

Project No: 110.14

St. Rose of Lima Church

P. O. Box 566

Sooke, BC V8Z 1H5

Attention: Bruce Lemaire-Ellmore & Bill Hadikin

Date: December 17th, 2010

Re: St. Rose of Lima Church at 2192 Townsend Road – DP Application Material

Dear Mr. Lemaire-Ellmore and Mr. Hadikin,

The following information has been prepared to address the Development Permit application requirements for your project on Townsend Road in the District of Sooke that relate to landscape and site design features. This letter includes three primary components:

- 1) site landscape concept and site grading concept plan attachments that address specific site planning and design submission requirements;
- 2) A costing spreadsheet intended to provide the District of Sooke with necessary landscape cost information to secure bonding; and
- 3) The rationale for an internal trail option (as shown on the landscape concept plan) in exchange of a road edge pathway along the subject property frontage on Townsend Road, accompanied by proposed design details for the trail.

The following materials are included as attachments:

- 1) **Landscape Concept Plan:** The site landscape concept plan shows the general intent of the landscape design, including proposed locations, scale and character of the following:
 - Rain gardens for rain water management;
 - Ornamental tree & shrub plantings;
 - Buffer planting along residential properties;
 - Proposed trail location;
 - Drainage course alterations and riparian setbacks;
 - Outdoor congregation areas and pedestrian circulation;
 - Rough grading; and,
 - Signage location at site entrance.
- 2) **Grading Concept Plan:** The site grading concept plan shows the location of rain gardens and surface drainage features. It is expected that both the buildings and parking area can be managed entirely through surface rain water management features from a volume perspective, and that these surface features will also perform to treat runoff water quality. Murdoch de Greeff Inc. has considerable experience in the Victoria area using surface rain water management features to good effect in the landscape.

- 3) **Costing Spreadsheet:** The costing spreadsheet provides the District of Sooke and St. Rose of Lima with an estimate of landscape construction costs for the purposes of landscape bonding and project planning respectively.

In addition to the attached landscape concept plan, rain water management plan and costing spreadsheet, we have prepared the following rationale and proposed design details for the pedestrian trail that is intended to serve as an alternative to a road edge pathway along Townsend Road:

- 1) **Rationale – pedestrian trail:** As part of the Rose of St. Lima Church's Rezoning and DP applications, the District of Sooke has requested, as per the community's trails network plan, that the church construct a path along the Townsend Road frontage of their property. Rather than locate this pathway along the road edge (ie: a concrete curb-edge sidewalk) and within the Townsend Road allowance, we recommend locating the path through the forest within the subject property.

There are two driving factors that have influenced our recommendation to pursue an internal pedestrian trail in place of road side pathway. First, a road side pathway would require increasing the width of the shoulder for the full length of the property frontage along Townsend Road. This would require the addition of a significant volume of fill material, result in disturbance to a drainage course, and necessitate the removal of significant roadside vegetation. The roadside vegetation that would be lost includes up to 14 mature trees, the loss of which would change the character and feel of the property frontage and Townsend Road in a manner counter to the design intent of the overall project (ie: "the church in the woods" concept). Second, we believe that an internal trail would achieve similar ends as a road side pathway by providing safe pedestrian circulation, but would also result in a more pleasing user experience. It is our recommendation that a well designed and built internal trail be pursued along the subject property's western edge (along Townsend Road) as part of this project, instead of a road side pathway.

The following design details are recommended for the internal trail and are included to demonstrate a willingness to construct the internal trail to a high standard.

2) **Proposed Design Details – pedestrian trail:**

- a. Trail Width = 1.8m finished tread surface width.
- b. Vegetation Clear Zone – Sides = 0.5m both sides.
- c. Vegetation Clear Zone – Above = 3m.
- d. Maximum Slope = <8%.
- e. R.O.W. Width (Proposed S.R.W.) = 4m.
- f. Drainage Course Crossing = culvert array (design to be coordinated by Landscape Architect with project Biologist).

