

Subject: Ottawa Fire Services 2025 Station Location Study

File Number: ACS2025-EPS-OFS-0001

**Report to Emergency Preparedness and Protective Services Committee on 20
February 2025**

and Council 26 February 2025

Submitted on February 10, 2025 by Paul Hutt, Chief, Ottawa Fire Services

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Ward: Citywide

**Objet : Étude sur l'emplacement des casernes 2025 du Service d'incendie
d'Ottawa**

Numéro de dossier : ACS NUMBER ACS2025-EPS-OFS-0001

**Rapport présenté au Comité des services de protection et de préparation aux
situations d'urgence**

Rapport soumis le 20 février 2025

et au Conseil le 26 février 2025

Soumis le 2024-09-26 par Paul Hutt, Chef, Service des Incendies d'Ottawa

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REPORT RECOMMENDATION(S)

That the Emergency Preparedness and Protective Services Committee recommend Council:

1. Receive this report for information; and
2. Approve the expansion and renovation of Station 94 (5669 Manotick Main St.) and Station 93 (6891 Parkway Rd.) to accommodate full-time on-site career firefighter staffing as outlined in this report, subject to approval through the budget process for the relevant funding year.

RECOMMANDATION(S) DU RAPPORT

Que le Comité des services de protection et de préparation aux situations d'urgence recommande au Conseil de :

1. Prendre connaissance du présent rapport à titre informatif et
2. Approuver l'agrandissement et la rénovation de la caserne 94 (5669, rue principale de Manotick) et de la caserne 93 (6891, chemin Parkway) afin d'y recevoir un effectif de pompiers professionnels à temps plein, comme il est décrit dans le présent rapport et sous réserve de l'approbation du budget de l'exercice financier pertinent.

EXECUTIVE SUMMARY

Assumptions and Analysis

Ottawa Fire Services is dedicated to protecting lives, property, and the environment in the City of Ottawa. With a vision to continually enhance emergency response, training, education, prevention, and safety standards, Ottawa Fire Services strives to meet the evolving needs of the community.

In line with this vision, Ottawa Fire Services' 2025 station location study aims to optimize fire station placement and resources to maintain Council-approved response times. The outcome of the study resulted in two recommendations based on projected community growth and increasing demand for fire services:

- Ottawa Fire Services is recommending renovations to expand Station 94 (5669 Manotick Main St.) to support career staffing (i.e. full-time on-site presence) to address the growing service demands in Manotick as the population reaches urban density levels by 2027.

- Similarly, Ottawa Fire Services is recommending renovations to support career staffing at Station 93 (6891 Parkway Rd.) to serve the growing Greely area, which is projected to reach urban density levels by 2030.

The recommendations being brought forward aim to enhance public safety and support Council's strategic objective of aligning emergency response times with community needs. They also seek to ensure that Ottawa Fire Services can meet its response standards, while creating a sustainable deployment model that will serve all communities over the next 10 years (2025-2034).

Financial Implications

The funding strategy to support the recommendations involves monitoring growth and development with expansions subject to budget approval for the relevant years. The two fire stations have been identified for funding in the 2024 City-wide and Area Specific Development Charges Background Study. Based on current projections, the funding requirement for the expansion of Station 94 (5669 Manotick Main St.) is expected to be considered in the 2027 budget, with staffing needs addressed in the 2028 budget. Similarly, funding for the expansion of Station 93 (6891 Parkway Rd.) is anticipated for the 2030 budget, with staffing requirements considered in the 2032 budget. Final costs and timing will depend on factors such as growth trends, population density, station evaluations, and compliance with standards. These costs have been identified in the 2024 City-wide and Area Specific Development Charges Background Study. By expanding existing stations, instead of building new ones, the City is projected to save an estimated \$9 million in capital costs.

