

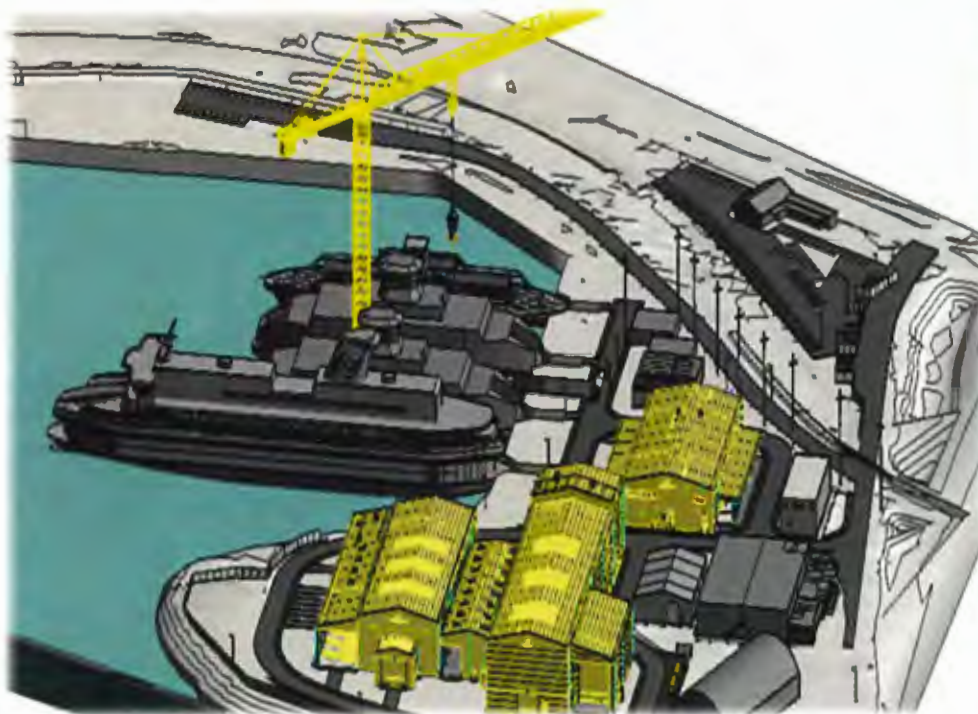
# BC Ferries Fleet Maintenance Unit (FMU) Site Redevelopment Project

