



James Bay Neighbourhood Association

jbna@vcn.bc.ca
Victoria, B.C., Canada

www.jbna.org

April 18th, 2017

Mayor Helps,
City of Victoria.

Dear Mayor Helps,

This letter is to request that the City of Victoria Partner with JBNA to host a Conveyancing Technical Forum to discuss the CRD wastewater project conveyance system. The possibility of a seabed pipeline is now in the public realm; this alternative needs to be fully explored. JBNA has received a request from residents who believe that such a forum would benefit the residents of Victoria as both taxpayers and as stewards of the Dallas bluffs.

No feasibility review of a seabed pipeline has been done either under the Seaterra project or the current Wastewater Treatment Project. This was confirmed last week by Mr. Fairbairn at the *Committee of the Whole* meeting. Review of seabed routing, with subject matter experts, should occur prior to the letting of a contract for trenching along Dallas Road.

An alternative can be the outcome of the Forum, well within the mandated timeline (Dec 31st 2020). This meeting can provide a valuable Plan B, if a failure occurs within the current Plan A.

Attached you will find the letter requesting the Forum, and a proposed program which identifies subject matter specialists who could be invited to contribute to the discussion. The Forum, hosted by the City in partnership with JBNA, could be held in a timely manner.

Thank you for considering this request. We look forward to receiving what we would expect to be a positive response and to partnering with the City on this Conveyancing Technical Forum.

Yours truly

Marg Gardiner
President, JBNA

Cc: CoV Councilors
JBNA Board
Carole James, MLA, Victoria-Beacon Hill
Murray Rankin, MP, Victoria
Peter Fassbender, Minister, BC Community, Sport and Cultural Development

Attachments: WCAC request letter of April 17th, 2017
WCAC proposed Forum Program

April 17, 2017

To the James Bay Neighbourhood Association:

We are City of Victoria residents concerned about the current plans for the conveyance of sewage from Clover Point to the McLoughlin Point Wastewater Treatment Plant. An alternative seabed pipeline option appears to have many advantages compared with trenching along Dallas Road and tunneling across the harbour.

We believe it is important and urgent to have a public forum of qualified experts to explore a seabed route prior to commencing drilling in June. We understand this proposal, among other advantages, would minimize damage to the Dallas Road bluffs, reduce construction time, provide greater resistance to earthquake damage and protect residents' quality of life.

We understand technical experts in all relevant fields have voiced support for the seabed pipeline route and have verbally indicated their willingness to meet with CRD and Project Team engineers to explore the benefits and challenges of both methods. We propose that the JBNA, the CRD Project Team and City of Victoria staff engage in a forum to explore relevant technical conveyancing aspects of the project.

The proposed topics to be discussed at the forum include:

- seismicity,
- slope stability,
- environmental permitting,
- remote sensing
- structural geology
- ocean wave and current dynamics,

We ask that JBNA consider this request and assist in facilitating the forum as proposed as soon as possible. We understand that there are concerns about meeting project deadlines. Elected officials and residents should have the opportunity to learn more and make an informed decision about the seabed design. We believe that a seabed route may be the most cost effective and safe approach with the fewest negative community impacts. Thank you.

Yours truly

The following City of Victoria residents:

*Justine Scholefield
Corey Scholefield
133 Ladysmith*

*Darrel Woods
60 San Jose*

*James Morley
Laurie Brucker
34 San Jose*

*Maria McKenty
115 Government*

*Angie Preston
139 Simcoe*

*Michèle Richardson
338 Niagara*

*Joan Looy
2-145 Niagara*

*Samaya VanTyle
#3 - 144 Dallas Rd*

*William Cree
Anne Cree
310 Dallas Rd*

*Patricia Henry
44 San Jose*

*Dave Jarvis
33 Dock*

*Ian MacDonell
61 San Jose*

*Michael Morris
#2-49 San Jose*

*Nancy Craig
614 Dallas Rd*

*Miriam Nelken
105-20 Olympia Ave*

Sandra Allin

*David Allin
612 Dallas Rd*

*Christine Johnston
Melville Johnston
17 Dock*

*Terry Scandrett
402 – 21 Dallas Rd*

*Angela Bassage
402 – 21 Dallas Rd*

*John Gunton
506 – 21 Dallas Rd.*

*Jill Roberts
628 – 21 Dallas Rd*

*Elizabeth Kozak
512 – 21 Dallas Rd*

*Wilf Erickson
301 -21 Dallas Rd*

*Joan McHardy
65 Oswego Street*

*Jonathan Argue
81 San Joes*

*Pat McGuire
71 Dock*

*Gary Albach
401-21 Dallas Rd*

Core Area - CRD Wastewater Conveyancing Technical Forum

(Invitation will be extended to the public to observe the proceedings)

The objective of this forum is to enable discussion of technical issues important in considering the design of Wastewater Conveyancing. There is merit in considering all alternatives prior to sending out RFQs, RFPs and entering into contracts: recognising that all ideas lead to the best possible outcome.

Proposed Program

Possible Venues: Victoria Convention Centre or City Council Chambers (centre table set-up)

Proposed Time/Date: 09:00 - 13:00. May 3rd or 4th or June 9th or 12th

1. **Welcome:** Mayor Helps
2. **Opening Remarks:** Moderator - TBD
3. **Opening Presentations:**
 - 3.1. Seabed Pipeline Proposal 20 minutes John Gunton Ph.D (WCAC)
 - 3.2. Land Pipeline proposal 20 minutes Reno Fiorante P.Eng., PE. (Stantec/CRD)
4. **Round Table Topic Discussion: Moderator - TBD**
 - 4.1. **Environmental Permitting** (Ministry of Environment, Kerr Wood Leidal, 2011, City of Victoria)
 - 4.1.1. Foreshore Crossing
 - 4.1.2. Sea Floor Issues
 - 4.1.3. Dallas Bluff Ecology: SAR, endangered species
 - 4.1.4. Migratory Bird Sanctuary
 - 4.1.5. Aquatic Species
 - 4.1.6. Outfall Permitting
 - 4.2. **Operational Maintenance**

Once the pipeline is in place and commissioned, what are the circumstances under which the pipeline would need to be inspected? If repair is required, what are the relative merits of the seabed vs land route? What rerouting of sewage will exist to allow repair time? What precautionary components will be required in order to achieve rapid repairs? (Contractors)
 - 4.3 **Seismicity**

Given that an earthquake in the range M7 - M9 is likely to occur in the region sometime during the lifetime of the pipeline, what are the comparative merits of the seabed vs land route in mitigating rupture due to ground accelerations, slumping and liquefaction? What precautions to prevent pipeline rupture from earth movements are planned for the McLoughlin Pt. to Hartland Pipelines? (Geological Survey of Canada - Barrie & Rodgers: U.Vic - Morrell: British Columbia Geological Survey - Consultant- Monaghan).

4.4 Geotechnical

Given the Dallas Bluffs are receding and are identified as geotechnically unstable, and that the sea wall is vulnerable to undercutting, what are the comparative merits of the land route vs the seabed route? (Kerr Wood Leidal, 2011, British Columbia geological Survey - Monaghan).

4.5 Wave and Current

The Dallas Road shoreline is under constant erosional attack from wave action. Is this destructive coastline increasingly vulnerable as sea level continues to rise? A west to east current is suspected to winnow fines from the sea floor, leaving a coarse rounded gravel base. Given that the seabed route proposes to lay the pipeline in 35 metres of water on a lidar, bathymetry and seismically defined bench, what are the engineering challenges to this pipeline design? (Ocean Engineering, U. Vic – Buckham)

4.6 Ships Anchoring

Should a pipeline be placed on the sea floor in approximately 35 metres of water parallel to the shore of Dallas Road and inboard of Brotchie Ledge, what shipping regulations might be necessary in the design of the pipeline? (Transport Canada)

4.7 Cost Comparison

What are the comparative cost elements of designing and constructing a seabed pipeline vs a trenched and drilled/tunnelled conveyance on land? (contractors and suppliers)

4.8 Construction Duration & Scheduling

What are the issues that need to be considered when comparing the time required to complete the construction of a seabed pipeline compared with a land conveyance? (contractors and suppliers)

5. Closing and Next Steps: Moderator - TBD

SUGGESTED PARTICIPANTS

City of Victoria

Fraser Work B.Eng., M.Sc.

