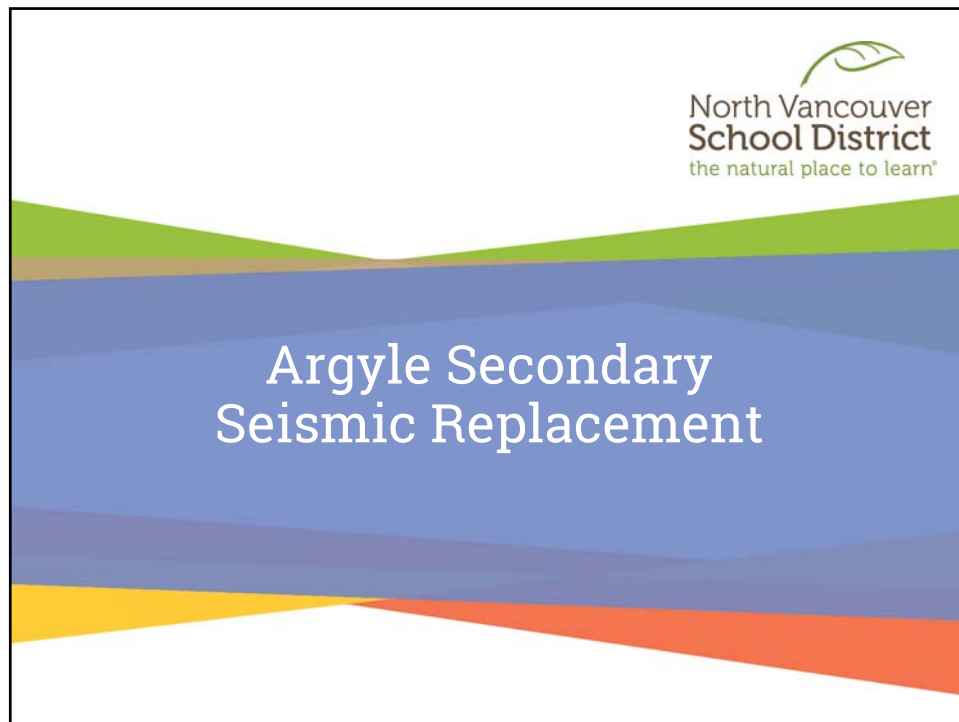





| Capital Project Team | | nvsd | |
|--------------------------------|--|---|--|
| MAJOR CAPITAL FUNDING PROGRAMS | PROJECT DESCRIPTION | PROJECT LEAD | PROJECT SUPPORT |
| Seismic Mitigation Program | <ul style="list-style-type: none"> ➤ Argyle Secondary Seismic Replacement ➤ Handsworth Secondary Seismic Replacement ➤ Mountainside Secondary Seismic Upgrade | Mark Thomson Mark Thomson Tanja Kalamar | James Bell James Bell James Bell |
| School Enhancement Program | ➤ Mountainside Secondary Building Envelope – Exterior Wall System | Tanja Kalamar | James Bell |
| New School Program | ➤ Cloverley Elementary – Provide Draft Concept Plan 60K/475 Capacity School | Tanja Kalamar | James Bell |
| MINOR CAPITAL PROJECTS | | | |
| Building Envelope Program | ➤ Dorothy Lynas Elementary Building Envelope – Upgrades | James Bell | Jeff Jackson |
| Annual Facilities Grant | <ul style="list-style-type: none"> ➤ 2020 Major Highlights ➤ Capilano / Norgate CNCP | Mike Chapman | Jeff Jackson Luke Smeaton |
| Playground & Equipment Program | ➤ Westview Elementary | Mike Chapman | Jeff Jackson |