Development Permit Panel Meeting  
November 16, 2023

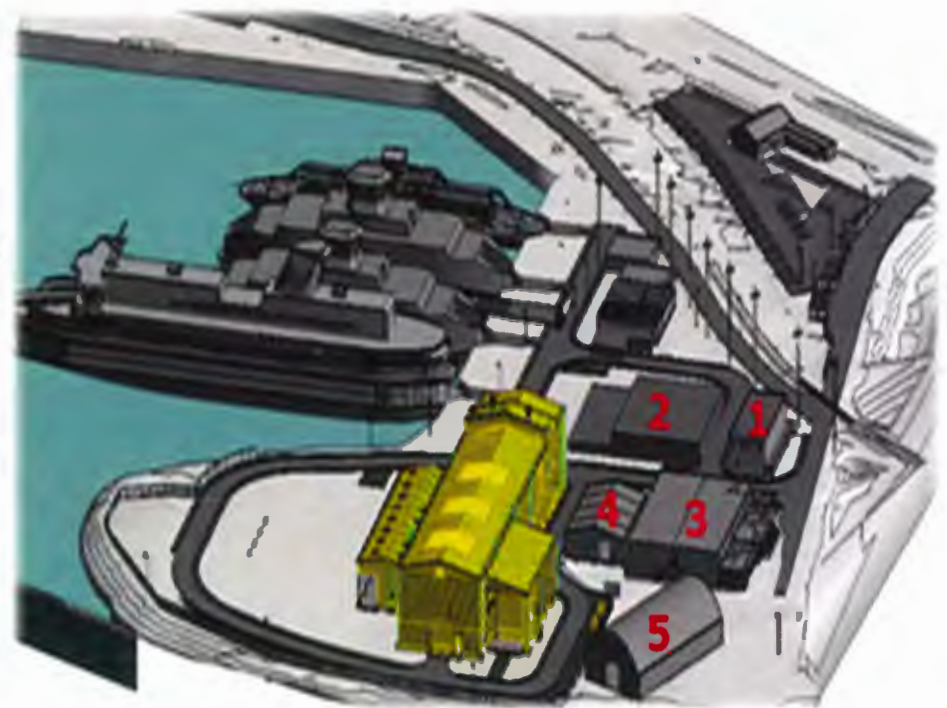


## 2019 DP Application vs 2023 DP Application

- **2019 - Major Site Redevelopment**
  - Three new primary building structures and a fixed tower crane
- **2023 - Minor Site Redevelopment & Life-Extensions**
  - One primary new structure, building life-extensions to five buildings



**2019**

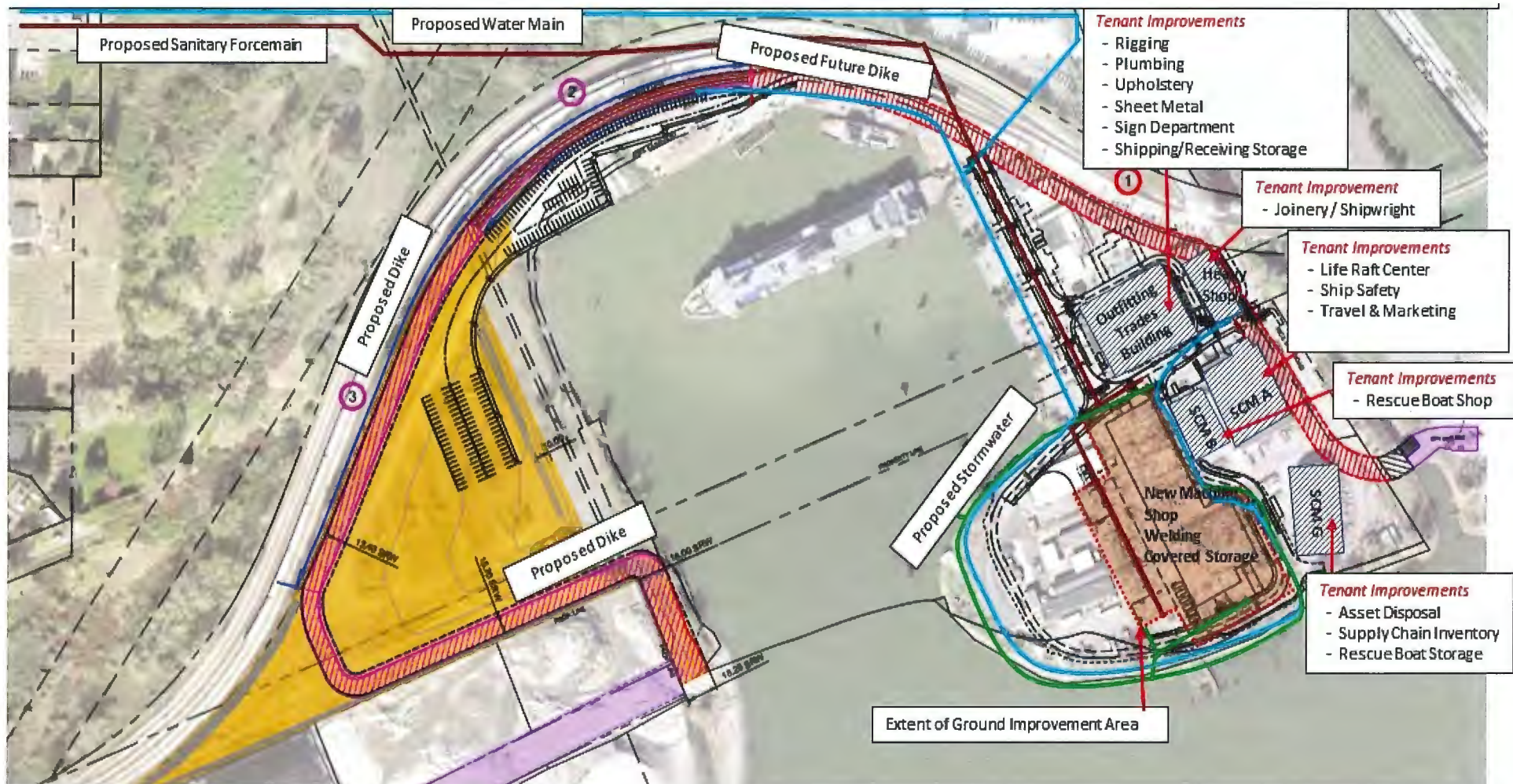


**2023**

# Project Overview

## 2023 FMU Redevelopment Scope Detail

- **Build 1 New Primary Building**
- **Life Extend 5 Existing Buildings**
- **Construct Site Utilities, Dike System and Parking**

