SCHEDULE A

This forms part of application

Z21-0026

Planner Initials TC

City of Kelowna
DEVELOPMENT PLANNING

CITY OF KELOWNA

MEMORANDUM

Date: April 14, 2021

File No.: Z21-0026

To: Urban Planning (BW)

From: Development Engineering Manager (JK)

Subject: 472 Knowles Rd. RU1 to RU2

The Development Engineering Department has the following comments and requirements associated to rezone the subject property from RU1 – Large Lot Housing to RU2 – Medium Lot Housing to facilitate a 3-lot subdivision.

The Development Engineering Technologist for this project is Aaron Sangster.

1. General

a. The following requirements are valid for one (1) years from the reference date of this memo, or until the PLR and/or application has been closed, whichever occurs first. The City of Kelowna reserves the rights to update/change some or all items in this memo once these time limits have been reached.

2. Domestic Water and Fire Protection

a. This property is currently serviced with 19mm-diameter water service. The disconnection of the existing small diameter water services and the tie-in of a larger new service can be provided by City forces at the developer's expense. One metered water service will supply the development. The applicant will be required to sign a Third Party Work Order for the cost of the water service upgrades. For estimate inquiry's please contact Aaron Sangster by email asangster@kelowna.ca or phone, 250-469-8487.

3. Sanitary Sewer

a. Our records indicate that these properties are currently serviced with a 100mm-diameter sanitary sewer service. An inspection chamber (IC) complete with brooks box must be confirmed/installed on the service at the owner's cost. Service upgrades can be provided by the City at the applicant's cost. The applicant will be required to sign a Third Party Work Order for the cost of the service upgrade. For estimate inquiry's please contact Aaron Sangster by email asangster@kelowna.ca or phone, 250-469-8487.

4. Storm Drainage

a. The developer must engage a consulting civil engineer to provide a storm water management plan for the site, which meets the requirements of the City Storm Water Management Policy and Design Manual. The storm water management plan must also include provision of lot grading plan, minimum basement elevation (MBE), if

applicable, and recommendations for onsite drainage containment and disposal systems.

b. On site storm drainage systems for the site will be reviewed and approved by Engineering in accordance with bylaw 7900, when a site servicing design is submitted.

c. There is a possibility of a high water table or surcharging of storm drains during major storm events. This should be considered in the design of the onsite system.

5. Road Improvements

a. Knowles Rd. must be upgraded to an urban standard along the full frontage of this proposed development, including roll-over curb and gutter, sidewalk, irrigated landscaped boulevard, streetlights, drainage system including catch basins, manholes and pavement removal and replacement and re-location or adjustment of utility appurtenances if required to accommodate the upgrading construction. The road cross section to be used is a SS-R3. Cash-in-lieu instead of immediate construction is required, and the City will initiate the work later, on its own construction schedule. The cash-in-lieu amount is determined to be **$70,958.17** not including utility service cost.

b. Development Engineering fee 3.5% = **$2,399.10** ($2,284.85 + $114.25 GST)

6. Electric Power and Telecommunication Services

a. All proposed service connections are to be installed underground. It is the developer's responsibility to make a servicing application with the respective electric power, telephone and cable transmission companies to arrange for these services, which would be at the applicant's cost

b. Re-locate existing utilities, where necessary.

7. Development Permit and Site Related Issues

a. Provide all necessary Statutory Rights-of-Way for any utility corridors as required.

b. If any road dedication affects lands encumbered by a Utility right-of-way (such as Fortis, etc.) please obtain the approval of the utility prior to application for final subdivision approval. Any works required by the utility as a consequence of the road dedication must be incorporated in the construction drawings submitted to the City's Development Manager.

8. Geotechnical Study

a. Provide a geotechnical report prepared by a Professional Engineer competent in the field of hydro-geotechnical engineering to address the items below: NOTE: The City is relying on the Geotechnical Engineer's report to prevent any damage to property and/or injury to persons from occurring as a result of problems with soil slippage or soil instability related to this proposed subdivision. The Geotechnical reports must be submitted to the Development Services Department for distribution to the Development Engineering Branch and Inspection Services Division prior to submission of Engineering drawings or application for subdivision approval:

i. Area ground water characteristics, including any springs and overland surface drainage courses traversing the property. Identify any monitoring required.