- g. Trail Cross Slope = Min. 2% (crown typical).
- h. Trail Drainage = Hand-formed drainage swales (and 4" perforated pipe as required) placed to prevent accumulation of water adjacent to trail edge; minimize long and straight slopes where water can accumulate on surface and cause erosion; fine grading to be reviewed in field by Landscape Architect.
- i. Base Preparation = Min. 150mm approved road base.
- j. Topping Material = Min. 50mm Pathway Blend (Crushed Rock); Topping Material Specification:

Pathway Blend: Sieve Test Specification (Max. Min. Tolerances)							
Sieve Opening		Percent Passing Sieve					SPEC. CHECK
US STANDARD	METRIC (mm)	WEIGHT RETAINED	PERCENT RETAINED	TOTAL PERCENT PASSING	(SPEC.) MIN.*	(SPEC.) MAX.*	
>1/2"	>12.5				0.0%	0.0%	
3/8"	9.5				0.0%	0.0%	
1/4"	6.3				5.0%	15.0%	
No. 4	4.75				5.0%	15.0%	
No. 8	2.36				10.0%	25.0%	
No. 16	1.18				5.0%	15.0%	
No. 30	0.600				5.0%	10.0%	
No. 50	0.300				2.0%	7.0%	
No. 100	0.150				2.0%	7.0%	
No. 200	0.075				2.0%	7.0%	
PAN	0.0				2.0%	12.0%	
TOTAL:							
* Minimum percentage total fines passing 0.6mm sieve = 18%							
* Maximum percentage total fines passing 0.6mm sieve = 30%							

- 3) **Rain Water Management (Rain Gardens and Landscape-based Drainage):** We have designed a rain water management system that employs the use of rain gardens to manage surface runoff. In addition to providing a measurable storage volume, rain gardens have the added benefit of cleaning contaminated water as it passes through soil. In this respect, the rain gardens will provide an effective water treatment buffer between the drainage channel and the gravel surface parking lot (likely the surface to generate the most pollution on this project). Cleaner roof runoff water will also be directed to rain gardens to buffer runoff

volume and slow the rate of water flow leaving the site. The drainage system design will be coordinated with the project Civil Engineer.

- 4) **Native Species Plantings:** Where possible, native plants will be used in landscape design. Murdoch de Greeff Inc. has considerable experience in working with a native plant palette and we have found that significant benefits can be accrued through their use, including irrigation reduction and urban wildlife habitat enhancement. However, we have found that it is important to recognize that there are limitations to the use of native plants in certain circumstances, and typically employ some cultivated or ornamental plant species in exacting landscape applications, such as rain gardens and ornamental or high visibility accent plantings.

We hope that the information provided in this letter helps to clarify design intent for your Townsend Road church project. Please do not hesitate to contact us if you have further questions regarding this letter or the attachments.

Best Regards,



Paul de Greeff
Registered Landscape Architect (RLA)

Cc: Patrick Lucey, Aqua-tex Consulting
Peter Yohannkecht, HCMA
Jan Hoel, Hoel Engineering Ltd.

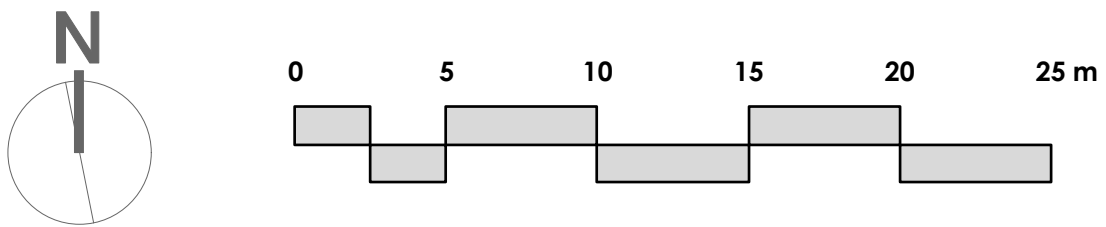
Attachments: Landscape Concept Plan
Grading Concept Plan
Costing Spreadsheet

ptd/PTd



PLANT LIST			
QTY	SYMBOL	PLANT TYPE and suggested plants	
13		Trees Suggested species: Acer griseum, Acer macrophyllum, Magnolia kobus, Picea omorika, Thuja plicata	4 - 5 cm caliper
25		Trees - Naturalized planting Suggested species: Abies grandis, Acer glabrum var. douglasii, Pseudotsuga menziesii, Tsuga heterophylla	2 m height, b+b
211		Ornamental Shrubs Suggested species: Calycanthus occidentalis, Cornus canadensis, Gautheria procumbens, Mahonia nervosa, Ranunculus mucronata, Prostanthera cuneata, Rhododendron, Spiraea 'Little Princess', Prostanthera cuneata, Viburnum plicatum tomentosum 'Summer Snowflake'	#2 / #3 pot
1691		Rain Garden Plants Suggested species: Carex obnupta, Cornus kelseyii, Juncus 'Carmen's Grey', Myrica gale	72 plug
250		Naturalized Shrubs Suggested species: Cornus sericea, Mahonia nervosa, Myrica gale, Oemleria cerasiformis, Oxalis oregana, Polystichum munitum, Rubus parviflorus, Rubus spectabilis, Spiraea douglasii, Symphoricarpos alba	#2 / #1 pot
200		Naturalized Buffer Plants Suggested species: Cornus sericea, Holodiscus discolor, Oemleria cerasiformis, Philadelphus lewisii, Ribes sanguineum, Symphoricarpos alba	#2 / #1 pot

