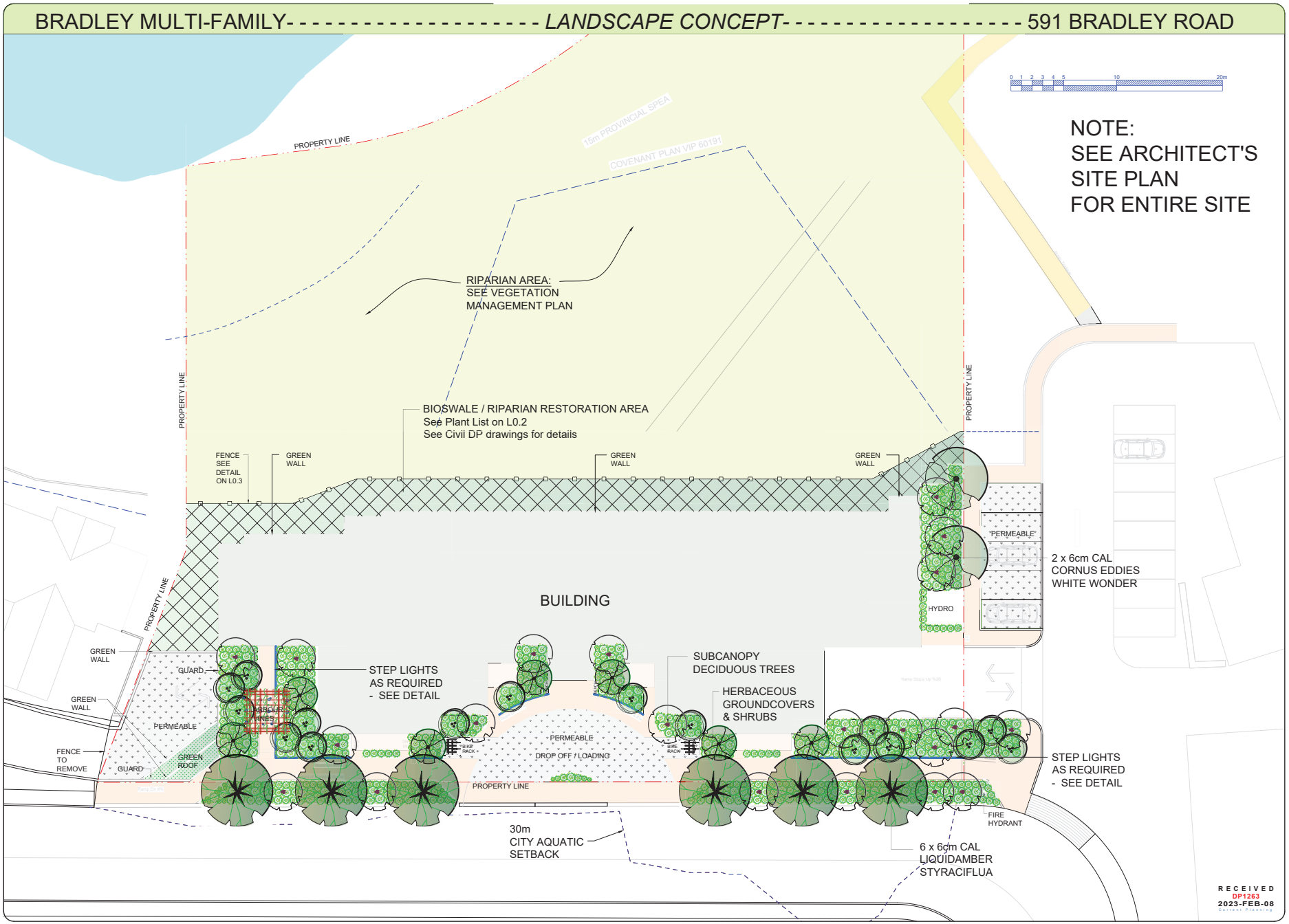
ATTACHMENT H
LANDSCAPE PLAN AND DETAILS



NOTES:
For grading information, see Civil & Architectural drawings.

REVISIONS:
- Issued for DP - 2021Dec23
- Issued for Coordination - 2022Jan13
- Issued for DP - 2022Jan14
- CoN Comments - 2023Jan23

CONSULTANT:
LANDSCAPE ARCHITECT

PROJECT:
591 BRADLEY STREET
NANAIMO, BC

SITE LEGAL DESCRIPTION:
Lot 2. Newcastle Townsite, Section 1, Nanaimo District, Plan VIP60189

SHEET TITLE:
CONCEPTUAL LANDSCAPE PLAN

SCALE:	DATE:
1:200	DEC. 20, 2021
DRAWN: DR	CHECKED: VJD

PROJECT NUMBER: BRADLEY STREET 2021

DRAWING NUMBER: L0.1 - DP

BRADLEY MULTI-FAMILY- *LANDSCAPE CONCEPT*- 591 BRADLEY ROAD

DESIGN RATIONALE

The site is located on the north bank of the Millstone River. The southern part of the property consists of the existing riparian vegetation. Any disturbance due to construction will restored with native species that are already growing on the site.

