# SCHEDULE 1

### OF BYLAW 7900

## **CITY OF KELOWNA**

# WORKS & SERVICES REQUIREMENTS

BL8382, BL8398, BL8572, BL8712, 8762, 8847, 8981,12356 and 12555 all replaced Schedule 1 in its entirety BL12624 amended Schedule 1

#### WORKS & SERVICES REQUIREMENTS

#### Key Sheet

Abbreviation	Requirement
WTR	Community water system. In subdivisions which are to be provided with a community water system, each Parcel within the proposed subdivision, or Parcel being Developed, must be supplied by a water distribution system, including service connections, and with adequate fire flow and protection, which is designed in accordance with the standards prescribed in the Design Standards Water Section.
WELL	Where a community water system is not available a proven water supply located on each parcel is permitted.
SWR	Community sanitary sewer system.
SWRSEP	Sanitary sewer collection and disposal or Sanitary sewage effluent ground disposal in accordance with Part 2, Section 5.2 (0)(viii) of this bylaw.
DITCH	Drainage collection and disposal system by open ditches and culverts.
STM	Closed drainage collection and disposal system (i.e., a system other than open ditches).
SL	Street lighting throughout the subdivision.
SLI	Street lighting at street intersections only.
ОН	Overhead electrical and communication wiring.
UG	Underground electrical and communication wiring.
W	Communication and electrical wiring to conform to the highest standard of existing adjacent facilities

			Utilities				Utilities						
	(Refer to Key Sheet above)					_	(Refer to Key Sheet above)						
Zone <sup>1</sup>	Water	Sewer	Drain	Wiring	Lighting	Zone <sup>1</sup>	Water	Sewer	Drain	Wiring	Lighting		
Aı	WELL	SWRSEP	DITCH	ОН	SLI	Cı	WTR	SWR	STM	UG	SL		
A2	WELL	SWRSEP	DITCH	ОН	SLI	C2	WTR	SWR	STM	UG	SL		
						VC1	WTR	SWR	STM	UG	SL		
RR1	WTR	SWRSEP	DITCH	ОН	SLI	UC1-5	WTR	SWR	STM	UG	SL		
RR2	WTR	SWR	DITCH	ОН	SLI	CA1	WTR	SWR	STM	UG	SL		
RU1	WTR	SWR	STM	UG	SL	<b>l</b> 1	WTR	SWR	STM	UG	SL		
RU2	WTR	SWR	STM	UG	SL	l2	WTR	SWR	STM	UG	SL		
RU3	WTR	SWR	STM	UG	SL	l3	WTR	SWRSEP	DITCH	ОН	SLI		
RU4	WTR	SWR	STM	UG	SL	14	WELL	SWRSEP	DITCH	ОН	SLI		
RU5	WTR	SWR	STM	UG	SL								
						Pı	WTR	SWR	STM	UG	SL		
MF1	WTR	SWR	STM	UG	SL	P2	WTR	SWR	STM	UG	SL		
MF2	WTR	SWR	STM	UG	SL	P3	WELL	SWRSEP	STM	W	SLI		
MF3	WTR	SWR	STM	UG	SL	P4	WELL	SWRSEP	STM	W	SL		
MH1	WTR	SWR	STM	UG	SL								
						Wı	N/A	N/A	N/A	N/A	N/A		
HD1	WTR	SWR	STM	UG	SL	W2	AS REQUIRED BASED ON DEVELOPMENT PROPOSAL						
HD2	WTR	SWR	STM	UG	SL								
						CD <sup>(3)</sup>	WTR	SWR	STM	UG	SL		
						CD12	WTR	SWR	STM	UG	SL		

### Table 1: Utility Requirements

Notes:

- 1. Comprehensive Development Zones listed in Section 17 of the Zoning Bylaw, except the CD12 Airport zone.
- 2. The zones identified in this table are the zones designated in the Zoning Bylaw. Properties with an 's'. 'b'. 'h', 'lp' or 'rls' as part of the zoning designation shall comply with the works and services requirements of the parent zone (e.g. RU1s shall comply with the requirements of the RU1 zone.)