Argyle Secondary



PROJECT SCHEDULE

Phase 1 – New School

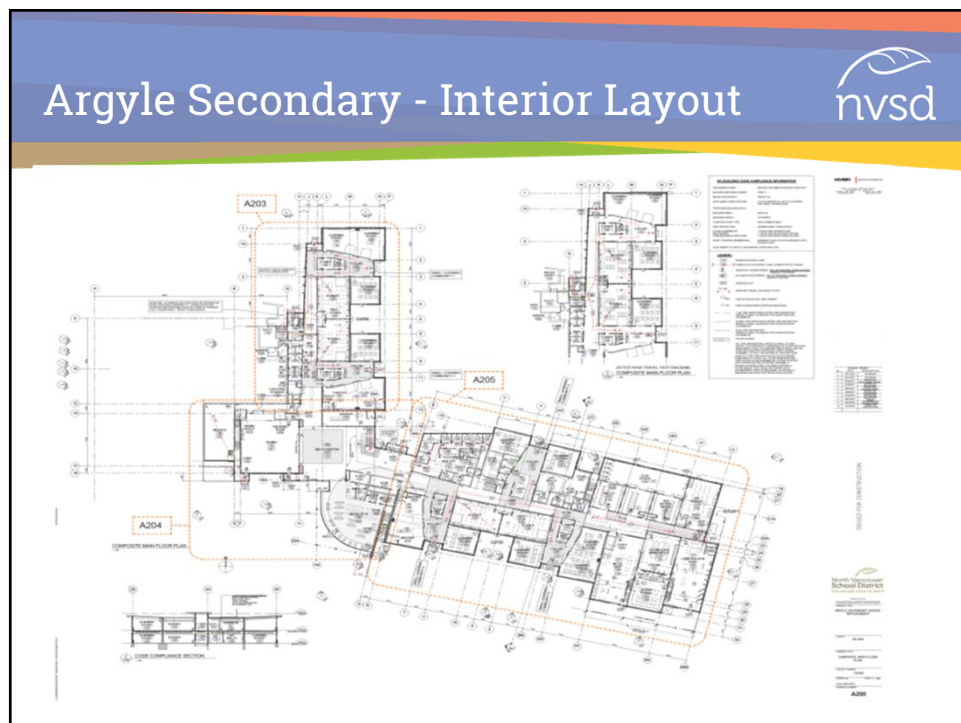
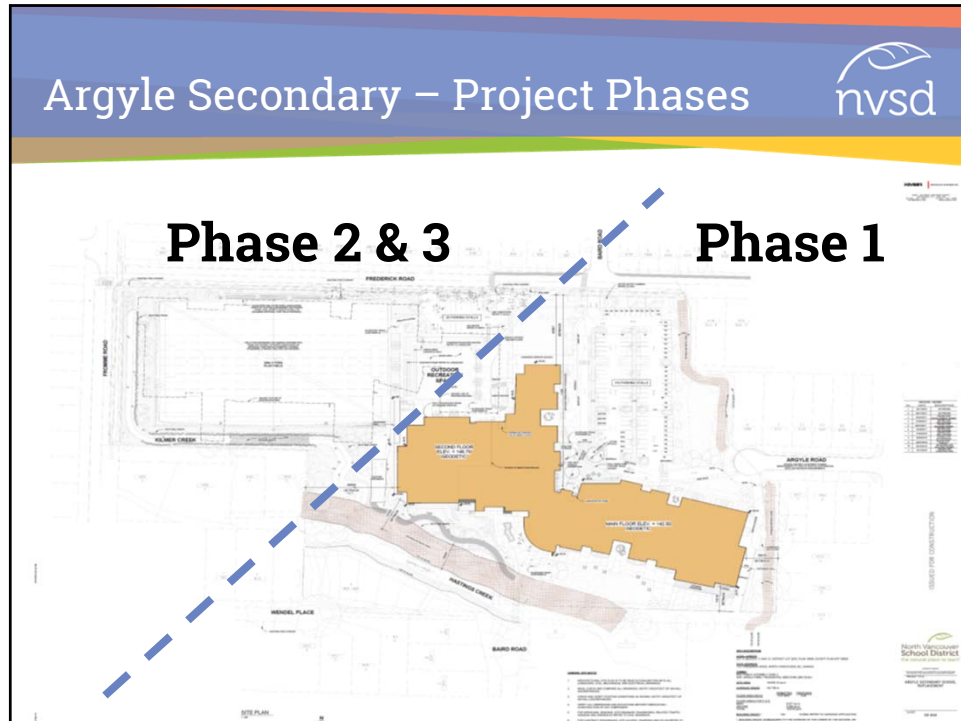
- ❑ Interior fit out & commissions - September/October 2020
- ❑ Occupancy, furnishings & equipment - November/December 2020
- ❑ Gym completion & Phase 1 closeout - November/December 2020

