



Design and Construction Considerations for the Colwood Jetties Remediation Project Esquimalt Harbour, British Columbia

Presented by

Kellee Christensen, Anchor QEA, LLC

October 27, 2017

Work Site



Project Description and Objectives

- Sediment remediation
 - 21,300 m³ contaminated sediment removal
 - Required Dredging (with payable overdredge): 19,435 m³
 - Missed Inventory (contingency): 1,865 m³
 - 14,200 m³ material placement
 - Structural Backfill: 2,080 m³
 - General Backfill: 8,365 m³
 - Underpier Cover: 815 m³
 - Residuals Management Cover: 2,940 m³
 - Remediation activities performed in open-water and under-pier areas

Project Description and Objectives

- Other activities
 - Material processing
 - UXO monitoring
 - Archaeological monitoring
 - Structural removal and reinstatement
 - Material transport and disposal in the United States
- Construction from January 2017 through April 2017
 - Remove maximum contamination practicable
 - Coordinate with ongoing DND activities

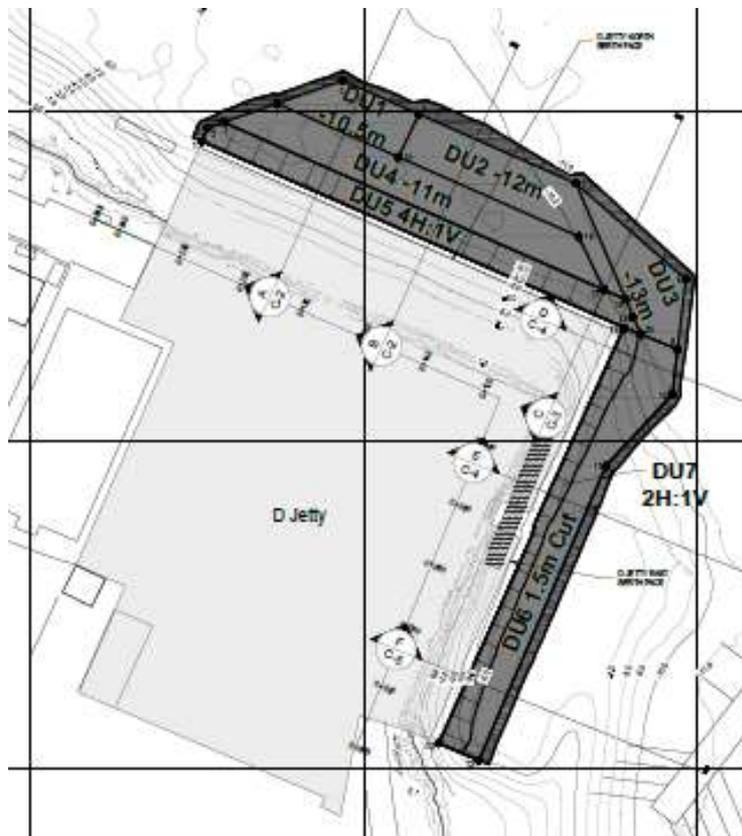
Design and Construction Challenges

- Dredging
- Backfill placement and water quality
- Material processing
- Material transport and disposal

