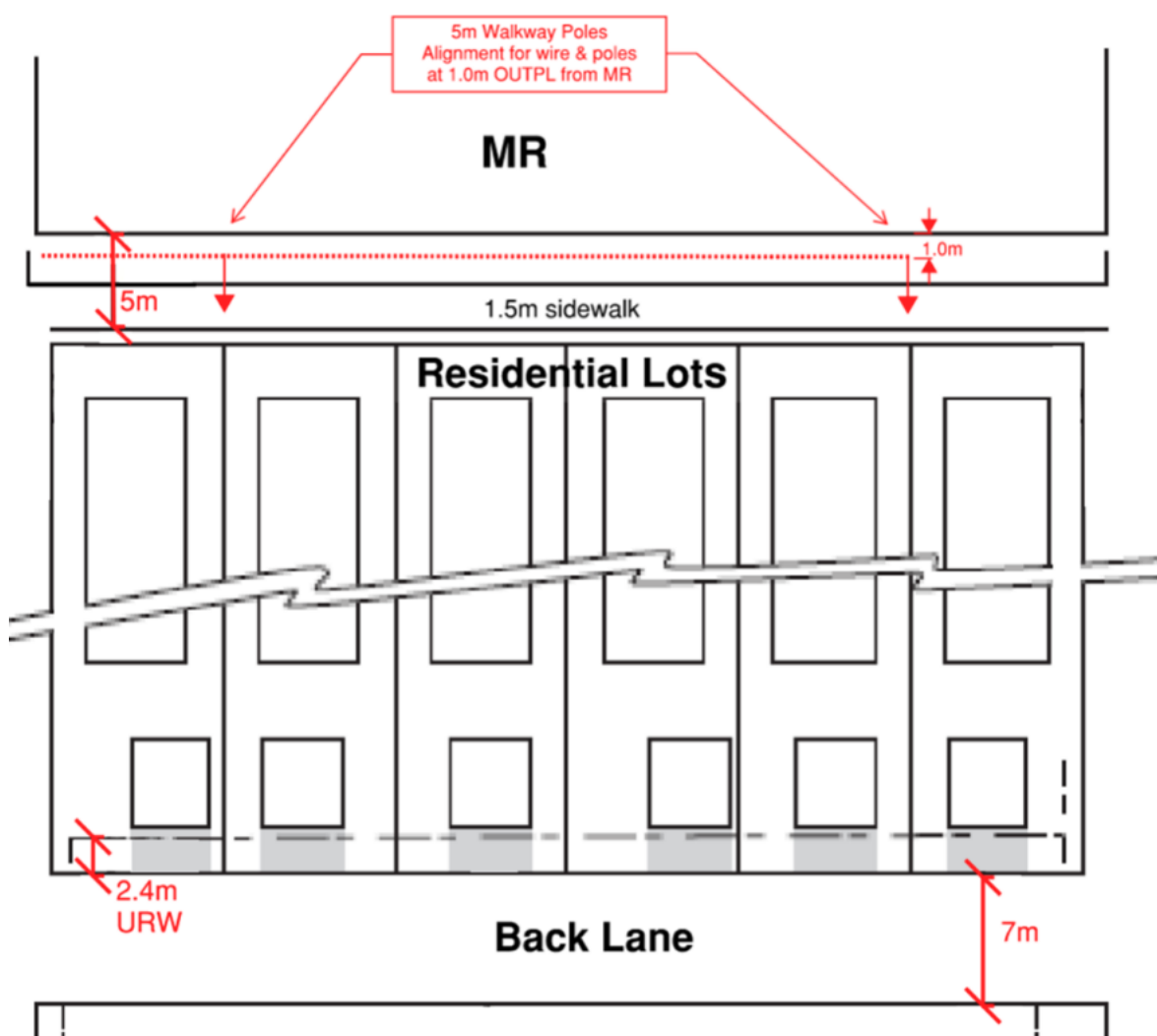


- Designs must be compliant with City of Calgary complete street cross sections as per the current version of the DGSS (Design Guidelines for Sub-division Servicing). Deviations will not be accepted without approval from City of Calgary Street Lighting & Electrical.
- Proposed cross sections must be submitted with the street light design for City review. Alternate cross sections need Transportation Development Services (TDS) approval.
- Incremental cheques are collected by the design consultant on behalf of The City. They are based on the agreed rate with MDA. Incremental cheques cover 15 years of electricity and additional maintenance costs for nonstandard material.
- A Design Incremental Cost Data Sheet (DDS) is required for all subdivision phases, including those with non-decorative lighting. The estimated capital cost is to be left blank and will be filled in by the City of Calgary Streetlighting & Electrical. The Decorative Lighting Incremental Cost Calculation for standard lighting phases will be \$0. If any information required for the DDS is unknown at construction (for example the Development Agreement Number), it may be submitted with the approval package containing blank sections or "TBD". However, CCC will not be awarded until this document is amended and re-submitted with all sections filled out accurately and completely.
- Adjacent existing phases must be clearly marked on drawings with the subdivision name and phase number. Add map number if known.



- When connecting to an adjacent phase where HDPE was stubbed out for future use, confirm the existing HDPE alignment (as-built and as-recorded) before submitting the new phase design. APRCON and AS-BUILT must clearly show the new HDPE connecting to the existing. Drafted cable must be on the correct drafting layer in CAD.

- MR Fronting (“garden”) lots are to have both the SL and wire at 1.0m from the MR Property Line, using 5m walkway poles, facing towards the 1.5m monowalk and addressing of the “front” of the houses. No lighting will be provided in the paved lane. The illuminance requirement will be standardized as Local/Low with 4.0 avg lux and 1.0 minimum lux (no uniformity ratio is required). With this standard, lights will be placed approximately every 4-5 lots.



2.3. Roadway Lighting at Signalized Intersections

For inquiries related to intersection signalization, contact streetlighting@calgary.ca.

- Traffic signals engineering and construction to be completed by City of Calgary.
- Where the roadway street lighting photometric analysis is completed by a permitted street lighting design company, the same permitted company shall complete all, if any, intersection street lighting photometric analysis within the project limit. The permitted company shall submit the lighting plan and AGi file to the City of Calgary for review. The City may, at their discretion, request modifications to the proposed intersection lighting.
