



City of Calgary – Roads’ Street Lighting Division
MEMO: Street Light Design Guidelines – what you need to know
March 2021

Overview:

As The City of Calgary is currently in the process of updating our street light design drafting standards, in the absence of an updated standard to share, we are reaching out to all pre-qualified street light design consultants to ensure that your teams have access to the most current existing standards that should be referenced when drafting street light designs. These documents outline the required specifications and will continue to be ‘the standard’, until such a time that we implement updated drafting and design standards.

Important resources:

For access to the “Standard specifications for street light construction” documents, please visit the [Planning & Development resource library \(calgary.ca\)](#) and expand the “Technical and Design Specifications” tab (see image from web page below).

Standard specifications for street lighting construction

Version	Effective date	Addenda
 Design Symbols for Street Light Luminaires and Poles (Feb. 2021)		
 Street lighting construction 2006 (Current)	2006-01-01 to present	
 Street lighting material catalogue 2016		

Two of these documents are critically important to your drafting success. The [Design Symbols for Street Light Luminaires and Poles document](#) provides consultants with essential information as it relates to the proper naming convention for street light infrastructure (i.e.: “NA” represents a 32W LED light and “9” represents 9m x 2.5m Davit) on your designs.

The [Street lighting material catalogue 2016 document](#), also known as the ‘developer’s choice catalogue’ is a comprehensive catalogue of City of Calgary standard street light materials that must be utilized in your designs.

Another key document that your teams need to be familiar with is the [Design Guidelines for Street Lighting 2016](#). Of particular importance is Appendix B: Street Lighting Drafting Standards. This appendix provides information regarding: layers, line types and weights, and symbology.

Important City contacts:

1. As you're working through your designs, if you have drafting-related questions, please reach out to IISAIM-Traffic-StreetLighting@calgary.ca with the appropriate requisition form. You can acquire the requisition form by emailing IISAIM. Please note, wire representation may not be accurate and will require site trips to open handholes to identify conduits in the base, turning relays and cabinets on. Prequalified consultants and/or contractors can be provided keys to confirm these details.
2. You must apply for line assignment on your project as an authorized "street light contractor" in the CROWM system. You must have a Business myID account to get access to this system. This [link](#) will provide you with information to assist in that process. The street light team will authorize the contractor in CROWM.
3. Contact InventoryManagement@calgary.ca to obtain a material price list and for billing inquiries.

URD/offsite specific:

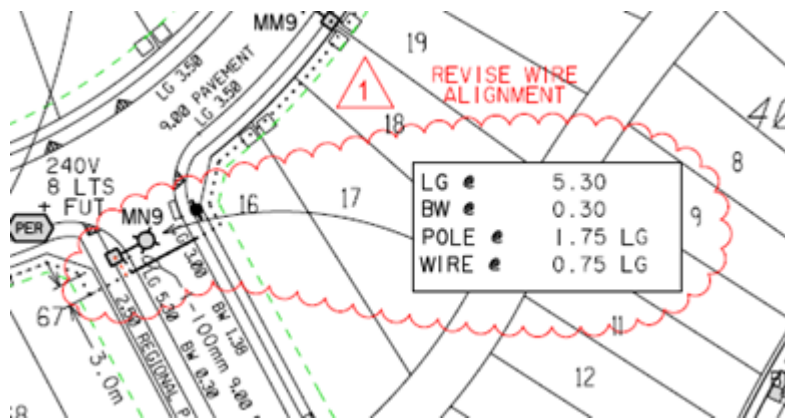
1. For URD projects, follow the URD shallows workflow which can be obtained by emailing EPSCProcessURD@enmax.com
2. For URD/residential incremental cheques are collected on behalf of The City by the design consultant. The incremental cheques are based on an agreed upon rate with BILD, nonstandard material is not approved unless there is a rate agreement with BILD that can be brought into the MDA. Incremental cheques represent 15 years' worth of electricity and added maintenance due to the added maintenance costs of nonstandard material. Do not design with nonstandard material unless you have prior permission from the developer, BILD, and The City with a negotiated incremental rate.
3. For URD/residential the only approved pole types are standard davit, standard davit powder coated (Cranston), domus, traditional pole, shoebox and step/mckenzie pole for URD/offsite work in residential areas.
4. The URD joint trench work MPLA (multi party line assignment) is applied for by ENMAX on behalf of the 4 parties including 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 including all SL bases.
5. Street light offsite single party ULA (utility line assignment) is applied for by the street light consultant.
6. 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 Transportation Planning
7. It is recommended to share your proposed design, IFR, with The City at step 7 of the URD shallows workflow or risk not receiving City approval at a later step.
8. Design and posted speed limits shall be reflected on the street light design criteria.

9. Failure to submit APRCON and Asbuilt drawings into the City GIS system within 60 days of construction completion or before CCC will result in removal from the prequalification list.
10. You are responsible for the two year warranty of the lights until FAC. Light outages, property damage, etc during this period are your responsibility.
11. CCC and FAC will be issued by the appropriate quadrant design tech and will be requested by the design consultant.