RÉSUMÉ

Hypothèses et analyse

Le Service des incendies d'Ottawa se consacre à la protection des vies, des biens et de l'environnement de la ville d'Ottawa. Fort de sa vision d'améliorer continuellement ses interventions d'urgence, la formation et l'éducation, la prévention et les normes de sécurité, le Service des incendies d'Ottawa œuvre à répondre à l'évolution des besoins de notre collectivité.

Conformément à cette vision, l'étude de 2025 sur l'emplacement des casernes réalisée par le Service des incendies d'Ottawa a pour objet d'optimiser le placement des casernes et les ressources afin de préserver les délais d'intervention approuvés par le Conseil. Les résultats de l'étude se traduisent dans deux recommandations fondées sur

les prévisions de croissance de la collectivité et sur une demande croissante de services d'incendie :

- Le Service des incendies d'Ottawa recommande des rénovations pour agrandir la caserne 94 (5669, rue principale de Manotick) afin de soutenir l'effectif de pompiers professionnels (c'est-à-dire une présence sur place à temps plein) dans ses efforts pour répondre à la demande accrue de services dans Manotick dont la population devrait avoir atteint des niveaux de densité urbaine en 2027.
- De même, le Service des incendies d'Ottawa recommande des rénovations pour soutenir l'effectif de pompiers professionnels de la caserne 93 (6891, chemin Parkway) et ses efforts pour desservir le secteur en pleine croissance de Greely dont la population devrait avoir atteint des niveaux de densité urbaine en 2030.

Les recommandations mises de l'avant visent à améliorer la sécurité du public et à soutenir l'objectif stratégique du Conseil d'arrimer les délais d'intervention d'urgence et les besoins de la collectivité. Elles visent également à ce que le Service des incendies d'Ottawa puisse respecter ses normes d'intervention tout en créant un modèle de déploiement durable qui répondra aux besoins de toutes les communautés dans les dix prochaines années (2025-2034).

Répercussions financières

La stratégie de financement pour donner suite aux recommandations s'articule autour de la surveillance de la croissance et du développement et de l'approbation des budgets de l'exercice financier pertinent requis pour procéder. Les deux casernes de pompiers ont été retenues pour une demande de financement dans le cadre de l'Étude préliminaire sur les redevances d'aménagement 2024 pour toute la ville et pour certains secteurs. En fonction des prévisions actuelles, les fonds requis pour l'agrandissement de la caserne 94 (5669, rue principale de Manotick) seraient pris en compte dans le budget de 2027 et les besoins en matière d'effectif, dans le budget de 2028. De même, les fonds requis pour l'agrandissement de la caserne 93 (6891, chemin Parkway) seraient pris en compte dans le budget de 2030 et les besoins en matière d'effectif, dans le budget de 2032. Les coûts définitifs et le calendrier de réalisation dépendront de facteurs tels que les tendances sur le plan de la croissance, la densité de la population, l'examen des casernes et le respect des normes. En agrandissant des casernes existantes plutôt qu'en en construisant de nouvelles, la Ville prévoit économiser environ 9 millions de dollars en dépenses d'immobilisation.

BACKGROUND

In 2015, Council approved the Ottawa Fire Services Station Location Study ([ACS2015-COS-EPS-002](#)), which recommended establishing response time standards based on community risk, known as the standards of cover, and the construction of new fire stations in Kanata North and on Cyrville Road. These stations are now operational.

Since then, Ottawa Fire Services has continued to utilize a risk-based deployment model, recognized as a best practice by leading industry organizations such as the Ontario Fire Marshal, the Metro Fire Chiefs Association, and the Commission on Fire Accreditation International, with Ottawa Fire Services holding Accredited Agency status from the accreditation process since 2014.

Community Risk Assessment and Standards of Cover

The Commission on Fire Accreditation International accreditation process involves a comprehensive self-assessment and peer review to evaluate performance against established standards and community risks. A key component of this process is the Community Risk Assessment, which identifies and categorizes community risks to determine the most effective distribution of resources.