- Signalized intersection lighting within downtown core shall utilize 12 m traffic/street light combination extensions (City SL Symbol Reference 24) with City standard high mast LED luminaires. Signalized intersection lighting at all other areas shall utilize 9 m or 15 m traffic street light combination extensions (City SL Symbol References 11 and 36, respectively) with current generation City standard cobrahead LED luminaires.
- A junction box shall be provided near the intersection to facilitate power extension for intersection lighting. SL permitted company shall verify sufficient capacity on circuit to feed proposed intersection lighting. The permitted company shall provide voltage drop calculations to City of Calgary for review. Integration between SL permitted company designed intersection lighting and City traffic signal design shall be completed by the City of Calgary.
- For intersections planned for future signalization, street light extensions on temporary wood poles shall be utilized, with the lights placed at the end of their respective SL circuit. Where feasible, wood poles shall leave sufficient clearance for installation of future traffic signals bases.

2.4. Lighting and Electrical within City of Calgary Parking Lots

- Prior to any lighting and electrical work within City of Calgary Parking lots, Calgary Parking shall verify whether lighting and electrical infrastructure is required. Proposed lighting and electrical designs shall be reviewed and approved by the City and be subject to ULA permitting requirements. Designs must comply to Canadian Electrical Code (latest) at the time of construction. The City may request street light design and/or construction permitted companies to perform design and construction work within City of Calgary Parking Lots, at their discretion.

2.5. Lighting and Electrical within Parks Land

- Prior to any lighting and electrical work within City of Calgary Parks Land, Calgary Parks shall verify whether lighting and electrical infrastructure is required. Proposed lighting and electrical designs shall be reviewed and approved by the City and be subject to ULA permitting requirements. Designs must comply to Canadian Electrical Code (latest) at the time of construction. The City may request street light design and/or construction permitted companies to perform design and construction work within Park Land, at their discretion.

3. Submissions

- All correspondence – approvals, CCC requests, material requests, etc. – must be submitted to streetlighting@calgary.ca.
- APRCON in appropriate CAD format and a Design Incremental Cost Data Sheet (DDS) and cheque, as applicable, must be submitted before materials are released.
- Companies purchasing materials from City Stores for the first time shall submit the required company information to InventoryManagement@calgary.ca to establish an account prior to requesting materials.
- Unmetered requests shall be submitted to streetlighting@calgary.ca.

