



Subject: Fire Services Headquarters Station 4-5
Prepared by: Allan D. Downey, Director of Operations
Department: Operational Services
Date: November 26, 2019

Recommendation

- 1. That Report No. OPS19-025 be received; and,**
- 2. That the revised design of Station 4-5 be approved; and,**
- 3. That the revised budget of \$13,567,727 be approved from the Asset Replacement Fund (ARF); and,**
- 4. That the Joint Council Committee (JCC) recommend that the tender be awarded to REMO General Contracting Ltd. in the amount of \$10,836,817.**

Executive Summary

- The facility was redesigned to provide cost savings that would bring the facility closer to the approved budget
- As a result of the proposed revisions to the facility design, a reduction in the amount of \$1,147,000 has been achieved
- The increase to the budget can be funded through the Asset Replacement Fund (ARF)
- Staff recommend that the tender be awarded to REMO General Contracting Ltd. and the budget be increased to \$13,567,727

Background

The JCC recommended the approval of the design and development of a combined fire hall, training facility headquarters to serve the needs of the residents of Aurora and Newmarket in accordance with the Master Fire Plan.

On November 10, 2015, four (4) acres of land were purchased at the corner of Earl Stewart Drive and Isaacson Crescent in Aurora.

On February 14, 2017, JCC approved a budget of \$11,000,000 for the design and construction of the facility.

On March 28, 2017, JCC approved the engagement of Thomas Brown Architects to design the new facility, under the guidance of a Steering Committee comprised of staff from Aurora, Newmarket and CYFS.

Several reports and updates were presented to JCC culminating in the approval of design on June 12, 2018.

Staff received approval to proceed to detailed design, preparation of specifications and tender documents and proceed to public tender based on information provided in staff report OPS18-011.

The project was released for public tender on April 12, 2019 and closed on May 22, 2019. Nine (9) bids were received as follows:

1. REMO General Contracting Ltd.	\$11,983,817
2. Garritano Bros Ltd	\$12,076,783
3. M.J. Dixon Construction Limited	\$12,283,000
4. Century Group Inc.	\$12,582,803
5. JR Certus Construction Co. Ltd.	\$13,307,800
6. Pre-Eng Contracting Ltd.	\$13,512,500
7. Jasper Construction Corp.	\$13,668,900
8. Percon Construction Inc.	\$14,093,475
9. Rea Investments Limited o/q REA Construction	\$15,730,000

Reference checks were performed by the Town of Aurora. Staff recommend that REMO General Contracting Ltd. be considered as the low qualified bidder.

Analysis

The facility was redesigned to provide cost savings that would bring the facility closer to the approved budget

Extensive consultation between the Architect, proposed low bidder and the Fire Chief have been ongoing since the closing of the tender to ensure that all aspects of the design are explored for modification and subsequent cost reduction.

The methodology for modifying the design was based on the following:

1. Look for elements in the design that could be eliminated or changed in order to reduce the building area.
2. Look for elements in the design that could be changed or modified to reduce the building cost.
3. Do not change areas programmed for Suppression.
4. Do not make changes that would severely compromise Training or Administrative operations.

The modifications to the design encompassed the following:

Building Modifications:

- Deletion of one (1) bay in the Apparatus Bay
- Remaining bays shortened by 20' from 90' to 70'
- Reduction of second floor office area by the width of the deleted bay below
- Deletion of one (1) classroom on the second floor
- Adjustment of the northwest entrance and hose tower by moving both elements east to infill area of deleted classroom

The above-noted revisions achieved a reduction in gross floor area of 4,331 square feet from the original tender gross floor area of 28,099 square feet representing a 15.5% reduction.

Further Modifications that did not affect Building Area:

- Change of Apparatus Bay doors from four (4) fold style to standard overhead doors
- Elimination of large trapezoidal overhangs over the Apparatus Bays (east and west elevation)
- Simplification of northwest building entrance
- Reduction of curtain wall systems at northwest building entrance
- Reduction of architectural precast panels at east (front) elevation of building
- Change of specification for aluminum panel cladding systems
- Elimination of vehicle extraction system, trench drain and tube heaters resulting from deletion of one (1) Bay
- Elimination of electrical fixtures and wiring resulting from deletion of one (1) Bay and deletion of one (1) classroom

