

Monthly Summary Report No. 17 – Wainfleet Central Fire Station

Project:	Wainfleet Fire Station – 42143 Highway #3, Wainfleet ON, L0S 1V0		
Owner:	Township of Wainfleet		
Contract:	General Construction (GC) – Stipulated Price Contract (CCDC2) with Amendments		
Contractor:	TRP Construction General Contractors – 3050 Harvester Rd Unit 107, Burlington, ON L7N 3J1		
Reporting Period:	September 1 st , 2023, to September 30 th , 2023		
Prepared By:	Urban & Environmental Management Inc. – 4701 St. Clair Ave. Suite 301, Niagara Falls		
Report Date:	October 17 th , 2023	UEM Project #21-800	
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1.0 PROJECT BUDGET

The project budget (excluding HST) for the Wainfleet Central Fire Station includes:

Construction (TRP Contract)	\$5,950,000
Contract Allowances	\$325,000
Contract Award	\$6,275,000
Construction Contingency	\$299,000
Pre-Construction Township Activities	\$8,100
Owners Allowances	\$686,100
Advisory Services	\$390,700
Project Budget	\$7,658,900

2.0 PROJECT SCHEDULE

2.1. MONTHLY SCHEDULE

The contract requires that an updated schedule be submitted by the contractor monthly.

TRP Construction provided a baseline project schedule on May 18th, 2022. An updated schedule (November 25th, 2022) revised the completion date of the load bearing masonry task and shortened the duration for completion of roof truss and roofing tasks. The revisions did not change the anticipated substantial completion date of June 9th, 2023.

The latest schedule received from the contractor on May 31st, 2023, has been exceeded. This schedule noted substantial completion date and occupancy dates of June 28th and June 29th, 2023. UEM has requested and continues to press the contractor for an updated close-out schedule that details the outstanding activities with appropriate durations and realistic completion dates.

Based on recent site meetings and verbal updates from the contractor, UEM estimates that substantial completion could be achieved by the end of October 2023. Several key items are required for the building's occupancy permit. Additionally incomplete/deficient work is outstanding, and the building is not fit for its intended use, delaying the certification of substantial performance. A preliminary deficiency list prepared by the Township was shared to the contractor on August 22nd, 2023. Major issues include exterior siding, flooring, interior masonry, electrical finishes, and site works. The contract administrator has yet to produce a deficiency list.

Contractor and subtrade performance have not been satisfactory, resulting in poor performance of the work, requiring multiple returns to site to correct already completed work. The current subtrade labour market is saturated with work, resulting in delays waiting for trades to return to site.

2.2. SUBSTANTIAL COMPLETION AND OCCUPANCY

Substantial Completion as defined by the Ontario Architects Association, Ontario General Contractors Association, and the Construction Lien Act (as amended April 19th, 2021) state a project is substantially complete if: (1) the building must be completed for its intended use, and (2) it meets the financial requirements of the Act (uncompleted and deficient work shall be less than 3% for the contract's first \$1,000,000, 2% for the second \$1,000,000, and 1% of the remainder).

Based on the approved contract cost of \$6.3M, the amount remaining to achieve Substantial Completion would need to be less than \$93,000 (\$30,000, \$20,000, \$43,000).

Occupancy is a separate decision/process from the substantial completions process. Occupancy is granted by the host municipality (Wainfleet) and could involve full or partial occupancy before or after substantial completion is certified.

The owner must have insurances in place for both partial and full occupancy or when substantial completion is certified.

2.3. HOLDBACKS AND DEFICIENCIES

During the closeout of a project there are often deficiencies to be corrected and the completion of outstanding work. These tasks may continue past the certification of substantial performance and occupancy dates. The contract administrator would not certify the full amount of a payment application on any line item that has deficient or incomplete work. The amount not certified should be proportional to the cost to correct the deficient or incomplete work.

The statutory holdback of 10% of the certified work complete is mandated through the Construction Act for payment of sub-trades. It is available only if the general contractor declares bankruptcy and cannot pay the trades for work completed. Project performance bonding is available to complete work that was not finished when bankruptcy was declared or if the contract is not fully completed by the contractor.

The Construction Act was revised in 2019 to include Section I, Prompt Payment. This revision defines conditions, schedules, rights, and penalties in the certification of payment applications, payment by owner to the general contractor, and payment by the general contractor to subtrades. Prior to 2019 the statutory holdback included a mechanism in which costs by the owner to correct deficient work could be deducted from the holdback, this is no longer an option.

The Prompt Payment regulations require that the contractor submit a "proper invoice." An invoice is only deemed "proper" if it meets the requirements of the Construction Act. The contract administrator cannot arbitrarily withhold funds against any completed task/item without direct proof or cause.

On this project there is a unique condition where the polished concrete flooring has not been accepted as a finished product as it was damaged because the general contractor and subtrades did not protect the concrete floors prior to polishing. The polished concrete floor end product is not a single line item for "flooring". The polished concrete floor is made up of "concrete supply", "concrete floor finishing" (the float and finishing of the concrete as it cures) and "concrete polishing". The concrete supply and concrete floor finishing were certified in October through December 2022. At this time the concrete floor was acceptable and was not damaged. The contract administrator could not reasonably withhold payment on these line items. The balance of work to complete the floor finish was under the concrete polishing line item. By the time the polisher commenced work the floor was damaged from work carried out the general contractor and the subtrades. Under the Construction Act, the contract administrator could not reasonably withhold certification of the floor polishing as the polishing trade did complete their work; and were not responsible for the damage.

The Town must rely on the contract administrator to enforce the contract and exhaust all contractually available options to have the general contractor correct the floor damage by acceptable means. If the contractor does not correct the floor in a satisfactory manner, the Town can retain another contractor to complete the work and back charge the general contractor or make a claim against the performance bond. This is a last resort option as it will likely lead to litigation and cost both parties an indeterminate amount in legal fees.

2.4. TOWNSHIP RESPONSIBILITIES

The TRP construction contract includes the building, all infrastructure, and finishes; however, excludes several operational items/tasks that the Township is responsible for completing or procuring. The following items are dependent on the contractor finishing the building to the level of being fit for its intended use as an emergency response station.

- Office Equipment
- Communication Radios & Public Address Systems
- Maintenance Tools & Equipment
- SCBA Compressor & Fill Station

2.5. MONITORING CONSTRUCTION PROGRESS

UEM works closely with the contractor administrator to monitor the construction progress against the project schedule on an ongoing basis, reviewing milestones, deliveries, commencing work, completed work, outstanding issues, deficiencies, and project risks.

When there is a suspected or actual variance in the project schedule, we evaluate the cause of the variance, impact on the budget and the owners needs and where necessary prepare a corrective action plan.

2.6. SUMMARY OF KEY DATES

CONSTRUCTION ACTIVITY	ESTIMATED DATE COMPLETE
Construction Tender Issued	February 10 th , 2022
Construction Tender Public Opening	March 22 nd , 2022
Contractor Mobilization	May 3 rd , 2022
Demolition of Barn and House	June 3 rd , 2022
Strip & Grade Building Pad	July 7 th , 2022
Footings & Foundation Walls	July 18 th , 2022
Parking Lot Prep & Granular	August 5 th , 2022
In-Floor Heating Rough-in	October 19 th , 2022
Slab on Grade	October 24 th , 2022
Structural Masonry Block	December 1 st , 2022
Roof Trusses	December 16 th , 2022
Mechanical Rough ins	January 19 th , 2022
Electrical Rough ins	January 19 th , 2022
Aluminum Windows	March 13 th , 2023
Drywall	April 14 th , 2023
Overhead Doors	May 12 th , 2022
Millwork	May 16 th , 2023
Plumbing Fixtures	June 14 th , 2022
Permanent Power	June 14 th , 2022
Concrete Curbs and Sidewalks	June 16 th , 2023
Electrical Devices & Fixtures	June 19 th , 2022
Asphalt Paving – Base Course	June 21 st , 2023
Fire Alarm Verification	August 3 rd , 2023
Planting, Seed, Sod	June 22nd, 2023 Oct. 2023
Occupancy	June 28th, 2023 Oct. 2023
Vinyl Plank Flooring	June 28th, 2023 Oct. 2023
Substantial Completion	June 29th, 2023 Oct. 2023

On September 30th, 2023, the contractor advised twenty-four (24) working days lost due to inclement weather and difficult working conditions in the inclement weather since the beginning of the project. The Project Manager reviews lost weather days with the contractor weekly and reports to the Township every other week. The number of lost weather days recorded from windy, wet, and hot weather is confirmed and the potential effect is considered in the contractor's updated schedule. To date there has not been a material impact on the project schedule.