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ii. Site suitability for development.

iii. Site soil characteristics (i.e. fill areas, sulphate content, unsuitable soils such as organic material, etc.).

iv. Any special requirements for construction of roads, utilities and building structures.

v. Recommendations for items that should be included in a Restrictive Covenant.

vi. Recommendations for roof drains, perimeter drains and septic tank effluent on the site.

vii. Any items required in other sections of this document.

Additional geotechnical survey may be necessary for building foundations, etc

12. Charges and Fees

(a) Development Cost Charges (DCC's) are payable

(b) Fees per the "Development Application Fees Bylaw" include:

(i) Street/Traffic Sign Fees: at cost if required (to be determined after design).
(ii) Survey Monument, Replacement Fee: $1,200.00 (GST exempt) – only if disturbed.
(iii) Engineering and Inspection Fee: 3.5% of construction value (plus GST).
(iv) Hydrant levy charge of **$500.00** ($250.00 per new lot.)
(v) Survey Monument Fee: **$100.00** ($50 per newly created lot – GST exempt).

James Kay, P. Eng.
Development Engineering Manager

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ATTACHMENT A

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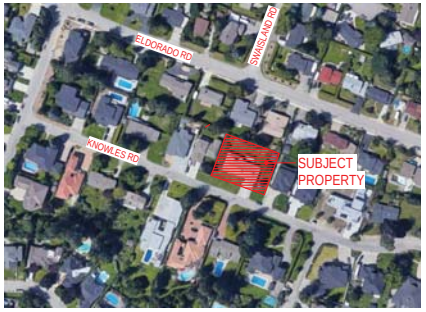
NOTES:

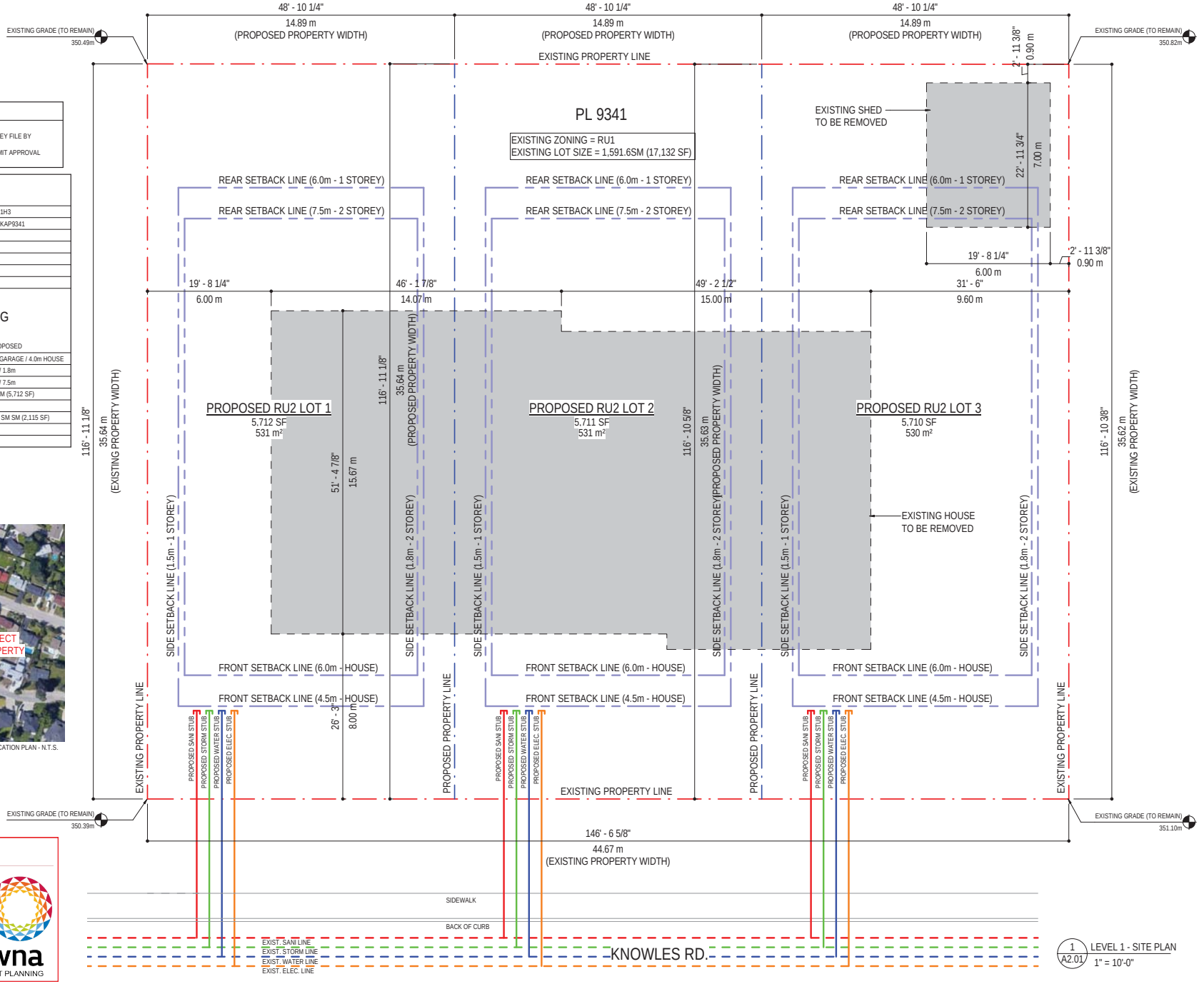
1. ALL EXISTING GRADES AND SURVEY INFORMATION BASED ON SURVEY FILE BY FERGUSON LAND SURVEYING DATED FEBRURARY 1, 2021.
2. ALL SERVICING IS APPROX. CIVIL TO CONFIRM UPON BUILDING PERMIT APPROVAL

