*__Live Streaming/Telecast__: Please note that Public Meetings held in the Council Chamber are being recorded and broadcasted as well included on the City's website at: www.whiterockcity.ca

Corporate Administration (604) 541-2212
E-mail clerksoffice@whiterockcity.ca

THE CORPORATION OF THE

CITY OF WHITE ROCK

15322 BUENA VISTA AVENUE, WHITE ROCK, B.C. V4B 1Y6

ON TABLE see page 179

June 10, 2020

A **REGULAR MEETING** of CITY COUNCIL will be held in the **CITY HALL COUNCIL CHAMBERS** located at **15322 Buena Vista Avenue, White Rock, BC,** on **MONDAY, JUNE 15, 2020** to begin at **7:00 p.m.** for the transaction of business as listed below.

The City of White Rock is committed to the health and safety of our community. In keeping with Ministerial Order No. M139 from the Province of British Columbia, City Council meetings will take place without the public in attendance at this time until further notice.

Please note you can watch the meeting, as well as previous meetings, online www.whiterockcity.ca/councilmeetings .

T. Arthur, Director of Corporate Administration

A G E N D A

1. CALL MEETING TO ORDER

1.1 FIRST NATIONS LAND ACKNOWLEDGEMENT

We would like to recognize that we are standing/working/meeting on the traditional unceded territory of the Semiahmoo First Nation, and also wish to acknowledge the broader territory of the Coast Salish Peoples.

1.2 SPECIAL RECOGNITION: HEALTH CARE WORKERS AND FIRST RESPONDERS

Council to honour Health Care Workers and First Responders who are the heroes of this global pandemic.

2. ADOPTION OF AGENDA

RECOMMENDATION

THAT the Corporation of the City of White Rock Council adopt the agenda for its regular meeting scheduled for June 15, 2020 as circulated.

3. ADOPTION OF MINUTES

a) June 8, 2020 – Special meeting **Page 6**

RECOMMENDATION

THAT the Corporation of the City of White Rock Council adopt the following meeting minutes as circulated:

a) June 8, 2020 – Special meeting

4. QUESTION AND ANSWER PERIOD

Due to the COVID-19 global pandemic, Question and Answer Period has been temporarily suspended until further notice. You may forward questions and comments to Mayor and Council by emailing ClerksOffice@whiterockcity.ca with **Question and Answer Period** noted in the subject line. Your questions and comments will be noted along with answers and placed on the City's website. You will be notified directly once this has been completed.

The following correspondence was received by 8:30 a.m., June 10, 2020, with respect to Question and Answer Period: **Page 11**

a) Heather C., expressing concerns regarding the increase of cars and trucks along North Bluff Road and requesting the RCMP increase surveillance along the hospital corridor
b) M. Desmarais, requesting the City provide statistics by the City / RCMP regarding the number of tickets issued for speed and noise violations since the City's request for increased enforcement
c) R. Wallace, requesting the City permit the "Artist Walk" be reinstated with physical distancing measures in the City of White Rock
d) T. Erwin, requesting Council consider implementing an "Empty Commercial Space" fee

RECOMMENDATION

THAT Council receive for information the correspondence submitted for Question and Answer Period by 8:30 a.m., June 10, 2020 including "On-Table" information provided with staff responses that are available at the time.

Note: Answers not provided at the meeting will be provided to the person who submitted the question and the information will be placed on the City website with a copy forwarded to City Council.

5. DELEGATIONS AND PETITIONS

5.1 DELEGATIONS

Due to the COVID-19 global pandemic, Delegations will be temporarily postponed/suspended until further notice. If you wish to appear as a delegation in the future, please continue to submit your application to ClerksOffice@whiterockcity.ca or call 604 541 2212 and staff will keep you updated on when Delegations will resume.

5.2 PETITIONS

None

6. PRESENTATIONS AND CORPORATE REPORTS

6.1 PRESENTATIONS

6.1a 2020 - 2023 RCMP STRATEGIC PLAN

Staff Sergeant Kale Pauls will be in attendance to provide a PowerPoint presentation regarding the 2020-2023 RCMP Strategic Plan.

Note: Additional materials regarding this presentation will be presented at the meeting and was available in advance. Click here to view.

6.2 CORPORATE REPORTS

6.2.1 COVID-19 GLOBAL PANDEMIC (VERBAL UPDATE)

Verbal update from the Chief Administrative Officer and the Fire Chief with respect to the COVID-19 global pandemic.

RECOMMENDATION

THAT Council receives the verbal report from the Chief Administrative Officer and the Fire Chief regarding the COVID-19 global pandemic.

6.2.2 PLANNING PROCEDURES BYLAW AMENDMENT - ELECTRONIC PUBLIC HEARINGS FOR LIQUOR AND CANNABIS LICENCE REFERRALS AND DELEGATION OF LIQUOR PRIMARY CLUB LICENCES

Page 18

Corporate report dated June 15, 2020 from the Director of Planning & Development Services titled "Planning Procedures Bylaw Amendment - Electronic Public Hearings for Liquor and Cannabis Licence Referrals and Delegation of Liquor Primary Club Licences".

RECOMMENDATION

THAT Council recommends Appendix B as appended to this corporate report dated June 15, 2020, be referred for consideration of adoption under the Bylaws section of the June 15, 2020 regular Council meeting agenda.

6.2.3 APPLICATION FOR LIQUOR PRIMARY CLUB LICENCE, 14560 NORTH BLUFF ROAD (LL 20-002)

Page 25

Corporate report dated June 15, 2020 from the Director of Planning and Development Services titled "Application for Liquor Primary Club Licence, 14560 North Bluff Road (LL 20-002)".

RECOMMENDATION

THAT Council, pending amendments to the Planning Procedures Bylaw described in a separate corporate report, allow the Director of Planning and Development Services to obtain public input through written comment and respond directly to the LCRB, including in the response that if the liquor primary club licence application at 14560 North Bluff Road is approved that it be subject to the following conditions:

- that the hours of liquor service be limited to the period of time between 3:00 p.m. and 9:00 p.m., Sunday to Saturday, inclusive;
- that, notwithstanding the above-noted hour of liquor service, the service of liquor shall be prohibited when children are attending scheduled classes or are receiving services offered at the White Rock and Cobble Hill Montessori; and
- that the "service area" be limited to the clubhouse and the abutting patio.

7. MINUTES AND RECOMMENDATIONS OF COMMITTEES

7.1 STANDING AND SELECT COMMITTEE MINUTES

None

7.2 STANDING AND SELECT COMMITTEE RECOMMENDATIONS

a) The following document titled "2018 City of White Rock Fire Underwriters Survey" has been bought forward for Council's information in response to the **Water Community Advisory Panel** recommendation dated March 10, 2020. Council endorsed this recommendation at the April 20, 2020 regular Council meeting: **Page 48**

THAT Council directs staff to work with the authors of the 2018 Fire Underwriters Report and bring back to Council what can be made public.

Note: The document as included in the agenda was provided to the City's Fire Chief following review and being redacted by SCM - Opta Information Intelligence – information provider.

RECOMMENDATION
THAT Council endorses staff forwarding the "2018 City of White Rock Fire Underwriters Survey" as reviewed and redacted by SCM - Opta Information Intelligence – information provider to the Water Community Advisory Panel for information purposes.

8. BYLAWS AND PERMITS

8.1 BYLAWS

8.1.1 BYLAW 2347 - PLANNING PROCEDURES BYLAW AMENDMENT, BYLAW NO. 2347

Bylaw 2347 proposes to revise the Planning Procedures Bylaw as outlined in the corporate report noted on this agenda as Item 6.2.2. Council will determine, under this item, which bylaw will be considered for readings (Appendix A or Appendix B)

RECOMMENDATION #1: FIRST THREE BYLAW READINGS
THAT Council give first, second, and third reading to *"City of White Rock Planning Procedures Bylaw, 2017, No. 2234, Amendment (Liquor and Cannabis Public Input) Bylaw, 2020, No. 2347"*, included and circulated in the June 15, 2020 regular Council agenda package as **Appendix ___** under Item 6.2.2.

Note: In accordance with Ministerial Order No. M139, local governments may consider third and final reading on the same evening.

RECOMMENDATION #2: FINAL READING
THAT Council give final reading to *"City of White Rock Planning Procedures Bylaw, 2017, No. 2234, Amendment (Liquor and Cannabis Public Input) Bylaw, 2020, No. 2347"*, included and circulated in the June 15, 2020 regular Council agenda package as **Appendix ___** under Item 6.2.2.

8.2 PERMITS

None

9. CORRESPONDENCE

9.1 CORRESPONDENCE - RECEIVED FOR INFORMATION

Note: *Further action on the following correspondence items may be considered. Council may request that any item be brought forward for discussion, and may propose a motion of action on the matter.*

9.1.1 Email dated June 6, 2020 from John Lawson, Chair, SurreyCares Community Foundation, regarding Grants available to Charities in White Rock **Page 177**

Note: *Council may wish to refer this matter to staff for consideration and response.*

10. MAYOR AND COUNCILLOR REPORTS

10.1 MAYOR'S REPORT

10.2 COUNCILLORS REPORTS

10.2.1 METRO VANCOUVER BOARD IN BRIEF

None

11. MOTIONS AND NOTICES OF MOTION

11.1 MOTIONS

None

11.2 NOTICES OF MOTION

None

12. RELEASE OF ITEMS FROM CLOSED COUNCIL MEETINGS

None

13. OTHER BUSINESS

14. CONCLUSION OF THE JUNE 15, 2020 REGULAR COUNCIL MEETING

PRESENT: Mayor Walker
Councillor Chesney
Councillor Fathers
Councillor Johanson
Councillor Kristjanson
Councillor Manning
Councillor Trevelyan

STAFF: G. Ferrero, Chief Administrative Officer
T. Arthur, Director of Corporate Administration
J. Gordon, Director of Engineering and Municipal Operations
C. Isaak, Director of Planning and Development Services
C. Ponzini, Director of Financial Services
S. Lam, Deputy Corporate Officer (via electronic means)

The City of White Rock is committed to the health and safety of our community. In keeping with Ministerial Order No. M139 from the Province of British Columbia, City Council meetings will take place without the public in attendance at this time until further notice.

Please note you can watch the meeting, as well as previous meetings, online www.whiterockcity.ca/councilmeetings.

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1. CALL MEETING TO ORDER

The meeting was called to order at 6:00 P.M.

1.1 FIRST NATIONS LAND ACKNOWLEDGEMENT

We would like to recognize that we are standing/working/meeting on the traditional unceded territory of the Semiahmoo First Nation, and also wish to acknowledge the broader territory of the Coast Salish Peoples.

2. ADOPTION OF AGENDA

2020-330 **It was MOVED and SECONDED**

THAT the Corporation of the City of White Rock Council amends the agenda for its special meeting scheduled for June 8, 2020 by adding the following:

- Letter dated June 5, 2020 from the White Rock BIA regarding Additional Public Seating and Tables in White Rock

AND the agenda was adopted as amended.

CARRIED

3. ADOPTION OF MINUTES

a) June 1, 2020 – Special meeting

2020-331 **It was MOVED and SECONDED**

THAT the Corporation of the City of White Rock Council adopts the following meeting minutes as circulated:

a) June 1, 2020 – Special meeting.

CARRIED

Mayor Walker provided the following statement against racism and discrimination on behalf of Council and the City of White Rock:

- *I would like to take a moment to speak about an important world matter.*
- *As we watch the events unfolding south of the border and across the globe, and at a time when we have come together to keep our community safe against a global pandemic, we are made less by acts of racist violence.*
- *Racism and discrimination have no place in our society. And yet, here in Canada, as in the U.S. and around the world, racism is too often a reality of daily life.*
- *In White Rock, we are proud of our community's culture of respect and inclusion. But there is still more for us to do. Each of us has a responsibility to think every day about how our words and our actions may be expressing bias, even without our intent. Racist attitudes translate into racist acts.*
- *In White Rock, we are a welcoming City, committed to inclusion and diversity and fiercely opposed to racism and hatred in any form.*
- *We will continue to listen and to learn and to bring change where it's needed.*
- *We will:*
  - *Continue to provide a workplace free of discrimination.*
  - *Not tolerate discrimination of any kind in providing our services or in our decision-making.*
  - *Continue to observe equal opportunity employment in our hiring practices.*
  - *Continue to partner with the Semiahmoo First Nation to work collaboratively for a better future.*
  - *Condemn any acts of racism or racist violence in our community.*

4. CORPORATE REPORTS

4.1 COVID-19 GLOBAL PANDEMIC (VERBAL UPDATE)

Verbal update from the Chief Administrative Officer with respect to the COVID-19 global pandemic.

The Chief Administrative Officer provided an update on COVID-19 stats both globally and locally.

Council discussed the following topics in relation to the COVID-19 global pandemic:

FENCING AT THE WATERFRONT

Council discussed the possibility of removing the blue fencing at the waterfront area. While it was recognized that visitors have mostly adhered to physical distancing, that a stretch of good weather has not yet been experienced where it is anticipated that more people would arrive at the waterfront.

Due to the cost to remove the fencing from the site and possibly of having to re-install it, Council decided to hold off on the removal for now and revisit this in the future after more monitoring.

2020-332 **It was MOVED and SECONDED**

THAT Council directs staff to remove the blue fencing located at the waterfront area.

DEFEATED

Councillors Chesney, Fathers, Manning, Trevelyan and Mayor Walker voted in the negative

PARKING UPTOWN

With the phased reopening of the economy, Council reported that there are still contractors utilizing public parking spots in the uptown area during the day.

This issue has been ongoing, it takes away available parking from customers of the local businesses.

Staff noted that:

- Each construction site has a parking plan which they need to be following
- While many of these projects have sub-contractors, project leads should be reinforcing the parking permissions to the workers
- The City is currently exploring adding additional parking enforcement officers on staff

It was noted that discussion regarding general service levels will be part of a strategic priorities discussions. A corporate report will come in the near future to address these matters.

COUNCIL MEETING SCHEDULE
It was recognized that through the pandemic, the Council meeting schedule was revised to host a meeting every week to include the verbal COVID-19 updates.

Council agreed to revert back to the original 2020 regular Council meeting calendar. COVID-19 verbal updates will continue to be a part of the regular Council meeting.

2020-333 **It was MOVED and SECONDED**
THAT Council resumes the 2020 Regular council meeting schedule as adopted on November 18, 2019.

CARRIED

2020-334 **It was MOVED and SECONDED**
THAT Council receives the verbal report from the Chief Administrative Officer regarding the Covid-19 global pandemic.

CARRIED

4.2 RCMP DISPATCH AND TRANSCRIPTION SUPPORT SERVICES AGREEMENT
Corporate report dated June 8, 2020 from the Director of Human Resources titled "RCMP Dispatch and Transcription Support Services Agreement".

2020-335 **It was MOVED and SECONDED**
THAT Council authorizes the Mayor and City Clerk to execute the RCMP Dispatch and Transcription Support Services Agreement, attached as Appendix A to this corporate report, for the continued delivery of RCMP dispatch services by the City of Surrey for the City of White Rock.

CARRIED

4.3 PROPOSED PICNIC TABLE PROGRAM FOR OUTDOOR PUBLIC SEATING
Corporate report dated June 8, 2020 from the Director of Planning and Development Services titled "Proposed Picnic Table Program for Outdoor Public Seating".

The White Rock BIA advised through correspondence that their board has agreed to contribute funding in the amount of $2,500 in support of such a program (letter provided On-Table).

2020-336 **It was MOVED and SECONDED**
THAT Council directs staff to acquire and install picnic tables and benches for outdoor public use, focusing on the plaza at Memorial Park as well as other appropriate locations in the East Beach and the Uptown areas, using $10,000 from operating contingency for the picnic tables and benches, and expand the outdoor seating program if further donations are received from partners.

CARRIED

5. **OTHER BUSINESS**

FENCING AT RUTH JOHNSTON PARK
Council discussed the new fencing that has been installed at Ruth Johnston Park around the municipal storage area.

Staff provided the following information in response to questions/comments:

- No further trees are going to be taken down in this area, adding that the fencing has been installed to allow for the trees to remain
- The heavier duty fence, including where it's located in proximity to the trees, will reduce trespass (it was found that the previous chain link fence was easy to cut through)

6. **CONCLUSION OF THE JUNE 8, 2020 SPECIAL COUNCIL MEETING**
The Chairperson declared the meeting concluded at 7:14 p.m.

Mayor Walker

Tracey Arthur, Director of Corporate Administration

From: H C
To: Clerk"s Office
Subject: Question and Answer Period
Date: Friday, June 05, 2020 3:12:18 PM

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good Afternoon
As a resident of White Rock, I am deeply concerned over the increase of cars and trucks along North Bluff.
We live at the Summit which is located by Peace Arch Hospital.
The number of speeders is increased and getting worse. We have made many calls to RCMP.
I'm hoping with your influence you could make a request to RCMP to up the surveillance along the hospital corridor. It's 50K and the signage is so small to indicate a hospital.
Thank you
Heather C.

Sent from my iPhone

From: md6755
To: Clerk"s Office
Subject: Traffic
Date: May 27, 2020 11:13:57 AM

Will any statistics be released by the city/RCMP as to how many tickets are being issued for speed and noise violations since enforcement has "apparently" been increased in the Marine Drive area of White Rock?

Thank you
Marilyn Desmarais

Sent from my Samsung Galaxy smartphone.

From: Virtual Edge
To: brenda.anderson@peacearchnews.com; editorial@peacearchnews.com; Clerk"s Office
Subject: Question and Answer Period
Date: June 8, 2020 2:14:37 PM
Attachments: eiikcififbognefa.png
ncbllapikeimiioj.png

==========

Question and Answer Period
During the COVID-19 pandemic, you can participate in Question and Answer Period by emailing ClerksOffice@whiterockcity.ca with "Question and Answer Period" noted in the subject line. Your questions and comments will be noted along with answers and placed on the City's website. You will be notified directly once this has been completed.

==========

Dear City of White Rock

Will the Artist Walk reopen?

The White Rock Farmers' Market is allowing NON food vendors (they have a member on council and artists at the beach are not represented on council).

The artists at the beach have always been set up more than the current safe distance rules many places require. The artists are spaced out and not packed in like sardines, like other venues. Artists on the promenade are working as goodwill ambassadors for White Rock using their own time & money with no guarantee of profits or sales. A postcard or greeting card mailed around the world has the potential to bring more people to White Rock Beach. Many people have asked about restaurants or history of the pier or White Rock. Some of my photos of White Rock Beach are hanging on the walls of homes in England, Scotland, Ireland, Hungary, USA, Australia, Japan, China, Belgium, South America, etc in turn showing White Rock in a good light around the world. All artists at the beach have had sales to people around the globe. With the border closed, cruise ships not running and reduced flights to BC, the economic tsunami to tourism is a worldwide problem.

PHOTOS: White Rock Farmers' Market 'welcomes all vendors'

https://www.peacearchnews.com/photo-galleries/photos-white-rock-farmers-market-welcomes-all-vendors/

The BIA is trying to help restaurants

Liquor permission considered for White Rock's Memorial Park

https://www.peacearchnews.com/news/liquor-permission-considered-for-white-rocks-memorial-park/

On Sunday June 7 2020 buskers were present on the open promenade but no artists set up.

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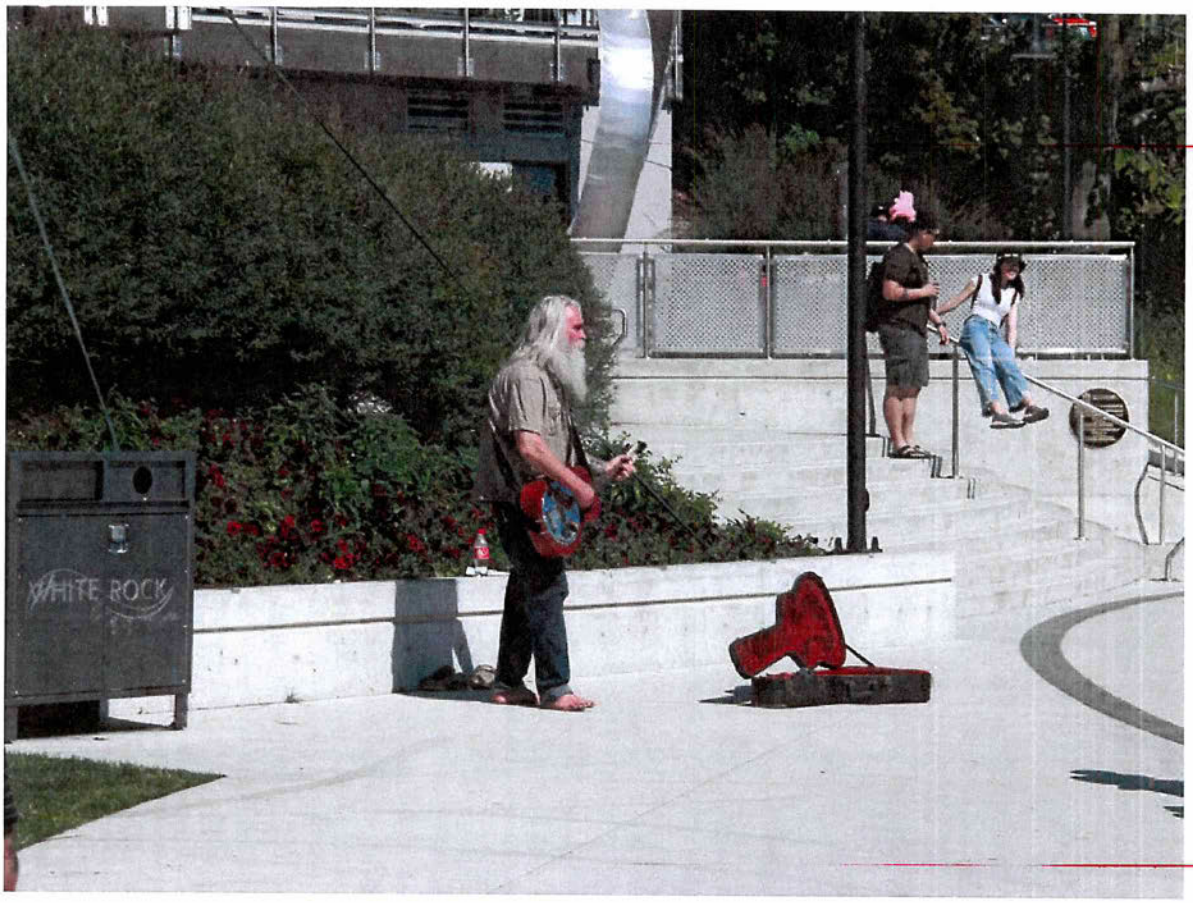


Has the city forgotten about the artists (photographers & painters)?

ARTISTS WALK

To keep the community safe and to help slow the spread of COVID-19, the City of White Rock is temporarily suspending registration into the artists walk program until further notice.

Artists understand there is a risk setting up due to COVID 19, but have invested in masks, gloves, and other protective measures and will display social distancing signs, preferred contactless payments, etc.

Some artists have decided to pass on the beach until COVID 19 is not a problem. My waterfront sales are DOWN 99.9% over last year like other artists.

I have been working getting more products online and people will be able to scan a QR code and browse online what I offer on their own device. I can present the product for purchase quickly once they decide. Just about everything I sell is sealed in plastic.

We understand food vendors maybe required to have enclosed food setup, due to selling consumable products unlike postcards, photos and wall art.
This email in only concerning the artists and not food vendors.

Artists agree the closing of the pier and promenade was necessary and could happen again, but allowing ALL VENDORS at the market, focusing on liquor sales in Memorial Park, while there have been no updates for artists in the artist walk program - this not a level playing field for doing business in White Rock.

If the city has decided artists are not allowed to be at the waterfront this year, or following years, please let us know.

If the city decides the artists are allowed on the promenade, opening up this area in the photo below will allow easier access to set up **like when the pier was reconstructed.**

Opening this area up would reduce traffic beside the museum and make it safer for visitors.

I personally helped the reconstruction crew with blocking traffic so they could enter their enclosed off area safely. Some of the workers even purchased from the artists.

I also sent this to the Peace Arch News as past emails to the city were ignored or never answered.

Ric Wallace

From: Tracey Erwin
To: Clerk"s Office
Subject: Question & Answer Period
Date: June 8, 2020 4:28:00 PM

With the greedy landlords and disruption to businesses these last few years will council consider implementing an "Empty commercial space" fee?

Tracev Erwin

Life is short go explore

THE CORPORATION OF THE

CITY OF WHITE ROCK

CORPORATE REPORT

DATE: **June 15, 2020**

TO: **Mayor and Council**

FROM: **Carl Isaak, Director of Planning & Development Services**

SUBJECT: **Planning Procedures Bylaw Amendment - Electronic Public Hearings for Liquor and Cannabis Licence Referrals and Delegation of Liquor Primary Club Licences**

RECOMMENDATION

THAT Council recommends Appendix B as appended to this corporate report dated June 15, 2020, be referred for consideration of adoption under the Bylaws section of the June 15, 2020 Regular council meeting agenda.

INTRODUCTION

This corporate report dated June 15, 2020, presents proposed amendments to the City of White Rock Planning Procedures Bylaw, 2017, No. 2234, to allow the gathering of public input related to a liquor or cannabis licence referral to occur as an electronic public hearing or one reliant on other communication facilities. The corporate report also identifies and recommends a potential delegation of authority to the Director of Planning and Development Services to provide comment on applications for new liquor primary club licences.

PAST PRACTICE / POLICY / LEGISLATION

The *Liquor Control and Licensing Act* and the *Cannabis Control and Licensing Act* set out the processes for gathering public input in the review of applications for liquor and cannabis licences in British Columbia. Both statutes provide that, if a local government or first nation wish to provide comments and recommendations on a licence application, they must seek out the views of the public by undertaking at least one of the following:

(i) receiving written comments in response to a public notice of the application,
(ii) conducting a public hearing in respect of the application,
(iii) holding a referendum, or
(iv) using another method the local government or first nation considers appropriate.

The City of White Rock Planning Procedures Bylaw, 2017, No. 2234, currently provides that, for applications requiring a public hearing, the input of the public must be gathered by way of the hosting of a meeting in Council Chambers, or an appropriate public venue, prior to the Council meeting and in conjunction with the public meeting required for a Temporary Use Permit, if applicable. While a recent Ministerial Order (i.e., Order No. M139) enables municipalities to host digital/electronic public hearings or meetings required by the *Local Government Act*, the Order does not apply directly to applications made under the *Liquor Control and Licensing Act* or the *Cannabis Control and Licensing Act.* The amendments presented in this corporate report

are intended to allow the public hearing required with a liquor or cannabis licence application to be carried out electronically or by way of using other communication facilities, consistent with what may be considered another method of consultation recognized in the aforementioned statutes.

It is noted that on May 25, 2020, Council passed the following resolution, endorsing proposed electronic meeting formats to be applied in the review of land development applications and to enable digital meetings of the City's Advisory Design Panel.

"THAT Council:

1. Receive for information the corporate report dated April 27, 2020, from the Director of Planning and Development Services, titled "Procedures for Conducting Electronic Public Hearings and Advisory Design Panel Review;" and
2. Endorse the proposed electronic meeting formats as proposed in this corporate report.

[Resolution No. 2020-300]"

The intention of the amendments presented in this corporate report are consistent with those endorsed by the Council via the above-referenced resolution.

ANALYSIS

The analysis presented in the corporate report dated May 25, 2020, and titled "Procedures for Conducting Electronic Public Hearings and Advisory Design Panel Review" can be applied to the basis for the bylaw amendments presented in this corporate report. Enabling electronic public hearings in the review of cannabis and liquor licence applications will support the social distancing needed to protect the health of participants during the ongoing COVID-19 pandemic, while also allowing applications to move forward in the review process. In addition to supporting electronic public hearings, there exist opportunities to promote more traditional means of engagement, primarily involving written submissions, in the notices advising the public of new applications.

Appendix A to this corporate report presents the Draft Planning Procedures Bylaw Amendment, Bylaw No. 2347 specific to enabling electronic public hearings. The following section of this corporate report presents an additional amendment recommended by staff as it relates specifically to new liquor primary club licence applications.

Liquor Primary Club Licence Applications

In March 2020, notices of a new liquor primary club licence application by the Mann Park Lawn Bowling Club were circulated to approximately 50 property owners. The corporate report, dated June 15, 2020, and titled "Application for Liquor Primary Club Licence, 14560 North Bluff Road (LL-20-002)" provides a summary of the response to this notice, being one letter from a concerned resident. As outlined in the corporate report, efforts were made by staff and the applicant to address the concerns presented by the resident. It is believed the concerns will be alleviated through conditions tied to the liquor licence (e.g., limitations on hours of service, controlled licensed areas, etc.).

At present, the Planning Procedures Bylaw, 1997, No. 2234, requires that any new liquor primary club licence application be subject to a public hearing. A "club" licence does not refer to a night club, and is rather a licence for private membership-based association that has another primary focus (social, recreational, cultural) besides liquor service. The application fee associated with any licence requiring a public hearing is $2,550, whereas the fee for applications

that do not require a public hearing is $500. Recognizing that liquor primary club licence applications have not historically generated much public interest and they are commonly tied to established recreational or social venues (e.g. Peace Arch Curling Club, the Elks Hall, and White Rock Lawn Bowling Club are the only current liquor primary club licence holders), where impacts to the community may be limited or understood, it is recommended that authority for the review of new liquor primary club licence applications be delegated to the Director of Planning and Development Services. This delegation would eliminate the need for a public hearing entirely, with comments being provided in written format only, and allow the Director to provide recommendations regarding the application to the Liquor Control and Regulation Branch (LCRB) on behalf of Council, saving applicants time and money in the process.

Appendix B to this corporate report presents amendments to the City of White Rock Planning Procedures Bylaw, 2017, No. 2234 that would delegate authority for the review and response to new liquor primary club licence applications to the Director of Planning and Development Services while also implementing the amendments that would enable electronic public hearings discussed earlier in this corporate report.

BUDGET IMPLICATIONS

Fees associated with the processing of cannabis and liquor licence applications are set to achieve cost recovery related to the level of effort associated with the application. The proposed electronic public hearing format and potential delegation of authority to the Director of Planning and Development Services is not anticipated to have any impact on the budget.

CLIMATE CHANGE IMPLICATIONS

No climate change implications are anticipated as a result of the proposed electronic meeting processes.

OPTIONS

This corporate report introduces two options for amendments to the City of White Rock Planning Procedures Bylaw, 2017, No. 2234. Option 1 would enable electronic public hearings and would be implemented if Council were to:

1. Give all four readings to "City of White Rock Planning Procedures Bylaw, 2017, No. 2234, Amendment Bylaw, 2020, No. 2347" as presented in Appendix A.

Option 2 would enable electronic public hearings and also delegate to the Director of Planning and Development Services the authority to receive public input via written comments and respond to the LCRB on behalf of the City for liquor primary club licence referrals. This would be implemented if Council were to:

2. Give all four readings to "City of White Rock Planning Procedures Bylaw, 2017, No. 2234, Amendment Bylaw, 2020, No. 2347" as presented in Appendix B.

Staff recommend Option 2.

CONCLUSION

During the ongoing COVID-19 pandemic, the hosting of in-person public meetings is not recommended, and alternative processes such as electronic public hearings, are being utilized instead of in-person public hearings. Liquor and cannabis licence referral applications currently require in-person public hearings according to the Planning Procedures Bylaw, and staff recommend that the bylaw be amended to allow these hearings to be conducted in an electronic

format identical to the format used for public hearings related to land use applications. Public input on liquor and cannabis referrals may also be provided through written comment only and the authority to respond to the referral can be delegated to staff, which may be appropriate for applications that are minor in nature and do not generate significant public interest. The recommended option presented in this corporate report would also delegate the authority to respond to new liquor primary club licence applications to the Director of Planning and Development Services. For these reasons the amendments presented in Appendix B are considered appropriate and in the overall public interest.

Respectfully submitted,

Carl Isaak, MCIP, RPP
Director of Planning & Development Services

Comments from the Chief Administrative Officer

I concur with the recommendation of this corporate report.

Guillermo Ferrero
Chief Administrative Officer

Appendix A: Draft Planning Procedures Bylaw Amendment, Bylaw No. 2347 - Option 1
Appendix B: Draft Planning Procedures Bylaw Amendment, Bylaw No. 2347 - Option 2

APPENDIX A

Draft Planning Procedures Bylaw Amendment, Bylaw No. 2347 – Option 1

The Corporation of the CITY OF WHITE ROCK BYLAW 2347

A Bylaw to amend the
"City of White Rock Planning Procedures Bylaw, 2017, No. 2234" as amended

The CITY COUNCIL of the Corporation of the City of White Rock, in open meeting assembled, ENACTS as follows:

1. That the text of the "City of White Rock Planning Procedures Bylaw, 2017, No. 2234" be amended by amending subsection (e) v) of Schedule N to read:

   v) The Public Hearing is held in Council Chambers, or an appropriate public venue, prior to Council meeting and in conjunction with the Public Meeting required for the related Temporary Use Permit application, as applicable. The Public Hearing may be conducted as an electronic meeting or one reliant on other communication facilities.

2. This Bylaw may be cited for all purposes as the "City of White Rock Planning Procedures Bylaw, 2017, No. 2234, Amendment (Liquor and Cannabis Public Input) Bylaw, 2020, No. 2347".

RECEIVED FIRST READING on the	day of
RECEIVED SECOND READING on the	day of
RECEIVED THIRD READING on the	day of
ADOPTED on the	day of

_____
Mayor

_____
Director of Corporate Administration

APPENDIX B

Draft Planning Procedures Bylaw Amendment, Bylaw No. 2347 – Option 2

The Corporation of the CITY OF WHITE ROCK BYLAW 2347

A Bylaw to amend the
"City of White Rock Planning Procedures Bylaw, 2017, No. 2234" as amended

The CITY COUNCIL of the Corporation of the City of White Rock, in open meeting assembled, ENACTS as follows:

1. That the text of the "City of White Rock Planning Procedures Bylaw, 2017, No. 2234" be amended:

   (1) by amending Section 22 to read:

   22) For referral of liquor licence applications not involving: a new licence (other than a new liquor primary club licence, or those applications related to a manufacturer's licence, such as a lounge endorsement and patio endorsement that has been previously supported by Council and issued), for a lounge endorsement, for patron participation entertainment, for extension of hours greater than one hour, and/or relocation of a liquor licence, Council delegates to the Director the authority to provide comments on the application.

   (2) by amending section (a) of Schedule N to read:

   a) When a referral is received from the BC Liquor and Cannabis Regulation Branch, staff contacts the Applicant and advises of City application and fee requirements. For cannabis store license applications, if a Temporary Use Permit application has not been submitted, staff respond to the LCRB noting that the applicant is not eligible for a cannabis store license. Applications for a new licence (other than a liquor primary club licence, or those related to a manufacturer's license that has been previously supported by Council and issued), for a lounge endorsement, for patron participation entertainment, for extension of hours greater than one hour, and/or relocation of a liquor licence require a Public Hearing; all other applications require public input through written comment only and the authority to provide comments is delegated to the Director. Staff may elect to opt-out of providing comment for increases in capacity under 10 persons and for permanent patio additions under 15 square metres in size.

   (3) by amending subsection (e) v) of Schedule N to read:

   v) The Public Hearing is held in Council Chambers, or an appropriate public venue, prior to Council meeting and in conjunction with the Public Meeting required for the related Temporary Use Permit application, as applicable. The

Public Hearing may be conducted as an electronic meeting or one reliant on other communication facilities.

2. This Bylaw may be cited for all purposes as the "City of White Rock Planning Procedures Bylaw, 2017, No. 2234, Amendment (Liquor and Cannabis Public Input) Bylaw, 2020, No. 2347".

RECEIVED FIRST READING on the day of

RECEIVED SECOND READING on the day of

RECEIVED THIRD READING on the day of

ADOPTED on the day of

_____

Mayor

_____

Director of Corporate Administration

THE CORPORATION OF THE

CITY OF WHITE ROCK

CORPORATE REPORT

DATE: **June 15, 2020**

TO: **Mayor and Council**

FROM: **Carl Isaak, Director of Planning and Development Services**

SUBJECT: **Application for Liquor Primary Club Licence, 14560 North Bluff Road (LL 20-002)**

RECOMMENDATION

THAT Council, pending amendments to the Planning Procedures Bylaw described in a separate corporate report, allow the Director of Planning and Development Services to obtain public input through written comment and respond directly to the LCRB, including in the response that if the liquor primary club licence application at 14560 North Bluff Road is approved that it be subject to the following conditions:

- that the hours of liquor service be limited to the period of time between 3:00 p.m. and 9:00 p.m., Sunday to Saturday, inclusive;
- that, notwithstanding the above-noted hour of liquor service, the service of liquor shall be prohibited when children are attending scheduled classes or are receiving services offered at the White Rock and Cobble Hill Montessori; and
- that the "service area" be limited to the clubhouse and the abutting patio.

INTRODUCTION

The purpose of this corporate report is to present Council with a liquor license referral application which, if approved by the Liquor and Cannabis Regulation Branch (LCRB), would allow the Mann Park Lawn Bowling Club ("Club") to serve liquor on a more regular basis under the terms and limitations of a Liquor Primary Club licence. The Club has approximately 140 members who pay annual fees. The Club has, in the past, hosted special events such as awards nights, cultural celebrations, and gatherings on statutory holidays. During these events, liquor has been served under the terms of a "liquor special events permit" issued by the LCRB.

The Mann Park Lawn Bowling Club is a recreational facility that provides lawn bowling in the summer months and carpet bowling during the winter months. The Club is located at 14560 North Bluff Road and is situated at the southeast corner of the intersection of North Bluff Road and High Street. The property is owned by the City of White Rock and is leased to the Club. It is noted that the existing clubhouse is shared with the White Rock and Cobble Hill Montessori ("Montessori"), being an early learning centre (school) for children. Land uses north and west of the property include low profile residential uses. The uses south and east of the property include the open space, parkland, and other public recreational uses that make up Ruth Johnson / Centennial Park. A location map, orthographic photo, and several site photos are provided in Appendix A.

PAST PRACTICE / POLICY / LEGISLATION

***Liquor Control and Licensing Act* and Regulation (the *Act* and the Regulation)**
Liquor licences are regulated by the Province through the BC Liquor and Cannabis Regulation Branch (LCRB) in accordance with the *Liquor Control and Licensing Act* (the "*Act*) and BC Regulation 155/2019, being the *Liquor Control and Licensing Regulation*. The role of local government is to consider liquor licence applications and, in doing so, provide a recommendation (i.e., support or non support) to the LCRB.

As noted, the subject application is for a Liquor Primary Club licence. Section 11 (1) (a) of the referenced BC Regulation requires that the holder of a Liquor Primary Club licence: i) have at least 50 members who pay annual membership fees; ii) not have any share capital, and iii) not operate for the financial gain of its members. Further, the Regulation in Section 11 subsection (2) stipulates the manner in which liquor may be transported throughout the service area and in subsection (4) provides that only members and the registered guests of members may be served liquor; the regulation further outlines requirements for maintaining a register of guests.

Section 38 of the *Act* sets out the responsibilities of local government in formulating a recommendation on a liquor licence application. Section 71 of the related BC Regulation, provides that local governments must take into account the following:

a) The location of the establishment;

b) The person capacity and hours of liquor service;

c) The impact of noise on the community in the immediate vicinity of the establishment;

d) The general impact on the community; and

e) The views of residents, along with a description of the method used to gather those views.

Section 38 (3) of the *Act* provides that local governments wishing to provide comments on an application must do so "within the prescribed time period, or any further period authorized by the general manager." While the Province's Liquor Primary Licence Application Form requests that a resolution regarding the application be provided by the local government within 90 days of the receipt of the application (i.e., in this case 90 days as of February 4, 2020), recent correspondence from the LCRB has confirmed that due to the COVID-19 crisis and limitations surrounding public gatherings, the period for offering comments has been extended by 120 days to September 4, 2020. The applicant has been informed of this and has not expressed any objections to the extended commenting / review period.

White Rock Planning Procedures Bylaw, 2017, No. 2234 (Procedures Bylaw)
Schedule N to the *City of White Rock Planning Procedures Bylaw, 2017, No. 2234*, sets out the procedures tied to the processing of "Liquor and Cannabis Licence Resolution Request Applications." Generally, the process of an application involves: the circulation of notice of the application to property owners within 100 metres of the subject property; the compilation of comments from these owners for Council consideration; the scheduling and hosting of a public hearing (i.e., for new liquor licence applications), notice of which is provided by mail to those within 100 metres of the property and posted within the local newspaper; and, the circulation of a resolution of Council to the LCRB regarding the application.

White Rock Official Community Plan, 2017, No. 2220
The subject property is designated "Open Space and Recreation Area" in the Official Community Plan (OCP). The objective of this designation is to enable opportunities for both

passive and active recreation, habitat protection and natural area preservation (per Policy 8.11). The designation is applied to lands that can be used efficiently to provide social, economic and ecological benefits across the City (per Policy 8.12).

The City's Economic Development policies are outlined in Section 14 of the OCP. These policies support the creation of an economic environment intended to promote the City as a place to do business (per Policy 14.3.1). The policies of Section 15, titled "Parks + Recreation," further acknowledge the importance of supporting indoor and outdoor recreation facilities and an overall approach to open space that contributes to the economic vitality of the community.

The ability to serve liquor at the Mann Park Lawn Bowling Club would support the overall economic viability of the business by providing a service sought by its members. Controls built into the liquor licence, such as restrictions on the times during which liquor may be served, can be used to ensure the business operates compatibly with other uses of the property and nearby lands. Subject to the implementation of these controls, the liquor licence application does not present any conflicts with the overarching policy objectives of the OCP.

White Rock Zoning Bylaw, 2012, No. 2000 (Zoning Bylaw)
The subject property located at 14560 North Bluff Road is zoned "P-1 Civic / Institutional Use Zone." The P-1 Zone permits "parks and natural areas," being areas used by the public for active or passive recreation. The service of liquor, as proposed, is considered to be an "accessory use" because it is, or would be, subordinate and customarily incidental to the principal, recreational, use of the property.

ANALYSIS

The subject application is seeking approval of a new "Liquor Primary Club Licence" which would allow liquor to be served to members and guests of the Mann Park Lawn Bowling Club. The application has been circulated to internal leads within the City of White Rock's Building, Engineering, Operations, Fire, Parking, and Bylaw Enforcement Departments as well as the RCMP. Comments from City staff provide that the application does not present any issues or concerns. Comments from the RCMP confirm that over the past five years there have been no reports linked to the property that would present a concern as it relates to the liquor licence application. The requested liquor licence does not introduce any conflict with the overarching objectives of the City's OCP or applicable zoning regulations.

Staff have reviewed the application against the factors outlined in the *Liquor Control and Licensing Act* and BC Regulation 155/2019, being the *Liquor Control and Licensing Regulation,* and offer the following summary for Council's consideration:

a) The location of the establishment

The subject property is located in the southeast corner of the intersection of North Bluff Road and High Street. Land uses north and west of the property include low profile residential uses, primarily being single detached homes. The presence of roadways abutting this corner lot will offer a degree of buffering between the recreational use of the site and nearby residences. Uses south and east of the property include open space, parkland, and public recreational uses forming components of Ruth Johnson / Centennial Park. The Park includes a children's play area, sports fields including tennis courts, a lacrosse box, baseball diamond and a soccer pitch, wooded trails, Centennial Arena, and the City's Centre for Active Living, which is home to the Peace Arch Curling Club. It is noted that a stand of mature trees buffer the subject property from abutting uses to the east and south.

Appendix A to this corporate report provides a location map and aerial photo of the property as well as several site photos.

b) The person capacity and hours of liquor service of the establishment

The requested licence would allow liquor to be served within the existing clubhouse, being approximately 167 square metres (1,800 square feet) in area, and an attached patio, being roughly 35 square metres (378 square feet) in area. The occupancy load of the interior of the clubhouse is 104 persons and the occupancy load of the patio is 29 persons; an Inspection Report prepared by the City of White Rock Fire Department recognizes a total occupant load of 139 persons as it also accounts for six staff. The Provincial licence application notes a total occupant load (of all licensed areas) of 135 persons although it is understood this was noted in error and the intent is to allow for occupancy which aligns with that recognized by the City's Fire Department.