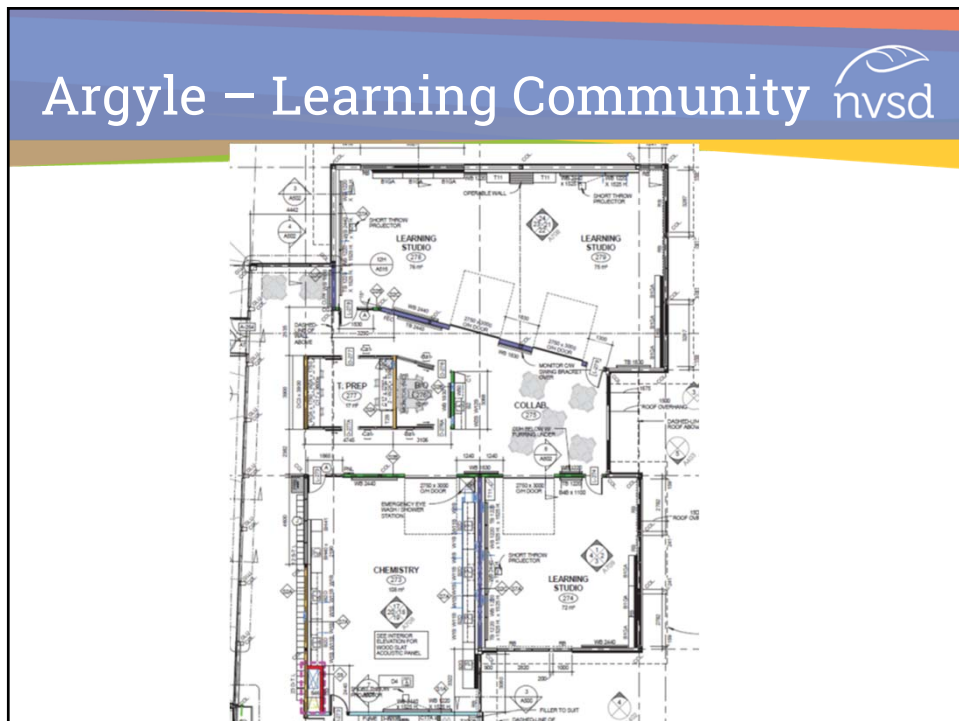
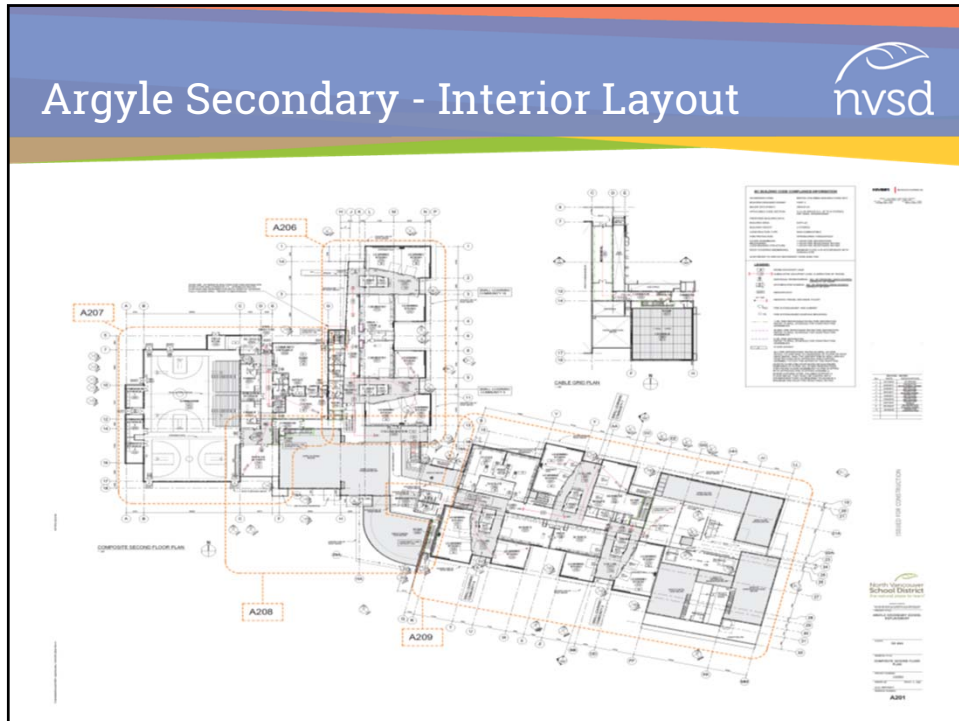
Phase 2 – Demolition

- ❑ Site property (tree barriers/sediment control) – December 2020
- ❑ Hazardous materials abatement of existing school - January 2021
- ❑ Demolition of existing school – March 2021

Phase 3 – Site Improvements

- ❑ Commence construction of new field
- ❑ Commence daylighting of Kilmer Creek





Argyle Secondary – Features & Benefits



HIGHLIGHTS

- ❑ 1,300 student capacity
- ❑ 21st Century learning environment
- ❑ LEED® Gold equivalent
- ❑ Natural daylighting - lines of site to the natural environment
- ❑ LED dimmable lighting systems
- ❑ COVID Considerations
 - ✓ Merv 13 filtration
 - ✓ Displacement ventilation systems
 - ✓ Touchless faucets
 - ✓ S-Turn washroom entry's
 - ✓ Outdoor learning spaces
 - ✓ Learning communities have easy access to exterior & natural environments
 - ✓ Rooftop patio