ZONING SUMMARY	472 Knowles rd.
ADDRESS	472 KNOWLES RD, KELOWNA, BC, V1W 1H3
LEGAL DESCRIPTION	LOT A, DISTRICT LOT 167, ODYD, PLAN KAP9341
DEVELOPMENT PERMIT AREA	N/A
EXISTING ZONING	RU1
PROPOSED ZONING	RU2
EXISTING LEGAL USE	SINGLE FAMILY HOME
PROPOSED LEGAL USE	3 INDEPENDENT RU2 ZONED LOTS

ZONING REQUIREMENTS	PROPOSED BUILDING	
	ZONING STANDARD	PROPOSED
FRONT SETBACK	6.0m GARAGE/ 4.0m HOUSE	6.0m GARAGE / 4.0m HOUSE
SIDE SETBACK	1.5m (1 storey) / 1.8m (2 storey)	1.5m / 1.8m
REAR SETBACK	6.0m (1 storey) / 7.5m (2 storey)	6.0m / 7.5m
PARCEL SIZE	400 SM	531 SM (5,712 SF)
BUILDING HEIGHT	8.5m or 2.5 storeys	TBD
TOTAL PARCEL COVERAGE AREA	196.5 SM (37%)	196.5 SM SM (2,115 SF)
TOTAL PARCEL COVERAGE %	37%	37%
TOTAL PARKING COVERAGE %	10%	10%



LOCATION PLAN - N.T.S.



1 / A2.01 LEVEL 1 - SITE PLAN
1" = 10'-0"

ATTACHMENT B
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Planner Initials TC

CM DESIGNS
curt_mitch@outlook.com
250-300-6888

TRUE NORTH
PROJECT NORTH

APPLICANT: RON CANNON - roncannon@shaw.ca

No.	Date	Revision
01	2021-03-03	ISSUED FOR SUBDIVISION & REZONING

Drawing Title: SITE PLAN & ZONING

Project Title: 472 KNOWLES
472 KNOWLES RD, KELOWNA, BC, V1W 1H3
LOT A, DISTRICT LOT 167, ODYD, PLAN KAP9341

Drawing Number: A2.01

Job No.	18 - 1816
Scale	As indicated

NOTES

1. PLANT MATERIAL AND CONSTRUCTION METHODS SHALL MEET OR EXCEED THE CANADIAN LANDSCAPE STANDARD.

2. ALL SOFT LANDSCAPE AREAS SHALL BE WATERED BY A FULLY AUTOMATIC TIMED UNDERGROUND IRRIGATION SYSTEM.

3. TREE AND SHRUB BEDS TO BE DRESSED IN A MINIMUM 50mm DOUGLAS RED FIR MULCH, AS SHOWN IN PLANS. DO NOT PLACE WEED MAT UNDERNEATH TREE AND SHRUB BEDS.

4. TREE AND SHRUB BEDS TO RECEIVE A MINIMUM 300mm DEPTH TOPSOIL PLACEMENT.

5. TURF AREAS FROM SOD SHALL BE NO. 1 GRADE GROWN FROM CERTIFIED SEED OF IMPROVED CULTIVARS REGISTERED FOR SALE IN B.C. AND SHALL BE TOLERANT OF DROUGHT CONDITIONS. A MINIMUM OF 150mm DEPTH OF GROWING MEDIUM IS REQUIRED BENEATH TURF AREAS. TURF AREAS SHALL MEET EXISTING GRADES AND HARD SURFACES FLUSH.