The proposed hours of liquor service are as follows:

	Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Sunday**
Open	14.30	14.30	14.30	14.30	14.30	14.30	14.30
Closed	21.00	21.00	21.00	21.00	21.00	21.00	21.00

As mentioned, the property subject to this application is shared between the Mann Park Lawn Bowling Club and the White Rock and Cobble Hill Montessori. The hours of operation tied to Montessori are as follows:

- January 1 through April 15 — 3:30 p.m.;
- April 16 through June 30 — 12:30 p.m.;
- July and August — School closed;
- September 1 through September 15 — 2:30 p.m.; and
- September 16 through December 31 — 3:30 p.m.;

City staff have discussed the proposal with the Director of the Montessori to ensure potential areas of interest or concern are understood. Through these discussions, and subsequent discussions with the applicant, it is suggested that the standard hours of liquor service be modified to between 3:00 p.m. and 9:00 p.m.. Further, it is recommended that a general limitation be added to the licence stating that liquor shall not be served during times when children are attending scheduled classes or are receiving services offered at the White Rock and Cobble Hill Montessori. This latter condition will insure that, at minimum, when the Montessori is opened to 3:30 p.m., as listed above, liquor service at the Club is not permitted.

c) The impact of noise on nearby residents:

Appendix B to this corporate report includes a "Letter of Intent" (the "Letter") provided by the applicant. The Letter provides that liquor would only be served from a single licensed bar within the clubhouse. Liquor could then be consumed either within the clubhouse or an open patio which can only be accessed through the clubhouse; there is no opportunity to carry liquor served at the licensed bar through an unlicensed area of the property to get to the patio. A floor plan illustrating the layout of the clubhouse and patio is provided as Appendix C. A site layout plan illustrating the layout of the clubhouse relative to the parking area and bowling green is provided as Appendix D. It is noted that the patio is situated within the interior of the property and is screened from neighbouring views. This

configuration is considered advantageous as it relates to mitigating the potential impacts of noise generated on site.

The Letter of Intent further acknowledges that the hours of proposed liquor service are commonly tied to times when meals may be served and, during special events, when entertainment including live music and dancing may take place. Over the past ten years, the Club notes that special event liquor licenses have been received and that throughout this period there have been no complaints raised by nearby residents. If complaints are received, the Letter provides that they would be referred to the Club's Board of Directors for a response.

d) The impact on the community if the application is approved:

The application is seeking a type of liquor licence that would restrict liquor service to members of the Mann Park Lawn Bowling Club and their registered guests. Additional controls built into the licence, such as restrictions on the hours of service and the areas within which liquor may be consumed, will act to further limit impacts on the broader community. If staff are directed to schedule a public hearing, Council will have the opportunity to receive further feedback from the public as it relates to this consideration.

It is worth noting that the LCRB has a duty to supervise licensees, permittees and the operation of licensed establishments to ensure that issues of over-service, over-consumption and loss of control do not occur. Failure of a licensee to serve liquor in a responsible manner can result in the suspension of a licence and/or the closure of the establishment. Further, the managers and staff working within a licensed establishment are required to complete training as it relates to responsible liquor service.

e) The views of residents and a description of the method used to gather views:

The City's Planning Procedures Bylaw sets out a process of soliciting feedback from the public as it relates to liquor and cannabis licence referral requests. The process requires that notice of the application be provided to property owners within 100 metres of the subject property. For new licence applications, as is the case here, the process requires a public hearing, prior to finalizing a resolution of Council, which is then submitted to the LCRB.

Notice of this application has been provided to all property owners within 100 metres of the subject property. On March 6, 2020, approximately 50 letters were mailed with initial comments being requested by March 23, 2020 (see Appendix E). To date, only one formal response to the notification letter has been received (see Appendix F).

Should Council direct staff to schedule a public hearing (in an electronic format as discussed in a separate corporate report on this Council agenda), advertisement of the meeting will be placed in two consecutive issues of the Peace Arch News and on the City's webpage. Further, a mail out explaining the application will be provided to all property owners within 100 metres of the subject property. All written correspondence will be compiled and presented to Council in advance of the finalization of any subsequent resolution to be provided to the LCRB.

A separate report on the application procedures for liquor and cannabis referral applications notes that Council may delegate the authority to respond to different types of these referrals to staff, and recommends that this authority to respond to liquor primary club licences be delegated to the Director who would obtain further written comments from the adjacent properties and then respond on behalf of the City. If Council approves these

proposed amendments to the Planning Procedures Bylaw, a public hearing would not be necessary.

BUDGET IMPLICATIONS

There are no budget implications associated with this application.

OPTIONS

The following options are available for Council's consideration:

1. Consider the application for a liquor primary club licence at 14560 North Bluff Road, and authorize staff to schedule a public hearing;
2. Consider the application for a liquor primary club licence at 14560 North Bluff Road, and authorize staff to opt-out of providing input into the liquor licensing process for this application, leaving the required public consultation process to the LCRB;
3. Consider the application for a liquor primary club licence at 14560 North Bluff Road, and pending amendments to the Planning Procedures Bylaw described in a separate corporate report, allow the Director of Planning and Development Services to obtain public input through written comment and respond directly to the LCRB;
4. Defer consideration pending the receipt of further information to be identified by Council.

Staff recommend Option 3, which is incorporated in the recommendations of this corporate report.

CLIMATE CHANGE IMPLICATIONS

There are no direct environmental or climate action effects related to this application.

CONCLUSION

The Mann Park Lawn Bowling Club, a recreational facility that provides lawn/carpet bowling, located at 14560 North Bluff Road in Centennial Park on land leased from the City, has applied for a Liquor Primary Club Licence. The ability to serve liquor at the Mann Park Lawn Bowling Club would support the overall economic viability of the business by providing a service sought by its members.

Staff conditionally support the requested liquor primary club license, contingent on the incorporation of limitations within the Provincial licence as outlined in this corporate report. It is recommended that Council, pending amendments to the Planning Procedures Bylaw described in a separate corporate report, allow the Director of Planning and Development Services to obtain public input through written comment and respond directly to the LCRB, or alternately authorize the scheduling of a public hearing, which would be conducted under the Electronic Public Hearing procedures proposed in a separate corporate report on this Council agenda.

Respectfully submitted,

Carl Isaak, MCIP RPP
Director of Planning and Development Services

Comments from the Chief Administrative Officer:

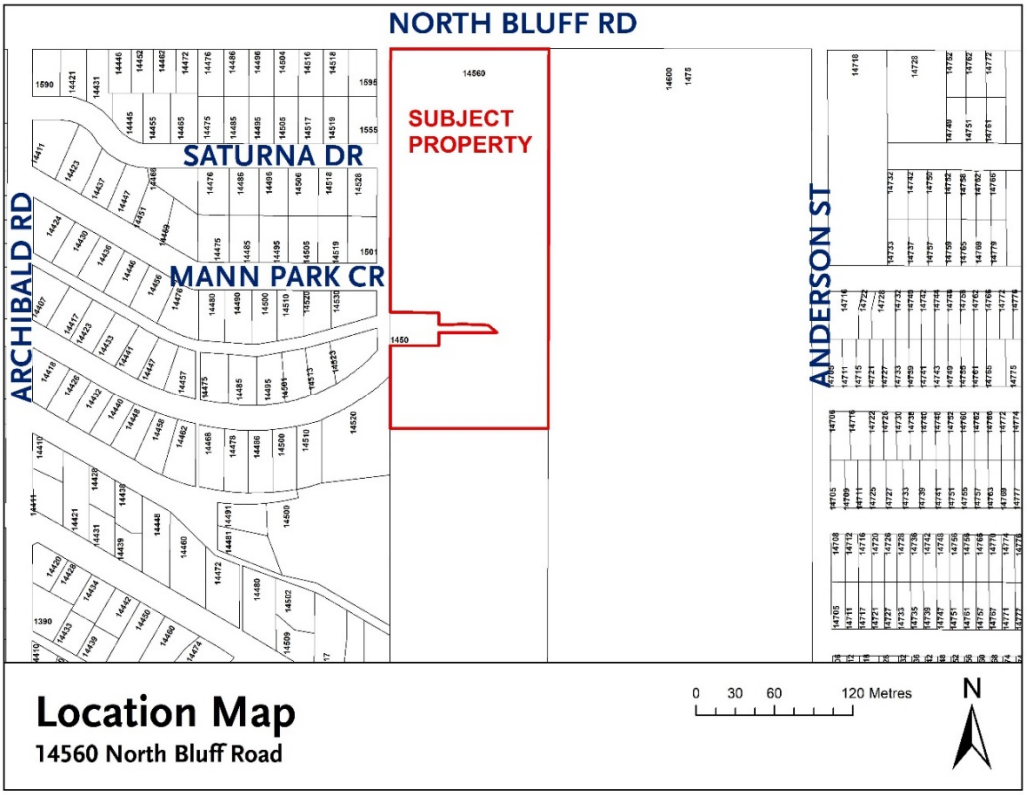
I concur with the recommendations of this corporate report.

Guillermo Ferrero
Chief Administrative Officer

Appendix A: Location Map, Ortho Photo and Site Photos
Appendix B: Letter of Intent from the Applicant
Appendix C: Floor Plan
Appendix D: Site Layout
Appendix E: Notification Letter
Appendix F: Comments from the Public

Appendix A

Location Map, Ortho Photo and Site Photos



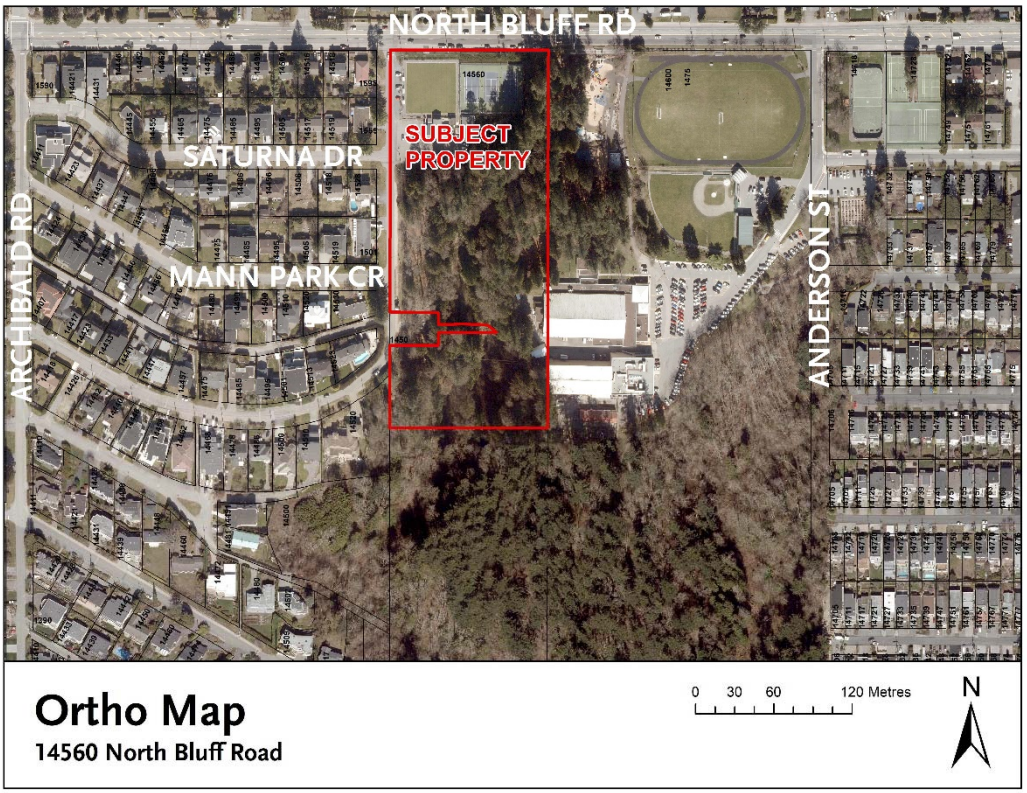


Figure 1: View from North Bluff Road

Figure 2: Single detached homes opposite the property along High Street

Figure 3: View of patio within the interior of the subject property, largely screened from neighbouring views

Figure 4: Parking lot servicing the subject property and the Tennis Club, note wooded lands south and east of the property

Appendix B

Letter of Intent from Applicant

MANN PARK LAWN BOWLING CLUB

APPLICATION FOR A NEW LIQUOR PRIMARY CLUB LICENCE

Letter of Intent

- **Primary Focus** — The Club's primary focus is lawn bowling during the summer months and carpet bowling during the winter months. We have approximately 140 members who pay annual fees. Throughout the year functions such as awards nights, special days (e.g. Oktoberfest) and statutory holidays (e.g. Canada Day) are held that involve a meal and the serving of liquor. For these we obtain a special event liquor licence. We are applying for an annual liquor licence so that members may also have a beer or a glass of wine after participating in regular bowling activities. Hard liquor (i.e. a dram of scotch whiskey) is only served on Robbie Burns Day. Non-alcoholic beverages are always available.
- **Operating Hours of Primary Business** — The Club's bowling hours are 9:15 AM to dusk and it is proposed that, subject to a Special Event Server being present, liquor will be sold between 2:30 PM and 9:00 PM. Liquor will be consumed only in the clubhouse or on a patio accessed through the clubhouse. Maximum capacity for lawn bowling is 64 and ticket sales for sit-down dinners are limited to 95.
- **Entertainment Offered** — On special days (e.g. our annual Christmas party) the Club has live music and dancing after a sit-down dinner. A portion of the clubhouse is cleared for this purpose. Throughout the year we have a number of 50/50 draws pursuant to a Gaming Event Licence.

- **Food Service Offered** — On special days and statutory holidays the Club serves a hot dinner and dessert. Meals are not normally provided during regular bowling activities. Several times during the summer bowling season we host interclub competitions at which a light snack and/or dessert is served.
- **Composition of the Neighbourhood** — The Club occupies property owned by the City of White Rock at the corner of High Street and North Bluff Road. To the west and north are single family residences. To the east is the White Rock Tennis Club and to the south is an undeveloped area of Ruth Johnson Park.
- **Potential for Noise and Other Types of Disturbance** — The only possible disturbance is live music on special days which is usually played between 6:00 PM and 9:00 PM. Based on our experience to date, we do not anticipate any complaints.
- **Measures to Ensure Nearby Residents are not Disturbed** — Should the Club receive a complaint, a member of our board of directors will follow up in a timely manner.
- **Other Relevant Information** — Given that the Club has obtained special event liquor licences for ten or more years, the application is requesting that members now be allowed to have a beer or a glass of wine following regular bowling activities (the only change) and the fact that during this period the Club has had no complaints from the single family residences to the east or the north, questions the necessity of the City of White Rock requesting public input from the community within the immediate vicinity.

MANN PARK LAWN BOWLING CLUB

APPLICATION FOR A NEW LIQUOR PRIMARY CLUB LICENCE

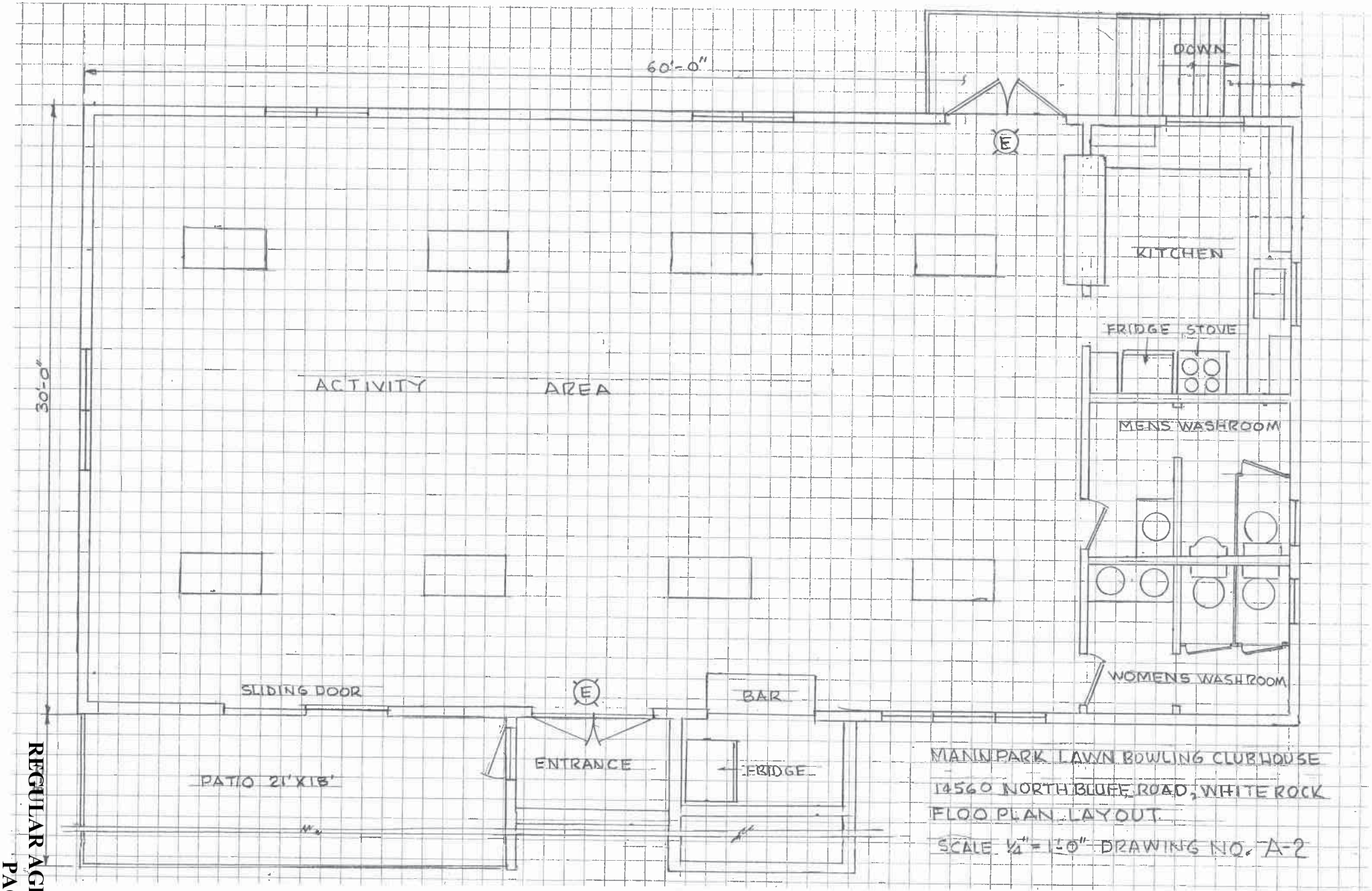
Appendix II – Patio

Note: The patio is used for watching games in process

1. The patio is flush with the clubhouse main floor which is 51" above the lawn bowling green. The exterior walls of the clubhouse form two sides and the other sides have a fixed metal railing 2 feet high. The patio is not covered.
2. The patio is off the northeast corner of the clubhouse with the only access being a sliding glass door between it and the clubhouse.
3. As the patio is accessed only from the clubhouse, there is no need for additional management and control. All sales will be managed and controlled at the time of service by the bar staff who are Special Event Servers.
4. Liquor will be served from the licenced bar in the clubhouse.
5. Liquor is not carried through an unlicenced area to get to the patio.

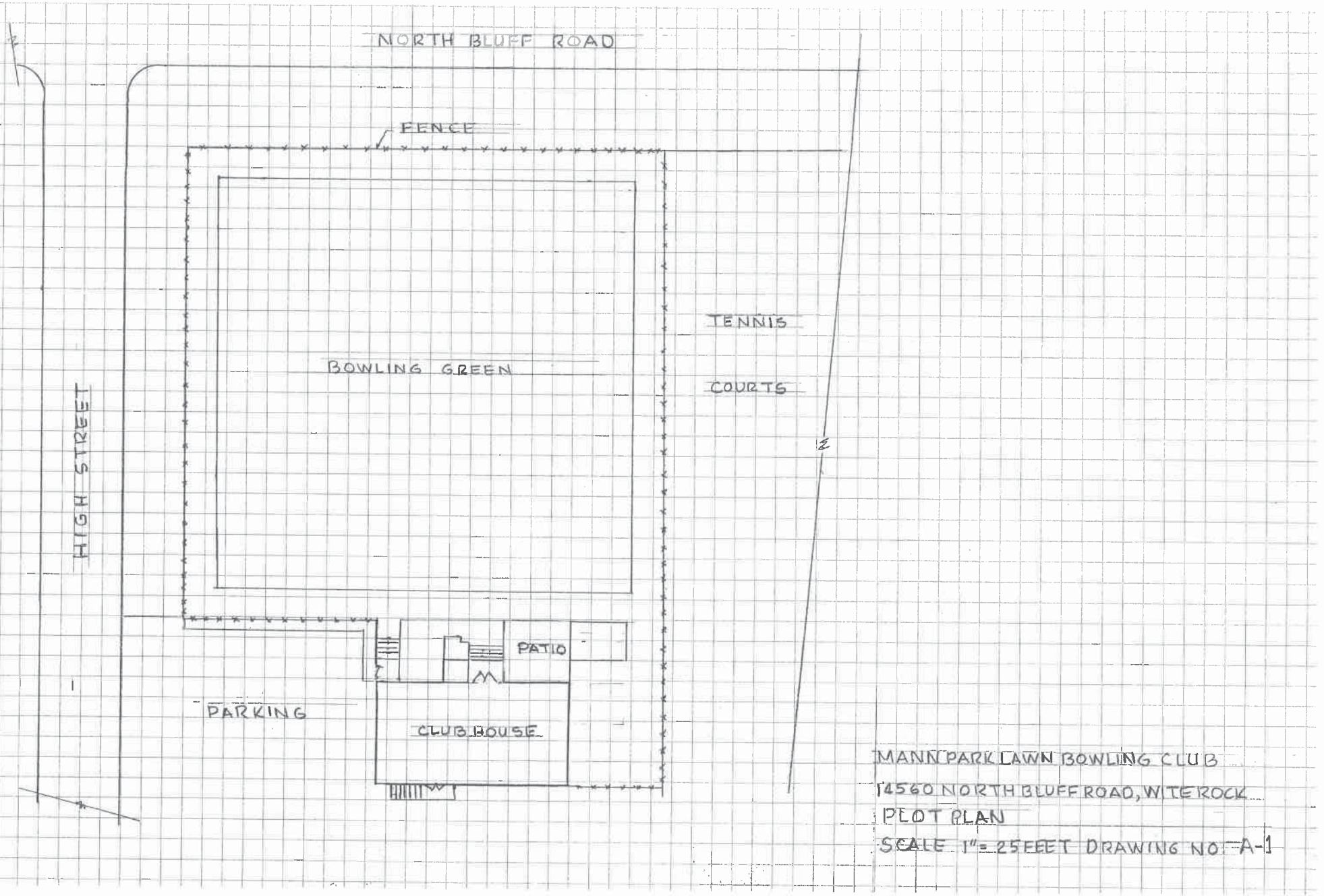
Appendix C

Floor Plan


60'-0"
30'-0"
DOWN
KITCHEN
FRIDGE
STOVE
ACTIVITY AREA
MENS WASHROOM
WOMENS WASHROOM
SLIDING DOOR
BAR
ENTRANCE
FRIDGE
PATIO 21'X18'
MANN PARK LAWN BOWLING CLUBHOUSE
14560 NORTH BLUFF ROAD, WHITE ROCK
FLOOR PLAN LAYOUT
SCALE 1/4" = 1'-0" DRAWING NO. A-2

Appendix D

Site Layout


NORTH BLUFF ROAD
FENCE
HIGH STREET
BOWLING GREEN
TENNIS
COURTS
PATIO
M
PARKING
CLUB HOUSE
MANN PARK LAWN BOWLING CLUB
14560 NORTH BLUFF ROAD, WHITEROCK
PLOT PLAN
SCALE 1"=25FEET DRAWING NO. A-1

Appendix E

Notification Letter

PUBLIC NOTIFICATION OF APPLICATION

Proposed Liquor Licence – Mann Park Lawn Bowling Club
Development Application File No. LL 20-002

RE: 14560 North Bluff Road
Legal Description: Parcel O, Plan NWP10415, Part NW1/4, Section 10, Township 1, New Westminster Land District, see 6552.000 for SRW Portion
PID: 013-192-515

NOTICE is hereby given that a New Liquor Primary Club (liquor licence) application has been submitted to the Province's Liquor and Cannabis Regulation Branch (LCRB) by Mann Park Lawn Bowling Club for the property located at 14560 North Bluff Road; notice of the application was received by the City of White Rock on February 4, 2020.

PROPOSAL:

The requested liquor licence would enable the owner of the Mann Park Lawn Bowling Club to serve liquor within the existing clubhouse, being approximately 167 square metres in area, as well as the attached patio, being roughly 35 square metres in area. The application is also sought to eliminate the periodic need for special event (liquor) licenses, which have been previously issued to the applicant at this site. The occupancy load of the interior of the clubhouse is 104 persons and the occupancy load of the patio is 29 persons. The provincial licence application notes a total occupant load (of all licensed areas) of 135 persons; the White Rock Fire Department acknowledges 6 additional person occupancy spaces for staff.

The proposed hours of liquor service are as follows:

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Open	14.30	14.30	14.30	14.30	14.30	14.30	14.30
Closed	21.00	21.00	21.00	21.00	21.00	21.00	21.00

OPPORTUNITY FOR COMMENT:

In accordance with the *Liquor Control and Licensing Act*, the *Liquor Control and Licensing Regulation*, and the *White Rock Planning Procedures Bylaw, 2017, No. 2234*, input from those within the immediate vicinity of the property subject to the application is to be gathered. Comments regarding noise and the general impact of the proposal on the community are of particular interest. If you wish to provide comments regarding this application please do so by **Monday, March 23, 2020**. Comments can be submitted by:

- Mailing or delivering your written comments to the Planning & Development Services Department at White Rock City Hall, 15322 Buena Vista Avenue, White Rock, BC V4B 1Y6; or
- E-mailing your comments to the Planning & Development Services Department at planning@whiterockcity.ca with "14560 North Bluff Road – Liquor Licence" typed in the subject line.

Please Note: All correspondence regarding the application will be included in a future report to Council and will form part of the public record. A Public Hearing will be scheduled following the above-noted commenting period to solicit additional feedback from the public prior to seeking a resolution of Council regarding the application (i.e., to recommend that the Province approve or reject the application).

Planning and Development Services
P: 604.541.2136 | F: 604.541.2153
City of White Rock
15322 Buena Vista Avenue, White Rock BC, Canada V4B 1Y6
www.whiterockcity.ca

If Council authorizes staff to schedule this Public Hearing, a notification letter will be sent out to the owners of properties in the immediate vicinity of 14560 North Bluff Road. Notice of the Public Hearing will also be posted in the Peace Arch News and on the City of White Rock webpage (www.whiterockcity.ca).

All written comments received prior to the Public Hearing will be gathered and considered in the City's recommendation to the LCRB along with a written summary of the comments received during the Public Hearing (i.e., meeting minutes). The final decision for the application is ultimately made by the LCRB.

A copy of the application may be inspected at the Planning & Development Services Department at White Rock City Hall, 15322 Buena Vista Avenue, White Rock, B.C. during usual hours of operations (8:30 A.M to 4:30 PM), excluding weekends and statutory holidays.

SITE MAP

Further details regarding the application may be obtained from the Planning and Development Services Department at City Hall or by contacting Greg Newman, Manager of Planning at (604) 541-2142 | gnewman@whiterockcity.ca.

Sincerely,

Greg Newman, MCIP, RPP
Manager of Planning

Dated: March 6, 2020

Appendix F

Comments from the Public

Greg Newman

From: Mandy Johnston [redacted]
Sent: March 15, 2020 2:09 PM
To: Planning
Subject: Proposed liquor license for man Park lawn bowling club

Dear Council,
As a citizen with children living very close to the lawn bowling club, I strongly object to this proposed license.

1) I see most lawn bowlers arriving by car and their parking and driving is already worrisome when sharing the area with pedestrian traffic by the park. I do not wish to have afternoon alcohol consumption adding more risk to this area.

2) The crime rate of vehicle break-ins, drug use, and discarded alcohol bottles in the park is high. I see evidence of this daily. if the lawn bowling club also has alcohol and cash on premises I fear it will attract more crime.

3) The noise and traffic from periodic events at the club carries to my home past my bedtime and I do not wish for it to be a regular occurrence.

4) The use of the space as a preschool is a great addition to our neighbourhood and the proposal to have drinking begin at 2:30 before the children are even gone does not make sense to me and I do not wish to see the preschool pushed out so that people can drink alcohol.

I hope that the man Park lawn bowling club can continue to bring enjoyment and active living to the seniors is of our community and that they can enjoy their alcohol drinking later in their own homes or already licensed establishments.

Sincerely,
Mandy Johnston

City of White Rock

Fire Underwriters Survey

2018

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Opta Information Intelligence, an SCM Company
8333 Eastlake Drive
Burnaby, BC V5A 4W2
1-800-665-5661

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1. SCOPE OF OUR ENGAGEMENT

White Rock Fire Rescue contracted the services of SCM Opta Information Intelligence Inc. (formerly IAO) to evaluate the community's fire protection programs in order to update the Fire Insurance Grades for the community. The purpose of the assessment is to determine whether the community's current Fire Insurance Grading classifications are representative of the fire protection programs and fire protection resources that are currently in place within the community. A Fire Insurance Grading review is a key part of the assessment process.

The significant findings of the Fire Underwriters Survey (FUS) fire protection review were requested to be outlined within a report format. The report will provide an update on the City of White Rock's Fire Insurance Grading assignments and make recommendations aimed at improving the level of public fire protection and improving Fire Insurance Grading classifications for the City.

1.1. Acknowledgement

Opta Information Intelligence Inc. wishes to thank White Rock Fire Rescue and the City of White Rock for their valuable assistance in conducting this survey and preparation of this report.

1.2. Distribution of Use

This report, along with the findings and conclusions, contained herein, is intended for the sole use of the City of White Rock to assist in the public fire protection planning needs of the community.

Judgements about the conclusions drawn, and opinions presented in this report should be made only after considering the report in its entirety. This report is Private and Confidential and is intended for the exclusive use of the City of White Rock.

1.3. Reliance and Limitation

We have relied on the general accuracy of information provided by stakeholders without independent verification. However we have reviewed this information for consistency and reasonableness. The accuracy of our conclusions is dependent upon the accuracy and completeness of this underlying data. Therefore, any discrepancies discovered in this data by the reader should be reported to us and this report amended accordingly, as warranted.

2. EXECUTIVE SUMMARY

This report covers a Fire Insurance Grading review update for the City of White Rock. The review covers the 4 areas of the Fire Insurance Grading assessment, i.e. Fire Department, Water Supplies, Fire Safety Control, and Emergency Communications. Recommendations concerning the items reviewed have been provided in order to improve or maintain credit. Each of the 4 areas have been assigned a relative classification which is based on a 1 to 10 scale (1 being the highest). The final Public Fire Protection Classification (PFPC) is based on the relative classifications and is also on a 1 to 10 scale (1 being the highest).

The final overall PFPC calculated for the City of White Rock has improved from PFPC 4 to PFPC 2. Additionally a Dwelling Protection Grade (DPG) 1 has been maintained for the City.

All items assessed during the Fire Insurance Grading review are discussed throughout the report with recommendations provided considering improving or maintaining credit within the grading. Overall the level of public fire protection provided within the City of White Rock has improved. The Fire Department is well administered and has put many programs in place that provide a good level of public fire protection within the community.

Summary tables of credit scores have been provided in section 11. Recommendations have been provided for any areas of the Grading where notable credit is still available. A summary of recommendations is provided below.

Recommendations Summary
Recommendation 1: Shift Engine 2 to Reserve Status. Replace Second Line Engine with Apparatus under 20 Years in Age
Recommendation 2: Provide a Ladder Apparatus Under 20 Years in Age
Recommendation 3: Certify Mechanics as Emergency Vehicle Technicians
Recommendation 4: Maintain 20 Year Replacement Schedule for Engine and Ladder Apparatus
Recommendation 5: Increase fire fighter staffing
Recommendation 6: Continue to Review and Develop Pre-Incident Plans
Recommendation 7: Develop programs targeted at dwellings
Recommendation 8: Continue to develop and expand target hazard priority programs
Recommendation 9: Provide a designated Public Educator Position
Recommendation 10: Certain Inspectors should be Trained to NFPA 1031
Recommendation 11: Meet frequency of inspections
Recommendation 12: Colour-coding system for hydrants

3. TERMS OF REFERENCE

Term	Definition
Aerial Fire Apparatus.	A vehicle equipped with an Aerial ladder, elevating platform, Aerial ladder platform, or water Tower that is designed and equipped to support firefighting and rescue operations by positioning personnel, handling materials, providing continuous egress, or discharging water at positions elevated from the ground.
Aid - Automatic Aid	A plan developed between two or more fire departments for immediate joint response on first alarms. This process is accomplished through simultaneous dispatch, documented in writing, and included as part of a communication center's dispatch protocols.
Aid - Mutual Aid	Reciprocal assistance by emergency services under a prearranged plan. This is part of the written deployment criteria for response to alarms, as dispatched by the communications center.
Basic Fire Flow	The value which represents the fire potential of most large properties in the municipality, but may exclude several of the largest properties not considered as usual to the municipality. Normally, the value used as the Basic Fire Flow will not be the peak required fire flow in the municipality. The Basic Fire Flow is the benchmark against which all protective facilities are measured.
Building	Any structure used or intended for supporting or sheltering any use or occupancy.
Building area	The greatest horizontal area of a building above grade within the outside surface of exterior walls or within the outside surface of exterior walls and the centre line of firewalls.
Building height	The number of storeys contained between the roof and the floor of the first storey.
Built Environment	Buildings and structures: human-made buildings and structures, as opposed to natural features.
Combustible	A material fails to meet the acceptance criteria of CAN4-S114, “Determination of Non-Combustibility in Building Materials.”
Commercial Lines Insurance	A distinction marking property and liability coverage written for business or entrepreneurial interests (includes institutional, industrial, multi-family residential and all buildings other than detached dwellings that are designated single family residential or duplex) as opposed to Personal Lines.
Community - Major or Large	An incorporated or unincorporated community that has: • a populated area (or multiple areas) with a density of at least 400 people per square kilometer; AND • a total population of 100,000 or greater.
Community - Medium	An incorporated or unincorporated community that has: • a populated area (or multiple areas) with a density of at least 200 people per square kilometer; AND/OR • a total population of 1,000 or greater.
Community - Small	An incorporated or unincorporated community that has: • no populated areas with densities that exceed 200 people per square kilometer; AND • does not have a total population in excess of 1,000.
Company	A group of members that is (1) under the direct supervision of an officer or leader; (2) trained and equipped to perform assigned tasks; (3) usually organized and identified as engine companies, ladder companies, rescue companies, or squad companies; (4) usually operates with one piece of fire apparatus (Pumper, ladder truck, elevating platform, rescue, squad, ambulance); and (5) arrives at the incident scene on fire apparatus or assembles at the scene prior to assignment. The term company is synonymous with company unit, response team, and response group.
Demand Zone Levels	An area used to define or limit the management of a risk situation. A demand zone can be a single building or a group of buildings. It is usually defined in terms of geographical boundaries, called fire management areas or fire management zones.

Detached Dwelling	Buildings containing not more than two dwelling units in which each dwelling unit is occupied by members of a single family with not more than three outsiders, if any, accommodated in rented rooms. Aka. One- and Two-Family Dwelling
Dwelling Protection Grade (DPG)	The fire insurance grade or grades utilized by Personal Lines Insurers in Canada. The DPG is a number between 1 and 5 that is calculated by comparing the fire risk in terms of require fire flows to available resources. Unlike the PFPC system, within the DPG system, the benchmark required fire flow is a constant, and is typical for a Detached Dwelling. The DPG for communities across Canada is determined from a basic survey of the available resources related to fire risk reduction and fire protection capacity.
Dwelling, Typical	Refers to One- and Two-Family Detached Dwellings: - with no structural exposures (buildings with an area exceeding 9.3 sq.m) within 3 m; - with no unusual fire risks (such as wood shake roofs); AND - with an effective area (all storeys excluding basements) not exceeding 334 sq.m (3,600 sq.ft).
Emergency Dispatch Protocol	A standard sequence of questions used by telecommunicators that provides post-dispatch or pre-arrival instructions to callers.
Emergency Incident	Any situation to which the emergency services organization responds to deliver emergency services, including rescue, fire suppression, emergency medical care, special operations, law enforcement, and other forms of hazard control and mitigation.
Emergency Response Facility (ERF)	A structure or a portion of a structure that houses emergency response agency equipment or personnel for response to alarms. Examples of ERFs include a fire Hall, a police Hall, an ambulance Hall, a rescue Hall, a ranger Hall, and similar facilities.
Emergency	A condition that is endangering or is believed to be endangering life or property; an event that requires the urgent response of an emergency response agency.
Engine	A fire department Pumper having a rated capacity of 2840 L/min (625 Igpm) or more.
Exposing building face	That part of the exterior wall of a building which faces one direction and is located between ground level and the ceiling of its top storey or, where a building is divided into fire compartments, the exterior wall of a fire compartment which faces one direction.
Exposure	The heat effect from an external fire that might cause ignition of, or damage to, an exposed building or its contents.
Fire Apparatus	A fire department emergency vehicle used for rescue, fire suppression, or other specialized functions.
Fire Department Vehicle	Any vehicle, including fire apparatus, operated by a fire department.
Fire Department	A fire department is a group of persons formally organized as an authorized service of a municipal or other local government having a sustainable source of funding, which could include taxation, fees for services provided, contracts, permit fees or other reliable sources of revenue which will support the cost of services provided. A minimum number of trained persons able and equipped to respond with motorized firefighting apparatus to extinguish fires or to respond to other classes of circumstances which may occur within a designated geographical area.
Fire Department. - Public Fire Department	A legally formed organization providing rescue, fire suppression, emergency medical services, and related activities to the public.
Fire Force, Available	A measure of the human resources that are available to participate in firefighting operations on the fire ground or an equivalent measure.
Fire Force, Required	A measure of the human resources that are needed to participate in firefighting operations on the fire ground (or an equivalent measure) for an ideal response based on the required fire flow, number of companies and average response time as specified in the Table of Effective Response.
Fire Flow	The flow rate of a water supply, measured at 20 psi (137.9 kPa) residual pressure that is available for firefighting.
Fire Growth Potential	The potential size or intensity of a fire over a period of time based on the available fuel and the fire's configuration.
Fire Hall	An "emergency response facility" where fire department apparatus and equipment are housed, protected against harm, and made readily accessible for use in emergencies. The Fire Hall is

	normally the location where Firefighters respond from. Other primary purposes include training and administration of the fire department.
Fire Hydrant	A reliable connection to a water main for the purpose of supplying water efficiently and reliably to fire hose or other fire protection apparatus. To be recognized for Fire Insurance Grading purposes, the device shall be designed and installed in accordance with CAN/ULC S520, UL 246 and/or AWWA C502/C503 and listed for use as a fire hydrant by UL and/or ULC.
Fire Hydrant – Public	A fire hydrant situated and maintained for public use on a public right-of-way (or easement) to provide water for use by the fire department in controlling and extinguishing fires. The location of a public fire hydrant is such that it is accessible for immediate and unrestricted use by the fire department at all times. Public fire hydrants are owned and maintained by the government entity (ex. city, village, etc.) which is responsible for maintaining the hydrants and water supply distribution system in operating condition at all times and is authorised to levy taxes to fund the operation and maintenance programs.
Fire Hydrant – Private	A fire hydrant located on privately owned property, or on streets not dedicated to public use. Although a private fire hydrant may be connected to a public water supply system, maintenance of the hydrant and access to the hydrant are the responsibility of the property owner. Private hydrants are normally required where buildings are so located on the property or are of such size and configuration that a normal hose lay from a public hydrant would not reach all points on the outside of the building.
Fire load	(as applying to an occupancy) The combustible contents of a room or floor area expressed in terms of the average weight of combustible materials per unit area, from which the potential heat liberation may be calculated based on the calorific value of the materials, and includes the furnishings, finished floor, wall and ceiling finishes, trim and temporary and movable partitions.
Fire Protection	Methods of providing fire detection, control, and extinguishment.
Fire Suppression	The activities involved in controlling and extinguishing fires. Fire suppression includes all activities performed at the scene of a fire or training exercise that expose fire department members to the dangers of heat, flame, smoke, and other products of combustion, explosion, or structural collapse.
First Responder (EMS)	Functional provision of initial assessment (airway, breathing, and circulatory systems) and basic first aid intervention, including CPR and automatic external defibrillator (AED) capability. A first responder assists higher level EMS providers.
First Storey	The uppermost storey having its floor level not more than 2 m above grade
Grade	(as applying to the determination of building height) The lowest of the average levels of finished ground adjoining each exterior wall of a building, except that localized depressions such as for vehicle or pedestrian entrances need not be considered in the determination of average levels of finished ground.
Hazard	The potential for harm or damage to people, property, or the environment. Hazards include the characteristics of facilities, equipment systems, property, hardware, or other objects, and the actions and inactions of people that create such hazards.
Hazardous Material	A substance (solid, liquid, or gas) that when released is capable of creating harm to people, the environment, and property.
Incident Commander.	The person who is responsible for all decisions relating to the management of the incident and is in charge of the incident site.
Incident Management System (IMS)	An organized system of roles, responsibilities, and standard operating procedures used to manage emergency operations. Such systems are also referred to as incident command systems (ICS).
Initial Attack	An aggressive suppression action consistent with fire fighter and public safety and values to be protected.
Initial Attack Apparatus	Fire apparatus with a permanently mounted fire pump of at least 250 USgpm (950 L/min) capacity, water tank, and hose body whose primary purpose is to initiate a fire suppression attack on structural, vehicular, or vegetation fires, and to support associated fire department operations.

Ladder Company	A fire department company that is provided with an Aerial fire apparatus and is trained and equipped to support firefighting and rescue operations by positioning personnel, handling materials, providing continuous egress, or discharging water at positions elevated from the ground.
Ladder Truck	An alternate name for Aerial Fire Apparatus.
Master Stream	A portable or fixed firefighting appliance supplied by either hose lines or fixed piping and that has the capability of flowing in excess of 300 USgpm (1140 L/min) of water or water based extinguishing agent.
Member	A person involved in performing the duties and responsibilities of a fire department, under the auspices of the organization. A fire department member can be a full-time or part-time employee or a paid or unpaid volunteer, can occupy any position or rank within the fire department, and can engage in emergency operations.
Mobile Water Supply (Tanker)	A vehicle designed primarily for transporting (pickup, transporting, and delivery) water to fire emergency scenes to be applied by other vehicles or pumping equipment.
Non-combustible	A material that meets the acceptance criteria of CAN4-S114, "Determination of Non-Combustibility in Building Materials."
Non-combustible construction	The type of construction in which a degree of fire safety is attained by the use of non-combustible materials for structural members and other building assemblies.
Non-combustible Material	A material, as defined in NFPA 220, Standard on Types of Building Construction, that, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapours when subjected to fire or heat. Materials reported as non-combustible, when tested in accordance with ASTM E 136, Standard Test Method for Behaviour of Materials in a Vertical Tube Furnace at 750°C, are considered non-combustible materials.
Officer	
Officer - Company Officer	A supervisor of a crew/company of personnel. This person could be someone appointed in an acting capacity. The rank structure could be either sergeant, lieutenant, or captain.
Officer - Incident Safety Officer	An individual appointed to respond or assigned at an incident scene by the incident commander to perform the duties and responsibilities of that position as part of the command staff.
Officer - Supervisory Chief Officer	A member whose responsibility is above that of a company officer, who responds automatically and/or is dispatched to an alarm beyond the initial alarm capabilities, or other special calls. In some jurisdictions, this is the rank of battalion chief, district chief, deputy chief, assistant chief, or senior divisional officer (UK fire service). The purpose of their response is to assume command, through a formalized transfer-of-command process, and to allow company officers to directly supervise personnel assigned to them.
One- and Two-Family Dwelling	Buildings containing not more than two dwelling units in which each dwelling unit is occupied by members of a single family with not more than three outsiders, if any, accommodated in rented rooms.
Optimum Level of Fire Protection	The combination of firefighting staff and apparatus that delivers a suppression effort commensurate with the fire demand faced, yet representing the most efficient use of resources in a safe and effective manner.
Peak Fire Flow	All buildings and building groups within a District or Municipality, the highest calculated required fire flow.
Personal Lines Insurance	Insurance covering the liability and property damage exposures of private individuals and their households as opposed to Commercial Lines. Typically includes all detached dwellings that are designated single family residential or duplex.
Personal Protective Clothing	The full complement of garments Firefighters are normally required to wear while on emergency scene, including turnout coat, protective trousers, fire-fighting boots, fire-fighting gloves, a protective hood, and a helmet with eye protection.
Personal Protective Equipment	Consists of full personal protective clothing, plus a self-contained breathing apparatus (SCBA) and a personal alert safety system (PASS) device.
Public Fire Department	An organization providing rescue, fire suppression, emergency medical services, and related activities to the public.

