

The Corporation of the Town of Niagara-on-the-Lake

Information Report to Council

SUBJECT: Proposed Amendments to the Growth Plan for the Greater Golden Horseshoe, 2017, and Related Regulations

Date: January 17, 2019

Prepared By: Mark Iamarino

Department: Community & Development

BACKGROUND INFORMATION

On January 15, 2019, the Province announced proposed amendments to the Growth Plan for the Greater Golden Horseshoe, 2017 (Growth Plan), along with amendments to related Ontario Regulations 311/06 (Transitional Matters – Growth Plans) and 525/97 (Exemption from Approval - Official Plan Amendments). The purpose of these amendments is to address policies viewed by the provincial government as being potential barriers to increasing the supply of housing, creating jobs, and attracting investment.

In the fall of 2018, the Province hosted a series of technical working group sessions with the municipal and development sector, along with a stakeholder forum, to discuss various aspects of Growth Plan implementation and develop solutions to implementation challenges. The proposed amendments reflect some of the solutions identified during this consultation.

The proposed amendments to the Growth Plan can be viewed [here](#).

Comments on the proposed amendments can be submitted [here](#) via the Environmental Registry of Ontario, until February 28, 2019. The Environmental Registry posting also includes a summary of the proposed amendments, including those to the related Regulations.

Further information is provided in the Province's [News Release](#) and [Backgrounder](#).

NEXT STEP / CONCLUSION

Planning Staff will review the proposed amendments and other relevant information provided by the Province and will advise Council of any potential implications these amendments may have on Town planning matters and projects, including the Official Plan Review.

ATTACHMENTS

The Corporation of the Town of Niagara-on-the-Lake Information Report to Council

SUBJECT: Viability of the Queenston Fire Station

Date: January 17, 2019

Prepared By: Rob Grimwood

Department: Fire Department

BACKGROUND INFORMATION

The purpose of this report is to provide Council with information related to the viability of the Queenston Fire Station. In December 2018, Council made a motion that “Staff provide copies of any reports provided to previous Councils with respect to the viability of the Queenston Fire Station”.

The information report endeavours to provide Council with all known information relative to the viability of the Queenston Fire Station. The information provided will go as far back as 1971 and is as comprehensive as possible with all known reports and records provided.

In an effort to improve the clarity of the report, it has been divided into two sections that would be components of viability. The first section has been titled “Operational Feasibility” and this section includes all reports and other documents that refer to the operational feasibility of the station. This includes previous reports and documents that reference evaluations of the station’s necessity, its operational capacity and/or the potential closure or amalgamation of the station.

The second section has been titled “Structural Issues” and this section includes all reports and documents related to the station’s structural stability, structural issues and major capital costs required to conduct repairs related to structural issues.

Found below will be a summary of the reports and documents. This summary sorts the reports and documents by year, and where there are multiple documents in a year, by specific date. It then provides (where appropriate) a brief synopsis of the information. Each of these has a specific attachment number which can then be referenced to read

the entire document.

NEXT STEP / CONCLUSION

The initial request of Council was for all previous reports and records, which have been provided in this report without analysis. Should Council seek staff analysis of this information and/or staff recommendation regarding any future actions it will need to be subject to a future report that would more closely analyze past information, current information and future considerations.

SUMMARY OF DOCUMENTS

Summary of Reports and Documents **Queenston Fire Station Operational Feasibility**

1971

March 23, 1971 Report on Municipal Fire Protection Survey (Attachment #1)

- This report was prepared by the Department of Justice (previously responsible for fire safety prior to the formation of the Office of the Fire Marshal) at the request of the Town. Contained within this document, on page 16, is the following recommendation “It is recommended that a two-bay fire station be constructed in 1971 in the vicinity of Highway #8A (York Road) and Concession 2. This fire station is to replace the fire station located in the St. Davids area and the fire station located in the Queenston area.”.

1974 or 1975

Unknown Date -Report on District No. 2 and District No. 4 Fire Halls. (Attachment #2)

- This report is not dated and has no author identified. It appears as though it was drafted by the Niagara-on-the-Lake Fire Chief (or someone representing the fire department) in response to the 1971 Report on Municipal Fire Protection Survey completed by the Department of Justice.

1975

The attached newspaper article from May 1, 1975 indicates that “The town has been looking at the feasibility of combining the Queenston firehall with another”. (Attachment #3)

1996

January 1996 Fire Station Location and Staffing Report written by the Office of the Fire Marshal. (Attachment #4)

- This report was prepared by the Office of the Fire Marshal, at the request of Council. The Office of the Fire Marshal was asked to analyze “Fire Hall Locations and Staffing” and this report is the culmination of this analysis. It makes the same recommendation, on page 10, as was previously recommended whereby the Town “consider a new station to replace stations 2 and 4”.

July 29, 1996 A report to the Corporate Services Advisory Committee regarding the station location component of the 10 year master plan by Fire Chief Bruce Little. (Attachment #5)

- This document subject is a report to the Corporate Services Advisory Committee regarding fire station locations.

- Recommendation #4 of this report is “That the Fire Chief and Steering Committee be authorized to review the location of No. 2 Station (St. Davids) and No. 4 Station (Queenston) three years from the time this report is submitted to consider the following options based on the Fire Marshals report of 1996:

- Option #1

- Maintain, staff and provide the appropriate fire apparatus for five (5) fire halls within the boundaries of Niagara-on-the-Lake.

- Option #2

- Close Station No. 4 (Queenston), relocate the fire apparatus and staff and have Station No. 2 (St. Davids) provide fire protection for this area.

- Option #3

- Close No. 2 Station (St. Davids), relocate the fire apparatus and staff and have Station No. 4 (Queenston) provide fire protection for this area.

- Option #4

- Amalgamate District No. 2 (St. Davids) and District #4 (Queenston) Stations by building a new fire hall between the Village of Queenston and St. Davids to best serve both communities as proposed in the Fire Marshals Report 1996. Fire Apparatus and staff would be distributed between the Glendale Station and the York Road Station.

1997

June 1997 A Verification Report for Fire Station Locations written by the Office of the Fire Marshal. (Attachment #6)

- This document appears to have been driven by a Council request made in February of 1997 where “Council authorized the Chief Administrative Officer, L. J. Holloway, to request the Office of the Fire Marshal to verify station locations and prepare an accompanying report of findings”. This document is that verification and, as part of the conclusions, recommends that there be an amalgamation of Stations 2 and 4.

1999

June 8, 1999 A 10 year master plan steering committee meeting agenda. (Attachment #7)

- Item #5 on the meeting agenda references the amalgamation of the Queenston and St. Davids Fire Stations (see subsequent meeting minutes).

June 8, 1999 Meeting minutes from the 10 year master plan steering committee meeting. (Attachment #8)

- Item #5 on the meeting minutes, in reference to discussing the amalgamation of the Queenston and St. Davids Fire Stations says the following “The Committee agreed that this is an emotional issue and will be discussed at the next meeting”. There are no records of any further discussion and the result appears to be the recommendation below that the committee re-convene in three years to review the issue. This effectively deferred any decision.

September 21, 1999 report to the steering committee members containing recommendations to Council. (Attachment #9)

- This memo to the Steering Committee contains draft recommendations to Council. This appears to have been consensus of the committee and drafted in advance of the report to Council.

December 6, 1999-Report FC 99-25 (Attachment #10)

- This report to Council contains 4 recommendations, with recommendation #4 containing 3 options. Recommendation #4, which deals with the Queenston Fire Station, states “the Fire Chief and Steering Committee be authorized to reconvene three years from the time of this report being submitted to review the location of Station #2 (St. Davids) and Station #4 (Queenston) to consider the following options based on the Fire Marshals Report of 1996 and the Steering Committee’s research of 1999.

- Option #1

- Provide the appropriate staffing and apparatus for five stations within the boundaries of Niagara-on-the-Lake.

- Option #2
 - Upon completion of the construction of the new Glendale Station, Station #4 (Queenston) and the new Glendale Station (Station #5) would become sub-stations of Station #2 (St. Davids). Staffing and apparatus would be re-located to best serve the needs of the day.
- Option #3
 - Close and sell Station #2 (St. Davids) and Station #4 (Queenston). Amalgamate both stations and build a new station between St. Davids and Queenston as proposed in the 1996 Fire Marshals report.

2002

February 8, 2002 memo to the 10 Year Fire Department Master Plan Steering Committee. (Attachment #11)

- This memo re-convenes the Steering Committee to continue the process adopted by Council in their 1999 report.

April 22, 2002 report FC-02-013 (Attachment #12)

- This report to Council is the culmination of the Steering Committee's 2002 work. It focuses on the implementation of a new Glendale Fire Station. The only references to the viability of the Queenston Fire Station are as follows:

- Section 3 states that "At the present time we have managed to operate with our existing staff by amalgamating Station 2 (St. Davids) with Station 4 (Queenston) for a total of 50 firefighters". It should be clarified that this was not a physical amalgamation of the stations, rather it took the complement of firefighters that was previously assigned to the St. Davids and Queenston Fire Stations (50 firefighters, 25 from each station) and spread them out amongst 3 stations once the Glendale Station was operational by assigning 20 firefighters to Station 2 (St. Davids) and 15 firefighters each to Station 4 (Queenston) and Station 5 (Glendale). Subsequently the number of firefighters at those 3 stations was increased to 20 per station.
- Recommendation 6 defers further discussion on this issue for another three years by stating "the Lord Mayor and members of Council authorize the 10 year Master Plan Steering Committee to investigate and consider the following options in the year 2005:
 - Option #1-review the emergency call volume, staffing and defined area of response of Station 5 for the purposes of having it operate as a stand-alone station.
 - Option #2-review the call volume, staffing and defined area of response in Stations 2 (St. Davids) and 4 (Queenston) for consideration of amalgamating the two

stations.

2006

March 6, 2006 -Fire Department Five Year Master Plan report (FC-06-005)
(Attachment #13)

- This report, presented to Council in March of 2006, makes the following references related to the Queenston Fire Station:
 - Page 4, Section Queenston-Station 4, indicates that the station “was not well built initially with problems arising within 12 months after occupancy but the contractor went out of business shortly after completion thus no redress was available from the builder.”.
 - Page 4, Section Queenston-Station 4, indicates that “because of these problems including areas of the building settling and loose masonry, remedial work was started in 2004 with the re-pointing of all exterior brickwork and changes to drainage patterns around the building’s exterior walls. This was required because of the use of substandard construction materials and methods and appears to have had the desired effect.”.
 - Page 9, paragraph 5 indicates that “The possibility of combining the stations in St. Davids and Queenston or closing both and building one new one was considered as a way to save money.”. Following this statement there is analysis on this item and a recommendation to retain the existing five stations.

Post-2006

- There is no evidence that further master planning was done, that this committee (or any other committee) re-convened or the discussion regarding the viability of the Queenston Fire Station (or a potential amalgamation with another station) continued in any formal manner.

Summary of Reports and Documents

Queenston Fire Station Structural Issues

2001

November 5, 2001 Report FC-01-20 (Attachment #14)

- This report to Council sought \$13,422 plus GST to complete drainage work on the Queenston Fire Station. The report describes some of the issues affecting the station in detail.

2003

May 30, 2003 Memo from Chris Turner Associates (structural engineer) (Attachment #15)

- This memo provides information (including detailed description of the issues) following a structural engineering assessment of the structure.

August 7, 2003 Memo from AMEC Earth & Environmental Ltd. (Attachment #16)

- This memo provides information and recommendations following an assessment of the structure by this company.

October 6, 2003 Report FC-03-008. (Attachment #17)

- This report to Council seeks funding to repair structural defects at the Queenston Fire Station at a non-specified cost.

2004

September 7, 2004 Report FC-04-016. (Attachment #18)

- This report to Council seeks funding to initiate masonry repairs at the Queenston Fire Station at a cost of \$41,831.65.

2010

November 9, 2010 Memo from Chris Turner Associates (structural engineer) (Attachment #19)

- This memo provides further information from a structural engineer following a site visit.

2018

September 10, 2018 Site Visit Report from Chris Turner Associates (structural engineer) (Attachment #20)

- This site visit report provides more recent information from a structural engineer following a site visit.

ATTACHMENTS



Queenston Fire Station Attachment #1.pdf

REPORT ON
MUNICIPAL FIRE PROTECTION SURVEY
TOWN OF NIAGARA-ON-THE-LAKE

M. S. HURST
FIRE MARSHAL



18
PLEASE ADDRESS
ALL COMMUNICATIONS
TO THE FIRE MARSHAL

ONTARIO
DEPARTMENT OF JUSTICE
OFFICE OF THE FIRE MARSHAL

204 RICHMOND ST. WEST, TORONTO 129

OUR FILE NO. 71-30
TELEPHONE: 365-4858

MARCH 23, 1971

THE MAYOR AND MUNICIPAL COUNCIL,
CORPORATION OF THE TOWN OF NIAGARA-ON-THE-LAKE,
MUNICIPAL OFFICES,
R.R.#4,
ST.CATHARINES, ONTARIO.

SIRS:

IN ACCORDANCE WITH THE REQUEST CONTAINED IN YOUR
LETTER OF DECEMBER 23, 1970 TO CONDUCT A MUNICIPAL FIRE
PROTECTION SURVEY OF THE TOWN OF NIAGARA-ON-THE-LAKE, THE
FOLLOWING IS OUR REPORT OF SUCH SURVEY.

YOURS VERY TRULY,

A handwritten signature in dark ink, appearing to be "M. S. Hurst", written over a horizontal line.

MSH:AM

FIRE MARSHAL.

TERMS OF REFERENCE

PURPOSE:

1. IN VIEW OF THE RESOLUTION OF THE COUNCIL OF THE CORPORATION OF THE TOWN OF NIAGARA-ON-THE-LAKE THAT A MUNICIPAL FIRE PROTECTION SURVEY BE CONDUCTED OF THE MUNICIPALITY, IT IS CONSIDERED ADVISABLE TO REVIEW THE EXISTING MUNICIPAL FIRE PREVENTION AND FIRE PROTECTION FACILITIES OF THE MUNICIPALITY TO DETERMINE WHAT CHANGES, IF ANY, BE CONSIDERED IN ORDER TO IMPROVE THE EFFICIENCY AND EFFECTIVENESS OF SUCH FACILITIES.
2. TO MAKE RECOMMENDATIONS TO THE MUNICIPAL COUNCIL WITH RESPECT TO THE IMPROVEMENTS IN THE MUNICIPAL FIRE PREVENTION AND FIRE PROTECTION SERVICES THAT ARE DEEMED NECESSARY.

SCOPE:

THE SURVEY WILL INCLUDE A REVIEW OF THE ORGANIZATION, METHODS, PRACTICES, MANPOWER, APPARATUS, EQUIPMENT, COMMUNICATIONS AND FIRE STATIONS OF THE TOWN OF NIAGARA-ON-THE-LAKE FIRE DEPARTMENT, FIRE PREVENTION AND OTHER APPROPRIATE BY-LAWS, WATER SUPPLY FOR FIRE FIGHTING PURPOSES AND TRAFFIC CONDITIONS WHICH MAY AFFECT FIRE DEPARTMENT OPERATIONS.

LIAISON AND RESPONSIBILITY:

1. MR. C. N. VINE, FIRE SERVICES ADVISER, WILL BE IN CHARGE OF THE SURVEY.
2. THE OFFICER WILL CONSULT WITH THE APPROPRIATE MUNICIPAL OFFICIALS IN CONDUCTING THE SURVEY.

DURATION:

THE PROJECT IS TO BE STARTED JANUARY 25, 1971 AND IS TO BE COMPLETED FEBRUARY 19, 1971.

ACKNOWLEDGEMENTS

THE ASSISTANCE AND ADVICE OF THE UNDERMENTIONED IS GRATEFULLY
ACKNOWLEDGED:

W. GRIFFITHS, CHAIRMAN OF FIRE COMMITTEE, TOWN OF NIAGARA-ON-THE-LAKE.
G. D. PRITCHARD, CLERK, TOWN OF NIAGARA-ON-THE-LAKE.
J. Y. FLEMING, DEPUTY CLERK, TOWN OF NIAGARA-ON-THE-LAKE.
D. SHERLOCK, CHIEF, AREA NO. 1, TOWN OF NIAGARA-ON-THE-LAKE FIRE DEPARTMENT.
N. HAINES, DEPUTY CHIEF, AREA NO. 1, TOWN OF NIAGARA-ON-THE-LAKE FIRE DEPARTMENT.
W. BROWN, CHIEF, AREA NO. 2, TOWN OF NIAGARA-ON-THE-LAKE FIRE DEPARTMENT.
J. MURDOCK, CHIEF, AREA NO. 3, TOWN OF NIAGARA-ON-THE-LAKE FIRE DEPARTMENT.
C. M. PRENTICE, CHIEF, AREA NO. 4, TOWN OF NIAGARA-ON-THE-LAKE FIRE DEPARTMENT.
B. P. REDEKOPP, SUPERINTENDENT OF WORKS, TOWN OF NIAGARA-ON-THE-LAKE.
M. J. BATESON, BUILDING INSPECTOR, TOWN OF NIAGARA-ON-THE-LAKE.
G. SILVERTHORN, SECRETARY, PLANNING BOARD, TOWN OF NIAGARA-ON-THE-LAKE.
W. PATTERSON, OPERATOR, WATER TREATMENT PLANT, TOWN OF NIAGARA-ON-THE-LAKE.
W. BANNAN, FIRE CO-ORDINATOR, REGION OF NIAGARA.
J. FITZGIBBON, CHIEF, DIVISION OF COMMUNICATIONS, CITY OF ST.CATHARINES FIRE
DEPARTMENT.

IN ACKNOWLEDGING THE ASSISTANCE AND ADVICE RECEIVED, THE OFFICE OF
THE FIRE MARSHAL DISASSOCIATES ALL THOSE NAMED ABOVE FROM ANY OF THE
FINDINGS AND CONCLUSIONS IN THIS REPORT: FOR THESE, THE OFFICE OF THE
FIRE MARSHAL ASSUMES FULL RESPONSIBILITY.

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SUMMARY OF RECOMMENDATIONS

FOR THE CONVENIENCE OF THOSE CONCERNED, A SUMMARY OF RECOMMENDATIONS IS PROVIDED HEREUNDER LISTING THOSE CHANGES WHICH ARE CONSIDERED DESIRABLE IN THE EXISTING FIRE PREVENTION AND FIRE PROTECTION FACILITIES. A COMPLETE LIST OF RECOMMENDATIONS, TOGETHER WITH REASONS, MAY BE FOUND IN THE FOLLOWING PAGES OF THE REPORT.

FIRE DEPARTMENT ORGANIZATION

1. BY-LAW NO. 40-70 BE REPEALED AND THE DEPARTMENT BE RE-ORGANIZED IN ACCORDANCE WITH THE RECOMMENDED ORGANIZATION CHART (TABLE 1) AND THAT A BY-LAW TO ESTABLISH AND REGULATE THE DEPARTMENT UNDER THE PROVISIONS OF SECTION 379(1), PARA 25 OF THE MUNICIPAL ACT, RSO 1960, CHAPTER 249, BE PASSED IN ACCORDANCE WITH THE RECOMMENDED ESTABLISHING AND REGULATING BY-LAW (APPENDIX A).
2. RULES FOR THE DEPARTMENT BE MADE AND PUBLISHED BY THE CHIEF OF THE DEPARTMENT IN ACCORDANCE WITH THE RECOMMENDED RULES FOR THE DEPARTMENT (^{PAGE 412}APPENDIX B) UNDER THE PROVISIONS OF SECTION 6 OF THE RECOMMENDED ESTABLISHING AND REGULATING BY-LAW (APPENDIX A). ^{PAGE 34}
3. THE POSITION OF FULL-TIME CHIEF OF THE FIRE DEPARTMENT BE ESTABLISHED AND FILLED BY WAY OF EXAMINATION AND A BY-LAW BE PASSED BY THE MUNICIPAL COUNCIL APPOINTING THE SUCCESSFUL APPLICANT IN ACCORDANCE WITH THE RECOMMENDED BY-LAW (APPENDIX C). ^{PAGE 45}
5. A SYSTEM BE ESTABLISHED TO MAINTAIN RECORDS OF FIRE LOSS AND OTHER EMERGENCY RESPONSES, APPARATUS MAINTENANCE AND REPAIRS, STATION AND APPARATUS INVENTORY, ACCIDENT REPORTS, FIRE FIGHTERS ATTENDANCE AT FIRES AND TRAINING MEETINGS, FIRE PREVENTION INSPECTIONS AND SUCH OTHER RECORDS AS MAY BE DEEMED NECESSARY.

FIRE STATIONS

6. THE FIRE STATION LOCATED IN THE VIRGIL AREA BE DESIGNATED AS FIRE DEPARTMENT HEADQUARTERS AND IT BE REMODELLED AND RENOVATED IN 1971 TO PROVIDE ACCOMMODATION FOR A TRIPLE COMBINATION FIRE TRUCK, TANK TRUCK, SALVAGE TRUCK, CHIEF'S CAR, LIVING AND TRAINING ACCOMMODATION FOR THE FIRE FIGHTERS, AND OFFICE ACCOMMODATION FOR THE CHIEF, DEPUTY CHIEF AND FUTURE STAFF.
7. A TWO-BAY FIRE STATION BE CONSTRUCTED IN 1971 IN THE VICINITY OF HIGHWAY NO. 8A AND CONCESSION 2 TO PROVIDE ACCOMMODATION FOR A TRIPLE COMBINATION FIRE TRUCK TANK TRUCK, LIVING AND TRAINING ACCOMMODATION FOR THE FIRE FIGHTERS AND OFFICE ACCOMMODATION FOR THE OFFICER IN CHARGE OF THE STATION. THIS FIRE STATION IS TO REPLACE THE FIRE STATION LOCATED IN THE ST. DAVIDS AREA AND THE FIRE STATION LOCATED IN THE QUEENSTON AREA.
8. A NEW CONCRETE FLOOR WITH DRAINS IN EACH BAY BE INSTALLED IN THE APPARATUS ROOM OF THE FIRE STATION LOCATED AT 233 KING STREET IN THE NIAGARA AREA AND THE OLD WOOD FRAME STRUCTURE ATTACHED TO THE REAR OF THE BUILDING BE REMOVED. *Done*

APPARATUS AND EQUIPMENT

9. THE 1960 TRIPLE COMBINATION FIRE TRUCK PRESENTLY LOCATED IN THE ST. DAVIDS AREA FIRE STATION BE RELOCATED TO THE NIAGARA AREA FIRE STATION.
10. THE 1966 SERVICE TRUCK (VAN) PRESENTLY LOCATED IN THE NIAGARA AREA FIRE STATION BE RELOCATED TO THE PROPOSED FIRE DEPARTMENT HEADQUARTERS IN THE VIRGIL AREA AND EQUIPPED AS A SALVAGE TRUCK.
11. THE 1969 TRIPLE COMBINATION FIRE TRUCK PRESENTLY LOCATED IN THE QUEENSTON AREA FIRE STATION BE RELOCATED TO THE PROPOSED FIRE STATION IN THE VICINITY OF

HIGHWAY NO. 8A AND CONCESSION 2 WHEN IT IS CONSTRUCTED AND IN OPERATION.

12. TWO TANK TRUCKS DESIGNED IN ACCORDANCE WITH CSA B89.3 AND EQUIPPED WITH PUMPS OF A MINIMUM CAPACITY OF 200 GPM AT 150 PSI EACH, AND WATER TANKS OF 1,000 GALLONS CAPACITY EACH, BE PURCHASED IN 1971. ONE TANK TRUCK TO BE LOCATED AT THE PROPOSED FIRE DEPARTMENT HEADQUARTERS IN THE VIRGIL AREA AND THE OTHER TO BE LOCATED IN THE PROPOSED FIRE STATION IN THE VICINITY OF HIGHWAY NO. 8A AND CONCESSION 2 WHEN THIS FIRE STATION IS CONSTRUCTED AND IN OPERATION.

13. THE FOLLOWING FIRE TRUCKS BE DECLARED SURPLUS EQUIPMENT AND DISPOSED OF: ONE 1953 TRIPLE COMBINATION FIRE TRUCK, TWO 1951 TRIPLE COMBINATION FIRE TRUCKS, ONE 1965 SERVICE TRUCK (VAN) AND ONE 1960 SERVICE TRUCK (VAN).

14. A SMALL FULLY ENCLOSED VEHICLE BE PURCHASED TO BE USED BY THE CHIEF OF THE FIRE DEPARTMENT FOR FIRE INSPECTIONS AND GENERAL ADMINISTRATION OF THE DEPARTMENT.

FIRE FIGHTING MANPOWER

15. SUFFICIENT FIRE FIGHTERS BE EMPLOYED IN 1971 SO AS TO PROVIDE PROPER MANNING OF EACH VEHICLE.

in effect now
16. THE POLICY BE ADOPTED AND A DIRECTIVE ISSUED THAT THE FIRST RESPONDING OFFICER TO A FIRE BE IN CHARGE OF THE FIRE FIGHTING OPERATIONS UNTIL RELIEVED OF THIS AUTHORITY BY A MORE SENIOR OFFICER.

TRAINING

17. APPLICATION BE MADE IMMEDIATELY FOR THE CHIEF AND DEPUTY CHIEF OF THE DEPARTMENT TO ATTEND THE FIRE PROTECTION TECHNOLOGY COURSE AT THE ONTARIO FIRE COLLEGE ON DIFFERENT UNITS OVER A THREE-SUCCESSIVE-YEAR PERIOD BEGINNING IN 1972. APPLICATION SHOULD ALSO BE MADE FOR THE OTHER OFFICERS OF THE DEPARTMENT TO ATTEND THE COURSE IN SUBSEQUENT YEARS.

18. AN IN-SERVICE FIRE DEPARTMENT TRAINING PROGRAM BE ESTABLISHED TO PROVIDE FOR THE RECRUIT AND REFRESHER TRAINING OF THE MEMBERS OF THE DEPARTMENT.

COMMUNICATIONS

19. AN IMPROVED SYSTEM BE ESTABLISHED TO RECEIVE ALARMS OF FIRE COMPATIBLE TO THE CITY OF ST. CATHARINES FIRE DEPARTMENT'S COMMUNICATION AND DISPATCHING SYSTEM.

FIRE PREVENTION

20. A FIRE PREVENTION BY-LAW BE PASSED BASED ON A LIST OF FIRE PREVENTION MEASURES PROVIDED BY THE CHIEF OF THE DEPARTMENT AND REVIEWED BY THE MUNICIPAL SOLICITOR WITH INSTRUCTIONS TO ENSURE THAT THERE IS ADEQUATE PROVINCIAL ENABLING LEGISLATION AND THAT THERE IS NO CONFLICT WITH PROVINCIAL LAW.

21. A PROGRAM OF IN-SERVICE FIRE PREVENTION INSPECTIONS BE ESTABLISHED.

WATER SUPPLY

22. PROVISIONS BE MADE AT ALL STATIC WATER SUPPLIES THROUGHOUT THE TOWNSHIP FOR FIRE TRUCKS TO DRAFT WATER FOR FIRE FIGHTING.

23. ALL DEAD-END WATER MAINS BE LOOPED SO AS TO PROVIDE INCREASED GALLONAGE BY PROVIDING FLOW FROM MORE THAN ONE DIRECTION.

24. THE FIRE DEPARTMENT BE PROVIDED WITH AN UP-TO-DATE MAP OF THE TOWN SHOWING SIZES OF MAINS AND LOCATION OF HYDRANTS WITHIN THE MUNICIPALITY.

TRAFFIC CONTROL FACILITIES

25. THE RENAMING OF STREETS HAVING IDENTICAL NAMES BE CARRIED OUT AS SOON AS POSSIBLE.

REVIEW OF EXISTING FIRE PREVENTION AND FIRE PROTECTION FACILITIES

INTRODUCTION

THE TOWN OF NIAGARA-ON-THE-LAKE HAS A TOTAL POPULATION OF 12,258, A TOTAL ASSESSMENT OF \$17,418,295 AND A TOTAL LAND AREA OF APPROXIMATELY 32,640 ACRES.

THE GENERAL TYPE OF CONSTRUCTION IS 90% WOOD FRAME AND 10% MASONRY WITH MOSTLY COMPOSITION-TYPE ROOFING.

THE DEVELOPMENT OF THE TOWN IS APPROXIMATELY 81% RESIDENTIAL-FARM AND 19% COMMERCIAL-INDUSTRIAL. AGRICULTURE, PLEASURE BOAT MANUFACTURING, EQUIPMENT OVERHAUL, PRESERVED FOODS, ELECTRICAL CIRCUITS, HORSE RACING, CUSTOMS AND IMMIGRATION, TOURISM, AIRPORT FACILITIES, DAIRY PRODUCTS AND ASSORTED SMALL BUSINESSES FORM THE ECONOMY OF THE TOWN. THE ONLY PLANNED DEVELOPMENT LIKELY TO TAKE PLACE DURING THE NEXT SEVERAL YEARS IS IN THE NORTH-EAST AREA OF THE TOWN. THE DEVELOPMENT IS PRIMARILY RESIDENTIAL WITH 116 LOTS APPROVED, AND THE POSSIBILITY OF 312 LOTS BEING DEVELOPED. A PROPOSED 500 LOT RESIDENTIAL DEVELOPMENT IN THE SOUTH-EAST AREA OF THE TOWN COULD BE DEVELOPED WITHIN THE NEXT FIVE YEARS. SEVERAL SMALL RESIDENTIAL SUB-DIVISIONS WITH 16 LOTS OR LESS ARE ALSO PROPOSED IN THE EAST AND SOUTH-WEST AREAS OF THE TOWN.

BY-LAW NO. 68-1965, ZONING BY-LAW, FORMER TOWN OF NIAGARA WAS PASSED THE 7TH DAY OF JANUARY, A.D. 1969. AS THIS BY-LAW WAS SUBJECT TO THE APPROVAL OF THE ONTARIO MUNICIPAL BOARD, IT IS ASSUMED TO BE ADEQUATE.

BY-LAW NO. 1977-64, ZONING BY-LAW, FORMER TOWNSHIP OF NIAGARA WAS PASSED THE 21ST DAY OF JULY A.D. 1964. AS THIS BY-LAW WAS SUBJECT TO THE APPROVAL OF THE ONTARIO MUNICIPAL BOARD, IT IS ASSUMED TO BE ADEQUATE.

BY-LAW No. 1996-64, A BY-LAW TO AMEND RESTRICTED AREA BY-LAW No. 1977-64 WAS PASSED THE 13TH DAY OF OCTOBER A.D. 1964. THIS BY-LAW DOES NOT AFFECT THE ABOVE COMMENTS MADE ON BY-LAW No. 1977-64.

BY-LAW No. 2341-69, A BY-LAW TO REGULATE THE CONSTRUCTION, ALTERATION, REPAIRING, ERECTION AND PLACING OF BUILDINGS IN THE TOWNSHIP OF NIAGARA WAS PASSED THE 23RD DAY OF JUNE A.D. 1969. THIS BY-LAW IS BASED ON THE NATIONAL BUILDING CODE OF CANADA.

BY-LAW No. 68-1694, A BY-LAW TO REGULATE THE ERECTION, ALTERATION OR RESTORATION, REPAIR AND REMOVAL OF BUILDINGS WAS PASSED THE 22ND DAY OF OCTOBER A.D. 1968. THIS BY-LAW IS BASED ON THE SHORTER FORM OF THE NATIONAL BUILDING CODE OF CANADA, 1965.

FIRE DEPARTMENT ORGANIZATION

THE TOWN OF NIAGARA-ON-THE-LAKE FIRE DEPARTMENT IS COMPRISED OF FOUR FIRE COMPANIES DESIGNATED AS ST. DAVIDS COMPANY, QUEENSTON COMPANY, VIRGIL COMPANY AND NIAGARA COMPANY. EACH FIRE COMPANY OPERATES UNDER A SEPARATE AND DIFFERENT CHAIN OF COMMAND WITH VERY LITTLE CO-ORDINATION BETWEEN THE COMPANIES. THE TOWN OF NIAGARA-ON-THE-LAKE FIRE DEPARTMENT WHICH PROVIDES FIRE PROTECTION AND VARYING DEGREES OF FIRE PREVENTION FACILITIES TO THE MUNICIPALITY, CONSISTS OF FOUR CHIEFS, THREE ASSISTANT CHIEFS, TWO DEPUTY CHIEFS, SIX CAPTAINS, 5 LIEUTENANTS AND EIGHTY-SEVEN FIRE FIGHTERS, ALL OF WHOM ARE PART-TIME (VOLUNTEER).

THE FIRE DEPARTMENT OPERATES FROM FOUR FIRE STATIONS. THE ST. DAVIDS COMPANY OPERATES FROM A FIRE STATION LOCATED AT THE CORNER OF CREEK ROAD AND HIGHWAY No. 8A IN THE SOUTH-EAST AREA OF THE TOWN. IN OPERATION FROM THIS FIRE STATION ARE TWO TRIPLE COMBINATION FIRE TRUCKS.

THE QUEENSTON COMPANY, ALSO IN THE SOUTH-EAST AREA OF THE TOWN, OPERATES FROM A FIRE STATION LOCATED ON PRINCESS STREET. IN OPERATION FROM THIS FIRE STATION IS A TRIPLE COMBINATION FIRE TRUCK AND A SERVICE TRUCK.

THE VIRGIL COMPANY IS THE MOST CENTRALLY LOCATED AND OPERATES FROM A FIRE STATION AT THE CORNER OF LORRAINE STREET AND CREEK ROAD. TWO TRIPLE COMBINATION FIRE TRUCKS AND A SERVICE TRUCK ARE IN OPERATION FROM THIS FIRE STATION.

THE NIAGARA COMPANY IS LOCATED AT 233 KING STREET IN THE NORTH-EAST AREA OF THE TOWN. IN OPERATION FROM THIS FIRE STATION ARE TWO TRIPLE COMBINATION FIRE TRUCKS, ONE SERVICE TRUCK AND AN AMBULANCE.

BY-LAW No. 40-70, PASSED BY COUNCIL APRIL 20, 1970, ESTABLISHES AND REGULATES THE FIRE DEPARTMENT. COUNCIL HAS NOT EXERCISED ITS LEGISLATIVE RESPONSIBILITIES BY PASSING A BY-LAW APPOINTING THE CHIEFS, OR PREFERABLY A CHIEF OF THE FIRE DEPARTMENT. BY-LAW No. 67-1676, PASSED BY THE COUNCIL OF THE FORMER TOWN OF NIAGARA DECEMBER 19, 1967, APPOINTED THE CHIEF OF THE FORMER TOWN OF NIAGARA FIRE DEPARTMENT.

THE QUALIFICATIONS FOR APPOINTMENT OF PART-TIME FIRE FIGHTERS ARE THAT THE APPLICANT MUST BE A PHYSICALLY-FIT MALE RESIDENT OF THE MUNICIPALITY, OF GOOD REPUTATION AND 18 YEARS OF AGE OR OVER, NOT MORE THAN 70 YEARS OF AGE FOR THE CHIEF, 65 YEARS OF AGE FOR OTHER OFFICERS, AND 60 YEARS OF AGE FOR FIRE FIGHTERS.

PROMOTIONS WITHIN THE DEPARTMENT ARE MADE AT THE DISCRETION OF THE CHIEFS OF THE DEPARTMENT AFTER APPROVAL BY COUNCIL.

THE FOUR CHIEFS EACH RECEIVE AN ANNUAL SALARY OF \$425., THE ASSISTANT CHIEFS EACH RECEIVE AN ANNUAL SALARY OF \$325., ALL OTHER OFFICERS AND FIRE FIGHTERS RECEIVE REMUNERATION FROM AN ALLOTMENT FROM COUNCIL BASED ON \$225 PER FIRE FIGHTER. THE AMOUNTS ARE POOLED FOR THE FOUR COMPANIES AND DIVIDED ON SEPARATE POINT SYSTEMS.

THE ST.DAVIDS COMPANY AND THE QUEENSTON COMPANY ALLOT 2 POINTS PER FIRE AND 1 POINT PER MEETING. THE NIAGARA COMPANY ALLOTS 1 POINT PER FIRE OR MEETING. THE VIRGIL COMPANY ALLOTS 1 POINT PER FIRE OR 2 POINTS IF THE FIRE REQUIRES OVER TWO HOURS SERVICE AND 1 POINT PER MEETING.

THE ONLY RECORDS KEPT ARE BY THE CHIEFS OF THE DEPARTMENT AND CONSIST MAINLY OF THE FOLLOWING: FIRES AND ATTENDANCE.

OPERATING COST OF THE DEPARTMENT IN 1970 WAS APPROXIMATELY \$66,000. THE ESTIMATED OPERATING COST FOR THE FIRE DEPARTMENT IN 1971 IS \$71,000.

IN REVIEWING BY-LAW NO. 40-70, IT WAS FOUND THAT IT DID NOT CLEARLY INDICATE THE NECESSARY FUNCTIONS OF THE DEPARTMENT NOR THE LINE AND STAFF RESPONSIBILITIES OF THE OFFICERS. ALTHOUGH IT DOES ESTABLISH THE DEPARTMENT, IT DOES SO WITHOUT PROVIDING FOR THE NECESSARY DIVISIONS WITHIN THE DEPARTMENT AND CONSEQUENTLY DOES NOT EXPRESS SPECIFICALLY THE WISHES OF THE COUNCIL AS TO HOW THE DEPARTMENT SHOULD OPERATE. THERE IS NO DEPARTMENT ORGANIZATION CHART TO SHOW THE VARIOUS FUNCTIONS OF THE DEPARTMENT, AND THERE APPEARS TO BE NO REGULAR LINE OR STAFF AUTHORITY OF THE OFFICERS WHICH WOULD INDICATE A LACK OF CLEAR CHAIN OF COMMAND.

SHOULD THE MEMBERS OF THE FIRE DEPARTMENT WISH TO FORM A PART-TIME FIRE FIGHTERS' ASSOCIATION, THE ASSOCIATION SHOULD BE KEPT SEPARATE AND DISTINCT FROM THE OPERATION OF THE FIRE DEPARTMENT. WHEN SUCH AN ASSOCIATION IS ESTABLISHED, IT IS SUGGESTED THAT THE BY-LAW AND CONSTITUTION FOR THE ESTABLISHMENT OF A PART-TIME FIRE FIGHTERS' ASSOCIATION (APPENDIX D) BE USED AS A GUIDE.

IT IS MOST DESIRABLE FOR A COUNCIL TO EXERCISE ITS LEGISLATIVE RESPONSIBILITIES UNDER THE PROVISIONS OF THE MUNICIPAL ACT TO GIVE LEADERSHIP AND DIRECTION AS TO HOW THE DEPARTMENT SHOULD BE ADMINISTERED. AN ESTABLISHING AND REGULATING BY-LAW INDICATES THE NECESSARY FUNCTIONS OF THE DEPARTMENT, THE LINE AND STAFF

RESPONSIBILITIES OF THE OFFICERS, QUALIFICATIONS FOR APPOINTMENTS, METHOD OF PROMOTION, REGULATION OF THE MEMBERS, AND GENERALLY EXPRESSES THE WISH OF THE COUNCIL AS TO HOW THE DEPARTMENT SHALL OPERATE.

THE CHIEF OF THE DEPARTMENT IS RESPONSIBLE TO THE COUNCIL FOR THE PROPER ADMINISTRATION AND OPERATION OF THE DEPARTMENT AND FOR THE DISCIPLINE OF ITS MEMBERS. IT IS, THEREFORE, DESIRABLE FOR HIM TO MAKE SUCH DEPARTMENTAL RULES AS MAY BE NECESSARY FOR THE CARE AND PROTECTION OF THE PROPERTY OF THE DEPARTMENT, FOR THE CONDUCT OF THE MEMBERS, AND GENERALLY FOR THE EFFICIENT OPERATION OF THE DEPARTMENT, PROVIDED THAT SUCH RULES DO NOT CONFLICT WITH THE PROVISIONS OF ANY BY-LAW OF THE MUNICIPALITY.

IN VIEW OF THE ENLARGED MUNICIPALITY AND THE MERGING OF FOUR FIRE DEPARTMENTS INTO ONE ORGANIZATION, ONE CHIEF OF THE DEPARTMENT IS ESSENTIAL TO ENSURE PROPER CO-ORDINATION AND STANDARDIZATION OF PROCEDURES FOR ALL COMPANIES.

IN THE TIME AT THEIR DISPOSAL, THE CHIEFS OF THE DEPARTMENT HAVE CARRIED OUT SOME FIRE PREVENTION INSPECTIONS AND HAVE ADMINISTERED THEIR COMPANIES IN A DEDICATED AND CONSCIENTIOUS MANNER. HOWEVER, AS A MUNICIPALITY GROWS AND TIME CONSUMING DUTIES INCREASE, IT BECOMES MORE APPARENT THAT THESE IMPORTANT DUTIES REQUIRE THE SERVICES OF A FULL-TIME CHIEF OF THE DEPARTMENT TO DEVOTE HIS WHOLE TIME TO THE ADMINISTRATION OF THE DEPARTMENT AND CONDUCTING MORE FIRE PREVENTION INSPECTIONS.

IN ORDER TO HAVE AUTHORITY TO CARRY OUT HIS DUTIES AND RESPONSIBILITIES, THE CHIEF OF THE FIRE DEPARTMENT OF A MUNICIPALITY SHOULD BE APPOINTED BY BY-LAW.

IN EVERY FIRE DEPARTMENT, A DEPUTY CHIEF SHOULD BE APPOINTED TO ASSIST THE CHIEF OF THE DEPARTMENT WITH FIRE PREVENTION INSPECTIONS, TRAINING, ADMINISTRATION AND OPERATION OF THE FIRE DEPARTMENT AND CARRY OUT THE DUTIES OF THE CHIEF OF THE DEPARTMENT IN HIS ABSENCE.

RECORDS ARE IMPORTANT AND ESSENTIAL AS THEY PROVIDE INFORMATION PERTAINING TO PAST ACHIEVEMENTS AND FUNCTIONS OF THE DEPARTMENT AS WELL AS A BASIS FOR DETERMINING THE FUTURE REQUIREMENTS IN AN EXPANDING DEPARTMENT.

