Bulletin: Development Engineering Updates

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Bulletin # 17-00 R2
Updated: June 27, 2018
Created: September 2017

This bulletin is for informational purposes only. Please be sure to consult the relevant City of Kelowna bylaw.

Purpose

The Development Engineering Branch wishes to proactively communicate updates and changes with our clientele in order to improve customer service and ensure transparency in our decision making.

Bulletin Scope

The series of Bulletins apply to all Works and Services within the City of Kelowna. They are specific to the application and utilization of the Subdivision, Development & Servicing Bylaw No. 7900 and Council Policies relating to Development Engineering.

Background

In the review of Development Applications, the Development Engineering Branch identifies common misinterpretations of the bylaw, misunderstandings of policies or repeated areas of concern from applicants. It also applies best practices and devises innovative approaches to address opportunities. As City and Council priorities adapt, it is valuable to communicate changes in approach or application of City standards to the Development Community.

Guidelines

Development Engineering will produce, maintain and update a series of Bulletins to help communicate changes to their clients. They are provided for information only. The governing legislation, bylaws and policies remain the framework; however, the bulletins will help improve coordination and collaboration between the City and its clients.

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Development Engineering
1435 Water Street
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TEL 250-469-8960
FAX 250-862-3314

As the Development Engineering Branch strives to improve our communications, review and approval efficiency, and accountability, we invite any feedback or comment you may have. Please contact me anytime at 250-470-0681 or JKay@Kelowna.ca.

Sincerely,

James B. Kay, P.Eng
Manager, Development Engineering Branch

Bulletin: Communications & Submissions

Your Development Engineering Team

Bulletin # 17-01
Updated: September 1, 2017
Created: September 2017

This bulletin is for informational purposes only. Please be sure to consult the relevant City of Kelowna bylaw.

Purpose

The Development Engineering Branch wishes to proactively communicate updates and changes with our clientele in order to improve customer service and ensure transparency in our decision making.

Bulletin Scope

Bulletin #1 outlines an update of our Branch staffing and operations to help direct Applicants to the most appropriate teammate.

Background

The Development Engineering Branch has undergone much change in the last six months, and we wish to share our structure, status and direction to facilitate smoother communications.

Guidelines

1. Communications

Development Engineering has created a new e-mail address for communications and/or digital correspondence. Please feel free to continue to contact the Development Technician/Manager you wish directly; however, if you have a general inquiry or question, feel free to use DevelopmentEngineering@kelowna.ca and our Development Service Clerk will ensure your email is addressed immediately.

2. Staffing

Development Engineering has restructured to meet the changing needs of the Development Community. As such, we have upgraded the Construction Inspector role to a full Development Technician. Functionally this means that we have 25% more capacity to review and process Applications and meet your timelines and needs. It also means improved cross-training and capacities among staff to cover and deliver.

The other key benefit is it means your Dev.Tech. will be your key contact all the way through your project. Please connect with them directly for all design and construction-related inquiries and issues. See Map for details.

3. Correspondence & Meetings

Development Engineering aspires to respond to all phone calls within four hours and all e-mails same day. We are focused on responding to your applications as efficiently as possible. Please feel free to call or email if there are questions or opportunities to resolve simple issues in a timely manner.

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Our Branch operates on a first-in, first-out program, and assigns turnaround times/targets for submissions. These may range from five weeks for engineering drawing submission/reviews to two/three weeks for Servicing Memos. Please let us know when your matters are urgent and we will do the best we can to facilitate; however, please appreciate that we follow a structured process that requires us to complete each step appropriately.

Our staff is always happy to meet to address larger issues. We will aspire to resolve any issues first and will coordinate meetings as appropriate with other staff. Please direct all correspondence and meeting requests to either your Planning File Manager or your Dev.Eng. Dev.Tech and they will be happy to coordinate other departments/staff as appropriate.

While formal submissions still must adhere to Engineering Drawing Submission Requirements (Council Policy 265 – first submission including PDF and two full-size paper sets) , we encourage the use of e-mail for interim submissions, quick comments/checks, (pdfs details/drawings), and where appropriate. E-mail can accommodate files up to 8mb, otherwise please have staff arrange for a CityShare file upload.

As the Development Engineering Branch strives to improve our communications, review and approval efficiency and accountability, we invite any feedback or comment you may have. Please contact me anytime at 250-470-0681 or JKay@Kelowna.ca.

Sincerely,

James Kay

James B. Kay, P.Eng
Manager, Development Engineering Branch

Bulletin: Streamlined Review & Approvals

Submission, Process, Compliance

City of Kelowna

Bulletin # 17-02 R1
Updated: June 21, 2018
Created: September 2017

This bulletin is for informational purposes only. Please be sure to consult the relevant City of Kelowna bylaw.

Purpose

The Development Engineering Branch wishes to proactively communicate updates and changes with our clientele in order to improve customer service and ensure transparency in our decision making.

Bulletin Scope

Bulletin #2 outlines a series of suggestions and approaches that the Development Community may wish to consider in order to streamline the review and approvals process. It applies/references:

- Subdivision, Development & Servicing Bylaw 7900
- Engineering Drawing Submission Requirements (Council Policy 265)
- Subdivision, Development & Servicing – Approved Products List (Council Policy 266)

Background

The Development Engineering Branch aspires to deliver responsive, efficient, fair and predictable support to the Development Community in a collaborative and transparent manner. We work to engineer a healthy development climate within the City of Kelowna. The key success factor for our Branch is in the timeliness of our reviews and approvals.