Public Fire Protection Classification	The fire insurance grade or grades utilized by Commercial Lines Insurers in Canada. The PFPC is a number between 1 and 10 that is calculated by comparing the fire risk in terms of require fire flows to available resources. The PFPC for communities across Canada is determined from an extensive survey and analysis of the fire risk in the built environment and the available resources related to fire risk reduction and fire protection capacity.
Public Fire Protection Classification Standard	Fire risk rating schedule applied by the FUS to public fire protection in Canada. The Schedule applies various processes of modelling and scoring to produce a value representing public fire protection services relative to fire risk.
Public Fire Service Communications Center	The building or portion of the building used to house the central operating part of the fire alarm system; usually the place where the necessary testing, switching, receiving, transmitting, and power supply devices are located.
Public Safety Answering Point	A facility in which 9-1-1 calls are answered.
Pumper	Fire apparatus with a permanently mounted fire pump of at least 750 USgpm (2850 L/min or 625 Igpm) capacity, water tank, and hose body whose primary purpose is to combat structural and associated fires.
Quint	Fire apparatus with a permanently mounted fire pump, a water tank, a hose storage area, an Aerial ladder or elevating platform with a permanently mounted waterway, and a complement of ground ladders. The primary purpose of this type of apparatus is to combat structural and associated fires and to support fire-fighting and rescue operations by positioning personnel-handling materials, providing continuous egress, or discharging water at positions elevated from the ground.
Required Fire Flow	The rate of water flow, at a residual pressure of 20 psi (138 kPa) and for a specified duration, that is necessary to confine and control a major fire in a specific building or group of buildings which comprise essentially the same fire area by virtue of immediate exposure. This may include as much as a city block.
Storey	That portion of a building which is situated between the top of any floor and the top of the floor next above it, and if there is no floor above it, that portion between the top of such floor and the ceiling above it.
Wildland/Urban Interface	The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

4. FIRE UNDERWRITERS SURVEY

FUS is a national organization that represents more than 85 percent of the private sector property and casualty insurers in Canada. FUS provides data to program subscribers regarding public fire protection for fire insurance statistical and underwriting evaluation. It also advises municipalities if they desire to review the current levels of fire protection in the community and provide direction with recommendations where improvements will enable them to better deal with fire protection problems.

FUS offices maintain data from surveys on fire protection programs for all incorporated and unincorporated areas across Canada. The results of these surveys are used to establish the Public Fire Protection Classification (PFPC) and Dwelling Protection Grade (DPG) for each community. The PFPC and DPG is also used by underwriters to determine the amount of risk they are willing to assume in a given community or section of a community.

The overall intent of the grading systems is to provide a measure of the ability of the protective facilities within a community to prevent and control major fires that may be expected to occur by evaluating in detail the adequacy, reliability, strength and efficiency of these protective facilities.

4.1. Fire Insurance Grading Classifications

Public Fire Protection Classification (PFPC):

> The PFPC is a numerical grading system scaled from 1 to 10. Class 1 is the highest grading possible and Class 10 indicates that little or no fire protection is in place. The PFPC grading system evaluates the ability of a community's fire protection programs to prevent and control major fires that may occur in multifamily residential, commercial, industrial, and institutional buildings and course of construction developments.

FUS also assigns a second grade for community fire protection, referred to as the Dwelling Protection Grade, which assesses the protection available for buildings such as single-family dwellings.

Dwelling Protection Grade (DPG):

> The DPG is a numerical grading system scaled from 1 to 5. One (1) is the highest grading possible and five (5) indicates little or no fire protection is provided. This grading reflects the ability of a community to handle fires in buildings such as single family residences.

The method used to calculate the PFPC and DPG is called the Classification Schedule for Public Fire Protection.

4.2. Public Fire Protection Classification System

The Public Fire Protection Classification grading system is a measure of a community's overall programs of fire protection. The ability of a community's fire defences are measured against recognized standards of fire protection relative to fire hazard and the fire/life safety risk present within the community. The following areas of fire protection are reviewed in the survey and have the following weights within the PFPC grading system:

- Fire Department 40%
- Water Supply 30%
- Fire Safety Control 20%
- Fire Service Communications 10%

The above classifications are conveyed to subscribing companies of FUS. FUS subscribers represent approximately 85-90% of the fire insurance underwriters in Canada. Subscribers use this information as a basis in their fire insurance underwriting programs to set limits in the amount of risk they are willing to assume within a given portion of a community, and to set fire insurance rates for commercial properties. Improved fire protection grades may result in increased competition for insurance underwriting companies to place their business within a community. Our analysis indicates that an improved fire protection grade has a positive effect on fire insurance rates.

In addition, PFPC classifications are a measure of the level of fire protection within a community. Many progressive communities use the classification system to assess the performance of their fire protection programs, and to plan the direction of fire protective services for the future of the community.

PFPC Grades do not apply beyond 5km road response distance from a recognized Fire Hall.

4.3. Dwelling Protection Grading System

Dwelling Protection Grades are based on a 1 to 5 grading system; DPG 5 indicates little or no fire protection being available. Most small and midsize communities that have a gradable emergency water supply are assigned a DPG 3A rating, which the insurance industry has termed fully protected. DPG 3B refers to communities, or portions of communities, that have a recognized fire department but are not protected with a recognized water supply. The insurance industry has termed this 'semi-protected'. Within the FUS grading, a grade of 3B indicates that the fire department is equipped, trained, prepared and adequately staffed to provide "Standard Shuttle Service" to a fire event within a reasonable response time (i.e. utilize a Pumper, tender and various related equipment to deliver water to a fire site and provide structural firefighting at the fire event).

The protected assignment refers to DPG 1 to DPG 3A. An unprotected designation refers to DPG 5. DPG 3B and 4 are given the semi-protected designation. The lower the DPG assignment is, the larger the discount given in fire insurance rates. The discounts given for an identical property considered fully-protected over those considered unprotected can be approximately 60%. Where there is sufficient population and sufficient taxation base, the savings generated can more than offset the operating and capital costs of an effective fire service.

A summary of the requirements for the Dwelling Protection Grade system is provided in APPENDIX E Dwelling Protection Grade Summary of Basic Requirements.

Many insurers have simplified the Dwelling Protection Grading system to a simple three tier system. This is typical for setting insurance premium rates for detached single family residences only. Some insurers also inquire as to whether a department is career, composite, or volunteer.

Different insurers utilize the Dwelling Protection Grades differently to set their own rates based on the marketplace and their own loss experiences. The three tier system that is typically used by many insurers is shown in Table 1 FUS Grades Correlation to Commonly used Insurance Terminology and Simplified Grades.

Table 1 FUS Grades Correlation to Commonly used Insurance Terminology and Simplified Grades

FUS Dwelling Protection Grades	System Used by Many Insurance Companies "3 tier" system	Insurance Companies typically refer to this grade as
1	Table I	Fully Protected, Career
2	Table I	Fully Protected, Composite
3A	Table I	Fully Protected, Volunteer
3B[1]	Table II	Semi–Protected, Volunteer (Shuttle)
4	Table II or III	Limited–Protection, Volunteer
5	Table III	Unprotected

The fire insurance industry has minimum requirements that communities must meet in order for their fire protection program to receive recognition.

It should be noted that DPG Grades do not apply beyond 8km road response distance from a recognized Fire Hall.

4.4. Measuring Fire Risk in This Review

The strength of fire protection within a community depends largely on the will and financial ability of the community to support this emergency service. FUS and the National Fire Protection Association statistics indicate that the larger the population of a community, the higher the level of fire protection, when measured against the risk of fires within the community. The best scenario for the level of fire protection occurs when expectations of fire suppression and prevention match the community's willingness to pay for this expectation.

Community growth resulting from capital developments increases the level of fire risk; however, the development of fire protective services often falls behind the developments, particularly in communities where growth happens quickly. If community expectation levels are constant and the fire protective service level is also constant, then as the fire risk level increases the fire protection level relative to the fire risk level decreases and community expectation may no longer be met.

Optimum Level of Fire Protection

The combination of firefighting staff and apparatus that delivers a suppression effort commensurate with the fire demand faced, yet representing the most efficient use of resources in a safe and effective manner.

1 Note that communities qualifying for Dwelling Protection Grade of 3B may also be able to achieve an equivalency to 3A through Superior Tanker Shuttle Service Accreditation.

4.5. Overview of the Assessment Process

There is no one universal model of fire defence that can be applied to all situations or to a community requiring this emergency service. Ideally, the strength of a fire protection program is balanced between the risk of serious fire and the community's fire loss experience. Fire defences should be tailored with these issues in mind. To gauge the needs of the fire service based on experience alone would be to ignore perils that have not yet occurred. Ignoring experience and focusing on risk alone may tend to build-up a fire department force beyond the financial acceptability of the community paying for the service.

FUS measures the ability of a fire department against the risk of fire likely to occur within a community. This measurement is usually not determined by the most significant risk, nor is it based on the average fire risk. Our measurement tends to focus on those structures where there is a considerable risk to fire and life safety, and where total or temporary loss of a particular structure would have a significant impact on a community's tax base and economy. A fire department should be structured and supported to effectively deal with everyday emergencies while at the same time capable of controlling and extinguishing most fires that may occur.

FUS examines the entire program of the community's fire defence in order to assess and grade the overall program. There are some areas within a FUS grading that carry substantial weight, such as:

- Type and number of apparatus
- The condition and age of fire apparatus and fire suppression equipment
- The type of apparatus and ancillary equipment for the hazards present
- Pumping capacity
- The type of staffing (i.e. career Firefighters vs. volunteers)
- The distribution of companies relative to fire risk
- Response to alarm protocols
- Response times to critical risks
- Management of emergency services
- The quality of training programs for the fire fighter including specialized training
- The availability, adequacy and reliability of emergency water supplies.
- Fire prevention inspections
- Public education programs
- Building controls (application of Building Codes and related standards; plan review process; effective construction inspection and permit process; local building bylaws)
- Automatic fire protection systems
- Emergency communication systems

5. REVIEW SCOPE AND METHODOLOGY

5.1. Review Objectives

The scope of this review was to conduct an assessment of the City of White Rock's fire protection programs for Fire Insurance Grading and to update the Fire Insurance Grades for the City. The review involved the following:

- Citywide risk assessment
- Fire Department operations
- Programs of Fire Safety Control including those of fire prevention and public education
- Dispatch and communications
- Water Supply

The following key contacts were made and provided information throughout the survey and development of the report:

- Phil Lemire, Fire Chief
- Bob Schlase, Deputy Fire Chief
- Ed Wolfe, Deputy Fire Chief
- Catherine Webb, Administrative Assistant
- Surrey Fire Service – Communications Division
- Dr. Saad Jasim, Manager – Utilities
- Boris Zanic, GIS Specialist

6. COMMUNITY RISK AND HAZARD ASSESSMENT

6.1. Background

A risk assessment was conducted throughout the City of White Rock to aid in determining the community's fire protection needs and to assist in assessing the adequacy of the current Fire Hall location and distribution of apparatus. A risk and hazard assessment, along with a response distance review, lays the groundwork for determining fire protection needs within a community. This assessment is important in ascertaining organizational structure, personnel, training, fire apparatus and fire equipment needs, response time benchmarks and adequacy of fire hall locations.

The "Risk and Hazard Assessment" is an evaluation of the fire loading and risk present in a given area.

6.2. Measuring Fire Risk

Adequate response to a fire emergency is generally measured by the speed with which a responding firefighting crew(s) can arrive at the fire emergency with sufficient resources, to have a reasonable degree of opportunity to control or extinguish a fire. Simply put, the response provided by a firefighting crew should equal the potential severity of the fire or fire emergency.

Generally, the potential severity of a fire event is associated with the fuel load present and exposures to the fire. Factors such as building construction materials; quality of construction; building renovation history; building size, height and age; occupancy and hazards associated with the occupancy, will all contribute to the potential severity of a fire. In addition, other buildings sufficiently exposed to a burning building can contribute to the magnitude of a fire and the resources necessary to be in place to control or extinguish a given fire. Alternatively, building controls and automatic fire protection systems (both active and passive) that limit fire spread will reduce the potential severity of a fire. For building controls to be considered effective, their design, installation and maintenance must also be reviewed as any weak link may result in the system being ineffectual.

Much of the research into fire protection requirements for individual buildings and communities and the corresponding number of Pumper companies and response times has been conducted by FUS and the National Fire Protection Association (NFPA). FUS evaluates adequacy of response by comparing the potential severity of fires that may occur with a rating of the ability of fire crews and their resources responding within a specified time period relative to the fire magnitude potential.

The base point, within the Public Fire Protection Classification Standard for measuring fire risk and the resultant available and adequate response is the determination of Required Fire Flows (RFF).

6.3. Required Fire Flows

Required Fire Flows (RFF) may be described as a measurement of the amount and rate of water application, and fire company response (resources and response times), required in firefighting to confine and control the fire

magnitude possible in a building or group of buildings which comprise essentially the same fire area by virtue of immediate exposures.

RFFs were derived for buildings throughout the City of White Rock using the methodology described in the FUS 1999 Guideline "Water Supply for Public Fire Protection" (refer to APPENDIX A). The calculation takes into account the construction type, occupancy, exposures, total effective area, and the fire protection systems in place for each risk. The RFF calculation is based on the following formula:

$$F = 220C\sqrt{A} \text{ .....} \textit{see additional notes in appendix A}$$

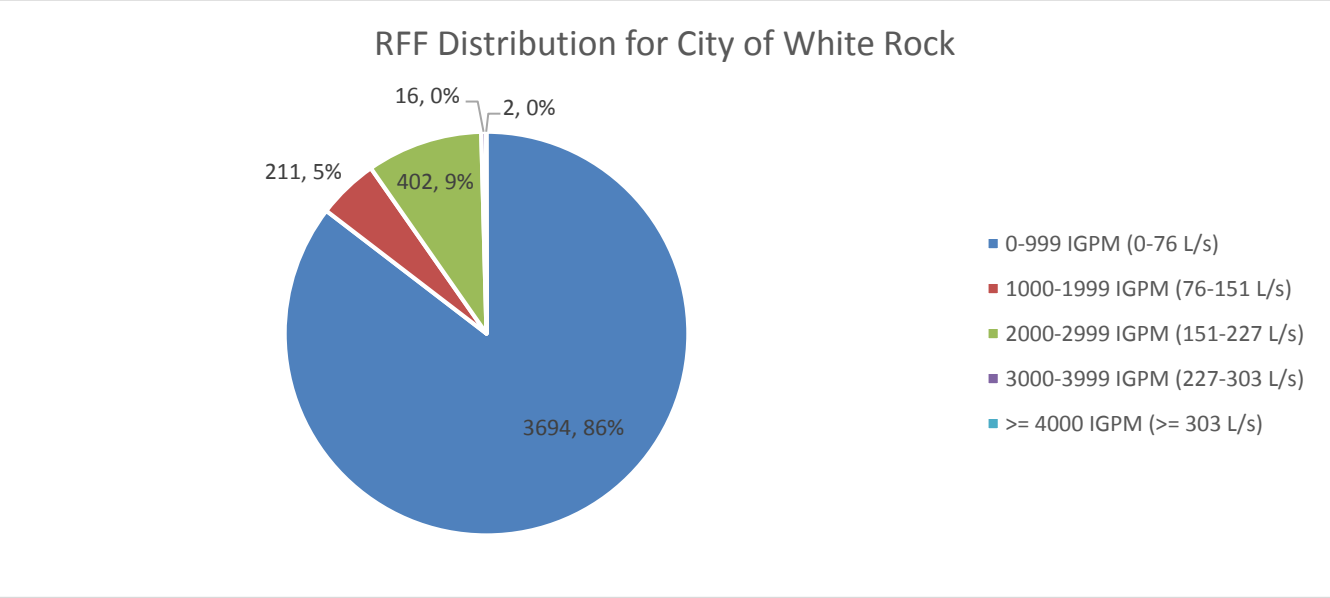
Where:

- C=coefficient related to the type of construction
- A=total effective building area

GIS building and zoning data related to Required Fire Flow variables as well as manual calculations were used to derive Required Fire Flows for buildings throughout the community. Additionally, details of structures 4 storeys and over as well as sprinkler protected buildings were provided by White Rock Fire Rescue and updated in the risk assessment for the City. These RFFs were typically found to fall within the RISK RATING limits of Table 6 FUS - Table of Effective Response. The final risk assessment layer for the City of White Rock completed for this assessment is shown in Figure 2.

Overall 4,325 Required Fire Flows were derived for the City of White Rock. The distribution of RFFs is shown in Figure 1.

Figure 1 RFF Distribution City of White Rock



The Guide for Determination of Required Fire Flow (see APPENDIX A) Note A indicates that the guide is not expected to necessarily provide an adequate value for lumber yards, petroleum storage, refineries, grain elevators, and large chemical plants but may indicate a minimum value for these hazards.

Risks beyond the scope of this review exist in the City.

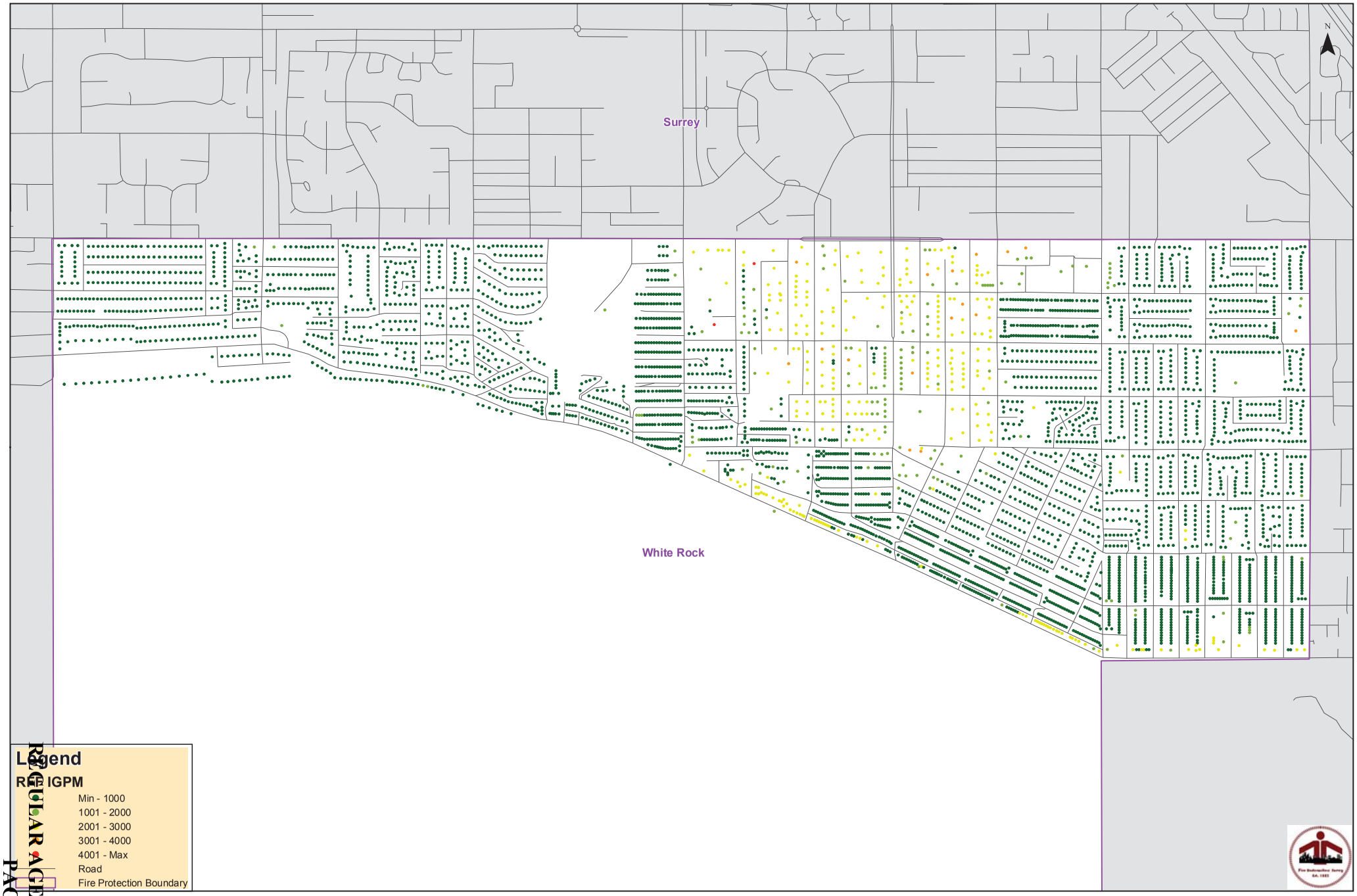
6.4. Basic Fire Flow for the City of White Rock

The Basic Fire Flow is determined from the analysis of the RFFs. The value which represents the fire potential of most large properties in the municipality, but may exclude several of the largest properties not considered as usual to the municipality. Normally, the value used as the Basic Fire Flow will not be the peak RFF in the municipality.

The 95th percentile of RFF values for the City of White Rock was then used to select the final Basic Fire Flow for the City which is 2,800 IGPM (212 L/s).

RFFs calculated that were higher than the Basic Fire Flow are not excluded from the Public Fire Protection Classification Standard. They are still utilized under specific items of the Rating. Additional resources and planning may be required to adequately provide protection to peak RFF risks.

It should be noted that although there are older buildings within the City of White Rock that have a RFF greater than 2,800 IGPM, the Basic Fire Flow for the City has remained constant since the previous assessment in 2009, due to the implementation of Fire Sprinkler System *Bylaw No. 1683*.



White Rock, BC

Figure 2 - Property Points with RFF Values

Scale = 1:4,500 0 100 200 Meters

Fire Underwriters Survey
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7. PFPC - FIRE DEPARTMENT ASSESSMENT

7.1. Fire Department Grading Items

The following items are assessed as part of this study and as part of the Fire Insurance Grading process.

Areas analyzed in the assessment of the Fire Department are as follows:

- FD – 1: Engine Service
- FD – 2: Ladder Service
- FD – 3: Distribution of Companies
- FD – 4: Engine and Ladder Pump Capacity
- FD – 5: Design, Maintenance and Condition of Apparatus
- FD – 6: Number of Line Officer – Fire Suppression
- FD – 7: Total Fire Force Available
- FD – 8: Engine and Ladder Company Unit Manning
- FD – 9: Master and Special Stream Devices
- FD – 10: Equipment for Engines and Ladder Apparatus
- FD – 11: Fire Hose
- FD – 12: Condition of Fire Hose
- FD – 13: Training and Qualifications
- FD – 14: Response to Alarms
- FD – 15: Fire Ground Operations
- FD – 16: Special Protection Required
- FD – 17: Miscellaneous Factors and Conditions
- FD – 18: Pre-Incident Planning
- FD – 19: Administration

7.2. Engine Service

Fire departments are evaluated for the number of engine companies in service relative to the overall fire potential and the area being protected. Engine apparatus are required to be adequately housed and staffed in order to receive full credit.

The engine service grading item refers to the amount of credit received for each of the department's engines. Recognition and credit for engines may be reduced or withheld based upon the measured reliability of the pumps and the apparatus upon which they are installed (ex. factors such as age, listing, testing, etc.).

Fire apparatus that serve dual purposes are evaluated based on the primary duty it serves on the fire ground. For example, a ladder apparatus with a fire pump may be credited in one of two ways.

- 100 percent credit as a ladder apparatus and 50 percent credit as an engine, or
- 100 percent credit as an engine apparatus and 50 percent credit as a ladder apparatus.

This depends upon the number of apparatus a department has available and where credit should be distributed properly in the grading depending on the primary use of the fire apparatus.

The maximum acceptable age of apparatus for the City of White Rock, as specified in the Classification Standard for Public Fire Protection, is 20 years as a First/Second Line Duty apparatus and up to 29 years as a reserve. Refer to APPENDIX E Insurance Grading Recognition of Used or Rebuilt Fire Apparatus.

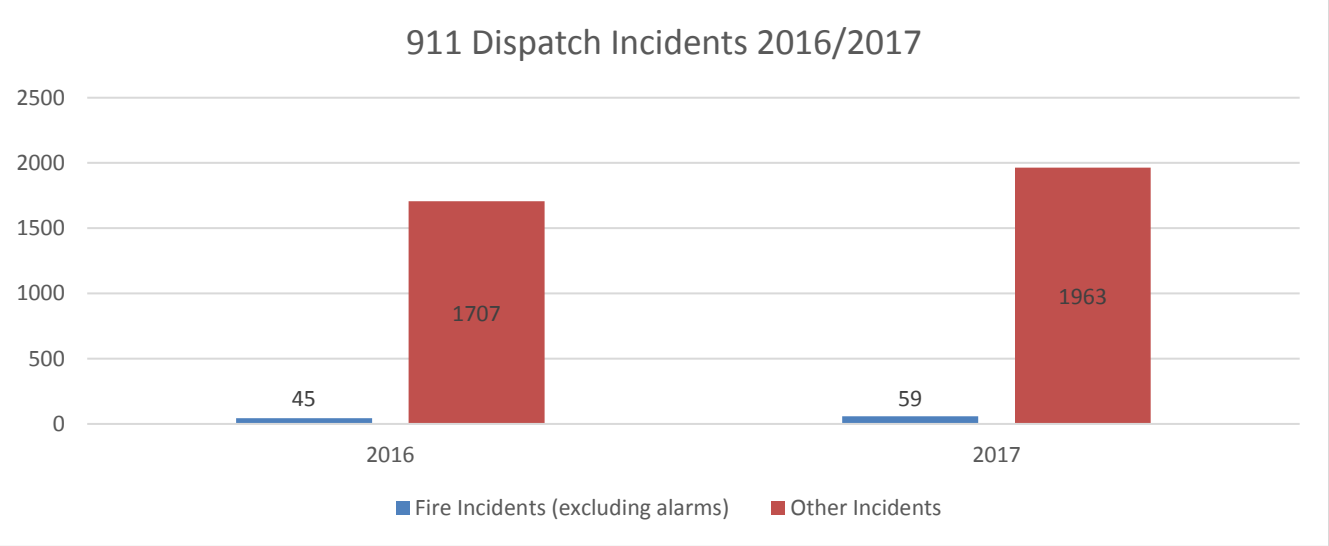
The benchmark number of Engine Companies that the City of White Rock can receive credit for is based on the Basic Fire Flow of 2,800 IGPM (212 L/s). Initial apparatus needs are cross referenced with Table 6 FUS - Table of Effective Response. For a Basic Fire Flow of 2,800 IGPM (212 L/s) 3 Pumper apparatus are needed.

Further apparatus needs are determined based on distribution of resources to provide reasonable coverage within the City. Ideally between 90%-100% of properties should have a Pumper apparatus response within first due response times, which are derived from the RFF calculated for the property and resource needs read from Table 6. Typically response times are converted to response distances using an established Time-Distance formula as road speeds; network maps; etc. are generally not readily available. All buildings/RFF considered for coverage are shown in Figure 2. GIS software is used to find the number of facilities needed to provide 90% coverage of RFF points considering individual response times. An optimization was completed in order to determine the number of facilities in the City needed to provide more than 90% coverage.

It can be seen that White Rock Fire Rescue meet the first due response needs of 4,325 property points within the City boundaries. One fire hall facility is needed which results in 100% of all property points lying within first due response distances of a fire hall. As 3 Pumper companies are already needed based on the Basic Fire Flow, no additional Pumper companies are added for distribution. The optimized facility location is shown in Figure 4 Facility Needs for Pumper Distribution with the number of RFF points covered by the facility shown as labels. Please note, optimized location is determined based on road travel distance in kilometers to existing building stock, factors such as topography or available space are not included in the calculation.

Final apparatus needs are then based on the frequency of alarms for a fire company and total number of “Fire” calls annually. Where a Pumper company receives in excess of 2,500 calls per year, additional companies are needed. The number of alarms for 2016/2017 are shown in Figure 3 911 Dispatch Incidents. Based on the dispatch data, no further apparatus are added for needs.

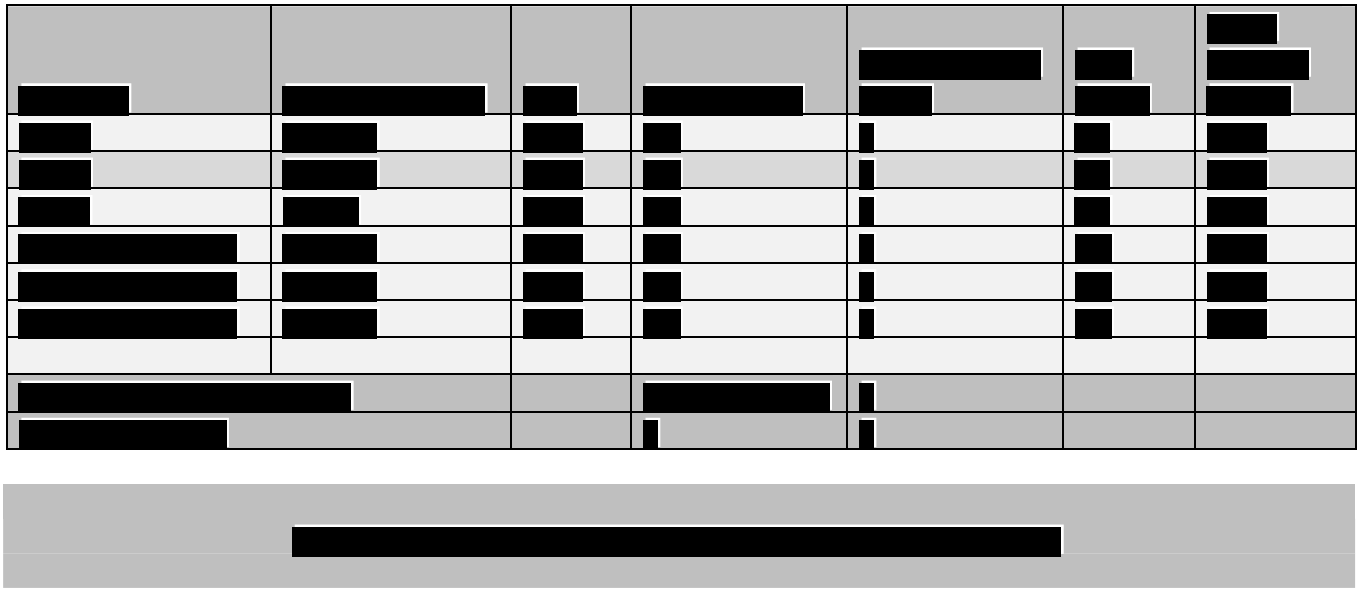
Figure 3 911 Dispatch Incidents



Therefore the total needed Pumper companies for benchmarking within the Public Fire Protection Classification Standard is 3. For Fire Insurance Grading, a fire department should have one reserve engine for each eight engines in service. A fire department even with a single pumper/engine company are still measured against having at least one reserve pumper apparatus.

A summary of Pumper apparatus credit is provided in Table 2. Tower apparatus, can receive 100% credit as a Pumper company and 50% as a Ladder company, or vice versa, depending on its primary use. Apparatus credited as AD (Active Duty) under Duty Status receive 100% credit as first responding; those credited as AA (Automatic Aid) and OA (Outside Aid) only receive limited credit. As part of the Metro Vancouver Mutual Aid Agreement, 3 pumpers from Surrey Fire Service have been credited as Outside Aid. Apparatus credited as Automatic or Outside Aid cannot contribute to more than 33% of the total needs of a community.

Table 2 Credited In-Service Engine Summary



Recommendation 1: Shift Engine 2 to Reserve Status. Replace Second Line Engine with Apparatus under 20 Years in Age

Apparatus 'Engine 2' (LaFrance, 1998) is currently 20 years of age. Engine 2 should be replaced in its function as second due pumper, and placed in reserve status to obtain extra credit.

To ensure an adequate response when a fire department has an Engine apparatus out for repair, a fire department should have a reserve pumper apparatus equipped, maintained, and ready for replacement purposes if its primary or secondary pumper is out of service.

White Rock, BC

Figure 4 - Facility Needs for Pumper Distribution

Scale = 1:4,500 0 100 200 Meters

Fire Underwriters Survey

7.3. Ladder Service

Fire departments are evaluated for the number of ladder companies in service relative to the overall fire potential and the area being protected. Ladder apparatus are required to be adequately housed and staffed in order to receive full credit.

The ladder service grading item refers to the amount of credit received for each of the department's ladder apparatus. Recognition and credit for ladders may be reduced or withheld based upon the measured reliability of the apparatus upon which they are installed (ex. factors such as age, listing, testing, etc.).

Fire apparatus that may serve dual purposes are evaluated based on the primary duty it serves on the fire scene. As previously stated, a ladder apparatus with a fire pump may be credited in one of two ways.

- 100 percent ladder credit as a ladder apparatus and 50 percent credit as an engine, or
- 100 percent credit as an engine apparatus and 50 percent credit as a ladder apparatus.

This all depends upon the number of apparatus a department has available and where credit should be distributed properly in the grading depending on the primary use of the fire apparatus.

Response to buildings that are 3 storeys or 10 m (35 ft) or more in height, or districts that have a Basic Fire Flow greater than 3,300 IGPM (250 L/s), or any combination of these criteria, should have a ladder company (Refer to APPENDIX D Requirements for Aerial Apparatus). The height of all buildings in the community, including those protected by automatic sprinklers, is considered when determining the number of needed ladder companies for Fire Insurance Grading.

The benchmark number of ladder companies that the City of White Rock can receive credit for based on the Basic Fire Flow of 2,800 IGPM (212 L/s) is 1. Values are cross referenced with the Table of Effective Response. Again, further apparatus needs are determined based on distribution of resources to provide reasonable coverage within the City. Ideally between 90%-100% of properties (where ladder response is needed) should have a ladder apparatus response within first due response time which is derived from the RFF calculated for the property and referenced from Table 6.

Again, a location optimization was completed to determine the total number of theoretical facilities needed to provide coverage of approximately 90% coverage of properties needing ladder response. These buildings were selected based on RFF value being >= 3100 IGPM, number of stories being >= 3, or whether number of stories being >= 3 based on the zone code. One facility can provide coverage for 100% of these properties. This theoretical location is shown in Figure 5 Facility Needs for Ladder Distribution. Please note, optimized location is determined based on road travel distance in kilometers to existing building stock, factors such as topography or available space are not included in the calculation. No further needs are considered under this item.

The current replacement schedule of apparatus for the City of White Rock is 20 years. Tower 1 is currently over the 20 year age mark; however, White Rock Fire Rescue has provided an Aerial Platform Fire Apparatus Request for Proposal and Asset Improvement Project Plan indicating that Tower 1 will be replaced in 2018. Detailed maintenance, repair, and service records were provided for the apparatus and credit has been extended as discussed in section 7.6.

Table 3 Credited In-Service Ladder Summary

[redacted]						
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]						
[redacted]						

[redacted].

Recommendation 2: Provide a Ladder Apparatus Under 20 Years in Age

The ladder apparatus is 22 years in age. Credit for ladder apparatus begins to decrease after 20 years in age, and will receive limited to no credit at 25 years for fire insurance grading purposes. For apparatus over 20 years in age, the fire department is required to submit documentation to FUS that the ladder apparatus is well maintained each year to extend credit until it is replaced. Extension of credit is up to a maximum of 25 years.

The ladder apparatus is recommended to be replaced if the City and the fire department wish to maintain credit within the fire insurance grading item. A ladder apparatus less than 20 years in age is recommended to maintain credit received.

If the ladder apparatus is not replaced within a reasonable timeframe, credit received within grading item 7.4 – Distribution of Companies will have to be reviewed and adjusted accordingly for Distribution of Ladder Companies.

Figure 5 - Facility Needs for Ladder Distribution

White Rock, BC

Scale = 1:4,500

0 100 200
Meters

Fire Underwriters Survey

7.4. Distribution of Companies

7.4.1. Background

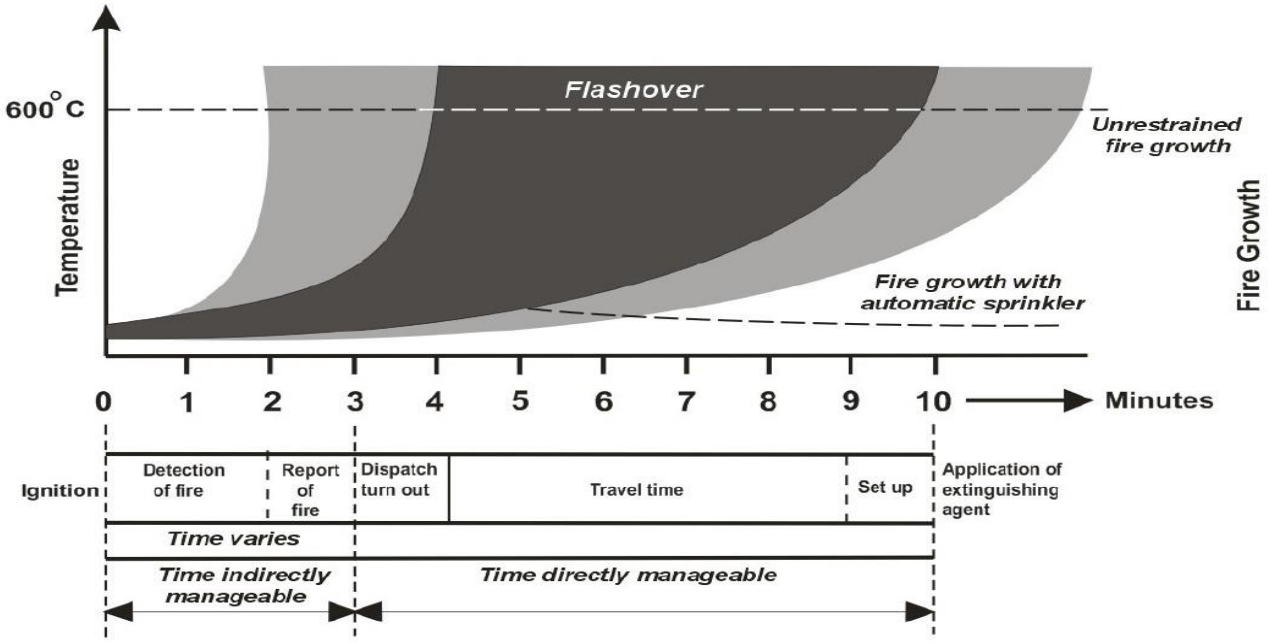
This item concerns the placement of companies throughout the Fire Protection Area when considering the ideal response based on the values listed in Table 6 FUS - Table of Effective Response.

Within the Table of Effective Response the following are identified for each Required Fire Flow (RFF) (building):

- First due response – Initial number of companies within a specified time/distance depending on RFF value
- Second due response – Secondary number of companies within a specified time/distance depending on RFF value
- Total concentration response – Total number of companies within a specified time/distance depending on RFF value

The intent of fire department response is to arrive at a fire scene with the necessary resources before the point of flashover, see Figure 6. Beyond the point of flashover, it can become very difficult to combat a fire as fire growth increases exponentially as can be seen.

Figure 6 Fire Propagation Curve (source NFPA)



It can be seen from Figure 6 that in order for a fire department to arrive with the necessary resources at a specific point of fire growth would require knowledge/control of all aspects of two systems: the fire and the response. In both cases neither system is completely controllable and as such most response distances/times are based on empirical data and research from mutual agencies. Ideal response distances/times form the basis of fire Hall location/apparatus distribution.

For response assessment within the Public Fire Protection Classification Standard, the Table of Effective Response is used as the benchmark, see Table 6 FUS - Table of Effective Response. A single family dwelling structure can have an RFF value of 1100 IGPM. The benchmark response for 1100 IGPM is read from the Table:

- Initial response to alarms for Pumper companies is 2, i.e. 1 Pumper company in a first due response time of 4 minutes (same as NFPA 1710) and 1 Pumper company in a second due response time of 6 minutes.
- The total number of Pumper companies required is 2 in 6 minutes.
- In the case of 1100 IGPM (84 L/s) a Ladder company is required only if the building is 3 stories or greater.

Within the Public Fire Protection Classification Standard individual property response is measured against these benchmarks with 100% credit being applied where the ideal distances/times are met.

7.4.2. Response Assessment Model

As road speed network data was not available for the City, response times were converted to response distance based on the following relationship (source The New York City - RAND Institute):

$$1.065d = \mathrm{t} - 0.65$$

Where:
d = distance (km)
t = time (min)

Again GIS was used with municipal road network data to determine the response distances from each fire hall/apparatus to each RFF point.

The results are summarized in Table 4 Current Distribution of Response Credit - Pumper, Figure 7 Current Distribution of Pumper Response Credit and Figure 8 Distribution of Response Summary. In summary, 92.92% of RFF points lie within first due response distances. Additionally, 100% of RFF points lie within 4km of the fire hall. Percentage credit received for each RFF point is shown in Figure 10. Figure 10 shows how well each RFF point met the benchmark Pumper response for all apparatus needed. 100% credit (green) shows that all Pumper apparatus are expected to be on-scene within the distances/times specified in Table 6.