The design concept for the northern part of the site will be to create a "copse" or small-scale woodland to reflect the native forest on most of the site. Most of this space lies on the parkade with a narrow boulevard lying parallel to Bradley Street

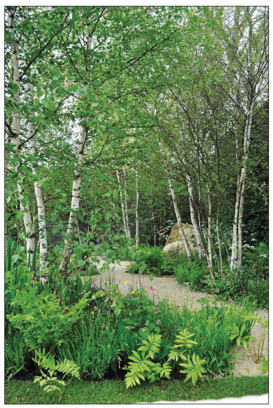
Typically, a woodland planting scheme consists of the canopy, sub-canopy, shrub and herbaceous layer.

Due to the constraints of planting on the parkade below the canopy trees can only be planted along the boulevard area. Within the site small trees/large shrubs with non-aggressive root systems will provide the sub-canopy.

These gardens will provide privacy for the living spaces on the north side, be a wind and dust filter and create habitat for wildlife. The dominant green changes the perception of the space both horizontally and vertically. While the paths that lead residents and visitors through the site are geometric, jogs create places to stop and sit and enjoy the plants. The gardens offer shade, changing interest all year from buds, flowers, leaves, fruit and bark.

The landscape lighting will consist of step lighting in the planter walls that are adjacent to the sidewalks, consistent with the dark sky objectives in OCP. The building entrance will be lit within the canopy.

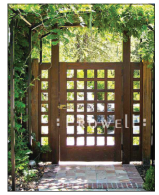
DESIGN ELEMENTS



Woodland plantings

Arbours and Trellises

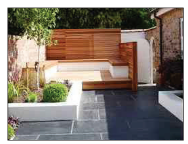
DESIGN DETAILS



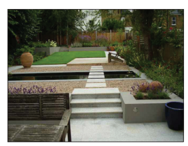
Garden Gate

Vine-covered Walks

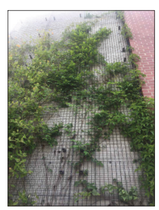
Sheltered Seats



Seats in the Sun



Seatwalls - Low Level Lighting



Green Walls

Step Light Detail

PLANT LISTS

PLANT LIST #1 Upland landscape design

Qty** Replacement trees
Quantities for the remainder of the plan to be determined on Building Permit drawings.

Qty **	Key	Botanical Name	Common Name	Pot Size
		Large Deciduous Trees		
2	Cn	Cornus eddies white wonder	Eddies White Wonder Dogwood	6 cm cal
6	Ls	Liquidamber styraciflua	Sweet gum	6 cm cal
		Small Deciduous Trees		
	Ac	Acer palmatum	Japanese Maple	2.5 m ht
	Ag	Amelanchier grandiflora 'Autumn Brilliance'	Service berry	10 gall
	Ag	A.x grandiflora Robin Hill	Serviceberry	10 gall
	Ae	Aralia elata	Aralia	
	Ck	Cornus kousa	Chinese Dogwood (multistem)	3m. ht
	Cm	Cornus mas	Cornelian cherry	#10
	Hm	Hamamellis mollis	Witch Haz#10el	
	Mt	Malus toringo "Scarlet Brouwers Beauty"	Dwarf Craballey	
	Pv	Prunus virginiana	Chokecherry	
	Sr	Syringa reticulate 'Ivory Silk"	Lilac	
		Evergreen Hedging		
	Tpe	Thuja plicata excelsor	Western Red Cedar	1.5m ht
		Evergreen Shrubs		
	Au	Arbutus unedo	Strawberry Tree	#1
	Aj	Azalea japonica	Japanese Azalea	
	Cr	Ceonothus repens	Spreading Calif. Lilac	#1
	La	Lavendula angustifolia "Hidcote"	English lavender	#1
	Oa	Osmanthus armatus		
	Pm	Pinus mugo mugo	Dwarf Mugo Pine	#1
	Rh	Rhododendron varieties	Rhodos	#2
	Vo	Vaccinium ovatum	Evergreen Huckleberry	#1
		Deciduous Shrubs		
	Al	Amelanchier lamarckii	Serviceberry	#10
	Cs	Cornus alba siberica	Red Twigged Dogwood	#1
	Ea	Euonymous alatus	Winged Euonymus	#1
	Hd	Holodiscus discolor	Ocean Spray	#1
	Plg	Philadelphus lewisii 'Gordianus'	Mock Orange (Coastal)	#1
	Rs	Ribes sanguineum	Red Flowering Currant	#1
		Ground Cover		
	Aj	Ajuga repens	Bugle	#1
	Auu	Arctostaphylos uva-ursi	Kinnikinnick	4 cm
	Es	Epimedium suphoreum	Epimedium	#1
	Gs	Gaultheria shallon	Salal	#1
	Go	Gallium odorata	Sweet Woodruff	#1Go
		Grasses		
	Ce	Carex evergold	Evergold Sedge	#1
	Hk	Hakonechloa macra	Japanese Woodland grass	#1
	Hs	Helictotrichon sempervirens	Blue oat Grass	#1
	Msy	Miscanthus sinensis yaku jima	Maiden Grass	#1
	Pa	Pennisetum alopecuroides	Fountain Grass	#1
	Ms	Miscanthus sinensis var.purpurascens	Orange flame Grass	#1
				#1
		Ferns		#1
	Pmun	Polystichum munitum	Sword Fern	#1
		Perennials		
	Is	Iris sibirica	Siberian Iris	#1
	Nd	Nepeta dropmore blue	Catnip	#1
	Rg	Rudbekia goldstrum	Black Eyed Susan	#1

