CORPORATION OF THE TOWNSHIP OF ESQUIMALT

DESIGN REVIEW COMMITTEE
AGENDA

SPECIAL MEETING
THURSDAY, FEBRUARY 16, 2017 3:00 P.M.
ESQUIMALT COUNCIL CHAMBERS

MEMBERS: Roger Wheelock (Chair), Ally Dewji, Paul De Greeff, Robert Schindelka, Wendy Kay, Richard Iredale, Jill Singleton

RESOURCE MEMBER: Cst. Franco Bruschetta [Non-Voting]

COUNCIL LIAISON: Councillor Beth Burton-Krahn
Councillor Olga Liberchuk

STAFF LIAISON: Bill Brown, Director of Development Services

SECRETARY: Pearl Barnard

I. CALL TO ORDER

II. LATE ITEMS

III. ADOPTION OF AGENDA

IV. STAFF REPORT

DEVELOPMENT PERMIT APPLICATION
"REVIEW OF DESIGN REVISIONS FOR THE CORE AREA WASTEWATER TREATMENT PLANT AT MCLOUGHLIN POINT"
337 Victoria View Road
Lot 1; Section 11; Plan EPP36468

PURPOSE OF APPLICATION:

The purpose of this application is to ensure that the applicant's intentions are consistent with the Zoning Bylaw and the design guidelines for Development Permit Area No. 3 "Industrial" including the May 2013 Guidelines (Schedule "A" of this report) that specifically apply to this project. The comments of the Design Review Committee are invaluable in helping staff in reviewing the application and Council in their decision making process vis a vis the application.

RECOMMENDATION:

The Esquimalt Design Review Committee recommends that the development permit application for the Core Area Waste Water Treatment Plant be forwarded to Council with a recommendation for either:

1. **Approval including reasons for the recommendation**.
2. **Approval subject to specific conditions and including reasons for the recommendation.**
3. **That it be returned to the Design Review Committee for further review.**

V. STAFF LIAISON STATUS REPORT

VI. NEW BUSINESS

VII. NEXT REGULAR MEETING
March 8, 2017

VIII. ADJOURNMENT

CORPORATION OF THE TOWNSHIP OF ESQUIMALT

Municipal Hall, 1229 Esquimalt Road, Esquimalt, B.C. V9A 3P1
Telephone (250) 414-7100 Fax (250) 414-7111

DRC Meeting: February 16, 2017

STAFF REPORT

DATE: February 16, 2017

TO: Chair and Members of the Design Review Committee

FROM: Bill Brown, Director of Development Services

SUBJECT: **DEVELOPMENT PERMIT APPLICATION**
"REVIEW OF DESIGN REVISIONS FOR THE CORE AREA WASTEWATER TREATMENT PLANT AT MCLOUGHLIN POINT"
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The Esquimalt Design Review Committee recommends that the development permit application for the Core Area Waste Water Treatment Plant be forwarded to Council with a recommendation for either:

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BACKGROUND:

Purpose of the Application

The purpose of this application is to ensure that the applicant's intentions are consistent with the Zoning Bylaw and the design guidelines for Development Permit Area No. 3 "Industrial" including the May 2013 Guidelines (Schedule "A" of this report) that specifically apply to this project. The comments of the Design Review Committee are invaluable in helping staff in reviewing the application and Council in their decision making process vis a vis the application.

Context

The McLoughlin Point site is a 14,213 m^2 parcel situated on the west side of the entrance to Victoria Harbour. Because of its prominent location, it is imperative that the plant exhibit exemplary design. The Design Guidelines state that the development, "Respect the site as a gateway location." Approximately 240 cruise ships carrying over 500,000 passengers are scheduled pass by the plant on their way to dock at Ogden Point in 2017. It is crucial that these visitors get a good first impression of Esquimalt. Also, the plant will lie in one of the float plane flight paths to the harbor. In addition to the need to ensure that the design of the plant reflects its prominent location, the design also needs to respond to the fact that it is located near one of the most seismically active areas in Canada and, given its proximity to the shore, subject to potential Tsunamis.

Applicant/Owner: Capital Regional District

Architect: HDR|CEI Architecture

Property Size: Metric: 14,213 m^2

Existing Land Uses: Vacant

Surrounding Land Uses:
North: CFB Esquimalt.
South: Strait of Juan de Fuca.
West: CFB Esquimalt (low density residential)
East: Entrance to Victoria Harbour

Existing Zoning: McLoughlin Point Special Use [I-3] and Marine Navigation [M-4].

Existing OCP Designation: Industrial

Existing Development Permit Area: No. 3 Industrial

Design Overview

The Design Review Committee first reviewed the Development Permit application for the proposed Core Area Wastewater Treatment Plant at their January 11, 2017 meeting. At that time a number of issues were identified and the applicant was asked to consider the concerns of the Committee and return with a design that addressed the Committee's concerns. The Design Review Committee met again on February 9, 2017 to review the revised design. At that time the Design Review Committee identified three main areas of concern:

DRC Concern	Applicant's Response
Use board form concrete on the façade of the tertiary treatment portion of the building so that it blends into the rocky coast environment better;	The drawings still indicate the use of precast concrete panels, however, they are less "angular" than the ones previously proposed. The stained concrete has also been removed from the staircase enclosure on top of this portion of the building.
Explore architectural elements such as shape to help harmonize the operations and maintenance part of the building with the plant part of the building;	From the east elevation, the southern ends of the upper portions of the building have been set at an angle that reflects the angles on the lower portions of the maintenance and operations direction of the building. This is in response to the suggestion by the Design Review Committee that "shape" be considered as a possible architectural element to introduce harmony between different portions of the building.
Explore the option of adding green roof over the plant portion of the building.	It appears as though the area of green roof has been reduced.

Staff have reviewed the latest design and wish to have the Design Review Committee comment specifically on the following:

1) South elevation: The south end of the maintenance and operations portion of the building has been changed so that the building and fenestration has become rectilinear in order to match the rectilinear ends of the upper portions of the treatment plant portion of the building. Staff are concerned that, compared to the previous design, this is treatment may be less attractive. The Design Guidelines state that any development must, "Respect the site as a gateway location."
2) Staff note that extensive areas of "metal panel cladding" are used. Section 5 (a) of the May 2013 Design Guidelines states, "Incorporate designs that, while respecting the site, ensure the highest standards of materials and workmanship, and are aesthetically pleasing". In addition, the Guidelines state, "Design aesthetics should be optimized with the use of appropriate, high quality materials." Does the Design Review Committee believe that "metal panel cladding" meets the intent of the design guidelines?

Alternatives

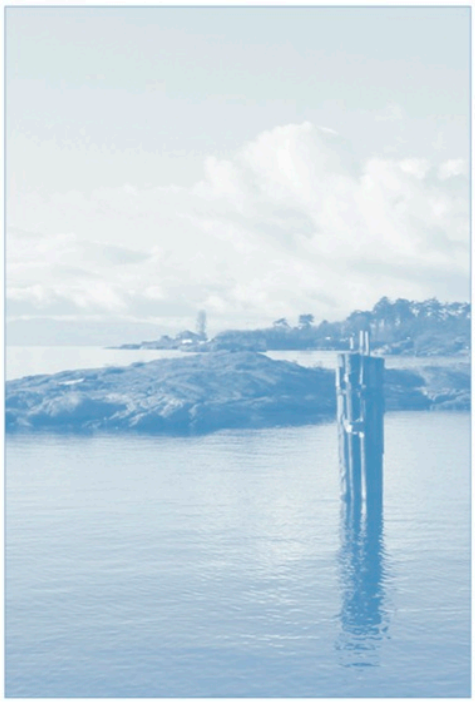
1. Forward the development permit application to Council with a **recommendation of approval including reasons for the recommendation**.

