

APPENDIX B:

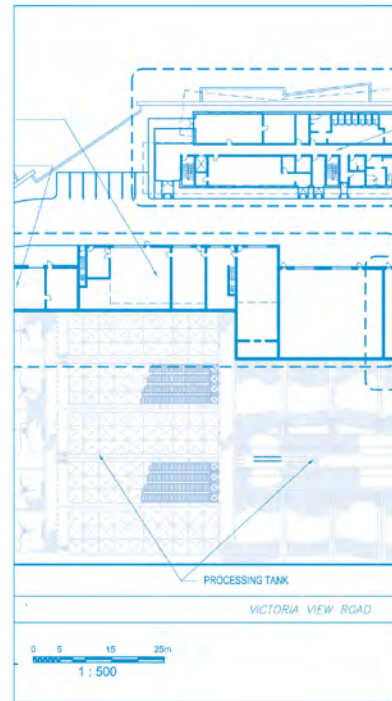
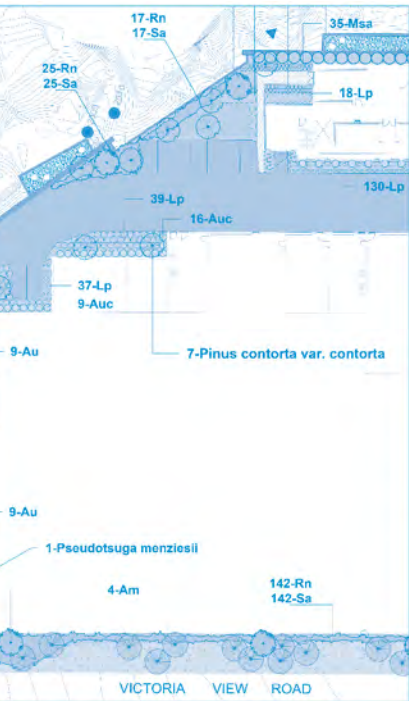
Design Guidelines (including Landscape Plan & Building Elevations)

Prepared by CitySpaces Consulting
Ltd



Design

Guidelines



McLoughlin Point Wastewater Treatment Plant

Prepared for the
Capital Regional District

January 2013

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Site Plans, Elevations, Cross Sections and Perspectives by Stantec Consulting Ltd.
 Landscape Plans by Murdoch de Greeff Inc.

Purpose

The purpose of these Design Guidelines is to provide a design framework for the final building specifications to construct the McLoughlin Point Wastewater Treatment Plant. The guidelines establish a standard and framework for the final functional program and building design.

Guiding Principles

Key organizational principles guiding functionality and building design are:

- Be respectful of view impacts.
- Minimize foreshore disturbance to the extent possible.
- Respect and recognize working harbour principles in the design.
- Maintain a profile that blends with the landscape rather than stands out, while meeting the functional requirement of the use.
- Design the Operations Facility to meet or exceed LEED® Silver and the Esquimalt Green Building and Development Policy.
- Design to mitigate off-site impacts relating to odour and noise.
- Design to address external risk assessment factors, relating to significant seismic and tsunami events including post tsunami wave surge.
- As a brownfield site, improve the biotic environment through planting of native materials compatible with an exposed marine environment.

View Considerations

As waterfront property, view impacts are an important design consideration. Investigations were conducted to determine significant views. Given the topography and relationship to Department of National Defence lands, the site is not seen from vantage points within the Township of Esquimalt.

Building and design will be evaluated at the following locations:

- Shoal Point Coast Guard
- Ogden Point Cruise Ship Berth
- Songhees Walkway at Cooperage Place

Marine Shoreline Character Design Considerations

- Buildings should be sited in a manner that preserves the integrity of the foreshore.
- Building form as seen from the water should respect and reflect the angularity of the rocky shoreline, applying stepped rooflines, projected walls and/or building elements and articulation of structures.
- Tsunami and associated catastrophic event protection wall mitigation elements should relate to the character of the rocky shoreline where possible.



Massing, Siting & Height (Scale) of Buildings & Structures

- Building heights should not exceed 15 m from the current grades.
- Building masses should be divided into multiple elements so that the facility does not appear to be one or two simple, large blocks but rather an assembly of smaller components.
- Building heights should vary; generally lower toward the north, east and south edges of the site, and higher in the centre.
- The site is exposed to strong wind and wind-driven rain. Building forms should be designed in response to the exposed weather and sea conditions.
- Given the relationship of the site to its surroundings, buffering in the way of setbacks from property lines is not a consideration, subject to screening.

Architectural Elements of Buildings and Structures

- The design aesthetics of new structures should be optimized through high quality industrial materials.
- The overall design, colours and detailing should minimize obtrusiveness and the visual impact of the structure by using low profile detailing.
- Building materials should be selected in response to the exposed climatic conditions.
- Architectural colours and palette should respect and be derived from the marine shoreline character, topography and vegetation; i.e. using natural colours.
- Recognize the potential for damage from large vehicles and equipment by specifying durable wall materials, such as cast-in-place concrete.

Roof Form, Exterior Walls and Exterior Finishes

- Roofs angled at a greater than 2:12 slope should be clad in an architectural finish such as standing seam metal roofing.
- Building materials need to be durable in the high-salinity environment of wind-driven water, including concrete and pre-cast concrete, metal and concrete board or panelling, and treated steel.
- Structures should contain provisions to ensure a high standard of exterior maintenance for the life of the structures.
- Exterior details, such as railings, roof edging and projections should be made of aluminum, stainless steel or other durable metals and wood, and properly flashed and detailed as appropriate for the exposed weather conditions.
- High performance glazing capable of providing natural ventilation where appropriate. Glazing system(s) to be thermally broken and suitable for exposed marine environment.
- Doors, overhead doors and other closures, including hatches, grilles and louvres, to be durable, thermally resistant and finished suitably for marine environment.

