

Wastewater Treatment Project

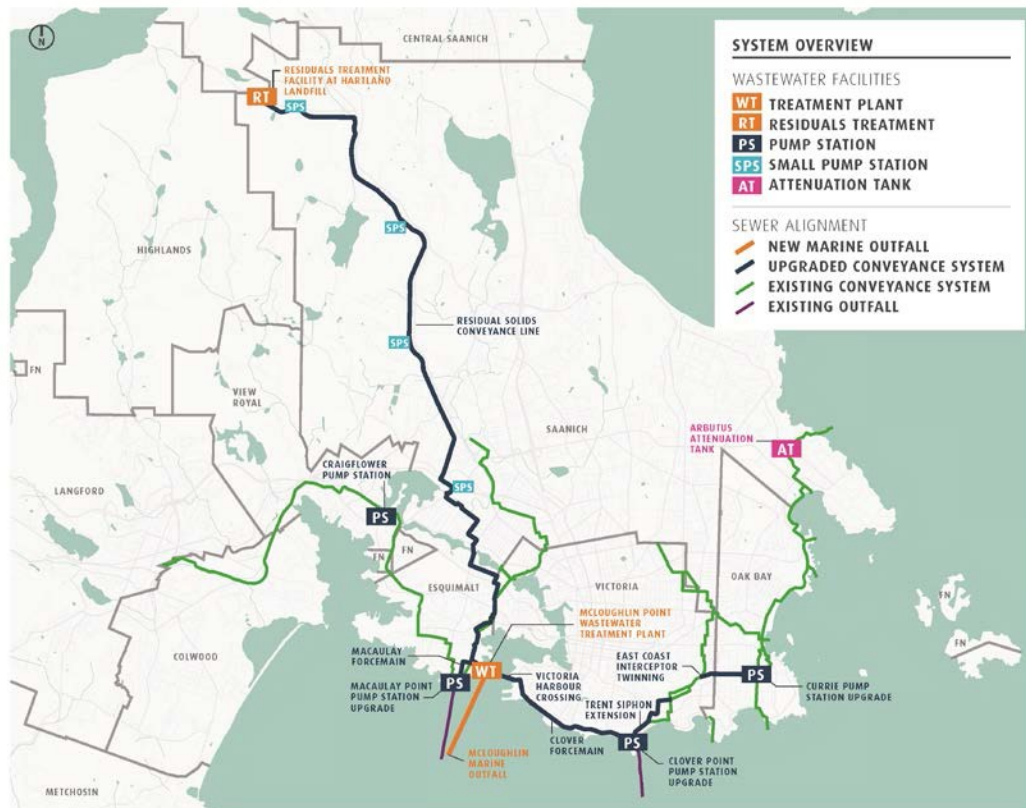
Community Consultation Meetings

Clover Point Pump Station,
Clover Forcemain and Cycle Path
on Dallas Road

January 2018

Wastewater Treatment Project

- The Wastewater Treatment Project will provide tertiary treatment for wastewater from the core area municipalities of Victoria, Esquimalt, Saanich, Oak Bay, View Royal, Langford and Colwood and the Esquimalt and Songhees Nations. The Project will be built so we comply with federal regulations by the end of 2020.



Clover Forcemain

- The Clover Forcemain is a pipe that will transport wastewater from the Clover Point Pump Station to the McLoughlin Point Wastewater Treatment Plant for tertiary treatment.
- This pipe will run from the Clover Point Pump Station along Dallas Road to Ogden Point, where it will connect to the cross-harbour undersea pipe.
- Clover Forcemain construction is anticipated to begin in early 2018 and take approximately two years to complete.

Clover Point Pump Station

- The Clover Point Pump Station will be upgraded and expanded as part of the Wastewater Treatment Project.
- The current pump station pumps sewage directly into the ocean. The expanded pump station will pump wastewater to the McLoughlin Point Wastewater Treatment Plant for tertiary treatment and will provide bypass pumping to the existing outfall during storm events.
- Construction of the Clover Point Pump Station expansion is anticipated to begin in early 2018 and take approximately two years to complete.