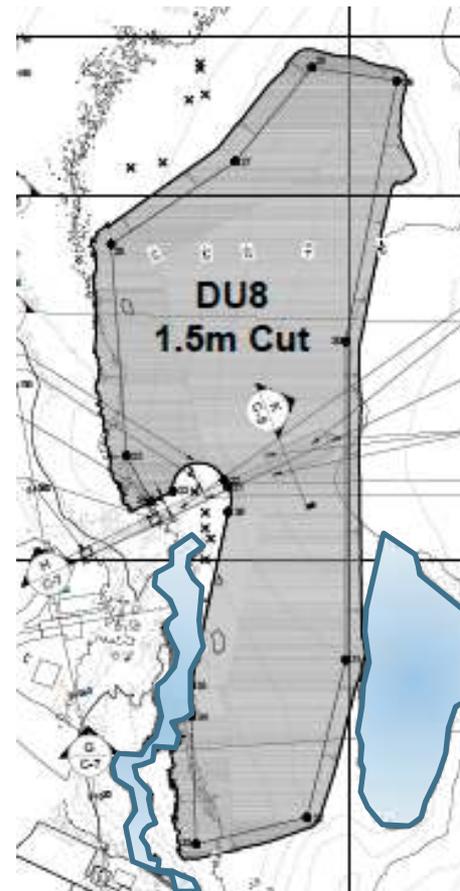


Design and Construction Challenges

- Dredging



D Jetty



F/G Jetty

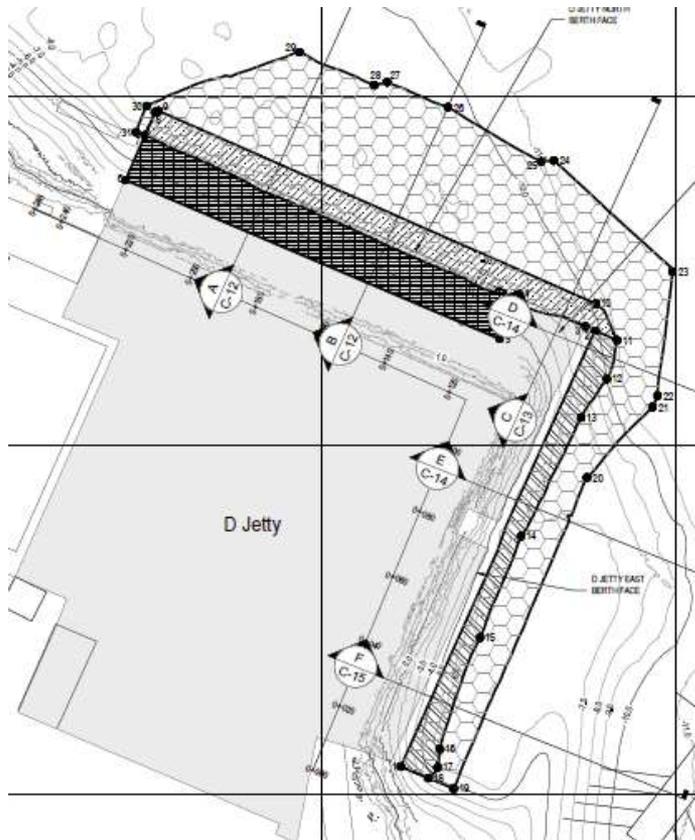
Design and Construction Challenges



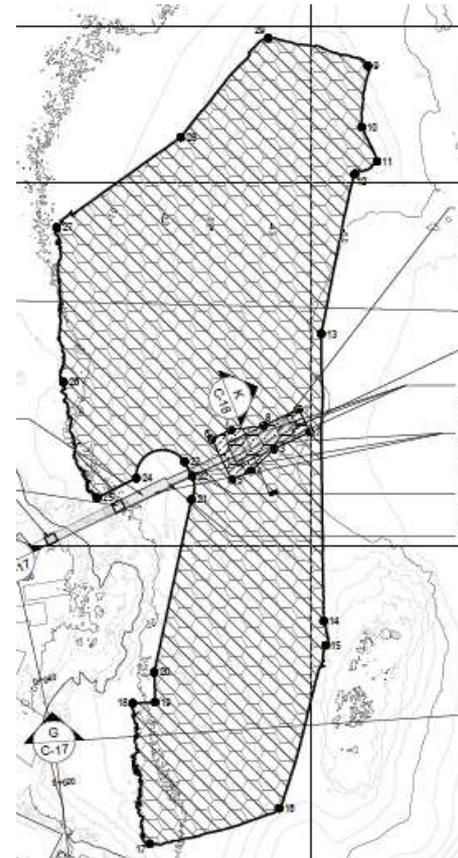
- Bedrock
- Nearshore dredging

Design and Construction Challenges

- Material placement



D Jetty



F/G Jetty

Design and Construction Challenges



- Steeper slopes
- Water quality

Design and Construction Challenges

- Material processing



Design and Construction Challenges



- Material processing

Design and Construction Challenges

- Material processing rates
 - 24 hour shifts
- UXO monitoring
- Archaeological monitoring



Design and Construction Challenges



- Material Disposal

Design and Construction Challenges

- Material transport to The Dalles, Oregon, for disposal



- Barge transport
- Truck transport

Lessons Learned

- Budget and schedule
- Permit requirements
- Vessel documentation
- Material production rates



Questions

Kellee Christensen

kchristensen@anchorqea.com