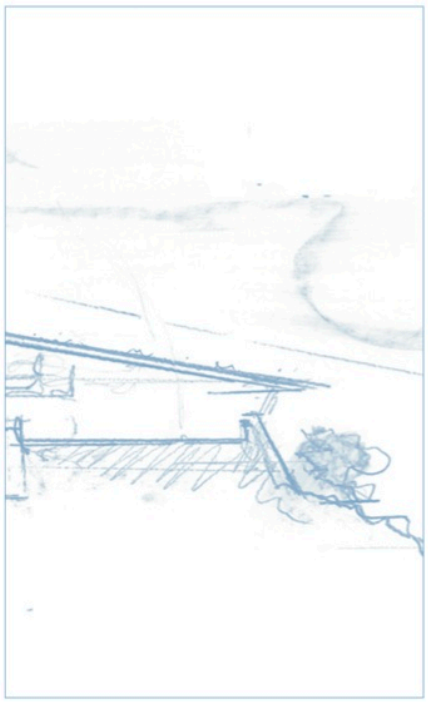
2. Forward the development permit application Council with a **recommendation of approval including specific conditions and including reasons for the recommendation.**

3. Forward the development permit application to Council with a **recommendation that it be returned to the Design Review Committee** for further review.

_____
Bill Brown
Director of Development Services

Design Guidelines





REVISED
McLoughlin Point
Wastewater Treatment Plant

Prepared for the
Capital Regional District

May 2013

CITY SPACES

Table of Contents

Purpose

Because the Township of Esquimalt's *Official Community Plan* designates the site of the McLoughlin Point wastewater treatment facility as a *Development Permit Area (*in order to address *building form and character* in future development of the land), the purpose of these Design Guidelines is to provide the owner (the CRD), the Township of Esquimalt, and the successful project construction proponent with key design parameters for the facility and the site.

Since the procurement method for this project is *design-build*, the final building design will be prepared by the project proponent. The guidelines introduce a degree of certainty, and understanding over design objectives and expectations regarding the completed design. Recognizing the necessary functional workings of the facility, these guidelines are intended to inform and to guide, but not restrain imagination or appropriate design solutions.

At a later date, the project proponent will submit plans for a Development Permit to the Township of Esquimalt once a specific design solution has been reached.

VISION STATEMENT

A design that reflects enduring and sustainable practices, and meets functional needs while being respectful of the prominent setting.

Guiding Principles

The process for developing the guiding design principles considered input from a workshop and open house attended by architects, landscape architects, Core Area Liquid Waste Management Committee representatives, and the public. These principles, or perhaps more appropriately *design values*, provide *qualitative performance statements* that shape both the intentions of the core area wastewater treatment system, and the specific guidelines for the McLoughlin Point wastewater treatment facility.

1. SUSTAINABILITY

a) The treatment system will support environmental, social and economic sustainability, and be considered part of CRD climate action initiatives.

b) Wastewater should be treated as a resource and, wherever possible and practical, provide opportunities for resource recovery and reuse.

c) The McLoughlin Point facility should meet, or exceed the CRD's and the Township of Esquimalt's policies on sustainability and building excellence.

2. RESPECT FOR THE SITE

a) Respect the site as a gateway location.

b) Respect the natural shoreline.

c) Respect the site context, and respond to the site and its surroundings.

3. PLAN FOR THE FUTURE

a) Acknowledge and plan for major tsunami events, climate warming effects, and post-disaster resiliency.

b) Incorporate durable, long-lasting, and timeless materials and design strategies.

4. LIVABILITY

a) Provide a design solution that meets, or exceeds, Township of Esquimalt and City of Victoria noise by-law requirements.

b) Provide a design solution that restricts odours to a maximum of five (5) odour units, or less (not detectable by humans).

c) Respect view impacts from all sides, and from above.

5. SENSE OF PRIDE

a) Incorporate designs that, while respecting the site, ensure the highest standards of materials and workmanship, and are aesthetically pleasing.

b) Incorporate public art into the design.

View from Ogden Point

Design Guidelines

SUSTAINABILITY STANDARDS

Treating its wastewater should be viewed as an element of the region's long-term sustainability objectives. Design considerations to support environmental, social, and economic sustainability include:

- Design the *Operations and Controls* building to a LEED® Gold standard.
- Where feasible, design for on-site heat recovery, and plan for future, long-term, neighbourhood, heat-resource opportunities.
- Incorporate a green roof system into the *Operations and Controls* building and other buildings, where appropriate.
- While much of the site is impervious rocky shoreline, where possible, introduce methods to clean and reduce stormwater runoff, incorporate rain gardens, and consider practical ways to re-use water.
- Restrict impact on the shoreline, except for those areas where wastewater lines enter or exit the treatment plant.

VIEW CONSIDERATIONS

View impacts are an important design consideration given that the site is a waterfront property. The impact on views from all sides (including from east and south perspectives, from across the harbour, and from above) need to be considered in the design process.

Building and design view impacts will be evaluated from the following locations:

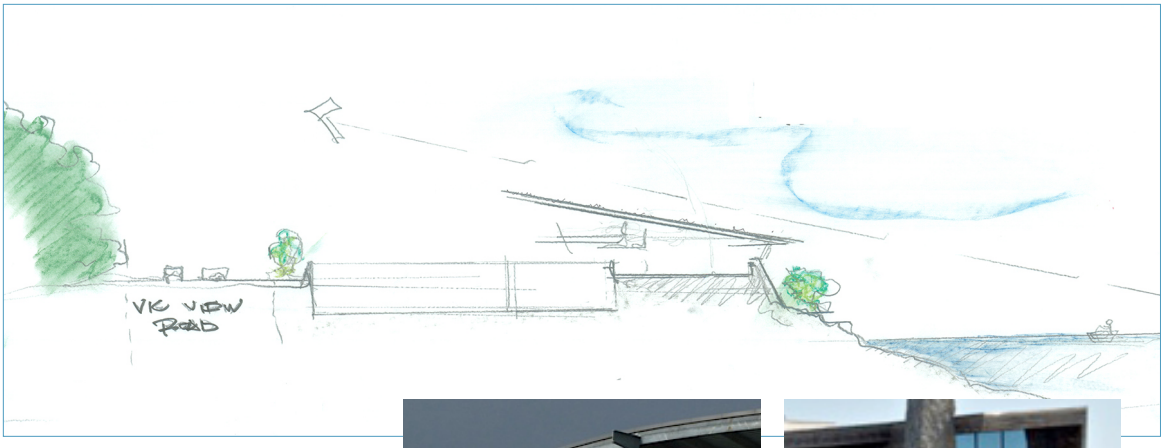
- Shoal Point and Ogden Point;
- Songhees Walkway to West Bay; and
- From above.

MARINE SHORELINE CHARACTER DESIGN CONSIDERATIONS

- Building forms should respect the site.
- Wall elements, relating to tsunami and associated catastrophic event protection, such as stepped walls that incorporate angled features, projections, wall terraces, and textures, should reflect the character of the rocky shoreline,.

MASSING, SITING & EXTERIOR ARCHITECTURAL ELEMENTS

- The design must demonstrate how the buildings and structures will fit into the site, responding to the shoreline in the forefront, and the evergreen treeline and rocky knoll backdrop.
- Building heights should vary, but not exceed 15 metres, from the finished grade.
- Design aesthetics should be optimized with the use of appropriate, high quality materials.
- Exterior building materials, including exterior details, must be selected to withstand intense weather and sea conditions, and must be of a high standard to ensure low maintenance.
- Doors, overhead doors, and other closures (including hatches, grilles, and louvres) should be durable, thermally resistant, and suitably finished for the marine environment.
- Windows should have high performance glazing, and be capable of providing natural ventilation, where appropriate.
- Roof areas must consider views from above.
- Clarifiers and aerated filters must be covered to meet noise and odour principles.