LEGEND		
---	Property line	
---	Limit of disturbance, all native vegetation outside this boundary to be retained. Orange snow fencing to be installed, along limit of disturbance, and maintained in good condition throughout construction.	
	Existing tree to be retained	
	Existing tree to be removed	
	Ornamental Shrub Planting	
	Rain Garden Planting / Bioswale	
	Cast in Place Concrete Paving	
	Crushed Aggregate - Parking Area	
	Crusher Fines Aggregate Walkway	
	Lawn Gathering Area	
	Deck, wood grain appearance	
	Dry-stack boulder retaining wall	
	Flow spreader / dissipator	
	Bollard Light, 5 total	
	Existing High Water Mark	
	Proposed High Water Mark	
	SPEA; ZOS - shade; ZOS - leaf and litter fall; ZOS - large woody debris; (10 m setback from proposed high water mark)	
	Riparian Assessment Area boundary (30 m setback from existing high water mark)	



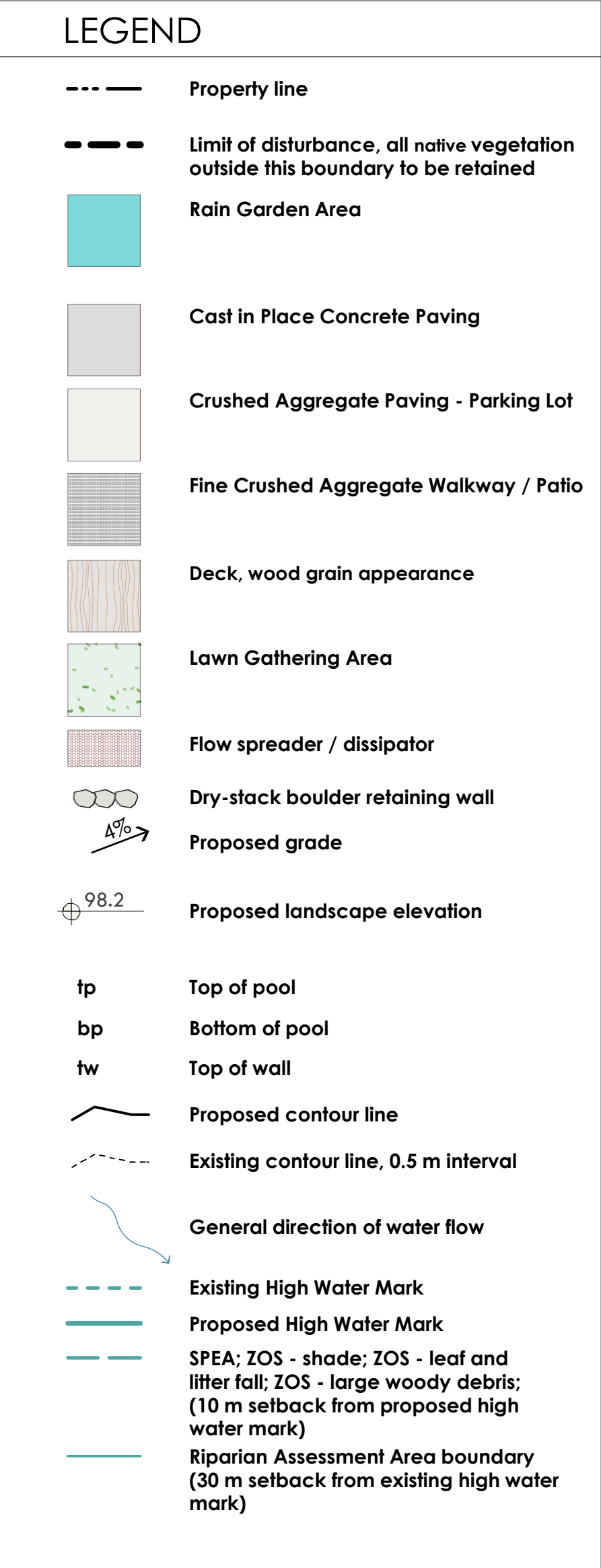
not for construction

1	issued for DP	10.12.17
rev no	description	date

Murdoch de Greeff INC
Landscape Planning & Design
205-550 Duplein Road
Victoria, BC V8B 1C1
Phone: 250.412.2891
Fax: 250.412.2892