Argyle Secondary



Argyle Secondary



Argyle Secondary



Argyle Secondary



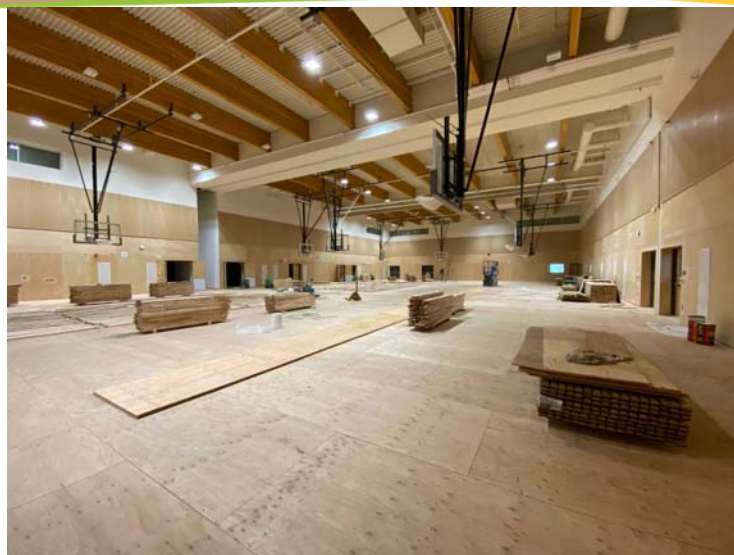
Argyle Secondary



Argyle Secondary



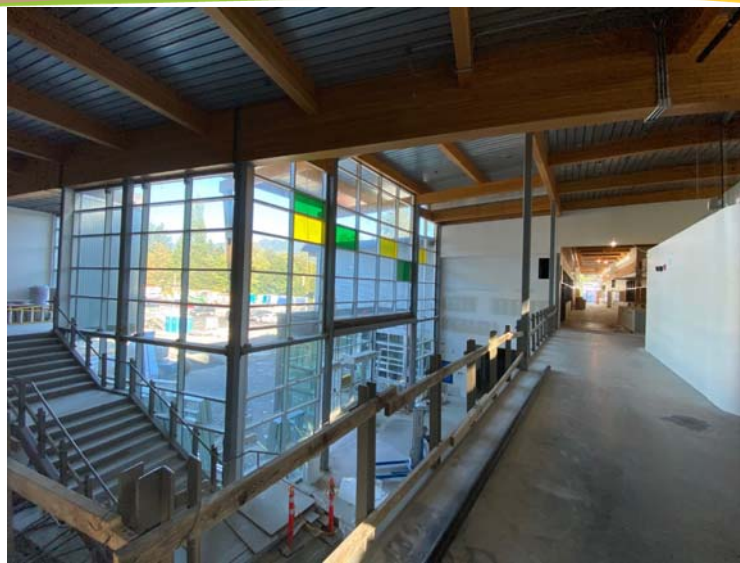
Argyle Secondary



Argyle Secondary



Argyle Secondary



Argyle Secondary



Handsworth Secondary Seismic Replacement

Handsworth Secondary



PROJECT SCHEDULE

Phase 1 - New School

- ❑ Commence construction of new school – February 2020
- ❑ Substantial completion of new school – July 2022
- ❑ Occupancy and move-in to new school – August 2022

Phase 2 - Demolition

- ❑ Commence demolition of existing school – September 2022
- ❑ Completion of demolition of existing school – March 2023

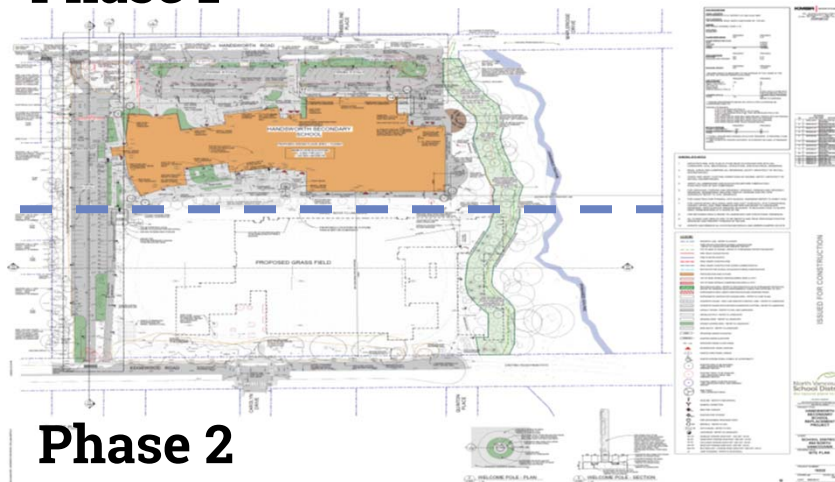
Phase 3 – Site Improvements

- ❑ Commence construction of new field – April 2023
- ❑ Riparian improvements at ravine – May 2023
- ❑ Project final completion – July 2023