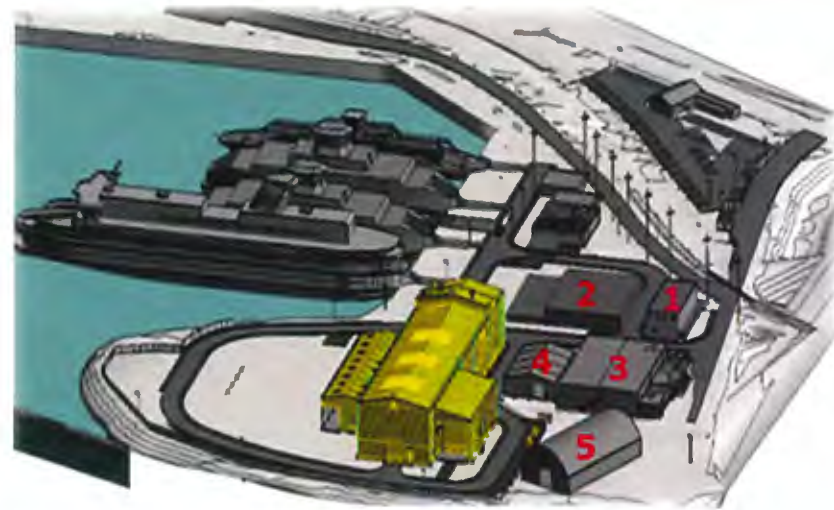


# Project Overview

## 2023 Redevelopment Scope



**Existing FMU Facility Aerial  
(Highlighted Demolition Area)**



**New Overall Site View**



**New machine shop showing attached  
welding/fabrication shop**



**New machine shop showing attached  
covered storage area**

# Environmentally Sensitive Areas (ESAs) and Riparian Management Areas (RMAs)



Legend		
	Roads	
	Lulu Island Foreshore IT5 (Intertidal)	
	Shellmont Dyke SH5 (Shoreline)	
	Shellmont South SH6 (Upland Forest, Old Fields and Shrublands)	
	Other ESAs	

**Notes:**  
Field data collected March 2018

**References:**  
SNC Lavalin, City of Richmond,  
BC Ferries, DataBC, ESO Base Layers

<b>Client Name:</b> BC Ferries	<b>Project Location:</b> Deas FMO, Richmond
<p><b>Scale:</b> 1:4,500</p>	
<b>Reviewer:</b> JJ	<b>Creator:</b> ECH
<b>Date:</b> 2019/03/05	<b>REF No:</b> 680343-004

MXD Path: \\s2606\projects\Current Projects\SNC-Lavalin Potts & Mann\627732 - BC Ferries Deas FMO\4.0 Execution\4.5 GIS and Drawings\GIS\PROJ\627732\_Pro.aprx

# Impacts on ESA SH-5 and ESA IT-5 (Main Site)

## 2019

## 2023



- **Footprints reduced by 2,742 m<sup>2</sup> in ESA SH-5 and 257 m<sup>2</sup> in ESA IT-5**

# Impacts on ESA SH-5 and ESA IT-5 (Parking Lot and Dike)



- Impacts and compensation for proposed parking lot and dike assessed by Department of Fisheries and Oceans and Ministry of Forests
- Letter of Advice and *Water Sustainability Act* Section 11 Approval received in October 2023
- Addressed under City of Richmond Servicing Agreement SA-20-891043