Construction Site meetings have concluded; site reviews are coordinated on an as-needed basis.

3.0 FRONT END DOCUMENTATION AND RESPONSIBILITIES

New and renovated construction projects can require several pre-approvals and documentation prior to and during construction. Following is a brief checklist of the more common project front end responsibilities required as part of the contract at the provincial and regional/municipal levels.

3.1. BUILDING PERMIT & SITE PLAN APPROVAL

Township of Wainfleet Plan Agreement

- **Completed**

Township of Wainfleet Building Permit

- **Completed** (May 26th, 2022)

Ministry of Transportation Ontario (MTO) Land Use Permit

- **Completed** (May 16th, 2022)

3.2. GENERAL REQUIREMENTS

The contractor is required to prepare a project specific “health and safety” plan for review by the Township and posted at the project site. The contractor is to provide safety training to trades and representatives that intend to access the project site.

- ✓ **Completed**

The contractor will engage the municipal building inspector and Fire Department at the beginning of the project to review building exits, fire access and other code matters.

- ✓ **Completed**

The contractor will provide prior to construction, a Gantt chart in sufficient detail to track (and update) progress and a cash flow forecast.

- ✓ **Completed** – Updates Outstanding Since May 2023

Fire & Life Safety plan prior to occupancy.

- **Not Required**

3.3. ENVIRONMENTAL REQUIREMENTS & APPROVALS

Ontario Regulation 102/94 – “Waste Audits and Waste Reduction Work Plans” mandates that a project consisting of the construction of one or more buildings with a total floor area of at least 2,000 square meters requires the contractor to:

- Conduct a pre-construction waste audit
- Prepare a written waste reduction plan based on the waste audit to reduce, reuse and recycle waste to be generated at the construction project
- Implement the waste reduction plan
 - **Not Required** – Project less than 2,000 square meters

Renovation or demolition of buildings constructed prior to approximately 1979 require a project specific designated substance survey prior to construction. If hazardous or designated substances are identified, then remediation must be undertaken prior to the construction/renovation.

- ✓ **Completed** – Designated Substance & Hazardous Material Evaluation report issued by Ontario Environmental & Safety Network Ltd. On March 5th, 2020. Materials containing asbestos were found and abated in the structures to be demolished.

3.4. SERVICES FROM OTHER AGENCIES

Electrical Connections – Hydro One

- **Complete** – Building energized June 2023

TSSA Certification – The contractor, subcontractor(s) and manufacture(s) are contractually obligated to complete required certification forms. Owner signature required for submission to TSSA.

- **Incomplete** - Schedule TBD

Supply natural gas to the Wainfleet Fire Station – Enbridge Gas

- **Complete** - meter installed early May 2023

Internet Services Provider

- **Complete** – Point-to-Point tower connectivity online August 3rd, 2023

4.0 MAJOR ACTIVITIES COMPLETED/ONGOING

April 1st to May 31st, 2022

- Contractor mobilized (May 2nd, 2022)
- Permits issued
- Demolition of existing structures commenced

June 1st to June 30th, 2022

- Strip and stockpile topsoil
- Removal of trees, stumps, fencing
- Excavation for footings
- Commence forming of footings

July 1st to July 31st, 2022

- Footings and foundation walls complete
- Damp proofing complete
- Slab backfill complete
- Pond infill complete
- Septic bed constructed, and tank installed

August 1st to August 31st, 2022

- Electrical underground complete
- Mechanical underground complete
- Road and parking lot granular complete

September 1st to September 30th, 2022

- Apparatus bay trench drains complete
- Roof trusses delivered
- Under slab insulation complete
- Floor slab reinforcing complete

October 1st to October 31st, 2022

- In-floor radiant heat piping complete
- Floor slab complete
- Structural steel columns completed
- Load bearing masonry commenced

November 1st to November 30th, 2022

- Load bearing masonry ongoing
- Electrical rough-ins within masonry
- Mechanical rough-ins within masonry

December 1st to December 31st, 2022

- Load bearing masonry complete
- Roof trusses and sheathing complete
- Mezzanine stair and metal decking installed
- Attic space electrical conduit installed
- Roof membrane commenced

January 1st to January 31st, 2023

- Roof fascia framing complete
- Mezzanine concrete poured
- Roof membrane complete on Administration side
- Attic fire block complete on Administration side
- Underside of truss drywall complete on Administration side
- Mechanical and electrical rough-ins on going

February 1st to February 28th, 2023

- Roof watertight
- Non-load bearing masonry commenced
- Ductwork installation commenced
- Exterior spray foam insulation complete on Administration side
- Mechanical and electrical rough-ins on going

March 1st to March 31st, 2023

- Glazing installed
- Non-load bearing masonry completed
- Mechanical equipment in mechanical room underway
- Electrical switchgear and transfer switch installed
- Painting commenced
- Exterior masonry commenced

April 1st to April 30th, 2023

- Brick veneer completed
- Floor polishing in Administration completed
- Metal roofing commenced
- Fire cisterns installed
- Gas meter/station installed
- Apparatus bay ceiling commenced

May 1st to May 31st, 2023

- Potable water cistern installed
- Metal roofing complete
- Siding commenced
- Drywall ceilings complete
- Second coat of paint complete
- Apparatus bay doors installed
- Administration millwork completed
- Mechanical equipment installation ongoing
- Electrical devices installation commenced

June 1st to June 30th, 2023

- Concrete curbs and sidewalks complete
- Base course asphalt complete
- Generator installed
- Permanent power connected
- Light fixture installation
- Plumbing fixture installation
- Soffit installation commenced
- Floor polishing apparatus bay commenced

July 1st to July 31st, 2023

- Washroom fixtures and partitions installed
- Generator installation complete
- IT room complete
- Fire alarm devices installed
- Bunker gear racks installed
- Bollards and fencing installed

August 1st to August 31st, 2023

- Potable water pump installed
- Fire cistern pump installed
- Mechanical controls installed
- IT network online
- Security cameras installed
- Appliances delivered

September 1st to September 30th, 2023

- Top-cost asphalt complete
- Line painting complete

- Mechanical start-ups commenced
- Mechanical and electrical deficiencies ongoing
- Commissioning activities commenced.