Lighting

- Ensure that light fixtures provide no more than the minimum lighting needed for the intended purpose, not to exceed those recommended by the *Illuminating Engineering Society for North America Recommended Practice Manual: Lighting for Exterior Environments*.
- Specify shields for light fixtures to reduce impacts on other properties and especially as seen from the designated viewpoints.
- Direct all lighting downward and not into the night sky.
- Specify energy efficient fixtures and consistent colour for all lighting.

Landscape Elements

The design concept is based on the site conditions, views from the harbour, and a windswept rocky shoreline.

- Use plant species that are hardy to harsh, salt spray environments and locate plants such that the wind's forces shape their future form.
- The retaining wall system should be designed to reflect the rugged and rough-textured surface of boulder and exposed-rock shorelines.
- Screen outdoor storage and parking areas through the use of berms, fences, landscaping and/or solid noise-absorbing barriers;
- Articulate the perimeter retaining wall with tiered and staggered protrusions and recesses;
- Roughen the perimeter retaining wall with board-formed recesses.

Guidelines for Seawall and Walls

The retaining wall system should be designed to reflect the rugged and rough-textured surface of the exposed-rock shorelines. The mass of the wall (combined height and width) will need to be broken to reduce visual impacts to neighbouring communities and water/air traffic. Features that can be used to achieve this include board form relief, wall projections, vertical elements and wall protrusions.

Walls are divided into two types: primary walls, which are prominent perimeter retaining walls and feature walls within the Plant; and secondary walls, which serve as infill between the primary walls.

- Walls must not protrude beyond the High Water Mark (HWM, 1.804 m geodetic) with the exception of the identified inlet (see Civil drawings for location). Proponents are encouraged to minimize the amount of filling of areas below the HWM and will be responsible for obtaining regulatory approvals.
- The site must be protected by a continuous Tsunami protection wall with a top elevation of not less than 6.500 m.
- Minimize the appearance of wall heights greater than 4.0 m by placing step walls between the Tsunami protection wall and the High Water Mark. .



- Step walls when the distance between the high water mark (1.804 m) and a road edge or building face is greater than 2.0 m.
- Finish all surfaces of the primary perimeter retaining walls with random 50 x 100 mm board-formed recesses. Space vertical recesses randomly, varying spacing between 200 mm and 600 mm. Provide a smooth finish for all secondary walls.
- Maximum run of horizontal wall face to be 20 m, at which time a 90 degree bend/step in the wall of a minimum 600 mm must occur.
- Provide a minimum 1 m setback of the perimeter retaining walls from the existing natural boundary (waterside property line) to avoid construction below HWM.

Guidelines for Planting — General

Plants will be limited in distribution due to salt spray and wind exposure, particularly on the south side of the site. Lawn area should be limited or eliminated entirely to reduce site maintenance costs. Mature plant heights must be at least 60 cm tall for all planted areas to shade undesirable weed species. Planting densities must ensure that vegetated areas will have 100% plant coverage after two full growing seasons. Planted areas will be irrigated with a high water efficiency irrigation system. Plants should also be drought tolerant and require minimal water after the 2 year establishment period.

Guidelines for Planting along Seawalls

Plants will be limited in distribution due to salt spray. Species selection will be restricted by salt spray and wind. Lawn area should be limited or eliminated entirely to reduce site maintenance costs. Do not situate trees less than 10 m of the south facing wall as this will be a high wind velocity area.

The following species are considered appropriate for use along the waterfront:

- *Pinus contorta* var. *Contorta* (Shore Pine)
- *Arbutus menziesii* (Pacific Madrone)
- *Rosa nutkana* (Nootka Rose)
- *Symphoricarpos albus* (Snowberry)
- *Arbutus unedo* (Strawberry Tree)
- *Myrica californica* (Sweet Gale)
- *Lonicera pileata* (Privet Honeysuckle)
- *Mahonia aquifolium* (Oregon Grape)

Guidelines for Planting Adjacent to Building Entrances

Planting around the building entrances can be more design driven and should complement the building architecture.



Guidelines for Screening on Victoria View Road

Introduce screening along the road frontage and adjacent property lines to break up the mass of continuous concrete walls. Screening will consist mostly of coniferous tree plantings. Cluster trees to provide clear 8 m wide gaps to allow for future maintenance access (from a crane).

A continuous shrub border will be required at the base of the wall that is 1.8 m wide to screen the lower retaining wall and reduce the risk of vandalism. Shrubs in this area are to be native only. The exception is adjacent to the two entrances where lower evergreen screening is desirable.

In situations with larger retaining walls, vines can be considered, but must be supported by a cable system.

The following species are considered appropriate for use in screening applications:

- *Pseudotsuga menziesii* (Douglas Fir);
- *Rosa nutkana* (Nootka Rose);
- *Symphoricarpus albus* (Snowberry); and
- *Parthenocissus tricuspidata* (Boston Ivy).

Stormwater Management

The following stormwater management measures should be considered for the site:

- Storm water from the internal roadways and parking areas will be treated prior to discharge. Treatment of roadway and parking run-off can come in the form of:
 - Bioswales adjacent to the parking and roadways c/w raised overflow basins connected to the storm drain system.
 - Aqua pave permeable paving complete with the Inhibitex and under drain system in discrete areas where direction of run-off to a bioswale is not feasible.
 - The use of oil interceptors; or
 - A combination of these.
- A conventional storm drain will be installed, with outfall to the ocean. All drainage from the site will eventually be discharged through this pipe.

The buildings will connect directly to the piped storm drain system. Building drainage will bypass the treatment system; however, a stormceptor, or similar end of pipe treatment device could be installed if treatment of roof drainage is required.

Parking and Services

- Design should minimize the visual impact of vehicle parking as seen from the designated viewpoints
- Parking to be provided as required for visitors, plant and system operation staff and CRD maintenance vehicles.