1. IT IS THEREFORE RECOMMENDED THAT: BY-LAW No. 40-70 BE REPEALED AND THE DEPARTMENT BE RE-ORGANIZED IN ACCORDANCE WITH THE RECOMMENDED ORGANIZATION CHART (TABLE 1) AND THAT A BY-LAW TO ESTABLISH AND REGULATE THE DEPARTMENT UNDER THE PROVISIONS OF SECTION 379(1), PARA 25 OF THE MUNICIPAL ACT, RSO 1960, CHAPTER 249, BE PASSED IN ACCORDANCE WITH THE RECOMMENDED ESTABLISHING AND REGULATING BY-LAW (APPENDIX A).
2. IT IS THEREFORE RECOMMENDED THAT: RULES FOR THE DEPARTMENT BE MADE AND PUBLISHED BY THE CHIEF OF THE DEPARTMENT IN ACCORDANCE WITH THE RECOMMENDED RULES FOR THE DEPARTMENT (APPENDIX B) UNDER THE PROVISIONS OF SECTION 6 OF THE RECOMMENDED ESTABLISHING AND REGULATING BY-LAW (APPENDIX A).
3. IT IS THEREFORE RECOMMENDED THAT: THE POSITION OF FULL-TIME CHIEF OF THE FIRE DEPARTMENT BE ESTABLISHED AND FILLED BY WAY OF EXAMINATION AND A BY-LAW BE PASSED BY THE MUNICIPAL COUNCIL APPOINTING THE SUCCESSFUL APPLICANT IN ACCORDANCE WITH THE RECOMMENDED BY-LAW (APPENDIX C).
4. IT IS THEREFORE RECOMMENDED THAT: THE POSITION OF FULL-TIME DEPUTY CHIEF OF THE DEPARTMENT BE ESTABLISHED AND FILLED BY WAY OF EXAMINATION.

ASSISTANCE MAY BE OBTAINED FROM THE OFFICE OF THE FIRE MARSHAL, ON A ONE-TIME BASIS ONLY, IN CONDUCTING PROMOTIONAL EXAMINATIONS FOR THE POSITION OF CHIEF OR DEPUTY CHIEF OF THE DEPARTMENT.
5. IT IS THEREFORE RECOMMENDED THAT: A SYSTEM BE ESTABLISHED TO MAINTAIN RECORDS OF FIRE LOSS AND OTHER EMERGENCY RESPONSES, APPARATUS MAINTENANCE AND REPAIRS, STATION AND APPARATUS INVENTORY, ACCIDENT REPORTS, FIRE FIGHTERS ATTENDANCE AT FIRES

AND TRAINING MEETINGS, FIRE PREVENTION INSPECTIONS AND SUCH OTHER RECORDS AS MAY BE DEEMED NECESSARY.

FIRE PROTECTION AGREEMENTS

BY-LAW No. 100-71, PASSED BY COUNCIL JANUARY 4, 1971, AUTHORIZES THE TOWN OF NIAGARA-ON-THE-LAKE FIRE DEPARTMENT TO PARTICIPATE IN THE REGION OF NIAGARA MUTUAL FIRE AID SYSTEM.

THE TOWN OF NIAGARA-ON-THE-LAKE HAS NOT ENTERED INTO ANY OTHER AGREEMENTS WITH ANY OTHER PARTIES TO PROVIDE OR RECEIVE FIRE PROTECTION.

FIRE STATIONS

THERE ARE FOUR FIRE STATIONS IN OPERATION IN THE TOWN OF NIAGARA-ON-THE-LAKE.

THE FIRE STATION LOCATED AT THE CORNER OF CREEK ROAD AND HIGHWAY NO. 8A IN THE SOUTH-EAST AREA KNOWN AS THE ST. DAVIDS AREA IS A TWO-STOREY BUILDING OF MASONRY AND WOOD CONSTRUCTION MEASURING APPROXIMATELY 30' x 45'. THE GROUND FLOOR CONSISTS OF TWO BAYS, THE SECOND FLOOR CONSISTS OF A MEETING ROOM AND KITCHEN. HEAT IS PROVIDED BY AN OIL-FIRED HOT WATER SYSTEM. THERE IS ALSO A SMALL BASEMENT AREA HOUSING THE HEATING UNIT. THE MAXIMUM DISTANCE THAT FIRE DEPARTMENT VEHICLES FROM THIS STATION TRAVEL TO FIRST RESPONSE FIRES IN THE TOWN IS APPROXIMATELY SEVEN MILES.

THE FIRE STATION LOCATED ON PRINCESS STREET, ALSO IN THE SOUTH-EAST AREA OF THE TOWN, KNOWN AS THE QUEENSTON AREA, IS A TWO-STOREY BUILDING OF MASONRY CONSTRUCTION MEASURING APPROXIMATELY 30' x 35'. THE GROUND FLOOR CONSISTS OF TWO BAYS WITH LOW CEILINGS. THE SECOND FLOOR CONSISTS OF A MEETING ROOM, KITCHEN AND WASHROOMS. HEAT IS PROVIDED BY AN OIL-FIRED, FORCED-AIR UNIT. THE MAXIMUM DISTANCE THE FIRE DEPARTMENT VEHICLES FROM THIS STATION TRAVEL TO FIRST RESPONSE FIRES IN THE TOWN IS APPROXIMATELY SIX MILES.

THE FOREGOING FIRE STATIONS APPARATUS ROOMS ARE LIMITED IN SPACE. OFFICE ACCOMMODATIONS ARE NOT PROVIDED FOR THE OFFICERS IN CHARGE OF THE FIRE STATIONS. THE DISTANCE BETWEEN THE TWO FIRE STATIONS IS APPROXIMATELY THREE ROAD MILES.

THE FIRE STATION LOCATED AT THE CORNER OF LORRAINE STREET AND CREEK ROAD, KNOWN AS THE VIRGIL AREA, IS THE MOST CENTRALLY LOCATED FIRE STATION IN THE TOWN. IT IS A TWO-STOREY BUILDING OF MASONRY CONSTRUCTION MEASURING APPROXIMATELY 40' x 50', THE GROUND FLOOR CONSISTS OF TWO BAYS WITH HOSE DRYING FACILITIES. THE SECOND FLOOR CONSISTS OF A MEETING ROOM AND KITCHEN. HEAT IS PROVIDED BY GAS-FIRED, FORCED-AIR UNITS. THE MAXIMUM DISTANCE THAT FIRE DEPARTMENT VEHICLES FROM THIS STATION TRAVEL TO FIRST RESPONSE FIRES IN THE TOWN IS APPROXIMATELY SIX MILES.

THE FIRE STATION LOCATED AT 233 KING STREET IN THE NORTH-EAST AREA OF THE TOWN, KNOWN AS THE NIAGARA AREA, IS A TWO-STOREY BUILDING OF MASONRY CONSTRUCTION MEASURING APPROXIMATELY 60' x 60'. THE GROUND FLOOR CONSISTS OF THREE BAYS OF WHICH ONLY ONE IS PROVIDED WITH A FLOOR DRAIN. HOSE DRYING FACILITIES ARE PROVIDED. THE SECOND FLOOR CONSISTS OF AN OFFICE, MEETING ROOM AND WASHROOMS. THE MAXIMUM DISTANCE THE FIRE DEPARTMENT VEHICLES FROM THIS STATION TRAVEL TO FIRST RESPONSE FIRES IN THE TOWN IS UNDER THREE MILES.

FIRE STATIONS ARE CONSTRUCTED TO HOUSE FIRE FIGHTING APPARATUS AND ACCOMMODATE THE FIRE FIGHTERS MANNING THE APPARATUS LOCATED IN REASONABLY CONVENIENT AREAS TO GIVE QUICK RESPONSE TO FIRES, HAVING REGARD TO THE DISTANCES TO BE TRAVELLED AND WHETHER IT IS AN INDUSTRIAL, COMMERCIAL OR RESIDENTIAL AREA TO BE PROTECTED. PROVISION SHOULD BE MADE IN FIRE STATIONS TO ACCOMMODATE MORE THAN ONE PIECE OF FIRE FIGHTING APPARATUS SO AS TO PROVIDE FLEXIBILITY OF OPERATIONS ALLOWING APPARATUS TO BE ASSIGNED FROM ONE STATION TO ANOTHER AS THE DEVELOPMENT OF AREAS PROCEEDS. ALSO, SPACE SHOULD BE PROVIDED FOR LIVING AND TRAINING ACCOMMODATIONS FOR THE FIRE FIGHTERS MANNING THE STATION. IN THE CASE OF HEADQUARTERS FIRE STATIONS,

IN ADDITION TO THE APPARATUS, LIVING AND TRAINING ACCOMMODATION, SPACE SHOULD BE PROVIDED FOR THE ADMINISTRATIVE, TRAINING AND FIRE PREVENTION STAFFS OF THE DEPARTMENT.

6. IT IS THEREFORE RECOMMENDED THAT: THE FIRE STATION LOCATED IN THE VIRGIL AREA BE DESIGNATED AS FIRE DEPARTMENT HEADQUARTERS AND IT BE REMODELLED AND RENOVATED IN 1971 TO PROVIDE ACCOMMODATION FOR A TRIPLE COMBINATION FIRE TRUCK, TANK TRUCK, SALVAGE TRUCK, CHIEF'S CAR, LIVING AND TRAINING ACCOMMODATION FOR THE FIRE FIGHTERS, AND OFFICE ACCOMMODATION FOR THE CHIEF, DEPUTY CHIEF AND FUTURE STAFF.
7. IT IS THEREFORE RECOMMENDED THAT: A TWO-BAY FIRE STATION BE CONSTRUCTED IN 1971 IN THE VICINITY OF HIGHWAY NO. 8A AND CONCESSION 2 TO PROVIDE ACCOMMODATION FOR A TRIPLE COMBINATION FIRE TRUCK, TANK TRUCK, LIVING AND TRAINING ACCOMMODATION FOR THE FIRE FIGHTERS AND OFFICE ACCOMMODATION FOR THE OFFICER IN CHARGE OF THE STATION. THIS FIRE STATION IS TO REPLACE THE FIRE STATION LOCATED IN THE ST.DAVIDS AREA AND THE FIRE STATION LOCATED IN THE QUEENSTON AREA.
8. IT IS THEREFORE RECOMMENDED THAT: A NEW CONCRETE FLOOR WITH DRAINS IN EACH BAY BE INSTALLED IN THE APPARATUS ROOM OF THE FIRE STATION LOCATED AT 233 KING STREET IN THE NIAGARA AREA AND THE OLD WOOD FRAME STRUCTURE ATTACHED TO THE REAR OF THE BUILDING BE REMOVED.

APPARATUS AND EQUIPMENT

THE TOWN OF NIAGARA-ON-THE LAKE FIRE DEPARTMENT OPERATES SEVEN TRIPLE COMBINATION FIRE TRUCKS, THREE SERVICES TRUCKS AND ONE AMBULANCE FROM THE FOLLOWING STATIONS:

VIRGIL AREA FIRE STATION:

- 1 - 1964 MODEL TRIPLE COMBINATION FIRE TRUCK WITH A PUMP RATED AT 625 GPM AT 150 PSI WITH A 600 GALLON WATER TANK.

(VIRGIL AREA FIRE STATION - CONT'D.)

- 1 - 1953 MODEL TRIPLE COMBINATION FIRE TRUCK WITH A PUMP RATED AT 420 GPM AT 120 PSI WITH A 400 GALLON WATER TANK.
- 1 - 1965 MODEL SERVICE TRUCK WHICH CARRIES FIRE FIGHTING COATS, BOOTS AND HELMETS AS WELL AS SELF-CONTAINED BREATHING APPARATUS, AIR CYLINDERS, FOAM, SHOVELS, PITCHFORKS AND BROOMS.

NIAGARA AREA FIRE STATION:

- 1 - 1967 MODEL TRIPLE COMBINATION FIRE TRUCK WITH A PUMP RATED AT 625 GPM AT 150 PSI WITH A 300 GALLON WATER TANK.
- 1 - 1951 MODEL TRIPLE COMBINATION FIRE TRUCK WITH A PUMP RATED AT 420 GPM AT 120 PSI WITH A 300 GALLON WATER TANK.
- 1 - 1966 MODEL SERVICE TRUCK WHICH CARRIES COATS, BOOTS AND HELMETS AS WELL AS PORTABLE ELECTRIC GENERATOR, SMOKE EJECTORS, LIGHTS, POWER SAW, FOAM, SPARE AIR CYLINDERS AND ROPE.

IN ADDITION TO THE FIRE TRUCKS, ONE 1967 MODEL AMBULANCE AND ONE RESCUE BOAT OPERATE FROM THIS FIRE STATION.

QUEENSTON AREA FIRE STATION:

- 1 - 1969 MODEL TRIPLE COMBINATION FIRE TRUCK WITH A PUMP RATED AT 625 GPM AT 150 PSI WITH A 500 GALLON WATER TANK.
- 1 - 1960 SERVICE TRUCK WHICH CARRIES COATS, BOOTS AND HELMETS AS WELL AS SPARE AIR CYLINDERS, SMOKE EJECTOR, BREATHING APPARATUS, LIGHTS, BROOMS, SHOVELS AND RESUSCITATOR.

IN ADDITION TO THE FIRE TRUCKS, ONE RESCUE BOAT OPERATES FROM THIS FIRE STATION.

ST. DAVIDS AREA FIRE STATION:

- 1 - 1960 MODEL TRIPLE COMBINATION FIRE TRUCK WITH A PUMP RATED AT 625 GPM AT 150 PSI WITH A 500 GALLON WATER TANK.
- 1 - 1951 MODEL TRIPLE COMBINATION FIRE TRUCK WITH A PUMP RATED AT 420 GPM AT 120 PSI WITH A 500 GALLON WATER TANK.

EQUIPMENT IN SERVICE IN THE DEPARTMENT INCLUDES THE FOLLOWING: 6 PORTABLE PUMPS, 1 PORTABLE GENERATOR COMPLETE WITH LIGHTS AND EXTENSION CORDS, 1 POWER SAW, 1 HOSE WASHER, 2 RESUSCITATORS, 4 SMOKE EJECTORS, 13 SELF-CONTAINED BREATHING APPARATUS COMPLETE WITH 11 SPARE AIR CYLINDERS, 2 FOAM EDUCTORS, 55 GALLONS OF FOAM AND 1 FLOATING TYPE STRAINER FOR HARD SUCTION HOSE. LADDERS CONSIST OF FIVE 10' FOLDING ATTIC LADDERS, FIVE 12' ROOF LADDERS, ONE 14' ROOF LADDER, ONE 16' ROOF LADDER, FIVE 24' TWO-SECTION EXTENSION LADDERS, TWO 35' THREE-SECTION EXTENSION LADDERS AND TWO 45' THREE-SECTION EXTENSION LADDERS FOR A TOTAL OF 420' OF GROUND LADDERS, ALL OF WHICH ARE METAL WITH THE EXCEPTION OF ONE ROOF LADDER WHICH IS WOOD CONSTRUCTION. HOSE CONSISTS OF 6,350' OF 2½" HOSE, 5,000' OF 1½" HOSE AND 1,050' OF 1" BOOSTER HOSE MOUNTED ON REELS. THE DEPARTMENT HAS A GOOD RANGE OF FIRE EXTINGUISHERS, AXES, LAMPS AND NOZZLES ETC.

TRIPLE COMBINATION FIRE TRUCKS ARE THE BASIC APPARATUS OF A FIRE DEPARTMENT AND ARE EQUIPPED WITH A FIRE PUMP, WATER TANK AND HOSE BODY. THEY ARE DESIGNED TO TRANSPORT FIRE FIGHTERS TO THE SCENE OF A FIRE AND PROVIDE THE NECESSARY FIRE FIGHTING EQUIPMENT FOR EXTINGUISHMENT. THE ENGINE PROVIDES THE MOTIVE POWER FOR THE VEHICLE AS WELL AS FOR THE FIRE PUMP. THE FIRE PUMP IS USED TO DRAFT WATER FROM STATIC WATER SUPPLIES AND WATER DISTRIBUTION SYSTEMS AND CAN BE UTILIZED TO PROVIDE LARGE VOLUMES OF WATER AT LOW PRESSURES OR SMALLER VOLUMES AT A HIGHER PRESSURE. THE VEHICLE MAY BE OBTAINED IN SIX FIRE PUMP CAPACITY SIZES AND THE MINIMUM DESIGN SPECIFICATIONS ARE CONTAINED IN THE CANADIAN STANDARDS ASSOCIATION STANDARD B89.3. THIS TYPE OF VEHICLE IS A PRIMARY TOOL IN MUNICIPAL FIRE EXTINGUISHMENT AND IT SHOULD BE DESIGNED TO MEET THE NEEDS OF A MUNICIPALITY, PARTICULARLY WITH RESPECT TO FIRE PUMP AND WATER TANK CAPACITIES.

TANK TRUCKS ARE PRIMARILY DESIGNED TO TRANSPORT LARGE QUANTITIES OF WATER TO THE SCENE OF A FIRE AND EXPEL SUCH WATER. THE TANK TRUCK IS EQUIPPED WITH A RELATIVELY SMALL FIRE PUMP AND A WATER TANK RANGING IN CAPACITY FROM 500 TO 1,000

GALLONS. THEY ARE ALSO EQUIPPED WITH HOSE AND OTHER SMALL EQUIPMENT AND THE MINIMUM DESIGN SPECIFICATIONS ARE CONTAINED IN THE CANADIAN STANDARDS ASSOCIATION STANDARD B89.3. SUCH VEHICLES ARE MOST ESSENTIAL TO THE FIRE FIGHTING FACILITIES OF A MUNICIPALITY WHERE THERE ARE NO DISTRIBUTION SYSTEMS OR PLENTIFUL STATIC SOURCES OF WATER.

THE GENERAL EXPERIENCE OF FIRE DEPARTMENTS OPERATING AN EMERGENCY CAR SERVICE HAS BEEN THAT IT REDUCES THE FIRE FIGHTING PERSONNEL ON DUTY EVERY TIME THE SERVICE IS USED, THUS, REDUCING SERIOUSLY THE FIRE PROTECTION ABLE TO BE PROVIDED ON FIRST RESPONSE APPARATUS TO ANY ALARMS OF FIRE. WHILE THERE IS NO SERIOUS OBJECTION TO FIRE DEPARTMENTS PROVIDING THIS TYPE OF SERVICE WHICH IS, IN EFFECT, AMBULANCE SERVICE AND HAVING THE VEHICLE HOUSED IN THE FIRE STATION, IN OUR OPINION, IT IS MORE DESIRABLE TO HAVE IT UNDER THE JURISDICTION OF THE MEDICAL OFFICER OF HEALTH AND NOT UNDER THE JURISDICTION OF THE FIRE DEPARTMENT, AND RECRUIT SPECIAL PERSONNEL TO PROVIDE SUCH SERVICE WHO WOULD BE RESPONSIBLE TO THE MEDICAL OFFICER OF HEALTH.

THE FIRE DEPARTMENT OPERATES TWO BOATS FOR WATER RESCUE AND DRAGGING PURPOSES. WE ARE OF THE OPINION THAT WATER RESCUE SERVICES DO NOT COME WITHIN THE SCOPE OF THE SURVEY, AND THEREFORE WE HAVE NO COMMENTS TO MAKE ON THIS SERVICE.

EXPENSIVE DUPLICATION OF EQUIPMENT IN AREAS OPERATING WITH MORE THAN ONE FIRE DEPARTMENT IS UNAVOIDABLE, HOWEVER, WHEN TWO OR MORE FIRE DEPARTMENTS COMBINE TO FORM A LARGER, MORE EFFICIENT ORGANIZATION, CONSIDERABLE SAVINGS TO THE MUNICIPALITY CAN RESULT WITH THE POOLING OF RESOURCES, STANDARDIZATION AND RE-LOCATION OF VEHICLES AND EQUIPMENT.

9. IT IS THEREFORE RECOMMENDED THAT: THE 1960 TRIPLE COMBINATION FIRE TRUCK PRESENTLY LOCATED IN THE ST. DAVIDS AREA FIRE STATION BE RELOCATED TO THE NIAGARA AREA FIRE STATION.

10. IT IS THEREFORE RECOMMENDED THAT: THE 1966 SERVICE TRUCK (VAN) PRESENTLY LOCATED IN THE NIAGARA AREA FIRE STATION BE RELOCATED TO THE PROPOSED FIRE DEPARTMENT HEADQUARTERS IN THE VIRGIL AREA AND EQUIPPED AS A SALVAGE TRUCK.

11. IT IS THEREFORE RECOMMENDED THAT: THE 1969 TRIPLE COMBINATION FIRE TRUCK PRESENTLY LOCATED IN THE QUEENSTON AREA FIRE STATION BE RELOCATED TO THE PROPOSED FIRE STATION IN THE VICINITY OF HIGHWAY NO. 8A AND CONCESSION 2 WHEN IT IS CONSTRUCTED AND IN OPERATION.

12. IT IS THEREFORE RECOMMENDED THAT: TWO TANK TRUCKS DESIGNED IN ACCORDANCE WITH CSA B89.3 AND EQUIPPED WITH PUMPS OF A MINIMUM CAPACITY OF 200 GPM AT 150 PSI EACH, AND WATER TANKS OF 1,000 GALLONS CAPACITY EACH, BE PURCHASED IN 1971. ONE TANK TRUCK TO BE LOCATED AT THE PROPOSED FIRE DEPARTMENT HEADQUARTERS IN THE VIRGIL AREA AND THE OTHER TANK TRUCK TO BE LOCATED IN THE PROPOSED FIRE STATION IN THE VICINITY OF HIGHWAY NO. 8A AND CONCESSION 2 WHEN THIS FIRE STATION IS CONSTRUCTED AND IN OPERATION.

13. IT IS THEREFORE RECOMMENDED THAT: THE FOLLOWING FIRE TRUCKS BE DECLARED SURPLUS EQUIPMENT AND DISPOSED OF: ONE 1953 TRIPLE COMBINATION FIRE TRUCK, TWO 1951 TRIPLE COMBINATION FIRE TRUCKS, ONE 1965 SERVICE TRUCK (VAN) AND ONE 1960 SERVICE TRUCK (VAN).

14. IT IS THEREFORE RECOMMENDED THAT: A SMALL FULLY ENCLOSED VEHICLE BE PURCHASED TO BE USED BY THE CHIEF OF THE FIRE DEPARTMENT FOR FIRE INSPECTIONS AND GENERAL ADMINISTRATION OF THE DEPARTMENT.

FIRE FIGHTING MANPOWER

THE TOWN OF NIAGARA-ON-THE-LAKE FIRE DEPARTMENT MANPOWER CONSISTS OF FOUR CHIEFS, THREE ASSISTANT CHIEFS, TWO DEPUTY CHIEFS, SIX CAPTAINS, FIVE LIEUTENANTS AND EIGHTY-SEVEN FIRE FIGHTERS, ALL OF WHOM ARE PART-TIME.

THE MANPOWER IS DIVIDED INTO FOUR COMPANIES, EACH WITH A DIFFERENT ORGANIZATIONAL CHAIN OF COMMAND.

THE NIAGARA AREA HAS ONE CHIEF, ONE ASSISTANT CHIEF, ONE DEPUTY CHIEF, TWO CAPTAINS AND TWENTY-FIVE FIRE FIGHTERS. THE RESPONSE OF FIRE FIGHTERS FROM THIS AREA TO ALARMS OF FIRE AVERAGES FIFTEEN DURING THE DAY AND TWENTY-FIVE AT NIGHT. ATTENDANCE AT FIRE DEPARTMENT TRAINING MEETINGS AVERAGES TWENTY-FIVE.

THE VIRGIL AREA HAS ONE CHIEF, ONE ASSISTANT CHIEF, TWO CAPTAINS, TWO LIEUTENANTS AND NINETEEN FIRE FIGHTERS. THE RESPONSE OF FIRE FIGHTERS FROM THIS AREA TO ALARMS OF FIRE AVERAGES FOURTEEN DURING THE DAY AND SEVENTEEN AT NIGHT. ATTENDANCE AT FIRE DEPARTMENT TRAINING MEETINGS AVERAGES FIFTEEN.

THE ST. DAVIDS AREA HAS ONE CHIEF, ONE ASSISTANT CHIEF, ONE CAPTAIN, TWO LIEUTENANTS AND TWENTY-ONE FIRE FIGHTERS. THE RESPONSE OF FIRE FIGHTERS FROM THIS AREA TO ALARMS OF FIRE AVERAGES TEN DURING THE DAY AND SIXTEEN AT NIGHT. ATTENDANCE AT FIRE DEPARTMENT TRAINING MEETINGS AVERAGES SIXTEEN.

THE QUEENSTON AREA HAS ONE CHIEF, ONE DEPUTY CHIEF, ONE CAPTAIN, ONE LIEUTENANT AND TWENTY-TWO FIRE FIGHTERS. THE RESPONSE OF FIRE FIGHTERS FROM THIS AREA TO ALARMS OF FIRE AVERAGES TEN DURING THE DAY AND FIFTEEN AT NIGHT. ATTENDANCE AT FIRE DEPARTMENT TRAINING MEETINGS AVERAGES SIXTEEN.

FIRE FIGHTING APPARATUS IS SOMEWHAT EXPENSIVE TO PURCHASE BECAUSE OF ITS SPECIALIZED DESIGN AND LIMITED SALE. THEREFORE, AT THE TIME OF CONSIDERING THE PURCHASE OF SUCH FIRE FIGHTING APPARATUS, CONSIDERATION SHOULD BE GIVEN TO THE MANNING OF THE APPARATUS IN ORDER THAT FULL BENEFITS MAY BE DERIVED FROM SUCH A CAPITAL EXPENDITURE. A TRIPLE COMBINATION FIRE TRUCK REQUIRES FIVE MEN, INCLUDING AN OFFICER, TO OPERATE IT EFFICIENTLY. THE OFFICER IN CHARGE IS RESPONSIBLE FOR DETERMINING THE EXTENT OF FIRE AND THE NEED FOR ADDITIONAL HELP, METHOD OF ATTACK TO BE USED IN CARRYING OUT RESCUE AND FIRE FIGHTING OPERATIONS AND THAT THE MEN

UNDER HIS COMMAND DEPLOY THEMSELVES SO AS TO EFFECTIVELY ATTACK THE FIRE WITH A MINIMUM OF DELAY AND A REASONABLE DEGREE OF SAFETY. IN OPERATION IT REQUIRES ONE MAN TO REMAIN AT THE TRUCK AND OPERATE THE PUMP TO PROVIDE THE DESIRED PRESSURES AND VOLUMES OF WATER. AT THE TIME OF CONNECTING THE PUMP EITHER TO A HYDRANT OR TO DRAFT, IT REQUIRES ANOTHER MAN TO ASSIST THE PUMP OPERATOR. AT THE SAME TIME THE THREE OTHER MEN ARE STRETCHING THE HOSE LINES REQUIRED WHERE IT TAKES AT LEAST TWO MEN TO OPERATE EACH $2\frac{1}{2}$ " FIRE STREAM EFFICIENTLY. IF TWO $2\frac{1}{2}$ " HOSE LINES ARE STRETCHED FROM A TRUCK IT WOULD REQUIRE TWO MEN EACH HANDLING ONE HOSE LINE AND ONE MAN AT THE TRUCK OPERATING THE PUMP.

WHERE A FIRE DEPARTMENT OPERATES MORE THAN ONE PIECE OF FIRE FIGHTING APPARATUS, THE SITUATION WHERE TWO OR THREE FIRE COMPANIES RESPOND TO A FIRE CALL WITH A CAPTAIN IN CHARGE WILL BE A COMMON OCCURRENCE. EACH MAN WILL HAVE EQUAL AUTHORITY TO GIVE ORDERS TO HIS MEN IN FIGHTING THE FIRE WITH NO ONE IN COMPLETE CHARGE OF ALL OFFICERS AND MEN UNTIL A SENIOR OFFICER OF THE DEPARTMENT ARRIVES ON THE SCENE. THE SITUATION WILL BE CONFUSING AND LACK CO-ORDINATION OF EFFORT DUE TO THE ABSENCE OF AN OVERALL COMMANDER AMONG THE MEN FIGHTING THE FIRE. THEREFORE, IT IS DESIRABLE TO ESTABLISH AN OPERATIONAL PROCEDURE WHEREBY IN MULTIPLE COMPANY OPERATIONS ONE OFFICER WILL BE ASSIGNED THE OVERALL COMMAND.

15. IT IS THEREFORE RECOMMENDED THAT: SUFFICIENT FIRE FIGHTERS BE EMPLOYED IN 1971 SO AS TO PROVIDE PROPER MANNING OF EACH VEHICLE.

16. IT IS THEREFORE RECOMMENDED THAT: THE POLICY BE ADOPTED AND A DIRECTIVE ISSUED THAT THE FIRST RESPONDING OFFICER TO A FIRE BE IN CHARGE OF THE FIRE FIGHTING OPERATIONS UNTIL RELIEVED OF THIS AUTHORITY BY A MORE SENIOR OFFICER.

TRAINING

THE TRAINING PROVIDED TO THE FIRE FIGHTERS OF THE DEPARTMENT IS UNDER THE DIRECTION OF THE OFFICERS OF THE DEPARTMENT AND IS CARRIED OUT SEPARATELY IN THE

COMPANY AREAS OF VIRGIL, NIAGARA, ST. DAVIDS AND QUEENSTON. THERE IS NO OVERALL TRAINING PROGRAM TO STANDARDIZE THE FIRE FIGHTING METHODS USED IN THE TOWN OF NIAGARA-ON-THE-LAKE FIRE DEPARTMENT NOR HAS A TRAINING DIVISION BEEN ESTABLISHED IN THE DEPARTMENT.

THE FIRE FIGHTERS OF THE NIAGARA AREA MEET ONCE A WEEK FROM MAY TO SEPTEMBER FOR A TWO HOUR TRAINING MEETING AND DURING THE REMAINDER OF THE YEAR THEY MEET ONCE MONTHLY TO VIEW A TRAINING FILM.

THE FIRE FIGHTERS OF THE VIRGIL AREA MEET THREE TIMES MONTHLY FOR A TWO HOUR PERIOD FOR TRAINING PURPOSES.

THE FIRE FIGHTERS OF THE ST. DAVIDS AREA MEET DURING THE SUMMER MONTHS WHEN DEEMED NECESSARY BY THE CHIEF FOR TRAINING PURPOSES.

THE FIRE FIGHTERS OF THE QUEENSTON AREA MEET THREE TIMES MONTHLY FOR TRAINING PURPOSES.

THE SUBJECTS TAUGHT BY THE VARIOUS COMPANY OFFICERS INCLUDE THE FOLLOWING: PUMP OPERATION, LADDER EVOLUTIONS, HOSE LAYS, ROPES AND KNOTS, USE OF SELF-CONTAINED BREATHING APPARATUS AND EXTINGUISHMENT OF SPECIAL TYPE FIRES.

TRAINING FACILITIES ARE LIMITED TO MEETING ROOMS AND NEARBY DRAFTING FACILITIES.

THE FIRE PROTECTION TECHNOLOGY COURSE CONSISTS OF THREE UNITS OF ACADEMIC STUDY COMPRISING A TOTAL OF TWENTY-TWO WEEKS. THE UNITS CONSIST OF A FIRE FIGHTING OPERATIONS UNIT OF EIGHT WEEKS, A FIRE PREVENTION UNIT OF EIGHT WEEKS AND A FIRE DEPARTMENT ADMINISTRATION UNIT OF SIX WEEKS AND IS TAKEN OVER A THREE-SUCCESSIVE-YEAR PERIOD.

NO MEMBER OF THE DEPARTMENT HAS COMPLETED THE FIRE PROTECTION TECHNOLOGY COURSE. MR. C. M. PRENTICE COMPLETED FIRE FIGHTING OPERATIONS UNIT, PART 1 IN 1959

AND FIRE PREVENTION UNIT, PART 1 IN 1962. MR. D. F. FLYNN COMPLETED FIRE PREVENTION UNIT, PART 1 IN 1968.

FIRE PREVENTION AND FIRE PROTECTION ARE RECOGNIZED AS SERVICES THAT REQUIRE SPECIAL SKILLS AND TECHNICAL KNOWLEDGE TO PERFORM THEIR FUNCTIONS. THE WORK OF A FIRE FIGHTER IS TWO-FOLD, TO MINIMIZE THE CHANCES OF FIRE OCCURRENCE AND TO MINIMIZE THE LOSSES WHEN FIRE OCCURS. TRAINING OF FIRE FIGHTERS MUST BE CARRIED OUT BY TEACHING FIRE PREVENTION AND FIRE FIGHTING SKILLS AND BY FOLLOWING CAREFULLY DEVELOPED TRAINING PROGRAMS. CHIEF TRAINING OFFICERS SHOULD BE APPOINTED TO DEVELOP AND SCHEDULE IN-SERVICE FIRE DEPARTMENT TRAINING PROGRAMS, WHICH INCLUDE RECRUIT AND REFRESHER TRAINING. THEY SHOULD ALSO CO-ORDINATE THE WORK OF COMPANY OFFICERS IN THE PROGRAM AND SUPERVISE ALL TRAINING AND PLAN TRAINING SESSIONS FOR ALL FIRE FIGHTING PERSONNEL. ALL OFFICERS MUST KNOW THE TECHNIQUES, METHODS AND WAYS OF TEACHING. THEY MUST STUDY NUMEROUS TEXTBOOKS AND TRAINING MANUALS ON A VARIETY OF SUBJECTS, AND KNOW THE NEW TECHNIQUES OF FIRE PREVENTION AND FIRE FIGHTING AS THEY ARE DEVELOPED IN ORDER TO MAINTAIN A HIGH DEGREE OF EFFICIENCY. THE CHIEF TRAINING OFFICER SHOULD MAINTAIN AN UP-TO-DATE RECORD OF THE TRAINING RECEIVED BY EACH FIRE FIGHTER AND OFFICER. ASSISTANCE MAY BE OBTAINED FROM THE OFFICE OF THE FIRE MARSHAL IN DEVELOPING AN IN-SERVICE FIRE DEPARTMENT TRAINING PROGRAM.

FIRE PROTECTION AND FIRE PREVENTION RESPONSIBILITIES REQUIRE THE SERVICES OF HIGHLY-SKILLED OFFICERS. THIS IS PARTICULARLY IMPORTANT IN SENIOR OFFICER POSITIONS WHO MUST HAVE ADVANCE TRAINING IN FIRE PROTECTION TECHNOLOGY WHICH INCLUDES FIRE PREVENTION, FIRE FIGHTING OPERATIONS AND FIRE DEPARTMENT ADMINISTRATION STUDIES. THE ONTARIO FIRE COLLEGE PROVIDES SUCH ADVANCED TRAINING FOR FIRE DEPARTMENT OFFICERS AT NO COST TO THE MUNICIPALITY EXCEPT TO CONTINUE THE INDIVIDUAL'S SALARY WHILE ATTENDING SUCH COURSES. RETURN TRANSPORTATION, MEALS,

ACCOMMODATION, TUITION AND TEXTBOOKS ARE PROVIDED WITH NO CHARGE TO THE STUDENT OR MUNICIPALITY. IT IS EXCEEDINGLY IMPORTANT FOR THE OFFICERS AND POTENTIAL OFFICERS OF THE DEPARTMENT TO IMPROVE THEIR SKILLS IN SUCH TOPICS IN ORDER FOR THE DEPARTMENT TO KEEP PACE WITH THE EVER-CHANGING TECHNIQUES BEING DEVELOPED IN FIRE PREVENTION, FIRE PROTECTION AND ADMINISTRATION, SO THAT MAXIMUM EFFICIENCY MAY BE MAINTAINED WHICH WILL RESULT IN THE REDUCTION OF LOSS OF LIFE AND PROPERTY FROM FIRE IN THE COMMUNITY.

17. IT IS THEREFORE RECOMMENDED THAT: APPLICATION BE MADE IMMEDIATELY FOR THE CHIEF AND DEPUTY CHIEF OF THE DEPARTMENT TO ATTEND THE FIRE PROTECTION TECHNOLOGY COURSE AT THE ONTARIO FIRE COLLEGE ON DIFFERENT UNITS OVER A THREE-SUCCESSIVE-YEAR PERIOD BEGINNING IN 1972. APPLICATION SHOULD ALSO BE MADE FOR THE OTHER OFFICERS OF THE DEPARTMENT TO ATTEND THE COURSE IN SUBSEQUENT YEARS.

18. IT IS THEREFORE RECOMMENDED THAT: AN IN-SERVICE FIRE DEPARTMENT TRAINING PROGRAM BE ESTABLISHED TO PROVIDE FOR THE RECRUIT AND REFRESHER TRAINING OF THE MEMBERS OF THE DEPARTMENT.

COMMUNICATIONS

THE SYSTEM FOR RECEIVING ALARMS OF FIRE IN THE TOWN OF NIAGARA-ON-THE-LAKE IS BY PUBLIC TELEPHONE. THERE ARE FOUR SEPARATE TELEPHONE NUMBERS USED BY THE PUBLIC TO REPORT ALARMS OF FIRE DEPENDING ON THE AREA OF THE TOWN THAT THE CALL ORIGINATES FROM.

THE AREAS AND TELEPHONE NUMBERS ARE DESIGNATED AS FOLLOWS: NIAGARA AREA-682-2453, QUEENSTON AREA - 468-2401, ST. DAVIDS AREA - 468-2521, VIRGIL AREA - 682-2522. DIALING ANY OF THE FOREGOING NUMBERS CONNECTS THE CALLER TO A CALL DIRECTOR LOCATED IN THE CITY OF ST.CATHARINES FIRE DEPARTMENT COMMUNICATIONS CENTRE AT FIRE DEPARTMENT HEADQUARTERS. ALL CALLS AND RADIO COMMUNICATIONS ARE MONITORED BY A RECORDING DEVICE.

PART-TIME FIRE FIGHTERS IN THE TOWN OF NIAGARA-ON-THE-LAKE ARE ALERTED BY SIRENS LOCATED IN THE NIAGARA AREA, VIRGIL AREA, QUEENSTON AREA AND ST.DAVIDS AREA ACTUATED FROM THE CITY OF ST. CATHARINES FIRE DEPARTMENT COMMUNICATIONS CENTRE BY RADIO TONE SIGNALS. SEVEN TONE ALERT MONITORS ARE EMPLOYED IN THIS SYSTEM.

DURING 1970, THE FIRE DEPARTMENT RECEIVED 113 ALARMS OF FIRE, OF WHICH 34% WERE IN THE NIAGARA AREA, 28% WERE IN THE ST. DAVIDS AREA, 24% WERE IN THE VIRGIL AREA AND 14% WERE IN THE QUEENSTON AREA.

THE DEPARTMENT OPERATES DUAL FREQUENCY SHORT-WAVE RADIO WITH FOUR BASE STATIONS LOCATED IN THE FOUR DESIGNATED AREAS OF THE TOWN. EIGHT FIRE DEPARTMENT VEHICLES ARE EQUIPPED WITH MOBILE SHORT-WAVE RADIOS. THE RADIO COMMUNICATIONS SYSTEM OPERATES ON THE REGION OF NIAGARA FIRE RADIO FREQUENCY OF 153.77 MCS. AND THE OFFICE OF THE FIRE MARSHAL'S FREQUENCY OF 154.07 MCS.

THE FIRE FIGHTERS IN THE NIAGARA AREA ARE ALSO EQUIPPED WITH FOUR PORTABLE RADIOS OPERATING ON A CITIZENS BAND AND A NUMBER OF RADIO MONITOR SETS.

A DIVISION OF COMMUNICATIONS HAS NOT BEEN ESTABLISHED WITH THE DEPARTMENT AND STAND-BY POWER IS NOT PROVIDED FOR RADIO OTHER THAN AT THE CITY OF ST.CATHARINES FIRE DEPARTMENT HEADQUARTERS.

THERE ARE THREE BASIC ELEMENTS IN THE COMMUNICATIONS REQUIREMENTS OF A MODERN FIRE DEPARTMENT. ONE IS AN EFFECTIVE SYSTEM OF RAPID COMMUNICATIONS BETWEEN THE OPERATING UNITS OF THE DEPARTMENT, THE SECOND IS THE MEANS BY WHICH FIRES ARE PROMPTLY REPORTED TO THE DEPARTMENT. THE THIRD IS AN EFFECTIVE MEANS OF RECEIVING AND RECORDING THE ALARMS OF FIRE AND OTHER EMERGENCIES. IT IS NECESSARY FOR FIRE DEPARTMENT OFFICERS TO BE ABLE TO COMMUNICATE RAPIDLY WITH THE OFFICERS IN CHARGE OF INDIVIDUAL FIRE COMPANIES. THESE OFFICERS, IN TURN, MUST KEEP IN TOUCH WITH

FIRE DEPARTMENT HEADQUARTERS. ALSO, IT MUST BE POSSIBLE TO CALL OFF-DUTY FIRE FIGHTERS TO DUTY POSTS WITH A MINIMUM OF DELAY. THE COMMUNICATIONS SYSTEMS MUST ALSO PERMIT A FIRE DEPARTMENT TO CONTACT NEIGHBOURING COMMUNITIES.

19. IT IS THEREFORE RECOMMENDED THAT: AN IMPROVED SYSTEM BE ESTABLISHED TO RECEIVE ALARMS OF FIRE COMPATIBLE TO THE CITY OF ST. CATHARINES FIRE DEPARTMENT'S COMMUNICATION AND DISPATCHING SYSTEM.

FIRE PREVENTION

A FIRE PREVENTION PROGRAM HAS NOT BEEN DEVELOPED FOR THE TOWN OF NIAGARA-ON-THE-LAKE. FIRE PREVENTION ACTIVITIES HAVE BEEN CARRIED OUT ON AN AREA BASIS WITH VARYING DEGREES OF ORGANIZATION, PROGRAMMING AND INSPECTIONS.

FOUR INSPECTORS HAVE BEEN APPOINTED FOR THE NIAGARA AREA. DURING 1970 THE FOLLOWING INSPECTIONS WERE CONDUCTED, TWO SCHOOLS, FIFTEEN COMMERCIAL BUILDINGS AND FOUR CHURCHES. HOMES WOULD BE INSPECTED IF REQUESTED BY THE TENANT OR OWNER.

IN THE VIRGIL AREA NINE SCHOOLS AND EIGHT COMMERCIAL BUILDINGS WERE INSPECTED DURING 1970 BY THE FIRE FIGHTERS.

THE FIRE FIGHTERS IN THE ST. DAVIDS AREA CONDUCTED FOUR SCHOOL INSPECTIONS DURING 1970.

TWO INSPECTORS HAVE BEEN APPOINTED FOR THE QUEENSTON AREA. DURING 1970 OPEN HOUSE WAS HELD AT THE FIRE STATION. FILMS AND SPEAKERS WERE PROVIDED TO OUTSIDE GROUPS AND THE FOLLOWING INSPECTIONS WERE CONDUCTED: FOUR SCHOOLS, ONE NURSING HOME AND ONE APARTMENT BUILDING. COMMERCIAL BUILDINGS AND HOMES WOULD BE INSPECTED ON REQUEST.

THE MUNICIPAL COUNCIL HAS NOT PASSED A FIRE PREVENTION BY-LAW.

THE FIRE DEPARTMENT HAS NEVER SUBMITTED AN ENTRY IN THE NATIONAL FIRE PROTECTION ASSOCIATION FIRE PREVENTION CONTEST.