Project Team Members Presenting

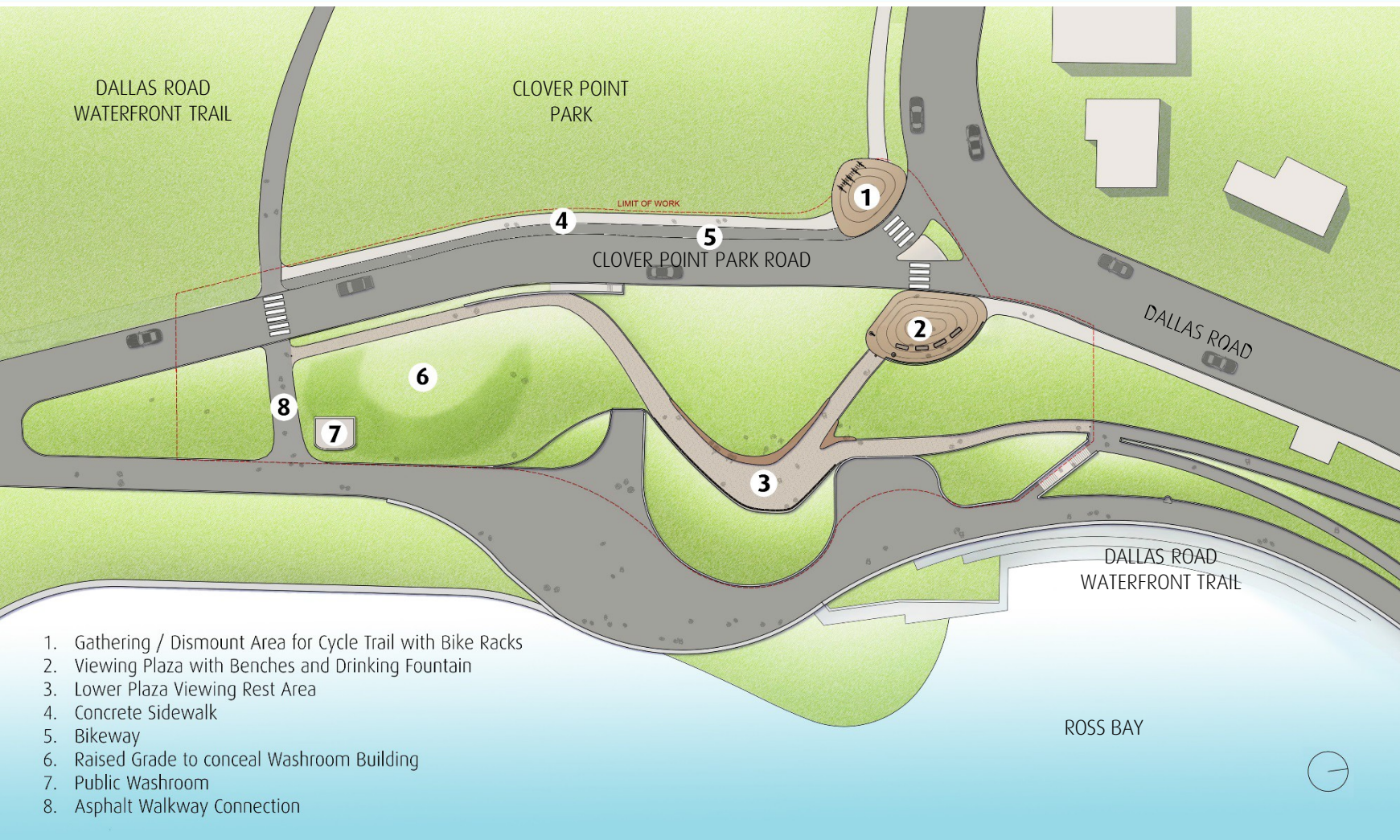
Dave Clancy - Project Director, CRD Wastewater Treatment Project

Bob Evans - Lead Architect, WSP/Kenaidan

Joe Broberg - Senior Project Manager, CH2M Hill

Mitchell Jacobson - Senior Transportation Engineer, Watt Consulting

Stephen Bean - Senior Geotechnical Engineer, Thurber Engineering



1. Gathering / Dismount Area for Cycle Trail with Bike Racks
2. Viewing Plaza with Benches and Drinking Fountain
3. Lower Plaza Viewing Rest Area
4. Concrete Sidewalk
5. Bikeway
6. Raised Grade to conceal Washroom Building
7. Public Washroom
8. Asphalt Walkway Connection

