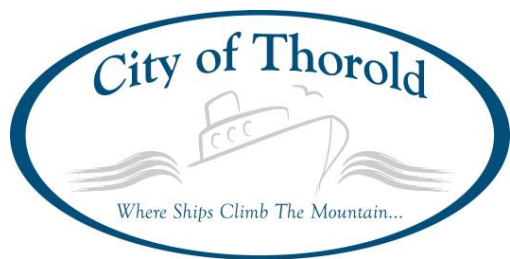




# Thorold Fire Station – Presentation to City Council

December 7, 2021



**vallee**  
*Consulting Engineers,  
Architects & Planners*

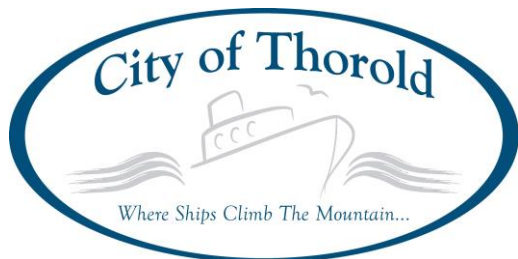
# INTRODUCTIONS

**G. DOUGLAS VALLEE LIMITED**  
**Consulting Engineers, Architects & Land Use Planners**

John Vallee, P.Eng., President

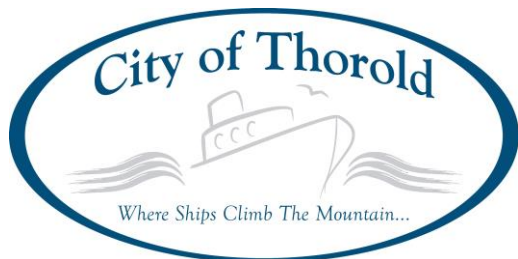
Michael Their, OAA, Project Architect

Melissa Stickl, OAA, Director of Architecture



# OUR ASSIGNMENTS

- **Assignment One – Schematic Design - Complete**
  - Review needs of the fire department and develop a Functional Program.
  - Develop schematic design with floor plans, elevations, site plan.
  - Opinion of construction cost.
- **Assignment Two – Implementation - Ongoing**
  - Develop final designs, drawings, tender document and construction documents.
  - Tender the work to general contractors.
  - Provide on-site general reviews during construction.
  - Administer the construction contract between Thorold and the general contractor





# ASSIGNMENT ONE – SCHEMATIC DESIGN

## Thorold Fire Station #1



## FUNCTIONAL PROGRAM – THOROLD FIRE STATION No: 1

### Rooms

- |   |   |
|---|---|
| 1. Apparatus Room                               | 27. Workshop/Repair Room                              |
| 2. Captain's Office & Captain's Dorm            | 28. Slop Room   |
| 3. Historic Display Room                        | 29. Garbage Enclosure                                 |
| 4. Dormitories                                  | 30. Outside and Diesel/Gas Storage Room               |
| 5. EOC Room                                     | 31. Corridors   |
| 6. Training Rooms (2 Rooms in Total)            | 32. Canopy Entrance                                   |
| 7. Kitchenette (Adjacent to Training Room)      | 33. Laundry / Linen (Dormitory)                       |
| 8. Kitchen/Dining Room (Part of Lounge)         | 34. Female Washroom (Dormitory)                       |
| 9. Lounge                                       | 35. Male Washroom (Dormitory)                         |
| 10. Janitor Closet                              | 36. Fire Chief Office                                 |
| 11. Male Washrooms / Shower                     | 37. Deputy Fire Chief Office                          |
| 12. Female Washrooms / Shower                   | 38. Fire Prevention Officer Office                    |
| 13. Universal Room                              | 39. Training Officers Office                          |
| 14. Fitness Room                                | 40. District Chief Office                             |
| 15. Vestibule/Foyer Main Entrance               | 41. Administration Assistant Office                   |
| 16. Vestibule Entrances (Perimeter of Building) | 42. Reception Desk                                    |
| 17. SCBA Room                                   | 43. Waiting Area (Lobby)                              |
| 18. Fill Station Room                           | 44. Filing Room                                       |
| 19. Mechanical / Electrical Room                | 45. Office Storage Room (Office Supplies and Printer) |
| 20. Sprinkler Room                              | 46. IT Room   |
| 21. Generator                                   | 47. Meeting Room                                      |
| 22. Mezzanine                                   | 48. Administration Headquarters Lunch Room            |
| 23. Bunker Gear Locker Room                     | 49. Board Room  |
| 24. Communication Room                          | 50. Male Washroom (Staff)                             |
| 25. Extractor Room / Bunker Dryers              | 51. Female Washroom (Staff)                           |
| 26. Storage Room                                | 52. Office (Spare)                                    |