THE PREVENTION OF FIRES IS THE PRIMARY FUNCTION OF A FIRE DEPARTMENT AND WHEN PERFORMED EFFECTIVELY WILL REDUCE THE LOSS OF LIFE AND PROPERTY FROM FIRES. FOR SUCH A PROGRAM TO BE SUCCESSFUL, IT REQUIRES CAREFUL PLANNING AND MUST BE CARRIED OUT BY WELL-TRAINED PERSONNEL. ONE OF THE WAYS TO ENSURE SUCH SUCCESS IS TO PASS A FIRE PREVENTION BY-LAW OF THE MUNICIPALITY SO THAT CITIZENS KNOW BEFOREHAND WHAT THE FIRE SAFETY REQUIREMENTS OF THE MUNICIPALITY ARE WHICH WILL REDUCE THE USE OF DISCRETIONARY ORDERS BY INSPECTORS. THE MUNICIPAL ACT AND OTHER PROVINCIAL LAWS SUCH AS THE HOTEL FIRE SAFETY ACT AND THE GASOLINE HANDLING ACT EMPOWER MUNICIPALITIES TO PASS BY-LAWS WITH RESPECT TO THE PREVENTION OF FIRE. THE CHIEF OF THE DEPARTMENT SHOULD PROVIDE A LIST OF FIRE PREVENTION MEASURES TO BE INCLUDED IN A PROPOSED FIRE PREVENTION BY-LAW AND THE MUNICIPAL SOLICITOR SHOULD REVIEW THE MEASURES TO ENSURE THERE IS ADEQUATE PROVINCIAL ENABLING LEGISLATION AND THAT THERE IS NO CONFLICT WITH PROVINCIAL LAW.

THE PRIME FUNCTION OF A FIRE DEPARTMENT IS TO PREVENT FIRES FROM OCCURRING. AS THE VAST MAJORITY OF FIRES WHICH OCCUR TAKE PLACE IN RESIDENTIAL, COMMERCIAL AND INDUSTRIAL PROPERTIES AND AS THE MAJORITY OF LIVES THAT ARE LOST ARE FROM THESE FIRES, ALL FIRE FIGHTING PERSONNEL SHOULD BE FULLY ENGAGED IN FIRE PREVENTION ACTIVITIES DURING THEIR NON-FIRE FIGHTING TIME. AN IN-SERVICE FIRE PREVENTION INSPECTION PROGRAM IS DESIGNED TO ENGAGE THE SERVICES OF ALL THE PERSONNEL OF THE DEPARTMENT TO ACQUAINT THE HOUSEHOLDER AND BUSINESS PERSONNEL WITH FIRE SAFETY MEASURES BY DISCLOSING FIRE HAZARDS AND INDICATE THE REMEDIAL MEASURES. SUCH A PROGRAM NOT ONLY REDUCES FIRES AND MAKES EFFICIENT USE OF THE FIRE FIGHTERS' NON-FIRE FIGHTING TIME, BUT ALSO PROVIDES A PROPER IMAGE OF THE DEPARTMENT THROUGH BETTER RELATIONS WITH THE CITIZENS. THE PROGRAM IS CONDUCTED BY PUMPER AND LADDER COMPANIES BEING ASSIGNED WITH THEIR FIRE FIGHTING TRUCKS TO CERTAIN STREETS

WITHIN THE MUNICIPALITY TO CONDUCT SUCH INSPECTIONS. THE DRIVER OF THE VEHICLE REMAINS WITH THE TRUCK AND IS IN CONTACT WITH DEPARTMENT HEADQUARTERS BY RADIO. THE MEN ASSIGNED CONDUCT FIRE PREVENTION INSPECTIONS OF RESIDENTIAL, COMMERCIAL AND INDUSTRIAL PREMISES. IF AN ALARM OF FIRE IS RECEIVED OVER THE RADIO, THE DRIVER SOUNDS THE SIREN ON THE TRUCK. THE FIRE FIGHTERS CONDUCTING THE INSPECTIONS RESPOND TO THE FIRE TRUCK AND PROCEED TO THE FIRE WHICH IN SOME CASES IS FOUND TO BE CLOSER THAN IF THE COMPANY RESPONDED FROM THEIR STATION. ASSISTANCE MAY BE OBTAINED FROM THE OFFICE OF THE FIRE MARSHAL IN DEVELOPING AN IN-SERVICE FIRE PREVENTION INSPECTION PROGRAM.

20. IT IS THEREFORE RECOMMENDED THAT: A FIRE PREVENTION BY-LAW BE PASSED BASED ON A LIST OF FIRE PREVENTION MEASURES PROVIDED BY THE CHIEF OF THE DEPARTMENT AND REVIEWED BY THE MUNICIPAL SOLICITOR WITH INSTRUCTIONS TO ENSURE THAT THERE IS ADEQUATE PROVINCIAL ENABLING LEGISLATION AND THAT THERE IS NO CONFLICT WITH PROVINCIAL LAW.

21. IT IS THEREFORE RECOMMENDED THAT: A PROGRAM OF IN-SERVICE FIRE PREVENTION INSPECTIONS BE ESTABLISHED.

WATER SUPPLY

WATER SUPPLY FOR DOMESTIC USE AND FIRE FIGHTING IS SUPPLIED BY THE REGIONAL MUNICIPALITY OF NIAGARA PUBLIC WORKS DEPARTMENT. THERE ARE FIVE WATER SYSTEMS WITHIN THE TOWN OF NIAGARA-ON-THE-LAKE CAPABLE OF PROVIDING TWO MILLION GALLONS DAILY. WATER FOR FIRE FIGHTING MUST BE CARRIED ON THE FIRE TRUCKS OR DRAFTED FROM STATIC SOURCES SUCH AS THE LAKE, RIVERS AND STREAMS IN SOME AREAS OF THE TOWN.

SYSTEM NO. 1 IS THE FORMER NIAGARA TOWNSHIP SYSTEM LOCATED ON LOT NO. 5 ALONG HIGHWAY NO. 8. WATER FOR THIS SYSTEM IS PROVIDED BY FOUR WELLS AND SPRINGS. IN OPERATION AT THIS LOCATION ARE THREE PUMPS.

PUMP No. 1 DELIVERS 350 GPM AT 35 PSI AND IS ELECTRICALLY-DRIVEN.

PUMP No. 2 DELIVERS 180 GPM AT 35 PSI AND IS ELECTRICALLY-DRIVEN.

PUMP No. 3 IS DRAINED FOR THE WINTER, HOWEVER, IT COULD BE MADE TO OPERATE IN ONE HOUR'S TIME AND WOULD DELIVER 180 GPM AT 35 PSI AND IS ELECTRICALLY-DRIVEN.

A 150,000 GALLON CAPACITY UNDERGROUND MASONRY RESERVOIR FEEDS 43.6 MILES OF WATER MAINS AND 311 HYDRANTS BY GRAVITY.

THE PRIMARY FEEDER MAIN IS 12" WITH A 10" MAIN GOING WESTERLY TO THE GARDEN CITY RACEWAY. SECONDARY AND DISTRIBUTOR MAINS ARE 8" AND 6". BRANCH MAINS TO INDIVIDUAL HYDRANTS ARE ONLY 4" IN SOME CASES. GOOD PRACTICE CALLS FOR 8" OR LARGER MAINS, WITH 6" BRANCHES TO INDIVIDUAL HYDRANTS.

SYSTEM No. 2 IS THE FORMER TOWN OF NIAGARA AND MISSISSAUGA BEACH WATER SYSTEM LOCATED NEAR THE MOUTH OF THE NIAGARA RIVER ON COLLINGWOOD STREET. THE SOURCE OF WATER FOR THIS SYSTEM IS THE NIAGARA RIVER. WATER ENTERS THE WATER TREATMENT PLANT THROUGH TWO 10" INTAKE MAINS BY GRAVITY. THERE ARE THREE PUMPS IN OPERATION AT THIS LOCATION.

PUMP No. 1 DELIVERS 600 GPM AT 80 PSI AND IS ELECTRICALLY-DRIVEN.

PUMP No. 2 DELIVERS 600 GPM AT 80 PSI AND IS ELECTRICALLY-DRIVEN.

PUMP No. 3 DELIVERS 300 GPM AT 80 PSI AND IS ELECTRICALLY-DRIVEN.

A STAND-BY PUMP FORMERLY DRIVEN BY AN INTERNAL COMBUSTION ENGINE IS NO LONGER IN SERVICE.

WATER IS PUMPED TO AN ELEVATED METAL STORAGE TANK OF 208,000 GALLONS CAPACITY. THERE ARE 18 MILES OF MAINS AND 110 HYDRANTS. WATER ENTERS THE DISTRIBUTION GRID THROUGH A 14" PRIMARY FEEDER MAIN, 8" SECONDARY FEEDER MAIN AND 6", 4" AND 2" DISTRIBUTOR MAINS. A NUMBER OF MAINS ARE DEAD END.

SYSTEM NO. 3 IS THE FORMER QUEENSTON VILLAGE, NIAGARA BOULEVARD WATER SYSTEM. WATER FOR THIS SYSTEM IS SUPPLIED BY THE CITY OF NIAGARA FALLS WATER SYSTEM AND SUPPLEMENTED BY THE FORMER NIAGARA TOWNSHIP WATER SYSTEM.

AN UNDERGROUND MASONRY RESERVOIR OF 150,000 GALLONS CAPACITY PROVIDES WATER BY GRAVITY THROUGH 9.6 MILES OF 8" AND 6" MAINS TO 60 HYDRANTS.

SYSTEM NO. 4 IS THE FORMER BEVAN HEIGHTS WATER SYSTEM LOCATED IN THE SOUTH-EASTERN AREA OF THE TOWN. WATER FOR THIS SYSTEM IS SUPPLIED BY THE CITY OF NIAGARA FALLS WATER SYSTEM AND DISTRIBUTED THROUGH .6 MILES OF 6" MAINS TO SEVEN HYDRANTS.

SYSTEM NO. 5 IS THE FORMER ST. DAVIDS WATER SYSTEM. WATER FOR THIS SYSTEM IS PROVIDED BY A WELL. IN OPERATION AT THIS LOCATION IS A DEEP WELL PUMP ELECTRICALLY-DRIVEN DELIVERING 200 GPM AT 20 PSI. AN ELEVATED METAL WATER TANK SUPPLIES WATER BY GRAVITY THROUGH 2.9 MILES OF MAINS TO SIXTEEN HYDRANTS.

THERE IS A TOTAL OF APPROXIMATELY 74.7 MILES OF WATER MAINS AND 504 HYDRANTS IN THE TOWN OF NIAGARA-ON-THE LAKE.

THE WATER TREATMENT PLANT LOCATED ON COLLINGWOOD STREET IS MANNED BY AN OPERATOR AT ALL TIMES AND ALL OTHER INSTALLATIONS ARE CHECKED DAILY.

ACCESS TO STATIC SOURCES OF WATER COULD BE DEVELOPED TO SUPPLEMENT THE WATER SUPPLIES CARRIED ON FIRE TRUCKS IN AREAS NOT SERVICED BY HYDRANTS.

THE FIRE DEPARTMENT HAS EXPERIENCED SHORTAGES OF WATER FOR FIRE FIGHTING PURPOSES DUE TO THE FOLLOWING REASONS: LACK OF DEVELOPED STATIC SOURCES, INSUFFICIENT WATER CARRYING CAPACITY OF FIRE TRUCKS, SMALL SIZED WATER MAINS, DEAD-END WATER MAINS AND SMALL SIZE BRANCH MAINS TO INDIVIDUAL HYDRANTS.

WHEN A MUNICIPALITY MUST DEPEND ON WATER FROM STATIC SOURCES FOR FIRE FIGHTING PURPOSES, PROVISION SHOULD BE MADE FOR FIRE TRUCKS TO REACH THE SOURCE OF WATER WITHOUT OBSTRUCTION OR RISK TO THE MEN AND APPARATUS, AS DRAFTING WATER FROM A STATIC SOURCE REQUIRES THAT THE FIRE TRUCK BE LOCATED AS CLOSELY AS POSSIBLE TO THE WATER.

22. IT IS THEREFORE RECOMMENDED THAT: PROVISIONS BE MADE AT ALL STATIC WATER SUPPLIES THROUGHOUT THE TOWNSHIP FOR FIRE TRUCKS TO DRAFT WATER FOR FIRE FIGHTING.

23. IT IS THEREFORE RECOMMENDED THAT: ALL DEAD-END WATER MAINS BE LOOPED SO AS TO PROVIDE INCREASED GALLONAGE BY PROVIDING FLOW FROM MORE THAN ONE DIRECTION.

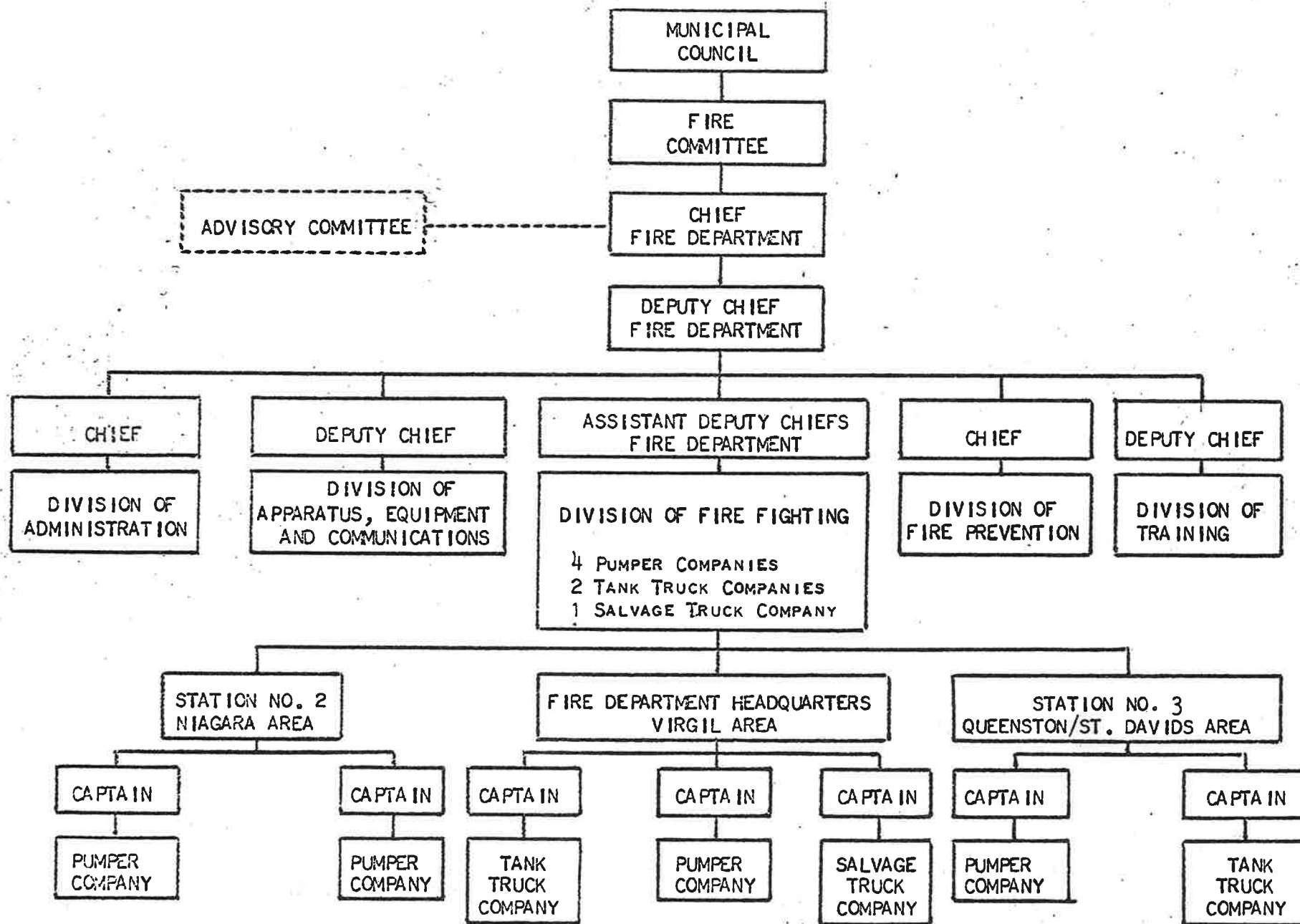
24. IT IS THEREFORE RECOMMENDED THAT: THE FIRE DEPARTMENT BE PROVIDED WITH AN UP-TO-DATE MAP OF THE TOWN SHOWING SIZES OF MAINS AND LOCATION OF HYDRANTS WITHIN THE MUNICIPALITY.

TRAFFIC CONTROL FACILITIES

ALL ROADS IN THE MUNICIPALITY ARE HARD SURFACED OR GRAVEL COVERED AND WELL MAINTAINED DURING ALL PERIODS OF THE YEAR. THERE ARE NO TRAFFIC SIGNALS OR RAILWAY CROSSINGS IN THE MUNICIPALITY TO IMPEDE THE MOVEMENT OF FIRE DEPARTMENT VEHICLES. ALL BRIDGES IN THE MUNICIPALITY ARE OF SUFFICIENT STRENGTH TO CARRY THE WEIGHT OF LARGE FIRE TRUCKS FULLY EQUIPPED AND MANNED.

THERE IS A DUPLICATION OF STREETS HAVING THE SAME NAME AS A RESULT OF THE ENLARGED MUNICIPALITY.

25. IT IS THEREFORE RECOMMENDED THAT: THE RENAMING OF STREETS HAVING IDENTICAL NAMES BE CARRIED OUT AS SOON AS POSSIBLE.

RECOMMENDED ORGANIZATION CHART

RECOMMENDED ESTABLISHING AND REGULATING BY-LAW

BY-LAW No.BEING A

BY-LAW TO ESTABLISH A FIRE DEPARTMENT

WHEREAS THE ONTARIO MUNICIPAL ACT PROVIDES THAT THE COUNCIL MAY BY BY-LAW ESTABLISH AND REGULATE A FIRE DEPARTMENT:

THEREFORE, THE COUNCIL OF THE CORPORATION OF THE TOWN OF NIAGARA-ON-THE-LAKE ENACTS AS FOLLOWS:

1. IN THIS BY-LAW, UNLESS THE CONTEXT OTHERWISE REQUIRES,
 - (A) "COUNCIL" MEANS THE COUNCIL OF THE TOWN OF NIAGARA-ON-THE-LAKE.
 - (B) "DEPARTMENT" MEANS THE TOWN OF NIAGARA-ON-THE-LAKE FIRE DEPARTMENT.
 - (C) "MEMBER" INCLUDES AN OFFICER.
2. A DEPARTMENT FOR THE TOWN OF NIAGARA-ON-THE-LAKE TO BE KNOWN AS THE TOWN OF NIAGARA-ON-THE-LAKE FIRE DEPARTMENT IS HEREBY ESTABLISHED AND THE HEAD OF THE DEPARTMENT SHALL BE KNOWN AS THE CHIEF OF THE DEPARTMENT.
3. IN ADDITION TO THE CHIEF OF THE DEPARTMENT, THE DEPARTMENT PERSONNEL SHALL CONSIST OF A DEPUTY CHIEF AND SUCH NUMBER OF DIVISION CHIEFS, CAPTAINS AND OTHER OFFICERS AND MEMBERS AS FROM TIME TO TIME MAY BE DEEMED NECESSARY BY THE COUNCIL.
4. (1) THE CHIEF OF THE DEPARTMENT MAY RECOMMEND TO THE COUNCIL THE APPOINTMENT OF ANY QUALIFIED PERSON AS A MEMBER OF THE DEPARTMENT.
(2) A PERSON IS QUALIFIED TO BE APPOINTED A MEMBER OF THE DEPARTMENT FOR FIRE FIGHTING DUTIES WHO
 - (A) IS NOT LESS THAN YEARS OF AGE AND NOT MORE THAN YEARS OF AGE,
 - (B) IS OF GOOD CHARACTER,
 - (C) PASSES SUCH APTITUDE AND OTHER TESTS AS MAY BE REQUIRED BY THE
CHIEF OF THE DEPARTMENT
 - (D) IS MEDICALLY FIT TO BE A MEMBER AS CERTIFIED BY A PHYSICIAN
DESIGNATED BY THE CHIEF OF THE DEPARTMENT, AND
 - (E) HAS SUCCESSFULLY COMPLETED AT LEAST GRADE ,

(3) A PERSON APPOINTED AS A MEMBER OF THE DEPARTMENT FOR FIRE FIGHTING DUTIES SHALL BE ON PROBATION FOR A PERIOD OF DURING WHICH TIME HE SHALL TAKE SUCH SPECIAL TRAINING AND EXAMINATIONS AS MAY BE REQUIRED BY THE CHIEF OF THE DEPARTMENT.

(4) IF A PROBATIONARY MEMBER APPOINTED FOR FIRE FIGHTING DUTIES FAILS ANY SUCH EXAMINATIONS, THE CHIEF OF THE DEPARTMENT MAY RECOMMEND TO COUNCIL THAT HE BE DISMISSED.

5. THE REMUNERATION OF ALL MEMBERS OF THE DEPARTMENT SHALL BE AS DETERMINED BY THE COUNCIL.

6. THE CHIEF OF THE DEPARTMENT IS RESPONSIBLE TO THE COUNCIL FOR THE PROPER ADMINISTRATION AND OPERATION OF THE DEPARTMENT, FOR THE DISCIPLINE OF ITS MEMBERS, AND

- (A) MAY MAKE SUCH GENERAL ORDERS AND DEPARTMENTAL RULES AS MAY BE NECESSARY FOR THE CARE AND PROTECTION OF THE PROPERTY OF THE DEPARTMENT, FOR THE CONDUCT OF THE MEMBERS OF THE DEPARTMENT, AND GENERALLY FOR THE EFFICIENT OPERATION OF THE DEPARTMENT, PROVIDED THAT SUCH GENERAL ORDERS AND RULES DO NOT CONFLICT WITH THE PROVISIONS OF ANY BY-LAW OF THE MUNICIPALITY.
- (B) SHALL REVIEW PERIODICALLY THE POLICIES AND PROCEDURES OF THE DEPARTMENT AND ESTABLISH AN ADVISORY COMMITTEE CONSISTING OF SUCH OFFICERS AS HE MAY DETERMINE FROM TIME TO TIME TO ASSIST HIM IN HIS DUTIES.
- (C) SHALL TAKE ALL PROPER MEASURES FOR THE PREVENTION, CONTROL AND EXTINGUISHMENT OF FIRES AND FOR THE PROTECTION OF LIFE AND PROPERTY AND SHALL ENFORCE ALL MUNICIPAL BY-LAWS RESPECTING FIRE PREVENTION AND EXERCISE THE POWERS AND DUTIES IMPOSED ON HIM BY THE FIRE MARSHALS ACT.
- (D) IS RESPONSIBLE FOR THE ENFORCEMENT OF THIS BY-LAW AND THE GENERAL ORDERS AND DEPARTMENTAL RULES.
- (E) SHALL REPORT ALL FIRES TO THE FIRE MARSHAL AS REQUIRED BY THE FIRE MARSHALS ACT.
- (F) SHALL SUBMIT TO THE COUNCIL FOR ITS APPROVAL, AS REQUIRED BY COUNCIL, THE ANNUAL ESTIMATES OF THE DEPARTMENT.

7. THE DEPUTY CHIEF SHALL REPORT ON THE ACTIVITIES OF THE DIVISIONS THAT ARE HIS RESPONSIBILITY TO THE CHIEF OF THE DEPARTMENT AND CARRY OUT THE ORDERS OF THE CHIEF, AND, IN THE ABSENCE OF THE CHIEF, HAS ALL THE POWERS AND SHALL PERFORM ALL THE DUTIES OF THE CHIEF.

8. THE DEPARTMENT IS COMPOSED OF THE FOLLOWING DIVISIONS:

DIVISION OF ADMINISTRATION,

DIVISION OF APPARATUS, EQUIPMENT AND COMMUNICATIONS

DIVISION OF FIRE FIGHTING

DIVISION OF FIRE PREVENTION

DIVISION OF TRAINING

9. THE CHIEF OF THE DEPARTMENT IS RESPONSIBLE FOR THE CARRYING OUT OF THE FOLLOWING DUTIES OF THE DIVISION OF ADMINISTRATION:

1. PROVIDE ADMINISTRATION FACILITIES FOR THE CHIEF AND DEPUTY CHIEF OF THE DEPARTMENT.
2. PREPARE THE DEPARTMENTAL BUDGET AND TO EXERCISE BUDGETARY CONTROL
3. PREPARE THE PAYROLL OF THE DEPARTMENT AND INITIATE REQUISITIONS FOR MATERIALS AND SERVICES AND CERTIFY ALL ACCOUNTS OF THE DEPARTMENT.
4. MAINTAIN PERSONNEL RECORDS.
5. ARRANGE FOR THE PROVISION OF NEW BUILDINGS.
6. ARRANGE FOR THE PROVISION OF NEW BUILDINGS.
7. PREPARE THE ANNUAL REPORT OF THE DEPARTMENT.
8. PROVIDE LIAISON WITH THE REGIONAL MUNICIPALITY OF NIAGARA FIRE CO-ORDINATOR
9. PROVIDE LIAISON WITH THE LOCAL FIRE FIGHTERS' UNION.
10. CARRY OUT THE GENERAL ADMINISTRATIVE DUTIES OF THE DEPARTMENT.
11. ASSIST THE REGIONAL MUNICIPALITY OF NIAGARA FIRE CO-ORDINATOR IN THE PREPARATION OF A REGIONAL FIRE SERVICE ANNEX AND OPERATING PROCEDURES.

10. THE DEPUTY CHIEF SHALL BE IN CHARGE OF THE DIVISION OF APPARATUS, EQUIPMENT AND COMMUNICATIONS AND IS RESPONSIBLE TO THE CHIEF FOR THE CARRYING OUT OF THE FOLLOWING DUTIES OF THE DIVISION:

1. PREPARE SPECIFICATIONS FOR THE PURCHASE OF APPARATUS AND EQUIPMENT.
2. MAINTAIN AND KEEP IN REPAIR ALL EXISTING BUILDINGS, FIRE FIGHTING, RESCUE AND SALVAGE APPARATUS OF THE DEPARTMENT.
3. MODIFY APPARATUS AND EQUIPMENT.
4. PROVIDE RECHARGING FACILITIES FOR FIRE FIGHTING EXTINGUISHERS AND CYLINDERS AND TO TEST AND REPAIR HOSE.
5. WHERE A WATERWORKS COMMISSION IS ESTABLISHED PROVIDE LIAISON IN ORDER TO ENSURE AN ADEQUATE FLOW OF WATER IN NEW WATERWORKS PROJECTS AND THE ADEQUATE MAINTENANCE OF EXISTING WATERWORKS FACILITIES FOR THE USE OF THE DEPARTMENT.
6. ISSUE CLOTHING, EQUIPMENT AND CLEANING SUPPLIES.
7. PREPARE THE ANNUAL REPORT AND BUDGET OF THE DIVISION OF APPARATUS, EQUIPMENT AND COMMUNICATIONS TO BE SUBMITTED TO THE DIVISION OF ADMINISTRATION.
8. RECEIVE ALARMS AND DISPATCH APPARATUS.
9. PREPARE SPECIFICATIONS FOR NEW COMMUNICATION SYSTEMS AND FOR ADDITIONS TO EXISTING COMMUNICATION SYSTEMS.
10. MAINTAIN THE COMMUNICATION SYSTEMS OF THE DEPARTMENT.

11. (1) THE DEPUTY CHIEF IS RESPONSIBLE TO THE CHIEF OF THE DEPARTMENT FOR THE MANAGEMENT AND OPERATION OF THE DIVISION OF FIRE FIGHTING AND FOR THE CARRYING OUT OF THE FOLLOWING DUTIES OF THE DIVISION:

1. PREVENT, CONTROL AND EXTINGUISH FIRES.
2. CONDUCT, THROUGH THE DIVISION OF FIRE FIGHTING OR THE DIVISION OF FIRE PREVENTION, INVESTIGATIONS OF FIRES IN ORDER TO DETERMINE CAUSE, ORIGIN AND CIRCUMSTANCES, AND, WHERE APPROPRIATE, TO RECOMMEND THAT THE AUTHORITY HAVING JURISDICTION SHALL CONDUCT AN INVESTIGATION.

3. PERFORM RESCUE AND SALVAGE OPERATIONS AND RENDER FIRST AID.
4. RESPOND AND ASSIST AT SUCH EMERGENCIES AS MAY BE REQUIRED BY THE CHIEF OF THE DEPARTMENT.
5. PARTICIPATE IN TRAINING AT STATIONS.
6. CONDUCT COMPANY FIRE PREVENTION AND FAMILIARIZATION INSPECTIONS OF PREMISES.
7. PERFORM APPARATUS MAINTENANCE AND CLEANING DUTIES AT STATIONS.
8. PREPARE THE ANNUAL REPORT AND BUDGET OF THE DIVISION OF FIRE FIGHTING TO BE SUBMITTED TO THE DIVISION OF ADMINISTRATION.

(2) A CAPTAIN IS IN COMMAND OF THE COMPANY TO WHICH HE IS ASSIGNED AND DURING HIS TOUR OF DUTY IS RESPONSIBLE FOR THE PROPER OPERATION OF THAT COMPANY TO THE DEPUTY CHIEF.

(3) WHERE THE CHIEF OF THE DEPARTMENT DESIGNATES A MEMBER TO ACT IN PLACE OF AN OFFICER OF THE DEPARTMENT, SUCH MEMBER, WHEN SO ACTING, HAS ALL THE POWERS AND SHALL PERFORM ALL THE DUTIES OF THE OFFICER REPLACED.

12. THE CHIEF OF THE DEPARTMENT IS IN CHARGE OF THE DIVISION OF FIRE PREVENTION AND IS RESPONSIBLE FOR THE CARRYING OUT THE FOLLOWING DUTIES OF THE DIVISION:

1. CONDUCT FIRE PREVENTION INSPECTIONS OF PREMISES.
2. ENFORCE FIRE PREVENTION BY-LAWS.
3. EXAMINE BUILDING PLANS.
4. PROVIDE PERSONNEL FOR FIRE PREVENTION LECTURES.
5. ESTABLISH AND MAINTAIN PHOTOGRAPHY FACILITIES.
6. MAINTAIN FIRE LOSS RECORDS.
7. RECEIVE, PROCESS AND FOLLOW UP REPORTS OF FIRE PREVENTION INSPECTIONS CONDUCTED UNDER THE DIVISION OF FIRE FIGHTING.
8. PREPARE THE ANNUAL REPORT AND BUDGET OF THE DIVISION OF FIRE PREVENTION TO BE SUBMITTED TO THE DIVISION OF ADMINISTRATION.

13. THE DEPUTY CHIEF IS RESPONSIBLE FOR THE CARRYING OUT OF THE FOLLOWING DUTIES OF THE DIVISION OF TRAINING:

1. CONDUCT TRAINING FOR ALL PERSONNEL OF THE DEPARTMENT IN FIRE ADMINISTRATION, FIRE PREVENTION AND FIRE FIGHTING.
2. ADMINISTER TRAINING PROGRAMS IN STATIONS.
3. PREPARE AND CONDUCT EXAMINATIONS OF MEMBERS AS REQUIRED BY THE CHIEF OF THE DEPARTMENT.
4. PREPARE THE ANNUAL REPORT AND BUDGET OF THE DIVISION OF TRAINING TO BE SUBMITTED TO THE DIVISION OF ADMINISTRATION.

14. (1) THE PROVISIONS OF THIS SECTION WITH RESPECT TO THE PROMOTION OF A MEMBER DO NOT APPLY TO THE DEPUTY CHIEF.

(2) ANY MEMBER HAVING AT LEAST YEARS OF SERVICE WITH THE DEPARTMENT MAY MAKE APPLICATION TO THE CHIEF OF THE DEPARTMENT TO QUALIFY HIM FOR A PROMOTION TO A RANK IMMEDIATELY SUPERIOR TO HIS PRESENT RANK.

(3) EVERY RECOMMENDATION FOR THE PROMOTION OF A MEMBER MADE TO THE COUNCIL BY THE CHIEF OF THE DEPARTMENT SHALL BE BASED ON THE EVALUATION OF

- (A) THE RESULTS OF EXAMINATIONS TAKEN BY THE MEMBER,
- (B) THE AGE AND PHYSICAL FITNESS OF THE MEMBER, AND
- (C) THE FIRE AND STATION RECORD OF THE MEMBER.

(4) WHEN, IN THE OPINION OF THE CHIEF OF THE DEPARTMENT, ALL OTHER FACTORS FOR THE PROMOTION OF TWO OR MORE MEMBERS ARE EQUAL, SENIORITY OF SERVICE IN THE DEPARTMENT GOVERNS.

(5) THE FIRE FIGHTING AND STATION RECORD OF EACH MEMBER OF THE DEPARTMENT SHALL BE EVALUATED ANNUALLY AS FOLLOWS:

1. THE CAPTAIN OF EACH COMPANY SHALL EVALUATE EACH MEMBER OF THE COMPANY.
2. THE DEPUTY CHIEF SHALL EVALUATE THE CAPTAINS AND OTHER MEMBERS UNDER HIS JURISDICTION.

(6) THE CHIEF OF THE DEPARTMENT AND THE DEPUTY CHIEF SHALL EVALUATE ALL MEMBERS OF THE DEPARTMENT WHO ARE PARTICIPATING IN AN EXAMINATION FOR PROMOTION.

(7) EVERY APPLICANT FOR PROMOTION SHALL TAKE SUCH WRITTEN, ORAL, AND PRACTICAL EXAMINATIONS AS MAY BE REQUIRED BY THE CHIEF OF THE DEPARTMENT.

15. (1) EVERY MEMBER OF THE DEPARTMENT APPOINTED FOR FIRE FIGHTING DUTIES IS SUBJECT TO A MEDICAL EXAMINATION AT LEAST ONCE ANNUALLY AND AT SUCH OTHER TIMES AS THE CHIEF OF THE DEPARTMENT MAY REQUIRE.

(2) IF A BOARD OF MEDICAL EXAMINERS FINDS THAT A MEMBER IS PHYSICALLY UNFIT TO PERFORM HIS ASSIGNED DEPARTMENTAL DUTIES AND THAT SUCH CONDITION IS ATTRIBUTED AS A RESULT OF HIS EMPLOYMENT IN THE DEPARTMENT, THE COUNCIL MAY ASSIGN THE MEMBER TO OTHER EMPLOYMENT OR MAY RETIRE HIM AND PROVIDE SUCH RETIREMENT ALLOWANCES AS DEEMED PROPER.

16. (1) EVERY MEMBER OF THE DEPARTMENT SHALL REPORT FOR DUTY AT THE TIME PRESCRIBED BY THE DEPARTMENTAL RULES AND SHALL REMAIN ON DUTY UNTIL RELIEVED.

(2) IN THE CASE OF A MEMBER FAILING TO REPORT FOR DUTY, THE OFFICER-IN-CHARGE SHALL REPORT THIS IN WRITING, THROUGH HIS SUPERIOR OFFICER, TO THE CHIEF OF THE DEPARTMENT.

(3) NO MEMBER,

(A) WHILE IN UNIFORM, SHALL ENTER ANY PREMISES WHERE ALCOHOLIC BEVERAGES ARE SOLD OR CONSUMED, EXCEPT IN THE PERFORMANCE OF HIS DEPARTMENTAL DUTIES.

(B) IF HIS ABILITY IS IMPAIRED BY THE USE OF AN INTOXICATING BEVERAGE OR DRUG, SHALL BE PERMITTED TO REMAIN ON DUTY.

(C) WHILE ON DUTY, SHALL CONSUME ANY INTOXICATING BEVERAGE OR DRUG.

(4) NO MEMBER SHALL SOLICIT THE INFLUENCE OR SUPPORT OF ANYONE IN ORDER TO SECURE A TRANSFER, PROMOTION OR OTHER ADVANTAGE.

17. (1) THE CHIEF OF THE DEPARTMENT MAY REPRIMAND, SUSPEND OR RECOMMEND DISMISSAL OF ANY MEMBER FOR INSUBORDINATION, INEFFICIENCY, MISCONDUCT, TARDINESS OR FOR NON-COMPLIANCE WITH ANY OF THE PROVISIONS OF THIS BY-LAW OR THE GENERAL ORDERS AND DEPARTMENTAL RULES THAT IN THE OPINION OF THE CHIEF WOULD BE DETRIMENTAL TO THE DISCIPLINE AND EFFICIENCY OF THE DEPARTMENT.

(2) FOLLOWING THE SUSPENSION OF ANY MEMBER, THE CHIEF OF THE DEPARTMENT SHALL REPORT THE SUSPENSION AND HIS RECOMMENDATION TO COUNCIL.

(3) A MEMBER SHALL NOT BE DISMISSED WITHOUT BEING AFFORDED AN OPPORTUNITY FOR A HEARING BEFORE COUNCIL, IF HE MAKES A WRITTEN REQUEST FOR SUCH HEARING WITHIN SEVEN DAYS AFTER RECEIVING SUCH NOTICE OF HIS PROPOSED DISMISSAL.

18. THE DEPARTMENT SHALL NOT RESPOND TO A CALL WITH RESPECT TO A FIRE OR EMERGENCY OUTSIDE THE LIMITS OF THE TOWN OF NIAGARA-ON-THE-LAKE EXCEPT WITH RESPECT TO A FIRE OR EMERGENCY,

(A) THAT IN THE OPINION OF THE CHIEF OF THE DEPARTMENT THREATENS PROPERTY IN THE TOWN OF NIAGARA-ON-THE-LAKE OR PROPERTY SITUATED OUTSIDE THE TOWN OF NIAGARA-ON-THE-LAKE THAT IS OWNED AND OCCUPIED BY THE TOWN OF NIAGARA-ON-THE-LAKE,

(B) IN A MUNICIPALITY WITH WHICH AN AGREEMENT HAS BEEN ENTERED INTO TO PROVIDE FIRE PROTECTION, OR

(C) ON PROPERTY WITH RESPECT TO WHICH AN AGREEMENT HAS BEEN ENTERED INTO WITH ANY PERSONS OR CORPORATION TO PROVIDE FIRE PROTECTION THEREFOR.

19. THIS BY-LAW COMES INTO EFFECT ON THE DAY IT IS PASSED BY COUNCIL.

PASSED THISDAY OF19..

.....
HEAD OF MUNICIPALITY

.....
CLERK OF MUNICIPALITY

RECOMMENDED RULES FOR FIRE DEPARTMENT

1. EVERY MEMBER SHALL REPORT FOR DUTY AT THE PRESCRIBED TIME ON HIS DUTY DAYS AND REMAIN ON DUTY UNTIL RELIEVED.
2. MEMBERS SHALL SHOW COURTESY AND RESPECT AT ALL TIMES IN DEALING WITH THE PUBLIC.
3. MEMBERS SHALL ACT WITH RESPECT AND COURTESY AND ADDRESS SUPERIOR OFFICERS BY THEIR DEPARTMENTAL RANK. ABBREVIATIONS SHALL NOT BE USED.
4. WHEN A MEMBER IS ADDRESSED BY AN OFFICER ABOVE THE RANK OF CAPTAIN HE SHALL STAND AND REMAIN STANDING UNTIL RELIEVED.
5. WHEN A MEMBER ALLEGES UNFAIR TREATMENT HE MAY MAKE A WRITTEN COMPLAINT AGAINST A SUPERIOR OFFICER TO THE CHIEF OF THE DEPARTMENT.
6. IMMEDIATELY FOLLOWING THE ROLL CALL OF THE MEMBERS REPORTING FOR DUTY, THE OFFICER-IN-CHARGE SHALL READ ALL GENERAL ORDERS RECEIVED, AFTER WHICH ALL DETAILED MAINTENANCE WORK OF THE STATION SHALL BE CARRIED OUT.
7. MEMBERS SHALL REMAIN WITH THE COMPANY AT THE SCENE OF A FIRE UNLESS THEY ARE ASSIGNED TO SPECIAL DUTY BY A SUPERIOR OFFICER.
8. MEMBERS WHEN ON DUTY SHALL NOT LEAVE THEIR FIRE STATION UNLESS PERMISSION IS GRANTED BY A SUPERIOR OFFICER WHO IS AUTHORIZED TO GRANT SUCH PERMISSION.
9. TELEPHONES OF THE DEPARTMENT SHALL NOT BE USED FOR OTHER THAN DEPARTMENTAL BUSINESS.
10. PRIVATE CARS OF MEMBERS SHALL NOT BE USED FOR FIRE SERVICE PURPOSES WITHOUT SPECIFIC AUTHORIZATION FROM THE CHIEF OF THE DEPARTMENT.
11. NO MEMBER, DIRECTLY OR INDIRECTLY, SHALL SOLICIT OR ACCEPT FROM ANYONE GIFTS, MONEY OR OTHER ARTICLES AS A REWARD FOR SERVICES RENDERED IN CARRYING OUT HIS DUTIES.
12. NO MEMBER, WITHOUT THE PERMISSION OF THE CHIEF OF THE DEPARTMENT, SHALL SELL TICKETS OR SOLICIT ADVERTISING, SUBSCRIPTIONS, GIFTS OR CONTRIBUTIONS FOR ANY PURPOSE WHATSOEVER.

13. EVERY MEMBER SHALL NOTIFY THE OFFICER-IN-CHARGE OF ANY CHANGE IN HIS ADDRESS OR TELEPHONE NUMBER WITHIN 24 HOURS OF SUCH CHANGE.
14. NO MEMBER SHALL LOITER AT THE APPROACHES OF THE STATION OR IN THE VICINITY DURING SERVICE HOURS.
15. MEMBERS SHALL NOT HOLD SOCIAL EVENTS OR MEETINGS IN THE FIRE STATION WITHOUT PREVIOUSLY OBTAINING PERMISSION FROM THE CHIEF OF THE DEPARTMENT.
16. WITH THE EXCEPTION OF DRIVERS OR MECHANICS DULY AUTHORIZED AND DESIGNATED TO FULFIL THIS DUTY, NO MEMBER SHALL START, REPAIR OR PUT INTO OPERATION ANY APPARATUS OF THE DEPARTMENT.
17. NO MEMBER SHALL SMOKE ON THE APPARATUS OR WHILE IN UNIFORM IN PUBLIC.
18. NO MEMBER SHALL SUPPLY INFORMATION RELATIVE TO THE DEPARTMENT OR OPERATIONS THEREOF UNLESS AUTHORIZED BY THE CHIEF OF THE DEPARTMENT.
19. WHEN VALUABLES (MONEY, JEWELLERY, ETC.,) ARE FOUND DURING A FIRE, MEMBERS SHALL HAND THEM OVER TO THE OFFICER-IN-CHARGE OF OPERATIONS WHO SHALL SUBMIT A DETAILED REPORT TO THE CHIEF OF THE DEPARTMENT.
20. NO MEMBER SHALL USE PROFANE, IMMORAL OR INDECENT LANGUAGE OR BE GUILTY OF CONDUCT WHICH MAY BE PREJUDICIAL TO THE GOOD REPUTATION, ORDER AND DISCIPLINE OF THE DEPARTMENT.
21. ALL VERBAL AND WRITTEN COMMUNICATIONS AND REPORTS SHALL BE TRANSMITTED BY A MEMBER TO HIS IMMEDIATE SUPERIOR WHO SHALL DEAL WITH SUCH COMMUNICATIONS IN THE MANNER PRESCRIBED BY THE DEPARTMENTAL RULES.
22. EVERY MEMBER IS RESPONSIBLE FOR ANY DAMAGE TO OR THE DESTRUCTION OR LOSS OF HIS UNIFORM OR ANY EQUIPMENT ISSUED TO HIM DUE TO HIS NEGLIGENCE.
23. ALL TRAFFIC LAWS APPLICABLE TO VEHICLES OF THE DEPARTMENT SHALL BE OBEYED AND EXTREME CAUTION SHALL BE EXERCISED AT ALL TIMES.
24. ALL APPARATUS AND EQUIPMENT SHALL BE TESTED IN ACCORDANCE WITH THE GENERAL ORDERS ISSUED FOR THAT PURPOSE.