The impact of the above-noted reductions required the following modifications:

- Reconfiguration of second floor administrative area, staff kitchen and classroom areas
- Reconfiguration of ground floor ancillary spaces to the Apparatus Bays, storage areas and SCBA fill and testing areas

Site Modifications:

- Relocation of the north drive aisle, parking and generator site lighting etc. to the south in order to eliminate the retaining wall at the north property line
- Reduction of the amount of asphalt paving along the north and west property lines resulting from the above-noted adjustment of the drive aisle
- Elimination of imported granular fill within the building area

Operational Impact resulting from Modifications

The above-noted modifications have changed the capacity of the facility. While the operations associated with fire suppression have been maintained, other aspects of the facility have been changed. A summary of these impacts is provided as follows:

- Reduction of Apparatus Bay number and depth has reduced future housing opportunities for apparatus
- Deletion of one (1) classroom has reduced the capacity of training operations by eliminating the possibility of having concurrent training sessions but training requirements will not be comprised and will continue to be fulfilled. The reduced second floor area and resulting reconfiguration of second floor administration area reduces the possibility of future expansion.

Determination of cost impact resulting from modifications

After undertaking a preliminary review of the design to determine a strategy for cost reduction, the Steering Committee attended a meeting with the lowest compliant bidder at the end of August 2019.

The work involved in modifying the tender design was significantly more complex than originally anticipated by the Architect as the impact of the reductions required significant reconfiguration to the remaining spaces to ensure that the facility would be operationally effective. To try to mitigate the issue, the Architect was granted permission to establish contact with the bidder and work with them to develop the scope of the revisions. This

has proved to be beneficial as the bidder drew attention to items that were not originally under consideration.

Working with the bidder, the Architect and CYFS are confident that the modifications to the tender scope is fully explored and that further modifications are not advisable. From a cost perspective, the order of magnitude value of changes based on discipline is as follows (organized from greatest to least):

1. Architectural Changes
2. Civil Changes
3. Structural Changes
4. Mechanical and Electrical Changes

The cost impact of the changes places primary importance on Items 1 to 3. The cost impact under Item 4 will be minimal.

The scope of the modifications realized cost reduction in the following categories:

- Bonding
- Retaining walls
- Concrete forming
- Cast in place concrete
- Concrete finishing
- Concrete reinforcing
- Architectural precast
- Masonry
- Vehicle Exhaust Extraction Systems
- Excavation
- Structural Steel
- Steel Deck
- Waterproofing – Below Grade
- Aluminum Cladding Systems
- Roofing
- Apparatus Bay Doors
- Gypsum Board Systems
- Acoustical Partitions (folding)
- Flooring
- Mechanical Systems
- Electrical Systems

As a result of the proposed revisions to the facility design, a reduction in the amount of \$1,147,000

Cost savings in the amount of \$1,147,000 have been realized, culminating in an adjusted tender bid of \$10,836,817.

The Architect, proposed contractor and Fire Chief have modified the design to a point that continues to maintain the original intent and scope of this facility without jeopardizing the overall operation.

The increase to the budget can be funded through the Asset Replacement Fund

The original budget for Fire Hall 4-5 was funded through a combination of the Development Charge reserve and the Asset Replacement Fund (ARF).

Since the original budget was approved JCC recommended the budget include an additional 15 percent, \$1,650,000, and it be funded from the ARF. To build the Fire Hall under its current design an additional \$2,567,727 is requested to be funded from the ARF.

At JCC's meeting on October 22, it was agreed that any year-end surplus experienced in excess of the budgeted reserve fund requirement (currently \$700,000 based upon the 2020 draft budget) will be transferred to the asset replacement funds.

It is projected that there will be sufficient funds in the ARF to cover the additional \$2,567,727 required without impacting the rest of the capital program. These funds are the result of realized and anticipated operational savings.

Staff recommend that the tender be awarded to REMO General Contracting Ltd. and the budget be increased to \$13,567,727

REMO General Contracting Ltd. has worked with both Towns to reduce the overall cost of Fire hall 4-5. To award the contract to REMO General Contracting Ltd. it is recommended the budget be increased to \$13,567,727. This budget will include the complete cost for the Fire Hall project as shown in Table 1 below.