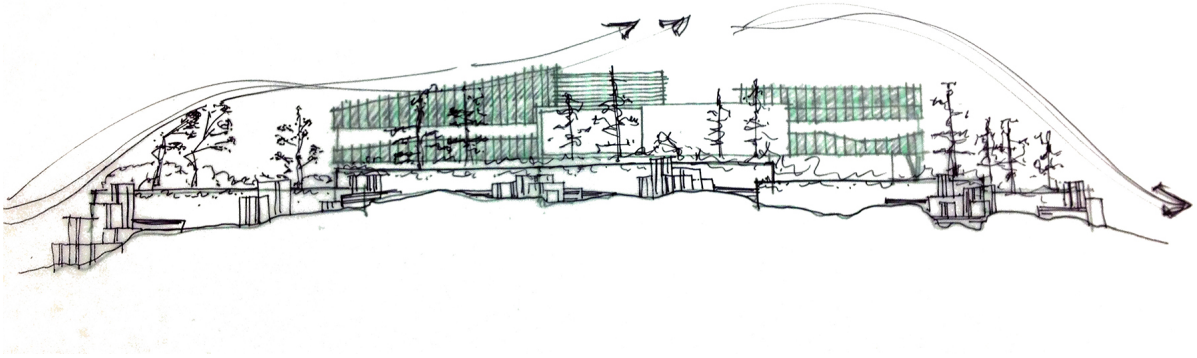
LIGHTING

- Light fixtures should provide no more than the minimum lighting needed for their intended purposes, and not exceed levels recommended by the *Illuminating Engineering Society for North America Recommended Practice Manual: Lighting for Exterior Environments*.
- Light fixture shields should be specified to reduce impacts on other properties, and when seen from the designated viewpoints.
- All lighting should be directed downward, and not into the night sky.
- Energy efficient fixtures should be specified, with consistent colour for all lighting.

LANDSCAPE ELEMENTS

The design concept is based on site conditions, views from the harbour, and a windswept rocky shoreline. With this in mind, landscape elements should include:

- Use of plant species that are designated hardy to harsh, and for salt spray environments; situate plants such that the force of the wind shapes their future forms;
- A retaining wall system designed to reflect the rugged and rough-textured surface of boulders and exposed-rock shorelines;
- Outdoor storage and parking areas screened through the use of berms, fences, landscaping and/or solid noise-absorbing barriers;

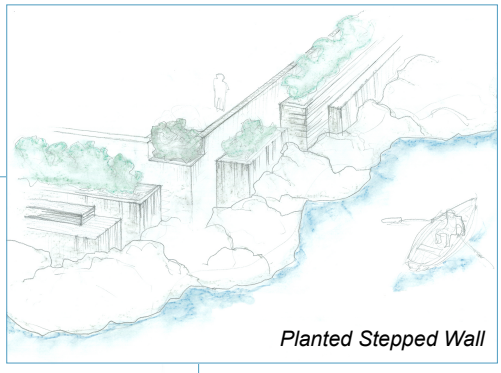


GUIDELINES FOR SEAWALL AND WALLS

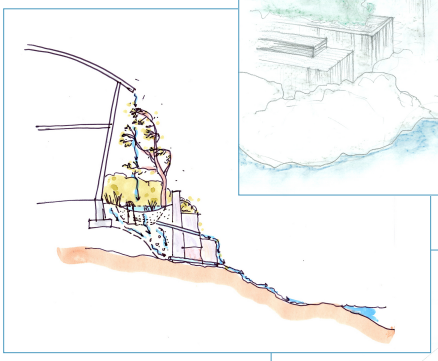
The retaining wall system should be designed to reflect the rugged and textured surface of the exposed-rock shorelines. To reduce view impacts for neighbouring communities and water/air traffic, the mass of the wall (combined height and width) will be broken up visually with features such as board form relief, wall projections, vertical elements, and wall protrusions. It should feature both rounded, smooth, and angular surfaces to reflect the natural shoreline.

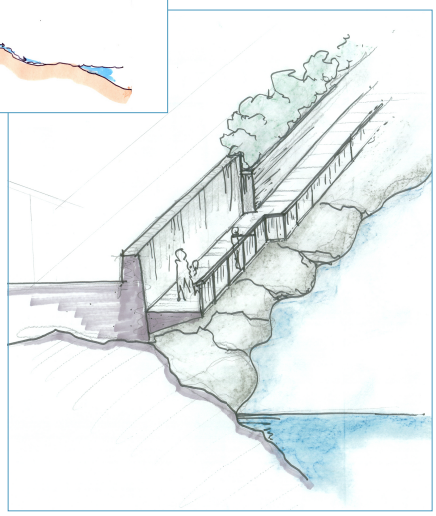
Walls are divided into two types: 1) primary walls, which are prominent perimeter retaining walls, and feature walls within the plant; and 2) secondary walls, which serve as infill between the primary walls.

- Walls must not protrude beyond the High Water Mark (HWM 1.804m geodetic).
- The site must be protected by a continuous tsunami protection wall that has a top elevation of not less that 6.5 metres above the High Water Mark.
- The appearance of wall heights greater than 4.0 metres must be minimized by placing step walls in the tsunami protection wall.
- Planted stepped walls should be a minimum depth of 1.0 metre horizontally to allow for landscape elements to be introduced. Where this is not possible, shallower multiple steps may be used.
- All surfaces of the primary perimeter retaining walls must be finished with random board-formed recesses or other suitable architectural treatment. Vertical recesses should be spaced randomly. A smooth finish should be considered for secondary walls.
- The design should plan for development of a pedestrian pathway along the waterfront side of the site.



Planted Stepped Wall





GUIDELINES FOR PLANTING – GENERAL

- Distribution of plants will be limited due to salt spray and wind exposure, particularly on the south side of the site
- Planting will exclude lawns.
- 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 efficiency irrigation system.
- Plants should be drought tolerant and require minimal water after the two-year establishment period.
- Green roofs must be installed fully established to minimize wind erosion and maintenance.
- All planting will be to BCNLA/BCSLA Landscape Standards.

GUIDELINES FOR PLANTING ALONG SEAWALLS

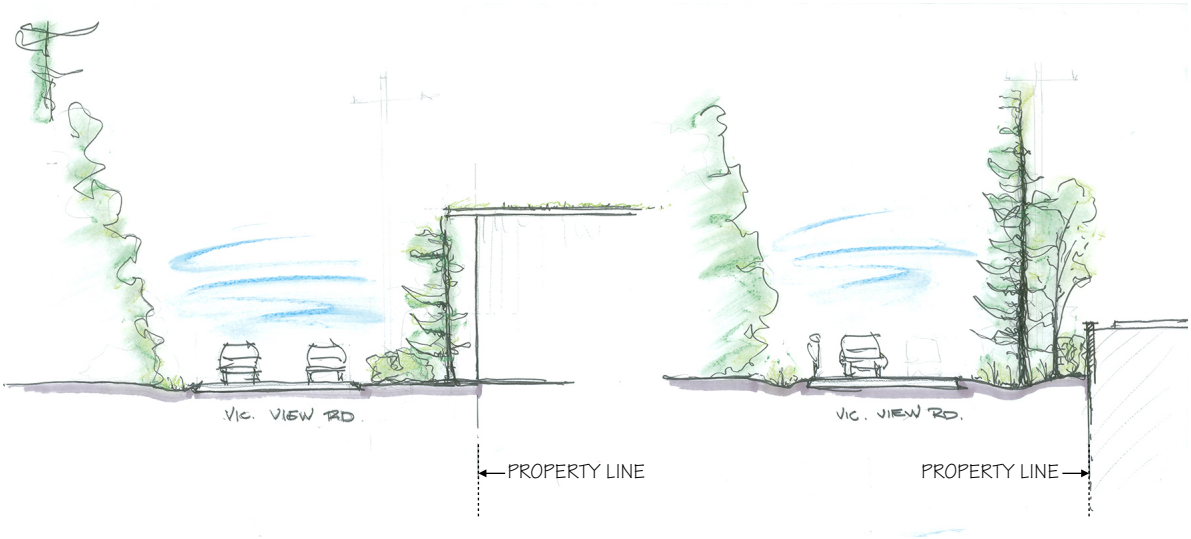
- Distribution of plants will be limited due to salt spray and wind exposure.
- Trees must be situated more than 10 metres from the south facing wall, as this will be a high wind velocity area.
- The following species are considered appropriate for use along the waterfront:
  - Pinus contorta var. Contorta (Shore Pine)
  - Arbutus menzesii (Pacific Madrone)
  - Rosa nutkana (Nootka Rose)
  - Symphoricarpus 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 specific hard and soft landscaping should complement the building architecture.