25. EVERY MEMBER INJURED WHILE ON DUTY SHALL IMMEDIATELY REPORT THE INJURY TO THE OFFICER-IN-CHARGE WHO SHALL FORTHWITH SUBMIT A WRITTEN REPORT THEREOF TO THE CHIEF OF THE DEPARTMENT.
26. (1) EVERY MEMBER INVOLVED IN AN ACCIDENT WHILE ON DUTY SHALL IMMEDIATELY REPORT THE ACCIDENT TO THE OFFICER-IN-CHARGE WHO SHALL SUBMIT A WRITTEN REPORT THEREOF TO THE CHIEF OF THE DEPARTMENT.
(2) WHERE APPARATUS IS INVOLVED IN AN ACCIDENT, THE DRIVER SHALL IMMEDIATELY REPORT THE ACCIDENT TO THE OFFICER-IN-CHARGE WHO SHALL SUBMIT A WRITTEN REPORT TO THE CHIEF OF THE DEPARTMENT.
27. EVERY MEMBER EXPOSED TO RADIOACTIVE MATERIAL SHALL HAVE THIS FACT ENTERED ON HIS MEDICAL RECORD, INCLUDING THE NAME OF THE RADIOACTIVE MATERIAL AND THE NATURE AND DURATION OF HIS POSSIBLE EXPOSURE TO RADIATION.
28. MEMBERS ON DUTY WHILE GOING TO, RETURNING FROM OR WHILE WORKING AT FIRES, SHALL WEAR THE FULL ISSUE OF PROTECTIVE CLOTHING, INCLUDING FIRE FIGHTER'S HELMET AND WATERPROOF COAT, HOSE KEY AND BELT AND RUBBER BOOTS.
29. MEMBERS MUST BE IN POSSESSION OF A VALID CHAUFFEUR'S LICENCE TO DRIVE DEPARTMENT VEHICLES.

THE _____ OF _____

BY-LAW NO. _____

BEING A BY-LAW TO APPOINT THE CHIEF OF THE _____

OF _____ FIRE DEPARTMENT.

WHEREAS THE COUNCIL OF THE CORPORATION OF THE _____

OF _____ HAVE ENACTED A BY-LAW NO. _____

TO ESTABLISH A FIRE DEPARTMENT AND

WHEREAS THE COUNCIL HAS CONSIDERED A BY-LAW TO ESTABLISH THE POSITION OF

CHIEF OF THE FIRE DEPARTMENT

THEREFORE THE COUNCIL OF THE CORPORATION OF THE _____

OF _____ ENACTS THAT MR. _____

BE APPOINTED AS CHIEF OF THE FIRE DEPARTMENT TO SERVE FROM _____ 19 ____

UNTIL THIS BY-LAW IS RESCINDED.

READ A FIRST AND SECOND TIME THIS _____ DAY

OF _____ 19 ____

HEAD

CLERK

READ A THIRD TIME AND FINALLY PASSED THIS _____ DAY

OF _____ 19 ____

SAMPLE CONSTITUTION AND BY-LAWS FOR PART-TIME FIRE FIGHTERS' ASSOCIATION

MEMORANDUM OF INSTRUCTIONS TO ESTABLISH AN ASSOCIATION

ANY NUMBER OF PART-TIME MEMBERS OF A MUNICIPAL FIRE DEPARTMENT (NOT FEWER THAN SIX) WHO WISH TO ESTABLISH AN ASSOCIATION SHOULD HOLD AN ORGANIZATION MEETING AT WHICH THEY SHOULD, FIRST, APPOINT TEMPORARY OFFICERS, AND SECOND, APPOINT A COMMITTEE TO DRAFT THE CONSTITUTION AND BY-LAWS OF THE ASSOCIATION TO BE ADOPTED BY AN AFFIRMATIVE VOTE OF A MAJORITY OF THOSE PRESENT AT THE NEXT MEETING, OR IF THE CONSTITUTION AND BY-LAWS ARE DRAFTED, ADOPT THEM BY AN AFFIRMATIVE VOTE OF A MAJORITY OF THOSE PRESENT AT THE MEETING.

CONSTITUTION

ARTICLE 1: NAME

1. AN ASSOCIATION TO BE KNOWN AS THE _____
(NAME)
PART-TIME FIRE FIGHTERS' ASSOCIATION (HEREIN CALLED THE ASSOCIATION) IS
HEREBY ESTABLISHED.

ARTICLE 2: OBJECTS

2. THE OBJECTS OF THE ASSOCIATION ARE:
- (A) TO PROMOTE AND FURTHER THE DEVELOPMENT OF FIRE PROTECTION AND FIRE
PREVENTION,
 - (B) TO PROMOTE EDUCATIONAL PROGRAMS FOR THE BENEFIT OF THE MEMBERSHIP, AND
 - (C) TO PROMOTE AND ARRANGE SOCIAL ACTIVITIES FOR THE BENEFIT OF THE
MEMBERSHIP.

ARTICLE 3: MEMBERSHIP

3. (1) THE MEMBERSHIP OF THE ASSOCIATION CONSISTS OF THE FOLLOWING NAMED
MEMBERS OF THE _____ FIRE DEPARTMENT:
(NAME)

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

WHO CONTINUE AS MEMBERS OF THE ASSOCIATION IN ACCORDANCE WITH THE
CONSTITUTION AND BY-LAWS OF THE ASSOCIATION AND SUCH PERSONS AS HERE-
AFTER ARE ELECTED TO MEMBERSHIP IN ACCORDANCE WITH THE CONSTITUTION.

- (2) ANY MEMBER OF THE _____ FIRE DEPARTMENT MAY
(NAME)
BE ELECTED TO MEMBERSHIP IN THE ASSOCIATION BY AN AFFIRMATIVE VOTE OF A
MAJORITY OF THE VOTING MEMBERS OF THE ASSOCIATION PRESENT AT A MEETING.
- (3) ANY PERSON WHO HAS CONTRIBUTED TO THE GOOD AND WELFARE OF THE ASSOCIATION
MAY BE ELECTED AN HONORARY MEMBER OF THE ASSOCIATION BY AN AFFIRMATIVE
VOTE OF TWO-THIRDS OF THE MEMBERS OF THE ASSOCIATION PRESENT AT A MEETING.
- (4) AN HONORARY MEMBER IS NOT ELIGIBLE TO VOTE OR TO BE AN OFFICER OF THE
ASSOCIATION.

ARTICLE 4: OFFICERS

4. (1) THERE SHALL BE A PRESIDENT, VICE-PRESIDENT, SECRETARY AND TREASURER OF
THE ASSOCIATION WHO SHALL BE THE OFFICERS OF THE ASSOCIATION ELECTED IN
ACCORDANCE WITH THE BY-LAWS OF THE ASSOCIATION, PROVIDED, THAT ONE
MEMBER MAY HOLD THE OFFICES OF SECRETARY AND TREASURER AND SHALL BE
KNOWN AS THE SECRETARY-TREASURER.
- (2) THE FIRST OFFICERS OF THE ASSOCIATION ARE:

WHO SHALL HOLD OFFICE UNTIL THEIR SUCCESSORS ARE ELECTED IN ACCORD-
ANCE WITH THE BY-LAWS OF THE ASSOCIATION.

ARTICLE 5: BY-LAWS

5. SUCH BY-LAWS AS MAY BE DEEMED NECESSARY FOR THE PROPER OPERATION OF THE
ASSOCIATION MAY BE ADOPTED BY AN AFFIRMATIVE VOTE OF A MAJORITY OF THE VOTING
MEMBERS PRESENT AT A MEETING, AND MAY BE AMENDED IN ACCORDANCE WITH ARTICLE 6.

ARTICLE 6: AMENDMENTS

6. THE CONSTITUTION AND THE BY-LAWS OF THE ASSOCIATION MAY BE AMENDED ON NOTICE OF MOTION PRESENTED AT A REGULAR MEETING OF THE ASSOCIATION BY AN AFFIRMATIVE VOTE OF TWO-THIRDS OF THE VOTING MEMBERS PRESENT AT A MEETING, PROVIDED THAT A COPY OF THE NOTICE OF MOTION HAS BEEN RECEIVED BY THE SECRETARY AT LEAST 30 DAYS BEFORE A VOTE ON THE MOTION, AND THAT THE MOTION HAS BEEN READ AT THE REGULAR MEETING OF THE ASSOCIATION HELD IMMEDIATELY PRECEDING THE MEETING AT WHICH THE VOTE IS TO BE TAKEN.

BY-LAWS

OFFICERS

1. THE OFFICERS OF THE ASSOCIATION SHALL BE ELECTED BY BALLOT AT THE _____ REGULAR MEETING EACH YEAR BY A MAJORITY VOTE OF THE VOTING MEMBERS PRESENT AT THE MEETING, AND SHALL HOLD OFFICE FOR ONE YEAR AND UNTIL THEIR SUCCESSORS ARE ELECTED.

VACANCY

2. WHERE A VACANCY OCCURS IN ANY OFFICE FOR ANY REASON, A MEMBER OF THE ASSOCIATION SHALL BE ELECTED TO FILL THE VACANCY IN ACCORDANCE WITH SECTION 1, AND THE MEMBER SO ELECTED SHALL HOLD OFFICE FOR THE REMAINDER OF THE TERM OF HIS PREDECESSOR.

PRESIDENT

3. THE PRESIDENT SHALL PRESIDE AT ALL MEETINGS OF THE ASSOCIATION AND SHALL CALL SPECIAL MEETINGS AT THE REQUEST OF A MAJORITY OF THE EXECUTIVE COMMITTEE, OR WHEN HE DEEMS IT NECESSARY.

VICE-PRESIDENT

4. IN THE ABSENCE OF THE PRESIDENT, THE VICE-PRESIDENT SHALL PRESIDE AT THE MEETINGS OF THE ASSOCIATION.

SECRETARY

5. THE SECRETARY SHALL KEEP A RECORD IN A MINUTE BOOK OF THE PROCEEDINGS AT EACH MEETING OF THE ASSOCIATION, AND OF THE NAMES OF THE MEMBERS WHO ATTEND EACH MEETING.

TREASURER

6. THE TREASURER:
- (A) SHALL COLLECT AND RECEIVE ALL MONEYS DUE OR OWING TO THE ASSOCIATION,
 - (B) SHALL DEPOSIT ALL FUNDS OF THE ASSOCIATION IN A CHARTERED BANK OR TRUST COMPANY APPROVED BY THE OFFICERS OF THE ASSOCIATION,
 - (C) MAY MAKE PAYMENTS OUT OF THE FUNDS OF THE ASSOCIATION ON CHEQUES OR ORDERS DRAWN BY HIM AND COUNTERSIGNED BY THE PRESIDENT OR VICE-PRESIDENT,
 - (D) SHALL KEEP BOOKS OF ACCOUNTS SHOWING RECEIPTS AND EXPENDITURES FROM WHICH THE BALANCE MAY BE READILY FOUND, AND
 - (D) SHALL PRESENT AN AUDITED REPORT OF HIS RECEIPTS AND EXPENDITURES AS REQUIRED BY THE BY-LAWS.

AUDITORS

7. TWO AUDITORS SHALL BE ELECTED AT THE _____ REGULAR MEETING IN EACH YEAR BY A MAJORITY VOTE OF THE VOTING MEMBERS OF THE ASSOCIATION PRESENT AT THE MEETING.
8. THE AUDITORS' REPORT SHALL BE PRESENTED AT THE _____ REGULAR MEETING IN EACH YEAR.

COMMITTEES

9. THERE SHALL BE AN EXECUTIVE COMMITTEE COMPOSED OF THE OFFICERS OF THE ASSOCIATION.
10. AN EDUCATIONAL COMMITTEE, MEMBERSHIP COMMITTEE, PROGRAM COMMITTEE OR OTHER SPECIAL COMMITTEE MAY BE APPOINTED BY THE PRESIDENT OR ESTABLISHED BY A MAJORITY VOTE OF THE VOTING MEMBERS PRESENT AT A REGULAR MEETING OF THE ASSOCIATION, AND THE PRESIDENT IS AN EX OFFICIO MEMBER OF EVERY SUCH COMMITTEE.

MEETINGS

11. REGULAR MEETINGS OF THE ASSOCIATION SHALL BE HELD _____

(E.G., AT 7:00 P.M. ON THE FIRST FRIDAY IN EACH MONTH.)
12. NOTICE OF SPECIAL MEETINGS SHALL BE GIVEN _____

13. EXCEPT AS OTHERWISE PROVIDED BY THE CONSTITUTION OR BY-LAWS OF THE ASSOCIATION, ALL QUESTIONS PROPOSED FOR THE CONSIDERATION OF THE MEMBERS OF THE ASSOCIATION SHALL BE DETERMINED BY AN AFFIRMATIVE VOTE OF A MAJORITY OF THE VOTING MEMBERS PRESENT AT A MEETING.
14. EXCEPT AS OTHERWISE PROVIDED, AT MEETINGS OF THE ASSOCIATION, THE VOTES OF THE MEMBERS SHALL IN THE FIRST INSTANCE BE BY SHOW OF HANDS, BUT ANY MEMBER OF THE ASSOCIATION MAY DEMAND A BALLOT.

QUORUM

15. A _____ OF THE VOTING MEMBERS CONSTITUTES A QUORUM OF THE ASSOCIATION.

FEES

16. THE ANNUAL MEMBERSHIP FEE FOR EACH MEMBER IS _____ PAYABLE AT OR BEFORE THE _____ REGULAR MEETING IN EACH YEAR.
17. IN THE EVENT THE ASSOCIATION DISBANDS, THE TREASURER, ON A MAJORITY VOTE OF THE OFFICERS, MAY DIVIDE THE FUNDS OF THE ASSOCIATION AMONG THE PAID-UP MEMBERS OF THE ASSOCIATION.

DOCUMENTS

18. ALL DOCUMENTS OR INSTRUMENTS OF EVERY KIND, EXCEPT AS PROVIDED IN SECTION 6, SHALL BE SIGNED BY THE PRESIDENT, AND BY THE VICE-PRESIDENT, SECRETARY OR TREASURER.

LAPSE OF MEMBERSHIP

19. THE MEMBERSHIP OF A VOTING MEMBER LAPSES UPON HIS CEASING TO BE A MEMBER OF THE _____ FIRE DEPARTMENT.
20. IF THE FEES OR ANY OTHER INDEBTEDNESS OF A MEMBER OF THE ASSOCIATION REMAIN UNPAID FOR ONE MONTH, THE TREASURER SHALL NOTIFY THE MEMBER IN WRITING OF THE AMOUNT DUE AND, IF THE MEMBER FAILS TO PAY THE AMOUNT DUE WITHIN 10 DAYS OF SUCH NOTIFICATION, THE OFFICERS OF THE ASSOCIATION MAY FORTHWITH DECLARE SUCH MEMBER EXPELLED FOR NON-PAYMENT OF DUES OR INDEBTEDNESS AND THE SECRETARY SHALL NOTIFY THE MEMBER OF SUCH EXPULSION.

RULES OF ORDER

21. THE RULES CONTAINED IN ROBERT'S RULES OF ORDER SHALL GOVERN THE MEETINGS OF THE ASSOCIATION IN ALL CASES IN WHICH THEY ARE NOT INCONSISTENT WITH THE CONSTITUTION AND BY-LAWS OF THE ASSOCIATION.

ORDER OF BUSINESS

1. ROLL CALL
2. INTRODUCTION OF VISITORS
3. READING AND APPROVAL OF MINUTES
OF PREVIOUS MEETING
4. PRESENTATION OF BILLS
5. CORRESPONDENCE
6. REPORTS OF COMMITTEES
7. UNFINISHED BUSINESS
8. NEW BUSINESS
9. VISITORS' REMARKS
10. PLACE AND TIME OF NEXT MEETING
11. ANNOUNCEMENTS
12. SECOND ROLL CALL
13. ADJOURNMENT

REPORT ON
DISTRICT NO. 2 AND DISTRICT NO. 4
FIRE HALLS
NIAGARA ON THE LAKE FIRE DEPARTMENT

PURPOSE:

DISTRICT NO. 4 FIRE STATION (QUEENSTON) has been a topic of discussion for the last four years between the Town Council, Fire Department and the Fire Marshall's Office. The hall is totally inadequate as a fire station because of its age, size, design and location.

In December of 1970 the Town requested, by letter, that the Ontario Fire Marshall's Office conduct a Municipal Fire Protection Survey of The Town of Niagara-On-The-Lake. This report was received by the Town on March 23, 1971. One item in the report was the recommendation that the two Fire Stations, one (1) in Queenston and one (1) in St. David's be combined into one (1) Fire Station located at the intersection of Highway No. 8A and Concession No. 2.

There have been many hours of discussion on the pros and cons of what should be done with these Fire Stations and as to-date, no concrete decisions have been made, the purpose of this report will be to give Council added information to aid them in making a decision as to the future of these two (2) Fire Stations.

STATISTICS:

The following statistics have been included in this report to give an overall picture of The Niagara-On-The-Lake Fire Department. You will note that all Four Districts are represented and that a Fire Report for a 2½ Year Period is also included.

MANPOWER:

District No. 2 (St. David's) has 25 Men, one District Chief, one Assistant District Chief, one Captain, Two Lieutenants and Twenty fire fighters who all live in the St. David's area.

These men are notified that there is a fire by the fire siren at the station, radio monitors and by a telephone system which the men operate themselves. On responding to a fire some men go directly to the fire station to operate the equipment and others go directly to the fire scene. Average response time to the fire station is 3 minutes and the average manpower response to a fire is fourteen men.

District No. 4 (Queenston) has 25 Men, one District Chief, one Assistant District Chief, one Captain, one Lieutenant and Twenty One Fire fighters who all live in the Queenston Area.

The fire fighters are notified and respond to a fire in the same way as the District No. 2 Station. Average response time to the fire station is 3 minutes and the average manpower response to a fire is thirteen men.

The Fire Marshall's Report of 1971 recommended that the two stations be combined into one station but no mention was made of volunteer fire fighters. It was mentioned that five fire fighters, including an Officer would be required for a pumper. Since it was recommended that the relocated Station would have a pumper and a tanker I would assume that seven men per shift would be required. The report was written for a fully paid Fire Department which means that if the fire fighters work a twelve hour shift three shifts of seven men each would be required for the one New Station.

The average yearly salary for a First Class Paid Fire Fighter is between \$ 12,000.00 to \$ 16,000.00, these men all belong to the International Fire Fighters Union. Using \$ 12,000.00 as a yearly salary per man, one station alone for 21 paid men would cost \$ 252,000.00 a year and that is without any benefits. This also means that there would be only seven men responding to a fire call instead of the average 13 or 14 per station. It is understood that paid men would respond to the fire scene quicker and could be more highly trained but there is a limit to what the taxpayer can stand. Volunteer Fire Fighters Are Dedicated And Do An Excellent Job.

The question of why the station could not be half paid and half volunteer can be asked. This situation does not work properly in my opinion and in the opinion of most Fire Chiefs because of jealousy between the groups and that paid men and their Union are against the idea of non-professionals in a fire station.

I have asked both members of Districts No. 2 and No. 3 if they would combine memberships in one station. The answer was a Definite NO. The members of the station that was disbanded would resign in mass when the new station opened. This would mean that one station with 25 men would have double the area to cover with half the manpower available. More fire fighters would have to be advertised for and trained. This could be a problem as people who are willing to give their time to fire fighting are scarce in a small residential area.

FIRE STATIONS:

District No. 2 Station is located at the corner of Creek Road and Highway No. 8A in the south east area known as St. David's. The building is a two storey building of masonry and wood construction measuring 30 ft. x 45 ft. The ground floor consists of two bays, the second floor consists of a meeting room and kitchen. Heat is provided by an oil fired hot water system with its boiler located in a small basement. The maximum distance that fire department vehicles from this station travel to first response fires in the town is approximately seven miles.

This fire station was built by the residents of St. David's many years ago. At that time fire equipment was much smaller and the station was of ample size. With the modernizing of equipment the vehicles have become larger and consequently the fire station is congested and it is very difficult for the fire fighters to operate efficiently. The station is in a good location and is central to the fire area. The building is in good repair with the exception of the septic system.

It is my opinion that this station could be renovated and enlarged to function more efficiently as a fire station.

The ceptic system could be disconnected and a holding tank be substituted. The sanitary facilities are not used consistently to create problems and the tank could be pumped out on a regular basis.

District No. 4 Station is located on Princess Street in the south-east area of the Town, known as the Queenston Area. The building is a two storey building of masonry construction measuring 30 ft. x 35 ft. The ground floor consists of two bays with low ceilings. The second floor consists of a meeting room, kitchen and washrooms. Heat is provided by an oil fired forced-air unit. The maximum distance the fire department vehicles from this station travel to first response fires in the town is approximately seven miles.

This building was given to the fire fighters for a Fire Station years ago. It was converted to a fire station by adding two truck doors to the ground floor. Over the years these doors have been raised to accept modern equipment. In the equipment area, the ceilings are too low, too short for the length of vehicles, no inside vehicle washing area, the lighting is poor, no storage facilities. no hose washing areas, the heating is poor and the building is in a deplorable condition.

This building is a disgrace to the residents of the Town of Niagara-On-The-Lake and it is a wonder that the fire fighters are able to function at all. Again this is a good example of dedication on the part of the District No. 4 fire fighters. This building is unfit for a fire station.

EQUIPMENT:

Districts No. 2 and 4 have four (4) vehicles consisting of one (1) 1969, one (1) 1975, one (1) 1960 Triple combination pumpers, one (1) 1960 service truck and one rescue boat.

All the equipment is in good repair. The 1960 service truck was bought second hand by the fire fighters of District No.4 and will need replacing in the near future. The 1960 pumper at District No. 2 is the oldest pumper in the fire department and will be the next pumper to be replaced.

Other small equipment in the two fire stations is being renewed and repaired as required.

DISTRICT RESPONSIBILITIES:

District No. 2 has an area of 19 sq. miles and 70 miles of highway to protect. Also there are 1000 buildings of all kinds, with the residents who own them. The longest response time to the farthest point in the area will be 12.5 minutes.

District No. 4 has an area of 13 sq. miles and 36 miles of highway to protect. Also there are 600 buildings of all kinds, with the residents who own them. The longest response time to the farthest point in the area will be 12.5 minutes.

If the two Districts were combined there would be an area of 32 sq. miles and 106 miles of highway to protect. Also, there would be 1600 buildings of all kinds with the residents who own them. The longest response time to the farthest point in the area would still be 12.5 minutes.

SUMMARY:

If the Council of the Town of Niagara-On-The-Lake intends to maintain a Volunteer Fire Fighting Department I cannot agree with the recommendation of the Fire Marshall's report to put one (1) Fire Station on No. 8A Highway and Concession Two. This area is too remote from a populated area for a volunteer department. The speed in which a station answers a fire call is most important. This location would add many minutes to the response time.

If the Council can see its way clear to have a fully paid station as the Fire Marshall recommended there is some merit to the location although there would still be a lack of manpower at the major fire scene with only 7 men responding.

Also remember the area, miles of highway, buildings and lives to protect would almost double for the one station. This would mean that fire stations in District No. 1 and District No. 3 would automatically be given bigger areas to cover so that the area of the one (1) new station could be made smaller. This would take the equipment of Districts No. 1 and 3 away from the more thickly populated areas more frequently. As I have already stated, Volunteer and Paid Firefighters do not mix well together so I would suggest that if Council decided to make one station a fully paid station with 7 men a shift, they should also do the same with the other two stations but keep in mind that the cost for manpower alone would be in excess of \$ 600,000.00 Per YEAR.

It is my recommendation to keep the Niagara-On-The-Lake Fire Department a fully Volunteer Department with exception of a Full Time Paid Fire Chief who will be required in the future. With the proper administration, manpower and equipment, the Volunteer Department will function properly for many years to come at a reasonable expense to the taxpayer. This has been proven by many large Cities and Towns in the United States and Canada who still have Volunteer Fire Departments.

It is my recommendation that District No. 2 Fire Station be kept in its present location and be renovated and enlarged in the near future. An extra truck bay, extensions to the rear of the building, an extension to the second floor and the installation of a holding tank for sanitary facilities would accommodate the fire department for many years. This fire station has been functioning very well from this location on first and second calls. With the coming of the light industrial area near the Queen Elizabeth Highway, this station will be in a good position to provide excellent fire protection.

It is my recommendation that the existing District No. 4 Fire Station on Princess Street in the Village of Queenston be closed as soon as a new station can be built in the Queenston area. The new station should be of two bay size, ground level, with meeting room and Officers Office. Sufficient parking should be provided and the building should be designed to blend in with surrounding properties. An ideal location would be near the Niagara Parkway. The fire fighters in District No. 4 have offered their services in finishing the interior of the new station if the town would supply the necessary materials.

District No. 4 now protects the village of Queenston, Niagara Parks, Ontario Hydro, Federal Government properties and many miles of new homes built on the Niagara Parkway. It also provides a rescue service on the Niagara River.

I also understand that in the future there are two areas in Queenston, which are scheduled for Housing Subdivisions. This area will grow in the near future making it a heavily populated area and the location of the new Fire Station in the Queenston area would provide the adequate fire protection.

COMMENT:

If further discussion is desired on this report, please feel free to call at any time.

STATISTICSDISTRICT NO. 1 (NIAGARA-ON-THE-LAKE)

Size of Area to Protect:	4.5 Sq. Miles
Miles of Highway to Protect:	40 Miles
No. of Buildings to Protect: (Buildings of all kinds)	1800 Buildings
Longest Run in Road Miles:	3 Miles
Response Time to the Fire Scene On the Longest Run: (Includes 3 Minutes for Men to Arrive at the Fire Station)	7.5 Minutes
No. of Men in Station:	30 Men
Average Turnout of Men Per Fire Call:	18 Men
Equipment Available:	
Triple Combination Pumpers (625 I.G.P.M.)	2
Rescue Van	1
Rescue Boat	1

CONSOLIDATED FIRE REPORT FOR 2½ YEARS OF OPERATIONJULY 1, 1972 TO December 31, 1974

<u>TYPE OF CALL</u>	<u>NO. OF ALARMS</u>
Building Fires	28
Grass & Rubbish	28
Car	7
Misc. Type	26
False Alarms	10
Assistance Calls	7
Back Up Calls	20
<u>TOTAL NO. OF CALLS</u>	<u>126</u>
<u>BUILDING FIRE LOSSES</u>	<u>\$ 29,950.00</u>
<u>CONTENT FIRE LOSSES</u>	<u>\$ 7,000.00</u>
<u>TOTAL FIRE LOSSES</u>	<u>\$ 36,950.00</u>

STATISTICSDISTRICT NO. 2 (ST. DAVID'S)

Size of Area to Protect:	19 Sq. Miles
Miles of Highway to Protect:	70 Miles
No. of Buildings to Protect: (Buildings of all kinds)	1000 Buildings
Longest Run in Road Miles:	7 Miles
Response Time to the Fire Scene On the Longest Run: (Includes 3 Minutes for Men to Arrive at the Fire Station)	12.5 Minutes
No. of Men in Station:	25 Men
Average Turnout of Men Per Fire Call:	14 Men
Equipment Available:	
Triple Combination Pumps (625 I.G.P.M.)	2

CONSOLIDATED FIRE REPORT FOR 2½ YEARS OF OPERATIONJULY 1, 1972 TO December 31, 1974

<u>TYPE OF CALL</u>	<u>NO. OF ALARMS</u>
Building Fires	23
Grass & Rubbish Fires	16
Car	33
Misc. Type	14
False Alarms	4
Assistance Calls	4
Back Up Calls	15
 <u>TOTAL NO. OF CALLS</u>	 <u>109</u>
<u>BUILDING FIRE LOSSES</u>	<u>\$ 31,125.00</u>
<u>CONTENT FIRE LOSSES</u>	<u>\$ 21,000.00</u>
 <u>TOTAL FIRE LOSSES</u>	 <u>\$ 52,125.00</u>

STATISTICSDISTRICT NO. 3 (VIRGIL)

Size of Area to Protect:	20 Sq. Miles
Miles of Highway to Protect:	80 Miles
No. of Buildings to Protect: (Buildings of all kinds)	1900 Buildings
Longest Run in Road Miles	7 Miles
Response Time to the Fire Scene On the Longest Run: (Includes 3 Minutes for Men to Arrive at the Fire Station)	12.5 Minutes
No. of Men in the Station:	25 Men
Average Turnout of Men Per Fire Call:	14 Men
Equipment Available:	
Triple Combination Pumper (625 I.G.P.M.)	1
Tanker Truck (1200 I.G.)	1
Rescue Van	1

CONSOLIDATED FIRE REPORT FOR 2½ YEARS OF OPERATIONJULY 1, 1972 TO December 31, 1974

<u>TYPE OF CALL</u>	<u>NO. OF ALARMS</u>
Building Fires	18
Grass & Rubbish	27
Car	18
Misc. Type	10
False Alarms	13
Assistance Calls	2
Back Up Calls	5
<u>TOTAL NO. OF CALLS</u>	<u>93</u>
<u>BUILDING FIRE LOSSES</u>	<u>\$ 35,400.00</u>
<u>CONTENT FIRE LOSSES</u>	<u>\$ 32,850.00</u>
<u>TOTAL FIRE LOSSES</u>	<u>\$ 68,250.00</u>

STATISTICSDISTRICT NO. 4 (QUEENSTON)

Size of Area to Protect:	13 Sq. Miles
Miles of Highway to Protect:	35 Miles
No. of Buildings to Protect: (Buildings of all kinds)	600 Buildings
Longest Run in Road Miles:	7 Miles
Response Time to the Fire Scene On the Longest Run: (Includes 3 Minutes for Men to Arrive at the Fire Station)	12.5 Minutes
No. of Men in the Station:	25 Men
Average Turnout of Men Per Fire Call:	13 Men
Equipment Available:	
Triple Combination Pumper (625 L.G.P.M.)	1
Rescue Van	1
Rescue Boat	1

CONSOLIDATED FIRE REPORT FOR 2 $\frac{1}{2}$ YEARS OF OPERATIONJULY 1, 1972 TO December 31, 1974

<u>TYPE OF CALL</u>	<u>NO. OF ALARMS</u>
Building Fires	8
Grass & Rubbish	7
Car	13
Misc. Type	7
False Alarms	2
Assistance Calls	7
Back Up Calls	26
<u>TOTAL NO. OF CALLS</u>	<u>70</u>
<u>BUILDING FIRE LOSSES</u>	<u>\$ 50,530.00</u>
<u>CONTENT FIRE LOSSES</u>	<u>\$ 20,050.00</u>
<u>TOTAL FIRE LOSSES</u>	<u>\$ 70,580.00</u>

SUMMARY OF STATISTICS FOR THE FOUR DISTRICTS

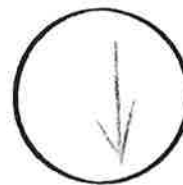
	<u>DISTRICT NO. 1</u>	<u>DISTRICT NO. 2</u>	<u>DISTRICT NO. 3</u>	<u>DISTRICT NO. 4</u>
<u>SIZE OF AREA TO PROTECT:</u>	4.5 Sq. Miles	19 Sq. Miles	20 Sq. Miles	13 Sq. Miles
<u>MILES OF HIGHWAY TO PROTECT:</u>	40 Miles	70 Miles	80 Miles	35 Miles
<u>NO. OF BUILDINGS TO PROTECT:</u>	1800 Buillings	1000 Buildings	1900 Buildings	600 Buildings
<u>LONGEST RUN IN ROAD MILES:</u>	3 Miles	7 Miles	7 Miles	7 Miles
<u>RESPONSE TIME TO FIRE SCENE:</u>	7.5 Minutes	12.5 Minutes	12.5 Minutes	12.5 Minutes
<u>NO. OF MEN IN THE STATION:</u>	30 Men	25 Men	25 Men	25 Men
<u>AVERAGE TURNOUT OF MEN PER FIRE CALL:</u>	18 Men	14 Men	14 Men	13 Men
<u>EQUIPMENT AVAILABLE:</u>				
Triple Combination Pumper	2	2	1	1
Tanker Truck			1	
Rescue Van	1		1	1
Rescue Boat	1			1

FIRE REPORT FROM JULY 1, 1972 TO DEC. 31, 1974

Building Fires	28	23	18	8
Grass & Rubbish	28	16	27	7
Car	7	33	18	13
Misc. Type	26	14	10	7
False Alarms	10	4	13	2
Assistance Calls	7	4	2	7
Back Up Calls	20	15	5	26
<u>TOTAL NO. OF CALLS</u>	<u>126</u>	<u>109</u>	<u>93</u>	<u>70</u>
<u>BUILDING FIRE LOSSES</u>	<u>\$ 29,950.00</u>	<u>\$ 31,125.00</u>	<u>\$ 35,400.00</u>	<u>\$ 50,530.00</u>
<u>CONTENT LOSSES</u>	<u>\$ 7,000.00</u>	<u>\$ 21,000.00</u>	<u>\$ 32,850.00</u>	<u>\$ 20,050.00</u>
<u>TOTAL FIRE LOSSES</u>	<u>\$ 36,950.00</u>	<u>\$ 52,125.00</u>	<u>\$ 68,250.00</u>	<u>\$ 70,580.00</u>

R.V. ANDERSON ASSOCIATES LIMITED;
Consulting Engineers & Architect,
76 Division Street,
Welland, Ontario.

() SERVICE LOCATION



INDICATE NORTH

LOT NO. DEPTH OF SERVICE
HOUSE NO. DEPT 4 AT STREET LINE
BUILDING (1) 4.75 METRES
DEPT 4.75



Street Line

Centerline of Sewer

Street Name

Municipality

REMARKS:

RSO
(RESIDENT INSPECTOR)

JOHN DALY FIRECHIEF
PRINT FULL NAME OF OWNER

Nov 12 / 87
(DATE)

JOHN DALY FIRECHIEF
SIGNATURE OF OWNER

Council appoints Deputy fire chief

Monday night
old Whittaker
St., Niagara-
Deputy Fire
on at a salary
sum effective
r will work
Don Sherlock
ble banking



WHITTAKER

for an or-
when Mr.
later this

year.
Married with three
children, Mr. Whittaker is a
graduate of North Kingstown
High School, the Shawinigan
Technical Institute and the
Army Communications
School.

He is presently employed
in the engineering depart-
ment of the Steel Co. of
Canada in Hamilton and for
the past 25 years has been
involved with the
engineering and con-
struction of all types of
piping and fire protection
systems.

He is a member of the
Board of Convenors of
Niagara Hospital and is past
chairman of the Niagara-on-
the-Lake Recreation
department. Mr. Whittaker
was an active member of the
swimming pool building fund
committee in his role as
treasurer and as a member
of District One fire depart-
ment he played an active
role in the designing of the
Fireman's Museum.

Following his appointment
Alderman Bert King said
that a feeling of uneasiness
was evident in the south end
of the town concerning the
building of a new firehall and
he thought the fear was
unwarranted.

"The people want a good
practical look at the problem
before any action is taken,"
Alderman King said.

Alderman Mike Dietsch
emphasized that before any
action was taken com-
munication between the
people of the area and
council must be improved
"they must have input into
the discussion," Ald. Dietsch
said.

In other business, council
approved the purchase of a
new fireman's van at a cost
of \$6,266, the lowest of three
tenders received.

The Niagara Advance

Vol. 47 No. 18 Niagara-on-the-Lake, Ont. May 1, 1975

Price 15c

ST. CATHARINES STANDARD Deputy Fire Chief appointed for town

APRIL
29/75

NIAGARA-ON-THE-LAKE—
This town has a new deputy
fire chief.

Last night, council mem-
bers appointed Gerald Whittaker, 47, of 163 Prideaux St.,
deputy firechief for the entire
town at a yearly salary of \$3,000.

Mr. Whittaker will assume
the post of fire chief in Au-

gust when the present chief,
Don Sherlock, retires.

Among his first duties,
deputy chief Whittaker, will
be required to sit down with
council members and review
plans to build a new fire hall
in the Queenston area.

At present council members
are considering proposals to
build a new fire hall in the

village of Queenston or to
build one central fire hall that
will serve both the Queenston
and St. Davids areas.

Earlier this year firefigh-
ters in Queenston and St. Da-
vids objected to the central
fire hall proposal saying they
felt one hall may be cheaper,
but it wouldn't provide the le-
vel of service needed by the
two communities.

Following the appointment
of deputy chief Whittaker last
night, Ald. Bert King rose to
speak on a matter of privilege
and told council members he
felt the firefighters' concerns
were unwarranted.

Council members were still
trying to make up their
minds, he said, and nothing
would be done about the new
fire hall until the two fire
chiefs were consulted.

NIAGARA FALLS REVIEW Queenston residents assured they'll get firehall information

NIAGARA-ON-THE-LAKE
— Lord Mayor Jacob Froese
Monday gave assurance to
residents living in the
Queenston area of the town
that no decision will be made
on a new firehall until the
town has talks with them.

Queenston area residents
are concerned that the old
firehall in their area will be
closed leaving them without a
facility close-by. The town
has four firehalls.

The town has been looking
at the feasibility of com-
bining the Queenston firehall
with another. It has also con-
sidered a new site. No deci-
sion has been made on
whether the four firehalls will
be reduced or another will
replace the Queenston facil-
ity.

Ald. H. F. King said there
seems to be a feeling of
uneasiness among Queenston
residents that they will lose
their firehall but their con-
cern is unwarranted.

With the appointment of a
new deputy chief, he said he
hoped that the town could
now look at the question of
another firehall or an addi-
tion to a present one.

Council approved the ap-
pointment of Gerald Whittaker
a senior piping de-
signer and co-ordinator with
the Steel Company of Ca-
nada, as deputy chief. He be-

gins his duties May 1 and re-
ceives a salary of \$3,000 a
year.

Ald. Mike Dietsch felt that
council has not commu-
nicated enough with the
people in Queenston, adding
that the town should notify
the residents what it plans to
do regarding firehall facil-
ities

the post of fire chief

NIAGARA FALLS REVIEW

Queenston residents assured they'll get firehall information

NIAGARA-ON-THE-LAKE
— Lord Mayor Jacob Froese Monday gave assurance to residents living in the Queenston area of the town that no decision will be made on a new firehall until the town has talks with them.

Queenston area residents are concerned that the old firehall in their area will be closed leaving them without a facility close-by. The town has four firehalls.

The town has been looking at the feasibility of combining the Queenston firehall with another. It has also considered a new site. No decision has been made on whether the four firehalls will be reduced or another will replace the Queenston facility.

Ald. H. F. King said there seems to be a feeling of uneasiness among Queenston residents that they will lose their firehall but their concern is unwarranted.

With the appointment of a new deputy chief, he said he hoped that the town could now look at the question of another firehall or an addition to a present one.

Council approved the appointment of Gerald Whittaker, 57, a senior piping designer and co-ordinator with the Steel Company of Canada, as deputy chief. He be-

gins his duties May 1 and receives a salary of \$3,000 a year.

Ald. Mike Dietsch felt that council has not communicated enough with the people in Queenston, adding that the town should notify the residents what it plans to do regarding firehall facilities.

Following the appointment of deputy chief Whittaker last night, Ald. Bert King spoke on a matter of council meeting and told council members that the firefighters' strike was unwarranted.

Council members were trying to make their minds, he said, and would be done about the fire hall until the chiefs were consulted.

TEN YEAR MASTER FIRE PLAN DISCUSSION PAPER

Through a resolution of Council, the Office of the Fire Marshal was requested to assist the Niagara on the Lake Fire Department with preparation of a ten year master fire plan. The OFM was asked to study fire station locations, staffing and subsequent apparatus and equipment requirements for fire suppression and rescue services.

This study must not be confused with our old survey program where specific recommendations were made to municipal councils with very little participation by local stake holders.

The opinions of all officers and fire fighters are important to this collaborative process and will be acknowledged in our final report to Fire Chief Little.

The following topics are offered for your consideration and will be discussed at your November 29/95 Officers meeting at St. Davids.

GENERAL:

1. An explanation of the OFM review process.
2. Development and implementation of your ten year master plan.

FIRE STATION LOCATIONS:

1. Need for a new station closer to Industrial Park.
2. New station for existing Station 1 area.
3. Future renovations or rebuilding of Station 3.
4. Realignment of response areas and future station projections.
5. Verification of station locations using computer program.

STAFFING:

1. Numbers and response status of existing volunteer staff.
2. Future requirements for volunteer staff: platooning, etc.
3. Need for full time Training/Safety Officer position and day time response crew or crews.
4. Current use of and future needs for fire prevention personnel.

APPARATUS and EQUIPMENT:

1. Development of a twenty year vehicle forecast when station locations and staffing have been determined.
2. Potential for utilizing technological changes in vehicles such as pumper/tankers or pumper/rescues.

This open discussion is intended to table any suggestions which you and/or your fire fighters have regarding the mandated areas of OFM study and I must emphasize that this is a **DISCUSSION PAPER ONLY** and no final conclusions or decisions have been reached at this time.

I look forward to your participation in this process and if you do have questions prior to our meeting, please feel free to contact me at 519 - 426 - 8112.



J. Wm. Jones,
Fire Services Adviser.

TOWN OF NIAGARA ON THE LAKE

FIRE STATION LOCATION and STAFFING REPORT

JANUARY, 1996

BACKGROUND:

Through a 1995 resolution of Council and a subsequent letter from Fire Chief R. Bruce Little, the Office of the Fire Marshal was requested to assist the Niagara on the Lake Fire Department with preparation of a ten year master fire plan.

The OFM was asked to analyze "Fire Hall Locations and Staffing" for future fire suppression and rescue service requirements and prepare a report which could be incorporated as a support document to your final ten year plan.

PURPOSE and SCOPE:

This report is intended as an information base for council, municipal and fire department managers to subjectively evaluate and determine future fire protection levels which ensure public safety yet are affordable to citizens of Niagara on the Lake.

Information for this report was obtained and discussed as a collaborative endeavour with the chief administrative officer, fire chief, officers and department members and while we acknowledge their contributions, the Office of the Fire Marshal does assume full responsibility for the final content.