**LEGEND**

Outfall Location	Proposed Project Footprint-Dike	<b>SH5 Habitat Type Overlap</b>
<b>ESA Areas</b>	Proposed Project Footprint-Fill Material	Impervious (Non-Vegetated)
ESA IT5	Proposed Project Footprint Overlap Area	Poor to Low Quality Habitat (Vegetated)
ESA SH5	City of Richmond Dike ROW	

# Compensation/Enhancement for Impacts on ESA SH-5 and ESA IT-5



- **2,976 m<sup>2</sup> of Shoreline Enhancement/Compensation**
- **Compensation/Enhancement ratio went up from 2.9:1 to 3.3:1**



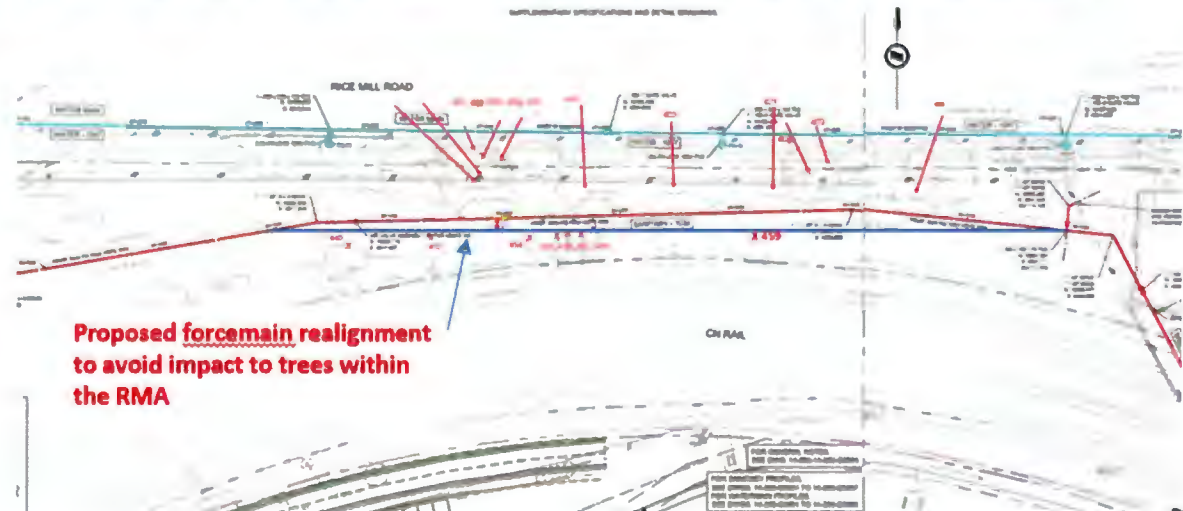
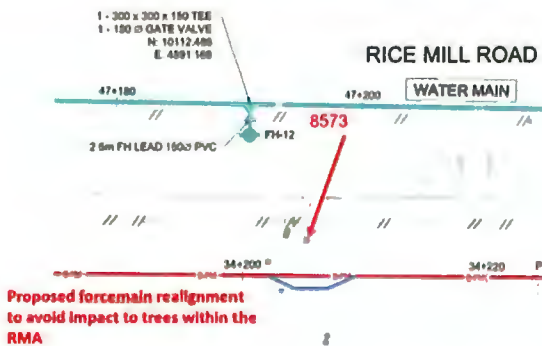
# Impacts on ESA SH-6 (Sanitary Forcemain)

2019 (Impacted Area = 1,134 m<sup>2</sup>)

2023 (Impacted Area = 1,083 m<sup>2</sup>)