There are several opportunities to expedite and streamline these processes if the Development Community were to adopt the following guidelines.

Guidelines

1. **Compliant Drawing Sets Warrant Expedited Review:**

   A significant amount of time is spent checking and comparing submissions vs. approved Bylaws and Policies. If the Development Community were to submit drawings with the following certification on the Cover Sheet, if verified, would deserve expedited reviews:

   "I....., Professional Engineer in good standing in the Province of British Columbia, confirm that the drawing set provided complies with Council Policy 265, and that the works and services herein comply with City of Kelowna Bylaw 7900, Policy 266, Master Municipal Construction Documents (MMCD), and best engineering practices. Any exceptions or variances are listed here: "

   Such a certification, if accurate and complete, would significantly benefit the applicant and City in terms of timeliness of drawing reviews.

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2. Subdivision, Development & Servicing Bylaw 7900

The City is currently undertaking a review of the Bylaw for consideration later this year. In the interim, one of the clauses Staff regularly have to remind applicants of is as follows:

Schedule 4, Section 4.4 Horizontal Alignment states:

"A turn-around or a second point of access is required on roads longer than 100 m. The maximum length of a permanent cul-de-sac shall be 200 m. Where it is part of a temporary and/or staged development, this maximum length may be 400 m. Cul-de-sac lengths greater than 200 m may be considered by the Approving Officer."

As Development Engineering is enforcing this consistently and regularly, please make accommodation for compliance on all drawing designs and submissions.

3. National Fire Protection Association 1141

Table 5.1.4.1 (a) Required Number of Access Routes for Residential Areas:

- 0-100 Households 1 Access Route
- 101-600 Households 2 Access Routes
- >600 Households 3 Access Routes

4. Retaining Walls & Rockfall Protection

With increased hillside development, Development Engineering wishes to remind the Development Community of the need of adequate Rockfall Protection adjacent the walls. Please consider BC MOT Supplement to TAC Geometric Design Guide 440, page 440-8, which outlines a ditch bottom width of 1.25-2.75m, depending on wall height. Sidewalks and utilities should be kept out of this protection area. Additional ROW may be required.

Where walls are on the high side, the City's preference is that the walls remain setback and on private property. Where the walls hold up the road, the City's preference is that additional dedication be provided and the walls be owned by the City. Please design any geogrids or tie-backs so that they do not encroach into the required road ROW.

Engineers and Geoscientists BC's Quality Management Guidelines: Documented Independent Review of Structural Designs shall be followed/implemented:

> "Retaining walls including but not limited to, gravity, piling, cantilever, anchored, mechanically stabilized earth (MSE), and geosynthetic reinforced soil (GRS) walls when over 3.0 m high or deemed to be high risk are included in the requirement to have documented independent reviews conducted by a qualified professional, as retaining walls fulfill the important structural function of safely retaining soil."

Further, while the City Zoning Bylaw allows for walls of up to 1.2m, and tiers, any wall greater than two tiers or 3.0m shall require a Building Permit.

5. Engineering Drawing Submission Requirements (Council Policy 265)

This Policy clearly outlines the expectations for drawing submissions. There is a gap in the conformance of submissions, particularly around record drawings and service cards. Development Engineering is working hard to ensure that these are both received prior to a project being placed on maintenance. Support in the timely completion and submission of these crucial components would be much appreciated.

Electronic submissions shall comply with Engineers and Geoscientists of British Columbia Professional Practice Guidelines and Quality Management Guidelines. In particular, we request that the Use of Seal, and especially the use of digital seal provisions using an approved, secure format be followed. Drawings not complying with this direction may be returned.

6. Subdivision, Development & Servicing – Approved Products List (Council Policy 266)

Where best engineering suggests variances from the approved products may be warranted, applicants are encouraged to identify the variance, prepare justification, and submit this item separately so that it may be evaluated/decided prior to the full submission.

7. Storm Service Connections & Rock Pits

Applicants are reminded that stormwater management, and under the right circumstances SWM through infiltration, is still a priority for the City. However, the City has ongoing concerns and challenges, largely on hillside development, with the approaches used regarding infiltration.

Designers are asked to flag the intended approach on the stormwater management drawings. Designers are cautioned about the use of geotechnical reports and percolation tests predicting infiltration rates when the infiltration measures will be placed in newly graded and compacted fill areas. Designers are cautioned about stability and breakout where infiltration is proposed against bedrock and reconstructed areas.

Therefore, the City requests that designers use their discretion, which may include new percolation tests for rock pits in areas of substantial fill. Alternatively, recommendations and signoff from the geotechnical engineer shall address the appropriateness of infiltration measures in the post-development conditions.