GUIDELINES FOR SCREENING ON VICTORIA VIEW ROAD

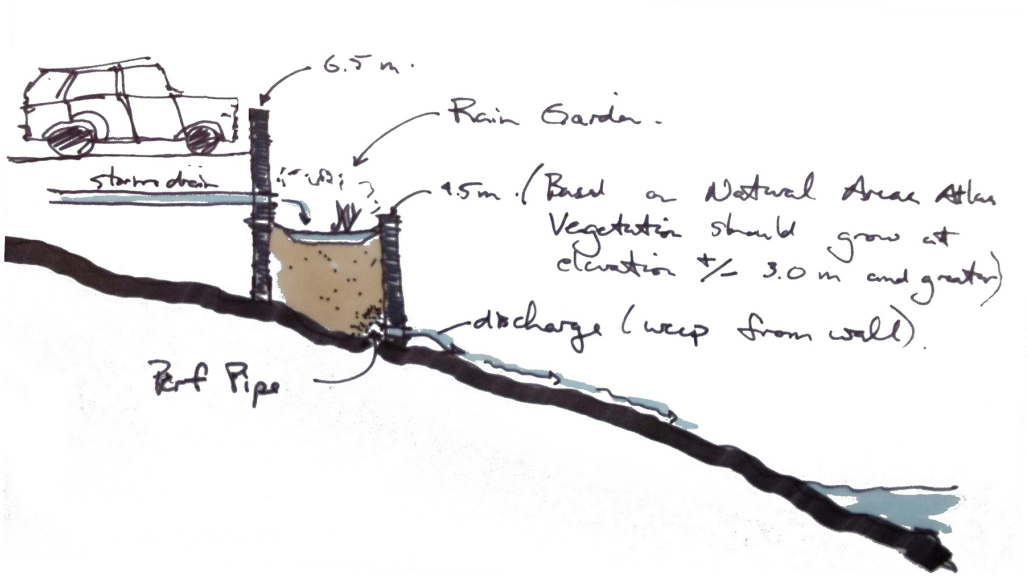
- To break up the mass of concrete walls, introduce screening (mostly of coniferous tree plantings) along the road frontage and adjacent property lines. The CRD should work with the Department of National Defence to allow for landscaping along the road frontage adjacent to the site. Cluster trees to provide clear 8-metre wide gaps to allow for future maintenance access (from a crane).
- A continuous shrub border will be required at the base of the wall to screen the lower retaining wall, and reduce the risk of vandalism. Shrubs in this area are to be native species only, with the exception of those 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 cable systems.
- The following species are considered appropriate for use in screening applications:
  - Pseudotsuga menzesii (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:

- Stormwater from the internal roadways and parking areas will be treated to remove 80% of TSS from a 6-month rain event prior to discharge.
- Treatment of roadway and parking run-off can come in the form of:
  - A combination of rain gardens and bioswales adjacent to the parking and roadways, complete with raised overflow basins, and under drains connected to the storm drain system;
  - Aqua-pave permeable paving, complete with an under drain system in discrete areas where direction of run-off to a bioswale is not feasible; or
  - A combination of these.
- A conventional storm drain will be installed with an 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 rain garden, stormceptor, or similar end-of-pipe treatment device could be installed if treatment of roof drainage is required.



PARKING AND SERVICES

- Parking for visitors, plant and system operation staff, and CRD maintenance vehicles should be suitably screened through the use of berms, fences, landscaping, and/or solid noise-absorbing barriers to minimize visual impact.

SIGNAGE

- Limit signage to directional and identification as required for wayfinding.

PUBLIC ART AND EDUCATION

- Public art shall be provided. The CRD and Township of Esquimalt will work together to confirm the process and requirements.
- Plans should include capacity for organized, educational site visits to learn about the functioning of the treatment system, the regional liquid waste management program, resource recovery, etc.

CITY SPACES

Suite 585, 1111 West Hastings Street, Vancouver BC V6E 2J3 | 604.687.2281
5th Floor, 844 Courtney Street, Victoria BC V8W 1C4 | 250.383.0304
Suite 300, 160 Quarry Park Boulevard SE, Calgary AB T2C 3G3 | 403.336.2468

www.cityspaces.ca

McLoughlin Point Wastewater Treatment Plant

HARBOUR RESOURSE PARTNERS PROJECT TEAM

AECOM – Engineering 3292 Production Way Burnaby BC V5Z 4R4 - Ernie Maschner

Graham Construction 10840 27 Street SE Calgary AB T2Z 3R6 – Mark Livingston

HDR|CEI 203-655 Tyee Road Victoria BC V2A 6P6- Jim Mann

LADR Landscape Design 495 Dupplin Rd #2b, Victoria, BC V8z 1B8– Bev Windjack

DRAWING LIST - ARCHITECTURAL

SHEET NUMBER	SHEET NAME
A-0	COVER SHEET
A-1	ARCHITECTURAL ROOF PLAN
A-2	RETAINING WALL PLAN
A-3	LEVEL 1
A-4	LEVEL 2
A-5	BUILDING AND SITE SECTIONS
A-6	BUILDING ELEVATIONS
A-7	BUILDING ELEVATIONS 2
A-8	RENDERED VIEWS 1
A-9	RENDERED VIEWS 2
A-10	RENDERED VIEWS 3
A-11	RENDERED VIEWS 4

DRAWING LIST - CONSULTANTS

SHEET NUMBER	SHEET NAME
010057954-CNSK01-R03	PROPOSED BUILDING AVERAGE GRADES
L1	LANDSCAPE PLAN
L2	PLANT IMAGES
ML-B0-C-004	TRUCK TURNING AND PARKING PLAN
ML-B0-C-201	EARLY WORK AREA PLAN
ML-B0-E-002	ELECTRICAL SITE LIGHTING PLAN

Google Maps

PROJECT DATA

SITE	LEGAL DESCRIPTION	CIVIC ADDRESS	NOTES
PROJECT LOT	LOT 1 , SECTION 11, AND PART OF THE BED OF VICTORIA HARBOUR, ESQUIMALT DISTRICT, PLAN 36468		SECTION 11 ESQUIMALT DISTRICT
LOT AREA	14,213 m2		

ZONING ANALYSIS - McLOUGHLIN POINT SPECIAL USE [I-3]

BONUS DENSITY LEVEL 3	PERMITTED	PROPOSED
FLOOR AREA	4500 m2	2157 m2
DENSITY (FAR)	0.35	0.15
LOT COVERAGE	65%	61%
MAX HEIGHT	15m	15m

PARKING

Parking requirements include

SPACES AS DETERMINED BY ZONING BYLAW

		TOTAL SPACES PROVIDED	REQUIRED SPACES
STANDARD SPACE MIN. SIZE: 2.6 X 5.5		2	1
DISABLED SPACE MIN. SIZE: 3.7x 5.5		1	1
ELECTRIC CAR CHARGING STATION STALLS MIN. SIZE:		1	0
SUBTOTAL		4	2
LOADING SPACE MIN. SIZE:	3m X 7.5m X 4.25h	2	2

NOTES:

BUILDING DATA

FLOOR	O & M (FLOOR AREA m²)	PROCESSING PLANT (GROSS m²)
LEVEL 1	1273 m2	PLANT NOT INCLUDED IN FLOOR AREA
LEVEL 2	868 m2	
TOTAL	2141 m2	
LOT COVERAGE	2334 m2	6330 m2 (INCLUDED IN LOT COVERAGE)

TOTAL SITE AREA = 14,213 M2
LOT COVERAGE = 8,664 M2 (61%)

PRESENT NATURAL BOUNDARY ACCORDING TO PLAN 36468 (HIGH WATER MARK)

POTENTIAL FUTURE WALK-WAY

PLANTER WALL

TRANSITION POINT FROM 10 METRE TO 7.5 METRE SETBACK

17.182
160°49'22"
13.414
170°33'54"
135° 43' 59"
34.491
164°14'08"
21.058
26.276
94°43'25"
8.9
16° 15' 33"
36.189
53°04'57"
13.90
34.693
27° 04' 37"

LANDSCAPED BUFFER

LEVEL 1 ROOF @ 10.44 (4.99M HIGH)

LEVEL 2 ROOF @ 14.71

ROOFTOP PATIO

OPEN TO BELOW

OPERATIONS AND MAINTENANCE BUILDING:
LOT COVERAGE: 2,334 M2
DRIVE AISLE BELOW
LEVEL 2 ROOF @ 16.21

PARKING FOR 4 VEHICLES (BELOW)

ACCESS ROAD

10.0 METRE SETBACK

ROOF @ 15.45 (10.0M HIGH)

ROOF @ 20.44 (14.99M HIGH)

ROOF @ 20.44 (14.99M HIGH)

TOP OF TANKS @ 10.34 (4.89M HIGH)

1.8M SECURITY FENCE ON TOP OF WALL

20.0 METRE SETBACK

TSUNAMI WALL

ROOF @ 17.71 (12.26M HIGH)

TOP OF STACKS @ 21.95 (16.5M HIGH AS PERMITTED BY BYLAW)

TOP OF TANKS @ 14.71 (9.26m HIGH)

TOP OF TANKS @ 13.21 (7.76M HIGH)

ROOF @ 18.31 (12.86M HIGH)

TOP OF TANKS @ 10.34 (4.89M HIGH)

ROOF @ 20.44 (14.99M HIGH)

LANDSCAPED BUFFER ON R.O.W.