PLANT LIST #2 Riparian / Bioswale restoration area

Between the building and riparian setback

Qty	Key	Botanical Name	Common Name	Pot Size	Spacing
		Evergreen Shrubs			
60	Gs	Gaultheria shallon	Salal	#1	1m o.c.
60	Ma	Mahonia aquifolium	Tall Oregon Grape	#1	1m o.c.
60	Mn	Mahonia nervosa	Dull Oregon Grape	#1	1m o.c.
60	Vo	Vaccinium ovatum	Evergreen Huckleberry	#1	1m o.c.
		Deciduous Shrubs			
60	Aa	Amelanchier alnifolia	Saskatoon berry	#1	1m o.c.
60	Cs	Cornus alba siberica	Red Twigged Dogwood	#1	1m o.c.
60	Hd	Holodiscus discolor	Ocean Spray	#1	1m o.c.
60	Plg	Philadelphus lewisii 'Gordianus'	Mock Orange (Coastal)	#1	1m o.c.
60	Rs	Ribes sanguineum	Red Flowering Currant	#1	1m o.c.
60	Pmun	Polystichum munitum	Sword Fern	#1	1m o.c.

PLANT LIST #3

Riparian area
Replacement trees planted within existing riparian area
Qty ** Replacement trees

Qty**	Key	Botanical Name	Common Name	Pot Size
		Deciduous Trees		
67	Am	Acer Macrophyllum	Big Leaf Maple	#5 pot
3	Pb	Populus trichocarpa	Black Cottonwood	#5 pot

Total replacement trees required: 70
Total replacement trees planted: 70

Drawing Notes

Riparian Restoration Area:

1.0 600 shrubs to be planted 1m o.c. in groups of ten, under direction of Landscape Architect. See Plant List #2
2.0 All plants and planting to be to BSCLA/BCNTA Landscape Standards, Latest Edition.
3.0 Plants to be irrigated for the first two years.

Riparian Area:

1.0 All invasive plants to be removed:
These include Holly, English Hawthorn, Spurge Laurel and Himalayan Blackberry, English Ivy.
Refer to City of Nanaimo's website: http://nanaimoscience.org/introduced-and-invasive-species/ for removal protocol.
2.0 Plant 70 trees in riparian area, see Plant List #3

RECEIVED
DP1263
2023-FEB-08
Current Planning

NOTES:
For grading information, see Civil & Architectural drawings.