Table 4 Current Distribution of Response Credit - Pumper

[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

Figure 7 Current Distribution of Pumper Response Credit

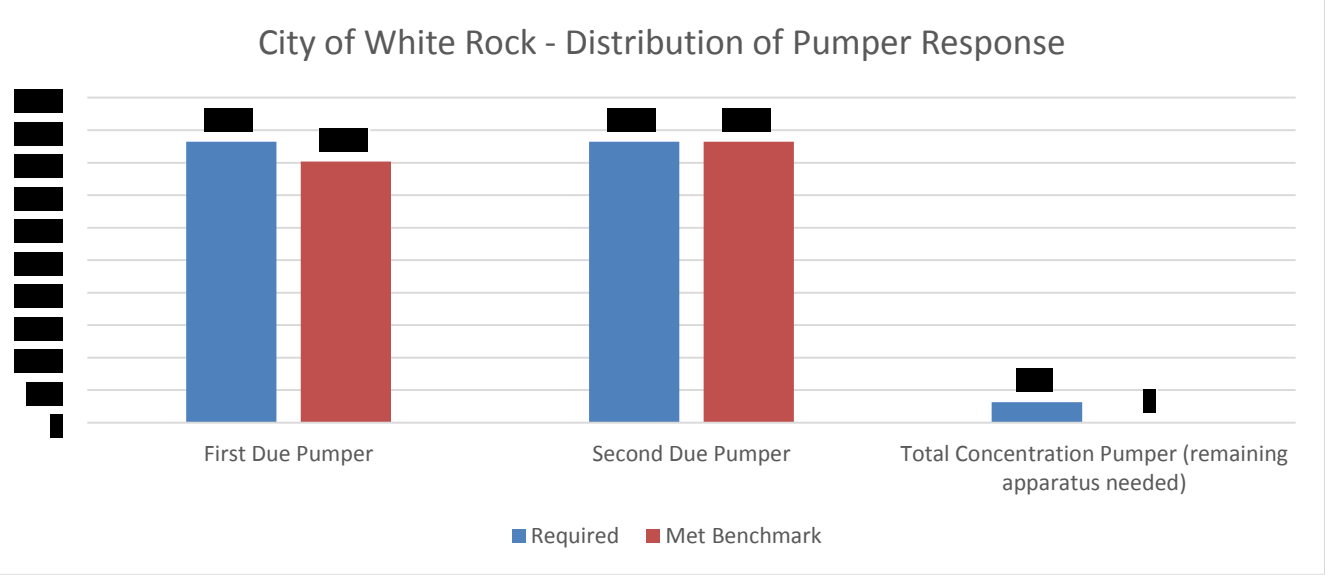
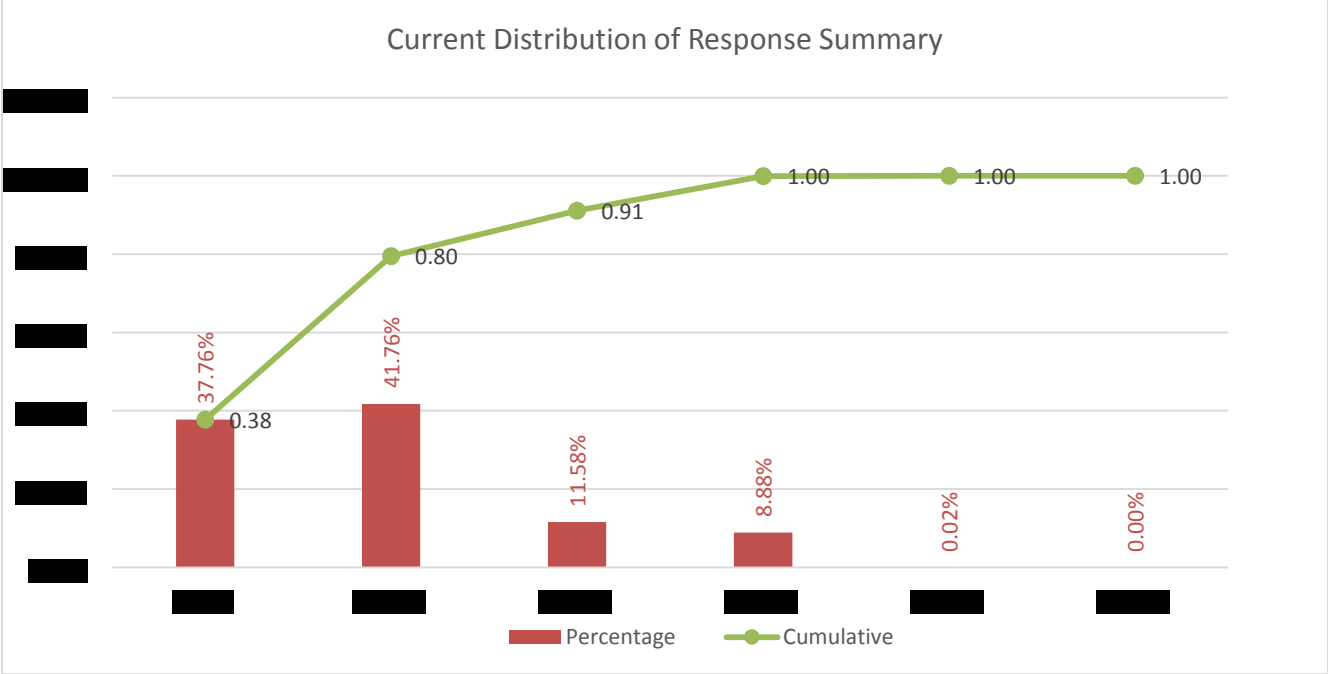


Figure 8 Distribution of Response Summary



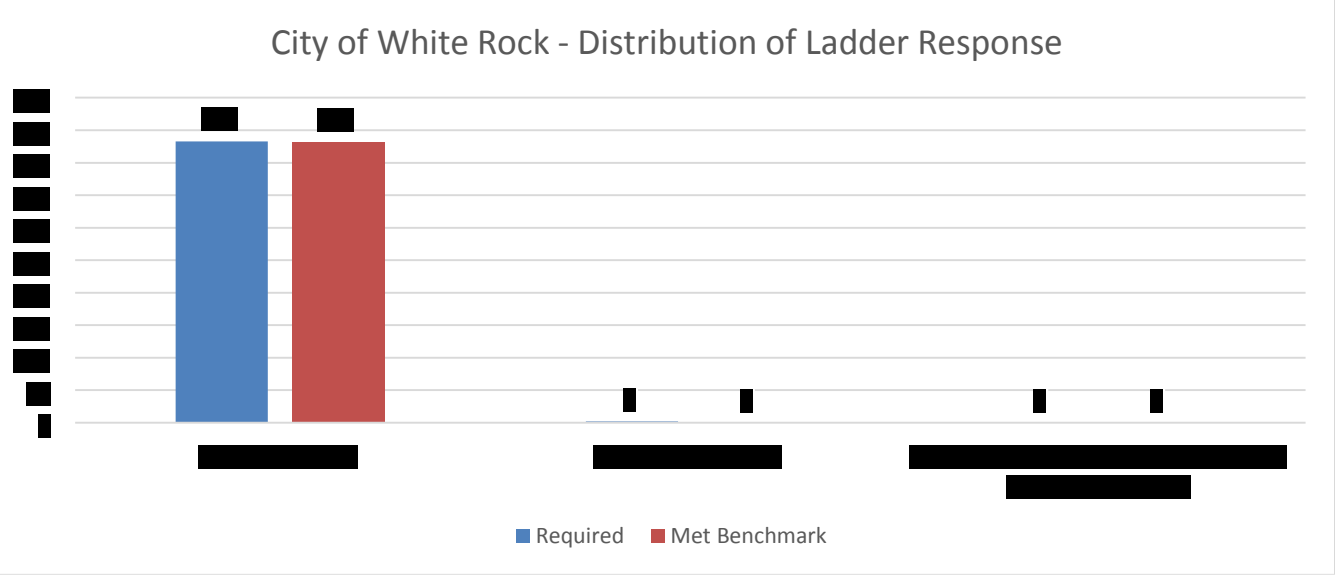
Ladder response results are summarized in Table 5 Current Distribution of Response Credit – Ladder and Figure 9 Current Distribution of Ladder Response Credit. In summary, 99.77% of RFF points lies within first due ladder response distances. Percentage credit received for each RFF point is shown in Figure 11 Ladder Benchmark Credit. Figure 11 Ladder Benchmark Credit shows how well each RFF point met the benchmark Ladder response for all

apparatus needed. 100% credit (green) shows that all Ladder apparatus are expected to be on-scene within the times specified in Table 6.

Table 5 Current Distribution of Response Credit – Ladder

[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

Figure 9 Current Distribution of Ladder Response Credit



[redacted]

Table 6 FUS - Table of Effective Response

The following Table aids in the determination of Pumper and Ladder Company distribution and total members needed. It is based on availability within specified response travel times in accordance with the fire potential as determined by calculation of required fire flows, but requiring increases in availability for severe life hazard.

RISK RATING	BUILDING EXAMPLES DISTRICT	FIRE FLOW L/min X1000	FIRE FLOW Approx. Igpm Range	INITIAL RESPONSE TO ALARMS Pumper Companies	INITIAL RESPONSE TO ALARMS Ladder Companies	1st DUE Engine Company, Minutes	2nd DUE Pumper Company, Minutes	1st DUE Ladder Company, Minutes	TOTAL Pumper Companies. No.	TOTAL Pumper Companies. Min.	TOTAL Ladder Companies No.	TOTAL Ladder Companies Min.
1 (a)	Very small buildings, widely detached buildings.	2	400	1	0	7.5	-	*9	1	7.5	*1	9
(b)	Scattered development (except where wood roof coverings).	3	600	1	0	6	-	*7.5	1	6	*1	7.5
2	Typical modern, 1 - 2 storey residential subdivision 3 - 6 m 10 - 20 ft. detached).	4-5	800-1,000	2	0	4	6	*6	2	6	*1	6
3 (a)	Close 3 - 4 storey residential and row housing, small mercantile and industrial.	6-9 10-13	1,200-2,000 2,200-2,800	2 2	1(if required by Hazards)	3.5 3.5	5 5	*4 *4	2 3	5 6	*1 *1	4 4
3 (b)	Seriously exposed tenements. Institutional. Shopping Centres Fairly large areas, fire loads, and exposures.	14-16 17-19	3,000-3,600 3,800-4,200	2 2	1 1	3.5 3.5	5 5	4 4	4 5	7 7	1 **1	4 4
4 (a)	Large combustible institutions, commercial buildings, multi-storey and with exposures.	20-23 24-27	4,400-5,000 5,200-60,00	2	1	2.5 2.5	4 4	3.5 3.5	6 7	7.5 7.5	2 2	5 5
4 (b)	High fire load warehouses and buildings like 4(a).	28-31 32-35	6200-6800 7000-7600	3	1	2.5 2.5	3.5 3.5	3.5 3.5	8 9	8 8	3 3	7 7
5	Severe hazards in large area buildings usually with major exposures. Large congested frame districts.	36-38 39-42 43-46	7,800-8,400 86,00-9,200 9,400-10,000	3	3	2 2 2	3.5 3.5 3.5	2.5 2.5 2.5	10 12 14	8 9 9	4 5 6	7.5 8 9

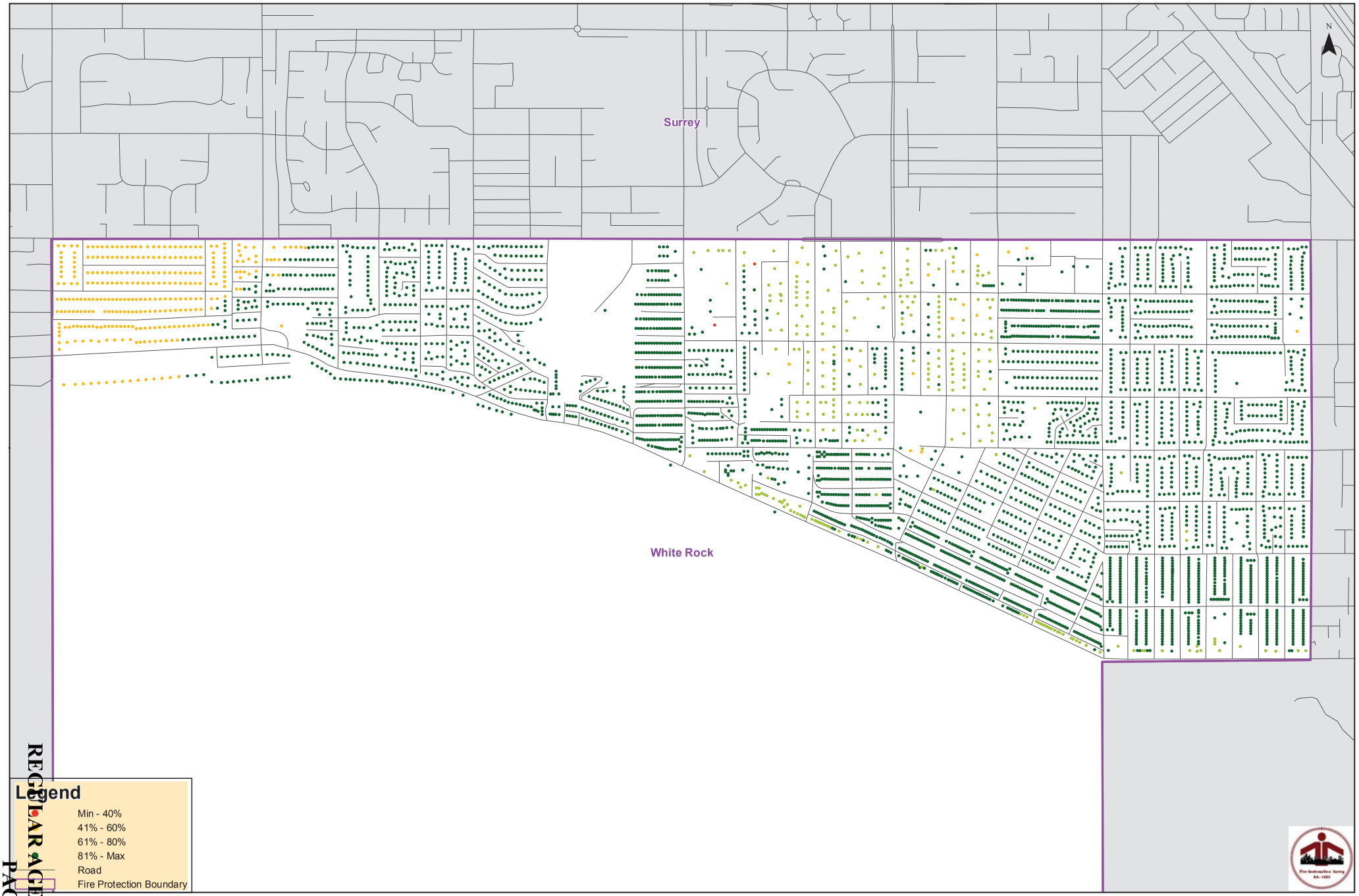
Notes to Table of Effective Response

* A ladder company is required here only when exceptional conditions apply, such as 3 storey heights, significant life hazards.

** For numerous or large single buildings over three stories use two ladder companies in 5 minutes.

When unsprinklered buildings over six stories have fire flow requirements less than Group 4, the number of Pumper and Ladder Companies under "Total Availability Needed" should be increased at least to the next group to provide the additional manpower required except where this additional manpower regularly responds in the time allotted, as occurs in some volunteer or composite fire departments.

The table gives travel times for apparatus AFTER dispatch and turn-out. Under very exceptional conditions affecting total response time, these nominal figures should be modified.



White Rock, BC

Figure 10 - Pumper Benchmark Credit

Scale = 1:4,500 0 100 200 Meters

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White Rock, BC

Figure 11 - Ladder Benchmark Credit

Scale = 1:4,500 0 100 200 Meters

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7.5. Engine and Ladder Pump Capacity

The Engine and Ladder Pump Capacity grading item refers to the capacity of credited, recognized pumps located on fire apparatus. Recognition and credit for pumps on fire apparatus may be reduced or withheld based upon the measured reliability of the pumps and the apparatus upon which they are installed (ex. factors such as age, listing, testing, etc.).

Fire apparatus that may serve dual purposes are evaluated based on the primary duty the apparatus serves on the fire scene (ladder or pump). As previously stated, a ladder apparatus with a fire pump may be credited in one of two ways.

- 100 percent credit as a ladder apparatus and 50 percent credit of the pump on the apparatus, or
- 100 percent for the pump on the ladder and 50 percent credit as a ladder apparatus.

This depends upon the number of apparatus a department has available and where credit should be distributed properly in the grading depending on the primary use of the fire apparatus.

Total credited Pumper capacity is summarized in Table 2.

[redacted]

7.6. Design, Maintenance and Condition of Fire Apparatus

Maintaining a reliable fire apparatus fleet could well be the most important capital asset for any municipal fire department. Firefighters are heavily dependent on the performance of their fire apparatus to deliver emergency services to protect lives, property and the environment. The apparatus must be maintained in superior operating condition and perform at the highest levels of safety, availability, functionality and reliability to ensure that emergency services are provided in a timely and efficient manner. When adequate performance levels can no longer be assured, apparatus should be replaced without delay, where possible.

The public fire service is rather unique when compared to other emergency services due to the fact that fire department apparatus are not continuously in use. However, when in use, fire apparatus are subject to considerable mechanical stress due to the nature of their function. The types of mechanical stresses that present immeasurable wear and tear on apparatus include, but are not limited to the following:

- The nature of emergency responses,
- Repeated acceleration and braking,
- Frequent defensive driving maneuvers,
- High engine speeds prior to sufficient engine warm-up,
- Excessive loads adding additional stresses (water weight and equipment), and
- Long term cumulative effects of emergency responses and extreme operating conditions resulting in reduced performance levels and fatigued mechanical components and assemblies.

Visual indications of the effects of mechanical stress do not always manifest themselves on the exterior of the apparatus; they are often effectively masked in most fire departments by a higher standard of aesthetic care and maintenance.

Fire Department apparatus should be of suitable design and well maintained for the emergency service that is to be performed. A breakdown en-route to, or on the fire ground could result in loss of life and greater damage to property. Maintenance facilities, quality of maintenance programs, qualifications of maintenance personnel, apparatus suitability and apparatus age are considered in this item.

Maintenance Facilities and Personnel
Regular maintenance and minor repairs on fire apparatus are conducted in a facility at the City of White Rock Public Works Yard. Maintenance and minor repairs preformed at the City's Public Works facility are completed by licensed mechanics. Major repairs (including pump repairs) would be completed by a third party located in the City of Surrey with Certified Emergency Vehicle Technicians (EVT) on staff.

Engine and Ladder Testing
Engine and ladder service tests including but not limited to pump testing are valuable in assessing the effectiveness of the preventive maintenance program. Service tests of pumps and ladders on apparatus are generally conducted to show whether the equipment is working correctly.

Pump tests are currently completed annually by a third party. Pump and preventative maintenance records for Pumper and Tower apparatus for past years have been provided by Hub Fire Engines & Equipment Ltd. In addition, provincial Motor Vehicle Inspections are also completed annually on all apparatus. Annual Non-Destructive Testing (NDT) inspection tests of Aerial/Tower apparatus are performed annually, with records provided from Commercial Truck Equipment Co. A preventive maintenance check is also completed quarterly in conjunction with the annual pump tests. Vehicle checks are completed weekly by White Rock Fire Rescue.

Maintenance records are returned to the fire department in hard copy format then scanned into the Fire House software for electronic record.

Age, Obsolescence and Condition of Apparatus
As fire department apparatus age, numerous studies have confirmed that they tend to require maintenance and/or repair on a more frequent basis, thus increasing costs and decreasing their level of reliability. Increased frequencies of maintenance/repair result in more "out of service" time often leading to an increased reliance on reserve apparatus, which typically have been demoted to reserve status as a result of exceeding its front line response expectancy. Increased probability of apparatus and equipment breakdowns or failures can also negatively impact the fire department's level of personnel safety and operational efficiency.

A lack of readily available replacement parts can also make long term use of the apparatus less economically feasible. Vehicle, pump and equipment manufacturers typically maintain a parts inventory for each model year for a finite period of time. After that period has passed the necessary replacement parts may be difficult to locate and/or obtain which can lead to increased "out of service" time or result in the apparatus being operated with deficiencies. Availability of replacement parts can be particularly problematic with fire department apparatus, largely due to the limited market and specialized nature of the individual components which in many cases must be re-built or custom fabricated. As previously mentioned, increased "out of service" time often results in an increased dependency on reserve apparatus which can further drive up maintenance/operating costs.

Obsolescence is another key factor related to aged fire department apparatus. Modern fire apparatus continually increase levels of safety, performance, functionality and reliability through the use of new technology, improved engineering practices and compliance with updated, recognized industry standards. Fire department apparatus equipped with the latest operating capabilities and safety features will ensure that fire fighter operational efficiency is maximized and their risk to possible injuries is kept to a minimum.

Service life is considered to be the period of time in which a fire department apparatus can be maintained in superior operating condition and is capable of adequately, reliably and efficiently performing all of its originally designed functions and duties. There are a number of indicators that will enable fire service management and fleet managers to understand that a piece of apparatus may in fact be reaching the end of its serviceable life span. The majority of these indicators will likely be identified during regular maintenance or annual testing of apparatus such as:

- Decline in pump capacity,
- Degradation of braking systems (longer braking distances experienced),
- Decreased engine performance, reliability and acceleration,
- Structurally weakened chassis due to constant load bearing,
- Slower engine warm up times, and
- Engines operating at higher revolutions per minute (RPM).

The National Fire Protection Association (NFPA) standards do not specify a mandatory retirement age for fire apparatus mainly due to the number of individual factors that can affect the lifespan of any fire department apparatus. The NFPA does however recommend that fire apparatus older than fifteen (15) years, that have been properly maintained and that are still in serviceable condition, be shifted from first-line service and placed in reserve status. The NFPA further recommends that any apparatus over twenty-five (25) years of age or those not conforming to applicable NFPA fire apparatus standards should be replaced.

FUS (FUS) considers the age of fire department apparatus to be one of many important factors when conducting Fire Insurance Grading evaluations in large part as a result of the factors previously noted. The current replacement schedule of pumper apparatus for White Rock Fire Rescue is 20 years. The population of the City of White Rock is approximately 19,952. Aerial apparatus are currently on a replacement schedule slightly over 20 years, due to factors of less frequent use and higher replacement cost.

[redacted]

Recommendation 3: Certify Mechanics as Emergency Vehicle Technicians

Provide training for City of White Rock mechanic(s) that maintain and repair emergency vehicles to Emergency Vehicle Technician (EVT) Certification in accordance with *NFPA 1071 – Standard for Emergency Vehicle Technician Professional Qualifications*.

Recommendation 4: Maintain 20 Year Replacement Schedule for Engine and Ladder Apparatus

Maintain an approved apparatus replacement schedule to ensure all engine and ladder apparatus have reserve funding to be replaced in accordance with age of recognition requirements for fire insurance grading purposes. For further information, see Appendix B - Insurance Grading Recognition of Used or Rebuilt Fire Apparatus.

7.7. Number of Line Officers – Fire Suppression

The number of Chief Officers and Company Officer positions is reviewed and graded under this item. The number of Chief Officers and Company Officers required to receive maximum credit for this grading item is determined from the Basic Fire Flow and the resulting number of engine and ladder companies associated with the benchmark.

Chief Officers
For Fire Insurance Grading the maximum credit White Rock Fire Rescue can receive for Chief Officers is 3. Full credit is received for each career Chief or career Deputy Chief on the department. An Auxiliary Chief or Auxiliary Deputy Chief is credited at 50 percent.

White Rock Fire Rescue has one career Fire Chief and two career Deputy Fire Chiefs. White Rock Fire Rescue received maximum credit for its career Fire Chief and each Deputy that assists the Fire Chief with administration of the fire department, training, and prevention.

Company Officers
The number of Company Officers that White Rock Fire Rescue can receive maximum credit for Fire Insurance Grading is determined by the total number of engine and ladder companies based on the Basic Fire Flow benchmark and an on duty shift factor. Credit can be received through a combination of career and auxiliary officers on the fire department. Full credit is received for each career officer on the department. Auxiliary officers are credited at 50 percent.

To determine the shift factor a typical 4 on / 4 off system is used. If all shifts were operated continuously year-round, then one career Company Officer would be required for each required engine and ladder company, for fire insurance grading purposes. However, in normal circumstances, shift coverage (holidays, leaves, etc.) requires that additional company officers be provided for continuous coverage. Typically, the true value of required company officers will fluctuate between 4 and 6 company officers per company.

For fire insurance grading the maximum credit White Rock Fire Rescue can receive credit for is 18.4 officers to be able to cover three engine companies and one ladder company. This was determined by the number of engine and ladder companies set in 7.2 and 7.3 and an on-duty shift factor. A shift factor of 4.6 was used.

White Rock Fire Rescue has a total of 4 designated Company Officers which enables one Officer on duty per shift. In addition to 3 Chief Officers and 4 Company Officers, White Rock Fire Rescue has 7 firefighters trained and certified to NFPA 1021 Level 1 (Fire Officer 1). Each career firefighter certified to NFPA 1021 Level 1 has been considered an Acting Captain, with an additional 0.5 Officer Credit points towards this grade item.

7.8. Total Fire Force Available

Under this grading item, a fire department is measured in its ability to meet the staffing requirements as determined by the Basic Fire Flow benchmark from the Table of Effective Response. For the grading of this item there should be at least six competent career Firefighters available and assigned to respond with each required Pumper and Ladder Company.

For the purposes of Fire Insurance Grading, the maximum creditable number of career Firefighters per company is six (including officers). Therefore, the maximum credit that the White Rock Fire Rescue can receive for this grading item is 24 career Firefighters based on 3 engine companies and 1 ladder companies.

The total maximum creditable number of Firefighters is based on the number of companies (total concentration) and the maximum creditable number of career Firefighters per company (six) per shift (including officers), available continuously year round.

Credit for available fire force may be received based on the:

- minimum career Firefighters on duty,
- minimum regular vol. and off shift response of career Firefighters on 1st alarms,
- police officer/fire fighter and ambulance attendant/fire fighter,
- minimum automatic aid response,
- minimum mutual aid response, and
- minimum response of off-shift career Firefighters on multiple alarms.

Note that probationary Firefighters (incomplete training) and junior Firefighters (under age) are not credited due to lack of active fire ground duties.

Minimum Career Firefighters on Duty

The minimum number of career Firefighters on duty is determined by reviewing the fire departments records. Records are reviewed to determine the number of Firefighters on duty as during normal vacation periods less average details and sick leaves, but not the absolute minimum that may occur only one or two days a year. This includes career company officers and Firefighters. For Fire Insurance Grading, career Firefighters on duty are equal to one Fire Fighter Equivalent Unit (FFEU). White Rock Fire Rescue maintains a minimum on duty staffing of 4 career members during day and night shifts. Up staffing to 5 firefighters occurs through flex rotation, the fifth member is typically scheduled during day shifts. Total number of career firefighters on day and night shift have been reviewed over a typical 122 day cycle occurring in 2018. Percentage of hours with 4 firefighters have been calculated along with percentage of hours with 5 career firefighters on duty. White Rock Fire Rescue has additionally been credited for the typical 40 hour work week of the Chief and two Deputy Chiefs as on duty career fire fighters. As a result, White Rock Fire Rescue has been credited with 5.2 FFEU career firefighters on duty.

Minimum regular vol. and off shift response of career Firefighters on first alarms

Fire departments having off duty career members or auxiliary members responding on first alarms may receive credit. Typically three off duty or auxiliary members responding on first alarm are considered as one FFEU for

grading purposes. Consideration for credit is based on records being available indicating response statistics. If no records are kept of response, credit for FFEU is limited to one FFEU for each six off duty or auxiliary members claimed to respond. Auxiliary response records have been reviewed for structure fire calls from 2013 through 2017. A total of 200 auxiliary firefighters responded to 34 incidents for an average of 6 auxiliary members per fire call. Credit for auxiliary member response has been based off 22 total available auxiliary members, as well as an on-call duty chief, to equal 3.83 FFEU.

Police and Ambulance Personnel
Fire Departments may receive credit within the grading of this item for police and ambulance personnel responding and performing fire ground duties. The amount of credit depends upon the extent to which they are available and are used for response to fire alarms. Records of response and training are reviewed to determine that amount of credit that can be received. Each ambulance attendant/fire fighter or police officer/fire fighter on duty in a radio equipped vehicle and responding on first alarm equals 0.5 FFEU.

Automatic Aid
Fire departments that have formal contracts for automatic aid response may receive credit for the personnel responding for this grading item. For personnel to be credited for automatic aid the responding fire department should be within 8 km in road travel distance to built-up areas of the community or municipality. Each career fire fighter from the responding fire department may be credited as one FFEU and each volunteer fire fighter from the responding fire department may be credited as 0.33 FFEU.

Mutual Aid
Fire departments that have formal contracts for mutual aid response may receive some credit for the personnel responding for this grading item. For personnel to be credited for mutual aid the responding fire department should be within 25 km of travel distance to built-up areas of the community or municipality. Each career fire fighter from the responding fire department may be credited as one FFEU and each volunteer fire fighter from the responding fire department may be credited as 0.33 FFEU. As part of the Metro Vancouver Mutual Aid Agreement, maximum credit available for mutual aid has been reached, 8.17 FFEU have been credited towards Total Available Fire Force.

Off shift Response on Multiple Alarms
Fire departments that have formal agreements for career members to respond off shift on multiple alarms may receive credit for members responding within this grading item. Career members responding on multiple alarms are credited on the basis of four off duty career members being equal to one FFEU. White Rock Fire Rescue career members are on pagers and will be called back at discretion of duty chief or captain, depending on information available or upon arrival to scene. Career member call back records from 2013 through 2017 have been reviewed, an average of 7 career members attend a structure fire call in addition to 4 career members already on duty. Therefore, off shift career response has been credited 1.75 FFEU.

Recommendation 5: Increase fire fighter staffing

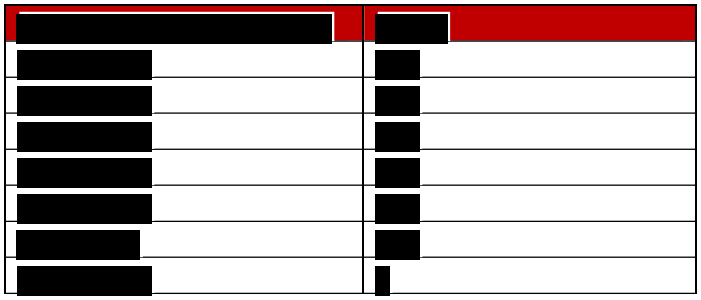
Within the Fire Insurance Grading the number of fire fighters is based on 6 members per company/apparatus, see section *7.9 – Engine and Ladder Company Unit Manning*. Increasing fire fighter staffing would increase credit under both this section of the Grading, section *7.8 – Total Fire Force Available* and section *7.9 – Engine and Ladder Company Unit Manning*.

7.9. Engine and Ladder Company Unit Manning

This grading item measures the company unit strength of on-duty paid personnel responding on in-service apparatus. A maximum manning of six can be credited for each in service engine and ladder company.

The number of members credited on-duty and on first alarm response determined from section 7.8 is used in the analysis of this grading item. The number of in-service engines and ladder apparatus is determined from sections 7.2 and 7.3.

[redacted]



[redacted]

7.10. Master and Special Stream Devices

This grading item considers the equipment Firefighters would use to be effective in combating large fires and fires in upper storeys or hard to reach locations. Equipment considered under this grading item are fixed and portable turrets, large spray nozzles, distributing nozzles, foam equipment, and elevated master stream devices.

[redacted]

7.11. Equipment for Engines and Ladder Apparatus, General

This grading item considers the general equipment for engine and ladder apparatus. Equipment includes, but is not limited to, rope, cutters, fire extinguishers, nozzles, first aid equipment, wrenches, generators, salvage tarps, etc.

Inventories have been developed by the fire department to keep track of equipment stored on its fire apparatus.

General Equipment for Engines and Ladder Apparatus
The inventories for each fire apparatus were briefly reviewed for Fire Insurance Grading purposes and found to be generally adequate.

Personal Protective Clothing and Equipment
White Rock Fire Rescue appears well equipped with Personal Protective Clothing (PPC) and Personal Protective Equipment (PPE). All of the fire department members have a set of PPC. PPC is checked in house and is well maintained on a yearly basis. Cleaning of turn out gear is completed in house with the exception of major contamination set of gear. A PPC washing machine is located at the fire hall.

SCBA refill station is also located at the fire hall in a separate contained room. White Rock Fire Rescue conducts regular inspections on their SCBA equipment.

Ground Ladders
White Rock Fire Rescue was reviewed for the number and length of ground ladders carried on fire apparatus. White Rock Fire Rescue has sufficient ground ladders for fire insurance grading purposes. Ground ladders are inspected and tested annually by a qualified third party, records have been provided from Rocky Mountain Phoenix.

[redacted]

7.12. Fire Hose

Fire hose used by the fire department should be distributed so that each engine company carries a minimum of at least 360 m (1,200 ft) of 65 mm (2 ½ in) (or larger), 180 m (600 ft) of 38 mm (1 ½ in), and 60 m (200 ft) of 25 mm (1 in) booster hose (or equivalent hose). A fire department should maintain a complete reload or spare hose at the Fire Hall. Maximum credit for this grading item is given if the fire department meets or exceeds the minimum hose totals. Larger hose may be credited in the place of smaller hose.

[redacted]

7.13. Condition of Fire Hose

This grading item reviews the condition and maintenance of the fire department's fire hose. Fire hose should be properly cared for. Fire hose failure on the fire ground can lead to injury or death of building occupants or to Firefighters, and result in unnecessary property damage. Suitable facilities should be provided for washing, drying, and storing of fire hose. Fire hose should be maintained in good condition and tested annually to at least 1,700 kPa (250 psi) pressure.

Testing Program and Age of Fire Hose
A portion of this grading item reviews the testing procedures and frequency of testing of the fire department fire hose. Fire hose should be maintained in accordance with NFPA 1962, *Standard for the Inspection, Care, and Use of Fire Hose, Couplings, and Nozzles and the Service Testing of Fire Hose,* recent edition.

White Rock Fire Rescue has an annual hose maintenance program. Testing is completed by crews. Records are entered in digital spreadsheets and also accounted for in the Fire House software.

Fire hose is currently replaced as needed based on annual maintenance/testing program and use in service.

Drying Facilities
Facilities and equipment for cleaning and drying of fire hose are reviewed in this portion of the grading item. There is a hose drying tower available for use at the fire hall.

[redacted]

7.14. Training and Qualifications

Fire Department training is commensurate with fire potential in the community or municipality which facilitates the effective handling of fires through provision of a competent force of personnel. The objective of this grading item is to measure qualifications of the members of the department through the results of the training programs, not simply the programs and facilities themselves. The training and qualifications grading item is separated into five areas for review.

Generally, facilities should be provided, sufficient in size and number and suitably equipped, for the proper instruction of all members. There should be a complete, uniform training program under the close supervision of a competent officer; the program should include the study and development of modern practices, including standard operational procedures. There should be a comprehensive schedule of regular classes and drills at the training facility and at fire Halls. Special classes for new members, officers, operators, and drivers should be held.

Quality of Basic Recruit Training
This portion of the grading item reviews the basic recruit training program used by the fire department including the probation period. Ideally a fire fighter should serve a probation period of up to one year in training status in which thorough training is provided in safe and efficient firefighting and the probationer is assessed in actual fire service performance.

Generally, training should produce, for most of the force, an all-round fire fighter/fire prevention inspector. This allows the firefighting force to complement the fire prevention staff in the total fire department objective. Recruit training should be separate from the routine drill program.

White Rock Fire Rescue has a fire force comprised of career as well as auxiliary fire fighters. In order to apply, auxiliary recruits must have a Grade 12 education, live within the City of White Rock (or 6.0km radius of fire hall), possess a valid Class 5 Driver's License, Police Clearance, passed the Candidate Physical Ability Test (CPAT) and medial test, able to regularly attend training and calls, and demonstrate a strong interest and commitment. In addition to the above noted qualifications, career recruit candidates must possess and maintain a valid Class 3 Driver's License, current Occupational First Aid or First Responder Level III certification, Firefighter Level II (NFPA 1001) certification from an IFSAC accredited institute, and should be able to demonstrate related work experience with additional education and training considered an asset.

Probationary period for a career recruit is twelve months in duration with ongoing practical and written assessments. Auxiliary recruits are placed in a six month probationary period. In order to advance from the probationary period, auxiliary recruits must pass a skills based assessment in conjunction with weekly skills review during scheduled training.

Quality of On-going Drills and Training

This portion of the grading reviews a fire departments on-going drill and training program. Generally, a fire department training program should include practice evolutions, classroom work, firefighting, prevention and other areas, all to be contained in a department manual; as well as inter-company and building familiarization exercises. This program should be under the supervision of an officer in charge with developing, coordinating and evaluating the results.

Training schedules for both career and auxiliary firefighter programs are created by the Deputy Chief. The career firefighter schedule is created annually and given to captains at the beginning of the year. It is the captain's determination when to cover each topic outlined in the schedule. Auxiliary/volunteer training schedule is provided a month in advance. The captain will set up drills and exercises to execute items outlined in the schedule.

All tracking of training and qualifications are entered in the FDM software. Captain's log training as completed to be reviewed and approved by the Deputy Chief. Hours are designated in career member's daily tasks for training. Auxiliary members cannot miss any training session in the first six months and must maintain a predetermined percentage of calls and weekly training session.

Qualifications of Officers

A portion of the grading item reviews the fire departments qualifications of line officers and promotion of its members. Within the Fire Insurance Grading, promotions should be carried out under a documented system providing job related criteria for each rank for internal and lateral entry. Written and oral examinations, in-service training, programs directed toward particular job positions, and evaluation by superiors as well as training ground tests should be used for the selection of candidates for fire suppression officer positions. Career, on-call and auxiliary members of the same fire department should be trained to identical qualification levels. (NFPA Standards for Professional Qualifications, 1001, 1002, 1021, 1031 and 1041 are indicative of good practice.)

White Rock Fire Rescue Officer Development Criteria system has been developed and put in place for promotion of the most qualified firefighter to Captain, as outlined within contract. In order to be promoted to a confirmed

Captain, the candidate or candidate(s) must first become an Acting Captain. In order to become an Acting Captain, the firefighter must certify to NFPA 1021 Fire Officer Level 1, and also successfully completed the following courses outlined in the Officer Development Program; Incident Command System Level 100 & 200, Emergency Scene Management I, Fire Service Administration I, Front Line Leadership in the Fire Service, Company Inspections, Fire Service Instructor I, Incident Safety Officer.

As a Confirmed Captain, the candidate will next need to certify to NFPA 1021 Fire Officer Level 2. The following additional course selection must also successfully be completed; Incident Command System Level 300, Emergency Scene Management II, Fire Service Administration II, Front Line Leadership in the Fire Service II, Fire Investigator I – Fire Cause and Origin, Strategies and Tactics, and Fire and Life Safety Educator I.

When a vacancy opens regarding the position of Captain, the senior most qualified Officer will be promoted to Captain. All promotions are subject to a six month probationary period, during which time the candidate must demonstrate they can perform all duties of the rank to the satisfaction of the Fire Chief. Seniority is a deciding factor in promotion to Captain with all other skills and training equal.

Qualification of Specialists

A portion of the grading item reviews the specialized training and qualifications of members of the fire department. Training and education of members of the department on the job or by outside resources should provide personnel with the abilities to perform their manual rescue firefighting, firefighting or specialist functions effectively in a manner commensurate with the size of the fire department and the fire potential of the community or municipality, including pump and ladder operators, mechanics, communications and any other fire suppression specialized personnel.

White Rock Fire Rescue has considerable career and auxiliary members trained in the areas of Hazmat Awareness, Hazmat Operations, Low to Steep Angle Rope Rescue, and Strategies & Tactics. When available White Rock Fire Rescue also sends firefighters to railway firefighting training and structural building assessment training.

Facilities for Training

Generally, facilities for drill and training should be readily available and include; necessary buildings or structures for ladder work; smoke and breathing apparatus training space; use of Pumpers and hose lines space; lecture space; and should be in keeping with the size of the fire department. Larger fire departments should have full training facilities capable of duplicating or simulating a variety of fire types and situations using real fires. Smaller departments may use provincial, regional or cooperative training facilities according to need, but in any case should provide for a broad range of realistic training exercises. Training facilities should always work towards meeting the needs of the potential fires.

White Rock Fire Rescue train at the firehall located at 15315 Pacific Avenue. In addition to common props the facility has a 4 storey tower, water pit, accessible hydrant, and standpipe. Adequate classroom and lecture space is available at this facility.

There is an agreement in place with a local tool yard to train on Auto Extrication, local ravine is utilized for low-angle and brush training, and bigger evolutions or large hose evolution training is completed at the city arena. Live fire training is most commonly completed at the Township of Langley Fire Department facility.

7.15. Response to Alarms

An adequate initial response of apparatus and personnel upon receipt of an alarm of fire is essential to provide for prompt control of what is generally an escalating emergency. This is required to be pre-arranged in nature as far as possible to ensure reliability. Efficient advance plans should be made for developing a maximum concentration of forces including reserve apparatus and outside assistance for the largest fires. Response should be commensurate with the hazard of the location responded to, with due consideration for the likelihood of other simultaneous fires. Minimum benchmark responses to fires are set out in Table 7 Initial Response to Alarms of Fire, which is based off the Table of Effective Response.

First Alarm Response to Commercial Districts
The Basic Fire Flow Benchmark of 2,800 IGPM (212 L/s) is used to determine the response on first alarm to commercial districts. From Table 7 Initial Response to Alarms of Fire the initial response is 2 Pumpers and 1 ladder (if required by hazards). White Rock Fire Rescue sends an initial response of 2 pumpers on first alarm. A ladder is generally sent on second alarm, unless information available at time of call indicates a ladder apparatus will be required.

First Alarms Response to Residential Districts
An average required fire flow for residential districts was determined and used for the first alarm response for residential districts. An average required fire flow of 800 IGPM (61 L/s) was determined. Again, from Table 7 Initial Response to Alarms of Fire, the initial response is 2 Pumpers. White Rock Fire Rescue sends this initial response to structure fire calls.

Suitable Pre-arranged responses (Running Cards)
When a fire department requires the response of more than three engine companies determined by the Basic Fire Flow Benchmark, pre-arranged responses (running cards) are reviewed.

Generally, running cards should set fourth assignments of specific companies to respond to locations throughout the community or municipality on first and succeeding alarms, even though specific assistance is frequently specified by the officer requesting it. Running cards should call for relocation of companies on second and any additional alarms may be necessary for the purpose of equalizing depleted coverage of the community or municipality during large fires.

White Rock Fire Rescue has developed pre-arranged responses to risks and emergency events within the municipality and is documented with the Surrey Fire Communication Centre.

Table 7 Initial Response to Alarms of Fire

Group	General Description Examples	Fire Flow		Response to First Alarm		Add for Severe Life Hazard: Engine, Ladder or Rescue Company, at Least
		L/min x 1000	Approx. Igpm range	Engine Companies	Ladder Companies	
1 (a)	Minor fires not in buildings, very small buildings, widely detached	1	200	1		
		2	400			
1 (b)	Scattered development (except wood covered roofs)	3	600	1		
2	Typical modern, 1-2 storey residential subdivision, 3-6 m (10-20 ft.) detached.	4-5	800 - 1,000	2		
3 (a)	Close 3-4 storey residential & row housing, small mercantile and industrial	6-13	1,200 - 2,800	2	1 (if required by hazards)	
3 (b)	Seriously exposed tenements. Institutional. Shopping Centres. Fairly large areas & fire loads, exposures.	14-19	3,000 - 4,200	2	1	1
4 (a)	Large combustible institutions, commercial buildings, multi-storey and with exposures.	20-27	4,400 - 6,000	2	1	1
4 (b)	High fire load warehouses and buildings like 4 (a).	28-35	6,200 - 7,600	3	1	1
5	Severe hazards in large area buildings usually with major exposures. Large congested frame districts.	36-46	7,800 - 10,000	3	2	1

Suitable Covering-in and 2nd Alarm Responses

When a fire department requires the response of more than three engine companies determined by the Basic Fire Flow Benchmark, the means of which a fire department has capacity to provide cover-in and 2nd alarm response is reviewed.

Second alarm typically includes response of Squad and Tower apparatus, as well as call back of off duty career fire fighters.

[redacted]

7.16. Fire Ground Operations

Within this portion of the grading item all phases of operations at fires are considered. The fire department is reviewed in its ability to operate effectively at fires both small and large in magnitude, including rescue work when necessary.

Good results at the fire scene depend on the use of effective and efficient fire methods and standard operating procedures, involving the laying of 65 mm (2 ½ inch) or larger hose lines, connecting pumpers to hydrants, connecting to and supplying sprinkler and standpipe systems in buildings and the efficient use of self-contained breathing apparatus (SCBA) and tools and other devices as may be called for by the conditions encountered.

Fire ground operations will also be influenced (favourably or unfavourably) by the adequacy of department manpower, sufficiency of pumper and Ladder Companies, quality of training and other factors.

White Rock Fire Rescue follows a regular training schedule to maintain the skills of its members to perform on the fire ground safely and effectively. White Rock Fire Rescue has established Standard Operating Guidelines (SOG).

Initial Available Fire Force Response to Commercial Districts
This portion of the grading item reviews staffing availability to provide initial response. The initial staffing response for White Rock Fire Rescue is adequate.