73° 37' 18"
49.895

WASTEWATER TREATMENT PLANT:
LOT COVERAGE: 5,930 M2

SLIDING SECURITY GATE

6 METRE SETBACK
30.48
163° 38' 39"
60.958
LANDSCAPED BUFFER
LANDING
EMERGENCY GENERATORS ON GRADE
55.959
SITE EXIT
SITE ENTRANCE

VICTORIA VIEW ROAD

DROP OFF ZONE

TOP OF TANKS @ 10.34 (4.89M HIGH)

ROOF @ 13.94 (8.49M HIGH)

41.2
39"

PARTIAL PLAN OF SOUTHERN TIP

EXISTING RETAINING/PLANTER WALL

TSUNAMI WALL

TERTIARY TREATMENT
LOT COVERAGE: 400 M2

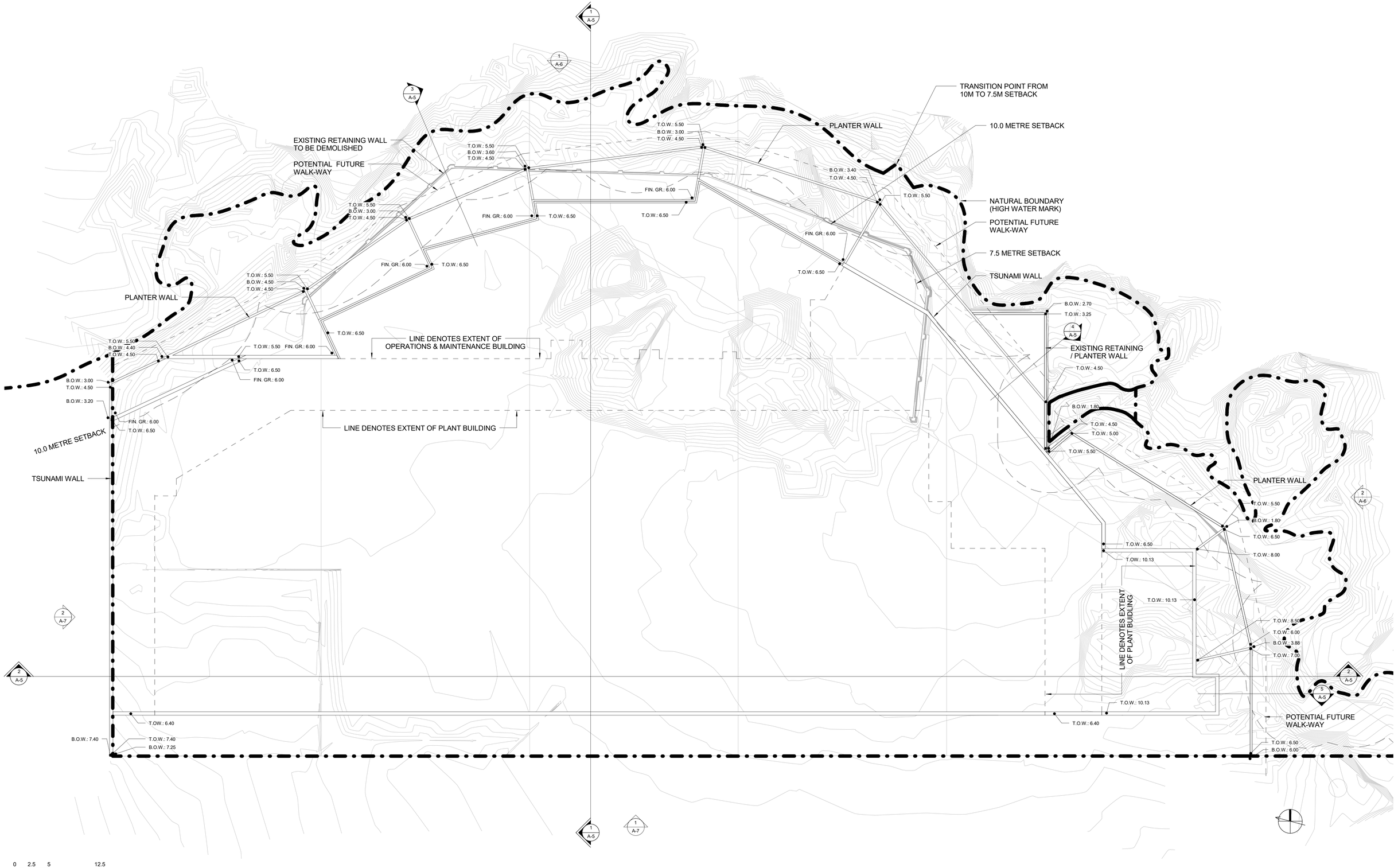
74°16'15"
4.763
162°40'56"
23.748
brass plate
68° 15' 18"
49.597

0 2.5 5 12.5

N

McLoughlin Point Wastewater Treatment Plant

ARCHITECTURAL ROOF PLAN A-1



McLoughlin Point Wastewater Treatment Plant

RETAINING WALL PLAN A-2

O & M BUILDING LEVEL 1:
FLOOR AREA = 1,273 m2

CALCULATION OF 'GRADE'
6.72 + 5.37 + 5.16 + 5.35 + 5.56 + 6.38 + 5.40 + 5.42 + 4.75 + 4.40 = 54.51M
54.51M / 10 = 5.45M GEODETIC