Signage

- Limit signage to directional and identification signage as required for way-finding.





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LEGEND

Property Line

Property Line

Hardscape

Cast in Place Concrete Paving

Medium Broom Finish

Asphalt Paving

Permeable Paving

Alabaster Concrete Aggregate

Pattern: 90 deg. Herringbone

Gravel Mulch

25 mm crush 150 depth over Landscape Fabric

Rock Mulch

200-300 mm Angular Rock over Landscape Fabric

Softscape

Shrub/Tree Planting

Naturalized Grass

Vegetated Rain Garden

Landscape Boulder

(15 in total)

type: Angular Rock 900 mm dia. 1/3 buried in substrate

source:

Metal Fence

(1m. in total)

source:

VICTORIA HARBOUR

Rain Garden Detail

Rain Garden Images

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200 - 524 Cuddehnet Road
Victoria, BC V8L 1G1

Phone: 250.412.2891
Fax: 250.412.2892

client
Capital Regional District
625 Fisgard Street
Victoria, British Columbia
V8W 1R7

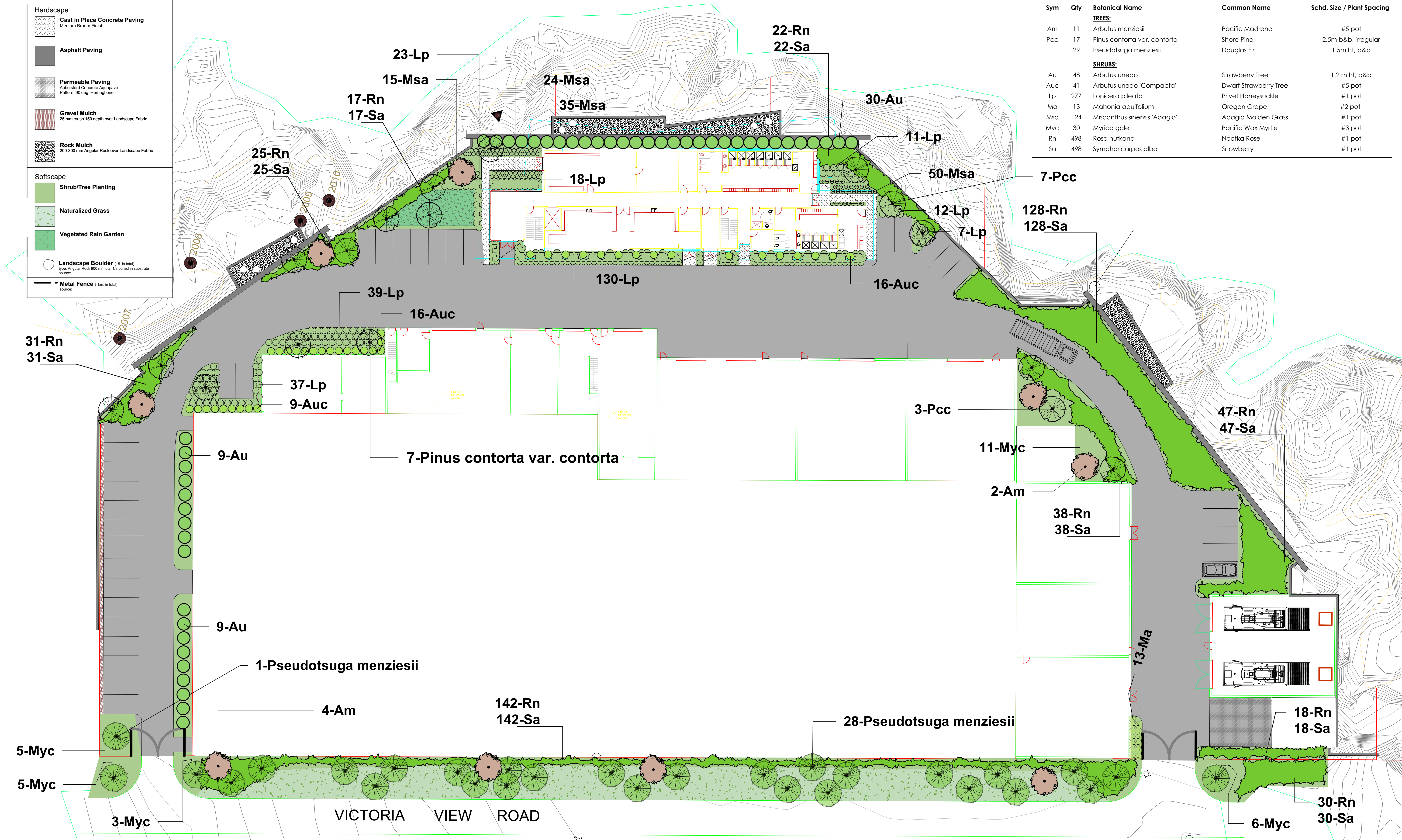
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Sewage Treatment Plant
Esquimalt, BC

sheet title
Landscape Plan

project no.	112.25
scale	1:250
drawn by	SM/ML
checked by	SM/PdG
revision no.	sheet no.