#### WORKS & SERVICES REQUIREMENTS

#### **Road Requirements**

Road requirements (refer to Standard Drawings) are determined using **Table 2** below and **Section 4.2** – **Road Classifications**:

- 1. Roadway classifications identified within the *Map* 13.1 *Functional Road Classification* of the *City's Official Community Plan* (OCP).
- 2. OCP Functional Road Classification Overlays:
  - Map 13.2 Transit Overlay;
  - Map 13.3 Biking Overlay;
  - Map 13.4 Truck Route Overlay; and
  - Map 13.5 DCC Project Overlay.
- 3. Consideration of the local context; the local context may include considerations such as, but not limited to:
  - Fixed elements unlikely to change over time, like topography, water bodies, environmentally sensitive areas, agricultural land reserves, First Nations reserves, etc.
  - Atypical frontages, for example schools, recreational facilities, parks, industrial loading areas, etc.
- 4. This Bylaw prescribes infrastructure design and practices. Council recognizes that each situation is unique, and solutions may need to be tailored to the existing conditions. As such, discretion is afforded the City Engineer to ensure the optimal technical solutions are implemented and adapt the prescribed practices herein to suit the individual project/site requirements.

### Table 2: Road Requirements (Refer to Standard Drawings)

		OCP N	1ap 13.3 – Bikin	g Overlay	
	Roadway Iassification DCP Map 3.1	Not on Biking Overlay	On Secondary Biking	On Primary Biking Route	Notes:
کر ا	Hillside		S-Ro1	Consult with	
Laneway	Suburban		5-Ro2	City	
-ane	Core Area		5-R02	Engineer	
	Urban Centre		5-Ro2	5	
	Rural		5-R20		
	Hillside		S-R21		Village Local-Residential, development fronts at least one side
	Hillside	XS-R22			Condition A, development fronts both sides
<u> </u>	Hillside		5-R23	Consult with	Condition B, development fronts one side only
Local	B Hillside XS-R24			City	Condition C, no development fronts street
	Suburban		5-R25	Engineer	
	Industrial	XS-R26 XS-R27 XS-R28			
	Core Area				
	Urban Centre				
	Rural		5-R40		
	Hillside	XS-R41	-		Village Collector Condition A, where commercial development fronts street
	Hillside Hillside	XS-R42			Village Collector Condition B, where no commercial development fronts street
-		XS-R43	Consultaniale	Consult with City Engineer	Collector Condition A, development fronts both sides
	Hillside	XS-R44	Consult with		Collector Condition B, development fronts one side only
tor	Hillside Hillside Hillside	XS-R45	City Engineer		Collector Condition C, no development fronts street Minor Collector Condition A, development fronts both sides or,
llec		XS-R46			development fronts one side only
ပိ		XS-R47	-		Minor Collector Condition B, no development fronts street
	Suburban	XS-R48	XS-R49		
	Industrial	XS-R50	Consult with City Engineer		
	Core Area	XS-R51	XS-R52		
	Urban Centre	XS-R53	XS-R54		
	Rural		XS-R60		
	Hillside	XS-R62	Consult with City Engineer	XS-R61	Arterial Condition A, within village centre where environmental conditions permit
Minor Arterial	Hillside	X	5-R63	Consult with	Arterial Condition B, within 10-minute walking distance of village centre; or, within village centre where environmental conditions do not permit the use of Condition A
Mino	Hillside	X	5-R64	City Engineer	Arterial Condition C, greater than a 10-minute walking distance from village centre.
[	Suburban	XS-R65			
	Core Area		5-R66		
	Urban Centre	X	S-R67		
	Rural				
	3-lane	XS-R8o		XS-R81	
	5-lane	X	5-R82	XS-R83	
_	Suburban				
eria	3-lane		5-R84		
ΨŪ	5-lane	XS-R85			
Major Arterial	Core Area			Consult with	
Maj	3-lane		5-R86	City Engineer	
_	5-lane	X	XS-R87		
	Urban Centre				
	3-lane	XS-R88			
	5-lane		5-R89		
	24 amended Tal				

BL12624 amended Table 2 Notes:

Notes:

- 1. Active Transportation Corridors not located with road right-of-way's such as but not limited to the Okanagan Rail Trail and Mission Creek Greenway, are transportation corridors requiring frontage improvements.
- 2. Pedestrian facilities are required on any road fronting a school or major recreational facility in rural land use areas.
- 3. Where a primary Biking Route is identified on OCP Map 13.3 Bike Overlay Map up to 2 m of additional ROW may be required.
- 4. Where a Rapid Transit or Frequent Transit Network is identified on OCP Map 13.2 Transit Overlay up to 3 m of additional ROW may be required on Local, Collector, and Minor Arterial roads and up to 6 m of additional ROW may be required on Major Arterial roads.
- 5. Where OCP Maps 13.2, 13.3, 13.4, and 13.5 overlays are present, consult with City Engineer for design requirements.

