



Northern Regional Construction Association



# The Future of Construction for Public Owners

*An Industry Perspective*

*2021 to 2030*

# Purpose of Presentation

- Provide City Council and Administration an industry perspective on the current and future environment relative to construction services.
- Share current industry statistics that articulate issues impacting contractors and public owners in the bidding process.
- Provide a viewpoint from an industry expert on matters impacting project costs and timelines.



Northern Regional Construction Association

# Construction Statistics You Need to Know in 2021.



**NRCA**

Northern Regional Construction Association

- Value of Current Construction in BC is **\$120B** (60% is in Northern BC – LNG, Site C, Coastal Gaslink)
- Value of Proposed Construction Projects in BC is **\$221B**
- Number of construction companies in BC is **25,784**. (92% have less than 20 employees)
- Number of construction trades workers in BC's labour force is **172,045**
- **26,806** – Number of construction job openings in BC due to retirements and expansion by 2030
- **11,331** – Unfilled construction jobs in BC unfilled to labour shortages (2030)
- **15.2% or 57,600** – BC youth unemployment rate (15-24 yrs. Old)
- **1 in 45** BC high school graduates enter construction trades programs within one year of graduation

# Worldwide Supply Chain Concerns



- Shortage of shipping containers resulting in global shipments of products
- Port congestion resulting in delays of unloading and delivery of materials.
- Government stimulus programs in Asia are driving increased demand for construction materials thus keeping materials in those regions.
- 2021 winter storm in Texas impacted petrochemical manufacturing – expect to experience North America shortages of paint and plastic materials.
- Drywall – North America market is sold out – OSB 7/16 “ is more expensive than plywood.
- Steel - during COVID, the industry went from 87% to less than 50% utilization.
  - Quotes were guaranteed for 3 months – now its 15 days.
  - Steel mills advising stability in Q2 2022.
  - Large distribution centres ( e.g., Amazon & Kmart) forecast to consume 65% of steel produced in North America in the next 24 months.

# Price Trends of construction materials since January 2020

➤ Lumber and other wood products	180%
➤ Primary ferrous metal products	115%
➤ Basic and semi-finished iron or steel products	115%
➤ Fabricated metal products and construction materials	109%
➤ Primary non-ferrous metal products	127%
<b>➤ Total Construction Industry Product Index</b>	<b>109%</b>

*Source – Statistics Canada- Industrial Index*



# Health and Transportation Projects



## LEGEND

### PROCUREMENT METHOD

DESIGN BUILD
DESIGN BID BUILD
DESIGN BUILD FINANCE
PROGRESSIVE DESIGN BUILD
CONSTRUCTION MANAGEMENT
ALLIANCE
TO BE DETERMINED