5.0 FORECASTED CASH FLOW

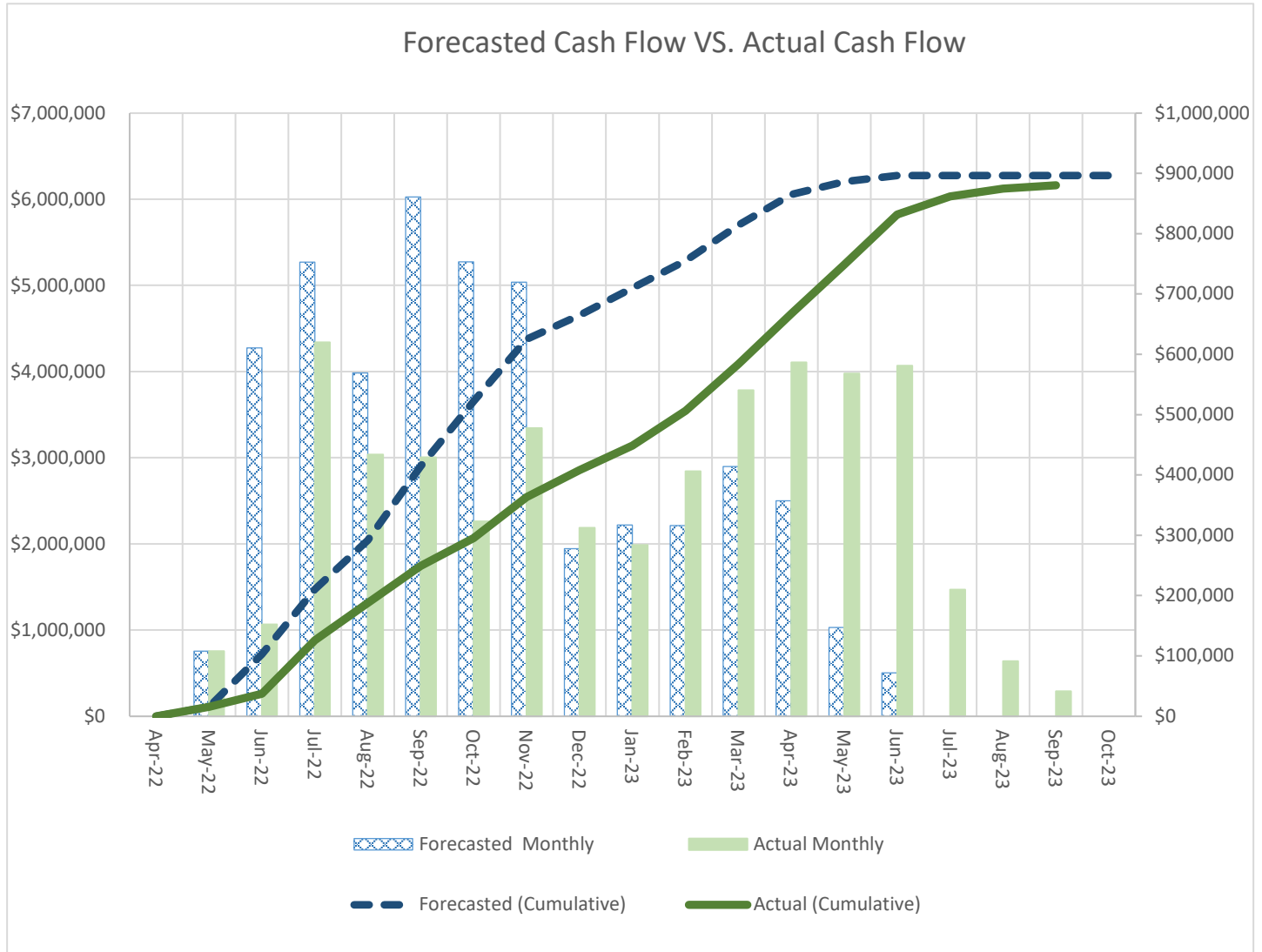
The TRP Construction contract includes the Wainfleet Central Fire Station construction (\$5,950,000) and allowances (\$325,000) for Testing and Inspection, Door Hardware, Interior Signage, Hydro & Gas Services, Security, Construction Rubble, Window Covers, Project Sign Board, and Commissioning for a total project budget of \$6,275,000. Projected cash flow (excluding HST) for monthly TRP Construction contract draws follows.

Projected and Actual Cumulative cash flow includes the total monthly amount Certified. The “actual monthly” and “actual cumulative” is before 10% of the certified amount is deducted for statutory holdback. It is also exclusive of HST. The cash flow forecast was issued by TRP Construction on May 31st, 2022. The forecasted cashflow include the contract allowances and does not include change orders.

Also included is a month by month (non-cumulative) actual and forecasted cashflow.

Construction Period Ending	Forecasted Cumulative – May 31 st , 2022 (Exc. HST)	Actual Monthly (Exc. HST & Inc. 10% Holdback)	Actual Cumulative (Exc. HST & Inc. 10% Holdback)
2022			
May	\$107,900	\$107,900	\$107,900
June	\$718,400	\$151,984	\$259,884
July	\$1,471,300	\$619,803	\$879,687
August	\$2,040,300	\$433,571	\$1,313,257
September	\$2,900,950	\$429,263	\$1,742,520
October	\$3,654,350	\$322,973	\$2,065,493
November	\$4,373,750	\$477,447	\$2,542,940
December	\$4,651,550	\$321,219	\$2,855,160
2023			
January	\$4,968,550	\$283,731	\$3,138,890
February	\$5,284,550	\$406,077	\$3,544,967
March	\$5,698,717	\$540,286	\$4,085,252
April	\$6,055,800	\$586,702	\$4,671,954
May	\$6,203,000	\$568,279	\$5,240,232
June	\$6,275,000	\$581,284	\$5,821,517
July	-	\$209,686	\$6,031,203
August	-	\$91,378	\$6,122,590
September	-	\$41,285	\$6,163,875

Note: The forecasted cashflow includes the upset limit for contract allowances.



Cashflow Commentary: UEM raised concerns to the contractor in November 2022 about the lagging actual cashflow against the forecasted cashflow. This is a concern as it is an indicator that the project may be behind schedule. The contractor provided background information explaining the trailing trend. This project has several large cost items, anticipated by the contractor to be procured or completed earlier in the project. The fire cisterns and associated work is valued at approximately two hundred thousand dollars and scheduled to be complete in Summer of 2022. This work delayed until Spring 2023 was completed in April 2023. The delays in underground mechanical rough-ins pushed the entire schedule back, impacting several high cost tasks such as the masonry, and roofing, both completed in May 2023.

The above graph shows that the contractor's draws increased February through May 2023, as anticipated, as the large cost items were completed. As of August 31st, budget and cost are close to and the amount of dollars yet to spent will support the financial requirements for substantial completion in October.

6.0 PROPOSED CHANGE ORDERS (PC)

Proposed Change	Date Issued	SI /RFI	Description of PCO	Status
PC 1.0	May 18/22	-	Add Hot Water line and Power to Future Washer	CO-3.0
PC 2.0	May 19/22	-	Remove Lights for SB-10	CO-6.0
PC 3.0	Jun. 8/22	-	Add ATS Bypass Switch and Power to Extractors	CO-5.0
PC 4.0	Jun. 23/22	-	Revised Light Fixture Type	CO-4.0
PC 5.0	Jul. 14/22	-	Extractor Discharge Tank, Duct Bank Relocation, SP-D Power	CO-11.0
PC 6.0	Jul. 25/22	-	Revised Sewer & Water Pipe Sizing	CO- 7.0 & 7.1
PC 7.0	Jul. 26/22	-	Roof Gable End	CO-9.0
PC 8.0	Jul. 28/22	-	Add Services Chase in Bunker Gear Room	CO-12.0
PC 9.0	Aug. 3/22	-	Remove Electronic Plumbing Fixtures	CO-15.0
PC 10.0	Sept. 7/22	-	Structural Steel Revisions	CO-18
PC 11.0	Sept. 15/22	-	Kitchen Grease Interceptor	CO 19.0
PC 12.0	Oct. 11/22	-	New Concrete Pad and Splash Pad	N/A
PC 12.1	Nov. 7/22	-	New Concrete Pad and Splash Pad & Cistern Revisions	CO-22.0
PC 13.0	Oct. 11/22	-	Electrical Pull Vault	CO-29.0
PC 14.0	Nov. 21/22	-	Truss Anchorage	CO-21.0
PC 15.0	Nov.23/22	-	Controls & High-Water Alarm	CO-31.0
PC 16.0	Jan. 3/23	-	Thermostat Wiring	CO-33.0
PC 17.0	Jan. 17/23	-	Exterior Lighting Controls	CO-23.0
PC 18.0	Jan. 24/23	-	Soft Starter for pump SP-02 and Controller	CO-30.0
PC 19.0	Feb. 3/23	-	Exterior Lighting, Signage, Network Cabling, Conduit, and Mezzanine Floor Finish	CO-32.0
PC-20.0	Feb. 21/23	-	Primary Wiring to Transformer	AD-14