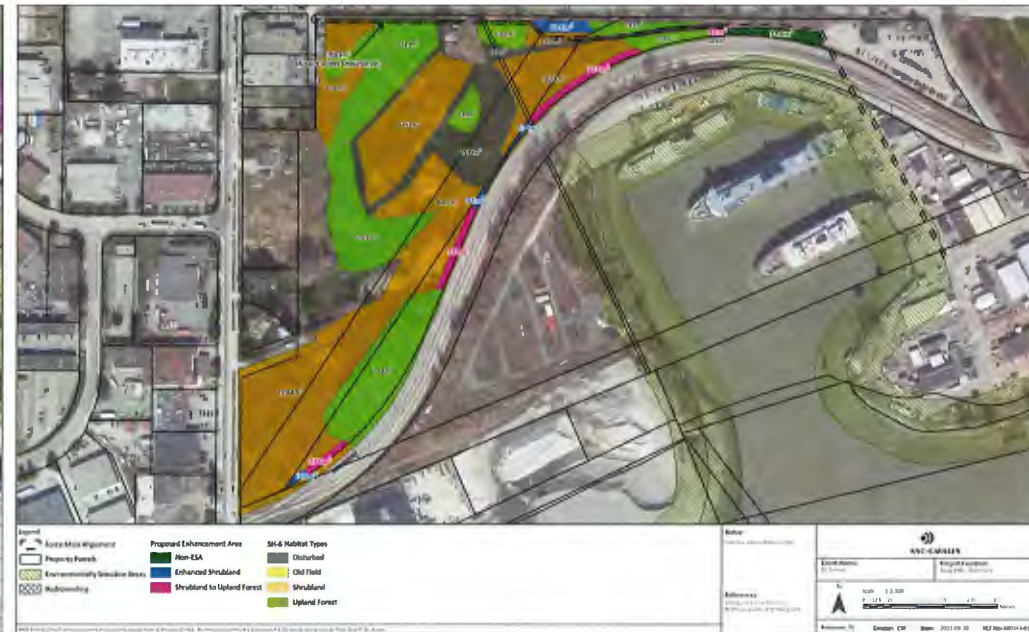
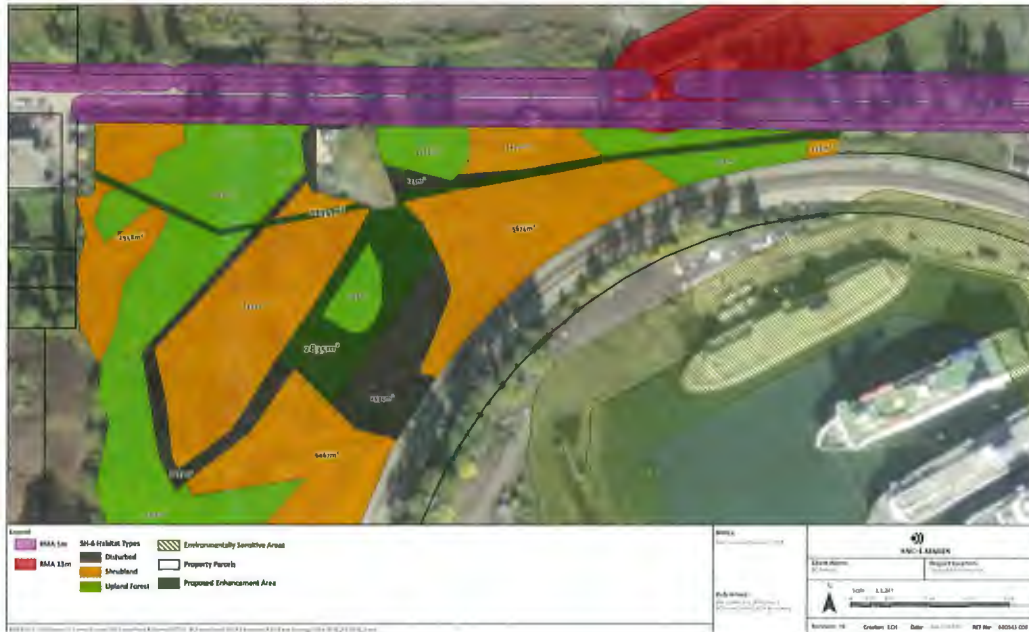


## 2023 Sanitary Re-alignment (Net Retention of 10 RMA trees)



# Compensation/Enhancement for ESA SH-6

**2019 (Compensation Ratio of 2.5:1)      2023 (Compensation Ratio of 2.9:1)**



- **No change in total compensation/enhancement area of 3,186 m<sup>2</sup>**
- **Compensation/enhancement arrangements had to respect BC Hydro and Metro Vancouver Right of Ways and Restrictions**
- **Consolidated compensation/enhancement area would become isolated with future development**
- **Linear compensation/enhancement area would avoid isolation, promote a wildlife travel corridor, and minimize human-wildlife interactions**