4. Miscellaneous

- Electrical permits and inspections are the responsibility of the consultant in conjunction with the contractor.
- Required information for NavCan and Transport Canada when designing in the vicinity of aerodromes: NAV CANADA Land Use Program Aviation – Land Use in the Vicinity of Aerodromes – TP 1247 (canada.ca)



Implementation and Compliance

This Supplement establishes the City of Calgary's current requirements and expectations for street lighting design, submission, and construction. It is intended to be used alongside the 2016 City of Calgary Design Guidelines for Street Lighting and all other applicable standards and guidelines referenced herein. Compliance is mandatory for all parties submitting street lighting designs to the City. As a living document, users are responsible for ensuring they reference the most current version.

All questions regarding this Supplement or its application should be directed to streetlighting@calgary.ca.



Revision History

NO.	REVISION DESCRIPTION	DATE
0	Original	2026-09-22

Appendix A: City of Calgary Drafting Template

NOTES

- 1. ALL PIPE SIZES ARE IN MILLIMETRES AND ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
- 2. ALL COORDINATES AND DISTANCES ARE BASED ON 3TM COORDINATE SYSTEM (NAD 83).
- 3. TRACE ID IS REQUIRED FOR ALL CIRCUITS AND MUST FOLLOW THE FORMAT OF PER-P1 (P2...ETC FOR MULTIPLE RELAYS), CAB-C1 (C2...ETC) AT THE POWER SOURCE, AND TRACE-P1, TRACE-C1 (TRACE C1-A, TRACE C1-B FOR MULTIPLE POWER SUPPLIES COMING OUT OF THE CABINET) AT THE LIGHTS.
- 4. POWER SUPPLY DETAIL MUST BE PROVIDED WHEN THE PER OR CABINET IS NOT SHOWN WITHIN THE LIMITS OF THE DRAWING.



NAD 83
COORDINATES

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	BY	DATE (YYYY-MM-DD)
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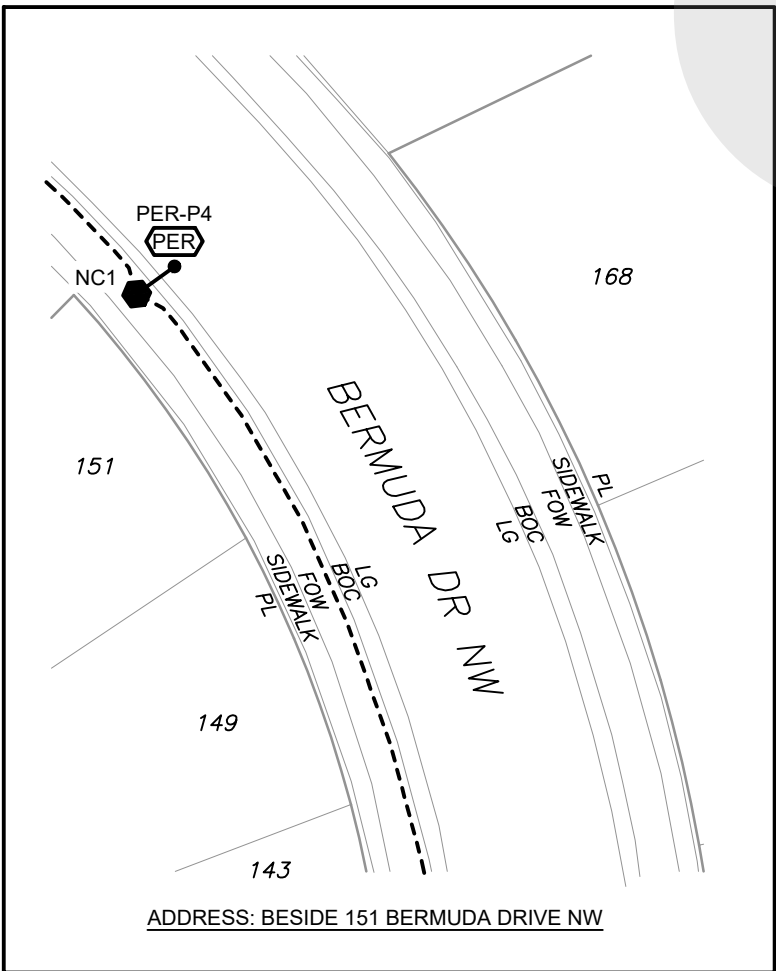
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MPULA NO.	###	DSGN FILE CHKR ID NO.	###
EXPIRY DATE	###	SUBMISSION DATE	###