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VICTORIA HARBOUR



**PRELIMINARY
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200 - 524 Cuduthel Road
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Phone: 250.412-2891
Fax: 250.412-2892

client

Capital Regional District
625 Fisgard Street
Victoria, British Columbia
V8W 1R7

project

Sewage Treatment Plant
Esquimalt, BC

sheet title

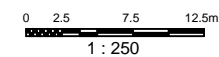
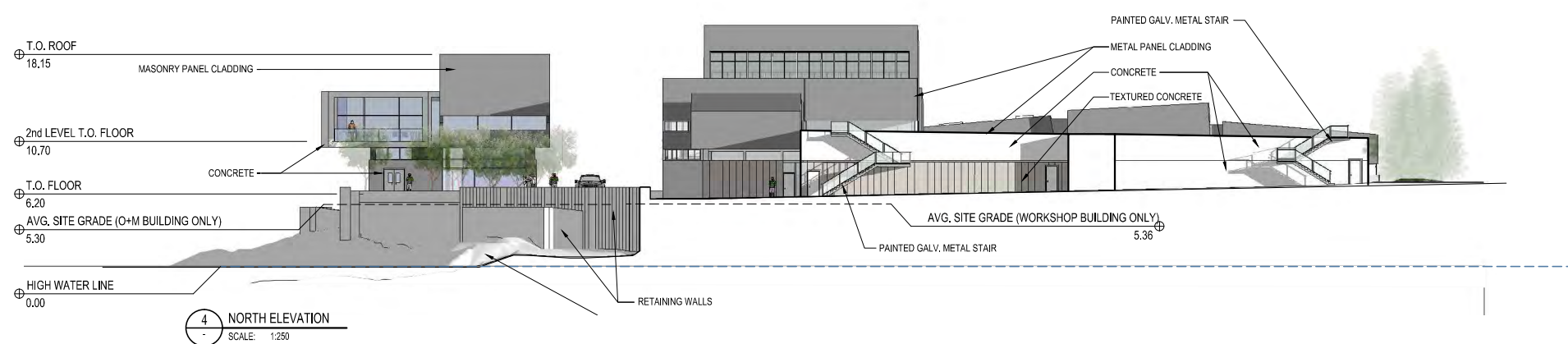
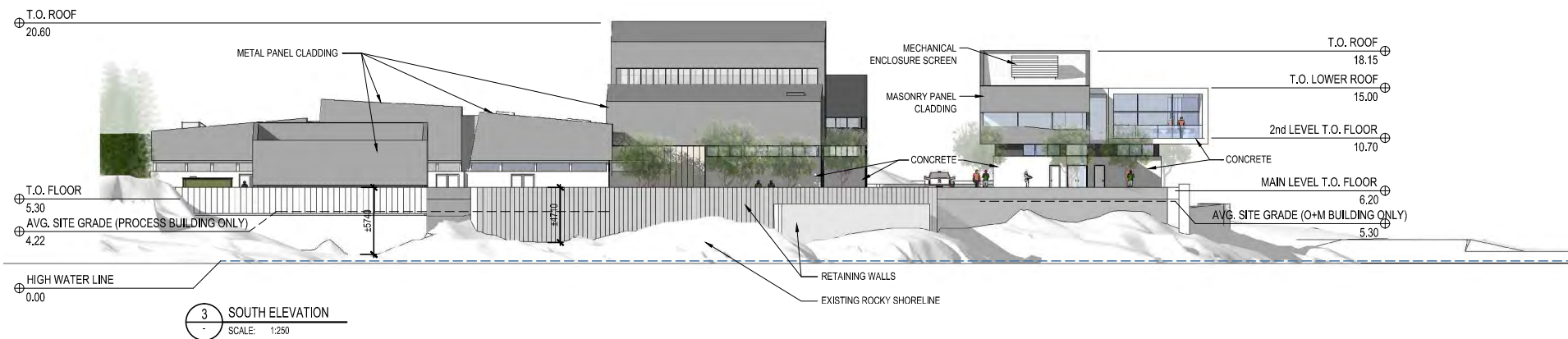
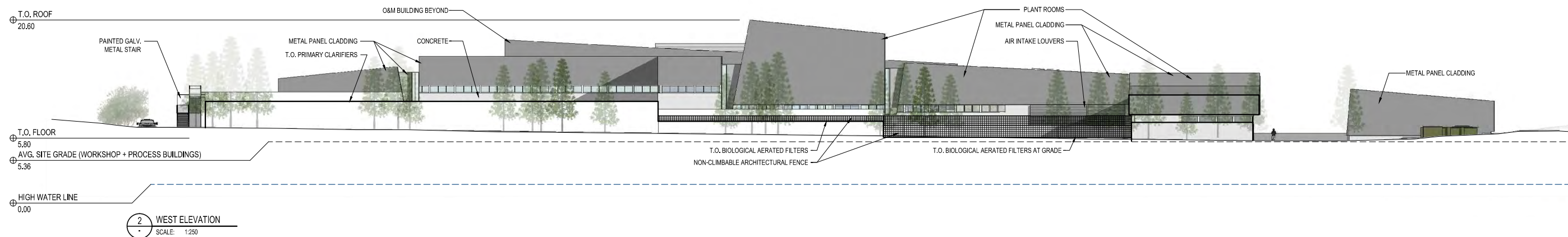
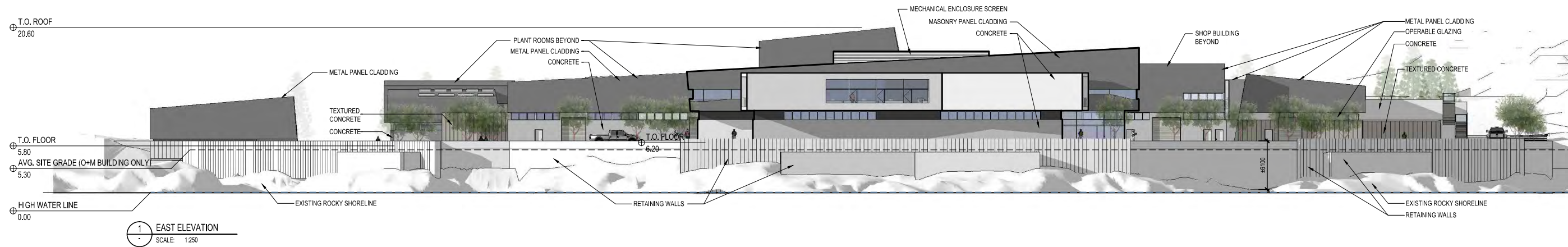
Planting Plan

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checked by	SM/PdG
revision no.	sheet no.