[redacted]

7.17. Special Protection Required

Some municipalities have particular fire hazards within areas they protect requiring specialized apparatus or equipment which should be provided either by the fire department, individual property owners, or both together. These hazards, including waterfront port and marina facilities, large petrochemical installations or brush and grass fire potentials should be provided for.

White Rock Fire Rescue has the following specialist equipment in place:

- Foam Capacity
- Brush and Grass Equipment

[redacted]

7.18. Miscellaneous Factors and Conditions

Records (For Effective Operations, Planning)
Suitable records of fires, fire operations, personnel, training, fire hose and other essential matters should be kept. Records should be maintained as they are essential to effective and responsible management of a fire department. Daily, monthly, and annual reports are useful management tools for the Fire Chief.

Generally, records of fires, training, tests, attendance and activities in the department should be developed to aid in planning future activity and policy as well as the assessment of performance. Good records of performance evaluations, work record and training should be maintained for each member.

Records related to training and personnel are maintained in a record management system/database. Apparatus maintenance and testing records are largely paper based. Pumper and ladder test records were both provided for review. Equipment inventories were provided. An annual report is also completed with performance measures derived from FDM Software.

Fire Halls (Suitability)
All Halls should be of substantial construction, suitable for the service, and located and arranged for ease and quickness of response. Proper safeguards against internal hazards should be provided. Construction of fire halls should be substantial, non-combustible, preferably fire resistive and protected from exposures, with internal and external hazards minimized. Halls should be equipped with adequate heating and lighting with consideration of the need to dry or thaw wet or frozen equipment and perform maintenance on apparatus. Fire halls should also be fully sprinklered to protect facility and expensive equipment, loss of any apparatus could render the service inoperable.

A summary of the Fire Hall is provided in APPENDIX C White Rock Fire Rescue Fire Hall Summary. Credit was given to the hall based on reasonable living, training, administrative, and storage space, as well as safety, security and redundancies in place.

Apparatus Refueling
Generally, fuel should be available in sufficient quantities at convenient points within the community or municipality. Suitable arrangements should be made for delivery of fuel to apparatus at fires of long duration. Fuel is available 24/7 for White Rock Fire Rescue.

Response Delays (Exceptional)
Every fire department may have delays in response for personnel or when on route to an emergency. The possibility of delays due to poor condition of roads, including inadequate snow removal and sanding, steep grades, vehicle parking, traffic, railroad crossing, and other similar features should be considered.

7.19. Pre-Incident Planning

Pre-incident planning is one of the most effective tools a fire department has in controlling or reducing the damage caused by fire, and identifying potential hazards or unsafe conditions at an emergency. Planning for fires in industrial and commercial occupancies increases the confidence and ability of the fire department in handling the fires and reduces the risk to the life safety of the Firefighters involved.

This grading item reviews the fire departments pre-incident planning program. Review of this grading item looks at the pre-incident plan inspection program, preparation of plans, quality of data, and the use of pre-incident plans in training.

White Rock Fire Rescue currently has 232 up to date pre-incident plans created for buildings in the City. White Rock Fire Rescue is working towards an available pre-incident plan for 100% of the city's inspectable building stock. There are approximately 805 inspectable properties within the City to create pre-incident plans in order to achieve 100% completion goal.

Fire suppression personnel create and review, every new preplan, as well as preform site familiarization tours. The city is divided into four zones, crews rotate through all four zones completing inspections and preplans to ensure all firefighters are familiar with building stock of the entire city. All pre-incident plans are available electronically using a web based model. When a preplan is updated, the updates will automatically appear in all devices capable of accessing the plans.

Fire Underwriters Survey has noted significant improvement to the Pre-Incident Planning Program developed by White Rock Fire Rescue since the previous assessment completed in 2009. White Rock Fire Rescue is encouraged to continue to develop pre-incident plans for all inspectable buildings except four family dwellings or smaller residential structures.

[redacted]

Recommendation 6: Continue to Review and Develop Pre-Incident Plans

Within the Classification Standard for Public Fire Protection, the pre-plan program should include familiarization visits and detailed pre-fire plans for every building except for dwellings or smaller residential structures, with an updating procedure. Pre-incident plan programs should be developed considering all areas of *NFPA 1620 – Standard for Pre-Incident Planning.*

Officers or Firefighters may be trained to develop pre-incidents plans and manage the overall program to ensure pre-incident plans are kept up to date. Personnel charged with the management of the pre-incident planning program may also be utilized to aid in the fire prevention inspections; however, training should be provided to ensure inspections are properly completed.

Fire inspection personnel review and update preplans during inspections. As such this grading item is tied to the number of inspections completed, see section 8.3.

Recommendations related to improving credit in this item are interrelated to scheduled inspections, see section 8.3.

7.20. Administration

Fire departments should be administrated and managed by qualified and progressive leadership with adequate authority to carry out its mandate. Adequate procedures should be established to govern the administration and operation of the organization. The fire department should be organized with appropriate staff for routine management and operational firefighting and emergency command.

White Rock Fire Rescue is organized with career administration and staffing to manage the operations of fire suppression, training, and fire prevention. The Department is well managed. White Rock Fire Rescue employs qualified individuals in the Fire Chief and two career Deputy Fire Chief positions. Adequate procedures are in place through standard operating guidelines and job descriptions.

8. PFPC - FIRE SAFETY CONTROL ASSESSMENT

8.1. Fire Safety Control Grading Items

The sections below cover the four grading items that pertain to Fire Safety Control. Twenty percent of the Public Fire Protection Classification for the City of White Rock comes from the grading of Fire Safety Control. Fire Safety Control has become an increasingly heavily weighted portion of the Fire Insurance Grading system.

A substantial degree of safety to life and protection of property from fire should be provided by provincial and municipal control of hazards. Control can be best accomplished by the adoption and enforcement of appropriate codes and standards for manufacture, storage, and use of hazardous materials and for building construction, as well as through training, advisory and education programs for the public.

This grading item reviews the general fire prevention, inspection and investigation activities of the fire department. Generally, the official in charge of fire prevention activities, in cooperation with the chief of the fire department, should establish an inspection procedure for correction of: obstructions to exits which interfere with emergency egress or with fire department operations; inadequate or defective automatic or other fire alarm/fire extinguishing equipment; or conditions in buildings or other structures which create a severe life hazard potential. Provisions should be made for the investigation of fires.

The fire prevention program should include visiting and inspection of dwellings on an occupant voluntary basis and the continuous education of the public. The fire department should maintain a highly visible profile in enforcement, education, training, and advisory services.

The recent publication of NFPA 1730 – Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations to the Public shows clear recognition of the importance and effectiveness of fire prevention programs. The document references the “Tri-Data” reports and largely follows the methods developed in other prevention proactive countries. From the Tri-Data report Global Concepts in Residential Fire Safety:

“Of all the best practices identified in this study, one stands out. To reduce fire causalities in the home, the British fire service is visiting large numbers of high-risk households to do fire safety inspections and risk reductions, especially to ensure they have a working smoke detector. This approach has required a major change in the culture and mission of the British fire service. It should be adapted for use in the United States. The approach is thought by the British to be a major factor in the 40 percent drop in fire deaths in the United Kingdom over the last 15 years, and it probably could have a large impact in the United States and other nations as well.”

While each community will have their own risks and reduction programs, prevention will be more and more viewed as a frontline service and not a support service.

8.2. Fire Prevention – General Program

Overview and Mandate
White Rock Fire Rescue currently executes Fire Prevention activities utilizing the Fire Chief, two Deputy Chiefs, and career suppression staff. One of the two Deputy Chiefs primary focus is centered on fire prevention efforts

A regular system of inspections is mandated for the City of White Rock in which all inspectable properties are targeted to be inspected on an annual basis. The current frequency of targeted inspections is summarized in Table 8 Inspection Frequency.

Table 8 Inspection Frequency

[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Dwelling Visits
White Rock Fire Rescue does not currently have a Dwelling Visit program in place. Firefighters will do a smoke alarm inspection while at a fire call and also on a request basis. White Rock Fire Rescue carries smoke alarms on engine apparatus and will install free of charge if crews deem appropriate.

Home Escape Plans are completed through public education activities at the local schools, informative material is also handed out to the public at various events.

Recommendation 7: Develop programs targeted at dwellings

White Rock Fire Rescue should develop a dwelling inspection program. Within the Fire Insurance Grading the purpose of home inspections by in-service fire personnel, or others, is to make residents more fire conscious, point out the seriousness or any hazards noted, and stress the importance of special programs or other self-help procedures, such as exit drills. Dwelling visits should be targeted based on the completion of frequently updated risk assessments.

Target Hazard Priority Program
All inspectable properties within the City of White Rock fall into a cycle to be inspected annually. Currently, there is not a Target Hazard Priority Program in place to identify properties of the greatest risk. However, a property may be moved up in the inspection cycle if an incident has occurred, or on a request/complaint basis.

White Rock Fire Rescue has implemented a bylaw (*Bylaw #1683*) requiring an approved sprinkler system in all construction of new buildings. Approved sprinkler systems are also required to service an entire building if renovation or addition to any building whereby the gross floor area will be increased by more than 25%.

Concerning target hazard priority programming of public education programs, the Fire Prevention Division delivers various programs.

Recommendation 8: Continue to develop and expand target hazard priority programs

White Rock Fire Rescue should develop and expand on targeted hazard programs. This should ideally be expanded into public education programming and effectiveness tracking.

Cooperation with Building Department

White Rock Fire Rescue has a strong working relationship with the Building Department. The City Building Inspector will complete a preliminary review of all plans. White Rock Fire Rescue is sent plans from the Building Department to review anything fire protection related. In addition, the fire department will be involved from the start on any complex buildings. Fire Chief and Deputy Fire Chiefs have completed Fire Plan Review training. The Fire Chief also sits on the City's Advisory Panel and is involved from the onset of the proposal stage.

Public Education

There is no dedicated public education position at this time. The following programs are delivered by the Fire Chief, Deputy Fire Chiefs, and Suppression Staff. The following is a highlight of ongoing public education activities completed by White Rock Fire Rescue:

- Fire Prevention Week
- Fire Hall Tours
- Fire Extinguisher Training
- Fire Safety Education
- Fire Safety Presentations
- High Rise Action Plan
- Juvenile Fire Setter Program
- Kids Zone
- Seniors Program
- Community Safety Fair
- Fire Drills
- Active social media messaging

Public education data tracking has been implemented and currently captures events completed and number of participants in various age groups. Throughout 2017 White Rock Fire Rescue participated in 26 public education events reaching a total of 359 children and 325 adults. Furthermore, 8 Fire Life Safety/Emergency Preparedness Lectures were provided by the fire department.

Recommendation 9: Provide a designated Public Educator Position

White Rock Fire Rescue should consider additional resources in order to administer public education programs within the City. Personal engaged in public education activities should be trained to *NFPA 1035 – Standard on Fire and Life Safety Educator, Public Information Officer, Youth Firesetter Intervention Specialist, and Youth Firesetter Program Manager Professional Qualifications* levels.

Qualifications

Firefighters are trained to complete crew inspections through the Company Inspection course offered at the Justice Institute of British Columbia.

Additionally the Fire Chief and Deputy Chiefs have NFPA – Certified Fire Plan Examiner Certification. There are no members on the Fire Department trained to *NFPA 1031 – Standard for Professional Qualifications for Fire Inspector and Plan Examiner*.

Recommendation 10: Certain Inspectors should be Trained to NFPA 1031

White Rock Fire Rescue Inspectors who complete anything other than basic routine inspections should be qualified to *NFPA 1031 – Standard for Professional Qualifications for Fire Inspector and Plan Examiner* levels.

[redacted]

Call Data

Call data from 2013 through 2017 was reviewed. “Fire” type calls are comparatively low for the City of White Rock with Structure Fire - Commercial having the highest volume of “Fire” type calls for 2015, 2016, and 2017, see Figure 12. MESA has the highest volume for all call data for all years 2013-2017. The data is summarized in Figure 12 All Call Summary 2013 - 2017. “Fire” type calls alone are summarized in Figure 13 Fire Call Summary 2013 - 2017 and Table 9 Fire Call Summaries. It can be seen from Table 9 Fire Call Summaries that Structure Fire - Commercial and Structure Fire - Residential make up 56% of all fire calls for 2013 through 2017, and 54% of fire calls in 2017. Between 2016 and 2017 there is an increase in Commercial Structure Fires by 29%, however a decrease during the same time frame in Residential Structure Fires by 15%. The largest increase from 2016 to 2017 has been Hydro Pole Fires (200%), followed by Commercial Structure Fires (29%), with the only other fire call increases attributed to Vehicle Fires (25%).

Figure 12 All Call Summary 2013 - 2017

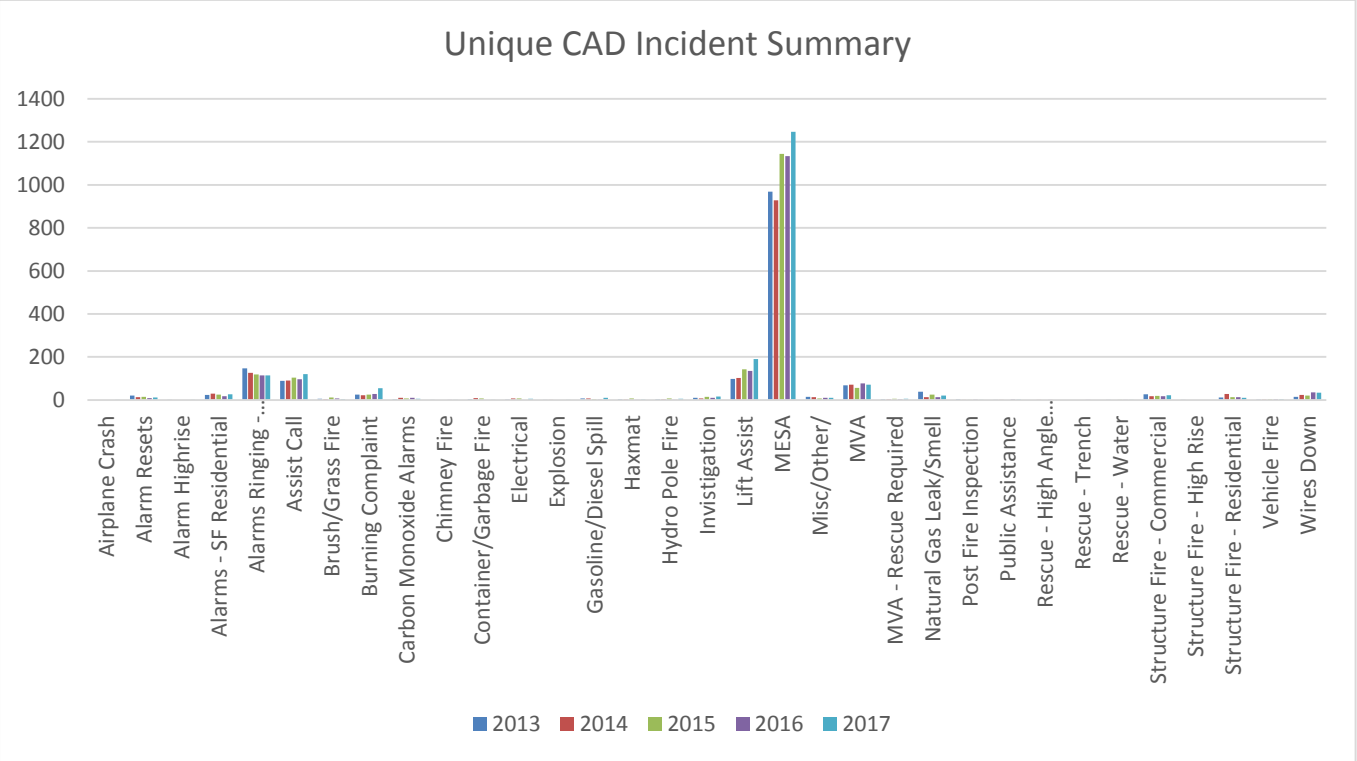


Figure 13 Fire Call Summary 2013 - 2017

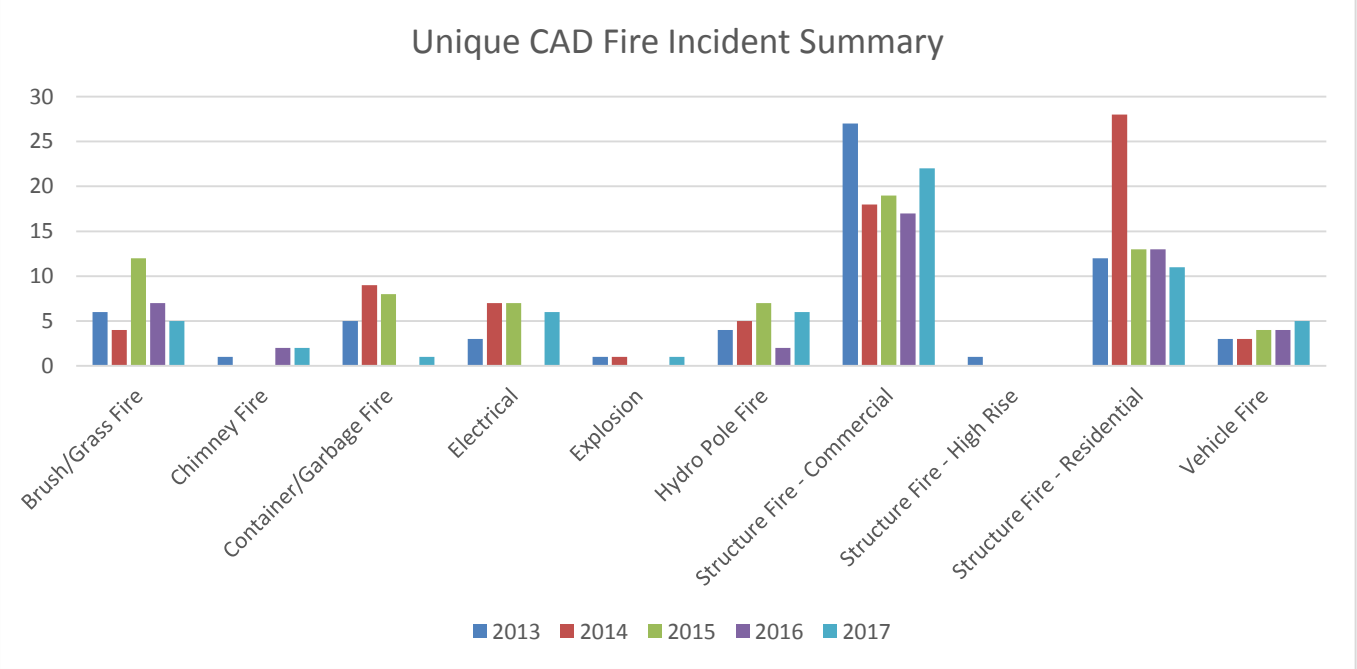
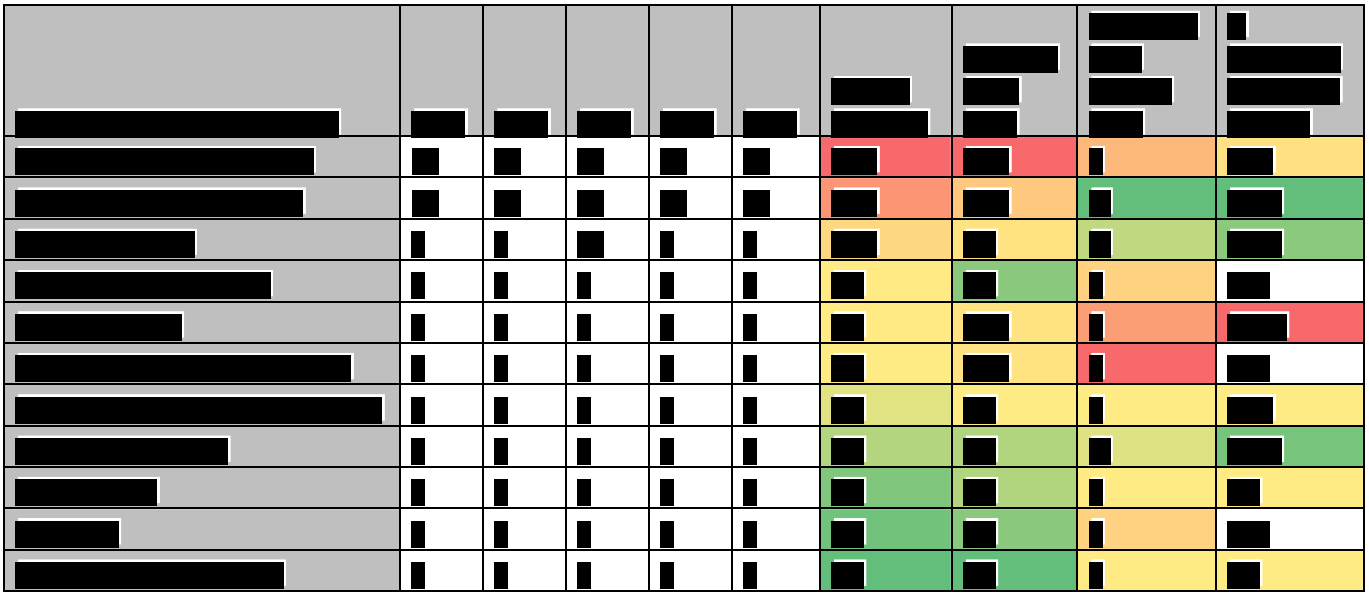


Table 9 Fire Call Summaries



8.3. Fire Safety Laws and Enforcement

This grading item reviews the fire safety laws in use and the enforcement of those laws within a community or municipality. Adequate laws or ordinances should be enacted to properly regulate the manufacture, storage, transportation and use of hazardous liquids, gases, and other combustible materials, including the handling of combustible waste, and to properly control building construction and electrical, heating, and ventilating installations. The National Fire and Building Codes of Canada and the Canadian Electrical Codes are accepted as the minimum standard regulation.

Generally, for enforcement purposes, inspections shall be made by personnel having specialized knowledge of special hazards by fire company members. Inspections should be made as frequently as may be necessary for the proper enforcement of fire prevention regulations.

Proper records of permits (licenses if required by local regulation), inspections, violations and their correction, and of all other important matters should be kept and analyzed.

The BC Fire Code is used in the City of White Rock and enforced through the City of White Rock Fire Prevention staff. Discussions White Rock Fire Rescue indicated that additional residential high rise structures are intended increase the inspectable property list. Otherwise, the City of White Rock is largely built out with little available room for development. Therefore, the number of annual inspections in not expected to increase greatly.

Of the approximate 805 inspectable property inspection target, it has been noted that 640 inspections took place in 2015, 560 inspections in 2016, and 659 inspections in 2017. As previously noted in section 7.19, the number of incomplete inspections has a cascading effect on the credit given to pre-incident plans.

[redacted]

Recommendation 11: Meet frequency of inspections

White Rock Fire Rescue should aim to complete all inspections based on the frequency list in NFPA 1730, at a minimum. Pre-Incident Plans should be created and/or updated simultaneously with inspections.

8.4. Building Construction Laws and Enforcement

This grading item reviews the building construction laws in use and the enforcement of those laws within a community or municipality. An adequate building construction code and enforcement program should be provided in the municipality, using a code equal to or better than the National Building Code of Canada.

The BC Building Code is used in the City of White Rock and enforced by the City. Automatic fire protection sprinklers are additionally installed as per the adopted bylaw *(Bylaw #1683)*.

Sprinkler protection (when designed and installed in accordance with *NFPA 13: Standard for the Installation of Sprinkler Systems* and maintained in accordance with *NFPA 25: Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*) is widely accepted as one of the most effective methods of reducing fire risk in buildings and communities. Statistically properly designed, installed and maintained sprinkler systems have been shown to reduce fire losses significantly and reduce the number of lives lost to fire.

[redacted]

8.5. Electrical Code and Inspections

This grading item reviews the extent of electrical code inspections and enforcement. An electrical code should be applicable and equivalent to the Canadian Electrical Code and be enforced by an inspection and permits program.

The BC Safety Authority is mandated to oversee the safe installation and operation of technical systems and equipment.

[redacted]

9. PFPC - FIRE SERVICE COMMUNICATIONS ASSESSMENT

9.1. Fire Service Communications Grading Items

The sections below cover the seven grading items that pertain to Fire Service Communications. Ten percent of the Public Fire Protection Classification of the City of White Rock comes from the grading of Fire Service Communications.

9.2. Communication Center

This grading item reviews the facility used for emergency communications. Equipment for the receipt and transmission of alarms should be housed securely and be protected against fire or damage from other sources, including flooding, vandalism, and earthquakes. Emergency communication centers should be of non-combustible construction with one to three hour protection from exposures depending on complexity of the installation. Most importantly, there should be protection from ignition sources and rapid initial fire spread through control of such sources as flammable furnishings and building finish materials.

The Public Safety Answering Point is E-Comm 911. This facility was visited in 2013 and no issues were noted considering NFPA 1221. E-Comm 911 transfers the call to Surrey Dispatch which was visited during this review and again no issues were noted. The RCMP in Surrey are used as an alternate dispatch facility. The Surrey Dispatch center is located in Surrey Fire Hall 1 at 8767 132 Street. Access within the facility is controlled by pass card entry. Additional security features include ballistic glass.

Exposure Hazards
The communications center and equipment rooms have been reasonably designed to be protected from fires, floods, storms, crime and other possible perils. Hazards from external exposures are considered to be minimal due to zoning, building location and no existing neighbouring structures.

Power
The primary power source is from the commercial utility distribution system. The secondary power source is a diesel powered back-up generator. There are 2 generators in place. The facility is also capable of connecting to a portable generator. In the event of a power failure, stand-alone UPS power maintains operations at each dispatcher console until the generator transfer occurs to maintain building operations under full load conditions.

9.3. Means for Transmitting Alarm by Public

This grading item reviews the means for transmitting alarm by the public. There should be reliable and convenient means for the public to communicate alarms of fire to the fire department, by public telephone or alternative means.

There are reliable and convenient means for the public to communicate alarms of fire to the fire department. Enhanced 911 Phase 2 cellular services are available in the City and integrated into emergency dispatch services.

[redacted]

9.4. Fire Department Telephone Service (Incoming from Public)

This grading item considers the means for the public to contact the fire department. There should be reliable and convenient means for the public to communicate alarms of fire to the fire department, by public telephone or alternative means.

This grading item reviews how the public contacts the emergency response agency. This is usually done by a published fire emergency number or 9-1-1.

The number of fire line available for receiving communication centre has been reviewed. The Surrey Fire Communication Centre has an adequate number of dedicated fire lines and business lines for the population it services for fire insurance grade purposes.

[redacted]

9.5. Means of Alarm Dispatch

This grading item considers the point of receipt of fire alarms from the public. It is necessary to have reliable and prompt notification of Firefighters to respond. The use of both audible and visual means is considered essential in larger fire departments having more frequent fire calls.

Sufficiency of circuits or radio frequencies for the transmission of alarms to fire Halls shall be provided as required by NFPA 1221, Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems. Alarm-receiving equipment in fire Halls, and elsewhere as may be required, shall be provided and served as specified in NFPA 1221.

The Public Safety Answering Point (PSAP) is managed and operated by E-Comm 911. E-Comm 911 transfers call information and the caller to the Surrey Dispatch facility. The dispatcher codes the event for Fire Dispatch and sends

the call through inter-computer aided dispatch (CAD) seamlessly. All necessary information related to the emergency will arrive on the Fire Dispatchers console with a proposal provided by computer aided dispatch (CAD). Once the appropriate response is determined, the resources needed are dispatched, verbal confirmation over the radio is provided to dispatchers by responding crews to inform them that they have begun their response.

Call answering and processing times are regularly monitored for general conformance with the NFPA 1221 standard.

[redacted]

9.6. Dispatching Service

This grading item considers the dispatching services in use. Telephone alarms should be received at a point where a competent operator or Firefighter assigned to duty is available to promptly receive and process emergency calls at all times.

Generally, operators should be familiar with the facilities provided and adequate in number for handling all alarms as required by the *NFPA 1221* and *NFPA 1061*, *Standard for Public Safety Telecommunications Personnel Professional Qualifications*. The handling of all calls, including those related to fire and other emergencies shall be considered in determining the number of operators to be on duty.

The Surrey Dispatch facility has 4 dispatchers on duty between the hours of 6am – 8pm, and 3 on duty from 8pm – 6am. There is also a supervisor on shift. Dispatchers follow a well-defined in-house training program which includes ongoing skills maintenance. All calls are tracked against *NFPA 1221* processing times with results ranging from 95% to 100% of calls meeting defined measurements.

[redacted]

9.7. Operations Radio

This grading item considers the means of the emergency communication center to stay in contact with fire Halls, apparatus, and personnel during emergency events. Telecommunicators should be able to maintain radio communications, using established procedures, with fire companies and essential personnel away from their quarters, in order to permit more effective and efficient operations, including the recall or re-assignment of companies, passing reports from and between units on the fire ground and contact with units on in-service inspection activity and training.

Generally, hand portable radios should be provided for all operational Chief and Company Officers on duty. The housing of base Hall equipment should be reliable and facilities preferably duplicated as to transmitter, wire circuits or radio relays. A duplicate transmitter and auxiliary power supply should be provided in fire departments having frequent fire calls.

The City of White Rock utilizes permanently mounted and portable radio equipment to receive emergency information and communicate between personnel on the fire ground during an emergency situation. The fire department possesses a sufficient amount of portable radios. A base radio station is provided at the fire station. Back-up power is available for the fire station's base radio and radios.

[redacted]

9.8. Miscellaneous Factors

This grading item considers any factors or conditions, not covered elsewhere, that may adversely affect the receipt and transmission of fire alarms or related emergency calls. These could include, but are not limited to: incompetent or insufficient supervisory and maintenance personnel; insufficient size or physical arrangement of the communication center such that efficiency of fire alarm operators is decreased; unsuitable location of these operators; improper use of or inadequate testing of existing equipment; inadequate records; inadequate maintenance; possible delays to the handling of non-emergency calls; handling of alarms prior to receipt by the fire alarm operators and other undesirable operating procedures.

[redacted].

10. WATER SUPPLY ASSESSMENT

10.1. Overview of Water Supply System

Details concerning the water systems in White Rock were provided by the Manager of Utilities, Engineering and Municipal Operations.

The City of White Rock operates its own water distribution system. There are three existing reservoirs in the City of White Rock's water system, two in the High-Pressure Zone; The Oxford Reservoir and the Merklin Reservoir, and one in the Low-Pressure Zone; the Roper Reservoir. Water is provided to the Oxford and Merklin Reservoirs through multiple wells and water is provided to the Roper Reservoir from the High-Pressure Zone via two PRV stations and one Control Valve Station. Water in the City of White Rock system is untreated.

The City of White Rock distribution system consists of 2 pressure zones. An overview map of the system is provided in Figure 14 City of White Rock Water System Overview.

10.2. Water Supply Grading Items

The sections below cover the 15 grading items that pertain to the Water Supply. Thirty percent of the Public Fire Protection Classification of the City of White Rock comes from the grading of the Water Supply.

An adequate and reliable water supply is an essential part of the firefighting facilities of a community or municipality. A water supply is considered to be adequate if it can deliver the Basic Fire Flow for the appropriate duration while simultaneously providing domestic water supply at the max day demand; if this delivery is possible under certain emergency or unusual conditions, the water supply is also considered to be reliable.

In most municipalities, due to structural conditions in some areas, the possibility exists that a combination of unfavorable factors, such as the delayed receipt of an alarm of fire, high winds, or an explosion, will result in a fire becoming large enough to tax the ability of the fire service to confine the fire using the normally available water supply.

If, at the same time, the water supply is lacking or is considerably curtailed due to the failure of essential equipment (reliability); any fire, even if relatively small upon the arrival of the fire department, could rapidly expand and extend to adjoining buildings, becoming a conflagration.

In order to provide reliability, duplication of some or all parts of a water supply system is important, the need for duplication being dependent upon the extent to which the various parts may reasonably be expected to be out of service as a result of maintenance and repair work, emergencies, or some unusual condition. The introduction of storage, either as part of the supply works or on the distribution system, may partially or completely offset the need for duplicating various parts of the system; the value of the storage depends upon its amount, location and availability.

Gravity Systems and Pumping Systems
Gravity systems delivering supply from the source directly to the community or municipality without the use of pumps is advantageous from a fire protection standpoint because of its reliability, but the reliability of a pumping

system can be developed to such a high degree through redundancies and back-up power supplies that no distinction is made between the two types.

Storage
In general, storage reduces the requirements of those parts of the system through which supply has already passed. Since storage usually fluctuates, the total normal daily minimum maintained or 80 percent of capacity is the amount that is considered as available.

Pump Capacities
As part of the grading analysis of pumps for Fire Insurance Grading the capacities of pumps are de-rated by 25 percent to factor in age and reliability.

White Rock, BC

Figure 14 - Water System Overview

Scale = 1:4,500 0 100 200 Meters

Fire Underwriters Survey

10.3. Normal Adequacy of Supply Works

The first grading item of the water system considers the ability of the supply works to deliver water at a rate equal to the maximum day demand plus the Basic Fire Flow rate for the time duration specified in Appendix B – Water Supply for Public Fire Protection under normal conditions. Credit may be given for the permissible overload rate of delivery from a filtration plant. If the supply works, alone or in conjunction with storage, can deliver the needed quantities to the distribution system, maximum credit will be received for this grading item.

The City of White Rock was divided into two pressure zones for this assessment and a weighted average was used for the final grading.

High-Pressure Zone
The high zone is a pump-based system consisting of seven wells which feed into two reservoirs (Oxford Reservoir and Merklin Reservoir) which feed the respective pump houses (Oxford and Merklin). Wells 1,2,3 and 8 feed into the Oxford Reservoir, Well 4 directly feeds into the High Zone and Wells 7 and 6 feed into the Merklin Reservoir. The Oxford Booster station consists of four booster pumps with a capacity of 1042 IGPM each, the Merklin Booster station consists of two booster pumps at 1042 IGPM each and two Fire Pumps at 2084 IGPM each.

Reservoir	Capacity (Imperial Gallons)
Oxford	429,000
Merklin	662,000

Well Combination	Capacity (IGPM)
1,2,3,8	1379.2
4	263.96
6,7	686.3

Low-Pressure Zone
The Low Zone is fed via three 150mm connections from the High Zone along with the Roper Reservoir (251,000 IG). There are three PRV stations to control the water coming from the High Zone to the Low Zone; the Johnston PRV Station, Roper Control Valve Station and the Stevens PRV Station. Based on the FUS Technical Manual, a flow of 734 IGPM was considered with each PRV connection.

[redacted]

10.4. Reliability of Sources of Supply

This grading item considers the effect on adequacy of the source of supply. Factors considered for adequacy may include the frequency, severity, and duration of droughts; physical condition of dams and intakes; danger from earthquakes, floods, forest fires, and ice dams or other ice formations; silting-up or shifting of channels; possibility of accidental contamination on the watershed; absence of watchmen where needed; and injury by physical means.

This item considers the miscellaneous factors in the source of supply, especially those due to natural causes that could result in partial or complete interruption of the delivery.

As the aquifer is confined, no deficiency is found in this section of the grading.

[redacted]

10.5. Reliability of Pumping Capacity

The ability of the water supply system to maintain the maximum day demand concurrently with the Basic Fire Flow with one and two pumps out of service is considered under this grading item. The pumps considered out of service are those which would cause a maximum reduction in service delivery to the system. To receive maximum credit, the remaining system capacity in conjunction with available storage, should be able to provide the Basic Fire Flow for the specified duration of the design fire at any time during a period of five days concurrently with consumption at the maximum day demand.

For this grading item a single failure and dual point failure analysis is conducted for the pumps considered as having the greatest impact being out of service. It should be noted that this Grading Item looks at higher levels of redundancy in a water system which may be above and beyond those typically provided. It can be common to not receive full credit in this area of the Grading. The Fire Underwriters Survey is currently reviewing changes to the rating schedule methodology which may not include such levels of redundancy analysis in the future.

High-Pressure Zone
Max Day Demand for 5 days is compared to the sum of the reservoir storage and refill rate of the reservoirs with a well being out-of-service for the full 5 days. In this case there is a shortfall of water by day 5. In other words, the total MDD for the 5 days is larger than the total available water, remembering that pumps are de-rated by 75% and reservoir storage is always de-rated to 80%. Again, it should be noted that changes to the Fire Underwriters Survey methodology may make this area of the Grading redundant in the future.

Low-Pressure Zone
There are no pumps in the low pressure zone.

[redacted]

10.6. Reliability of Power Supply

The ability of the system to maintain the maximum day demand concurrently with the Basic Fire Flow for the specified duration at any time when considering power interruption that may affect internal or external lines or devices is considered under this grading item.

Electric power supply should be so arranged that a failure in any power line or the repair or replacement of a transformer, switch, control unit, or other device will not prevent the delivery, in conjunction with available storage, of the Basic Fire Flow for the specified duration of the design fire.

Two situations are considered for the reliability of power supply, one with an internal line or device affected, and the second a full grid outage. No deficiency found when internal lines are affected as there are back-up generators are available. Minimum deficiency is observed when a whole pump house is taken out of service. Majority of credit is received for this item.

[redacted]

10.7. Reliability, Condition, Arrangement, Operation, and Maintenance of System Components

This grading item considers the condition of all necessary equipment that is not evaluated in other items which can also include pumps. This evaluation includes equipment such as pressure regulating valves or altitude valves that may be in the distribution system. The capability of personnel to operate the equipment credited under both normal operation and emergency conditions is also considered.

Monitoring of Water System Components
Key components of the City of White Rock Water System are monitored by a SCADA system accompanied with mandated well and pump station visits.

[redacted]

10.8. Fire Flow Delivery by Mains

This item is concerned with the rate of delivery of water from hydrants for use in combating fires. Typically, credit is calculated by comparing the Required Fire Flows to Available Fire Flows as determined through actual flow tests conducted in accordance with the procedure specified in NFPA 291, *Recommended Practice for Fire Flow Testing and Marking of Hydrants, recent Edition*. Available fire flows are calculated through interpolation of data to determine the capacity of the water system when flows bring the residual pressure in the system to 20 psi, which is the minimum pressure that is required within the system for firefighting. It should be noted that FUS makes an assumption that the theoretical value calculated at 20 psi is the available flow, i.e. the system can be drawn down to 20 psi. In areas of the system it may not be possible to draw the pressure down to 20 psi. Additionally, more accurate results on theoretical flows are achieved with a 25 percent drop in pressure at the static (gauge) hydrant during flow testing.

Flow test results may be influenced by various factors that may positively or negatively influence the result such as seasonal fluctuations in demand and time of day demand. For this reason, it is important to regularly test and monitor water supplies to ensure adequate fire flows can be provided when compared to the Required Fire Flows.

It is important to note that although in some cases Available Fire Flows may be adequate; if hydrant distribution is inadequate it may not be possible to deliver the water at the fire flow rate that is available. Adequate distribution of hydrants is important, particularly when dealing with larger flows. Hydrant distribution is analyzed in section 10.13.

Flow test data was gathered from the water model data provided in Figure 7-5 in the City of White Rock Water System Master Plan 2017.

[redacted]

10.9. Reliability of Principal Mains

This grading item reviews any and all pipe lines, aqueducts, tunnels, or conduits upon which service is dependent. This includes intakes, suction or gravity lines to pumping Halls, flow lines from reservoirs, treatment plant piping, force mains, supply and arterial mains, etc.

In this grading item the ability of the supply works or main arteries in the distribution system to deliver the maximum day demand plus the Basic Fire Flow with the most critical length of main shut off due to a break in the pipe, was analyzed. The time duration used in this item is three (3) days which should normally be sufficient to locate the break, isolate it, excavate to the main, make the necessary repairs, sterilize the main, verify the sanitary condition of the main and return the main to service.

Depending on the complexity of the supply works and distribution, the reliability of principal mains may be analyzed for a single main break or several main breaks across the water system. The mains that are analyzed are typically chosen on the basis of causing the most reduction in service.

[redacted]

High-Pressure Zone
The main from the Merklin Reservoir was considered out-of-service along with the main from the Oxford Reservoir. The ability of the system to provide max day demand and fire flow for the specified duration is then considered.

Low-Pressure Zone
The main from the Roper reservoir to the distribution was considered out-of-service along with the two 150mm mains. Again, the ability of the system to provide max day demand and fire flow for the specified duration is then considered.

10.10. Installation of Pipes

The Installation of Pipes grading item reviews the installation of mains throughout the water distribution system. The type of water main used, the provision of proper main appurtenances and the manner of installation is evaluated.

Mains should be in good condition and properly installed. Water mains should be suitable for the service intended. Asbestos-cement, Poly-vinyl chloride (PVC), cast and ductile iron, reinforced concrete and steel pipe manufactured in accordance with appropriate Canadian Standards Association or ANSI/AWWA standards, or any pipes listed by Underwriters' Laboratories of Canada for fire service are considered satisfactory. Normally, water mains rated for a maximum working pressure of 1,000 kPa is required. Service records, including the frequency and nature of leaks, breaks, joint separations, other failures and repairs, and general conditions should be considered as indicators of reliability.

The water mains in the distribution varies with age and construction. As the water system continues to age water mains should be continually reviewed for reliability and replacement.

[redacted]

10.11. Arrangement of Distribution System

The reliability of the arrangement of the mains in the distribution system is reviewed under this grading item. The supply mains, arteries, and secondary feeders should extend throughout the system, should be properly spaced, and looped for mutual support and reliability of service; dependence of relatively large areas upon single mains may constitute a reduction in credit.

This grading item is intended to review the amount of the community that is not serviced by arterial mains and arterial main looping. Also the overall distribution grid is reviewed for dead end mains and the amount of mains that are smaller than 150 mm (6 in).

Approximately 10% percent of the total length of mains are less than 150 mm (6 in) referencing Figure 7-2 in 2017 City of White Rock Water System Master Plan. Approximately 10% of the community is not serviced by arterial mains and non-looping arterial mains.

[redacted]

10.12. Additional Factors and Conditions Relating to Supply and Distribution

Water Supply grading items 1, 3, 4, 5, and 7 consider the adequacy and the reliability of the supply facility to deliver the maximum day demand concurrently with the Basic Fire Flow. This grading item evaluates, for the same

items, the ability of the supply facilities to deliver the maximum day demand concurrently with the peak Required Fire Flow value obtained from the risk assessment. It also covers any factors or conditions that will occasionally reduce the fire protection credited in the other items. Additional factors that are considered when analyzing the distribution system include built on areas that are not served, localized weakness, and service levels that are not considered.

There was a deficiency found in certain areas where hydrant flows are low, specifically in the western area of the city.

[redacted]

10.13. Distribution of Hydrants

There should be sufficient hydrants to allow the required rate of flow to be delivered to fire department engines and these hydrants should be well spaced in order to keep the length of fire department hose lines short. This grading item compares the existing hydrant spacing with the hydrant spacing needed for the various districts within a community or municipality. Hydrant distribution was determined using the Standard Hydrant Distribution table listed in Appendix B, FUS – 1999 Water Supply for Public Fire Protection.

To determine the average area served by each hydrant, representative districts are selected based on being primarily commercial or primarily residential. As part of the analysis for hydrant distribution three items are used in determining the distribution of hydrants:

- Representative areas are determined by the total area in square metres. Fire hydrants within the representative area are counted.
- All Required Fire Flows are averaged for the area.
- The average area per hydrant is compared against that listed in FUS – 1999 Water Supply for Public Fire Protection.

[redacted]

2 predominantly commercial areas and 2 predominantly residential areas were sampled in the City and no deficient areas were found.

10.14. Fire Hydrants – Size, Type, and Installation

Fire hydrants should conform to American Water Works Standard for Dry Barrel Fire Hydrants or Underwriters' Laboratories of Canada listing. Hydrants should have at least two 65 mm outlets. Where Required Fire Flows exceed 1,100 IGPM (5,000 LPM) or pressures are low there should also be a large Pumper outlet. The lateral street connection should not be less than 150 mm (6 in) in diameter. Hose threads, operating and cap nuts on outlets

should conform to Provincial Standard dimensions. A valve should be provided on lateral connections between hydrants and street mains.