Table 1	
Fire Hall 4-5 Revised Project Budget	
Non-Construction Costs:	
Architect	\$600,000
Furniture, Fixtures, Signage etc	506,500
Prefab shed for training	250,000
Allowance for props	100,000
	<u>1,456,500</u>
Construction Costs:	
Tender Revised Bid	10,836,817
Non-Recoverable HST (1.76%)	190,728
Contingency (10%)	1,083,682
	<u>12,111,227</u>
Total Revised Project Budget	<u>\$13,567,727</u>

In addition to this budget the Town of Aurora has included \$87,300 for project management fees and public art from its own reserves.

Conclusions

The project budget for Fire Hall 4-5 be increased to \$13,567,727 with the additional budget requested to be funded from the ARF and the tender be awarded to the lowest compliant bidder REMO General Contracting Ltd.

Attachments

Attachment #1 – Revised Design.

Previous Reports

PRCS17-008 Engagement of a Design Architect and Scheduling for the new Central York Fire Services Fire Hall, Headquarters and Training Centre, March 21, 2017

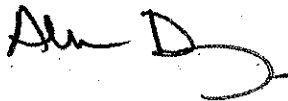
PRCS17-039 Central York Fire Services Headquarters Station 4-5, November 7, 2017

PRCS17-041 Central York Fire Services Headquarters Station 4-5, November 14, 2017

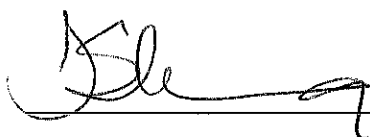
OPS18-011 Central York Fire Services Headquarters 4-5, June 12, 2018

Pre-submission Review

Departmental Approval



Allan D. Downey
Director
Operational Services



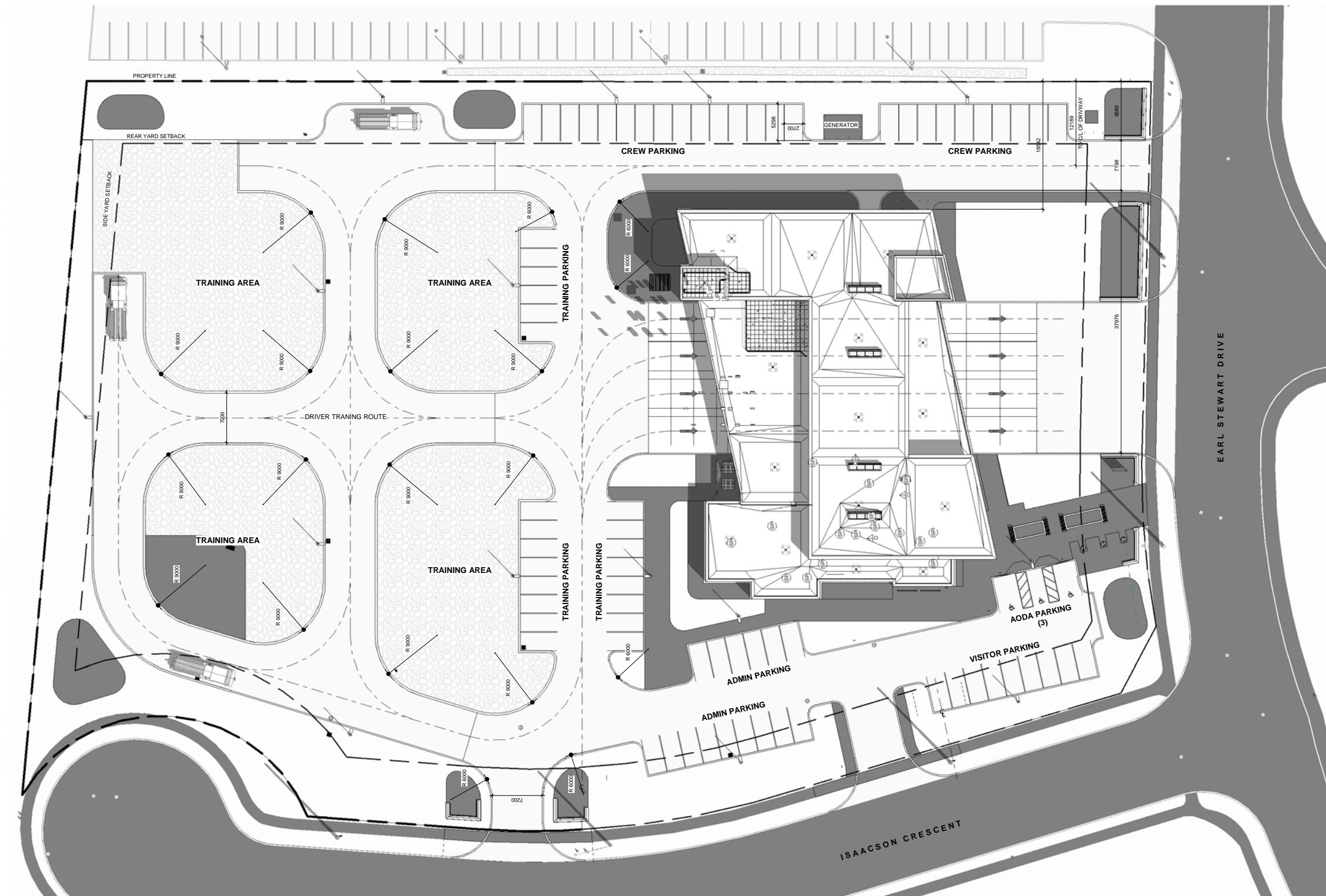
Jag Sharma
Chief Administrative Officer
Town of Newmarket