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<i>Arbutus unedo</i>	<i>Miscanthus 'Adagio'</i>	<i>Symphoricarpos albus</i>	<i>Myrica californica</i>	<i>Mahonia aquifolium</i>	<i>Rosa nootkana</i>	<i>Lonicera pileata</i>	<i>Arbutus menziesii</i>	<i>Pinus contorta</i> var <i>Contorta</i>	<i>Pseudotsuga menziesii</i>



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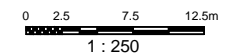
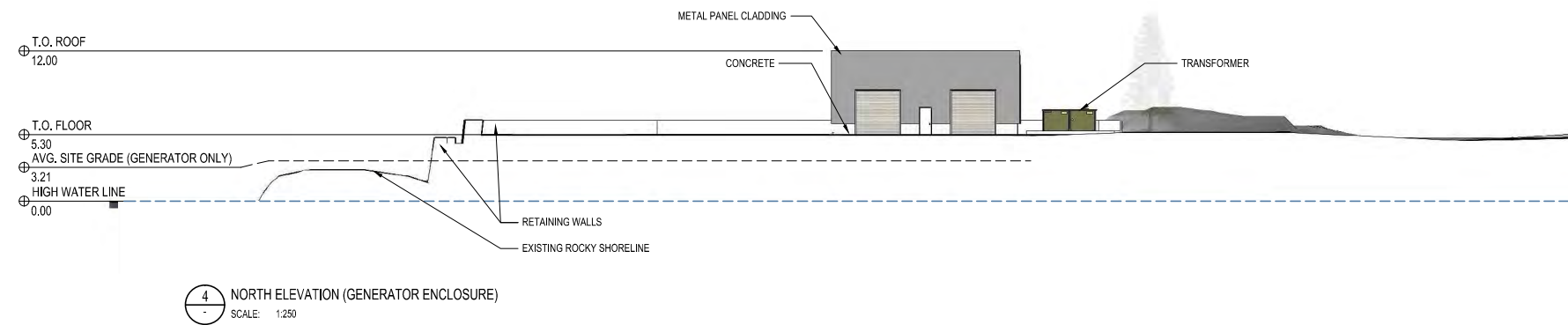
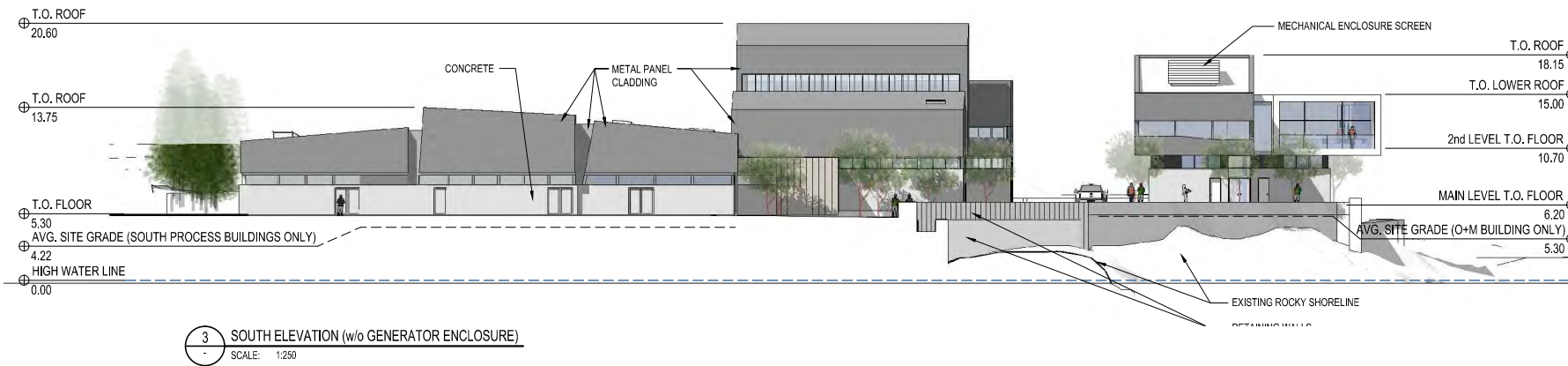
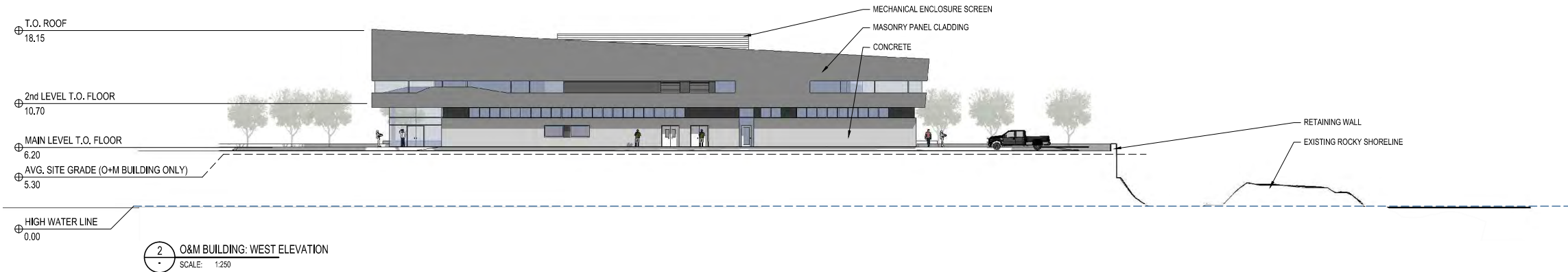
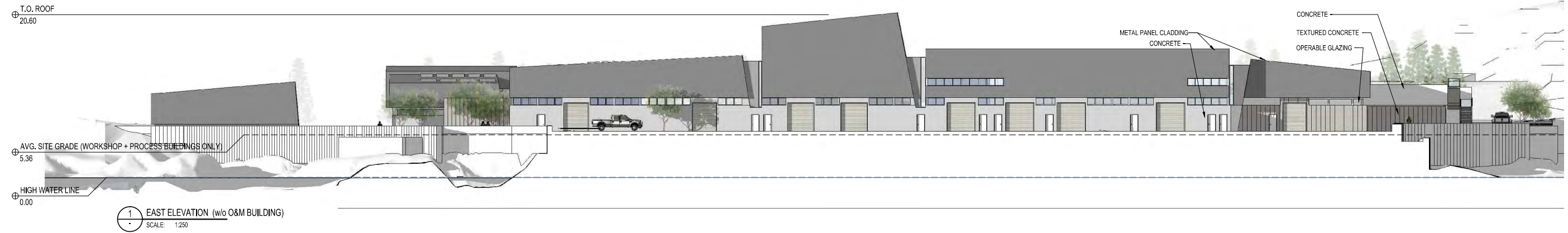
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Capital Regional District	Core Area Wastewater Treatment Program
DESIGNED	SURVEYED
DRAWN	DATE 11/01/13
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CORE AREA WASTEWATER TREATMENT PROGRAM
McLOUGHLIN POINT WWTP
BUILDING ELEVATIONS