PC-21.0	Mar. 2/21	-	Excess Soil/Clay	Cancelled
PC-22.0	Mar. 8/22	-	New pad for 40' Container & Concrete Pad Removal	N/A
PC-22.0R1	Mar. 22/23	-	New pad for 40' Container & Concrete Pad Removal	CO-34.0
PC-23.0	Apr. 11/23	-	New Outlets in Offices	CO-35.0
PC-24.0	Apr. 11/23	-	SCBA Washer Water Line Modifications	CO-38.8
PC-25.0	Apr. 17/23	-	CO and NOx Sensor – Option 1 & 2	Cancelled for PC-29.0
PC-26.0	Jun. 19/23	-	Apparatus Bay Ceiling Fan	CD-1.0 / CO-48.0
PC-27.0	Jun. 22/23	-	IT Room Power	CO-42.0
PC-28.0	Jun. 27/23	-	Female Washroom Outlet	CO-40.0
PC-29.0	Jun. 28/23	-	CO and NOx Sensor – Option 3	CO-47
PC-30.0	Jul. 6/23	-	Door D8-04 Hardware Revision	CO-44.0
PC-31.0	Jul. 10/23	-	Fire Cistern Draft Pipe	CO-46.0
PC-32.0	Jul. 17/23	-	Data Cabling	CO-45.0
PC-33.0	Aug. 9/23	-	Combustion Air Intake	-
PC-34.0	Sept. 6/23	-	Carpet Tile and Vinyl Plank Flooring	-
PC-35.0	Sept. 22/23	-	Backflow and French Drains	-

7.0 REQUEST FOR CHANGES (RFCO) – CONTRACTOR

Proposed Change	Date Issued	Description of PCO	Status
RFCO-01	May 30/22	Upsize Septic Tank from 6,800L to 18,000L	CO-2.0
RFCO-02	May 30/22	ATS Single Bypass Switch	Cancelled
RFCO-03	Jun. 3/22	Credit for Hydro One Application Fees Paid by Town	CO-1.0
RFCO-04	Jun. 13/22	Proposed Alternative Ceramic Floor Tile	Cancelled
RFCO-05	Jun. 13/22	Revised Light Fixture Type	Cancelled
RFCO-06	Jul. 6/22	Light Fixture Revisions	-
RFCO-07	Aug. 10/22	Delete Base Cabinet	CO-8.0
RFCO-08	Aug. 11/22	Siding Foam Closure	CO-10.0
RFCO-09	Aug. 22/22	Revise Solid Surface to Laminate	CO-13.0
RFCO-10	Aug. 24/22	Delete Roll-up Door in Kitchen	CO-14.0
RFCO-11	Nov. 9/22	Floor Drain Change	CO-20.0
RFCO-12	Jan. 20/23	Hydro cost Credit to Township	CO-24.0
RFCO-13	Jan. 26/23	Revise Door to Mechanical Room (SI-9.0)	CO-25.0
RFCO-14	Feb. 1/23	New Electrical Outlets (SI-8.0)	CO-26.0
RFCO-15	Feb. 6/23	Mezzanine Gate	CO-27.0
RFCO-16	Feb. 17/23	Additional Attic Duct Insulation	CO-28.0
RFCO-18	May 1/23	Window Passthrough Detail	CO-39.0
RFCO-19	May 12/23	IT Room Ceiling	CO-36.0
RFCO-20	May 17/23	Drywall Bulkhead – Bunkergear Room	CO-37.0
RFCO-21	Jul. 11/23	Corridor Bulkheads	CO-41.0
RFCO-22	Jul. 13/23	ERV Control Valve	-
RFCO-23	Aug. 18/23	Emergency Lighting Battery Pack	-

8.0 POTENTIAL CHANGES OF SIGNIFICANCE

The proposed change order (PC), request for change order (RFCO), and change directive (CD) process often involves multiple quote submissions, requests for further detail, clarifications and negotiations before costing is finalized as a change order or the request is rejected.

Backflow and French Drains (PC-35): partial cost submissions from the contractor are around \$15,000, the total cost is estimated to be around \$20,000. The backflow preventors will stop water backing up the outlet pipes when the municipal drain is at capacity. The Municipal drain has been witnessed backfilling both the fire cisterns and oil & grit separator multiple times since August 2023.

9.0 APPROVED CHANGE ORDERS (CO)

The total cost of approved Change Orders and Change Directives is a cost of \$126,732.47 which is approximately 2.0% of the awarded contract cost (\$6,275,000). Changes required because of design team issues is 2.73% of the Total Contract Cost.

To assist in reviewing the scope and nature of change orders, each are summarized as follows:

Type of Change Order	Cost of Changes to Date	Percent of Total Change Orders	Percent of Contract Cost (\$6,275,000)
Soil Conditions	\$0.00	0.0%	0.0%
Design Team: Errors, Omissions, Changes	\$171,565.32	96.2%	2.73%
Owner Requested	\$6,826.48	3.8%	0.11%
Address Existing Conditions	\$0.00	0.0%	0.0%
Credits	(\$51,659.33)	N/A	N/A
Total Change Orders to Date	\$126,732.47		

9.1. SOIL CONDITIONS

CO #	Change Orders to Original Contract	PC Reference	Date CO Issued	Date Approved	Cost/(Credit)
Sub-Total Soil Conditions Change Orders					\$0.00
Percentage of Total Change Orders					0%

9.2. DESIGN TEAM ERRORS, OMISSIONS, DESIGN CHANGE

The following lists the approved change orders described as errors, omissions, and changes to the design by the architectural/engineering team. The percentage by discipline/division is as follows:

Discipline	Cost of Error/ Omission, Design Change to Date	Percent of Error/Omission, Design Changes	Percent of Contract Cost (\$85,580,225)
Architectural (A)	\$17,733.81	10.3%	0.28%
Structural (S)	\$2,841.85	1.7%	0.05%
Electrical (E)	\$98,040.40	57.1%	1.56%
Mechanical (M)	\$18,316.45	10.7%	0.29%
Civil (C)	\$27,356.57	15.9%	0.44%
Other (O)	\$7,276.24	4.2%	0.12%

CO #	Change Orders to Original Contract	Discipline	PC Reference	Date CO Issued	Date Approved	Cost/(Credit)
CO-2.0	Upsize Septic Tank from 6,800L to 18,000L	O	RFCO-01	Jun. 9/22	Jun. 10/22	\$7,276.24
CO-3.0	Add Hot Water Line and Power to Future Washer	E	PC 1.0	Jun. 10/22	Jun. 15/22	\$2,085.59
CO-5.0	Add ATS Bypass Switch and Power to Extractors	E	PC 3.0	Jun. 29/22	Jul. 13/22	\$8,330.58
CO-9.0	Gable End Framing	S	PC 7.0	Aug. 15/22	Aug. 15/22	\$979.15
CO-10.0	Siding Foam Closure	A	RFCO-08	Aug. 15/22	Aug. 15/22	\$1,470.00
CO-12.0	Add Services Chase in Bunker Gear Room	A	PC-8.0	Aug. 16/22	Aug. 25/22	\$884.39
CO-16.0	Add Power for SP-D	E	PC-5.0	Sept. 14/22	Sept. 21/22	\$8,084.56
CO-17.0	Duct Bank Relocation	E	PC-5.0	Sept. 14/22	Sept. 21/22	\$13,995.19
CO-19.0	Grease Interceptor	M	PC-11.0	Nov. 4/22	Nov. 7/22	\$2,303.18
CO-21.0	Girder Truss Anchor	S	PC-14.0	Nov. 25/22	Dec. 7/22	\$1,862.70
CO-22.0	Fire Cistern and Storm Outlet	C	PC-12.2	Dec. 22/22	Jan. 1/22	\$26,109.17