FILE NO.	SAMPLE.dwg	ENG DWG NO.	###
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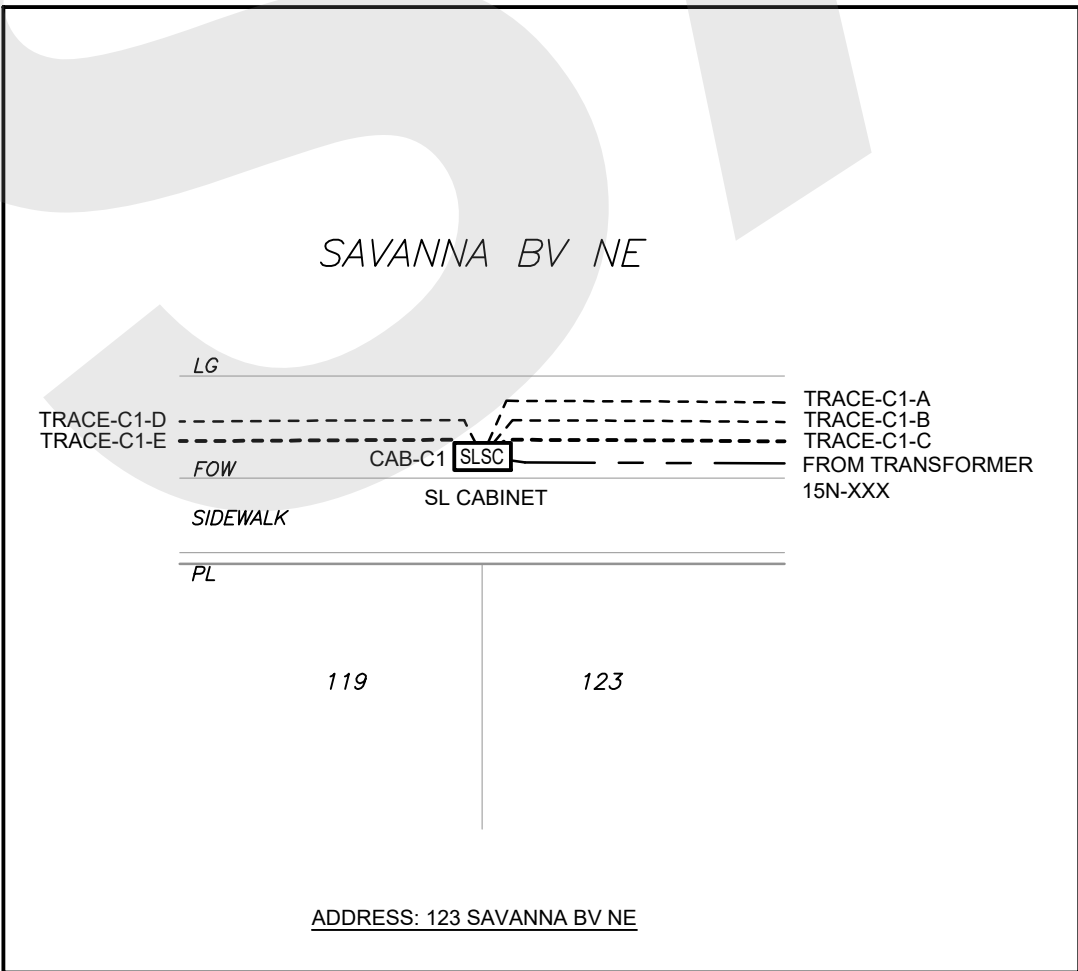
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POWER SUPPLY DETAIL (RELAY)

NOT TO SCALE



POWER SUPPLY DETAIL (CABINET)

NOT TO SCALE