Director, Engineering & Public Works, CoV

Jonathan Tinney B.A., M.CRP.

Director, Sustainable Development & Community Planning, CoV

CRD

Reno Fiorante Ph.D, P.Eng.

Sr. VP Water, Stantec Consulting Ltd.

Ken Madill P.Eng.

Engineering Manager, Core area Wastewater Treatment Project

Natural Resources Canada

Vaughn Barrie Ph.D.

Research Scientist & Adjunct Prof U.Vic: Quaternary marine geology, shelf sedimentation processes, marine geohazards, ocean management, marine placers.

Garry Rogers Ph.D.

Head, Earthquake Hazards, Natural Resources Canada. Leading authority on Canada's west coast earthquakes. Senior research scientist with the Geological Survey of Canada and a professor at the University of Victoria. Serves on the Canadian National Committee for Earthquake Engineering, which is responsible for earthquake provisions in the National Building Code, on advisory committees to the Earthquake Program of the US Geological Survey, the Southern California Earthquake Center, NEPTUNE Canada and the *New Zealand Journal of Geology and Geophysics* and as a national representative on the Pacific Tsunami Warning System.

Transport Canada

TBA

Department of Fisheries and Oceans

TBA

Environment Canada

TBA

Canadian Coast Guard

TBA

Pacific Pilotage Authority

TBA

University of Victoria

Kristin Morell, Ph.D.

Asst Prof. School of Earth and Ocean Science, Faulting & Structural Mapping, Tectonic geomorphology, landscape evolution, active tectonics, natural hazards.

Lucinda Leonard, Ph.D.

Asst Prof, Geophysicist, School of Earth and Ocean Science, VC Structural Dynamics, seismic and tsunami hazard assessment

Brad Buckham, Ph.D., P.Eng,

Marine Engineer, Department of Mechanical Engineering & Director of West Coast Wave Initiative, Finite Element Analysis & Ocean Dynamics

Emergency Services British Columbia

TBA

Ocean Networks Canada

Tom Gallagher B.Sc.

Board Director: Geologist with extensive experience in exploration and development of minerals and oil and gas deposits. Field mapping, surveying, drilling and pipelining.

Richard Dewey Ph.D.

Associate Director, Science Services: Research interests are coastal flows, mixing, turbulence, waves, and tides. He has conducted research throughout the Pacific from Japan to California, and along the B.C., Alaskan, and Arctic coasts. He has used a variety of profilers and ROVs, and deployed more than 150 moorings on over 100 oceanographic expeditions. He is author of the Mooring Design and Dynamics MATLAB package, and specializes in time series analysis

Kim Juniper Ph.D.

Professor in the School of Earth and Ocean Sciences and the Department of Biology at the University of Victoria, and holder of the BC Leadership Chair in Ocean Ecosystems and Global Change since 2006.

Denis D'Amours Ph.D.

Board Director: Retired research scientist with the Department of Fisheries and Oceans Canada. Retired Director of Canadian Hydrographic Service (Pacific) and Sr. Policy and Program Advisor DFO.

Consultants, Contractors and Suppliers

Harry Olynyk, P.Geo.

VP Terra Remote Sensing Inc, Lidar & Terrain Mapping

Mel Best, Ph.D, P.Geo.

Principal and Geophysicist, Bemex Consulting, Electrical, Seismic, GPR Survey Technologies

Ryan Nicoll, P.Eng.

Marine Engineer, Dynamic Systems Analysis, Current Evaluation

Scott Beatty, Ph.D, P.Eng.

Marine Engineer, Cascadia Coast, Wave Analysis

Adam Dunn

Estimator, Corix Water Products, Victoria HDPE pipe supplier

Craig Peddie

VP Estimating & Construction Services, JJM Construction, Pipeline laying, barge operations

Patrick Monaghan, Ph.D., P.Geo.

Consulting Geologist, Monaghan Petroleum Consulting, Quaternary geology and the earthquake hazard assessment of southern British Columbia