CO-23.0	Exterior Lighting Control	E	PC-17.0	Jan. 20/23	Jan. 23/23	\$805.54
CO-25.0	Mechanical Room Door	A	RFCO-13	Jan. 26/23	Jan. 27/23	\$2,730.00
CO-26.0	Additional Electrical Outlets	E	RFCO-14	Feb. 2/23	Feb. 7/23	\$2,398.59
CO-27.0	Mezzanine Gate	A	RFCO-15	Feb. 21/23	Feb. 21/23	\$4,025.70
CO-28.0	Attic Duct Insulation	M	RFCO-16	Mar. 2/23	Mar. 7/23	\$1,540.77
CO-29.0	Ductbank Vaults	E	PC-13.0	Mar. 14/23	Mar. 14/23	\$20,612.05
CO-30.0	SP02 Soft Start and Control Panel	E	PC-18.0	Mar. 15/23	Mar. 16/23	\$18,195.12
CO-31.0	High Water Alarm & Door Control Panel	E	PC-15.0	Apr. 3/23	Apr. 4/23	\$2,020.92
CO-32.0	Exterior Wall Packs & Data Cabling	E	PC-19.0	Apr. 4/23	Apr. 4/23	\$10,083.61
CO-33.0	Thermostat Wiring	E	PC-16.0	Apr. 12/23	Apr. 13/23	\$9,240.00
CO-36.0	IT Room Ceiling	A	RFCO-19.0	May 12/23	May 29/23	\$607.40
CO-37.0	Bulkhead in Bunker Gear RM	A	RFCO-20.0	May 25/23	May 29/23	\$934.29
CO-39.0	Kitchen Pass-Throughs	A	RFCO-18.0	Jun. 22/23	Jun. 22/23	\$2,794.41
CO-40.0	Female Washroom Receptacle	A	PC-28.0	Jul. 5/23	Jul. 14/23	\$315.00
CO-41.0	Corridor Bulkheads	A	RFCO-21.0	Jul. 14/23	Jul. 16/23	\$854.12
CO-42.0	IT Room Power	E	PC-27.0	Jul. 19/23	Jul. 25/23	\$1,571.25
CO-43.0	ERV Control Valve	M	RFCO-22.0	Jul. 19/23	Jul. 25/23	\$1,254.68
CO-44.0	D8-04 Change	A	PC-30.0	Jul. 31/23	Jul. 31/23	\$3,118.50
CO-45.0	Additional Data Cables	E	PC-32.0	Jul. 31/23	Jul. 31/23	\$617.40
CO-46.0	Correct Draft Pipe Elbows	C	PC-31.0	Aug. 4/23	Aug. 8/23	\$1,247.40
CO-47.0	CO2 & NO2 Sensor	M	PC-20.0	Aug. 11/23	Aug. 15/23	\$13,217.82
	Sub-Total Errors, Omissions, Design Changes Change Orders					\$171,565.32
	Percentage of Total Change Orders					96.2%

9.3. TOWNSHIP REQUESTED CHANGE

CO #	Change Orders to Original Contract	PC Reference	Date CO Issued	Date Approved	Cost/(Credit)
CO-11.0	Extractor Tank Size	PC-5.0	Aug. 15/22	Aug. 25/22	1,774.50
CO-34.0	New pad for 40' Container & Concrete Pad Removal	PC-22.0	Apr. 25/23	Apr. 25/23	\$986.43
CO-35.0	Additional Receptacles In Administration	PC-23.0	May 12/23	May 12/23	\$1,063.23
CO-38.0	SCBA Washer Water Line	PC-24.0	Jun. 12/23	Jun. 13/23	\$859.00
CO-48.0	Apparatus Bay Fan Rough-in	PC-26.0	Sug. 25/23		\$2,143.32
Sub-Total Owner Requested Change Orders					\$6,826.48
Percentage of Total Change Orders					3.8%

9.4. ADDRESS EXISTING CONDITIONS

CO #	Change Orders to Original Contract	PC Reference	Date CO Issued	Date Approved	Cost/(Credit)
Sub-Total Existing Conditions Change Orders					\$0.00
Percentage of Total Change Orders					0%

9.5. CREDITS

CO #	Change Orders to Original Contract	PC Reference	Date CO Issued	Date Approved	Cost/(Credit)
CO-1.0	Credit for Hydro One Application Fees Paid by Town	RFCO-03	Jun. 3/22	Jun. 15/22	(\$1,043.18)
CO-4.0	Revised Light Fixture Type	PC 4.0	Jun. 24/22	Jun. 29/22	(\$2,235.50)
CO-6.0	Remove Lights for SB-10	PC 2.0	Jun. 29/22	Jul. 13/22	(\$708.55)
CO-7.0 & 7.1	Site Services Pipe Size	PC-6.0	Sept. 26/22	Sept. 28/22	(\$2,312.68)
CO-8.0	Delete Base Cabinet	RFCO-07	Aug. 10/22	Aug. 15/22	(\$546.00)
CO-13.0	Revise Solid Surface to Laminate	RFCO-09	Aug. 23/22	Aug. 25/22	(\$13,410.00)
CO-14.0	Delete Roll-up Door - Kitchen	RFCO-10.0	Aug. 24/22	Aug. 25/22	(\$2,781.00)
CO-15.0	Eyewash Alarm and Fixture Electrical	PC-9.0	Sept. 12/22	Sept. 13/22	(\$582.84)
CO-18.0	Steel Deletions	PC-10.0	Oct. 17/22	Oct. 17/22	(\$7,182.62)
CO-20.0	Floor Drain Revisions	RFCO-11	Nov. 14/22	Nov. 23/22	(\$18,735.50)
CO-24.0	Hydro Credit	RFCO-12	Jan. 20/23	Jan. 23/23	(\$2,121.46)
Sub-Total Credit Change Orders					(\$51,659.33)

10.0 CHANGE DIRECTIVES (CD)

CD #	Change Directives to Original Contract	Date CD Issued	CO Reference	Cost/(Credit)
CD-1.0	Apparatus Bay Ceiling Fan	Jun. 14/23	CO-48.0	\$2,143.32
Total Change Directives				\$ 2,143.32

11.0 ALLOWANCE DISPERSAL (AD)

Section 11.0 is a summary of awarded contracts, billing progress and budget status for the cash allowances.

CAA #	Description	Date CAA Issued	Date CAA Approved	Cost/(Credit)
AD-01	Door Hardware – Supply & Installation by William Knell & Company Limited. This allowance includes all specified door hardware, operators, sweeps, closures, and electronic components for the new Fire Station. The scope was competitively priced by three bidders, with William Knell & Company being the low bid.	May 11/22	May 12/22	\$46,350.00
AD-02	Door Hardware – Supply & Installation by William Knell & Company Limited. This allowance is for a new electric strike for door D11-01. This strike was omitted on the hardware schedule and is required for the operation of the specified automatic door operator.	Jun. 13/22	Jun. 14/22	\$250.00
AD-03	Hydro and Gas – Additional engineering required by Schneider Electric for modifications to the main electrical switchboard and transformer cabinet to accommodate the Hydro One supplied cabinet transformer (CT). The specified Schneider cabinet is designed to accommodate several types of CT but was not designed for the CT Hydro One has in stock.	Jun. 22/22	Jun. 29/22	\$1,571.06
AD-04	Construction Rubble – Removal and disposal of concrete foundations found buried on site (RFI-08). These foundations were not part of the demolished house or barn structures.	Jul. 4/22	Jul. 5/22	\$572.00
AD-05	Testing & Inspection – Retain GHD to complete all testing and inspection services listed in their proposal dated June 10 th , 2022. This allowance includes costs for the following: footing & subgrade inspections, compaction testing, concrete/mortar/grout testing, steel inspections, spray foam & air barrier inspection, and laboratory testing.	Jul. 20/22	Jul. 27/22	\$12,366.00
AD-06	Construction Rubble – sub-excavation of unsuitable soils and place lean mix concrete (RFI-09). An old well was found when excavating for the new foundations. The geotechnical engineer reviewed with the structural consultant and determined the extent of sub-excavation & lean mix concrete required to mitigate the problem.	Jul. 22/22	Jul. 27/22	\$8,430.60