\* Gross Floor Areas noted below Include for Wall and Partition thickness

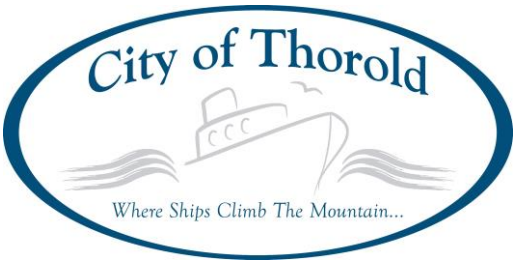
**17,0195.0 ft<sup>2</sup>± (1,581.0m<sup>2</sup>±) \* Gross Floor Area**

# ASSIGNMENT ONE – SCHEMATIC DESIGN



## ROOM USE LEGEND

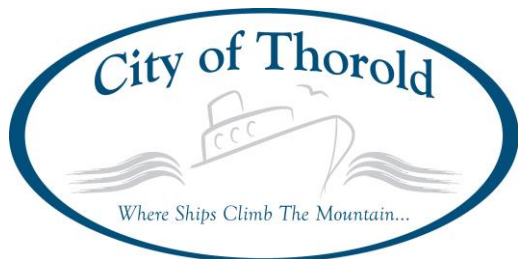
ADMINISTRATION AREA	BUNKER GEAR	DORMS	FITNESS CENTRE	PATIO	STORAGE	UNIVERSAL WASHROOM
APPARATUS AREA	COMMON	EQUIPMENT STORAGE	KITCHEN AREA	SERVICE SPACE	TRAINING AREA	WASHROOMS AND LOCKER AREA



# ASSIGNMENT ONE – SCHEMATIC DESIGN

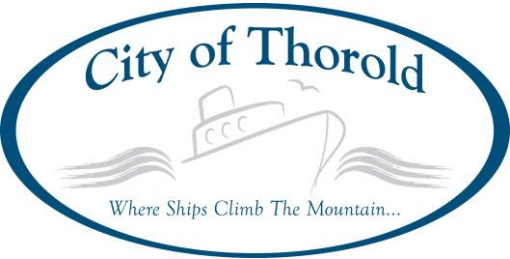
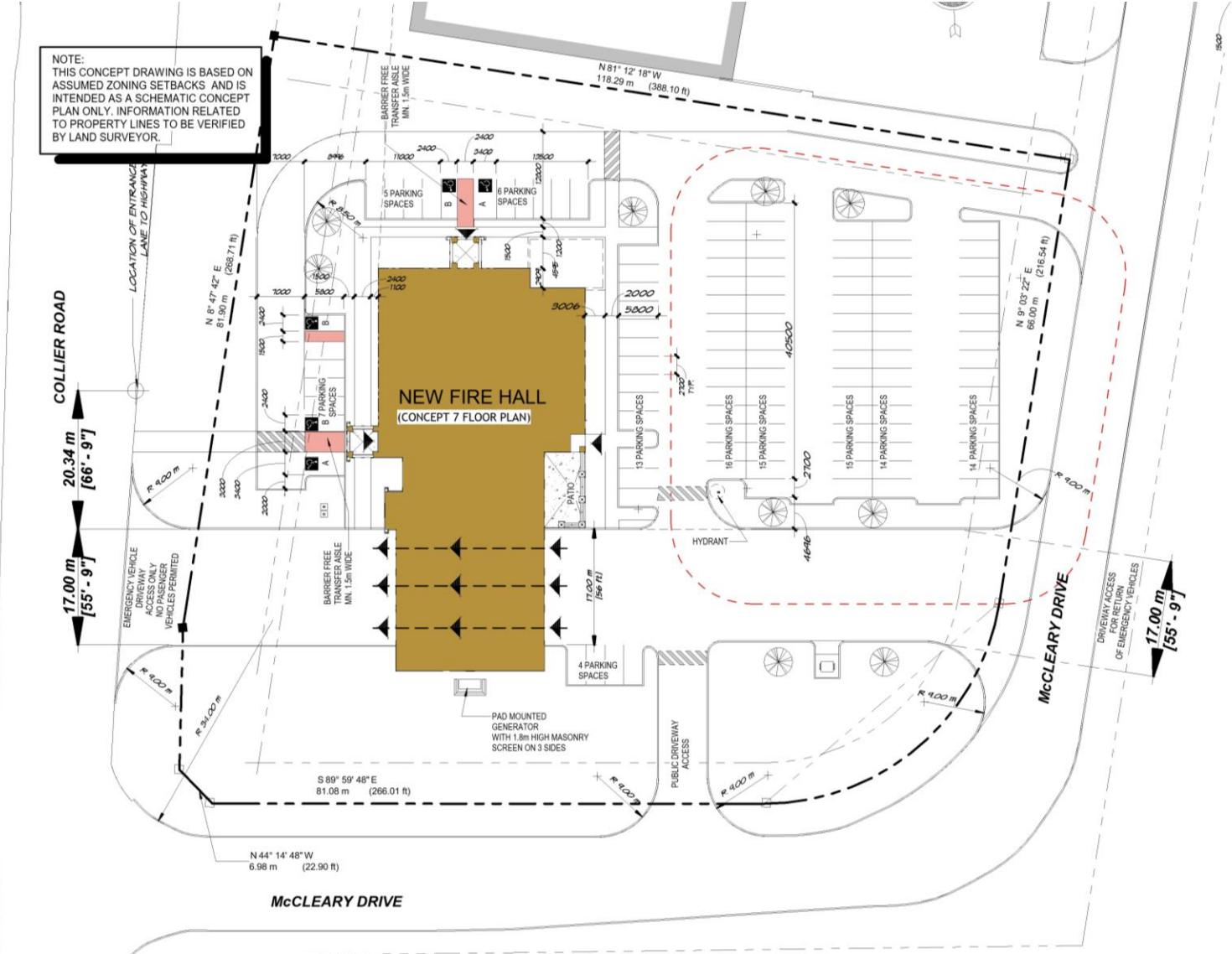
## Opinion of Cost from December 2020