CLOVER POINT PUMP STATION

FIGURE 1 - CONCEPT PUBLIC SPACE PLAN



CLOVER POINT PUMP STATION

FIGURE 2 – VIEW TOWARDS THE SOUTHWEST



CLOVER POINT PUMP STATION

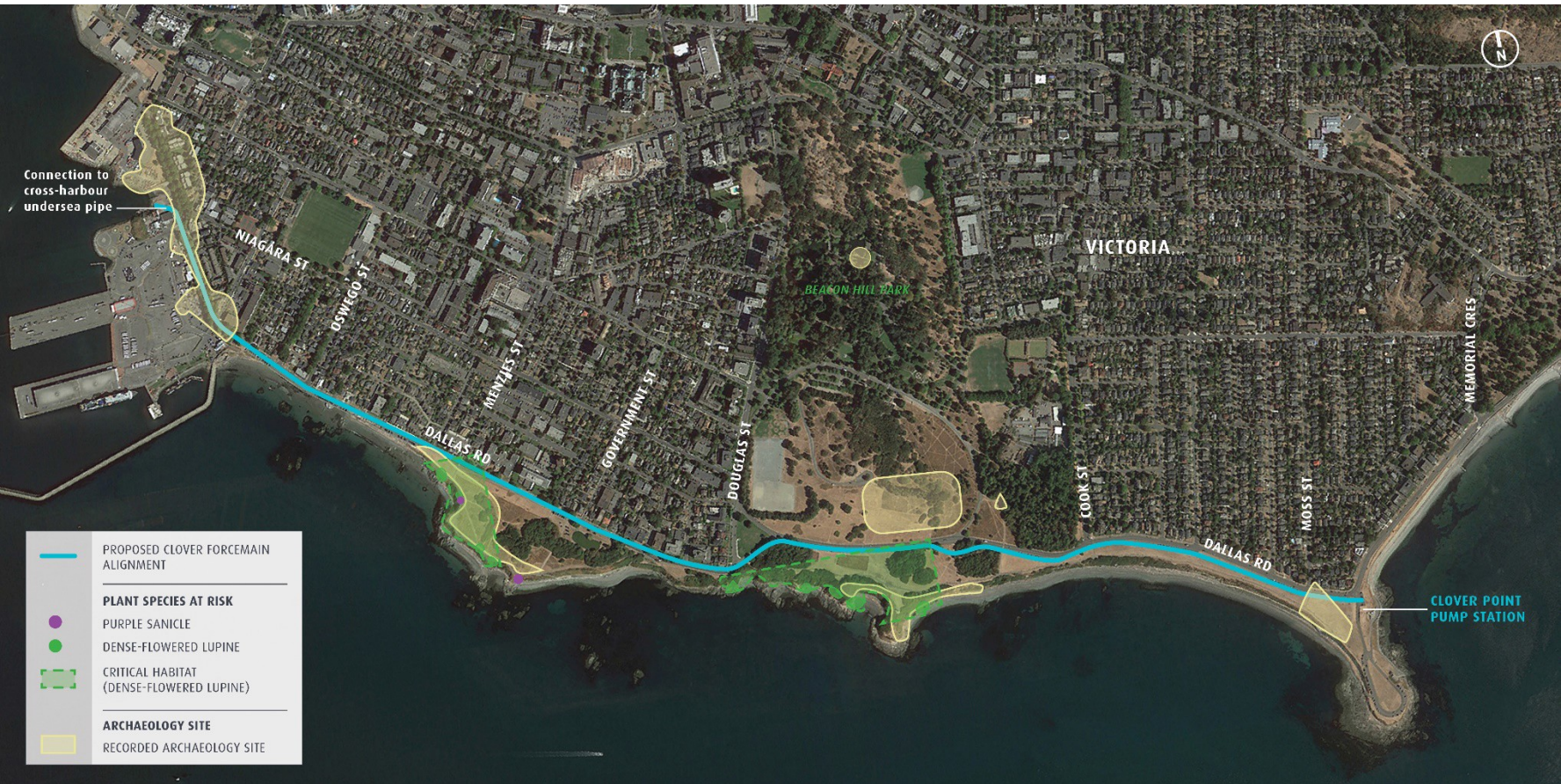
FIGURE 3 – VIEW TOWARDS THE NORTH



CLOVER POINT PUMP STATION

FIGURE 4 – VIEW TOWARDS THE SOUTH

Clover Forcemain: Alignment Overview



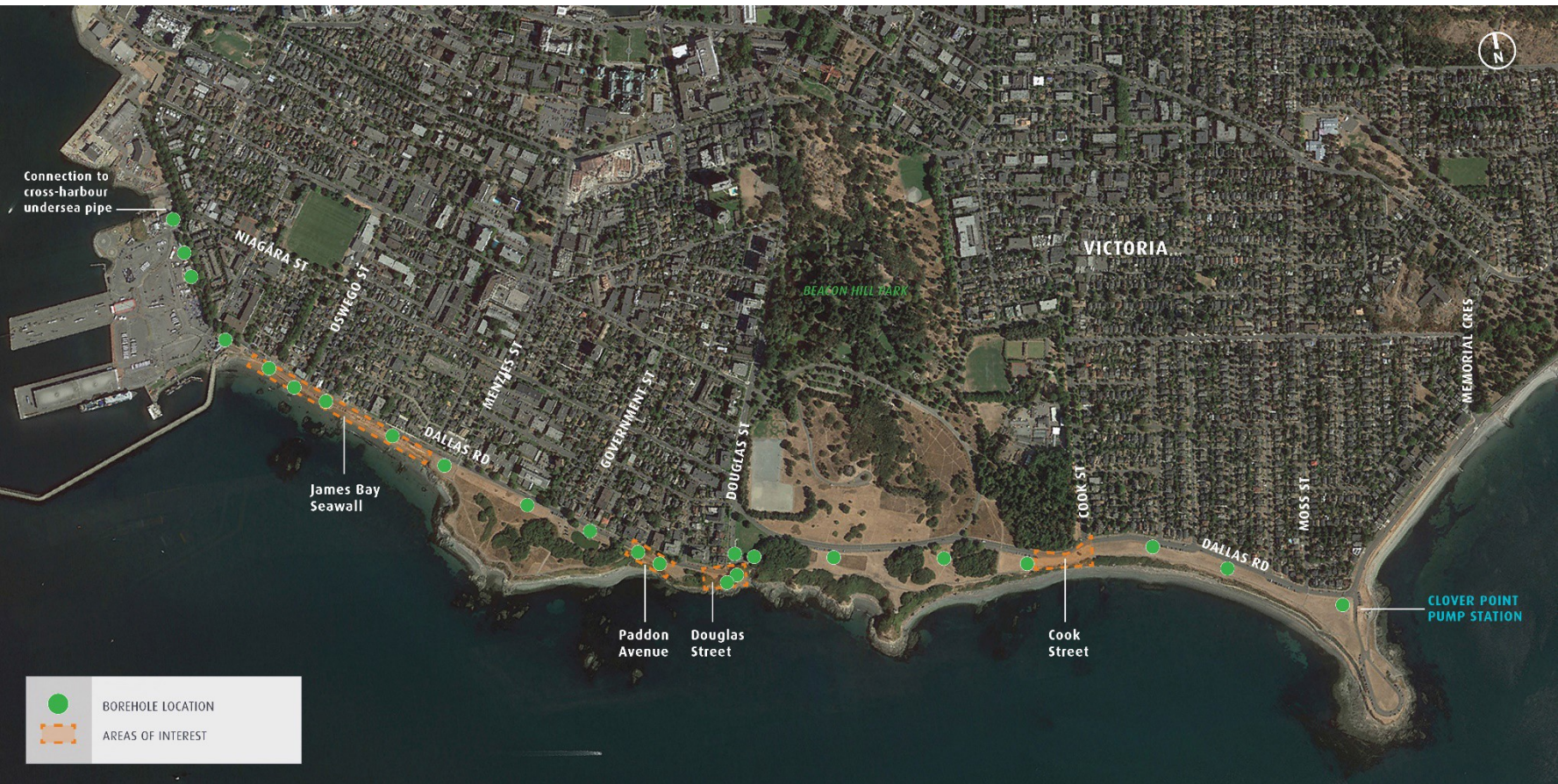
Clover Forcemain- Geotechnical Assessment

- In September 2017, the Project Team retained the design engineering team, who reviewed previous studies and technical reports, and completed a geotechnical assessment.
- The assessment concluded that the Dallas Road alignment is suitable from a geotechnical perspective and that the pipe can be constructed and operated without having an adverse environmental or geotechnical impact on the Dallas Road bluffs.