AD-07	Hydro and Gas – The Hydro One connection fee for the new permanent service to the Fire Station.	Aug. 22/22	Aug. 22/22	\$20,074.08
AD-08	Security Control – Retain Pasword to supply and install the access control and security system for the project. This includes door access modules, card readers, wiring, keypads, sensors, controllers/control panels, installation, and programming.	Sept. 30/22	Oct. 3/22	\$25,780.00
AD-09	Commissioning – CFMS-West retained as the commissioning agent for this project.	Dec. 20/22	Jan. 1/23	\$14,700.00
AD-10	Surveying – work completed by Lanthier & Gilmore Surveying Ltd. for the construction layout prior to construction.	Dec. 21/22	Jan. 1/23	\$1,729.80
AD-11	Testing & Inspection – Extension of Allowance disbursal 05 (approved on Jul. 27/22) for GHD to compete all testing and inspection services listed in their proposal dated June 10 th , 2022. This allowance has been extended due to the increased number of visits and test required to complete the project. The total for the testing an inspection allowance is now \$22,000.	Jan. 4/23	Jan. 10/23	\$9,634.00
AD-12	Signage – Retain Harrison Solutions to supply and install the two exterior building signs for the new fire station.	Jan. 4/23	Jan. 10/23	\$11,193.82
AD-13	Hydro & Gas – Enbridge Gas charges for the new gas service.	Feb. 23/23	Mar. 2/23	\$6,153.38
AD-14	Hydro & Gas – Supply and installation of the primary electrical cables from the pole to the transformer.	Mar. 14/23	Mar. 14/23	\$13,237.01
AD-15	Signage – Supply and installation of a “2023” date stone to be installed adjacent to the front entrance.	Mar. 30/23	Mar. 30/23	\$450.00
AD-16	Signage – Supply and installation of four pot lights in the north soffit above the apparatus bay doors to illuminate the building signage.	Apr. 4/23	Apr. 4/23	\$2,545.57
AD-17	Signage – Supply and installation the interior wayfinding signage and exterior traffic signage.	Apr. 20/23	Apr. 21/23	\$4,160.60
AD-18	Window Coverings – Supply and installation of 15 roller window shades by Interiors By Better Shade.	May 25/23	Jun. 1/23	\$5,905.00

AD-19	Door Hardware – Supply of glass trim for the exterior doors. The Issued for Construction drawings and specifications omitted this item.	Jun. 1/23	Jun. 8/23	\$1,200.00
AD-20	Surveying – Concrete curb layout and GPS file.	Jun. 1/23	Jun. 8/23	\$2,500.00
AD-21	Testing & Inspection – Extension of Allowance disbursal 11 (approved on Jan. 10/23) for GHD to complete additional concrete testing and compaction testing during the site hardscaping activities. The total for the testing an inspection allowance is now \$24,930.50.	Jul. 17/21	Jul. 18/23	\$2,930.50
AD-22	Testing & Inspection – Extension of Allowance disbursal 11 and 12 (approved on Jul. 25/23) for GHD to complete asphalt testing during the site hardscaping activities for \$1,077.50. The total for the testing and inspection allowance is now \$26,008.00.	Jul. 12/23		\$1,077.50

12.0 CASH ALLOWANCE DRAWS (CAD)

The following cash allowance summary notes awarded contracts and tracks billing progress against a total Contract Allowance of \$325,000 The project cash allowances are drawn from the Contract Allowance as stipulated in the construction contract.

The Sum of Approved Allowances awarded to date is \$192,810.92 against the Allowance Budget of \$325,000. As of Certificate of Payment 17, \$170,090.92 has been paid to the contractor. See summary table on next Page:

CAD Description	CAD Approved by Township (Exc. HST)	CAD Invoiced to Date (Exc. HST)	CAD Invoiced this Period (Exc. HST)	CAD Remaining to be Drawn (Exc. HST)
Door Hardware (AD-01)	\$46,350.00	\$46,350.00	\$0.00	\$0.00
Door Hardware (AD-02)	\$250.00	\$250.00	\$0.00	\$0.00
Door Hardware (AD-19)	\$1,200.00	\$1,200.00	\$0.00	\$0.00
Testing & Inspection (AD-05)	\$12,366.00	\$12,366.00	\$0.00	\$0.00
Testing & Inspection (AD-11)	\$9,634.00	\$9,634.00	\$0.00	\$0.00
Testing & Inspection (AD-21)	\$2,930.50	\$2,930.50	\$0.00	\$0.00
Testing & Inspection (AD-21)	\$1,077.50	\$1,077.50	\$1,077.50	\$0.00
Hydro & Gas (AD-03)	\$1,571.06	\$1,571.06	\$0.00	\$0.00
Hydro & Gas (AD-07)	\$20,074.08	\$20,074.08	\$0.00	\$0.00
Hydro & Gas (AD-13)	\$6,153.38	\$6,153.38	\$0.00	\$0.00
Hydro & Gas (AD-14)	\$13,237.01	\$13,237.01	\$0.00	\$0.00
Surveying (AD-10)	\$1,729.80	\$1,729.80	\$0.00	\$0.00
Surveying (AD-20)	\$2,500.00	\$2,500.00	\$0.00	\$0.00
Security Control (AD-08)	\$25,780.00	\$10,000.00	\$10,000.00	\$15,780.00
Construction Rubble (AD-04)	\$572.00	\$572.00	\$0.00	\$0.00
Construction Rubble (AD-06)	\$8,430.60	\$8,430.60	\$0.00	\$0.00
Window Coverings (AD-18)	\$5,905.00	\$5,905.00	\$5,905.00	\$0.00
Building Signage (AD-12)	\$11,193.82	\$11,193.82	\$0.00	\$0.00
Signage – Date Stone (AD-15)	\$450.00	\$450.00	\$0.00	\$0.00
Signage – Illumination (AD-16)	\$2,545.57	\$2,545.57	\$0.00	\$0.00
Signage – Interior & Traffic (AD-17)	\$4,160.60	\$4,160.60	\$0.00	\$0.00
Project Sign Board	n/a	\$0.00	\$0.00	n/a
Commissioning (AD-09)	\$14,700.00	\$7,760.00	\$1,120.00	\$6,940.00
Total Allowance in Contract (A)	\$325,000.00	-	-	-
Total Approved CAD's (B)	\$192,810.92	\$170,090.92	\$5,905.00	\$22,720.00
Difference (A - B)	\$133,266.58	-	-	-

* The total cash allowance for the above items is \$325,000. The cost for each item will be allocated as the contractor awards the individual contracts.

13.0 CERTIFICATE OF PAYMENTS SUMMARY

Certificate of Payment "CoP No. 17", Draw 17 for the period ending September 30th, 2023, was issued by the Architect on October 12th, 2023, and recommended for payment by UEM on October 13th, 2023, for the Wainfleet Central Fire Station project. The amount payable excluding HST is \$37,156.50. The schedule of Certificate of Payments received and recommended is as follows. All costs exclude HST.

Certificate of Payment (CoP) / Period Ending	Cumulative Net Amount Certified by Architect (Exc. 10% Holdback)	TRP Contract Cost (Including COs & CDs)	Balance of Statutory Holdback (10%)	Balance to Complete Contract
\$97,110.00 (CoP No. 01 for May '22)	\$107,900.00	\$6,275,000.00	\$10,790.00	\$6,167,100.00
\$136,785.44 (CoP No. 02 for Jun. '22)	\$259,883.82	\$6,283,318.65	\$25,988.38	\$6,023,434.83
\$557,822.46 (CoP No. 03 for Jul. '22)	\$879,686.56	\$6,288,705.18	\$87,968.66	\$5,409,018.62
\$390,213.62 (CoP No. 04 for Aug. '22)	\$1,313,257.24	\$6,276,187.03	\$131,325.72	\$4,963,818.96
\$386,336.47 (CoP No. 05 for Sept. '22)	\$1,742,519.99	\$6,296,260.45	\$174,252.00	\$4,553,740.46
\$290,675.70 (CoP No. 06 for Oct. '22)	\$2,065,492.99	\$6,289,077.83	\$206,549.30	\$4,223,584.84
\$429,702.53 (CoP No. 07 for Nov. '22)	\$2,542,940.24	\$6,274,508.21	\$254,294.02	\$3,731,567.97
\$280,997.33 (CoP No. 08 for Dec. '22)	\$2,855,159.50	\$6,300,617.38	\$285,515.95	\$3,445,457.88
\$255,358.04 (CoP No. 09 for Jan. '23)	\$3,138,890.66	\$6,302,031.46	\$313,889.07	\$3,163,140.80
\$365,468.30 (CoP No. 10 for Feb. '23)	\$3,544,966.54	\$6,308,455.75	\$354,496.65	\$2,763,489.21
\$486,257.13 (CoP No. 11 for Mar. '23)	\$4,085,252.24	\$6,348,803.69	\$408,525.22	\$2,263,551.45