#### Linear Park Trails Requirements

Linear Park requirements (refer to Standard Drawings) are determined using **Table 3: Trail Requirements**, *Map 10.1 - Linear Corridors* of the *City's Official Community Plan* (OCP).

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CLASS DIMENSIONS			LONGITUDINAL SLOPE		CROSS SLOPE	MATERIALS											
Trail Type	(W) Width	(W) Clear Min. Vertical (S) Short Se		(S) Slope for Short Sections (max. 10m)	Cross Slope	Surface Type	(M1) Type Depth	(M2) Granular Base	(M3) Sub-Base	(M4) Compacted Sub-Grade							
Major Urban		0.5 m	3.0 m	5% max. (1:20)	8% max. (1:12)	2% min.	Asphalt	50 mm	100 mm	200 mm	95% MPD						
Promenade							Concrete or Brick	100 mm or 75 mm	100 mm	N/A	95% MPD						
2 Major Multi-	4.5 - 3.0 m	0.5 m	3.0 m	8% max. (1:12)	12% max. (1:8)	2% min.	Asphalt	50 mm	100 mm	200 mm	95% MPD						
Use (Urban)							Concrete or Brick	60 mm	100 mm	N/A	95% MPD						
Major Multi-		4.5 - 3.0 m 0.5 m 2.5 m 3% max. 12% max (1:12) (1:8)		8% max.	12% max.		Asphalt	50 mm	75 mm	150 mm	95% MPD						
Use (Rural)	4.5 · 3.0 m			2% min.	Concrete or Brick	60 mm	100 mm	N/A	95% MPD								
Standard 3.0 - 2	30-20m	3.0 - 2.0 m 0.5 m	3.0 - 2.5 m	8% max. (1:12)	15% max. (1:7)	2% min	Asphalt millings	60 mm	75 mm	150 mm	95% MPD						
Multi-Use							Aggregate	50 mm	100 mm	N/A	95% MPD						
Narrow	15,12m	0.5 m	2.5 m	8% max. (1:12)	15% max. (1:7)	2% min.	Asphalt millings	60 mm	75 mm	150 mm	95% MPD						
5 Multi-Use	1.5 · 1.2 m						Aggregate	50 mm	100 mm	N/A	95% MPD						
Natura Traile	1.2 - 0.6 m	0.5 m	2.5 m	20% (1:5) max. hiking & walking	Over 20% use steps, etc.	2% min.	Natural ground	N/A	N/A	N/A	95% MPD						
reactine frams				15% (1:7) max. mountain biking	15%		Aggregate if needed	50 mm	100 mm	N/A	95% MPD						
	Trail Type Major Urban Promenade Major Multi- Use (Urban) Major Multi- Use (Rural) Standard Multi-Use	Trail     (W)       Type     Width       Major Urban     4.5m or       Promenade     greater       Major Multi-     4.5 · 3.0 m       Wajor Multi-     4.5 · 3.0 m       Standard     3.0 · 2.0 m       Narrow     1.5 · 1.2 m	Trail Type     (W) Width     (C) Clear Zone       Major Urban Promenade     4.5m or greater     0.5m       Major Multi- Use (Urban)     4.5 - 3.0 m     0.5 m       Major Multi- Use (Rural)     4.5 - 3.0 m     0.5 m       Standard Multi-Use     3.0 - 2.0 m     0.5 m       Narrow Multi-Use     1.5 - 1.2 m     0.5 m	Trail Type         (W) Width         (C) Clear Zone         (H) Min. Vertical Clearance           Major Urban Promenade         4.5 m or greater         0.5 m         3.0 m           Major Multi- Use (Urban)         4.5 · 3.0 m         0.5 m         3.0 m           Major Multi- Use (Urban)         4.5 · 3.0 m         0.5 m         3.0 m           Major Multi- Use (Rurali)         4.5 · 3.0 m         0.5 m         3.0 m           Major Multi- Use (Rurali)         3.0 - 2.0 m         0.5 m         3.0 - 2.5 m           Standard Multi-Use         3.0 - 2.0 m         0.5 m         3.0 - 2.5 m	CLASS         DIMENSIONS         SLOP           Trail Type         (W) Width         (C) Clear Zone         (H) Min. Vertical Clearance         Typical Slope           Major Urban Promenade         4.5m or greater         0.5 m         3.0 m         5% max. (1:20)           Major Multi- Use (Urban)         4.5 - 3.0 m         0.5 m         3.0 m         