Brantford Fire Station Tendered Cost (2019)	<b>\$520 per square foot</b>
Thorold Station No. 1	17,000 square feet
Thorold Station No. 1 Budget (\$2019)	\$8,840,000
Thorold Station No. 1 Budget (\$2021) increase 2% per year	\$9,197,136
Contingency 9%	\$802,864
Thorold Fire Station No. 1 Recommended Budget	\$10,000,000





# CONTRACT TWO – IMPLEMENTATION



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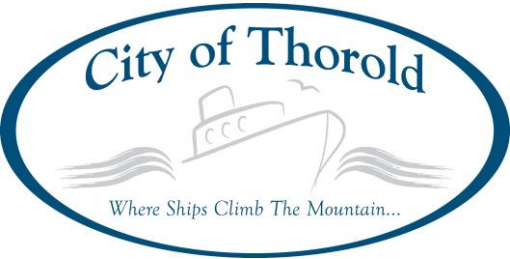
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# CONTRACT TWO – IMPLEMENTATION



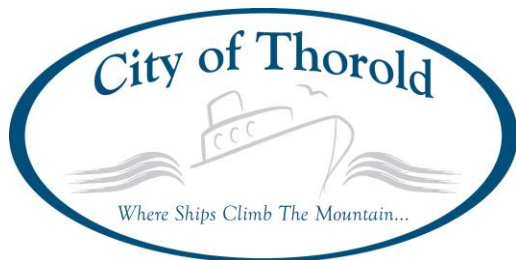
## ROOM USE LEGEND

ADMINISTRATION AREA	BUNKER GEAR	DORMS	FITNESS CENTRE	PATIO	STORAGE	UNIVERSAL WASHROOM
APPARATUS AREA	COMMON	EQUIPMENT STORAGE	KITCHEN AREA	SERVICE SPACE	TRAINING AREA	WASHROOMS AND LOCKER AREA





# CONTRACT TWO – IMPLEMENTATION

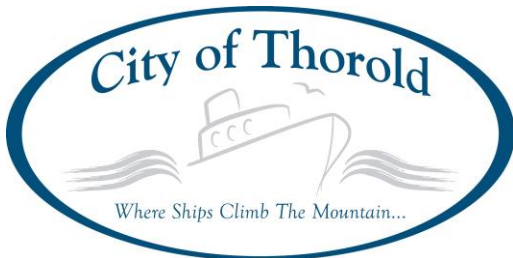


# CONTRACT TWO – IMPLEMENTATION

## Class C Estimate by Hanscomb - July 2021

### CONSTRUCTION COST ESTIMATE SUMMARY

New Construction	1,622 m2	3,676.88	\$5,963,900
Site Development			\$994,300
Sub-total	1,622 m2		\$6,958,200
General Requirements	8.0%		\$556,700
Fee	2.0%		\$150,300
Sub-total	1,622 m2	4,725.77	\$7,665,200
Design and Pricing Allowance	8.0%		\$613,200
Escalation Allowance (1 year @ 8.0% per annum)	8.0%		\$662,300
Sub-Total Construction Cost	1,622 m2	5,512.15	\$8,940,700
Construction Allowance	5.0%		\$447,000
Total Construction Cost	1,622 m2	5,787.73	\$9,387,700