6. SITE GRADING AND DRAINAGE WILL ENSURE THAT ALL STRUCTURES HAVE POSITIVE DRAINAGE AND THAT NO WATER OR LOOSE IMPEDIMENTS WILL BE DISCHARGED FROM THE LOT ONTO ADJACENT PUBLIC, COMMON, OR PRIVATE PROPERTIES.

PLANT LIST

BOTANICAL NAME	COMMON NAME	QTY	SIZE/SPACING & REMARKS
TREES			
ACER PALMATUM 'BLOODGOOD'	BLOODGOOD JAPANESE MAPLE	4	6cm CAL.
FAGUS SYLVATICA 'RED OBELISK'	RED OBELISK BEECH	7	6cm CAL.
PICEA PUNGENGS	BLUE SPRUCE	4	6cm CAL.
PLATANUS X ACERIFOLIA 'BLOODGOOD'	BLOODGOOD LONDON PLANE	3	6cm CAL.
SHRUBS			
CORNUS SERICEA 'KELSEYI'	KELSEY DWARF DOGWOOD	48	#02 CONT. /0.75M O.C. SPACING
HYDRANGEA ARBORESCENS 'INVINCIBELLE RUBY'	INVINCIBELLE RUBY HYDRANGEA	19	#02 CONT. /1.2M O.C. SPACING
PHILADELPHUS 'SNOWBELLE'	SNOWBELLE MOCKORANGE	27	#02 CONT. /1.0M O.C. SPACING
RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	7	#02 CONT. /2.0M O.C. SPACING
PERENNIALS, GRASSES & GROUNDCOVERS			
ACHILLEA MILLEFOLIUM 'PINK GRAPEFRUIT'	PINK GAPEFRUIT YARROW	29	#01 CONT. /0.6M O.C. SPACING
CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	13	#01 CONT. /0.9M O.C. SPACING
ECHINACEA PRPUREA 'SOLAR FLARE'	SOLARE FLARE CONEFLOWER	18	#01 CONT. /0.75M O.C. SPACING
HOSTA FORTUNEI 'HYACINTHINA'	HYACINTHINA HOSTA	10	#01 CONT. /1.0M O.C. SPACING
MONARDA DIDYMA 'PANORAMA MIX'	PANORAMA BEEBALM	18	#01 CONT. /0.75M O.C. SPACING
PANICUM VIRGATUM 'ROSTRALHBUSCH'	RED SWITCH GRASS	13	#01 CONT. /0.9M O.C. SPACING
PEROVSKIA ATRIPLICIFOLIA	RUSSIAN SAGE	10	#01 CONT. /1.0M O.C. SPACING

ATTACHMENT C

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City of Kelowna
DEVELOPMENT PLANNING

OUTLAND DESIGN
LANDSCAPE ARCHITECTURE

303-590 KLO Road
Kelowna, BC V1Y 7S2
T (250) 868-9270
www.outlanddesign.ca

N

PROJECT TITLE

472 KNOWLES RD.

Kelowna, BC

DRAWING TITLE

CONCEPTUAL LANDSCAPE PLAN

ISSUED FOR / REVISION		
1	21.05.14	Review
2		
3		
4		
5		

PROJECT NO	21-098
DESIGN BY	KM
DRAWN BY	TR
CHECKED BY	FB
DATE	MAY 14, 2021
SCALE	1:100
PAGE SIZE	24x36

SEAL

BRITISH COLUMBIA SOCIETY OF LANDSCAPE ARCHITECTS REGISTERED MEMBER FIONA BARTON 334

DRAWING NUMBER

L1/2

ISSUED FOR REVIEW ONLY

WATER CONSERVATION CALCULATIONS

LANDSCAPE MAXIMUM WATER BUDGET (WB) = 313 cu.m. / year
ESTIMATED LANDSCAPE WATER USE (WU) = 259 cu.m. / year
WATER BALANCE = 54 cu.m. / year
*REFER ATTACHED IRRIGATION APPLICATION FOR DETAILED CALCULATIONS

IRRIGATION LEGEND

ZONE #1: HIGH EFFICIENCY SUBSURFACE DRIP IRRIGATION FOR MODERATE WATER USE PLANTING AREAS
TOTAL AREA: 105 sq.m.
MICROCLIMATE: NORTHWEST EXPOSURE, PARTIALLY SHADED BY TREES & BUILDING
ESTIMATED ANNUAL WATER USE: 35 cu.m.