8% max. (1:12)           Major Multi- Use (Rural)         4.5 - 3.0 m         0.5 m         3.0 m         8% max. (1:12)           Major Multi- Use (Rural)         4.5 - 3.0 m         0.5 m         2.5 m         8% max. (1:12)           Major Multi- Use (Rural)         4.5 - 3.0 m         0.5 m         3.0 - 2.5 m         8% max. (1:12)           Standard Multi-Use         3.0 - 2.0 m         0.5 m         3.0 - 2.5 m         8% max. (1:12)           Narrow Multi-Use         1.5 - 1.2 m         0.5 m         2.5 m         8% max. (1:12)           Nature Trails         1.2 - 0.6 m         0.5 m         2.5 m         20% (1:5) max. hiking & walking 15% (1:7) max.	CLASS         DIMENSIONS         SLOPE           Trail Type         (W) Width         (C) Clear Zone         (H) Min.Vertical Clearance         (S) Typical Slope         (S) Slope for Short Sections (max. 10m)           Major Urban Promenade         4.5m or greater         0.5 m         3.0 m         5% max. (1:20)         5% max. (1:12)           Major Multi- Use (Urban)         4.5 - 3.0 m         0.5 m         3.0 m         8% max. (1:12)         12% max. (1:12)           Major Multi- Use (Rural)         4.5 - 3.0 m         0.5 m         3.0 m         8% max. (1:12)         12% max. (1:8)           Major Multi- Use (Rural)         4.5 - 3.0 m         0.5 m         2.5 m         8% max. (1:12)         12% max. (1:8)           Standard Multi-Use         3.0 - 2.0 m         0.5 m         3.0 - 2.5 m         8% max. (1:12)         15% max. (1:7)           Narrow Multi-Use         1.5 - 1.2 m         0.5 m         2.5 m         8% max. (1:12)         15% max. (1:7)           Nature Trails         1.2 - 0.6 m         0.5 m         2.5 m         20% (1:5) max. Ring & walking         Over 20% use steps, etc.	CLASS         DIMENSIONS         SLOPE         SLOPE           Trail Type         (W) Width         (C) Clear Zone         (H) Clearance         (S) Typical Slope         (S) Slope for Short Sections         Cross Slope           Major Urban Promenade         4.5 m or greater         0.5 m         3.0 m         5% max. (1:20)         8% max. (1:12)         2% min.           Major Multi- Use (Urban)         4.5 - 3.0 m         0.5 m         3.0 m         8% max. (1:12)         12% max. (1:8)         2% min.           Major Multi- Use (Rural)         4.5 - 3.0 m         0.5 m         2.5 m         8% max. (1:12)         12% max. (1:8)         2% min.           Standard Multi-Use         3.0 - 2.0 m         0.5 m         3.0 - 2.5 m         8% max. (1:12)         15% max. (1:7)         2% min.           Narrow Multi-Use         1.5 - 1.2 m         0.5 m         2.5 m         8% max. (1:12)         15% max. (1:12)         2% min.           Nature Trails         1.2 - 0.6 m         0.5 m         2.5 m         8% max. (1:12)         15% max. (1:12)         2% min.	