10 METRE SETBACK
TRANSITION POINT FROM 10 METRE TO 7.5 METRE SETBACK
NATURAL BOUNDARY (HIGH WATER MARK)
PROPOSED LOCATIONS (5 TOTAL) OF HERITAGE INTERPRETIVE SIGNAGE
7.5 METRE SETBACK
POTENTIAL FUTURE WALK-WAY
EXISTING RETAINING WALL TO BE DEMOLISHED
POTENTIAL FUTURE WALK-WAY
LANDSCAPE PLANTERS
LANDSCAPE PLANTER
PLANTER WALL
LANDSCAPE PLANTER
PLANTER WALL
1.8M SECURITY FENCE
TSUNAMI WALL (T.O.W. @ 6.50)
LANDSCAPE PLANTER
10.0 METRE SETBACK
TSUNAMI WALL (T.O.W. @ 6.50)
1.8M SECURITY FENCE
2.5M LANDSCAPED BUFFER ON R.O.W.
SLIDING SECURITY GATE
SITE EXIT
SITE ENTRANCE
1.1M GUARDRAIL
EXISTING RETAINING WALL
TSUNAMI WALL (T.O.W. @ 7.80)
TSUNAMI WALL (T.O.W. @ 6.50)
PLANTER WALL
POTENTIAL FUTURE WALK-WAY
LANDSCAPE BUFFER
LANDSCAPED BUFFER
LANDSCAPE
LANDSCAPE BUFFER
LANDSCAPED BUFFER
SLIDING SECURITY GATE
DROP OFF ZONE
ACCESS ROAD
ACCESS ROAD
ONE WAY
ONE WAY
LINE OF FLOOR ABOVE
LINE OF FLOOR ABOVE
LINE OF ROOF ABOVE
ELECTRICAL SHOP & STORAGE
INSTRUMENTATION SHOP & STORAGE
MALE CHANGE ROOM
LABORATORY
FITTINGS SHOP & STORAGE
MACHINE / WELDING / WOOD-WORKING SHOP & STORAGE
SERVICE LOBBY
FIRST AID
JAN.
STORAGE
COMM.
ELEC.
FEMALE CHANGE ROOM
PUBLIC LOBBY
OBSERVATION DECK
CLERESTORY ABOVE (SILL @ 2400 AFF)
FLOOR LEVEL: 6.20
REFUSE
PARKING FOR 4 VEHICLES (1 STALL WITH EV CHARGER)
SLUDGE TANK
PLANT DRAIN PUMP STATION
DENSADEG NO. 1 (38'-0")
PLATE SETTLER
DIRTY BACKWASH TANK
FLOOR LEVEL: 6.40
BAF NO. 1
BAF NO. 3
BAF NO. 5
BAF NO. 7
BAF NO. 9
BAF NO. 11
BAF NO. 2
BAF NO. 4
BAF NO. 6
BAF NO. 8
BAF NO. 10
BAF NO. 12
BAF NO. 13
BAF NO. 14
BAF GALLERY
CLEAN WATER STORAGE TANK (BELOW)
SWITCH GEAR
TRANSFORMERS
METER VAULT
GENERATOR ENCLOSURE
GENERATOR ENCLOSURE
LOADING
LOADING
PARKING FOR 15 VEHICLES
PARKING FOR 3 VEHICLES
PARKING FOR 3 VEHICLES
VICTORIA VIEW ROAD
UV
VENT
WITHIN LOUVRES
T.O.W.: 5.50
T.O.W.: 4.50
FIN. GR.: 6.00
EX. GRADE: 5.56
EX. GRADE: 6.38
FIN. GR.: 6.00
EX. GRADE: 5.40
FIN. GR.: 6.60
EX. GRADE: 5.50
FIN. GR.: 3.25
EX. GR.: 3.25
FIN. GR.: 6.00
EX. GRADE: 5.35
FIN. GR.: 6.00
EX. GRADE: 5.16
FIN. GR.: 6.10
FIN. GR.: 6.10
FIN. GR.: 6.10
FIN. GR.: 7.40
FIN. GR.: 6.30
FIN. GR.: 6.40
EX. GRADE: 5.37
FIN. GR.: 6.40
EX. GRADE: 3.57
FIN. GR.: 6.00
EX. GR.: 3.71
FIN. GR.: 6.40
EX. GRADE: 6.72
FIN. GR.: 7.25
EX. GRADE: 6.85
FIN. GR.: 6.50
EX. GRADE: 6.00
FIN. GR.: 6.50
EX. GRADE: 5.20
FIN. GR.: 6.40
FIN. GR.: 6.40
FIN. GR.: 6.50
EX. GR.: 4.65
FIN. GR.: 6.40
FIN. GR.: 4.50
EX. GR.: 3.25
FIN. GR.: 7.00
FIN. GR.: 8.00
EX. GR.: 5.42
FIN. GR.: 8.40
EX. GR.: 4.75
FIN. GR.: 8.20
EX. GR.: 4.40
FIN. GR.: 6.00
EX. GR.: 4.75
T.O.W.: 6.50
T.O.W.: 5.00
T.O.W.: 5.50
T.O.W.: 6.50
T.O.W.: 8.00
T.O.W.: 8.50
T.O.W.: 6.00
T.O.W.: 7.00
3700
2600
7000
7500
3000
0 2.5 5 12.5

McLoughlin Point Wastewater Treatment Plant

LEVEL 1 A-3

PRESENT NATURAL BOUNDARY
ACCORDING TO PLAN 36468
(HIGH WATER MARK)

PLANTER WALL BELOW

O & M BUILDING LEVEL 2:
FLOOR AREA = 868 m2

GREEN ROOF

10.44 (4.99M HIGH)

PLANTER WALL BELOW

1.8M SECURITY FENCE BELOW

TSUNAMI WALL BELOW

OPEN TO BELOW

ROOFTOP PATIO

EXISTING RETAINING WALL BELOW

TSUNAMI WALL BELOW

SUP OFF | SUP OFF | SUP OFF | SUP OFF | MNGR | MNGR | CONF ROOM | EDUCATION & INTERPRETIVE CENTRE

LIBRARY | SUP OFF | COPY | STORAGE | UPPER LOBBY

FLOOR LEVEL: 10.10

STAFF ROOM | M | F | SUPPORT SPACES | M & E SUPPORT SPACES | M | F | HC | 10.10 OPERATORS ROOM | CONTROL ROOM

20.0M SETBACK

10.34

ACCESS ROAD

DROP OFF ZONE

ACCESS ROAD

PLANTER WALL BELOW

20.0 METRE SETBACK

1.8M SECURITY FENCE BELOW

ODOUR CONTROL BELOW

STACK

STAIR

DENSADEG NO. 1 (38'-0")

ODOUR CONTROL

14.71

HEAT RECOVERY ROOM

OC STACK

OC STACK

OC STACK

SCREENS

STAIR

BLOWER ROOM

13.21

ROOF BELOW

10.34

13.21

BAF NO. 2 | BAF NO. 4 | BAF NO. 6 | BAF NO. 08 | BAF NO. 10 | BAF NO. 11

DENSADEG NO. 2 (38'-0")

DENSADEG NO. 3 (38'-0")