While the OFM mandate for this study was limited to fire station locations and staffing, it is essential in determining optimum locations and appropriate staff to evaluate actual emergencies by response areas and methods used in assembling fire suppression and rescue crews.

Similarly, we have included comments about fire apparatus selection and placement relative to the potential needs of the municipality.

This report identifies areas for immediate attention in your plan and projected needs with the most practical available options, if anticipated municipal development proceeds.

The options in this report are suggested to be the most practical by the OFM because the end results are based solely upon the best affordable fire protection for ALL citizens of the Town of Niagara on the Lake.

It must be clearly understood and emphasized to all users that the content and/or conclusions of this report are not intended as any form of criticism of current or past councils, municipal or fire department managers and members.

FIRE STATION LOCATIONS:

1. STATION ONE: 233 KING STREET

The need for a new station to serve this area has been recognized and discussed by fire department members for the past ten years and this concern was identified in a 1986 report from the Office of the Fire Marshal to municipal council.

The major problems with the existing building include limited space for modern apparatus and extremely congested vehicle access to and from the site during peak traffic times.

Your volunteer fire fighters must drive private vehicles through traffic to the central station and then respond with fire vehicles through the same traffic to emergencies.

Station location studies have consistently proven it is both faster and safer to respond from perimeter locations to emergencies even if the alarms require travel to urban centres.

Municipally owned land on Niagara Stone Road would provide a more accessible site for responding volunteers, good emergency response routes to the town centre via Mississauga Street and allow improved access to Garrison Village and the Niagara Street areas.

The sale of your King Street property could finance a new building on Niagara Stone Road and likely still allow some margin of profit for the municipality.

There were discussions regarding the types of structures suitable for fire stations and to assist Fire Chief Little and his planning committee, a fire station construction and design package has been included with the original copy of this report as an appendix.

Because of the immediate need and available finances, this project should be prioritized in the earliest years of the master plan.

A list of items to be prioritized by the committee is included in this report as a **Summary of Further Action Required**.

2. STATION THREE: 1607 CREEK ROAD

While the central location of this station is important for first response in the immediate area, it is essential as second response for Station 1 and back up or cover responses for Stations 2 and 4.

Station 3 is in relatively good shape, however, the plan should address future renovations to permit more building space and the feasibility of relocating the station a short distance to the south should be examined by the committee.

3. STATIONS TWO: 745 WARNER ROAD and FOUR: 3 DUMFRIES STREET

Both of these buildings are in excellent condition and have ample space to house fire apparatus, office space and training/meeting facilities.

Fire station location studies traditionally used throughout North America are based upon National Fire Protection Association (NFPA) effective response times from fire stations to specific occupancies within a designated fire zone or area.

These times have been translated to distance by agencies such as the Underwriters Survey (Insurance Advisory Organization) with an ideal distance of 5 miles (8km) or less from a fire station to any building within the fire area.

A more detailed explanation of this response criteria is included in the following **Emergency Response Considerations** section.

Using the basic 5 mile radius concept, it becomes apparent Stations 2 and 4 are too close with only 3.1 miles separating them, however, neither can effectively serve the two response areas from existing fire station locations since this adds almost 6 minutes travel time from either site to the other immediate station area.

Station 2 responses also currently include industrial areas along York Road and unless a new station were constructed to the west, effective response times would be exceeded from Stations 3 or 4.

The concept of constructing a new station at a location between the existing sites to serve a redefined area was introduced to the fire department officers with the following discussion arising;

- an acceptable level of service for the area would have to be identified and approved by council,
- a new station would be required to the west, and,
- a new station would be required at a location between the existing Stations 2 and 4.

This option is obviously premature and should be included in the long range portion of your plan with a more comprehensive report if or when dictating circumstances become more definite.

If a report becomes necessary on this option, I would suggest the following be given serious consideration;

- any proposed station in this area be designated Niagara on the Lake Station 3 and existing Station 3 become Station 2, and,
- the personnel from Station 2 and 4 be redeployed to the new Stations 3 and 4 as individual response abilities permit.

4. NEW STATION: TAYLOR ROAD and QEW VICINITY

Current information indicates the proposed Niagara on the Green residential development is imminent with some expansion of the industrial park probable.

If this development occurs, the demand for fire protection services would be significant and beyond the effective response times from existing Stations 2 and 3.

A new station in the proposed Niagara on the Green area would also improve response to the industrial park and airport, provide better access to the QEW and reduce response times in the Read Road area now served from Station 3.

This station is contingent upon proposed development for the area and subsequently should also be included as a longer range project in the plan with annual updates to the CAO and council as more concrete information emerges.

EMERGENCY RESPONSE CONSIDERATIONS:

1. Response Time Standards:

Response times employed in evaluating fire station locations have traditionally been derived from the Table of Effective Responses published by the National Fire Protection Association (NFPA).

The NFPA standard is still used by Underwriters Survey, former Insurance Advisory Organization, for conducting municipal fire protection surveys to establish fire insurance rates. In addition, the same response data is used by private consulting firms and all computer based programs researched by the OFM.

The criteria groups and classifies buildings for fire risk and lists optimum response times for first arriving pumpers, first arriving ladder trucks (aerials) and second arriving pumpers based primarily upon potential structural fire loss.

An excerpt from the NFPA Table of Effective Responses has been included as Appendix A of this report indicating first response times of 2 to 3.5 minutes for various industrial or commercial establishments.

Although much of this framework is still valid, realized demand or actual alarm statistics have proven the vast majority of fire deaths, injuries and dollar loss occurs in residential rather than industrial or commercial occupancies in Ontario municipalities.

Other major influencing factors which make the OFM believe industries may be reasonably assigned slightly longer response times than NFPA recommends include;

- many plants are occupied by alert persons moving throughout the buildings both day and night,
- modern factories are constructed of fire resistive materials,
- even existing premises are equipped with early detection and/or sprinkler systems, and,
- many employ industrial fire brigades or teams for initial fire attack with available extinguishers or standpipe equipment.

The level of service for Niagara on the Lake was discussed and has not been formally designated or approved by council, however, the following have been used as acceptable response time standards for this report;

- 3 minutes: Institutional, limited to Station 1 and 3 areas.
- 4 minutes: Urban residential, in each fire response area.
- 5 minutes: Industrial, in each fire area.
- 7 minutes: Open/rural areas with widely detached structures.

2. Response Procedures:

To approve levels of service, council must also be reasonably sure sufficient personnel, fire apparatus and equipment are available around the clock to all fire areas of the municipality within the accepted response times.

While there is never a complete guarantee, the following measures have been taken to ensure sufficient response personnel under the volunteer fire department system in Ontario.

Platoon systems function by having a group "on call" for first responses with the second platoon and/or another designated station available as second response with additional calls for assistance to remaining stations and ultimately mutual aid.

This system makes volunteers more available for all calls and also permits them to be "off duty" if they must leave town or wish to attend various social and recreational activities. This system must be well planned to ensure the groups are properly balanced to accommodate both experience and availability of officers and fire fighters.

Medical assist squads may be formed by four people in the platoon who are available for medical emergencies at all times and they may be alerted to respond for the calls without requiring the entire platoon to assemble. Where necessary, special pagers have been provided by Emergency Health Services for these squads.

Selected officers or crews equipped with radios respond directly to the emergency scene, perform initial size up and advise responding apparatus of initial actions required saving valuable set up time in primary rescue evolutions or initial fire attack.

Multiple station responses may be activated for alarms in high hazard occupancies such as your hospital, nursing homes or industrial areas and this procedure was initiated by your fire department, however, numerous remote false alarms proved too costly to continue the program.

Discussions indicated the program could be implemented again with designated buildings actually reporting fires or emergencies.

Cover or back up systems ensure that personnel and equipment are available within each area to answer simultaneous emergency alarms and where the entire department is committed, mutual aid will provide the cover or back up.

Stand by crews are utilized by many volunteer departments for special community events and by some to staff stations during inclement weather to ensure emergency responses.

STAFFING:

1. Volunteer Staff:

Each of the stations is presently staffed with 25 officers and fire fighters with 2 auxiliary members. Our officers meeting indicated a very low turn over in personnel and waiting lists for persons interested in becoming members at individual stations.

There have been occasions where day time alarms have not turned out sufficient response personnel and other stations were activated to ensure adequate fire and rescue crews at the scene. With more fire fighters working away from the community and employers not able to allow employees leave their jobs, this is a common problem facing most volunteer fire departments in Ontario.

Response procedures outlined in the preceding section have been implemented in varying degrees by many departments to guard against a growing day time availability problem and there is no reason to believe they will not assist Niagara on the Lake.

There is no magic community size or population known to preclude use of volunteer fire fighters and the simple fact remains:

When volunteer or part time persons fail to respond to emergency alarms in a reasonable time with appropriate numbers, at any time of day, full time persons must be employed for adequate protection of the municipality and its citizens.

2. Part Time Staff:

The Town currently enjoys the services of part time fire prevention officer Mr. David Flynn, however, escalating work loads related to this position will eventually necessitate more hours than are now available.

Future needs for fire prevention should be addressed in the master plan through;

- a report on current work load,
 - a list of additional legislated requirements such as retrofit,
 - ways for each station to participate in local programs, and,
 - development of a council approved fire prevention policy to evaluate effectiveness of this important ongoing program.
-

3. Full Time Staff:

During the past ten years, the following matters have significantly increased the demand upon time for all Ontario fire chiefs:

- a) changing technology, both in fire fighting apparatus and techniques and the properties protected,
- b) legal requirements and complexities necessitating greater attention required to minimize legal liabilities,
- c) needs for self improvement in management techniques and personnel relations,
- d) needs for research, development and planning of new and specialized equipment and the associated training and education for new and specialized services,
- e) increased paper work required by all levels of government for matters ranging from simple vehicle responses to detailed reports for courts and injury reports to municipal and provincial agencies,
- f) required enforcement and/or participation in statutes, codes and regulations which were not in force until the eighties, such as the Occupational Health and Safety Act and the Ontario Fire Code.

Fire Chief Little has compensated for some of this demand by delegating and sharing some responsibilities particularly in the training area, however, even with this delegation, he simply does not have sufficient time to carry out his duties in the efficient manner council has enjoyed without some assistance.

The following is a summary of these duties and how the fire chief performs them on behalf of the Town of Niagara on the Lake:

1. The chief reviews all applications of potential members of the fire department and makes the necessary recommendation to council for hiring and then arranging for insurance, workers compensation and other municipal benefits.

The chief also interviews persons before recommendation to council concerning the suspension or dismissal of members.

2. He has established a training program for all members of the department from recruit through officers and he administers and coordinates this training for each station.
3. The chief reviews plans and inspections under the Ontario Building Code on those matters pertaining to fire safety.
4. As Chief Fire Official, he reviews inspections and enforces the Ontario Fire Code.
5. Since his position designates him as Assistant to the Fire Marshal, he has legislated responsibility to enforce the Fire Marshals Act. He also enforces other provincial acts such as the Gasoline Handling Act, as well as municipal by-laws or policies.
6. The chief administers various fire prevention programs and public information functions.
7. He attends regular meetings with the Niagara fire chiefs and the Regional Coordinator to keep current with fire related activities and also participates on various committees such as the Cross Border Agreement committee with New York State.
8. The chief participates in the formation and updating of the Regional Emergency Fire Service Plan and in the functions of the Mutual Aid Association.
9. He conducts fire investigations to determine the causes and origins of all fires in conjunction with his officers.

During some of these investigations, the chief spends time with other interested agencies such as Hydro or Energy Branch and an Office of the Fire Marshal Investigator. The following is an example of the amount of time involved;

0100 - 0600 - extinguish and overhaul fire

0600 - 1000 - secure and guard property with police assistance

1000 - 1800 - examine scene with OFM Investigator

This is a sample of the time spent on a suspicious or fatal fire at the scene and a further two hours would be spent with the Investigator at a later date reviewing reports prior to submission to Toronto.

10. The chief administers reports of all fires, emergencies and fire prevention inspections and submits them to the Office of the Fire Marshal.
11. The chief meets with other municipal department heads and has attended other meetings with municipal and provincial staff respecting emergency planning.
12. Consideration must also be given to the fact that the chief responds to requests through both the Planning and Building departments, which have numerous people employed.
13. The chief has taken an active role in establishing the criteria regarding tiered responses in the Region and has attended meetings with the provincial Emergency Health Services.
14. He administers and enforces the rules and operating procedures of the fire department, prepares and exercises control of the annual budget estimates.
15. The chief has established, implemented and administers a complete vehicle maintenance program which, undoubtedly, has proven very cost effective for the Town.
16. The chief prepares weekly, monthly, annual and various special reports for the benefit of council.

In addition to this list of activities and by all means most important, the chief attends fires and other emergencies where he assumes overall command and subsequent responsibility for the safety of 100 fire fighters and the citizens of Niagara on the Lake under the most adverse conditions.

The appointment of a full time Training/Safety Officer would allow further delegation of some task or project responsibility from Chief Little.

Fire department personnel would have a more consistent training and education program and the municipality would also benefit as this person could also provide required Occupational Health and Safety training for other municipal employees.

While this requires a financial commitment, Chief Little has a plan which will not increase the 1997 budget to employ this person.

A **SAMPLE** position description for a Training/Safety Officer has been included as **Appendix B** of this report.

APPARATUS:

A twenty year vehicle forecast should form part of your master plan to identify when vehicles are scheduled for replacement and where changes to the apparatus being used, become necessary.

Once the planning committee has decided on final station locations it should objectively evaluate what vehicles can be moved, deleted or changed to best accommodate actual needs of the station response area.

SUMMARY OF FURTHER ACTION REQUIRED:

The following are items which should be discussed by the committee and if they are included in the plan they should be prioritized with necessary action listed and the start and projected completion times identified. For example, the new Station 1 would appear in 1996 for sale of property, tender and prepare plans and in 1997 for completion of construction, members finishing meeting room and official opening of fire station.

FIRE STATION LOCATIONS:

1. Replace Station 1 with new station on Niagara Stone Road.
2. Construct new station in the Taylor Road & QEW area.
3. Renovate Station 3 and consider relocation to the south.
4. Consider new station to replace stations 2 and 4.

RESPONSE CONSIDERATIONS:

1. Prepare report on acceptable levels of fire protection for council approval using validated response time standards.
2. Determine which response procedures can be effectively used to improve assembly of fire attack teams and rescue crews:

Platoon Systems:
Responses Directly to Scene:
Cover and Back Up:

Medical Assist Squads:
Two Station Responses:
Stand By Crews:

STAFFING:

1. Volunteers to be recruited and trained for Taylor Road station with consideration of current volunteers at station 2.
2. Report and evaluation of additional programs and need for fire prevention personnel on a full, part time or volunteer basis.
3. Appointment of a full time training/safety officer.

CONCLUSIONS:

To establish and maintain an acceptable level of fire protection for the entire municipality, council must provide strategically located fire stations and sufficient trained personnel available at all times with the appropriate apparatus and equipment.

By developing and implementing a master plan which included the four station locations identified, each could provide effective first responses in their area, excellent second responses to at least one other area and between the four adequate back up or cover for any area of the municipality.

Even if some new response procedures are adopted, council should recognize an improvement in the numbers on site for fire attack and rescue teams.

If the training/safety officer is employed, effectiveness of your officers and fire fighters will increase improving fire suppression and rescue techniques and if fire prevention and public education programs are enhanced or expanded, residential fires will decrease.

The Office of the Fire Marshal has enjoyed an excellent affiliation with Chief Little and your fire department for many years and if we can be of further assistance with your master plan development or any other fire related matter, we will certainly make every effort to accommodate your request.

J.Wm.Jones,
Fire Services Adviser

TABLE OF EFFECTIVE RESPONSES: FIRST AND SECOND RESPONSE TIMES

GROUP	DESCRIPTION EXAMPLES	1ST IN PUMPER	1ST IN LADDER	2ND IN PUMPER
1.a	Very small buildings, widely detached.	7.5 min		
1.b	Scattered development, except wood roof bldgs.	6 min		
2	Typical modern, 1-2 storey residential 10 - 20 ft detached.	4 min		6
3.a	Close 3-4 storey residential, row housing, small mercantile and industrial.	3.5 min	4	5
3.b	Seriously exposed tenement. Institutional. Shopping Centres. Large area & fire loads, exposures.	3.5 min	4	5
4.a	Large combustible institutions, commercial buildings, multi storey and with exposures.	2.5 min	3.5	4
4.b	High fire load warehouse and buildings like 4.a.	2.5 min	3.5	3.5
5	Severe hazards in large area bldgs usually with major exposures & large congested frame areas.	2 min	2	3.5

There are several major influencing factors which make the OFM believe industries may be reasonably assigned slightly longer response times than NFPA recommends including;

- many plants are occupied by alert persons moving throughout the buildings both day and night,
- modern factories are constructed of fire resistive materials,
- even existing premises are equipped with early detection and/or sprinkler systems, and,
- many now employ industrial fire brigades or teams for initial fire suppression activities with appropriate extinguishers or standpipe equipment.

GENERAL STATEMENT OF DUTIES:

The training/safety officer is responsible to the fire chief for all education, training and safety programs of the department and does the related work as required, and where assigned;

Assists with fire prevention, public education, specific fire suppression and other approved departmental programs.

DISTINGUISHING FEATURES OF THE RANK:

This is supervisory and participatory work involving a high degree of responsibility for developing, coordinating, and conducting activities pertaining to education, training and safety for all fire department members.

These activities take place at fire stations, designated training facilities and emergency scenes and are performed in accordance with established policies of the department.

The training/safety officer is required to prepare and maintain appropriate training/safety records and reports, special reports, required by the fire chief, and annual training and safety budget estimates.

The training/safety officer, when required, may act in the position of the fire chief.

ILLUSTRATIVE EXAMPLES OF WORK:

- develops, implements and maintains performance based educational, training and safety programs which are successive and applicable for all recruits, fire fighters, and officers
- in conjunction with the fire chief, arranges provision for education and development of senior officers with relevant agencies
- delivers and/or arranges training of personnel in new or specialized technology, operational procedures and/or safety practices
- compiles and monitors reports of educational and training activities from station officers conducted for personnel
- meets regularly with the fire chief and officers to evaluate all educational, training and safety programs and collect practical suggestions for progression
- meets regularly with the occupational health and safety committee as a management nominee to facilitate identified problems and/or concerns
- attends other meetings when required by the fire chief
- attends educational conferences and seminars, approved by the fire chief, to remain current and ensure delivered programs further the identified requirements of the municipality

- advises the fire chief of significant changes in technology, procedures or equipment necessary to maintain or improve the programs of the department
- attends major emergencies as the on site safety director when required by the fire chief, or requested by the officer in charge
- attends all post emergency evaluations to identify problems relating to training and safety programs and recommend corrective action to the fire chief, officers and personnel
- may be required to perform other officer or senior officer duties, as required by the fire chief, from time to time

REQUIRED KNOWLEDGE, SKILL AND ABILITIES:

- thorough knowledge of the principles of adult training and education
- thorough knowledge of departmental policies, procedures and rules
- thorough knowledge of the Ontario Occupational Health and Safety Act requirements and recommended practices respecting fire departments
- good knowledge of modern fire fighting principles, procedures and equipment
- good knowledge of modern rescue and first aid principles, procedures and equipment
- good knowledge of modern fire prevention methods
- good knowledge of the municipality and surrounding areas protected by agreement
- demonstrated ability to instruct personnel, supervise fire fighters, exercise sound judgment and be resourceful

EXPERIENCE AND TRAINING:

Must have at least five years of competent experience as an officer and possess subsequent training in management skills and teaching practices at the Ontario Fire College or similar equivalent courses and seminars.

REQUIRED TRAINING FOR PROMOTION:

Must acquire advanced management, incident command and contingency planning skills and have a demonstrated ability to perform the required administrative work of a senior officer.

WORKING CONDITIONS:

The training/safety officer will be expected to respond and work in all types of weather and less than ideal conditions and may have to enter hazardous atmospheres and areas and will be expected to work in a safe manner.

July 29, 1996

FC 96-126
Fire Department

Report To: Corporate Services Advisory Committee

Subject: **Ten Year Master Plan (Station Location Only)**

BACKGROUND:

With Council's authorization the Fire Chief requested The Ontario Fire Marshals Office to conduct a *STUDY* of our present and future needs regarding fire hall location and staffing. The Study was conducted by Mr. Bill Jones, Fire Services Advisor from the Ontario Fire Marshals Office (O.F.M.) Southwest Office. Mr. Jones and I met on a number of occasions to discuss future development. One of his tasks was to meet with the officers at one of our regular monthly meetings and discuss the Study and listen to what input the officers had to offer. Mr. Jones spent a considerable amount of time mapping out the distances traveled between stations and mapping the locations of high risk buildings and special needs such as the hospital, schools, apartments, special care facilities. All of these buildings are legislated under the National Fire Protection Association (N.F.P.A.) Standards which mandates the response times for all industrial and commercial buildings. This standard is still used by the Insurance Advisory Organization who set insurance rates for the Province of Ontario.

Once the Study was completed Mr. Jones presented his findings to the Fire Chief and Officers. The report recommended a steering committee consisting of the Lord Mayor, two members of Council, the Chief Administrative Officer, the Fire Chief, a District Chief from each Station, the Chief Fire Prevention Officer and the Director of Training. Council approved the report and the steering committee structure.

At the first meeting of the Steering Committee held April 23, the Study was reviewed and the following questions were asked:

- Are we presently providing sufficient Fire Protection to the Community as a whole?
- Are the present fire hall locations serving the entire community?
- Can we provide the same level of fire protection with a reduction of fire halls?
- Can we justify four fire halls?
- If Niagara-on-the-Green is to be developed should we be considering a new station?
- Would we be lowering the level of service if we were to reduce the number of fire halls?

This report will provide an answer to these questions.

The Steering Committee also focused on the task of providing Mission Statement goals.

MISSION STATEMENT

"TO ESTABLISH AND MAINTAIN AN ACCEPTABLE LEVEL OF FIRE PROTECTION FOR THE "ENTIRE" MUNICIPALITY IN A COST EFFECTIVE MANNER, TODAY AND IN THE FUTURE."

Town Planner Mr. John Perry attended one of our meetings and provided us with his department's estimate of potential growth and development in the urban areas over the next ten years. From this meeting the committee felt that we should be focusing on the Old Town, Virgil and Glendale Area.

A considerable amount of time was spent on analysing the need for the existing four stations. The Fire Marshal provided us with a number of options ranging from a single station to five stations. Each scenario was judged on its own merit.

The Committee felt that reducing the existing four stations would create a negative atmosphere for the following reasons:

- More work load on the remaining stations
- Full time firefighters may be required; operational costs will go up
- May affect our insurance rates
- Response times will go up if we have fewer fire halls
- Higher taxes
- Less manpower available with fewer stations

On the positive side, reducing the existing four stations would:

- Less equipment to maintain
- Fewer buildings
- Fewer firefighters

The committee also reviewed the type of emergency incidents to which we respond, the type of buildings involved and the mandated time frame to be on location as per N.F.P.A. Standards.

It was noted that when the Town amalgamated in 1972 the existing stations became part of the overall fire protection for the Town and we inherited the station locations.

The Committee generally felt the Fire Department was providing a sufficient level of service, and was unanimous that four fire halls would best serve our community for the above noted reasons. It was generally felt we would be lowering the level of service to our citizens by reducing stations and this could result in increased insurance rates to home owners and commercial properties.

The next step was to review the Fire Marshal's recommendations for present and future station locations. Mr. Jones refers to the Fire Marshals Report of 1986 which identifies the same problem we are experiencing today with District No. 1 Station (Old Town). The 1996 Report clearly identifies limited space for modern fire apparatus, extremely congested vehicle access for volunteer firefighters responding to an emergency incident and firefighters trying to get the fire apparatus back through the same congestion after the incident. Mr. Jones visited the Highway 55 site (Town owned lands) near the Old Town and agrees this should be the preferred site. After a lengthy discussion the Steering Committee agreed with Mr. Jones recommendation, and also decided that the sale of the existing #1 Station and the building of a new station on Highway 55 should be the number one priority.

It was also noted that District No. 3 Station (Virgil) was land locked and any future expansion will be almost impossible. Significant growth in the Virgil area will dictate expansion or construction of a new fire hall.

The Glendale area including Niagara-on-the-Green will be monitored as to call volume and development growth. Mr. Jones report recommends a new fire hall be constructed in the Glendale area when sufficient development has occurred to justify a new station.

Since only 3.1 miles separate District No. 2 (St.Davids) and No. 4 (Queenston) Stations the Fire Marshal recommends that these two stations amalgamate and a new station be constructed between St. Davids and Queenston to serve both communities and the rural area.

Please find the attached the Fire Marshals Report dated January 1996 as a supporting document for the statements made in this report.

Comments:

As our Community grows so must emergency services.

This study was prepared to establish and maintain an acceptable level of fire protection to the **entire** community. If the existing stations were relocated strategically throughout Niagara-on-the-Lake the work load and response areas would be equally shared by all four stations.

Accepting the Master Plan would provide a greater level of fire protection in a cost effective manner to all areas of Niagara-on-the-Lake.

The Fire Chief and Members of the Ten Year Master Plan Steering Committee make the following recommendations.

RECOMMENDATIONS:

Recommendation No. 1

That the Fire Chief be authorized to proceed with preparing plans and drawings and calling tenders for construction of a new fire hall on Town owned property on Highway #55, and that the existing fire station at 233 King Street be advertised for sale with the condition that it cannot be occupied until the new fire station is completed.

Recommendation No. 2

That the Fire Chief and Steering Committee be authorized to review emergency call volume and fire hall condition and growth in District 3 (Virgil) three (3) years from the date of this report being submitted, to consider remodelling and/or relocating and constructing a new fire hall. A full report to be submitted to the Lord Mayor and Council of the day for their approval.

Recommendation No. 3

That the Fire Chief and Steering Committee be authorized to review emergency call volume and development in the Glendale area including Niagara-on-the-Green three (3) years from the date of this report being submitted, for consideration of a new fire hall to be built in the Glendale/York Road area. A full report to be submitted to the Lord Mayor and Council of the day for their approval.

Recommendation No. 4

That the Fire Chief and Steering Committee be authorized to review the location of Station No. 2 (St. Davids) and Station No. 4 (Queenston) three (3) years from the time this report is submitted to consider the following options based on the Fire Marshals report of 1996:

Option No. 1

Maintain, staff and provide the appropriate fire apparatus for five (5) fire halls within the boundaries of Niagara-on-the-Lake.

Option No. 2

Close Station No. 4 (Queenston), relocate the fire apparatus and staff and have Station No. 2 (St. Davids) provide fire protection for this area.

Option No. 3

Close No. 2 Station (St. Davids), relocate the fire apparatus and staff and have Station No. 4 (Queenston) provide fire protection for this area.

Option No. 4

Amalgamate District No. 2 (St. Davids) and District No. 4 (Queenston) Stations by building a new fire hall between the Village of Queenston and St. Davids to best serve both communities as proposed in the Fire Marshals Report 1996.

Fire apparatus and staff would be distributed between the Glendale Station and the York Road Station.

TOWN of NIAGARA on the LAKE

Verification Report for Fire Station Locations:

June, 1997

Introduction:

In February 1997, Council authorized Chief Administrative Officer, L.J. Holloway, to request the Office of the Fire Marshal to *verify station locations and prepare an accompanying report of our findings*. The project was to be conducted in collaboration with Fire Chief B. Little using our leased computer program.

Unfortunately, prior commitments and current budget restraints forced our Program Development Manager not to approve use of the program for Niagara on the Lake. It was agreed, however, the principles of the program could be applied with distances and responses physically verified by Chief Little and myself.

The only aspect of the computer based program not incorporated in your verification is the number of prearranged zones that may be covered from optimum computer selected station sites. It must be emphasized that while the computer selects optimum sites, use of volunteer fire fighters requires users to select alternative locations where the volunteers can readily assemble at stations for responses.

Based upon previous OFM experience with the computer program, distances and times were recorded to the extremities of the Town as well as selected target locations. It was concluded if the times to the municipal boundaries were satisfactory, all sites closer would also be acceptable.

Verification Results:

At Chief Little's suggestion, we commenced this project to verify if the Town could be adequately serviced from three strategically located stations, rather than four. We concluded that this was the most practical option for long term fire protection services, provided certain factors were agreed upon and included in final development of your plan.

This option includes:

- a) *Amalgamation of stations 1 and 3 at a new headquarters station in the vicinity of Highway 55 (Niagara Stone Road) and Regional Road 85 (East & West Line),*
- b) *Construction of a new station in the Taylor/Irvine and Queenston Road vicinity, and,*
- c) *Amalgamation of stations 2 and 4 at a new station in the Concession 2 (Progressive Ave) and Regional Road 81 (York Road) vicinity.*

The following table illustrates various response times from these locations to selected sites traveling at the ***posted speed limits*** with minor variances for road conditions and traffic congestion slowing some times.

Selected Site: Hospital

<i>Station</i>	<i>Route</i>	<i>Time</i>
HQ	85, Niagara Pkwy, Queens Parade (80 km/hr)	3.9
#1 @ 55	Mississauga, Queen (50 km/hr)	3.8
Taylor	Irvine, 55, 85, Niagara Pkwy, Queens Parade	12.9
York	York, Conc 1, 85, Niagara Pkwy, Queens Parade	12.1

Selected Site: Read & Carlton

HQ	55, Carlton	9.1
Stn 3	55, Carlton	7.4
Taylor	Queenston, Stewart, Carlton	5.0
York	York, Taylor, Queenston, Stewart, Carlton	12.5

Selected Site: Airport

HQ	55	6.6
Taylor	Irvine	2.4
York	York, Taylor, Irvine	9.9

Selected Site: Niagara Parkway at Line 4

HQ	85, Niagara Parkway (70km/hr)	6.6
Taylor	York, Niagara Parkway	15.4
York	York, Niagara Parkway	7.8

Selected Site: Virgil

HQ	55	1.7
Taylor	Irvine, 55	7.2
York	York, 100 (Four Mile Creek Rd)	8.6

Selected Site: Queen and Mississauga

HQ	55	3.7
Taylor	Irvine, 55	14.0
York	York, Conc 1, 85, Niagara Pkwy, Queens Parade, Queen	12.7

Overall responses were quite adequate from the three sites tested with at least one of the stations capable of a response time to the target location within the following accepted standard:

- a) *Institutional:* 4 minutes
- b) *Urban Residential:* 5 minutes
- c) *Rural Residential:* 7 minutes
- d) *Industrial:* 5 minutes

The responses from the proposed site for Station 1 at Niagara Stone Road and existing Station 3 Virgil were added to demonstrate times may be slightly lower to some areas from existing locations. This fact, however, is appropriately compensated for when responses to opposite municipal boundaries are considered.

Our tested responses also clearly indicate a station in the Taylor Road area is absolutely essential to make this option viable. Without this station there would be response times of 9 minutes from the proposed Headquarters and 8.6 minutes from the York Road station to Queenston Road at 55 Highway.

The table also indicates times for second and third responses to each target area. This should verify the necessity of having an adequate first response and back up in each area for initial rescue and fire attack teams.

Response Procedures:

Revised response procedures is the second critical factor in making this option work. In basic terms, a two platoon system must be implemented in each response area with equal representation on each platoon from the existing Stations 1 and 3 and Stations 2 and 4.

When an emergency call is received in Virgil, the persons "*on duty*" from Virgil respond directly to the scene and those from existing Station 1 proceed to the new station to bring the appropriate equipment. Similarly, existing Stations 2 and 4 will have to determine an appropriate dividing line or sector for their standard responses.

This procedure still leaves a back up platoon in each area that may be activated when a working emergency is encountered unless it is decided to activate a second station before the "*off duty*" platoon.

This type of response procedure is not new in Ontario and has been used successfully in several expanding municipalities across the province. Our current Regional Manager worked this response system several years ago as both a volunteer and full time fire fighter while the City of Brampton developed.

The station between Virgil and Old Town is also not a new proposal. Former Fire Chief G. Whittaker discussed the idea with several persons, however, did not actively pursue this option because of perceived political and personal negative sentiments at that time.

While the three station option can work, it must also be accepted that a sufficient number of fire fighters and appropriate apparatus are maintained to adequately respond to emergencies. Even with the amalgamation of four stations, the platoons will not work unless there are enough available persons for the initial calls. Apparatus should also be readily available for second alarms within the enlarged fire response areas, as well as for back up to the other stations.

Conclusion:

Chief Little and I both believe this to be the most practical solution for effective provision of fire protection services based upon costs the municipality should be able to afford over the next five to ten years.

If this option is not accepted, for any reason, our suggestion is to proceed with construction of a new Station 1 at Niagara Stone Road, amalgamation of Stations 2 and 4 in a new station and eventual relocation of Station 3 to a location slightly south of Virgil. Should this be the avenue of choice, Council must also be made aware of excessive response times to the Glendale, Queenston Road and Highway 55 areas of the Town, if a station is not constructed in that vicinity.

Your Fire Planning Committee must now decide on the priorities for staging an acceptable plan and if the Office of the Fire Marshal can be of any further assistance at any phase, we will make every effort to accommodate your request.

In concluding, this report, I again extend sincere thanks to Fire Chief Little for his input and assistance with this project.



J. Wm. Jones,
Fire Protection Adviser

NIAGARA-ON-THE-LAKE FIRE & EMERGENCY SERVICES

10 Year Master Plan - Steering Committee

A G E N D A

1. Review the Recommendations from Report #FC 96-126 (attached)
2. Review the Mission Statement as adopted by the Steering Committee of "96"
3. Review: Virgil Call Volume
Condition of Virgil Station
Growth
Other
4. Review: Glendale Area Call Volume
Growth
Land for Station
Partnership with Niagara College
Sub-station
5. Amalgamation of Queenston (Station #4) & St. Davids (Station #2)
6. Direction from Committee
7. Date and location of next meeting
8. Adjournment

Date: June 8, 1999

Time: 7:00 p.m.

Location: District #3 (Virgil)

RECOMMENDATION NO. 1 - Sale of Existing District #1 Station

3. RECOMMENDATION NO. 2 - Review of District #3 Station

VIRGIL CALL VOLUME:

Chief Little reviewed the number of calls responded to in the past five years. An unusually large increase from 59 in 1996 to 100 in 1997 was noted. Chief Little will attempt to separate these numbers into types of incidents.

CONDITION OF BUILDING:

- It was built in 1959.
- The truck bays are overcrowded - 2 doors and three trucks.
- Structural considerations.
- Heating costs - no insulation.
- No expansion potential at the present location.

LAND FOR STATION:

No Town land has been identified to be acceptable for a new station. Further research will be required to identify potential sites.

GROWTH:

The growth potential of the Virgil Urban Area was placed at 1,000 units by Town Planner, John Perry to the 1996 Committee. It was agreed this number will only change upward with time.

There were no other considerations at this time.

4. RECOMMENDATION NO. 3 - Review of the Glendale Area

GLENDALE AREA CALL VOLUME:

Fire Chief Little reviewed the calls responded to in the period of November 1, 1998 to April 30, 1999.

District No. 2 - 62 Incident Responses in total
- 39 Incidents in Glendale Area

District No. 4 - 32 Incident Responses in total
- 16 with District No. 2 - Rescue

GROWTH:

Commercial and residential development is increasing along with the completion of Niagara College. Niagara-on-the-Green is starting its residential component with 150 lots. Growth potential is large and rapid.

LAND FOR STATION:

Potential sites for station locations are Taylor Road at York Road (Town owned), the Ministry of Transportation property (patrol yard) and vacant land in the area.

PARTNERSHIP WITH NIAGARA COLLEGE:

The committee agreed that this is an interesting option and should be researched. B. Little, A. Viola and L. Holloway will arrange to meet with the College Administration to discuss the possibilities.

5. **RECOMMENDATION NO. 4 - Amalgamation of Districts #2 & #4**

The Committee agreed that this is an emotional issue and will be discussed at the next meeting.

6. **Direction from the Committee:**

The Committee agreed that to establish a plan for the Glendale Area should be of the highest priority. Further statistical information will be assembled by Chief Little and an update of the discussions with Niagara College will be available at the next meeting.

7. Committee members will be notified on the date of the next meeting.

Meeting adjourned at 8:40 p.m.



Office of the Fire Chief
R. Bruce Little
TELEPHONE (905) 468-3266
FACSIMILE (905) 468-2959

The Town of Niagara-On-The-Lake

1593 CREEK ROAD
P.O. BOX 100
VIRGIL, ONTARIO
L0S 1T0

September 21, 1999

FC 99-205
Fire Department

Report To: Steering Committee Members
Fire Department 10 Year Master Plan

From: Bruce Little, Fire Chief

Subject: **Recommendations to Council**

Recommendation #1

That the Fire Chief be authorized to proceed with the purchase of property as defined on Schedule "A" for future consideration to relocate District #3 Station (Virgil).

Recommendation #2

That the Fire Chief be authorized to proceed with final preparation of acquiring Town owned land for construction of a new fire hall in the Glendale Area as identified in Schedule "B".

Recommendation #3

That the Fire Chief be authorized to establish a building committee to review plans in preparation for construction of a new fire hall in the year 2002.

Recommendation #4

That the Fire Chief and Steering Committee be authorized to reconvene three years from the time of this report being submitted to review location of Station #2 (St. Davids) and Station #4 (Queenston) to consider the following options based on the Fire Marshals report of 1996 and the Steering Committee's research of 1999.

Option #1

Provide the appropriate apparatus and staff for five stations within the boundaries of Niagara-on-the-Lake.

Option #2

Upon completion of construction of the new Glendale Station, Station #4 (Queenston) and the new Glendale Station would become sub-stations of Station #2 (St. Davids), and staffing and apparatus would be relocated to best suit our needs of the day.

Option #3

Close and sell Station #2 (St.Davids) and Station #4 (Queenston), amalgamate both stations and build a new station between St. Davids and Queenston as proposed in the Fire Marshals report of 1996.

Recommendation #5

That the Fire Chief and Steering Committee be authorized to reconvene in three years from the time of this report being submitted to review the emergency call volume, growth in the Virgil area and fire hall condition at Station #3 (Virgil).

Respectfully submitted,

B. Little
Fire Chief

BL/jp



Office of the Fire Chief
R. Bruce Little
TELEPHONE (905) 468-3266
FACSIMILE (905) 468-2959

The Town of Niagara-On-The-Lake

1593 CREEK ROAD
P.O. BOX 100
VIRGIL, ONTARIO
LOS 1TO

December 06, 1999

FC 99-25
Fire Department

Report To: Corporate Services Advisory Committee

Subject: Fire Department - 10 Year Master Plan

BACKGROUND

With the authority of Council (Report #FC 99-009) the Fire Department 10 Year Master Plan Steering Committee reconvened on June 8, 1999 to review the four recommendations from the 1996 Master Plan report. A copy of the recommendations was provided to Committee members for information purposes. Our mission statement (Appendix 1) was reviewed with minor modifications to reflect today's needs and demands.

The first recommendation from the Steering Committee's 1996 report was the sale of the King Street Fire Hall and construction of a new station on Highway #55. This is still ongoing.

The second recommendation was to revisit and review our District #3 (Virgil) Station on the following topics:

- a) building condition & location,
- b) growth,
- c) call volume, and
- d) availability of land.

Building Condition & Location

The Virgil Fire Hall was constructed in 1959 and yes, at that time it did indeed serve the community of the day. The overall condition of the hall is sound, but does not meet today's needs or standards. There appears to be little or no insulation in the walls in the truck bays. This is also the case with the overhead bay doors; they are not insulated. There is no fire separation between floors, and this has limited the functions in the meeting room on the second floor. A storage room is being used by the secretary and District Chief as an office. Three large trucks are crowded into two bays, with only two overhead doors. There is no room for expansion to the existing building and parking has always been an issue with our neighbours. The location is great, but it is a very busy intersection with the connecting link to the Old Town.

Growth

The Planning and Development Department provided an overview of the estimated growth within the urban boundaries of Virgil (Appendix 2). We can expect a growth of 1,047 units, in the next eight to ten years which will be second to the Glendale Area.

Call Volume

District #3 (Virgil) has experienced an increase in emergency incidents. The past three years of emergency incidents were reviewed by Chief Little for an explanation. Chief Little reported an increase in home detection systems activated, burning complaints and car accidents. These appeared to be the obvious reasons.

Availability of Land for a new Station

With the existing station being landlocked, the Committee felt the importance of investigating possible sites that may be available to suit our needs today and in the future. It was also noted that if and when we wanted to purchase lands for future consideration there may not be any available at a reasonable price with the anticipated growth in the next five to ten years. Chief Little and other Committee members were invited to explore possible sites and report their findings to the Committee. One site was identified and preferred by Committee members as well as District #3 Senior Officers. The site is located on Regional Road #55 at the corner of Concession 6 Rd. (refer to map on Appendix 3). It is approximately one acre, with water and sewer available. This preferred site provides great access for responding apparatus to the defined area that our District #3 is responsible for. Preliminary decisions with the owner of the preferred site indicates the land may be for sale.

The third recommendation from the 1996 report under review is the Glendale Area. The Steering Committee discussed at length the potential growth and development in this area. Distance and time appeared to be a significant factor in providing fire protection for the Glendale Area and all agreed this area should receive a great deal of our attention and priority in our next report to Council. The following items were discussed:

- a) growth,
- b) call volume,
- c) potential sites,
- d) partnerships,
- e) staffing & apparatus,
- f) amalgamation of districts, and
- g) funding.

Growth

Once again, the Planning and Development Department were very helpful in providing us with anticipated growth in the Glendale Area (Appendix 4). At this time we can expect approximately 1,600 units to be constructed in the area. As this report is being prepared, Niagara College student residences and Purolator have both started construction, Niagara-on-the-Green is preparing to construct another

40 homes before winter sets in, the golf course is underway and there is a lot of talk on future expansion in the Niagara-on-the-Green commercial area.

Chief Little also provided a daytime and nighttime population for the Glendale area. This chart is included in the package (Appendix 5).

Call Volume

Before we could determine call volumes Chief Little had to determine a defined area to study for the purposes of the request for Incidents (refer to Appendix 6; a map showing the defined area that may be the area of responsibility if a new station were to be constructed).

Chief Little reviewed Emergency Incidents for both District #2 (St.Davids) and District #4 (Queenston). In the past three years it was revealed that over 60% of all Emergency Incidents that these two stations responded to, were in the Glendale Area.

Partnerships

Due to the importance of Fire Protection in the Glendale area, it was suggested that members of Committee meet with the C.E.O. of Niagara College to see if a partnership could be formed that would see a station located on site the of the College. A meeting with Mr. Paterson revealed that although he liked the idea, there is no land available at the Glendale Campus.

The Committee also directed Chief Little to explore a partnership with the Ministry of Transportation (Glendale Yard). The Ministry of Transportation has tendered all of its' snow plowing and sanding operations to private contractors. The contractors will be given the first right of refusal to use the on site garage. Chief Little has indicated to the Ministry that we may be interested in renting a bay on an interim basis. The tenders will not be opened until December 1999. The Ministry will keep us posted.