\$528,031.39 (CoP No. 12 for Apr. '23)	\$4,671,953.79	\$6,371,134.65	\$467,195.38	\$1,699,180.86
\$511,450.81 (CoP No. 13 for May '23)	\$5,240,232.47	\$6,373,739.57	\$524,023.25	\$1,133,507.10
\$523,155.94 (CoP No. 14 for Jun. '23)	\$5,821,516.85	\$6,377,393.20	\$582,151.69	\$555,876.35
\$188,717.29 (CoP No. 15 for Jul. '23)	\$6,031,202.72	\$6,381,388.03	\$603,120.27	\$350,185.31
\$82,248.32 (CoP No. 16 for Aug. '23)	\$6,122,589.75	\$6,399,589.15	\$612,258.98	\$276,999.40
\$37,156.50 (CoP No. 17 for Sept. '23)	\$6,163,874.75	\$6,401,732.47	\$616,387.48	\$237,857.72

14.0 SUPPLEMENTAL (SITE) INSTRUCTIONS (SI)

SI	Date Issued	Description
SI-1.0	July 28, 2022	Electrical/Mechanical Conduit Chase
SI-2.0	September 15, 2022	Tile Colour Clarifications
SI-3.0	September 28, 2022	Countertop and Cabinet Colour Clarifications
SI-4.0	October 27, 2022	Revise Window Location – Deputy Chief Office
SI-5.0	November 28, 2022	Commissioning Requirements
SI-6.0	December 13, 2022	Keypad Clarifications
SI-7.0	January 11, 2023	Additional Electrical Outlet Clarifications
SI-8.0	January 20, 2023	South Exterior Lights
SI-9.0	January 26, 2023	Revise Mechanical Room Door, Revise Attic Space Firestopping
SI-9.0r1	January 26, 2023	Revise Attic Space Firestopping

SI-10.0	March 21, 2023	Paint Colours and Accent Walls
SI-11.0	March 31, 2023	Date Stone Location
SI-12.0	May 18, 2023	Metal Siding – Trims & Box-outs
SI-13.0	June 27, 2023	Administration – Floor Polishing
SI-13.1	July 14, 2023	Floor Polishing & Grinding
SI-14.0	August 21, 2023	Fire Alarm System Clarification
SI-15.0	September 12, 2023	Parking Lot Line Painting
SI-16.0	October 4, 2023	Air Balancing

15.0 REQUEST FOR TOWNSHIP INFORMATION (RFTI)

RFCI	Date Issued	Description	Status

16.0 STATUS OF PROJECT BUDGET

The status of the project budget and costs (excluding HST) to September 30th, 2023, for the Wainfleet Central Fire Station are as follows.

Note: The status of construction costs to date represents the amount paid by the Township of Wainfleet to the contractor and INCLUDES Holdbacks (10%).

ACTIVITY		BUDGET	STATUS TO DATE
A1.	Construction Cost (Tender Cost from TRP)	\$5,950,000	\$5,867,051
A2.	Construction Allowances (By Competitive Bid)	\$325,000	\$170,091
	Construction Contingency	\$311,000	\$126,732
A3.	Pre-Construction Township Activities	\$8,100	\$7,979
B.	Owners Allowances	\$686,100	\$707,091
C.	Advisory Services	\$378,700	\$362,385
TOTAL PROJECT BUDGET		\$7,658,900	\$7,241,330

17.0 POTENTIAL CONSTRUCTION PROJECT RISKS

All construction projects carry some level of risk and uncertainty to participants. Owners mitigate risk by following a rigorous planning, evaluative, investigative and design process and transfers risk by insurances, bonding, indemnification, supplementary conditions, and contracts. However, there remains potential project risks to the owner that should be regularly assessed by a risk register and ongoing evaluation of the probability of specific risks.

The probability of a project risk is considered as “low” (unlikely), “moderate” (possible), “high” (likely) or “very high” (active). A construction risk can have one or more causes and one or more impacts. Construction project risks are interrelated and interdependent.

The assessment of potential project risks considers the probability, uncertainty, and consequences of a potential risk. The probability of the risk may change as circumstances change or arise and are specific to a particular project. Some of the most consequential potential project risks experienced during construction include:

Schedule – Schedule risks include weather delays, unknown site conditions, moisture in concrete, fire, permit delays, contractor performance (including financial issues), supply (labour and material) problems, work stoppages (strikes and mandated shutdowns) and decision-making delays.

The effect of the potential return of the pandemic in 2023 is considered in assessing schedule risk. Potential schedule impacts are mitigated by agreeing to a critical path schedule and monitoring completion of milestone activities against the approved baseline. Supply of goods and labor is an ongoing scheduling matter that is monitored regularly. The schedule and actual cash flow has exceeded the contractors forecasted cash flow (see graph in Section 5.0). The contractor did not meet the financial test for substantial performance by the end of September. (See the cashflow commentary on page 11 of this report).

- **Risk to Project: High - Monitor**

Budget – Factors contributing to budget risk include design omissions and errors, unknown site conditions, contract disputes, schedule delays, increases in material costs, and work stoppages. Consequences could be that certain parts of the project are eliminated, changed, or not fully completed.

- **Risk to Project: Low**

Overpayment to Contractor – There is a risk of overpayment to the contractor if the process of contractor draws are not rigorously reviewed. This can be a significant project risk in terms of completed project and addressing construction deficiencies.

Payment to the contractor follows due diligence involving the architect, engineering sub-trades, the contract administrator, and the project manager. The percentage of work claimed by the contractor and the verification of delivered equipment and materials is reviewed by the frequent on-site visits. Reference to the contractor's schedule and forecasted cashflow provide another monitor. Details such as the inclusions of only approved changes is another check against over payment. Holdbacks, both statutory and against unfinished or deficient work, provide assurances.

There is also the risk of duplicate payment for work in the base contract and new work defined by changes to project scope. The contract administrator works closely with the design team to determine what is acceptable new scope and what the contractor is providing as part of their contractual obligations.

- **Risk to Project: Low**

Pandemic – A public health crisis would likely affect construction productivity, or the government could again mandate the construction industry, including supply of equipment, materials, and products, to stop work because of the COVID-19 virus. The consequence is a high level of uncertainty which has potential effects on the project schedule, cash flow, budget and potentially equipment, material and labour supply.

- **Risk to Project: Low**

Goods and Labour Supply – The supply of goods (equipment and materials) and labour (including availability of trades and specialized subtrades) can be affected by several factors such as a pandemic, mandated shutdowns, labour shortages, disputes and strikes, high demand for specific goods, currency exchange fluctuations and seasonal shutdown by manufacturers. The consequences are probable impacts on project schedule/completion date.

The construction industry is seeing an unprecedented number of labour strikes.

The contractor has acquired all major materials and deliveries. There are no anticipated items with extended delivery times that will impact substantial completion

- **Risk to Project: Low**

Health and Safety – Worker safety is paramount to the general contractor, subtrades and the owner. Unsafe work conditions, carelessness or a serious workplace accident can affect the project schedule. The general contractor has implemented a comprehensive work health and safety program. The consequence is that workers health and safety is affected which in turn could impact project schedule and completion.

- **Risk to Project: Low**

Environmental – Unknowns and the unexpected such as severe weather events, subsurface conditions not suitable for construction, contaminated soils, underground hazards, structures and tanks, endangered or sensitive species or the presence of archaeological or historical resources represent high levels of risk, particularly in the early stages of the project. The consequences are impacts to budget, schedule and project completion.

- **Risk to Project: Low**

Contractor Performance – The quality of construction including defective work, the completion of the project on schedule, negligence, project close-out and operational readiness, the financial stability of the general contractor, bankruptcy, the availability of trades and labour, health & safety practices and labour unrest represent high levels of risk. The consequences affect all aspects of the project.

This risk is mitigated by employing a rigorous contractor (including major subtrades) selection process that considers qualifications and experience, financial stability, and proposed project management and on-site supervision personnel.

As noted in the assessment of schedule risk, contractor performance in the last stages of the project is critical to its success. A coordinated effort of all trades and the architectural/engineering team is imperative to meet project milestones.