# Impacts on 5m RMA (Southside Ditch on Rice Mill Road)

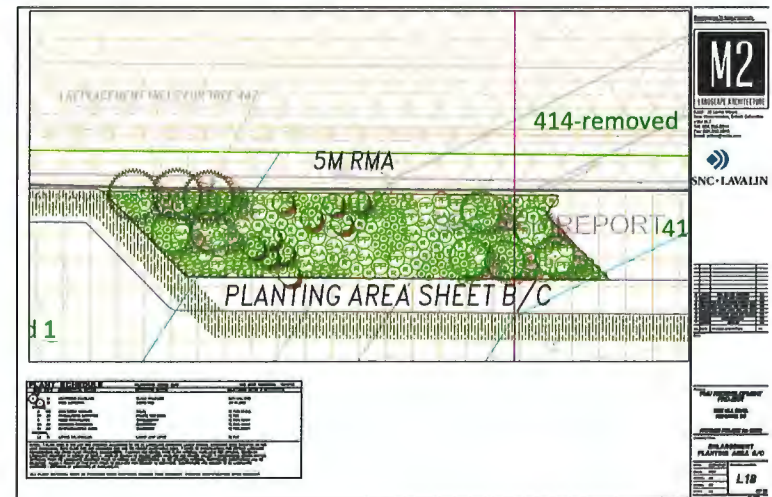


- Water main installation, culvert removals/daylighting, and compensation assessed by Department of Fisheries and Oceans and Ministry of Forests
- Letter of Advice and *Water Sustainability Act* Section 11 Approval received in October 2023
- Addressed under City of Richmond Servicing Agreement SA-20-891044

# Impacts on 5m RMA (Tree 442)



- **Tree 442 needs to be removed to allow for City of Richmond Statutory Right of Way for the Water Main Meter Chamber**



- **Three trees will be planted along RMA to compensation for removal of Tree 442**

# Tree Accounting

## Tree Accounting

Area of the Site	Impacted Trees	Required Replacement Trees	Planted Replacement Trees	Cash in Lieu for Replacement Trees
BC Ferries Land North of CN Rail	- 26 trees impacted by private sanitary line - 1 tree Impacted in RMA (servicing)	2:1 ratio - 44 trees 3:1 ratio - 15 trees	148 trees (min 8 cm caliper or 4 m ht.)	N/A
BC Ferries Land South of CN Rail	-62 trees impacted by dike Infrastructure - 5 trees impacted by FMU and related works	2:1 ratio - 132 trees 3:1 ratio - 6 trees	25 trees {min 8 cm caliper or 4 m ht.)	N/A
<b>Total</b>	<b>94 trees impacted</b>	<b>197 trees total</b>	<b>173 planted trees</b>	<b>24 trees @ \$750 per tree (\$18,000)</b>