Population density is a crucial factor in assessing fire service risk levels. Areas with higher population density typically require a more robust fire service response due to the greater likelihood and potential severity of incidents. The assessment analyzes current population data and growth trends to anticipate future needs and ensure fire services remain adequately prepared. This helps identify areas where additional resources may be needed to mitigate the risks associated with urbanization while maintaining service standards.

Growth in both urban and rural village areas increases the demand for fire services. This growth drives the strategic allocation of resources to reduce response times. The assessment identifies high-incidence areas where deployment changes will be necessary over time.

Through adherence to over 250 performance indicators and addressing identified risks, Ottawa Fire Services validates its operations and its ability to provide reliable emergency services. The self-assessment and peer review process established response time standards: 7 minutes and 13 seconds for urban areas, and 11 minutes and 8 seconds for rural areas, found in Document 2 Standards of Cover. Ottawa Fire

Services uses the data from the Community Risk Assessment to track its performance against these standards and to identify areas where realignment may be necessary.

The 2015 station location study recommended that a sustainable deployment model be created to meet the needs of all communities for the next 10 years. As a result, a new study was conducted to address the needs for the next decade, from 2025 to 2034.

DISCUSSION

2025 Station Location Study

Methodology

The station location study was conducted by developing response measurements in Geographic Information System software and applying these measures across the City of Ottawa. The response measurements were developed in accordance with the three (3) primary considerations of the standards of cover:

1. Risk Ratings (based on building type and population density)
2. Total Response Time (the time from the receiving the call and the first emergency response arrival on scene)
3. Response Time Benchmarks and Baselines

A road network of the entire city was built into Geographic Information System modelling software and each building was assigned a risk rating. A baseline measure for service performance and response time standards was also established as a benchmark for each response category—such as fire, medical, rescue, hazmat, and other emergencies—to optimize service delivery. Developing these response benchmarks is required by the *Fire Protection and Prevention Act* to ensure fire protection services meet community needs and circumstances. As part of this process, Ottawa Fire Services adopted the National Fire Protection Association performance standards to comply with provincial legislation.

To validate the results collected, each response benchmark was then compared to actual response times from the Ottawa Fire Services Record Management System database.

The following considerations were also taken into account for the purpose of this study:

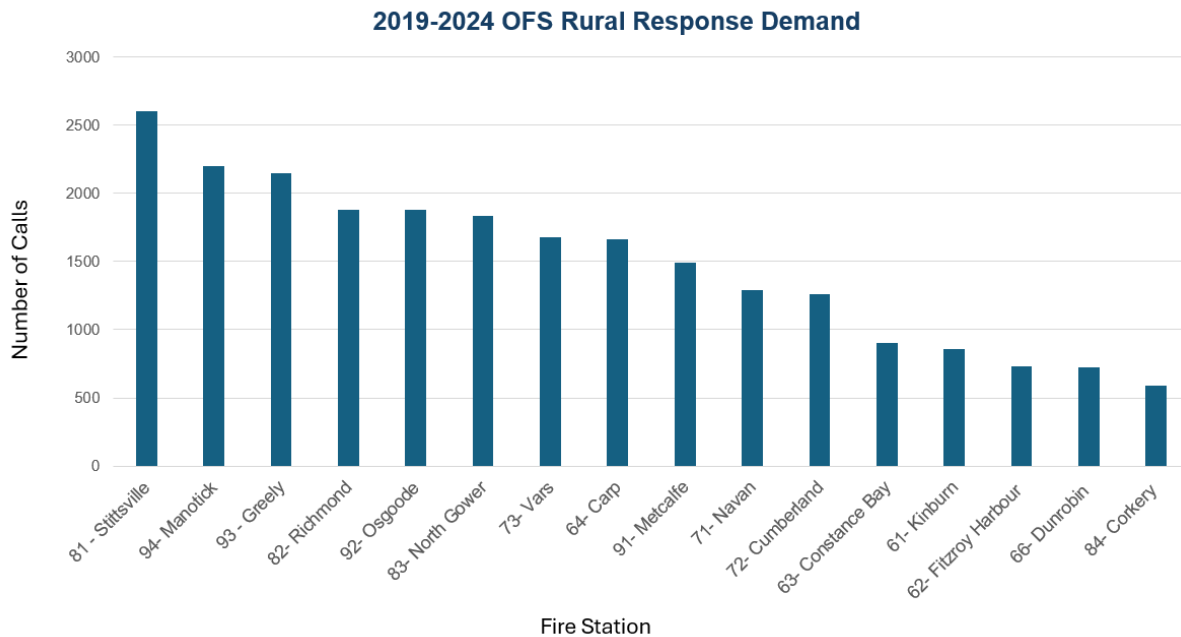
- Current response capabilities (i.e. existing stations and assets)
- Development data (i.e. future analysis)
- Citywide review and growth analysis