The contractor is no longer on site daily to oversee the completion of outstanding work and deficiencies.

- **Risk to Project: High – Monitor**

18.0 OTHER PROJECT MATTERS

No other project matters to document at this time.

19.0 CLOSE OUT DOCUMENTS

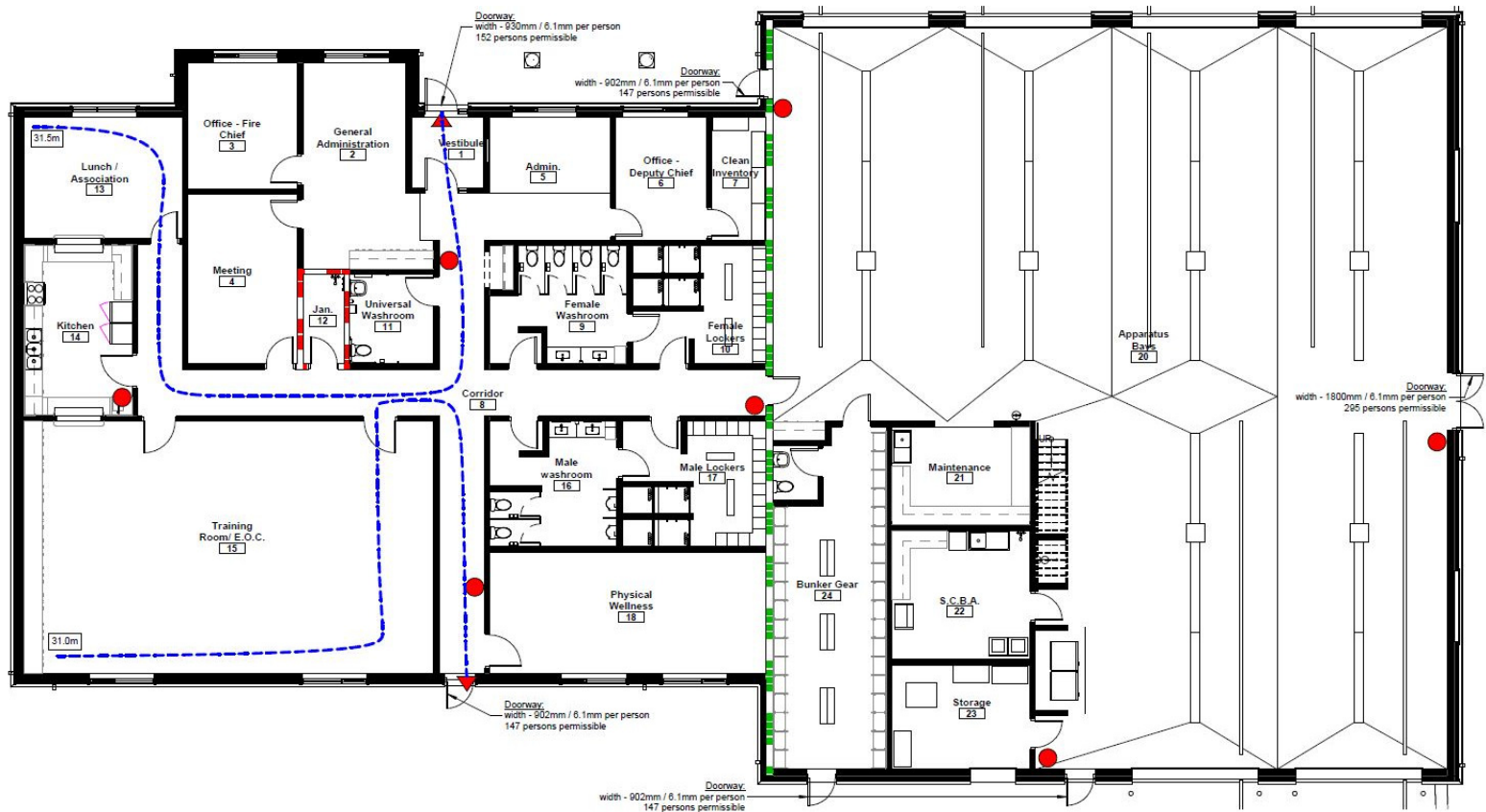
There are four significant milestones at the end of a construction project that must be addressed to permit occupancy:

- Certificate of Substantial Performance
 - **Construction in Progress**
- Occupancy Permit from Building Department (in consultation with Fire Department) including verification/compliance letters (i.e. ESA, emergency lighting, fire alarm, seismic restraint, sprinkler, electrical, mechanical), letters from sub-contractors and from the design architects/engineers. Balancing and controls can be ongoing during occupancy.
 - **Building Inspector and Fire Department undertake periodic inspections during construction**
- Architectural/Civil, Electrical, Mechanical and Structural As-Built Drawings
 - **Construction in Progress** – Architectural drafts submitted to consultant team for review
- Operation and Maintenance Manuals
 - **Construction in Progress** – Drafts submitted for architect / design team review

20.0 CONSULTANT & SUBCONTRACTOR LIST

Scope	Consultant / Contractor	Location
Architect	Raimondo + Associates Architects	Niagara Falls
Project Management	Urban & Environmental Management (UEM)	Niagara Falls
Mech./Elec./ Civil/ Structural Engineering	Mantecon Partners	Dundas
Commissioning Agent	CFMS- West	Grimsby
Testing & Inspection	GHD	St Catharines
General Contractor	TRP Construction General Contractors	Burlington
Demolition	Budget Environmental Disposal Inc	Hamilton
Civil/Siteworks	Backwoods Excavating Inc.	Grassie
Septic	Dynamic Fusion	Dunnville
Mechanical	Besseling Mechanical Inc	Hamilton
Electrical	Fred Giessler Electric	Niagara-on-the-Lake
Masonry	Cecchini Masonry Ltd.	Thorold
Landscape	Touchstone Site Contractors	Thorold
Finish Carpentry	Baywood Interiors Ltd.	Kitchener
Concrete Formwork	Niagara Formwork Structure Inc.	Welland
Concrete Supplier	Inter County Concrete Contracting	Dunnville
Concrete Finishing	Appolo Concrete Contracting	Hamilton
Structural Steel	Bradshaw Ironworks Ltd.	Welland
Metal Doors, Frames, Hardware	William Knell and Company Ltd.	Kitchener
Metal Siding, Soffit, Roofing	Plazo Constriction Corporation	North York
Overhead Doors	Overhead Door Company Limited	St. Catharines
Toilet & Bath Accessories	Canada Washroom Products Inc.	Burlington
Glazing	Welland Glass & Entrances Inc.	Welland
Gypsum Board/ACT	DBN Drywall & Acoustics Ltd.	St. Catharines
Flooring	Percella Flooring Inc.	Toronto
Painting	Painting-Canada Inc.	Hamilton

21.0 WAINFLEET CENTRAL FIRE STATION FLOOR PLAN



22.0 SITE PICTURES



Topcoat Asphalt and Line Painting - Front



Topcoat Asphalt and Line Painting - Rear



Office Furniture Delivered



Landscaping Commenced - Front



PROJECT FACT SHEET

Wainfleet Fire Station Construction Contract:	
TRP Construction	\$ 5,950,000.00
Construction Allowances	\$ 325,000.00
Total Wainfleet Fire Station Contract (Ex. HST)	\$ 6,275,000.00
Wainfleet Fire Station Project Scope:	
- Gross Floor Area	1,239 m ² (13,342 ft ²)
- Site Area	2.02 ha (4.99 ac)
Wainfleet Fire Station Key Features:	
Six Apparatus Bays	Dedicated Offices for Fire Chief and Deputy Fire Chief
1,200 ft ² , 60-person Training Room	440 ft ² Physical Wellness Room
Male Washroom and Change Rooms w/32 lockers	Female Washroom and Change Rooms w/20 lockers
300kW Natural Gas Generator	Metal Roof
Provisions for Future Apparatus Bays (2)	Provisions for Future EMS Station
50,000 Gallon Greywater Storage (Rainwater) c/w Pumps for Filling Fire Trucks	
Schedule:	
Occupancy	October 2023
Substantial Completion	October 2023

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