REVISIONS:

Issued for DP - 2021Dec23
Issued for Coordination - 2022Jan13
Issued for DP - 2022Jan14
CoN comments - 2023Jan23

CONSULTANT:

PROJECT:
591 BRADLEY STREET
NANAIMO, BC

SITE LEGAL DESCRIPTION:
Lot 2, Newcastle Townsite, Section 1, Nanaimo District, Plan VIP60189

SHEET TITLE:
LANDSCAPE DESIGN ELEMENTS

SCALE: AS NOTED
DATE: DEC. 20, 2021
DRAWN: DR
CHECKED: VJD
PROJECT NUMBER: BRADLEY STREET 2021
DRAWING NUMBER: L0.2 - DP

Table 1. Total trees within proposed developmert area on 591 Bradley Street

Species	DBH (cm)	Number of trees	Number of trees to be removed
DECIDU0US			
Bigleaf maple	60 mm to 300 mn	37	37
Bigleaf maple	301 mm to 600 rrm	15	15
Bigleaf maple	> 600 mm	1	0
Black cottonwood	60 mm to 300 mn	3	3
English holly	60 mm to 300 mn	4	4
Common hawthorn	60 mm to 300 mn	3	3
Cherry	60 mm to 300 mn	1	1
Total:		64	63

The locations of all trees within the proposed area of development on the property are indicated in Table 2 with the Significant bigleaf maple high-lighted in yellow in Table 2 and on Figure 2.

TABLES 1, 2 & 4 AND AIR PHOTO FROM TRPA PREPARED BY TOTH AND ASSOCIATES; TREE SURVEY CONDUCTED ON FEBRUARY 14, 2018

Table 2. Tree locations within the development footprint on 591 Bradley Street

Species Codes: Mb = Bigleaf Maple, Cb = Black Cottonwood, Dr = Red Alder, He = English Holly, Vs= Sweet Cherry, Hc = Common Hawthorn

Tree	Lat / Long						Trees > 30 cm	Trees <30 cm		Significant	Specie	Non	Species	Comment
Tag	Coordinates						Mb	Mb	Cb	Tree		Native		
897	49	10	30.247	-123	57	18.058	1							Multi-stem, suckered from stump
898	49	10	29.883	-123	57	17.849	1					2	He, Vs	
899	49	10	30.142	-123	57	17.572	1					1	He	
900	49	10	30.217	-123	57	17.54	1					1	He	
901	49	10	29.85	-123	57	17.564	1							
902	49	10	29.528	-123	57	17.722		1						
903	49	10	29.449	-123	57	17.869		1				2	Hc	
904	49	10	29.518	-123	57	18.059	3							
905	49	10	29.291	-123	57	17.669		2		1	Mb	1	He	
906	49	10	29.711	-123	57	17.333		2						
907	49	10	29.529	-123	57	17.526		2						
908	49	10	29.644	-123	57	17.261		1				1	Hc	
909	49	10	29.397	-123	57	17.565	1							
912	49	10	29.477	-123	57	17.077	1							
913	49	10	29.615	-123	57	17.045		1						
914	49	10	29.784	-123	57	16.917	1							
915	49	10	29.824	-123	57	16.954	1							
916	49	10	30.032	-123	57	16.854	1	6						
917	49	10	29.892	-123	57	16.647		1	1					
918	49	10	29.69	-123	57	16.745		1						
919	49	10	29.481	-123	57	16.717		1						
920	49	10	29.423	-123	57	16.513		1						
921	49	10	29.522	-123	57	16.372		2						
922	49	10	29.759	-123	57	16.244		2						
923	49	10	29.964	-123	57	16.208		1						
924	49	10	30.149	-123	57	15.987	1							
925	49	10	30.15	-123	57	15.671		1						
926	49	10	30.191	-123	57	15.049		2						
927	49	10	29.404	-123	57	15.293	1							
928	49	10	29.339	-123	57	15.372		1						
929	49	10	29.626	-123	57	15.91			2					
930	49	10	29.655	-123	57	16.074		1						
931	49	10	29.696	-123	57	16.274		1						
932	49	10	29.52	-123	57	16.421		1						
933	49	10	29.457	-123	57	16.248		1						
934	49	10	29.393	-123	57	15.979		2						
937	49	10	29.358	-123	57	16.516		2						
Total Trees:					**64**	**Subtotals:**	**15**	**37**	**3**	**1**		**8**		

Figure 3. Proposed development plan overlaid on August 2016 airphoto with tree locations