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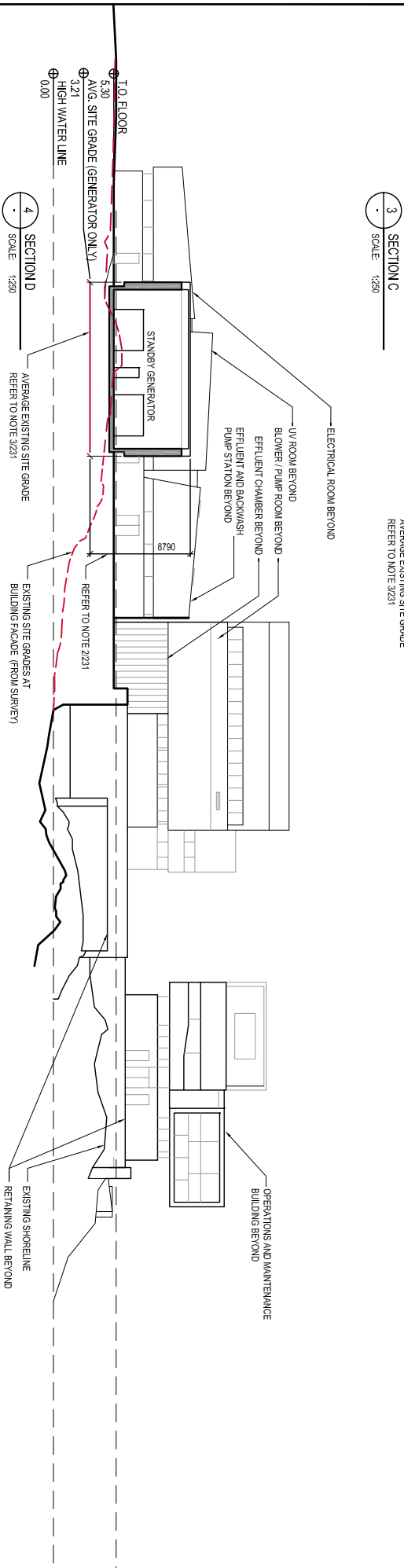
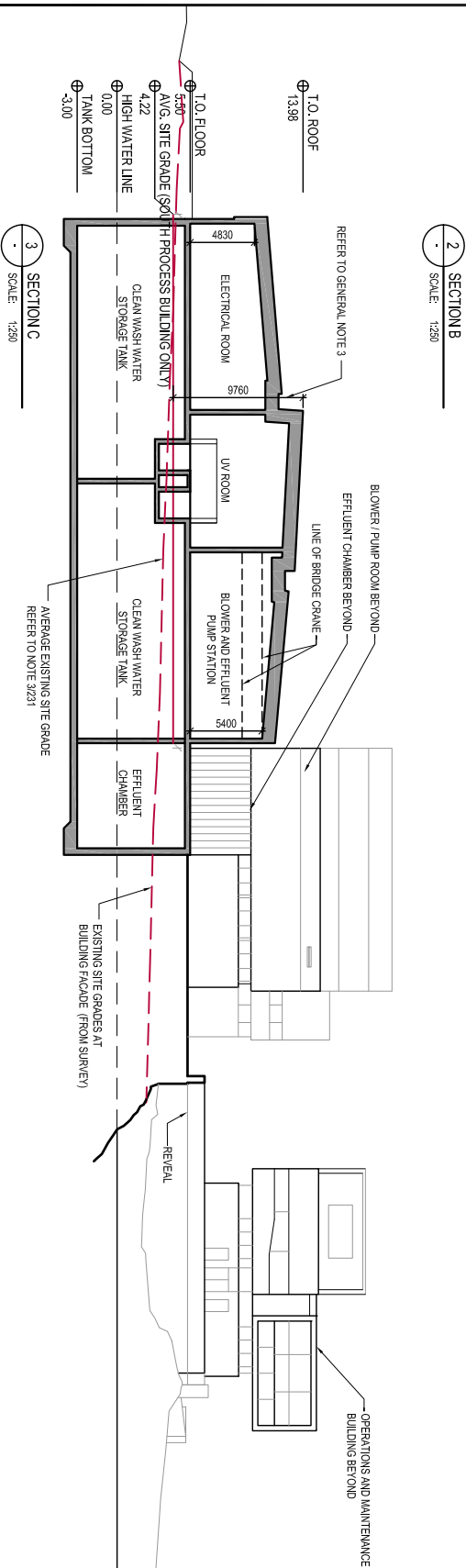
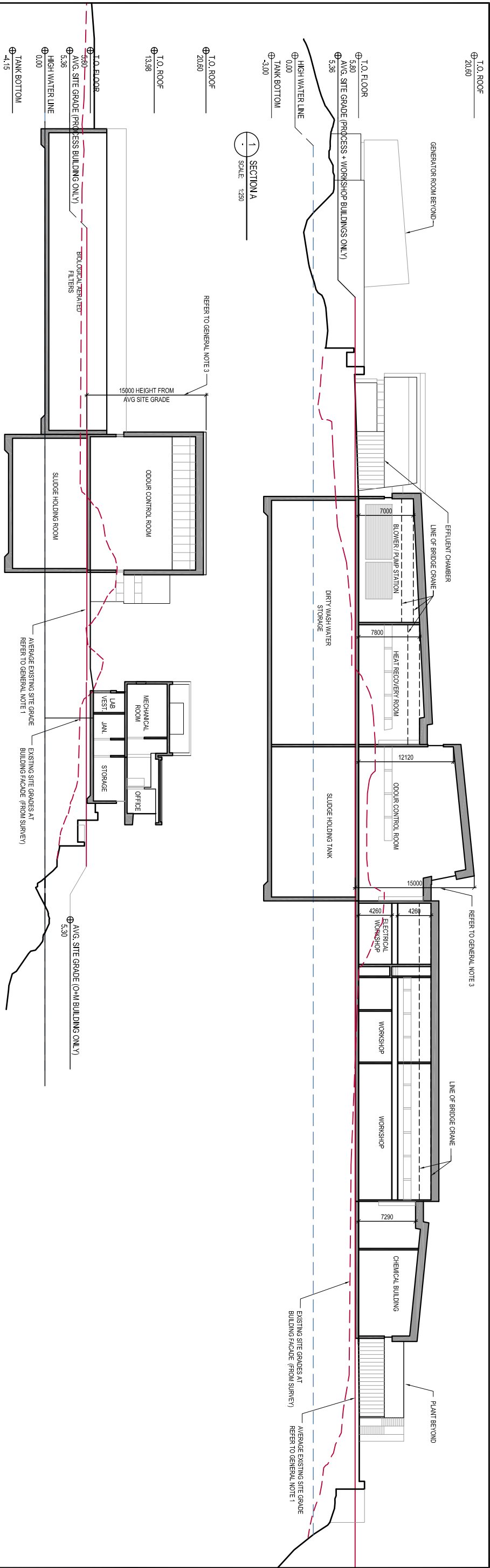
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RESUBMITTING APPLICATION