Handsworth Secondary



Phase 1

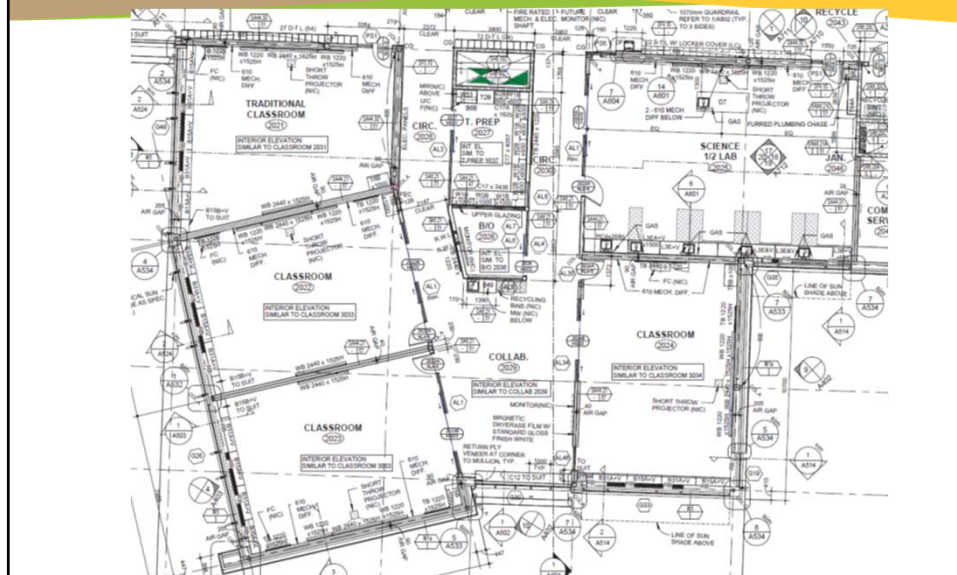


Phase 2

Handsworth Secondary –Interior Layout



Learning Community



Handsworth Secondary – Features & Benefits



HIGHLIGHTS

- ❑ 1,400 student capacity
- ❑ 21st Century learning environment
- ❑ LEED® Gold equivalent
- ❑ Natural daylighting - lines of sight to the natural environment
- ❑ LED Dimmable lighting systems
- ❑ COVID Considerations
 - ✓ Merv 13 filtration
 - ✓ Displacement ventilation systems
 - ✓ Touchless faucets
 - ✓ S-Turn washroom entry's
- ❑ Outdoor learning spaces
 - ✓ Learning communities have easy access to exterior & natural environments

Handsworth Secondary



Handsworth Secondary



Handsworth Secondary



Handsworth Secondary



Mountainside Secondary Seismic Upgrade

Project Funding Sources



Project is funded by the Ministry of Education Major & Minor Capital Funding Programs

- ❑ **Seismic Mitigation Program**
 - ✓ Seismic Upgrade
- ❑ **School Enhancement Program**
 - ✓ Windows and Building Envelope Replacement
- ❑ **Annual Facility Grant**
 - ✓ Domestic Water Piping Renewal

Project Objective & Design Principles



PROJECT OBJECTIVE

- ❑ Project objective is to seismically upgrade and strengthen the building.
- ❑ Seismic upgrade design is to the general intent of the Seismic Retrofit Guidelines 3rd Edition endorsed by the Engineers and Geoscientists BC and the Ministry of Education.

Project Execution & Phasing Plan



Key Factors

- ☐ Safety of the occupants during construction
- ☐ Constructing within and around occupied building
- ☐ Swing space phased construction / partial occupancies
- ☐ Construction planning, material, staging, parking and access
- ☐ Project location and access to vendors
- ☐ Covid-19 measures to ensure safety within construction areas and compliance within occupied school spaces
- ☐ Day Care

Mountainside Secondary



PROJECT SCHEDULE

Block 1A – November 2020

- ☐ Phase 1 (East End of the Block) – Occupied
- ☐ Phase 2 (West End of the Block) – 60 % Complete

Block 1B – March 2021

- ☐ Exterior Demolition – 100% complete
- ☐ Exterior Seismic Upgrade – 100% Complete
- ☐ Overall Completion to Date – 10% Complete

Block 1B –Completion September 2021

Block 2 Gymnasium – June 2021

- ☐ Crawlspace – 100% Complete
- ☐ Cladding Renewal – 80% Complete
- ☐ Overall Completion to Date – 40% Complete

Block 3 Admin – August 2021

- ☐ Lower Floor Demolition – 70% Complete
- ☐ Overall Completion to Date – 10% Complete