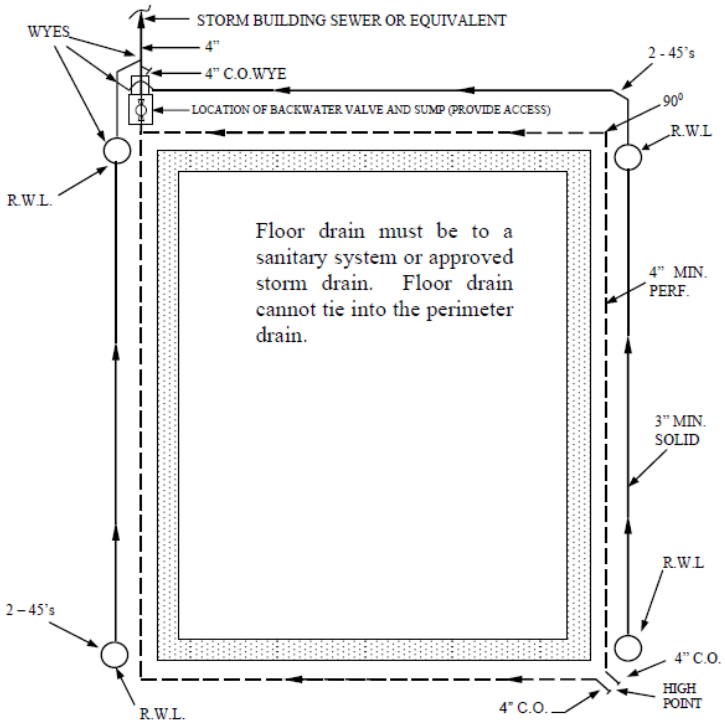
Special care is required for all foundation drains and roof leaders above a retaining wall. Designers must specifically address the suitability of any system that does not provide for connection to a storm sewer system with detention elsewhere. Infiltration behind a retaining wall requires specific geotechnical input and permits.

Finally, if roof leaders and foundation drains are to be tied-together for any reason, a storm inspection chamber will be required at the property line and a backwater valve shall be installed between the foundation drain and roof leaders.

TYPICAL FOUNDATION AND STORM DRAINAGE SYSTEM

NOTES:

1. SEPARATE SOLID PIPE RAIN WATER LEADER SYSTEM
2. PERIMETER DRAIN CONNECTS TO STORM BUILDIING SEWER THROUGH A BWV
3. MIN. GRADE ON PERIMETER DRAIN RECOMMENDED TO BE 1" IN 40'
4. 4' C.O.'s TO ACCESS EACH DIRECTION OF HIGH POINT OF PERIMETER DRAIN
5. BACKWATER VALVE MUST BE ACCESSIBLE USING A CULVERT OR ACCESSABLE DESIGNED BWV



8. Worksafe BC

Several recent applications have encountered difficulty during construction with regards to Worksafe BC regulations as they pertain to proximity to power lines. If there are power lines adjacent/within a development application, applicants are encouraged to discuss with Development Engineering and contact the utility owner as early in the process as possible to understand the implications of the utility. This pertains to the Council Policy of undergrounding power lines in Urban Centres and to the zones of influence and required setbacks from existing utilities.

As the Development Engineering Branch strives to improve our communications, review and approval efficiency and accountability, we invite any feedback or comment you may have. Please contact me anytime at 250-470-0681 or JKay@Kelowna.ca.

Sincerely,

James Kay

James B. Kay, P.Eng
Manager, Development Engineering Branch

Bulletin: Energy Efficient Streetlights

LED Conversion Project

City of Kelowna

Bulletin # 17-03
Updated: September 1, 2017
Created: September 2017

This bulletin is for informational purposes only. Please be sure to consult the relevant City of Kelowna bylaw.

Purpose

The Development Engineering Branch wishes to proactively communicate updates and changes with our clientele in order to improve customer service and ensure transparency in our decision making.

Bulletin Scope

Bulletin #3 outlines the new expectations with regards to Development and specifically the streetlights proposed/utilized within development projects.

Background

In late 2016, Kelowna City Council has approved the City's switch to Light Emitting Diode (LED) Streetlights. Brydan Tollefson is our Energy Program Manager and leading the initiative; Brian Cairney is our Traffic Signals and Systems Supervisor. While LED is not currently a requirement, the City is working with Fortis to update the approved products list to include LED options. Development Engineering is requesting all Designers and Developers consider the use of LED streetlights. The expectation is that the City will find cost-neutral LED solutions for developments in the City.

Guidelines

1. Consult With Your Development Technician Early

Development Engineering is here to consider and assist your recommendations. Contact your Dev.Tech early for direction and for more information on which LED products have been approved.

2. Approved Products List

The City is currently working with Fortis to add LED streetlight options to the Approved Products List.

The non-decorative (cobra head) LED fixture selection has been finalized. The approved list has been updated to include products from GE, however the equivalent Philips products are also approved, and will be added to the list in the next revision.

Research into decorative LED fixture options is ongoing. At this time, the LED equivalent of the 70W King Luminaire Aurora sag and the Harbour style lights have been added to the approved products list. New fixtures may continue to be added moving forward, so consult the approved products list or speak with your Dev. Tech for more information. Further investigation into decorative LED fixtures is ongoing.

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3. **Streetlight Design**

   The design standards are still being updated; however, the expectation is that conversion to LED will use the same spacing and layout as the previous HPS design. This ensures no extra cost to the developer.

   "All non-decorative street lights must be LED and dark sky compliant. All LED lighting will be a colour temperature of 3000K or lower (other temperatures may be accepted with City approval). All lighting equipment must be on the City's Approved Product list".

   The City is still requiring the same illumination requirements as listed in the current bylaw.

As the Development Engineering Branch strives to improve our communications, review and approval efficiency and accountability, we invite any feedback or comment you may have. Please contact me anytime at 250-470-0681 or JKay@Kelowna.ca.