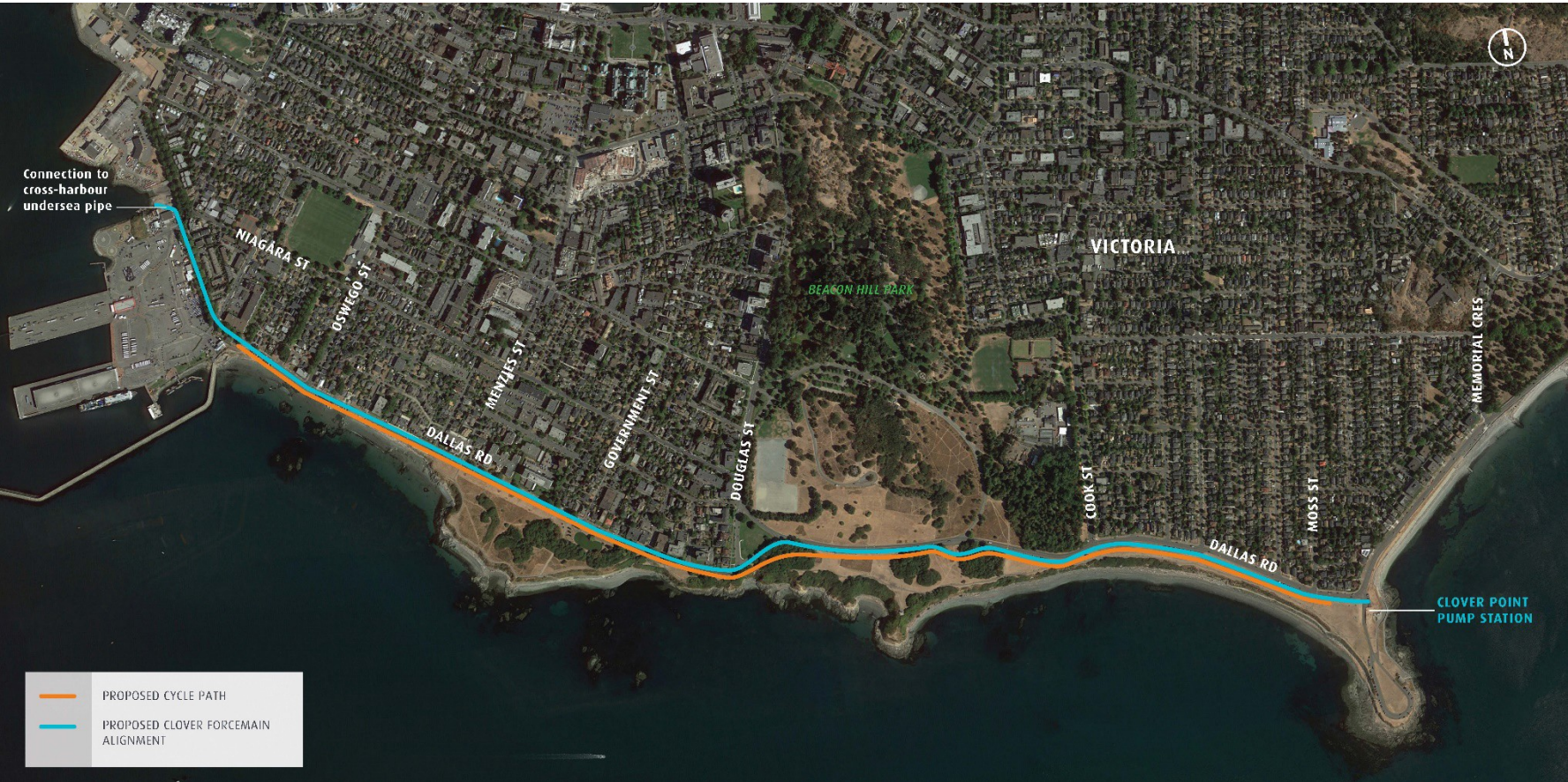
The design engineering team includes:

- Kerr Wood Leidal – expertise with the Dallas Road Bluffs
- CH2M HILL – expertise in seismic design and resiliency of large diameter forcemains in high seismic areas such as Metro Vancouver and the Pacific Northwest
- Thurber Engineering – geotechnical specialists including slope stability and terrain hazard assessments
- Plan Dynamics Limited – local environmental expertise

Clover Forcemain: Areas of Geotechnical Interest



Cycle Path: Alignment Overview



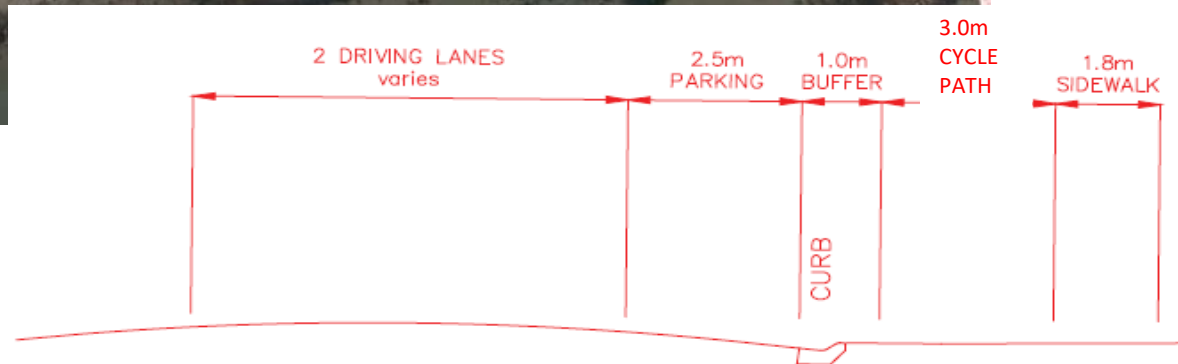
Cycle Path Criteria

- Cycle path width:
 - 3.0m min
- Buffer width between cycle path and road
 - Desirable min: 1.0m (or 1.5m min. for treed landscaping)
 - Limited width: 0.6m adjacent to moving vehicles, 0.75m adjacent to parked cars
- On-street parking
 - 2.5m is considered a suitable width for a typical parking lane (parallel)
- Drive lanes with buses
 - 3.3m min (typ.)
- New Sidewalks
 - 1.5 min is typical in Victoria; 1.8m – 2.0m preferred



Pandora Cycle Path

Cycle Path: Seawall Alignment - Dock St to Lewis St



SECTION A
N.T.S.

Cycle Path: Paddon Ave



Cycle Path: Douglas Street



Cycle Path: Mile Zero / Beacon Hill Park



Cycle Path: Cook Street to Linden Avenue



Cycle Path: Wellington Avenue to Clover Point



Parking Option 1 - Parallel parking



Dock Street to Lewis Street

Parking Option 2

Angle parking with four curb extensions



Dock Street to Lewis Street

Parking Option 3

Angle parking with two curb extensions



Dock Street to Lewis Street

Dallas Road Parking Options between Dock St and Lewis St

	Key Features	Total # of Spaces
Option 1	<ul style="list-style-type: none">• Presented to City of Victoria Council Dec 14/17• Meet licencing agreement criteria• Parallel parking on Dallas Road between Dock and Lewis Street	107
Option 2	<ul style="list-style-type: none">• Four curb extensions on south side, at each side street• Curb extensions provide improved pedestrian and cyclist connectivity: shortening crossing distance and removing parked cars from crossing area• Able to retain angle parking	115
Option 3	<ul style="list-style-type: none">• Two curb extensions on south side at Pilot and Oswego Street• Additional parking• Able to retain angle parking	129

Next Steps

February/March 2018

- Project Team to present the 50% design to the City of Victoria Council. This presentation will reflect input received at these community meetings.

March 2018

- The public space improvements and cycle path design and alignment, exterior of the Clover Point Pump Station building, and Clover Forcemain alignment is subject to City of Victoria approval in accordance with the criteria set out in the City of Victoria licences.