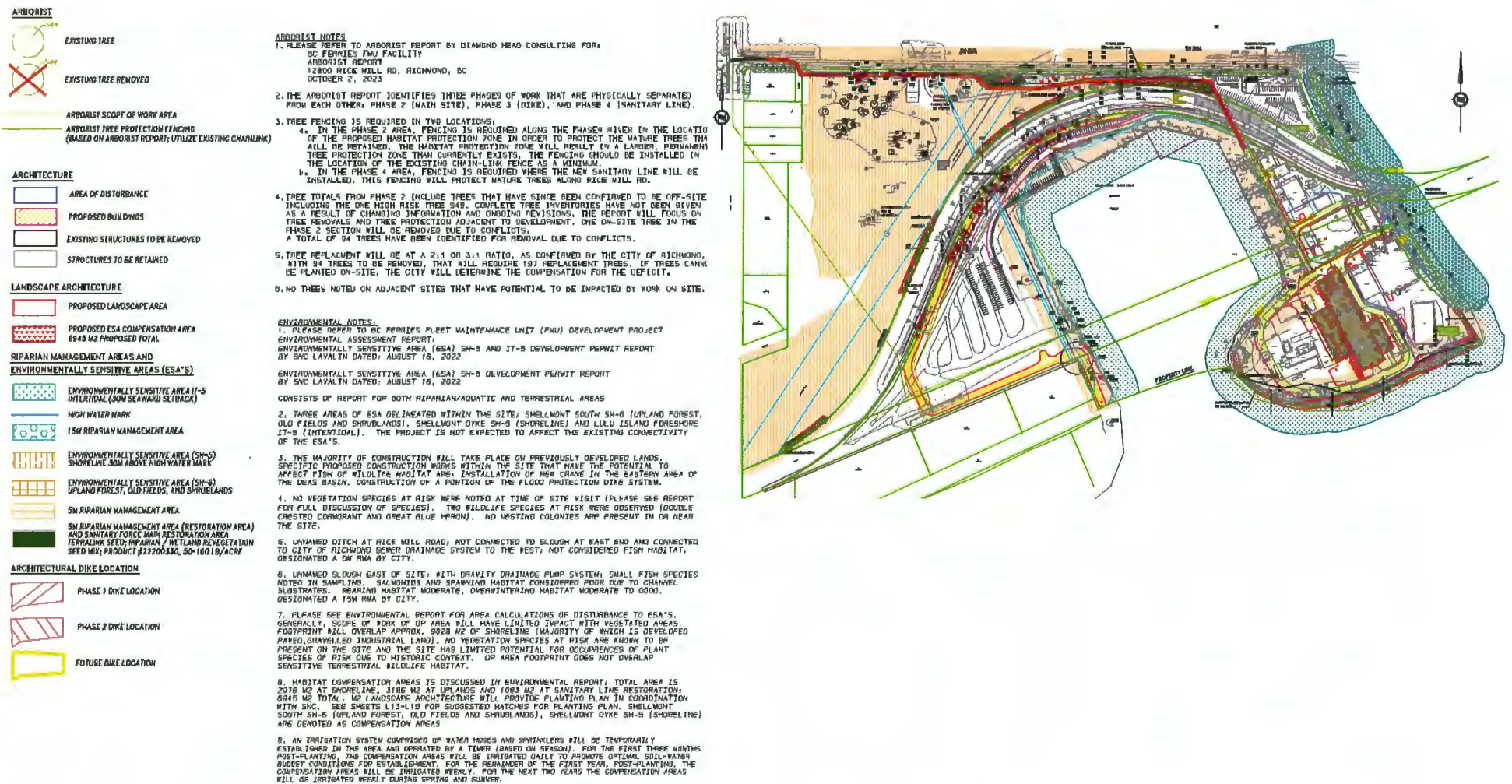
# Project Landscape

- Landscape google aerial / Existing Conditions
- Restoration and Compensation areas



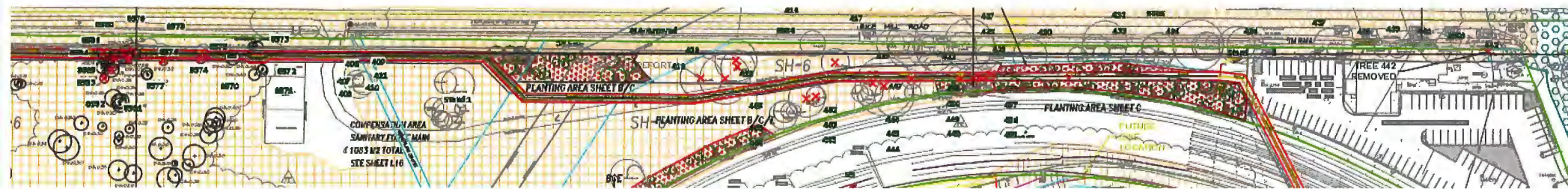
# Project Landscape

- Landscape Masterplan with combined information
- Restoration and Compensation areas, Arborist information



# Project Landscape

- SH-5 Landscape areas; San line, Train ROW and Rice Mill Road
- Retained trees and Landscape Screening
- Planting Compensation