Project Substantial Completion - September 2021

Project Blocks and Phases



Mountainside Secondary – Features & Benefits



HIGHLIGHTS

- ❑ New envelope (insulation, cladding, operable windows)
- ❑ New dimmable LED lighting system
- ❑ New audio visual & PA system
- ❑ New domestic plumbing with increased handwashing capacity & touchless faucets
- ❑ New electrical wiring and distribution panels
- ❑ Renewed architectural finishes
- ❑ Integrated classrooms & breakout spaces
- ❑ Outdoor terraced seating area
- ❑ New gym washroom & change rooms
- ❑ Improved washroom layouts (gender neutral / accessible spaces)
- ❑ Improved site drainage
- ❑ Improved ventilation distribution and perimeter heating
- ❑ Touchless door openers at wheelchair accessible entry/s

Progress Photos Block 1A – Academic



Progress Photos Block 1A – Academic



Progress Photos Block 1A – Academic



Progress Photos Block 1A – Academic



Progress Photos Block 1A – Academic



Progress Photos Block 1A – Academic Interior



Progress Photos Block 1A – Academic Interior



Progress Photos Block 1A – Academic Interior



Progress Photos Block 1A – Academic Interior



Progress Photos Block 1A – Academic Interior



Progress Photos Block 1A – Academic Interior



Progress Photos Block 1B – Academic



Progress Photos Block 1B – Academic



Progress Photos Block 2 - Gymnasium



Progress Photos Block 2 - Gymnasium



Progress Photos Block 2 - Gymnasium



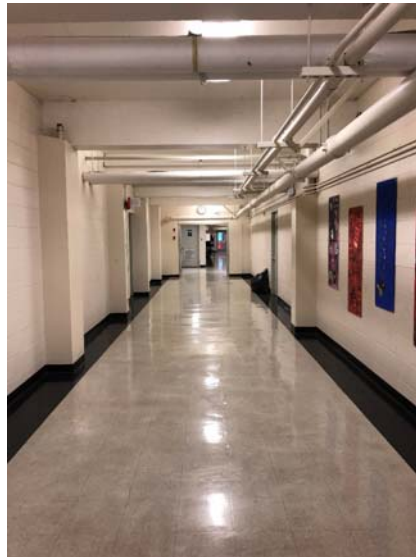
Progress Photos Block 3 – Administration



Progress Photos Block 3 – Administration



Progress Photos Block 3 – Administration



Progress Photos Block 3 – Administration



Progress Photos Block 3 – Administration



Cloverley Elementary Concept Plan

Cloverley Elementary



History of Cloverley Elementary School

- ❑ 1961 to 1982 – Cloverley Elementary School was a public school
- ❑ 1982 to 2010 – building was leased to a series of different organizations
- ❑ 2010 to 2014 – building was temporarily returned to service during seismic upgrade and renovation of Ridgeway Elementary School and Queen Mary Elementary School
- ❑ After 2014 – the school is vacant and based on facility condition assessment done in 2017 considered beyond useful life
- ❑ 2020 – 5-Year Capital Plan submission identified need for 60K/475E school on the Cloverley site
- ❑ Ministry of Education requested that the NVSD proceed with preparation of Concept Plan by December 1, 2020

Approval Process and Potential Schedule



Approval Process and Potential Schedule

- ❑ Long Range Facility Plan - Complete
- ❑ Concept Plan - December 1, 2020
- ❑ Project Definition Report* - Summer 2021
- ❑ Capital Project Funding Agreement*
- ❑ Certificate of Approval*
- ❑ Retain Consulting Team
- ❑ Project Design and Permitting
- ❑ Project Tendering
- ❑ Construction

* Requires Ministry of Education approvals prior to proceeding to the next phase.

Cloverley Elementary



Concept Plan Due December 2020

Consultants

- ❑ Consultant - DA Architecture
- ❑ Geotechnical and Environmental – Thurber Engineering Ltd.
- ❑ HazMat Survey – Kinetic OHS Services Ltd.
- ❑ Quantity Surveyor – James Bush & Associates Ltd.

Cloverley Elementary



Cloverley Elementary



Cloverley Elementary



Cloverley Elementary



Cloverley Elementary



Cloverley Elementary



Cloverley Elementary



Cloverley Elementary



Dorothy Lynas Elementary Building Envelope Project

Dorothy Lynas Elementary



Dorothy Lynas Elementary



Project Scope

Proactive renewal of aging building envelope details. The project largely focuses on the exterior perimeter face of the building and select fire walls exposed to weather elements.