Sincerely,

James Kay

James B. Kay, P.Eng
Manager, Development Engineering Branch

HPS Approved Products List

Style	FBC Material #	Description	Manufacturer	Manufacturer Model
Decorative Post Top	6422099	LUMINAIRE, DECORATIVE, POST TYPE 70W LUMINAIRE, decorative, 70 watt, 120/240 volts, HPS, Wellington, for street light	KING LUMINAIRE QUATTRO	K139E-2-7H-120DT-K14 099LA70
Decorative Post Top	6422100	LUMINAIRE, DECORATIVE, POST TYPE 200W LUMINAIRE, decorative, 200 watt, 120/240 volts, HPS, Wellington, for street light	KING LUMINAIRE QUATTRO	K139E-2-20H-120DT-K14 100LA20
Decorative Post Top	6422079	LUMINAIRE, DECORATIVE, ACORN-STYLE, 70W LUMINAIRE, decorative, 70 Watt, 120 Volt, HPS, acorn style post top mounting, C/W external acrylic rippled globe, type III distribution, mogul base with twist lock receptacle. Note: photo cell not included, specify powder coat paint color for the capital.	KING LUMINAIRE LUMEC QUATTRO	K425E-3-7H-120DT-K14-SST S56DSX70 079LA70
Decorative Post Top	6422083	LUMINAIRE, DECORATIVE, ACORN STYLE, 200W LUMINAIRE, decorative, 200 Watt, 120 Volt, HPS, acorn style post top mounting, C/W external acrylic rippled globe, type III distribution, mogul base with twist lock receptacle. Note: photo cell not included, specify powder coat paint color for the capital.	KING LUMINAIRE LUMEC QUATTRO	K425E-3-20H-120DT-K14-SST S56DSX200 083LA20
Decorative Post Top	6422089	LUMINAIRE, DECORATIVE, ACORN STYLE, 70W LUMINAIRE, decorative, 70 watt, 120 volt, HPS, acorn style post top mounting, C/W external acrylic rippled globe, Westinghouse ring & struts, type III distribution, mogul base with twist lock receptacle. Note: photo cell not included, specify powder coat paint color for the capital, ring/struts and finial when ordering. (For installation within the City of Kelowna)	KING LUMINAIRE LUMEC QUATTRO	K425E-3-7H-120DT-K14-WR S56C2DSX70 089LA70
Decorative Post Top	6422088	LUMINAIRE, DECORATIVE, ACORN-STYLE, 200W LUMINAIRE, decorative, 200 Watt, 120 Volt, HPS, acorn style post top mounting, C/W external acrylic rippled globe, Westinghouse ring and struts, type III distribution, mogul base with twist lock receptacle. Note: photo cell not included, specify powder coat paint color for the capital, ring and finial when ordering. (For installation within the City of Kelowna)	KING LUMINAIRE LUMEC QUATTRO	K425E-3-20H-120DT-K14-WR S56C2DSX200 088LA20
Decorative Pendant	6429067	LUMINAIRE, DECORATIVE, PENDANT 70W LUMINAIRE, decorative, pendant, 70 watt, 120/240 volts, HPS, Aurora Sag, for street light	KING LUMINAIRE LUMEC QUATTRO	K829-HSA-3-7H-120DT-KPL10 DMS50-70
Decorative Pendant	6429068	LUMINAIRE, DECORATIVE, PENDANT 200W LUMINAIRE, decorative, pendant, 200 watt, 120/240 volts HPS, Aurora Sag, for street light	KING LUMINAIRE LUMEC QUATTRO	K829-HSA-3-20H-120DT-KPL10 DMS50-200
Decorative Pendant	6429069	LUMINAIRE, DECORATIVE, RESID.PENDANT 70W LUMINAIRE, decorative, residential, pendant, 70 watt, 120/240 volts, HPS, Harbour Side, for street light, C/W 1/4-20 x 3/4" SS locking set screw, globe locking set screw.	KING LUMINAIRE LUMEC QUATTRO	K366I-3-7H-120DT-KPL10-PR CAND1 - 70 069LP70
Decorative Pendant	6429070	LUMINAIRE, DECORATIVE, RESID.PENDANT 200W LUMINAIRE, decorative, residential, pendant, 200 watt, 120/240 volts, HPS, Harbour Side, for street light C/W 1/4-20 x 3/4" SS locking set screw, globe locking set screw.	KING LUMINAIRE LUMEC QUATTRO	K366I-3-20H-120DT-KPL10-PR CAND1 - 200 070LP20