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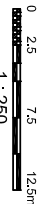




GENERAL NOTES:

1. AVERAGE SITE GRADE FOR BUILDINGS IN SECTION ARE CALCULATED AT BUILDING BLOCK PERIMETER

2. REFER TO DRAWING A251 FOR EXISTING GRADE DATA USED IN DETERMINING THE AVERAGE SITE GRADES FOR EACH RESPECTIVE BUILDING BLOCK

3. HIGHEST BUILDING HEIGHT FOR BUILDING BLOCK IS MEASURED FROM AVERAGE SITE GRADE



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SITE STATISTICS		Area (Sq. M.)
SITE AREA:		14364
BUILDINGS AREAS:		
Operations & Maintenance Building		
Level 1 (675) + Level 2 (885*)		675
Level 1 (675) + Level 2 (885*)		885
Operations & Maintenance Building Total Area		1560
*total excludes exterior decks (54 Sq. M.)		
Workshops/Plant Rooms		
Combined Level 1		2222
Combined Mezzanines		231
Standby Generator Enclosure		263
Workshops/Plant Rooms Total Area		2716
TOTAL BUILDINGS AREA		4276
FSR (total building area/site area)		30%
FSR including Generator enclosure		32%
SITE COVERAGE:		
Operations & Maintenance Building		675
Workshops/Plant Rooms		2222
Processing Tanks Combined areas		5143
Roadway & Parking Areas		2500
TOTAL SITE COVERAGE:		10540
% Site Coverage		73%
Total number of Parking Stalls		34

McLOUGHLIN POINT WASTE WATER TREATMENT PLANT

25.01.2013 ISSUED FOR REZONING APPLICATION

ARCHITECTURAL:

5-B-XXX-000	COVER PAGE
5-B-XXX-201	SITE PLAN
5-B-XXX-202	EXISTING SITE CONTOURS DIAGRAM
5-B-XXX-211	KEY PLAN
5-B-XXX-212	O&M BUILDING PLANS
5-B-XXX-213	SHOP & PLANT ROOMS PLANS
5-B-XXX-214	PLANT ROOMS PLANS CONTINUED
5-B-XXX-221	BUILDING ELEVATIONS
5-B-XXX-222	BUILDING ELEVATIONS
5-B-XXX-231	BUILDING SECTIONS
5-B-XXX-241	CRITICAL SITE VIEW: FROM OGDEN PT., MID-PIER
5-B-XXX-242	CRITICAL SITE VIEW: FROM OGDEN PT., END OF PIER
5-B-XXX-243	CRITICAL SITE VIEW: FROM SHOAL PT.
5-B-XXX-244	CRITICAL SITE VIEW: FROM SEAWALL AT SONGHEES
5-B-XXX-245	CRITICAL SITE VIEW: FROM PARKING LOT AT SONGHEES
5-B-XXX-251	EXISTING SITE GRADES

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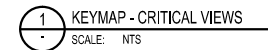
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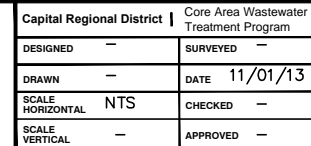
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CORE AREA WASTEWATER TREATMENT PROGRAM				
McLOUGHLIN POINT WWTP CRITICAL SITE VIEWS				
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3 VIEW FROM OGDEN POINT, END OF PIER (WIDE ANGLE)
SCALE: NTS