Highlights at Completion:

- ❑ New concealed gutters & associated wood framing
- ❑ New metal panel fascia
- ❑ New windows (gym, multipurpose room)
- ❑ New "rain-screen" envelope on exposed stucco clad walls
- ❑ Improved building envelope lifecycle
- ❑ Reduced maintenance costs

Dorothy Lynas Elementary



PROJECT SCHEDULE

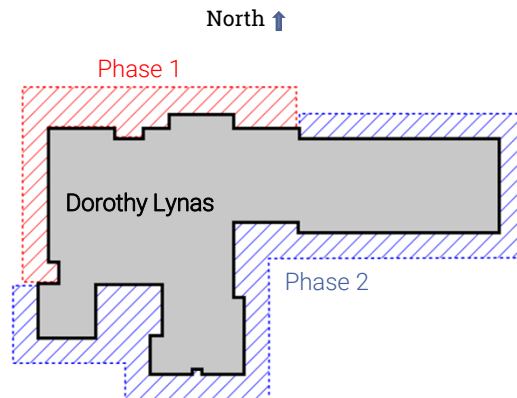
Phase 1– September 2020

- ❑ Administration / Main Entrance

Phase 2– October & November 2020

- ❑ Kindergarten / Gymnasium
- ❑ Classroom Blocks

Completion: November 20, 2020



Dorothy Lynas Elementary



Dorothy Lynas Elementary



Dorothy Lynas Elementary



Dorothy Lynas Elementary



ANNUAL FACILITIES GRANT

AFG Projects Overview



Purpose of the Annual Facilities Grant

- ❑ Increase the economic life of facility assets through proactive lifecycle replacement of base building components.
- ❑ Prevent premature deterioration of school assets.

AFG Project Categories



- ❑ Roof Replacements
- ❑ Site Servicing
- ❑ Site Upgrades
- ❑ Loss Prevention Projects
- ❑ Asbestos Abatement
- ❑ Disabled Access
- ❑ Electrical System
- ❑ Facility Upgrades
- ❑ Functional Improvements
- ❑ Health and Safety Upgrades
- ❑ Mechanical System Upgrades

AFG 2020/21 Budget



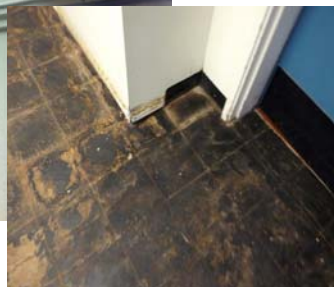
Budget Allocations

| | |
|---------------------------|-----------------|
| Asbestos Abatement | \$18K |
| Disabled Access | \$44K |
| Electrical Upgrade | \$6K |
| Facility Upgrade | \$812K |
| Functional Improvement | \$89K |
| Health & Safety Upgrade | \$202K |
| Mechanical System Upgrade | \$839K |
| Roof Replacement | \$427K |
| Site Servicing | \$120K |
| Site Upgrades | \$274K |
| | \$2.831M |

AFG – Asbestos Abatement



- ☐ Braemar
- ☐ Upper Lynn
- ☐ Cleveland
- ☐ Larson



AFG – Disabled Access




❑ Lynnmour – new accessible washroom











AFG – Disabled Access



❑ Canyon Heights – exterior accessibility upgrades

AFG – Facility Upgrades



- ❑ Exterior Envelope Renewal
- ❑ Floor Renewals/Interior Finishing



AFG – Facility Upgrades

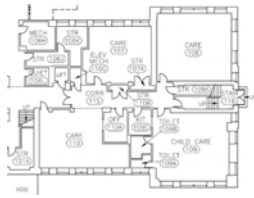


- ❑ Exterior Painting



AFG – Functional Improvements

- ❑ Classroom & administration office renovations



AFG – Health & Safety Upgrades

- ❑ Fire alarm upgrades (Boundary, Larson, Lynnmour, Lucas)
- ❑ Site tree inventories
- ❑ Corridor handwashing sinks
- ❑ Sutherland bleacher guardrails



AFG – Mechanical Systems



- ❑ Plumbing system renewals
- ❑ HVAC system upgrades and renewals
 - ✓ Norgate boiler and heat pumps
 - ✓ Larson portable furnaces and classroom zone valves
 - ✓ Windsor and Sutherland server room AC units



AFG – Roofing Replacements



- ❑ Cheakamus - Administration building
- ❑ Boundary - Sections 9 & 10
- ❑ Brooksbank - Section 6A
- ❑ Sherwood Park - Section 2B
- ❑ Lucas Centre - Lunch Room & Carpentry
- ❑ Seymour Heights - Portable 16