### SECTOR

EDUCATION	
ACCOMMODATION	
ENERGY & UTILITIES	
HEALTH	
TRANSPORTATION	

### PROJECT TYPE

NEW BUILD	NB
RENOVATION	R
EXPANSION	E

### CAPITAL COST

\$	\$50-\$150 MILLION
\$	\$150-\$500 MILLION
\$\$\$	\$500-\$1000 MILLION
\$\$\$\$	>\$1000 MILLION

## Active Procurement

SECTOR	PROJECT	OWNER	PROJECT TYPE	RFQ ISSUE	RFP ISSUE	IBC INVOLVED YES or NO	LOCATION	CAPITAL COST	CONSTRUCTION (ANTICIPATED)
	BCIT Student Housing Tall Timber House	BCIT	NB	Spring 2021	Spring 2022	No	Burnaby	\$	2022-2024
	Okanagan College Student Housing	Okanagan College	NB	Summer 2021	TBD	No	Kelowna, Vernon, Salmon Arm	\$	2021-2024
	Cowichan Secondary Seismic Upgrade	School District No. 79	R	Summer 2020	Fall 2021	Yes	Duncan	\$	2021-2024
	Natal 60 - 138kV Switchyard Rebuild	BC Hydro	R	Started	TBD	No	Southern Interior	\$	2023
	Burnaby Hospital Redevelopment Phase 1 <sup>4</sup>	Fraser Health Authority	NB/R/E	Dec 2019	June 2020	Yes	Burnaby	\$\$\$	2021-2025
	Cariboo Memorial Hospital Redevelopment	Interior Health Authority	R / E	Apr 2020	Oct 2020	Yes	Williams Lake	\$\$	2022-2024
	Cowichan District Hospital Replacement	Vancouver Island Health Authority	NB	Fall 2020	April 2021	Yes	North Cowichan	\$\$\$	2022-2026
	Mills Memorial Hospital Redevelopment	Northern Health Authority	NB	July 2019	Feb 2020	Yes	Terrace	\$\$\$	2021-2025
	Stuart Lake Hospital Replacement	Northern Health Authority	NB	April 2020	August 2020	Yes	Fort St. James	\$	2022-2024
	Dawson Creek & District Hospital Replacement	Northern Health Authority	NB	Oct 2020	Feb 2021	Yes	Dawson Creek	\$\$	2022-2026
	Edmonds Skytrain Ops. & Maint. Ctre. Upgrades (OMC1&2)	TransLink	E	–	May 2020	No	Burnaby	\$	2021-2023
	New Skytrain Operations & Maintenance Centre (OMC4)	TransLink	NB	–	Dec. 2021 (TBD)	No	Coquitlam	\$\$\$	2021-2025
	New Skytrain Operations & Maintenance Centre (OCC2)	TransLink	NB	–	April 2021	No	Burnaby	\$	2021-2024
	Hwy. 1 216th Street to 264th Street	Min. of Transport. & Infrastructure	E	Tender Winter 2021-2022	–	Yes	Langley	\$\$	Spring 2022
	Hwy. 1 Bruhn Bridge & Old Spall Rd.	Min. of Transport. & Infrastructure	E	Tender early 2022	–	Yes	Sicamous	\$\$	Summer 2022
	Hwy. 1 Salmon Arm West 10th Avenue SW to 10	Min. of Transport. & Infrastructure	E	Tender Winter 2022-2023	–	Yes	Salmon Arm	\$	Spring 2023

<sup>4</sup> Design Build Finance and Construction Management

# Industry Perspectives

What triggers contracting community to compete in City project bid?

- Owner of Choice- reputation that processes are fair, open and transparent, ensures high quality relationships, proper and design drawings.
- Current market conditions.
- Contractors' available resources to complete the works.
- Project delivery methods (Construction Manager, Design Build).
- Quality of Tender Documents.



Northern Regional Construction Association

# Why do Owner's experience cost project overruns?

- **Project Budgeting** – Quantity Surveyors using data bases not specific to region or market conditions.
- **Initial Budgets** – Not including specific architectural features, client requirements, infrastructure improvements, or real costs of selected site.
- **Incomplete** drawings and specifications at time of tender.
- Construction industry considers “**premiums**” for unknowns in design & unrealistic timelines.
- Lack of **balanced risk** between parties – contracts that are one sided.
- Budget and construction timelines
- **Misalignment** with Industry.







# Project Design

Deficiencies in project design can create delays and increase costs.

- 38% of construction contract “**disputes**” attributed to design issues.
- Change orders issued by owners because of missing information.
- Lack of design coordination
- Boiler plate specifications
- Extension of schedules.

# Future impacts to Owner projects

- ▶ Public Owners deferred capital spending in 2020 due to fear of the unknown or financial uncertainty during COVID.
- ▶ Significant infrastructure spending in Northern BC on health care and transportation.
- ▶ Public owners financial grants may trigger tight timelines to deliver projects on time. Industry may not be capable of meeting timelines
- ▶ Major projects (Pattulo Bridge, St Paul's Hospital, YVR expansion, Skytrain, Port Authority – nearly 7500 additional workers to meet this demand.
- ▶ Future demand for trades workers and pending retirements.