2 VIEW FROM OGDEN POINT, END OF PIER (CLOSE-UP)
SCALE: NTS



1 KEYMAP - CRITICAL VIEWS
SCALE: NTS

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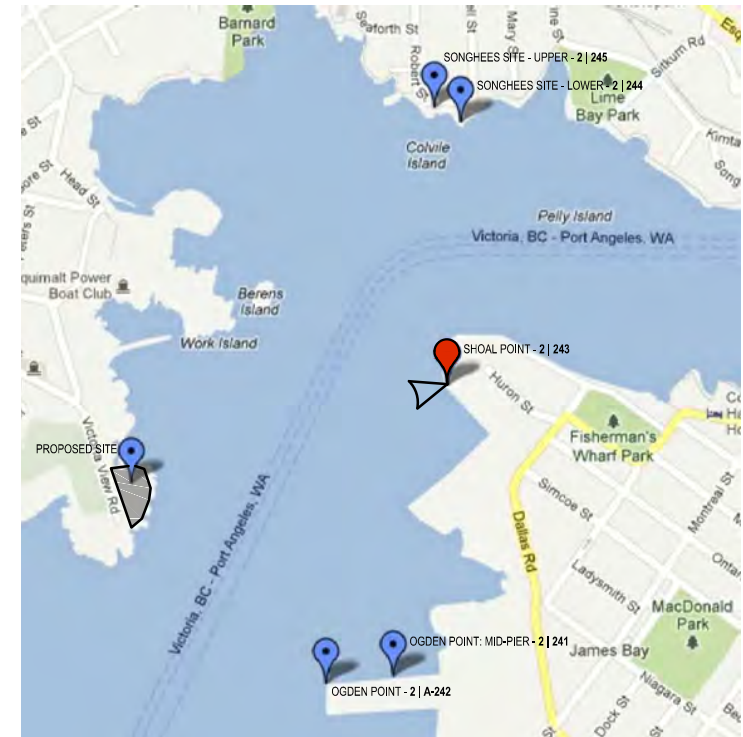
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3 VIEW FROM SHOAL POINT (WIDE ANGLE)
SCALE: NTS



2 VIEW FROM SHOAL POINT (CLOSE-UP)
SCALE: NTS



1 KEYMAP - CRITICAL VIEWS
SCALE: NTS



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Capital Regional District		Core Area Wastewater Treatment Program	CORE AREA WASTEWATER TREATMENT PROGRAM					
DESIGNED	—	SURVEYED	McLOUGHLIN POINT WWTP					
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3 VIEW FROM LOOKOUT AT SONGHEES WALKWAY (WIDE ANGLE)
SCALE: NTS



2 VIEW FROM LOOKOUT AT SONGHEES WALKWAY (CLOSE-UP)
SCALE: NTS



1 KEYMAP - CRITICAL VIEWS
SCALE: NTS

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Capital Regional District Core Area Wastewater Treatment Program	
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SCALE HORIZONTAL	NTS
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CORE AREA WASTEWATER TREATMENT PROGRAM

McLOUGHLIN POINT WWTP
CRITICAL SITE VIEWS

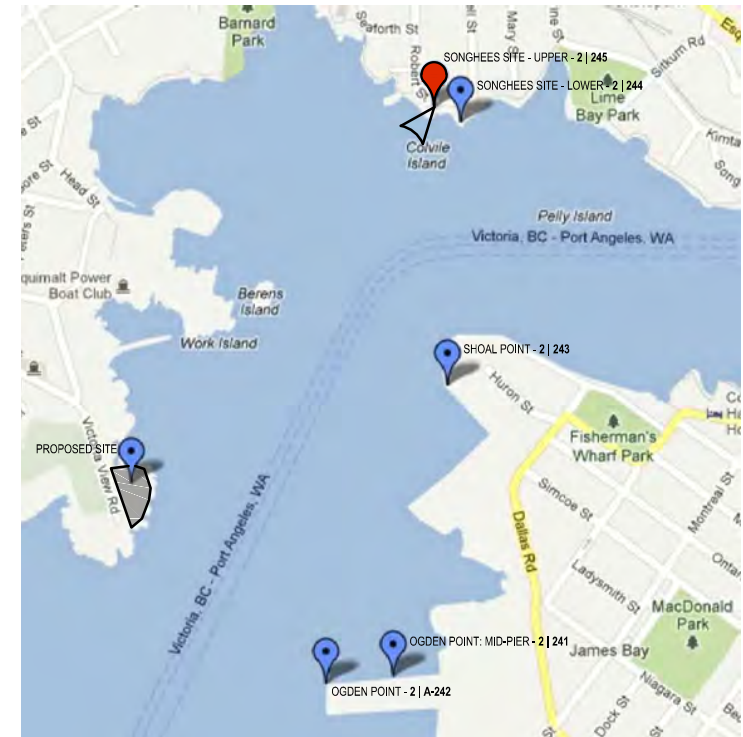
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1 VIEW FROM PARKING LOT AT SONGHEES WALKWAY (WIDE ANGLE)
SCALE: NTS



2 VIEW FROM PARKING LOT AT SONGHEES WALKWAY (CLOSE-UP)
SCALE: NTS



1 KEYMAP - CRITICAL VIEWS
SCALE: NTS



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SCALE HORIZONTAL	NTS	CHECKED	—
SCALE VERTICAL	—	APPROVED	—

CORE AREA WASTEWATER TREATMENT PROGRAM				
McLOUGHLIN POINT WWTP				
CRITICAL SITE VIEWS				
CONTRACT NUMBER	—	DRAWING NUMBER	5-B-XXX-245	ISSUE —
				SHT. No. OF —

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