AFG – Roofing Replacements



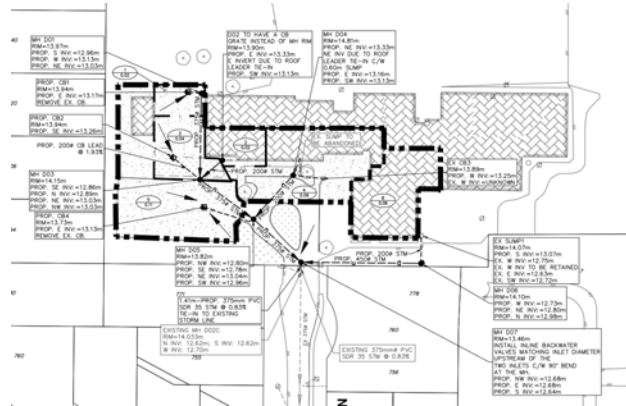
AFG – Roofing Replacements



AFG – Site Servicing



- ❑ Lynnmour drainage upgrade – design complete, ready for tendering



AFG – Site Upgrades



- ❑ Playgrounds - surfacing, drainage, swing mats
- ❑ Field top dressing
- ❑ Asphalt and walkway repairs
- ❑ Retaining walls
- ❑ Fencing

AFG – Site Upgrades

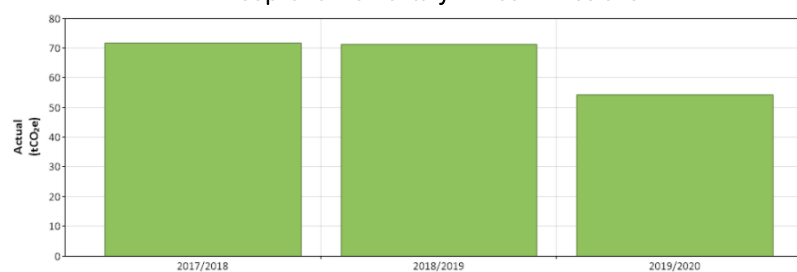


Capilano Boiler and HVAC



- ❑ Achieved 25% greenhouse gas reduction
- ❑ $\approx 16 \text{ tCO}_2\text{e}$ per year

Capilano Elementary Annual Emissions



Norgate Heating Plant Upgrade



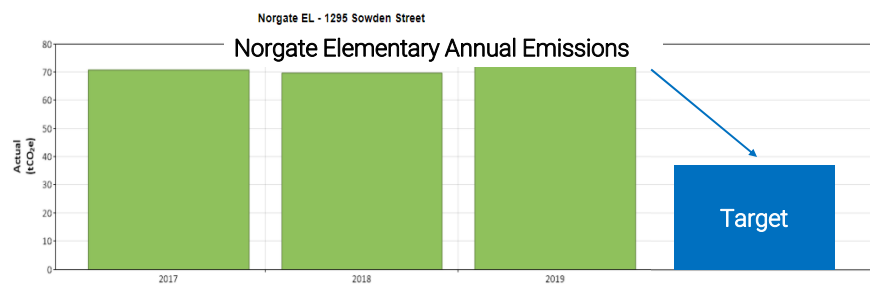
- ❑ Boiler system renewal
- ❑ Low-carbon electrification pilot
- ❑ Safety and comfort improvements



Norgate Heating Plant Upgrade



- ❑ Targeting 50% greenhouse gas reduction
- ❑ $\approx 35 \text{ tCO}_2\text{e}$ per year
- ❑ ≈ 7 passenger vehicles off the road for a year



Norgate Heating Plant Upgrade



New boilers and piping



New supplementary electric heat pumps



New hydronic coils in rooftop units

Norgate Heating Plant Upgrade



Roof access improvements for safety and convenience



Additional zone control for occupant comfort

Playground Equipment Program (PEP)

- ❑ Third year of annual PEP grant program.
- ❑ Provides specific funding to procure new playground equipment that is inclusive and universally accessible in design.
- ❑ Universally designed play spaces include adventure-style playground equipment that is designed to meet a range of elementary aged students' needs regardless of ability.

Playground Equipment Program (PEP)

2018/19 Norgate Elementary \$105k PEP Grant



Playground Equipment Program (PEP)

2019/20 Larson Elementary \$105k PEP Grant



Playground Equipment Program (PEP)

- ❑ 2020/21 Westview Elementary \$125k PEP Grant
- ❑ RFP Closing date October 23, 2020
- ❑ RFP will be used to seek an additional \$75k CNV Grant

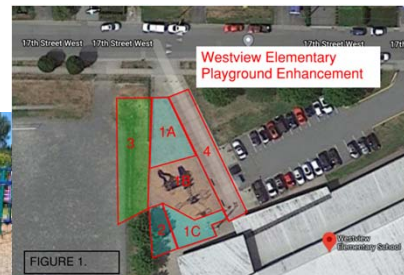


FIGURE 1.

Thank You



- Questions?