14.71

MAIN ELECTRICAL ROOM

DAF ROOM

14.71

ROOF BELOW

10.34

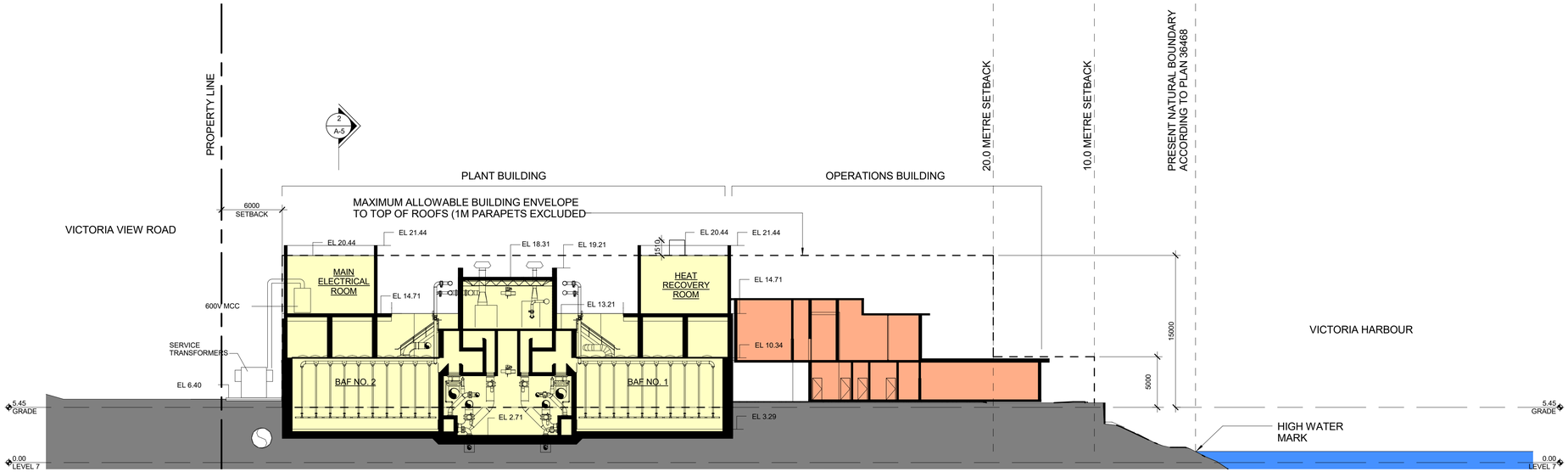
VENT

20.0M SETBACK

0 2.5 5 12.5

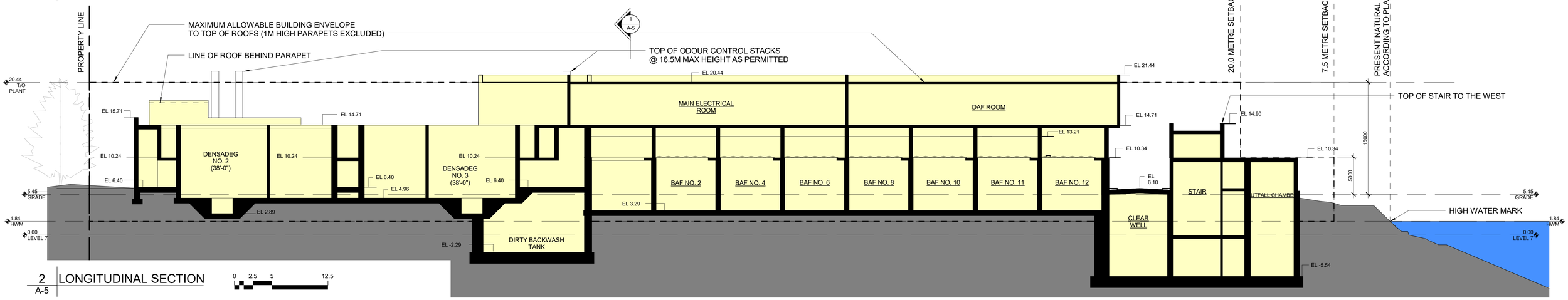
McLoughlin Point Wastewater Treatment Plant

LEVEL 2 A-4



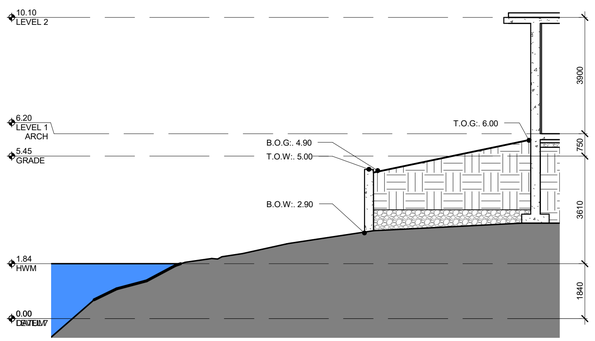
1 A-5 TRANSVERSE SECTION

0 2.5 5 12.5



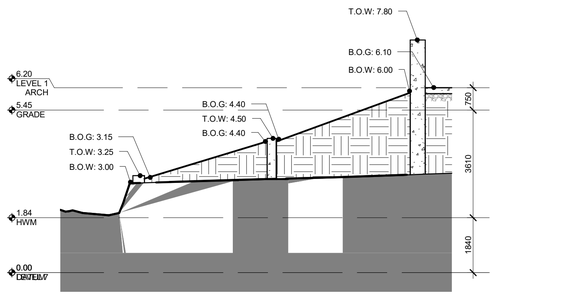
2 A-5 LONGITUDINAL SECTION

0 2.5 5 12.5



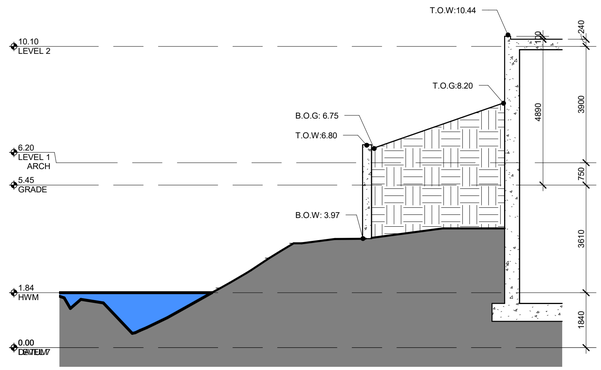
3 A-5 RETAINING WALL SECTION 1

0 1 2 5



4 A-5 RETAINING WALL SECTION 2

0 1 2 5

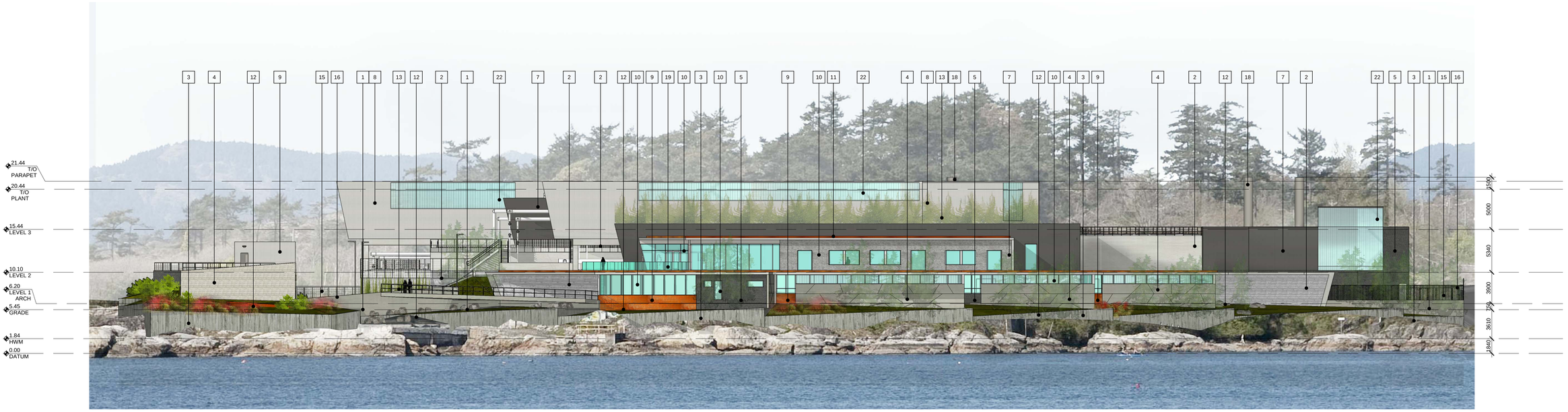


5 A-5 RETAINING WALL SECTION 3

0 1 2 5

McLoughlin Point Wastewater Treatment Plant

BUILDING AND SITE SECTIONS A-5



1 A-6 BUILDING ELEVATION - EAST

0 2.5 5 12.5

2 A-6 BUILDING ELEVATION - SOUTH

0 2.5 5 12.5

EXTERIOR ELEVATION KEY NOTES

GENERAL NOTES

1. ALL RETAINING WALLS TO RECIEVE A LIGHT SANDBLAST FINISH

1	CONCRETE - ARCHITECTURAL FINISH (SMOOTH)	6	MASONRY CLADDING - LIGHT	11	SEDUM MAT GREEN ROOF	16	SECURITY FENCE	21	PRE-PAINTED GENERATOR ENCLOSURE
2	CONCRETE - BOARDFORM (MEDIUM TEXTURE)	7	METAL PANEL CLADDING - DARK	12	LANDSCAPE ELEMENTS	17	INTERPRETIVE SIGNAGE	22	TRANSLUCENT POLYCARBONATE PANEL
3	CONCRETE - BOARDFORM (ROUGH TEXTURE)	8	METAL PANEL CLADDING - LIGHT	13	CLIMBING VEGETATION ON SCREEN ELEMENT	18	ODOUR CONTROL STACKS - GREY METAL		
4	CONCRETE - PRECAST CONCRETE PANEL	9	STAINED CONCRETE PANEL	14	METAL BAR GRATE SCREEN	19	GLASS GUARD		
5	MASONRY CLADDING - DARK	10	GLAZING IN ALUMINUM FRAME	15	METAL BAR GRATE - SECURITY GATE	20	PIPE RAIL GUARD		