Street light Design Revisions applicable to all projects:

1. Relays are the only acceptable means of circuit control on residential roads. On collector roads and higher classification, you must design with cabinets.
2. Do not place relays in the median.
3. Relays are to be designed to a maximum of 12 lights
4. Relays and cabinets are grounded to a ground plate.
5. Material must be procured through City stores. Nonstandard material will not be approved in new residential subdivisions for URD or offsites.
6. Material is ordered with appropriate lead times and approvals to InventoryManagement@calgary.ca. Purchase orders are preferred and should be itemized by line using the City of Calgary item number and the quantity required. Orders may only be processed with a valid City of Calgary customer number (information below). Our billing cycle is at the beginning of each month, and invoices will be sent out for payment with details on the accepted payment options.
7. Material will not be released unless an approved for construction drawing (APRCON) has been successfully submitted to the City of Calgary in appropriate CAD format.
8. Only conduit acceptable is 32mm HDPE for branch circuits and 100mm duct for secondary cable, road crossings and driveways; this is procured through The City. All other conduit is unacceptable.
9. All conduit should be perpendicular to the road or parallel (i.e. no diagonal road crossings). Deviation requires permission from the street light design tech.
10. (1) conduit should only have 1 circuit (i.e. 3 #8 Cu's for branch circuit). Deviation requires permission from the street light design tech.
11. 120/240 is the only acceptable input voltage for the street light system. Any deviation from this requires permission from the street light design tech. The EPC network area of Calgary is 120/208 and is reasonable to use within that area.
12. Electrical permits and inspections are the responsibility of the consultant in conjunction with the contractor.
13. If easements are registered on behalf of street lighting (not including URD or utility right of way), the easement must be indicated on the street light print.
14. Approved for construction drawings submitted at step 14 of the URD process will also contain voltage drop calculations, AGI calculations, and an EPC drawing of the power feed authenticated by EPC to indicate transformer tag numbers and transformer ratings in compliance with EPC standards.
15. Unmetered request shall be submitted to streetlighting@calgary.ca for approval prior to sending to siteid to confirm load additions and deletions.

16. Secondary power feeds are limited to #2 Al for relays and #3 Cu for cabinets. Branch circuits are limited to #8 Cu. Any deviation from that requires permission from the Street light design tech.
17. Voltage drop shall be limited to a maximum of 5% of the nominal supply voltage. Voltage calculations shall be calculated on the secondary and branch circuits and be authenticated by a Professional Engineer in Alberta.
18. AGI calculations shall be provided in AGI format and in PDF format and be authenticated by a Professional Engineer in Alberta.
19. Panel schedules will be installed in the cabinet on designs that require cabinets. Cabinet panel schedule will be included with design submission to indicate which lights are on which breakers
20. When luminaire wattages are out of date, use the closest luminaire wattage drafting code to ensure design can be imported into the GIS system; include a callout on the design to indicate actual wattage so The City can correct the wattage at a later date; do not invent new drafting codes. This will result in the submission being rejected. Revisions and callouts in red like below.



21. Consultants have to include removals/abandonments on their PDF designs and CAD submissions
22. Do not rely exclusively on GIS data for design (brownfield), wire representation may not be accurate and will require site trips to open handholes to identify conduits in the base, turning relays and cabinets on. Prequalified consultants and/or contractors will be provided keys to confirm these details upon request. Limits of approach work needs to be coordinated with qualified utility employees.
23. If wires extend outside of project boundaries (brownfield) and will impact non project related lights, it is your responsibility to identify this additional scope and bring it to the attention of the project manager.
24. New power feeds are requested through ENMAX via GetConnected (getconnected@enmax.com) and follow the ENMAX process.
25. For any companies that haven't purchased materials from the City before please provide the following information. They will need to submit the request with the following information to InventoryManagement@calgary.ca.

Name	Address 1 *	Address 2	Address 3	City *	Province	Country	Postal	phone #	Fax	Contact	Email Address

Street Light Team Contacts:

Name	Title	Email	Phone Number	Area of Responsibility
Michael Gray	Team Leader	Michael.gray@calgary.ca	403 801 1411	Citywide
Michael Green	Street Light Design Coordinator	michael.green@calgary.ca	403 809 4741	Citywide
Martin Seggewiss	Streetlight Design Tech	Martin.seggewiss@calgary.ca	403 268 2807	South East subdivisions, development permits and projects
Mesfin Kassahun	Streetlight Design Tech	Mesfin.Kassahun@calgary.ca	403 268 4575	North East Subdivisions, development permits, projects
Hansel De Castro	Streetlight Design Tech	Hansel.decastro@calgary.ca	403 268 4552	North West Subdivisions, development permits, projects
Sunny Sidhu	Traffic Construction Tech	Sunny.sidhu@calgary.ca	403 268 4628	South West Subdivisions, development permits and projects,