Fire hydrants that open in a direction opposite to that of the majority are considered unsatisfactory. Flush hydrants are considered undesirable because of delay in getting into operation; this delay is more serious in areas subject to heavy snow storms. Cisterns are considered unsatisfactory as an alternative to pressure hydrants.

There are approximately 344 hydrants on the City of White Rock Water System. All hydrants were observed to have 2 x 65mm ports and 1 x 100mm port via Google Earth.

[redacted]

10.15. Fire Hydrants – Condition and Inspection

For fire hydrants to be useful in combating fires, hydrants must be in good operating condition. This grading item considers the condition and inspection of hydrants.

Hydrants should ideally be inspected at least semi-annually and after use. The inspection should include operation at least once a year. Where freezing temperatures occur, the semi-annual inspections should be made in the spring and fall of each year. Hydrants should be kept in good condition and suitable records of inspections and repairs be maintained. Fire hydrants should be painted in highly visible colours so that they are conspicuous and be situated with outlets at least twelve inches above the grade. There should be no obstruction that could interfere with their operation. Snow should be cleared promptly after storms and ice and snow accumulations are removed as necessary.

Inspections are necessary to ensure that all hydrants in a community or municipality are in good condition.

Frequency of Inspection
Hydrants are inspected annually. Each hydrant undergoes a complete breakdown ever two years, each valve is also exercised every two years. Hydrants are flushed two times annually.

Condition
A tour of the City showed that hydrants appeared to be in good condition. Colour-coding is not completed as per the colour-coding system of *NFPA 291*. Fire flow data was taken from the water model provided in the 2017 Water System Master Plan Update along with hydrants that do not meet model flows via Table 6-4. Minimal deficiency was given in the case of snow clearance in steep areas.

[redacted]

Recommendation 12: Colour-coding system for hydrants

The Utilities Department and the Fire Department should explore the possibility of colour coding hydrants as per *NFPA 291 - Recommended Practice for Fire Flow Testing and Marking of Hydrants*.

10.16. Other Conditions Affecting Adequacy and Reliability

This grading item covers pertinent factors or conditions not considered in other grading items. Specifically this grading item reviews:

- plans and records of the water system
- emergency provisions, and
- construction and hazards of buildings.

Plans and Records

Complete, up-to-date plans and records essential for the proper operation and maintenance of the system should be available in a convenient form, suitably indexed and safely filed. These should include plans of the source as well as records of its yield and a reliable estimate of the safe yield; plans of the supply works including dams, intakes, wells, pipelines, treatment plants, pumping Halls, storage reservoirs and tanks; and a map of the distribution system showing mains, valves, and hydrants.

Detailed distribution system plans, in a form suitable for field use, should be available for maintenance crews. Records of consumption, pressures, storage levels, pipes, valves, hydrants, and the operations of the supply works and distribution system, including valve and hydrant inspections and repairs should be maintained.

The system is well mapped and GIS data for the system is readily available. Details of the system were readily available for review. Flows were based on the water system model provided in the 2017 Water Master Plan Update.

[redacted]

10.17. Management

A water supply system should be well administered and have adequate plans for development to keep pace with the growth of a community or municipality. Supervisory personnel should be qualified to perform their duties efficiently and should have competent assistants. Credit may be reduced in this grading item if the capability of the water system to provide fire protection is hindered by management.

The City of White Rock Water System appears well managed.

[redacted]

11. FIRE INSURANCE GRADING

Fire insurance grades are calculated as a single point in time measurement of fire risk and fire protection. The measurement is intended to be representative of the normal level of fire risk and fire protection resources in a community or a municipality at some given point in time and is considered from the perspective of property protection.

The fire insurance grades have been calculated for the City of White Rock in 2017 based on information acquired throughout the field survey and described in this report.

11.1. PFPC - Fire Insurance Grading Areas

To determine the final fire insurance grades, four separate relative classifications (with differing weights) have been determined:

- Fire Department (40%)
- Water Supplies (30%)
- Fire Prevention and Safety Control (20%)
- Emergency Communications (10%)

Each of these areas is further broken down and scored in a number of separate items with differing weights based on the importance of the item with respect to control of losses.

11.2. Fire Department Assessment within the Fire Insurance Grading

Fire Department contributes 40 percent of the overall grade in the calculation of Public Fire Protection Classification. Relative classifications are based on a 1 to 10 scale with 1 being the highest level.

Results are shown in Table 10 and Figure 15.

Table 10 Fire Department Grading Items Overall Summary

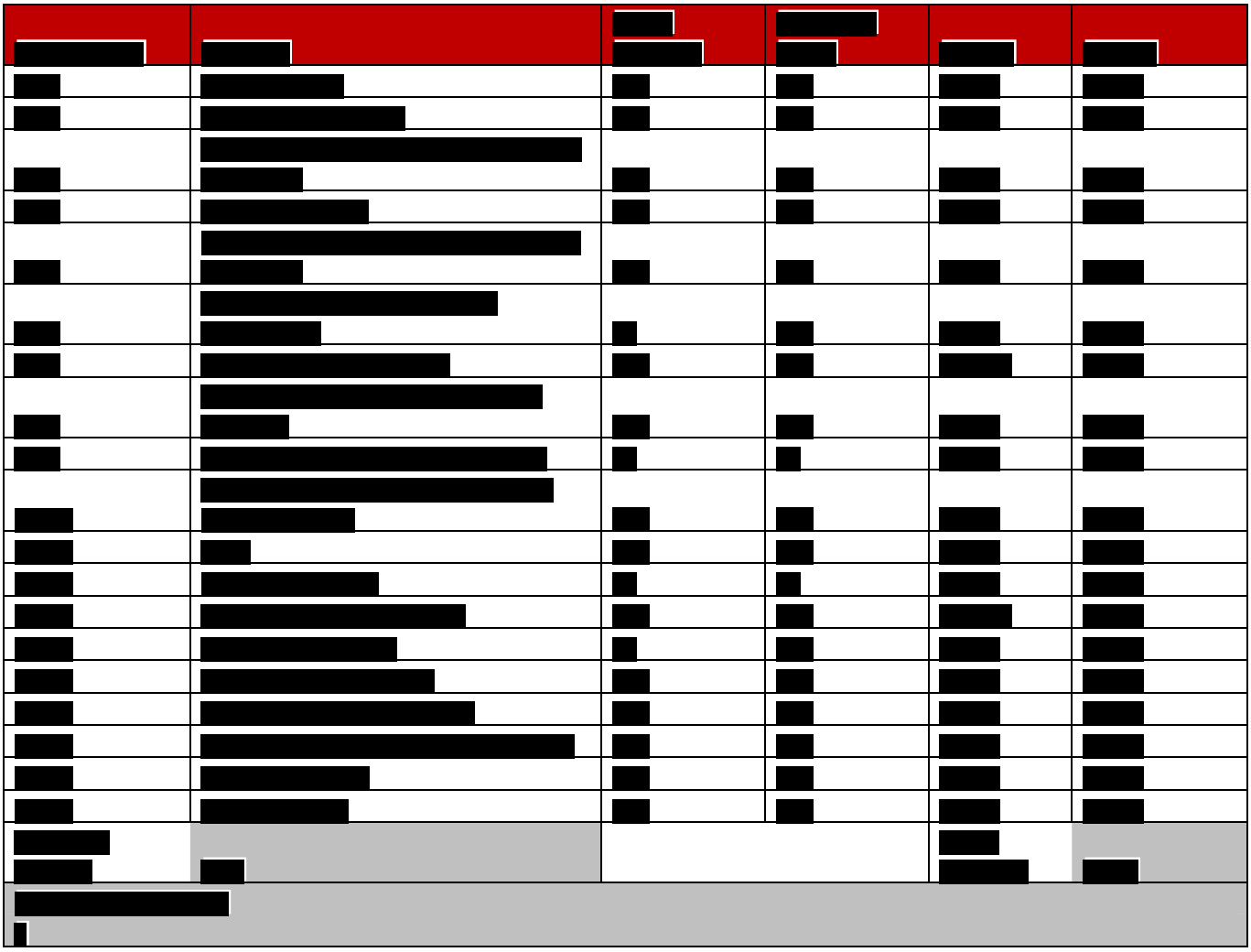
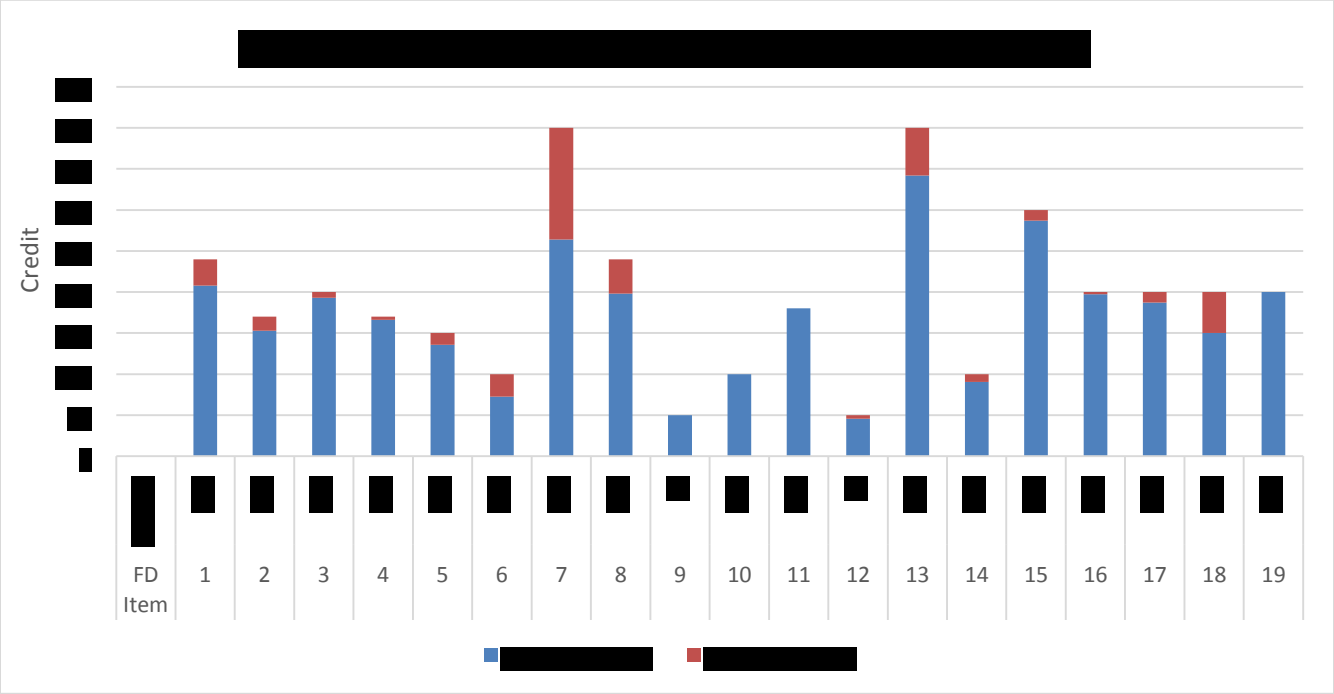


Figure 15 Fire Department Grading Items Overall Summary



The relative classification of the City of White Rock Fire Department portion is 3.

11.3. Water Supplies within the Fire Insurance Grading

Water Supply contributes 30 percent of the overall grade in the calculation of Public Fire Protection Classification. Relative classifications are based on a 1 to 10 scale with 1 being the highest level.

As previously noted this item is graded with two tiers of weight. Results are shown in Table 11 and Figure 16.

Table 11 Water Supply - Grading Item Results

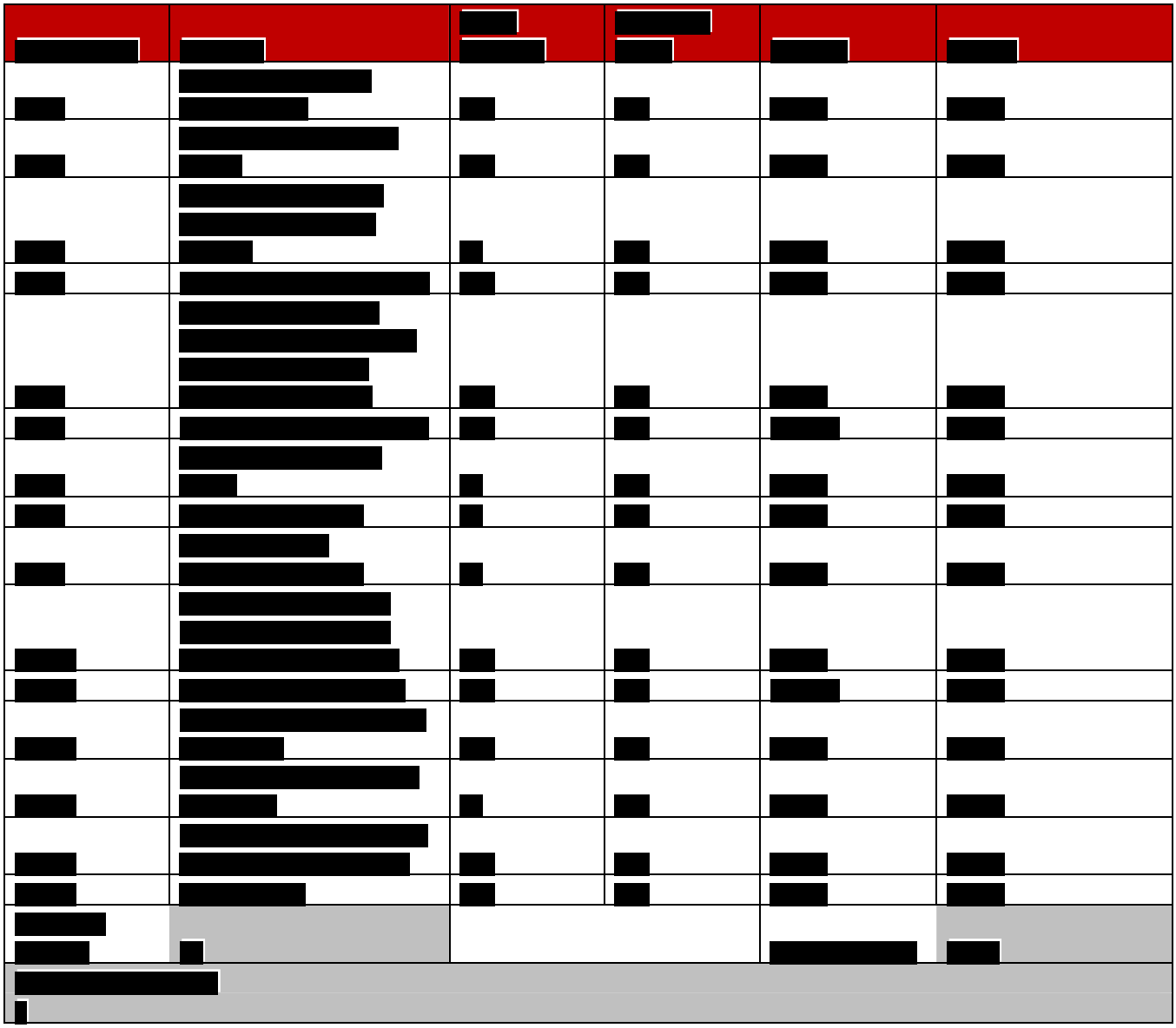
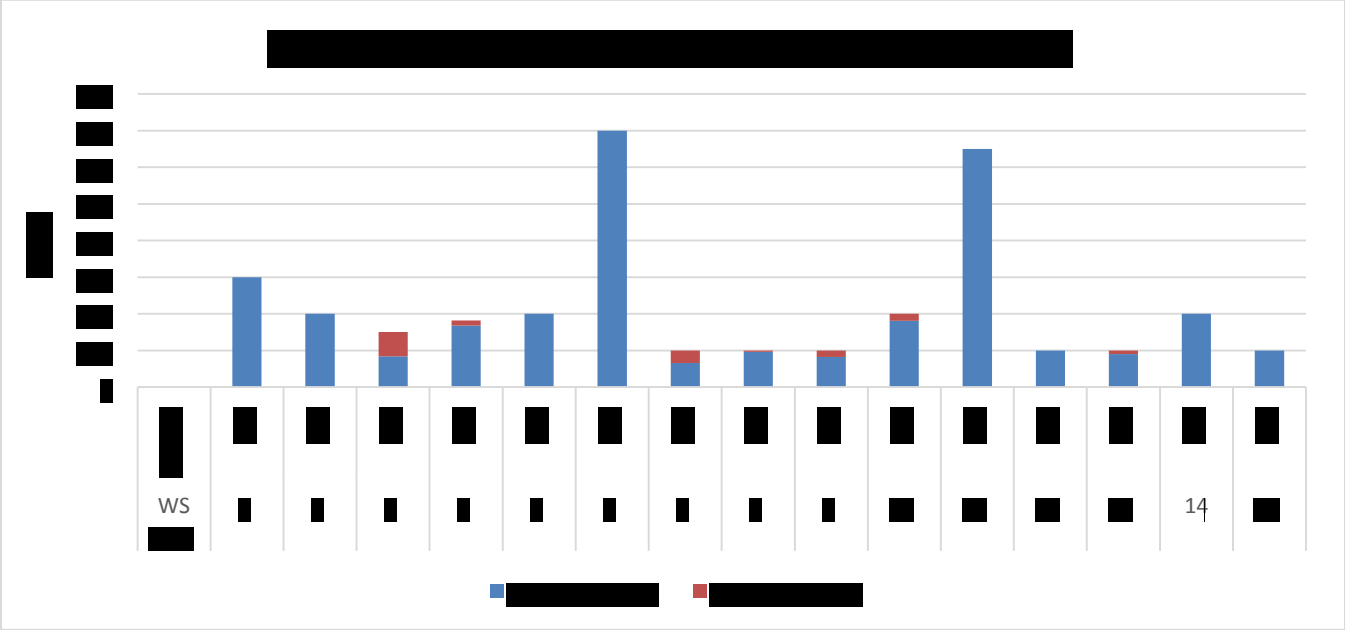


Figure 16 Water Supply Grading Items Overall Summary



The relative classification of the City of White Rock Water Supply portion is 1.

11.4. Fire Safety Control within the Fire Insurance Grading

Fire safety control contributes 20 percent of the overall grade in the calculation of Public Fire Protection Classification. Relative classifications are based on a 1 to 10 scale with 1 being the highest level.

Results are shown in Table 12 Fire Safety Control - Grading Item Results and Figure 17 Fire Safety Control Grading Items Overall Summary.

Table 12 Fire Safety Control - Grading Item Results

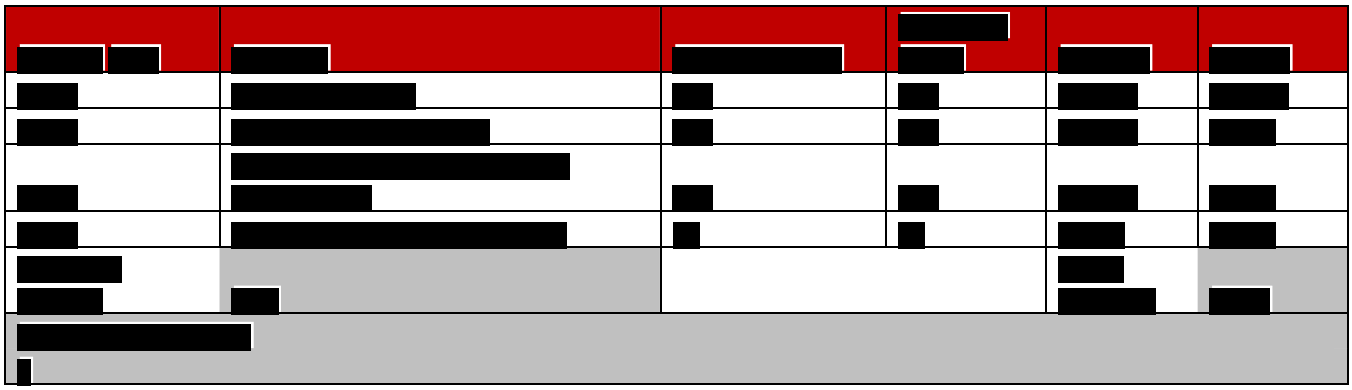
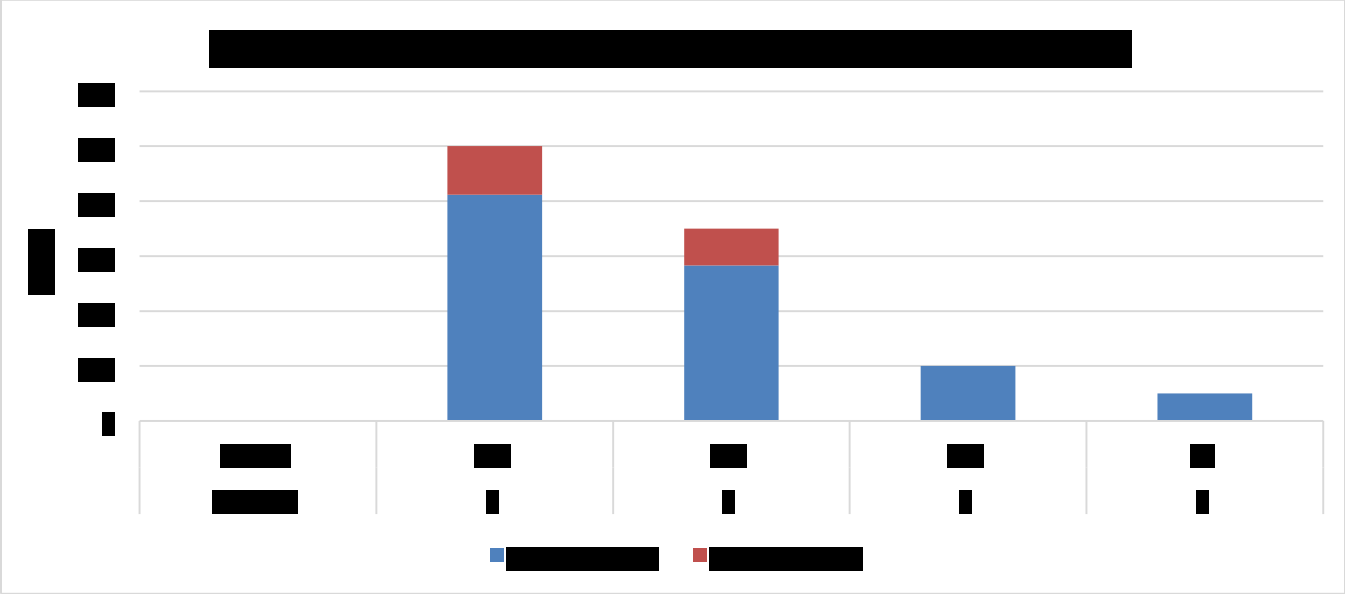


Figure 17 Fire Safety Control Grading Items Overall Summary



The relative classification of the City of White Rock Fire Safety Control portion is 2.

11.5. Fire Service Communications within the Fire Insurance Grading

Fire service communications contributes 10 percent of the overall grade in the calculation of Public Fire Protection Classification. Relative classifications are based on a 1 to 10 scale with 1 being the highest level.

As noted above in the sections of the Fire Department and Water Supply, Fire Service Communications is graded similarly with two tiers of weight. Results are shown in Table 13 Emergency Communications - Grading Item Results and Figure 18.

Table 13 Emergency Communications - Grading Item Results

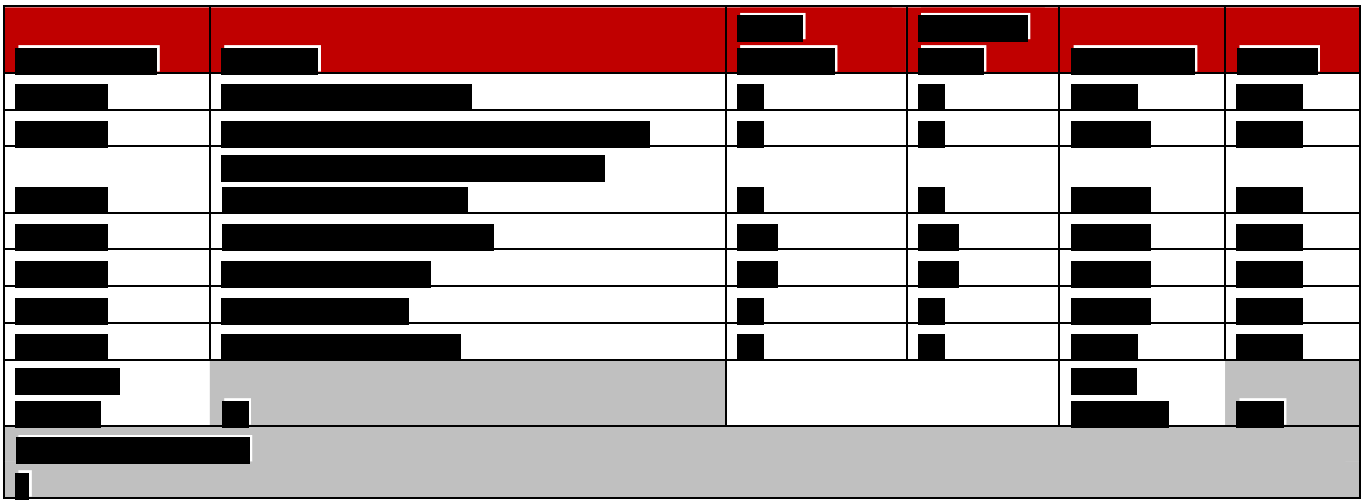
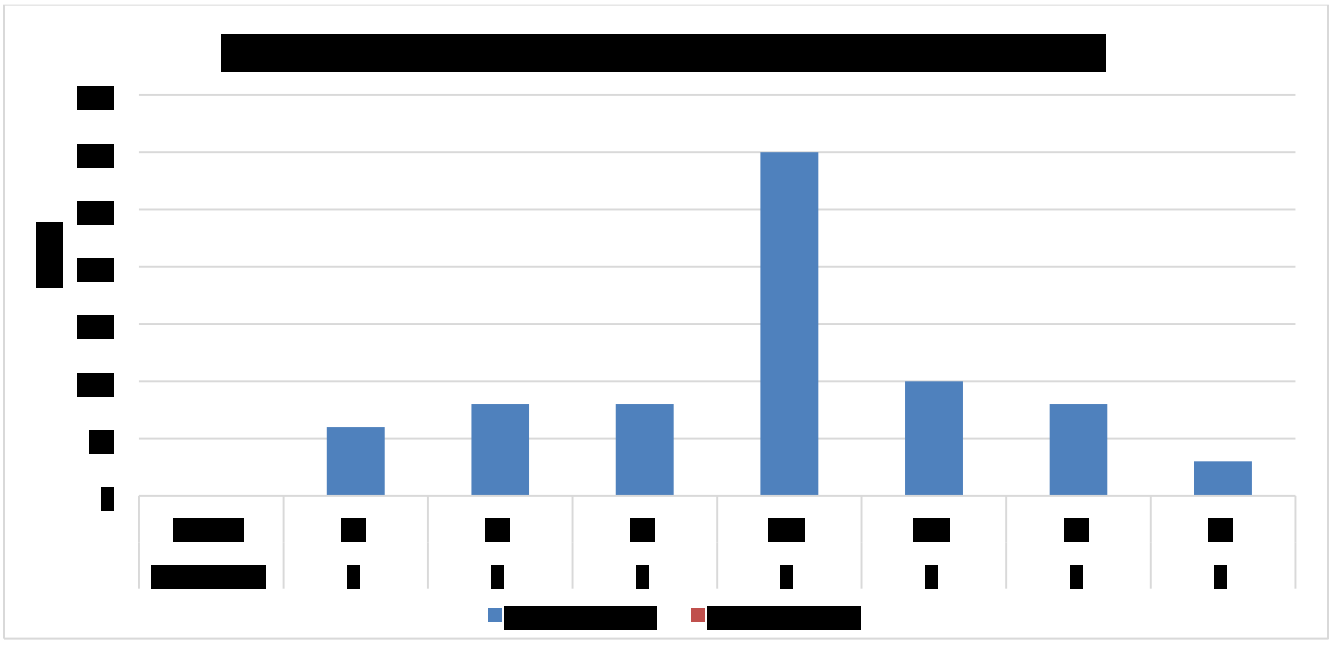


Figure 18 Emergency Communications Grading Items Overall Summary



The relative classification of the City of White Rock Communications portion is 1.

11.7. Summary of PFPC Fire Insurance Grading

The overall Public Fire Protection Classification grade is determined by totaling the credit received per grading item. A summary of the relative classifications and results of each grading area is provided in Table 14 Summary of Public Fire Protection Classification Grading Areas.

Table 14 Summary of Public Fire Protection Classification Grading Areas

Area of Grading	Weight within Grading	Credit Received 2018	Relative Classifications 2018
Fire Department	40	30.44	3
Water Supply	30	27.08	1
Fire Safety Control	20	16.90	2
Fire Service Communications	10	10.00	1
[redacted]		[redacted]	
[redacted]		[redacted]	
Total Credit Score		80.57	

Table 15 PFPC Credit Range indicates the credit range of each PFPC grade. The final PFPC for the City of White Rock is PFPC 2.

Table 15 PFPC Credit Range

Overall PFPC	Credit Range Per PFPC Grade
1	90.00 – 100.00
2	80.00 – 89.99
3	70.00 – 79.99
4	60.00 – 69.99
5	50.00 – 59.99
6	40.00 – 49.99
7	30.00 – 39.99
8	20.00 – 29.99
9	10.00 – 19.99
10	0.00 – 9.99

11.8. DPG – Fire Insurance Grading

To determine Dwelling Protection Grade many of the details were used to calculate the Public Fire Protection Classification. Dwelling Protection Grade 1 applies to the City of White Rock.

12. Fire Insurance Grading Classification Reassignment

12.1. Fire Insurance Grading Reassignment

A Public Fire Protection Classification of 2 and a Dwelling Protection Grade 1 were determined based on this Fire Insurance Grading review.

Table 16 shows the fire insurance grades that were applied to the City of White Rock prior to this survey and report and the updated grades in 2018.

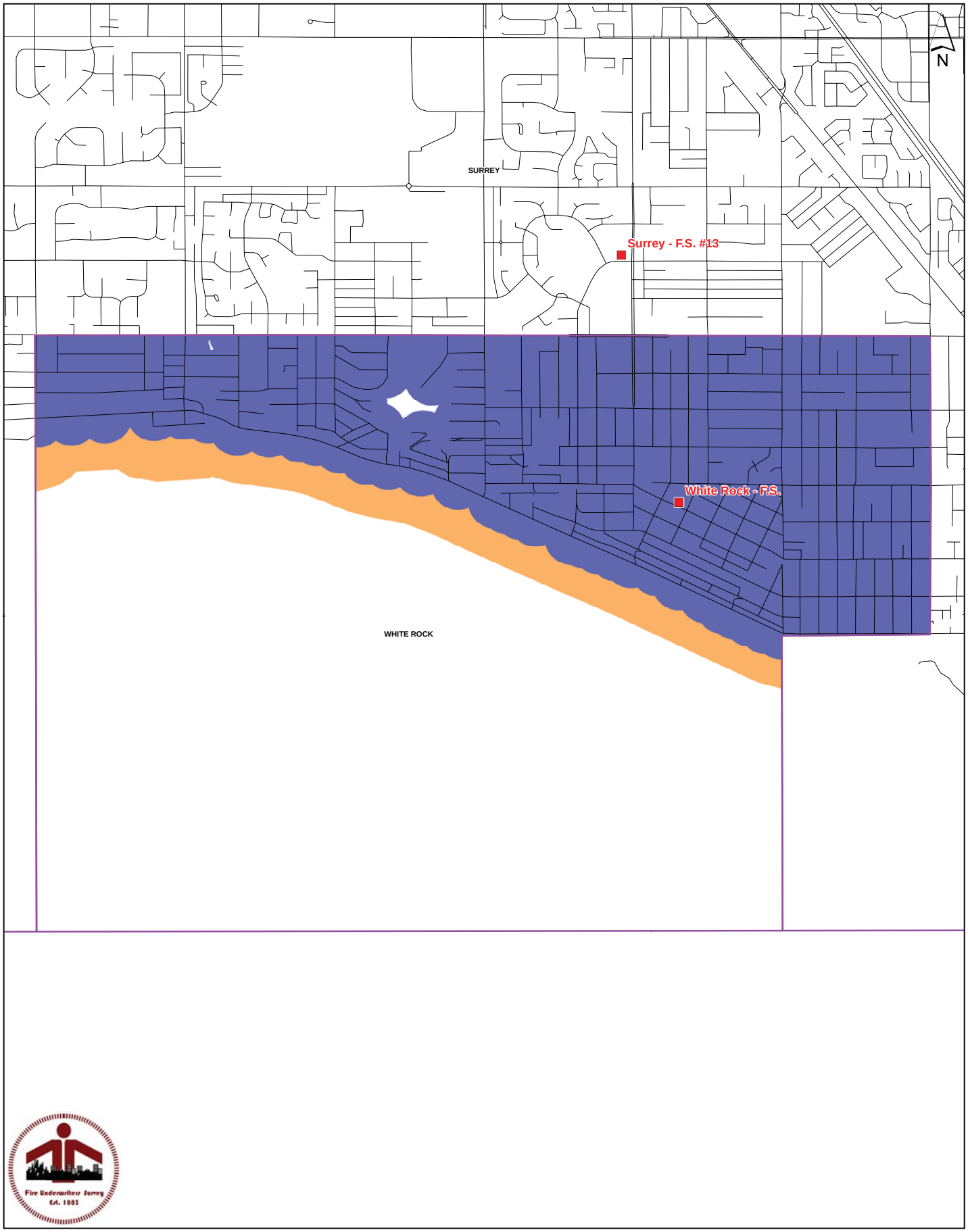
Table 16 City of White Rock Fire Insurance Grading Classifications

SUB DISTRICT(S)	PPFC 2009	PFPC 2018	COMMENTS
White Rock – F.S. (HPA[2])	4	**2**	Hydrant Protected Area – Commercial Lines insured properties within 150 m of a fire hydrant on the City of White Rock Water System and within 5.0 km of the White Rock Fire Hall.

SUB DISTRICT(S)	DPG 2009	DPG 2018	COMMENTS
White Rock – F.S. (HPA)	1	**1**	Hydrant Protected Area – Personal Lines insured properties within 300 m of a fire hydrant on the City of White Rock Water System, and within 8.0 km of the White Rock Fire Hall.

These Grades are illustrated in Figure 19 City of White Rock – PFPC Grades 2018 and Figure 20 City of White Rock - DPG Grades 2018 below.

[2] HPA – Hydrant Protected Area



White Rock, BC

Scale = 1:6,500

0 100 200 400 Meters

Commercial Lines Insurance - Public Fire Protection Classification

Fire Underwriters Survey

Legend

- Fire Hall
- Road
- Fire Protection Boundary
- 1
- 1 (Private Hydrant Protected)
- 2
- 2 (Private Hydrant Protected)
- 3
- 3 (Private Hydrant Protected)
- 4
- 4 (Private Hydrant Protected)
- 5
- 5 (Private Hydrant Protected)
- 6
- 6 (Private Hydrant Protected)
- 7
- 7 (Private Hydrant Protected)
- 8
- 8 (Private Hydrant Protected)
- 9
- 9P
- 10

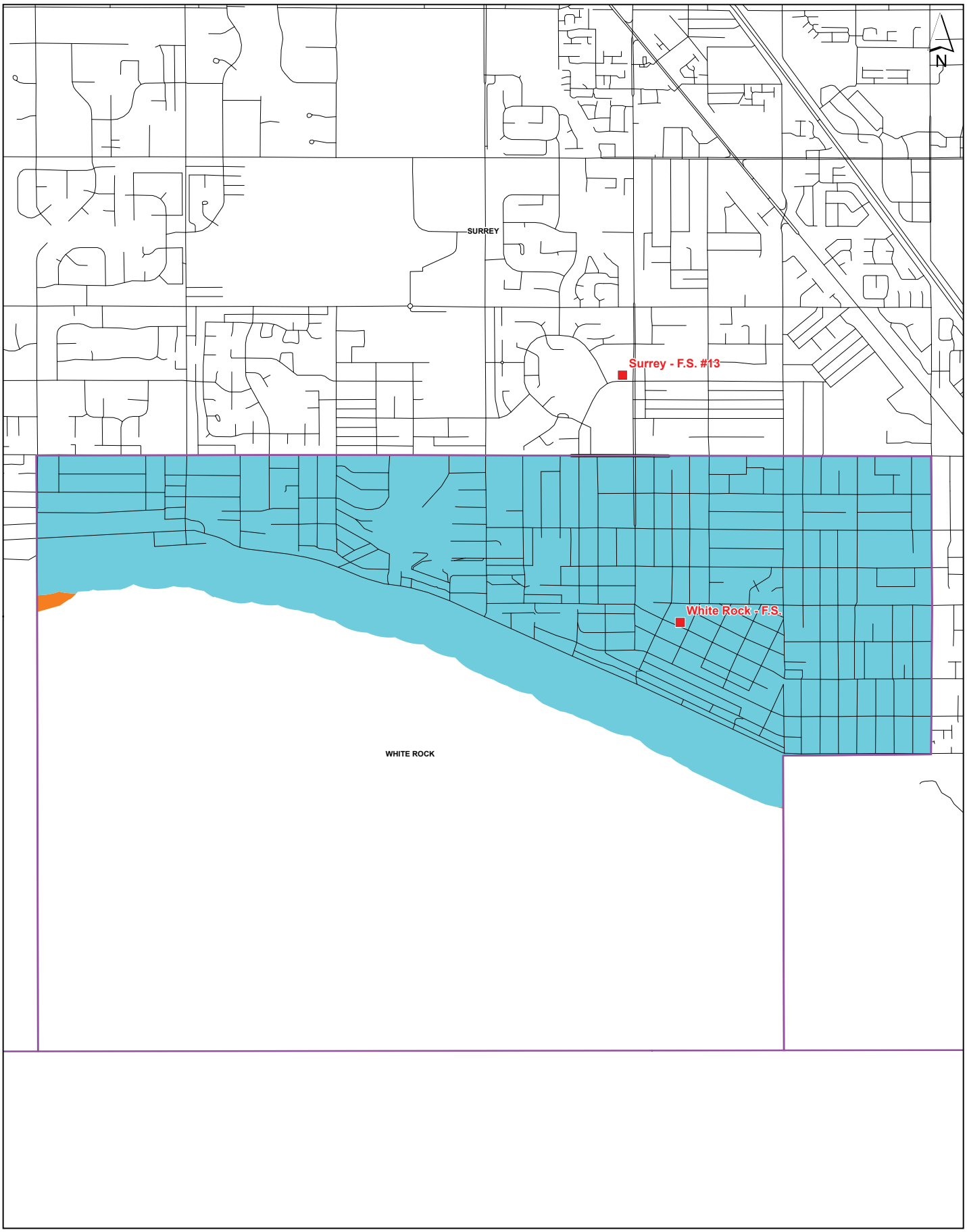
These maps and figures are not intended to illustrate the exact response distance or fire insurance grade coverage areas but can be used to aid in determining the fire insurance grade that should be applied to the property in question. Fire Underwriters Survey does not warrant or make any representations with respect to the quality, completeness, currency or accuracy of anything contained in this map, the fitness of this map for any purpose or results obtained using information contained in this map and is not responsible for any action taken in reliance on information contained in this map. In all cases, field data should be used to confirm the data and accuracy of these maps; if differences are noted please contact Fire Underwriters Survey at 1-800-665-5661.

Date Drawn: 2018-07-03

Drawn By: CY

Preliminary ■ Final

■ Commercial ☐ Personal



White Rock, BC

Scale = 1:6,500 (0, 200, 400 Meters)

Personal Lines Insurance - Dwelling Protection Grades

Fire Underwriters Survey

Legend

- Fire Hall
- Road
- Fire Protection Boundary
- 1
- 1 (Private Hydrant Protected)
- 2
- 2 (Private Hydrant Protected)
- 3A
- 3A (Private Hydrant Protected)
- 3B(F)
- 3B(L)
- 3B(S)
- 3B
- 4
- 5

These maps and figures are not intended to illustrate the exact response distance or fire insurance grade coverage areas but can be used to aid in determining the fire insurance grade that should be applied to the property in question. Fire Underwriters Survey does not warrant or make any representations with respect to the quality, completeness, currency or accuracy of anything contained in this map, the fitness of this map for any purpose or results obtained using information contained in this map and is not responsible for any action taken in reliance on information contained in this map. In all cases field data should be used to confirm the data and accuracy of these maps; if differences are noted please contact Fire Underwriters Survey at 1-800-665-5661.

Date Drawn: 2018-07-03

Drawn By: JU

Preliminary *Final*

Commercial *Personal*

APPENDIX A Water Supply for Public Fire Protection

WATER SUPPLY
FOR
PUBLIC FIRE PROTECTION

1999

FIRE UNDERWRITERS SURVEY

A SERVICE TO INSURERS AND MUNICIPALITIES

For further information on this document or any matters relating to the Fire Underwriters Survey please contact the appropriate offices of CGI Risk Management Services (formerly the Insurers' Advisory Organization) as follows:

Western Canada	CGI Risk Management Services Fire Underwriters Survey 3999 Henning Drive Burnaby BC V5C 6P9	Local: 604-6841581 Toll Free: 1-800-665-5661 Fax: 604-688-6986
Central Canada	CGI Risk Management Services Fire Underwriters Survey Suite 800, 7015 Macleod Tr. SW Calgary Alberta T2H 2K6	Local: 403-296-1300 Toll Free: 1-800-465-4264 Fax: 403-296-1316
Quebec	CGI Risk Management Services Fire Underwriters Survey 1611 Crémazie Blvd. East Montreal, Quebec H2M 2P2	Local: 514-735-3561 Toll Free: 1-800-263-5361 Fax: 514-844-0777
Ontario	CGI Risk Management Services Fire Underwriters Survey Lock Box 200 150 Commerce Valley Drive, West Markham, Ontario L3T 7Z3	Local: 905-882-6300 Toll Free: 1-800-387-4356 Fax: 905-695-6543
Atlantic Canada	CGI Insurance Business Services Fire Underwriters Survey 238 Brownlow Avenue, Suite 300 Park Place Center Dartmouth, Nova Scotia B3B 1Y2	Telephone: 902-423-9287 Toll-Free: 1-800-639-4528 Fax: 902-423-7376

FIRE UNDERWRITERS SURVEY is financed by the Canadian Insurance industry and utilizes technical staff of CGI Risk Management Services (formerly the Insurers' Advisory Organization Inc.) Its purpose is to survey fire protection conditions in Canadian communities and municipalities, providing data and advisory services to fire insurance underwriters and public officials concerned.

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WATER SUPPLY FOR PUBLIC FIRE PROTECTION

PREFACE

This guide summarizes the more significant recommendations of Fire Underwriters Survey with respect to fire protection requirements in municipal water works system design. It reflects the manner in which FUS assesses the water supply aspect of a municipality's fire risk potential during surveys on behalf of the Canadian property insurance industry and represents the accumulated experience of many years of study of actual fires. Water supply is one of a number of components evaluated by FUS in the municipal fire protection system. Recommendations applying to the fire departments and code enforcement are covered in other publications of Fire Underwriters Survey. FUS local offices are prepared to assist municipal officials or their consultants with advice on special problems, as time limits permit, in accordance with the intent of this guide. The minimum size water supply credited by FUS must be capable of delivering not less than 1000 L/min for two hours or 2000 L/min for one hour in addition to any domestic consumption at the maximum daily rate. Static suction supplies to fire department pumpers are recognized as a supplement to the piped system.

In the FUS assessment of a water supply system, the major emphasis is placed upon its ability to deliver **adequate** water to control major fires throughout the municipality on a **reliable** basis via sufficient and suitable **hydrants**. What is ultimately available to the fire department is the critical test in this fire protection evaluation.