LED Approved Products List

Style	FBC Material #	Description	Manufacturer	Manufacturer Model
Cobra	6422620	LED, 4000 LUMENS, HPS 70W EQ, TYPE II, 3000K, 120V-277V, flat glass, DIMMABLE, UL/CSA listed, 6kV/ 3kA surge protection, gray finish. Asymmetric medium light distribution type II, complete with ANSI C136.41 7-PIN receptacle, for use on cobrahead streetlighting poles. c/w 10 year warranty. Manufacturer to install a sticker on the outside of the luminaire that indicates Lumen Output that is visible from 5m	GE	ERL1004E130AGRAY100
Cobra	6422622	LED, 5000 LUMEN, HPS 100W EQ, TYPE II, 3000K, 120V-277V, flat glass, DIMMABLE, UL/CSA listed, 6kV/ 3kA surge protection, gray finish. Asymmetric medium light distribution type II, complete with ANSI C136.41 7-PIN receptacle, for use on cobrahead streetlighting poles. c/w 10 year warranty. Manufacturer to install a sticker on the outside of the luminaire that indicates Lumen Output that is visible from 5m	GE	ERL1005E130AGRAY100
Cobra	6422626	LED, 11500 LUMENS, HPS 200W EQ, TYPE II, 3000K, 120V-277V, flat glass, DIMMABLE, UL/CSA listed, 6kV/ 3kA surge protection, gray finish. Asymmetric medium light distribution type II, complete with ANSI C136.41 7-PIN receptacle, for use on cobrahead streetlighting poles. c/w 10 year warranty. Manufacturer to install a sticker on the outside of the luminaire that indicates Lumen Output that is visible from 5m	GE	ERLH011E130AGRAY026
Cobra	6422628	LED, 13000 LUMENS, HPS 250W EQ, TYPE II, 3000K, 120V-277V, flat glass, DIMMABLE, UL/CSA listed, 6kV/ 3kA surge protection, gray finish. Asymmetric medium light distribution type II, complete with ANSI C136.41 7-PIN receptacle, for use on cobrahead streetlighting poles. c/w 10 year warranty. Manufacturer to install a sticker on the outside of the luminaire that indicates Lumen Output that is visible from 5m	GE	ERLH013E130AGRAY026
Post Top	6422640	POST TOP, LED, 4000 LUMENS, TYPE II 3000K, 120-277V, 50W, Flat Clear Glass, Dimmable, UL/CSA listed, 10kV/10kA surge protection, Medium Gray Sand Texture Finish, Type II, 7 pin photo eye receptacle, meets ANSI C136.31, UL8750, UL1598, B2-U2-G1	PHILIPS	PBDP10050W64LED3KMPPCCLE2UNIVRCD7MGY
Post Top	6422641	POST TOP, LED, 4000 LUMENS, TYPE V 3000K, 120-277V, 50W, Flat Clear Glass, Dimmable, UL/CSA listed, 10kV/10kA surge protection, Medium Gray Sand Texture Finish, Type V, 7 pin photo eye receptacle, meets ANSI C136.31, UL8750, UL1598, B2-U2-G1	PHILIPS	PBDP10050W64LED3KMPPCCLE5UNIVRCD7MGY
Decorative Post Top	6441000	LED, 4000 LUMENS, HPS 70W EQ, WELLINGTON LUMINAIRE: Decorative, Post Top, 4000 Lumens, 3000k Color Temperature, To Replace 70W 120/240V HPS Streetlight, Type II, Wellington Style, with Photoeye Receptacle and House Side Shield	KING LUMINAIRE	K132R-B2AR-II-50(SSL)-1042-120:277-3K-HSS-K14
Decorative Post Top	6441004	LED, 4000 LUMENS, HPS 70W EQ, ACORN SST LUMINAIRE: Decorative, Post Top, 4000 Lumens, 3000k Color Temperature, To Replace 70W 120/240V HPS Streetlight, Type II, Acorn SST Style, with Photoeye Receptacle and House Side Shield	KING LUMINAIRE	K425R-T1AR-II-50(SSL)LED-4004-120:277-3K-HSS-K14-SST
Decorative Pendant	6441012	LED, 4000 LUMENS, HPS 70W EQ, AURORA SAG LUMINAIRE: Decorative, Pendant, 4000 Lumens, 3000k Color Temperature, To Replace 70W 120/240V HPS Streetlight, Type II, Aurora Sag Style, with Photoeye Receptacle and House Side Shield, C/W Plumbizer	KING LUMINAIRE	K829-P4SA-II-40(SSL)LED-8060-120:277-KPL10-3K-HSS s/f PR
Decorative Pendant	6441016	LED,4000 LUMENS, HPS 70W EQ, HARBOURSIDE LUMINAIRE: Decorative, Pendant, 4000 Lumens, 3000k Color Temperature, To Replace 70W 120/240V HPS Streetlight, Type II, Harbour Side Style, with Photoeye Receptacle and House Side Shield, C/W Plumbizer	KING LUMINAIRE	K366- P-S-T1AC-II-50(SSL)4004-120-277-3K-KPL10-HSS s/f PR7
Yard Light	6422611	YARDLIGHT, LED, 4000 LUM, TYPE V LED, 120-277 V, 3600 Lumens, 4000K, Type 5 with Acrylic Refractor, ANSI C136.41-7 Pin Dimming Recepticle, ANSI C136.10 Compliant,C/W Bracket, 8 ft #14 Leads, 10kV/5kA Surge Protection, HPS 70W EQ, Cast Aluminium Finish	GE	E2SA-0-A1-B5-1-40-A-L-5-R

Bulletin: Erosion & Sediment Control

Awareness & Compliance

City of Kelowna

Bulletin # 17-04
Updated: September 1, 2017
Created: September 2017

This bulletin is for informational purposes only. Please be sure to consult the relevant City of Kelowna bylaw.

Purpose

The Development Engineering Branch wishes to proactively communicate updates and changes with our clientele in order to improve customer service and ensure transparency in our decision making.

Bulletin Scope

Bulletin #4 reiterates and emphasizes the existing expectations with regards to Development and specifically the erosion & sediment control within development projects. Drawings shall be provided with all submissions.

Background

The Development Engineering Branch aspires to deliver responsive, efficient, fair and predictable support to the Development Community in a collaborative and transparent manner. A gap has been identified between the current regulations/bylaw and current practices in the City.

Erosion & Sediment Control has evolved significantly over the last decade, with many municipalities adopting aggressive permitting and enforcement approaches. The City of Kelowna has a need to protect our streams, watercourses, and lake as natural resources and drinking water source. This Bulletin is intended to inform and educate, while signaling a renewed focus on compliance with the existing policies regarding erosion & sediment control. Submissions will be reviewed for compliance starting immediately.