Potential Sites for a New Station

Again, Committee members were asked to consider potential sites for a fire station in the Glendale Area. A number of sites were reviewed, with Town owned property being the preferred site on York Road and Townline Road in front of the Ministry of Transportation property (refer to Appendix 7; a map outlining the property). The property offers quick access to the Q.E.W., the Niagara District Airport, Niagara College, conference centres, residential and commercial areas.

Chief Little provided a mileage chart and approximate response times for the preferred location on York and Townline Roads. They are also included in this package (Appendix 8).

Staffing & Apparatus

During our study the question of staffing and apparatus was discussed at length. Chief Little advised the Committee he has never planned nor budgeted for additional staffing and/or apparatus. In the opinion of the Fire Chief, we do have adequate staffing and apparatus. It is just a matter of relocating them to a better location where they can best serve our Municipality. Our Development Charges By-law does address the possibility of another station in the Glendale area, with staffing and apparatus status quo. Therefore, the Committee agreed that apparatus and staffing would come from our District #4 and District #2 Stations. Chief Little was directed by the Committee to send flyers to the Glendale Area to see if in fact there may be individuals that would be interested in joining our Department. 326 letters were sent out with 6 people putting their names forward and/or inquiring about the position (refer to Appendix 9; the recruitment notice that was mailed out).

Amalgamation of District Stations

Chief Little was asked to provide capital costs and operating expenses for a new station. This was prepared and discussed (refer to Appendix 10; a copy of this report for your information). To construct a building and provide the appropriate equipment and apparatus for a new fire hall would be approximately 1.2 million dollars. Our Committee is suggesting that upon completion of a fifth station, the Glendale Station and Queenston Station would now become sub-stations of District #2 (St. Davids). A full compliment of 25 firefighters would be on staff in District #2. Queenston and Glendale would be reduced to 10 - 15 firefighters per District. Our Committee is suggesting this would be in effect until such a time when Station #5 would stand on its' own. This however, would be driven by development and emergency incidents.

Funding

The Committee is suggesting that Station #5 be constructed in such a manner that we could start with a single bay and add on as it becomes necessary. Therefore, we feel a new fire station could be built for under \$400,000.00. Funding would come from one of two sources; our Development Charges or our Fire Department Reserves. It is possible that we may accumulate a reserve from our Development Charges by the time of construction or we borrow from our Fire Department Reserves. Last but not least, we could start a reserve fund for construction of a new station and budget on an annual basis.

Conclusion

From the information provided and researched by the Committee there could be a strong argument for a fifth station in the Glendale Area today. The amalgamating of stations is always a sensitive topic and the Committee believes we may in fact satisfy the concerns of all those involved by making Queenston and Glendale sub-stations of District #2 (St. Davids) and use all the existing apparatus and equipment.

Although Virgil Station (District #3) will not be moving in the near future, the Committee is happy with the proposed location and is fully supportive of purchasing lands for future consideration.

The Fire Chief and members of the Fire Department 10 Year Master Plan Steering Committee are pleased to make the following recommendations for approval by the Lord Mayor and members of Council:

RECOMMENDATIONS

It is respectfully recommended that;

1. the Fire Chief be authorized to proceed with the purchase of lands as identified in this report and known as Part Lot 156, Roll #15-040-01 (0.79 acres) in the Town of Niagara-on-the-Lake, for future consideration to relocate the District #3 (Virgil) Fire Station.
2. the Fire Chief be authorized to secure approximately 1 acre of property on Town owned land on the corner of York Road and Townline Road in the Town of Niagara-on-the-Lake known as Part 2 of Plan 30R-7347 for future consideration of a fifth Fire Station to serve the Glendale Area as defined in this report (Appendix 6).
3. the Fire Chief be authorized to establish a Building Committee consisting of the Fire Chief, 4 District Chiefs, one member of Council appointed by the Lord Mayor and the Chief Administrative Officer to review plans in preparation for construction of a new station in the year 2002 and investigate a building that would temporarily locate a first response team of firefighters and apparatus to the Glendale Area by the summer of 2000.
4. the Fire Chief and Steering Committee be authorized to reconvene three years from the time of this report being submitted to review location of Station #2 (St. Davids) and Station #4 (Queenston) to consider the following options based on the Fire Marshals Report of 1996 and the Steering Committee's research of 1999.

Option #1

Provide the appropriate staffing and apparatus for five stations within the boundaries of Niagara-on-the-Lake.

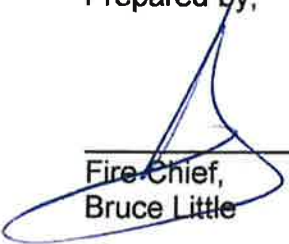
Option #2

Upon completion of construction of the new Glendale Station, Station #4 (Queenston) and the new Glendale Station (Station #5) would become sub-stations of Station #2 (St. Davids). Staffing and apparatus would be relocated to best serve our needs of the day.


Option #3

Close and sell Station #2 (St. Davids) and Station #4. Amalgamate both stations and build a new station between St. Davids and Queenston as proposed in the 1996 Fire Marshal's Report.

Prepared by,



Fire Chief,
Bruce Little

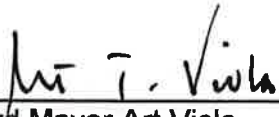
Alderman Rob Copeland
Committee Member

Lew Holloway
Chief Administrative Officer
Committee Member

District Chief Greg Warner
Committee Member

District Chief Bob Dick
Committee Member


Submitted by,



Lord Mayor Art Viola
Committee Member

Alderman Terry Flynn
Committee Member

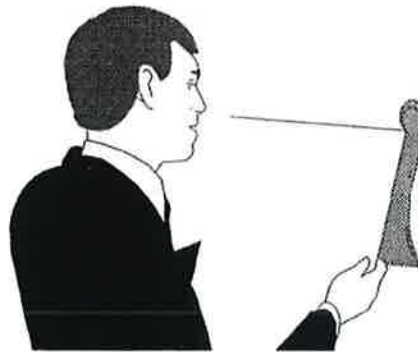
Dave Flynn
Community Fire Safety Officer
Committee Member

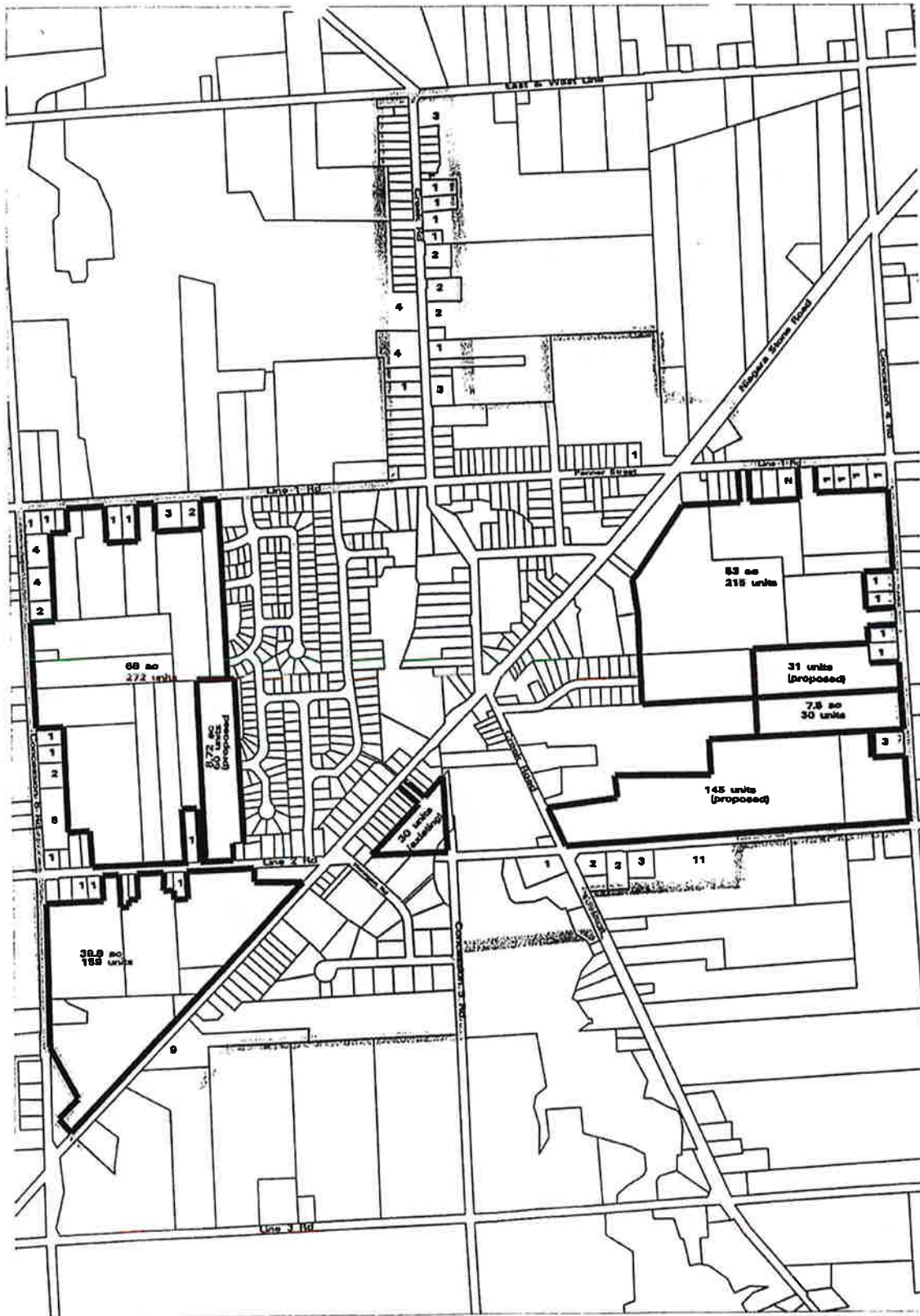
District Chief Richard Woodruff
Committee Member

District Chief John Daley
Committee Member

MISSION STATEMENT


To establish and maintain an acceptable level of fire protection and emergency services for the entire municipality in a cost effective and efficient manner, today and in the future.





VIRGIL

Estimated New Dwelling Units = 942
 Estimated New Building Lots = 105
 Total = 1047

 Urban Boundary
 Based on 4 unit per acre

APPENDIX (31)

34th

FARM LTD

CSL

7-80 BOR-2464
PT. 2

57

MAZZA

PT 307-7109

CLARK

2-15-033

EVELYN & GORDON QUINN
10 ACS
434926-81 908-2404

14-284

N. L. C. FINNAN, 110

11.14 ACS
57100-78 306.84

14-286

PETER GOSSEN
A. P. ACS
PART 3
SEC. 5-12

14-280

SIEGFRIED WERNIG
10.42 ACS
234030-11

15-3405
3.87
acres

#14-283

H. G. M. PEYERAN
14.493 ACS
529382-87

14-282¹⁰

14-256

NEWARK (W) INC. LTD.
9.04 ACS
306-3509 144985-82

14-257

WINDOL FARM
12.1 ACS
306-3509

14-254

PETER C. W. KLINSON

17 ACS

427215-90

15-41

R. D. BYL
8.89 ACS
569113-88

15-40

CLIFFORD PAUL
6.75 ACS
77135

5-56

S. 240K
574282
8206-82

15-47

SEPARATE
SCHOOL
9.64 ACS
143852

15-54

MARTIN BRENS
17.4 ACS
86322

15-2

HUBBEL GRAPES
100 ACS
569113-88

LOT

122

Potential New Dwellings/Lots

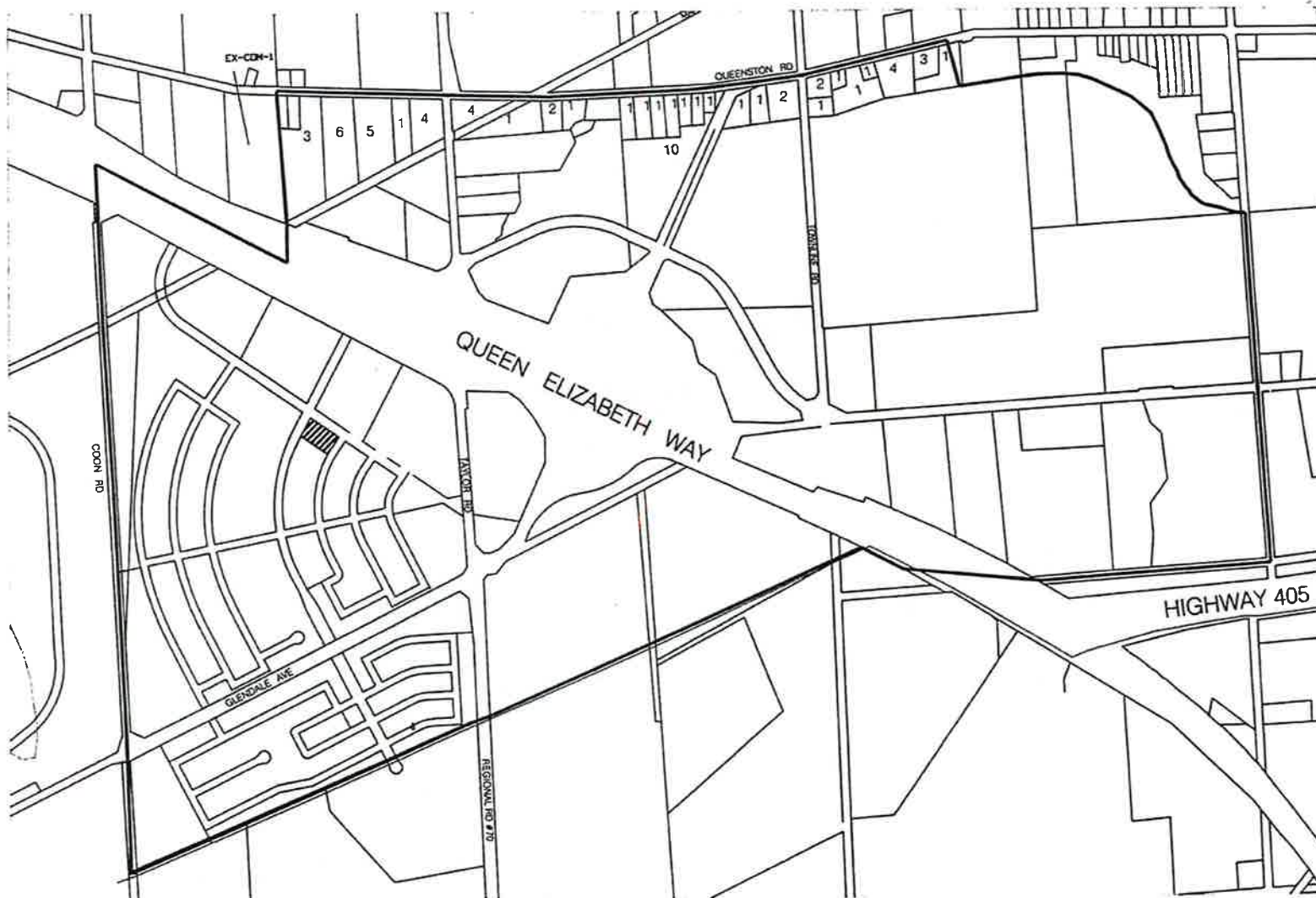
1438 dwelling units - proposed

**101 units - First Phase

Potential New Dwellings (Lots) = 62

1601 Urban Boundary

*Not Considered Dwelling Units As Defined in Zoning By-law



Alexander (4)

Population in the Glendale Area

1,000 Permanent Residents

Daytime Population

White Oaks	500
Husky	100
Private Eyes	100
Seneca	30
Glendale Industry	100
Airport	100
Lincoln area	50
Niagara College	2,000
Niagara Residents	500
Wiens Complex	500
Purolator	200
TOTAL	4,180

Nighttime

Niagara College Residents	500
White Oaks	500
Wiens Hotel	300
Husky	100
TOTAL	1,400

Garh-103



CITY OF NIAGARA FALLS

THE TOWN OF NAGARA ON THE LAKE	
ACCOUNT # 11111111	ACCOUNTING UNIT
DATE 1-7-78	DATE
RAVAIL ADDRESS NUMBERING SYSTEM	
ISSUED BY: M.L.	ISSUED
ISSUED DATE	DATE 87-78

NUMBERS HAVE BEEN DESIGNATED TO RUN PROGRESSIVELY FROM SOUTH TO NORTH & FROM WEST TO EAST WITH EVEN NUMBERS TO BE ON THE NORTH & WEST & ODD NUMBERS TO BE ON THE SOUTH & EAST.

NOTES

Location Map



Subject Property

July 28, 1999

Proposed Fire Hall Locations**TIMES AND KILOMETERS****Town owned property in front of M.T.O. to:**

	<u>Kilometers</u>	<u>Minutes</u>
Airport	3	3.06
Carlton Street	7.8	6.40
Lakeshore Road	11.2	10.11
Concession 7 Road	1.4	1.4
Creek Road	4.7	
Niagara Parkway	8.7	

Existing Station #3 to:

Lakeshore Road	8.3	6.50
----------------	-----	------

Proposed new station at Concession 6 Road to:

Airport	4	3.03
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Appendix (91)



Office of the Fire Chief
R. Bruce Little
TELEPHONE (905) 468-3266
FACSIMILE (905) 468-2959

1593 CREEK ROAD
P.O. BOX 100
VIRGIL, ONTARIO
L0S 1T0

The Town of Niagara-On-The-Lake

NOTICE

NIAGARA-ON-THE-LAKE FIRE & EMERGENCY SERVICES

Due to the rapid growth in the Glendale area, the Fire Chief has formed a Steering Committee to review our needs now and in the future for Fire & Emergency Services in the Glendale area.

We may need additional volunteers to come forward and serve with the Niagara-on-the-Lake Fire Service.

I am asking for your co-operation to discuss this notice with your employees or family members to see if they would be interested in becoming a member of the Niagara-on-the-Lake Fire & Emergency Services.

Application forms are available at the Town Administration Office, 1593 Creek Road, Virgil or for additional information please call the Fire Chief at 468-3266 ext. 260.

The closing date to receive applications is **September 20, 1999.**

Thank you for your time and consideration in this matter.


B. Little
Fire Chief



Appendix (10)

Niagara-on-the-Lake Fire & Emergency Services

Capital & Operating Expenditures for a Proposed 5th Station

DESCRIPTION	AMOUNT	TOTAL
CAPITAL		
Two bay, 8,000 square foot building	\$ 750,000.00	
Apparatus: 1 Pumper	250,000.00	
1 Equipment Van	50,000.00	
Bunker Gear including boots	25,000.00	
Equipment: Hose, Nozzles, Fans and Extrication equipment	100,000.00	
Total		\$1,175,000.00
OPERATING EXPENDITURES		
Hall Maintenance	\$ 2,500.00	
Apparatus	5,000.00	
Equipment	10,000.00	
Services	7,000.00	
Total		\$ 24,500.00
Honorariums	36,800.00	\$ 36,800.00
Transfers to Reserves (divided by 4)	90,000.00	\$ 22,500.00
Total		\$ 83,800.00



Office of the Fire Chief
R. Bruce Little
TELEPHONE (905) 468-3266
FACSIMILE (905) 468-0301

The Town of Niagara-On-The-Lake

1593 CREEK ROAD
P.O. BOX 100
VIRGIL, ONTARIO
L0S 1T0

February 8, 2002

FC 02-18
Fire Department

Memo To: 10 Year Fire Department Master Plan, Steering Committee
From: Bruce Little, Fire Chief
Subject: **Notice of Meeting**

Please be advised with Council's authorization our committee can reconvene and continue on with the process that was adopted by Council in our 1999 report. Our next meeting has been scheduled for the following date and time. If you are unable to attend, contact Chief Little as soon as possible.

Date: March 06, 2002

Time: 7:00 p.m.

Location: District #2 (St. Davids)


B. Little
Fire Chief

cc

Lord Mayor Gary Boroughs
Alderman Rob Copeland
Alderman Terry Flynn
Chief Administrative Officer Lew Holloway
Community Fire Safety Officer Jo Zambito
District #1 - Greg Warner
#2 - Rich Woodruff
#3 - Bob Dick
#4 - John Andersen
#5 - To Be Announced

BL/jp



The Town of Niagara-On-The-Lake

Telephone (905) 468-3266
Facsimile (905) 468-2959

1593 Four Mile Creek Road
P.O. Box 100
Virgil, Ontario
L0S 1T0

Report:	FC-02-013	Committee Date:	April 22, 2002
		Due in Council:	April 29, 2002
Report To:	Corporate Services Advisory Committee		
Subject:	Fire Department 10 Year Master Plan - Glendale Station		

Background

With the authority of Council (report FC-02-003), the Fire Department's 10 Year Master Plan Steering Committee reconvened on March 6, 2002 to review our recommendations to Council addressed in our 1999 report FC-99-25 (see attached Appendix I). Also included in this report is our Mission Statement (Appendix II). This has been revised with minor changes to reflect our needs and circumstances.

This report will focus on the construction of the Glendale Station with recommendations in the summary for additional meetings with the Steering Committee for future considerations that have been recommended and approved in report FC-99-25.

The Steering Committee would like to address the following topics to provide the Lord Mayor and members of Council a general overview of the project.

- Growth
- Availability of land for new station
- Staffing and apparatus
- Existing facility
- Emergency call volume
- Partnerships
- Financial impact

1. Growth

The Planning Department has been very helpful in providing our Committee with an overview of anticipated development in the Glendale area. In the past several years we have witnessed some exceptional growth in the Glendale area. The construction of Niagara College, the college residence, Niagara-on-the-Green, Gateway, Leons, Henry Schein Arcona, Purolator, Royal Niagara Golf Club and the addition to White Oaks are just the beginning, with plans underway for two more hotels, an expansion to Niagara College and Foster Wheeler, and the second phase to Niagara-on-the-Green, as well as the proposal for the airport. The Planning and Development Department believe we can expect another ten years of growth and development.

2. Availability of Land for New Station

In preparation of both the 1996 & 1999 10 Year Master Plan reports to Council, the Steering Committee directed Chief Little to investigate possible sites for the Glendale Station. Working closely with the Clerks Department, a parcel of Town owned property was identified as a possible site for the Glendale Station on York Road between Townline Road and Glendale Avenue across from the Purolator building. The Fire Chief's 10 Year Master Plan report to Council (FC-99-25) recommended the York Road site. With Council approving report FC-99-25, our Steering committee still believes this is the best location and supports the York Road site as the preferred location for the Glendale Station (see attached location map Appendix III).

3. Staffing and Apparatus

As reported and approved in previous 10 Year Master Plan reports, staffing and apparatus will be determined on emergency call volume. At the present time we have managed to operate with our existing staff by amalgamating Station 2 (St. Davids) & Station 4 (Queenston) for a total of 50 firefighters. With the opening of Station 5 all three stations (#2, #4 & #5) back each others emergency calls. There may come a day when Station 5 (Glendale) will stand on its own, however, this will be determined by call volume and building development. At the present time we have one pumper and an emergency van located at the Glendale Station and this seems to be working well. Replacement of these vehicles has been addressed in our fleet replacement program.

4. Existing Facility

In the summer of 2000 Council approved a fifth station (sub-station) in the Ministry of Transportation building located at 571 York Rd. (Homer Yard) which is now operated by Hardrock Paving. Their head office is located in the City of Port Colborne. Hardrock Paving was awarded the contract to maintain the Q.E.W. under the provincial government's structuring program. Chief Little negotiated a three year lease agreement with Hardrock for three bays in their existing building. Terms of the agreement have a sunset clause of 2003, when in fact we will have to vacate the building. Terms of the agreement between Hardrock and the Ministry of Transportation is that at the end of their three year agreement, they have the

opportunity to rebid the project to extend the agreement for another three years. Due to the uncertainty of this agreement, the Steering Committee felt obligated to proceed with our plans for a new station.

5. Emergency Call Volume

With the development of Niagara-on-the-Green, Chief Little has observed a dramatic increase in call volume in the Glendale area for the past three years. Our records clearly indicate that 80% of our emergency calls out of Station 2 (St. Davids) are in the Glendale area.

Response time to the Glendale area was approximately 10 to 15 minutes from the time of our pagers being activated. This number is based on a three to five minute response to the station and a five to seven minute response to Glendale. These numbers may vary due to the time of day, year and weather conditions. Our emergency response to the Glendale area was not acceptable and noted in the Fire Marshal's report of January 1996. The Fire Marshal references the National Fire Protection Association (N.F.P.A.) table considered "not acceptable" according to these standards.

With the opening of our Glendale sub-station in 2001, we have improved our response times and will continue to improve to within the effective response table as more people live and work in the Glendale area.

6. Partnerships

The Niagara Regional Ambulance Service has expressed an interest in locating a sub-station in the Glendale area. Chief Little has met with Mr. John Cunnane, Director of the Public Safety Division to discuss this matter and to explore the possibility of a partnership between the Region and the Corporation. The Region's long term planning for station location does identify the Glendale exchange as a preferred location. Should such an agreement be drawn between the two parties, it could possibly offset some of our capital costs and operating expenses.

7. Financial Impact

In consultation with the Director of Corporate Services, it appears that we have accumulated approximately \$400,000.00 in development charges that have been earmarked for projects like this where development has had an impact on our community and a strain on emergency services. The short fall of \$200,000.00 plus would be debenture. The project has been budgeted at \$ 600,000.00.

Conclusion

Due to the uncertainty of an extension of the agreement with Hardrock Paving and the risk of being served a notice to vacate the building as well as the mere fact that 80% of our emergency call volume out of St. Davids Station is focused in the Glendale area and knowing our response times are not within the N.F.P.A. criteria as noted by the Fire Marshal's survey in 1996, the steering committee believes the time is right. All the research and supporting documents, including the Fire Marshal's office report and the Planning and Development Department, confirm that Glendale is one of the fastest

growing areas in our community with many more proposals being introduced to staff.

Staffing and apparatus have been dealt with in-house and appear to be working well. The financial impact short fall is workable with the Director of Corporate Services indicating that funding for the project could be achieved from the Corporate Reserves. The property is zoned M5 Prestige Industrial. The zoning by-law is attached (see Appendix IV) and would permit this type of building under Section 3.21 "Public Use." The Official Plan, Section 15 also supports the use of the lands under Section 15 as "Community Facilities" (see Appendix V).

RECOMMENDATION

It is respectfully recommended that;

- 1. the Lord Mayor and members of Council authorize Chief Little to proceed with the hiring of a local company to complete the site elevations on Town owned property, know as Pt. lot 1, Concession 9 Rd., Grantham, Part 2,**
- 2. the Lord Mayor and members of Council authorize the Fire Chief to form a Building Committee consisting of the Fire Chief, District 2 Chief and officers of Station 5,**
- 3. the Lord Mayor and members of Council authorize the Building Committee under the direction of the Chief Administrative Officer and the Fire Chief to prepare a "Request for Proposal" (R.F.P.) inviting architects to bid on the building design and construction of a new fire station in the spring of 2003,**
- 4. the Lord Mayor and members of Council authorize the Fire Chief to meet with the Director of the Regional Public Safety Division to explore the feasibility of a lease agreement and partnership between the Region and the Corporation,**
- 5. the Lord Mayor and members of Council authorize the Fire Chief to reconvene the 10 Year Master Plan Steering Committee in three years (2005) for the purpose of reviewing the growth and development in Virgil and the emergency call volume and investigate the feasibly of relocating Station 3 (Virgil) to Town owned property on Regional Road #55 and Concession 6 Rd.,**
- 6. the Lord Mayor and members of Council authorize the 10 Year Master Plan Steering Committee to investigate and consider the following options in the year 2005:**
 - Option #1**
Review the emergency call volume, staffing and defined area of response of Station 5 for the purposes of having it operate as a stand-alone station.
 - Option #2**
Review the call volume, staffing and defined area of response in Stations 2 (St. Davids) & 4 (Queenston) for consideration of amalgamating the two stations.

Prepared by:

R. Bruce Little
Fire Chief

Submitted by:

Lord Mayor Gary Burroughs
Committee Member

Lew Holloway
Chief Administrative Officer
Committee Member

Alderman Rob Copeland
Committee Member

Alderman Terry Flynn
Committee Member

District Chief Greg Warner
Committee Member

District Chief Rich Woodruff
Committee Member

District Chief Bob Dick
Committee Member

Assist. Chief John Andersen
Committee Member

Jo Zambito
Community Fire Safety Officer
Committee Member

ATTACHMENTS



The Town of Niagara-On-The-Lake

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Report: FC-06-005 **Committee Date:** March 06, 2006

Due in Council: March 13, 2006

Report To: Corporate Services Advisory Committee
Subject: Fire Department Five Year Master Plan

PURPOSE

To put forward a request to adopt the Fire Department Five Year Master Plan.

BACKGROUND

In 2005 a committee, including representation from the C.A.O., Fire Department Administration, all fire districts and elected officials, developed a Master Plan for the Fire Department covering the next five years.

All areas of the department's responsibilities and operations were reviewed with recommendations being made to address areas of concern.

Attached is a copy of the final report from the Fire Department's Master Plan Committee for Council's consideration.

RECOMMENDATION

It is respectfully recommended that;

1. **the Lord Mayor and members of Council adopt the Fire Department Five Year Master Plan and the recommendations contained therein.**

Respectfully submitted,

Ken Eden

Lew Holloway

Fire Chief

Chief Administrative Officer

ATTACHMENTS



Master Plan- Feb 2006.doc

First Capital of Upper Canada - 1792



NIAGARA-ON-THE-LAKE FIRE & EMERGENCY SERVICES

FIVE YEAR PLAN

February 2006

INTRODUCTION

The Master Plan for the Niagara-on-the-Lake Fire & Emergency Services is based on the Department as it is now and what is felt will be required to meet Provincially Mandated service levels during the next ten years. It addresses all sectors of the Fire Department:

- Fire Suppression
- Fire Prevention
- Public Education
- Training
- Fire Stations
- Fire Apparatus and Equipment
- Building and equipment maintenance
- General Administration.

The analysis is based on:

- The ongoing use of volunteer firefighters being critical.
- A continuing ability to recruit sufficient volunteer firefighters.
- A population of 18,000 by 2015 (Planning Department projections).
- Emergency call volume not exceeding 1000 per year.
- A continuation of Tiered Response with EMS.
- Minimal building growth or development in the Old Town.
- The majority of commercial and industrial development taking place in Glendale.
- The majority of residential development taking place in Virgil, Glendale and St. Davids.
- No significant growth or development taking place in Queenston.
- No major changes in the services and/or service levels the department is mandated to supply.

BUILDINGS

i) Building Stock

The Fire Department operates five stations - St. Davids, the Old Town and Queenston that require little beyond routine maintenance, Glendale that was completed in July 2005 and Virgil that should be replaced as soon as possible. The Administrative Offices are located in the Municipal Office Building in Virgil.

Major building components have estimated useful life expectancies as follows:

- Roofing – twenty to twenty five years with regular maintenance.
- Heating – twenty years with regular maintenance.
- Overhead doors – twenty years plus depending on construction with wooden doors generally needing to be replaced after about twenty years.
- Windows – as required but likely twenty-five years.
- Interior redecorating – as required but most likely between 5 and 8 years.

With the replacement of the fire station in Virgil, all buildings will be in good condition and should meet departmental needs for the foreseeable future provided regular maintenance is performed.

An approximate replacement value for the five stations is \$8.5 million including the estimated cost for a new building in Virgil.

Strategic Solution:

In order to maintain the fire stations over the long term:

- **Establish a reserve for financing scheduled maintenance needs including periodic interior redecorating, furnace, window and roof replacement.**
- **Make annual contributions from the Operating Budget to create a Reserve Fund adequate to meet future building maintenance and replacement requirements.**

ii) Building Information

Old Town – Station 1

- 3 bay, 10,000 square foot, masonry construction completed in 2002.
- No known deficiencies.
- Design should meet the department's needs for the foreseeable future.
- Requires regular maintenance only.

St. Davids – Station 2

- 3 bay, 8500 square foot, masonry construction completed in 1984 with minor maintenance only since completion. The building was well built and the building envelope (walls, floors and roof) remains in good condition.
- Roof has approximately 5 years left if minor repairs are done immediately. Estimated roof replacement cost \$75,000.
- The furnaces were replaced in 2004 and 2005.
- Interior painting will be required in near future.
- Design should meet departmental needs for the foreseeable future.

Virgil – Station 3

- 2 bay, 2 storey, 2000 square foot, masonry construction completed in 1959. The floor and walls are in good repair however the condition of the roof is not known.
- Building is far too small for present needs and cannot be altered or expanded because of limited lot size with no opportunity to acquire additional land.
- Location is not good based on a recent analysis of emergency response data.
- Limited office and training space with a seriously crowded apparatus floor.
- Firefighter parking limited to nine spaces.
- Building scheduled to be replaced in 2007.

Queenston – Station 4

- 2 bay, 7000 square foot, masonry construction completed in 1976 with no upgrades and minor maintenance only until recently.
- It was not well built initially with problems arising within 12 months after occupancy but the contractor went out of business shortly after completion thus no redress was available from the builder.
- Because of these problems including areas of the building settling and loose masonry, remedial work was started in 2004 with the re-pointing of all exterior brickwork and changes to drainage patterns around the building's exterior walls. This was required because of the use of substandard construction materials and methods and appears to have had the desired effect.
- The furnace was replaced in 2004.
- The roof was replaced in 2005.
- The windows and bay doors are not in good condition and will have to be replaced in the very near future.
- Once these repairs have been completed the building envelope will be in good condition and should require only routine maintenance.
- Design should meet departmental needs for the foreseeable future.

Glendale – Station 5

- 3 bay masonry 9000 square foot masonry and steel building completed in July 2005.
- Part of the building will be leased to Regional EMS as an ambulance base for 10 years.
- Design should meet departmental needs for the foreseeable future.

Administration Office

- 675 square feet of office space plus storage area in the Municipal Building.
- Shared meeting room that is difficult to access.
- Ideal location because of the need to interact regularly with other municipal departments including Treasury, Planning, Building and Public Works.
- Space does not meet current requirements.
- No opportunity for additional space at this location.

iii) District 3 (Virgil) Location Study

As discussed, the present building is no longer able to meet the department's needs and it cannot be renovated to do so. It was built in 1959 as a two truck station with very limited office space and a training room on the second floor with basically no storage space anywhere.

The size of fire trucks in 1959 was considerably smaller than those of today and there are now three modern trucks on the apparatus floor. These cramped quarters make it difficult to do routine cleaning and maintenance with less than two feet between units and this could become a safety issue. This has also resulted in trucks being damaged while being moved out of the building on several occasions. Most recently there was \$3000 damage done when a truck being moved forward caught an open door on the cab of another truck parked in the station. Fortunately, no one was injured in this incident.

A study of the emergency response data for the period 2002 through 2004 inclusive was done to determine to where in the District the firefighters were responding in order to determine the best location for a new building. Also considered was where the firefighters live because the time it takes them to get to the station to get the apparatus impacts overall response time.

Included in this analysis is the distance they had to drive to get to the station and related concerns about them having to cross Niagara Stone Road en-route to the station. It can be very difficult for a car to cross this road at an uncontrolled intersection and even a controlled intersection can cause delays because of the traffic lights.

In addition, a determination was made of how many of the calls were in Virgil and how many were outside the Virgil urban boundary. This was done because it was felt it may be faster to get the firefighters to a station west of Niagara Stone Road and respond into Virgil in emergency mode than it is to get firefighters to a station east of Niagara Stone Road to get the trucks to respond within Virgil.

The study information produced the following results:

YEAR	TOTAL NO. OF CALLS	IN VIRGIL		OUTSIDE VIRGIL	
		No.	%	No.	%
2002	99	32	33%	67	67%
2003	96	46	48%	50	52%
2004	124	35	28%	89	72%
3 YR AVG.	106	38	36%	68	64%

It is evident from these results that, while the bulk of the population in District 3 lives within Virgil's urban boundary, significantly more emergency calls are run outside these boundaries. In addition, of the emergency responses run outside the urban boundary 85% were to the area west of Niagara Stone Road.

In summary, 64% of emergency responses in District 3 are outside the urban boundary and 85% of those are west of Niagara Stone Road. Also, 21 of the 25 firefighters assigned to District 3 live west of Niagara Stone Road resulting in the potential for 84% of the firefighters being required to cross Niagara Stone Road to get to the fire station if it is located on the east side of Niagara Stone Road.

Based on these results, the optimum location for a new fire station would be west of Niagara Stone Road on the western edge of the Virgil urban boundary

Several years ago the Town purchased a piece of property at the corner of Concession 6 and Niagara Stone Road adjacent to St. Michael's School for a future Virgil fire station but it now presents some issues to be considered.

1. It is on the east side of Niagara Stone Road, which is not optimal based on the emergency response study results.
2. While there is municipal water available to the lot the sanitary sewer line stops at Hillebrand Winery on Niagara Stone Road. Because of the topography and the need to cross a creek it is not possible to connect the lot to this line without the installation of a forced sewer system as the school has had to do. A rough estimate from Public Works for such a connection is in the area of \$30,000 and they also confirmed that, because it has to be a forced system, it is not possible to tie into the school's existing line.

3. It is at an intersection identified in the Transportation Master Plan (PW 04-077) as one that could undergo a major reconfiguration. If a reconfiguration requires the inclusion of any portion of this lot it would be all but impossible to build a fire station on the site. While it is possible to do so now, because of the shape of the lot any reduction in lot size would make it far more difficult if not impossible to do so.
4. The most critical issue however, is that since this site is in the Greenbelt Area the construction of a fire station is specifically excluded by this legislation.

With these issues in mind alternate sites are being sought for the proposed fire station that met the criteria dictated by the results of the Emergency Response Review.

The value of the existing District 3 building is estimated to be between \$200 - \$225,000 according to a local realtor and the potential value of the land now owned at Concession 6 and Niagara Stone Road is in the area of \$60,000.

Alternate uses for the present District 3 building could include:

1. Fire Department Administration Headquarters.
2. Other municipal department offices.
3. Ambulance station.

Strategic solution:

In order to continue to deliver the required service levels in District 3:

- 1. Investigate suitable serviced sites within the Virgil urban boundary.**
- 2. Refer the results of these investigations to Council for their consideration.**
- 3. Purchase a suitable site.**
- 4. Replace the Virgil fire station as soon as possible.**

STATION LOCATION ANALYSIS

The number and location of existing Fire Stations was reviewed to determine the possibility of reducing from the current five. The variables for this analysis included:

1. Financial Considerations:

The financial impact involved in reducing the number of fire stations by combining two existing ones including:

- Locating and purchasing a suitable parcel of land within an urban boundary on which to build a new station
- Construction costs
- Funds from the sale of existing stations
- Possible reduction in the number of trucks required

2. Response time:

To meet the requirements of the Fire Protection & Prevention Act it is necessary to have 10 firefighters at the emergency scene within 10 minutes of a reported structure fire ("10 in 10"). Therefore it is important to clearly understand what Response Time is and also what it is not.

It is not the time it takes to drive a fire truck from the station to the scene. It is the time from when the fire department is alerted (pagers being activated) until the first fire truck arrives at the emergency scene and ten firefighters are available to begin suppression activities.

The key difference in these measurements is that "10 in 10" takes into account the time required for the firefighters to respond to the station to get the trucks – Assembly Time. The further they have to travel to get to the station the less time there is to go from the station to the scene and still meet "10 in 10". Assembly Time is, therefore, a critical component in the Response Time calculation.

3. Personnel:

In order to be able to operate a volunteer department there must be a critical mass of people from which to draw volunteer firefighters. In addition, the distance a volunteer firefighter lives and/or works from the fire station, as discussed above, directly affects Response Times.

Another variable is firefighter availability during daytime business hours and this factor may necessitate an increase in the overall membership in any given station to have an adequate number of firefighters available to draw from during this time.

The importance of firefighter availability requires that a fire station be located so that an adequate number of firefighters live and/or work nearby to meet the mandated "10 in 10" standard.

4. Other:

- The possible loss of firefighters and/or lowering of morale in the affected as well as the remaining fire stations as a result of closing a station
- Public reaction in the affected areas
- Ongoing ability to meet "10 in 10"

Based on historical and projected emergency call statistics it is clear that the stations in the Old Town, Virgil and Glendale cannot be combined or eliminated if the "10 in 10" standard is to be met and a reasonable work load on the firefighters is to be maintained. The possibility of combining the stations in St. Davids and Queenston or closing both and building one new one was considered as a way to save money.

The option of closing the Queenston Station and servicing the entire area from St. Davids was considered. The Pros and Cons of doing this were determined to be:

Pros:

1. One less building to maintain – this may not be a big saving given the recent work done to the Queenston building's envelope but on-going costs such as heating, hydro and insurance would be eliminated – projected annual saving \$12,000

2. It may be possible to operate a combined station with one less rescue truck – projected annual saving \$8,000.
3. The sale of the existing building could generate in the area of \$350,000.

Cons:

1. It would be very difficult to meet “10 in 10” in the village of Queenston and virtually impossible to do so on the Parkway and rural areas now protected by the Queenston Fire Station.
2. It was felt there could be a loss of up to 50% of the firefighters now serving in Queenston and those remaining would not be able to assist in getting to the station in St. Davids in a timely fashion to respond the trucks. Travel distance is simply too great.
3. The morale of all remaining members would be negatively affected.
4. It may not be possible to attract a large enough pool of firefighters to generate an adequate response, especially during business hours.
5. There were concerns that the almost assured negative reaction from the residents of Queenston would adversely impact the entire department and the overall municipality.
6. It was felt there would be a real possibility that the residents of Queenston would oppose the sale of the building and want it for use for other municipal purposes such as a Community Center for example, which would result in not being able to realize the anticipated monetary gain from the sale of the present fire station.

The option of closing the St. Davids Fire Station and servicing the entire area from Queenston was evaluated with this analysis producing the same results. In addition the station in Queenston would not be able to house the additional truck that would be moved from St. Davids. Based on these results it was felt it was not possible to service Districts 2 and 4 from one station located in either Queenston or St. Davids.

The closing of both stations and building a new one between the two communities was then considered.

Pros:

1. One building to maintain - estimated annual savings as above.
2. One less truck to replace – estimated savings as above
3. Potential sale of both existing building – estimated revenue \$750,000.

Cons:

1. As the new station would need to be between the two communities, Greenbelt Legislation makes it impossible to acquire a suitable site in the rural area and there is no benefit to re-building in either of the urban areas based on the previous analysis.
2. Based on the cost of the Glendale station, a new facility would probably be in the area of \$1.8 million plus the cost of the land.
3. It was felt there would be the loss of a large number of the firefighters now serving in both Queenston and St. Davids with those remaining not being able to get to the new station in a timely fashion to respond the trucks.
4. The morale of all Fire Department members would be negatively affected.
5. It may not be possible to attract a large enough pool of firefighters to generate an adequate response, especially during business hours.
6. The anticipated negative reaction from the residents in both communities and their probable desire to keep both existing stations for other community purposes plus the cost of a new building would result in an atmosphere that would almost certainly have a highly negative impact on all municipal operations, especially the Fire Department.