Approved for Agenda



Ian Laing, Fire Chief
Central York Fire Services

Doug Nadorozny
Chief Administrative Officer

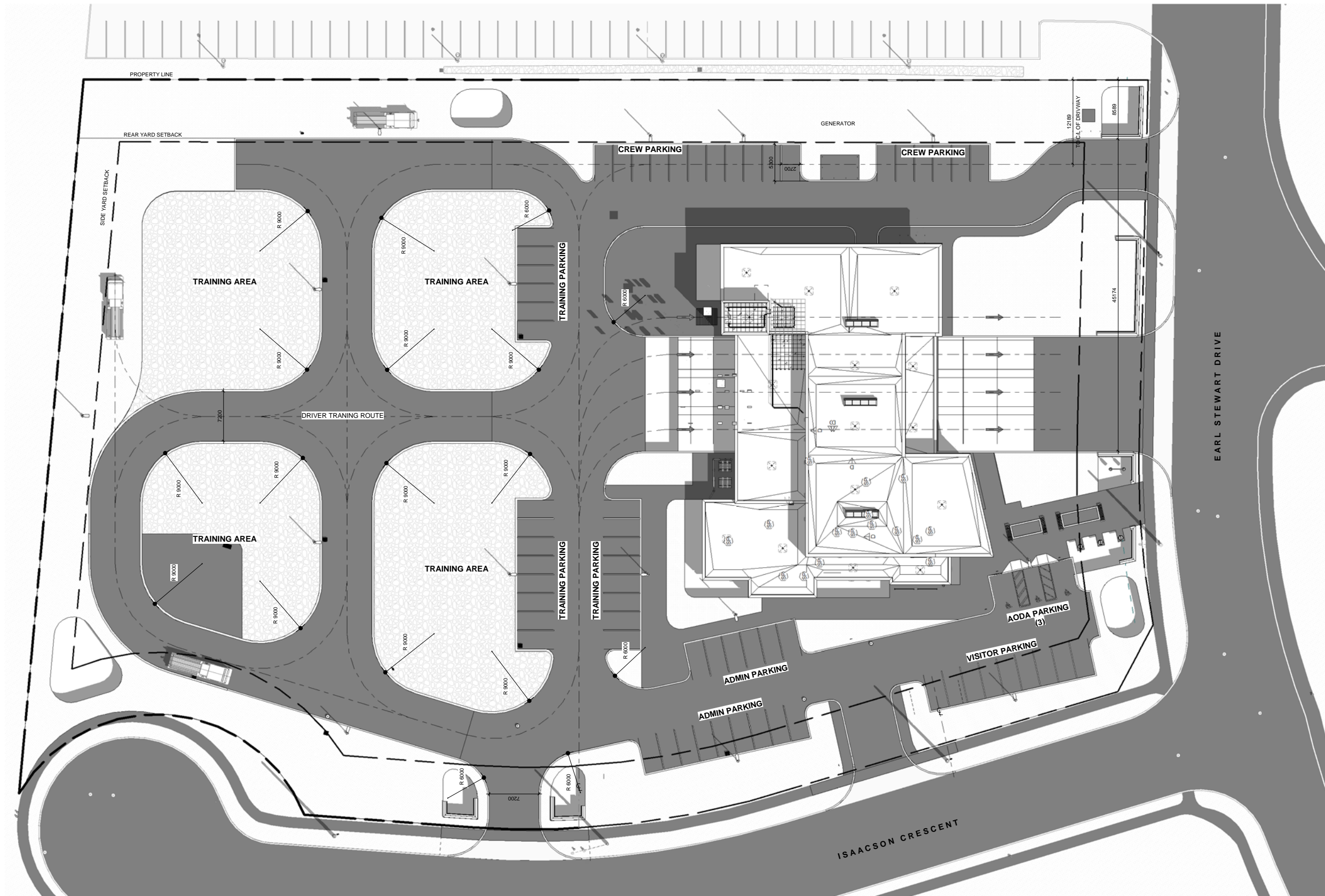


SITE PLAN - Tender

CENTRAL YORK FIRE SERVICES HQ STATION 4-5

300 EARL STEWART DRIVE, AURORA, ONTARIO

THOMASBROWN
ARCHITECTS

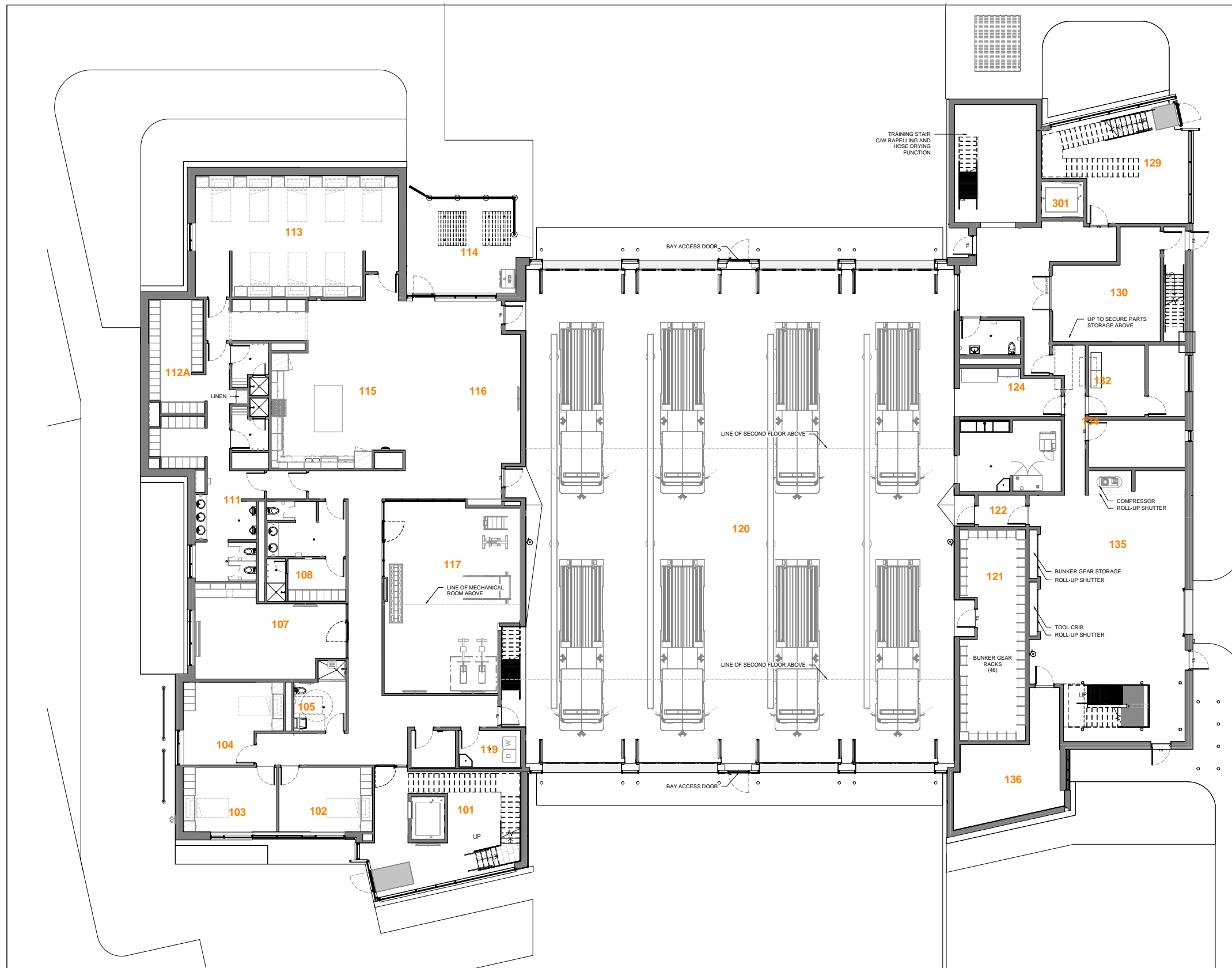


SITE PLAN - Reduced Scope

CENTRAL YORK FIRE SERVICES HQ STATION 4-5

300 EARL STEWART DRIVE, AURORA, ONTARIO

THOMASBROWN
ARCHITECTS



GROUND FLOOR PLAN - Tender

CENTRAL YORK FIRE SERVICES HQ STATION 4-5

300 EARL STEWART DRIVE, AURORA, ONTARIO

THOMASBROWN
ARCHITECTS



SPATIAL PROGRAM - GROUND FLOOR	
NUMBER	ROOM NAME
100	VESTIBULE
101	ENTRANCE/HERITAGE
102	CAPTAINS OFFICE 1
103	CAPTAINS OFFICE 2
104	PLATOON CHIEF