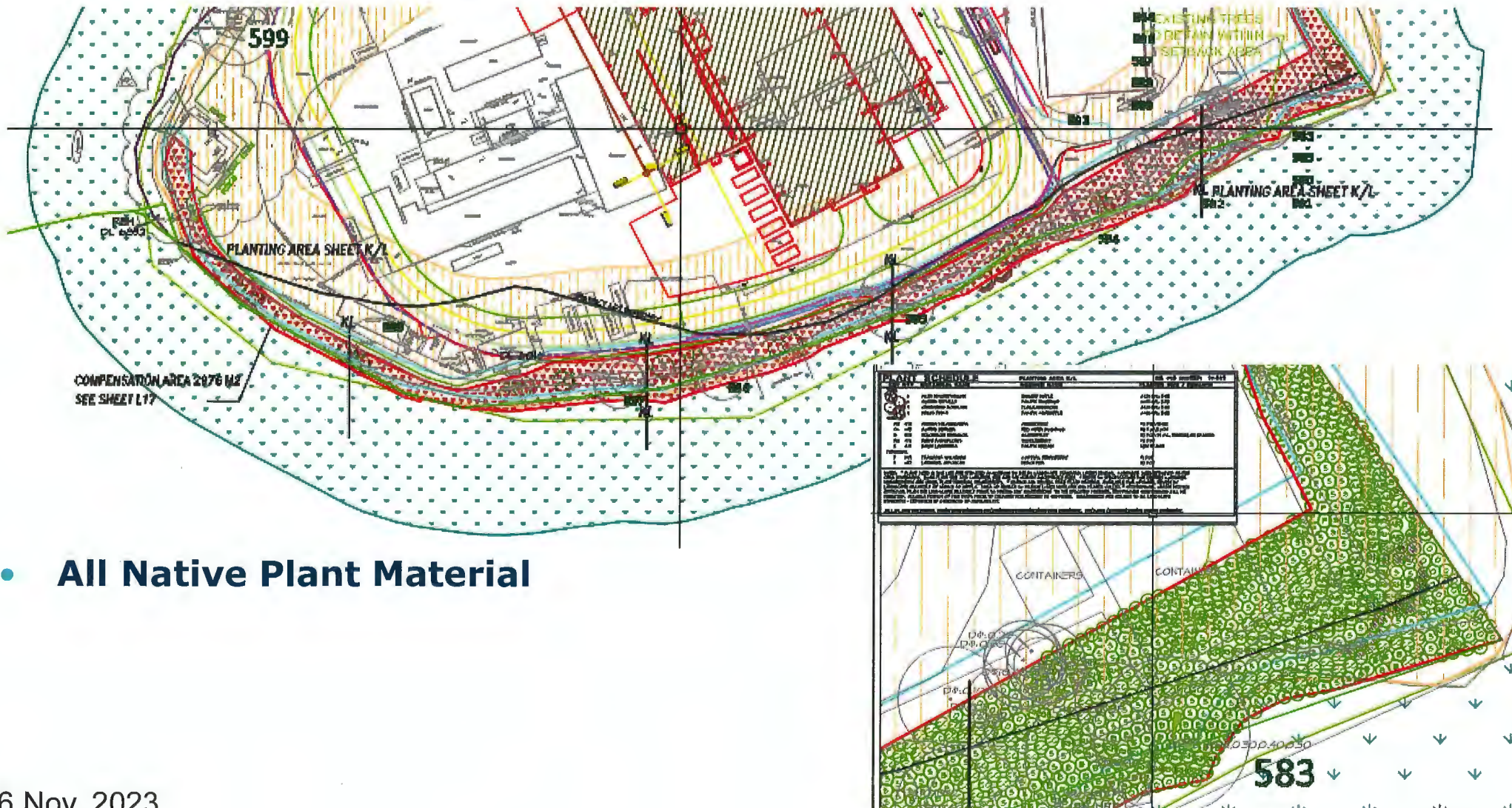
PLANT SCHEDULE		
SYMBOL	PLANTING AREA B/C	SEE JOB SHEETS 10-043
10	SHADBLAU SPANISH	SHAD BLAU
11	SHADBLAU SPANISH	SHAD BLAU
12	SALICORNIA SPANISH	SALE CORNIA
13	SPYRACALUS SPANISH	SPYRACALUS
14	SPYRACALUS SPANISH	SPYRACALUS
15	SPYRACALUS SPANISH	SPYRACALUS
16	SPYRACALUS SPANISH	SPYRACALUS
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100	SPYRACALUS SPANISH	SPYRACALUS

- Replacement Trees for Tree 442
- All Native Plant Material



# Project Landscape

- SH-6 Landscape Areas; San line and Rice Mill Road
- Retained trees and Landscape Screening
- Planting Compensation



- All Native Plant Material