At one point the Office of the Fire Marshal had suggested it might be beneficial to combine these stations however they had no suggestions as to where the land for a new one could be located or obtained. They later changed their suggestion indicating that this could only be considered if the new station was staffed with full time firefighters because of Response Time issues. This option was then considered.

In discussion with several area fire departments utilizing career firefighters, it was determined that, no matter what shift schedule is used, in order to cover all shifts, personal development days, statutory holidays, vacations, sick time etc., for every 24/7 position on the floor six people are required to staff it. Some departments used eight

per position but most indicated that six was sufficient. Thus if there were to be four firefighters on shift we would need a total complement of twenty-four firefighters. These firefighters would also almost certainly be unionized which would add another dynamic that we do not have to consider at present.

Relying on the information from the area departments using full time firefighters, a conservative estimate of a wage and benefit package for a career firefighter is \$70,000 with officers being paid at a higher rate. Based on this, the total payroll impact would be a minimum of \$1,680,000 annually, with no overtime, and this would only guarantee an initial response of 4 firefighters. When this is compared to the total of approximately \$200,000 paid to the 100 plus volunteers the financial impact of having four career firefighters on duty is clearly an issue that is extremely difficult to support.

While the four full time firefighters might get trucks to a scene slightly earlier than we do now, they may not ease the Response Time issue to meet "10 in 10" as six more firefighters are required to be on scene and the financial impact is beyond anything that can be supported. No real benefit would be realized in having less than four on duty for a variety of reasons including what they functions they could perform at an emergency scene and for Due Diligence reasons from a Health & Safety perspective.

While the introduction of full time firefighters might marginally reduce the number of volunteers required, the potential cost savings from such a reduction would be negligible compared to the full time wage requirements.

It should also be remembered that the total call volume for Districts 2, 4 & 5 for the year 2004 was 243 and it was strongly felt that 243 calls per year do not justify full time firefighters.

As stated at the outset of this report, it is critical from a cost perspective to operate with a volunteer firefighting force and for this and the above reasons it is not felt that the two existing stations be closed and a new one built.

Based on this analysis no financial or service delivery benefits were evident to closing or combining fire stations and it was felt that the mandated services and response times could only be met with the existing five station configuration. While this may appear to be a large number of stations for a community with a population of 14,000, population is not the only measuring criteria that must be used. The geographic size of the area being protected and the location of population centers must also be considered and it was felt there was no other option that would produce the necessary results.

Strategic solution:

In order to continue to deliver the mandated response levels at a sustainable cost it is necessary to:

- 1. Retain the existing five fire stations.**
- 2. Continue to utilize volunteer firefighters and no consideration should be given to hiring full time firefighters for these duties.**

APPARATUS & EQUIPMENT

i) Apparatus

The Fire Department operates sixteen pieces of apparatus:

- 5 pumpers
- 1 mini pumper
- 1 reserve pumper
- 1 aerial device
- 3 light rescue trucks
- 2 heavy rescue trucks
- 1 tanker
- 2 staff vehicles

The current replacement program is now adequately funded based on the Fire Underwriters requirements of replacing pumpers and aerials after twenty years. While a pumper or aerial can be kept as a reserve unit for an additional five years, no insurance rating recognition is given for either after twenty.

The Fire Underwriters have no replacement requirements for staff vehicles, tankers and rescue trucks. Under the existing replacement program staff vehicles are replaced after eight years with tankers and rescue trucks being replaced as required with an anticipated life of at least twenty years.

Two areas not addressed in the current replacement program are:

- a) The possibility of needing additional or alternate apparatus in Glendale.
- b) Apparatus changes needed to certify for rural water supply utilizing a water relay for areas that are not hydrant protected.

1. Glendale Apparatus and Equipment

The Fire Underwriters are supposed to survey a community and its fire protection capabilities every ten years but this is seldom the case. The last Fire Underwriters Survey for Niagara-on-the-Lake was in 1990 and there have been significant changes in the building stock, especially in the Glendale area since then.

When a new survey is done it is possible that it may recommend additional or alternate apparatus and equipment responding from the Glendale Fire Station because of the growth in the area and types of buildings that we are required to protect.

These needs however, cannot be determined with certainty unless and until a survey is done. Once these requirements have been determined, options to meet them will be evaluated and recommendation(s) made to Council.

2. Rural Water Supply

The Fire Underwriters have standards for supplying water for firefighting in areas that do not have fire hydrants with municipalities meeting these standards having more favourable insurance ratings in these areas.

The standard is the ability to provide an uninterrupted flow of water at a given site over a two hour period by transporting water from a source a minimum of 8 kilometers from the test site. The minimum is 200 gallons per minute with higher flows resulting in more favourable insurance ratings.

The details of this standard are being evaluated and tests will be made during 2006 to determine whether or not we can meet the requirements and, if not, why and what can be done to do so.

Apparatus Maintenance:

An area of more immediate concern is apparatus maintenance. It is presently done entirely by outside contractors with the attendant lack of control over both what is being done and when it is done. Routine issues are handled when the "for hire" shop can fit it in but emergency or unforeseen breakdowns represent a serious challenge under the present program. Finding technicians qualified to work on the fire package is even more difficult. There are no local shops that provide this service nor, based on available information, do they plan to do so.

Strategic Solution:

In order to maintain fleet assets to achieve optimum life expectancy, consideration should be given to:

- 1. Maintaining and increasing the apparatus replacement reserves as required to meet forecast requirements.**
- 2. Developing a program to meet the Fire Underwriters requirements for certified rural water supply.**
- 3. Continuing the review of the overall municipal fleet maintenance program that has been started recently and that:**
 - a) This review include all municipal fleet assets including fire apparatus and equipment.**
 - b) The Fire Department have control over the maintenance program and standards pertaining to fire apparatus and equipment.**
 - c) The Fire Department have the major role in the selection of staff who would report to the Public Works Department to perform these duties on fire apparatus and equipment.**
- 4. Bringing the maintenance of Fire Department apparatus and equipment into the municipal maintenance facility.**
- 5. Hiring a properly trained and qualified technician to perform this work. While all of this person's time would not necessarily be spent on fire equipment they would be trained and available to perform the necessary maintenance on it when required and to implement a planned Preventative Maintenance program for all fire apparatus and equipment. This would not only maximize the life of the apparatus and keep it service ready but also protect the Corporation from a Due Diligence perspective.**

ii) Firefighting Equipment

Overall the department is equipped to meet its mandated performance requirements. The radio system underwent a major upgrade in 2004 and the only significant area of concern is the Self Contained Breathing Apparatus (SCBA).

There are 50 sets of SCBA in service with 60 extra air tanks and they are used on a regular basis. Because they protect the respiratory tract they are a key piece of safety equipment and are used in a wide variety of situations. This equipment is at least twenty-five years old, has been upgraded as much as it can be and will need to be replaced in the not distant future. It is interesting to consider that this equipment is older than many of the firefighters that use it.

With more stringent safety and performance requirements being mandated by the National Fire Protection Association (NFPA) as well as provincial Health & Safety legislation, their replacement will be costly with an estimate in today's dollars of between \$350,000 and \$400,000 being needed.

Since more than one station is often responded to an incident it is critical that all such equipment be compatible. In addition, because of associated training and maintenance issues this replacement program should not be phased in but done at one time. Better pricing is more likely attainable on a single large purchase than by spreading it out over a number of years.

There has been newer used SCBA available from time to time and this will continue to be monitored as a possible source of replacement equipment. While this is an option to be monitored it would be unwise to rely on sufficient quantities of acceptable used SCBA being available when it is needed. As mentioned, it is important that only one type be in service throughout the department and every effort should be made to acquire it all at one time.

Strategic Solution:

In order to provide for the replacement of the Fire Department's Self Contained Breathing Apparatus it will be necessary to:

- 1. Establish a reserve fund in the amount of \$350-\$400,000 to finance this program.**
- 2. Plan to purchase this equipment in 2009. During that time the market will be monitored regularly to attempt to take advantage of any bulk purchasing or used equipment opportunities that become available.**

Department Structure

The department operates five Districts supported by a career Chief, Assistant Chief, Public Educator and clerical position. The authorized volunteer manpower compliment by District is:

District 1 – Old Town (25)

- District Chief
- Assistant District Chief
- 2 Captains
- 21 firefighters

District 2 – St. Davids (20)

- District Chief (Also responsible for Districts 4 & 5)
- Assistant District Chief
- 1 Captain
- 17 firefighters

District 3 – Virgil (25)

- District Chief
- Assistant District Chief
- 2 Captains
- 21 firefighters

District 4 – Queenston (15) (Sub District of District 2)

- Assistant District Chief
- 1 Captain
- 13 firefighters

District 5 – Glendale (15) (Sub District of District 2)

- Assistant District Chief
- 1 Captain
- 13 firefighters

While this structure has worked fairly well to date it is necessary to address the situation in Districts 2, 4 & 5. With the rapid growth and increasing number of responses in these areas, especially Glendale, criteria is required for a Sub District to become a stand-alone District.

In addition, it is necessary to increase the manpower allocations in Districts 2, 4 & 5 no matter what the structure is so a larger manpower pool is available to draw from to ensure an adequate and timely response in these areas, especially during business hours.

Strategic Solution:

To assist the Fire Department in meeting the requirements of “10 in 10” and to protect the Corporation from a Due Diligence perspective it will be necessary to:

- 1. Increase the authorized manpower in District 2 to 25 and in Sub Districts 4 & 5 to 20 to enlarge the available personnel pool to a size more likely to meet “10 in 10”.**
- 2. Create a stand alone District when the annual call volume exceeds 80 per year in any Sub District and**
 - a) A District Chief be appointed**
 - b) An Assistant District Chief be appointed**
 - c) 2 Captains be appointed**
 - d) The number of firefighters be increased to a maximum of 21**

Staffing

i) Firefighters

As discussed throughout this report, it is extremely important that the Fire Department continues to supply emergency response through the use of Volunteer Firefighters. The call volume is simply not high enough to warrant the cost of hiring full time firefighters and, while it is not anticipated that this situation will change in the near future, this issue will be monitored on an ongoing basis.

ii) Administration and Support Staff

At present the Fire Chief, Assistant Fire Chief, Public Educator and Administrative Assistant are full time.

The Administrative Staff is responsible for overall department administration including:

1. Budgeting
2. Planning – long and short term
3. Fire Prevention
4. Public Education and training
5. Emergency response
6. Fire code inspections
7. Fire code prosecutions
8. Building plans examination
9. Site plan review
10. Developing and delivering firefighter training programs
11. Records management
12. Personnel issues – recruiting, retention and discipline
13. Building maintenance
14. Apparatus and equipment acquisition
15. Apparatus and equipment maintenance
16. Communications equipment maintenance
17. Interaction with other NOTL Departments
18. Developing and maintaining the Municipal Emergency Plan
19. Fire Department Health & Safety
20. Developing community partnerships
21. Regional commitments – Regional Chiefs, Fire Prevention, Haz Mat

During the past eight to ten years there have been many changes in what is expected from a fire department. Some of these changes have evolved simply because no one else was prepared to or capable of providing the services such as hazardous materials response and tiered response with EMS, but the majority of them have been downloaded from the Province including the requirement to do Fire Prevention and Public Education, mandatory training standards and changes to municipal Emergency Response Plans.

The largest portion of the increased responsibilities and expectations have been downloaded through legislation including The Fire Protection & Prevention Act, provincial training standards, inspections of hotels, motels and nursing homes, the "10 in 10" emergency response standard and qualifying staff to a provincial standard to do Plans Examinations (Bill 124). Previously these services were optional with service levels and training standards being left to the discretion of the local municipality.

A significant strength in the area of Fire Prevention is the Assistant Chief's background and knowledge of the Ontario Building and Fire Codes and his experience in interpreting and applying both effectively.

With the large number of accommodations in Niagara-on-the-Lake (slightly under 400 B&B's in addition to the hotels), Niagara College and development in the Glendale area, inspections, which are an essential component of a successful Fire Prevention program, it is difficult for one person to do them on a part time basis even with the Public Educator assisting when possible. In addition, these building owners generally require assistance in developing the required Fire Safety Plan and these must also be reviewed by the Fire Department on an annual basis.

Staff resources for growth and development may initially be greater for the Planning, Building and Public Works Departments, but the long-term affect is felt by Fire because the growth and development reverts to Fire upon its completion. While the Fire Department participates with the other departments during the initial planning stages, their roles basically cease when the development is completed with the ongoing staff commitment falling to the Fire Department until the building is demolished.

The person charged with inspections is also responsible for the department's training program that is becoming an increasingly onerous task. In addition to the mandatory firefighting training, the need for specialized programs including auto extrication, high angle rescue, annual medical training including defibrillator training and re-certification requires a large commitment of staff resources.

Given the nature, size and structure of our firefighting force, we annually experience a significant turnover of personnel between retirements and members leaving for other reasons, generally work related, and the effect of the "Two Hatter" issue. The result of this turnover is that each year we have to recruit, evaluate and select new members and then deliver a recruit training program that lasts between twelve and sixteen weeks – another large block of staff training time.

The Public Education Office is delivering Public Education three days per week and is also able to assist with B&B inspections. While the level of Public Education is adequate, the annual B&B inspections continue to present a challenge to the department.

Records management is done primarily by the Administrative Assistant but the software being used is outdated and does not allow optimum use of the records being kept nor is it the most efficient method of managing this data. Software options are being reviewed and a recommendation should be available in the near future.

Given the existing workload, minimal time and attention is being given to the Municipal Emergency Response Plan and the ongoing training and plan maintenance mandated by the province. This is an area that needs to be addressed in the near future to adequately protect the Corporation.

Strategic Solution:

To enable the Fire Department to meet both the mandated and expected levels of service at the Administrative Level consideration should be given to:

- 1. Acquiring appropriate Records Management software.**
- 2. Reviewing the time requirements to deliver inspection services and training programs at a level that meets provincial and municipal requirements.**

**Recommendations for the Implementation and Maintenance
of the
Proposed 5 Year Master Plan**

- 1. Acquire a suitable site and construct a new fire station in Virgil as soon as possible.**
- 2. Acquire updated Records Management software in 2006.**
- 3. Evaluate the resources needed to perform inspections and to deliver training.**
- 4. Evaluate our ability to meet Rural Water Supply certification requirements.**
- 5. Increase the authorized manpower in Districts 2, 4 and 5 as soon as possible.**
- 6. Adopt criteria to establish a stand-alone Fire District.**
- 7. Maintain the existing five fire station configuration.**
- 8. Begin to create a Reserve Fund to meet future building maintenance and replacement requirements.**
- 9. Maintain adequate reserves to meet apparatus and equipment replacement requirements.**
- 10. Replace the Self Contained Breathing Apparatus (SCBA) in 2009.**
- 11. Continue the review of fleet maintenance procedures, particularly as they apply to fire apparatus.**
- 12. Review this Plan in 2009.**

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Committee Members:

Chief Administrative Officer Lew Holloway

District Chief (#1) Greg Warner

Fire Chief Ken Eden

District Chief (#2) Richard Woodruff

Assistant Fire Chief Jo Zambito

District Chief (#3) Robert Dick

Councillor Robert Copeland

Assist. District Chief (#4) John Andersen

Councillor Terry Flynn

Assist. District Chief (#5) Cameron Degrow



The Town of Niagara-On-The-Lake

Telephone (905) 468-3266
Facsimile (905) 468-2959

1593 Four Mile Creek Road
P.O. Box 100
Virgil, Ontario
L0S 1T0

Report:	FC-01-020	Committee Date:	November 05, 2001
		Due in Council:	November 12, 2001
Report To:	Corporate Services Advisory Committee		
Subject:	Drainage District #4 (Queenston)		

The District #4 Station (Queenston) was constructed in 1972. The entire building was constructed on a slab with no basement. At the time of construction Queenston did not have a sewer system and therefore a tile bed was installed on the westerly side of the station toward the Niagara Parkway.

After construction the station was experiencing a tremendous amount of water on site during the wet seasons and in the spring of the year. The unsettled and wet soil conditions started to shift the walls of the station, therefore an engineering firm was contracted in 1979 to inspect the site and come up with a solution to the problem. At the time draining the property was the best solution and most cost effective. In 1979 clay tile was installed to drain the site on the south side of the building and drain to an open ditch on the north side of the property. Unfortunately the station is still showing new stress cracks as if it is still settling after all these years.

In the spring of 2000 Chief Little requested our Chief Building Official, Will Walker to inspect the building with the hope of coming up with an answer to our problem. Mr. Walker did concur we have a problem but not to the degree the building was in any structural threat. It appeared we still had a drainage problem more so in the spring of the year with spring run off and wet seasons.

Four contractors were invited to visit the site and come up with a drainage solution that would stop the erosion of the property. Only one of the four drainage contractors inspected the site and agreed the property had a drainage system, however the system was never maintained and would not meet today's standards. The contractor is recommending that we drain the building not the site. In other words, the entire outside footing/wall would be excavated and drainage tile installed, including the front driveway which is also showing signs of sinking. The contractor believes in the spring of the year the entire footing under the cement slab is full of water and is causing the walls of the building to shift and crack. Only one of the four contractors bid the project. All the others indicated they were too busy and/or not interested.

Quotations to complete the project have been received from the following:

1. Bob Robinson and Son Construction - \$13,422.00 plus G.S.T.

This project was not budgeted in 2001. A meeting with the treasurer has suggested that funding would come from the Town's Contingency Reserve.

RECOMMENDATION

It is respectfully recommended;

- 1. that the Lord Mayor and members of Council accept the bid of \$13,422.00 from Bob Robinson and Son Contractors to underdrain the District #4 Station (Queenston) and that the project be funded from the Corporation's Contingency Reserve.**

Respectfully submitted,

Bruce Little
Fire Chief

Lew Holloway
Chief Administrative Officer

ATTACHMENTS



284612 ONTARIO LIMITED

O/A **BOB ROBINSON & SON**
CONSTRUCTION

March 30, 2001

The Town of Niagara-on-the-Lake
1593 Creek Road
P.O. Box 100
Virgil, Ontario
L0S 1T0



ATTENTION: MR. BRUCE LITTLE, FIRE CHIEF

RE: DRAINAGE WORK AT QUEENSTON FIREHALL

Dear Mr. Little:

OUR PRICE: \$13,422.00 + GST

This price is to cover all cost to complete the work listed below.

1. Excavate around the entire building to a depth of 2 feet, including a line along each side of the driveway to the open ditch on Highlander Street.
2. Remove all excavated material from the site.
3. Install a 4" perforated drain in the trench, as well as connecting the existing rain water leader to ensure a positive drain away from the building.
4. Install drainage holes in the wall in order to drain the water that has accumulated under the building floor.
5. Backfill all excavation with 3/4" clear stone. This will ensure that any water, both surface and sub-surface water, will immediately be drained off the entire area.
6. Supply and place sufficient topsoil to redirect the ground around the building in order to direct any rain water away from same.

...2

7. Sod all disturbed areas and leave in a neat and clean state.

We thank you for the opportunity to price this work, and we look forward to working with you in the near future. If you have any questions or concerns, please do not hesitate to contact us.

Yours very truly,

BOB ROBINSON & SON CONSTRUCTION



Bob Robinson Sr.
President

BR:JR



284612 ONTARIO LIMITED

BOB ROBINSON & SON
CONSTRUCTION

P.O. Box 129, Port Robinson, Ontario L0S 1K0
Phone: (905) 384-9884 Fax: (905) 384-0400

D & B Construction

R.R. # 2, 1053 Line 3

Niagara-On-The-Lake, Ontario LOS 1J0

(905) 468-0690

GST #: 137473484

INVOICE: 1537

Date: 02-Jul-02

To: Town of Niagara-on-the-Lake
Box 100
Virgil, Ontario
LOS 1TO

Description:		Amount:
1	Att. Bruce Little Re: Drainage work at Queenston firehall Excavate around the entire building to a depth of 2 feet, including along both sides of driveway.	
2	Remove all excavated material from site.	
3	Install 4" Big "O" with sock in trench and 4" Big "O" solid pipe for existing rain water leaders.	
4	Install drainage holes in the footing wall in order to drain water under building.	
5	Backfill excavation with 3/4" clear stone to provide for water drainoff.	
6	Supply and place topsoil to direct water away from building.	
7	Sod or seed disturbed areas. AS PER QUOTE	
	EXTRAS -	\$13,422.00
	Remove and replace concrete sidewalk in front of side door	\$800.00
	Repare concrete block footing	\$600.00
Subtotal:		\$14,822.00
G.S.T.		\$1,037.54
Total:		\$15,859.54

discussed with Jack Wagner 11/01/03. We will arrange the excavation required to coordinate with Mr. Turner.

Memorandum:

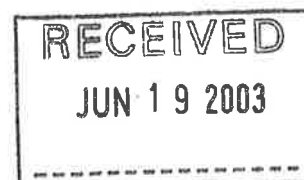
CHRIS TURNER ASSOCIATES INC:
STRUCTURAL AND CIVIL ENGINEERS
22 DUNLOP DRIVE
ST CATHARINES ON.
PH (905) 684 9228 FAX (905) 684 6229

TO: Town of NOTL- Fire and Emergency Services
Attn Chief Ken Eden

DATE: May 30, 2003

PROJECT: 23049: Queenston Fire Hall, Dumphries St. Queenston, Ontario.
Structural Condition Report.

1. At your request, we visited the above site on May 30, 2003 at 0400pm, to review with the Deputy Chief John Anderson and yourself, the vertical crack in the masonry walls and concrete slab on grade within the Apparatus Room particularly in the SE corner of the Building.
2. The Building was constructed in 1977. Based our site visit and a review of the original construction drawings prepared by Flemming & Secord Architects dated Oct 1976, the facility is a 84 ft x 58 ft single storey building with no basement. Conventional strip and spread concrete footings support load bearing masonry walls and a lightweight steel deck and OWSJ's roof framing.
3. The area of most significant cracking is the SE corner of the Apparatus Room (garage), adjacent the east jamb of the south wall windows. The masonry bearing below the 16" block lintel has experienced both vertical and significant horizontal movement which has resulted in cracking and spalling of the a section of the block face. The jambs and head of the windows at both the east and west ends of the garage have been re-caulked a number of times to prevent water intrusion. The section of the bank of windows that are operable, not longer open. We observed a significant 3/16" wide diagonal crack in the masonry, midway along and below the sill of the east section window on the south wall. There appears to be no significant cracking along the full length of the reinforced concrete block lintel. The Deputy Chief reports that the gaps at the jambs in the windows vary seasonally in width, being wider in the winter than the summer.
4. On the east load bearing wall, there are several significant vertical and diagonal crack sites. Stepped crack over the lintel to the door on the north end is minor. Hairline vertical crack up to 6 ft above finished floor (AFF) stepping to the south in 2 points are located at about third points along the wall.
5. The east edge of the slab on grade concrete floor in the garage, has moved down relative to the wall by about 1/2" - 5/8" as evidenced by the gap under the vinyl coving. A crack in the concrete floor runs roughly parallel to the east wall for the full length of the garage, linking the two eastern most floor CB's , 8 to 10 ft from the wall.



6. Over the garage there are no reported roof leaks. The built up membrane roof is believed to be original.
7. No cracks were evident or reported on the north wall over the large overhead doors.
8. On the SW corner of the Station, a failure in the roof flashing over the window several years ago, caused water infiltration into the room as well as allowing water into the external brick veneer. Freeze thaw has resulted in significant movement, cracking and some spalling of the face of the masonry at the north edge of the window. The flashing problem has been corrected and we recommended that the wall be repaired before the next winter to reduce the risk of any future deterioration. Windows should be removed and then re- positioned, to allow windows to operate and enable caulking of the jambs, head and sill.
9. A significant vertical crack in the pier at the NW corner of the building, should be repaired before winter to reduce the risk of future deterioration due to freeze thaw.
10. Several hairline cracks in the external brick veneer both on the west, south and east walls were particularly noticeable because of past attempts at caulking. We suggest that the mortar joints at all the crack sites should be cut out and re-pointed with good quality waterproof masonry mortar. This will help preserve the "rainscreen" barrier of the exterior masonry wall. Allowing water to infiltrate the brick may result in deterioration of the brick by freeze thaw and subsequent further spalling/cracking of the face. This procedure may need to be repeated during annual maintenance practice, since this current repair does not prevent further cracking in other locations. For a building of this size, we would have expected to see vertical control joints placed in the exterior masonry at regular intervals. Control joints are placed to relieve stresses in the brick due to normal thermal and moisture fluctuations in the brick. The lack of control joints may have contributed to the cracking in the exterior veneer, particularly at stress points over doorways and windows. *Can/should we cut control joints?*
11. The Deputy Chief reported that the underground water service from Dumfries St is located midway along the north side of the Building. The sanitary sewer enters the building from the south with the underground lateral being located adjacent the west foundation wall and discharging to a new service on Dumfries St. Previously, the sanitary pipe discharged to an on-site sanitary tile bed and tank located on the west side of the site. There has been no reported leaks or damage to the water or sanitary pipes in the last 3 years.
12. Roof storm runoff discharges through underground RW laterals to the roadside ditches on Dumfries St and Niagara Parkway. The interior floor CB's are reported to be connected to a common lateral; discharging to the ditch on Dumfries St. at the NE corner of the site. An on site boundary swale runs parallel to the south wall discharges to the east parking lot asphalt surface.
Generally the grade slopes away from the building. However at the SE and SW corners the grade slopes back toward the building, resulting in water accumulation at the face of the foundation wall. At the time of the site visit there was no free standing water in any of the ditches.

13. We understand that the fire trucks and equipment are washed down inside the Apparatus Room during the winter months. Because of the drop in the level of the slab along the east wall, the Deputy Chief reported that the wash-down water tends to flow away through the joint between the slab and the exterior wall. This has a tendency to wash away the subbase (particularly if it is sand) immediately below the slab resulting in voids and subsequent settlement of the slab possibly aggravating the initial settlement. We recommend re-caulking the joint and re-directing the flow to the CB's by using a "squeegee mop". Regularly inspect and repair the joint caulking as required to maintain a watertight seal.
14. About 12 months ago, a contractor installed a 4" dia perforated pipe around the perimeter of the Building, in a 24" deep trench surrounded in granular material. 2" dia holes were drilled through the east foundation wall to relieve any build up of water below the slab and behind the wall. It was reported that no water seeped from the holes at the time of the construction. (last spring and summer was a dryer than normal season. The existing weeping tile discharges to the roadside ditch on Dumfries St.
15. At this time we have no information on the nature of the soil around the building and particularly below the footings. The existing drawings are not specific. We suggest that a trench be excavated beside the footings in at least two locations, and that a Soils Engineer be engaged to comment on the nature of the soils and the potential for settlement particularly at the SE corner where the majority of the damage to the exterior wall has occurred. If the Town could arrange for an excavator to be available, we would be happy to re-visit the site, with a Soils Engineer, to carry out further investigation.

We hope this summary of information gathered in our preliminary site visit is satisfactory. Should you have any questions or comments please contact this office. At this time, we have not formed any conclusions as to the reasons for the observed movement in the SE corner of the Station. We would like to defer any statements until we have investigated the footings and received comments from the soils engineer. Please advise when the excavator will be available so that we may coordinate with a Soils Engineer. Unless you have any objections we propose asking Amec Ltd. to attend the next site meeting. We shall ask them to address their invoice directly to the Town on a Time and Disbursement basis. We understand that charges for our work charged on a time and disbursement basis, is satisfactory. Please advise if this arrangement should be revised.

Prepared by:
Chris Turner P. Eng.

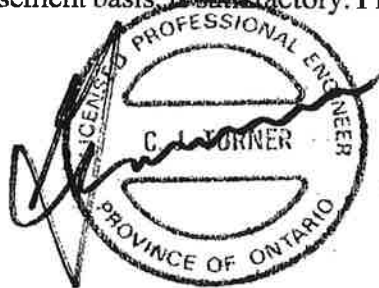
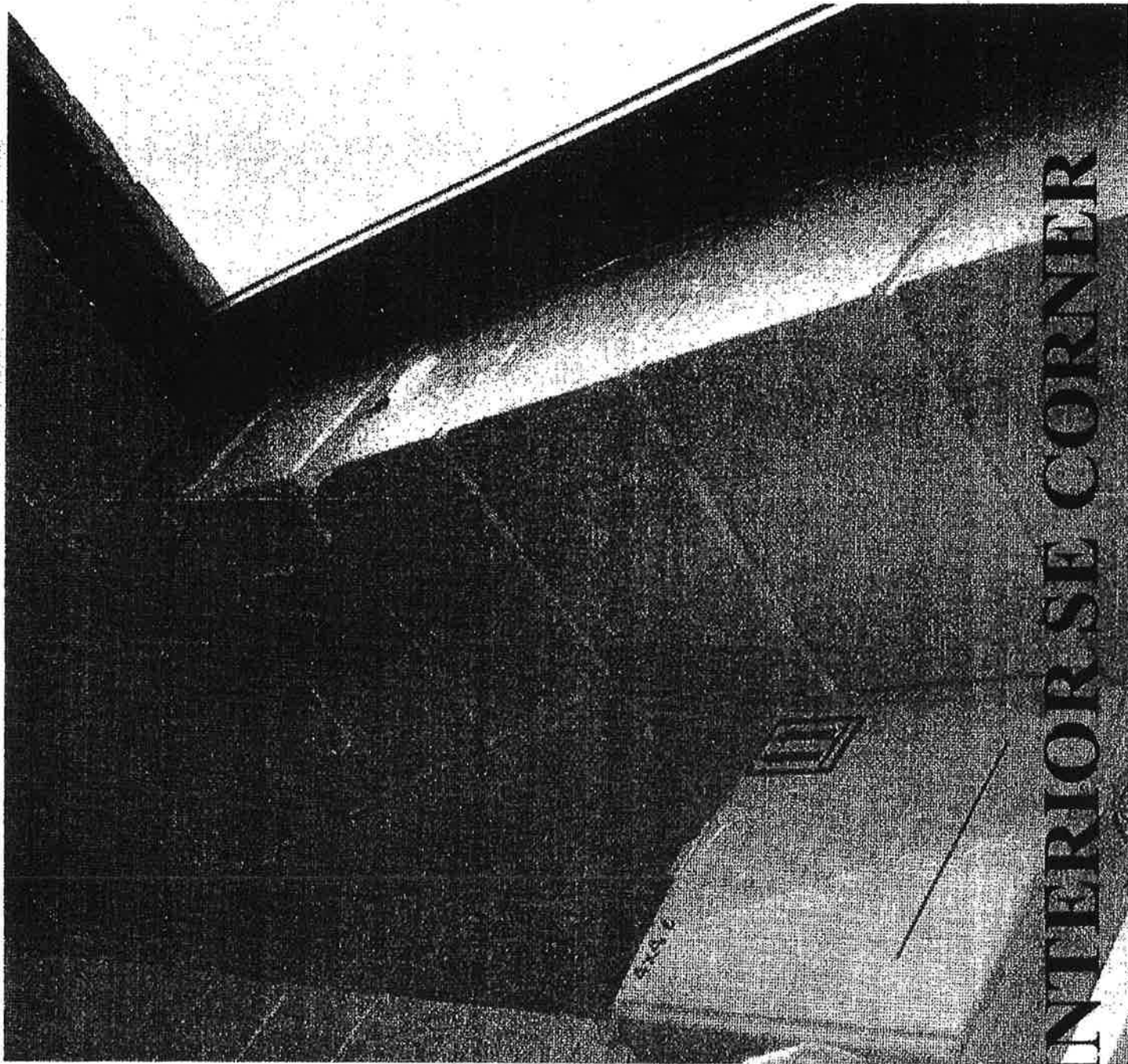


Photo 1, 2, 3 Attached

*Referred to
Nick Argenave*



INTERIOR SE CORNER

Town of Niagara-on-the-Lake
Geotechnical Consultation
Queenston Firehall
Dumfries Street
Queenston, Ontario

TG23260G
July, 2003
Page 4

Recommendations

Based on one site visit and the inspection of 3 shallow testpits, AMEC has suggested several potential mechanisms for the movement occurring in the building and some possible solutions. However, further investigation is recommended to confirm our preliminary opinions. Any remedial work involving underpinning will be expensive and the Owner should be confident that the proposed repairs will solve the problem.

Unfortunately, where movement appears to be cyclic, the best way to study it is long term monitoring. For example, several monitoring points can be established in and around the southeast corner. These points should be inspected every few months, covering at least one cycle of fall/winter/spring. As well points can be established on the foundation walls and monitored to determine whether frost heave could be causing movement.

It is recommended that several cores be drilled through the floor slab to determine if there is any void space, as well as to determine the materials underlying the concrete.

Alternatively, an inexpensive way to proceed would be to remove the tree (and as much of the root system as possible), and then see if the movement continues.

We trust that this report is complete within our present terms of reference. Please contact the undersigned if further assistance is required.

Yours truly,

AMEC Earth & Environmental Limited

Prepared By:



Jane Doucette, P.Eng.
Senior Geotechnical Engineer

Reviewed By:



Peter McGlone, P.Eng.
Principal Geotechnical Engineer

3 copies Client

AMEC Earth & Environmental Limited
3300 Merrittville Hwy., Unit #5
Thorold, Ontario
Canada L2V 4Y6
Ph +1 905-687-6616
Fax +905-687-6620
www.amec.com

Memorandum:

CHRIS TURNER ASSOCIATES INC:

CIVIL + STRUCTURAL ENGINEERS

22 DUNLOP DR.

ST. CATHARINES, ON.

Town of NOTL.

Fire and Emergency Services

Virgil Ontario

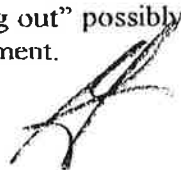
Attention: Chief Ken Eden

July 21, 2003

Reference: Our 23049: Queenston Fire Hall Dumphries St, Queenston

1. Visited the site July 15, 2003, to review the subsoil conditions adjacent the external foundation walls of the Building.
2. On the recommendation of our previous Report dated May 30, 2003, we met with Deputy Chief John Anderson and the Soils Engineer Jane Doucette P. Eng. from AMEC Ltd. to review the excavation adjacent the footings on the east and SE corner of the Building.
3. The excavation was taken to the bottom of the existing concrete footings in the 3 locations shown on the attached plan. Our observations are listed below. The Soils Engineers conclusions and recommendations shall follow under a separate cover.
4. In 2 locations the base of the footings were found to be 3'0 to 3'6" below existing grade. Footings were constructed of concrete; Concrete on the east footing projected 18" from the exterior face of the wall; on the south side excavation, the footing projected 8" -10".
The material immediately below all footings was believed to be native stiff clay. (Refer Soils Report)
Invert of the perimeter subsoil drain was between 24"-30" deep
Numerous fine and large roots from the Locus tree in the middle of the east wall where evident in the 2 excavations along the east wall. Tree is located 9.5' to 10'0 from the exterior face of the foundation and stands about 30'0 to 40'0 tall. The drip line extends well beyond the face of the foundation wall.
Another Locus tree to the NE is small in height and its drip line does not extend to the edge of the building.
5. We reiterated the recommendations of our May 30 report.
ie: repair and re-caulk existing cracking in the external masonry wall before winter
clean out the weepers to ensure water drains from the brick veneer and cavity.
As soon as possible, caulk cracks in the floor and the joint against the external wall to prevent further water from leaching the granular subbase below the slab.
6. Further information received. The sanitary tile bed on the SW face of the Building was abandoned about 12 years ago. From a continuously wet state prior to 12 years ago the soil, around the base of the foundation has been "drying out" possibly resulting in changes in the volume of the clay and as a consequence, some settlement.

Prepared by Chris Turner P. Eng.



C/c AMEC Ltd.

Phone (905) 684 9228

Fax (905) 684 6229



August 07, 2003

TG23260G/01

Town of Niagara-on-the-Lake
Box 100
Virgil, Ontario
L0S 1T0

Attention: Mr. Ken Eden

Re: Geotechnical Consultation
Queenston Firehall
Dumfries Street
Queenston, Ontario

Gentlemen:

The existing firehall is a one storey building with slab-on-grade and shallow footing construction. The structure is understood to have been constructed in the 1970's. There has been some mild to severe cracking along the exterior brickwork over the years. It is understood that there has been some problems with flashing and ice buildup, and that repairs have been effected.

Presently, the most severe cracking occurs within the southeast corner of the building. The east portion of the building consists of two fire truck bays. There are drains located in the center of each bay to collect washwater. The floors are sloped to allow water flow into the drains. Over the last approximately 1 year, the wash water from the most easterly bay now flows to the east wall of the building.

The south wall of the truck bays consists entirely of windows from approximately 4 feet above exterior grade to almost 9 feet above exterior grade. The cracking in this area is reported to have cyclic movements. Although no formal documentation has been undertaken, it is reported that cracks around the windows in the southeast corner are open during the winter and then close up during the spring.

In the approximate center of the east exterior wall of the building, there is cracking through the brick veneer. The mortar has been repaired on at least one previous occasion. There is a locust tree growing by the side of the building, whose branches overhang the building.

Three testpits were carried out adjacent to the foundation wall. One was between the locust tree and the wall (TP1), one was located several feet north of the southeast corner (TP2), and one several feet west of the southeast corner (TP3).

At each testpit location, clay fill overlay granular and weeping tile. It is understood that the weeping tile was installed in June of 2002. In TP1, tree roots were observed within the clay adjacent to the granular fill of the weeping tile. In TP2, the base of the footing was measured at 3 feet below finished exterior grade. As well, the width of footing extending beyond the exterior wall was measured to be 18 inches. In TP3, the top of the footing was measured to lie at 3 feet below existing exterior grade. In TP's 1 and 2, the material below the footing level consisted of native stiff to very stiff clayey silt to silty clay. The material at the base of TP3 was not observed.

due to caving of the granular material.

Within certain moisture content ranges, the clays of the Niagara Peninsula typically have some susceptibility to swelling and shrinkage. When moisture is taken from a soil, it shrinks and when it is added to a soil, it swells. Trees take a great deal of moisture out of the ground during the summer. The water is taken out of the soil by the roots and "breathed" out of the leaf surfaces by a process called evapotranspiration. In the summer, rainfall is low and the tree is growing and in full leaf. Trees have been measured to take up to 100 gallons of water per day from the ground. In addition, the leaf canopy prevents light rainfalls from reaching the ground close to the tree. Under these circumstances, the tree takes moisture out of the soil, which becomes drier and shrinks. In the winter, there are no leaves on the trees for evapotranspiration and there is a higher rainfall. Consequently, the rainfall can reach the ground around the tree. The moisture content of the soil is recharged and it tends to swell. Movements of 6 or more inches have been measured to occur adjacent to large trees in swelling soils. This, however, is an extreme case. The area of this effect is approximately the area of the root system, which is in turn, approximately the same area as the leaf canopy. Therefore, in heavy clay soils, if the leaves of the tree overhang the roof of the house, there is a possibility of the tree causing movement of the soil beneath the foundations, and hence movement of the house. Another, more conservative rule of thumb implies ground movement within a distance from the tree that is equivalent to its' height.

Typically, trees grow bigger with time and therefore, trees that may not have affected a structure when they were planted, could possibly do so in the fullness of time. As the trees grow larger, they not only affect a larger area, but they also affect it more. In addition to the effect of the trees, the moisture content of the ground generally is affected by the seasonal rainfall with the upper portions of the ground being drier after a very dry summer. Therefore, whilst a tree-induced motion of the house tends to be cyclic, it may not be totally regular. It can, however, be expected to cause settlement around August and September with cracks opening up. Typically the cracks will have closed somewhat by March or April.

The tree along the east wall could account for the cracking within the southeast corner. The wall along the east side is solid construction, having no window openings. The opening in the structure for the windows at the southeast corner would be a weaker point within the structure, and a reasonable place for cracking to occur, even if the mechanism is not present at that location.

Building movement can also be caused by poor soil conditions below the foundations. For example, loose or disturbed soil left below the foundation would eventually settle and cause the foundation and overlying wall to crack and settle. There was no indication of soft or loose soils at the footing level in the testpits. There has been recent excavation adjacent to the footings for weeping tile installation, although it did not appear that the footings had been undermined.

The observation made regarding the depth of the footing in Testpit 2 is unusual, as is the width of the footing that extends beyond the exterior wall. The normally accepted soil cover below finished grade for this area is 4 feet. During severe winters the depth of frost penetration may exceed 3 feet, and providing there is some water source, could cause ice-lensing and heave

below the footing. This could account for cyclic movement, although generally once heave has occurred, the structure does not return entirely to its original position.

When the footing extends beyond the wall by a significant amount, one of two things may have occurred. The first is that the footing may not have been poured in a straight line. Providing the wall on top of the footing is straight, the concern is that a portion of the wall may not be sitting on the footing and therefore may not have the proper support. Alternatively, this may have simply been a low area adjacent to the footing area, and extra concrete was poured to level the area. As the exposed footings did not appear to have been formed, the latter is likely the case.

Regarding the apparent floor movement, the only thing that is certain is that water at one time ran toward the center drain, but now runs back to the east wall. Either the center portion of the floor has risen, or the east edge of the wall has settled. It seems more probable that the east limit of the slab has settled. Otherwise, there must be some mechanism for heave or swell in the centre of the bay. As this area is understood to be heated during the winter, this seems unlikely.

The most common reason for floor slab settlement is loss of support due to settlement or washout of the underlying materials. It is also possible that the floor slab movement is a result of the other movement occurring in the building.

Potential Solutions

If the sole mechanism for damage is desiccation caused by the tree, we would expect that there will be continued movement. If the tree and the entire root ball were removed, it is anticipated that the movement would stop. Cutting the tree down would reduce the movement but the root system can remain active for several years. Similarly, any treatments to the tree (e.g. pruning) may have some effect in reducing the volume of water taken from the soil, and hence the amount of shrinkage or swelling of the soil. However, the benefits may not be noticeable for one or two years, and like pruning, would have to be performed each year.

The depth to which soils are affected by tree root systems is limited. If the structure were supported on the deeper soils, below the zone of influence of the tree roots, the foundations would be unaffected by the swelling/shrinkage. We anticipate that the foundations would have to be lowered in the order of 6 feet, to be below this zone of influence. Underpinning would be used to accomplish this. Underpinning can take the form of a solid 'wall' or trench below the footing, or spaced screw pile supports to depth, with adequate support of the concrete foundation between the screw pile locations.

Underpinning of the foundations would also solve any problems that may be occurring due to the lack of frost cover.

Recommendations

Based on one site visit and the inspection of 3 shallow testpits, AMEC has suggested several potential mechanisms for the movement occurring in the building and some possible solutions. However, further investigation is recommended to confirm our preliminary opinions. Any remedial work involving underpinning will be expensive and the Owner should be confident that the proposed repairs will solve the problem.

Unfortunately, where movement appears to be cyclic, the best way to study it is long term monitoring. For example, several monitoring points can be established in and around the southeast corner. These points should be inspected every few months, covering at least one cycle of fall/winter/spring. As well points can be established on the foundation walls and monitored to determine whether frost heave could be causing movement.