As indicated

McLoughlin Point Wastewater Treatment Plant

BUILDING ELEVATIONS A-6

1 A-7 BUILDING ELEVATION - WEST

0 2.5 5 12.5

2 A-7 BUILDING ELEVATION - NORTH

0 2.5 5 12.5

EXTERIOR ELEVATION KEY NOTES

GENERAL NOTES

1. ALL RETAINING WALLS TO RECIEVE A LIGHT SANDBLAST FINISH

1	CONCRETE - ARCHITECTURAL FINISH (SMOOTH)	6	MASONRY CLADDING - LIGHT	11	SEDUM MAT GREEN ROOF	16	SECURITY FENCE	21	PRE-PAINTED GENERATOR ENCLOSURE
2	CONCRETE - BOARDFORM (MEDIUM TEXTURE)	7	METAL PANEL CLADDING - DARK	12	LANDSCAPE ELEMENTS	17	INTERPRETIVE SIGNAGE	22	TRANSLUCENT POLYCARBONATE PANEL
3	CONCRETE - BOARDFORM (ROUGH TEXTURE)	8	METAL PANEL CLADDING - LIGHT	13	CLIMBING VEGETATION ON SCREEN ELEMENT	18	ODOUR CONTROL STACKS - GREY METAL		
4	CONCRETE - PRECAST CONCRETE PANEL	9	STAINED CONCRETE PANEL	14	METAL BAR GRATE SCREEN	19	GLASS GUARD		
5	MASONRY CLADDING - DARK	10	GLAZING IN ALUMINUM FRAME	15	METAL BAR GRATE - SECURITY GATE	20	PIPE RAIL GUARD		

As indicated

McLoughlin Point Wastewater Treatment Plant

BUILDING ELEVATIONS 2 A-7

AERIAL VIEW FROM SOUTH EAST

VIEW FROM OGDEN POINT

VIEW FROM SHOAL POINT

VIEW FROM SONGHEES WALKWAY

VIEW FROM SONGHEES WALKWAY - NIGHT

VIEW FROM OGDEN POINT - NIGHT

VIEW FROM WATER SOUTH OF SITE

First-level pre-vegetated sedum mat green roof with hydro-mat (different mixes create a banded pattern)

Second-level pre-vegetated sedum mat green roof with hydro-mat (different mixes create a banded pattern)

Douglas Fir (15) and Shore Pine (19) trees provide tall vegetative screening to site. Shoreline plantings are composed of mass plantings of hardy native shrubs and groundcovers. Large shrubs and trailing groundcovers overhang the seawall and provide leaf fall and insect drop into the intertidal area, benefitting fish and other organisms.
(Red Elderberry, Oceanspray, Indian Plum, Hooker's Willow, Snowberry, Nootka Rose, Baldhip Rose, Kinnickinnick, Twinflower, Redtwig Dogwood, Oregon Grape)

Large landscape boulders and logs reflect the rocky coastline that surrounds the site

Linear raingarden collects runoff from the road and features native shrubs, ferns and grasses

5M wide vegetated border strip is composed of native and adaptive shrubs and ferns, interspersed with Douglas Fir trees (8).
(Red Elderberry, Indian Plum, Redtwig Dogwood, Oceanspray, Oregon Grape, Sword Fern, Deer Fern, Blue Oat Grass)

First-level viewing platform and patio (HydraPressed concrete slabs)

Ground-level viewing platform and plaza featuring interpretive signage cantilevers over the raingarden and boulders below (Sawcut broom finish concrete)

1M wide semi-intensive green roof strip with a hydro-blanket along the building edge supports the growth of vines which grow on the adjacent building face

Large landscape boulders and logs contained within the existing retaining wall reflect the rocky coastline that surrounds the site

Trellis on corner of building supports a Honeysuckle vine

Linear raingarden bordered by a swath of large landscape boulders collects runoff from the road and cantilevered viewing platform above. Rain garden features native shrubs, ferns and grasses

Mounded planting bed with Douglas Fir trees (5) and native shrubs underneath
(Redtwig Dogwood, Nootka Rose, Oregon Grape, Sword Fern, Red Elderberry, Salal, Oceanspray, Snowberry)

Rain garden supported by corten steel wall captures runoff from adjacent building roof and roadway. Plantings are composed of native shrubs and grasses)

Shoreline plantings are composed of mass plantings of hardy native shrubs and groundcovers. Large shrubs and trailing groundcovers overhang the seawall and provide leaf fall and insect drop into the intertidal area, benefitting fish and other organisms. Planting beds are mounded (1:3) to building face for screening.
(Red Elderberry, Oceanspray, Indian Plum, Hooker's Willow, Snowberry, Nootka Rose, Baldhip Rose, Kinnickinnick, Twinflower, Redtwig Dogwood, Oregon Grape)

Serbian Spruce trees (3) frame trellises on the adjacent building face that support honeysuckle vines. Adjacent plantings are composed of native and adaptive shrubs and grasses.
(Honeysuckle, Baldhip Rose, Feather Reed Grass, Blue Oat Grass)

Boulder walls allow planting beds to be mounded against building faces along Victoria View Road. Planting beds are composed of native and adaptive shrubs, ferns and grasses, interspersed with Black Pine (13), Columnar Spruce (15), and Himalayan White Birch (9) trees which provide vertical screening of the site.
(Oregon Grape, Strawberry Bush, Coastal Strawberry, Blue Oat Grass, Baldhip Rose, Red Currant, Snowberry)

Recommended Nursery Stock

Trees
Total: 87

Botanical Name	Common Name	Size
Betula jacquemontii	Himalayan White Birch	6cm cal.
Picea omorika	Serbian Spruce	2m ht.
Picea pungens 'Iseli Fastigiate'	Columnar Blue Spruce	2m ht.
Pinus contorta	Shore Pine	2m ht.
Pinus nigra	Black Pine	2m ht.
Pseudotsuga menziesii	Douglas Fir	2m ht.
Pseudotsuga menziesii LG	Douglas Fir (Large)	3.5m ht.

Large Shrubs
Total: 270

Botanical Name	Common Name	Size
Arbutus unedo 'Compacta'	Compact Strawberry Bush	#10 pot
Holodiscus discolor	Oceanspray	#5 pot
Oemleria cerasiformis	Indian Plum	#5 pot
Ribes sanguineum	Red Flowering Currant	#2 pot
Salix hookeriana	Hooker's Willow	#5 pot
Sambucus racemosa	Red Elderberry	#5 pot

Medium Shrubs
Total: 1979

Botanical Name	Common Name	Size
Cornus stolonifera	Redtwig Dogwood	#3 pot
Mahonia aquifolium	Tall Oregon Grape	#3 pot
Rosa gymnocarpa	Baldhip Rose	#1 pot
Rosa nutkana	Nootka Rose	#1 pot
Symphoricarpos albus	Snowberry	#3 pot

Small Shrubs
Total: 707

Botanical Name	Common Name	Size
Gaultheria shallon	Salal	#1 pot
Mahonia repens	Creeping Oregon Grape	#1 pot

Perennials, Annuals and Ferns
Total: 1020

Botanical Name	Common Name	Size
Helictotrichon sempervirens	Blue Oat Grass	#1 pot
Juncus effusus	Common Rush	#1 pot
Mahonia repens	Creeping Oregon Grape	#1 pot
Polystichum munitum	Sword Fern	#1 pot

Groundcovers
Total: 1562

Botanical Name	Common Name	Size
Arctostaphylos uva ursi 'Vancouver Jade'	Vancouver Jade Kinnickinnick	#1 pot
Fragaria chiloensis	Coastal Strawberry	#1 pot
Linnaea borealis	Twinflower	#1 pot

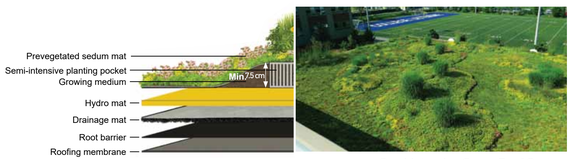
Vines
Total: 21

Botanical Name	Common Name	Size
Lonicera periclymenum 'Belgica'	Early Dutch Honeysuckle	#1 pot
Parthenocissus tricuspidata 'Veitchii'	Veitchii Boston Ivy	#1 pot

Green Roof

Prevegetated Sedum Mat

Notes:
1. **All work to be completed to current BCSLA Landscape Standards**
2. **All soft landscape to be irrigated with an automatic irrigation system**



Semi-Intensive Green Roof System

1:250

Feb 14-17

MCLOUGHLIN POINT WASTEWATER TREATMENT PLANT | LANDSCAPE PLAN

LADR LANDSCAPE ARCHITECTS
2B-495 Dupplin Rd. Victoria B.C. V8Z 1B8
Phone: (250) 598-0105 Fax: (250) 412-0696