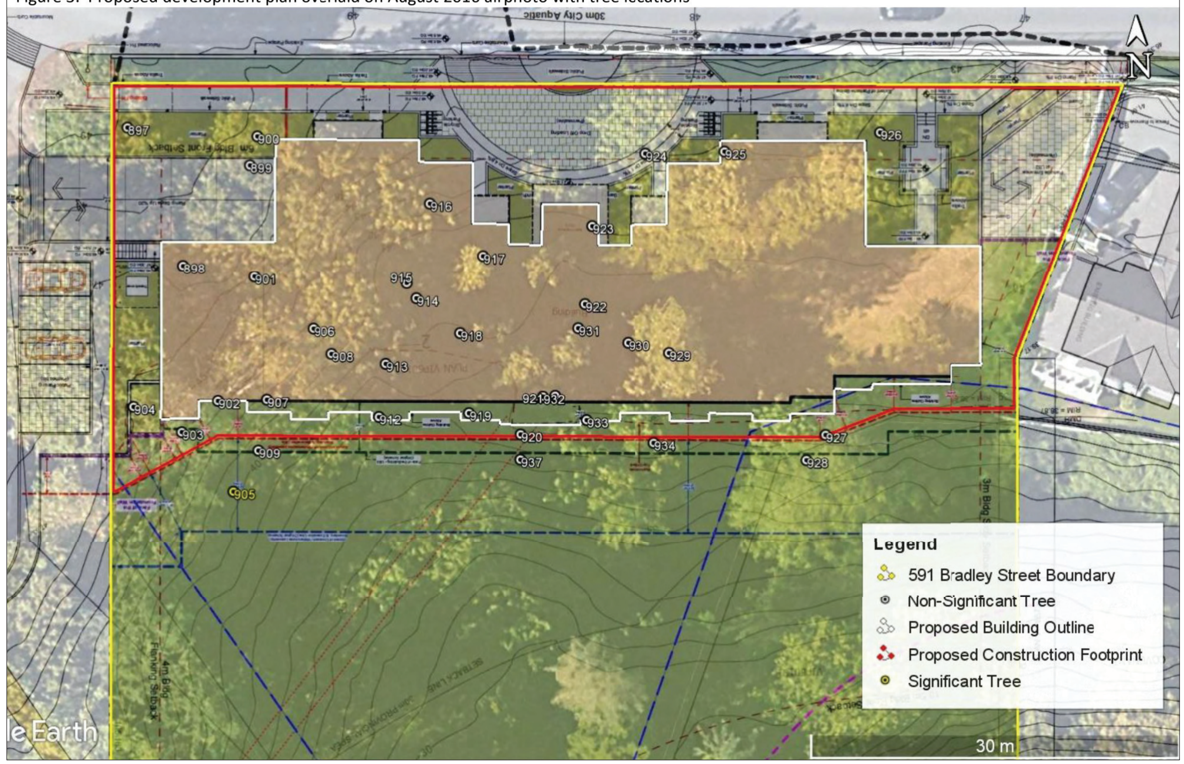
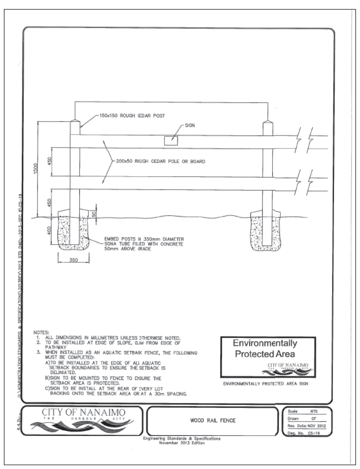


Table 4. Number of Replacement Trees according to proposed Schedule G

Species	DBH (cm)	Number of trees to be removed	Number of replacement trees	Diameter (cm) of Deciduous Stock or Height (m) of Coniferous Stock
DECIDUOUS				
Bigleaf maple	60 mm to 300 mm	37	37	(60 mm min dbh)
Bigleaf maple	301 mm to 600 mm	15	30	(60 mm min dbh)
Black cottonwood	60 mm to 300 mm	3	3	(60 mm min dbh)
Total: (Non-native trees not included)		55	70	

*Note: as the replacement number exceeds the maximum number required (100 trees/ha), the replacement requirements will most likely be based on the area of the property (0.56 ha x 100 trees / ha = 56 replacement trees.



NOTES:

1. Tree survey and removal information from:

   Toth and Associates
   RAR Assessment and Tree Survey,
   conducted on Feb. 14, 2018

REVISIONS:

Issued for DP - 2021Dec23
Issued for Coordination - 2022Jan13
Issued for DP - 2022Jan14
CoN comments - 2023Jan23

CONSULTANT:

LANDSCAPE**ARCHITECT**
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PROJECT:

591 BRADLEY STREET NANAIMO, BC

SITE LEGAL DESCRIPTION:

Lot 2. Newcastle Townsite, Section 1, Nanaimo District, Plan VIP60189

SHEET TITLE:

TREE MANAGEMENT PLAN

RECEIVED
DP1263
2023-FEB-09
Current Planning

SCALE:	DATE:
AS NOTED	DEC. 20, 2021
DRAWN:	CHECKED:
DR	VJD

PROJECT NUMBER:
BRADLEY STREET 2021

DRAWING NUMBER:
L0.3 - TMP