It is recommended that several cores be drilled through the floor slab to determine if there is any void space, as well as to determine the materials underlying the concrete.

Alternatively, an inexpensive way to proceed would be to remove the tree (and as much of the root system as possible), and then see if the movement continues.

We trust that this report is complete within our present terms of reference. Please contact the undersigned if further assistance is required.

Yours truly,

AMEC Earth & Environmental Limited

Prepared By:



Jane Doucette, P.Eng.
Senior Geotechnical Engineer

Reviewed By:



Peter McGlone, P.Eng.
Principal Geotechnical Engineer

3 copies Client



The Town of Niagara-On-The-Lake

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1593 Four Mile Creek Road
P.O. Box 100
Virgil, Ontario
L0S 1T0

Report: FC-03-008 **Committee Date:** **October 06, 2003**

Due in Council: October 14, 2003

Report To: Corporate Services Advisory Committee
Subject: Queenston Fire Station

RECOMMENDATION

It is respectfully recommended that;

1. the Lord Mayor and Council approve funding to repair structural defects at the Queenston Fire Station before winter and
2. the project be funded from contingency reserves.

Respectfully submitted,

Ken Eden
Fire Chief

Lew Holloway
Chief Administrative Officer

ATTACHMENTS



FC-03-08.doc

First Capital of Upper Canada - 1792

September 18, 2003

FC 03-08
Fire Department

Report To: Corporate Services Advisory Committee

From: Ken Eden, Fire Chief

Subject: **Queenston Fire Station**

PURPOSE

To put forward a request for funding to repair structural defects at the Queenston Fire Station before winter.

BACKGROUND

For some time there has been a problem at this location with the cracking of mortar joints between both the exterior bricks and interior concrete blocks. There have been significant gaps appearing between the walls and window frames which open and close during the year and have rendered the windows inoperative as well as allowing moisture and cold to enter the building.

A report from a structural engineer confirms that:

- i) there are structural defects that need to be addressed in the brickwork,
- ii) the southwest corner of the apparatus floor has sunk relative to the rest of the building and
- iii) the grade is sloping towards the building in several areas.

A soils engineer was engaged to further analyze the problem of the floor sinking and this report confirms the need to address the grading mentioned above and that a tree on the west side of the building also needs to be removed to prevent it from drawing moisture from under the building and weakening the base for the apparatus floor. In addition, this report advises that the footings under the southwest corner of the apparatus bays are only about 30" below grade, which could allow frost to penetrate below the footings causing instability and heaving.

Both engineers indicated that the remedial work done last year was what they would have recommended as a first step however it did not produce the desired results.

The structural engineer's report indicates that several areas of the exterior masonry need to be re-pointed to avoid moisture getting behind the bricks causing serious damage. This report recommends that, before winter:

- i) the masonry be re-pointed as required
- ii) the grade be sloped away from the building and
- iii) the tree be removed.

Preliminary estimates indicate \$8,000.00 to \$10,000.00 for masonry repairs and \$2,000.00 to \$3,000.00 for the changes to grade with the masonry work requiring approximately two weeks to complete.

The station was constructed in the mid 70's and apparently some of these issues were in evidence within 5 years but have now reached the point where they have to be addressed.

Unfortunately there is no budget allocation for these repairs however; the Director of Corporate Services recommends that the project be funded from contingency reserves. I feel that it is important to complete these repairs to prevent additional and potentially more costly repairs at a later date.

RECOMMENDATION

It is respectfully recommended that;

- 1. the Lord Mayor and Council approve funding to repair structural defects at the Queenston Fire Station before winter and**
- 2. the project be funded from contingency reserves.**

Respectfully submitted,

Ken Eden
Fire Chief

Lew Holloway
Chief Administrative Officer

KE/jp



The Town of Niagara-On-The-Lake

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1593 Four Mile Creek Road
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Report: FC-04-016

Committee Date: September 07, 2004

Due in Council: September 13, 2004

Report To: Corporate Services Advisory Committee
Subject: Masonry Repairs to the Queenston Fire Station

RECOMMENDATION

It is respectfully recommended that;

1. **the Lord Mayor and Council accept the proposal from Abe Dick Masonry Contractors Limited in the amount of \$41,831.65 for the re-pointing of the exterior brickwork at the Queenston Fire Station and to fund this from the Fire Building Reserve.**

Respectfully submitted,

Ken Eden
Fire Chief
Officer

Lew Holloway
Chief Administrative

ATTACHMENTS



Fc-04-16.doc

First Capital of Upper Canada - 1792

September 2, 2004

FC 04-016
Fire Department

Report To: Corporate Services Advisory Committee

Subject: **Masonry Repairs to the Queenston Fire Station**

PURPOSE

To put forward a proposal to authorize the required masonry repairs at the Queenston Fire Station.

BACKGROUND

Late in 2003 Council authorized temporary repairs to the exterior brickwork at the Queenston Fire Station as the result of incorrect mortar being used at the time of construction. The permanent solution was to re-point the brickwork and this was included in the 2004 Capital Budget with a budget estimate for this plus window and furnace repairs in the amount of \$60,000.00.

A tender was called that closed September 1, 2004 with two bids being received, both from reputable masonry contractors. The bids, including all taxes, were as follows:

Abe Dick Masonry Contractors Limited St. Catharines, ON.	\$41,831.65
---	-------------

Remple Masonry Restoration Co. Welland, ON.	\$46,734.92
--	-------------

RECOMMENDATION

It is respectfully recommended that;

1. **the Lord Mayor and Council accept the proposal from Abe Dick Masonry Contractors Limited in the amount of \$41,831.65 for the re-pointing of the exterior brickwork at the Queenston Fire Station and to fund this from the Fire Building Reserve.**

Ken Eden
Fire Chief

Lew Holloway
Chief Administrative Officer

SITE VISIT REPORT#S2

CHRIS TURNER ASSOCIATES INC:
CIVIL + STRUCTURAL ENGINEERS

22 DUNLOP DR. ST. CATHARINES, ON.L2R 1A4
Phone (905) 684 9228 Fax (905) 684 6229

DATE: Nov 09, 2010

PROJECT: 201001-39 Queenston Fire Station
Dumfries St Queenston, On.
Structural Condition Report

OWNER: Town of NOTL- Fire Department Attn: Chief Ken Eden.

ON SITE: Owner Ken Eden 905 468 3266 Ext 260
Contractor Denis Dick 905 651 2327

1. At the request of the NOTL Fire Dept, Chief Ken Eden, we visited the above site 0900am to review moderate to severe cracking in the external masonry wall projection on the north face (Dumfries St elevation) of the existing main building at the recreation room. We had previously visited the site after the cracking was first noted and our Report of Sept 30, 2010 outlines our observations and recommendations. This visit was to advise the Contractor on remedial measures for the winterising the wall.
2. We discussed monitoring of the cracks over the next few months and the winterising of the wall. Previously we noted that the severe cracking of the internal return walls of the north end of the Recreation Room, the cracking in the external adjacent the entrance doors and over the lintel of the west window and also that there was no visible cracking on the external face of the north wall. To date we have not set up any means of subjectively recording the movement. We observed the bed joints of the north wall projection were not level and measured the "dip" in the length of the wall as 5/8" taken at the east outside corner of the window well measured from the top of the metal flashing. See sketch below. At this time the internal face of the north wall appears to out of plumb by only about 1/8" in 48". The cracks reflect some vertical and horizontal movement due to settlement of the length of the north wall projection. The cracks are wider at the north side of the return walls than at the south side.
3. The Contractor removed some of the garden topsoil adjacent the exterior face of the wall to expose the top of the foundation wall. Based on the drawings the wall is reinforced concrete. We observed a parge coating over the concrete was largely undamaged except for cracking adjacent the entrance and at the extreme NW corner of the building. At the same time, excavate to about 12" below the existing garden grade to seal any cracks in the foundation wall if necessary against water intrusion with silicon caulking.
4. The OWSJ's supporting the roof span E/W parallel to the subject wall. On removal of some of the ceiling tiles we noted one OWSJ was located immediately adjacent the north wall, bearing on masonry of the east west projections. Therefore to ensure the integrity of the wall is maintained, it was recommended the Contractor place at least 9- 6" long mortar in the internal cracks on the east and west wall returns below the OWSJ bearing, adjacent the north wall immediately.

Existing mortar (particularly loose) in the joint should be removed prior to placing new. The new mortar should be at least 1.5" deep but placed over as much of the bed joint in the concrete block as possible. The remainder of the crack to either receive silicone caulking or masonry mortar to prevent the air and moisture leakage through the crack. Mortar in the crack will provide a measure to access any further movement in the wall during the next 3-6 months.

5. Although the cracking on the external wall is considered only minor, we recommend any external cracking be sealed against moisture intrusion and further deterioration of the brick veneer. We believe that the downward movement is occurring between the top of the brick and the underside of the external metal cladding at the upper section of the north wall.
6. In our Sept 30 Report, we proposed installation of new subsoil drainage in the garden bed, parallel to and adjacent the wall about 3ft deep, discharging to the north toward Dumfries St Roadside ditch. This system should be designed to collect and cut off both surface and underground water before it infiltrates to the existing footings. We don't believe this work is possible at this time and therefore should be delayed until the spring.
7. We would be pleased to provide additional assistance if require on this subject. If at any time additional information is discovered or should you have any questions please contact this office.

Prepared by Chris Turner P. Eng.

For Chris Turner Assoc's Engineering Inc.

SITE VISIT REPORT#S7

CHRIS TURNER ASSOCIATES INC:
CIVIL + STRUCTURAL ENGINEERS

22 DUNLOP DR. ST. CATHARINES, ON.L2R 1A4

DATE: Sept 10, 2018

PROJECT: 23049:
201001-39 Queenston Fire Station #4
212001-11 5 Dumfries St Queenston, NOTL, ONT.
218001-44 **Structural Condition Report**

OWNER: Town of NOTL- Facilities Supervisor Attn: Hans Pauls.

1. We visited the above site in the morning of Sept 10, 2018, at the request of the Town's Facility Supervisor, to review the cracking in the masonry walls of the building. Specifically the Town is asking a contractor to install a new glass mandoor on the NE corner of the apparatus bay, because over the last 5-10 years, the frame and door have been modified to enable the door to operate and close securely. The meeting also served to bring the Hans Pauls up to date as he has only recently taken over the responsibility for the fire stations.
2. We had previously visited this site to review the ongoing movement in the building resulting in cracking of the concrete floor and masonry walls. The building has a long history of defects due to movement in the foundations.
Previous Reports prepared by this office, forwarded to the Town as follows:
 - Our Project 23049 addressed to Chief Ken Eden in July 21, 2003. Two trenches were dug on the east and south faces and reviewed by Jane Doucette, P Eng from AMEC soils engineers
 - Our Project 210001-39: SVR S1 dated Sept 30, 2010 SVR S2 dated Nov 09, 2010 addressed to Chief Ken Eden.
 - Our project 212001-11 Four SVR between April 19 and Sept 24, 2012 addressed to Chief Alex Burbidge, concentrated on the repair of the masonry and particularly the lintel over the wind in the north facade west end. .The Reports, although identifying possible causes of the foundation movement, really didn't come up with anything conclusive. Our work since 2003 has been to review the structural integrity of the building and suggest repair for those areas of operational or cosmetic significance.
3. As a result of these visits several repairs were carried out on masonry on the north west corner over the large window in the general hall, on masonry in the south east corner adjacent the rear window of the apparatus bay and on the floor along the east wall of the apparatus room. At the recommendation of the consultants, a tree located on the SE corner was removed and a subsoil drain discharging to the north roadside ditch was installed. For details refer to the previous Reports.
4. In our brief review of the building during this visit we noted

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- significant cracking in the perimeter north masonry wall immediately adjacent the east side of the window in the Hall has opened again. This movement doesn't appear to be reflected in the external veneer. Based on 2012 photos of this area, the current movement is more or less the same as the 2012 cracking pattern. .
 - significant cracking of masonry along the east wall including (particularly as it applies to the subject of this Report) the south jamb of the NE man door.
 - the Owner reports, the masonry pavers outside the main north entrance doors have been relaid
 - the external roof drains on the east and west sides discharge to underground pipes which empty to the north roadside ditch.
 - the existing locus tree located adjacent the building on the NE corner has grown and the canopy extends over the existing roof of the apparatus room.
- It would therefore appear that since our last visit in 2012, the troubled areas at the NW and NE corners remain and further repairs are required.

- 5 During the 2003 investigation, the soils engineer indicated the current soil below the foundation was expansive clay, which is subject to the varying moisture content. (Refer previous Reports) We have had a dry winter and summer and thus the soil may have dried out, resulting in subsidence of the foundations in these areas .
The suggestion to investigate the economy of installing helical piles underpinning may be warranted. Since during 2003 investigations of the soils at a deeper level below the footings were not undertaken, we cannot comment whether this will be successful. Further test pits or an exploratory drilling may be required to establish the depth and number of piles required., so a budget for this work can be achieved.
6. The new frame for the man door in the NE corner should allow for future movement in the local foundation both up and down.
7. If we can be of further assistance, contact this office. Prior to any further repairs, we suggest a more detailed inspection be carried out to verify the structural integrity of the building remains intact.

Prepared by Chris Turner P. Eng.

For Chris Turner Assoc's Engineering Inc.





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The Corporation of the Town of Niagara-on-the-Lake Information Report to Council

SUBJECT: 2018 YEAR END ACTIVITY REPORT - BUILDING

Date: January 17, 2019

Prepared By: Darka Jensen

Department: Community & Development

BACKGROUND INFORMATION

This report has been prepared to inform Council of the building activity in the Town of Niagara-on-the-Lake for the year of 2018 (Attachment 1) as well as a review of the last 10 years (Attachment 2).

As per Attachment 1-i, the Town issued a total number of 530 Building Permits in 2018, which is a 6.7% decrease over the 568 Permits issued in 2017. The reduction in activity was reflected in a corresponding 27.8% decrease in construction value, \$96.5 million in 2018 as opposed to \$134 million in 2017.

The year 2017 saw a particularly high value in commercial development due to the construction of the new hotels on York Road and Counsell Street in Glendale, a new teaching distillery and new fitness and classroom additions at Niagara College, and significant expansion and renovations at the Cangro operations.

While the Town experienced a decrease in overall activity in 2018, revenue generated by Building Permit fees exceeded the year's budgeted forecast by 5.6%. This building activity generated building permit fees of \$713,790 (Attachment 1-iii) which slightly exceeded the 2018 budgeted forecast of \$675,920.

Residential Development

Residential construction value experienced a \$4 million year-over-year increase, representing 6.5% growth. As illustrated in Attachment 1-ii, 112 Building Permits for new residential units were issued, compared to 101 units in 2017. The majority of this construction activity took place in the following developments:

- **Old Town** Royal Albion, St. Andrews Glen, The Village and The Windsor
- **St Davids** St. Davids Estates, Collection 8 and Tanbark Heights
- **Virgil** Settlers Landing (Phase 1)

Non-Residential Development

Non-residential construction value experienced a \$41.5 million year-over-year decrease, representing a 61.7% loss. As illustrated in Appendix 1-i, the total number of non-residential permits in 2018 was 116 which was only 8 less than those of 2017. The majority of the construction activity in 2018 took place in the following notable developments:

- **St Davids** St. Davids Cold Storage – an 800 m² addition
Ravine Winery - new 1,150 m² event centre
- **Virgil** Silversmith Brewing Company – a 670 m² addition
1561 Niagara Stone Road - LCBO, Tim Hortons and several retail units for a total of 1,165 m²
1630 Niagara Stone Road - 558 m² building accommodating Starbucks and retail space
- **Glendale** Scott Labs - new 3,110 m² warehouse facility and associated offices
Central Community Church - site servicing and foundation
English Teachers Federation of Ontario – new 465 m² administrative office
- **Rural** Sunnybrook Winery – a 960 m² addition
Canopy Growth – 2,135 m² greenhouse addition
Pillitteri Estates Winery – 1,390 m² warehouse addition

Education and Training

Department Staff continue their required certification training to meet the professional qualifications as required by the Ministry of Municipal Affairs and Housing under the *Building Code Act*.

NEXT STEPS/CONCLUSIONS

While the Town's adoption of an Interim Control By-law will likely impact activity in Old Town, Building Services Staff expect that the 2019 residential activity will be similar to that of 2018.

The following approved developments are anticipated to drive residential development during 2019:

- **Old Town** Solmar at John & Victoria Streets – NW corner: 6 semis and 1 single lot
1909 Lakeshore Road - 4 singles lots
- **St. Davids** Vintages at Four Mile Creek - 18 singles, 2 semis, 36 townhouse units
- **Virgil** Settlers Landing (Phase 2) – 11 singles lots
The Vines (Woodcastle) – 12 singles and 47 townhouse units
Legacy Landing – 10 singles lots
- **Rural** Retirement facility at 415 Hunter Road - 141 apartment units

The following developments represent potential non-residential activity in 2019:

- **Old Town** Pillar & Post Gardens and a 370 m² special event space
135 Queen Street commercial space – 1,145 m²
126 Queen Street – 5,540 m² hotel addition (36 suites) and underground parking structure
- **St. Davids** 78 Four Mile Creek - 330 m² restaurant
412 Four Mile Creek - 860 m² commercial plaza
Four Mile Creek and York Road – mixed use - 525 m² commercial space and 15 apartment units

ATTACHMENTS



BP Stats 2018.pdf

Building Permit Values - Niagara-on-the-Lake

2018							
Month	Permit #	Residential	Industrial	Commercial	Agricultural	Institutional	Total Construction Value
January	27	\$1,069,181	\$175,000	\$80,000	\$0	\$243,000	\$1,567,181
February	25	4,395,500	400,000	379,548	60,000	0	\$5,235,048
March	95	26,431,200	0	675,000	0	0	\$27,106,200
Q1 Subtotals:	147	\$31,895,881	\$575,000	\$1,134,548	\$60,000	\$243,000	\$33,908,429
April	66	\$4,513,600	\$0	\$1,667,500	\$190,000	\$0	\$6,371,100
May	47	1,405,500	40,000	1,015,000	40,000	0	\$2,500,500
June	44	5,619,480	0	475,000	270,000	10,000	\$6,374,480
Q2 Subtotals:	157	11,538,580	40,000	3,157,500	500,000	10,000	15,246,080
July	56	\$2,945,000	\$4,300,000	\$2,190,500	\$1,418,000	\$0	\$10,853,500
August	36	4,206,200	65,000	1,192,000	0	0	\$5,463,200
September	39	7,546,000	870,000	520,000	88,000	2,500	\$9,026,500
Q3 Subtotals:	131	14,697,200	5,235,000	3,902,500	1,506,000	2,500	25,343,200
October	37	\$3,651,515	\$33,720	\$885,000	\$203,000	\$11,000	\$4,784,235
November	35	5,802,280	2,400,000	2,025,000	0	0	\$10,227,280
December	23	3,258,985	0	3,060,000	812,000	0	\$7,130,985
Q4 Subtotals:	95	12,712,780	2,433,720	5,970,000	1,015,000	11,000	22,142,500
Year to Date:	530	70,844,441	8,283,720	14,164,548	3,081,000	266,500	\$96,640,209

[Of the 530 total permits, 414 were classified as residential and 116 were non-residential]

2017							
Month	Permit #	Residential	Industrial	Commercial	Agricultural	Institutional	Total Construction Value
January	26	\$2,502,215	\$0	\$600,000	\$0	\$0	\$3,102,215
February	40	9,478,160	0	49,400	200,000	0	\$9,727,560
March	39	6,248,198	0	750,000	250,000	0	\$7,248,198
Q1 Subtotals:	105	\$18,228,573	\$0	\$1,399,400	\$450,000	\$0	\$20,077,973
April	49	\$4,259,301	\$2,040,000	\$7,429,500	\$700,000	\$16,000,000	\$30,428,801
May	57	2,173,200	0	46,000	180,000	1,100,000	\$3,499,200
June	118	7,979,180		17,009,243	1,330,000	0	\$26,318,423
Q2 Subtotals:	224	14,411,681	2,040,000	24,484,743	2,210,000	17,100,000	60,246,424
July	59	\$5,870,650	\$0	\$387,000	\$385,000	\$0	\$6,642,650
August	45	9,993,300	69,900	5,000	100,000	255,480	\$10,423,680
September	37	4,709,500	0	600,000	15,150,000	0	\$20,459,500
Q3 Subtotals:	141	20,573,450	69,900	992,000	15,635,000	255,480	37,525,830
October	44	\$7,501,000	\$0	\$150,000	\$352,000	\$0	\$8,003,000
November	33	4,356,300	0	53,000	100,000	1,205,000	\$5,714,300
December	21	1,446,200		472,000	470,000	0	\$2,388,200
Q4 Subtotals:	98	13,303,500	0	675,000	922,000	1,205,000	16,105,500
Year to Date:	568	66,517,204	2,109,900	27,551,143	19,217,000	18,560,480	\$133,955,727

[Of the 568 total permits, 444 were classified as residential and 124 were non-residential]

Residential Units (New Construction)**2018**

	Permits Issued	Units Created	Units Demo'd	Net Units	V alue
January	1	1	0	1	\$450,000
February	6	9	0	9	\$3,830,000
March	65	68	0	68	\$24,807,250
Q1 Subtotals:	72	78	0	78	\$29,087,250
April	4	6	-1	5	\$2,361,000
May	1	1	0	1	\$500,000
June	6	6	-1	5	\$3,729,000
Q2 Subtotals:	11	13	-2	11	\$6,590,000
July	2	3	-2	1	\$1,350,000
August	2	2	-2	0	\$1,700,000
September	8	8	-1	7	\$6,535,000
Q3 Subtotals:	12	13	-5	8	\$9,585,000
October	4	4	-1	3	\$2,698,000
November	5	12	-2	10	\$4,850,800
December	4	4	-2	2	\$2,187,000
Q4 Subtotals:	13	20	-5	15	\$9,735,800
Year to Date:	108	124	-12	112	\$54,998,050

2017

	Permits Issued	Units Created	Units Demo'd	Net Units	V alue
January	6	7	-1	6	\$1,955,800
February	17	26	-1	25	\$8,683,050
March	6	6	-1	5	\$3,152,500
Q1 Subtotals:	29	39	-3	36	\$13,791,350
April	7	7	-4	3	\$3,494,500
May	3	3	-4	-1	\$1,312,200
June	8	11	-1	10	\$4,790,900
Q2 Subtotals:	18	21	-9	12	\$9,597,600
July	8	8	-6	2	\$4,260,600
August	12	31	0	31	\$8,810,800
September	7	7	0	7	\$4,210,000
Q3 Subtotals:	27	46	-6	40	\$17,281,400
October	6	11	-4	7	\$5,825,000
November	6	7	-1	6	\$3,203,000
December	2	2	-2	0	\$1,160,000
Q4 Subtotals:	14	20	-7	13	\$10,188,000
Year to Date:	88	126	-25	101	\$50,858,350

Permit Value/Fee Report

Permit Type: 2018 Building Permits

<i>Month</i>	<i># Issued</i>	<i>Value of Permits</i>	<i>Fee Collected</i>
January	27	\$1,567,181	\$16,768.22
February	25	\$5,235,048	30,781.93
March	95	\$27,106,200	193,950.34
Q1 Subtotals	147	\$33,908,429	\$241,500.49
April	66	\$6,371,100	\$51,193.72
May	47	\$2,500,500	34,218.18
June	44	\$6,374,480	40,379.55
Q2 Subtotals	157	\$15,246,080	\$125,791.45
July	56	\$10,853,500	\$82,294.74
August	36	\$5,463,200	36,599.66
September	39	\$9,026,500	68,678.34
Q3 Subtotals	131	\$25,343,200	\$187,572.74
October	37	\$4,784,235	\$30,825.24
November	35	\$10,227,280	\$85,763.01
December	23	\$7,130,985	\$42,340.57
Q4 Subtotals	95	\$22,142,500	\$158,928.82
Totals:	530	\$96,640,209	\$713,793.50

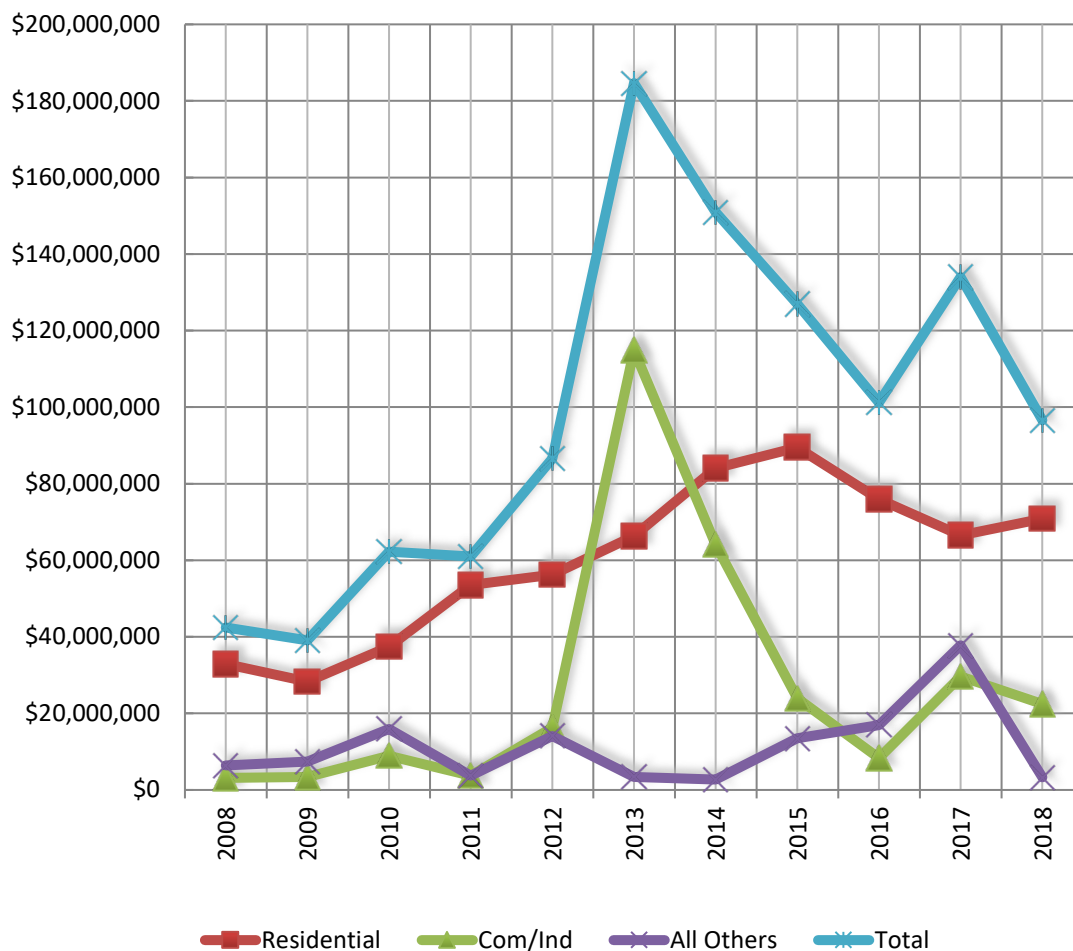
Permit Type: 2017 Building Permits

<i>Month</i>	<i># Issued</i>	<i>Value of Permits</i>	<i>Fee Collected</i>
January	26	\$3,102,215	\$28,656.30
February	40	9,727,560	98,232.44
March	39	7,248,198	58,006.42
Q1 Subtotals	105	\$20,077,973	\$184,895.16
April	49	\$30,428,801	\$183,581.90
May	57	3,499,200	28,735.50
June	118	26,318,423	245,658.79
Q2 Subtotals	224	\$60,246,424	\$457,976.19
July	59	\$6,642,650	\$59,086.56
August	45	10,423,680	90,629.99
September	37	20,459,500	78,609.39
Q3 Subtotals	141	\$37,525,830	\$228,325.94
October	44	\$8,003,000	\$51,989.06
November	33	\$5,714,300	\$36,401.65
December	21	\$2,388,200	\$15,693.52
Q4 Subtotals	98	\$16,105,500	\$104,084.23
Totals:	568	\$133,955,727	\$975,281.52

NEW UNIT Counts for: 2018

	St Davids						Glendale						Virgil						Old Town						Queenston						Rural						
	SFD	Semi	Town	Apts	Demos	SbT	SFD	Semi	Town	Apts	Demos	SbT	SFD	Semi	Town	Apts	Demos	SbT	SFD	Semi	Town	Apts	Demos	SbT	SFD	Semi	Town	Apts	Demos	SbT	SFD	Semi	Town	Apts	Demos	SbT	Totals
January	1					1																															1
February													4					4				4								1						1	9
March	2					2							3					3	1		62			63													68
April					-1	-1							1					1	1		3			4						1						1	5
May	1					1																															1
June	2					2							1					1	2					2						1					-1	0	5
July																			1	2			-1	2											-1	-1	1
August																			1					1						1					-2	-1	0
September	2					2							1				-1	0	1					1					4						4	7	
October	1					1							1					1											2						-1	1	3
November	2					2									3			3	1		6		-2	5													10
December	1					1							1					1	1				-1	0						1					-1	0	2
UNIT TOTALS:	12	0	0	0	-1	11	0	0	0	0	0	0	12	0	3	0	-1	14	9	2	75	0	-4	82	0	0	0	0	0	0	11	0	0	0	-6	5	112
Percentages(%)	9.8						0						13						73						0						4.5						100

Completed: January 9th, 2019

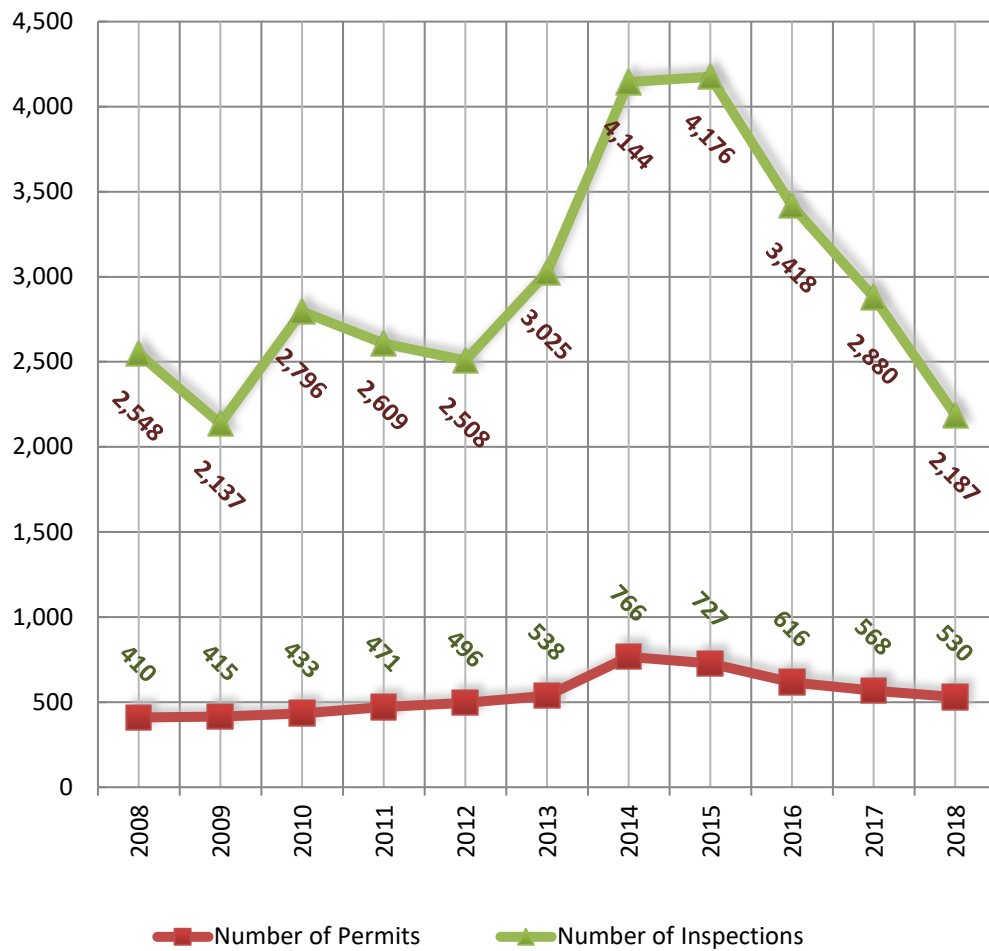
Table One: Value of Construction (\$)


Year	Residential	Com/Ind	All Others	Total
2008	32,877,470	3,146,600	6,409,000	42,433,070
2009	28,304,400	3,363,100	7,417,050	39,084,550
2010	37,429,769	8,906,945	15,944,000	62,280,714
2011	53,512,993	3,724,990	3,769,300	61,007,283
2012	56,242,854	16,269,350	14,073,600	86,585,804
2013	66,329,370	114,929,650	3,401,900	184,660,920
2014	84,064,130	64,122,945	2,719,700	150,906,775
2015	89,464,702	23,972,300	13,494,700	126,931,702
2016	75,924,581	8,329,100	16,945,744	101,199,425
2017	66,517,204	29,661,043	37,777,480	133,955,727
2018	70,844,441	22,448,268	3,347,500	96,640,209



Community and Development Services Department

Building Statistics 2008-2018

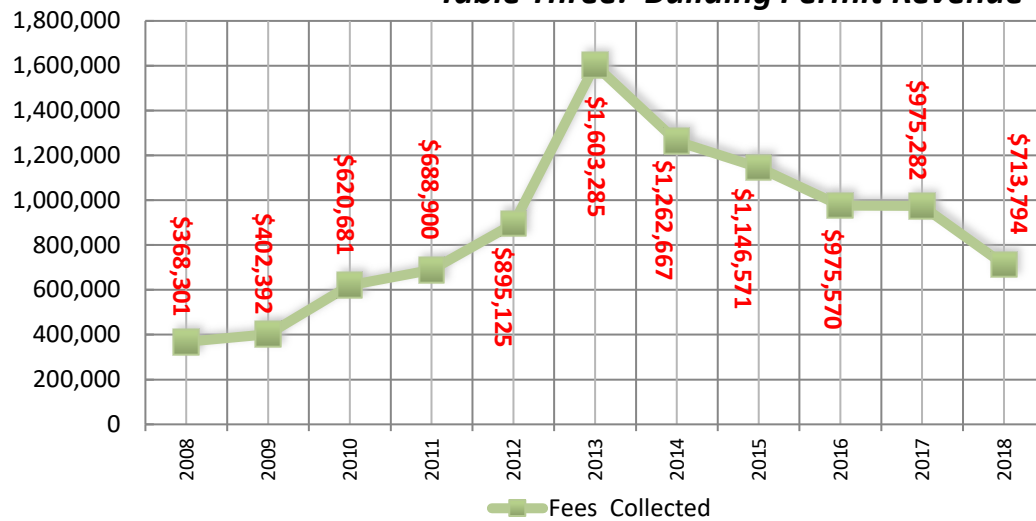
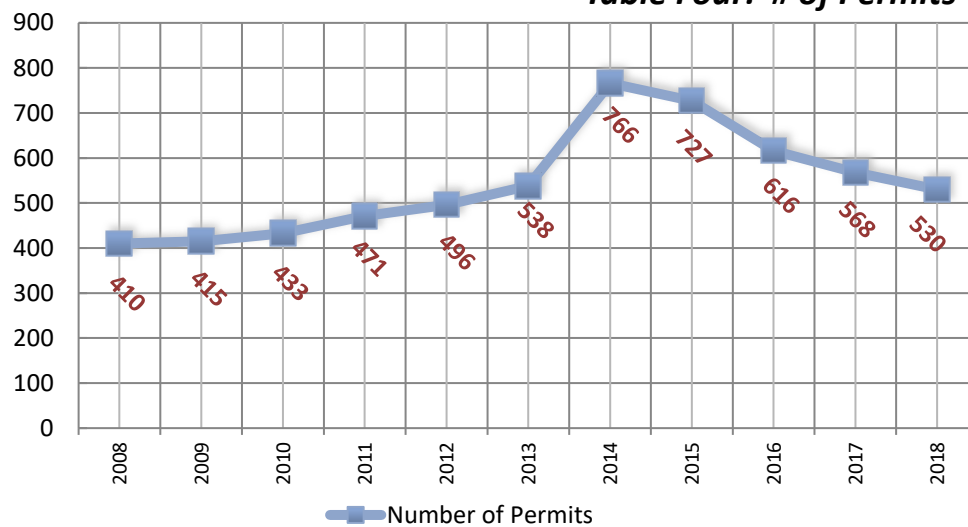
Table Two: # of Permits & Inspections

Year	Number of Permits	Number of Inspections
2008	410	2,548
2009	415	2,137
2010	433	2,796
2011	471	2,609
2012	496	2,508
2013	538	3,025
2014	766	4,144
2015	727	4,176
2016	616	3,418
2017	568	2,880
2018	530	2,187



Community and Development Services Department

Building Statistics 2008-2018

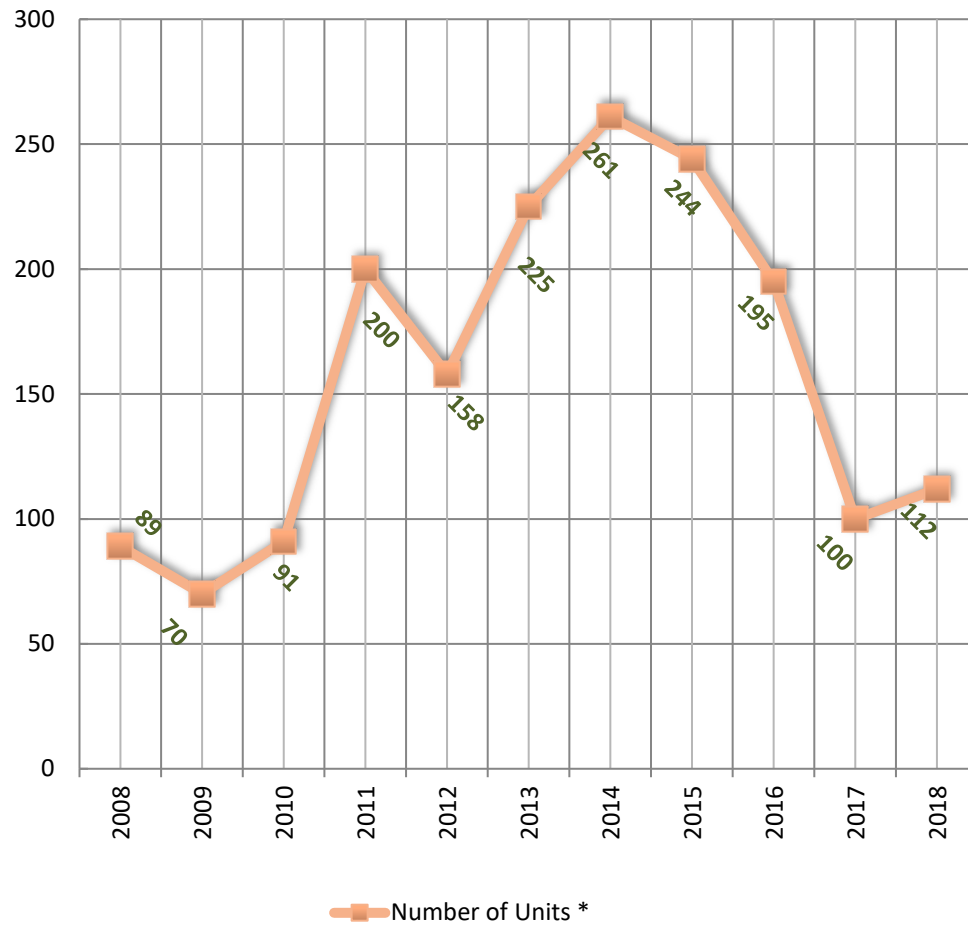
Table Three: Building Permit Revenue**Table Four: # of Permits**

5

Year	Number of Permits	Fees Collected
2008	410	368,301
2009	415	402,392
2010	433	620,681
2011	471	688,900
2012	496	895,125
2013	538	1,603,285
2014	766	1,262,667
2015	727	1,146,571
2016	616	975,570
2017	568	975,282
2018	530	713,794

Building Statistics 2008-2018

Table Five: Residential Dwelling Units



Year	Number of Units *
2008	89
2009	70
2010	91
2011	200
2012	158
2013	225
2014	261
2015	244
2016	195
2017	100
2018	112

* Represents the number of 'units' created in that year.

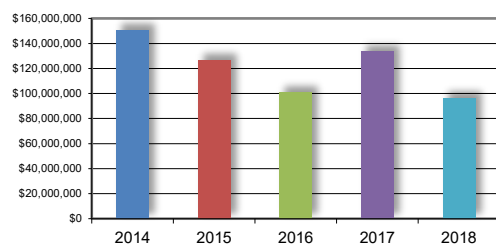


Community and Development Services Department

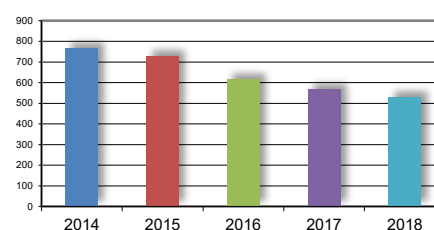
Building Statistics 2014-2018

Year	Value of Construction				# of Prmts	# Inspections	Bldg Prmt Revenues	# of new units
	Rsdntl	Com/Indl	Others	Total				
2014	84,064,130	64,122,945	2,719,700	\$150,906,775	766	4144	\$1,262,667	261
2015	89,464,702	23,972,300	13,494,700	\$126,931,702	727	4176	\$1,146,571	244
2016	75,924,581	8,329,100	16,945,744	\$101,199,425	616	3418	\$975,570	195
2017	66,517,204	29,661,043	37,777,480	\$133,955,727	568	2880	\$975,282	100
2018	70,844,441	22,448,268	3,347,500	\$96,640,209	530	2187	\$713,794	112
Average	77,363,012	29,706,731	14,857,025	\$121,926,768	641	3,361	\$1,014,777	182

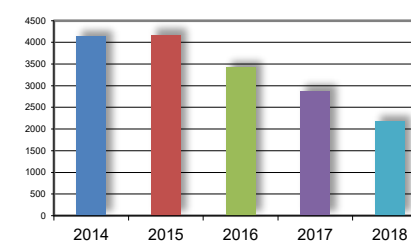
Value of Construction



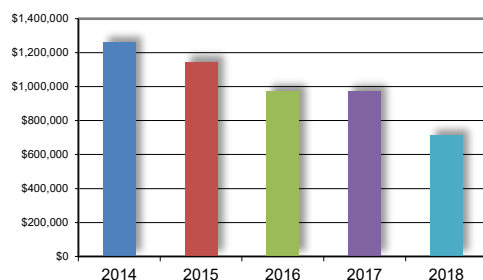
Number of Permits



Inspections



Building Permit Revenues



New Units Created