Guidelines

1. Council Policy 265 – Engineering Drawing Submission Requirements

Erosion and Sediment Control Plan

This plan is to detail methods and procedures that will be used to prevent or minimize soil displacement and transport of sediment from the Development site. This is to include methods to prevent or minimize soil transport onto adjacent properties or onto existing roads adjacent to the site (i.e. tracking from vehicles). Preventative methods of soil displacement on the site are to be detailed. The drawing shall show the following:

(a) Existing contours of the site at an interval sufficient to determine drainage patterns.
(b) Final contours if the existing contours are significantly changed.
(c) Final drainage patterns/boundaries.
(d) Existing vegetation such as significant trees, shrubs, grass, and unique vegetation.
(e) Limits of clearing and grading.
(f) Erosion and sediment control measures (temporary and permanent) including locations, names and details, in accordance with "Best Management Practices for

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Erosion and Sediment Control – Upland Works, City of Kelowna" and "Land Development Guidelines for the Protection of Aquatic Habitat – DFO + BCMOE".
(g) Storm Drainage systems including drain inlets, outlets, pipes, and other permanent drainage facilities (swales, waterways, etc.). The plan must have a narrative section describing the land, the disturbing activity and details of the methods used for controlling erosion and sedimentation. Include a description of the procedures for construction and maintenance of the control measures. Note the persons involved in maintenance and provide a maintenance schedule that is to be followed.

2. City of Kelowna Subdivision, Development & Servicing Bylaw No. 7900

3.5 EROSION AND SEDIMENTATION CONTROL

All proposed projects must provide erosion and sedimentation controls to prevent the displacement of soil and the transport of sediment from the project site resulting from land disturbing activities. To prevent the displacement of soil and the sediment transport during land-disturbing activities, Erosion and Sedimentation Control (ESC) measures are required and shall be performed as described below. Both temporary and permanent erosion and sedimentation controls shall be implemented.

The objective of erosion and sedimentation control is to prevent the displacement of soil and the transport of sediment to streams, wetlands, lakes, drainage systems, and adjacent properties. Erosion on construction sites can result in excessive sediment transport to adjacent properties and to surface waters. Sediment transport can result in adverse impacts such as flooding due to obstructed drainage systems, smothering of aquatic habitat and the creation of algal blooms in lakes, among others.

ESC

The following ESC documents detail methods of control:

- Best Management Practices for Erosion & Sediment Control – Upland Works, City of Kelowna (1998)
- Land Development Guidelines for the Protection of Aquatic Habitat, Department of Fisheries and Oceans and the BC Ministry of Environment (1992)

In general, erosion and sedimentation controls shall address the following:

Clearing Limits: Prior to any site clearing or grading, areas to remain undisturbed during project construction shall be delineated and marked on-site by flagging or other method. At a minimum, clearing limit delineation shall be installed at the edges of all sensitive area buffers.

Retain existing vegetation, as much as possible.

Cover Measures: Temporary and permanent cover measures shall be provided when necessary to protect disturbed areas as detailed in the ESC Documents. Temporary cover shall be installed if an area is to remain unworked for more than seven days, unless otherwise determined by the City. Any area to remain unworked for more than 30 days shall be seeded or sodded, unless the City determines that winter weather makes vegetation establishment infeasible. Slopes and stockpiles 3H:1V or steeper and with more than 3 metres of vertical relief shall be covered if they are to remain unworked for more than 12 hours. The intent of these measures is to have as much area as possible covered during any period of precipitation.

Perimeter Protection: Perimeter protection to contain sediment from sheet flow shall be provided downslope of all disturbed areas when necessary as detailed in the ESC Documents. Such protection shall be installed prior to upslope grading. Perimeter protection includes the use of vegetated strips, as well as more conventional constructed measures such as silt fences.

Traffic Area Stabilization: Unsurfaced entrances, roads, and parking areas used by construction traffic shall be stabilized to minimize erosion and tracking of sediment offsite as detailed in the ESC Documents.

Sediment Retention: Surface water collected from disturbed areas of the site shall be routed through a sediment pond or trap prior to release from the site as detailed in the ESC Documents, except areas at the perimeter of the site small enough to be treated solely with perimeter protection. Sediment retention facilities shall be installed prior to grading of any contributing area.

Surface Water Controls: Surface water controls shall be installed to intercept and convey all surface water from disturbed areas to a sediment pond or trap and discharge it downslope of any disturbed areas as detailed in the ESC Documents, except areas at the perimeter of the site small enough to be treated solely with perimeter protection. Significant sources of upslope surface water that drain onto disturbed areas shall be intercepted and conveyed to a stabilized discharge point downslope of the disturbed areas.

Implementation requirements

ESC Plan

All proposed projects must submit a plan for providing ESC measures as specified in City Policy 265. All ESC measures shall conform to the details and specifications in the ESC documents unless an alternative is approved by the City.

Construction within Sensitive Areas and Buffers

Any construction that will result in disturbed areas on or within a stream or associated buffer, within a wetland or associated buffer, or within 15 metres of a lake shall be subject to the Best Management Practices for Erosion & Sediment Control – In-stream Works (1998). These provisions include phasing the project whenever possible so that construction in these areas is limited to the dry season.

Maintenance

All ESC measures shall be maintained as per the Erosion and Sedimentation Control Plans. The consulting engineer shall be responsible for maintenance and review of ESC and for compliance with all conditions relating to ESC.

Final Stabilization

Prior to obtaining total performance, the site shall be stabilized and the structural ESC measures (such as silt fences and sediment traps) shall be removed and drainage facilities cleaned as specified.