Base information recieved from HCMA Architecture, November 23rd, 2010.

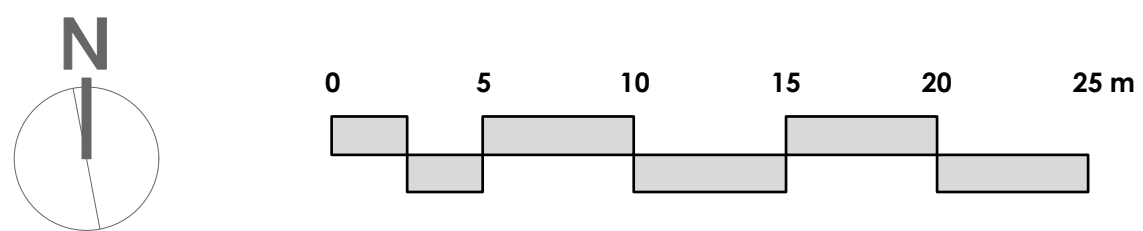
client	St. Rose of Lima 2192 Townsend Rd Sooke, BC V9Z 0H4
project	St. Rose of Lima Church Sooke, BC
sheet title	Landscape Plan
project no.	110.14
date	10.12.17
scale	1:250
drawn by	ml/pgd
checked by	SM/PdG
revision no.	sheet no.
1	L1.01



Catchment Area	Contributing Roof Area (sq.m.)	Contributing Parking and Walkway Area (sq.m.)	Rain Garden Area (sq.m.)	Total Storage (cu m)
1	150	1194	76	33
2		411	15	7
3	159		8	4
4	103	10	5	2
total	411	1615	104	46

Assumptions

- 1 Rain Garden design based on 200 mm live ponding plus 600 mm of sand/compost rain garden growing medium (20% void space) and 600 mm of scarified subgrade (20% void space).
- 2 Storage Volume of Rain Garden per sq. m. = 0.44 cu. m.



not for construction

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Base information recieved
from HCMA Architecture,
November 23rd, 2010.

client
St. Rose of Lima
2192 Townsend Rd
Sooke, BC V9Z 0H4

project	St. Rose of Lima Church Sooke, BC
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sheet title

Grading Plan

project no.	110.14
date	10.12.17
scale	1:250
drawn by	ml/pdg
checked by	SM/PdG
revision no.	sheet no.

1 L2.01

St. Rose of Lima Church
Sooke, BC

File: 110.14

BUDGET ESTIMATE - LANDSCAPE

(See Landscape Plan L1.01)

Landscape Costs (installed)

	Qty.	Size	Unit Cost	Cost
Trees - naturalized planting	25	2m, b&b	\$ 100.00	\$ 2,500.00
Trees	13	4.0-5.0cm cal, b&b	\$ 250.00	\$ 3,250.00
Ornamental Shrub planting	211	#2/#3 pot	\$ 14.00	\$ 2,954.00
Naturalized Shrub planting	250	#1/#2 pot	\$ 14.00	\$ 3,500.00
Naturalized Buffer planting	200	#1/#2 pot	\$ 14.00	\$ 2,800.00
Rain Garden planting	1691	plug - 72/tray	\$ 2.00	\$ 3,382.00
Growing Medium	256	cu.m.	\$ 60.00	\$ 15,330.25
Compost Mulch	92	cu.m.	\$ 60.00	\$ 5,526.98
Sand bed and drainage works (lawn area)	1	Lump Sum	\$ 2,000.00	\$ 2,000.00
Irrigation	1	Lump Sum	\$ 5,000.00	\$ 5,000.00
Trail Lighting	5	Bollard	\$ 950.00	\$ 4,750.00
Gravel trail and building surround pathways	296	sq.m.	\$ 20.00	\$ 5,920.00
Total				\$ 56,913.23