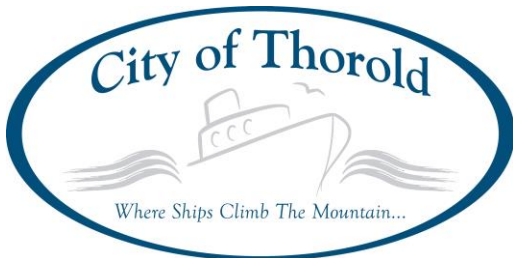
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# CONTRACT TWO – IMPLEMENTATION

## Class B Estimate by Hanscomb – October 2021

### CONSTRUCTION COST ESTIMATE SUMMARY

New Construction	1,622 m2	3,736.62	\$6,060,800
Site Development			\$1,359,300
Sub-total	1,622 m2		\$7,420,100
General Requirements	8.0%		\$593,600
Fee	2.0%		\$160,300
Sub-total	1,622 m2	5,039.46	\$8,174,000
Design and Pricing Allowance	5.0%		\$408,700
Escalation Allowance (1 year @ 4.0% per annum)	4.0%		\$343,300
Sub-Total Construction Cost	1,622 m2	5,503.08	\$8,926,000
Construction Allowance	5.0%		\$446,300
<b>Total Construction Cost</b>	<b>1,622 m2</b>	<b>5,778.24</b>	<b>\$9,372,300</b>





# CONTRACT TWO – IMPLEMENTATION

## Class A Estimate by Hanscomb – November 2021

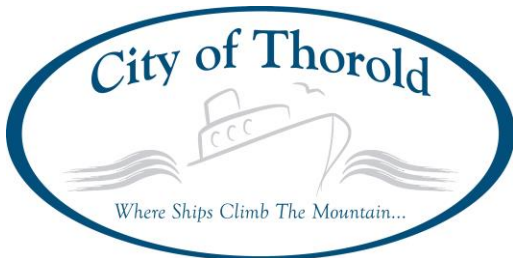
### CONSTRUCTION COST ESTIMATE SUMMARY

New Construction	1,622 m2	3,812.33	\$6,183,600
Site Development			\$1,302,500
Sub-total	1,622 m2		\$7,486,100
General Requirements	8.0%		\$598,900
Fee	2.0%		\$161,700
Sub-total	1,622 m2	5,084.28	\$8,246,700
Design and Pricing Allowance	5.0%		\$412,300
Cash Allowances	1 Sum		\$932,500
Escalation Allowance (1 year @ 6.0% per annum)	6.0%		\$575,500
Sub-Total Construction Cost	1,622 m2	6,268.19	\$10,167,000
Construction Allowance (carried in Cash Allowances)			\$0
<b>Total Construction Cost</b>	<b>1,622 m2</b>	<b>6,268.19</b>	<b>\$10,167,000</b>
<b>Covid-19 Factor (as per Architect)</b>	<b>10.0%</b>		<b>\$1,016,700</b>
<b>Total Construction Cost Including Covid-19 Factor</b>	<b>1,622 m2</b>	<b>6,895.01</b>	<b>\$11,183,700</b>

\$10 Million from Vallee in December of 2020.

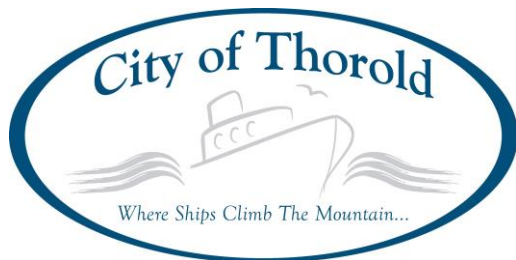
## NEXT STEPS

- **Council support and approval to proceed**
- **Tender to General Contractors (April 2022?)**
- **Council Award of Construction Contract (May 2022?)**
- **Construction Start (July 2022?)**
- **Occupancy (Summer 2023?)**



# THANK YOU!

## QUESTIONS & ANSWERS



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