As the Development Engineering Branch strives to improve our communications, review and approval efficiency and accountability, we invite any feedback or comment you may have. Please contact me anytime at 250-470-0681 or JKay@Kelowna.ca.

Sincerely,

James Kay

James B. Kay, P.Eng
Manager, Development Engineering Branch

Bulletin: Grading Certification

Awareness & Compliance

Bulletin # 17-05
Updated: September 1, 2017
Created: September 2017

This bulletin is for informational purposes only. Please be sure to consult the relevant City of Kelowna bylaw.

Purpose

The Development Engineering Branch wishes to proactively communicate updates and changes with our clientele in order to improve customer service and ensure transparency in our decision making.

Bulletin Scope

Bulletin #5 outlines the new approval and enforcement approach within the City of Kelowna with regards to Site Grading. This applies to all approvals from Subdivision, Development Permit, Servicing Agreement, and Building Permit.

Background

The Community Planning, Development Engineering, and Building & Permitting Branches all interact with site grading in various aspects of their reviews. Challenges regularly arise between the preliminary approvals and final construction, particularly when the various contractors and builders make changes to the approved grading plan.

However, this is very problematic as changes impact structural elements such as foundations and retaining walls, as well as hydraulic elements such as swales and drainage pathways.

As a result, this Summer, Sergio Sartori undertook the newly created Development Technician: Grading position within the Planning Department, charged with review, approval, and enforcement of site grading from inception to completion.

Guidelines

1. Development Permit approvals still come from Planning and Staff will still work with Developers to facilitate clearing and grading prior to Servicing Agreement where safe, environmentally responsible, and appropriate. However, these approvals are preliminary and in no way establish engineering elements such as road or wall locations. Grading will be reviewed at this stage.

2. Servicing Agreements are still the detailed design drawing review and approval and slopes, grading, swales, overland flow routes, and retaining walls are all required to be designed and detailed for staff review. However, attention shall be paid as builder-requested changes after acceptance of this grading plan may be subject to further permits/approvals.

3. Consultants are encouraged to consider including "Grading Record Survey" into their provision of services: confirmation that the grading onsite substantially complies with approved grading plan will be very helpful insofar as submission of certification of substantial completion. Grading will be an increasingly evaluated component of the development construction.

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4. Building Permits will be evaluated and monitored closely for compliance with the established grading plan. The Dev.Tech will review and evaluate late additions such as retaining walls and substantial changes to grade.

Ultimately the only change is that the City has established a reviewing and coordinating role with respect to grading. The intent of this bulletin is to inform Industry and proactively share these expectations.

As the Development Engineering Branch strives to improve our communications, review and approval efficiency and accountability, we invite any feedback or comment you may have. Please contact me anytime at 250-470-0681 or JKay@Kelowna.ca.

Sincerely,

James Kay

James B. Kay, P.Eng
Manager, Development Engineering Branch

Bulletin: Effective Blast Containment

Awareness & Compliance

Bulletin # 17-06
Updated: September 18, 2017
Created: September 2017

This bulletin is for informational purposes only. Please be sure to consult the relevant City of Kelowna bylaw.

Purpose

The Development Engineering Branch wishes to proactively communicate updates and changes with our clientele in order to improve customer service and ensure transparency in our decision making.

Bulletin Scope

Bulletin #6 outlines the scope and best practices with regards to blasting within the City of Kelowna. As Staff receive dozens of calls and complaints per year, it is important to communicate expectations and requirements within development projects.

Background

The Development Engineering Branch aspires to deliver responsive, efficient, fair and predictable support to the Development Community in a collaborative and transparent manner. A gap has been identified between the current regulations/bylaw and current practices in the City.

Guidelines

1. The City of Kelowna does not regulate, monitor or approve blasting: this is solely within the purvue and jurisdiction of WorkSafe BC. Any blasting proposed must comply with Provincial regulations.

2. On development sites where blasting is required, the Owner shall provide the contact information for their Contractor, Site Supervisor, and Consultant, as well as a communications strategy with regards to prior notification, signage, and follow-up procedures. All questions, inquiries, and problems shall be addressed by the Owner with copies provided to Development Engineering.

3. The City expects contractors/blasters to: notify nearby homeowners of planned blasts, conduct pre-blast surveys, measure ground vibrations and air pressures.

4. Failure to address safety concerns and public complaints may impact inspections and completion of the project.

As the Development Engineering Branch strives to improve our communications, review and approval efficiency and accountability, we invite any feedback or comment you may have. Please contact me anytime at 250-470-0681 or JKay@Kelowna.ca.

Sincerely,

James Kay

James B. Kay, P.Eng
Manager, Development Engineering Branch

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Bulletin: Record Drawings

Completeness & Compliance

Bulletin # 17-07
Updated: September 1, 2017
Created: September 2017

This bulletin is for informational purposes only. Please be sure to consult the relevant City of Kelowna bylaw.

Purpose

The Development Engineering Branch wishes to proactively communicate updates and changes with our clientele in order to improve customer service and ensure transparency in our decision making.

Bulletin Scope

Bulletin #7 outlines the expectations and requirements of City of Kelowna with regards to As-Built and/or Record Drawings. This crucial submission is essential to the City's management of its assets and yet is a regular challenge for all involved to achieve compliance and acceptance.