Rates of flow for firefighting purposes are expressed in litres per minute as this is the adopted unit for the firefighting field.

In this edition all quantities are specified in S.I. units.

PART I

GENERAL

ADEQUACY AND RELIABILITY. An adequate and reliable water supply for firefighting is an essential part of the fire protection system of a municipality. This is normally a piped system in common with domestic potable water service for the community.

A water supply system is considered to be fully adequate if it can deliver the necessary fire flow at any point in the distribution gridiron for the applicable time period specified in the table “Required Duration of Fire Flow” with the consumption at the maximum daily rate (average rate on maximum say of a normal year). When this delivery is also possible under certain emergency or unusual conditions as herein specified, the system is considered to be reliable. In cities of population in excess of 250,000 (or smaller places with high fire incident and severe hazard conditions) it is usually necessary to consider the possibility of two simultaneous major fires in the area served by the system.

Fire flows are amounts of water necessary to control fires. These are determined as shown in Part II. System design should contemplate meeting the required fire flows existing or probable with the possible exception of gross anomalies where there is no fire threat to the remainder of the community. In these cases, the properties should preferably be modified in hazard to reduce the required flow as part of a coordinated community fire protection system.

The protection of buildings by automatic sprinkler systems is a significant contribution to the fire protection of the community and should be encouraged, not penalized by onerous service charges or metering requirements.

In order to provide reliability, duplication of some or all parts of the system will be necessary, the need for duplication being dependent upon the extent to which the various parts may reasonably be expected to be out of service as a result of maintenance and repair work, an emergency or some unusual condition. The introduction of storage, either as part if the supply works or on the distribution system, may partially or completely offset the need for duplicating various parts of the system, the value of the storage depending upon its amount, location and availability.

STORAGE. In general, storage reduces the requirements of those parts of the system through which supply has already passed. Since storage usually fluctuates, the normal daily minimum maintained is the amount that should be considered as available for fires. Because of the decrease in pressure when water is drawn down in standpipes, only the portion of this normal daily minimum storage that can be delivered at a residual pressure of 150kPa at the point of use is considered as available. As well as the quantity available, the rate of delivery of water to the system from storage for the fire flow period is critical to this consideration.

PRESSURE. The principal requirement to be considered is the ability to deliver water in sufficient quantity to permit fire department pumpers to obtain an adequate supply from hydrants. To overcome friction loss in the hydrant branch, hydrant and suction hose, a minimum residual water pressure of 150 kPa in the street main is required during flow. Under conditions of exceptionally low suction losses, a lower residual may be possible. This includes the use of 100 mm and larger outlets for fire department pumper use and hydrants with large waterways.

Higher sustained pressure is of importance in permitting direct continuous supply to automatic sprinkler systems, to building standpipe and hose systems, and in maintaining a water plan so that no portion of the protection area is without water, such as during a fire at another location. Residual pressures that exceed 500 kPa during large flows are of value as they permit short hose-lines to be operated directly from hydrants without supplementary pumping.

SUPPLY WORKS

NORMAL ADEQUACY OF SUPPLY WORKS. The source of supply, including impounding reservoirs, and each part of the supply works should normally be able to maintain the maximum daily consumption rate plus the maximum required fire flow. Each distribution service within the system should similarly support its own requirements. In large cities where fire frequency may result in simultaneous fires, additional flow must be considered in accordance with the potential. Filters may be considered as capable of operating at a reasonable overload capacity based upon records and experience. In general, overload capacity will not exceed 25 percent, but may be higher in well designed plans operating under favourable conditions.

The absolute minimum supply available under extreme dry weather conditions should not be taken as the measure of the normal ability of the source of supply such as supply from wells. The normal or average capacity of wells during the most favourable nine month period should be considered, or the normal sustained flow of surface supplies to the source.

RELIABILITY OF SOURCE OF SUPPLY. The effect on adequacy must be considered for such factors as frequency, severity and duration of droughts, physical condition of dams and intakes; danger from earthquakes, floods, forest fires, and ice dams or other ice formations; silting-up or shifting of channels; possibility of accidental contamination of watershed or source; absence of watchmen or electronic supervision where needed; and injury by physical means. Where there is a risk of disruption, special precautions or alternate supplies should be arranged.

Where the supply is from wells, some consideration should be given to the absolute minimum capacity of the wells under the most unfavourable conditions; also to the length of time that the supply from the wells would be below the maximum daily consumption rate, and the likelihood of this condition recurring every year or only at infrequent intervals. It should be recognized that some water is generally available from wells and that the most extreme conditions are not as serious as a total interruption of the supply, as would be the case in the breaking of a dam or shifting of a channel. The possibility of clogging, salinity, and the need for periodic cleaning and overhauling must be considered. Dependence upon a single well, even where records are favourable, may be considered a feature of unreliability.

Frequent cleaning of reservoirs and storage tanks may be considered as affecting reliability.

Continuity of, and delay in implementing water supplies obtained from systems or sources not under the control of the municipality or utility should be considered also from these aspects.

GRAVITY SYSTEMS. A gravity system delivering supply from the source to distribution directly without the use of pumps is advantageous from a fire protection point of view because of its inherent reliability, but a pumping system can also be developed to a high degree of reliability.

PUMPING

RELIABILITY OF PUMPING CAPACITY. Pumping capacity, where the system or service is supplied by pumps, should be sufficient, in conjunction with storage when the two most important pumps are out of service, to maintain the maximum daily consumption rate plus the maximum required fire flow at required pressure for the required duration. For smaller municipalities (usually up to about 25,000 population) the relative infrequency of fires is assumed as largely offsetting the probability of a serious fire occurring at times when two pumps are out of service. (The most important pump is normally, but not always, the one of largest capacity, depending upon how vital is its contribution to maintaining flow to the distribution system.)

To be adequate, remaining pumps in conjunction with storage, should be able to provide required fire flows for the specified durations at any time during a period of five days with consumption at the maximum daily rate. Effect of normal minimum capacity of elevated storage located on the distribution system and storage of treated water above low lift pumps should be considered. The rate of flow from such storage must be considered in terms of any limitation of water main capacity. The availability of spare pumps or prime movers that can quickly be installed may be credited, as may pumps of compatible characteristics which may be valved from another service.

POWER SUPPLY FOR PUMPS. Electric power supply to pumps should be so arranged that a failure in any power line or the repair or replacement of a transformer, switch, control unit or other device will not prevent the delivery, in conjunction with elevated storage, of required fire flows for the required durations at any time during a period of two days with consumption at the maximum daily rate.

Power lines should be underground from the station or substation of the power utility to water plants and pumping stations and have no other consumers enroute. The use of the same transmission lines by other consumers introduces unreliability because of the possibility of interruption of power or deterioration of power characteristics.

Overhead power lines are more susceptible to damage and interruption than underground lines and introduce a degree of un-reliability that depends upon their location and construction. In connections with overhead lines, consideration should be given to the number and duration of lightning, wind, sleet, and snow storms in the area; the type of poles or towers and wires; the nature of the country traversed; the effect of earthquakes, forest fires, and floods; the lightning and surge protection provided; the extent to which the system is dependent upon overhead lines; and the ease of, and facilities for, repairs.

The possibility of power systems or network failures affecting large areas should be considered. In-plant auxiliary power or internal combustion driver standby pumping are appropriate solutions to these problems in many cases, particularly in small plants where high pumping capacity is required for fire protection service. When using automatic starting, prime 'movers' for auxiliary power supply and pumping should have controllers listed by Underwriters' Laboratories of Canada to establish their reliability.

FUEL SUPPLY. At least a five day supply of fuel for internal combustion engines or boilers used for regular domestic supply should be provided. Where long hauls, condition of roads, climatic conditions, or other circumstances could cause interruptions of delivery longer than five days, a greater storage should be provided. Gas supply should be from two independent sources or from duplicate gas-producer plants with gas storage sufficient for 24 hours. Unreliability of regular fuel supply may be offset in whole or in part by suitable provisions for the use of an alternate fuel or power supply.

BUILDINGS AND PLANT

BUILDINGS AND STRUCTURES. Pumping stations, treatment plants, control centres and other important structures should be located, constructed, arranged, and protected so that damage by fire, flooding, or other causes will be held to a minimum. They should contain no combustible material in their construction, and, if hazards are created by equipment or materials located within the same structure, the hazardous section should be suitably separated by fire-resistive partitions or fire walls.

Buildings and structures should have no fire exposures. If exposures exist, suitable protection should be provided, Electrical wiring and equipment should be installed in accordance with the Canadian Electrical Code. All internal hazards should be properly safeguarded in accordance with good practice. Private in-plant fire protection should be provided as needed.

MISCELLANEOUS SYSTEM COMPONENTS, PIPING AND EQUIPMENT. Steam piping, boiler-feed lines, fuel-piping (gas or oil lines to boilers as well as gas, oil or gasoline lines to internal-combustion engines), and air lines to wells or control systems should be so arranged that a failure in any line or the repair or replacement of a valve, fuel pump, boiler-feed pump, injector, or other necessary device, will not prevent the delivery, in conjunction with storage, of the required fire flows for the specified duration at any time during a period of two days with consumption at the maximum daily rate.

Plants should be well arranged to provide for effective operation. Among the features to be considered are: ease of making repairs and facilities for this work, danger of flooding because of broken piping; susceptibility to damage by spray; reliability of priming and chlorination equipment; lack of semi-annual inspection of boilers or other pressure vessels; dependence upon common non-sectionalized electric bus bars; poor arrangement of piping; poor condition or lack of regular inspections of important valves; and factors affecting the operation of valves or other devices necessary for fire service such as design, operation, and maintenance of pressure regulating valves, altitude valves, air valves, and other special valves or control devices, provision of power drives, location of controls, and susceptibility to damage.

Reliability of treatment works is likely to be influenced by the removal from service of at least one filter or other treatment unit; the reduction of filter capacity by turbidity, freezing or other conditions of the water; the need for cleaning basins; and the dependability of power for operating valves, wash-water pumps, mixers and other appurtenances.

OPERATIONS. Reliability in operation of the supply system and adequate response to emergency or fire demands are essential. Instrumentation, controls and automatic features should be arranged with this in mind. Failure of an automatic system to maintain normal conditions or to meet unusual demands should result in the sounding of an alarm where remedial action will be taken.

The operating force should be competent, adequate, and continuously available as may be required to maintain both the domestic and fire services.

EMERGENCY SERVICES. Emergency crews, provided with suitable transportation, tools and equipment, should be continuously on duty in the larger systems and be readily available upon call in small systems. Spare pipe and fittings, and construction equipment should be readily available. Alarms for fires in buildings should be received by the utility at a suitable location where someone is always on duty who can take appropriate action as required, such as placing additional equipment in operation, operating emergency or special valves, or adjusting pressures. Receipt of alarms may be by fire alarm circuit, radio, outside alerting device, or telephone, but where special operations are required, the alarm service should be equivalent to that needed for a fire station.

Response of an emergency crew should be made to major fires to assist the fire department in making the most efficient use of the water system and to ensure the best possible service in the event of a water main break or other emergency. The increase of pressures by more than 25 percent for fires is considered to increase the possibility of breaks.

PIPING

RELIABILITY OF SUPPLY MAINS. Supply mains cut off for repair should not drastically reduce the flow available to any district. This includes all pipe lines or conduits on which supply to the distribution system is dependent, including intakes, suction or gravity lines to pumping stations, flow lines from reservoirs, treatment plant piping, force mains, supply and arterial mains, etc. Consideration should be given to the greatest effect that a break, joint separation or other failure could have on the delivery of the maximum daily consumption rate plus required fire flow at required pressure over a three day period. Aqueducts, tunnels or conduits of substantial construction may be considered as less susceptible to failure and equivalent to good mains with a long history of reliability.

INSTALLATION OF PIPE. Mains should be in good condition and properly installed. Pipe should be suitable for the service intended. Asbestos-cement, poly-vinyl chloride (PVC), cast and ductile iron, reinforced concrete and steel pipe manufactured in accordance with appropriate Canadian Standards Association or ANSI/AWWA standards, or any pipes listed by Underwriters' Laboratories of Canada for fire service are considered satisfactory. Normally, pipe rated for a maximum working pressure of 1000 kPa is required, Service records, including the frequency and nature of leaks, breaks, joint separations, other failures and repairs, and general conditions should be considered as indicators of reliability. When mains are cleaned they should be lined.

Mains should be so laid as not to endanger one another, and special construction should be provided to prevent their failure at stream crossings, railroad crossings, bridges, and other points where required by physical conditions; supply mains should be valved at one and one half kilometre intervals and should be equipped with air valves at high points and blow offs at low points. Mains should not be buried extremely deep or be unusually difficult to repair, though depths to ten feet may be required because of frost conditions.

The general arrangement of important valves, of standard or special fittings, and of connections at cross-overs, intersections, and reservoirs, as well as at discharge and suction headers, should be considered with respect to the time required to isolate breaks. The need for check valves on supply or force mains and for other arrangements to prevent flooding of stations or emptying of reservoirs at the time of a break in a main should also be considered, as well as the need for relief valves or surge chambers. Accessibility of suitable material and equipment and ease of making repairs should be considered.

Arterial feeder mains should provide looping throughout the system for mutual support and reliability, preferably not more than 1000 metres between mains. Dependence of a large area on a single main is a weakness. In general the gridiron of minor distributors supplying residential districts should consist of mains at least 150mm in size and arranged so that the lengths on the long sides of blocks between intersecting mains do not exceed 200 metres. Where longer lengths of 150mm pipe are necessary 200mm or larger intersecting mains should be used. Where initial pressures are unusually high, a satisfactory gridiron may be obtained with longer lengths of 150mm pipe between intersecting mains.

Where deadends and a poor gridiron are likely to exist for a considerable period or where the layout of the streets and the topography are not well adapted to the above arrangement, 200mm pipe should be used. Both the ability to meet the required fire flows and reliability of a reasonable supply by alternate routing must be taken into account in this consideration.

VALVES. A sufficient number of valves should be installed so that a break or other failure will not affect more than 400 metres of arterial mains, 150 metres of mains in commercial districts, or 250 metres of mains in residential districts. Valves should be maintained in good operating condition. The recommended inspection frequency is once a year, and more frequently for larger valves and valves for critical applications.

A valve repair that would result in reduction of supply is a liability, but because of the probable infrequency of occurrence, it might be considered as introducing only a moderate degree of unreliability even if it resulted in total interruption. The repair of a valve normally should be accomplished in two days. Valves opening opposite to the majority are undesirable and when they do occur they should be clearly identified.

HYDRANTS

SIZE, TYPE AND INSTALLATION. Hydrants should conform to American Water Works Standard for Dry Barrel Fire Hydrants or Underwriters' Laboratories of Canada listing. Hydrants should have at least two 65mm outlets. Where required fire flows exceed 5000 l/min or pressures are low there should also be a large pumper outlet. The lateral street connection should not be less than 150mm in diameter. Hose threads, operating and cap nuts on outlets should conform to Provincial Standard dimensions. A valve should be provided on lateral connections between hydrants and street mains.

Hydrants that open in a direction opposite to that of the majority are considered unsatisfactory. Flush hydrants are considered undesirable because of delay in getting into operation; this delay is more serious in areas subject to heavy snow storms. Cisterns are considered unsatisfactory as an alternative to pressure hydrants. The number and spacing of hydrants should be as indicated in the table titled "Standard Hydrant Distribution".

INSPECTION AND CONDITION. Hydrants should be inspected at least semi-annually and after use. The inspection should include operation at least once a year. Where freezing temperatures occur, the semi-annual inspections should be made in the spring and fall of each year. Because of the possibility of freezing they should be checked frequently during extended periods of severe cold. Hydrants should be kept in good condition and suitable records of inspections and repairs be maintained. Hydrants should be painted in highly visible colours so that they are conspicuous and be situated with outlets at least twelve inches above the grade. There should be no obstruction that could interfere with their operation. Snow should be cleared promptly after storms and ice and snow accumulations removed as necessary.

HYDRANT DISTRIBUTION. Hydrant locations and spacing should be convenient for fire department use. Hydrants should be located at intersections, in the middle of long blocks and at the end of long dead-end streets. To allow for convenient utilization of water supplies, distribution density of hydrants should be in accordance with the required fire flows indicated in the table titled "Standard Hydrant Distribution" (page 16). The maximum recommended spacing of hydrants in commercial, industrial, institutional and multi-family residential areas is 90 metres; in single family residential areas 180 metres is recommended. In areas where fire apparatus have access (e.g. large properties, private developments, etc.), hydrants should be required by bylaw. The planning of hydrant locations should be a cooperative effort between the water utility and fire department.

RECORDS

PLANS AND RECORDS. Complete, up-to-date plans and records essential for the proper operation and maintenance of the system should be available in a convenient form, suitably indexed and safely filed. These should include plans of the source as well as records of its yield and a reliable estimate of the safe yield; plans of the supply works including dams, intakes, wells, pipelines, treatment plants, pumping stations, storage reservoirs and tanks; and a map of the distribution system showing mains, valves, and hydrants. Plans and maps should be in duplicate and stored at different locations.

Detailed distribution system plans, in a form suitable for field use, should be available for maintenance crews. Records of consumption, pressures, storage levels, pipes, valves, hydrants, and of the operations of the supply works and distribution system, including valve and hydrant inspections and repairs should be maintained.

TABLES

STANDARD HYDRANT DISTRIBUTION	
Fire Flow Required (litres per minute)	Average Area per Hydrant (m^2)
2,000	16,000
4,000	15,000
6,000	14,000
8,000	13,000
10,000	12,000
12,000	11,000
14,000	10,000
16,000	9,500
18,000	9,000
20,000	8,500
22,000	8,000
24,000	7,500
26,000	7,000
28,000	6,500
30,000	6,000
32,000	5,500
34,000	5,250
36,000	5,000
38,000	4,750
40,000	4,500
42,000	4,250
44,000	4,000
46,000	3,750
48,000	3,500

REQUIRED DURATION OF FIRE FLOW	
Fire Flow Required (litres per minute)	Duration (hours)
2,000 or less	1.0
3,000	1.25
4, 000	1.5
5,000	1.75
6,000	2.0
8000	2.0
10,000	2.0
12,000	2.5
14,000	3.0
16,000	3.5
18,000	4.0
20000	4.5
22,000	5.0
24,000	5.5
26,000	6.0
28,000	6.5
30,000	7.0
32000	7.5
34,000	8.0
36,000	8.5
38,000	9.0
40,000 and over	9.5

Interpolate for intermediate figures

Area refers to surface area of blocks and bounding streets. For a street without adjacent streets, a depth of one-half block is used.

A water supply system is considered to be adequate for fire protection when it can supply water as indicated above with consumption at the maximum daily rate. Certain types of emergency supplies may be included where reasonable conditions for their immediate use exist. Storage on the system is credited on the basis of the normal daily minimum maintained insofar as pressure permits its delivery at the rate considered.

PART II

GUIDE FOR DETERMINATION OF REQUIRED FIRE FLOW
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N.B. It should be recognized that this is a "guide" in the true sense of the word, and requires a certain amount of knowledge and experience in fire protection engineering for its effective application. Its primary purpose is for the use of surveyors experienced in this field, but it is made available to municipal officials, consulting engineers and others interested as an aid in estimating fire flow requirements for municipal fire protection.

Required Fire Flow may be described as the amount and rate of water application required in firefighting to confine and control the fires possible in a building or group of buildings which comprise essentially the same fire area by virtue of immediate exposure. This may include as much as a city block.

1. An estimate of the fire flow required for a given area may be determined by the formula:

$$F = 220C\sqrt{A}$$

where

F = the required fire flow in litres per minute.

C = coefficient related to the type of construction.

= 1.5 for wood frame construction (structure essentially all combustible).

= 1.0 for ordinary construction (brick or other masonry walls, combustible floor and interior).

= 0.8 for non-combustible construction (unprotected metal structural components, masonry or metal walls).

= 0.6 for fire-resistive construction (fully protected frame, floors, roof).

Note: For types of construction that do not fall within the categories given, coefficients shall not be greater than 1.5 nor less than 0.6 and may be determined by interpolation between consecutive construction types as listed above. Construction types are defined in the Appendix.

A = The total floor area in square metres (including all storeys, but excluding basements at least 50 percent below grade) in the building being considered.

For fire-resistive buildings, consider the two largest adjoining floors plus 50 percent of each of any floors immediately above them up to eight, when the vertical openings are inadequately protected. If the vertical openings and exterior vertical communications are properly protected (one hour rating), consider only the area of the largest floor plus 25 percent of each of the two immediately adjoining floors.

For one family and two family dwellings not exceeding two storeys in height, see **Note J.**

2. The value obtained in No. 1 may be reduced by as much as 25% for occupancies having a low contents fire hazard or may be increased by up to 25% surcharge for occupancies having a high fire hazard. Those may be classified as to contents as follows:

Non-Combustible	-25%	Free Burning	+15%
Limited Combustible	-15%	Rapid Burning	+25%
Combustible	No Charge		

As guide for determining low or high fire hazard occupancies, see the list in the Appendix. The fire flow determined shall not be less than 2,000 L/min,

3. The value obtained in No.2 above may be reduced by up to 50% for complete automatic sprinkler protection depending upon adequacy of the system. The credit for the system will be a maximum of 30% for an adequately designed system conforming to NFPA 13 and other NFPA sprinkler standards. Additional credit of up to 10% may be granted if the water supply is standard for both the system and fire department hose lines required. The percentage reduction made for an automatic sprinkler system will depend upon the extent to which the system is judged to reduce the possibility of fires spreading within and beyond the fire area. Normally this reduction will not be the maximum allowed without proper system supervision including water flow and control valve alarm service. Additional credit may be given of up to 10% for a fully supervised system.

4. To the value obtained in No. 2 above a percentage should be added for structures exposed within 45 metres by the fire area under consideration. This percentage shall depend upon the height, area, and construction of the building(s) being exposed, the separation, openings in the exposed building(s), the length and height of exposure, the provision of automatic sprinklers and/or outside sprinklers in the building(s) exposed, the occupancy of the exposed building(s), and the effect of hillside locations on the possible spread of fire.

   The charge for any one side generally should not exceed the following limits for the separation:

Separation	Charge	Separation	Charge
0 to 3m	25%	20.1 to 30 m	10%
3.1 to 10m	20%	30.1 to 45m	5%
10.1 to 20m	15%		

   The total percentage shall be the sum of the percentage for all sides, but shall not exceed 75%.

   The fire flow shall not exceed 45,000 L/min nor be less than 2,000 L/min.

Notes to Calculation

Note A: The guide is not expected to necessarily provide an adequate value for lumber yards, petroleum storage, refineries, grain elevators, and large chemical plants, but may indicate a minimum value for these hazards.

Note B: Judgment must be used for business, industrial, and other occupancies not specifically mentioned.

Note C: Consideration should be given to the configuration of the building(s) being considered and accessibility by the fire department.

Note D: Wood frame structures separated by less than 3 metres shall be considered as one fire area.

Note E: Fire Walls: - In determining floor areas, a fire wall that meets or exceeds the requirements of the current edition of the National Building Code of Canada (provided this necessitates a fire resistance rating of 2 or more hours) may be deemed to subdivide the building into more than one area or may, as a party wall, separate the building from an adjoining building.

Normally any unpierced party wall considered to form a boundary when determining floor areas may warrant up to a 10% exposure charge.

Note F: High one storey buildings: When a building is stated as 1=2, or more storeys, the number of storeys to be used in the formula depends upon the use being made of the building. For example, consider a 1=3 storey building. If the building is being used for high piled stock, or for rack storage, the building would probably be considered as 3 storeys and, in addition, an occupancy percentage increase may be warranted.

However, if the building is being used for steel fabrication and the extra height is provided only to facilitate movement of objects by a crane, the building would probably be considered as a one storey building and an occupancy credit percentage may be warranted.

Note G: If a building is exposed within 45 metres, normally some surcharge for exposure will be made.

Note H: Where wood shingle or shake roofs could contribute to spreading fires, add 2,000 L/min to 4,000 L/min in accordance with extent and condition.

Note I: Any non-combustible building is considered to warrant a 0.8 coefficient.

Note J: Dwellings: For groupings of detached one family and small two family dwellings not exceeding 2 stories in height, the following short method may be used. (For other residential buildings, the regular method should be used.)

Exposure distances	Suggested required fire flow	
	Wood Frame	Masonry or Brick
Less than 3m	See Note "D"	6,000 L/min
3 to 10m	4,000 L/min	4,000 L/min
10.1 to 30m	3,000 L/min	3,000 L/min
Over 30m	2,000 L/min	2,000 L/min

If the buildings are contiguous, use a minimum of 8,000 L/min. Also consider Note H.

OUTLINE OF PROCEDURE

A. Determine the type of construction.

B. Determine the ground floor area.

C. Determine the height in storeys.

D. Using the fire flow formula, determine the required fire flow to the nearest 1,000 L/min.

E. Determine the increase or decrease for occupancy and apply to the value obtained in D above. Do not round off the answer.

F. Determine the decrease, if any, for automatic sprinkler protection. Do not round off the value.

G. Determine the total increase for exposures, Do not round off the value.

H. To the answer obtained in E, subtract the value obtained in F and add the value obtained in G.

The final figure is customarily rounded off to the nearest 1,000 L/min.

APPENDIX

TYPES OF CONSTRUCTION

For the specific purpose of using the Guide, the following definitions may be used:

Fire-Resistive Construction - Any structure that is considered fully protected, having at least 3-hour rated structural members and floors. For example, reinforced concrete or protected steel.

Non-combustible Construction - Any structures having all structural members including walls, columns, piers, beams, girders, trusses, floors, and roofs of non-combustible material and not qualifying as fire-resistive construction. For example, unprotected metal buildings.

Ordinary Construction - Any structure having exterior walls of masonry or such non-combustible material, in which the other structural members, including but not limited to columns, floors, roofs, beams, girders, and joists, are wholly or partly of wood or other combustible material.

Wood Frame Construction - Any structure in which the structural members are wholly or partly of wood or other combustible material and the construction does not qualify as ordinary construction.

OCCUPANCIES

Examples of Low Hazard Occupancies:

Apartments
Asylums
Churches
Clubs
Colleges & Universities
Dormitories
Dwellings
Hospitals
Hotels
Institutions
Libraries, except Large Stack Room Areas
Museums
Nursing, Convalescent and Care Homes
Office Buildings
Prisons
Public Buildings
Rooming Houses
Schools
Tenements

Generally, occupancies falling in National Building Code Groups A, B, C and D are of this class.

Examples of High Hazard Occupancies:

- Aircraft Hangars
- Cereal, Feed, Flour and Grist Mills
- Chemical Works - High Hazard
- Cotton Picker and Opening Operations
- Explosives & Pyrotechnics Manufacturing
- Shade Cloth Manufacturing
- Foamed Plastics, Storage or use in Manufacturing
- High Piled Combustibles Storage in excess of 6.5 metres high
- Linseed Oil Mills
- Match Manufacturing
- Oil Refineries
- Paint Shops
- Pyroxylin Plastic Manufacturing & Processing
- Solvent Extracting
- Varnish and Paint Works
- Woodworking with Flammable Finishing
- Linoleum and Oilcloth Manufacturing

Other occupancies involving processing, mixing storage and dispensing flammable and/or combustible liquids. Generally, occupancies falling in National Building Code Group F, Divisions 1 and 2 would be in this class.

For other occupancies, good judgment should be used, and the percentage increase will not necessarily be the same for all buildings that are in the same general category - for example "Colleges and Universities": this could range from a 25% decrease for buildings used only as dormitories to an increase for a chemical laboratory. Even when considering high schools, the decrease should be less if they have extensive shops.

It is expected that in commercial buildings no percentage increase or decrease for occupancy will be applied in most of the fire flow determinations. In general, percentage increase or decrease will not be at the limits of plus or minus 25%.

EXPOSURES

When determining exposures it is necessary to understand that the exposure percentage increase for a fire in a building (x) exposing another building (y) does not necessarily equal the percentage increase when the fire is in building (y) exposing building (x). The Guide gives the maximum possible percentage for exposure at specified distances. However, these maximum possible percentages should not be used for all exposures at those distances. In each case the percentage applied should reflect the actual conditions but should not exceed the percentage listed.

The maximum percentage for the separations listed generally should be used if the exposed building meets all of the following conditions:

a. Same type or a poorer type of construction than the fire building.
b. Same or greater height than the fire building.
c. Contains unprotected exposed openings.
d. Unsprinklered.

CONVERSION FACTORS

Multiply	By	To Obtain
Centimetre	0.3937	Inches
Cubic Foot	0.0283	Cubic Metres
Cubic Metre	35.3145	Cubic Feet
Cubic Metre	219.97	Imperial Gallons
Cubic Metre	1.000	Litres
Foot	0.3048	Metres
Horsepower	0.7457	Kilowatt
Imperial Gallon	4.546	Litres
Inch	2.54	Centimetres
Kilogram	2.2046	Pounds
Kilogram of Water	1	Litres
Kilopascal	0.1450	Pounds per sq. inch
Kilowatt	1.341	Horsepower
Litre	0.21997	Imperial Gallons
Litre of Water	1	Kilograms
Metre	3.281	Feet
Metre of Water	10	Kilopascals
Pound	0.4536	Kilograms
Pound per sq. inch	6.89476	Kilopascals
U.S. Gallons	0.8327	Imperial Gallons
Imperial Gallons	1.201	U.S.Gallons

APPENDIX B Insurance Grading Recognition of Used or Rebuilt Fire Apparatus

TECHNICAL BULLETIN

FIRE UNDERWRITERS SURVEY™

A Service to Insurers and Municipalities

INSURANCE GRADING RECOGNITION OF USED OR REBUILT FIRE APPARATUS

The performance ability and overall acceptability of older apparatus has been debated between municipal administrations, the public fire service and many others for years. Fire Underwriters Survey (FUS) has reviewed experiences across Canada and in other countries and has developed a standard for acceptance of apparatus as the apparatus becomes less reliable with age and use.

The public fire service is unique compared to other emergency services in that fire apparatus vehicles are not continuously in use. However, when in use, the apparatus is subject to considerable mechanical stress due to the nature of its function. This stress does not normally manifest itself on the exterior of the equipment. It is effectively masked in most departments by a higher standard of aesthetic care and maintenance. Lack of replacement parts further complicates long term use of apparatus. Truck and pump manufacturers maintain a parts inventory for each model year for a finite time. After that period, obtaining necessary parts may be difficult. This parts shortage is particularly acute with fire apparatus due to the narrow market for these devices.

Fire Underwriters Survey lengthy experience in evaluating fire apparatus indicates that apparatus should be designed to an acceptable standard. The standard that is accepted throughout Canada by Fire Underwriters Survey is the Underwriters' Laboratories of Canada (ULC) Standard S515 (most updated version) titled, "Automobile Fire Fighting Apparatus," which was adopted as a National Standard of Canada in September 2004. Alternatively, NFPA 1901, the Standard for Automotive Fire Apparatus (most updated version) is also accepted by Fire Underwriters Survey with respect to apparatus design. Fire apparatus should be built by recognized manufacturers and tested by a suitably accredited third party.

Fire apparatus should respond to first alarms for the first fifteen years of service. During this period it has reasonably been shown that apparatus effectively responds and performs as designed without failure at least 95% of the time. For the next five years, it should be held in reserve status for use at major fires or used as a temporary replacement for out-of-service first line apparatus. Apparatus should be retired from service at twenty years of age. Present practice indicates the recommended service periods and protocols are usually followed by the first purchaser. However, at the end of that period, the apparatus is either traded in on new apparatus or sold to another fire department. At this juncture, the unit may have one or more faults which preclude effective use for emergency service. These deficiencies include:

a. Inadequate braking system
b. Slow pick-up and acceleration

c. Structurally weakened chassis due to constant load bearing and/or overloading
d. Pump wear

FUS has modified its application of the age requirement for used or rebuilt apparatus. Due to municipal budget constraints within small communities we have continued to recognize apparatus over twenty years of age, provided the truck successfully meets the recommended annual tests and has been deemed to be in excellent mechanical condition. The specified service tests are outlined below under the heading "Recommended Service Tests for Used or Modified Fire Apparatus". Testing and apparatus maintenance should only be completed by a technician who is certified to an appropriate level in accordance with NFPA 1071, *Standard for Emergency Vehicle Technician Professional Qualifications*.

Insurance grading recognition may be extended for a limited period of time if we receive documentation verifying that the apparatus has successfully passed the specified tests. If the apparatus does not pass the required tests or experiences long periods of "downtime" we may request the municipal authority to replace the equipment with new or newer apparatus. If replacement does not occur, fire insurance grading recognition may be revoked for the specific apparatus which may adversely affect the fire insurance grades of the community. This can also affect the rates of insurance for property owners throughout the community.

Table 1 Service Schedule for Fire Apparatus For Fire Insurance Grading Purposes

Apparatus Age	Major Cities [3]	Medium Sized Cities [4]	Small Communities [5] and Rural Centres
0 – 15 Years	First Line Duty	First Line Duty	First Line Duty
16 – 20 Years	Reserve	2nd Line Duty	First Line Duty
20 – 25 Years [1]	No Credit in Grading	No Credit in Grading *or* *Reserve [2]*	No Credit in Grading *or* *2nd Line Duty [2]*
26 – 29 Years [1]	No Credit in Grading	No Credit in Grading *or* *Reserve [2]*	No Credit in Grading *or* *Reserve [2]*
30 Years +	No Credit in Grading	No Credit in Grading	No Credit in Grading

[1] All listed fire apparatus 20 years of age and older are required to be service tested by recognized testing agency on an annual basis to be eligible for grading recognition. (NFPA 1071)

[2] Exceptions to age status may be considered in a small to medium sized communities and rural centres conditionally, when apparatus condition is acceptable and apparatus successfully passes required testing.

[3] Major Cities are defined as an incorporated or unincorporated community that has:
- *a populated area (or multiple areas) with a density of at least 400 people per square kilometre; AND*
- *a total population of 100,000 or greater.*

[4] Medium Communities are defined as an incorporated or unincorporated community that has:
- *a populated area (or multiple areas) with a density of at least 200 people per square kilometre; AND/OR*
- *a total population of 1,000 or greater.*

[5] Small Communities are defined as an incorporated or unincorporated community that has:
- *no populated areas with densities that exceed 200 people per square kilometre; AND*
- *does not have a total population in excess of 1,000.*

Table 2 Frequency of Listed Fire Apparatus Acceptance and Service Tests

	Frequency of Test					
	@ Time of Purchase New or Used	**Annual Basis**	**@ 15 Years**	**@ 20 Years** *See Note 4*	**20 to 25 Years (annually)**	**After Extensive Repairs** *See Note 5*
Recommended For Fire Insurance Purposes	Acceptance Test if new; Service Test if used & < 20 Years	Service Test	Acceptance Test	Acceptance Test	Acceptance Test	Acceptance or Service Test depending on extent of repair
Required For Fire Insurance Purposes	Acceptance Test if new; Service Test if used & < 20 Years	No Test Required	No Test Required	Acceptance Test	Acceptance Test	Acceptance or Service Test depending on extent of repair
Factor in FUS Grading	Yes	Yes	Yes	Yes	Yes	Yes
Required By Listing Agency	Acceptance Test	No	No	No	N/A	Acceptance Test
Required By NFPA *See Note 6*	Acceptance Test	Annual Service Test	Annual Service Test	Annual Service Test	Annual Service Test	Service Test

Note 1: See: 'Service Tests for Used or Rebuilt Fire Apparatus' for description of applicable tests
Note 2: Acceptance Tests consist of 60 minute capacity and 30 minute pressure tests
Note 3: Service Tests consist of 20 minute capacity test and 10 minute pressure test in addition to other listed tests
Note 4: Apparatus exceeding 20 years of age may not be considered to be eligible for insurance grading purposes regardless of testing. Application must be made in writing to Fire Underwriters Survey for an extension of the grade-able life of the apparatus.
Note 5: Testing after extensive repairs should occur regardless of apparatus age within reason.
Note 6: Acceptance Tests: See NFPA 1901, Standard for Automotive Fire Apparatus
Service Tests: See NFPA 1911, Standard for Service Tests of Fire Pump Systems on Fire Apparatus, Article 5.1

SERVICE TESTS FOR USED OR MODIFIED FIRE APPARATUS

The intent of this document is to ensure that all used or modified fire apparatus, equipped with a pump or used for tanker service, essentially meet the requirements of Underwriters' Laboratories of Canada (ULC) "Standard for Automobile Fire Fighting Apparatus" S515-04 or subsequent (current) editions of the Standard. Full adherence with the following specified tests is recommended when purchasing used apparatus.

Weight Tests

Load Balance Test:

When fully laden (including a 460kg (1000 lbs) personnel weight, full fuel and water tanks, specified load of hose and miscellaneous equipment), the vehicle shall have a load balance of 22% to 50% of total vehicle mass on the front axle and 50% to 78% of this mass on the rear axle.

Distribution of mass of 33% and 67% respectively on the front and rear axles is preferable for a vehicle having dual rear tires or tandem rear axles.

For a vehicle having tandem rear axles and dual tires on each axle, a loading of between 18% and 25% on the front axle with the balance of mass on the rear axles is permissible.

Road Tests

Acceleration Tests:

2.1.1) From a standing start, the apparatus shall attain a true speed of 55 km/h (35 mph) within 25 seconds for Pumpers carrying up to 3,150 litres (700 gallons) of water.

For apparatus carrying in excess of 3,150 litres (700 gallons) or apparatus equipped with aerial ladders or elevating platforms, a true speed of 55 km/h (35 mph) in 30 seconds should be attained.

2.1.2) The vehicle should attain a top speed of at least 80 km/h (50mph).

Braking Test:

The service brakes shall be capable of bringing the fully laden apparatus to a complete stop from an initial speed of 30 km/h (20 mph) in a distance not exceeding 9 metres (30 feet) by actual measurement. The test should be conducted on a dry, hard surfaced road that is free of loose material, oil and grease.

Pump Performance Tests

Hydrostatic Test

Recent evidence of hydrostatic testing of the pump for 10 minutes at a minimum pressure of 3,400 kPa (500 psi). APPLICABLE TO NEW OR REBUILT PUMPS ONLY (see 3.3).

Priming and Suction Capability Tests

Vacuum Test:

The pump priming device, with a capped suction at least 6 metres (20 feet) long, shall develop –75 kPa (22 inches of mercury) at altitudes up to 300 metres (1000 feet) and hold the vacuum with a drop of not in excess of 34 kPa (10 inches of mercury) in 10 minutes.

For every 300 metres (1000 feet) of elevation, the required vacuum shall be reduced 3.4 kPa (1 inch mercury).

The primer shall not be used after the 10-minute test period has been started. The test shall be made with discharge outlets uncapped.

Suction Capability Test:

The pump (in parallel or series) when dry, shall be capable of taking suction and discharging water with a lift of not more than 3 metres (10 feet) through 6 metres (20 feet) of suction hose of appropriate size, in not more than 30 seconds and not over 45 seconds for 6000 L/min (1320 Igpm) or larger capacity pumps. Where front or rear suction is provided on midship pumps, an additional 10 seconds priming time will be allowed. The test shall be conducted with all discharge caps removed.

Pump Performance

Capacity Test:

Consists of drafting water (preferably with a 10 feet lift) and pumping the rated capacity at 1000 kPa (150 psi) net pump pressure for a continuous period of at least 1 hour.

Pressure Test:

Under the same conditions as in 3.3.1 above pumping 50% of the rated capacity at 1700 kPa (250 psi) net pump pressure for at least ½ hour

For additional information on the above noted tests and test procedures, the following documents provide useful data:

- Underwriters Laboratories of Canada (ULC) publication titled S515 Standard for Automobile Fire Fighting Apparatus, latest edition.

- Fire Underwriters Survey (FUS) publication titled Fire Stream Tables and Testing Data latest edition.

- International Fire Service Training Association (IFSTA) publication titled Fire Department Pumping Apparatus, latest edition.

- National Fire Protection Association (NFPA) 1901 Standard for Automotive Fire Apparatus, latest edition.

- National Fire Protection Association (NFPA) 1911 Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus, latest edition.

- National Fire Protection Association (NFPA) 1912 Standard for Fire Apparatus Refurbishing, latest edition.

For further information regarding the acceptability of emergency apparatus for fire insurance grading purposes, please contact:

Western Canada	Quebec	Ontario	Atlantic Canada
Risk Management Services Fire Underwriters Survey 3999 Henning Drive Burnaby, BC V5C 6P9 1-800-665-5661	Risk Management Services Fire Underwriters Survey 1611 Crémazie Blvd. East Montreal, Quebec H2M 2P2 1-800-263-5361	Risk Management Services Fire Underwriters Survey 150 Commerce Valley Drive, West Markham, Ontario L3T 7Z3 1-800- 268-8080	Risk Management Services Fire Underwriters Survey 238 Brownlow Avenue, Suite 300 Dartmouth, Nova Scotia B3B 1Y2 1-800-639-4528

APPENDIX C White Rock Fire Rescue Fire Hall Summary

White Rock Fire Hall

Address	15315 Pacific Avenue, White Rock, BC
Year Built & Type of Construction	1992, Non-Combustible
Response Facility Type (Fire/Paramedic/Both)	Fire
Number of Storeys	2 Admin / 1 Bay
Number of Bays	4
Drive Through/Single Access Bays	Drive through (all 4)
Sprinkler/Non-Sprinkler/Partial	Sprinklered
Back-Up Power Supply	Generator
Emergency Lighting	Yes
Vehicle Exhaust System	Room exhaust system
Training Tower Available	Yes
Hose Drying (Tower/Rack/Cabinet/Etc)	Tower
SCBA Filling Station	Yes, separate room
PPC Washer/Dryer	Washer, hang dry
Spare Equipment, Storage, Repair Space	Bunker gear room, repair room, storage loft
Bay Area Comments	Adequate space around apparatus. Loft built over north west bay area for storage
Administration Space Comments	Captain office/sleeping quarters, radio room, administrator space, office for Deputy's, separate Fire Chief office
Living Space Comments	Bunk area in same room as lecture room separated by partition, male locker room/shower (no career female on staff), kitchen/living area
Training Space Comments	Lecture room with projector, fitness room, training tower, pumper pit, standpipe, hydrant

APPENDIX D Requirements for Aerial Apparatus

TECHNICAL BULLETIN

FIRE UNDERWRITERS SURVEY™

A Service to Insurers and Municipalities

LADDERS AND AERIALS: WHEN ARE THEY REQUIRED OR NEEDED?

Numerous standards are used to determine the need for aerial apparatus and ladder equipment within communities. This type of apparatus is typically needed to provide a reasonable level of response within a community when buildings of an increased risk profile (fire) are permitted to be constructed within the community.

Please find the following information regarding the requirements for aerial apparatus/ladder companies from the Fire Underwriters Survey Classification Standard for Public Fire Protection.

Fire Underwriters Survey

Ladder/Service company operations are normally intended to provide primary property protection operations of

1.) Forcible entry;
2.) Utility shut-off;
3.) Ladder placement;
4.) Ventilation;
5.) Salvage and Overhaul;
6.) Lighting.

Response areas with 5 buildings that are 3 stories or 10.7 metres (35 feet) or more in height, or districts that have a Basic Fire Flow greater than 15,000 LPM (3,300 IGPM), or any combination of these criteria, should have a ladder company. The height of all buildings in the community, including those protected by automatic sprinklers, is considered when determining the number of needed ladder companies.
When no individual response area/district alone needs a ladder company, at least one ladder company is needed if the sum of buildings in the fire protection area meets the above criteria."

The needed length of an aerial ladder, an elevating platform and an elevating stream device shall be determined by the height of the tallest building in the ladder/service district (fire protection area) used to determine the need for a ladder company. One storey normally equals at least 3 metres (10 feet). Building setback is not to be considered in the height determination. An allowance is built into the ladder design for normal access. The maximum height needed for grading purposes shall be 30.5 metres (100 feet).