105	UNIVERSAL WC
106	CORRIDOR
107	TRAINING OFFICE 1
108	WOMENS LOCKER ROOM
109	WOMEN'S WASHROOM
110	CORRIDOR
111	MENS WASHROOM
112A	MENS LOCKER ROOM
112B	SHOWER ROOM
112C	SHOWER ROOM
113	DORMITORY
114	EXTERIOR PATIO
115	KITCHEN
116	DAYROOM
117	EXERCISE ROOM
118	IT ROOM
119	LAUNDRY
120	APPARATUS BAY
121	GEAR ROOM
122	CORRIDOR
123	CLEAN ROOM
124	LOADING AREA
125	BAY WASHROOM
126	HOSE TOWER
127	CORRIDOR
128	REAR ENTRANCE
129	STAIRWAY
130	PARTS STORAGE
131	SCBA AIR FILL
132	SCBA AIR FILL
133	SCBA MASK REPAIR
134	TRAINING SPACE
135	ELECTRICAL ROOM

GROUND FLOOR PLAN - Reduced Scope

CENTRAL YORK FIRE SERVICES HQ STATION 4-5

300 EARL STEWART DRIVE, AURORA, ONTARIO

THOMASBROWN
ARCHITECTS



SPATIAL PROGRAM - SECOND FLOOR	
NUMBER	ROOM NAME