Background

The City of Kelowna requires complete and compliant drawing submissions. Council Policy 265: Engineering Drawing Submission clearly outlines the requirements. While Development Engineering reviews and approves design submission sets that may or may not meet these requirements, and for expediency, processes them for approvals/construction; it is still a requirement that the record drawing submission be compliant. Further, Engineers and Geoscientists of British Columbia Practice Guidelines outline expectations around Use of Seal, Direct Supervision, and Field Review. The City wishes to remain compliant with the regulator with regards to expectations and requirements of as-built vs record drawings.

Guidelines

1. Record Drawings

City of Kelowna still requires Record Drawings to be signed and sealed, though provides this one allowable disclaimer:

"I hereby give assurance that the new works shown on this drawing were inspected during construction and substantially reflect the installed works in all material aspect"

As the Development Engineering Branch strives to improve our communications, review and approval efficiency and accountability, we invite any feedback or comment you may have. Please contact me anytime at 250-470-0681 or JKay@Kelowna.ca.

Sincerely,

James Kay

James B. Kay, P.Eng
Manager, Development Engineering Branch

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Bulletin: Local Roads & Lane Access

Safety & Fire Fighting

Bulletin # 17-08
Updated: September 18, 2017
Created: September 2017

This bulletin is for informational purposes only. Please be sure to consult the relevant City of Kelowna bylaw.

Purpose

The Development Engineering Branch wishes to proactively communicate updates and changes with our clientele in order to improve customer service and ensure transparency in our decision making.

Bulletin Scope

Bulletin #8 establishes a new decision-making approach within the City of Kelowna by combining requirements of the Building Code with Subdivision Development & Servicing Bylaw 7900.

Background

The City of Kelowna allows/encourages Lane Access in some circumstances. The hillside standard SS-H15 for a Public Lane is 6m wide, with 5.7m asphalt, rollover curb, and parking on the edge of the paved surface, and may serve up to 10 units. However, in steep sites where the primary frontage onto a Local Road is encumbered/inaccessible, and the Lane does not provide the necessary access for emergency vehicles.

Guidelines

1. Lane Access

All development must have safe, accessible frontage of minimum 6m clear width. Therefore, if for any reason the local road frontage does not provide access for emergency services, the lane must be constructed to maintain 6m clear access. Most likely this will require full local road widths instead of lanes; however, discretion will be used if the design can achieve the required outcome through alternative measures such as wider asphalt and/or restricted parking, etc..

As the Development Engineering Branch strives to improve our communications, review and approval efficiency and accountability, we invite any feedback or comment you may have. Please contact me anytime at 250-470-0681 or JKay@Kelowna.ca.

Sincerely,

James Kay

James B. Kay, P.Eng
Manager, Development Engineering Branch

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Bulletin: Onsite Civil Infrastructure Approval, Testing & Commissioning

City of Kelowna

Bulletin # 18-09
Created: June 2018

This bulletin is for informational purposes only. Please be sure to consult the relevant City of Kelowna bylaw.

Purpose

The Development Engineering Branch wishes to proactively communicate updates and changes with our clientele in order to improve customer service and ensure transparency in our decision making.

Bulletin Scope

Bulletin #9 summarizes the approval, testing and commissioning procedures and practices of the Development Services Department (Building & Permitting, Development Engineering Branches) with regards to onsite civil infrastructure. This applies to all approvals for Building Permit, with the exception of Bare Land Strata, which rely exclusively on Design Professionals' certification.

Background

The Development Services Team are experiencing challenges non-compliance and requiring costly rework due to misunderstandings of the permitting and inspection requirements of onsite civil infrastructure. It is challenging as the processes involve Building Code, Plumbing Code, and Plumbing Regulation Bylaw 5968-87, Revised November 28, 2011.

These projects typically have applied for approval of offsite works resulting in a Servicing Agreement, Notice to Proceed, and Road Usage Permit. These approvals do not grant permission/approvals for any onsite works.

These projects typically have obtained a Building Permit for all plumbing inside the building. This permit does not grant permission/approvals for works outside the building.

Neither Consultant inspection nor Irrigation District review/approval/inspection of any component of the privately-owned onsite water system, from property line to building, replaces/supplants/substitutes for City plumbing inspection. (Exempt: ID-owned works in a ROW)

Guidelines

1. Plumbing Permit

Consultants must ensure that they have a Plumbing Permit specific to the civil works between the building and property line.

2. Hydrostatic Test

Consultants/Contractors must ensure that when sprinkler systems are to be installed: "All piping and attached appurtenances subjected to system working pressure shall be hydrostatically tested at 200 psi or 50 psi in excess

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of the system working pressure, whichever is greater, and shall maintain that pressure +/- 5psi for 2 hours.

3. **Materials**

   Consultant must ensure that pipes specified are suitable for this 200psi test.

4. **Inspection**

   Consultant/Contractor must call City Plumbing Inspector prior to covering any water system.

5. **Testing**

   Pressure/Chlorination testing will not be permitted against any valve; therefore, pressure and chlorination testing must be conducted prior to connecting to the service/main.

   If the mechanical/civil contractors wish, the City is supportive of testing the building and onsite systems with one pressure test.

6. **Tender/Contract/Administration**

   While completely within the Owner's discretion, consultants may wish to make expectations explicitly clear on drawings, specifications, tender/contract document, and any pre-construction or site meetings with the Contractor with regard to testing pressure, pipe specifications, and inspection protocols.

As Development Services (Building & Permitting, Development Engineering Branches) strives to improve our communications, review and approval efficiency and accountability, we invite any feedback or comment you may have. Please contact me anytime at 250-470-0681 or JKay@Kelowna.ca.

Sincerely,

James Kay

James B. Kay, P.Eng
Manager, Development Engineering Branch