Exception: When the height of the tallest building is 15.2 metres (50 feet) or less no credit shall be given for an aerial ladder, elevating platform or elevating stream device that has a length less than 15.2 metres (50 feet). This provision is necessary to ensure that the water stream from an elevating stream device has additional "reach" for large area, low height buildings, and the aerial ladder or elevating platform may be extended to compensate for possible topographical conditions that may exist. See Fire Underwriters Survey - Table of Effective Response (attached).

Furthermore, please find the following information regarding communities' need for aerial apparatus/ladder companies within the National Fire Protection Association.

NFPA

Response Capabilities: The fire department should be prepared to provide the necessary response of apparatus, equipment and staffing to control the anticipated routine fire load for its community.

NFPA *Fire Protection Handbook, 20th Edition* cites the following apparatus response for each designated condition:

HIGH-HAZARD OCCUPANCIES (schools, hospitals, nursing homes, explosive plants, refineries, high-rise buildings, and other high-risk or large fire potential occupancies):

*At least four pumpers, **two ladder trucks** (or combination apparatus with equivalent capabilities), two chief officers, and other specialized apparatus as may be needed to cope with the combustible involved; not fewer than 24 firefighters and two chief officers.*

MEDIUM-HAZARD OCCUPANCIES (apartments, offices, mercantile and industrial occupancies not normally requiring extensive rescue or firefighting forces):

*At least three pumpers, **one ladder truck** (or combination apparatus with equivalent capabilities), one chief officer, and other specialized apparatus as may be needed or available; not fewer than 16 firefighters and one chief officer.*

LOW-HAZARD OCCUPANCIES (one-, two-, or three-family dwellings and scattered small businesses and industrial occupancies):

*At least two pumpers, **one ladder truck** (or combination apparatus with equivalent capabilities), one chief officer, and other specialized apparatus as may be needed or available; not fewer than 12 firefighters and one chief officer.*

In addition to the previous references, the following excerpt from the 2006 BC Building Code is also important to consider when selecting the appropriate level of fire department response capacity and building design requirements with regard to built-in protection levels (passive and active fire protection systems).

Excerpt: National Building Code 2006

A-3 Application of Part 3.

In applying the requirements of this Part, it is intended that they be applied with discretion to buildings of unusual configuration that do not clearly conform to the specific requirements, or to buildings in which processes are carried out which make compliance with particular requirements in this Part impracticable. The definition of "building" as it applies to this Code is general and encompasses most structures, including those which would not normally be considered as buildings in the layman's sense. This occurs more often in industrial uses, particularly those involving manufacturing facilities and equipment that require specialized design that may make it impracticable to follow the specific requirements of this Part. Steel mills, aluminum plants, refining, power generation and liquid storage facilities are examples. A water tank or an oil refinery, for example, has no floor area, so it is obvious that requirements for exits from floor areas would not apply. Requirements for structural fire protection in large steel mills and pulp and paper mills, particularly in certain portions, may not be practicable to achieve in terms of the construction normally used and the operations for which the space is to be used. In other portions of the same building, however, it may be quite reasonable to require that the provisions of this Part be applied (e.g., the office portions). Similarly, areas of industrial occupancy which may be occupied only periodically by service staff, such as equipment penthouses, normally would not need to have the same type of exit facility as floor areas occupied on a continuing basis. It is expected that judgment will be exercised in evaluating the application of a requirement in those cases when extenuating circumstances require special consideration, provided the occupants' safety is not endangered.

The provisions in this Part for fire protection features installed in buildings are intended to provide a minimum acceptable level of public safety. It is intended that all fire protection features of a building, whether required or not, will be designed in conformance with good fire protection engineering practice and will meet the appropriate installation requirements in relevant standards. Good design is necessary to ensure that the level of public safety established by the Code requirements will not be reduced by a voluntary installation.

Firefighting Assumptions

The requirements of this Part are based on the assumption that firefighting capabilities are available in the event of a fire emergency. These firefighting capabilities may take the form of a

paid or volunteer public fire department or in some cases a private fire brigade. If these firefighting capabilities are not available, additional fire safety measures may be required.

Firefighting capability can vary from municipality to municipality. Generally, larger municipalities have greater firefighting capability than smaller ones. Similarly, older, well established municipalities may have better firefighting facilities than newly formed or rapidly growing ones. The level of municipal fire protection considered to be adequate will normally depend on both the size of the municipality (i.e., the number of buildings to be protected) and the size of buildings within that municipality. Since larger buildings tend to be located in larger municipalities, they are generally, but not always, favoured with a higher level of municipal protection.

Although it is reasonable to consider that some level of municipal firefighting capability was assumed in developing the fire safety provisions in Part 3, this was not done on a consistent or defined basis. The requirements in the Code, while developed in the light of commonly prevailing municipal fire protection levels, do not attempt to relate the size of building to the level of municipal protection. **The responsibility for controlling the maximum size of building to be permitted in a municipality in relation to local firefighting capability rests with the municipality. If a proposed building is too large, either in terms of floor area or building height, to receive reasonable protection from the municipal fire department, fire protection requirements in addition to those prescribed in this Code, may be necessary to compensate for this deficiency.** Automatic sprinkler protection may be one option to be considered.

Alternatively, the municipality may, in light of its firefighting capability, elect to introduce zoning restrictions to ensure that the maximum building size is related to available municipal fire protection facilities. This is, by necessity, a somewhat arbitrary decision and should be made in consultation with the local firefighting service, who should have an appreciation of their capability to fight fires.

The requirements of Subsection 3.2.3. are intended to prevent fire spread from thermal radiation assuming there is adequate firefighting available. It has been found that periods of from 10 to 30 minutes usually elapse between the outbreak of fire in a building that is not protected with an automatic sprinkler system and the attainment of high radiation levels. During this period, the specified spatial separations should prove adequate to inhibit ignition of an exposed building face or the interior of an adjacent building by radiation. Subsequently, however, reduction of the fire intensity by firefighting and the protective wetting of the exposed building face will often be necessary as supplementary measures to inhibit fire spread.

In the case of a building that is sprinklered throughout, the automatic sprinkler system should control the fire to an extent that radiation to neighbouring buildings should be minimal. Although there will be some radiation effect on a sprinklered building from a fire in a neighbouring building, the internal sprinkler system should control any fires that might be ignited in the building and thereby minimize the possibility of the fire spreading into the exposed building. NFPA 80A, “Protection of Buildings from Exterior Fire Exposures,” provides additional information on the possibility of fire spread at building exteriors.

The water supply requirements for fire protection installations depend on the requirements of any automatic sprinkler installations and also on the number of fire streams that may be needed at any fire, having regard to the length of time the streams will have to be used. Both these factors are largely influenced by the conditions at the building to be equipped, and the quantity and pressure of water needed for the protection of both the interior and exterior of the building must be ascertained before the water supply is decided upon. Acceptable water supplies may be a public waterworks system that has adequate pressure and discharge capacity, automatic fire pumps, pressure tanks, manually controlled fire pumps in combination with pressure tanks, gravity tanks, and manually controlled fire pumps operated by remote control devices at each hose station.

For further information regarding the acceptability of emergency apparatus for fire insurance grading purposes, please contact:

Western Canada	Quebec	Ontario	Atlantic Canada
Fire Underwriters Survey	Fire Underwriters Survey	Fire Underwriters Survey	Fire Underwriters Survey
3999 Henning Drive	1611 Crémazie Blvd. East	150 Commerce Valley Drive, West	238 Brownlow Avenue, Suite 300
Burnaby, BC V5C 6P9	Montreal, Quebec H2M 2P2	Markham, Ontario L3T 7Z3	Dartmouth, Nova Scotia B3B 1Y2
1-800-665-5661	1-800-263-5361	1-800- 268-8080	1-800-639-4528

APPENDIX E Dwelling Protection Grade Summary of Basic Requirements

Dwelling Protection Grade Summary of Basic Requirements per Fire Station[i]				
DWELLING PROTECTION GRADE	**WATER WORKS SYSTEM**	**FIRE DEPARTMENT**		**CORRELATION WITH PFPC[ii] Public Fire Protection Classification**
		EQUIPMENT	**FIREFIGHTERS[iii]**	
1	Water supply system designed in accordance with Fire Underwriters Survey standard "Water Supply for Public Fire Protection" with a relative classification of 5 or better	Response from within 8 km by road of a triple combination pumper	Minimum Response: - On-duty: 3 career fire fighters, plus - Off-duty: fire chief or other officer	Water Supply and Fire Department must grade PFPC Relative Class 5 or better
2	Water supply system designed in accordance with Fire Underwriters Survey standard "Water Supply for Public Fire Protection" with a relative classification of 6 or better	Response from within 8 km by road of a triple combination pumper	Minimum Response: - On-duty: 1 career fire fighters, plus - On-call: 15 auxiliary fire fighters	Water Supply and Fire Department must grade PFPC Relative Class 6 or better
3A	Water supply system designed in accordance with, and meeting the minimum requirements of, Fire Underwriters Survey standard "Water Supply for Public Fire Protection"	Response from within 8 km by road of a triple combination pumper	15 auxiliary fire fighters	No Public Fire Protection Classification required
3B	Not required – however fire department must have adequate equipment, training and access to approved water supplies to deliver standard shuttle service in accordance with NFPA 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting	2 units required. Triple combination pumper plus a mobile water supply with a combined water carrying capacity of not less than 6,820 L (1,500 IG)	15 auxiliary fire fighters	No Public Fire Protection Classification required
4[3]	Not required – however fire department must have adequate equipment, training and access to approved water supplies to deliver shuttle service in accordance with NFPA 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting	2 units required. Triple combination pumper plus a mobile water supply with a combined water carrying capacity of not less than 6,820 L (1,500 IG)	15 auxiliary fire fighters	No Public Fire Protection Classification required
5	Unprotected communities or communities not qualifying for Grades 1, 2, 3A, 3B, or 4 above	Unprotected communities or communities not qualifying for Grades 1, 2, 3A, 3B, or 4 above	Unprotected communities or communities not qualifying for Grades 1, 2, 3A, 3B, or 4 above	No Public Fire Protection Classification required

[i] Refer to additional notes and requirements for interpretation

[ii] The P.F.P.C. is a sophisticated municipal fire protection grading system utilized for Commercial Lines insurance. PFPC fire insurance grades are scaled from 1 to 10. One (1) represents a high level of fire protection and 10 indicates little or no recognized fire protection. This system evaluates the ability of a community's fire defences to prevent and control major fires that may occur in commercial, industrial and institutional buildings and/or districts.

[iii] Requirements for Dwelling Protection Grade 4 are the same as for Dwelling Protection Grade 3B, however in some cases, an allowance may be considered for Dwelling Protection Grade 4 where all of the criteria for Dwelling Protection Grade 3B have been met with one exception. If more than one criteria has not been met (ex. less than 15 auxiliary fire fighters and a single pumper apparatus) Dwelling Protection Grade 5 is applied.

Where Dwelling Protection Grade 4 is applied, a signed letter of intent from the community is to be sent to Fire Underwriters Survey indicating that improvements will be made, within an agreed timeframe, to meet the criteria of Dwelling Protection Grade 3B.

It is important to note that the absolute minimum number of auxiliary fire fighters considered within the fire insurance grading is 10 and that maximum age of apparatus that can be considered is 30.

Stephanie Lam

Subject: FW: Grants available to Charities in White Rock

From: John Lawson <jlawson@surreycares.org>
Date: June 6, 2020 at 1:12:13 PM PDT
To: Helen Fathers <HFathers@whiterockcity.ca>
Cc: "cbuttkus@surreycares.org" <cbuttkus@surreycares.org>, SurreyCares Foundation <info@surreycares.org>
Subject: Grants available to Charities in White Rock

Mrs. Helen Fathers
Councillor, City of White Rock
15322 Buena Vista Avenue
White Rock, BC V4B 1Y6

June 6th, 2020

Dear Councillor Fathers,

We hope this letter finds you and your family healthy during this pandemic.

On behalf of **SurreyCares Community Foundation**, I am writing to inform you that our foundation are taking part in the **Government of Canada's new $350M Emergency Community Support Fund** (ECSF), alongside many other foundations in Canada and with partners at the Canadian Red Cross and United Way Centraide Canada. As you are likely aware, this new Emergency Fund aims to support charities and non-profit organizations who are serving vulnerable populations disproportionately affected by COVID-19.

We are concerned about the ways in which the COVID-19 pandemic is impacting vulnerable Canadians in our community. We also want to ensure that charities in our area have the support they need to continue their important support in the fight against COVID-19. Through the ECSF, we are looking forward to providing much-needed funding to local charities offering front-line support to those who need it most. As of May 19, 2020, qualified donees working with vulnerable populations can apply to SurreyCares Community Foundation for a grant of up to **$75,000.** Because White Rock does not have a Community Foundation we have taken in on as a neighbour to extend this helping hand.

As a leader in your community, we encourage you to share information about the Fund with your constituents. Please feel free to direct them to our foundation's website (www.surreycares.org) for more information, this went live **on Tuesday May 19, 2020**.

Going forward, Community Foundations of Canada will maintain a running list of all the grants being disbursed in communities across Canada.

If you have any questions about our participation in the Fund or response efforts more generally, please do not hesitate to contact me.

Sincerely,

John Lawson, Chair
SurreyCares Community Foundation
C: 604-807-1972 O: 604-591-2699

Our Vision for Surrey is ***"a giving, connected community"***
Our Mission is to ***"inspire donors, grow endowments and invest in people"***

Check out our website @ www.surreycares.org

ON TABLE:
REGULAR COUNCIL – JUNE 15, 2020
QUESTION & ANSWER PERIOD UPDATE & LATE SUBMISSIONS: (ITEM 4)

Due to the COVID-19 global pandemic, Question and Answer Period has been temporarily suspended until further notice. The following items were addressed to Mayor and Council by emailing ClerksOffice@whiterockcity.ca with "Question and Answer Period" noted in the subject line.

Questions, comments, along with the response/information, will be noted on the City's website *following the scheduled Council meeting.* Correspondents will also be provided the response/information.

THE FOLLOWING INFORMATION, INCLUDING NOTED ON TABLE WAS RECEIVED BY 8:30 A.M. ON MONDAY, JUNE 15, 2020 (TODAY).

4a. Heather C., expressing concerns regarding the increase of cars and trucks along North Bluff Road and requesting the RCMP increase surveillance along the hospital corridor

Staff Sergeant Pauls, White Rock RCMP, advised the following:

RCMP have a number of areas with concerns for speeding. We are currently developing a website that will allow the public to identify their concerns and also provide information of police enforcement activity. Once are volunteers are back from a hold due to COVID, we have a new speed measuring device that will be set up for long periods of time in certain areas to provide an objective picture of the times and severity of speeding, which will be used to intelligently deploy our enforcement and our speed watch volunteers.

4b. M. Desmarais, requesting the City provide statistics by the City / RCMP regarding the number of tickets issued for speed and noise violations since the City's request for increased enforcement

Staff Sergeant Pauls, White Rock RCMP, advised that end of June/beginning of July the RCMP will release the second quarterly report and this topic will be included.

4c. R. Wallace, requesting the City permit the "Artist Walk" be reinstated with physical distancing measures in the City of White Rock

There are two (2) documents attached to this report with respect to this submission:

i. The Manager of Culture Services provided a memo in response to this item (attached).
ii. Mr. Wallace provided an additional submission following the publication of the agenda, and is also provided On Table with Agenda item 4.1c for Council's information.

4d. T. Erwin, requesting Council consider implementing an "Empty Commercial Space" fee

In Council's 2018-2022 Strategic Priorities, the issue of a "Vacant Property Tax" is identified as requiring advocacy with the Provincial Ministry of Finance in order to advance.

Further, at the Regular Council meeting on June 24, 2019, Council passed the following resolution [#2019-265]

THAT Council:

1. Introduces to this agenda the following resolution regarding Annual Vacancy Tax; and

2. Endorses the following to be forwarded to the Union of British Columbia of Municipalities (UBCM) for the 2019 convention:

WHEREAS The City of Vancouver has authority through the Vancouver Charter to implement an Annual Vacancy Tax

WHEREAS The City of White Rock is governed through the Community Charter where there is no current authority to implement a Vacancy Tax and it is believed that there are a number of vacant residential and commercial properties in the City of White Rock

THEREFORE BE IT RESOLVED THAT the City of White Rock request that UBCM work with the Province of British Columbia to amend the authority given to Local Governments through the Community Charter permitting municipalities the authority to impose, by bylaw, an annual vacancy tax on taxable residential and commercial properties, and that the criteria and administrative requirements be similar to those of the Vancouver Charter.

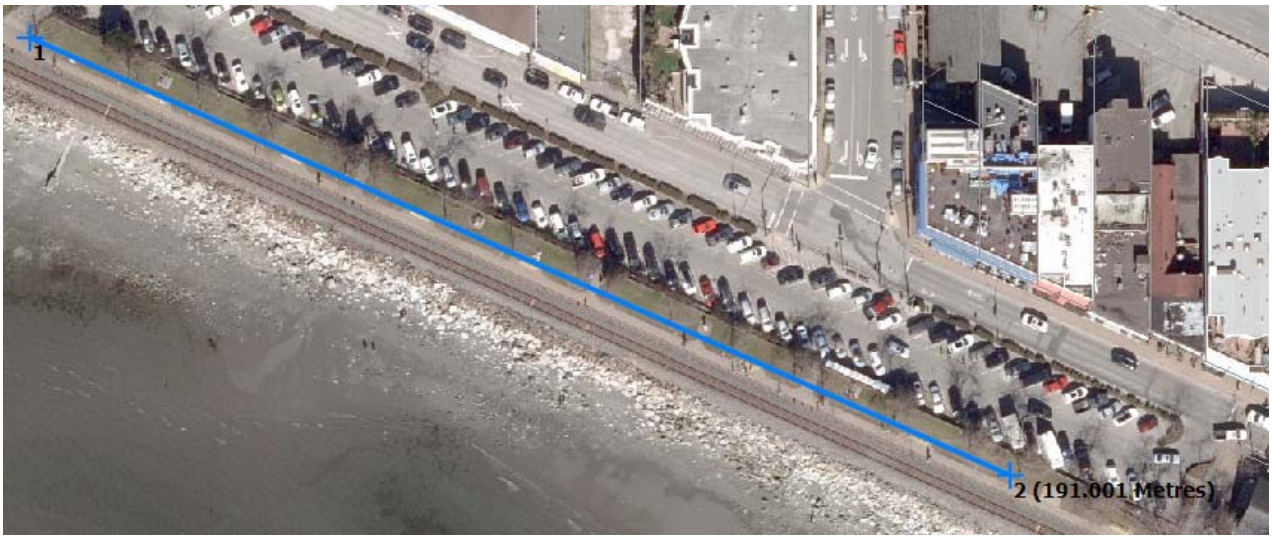
Memo to Council - June 11, 2020 – Artists Walk

2019 Artists and the Artists Walk Program

Fourteen artists participated in the 2019 Artists Walk. Under the program, permitted artists may set up, display and sell their artwork. There is a $150 fee to the City for the membership and artists retain 100% of their proceeds. Artists must attend and may not send agents or representatives in their place.

Location

The picture below shows the grass area, just west of the museum, where artists are normally located. The total area is approximately 191M. We have never had to decline an artist due to space limitations. Each artist work area may not exceed six square meters (approximately 2mx3m).



2020 Communication and Support for Artists

Due to the Covid situation, no 2020 artists are registered in the program. We emailed all existing artists right away when we closed the promenade and respond to new inquiries with updates. As we monitor the Provincial Health Orders, we update the website. We plan to email the 2019 artists and those that have inquired, once we are able to accept 2020 applications.

To support the 2019 artists that were unable to return due to COVID, we emailed an invitation to participate in the online vendor marketplace for Canada Day 2020. We have connected any artist interested with information on how to get involved and show their art online through our Story Mapping software. This will allow the artists to connect with customers online through the City's busy platform.

The City is also promoting local artists during this difficult time including featuring online art shows in partnership with the Semiahmoo Arts Society.

Considerations before re-opening

The previous set up of the artist walk tents along the grass next to the promenade could pose some problems under the current Provincial Health Orders.

Physical Distancing for users of the Promenade

Walkers on the promenade have to maintain a physical distance of 2M. In order to comply with the Provincial Health Order, walkers will often veer onto the grass to avoid being too close to others on the walkway.

Re-thinking how the tents are set back and how walkers are able to walk between or behind to maintain physical distancing, where artwork is stored, and how far down the beach, we want to stretch, will be important for us to comply with the Provincial Health distancing requirements.

Public Health Order

To protect the public from the risk of transmission of the COVID virus at artist stalls, and control of outbreaks arising from a marketplace, we can look to the Provincial Health Officer's updated instructions for *managers* of Farmers' Markets on May 28, 2020 (full order found here) as follows:

- You must encourage customers to maintain a two-metre distance from one another in line-ups to a market entrance, vendors' stalls, washrooms and other places where line-ups may occur, by placing distance indicators.
- You must post signs reminding people to maintain a two-metre distance from one another throughout a market and ensure that there is sufficient space available for customers, market staff and vendors to maintain that distance.
- You must prominently post signs reminding customers to regularly wash their hands or use a hand sanitizer when at a market.

Summary

Agreement between the Provincial Health Authority, artists, and cross-municipal departments (i.e. Parks, By-Laws, Communications, Recreation & Culture) to determine a new layout, changes to policies and procedures, and consideration of how the above restrictions would be monitored and maintained without an Artist Walk manager present, needs to be done before re-opening of the Artists Walk.

ON TABLE
REGULAR - JUNE 15, 2020
RE: ITEM 4.1c -ii

From: Virtual Edge
To: Clerk"s Office
Subject: Question and Answer Period
Date: June 13, 2020 11:10:11 AM
Attachments: dlanaliipaickekb.png
Proposed-signs-Ric-Wallace.pdf

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Emma

I have attached a PDF which that can be printed out SIZE AS in colour on letter size paper and shared with members council when the issue of **artists at the beach is talked about on June 15.**

I can design any sign at any size if the city think it is required **at my own expense for my setup. Other artist have the ability to create their own signs to suit their own setups.**

The sign with sea horses will get **NOTICED** and also listing **13 Horizontal postcards** along with 6 feet or 2 meters.
The city has had Sea horse lights on the pier in the past and is on postcards, greeting cards and poster prints I sell.

A medical supply safety manufacturer in New York City, USA liked my posting on Instagram within seconds of posting the attached PDF image.

Thanks for your help.

Ric Wallace

On 6/8/2020 2:25 PM, Clerk's Office wrote:

> Good afternoon Mr. Wallace,
>
> Thank you for your email. Your question/ comment will appear on the agenda for the next regularly scheduled Council meeting on June 15, 2020. The Clerk's Office I will be in contact with you again following that meeting to advise of a response from Council and/ or staff.
>
> Best regards,
>
> **EMMA TUSON**
> Committee Clerk, Corporate Administration
> 15322 Buena Vista Avenue, White Rock, BC V4B 1Y6
> Tel: 604.541.2213 | www.whiterockcity.ca
>
>
>
> **From:** Virtual Edge <virtualedge.ca@gmail.com>
> **Sent:** June 8, 2020 2:14 PM
> **To:** brenda.anderson@peacearchnews.com; editorial@peacearchnews.com; Clerk's Office <ClerksOffice@whiterockcity.ca>
> **Subject:** Question and Answer Period
>
>

PRACTICE PHYSICAL DISTANCING

13

HORIZONTAL POSTCARDS

6 Feet or 2 Meters

We want to see you again!

Interac VISA MasterCard

Ric Wallace ~ ARTographer

RICCO.CA

CrowART.ca

NO CASH - N0 PROBLEM

Pay Pay Square

WHITEROCKBEACHGALLERY.COM

WHITE ROCK RCMP
2020-2023 STRATEGIC PLAN

The White Rock RCMP's three-year Strategic Plan was developed after an environmental scan; an analysis of calls for service; a review of current literature on policing; and consultation with the public, detachment employees, & Mayor and Council.

Our strategic plan is a long term strategy to ensure that the policing service in White Rock is world class. It is a plan available to the public to understand what we are doing to continually adapt to an ever changing society and to be progressive. This strategic plan looks beyond our core responsibility of responding to calls for service and conducting investigations, and provides direction to our overall approach to policing in White Rock.

Based on our consultations, we have identified five priority areas that each have their own strategic objectives. Our detachment will identify current initiatives that are working and develop new initiatives to achieve these objectives.

Priority Areas

"Policing is about addressing the safety and protection needs of the community through connection and accessibility to the police for residents, business owners, and visitors. This three-year plan will focus our strategic leadership and continuous improvement efforts in a variety of areas as to exceed White Rock's desires. It is very rewarding for all of us at the detachment to work in a community that is supportive of their police officers, detachment staff, and volunteers. More importantly, we want you to feel valued when you call upon us to provide a policing service."

Kale Pauls (Staff Sergeant)
White Rock RCMP - Detachment Commander

PRIORITY AREA: Vulnerable Persons

The police have an impactful role in the lives of marginalized people and people that have been victims of crime. Continuous professional development and constant adaptation of procedures are required to ensure that best practices are being followed, and that police maintain awareness of the lived experiences of marginalized and victimized people.

Strategic Objectives	Initiatives	Performance Indicator
Increase accessibility and transparency of processes	1. Develop information on police processes for offences that are typically under-reported	# of products developed
Enhance victim-centered focus	1. Continued education for employees on the victim's experience/perspective.	# of employees completing education sessions
Enhance trauma-informed practice	1. Continued education on trauma informed investigations/ interviews.	# of employees completing education sessions
Strengthen mental Health partnership	1. Development of police mental health liaison with current resources	Establish position and development of process

PRIORITY AREA: Procedural Justice / Confidence in Police

Procedural justice is the manner in which police interact with the public, displaying fairness in process, transparency in actions, provide opportunities for a voice, and demonstrate impartiality. Although this is already a core practice of the White Rock RCMP, this needs to be constantly demonstrated and highlighted to maintain confidence in police.

Strategic Objective	Initiatives	Performance Indicator
Increase communication with the public on issues that matter	1. Development of a communications / media strategy	# of media releases Activity on social media
Increase complainant satisfaction through communication	1. Monitor complainant follow-up on all applicable files	Maintain a high complainant follow-up rate on all applicable files (to be determined)
Increase community engagement activity	1. Continue hosting community events (RCMP/Fire open house, Savvy Seniors, Coffee with Cops, etc) 2. Accessibility to detachment commander	# of engagement activities
Explore equipment available to officers that promote confidence in police	1. Business case to City for in-car camera systems & body cameras 2. Research and business case for less-lethal option (rubber projectile)	Determination of necessity and support for items
Ensure detachment business continuity & autonomy from some current services provided by Surrey	1. Information Technology and protective technical services review/implementation 2. Detachment resource review	Complete reviews/implement recommendations

PRIORITY AREA: Road Safety

Road safety has an impact on everyone - regardless of if you are a driver, passenger, cyclist, pedestrian, resident, or business owner - our roadways surround us and are a defining part of our community. Being safe and feeling safe are key components to this priority area, and the police have a role in addressing this though enforcement and education.

Strategic Objectives	Initiatives	Performance Indicator
Strengthen community and intelligence led traffic enforcement	1. Interactive traffic intelligence website for the community to identify problem locations and for us to communicate our enforcement activity. 2. Volunteers to operate a passive speed monitoring system to understand speeds in specific areas and inform action.	Development of traffic intelligence website # of interactions on the website # of areas surveyed for speed
Increase community quality of life through regulatory enforcement	1. Address noisy vehicles that are not in compliance with the Motor Vehicle Act/Regulation	Reduction in noisy vehicle complaints Increase in enforcement activity
Enhance road safety education	1. Create a video series specific to White Rock to highlight common issues and explain misunderstood traffic laws.	# of engagements

PRIORITY AREA: Reconciliation

The City of White Rock is situated on the traditional unceded territory of the Semiahmoo First Nation and the broader Coast Salish people. In recognition of the history and current situation of Indigenous people in Canada, it is paramount that the employees of the White Rock RCMP detachment are well versed on local Indigenous culture and history. The further understanding of inquiry recommendations will promote better empathy, compassion, and understanding that is applicable to Indigenous people and humanity in general.

Strategic Objectives	Initiatives	Performance Indicator
Continuous Indigenous relationship building	Participation in dialogue and cultural events with the Semiahmoo First Nation	# of dialogue forums / events
Strengthen culturally informed procedures	Develop system to have certain detachment policy reviewed with an Indigenous (and other) cultural lens	# of policy reviews
Missing and Murdered Indigenous Women and Girls (MMIWG) / Truth and Reconciliation Calls for Action - Employee engagement	Education/awareness program for RCMP officers and municipal employees to understand recommendations and calls for action on these important documents	# of internal education events

PRIORITY AREA: Best Practice Leadership

The leadership of a detachment is paramount to an effective, competent, and compassionate police service. Leadership is not one person, but a team approach that understands the perspectives of employees and harnesses the knowledge of the experts on the frontline. Every employee has an important role in leading the detachment to ensure a healthy and inclusive workplace.

Strategic Objectives	Initiatives	Performance Indicator
Strengthen detachment policy and procedure, examining them through the lens of employee wellness	1. Solicit input from employees on the impact of policy on wellbeing	# of policy reviews
Strengthen inclusive internal communication	1. Ensure leadership team meeting summaries are available for all staff 2. Develop internal communication 'media wall'	Internal communications review # of information postings
Enhance employee informed leadership	1. Utilize internal electronic anonymous surveys to solicit opinion and assess detachment operations	# of surveys

White Rock RCMP
2020-2023 Strategic Plan

Finalized Plan

Staff Sergeant Kale Pauls

June 15, 2020

White Rock RCMP

The five identified priorities

Vulnerable Persons

- Increase accessibility and transparency of processes
- Enhance victim-centered focus
- Enhance trauma-informed practice
- Strengthen Mental Health partnership

Procedural Justice / Confidence in Police

- Increase communication with the public on issues that matter
- Increase complainant satisfaction through communication
- Increase community engagement activity
- Explore equipment available to officers that promote confidence in police
- Ensure detachment business continuity & autonomy from some current services provided by Surrey

Road Safety

- Strengthen community and intelligence led traffic enforcement
- Increase community quality of life through regulatory enforcement
- Enhance road safety education

Reconciliation

- Continuous Indigenous relationship building
- Strengthen culturally informed procedures
- Missing and Murdered Indigenous Women and Girls (MMIWG) / Truth and Reconciliation Calls for Action
  - Employee engagement

Best Practice Leadership

- Strengthen detachment policy and procedure, examining them through the lens of employee wellness
- Strengthen inclusive internal communication
- Enhance employee informed leadership

ON TABLE
Regular - June 15, 2020
Re: Item 6.2.2

Proposed Amendments to Planning Procedures Bylaw

Electronic Public Hearings for Liquor and Cannabis Licence Referrals & Option for Delegation

WHITE ROCK
My City by the Sea!

June 15, 2020

Proposed Amendments

- Proposed amendments to the Planning Procedures Bylaw, 2017, No. 2234 to **enable electronic Public Hearings** required in the review of liquor or cannabis licence applications;
- Electronic options for public hearings tied to planning applications endorsed by Council on May 25, 2020
- Supporting a digital approach will allow public to be engaged in the review of applications while supporting social distancing efforts arising from the COVID-19 pandemic
- Additional amendment, presented as “Option 2”, would **delegate authority to the Director** of Planning & Development Services to provide comment on applications for new liquor primary club licences. This amendment would accompany the amendment to enable electronic public hearings.

Amendments – Electronic Public Hearings

- Option 1 (see Appendix A)
  - The following amendment would allow for electronic public hearings in support of liquor & cannabis licence applications.

Bylaw No. 2347:

1. **That the text of the "City of White Rock Planning Procedures Bylaw, 2017, No. 2234" be amended by amending subsection (e) v) of Schedule N to read:**

   v) The Public Hearing is held in Council Chambers, or an appropriate public venue, prior to Council meeting and in conjunction with the Public Meeting required for the related Temporary Use Permit application, as applicable. The Public Hearing may be conducted as an electronic meeting or one reliant on other communication facilities.

Optional Amendment

- New liquor primary club licence application by the Mann Park Lawn Bowling Club to be considered next on this agenda
- Two existing club licences issued in White Rock
- Staff believe club licence applications to be less complex than liquor primary licence applications
- Procedures Bylaw requires that new liquor primary club licence applications go to a public hearing with related fees
- Amendments to delegate authority to the Director would waive the need for a public hearing for new liquor primary club license applications thereby helping to streamline the approvals process while reducing costs to local clubs

Amendments – Delegation to Director

- Option 2 (see Appendix B) (includes Option 1 amendments enabling electronic public hearings)

Bylaw No. 2347:

1. **That the text of the "City of White Rock Planning Procedures Bylaw, 2017, No. 2234" be amended:**

   (1) by amending Section 22 to read:

   22) For referral of liquor licence applications not involving: a new licence (~~other than those applications related to~~ a new liquor primary club licence, or those applications related to a manufacturer's licence, such as a lounge endorsement and patio endorsement that has been previously supported by Council and issued), for a lounge endorsement, for patron participation entertainment, for extension of hours greater than one hour, and/or relocation of a liquor licence, Council delegates to the Director the authority to provide comments on the application.

Amendments – Delegation to Director

- Option 2 (see Appendix B) cont.

Bylaw No. 2347:

1. **That the text of the "City of White Rock Planning Procedures Bylaw, 2017, No. 2234" be amended:**

   (2) by amending section (a) of Schedule N to read:

   a) When a referral is received from the BC Liquor and Cannabis Regulation Branch, staff contacts the Applicant and advises of City application and fee requirements. For cannabis store license applications, if a Temporary Use Permit application has not been submitted, staff respond to the LCRB noting that the applicant is not eligible for a cannabis store license. Applications for a new licence (other than a liquor primary club licence, or those related to a manufacturer's license that has been previously supported by Council and issued), for a lounge endorsement, for patron participation entertainment, for extension of hours greater than one hour, and/or relocation of a liquor licence require a Public Hearing; all other applications require public input through written comment only and the authority to provide comments is delegated to the Director. Staff may elect to opt-out of providing comment for increases in capacity under 10 persons and for permanent patio additions under 15 square metres in size.

ON TABLE
Regular - June 15, 2020
Re: Item 6.2.3

Liquor Primary Club Licence

14560 North Bluff Road

[Mann Park Lawn Bowling Club]

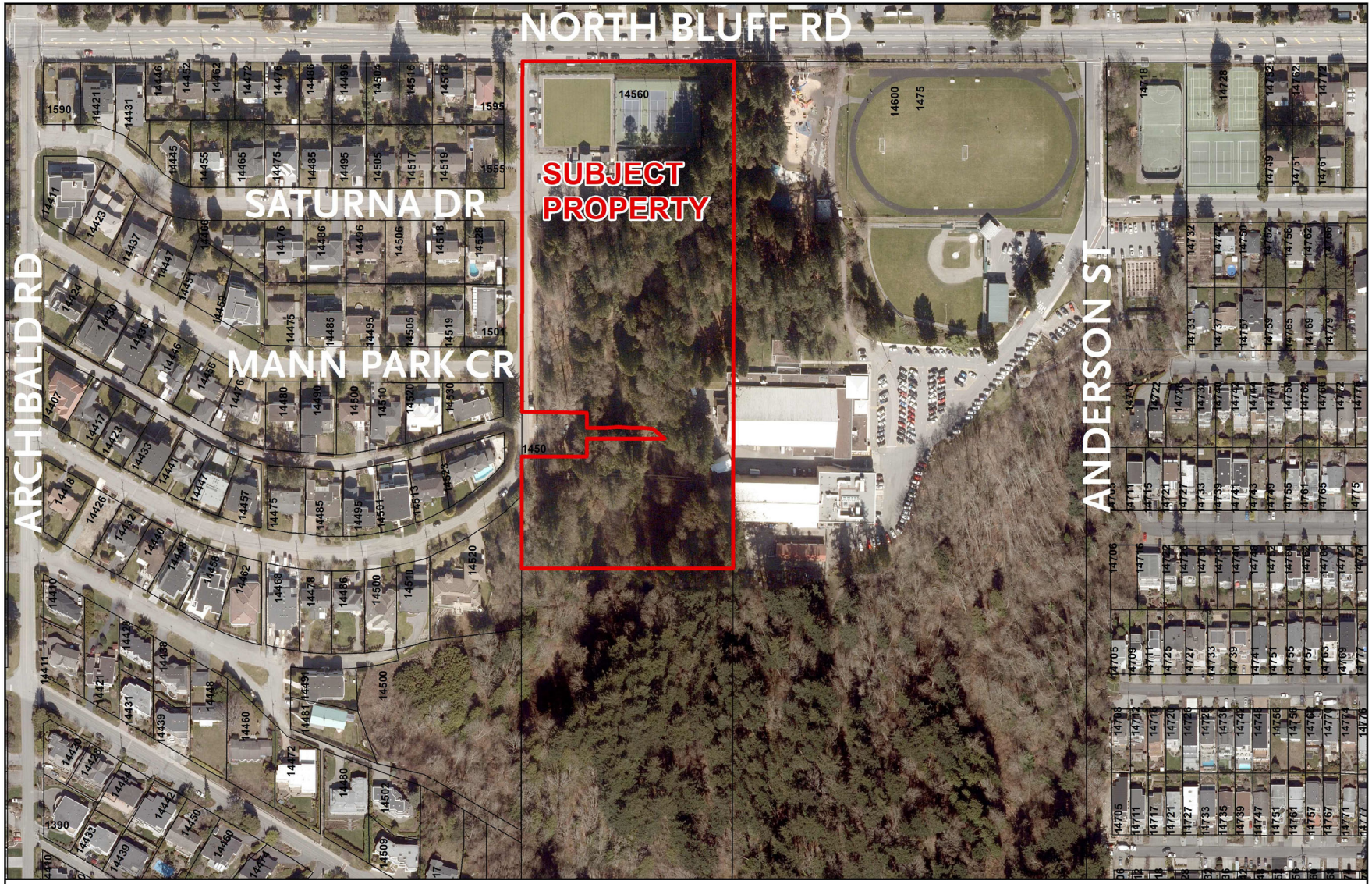
WHITE ROCK
My City by the Sea!

June 15, 2020

Overview

- Application for Liquor Primary Club Licence by Mann Park Lawn Bowling Club (approx. 140 members)
- Legislation limits liquor service with a club licence to members and their registered guests, within a defined service area
- Liquor service limited to the clubhouse and patio, accessed through the clubhouse (max. occupant load of 139 persons)
- Hours of service to be limited to between 3:00pm & 9:00pm*

  * *proposed condition would further limit liquor service when children are present at the White Rock and Cobble Hill Montessori, which occupies part of the building*



Ortho Map

14560 North Bluff Road


937
COUNTRY
We're with ya!
parc
retirement
living
MANN PARK
LA WN BOWLING
COME TRY IT
ALL AGES WELCOME


NORTH BLUFF RD
14500


MANN PARK
LAWN BOWLING
604.531.0833 mannparklbc.org

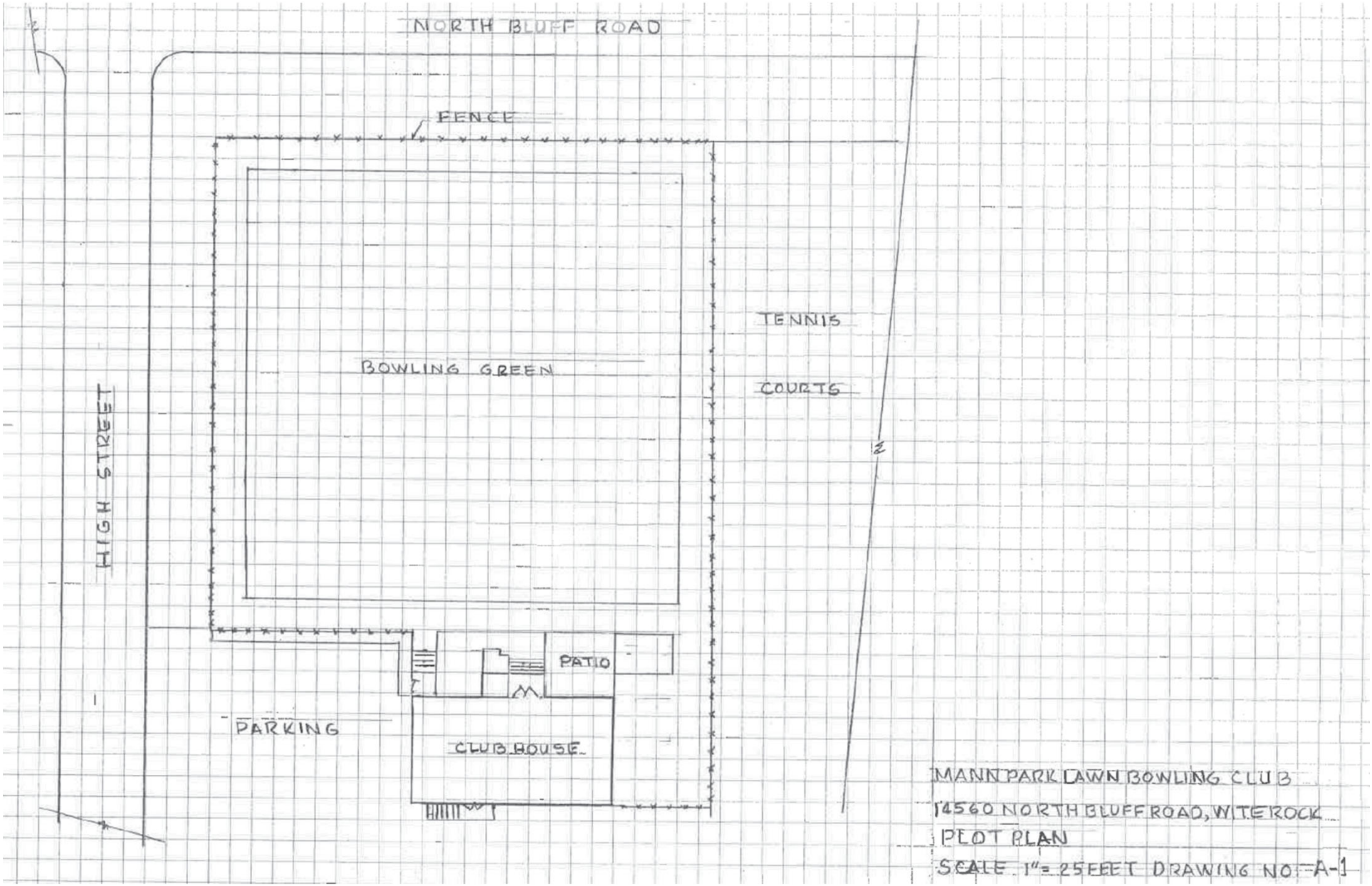
Considerations

- Corner lot with abutting woodlands will help buffer the recreational use of the Mann Park Lawn Bowling Club from abutting / nearby sensitive uses;
- The open patio is accessed through the club house and is screened from nearby residential uses and play spaces;
- Notice of application circulated to 50 property owners; one letter received (attached to corporate report as Appendix F);
- Consultation with staff at the Montessori led to proposed changes to the hours of liquor service and a condition prohibiting service when children are present;
- Consultation with City department representatives and the RCMP - no issues or concerns noted;

Next Steps

- Dependent on how Council decides to proceed with Bylaw amendments presented earlier.
- If amendments to the Bylaw are adopted to enable a delegation of authority to the Director, **additional notice would be provided seeking written comments on the Mann Park Liquor Licence application within 30 days of the notice**. The Director would then summarize and provide comments to the LCRB on behalf of Council
- If amendments regarding delegation are not adopted, the application would be scheduled for a public hearing (**using digital resources if option enabled**) following which staff would bring a report back to Council seeking a resolution (approve or deny) to be sent to the LCRB

Plot Plan


NORTH BLUFF ROAD
FENCE
TENNIS
COURTS
BOWLING GREEN
HIGH STREET
PATIO
PARKING
CLUB HOUSE
MANN PARK LAWN BOWLING CLUB
14560 NORTH BLUFF ROAD, WHITE ROCK
PLOT PLAN
SCALE 1"=25FEET DRAWING NO:-A-1