200	ENTRANCE/HERITAGE
201	RECEPTION
202	RECEPTIONIST
203	CLOSET
204	COPYROOM
205	HR OFFICE
206	GENERAL WORK AREA
207	DEPUTY'S OFFICE 1
208	DEPUTY'S OFFICE 2
209	CHIEF'S OFFICE
210	ADMIN COORDINATOR
211	ASSISTANT DEPUTY (TRAINING)
212	TRAINING OFFICE 1
213	TRAINING OFFICE 2
214	TRAINING OFFICE 3
215	CORRIDOR
216	BOARDROOM
217	KITCHENETTE/LUNCHROOM
218	JANITOR
219	CORRIDOR
220	UNIVERSAL WC
221	CORRIDOR
222	FEMALE WASHROOM
223	MALE WASHROOM
224	REAR ENTRANCE
225	STORAGE
226	CLASSROOMS
227	MEN'S LOCKER ROOM
228	WASHROOM
229	B.A.S. ROOM
230	I.T. ROOM
231	WOMEN'S LOCKER ROOM
232	CORRIDOR
233	ELEC. CLOSET
300	ELEVATOR
301	ELEVATOR
EXT	

SECOND FLOOR PLAN - Reduced Scope

CENTRAL YORK FIRE SERVICES HQ STATION 4-5
300 EARL STEWART DRIVE, AURORA, ONTARIO