ZONE #2: HIGH EFFICIENCY SUBSURFACE DRIP IRRIGATION FOR MODERATE WATER USE PLANTING AREAS
TOTAL AREA: 85 sq.m.
MICROCLIMATE: NORTHWEST EXPOSURE, PARTIALLY SHADED BY TREES & BUILDING
ESTIMATED ANNUAL WATER USE: 28 cu.m.

ZONE #3: HIGH EFFICIENCY SUBSURFACE DRIP IRRIGATION FOR MODERATE WATER USE PLANTING AREAS
TOTAL AREA: 79 sq.m.
MICROCLIMATE: NORTHEAST EXPOSURE, PARTIALLY SHADED BY TREES & BUILDING
ESTIMATED ANNUAL WATER USE: 26 cu.m.

ZONE #4: LOW VOLUME POP-UP SPRAYHEADS FOR TURF AREAS
TOTAL AREA: 90 sq.m.
MICROCLIMATE: NORTHEAST EXPOSURE, PARTIALLY SHADED BY TREES
ESTIMATED ANNUAL WATER USE: 77 cu.m.

ZONE #5: LOW VOLUME POP-UP SPRAYHEADS FOR TURF AREAS
TOTAL AREA: 59 sq.m.
MICROCLIMATE: SOUTHWEST EXPOSURE, PARTIALLY SHADED BY TREES
ESTIMATED ANNUAL WATER USE: 51 cu.m.

ZONE #6: LOW VOLUME POP-UP SPRAYHEADS FOR TURF AREAS
TOTAL AREA: 48 sq.m.
MICROCLIMATE: SOUTHWEST EXPOSURE, PARTIALLY SHADED BY TREES
ESTIMATED ANNUAL WATER USE: 41 cu.m.

IRRIGATION NOTES

1. IRRIGATION PRODUCTS AND INSTALLATION METHODS SHALL MEET OR EXCEED THE REQUIREMENTS OF THE WATER USE REGULATION BYLAW NO. 10480 AND THE SUPPLEMENTARY SPECIFICATIONS IN THE CITY OF KELOWNA BYLAW 7900 (PART 6, SCHEDULE 5).

2. THE IRRIGATION SYSTEM SHALL MEET THE REQUIREMENTS, REGULATIONS, AND BYLAWS OF THE WATER PURVEYOR.

3. THE IRRIGATION SYSTEM SHALL BE EQUIPPED WITH AN APPROVED BACKFLOW PREVENTION DEVICE, WATER METER, AND SHUT OFF VALVE LOCATED OUTSIDE THE BUILDING ACCESSIBLE TO THE CITY.

4. AN APPROVED SMART CONTROLLER SHALL BE INSTALLED. THE IRRIGATION SCHEDULING TIMES SHALL UTILIZE A MAXIMUM ET VALUE OF 7" / MONTH (KELOWNA JULY ET), TAKING INTO CONSIDERATION SOIL TYPE, SLOPE, AND MICROCLIMATE.

5. DRIP LINE AND EMITTERS SHALL INCORPORATE TECHNOLOGY TO LIMIT ROOT INTRUSION.

6. IRRIGATION SLEEVES SHALL BE INSTALLED TO ROUTE IRRIGATION LINES UNDER HARD SURFACES AND FEATURES.

7. IRRIGATION PIPE SHALL BE SIZED TO ALLOW FOR A MAXIMUM FLOW OF 1.5m/SEC.

8. A FLOW SENSOR AND MASTER VALVE SHALL BE CONNECTED TO THE CONTROLLER AND PROGRAMMED TO STOP FLOW TO THE SYSTEM IN CASE OF AN IRRIGATION WATER LEAK.

OUTLAND DESIGN
LANDSCAPE ARCHITECTURE
303-590 KLO Road
Kelowna, BC V1Y 7S2
T (250) 868-9270
www.outlanddesign.ca

PROJECT TITLE
472 KNOWLES RD.
Kelowna, BC

DRAWING TITLE
WATER CONSERVATION/ IRRIGATION PLAN

ISSUED FOR / REVISION		
1	21.05.14	Review
2		
3		
4		
5		

PROJECT NO	21-098
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DRAWING NUMBER
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