CLASS         DIMENSIONS         SLOPE         SLOPE         SLOPE           Trail Type $(W)$ Width $(C)$ Clear Zone $(H)$ Min. Vertical Clearance $(S)$ Typical Slope $(S)$ Slope for Short Sections (max. 10m) $Cross$ Slope $Surface$ Type           Major Urban Promenade $4.5 \text{ m or}$ greater $0.5 \text{ m}$ $3.0 \text{ m}$ $5\%$ max. (1:20) $2\%$ min. (1:8) $2\%$ min. (1:8) $Asphalt$ Major Multi- Use (Urban) $4.5 \cdot 3.0 \text{ m}$ $0.5 \text{ m}$ $3.0 \text{ m}$ $8\%$ max. (1:12) $12\%$ max. (1:8) $2\%$ min. (1:8) $Concrete$ or Brick           Major Multi- Use (Rural) $4.5 \cdot 3.0 \text{ m}$ $0.5 \text{ m}$ $2.5 \text{ m}$ $8\%$ max. (1:12) $12\%$ max. (1:8) $2\%$ min. (1:8) $Concrete$ or Brick           Major Multi- Use (Rural) $4.5 \cdot 3.0 \text{ m}$ $0.5 \text{ m}$ $2.5 \text{ m}$ $8\%$ max. (1:12) $12\%$ max. (1:7) $2\%$ min. (1:7)         Asphalt millings           Standard Multi-Use $3.0 \cdot 2.0 \text{ m}$ $0.5 \text{ m}$ $2.5 \text{ m}$ $8\%$ max. (1:12) $15\%$ max. (1:7) $2\%$ min. (1:7) $Agphalt$ millings           Nature $1.2 \cdot 0.6 \text{ m}$ $0.5 \text{ m}$ $2.5 \text{ m}$ $20\%$ max	CLASS         DIMENSIONS         SLOPE         SLOPE         SLOPE           Trail Type $(W)$ Width $Clear$ Clearance $(H)$ Clearance $(S)$ Typical Slope $(S)$ Slope for Short Sections (max. 10m) $Cross$ Slope $Surface$ Type $Surface$ Type $(M1)$ Type Depth           Major Urban Promenade $4.5 m \text{ or}$ greater $0.5 m$ $3.0 m$ $5\%$ max. (1:20) $5\%$ max. (1:12) $2\%$ min. (1:12) $2\%$ min. (1:12) $Asphalt$ $50 mm$ Major Multi- Use (Urban) $4.5 \cdot 3.0 m$ $0.5 m$ $3.0 m$ $3.0 m$ $8\%$ max. (1:12) $12\%$ max. (1:8) $2\%$ min. (1:8) $Asphalt$ $50 mm$ Major Multi- Use (Rural) $4.5 \cdot 3.0 m$ $0.5 m$ $2.5 m$ $8\%$ max. (1:12) $12\%$ max. (1:8) $2\%$ min. (1:8) $Asphalt$ $50 mm$ Major Multi- Use (Rural) $4.5 \cdot 3.0 m$ $0.5 m$ $2.5 m$ $8\%$ max. (1:12) $12\%$ max. (1:7) $2\%$ min. (1:7) $Asphalt$ $50 mm$ Major Multi-Use $3.0 - 2.0 m$ $0.5 m$ $3.0 - 2.5 m$ $15\%$ max. (1:12) $15\%$ max. (1:7) $2\%$ min. (1:7) $Asphalt$ $60 mm$ <	CLASS       DIMENSIONS       SLOPE       SLOPE       SLOPE       SLOPE       MAPPING         Trail Type $(W)$ Width $\begin{pmatrix} C \\ Clear} \\ Zone \\ Zone \\ Clearance       Min.VerticalClearance       \begin{pmatrix} S \\ TypicalSlope \\ (max.10m \\ (1:2) \\ (1:2$	CLASSDIMENSIONSSLOPESLOPESLOPESLOPEMATERNEXTrail Type $\binom{(W)}{Width}$ $\binom{(C)}{Clear}$ Clearance $\binom{(H)}{Min.Vertical}$ Clearance $\binom{(S)}{Typical Stope}$ $\binom{(S)}{Short Sactions}$ $\binom{(S)}{max. 10m}$ $\binom{Cross}{Stope}$ $\underset{Type}{Suptal Stope}$ $\binom{(M1)}{Type}$ Depth $\binom{(M2)}{Base}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Sub-Base}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Sub-Base}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Domm}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Domm}$ $\binom{(M3)}{Sub-Base}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Domm}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Domm}$ $\binom{(M3)}{Sub-Base}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Domm}$ $\binom{(M3)}{Sub-Base}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Domm}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Domm}$ $\binom{(M3)}{Sub-Base}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Domm}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Oomm}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Oomm}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Oomm}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Oomm}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Oomm}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Oomm}$ $\binom{(M3)}{Base}$ $\binom{(M3)}{Oomm}$ $\binom{(M3)}{Base}$ $\binom{(M3)}$						

### Table 3: Trail Requirements (Refer to Standard Drawings)