The current response capability assessed all existing fire stations and assets. Ottawa Fire Services operates 45 fire stations strategically located across the city, staffed by a combination of career and volunteer firefighters. These stations provide comprehensive fire suppression, rescue, and emergency medical services to their communities. As the city continues to grow and develop, it is essential for Ottawa Fire Services to regularly reassess its fire service capabilities in response to changing community risks.

When future development projects result in changes to the community risk assessment, Ottawa Fire Services must reassess fire service risk levels. For example, higher density areas require more robust fire services response due to the greater likelihood and potential impact of emergency incidents. This study is a planning tool to identify areas where resource changes may be required, helping to mitigate risks of urbanization and maintain high service standards and assist Ottawa Fire Services to effectively deploy resources to meet the evolving needs of the communities it serves.

The overall outcome of the study resulted in two recommendations based on growth and service demand in two rural areas, as depicted in Graph 1 below. It should be noted that Council approved in budget 2025 \$2.3 million to hire 22 new firefighters to address population growth in Stittsville and the surrounding area, and to convert Station 81 from a fully volunteer station to a composite station.

Graph 1: 2019-2024 Ottawa Fire Services Rural Response Demand



Growth

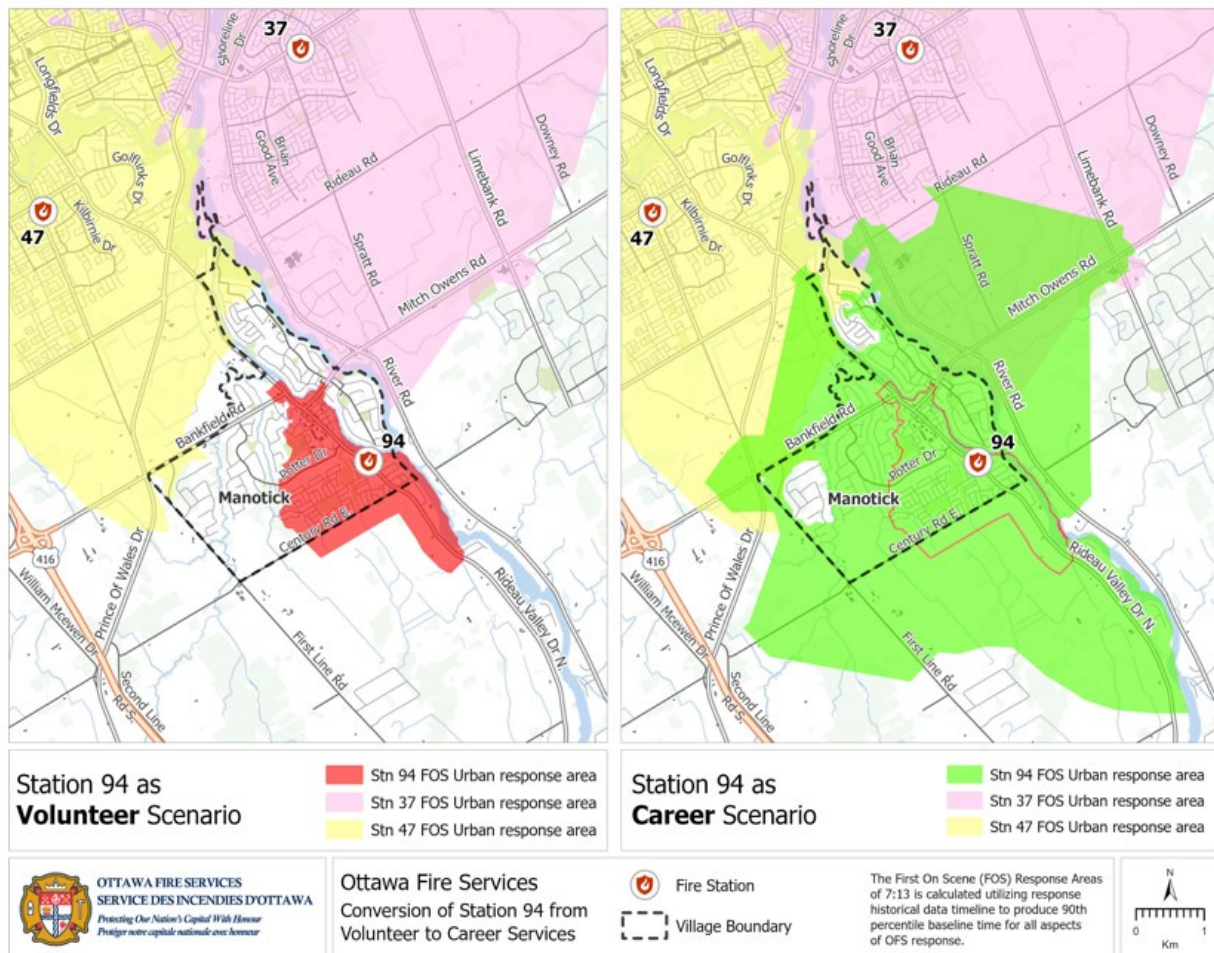
Station 94, 5669 Manotick Main St.:

Current projections indicate that Manotick's population growth and development will reach an urban density requirement for fire services by 2027. By modelling the urban response time standard considering population, growth, development, intensification data, higher density living conditions and increased infrastructure demands within the area, staff can determine optimal deployment models that support Council approved response standards. Career staffing deployment response time to an emergency is 7 minutes and 13 seconds, in line with Council approved standards of cover, compared to 11 minutes and 8 seconds for a volunteer response. The study supports conversion from volunteer to career response (i.e. a full-time on-site presence) to increase the area where the Council-approved service standard is met and to reduce the pressure on neighbouring stations, thereby improving service to residents.

Specifically, moving to a career deployment model and calculating an urban response time of 7 minutes and 13 seconds in Ottawa South, Ottawa Fire Services will have the urban response capability of reaching a population of 7,852 residents, encompassing 3,540 households and businesses within the village. The proposed deployment of career resources can cover a 32 square kilometer response area.

The proposed changes are designed to address service demand and the significant growth and development anticipated in the area between 2025 and 2030, with projections estimating an increase of nearly 2,000 residents and about 550 new households and businesses. The associated costs will include investments in renovations to the existing fire station and additional personnel to ensure that fire services can effectively meet increasing service demand. These expenditures are necessary for maintaining and enhancing the efficiency and effectiveness of emergency response in the rapidly growing community of Manotick. Map 1 shows the current volunteer response area of coverage for Station 94 and the proposed response area of coverage if converted to an urban deployment model with career staff.

Map 1 – Manotick Ottawa South Station 94



Station 93, 6891 Parkway Rd.:

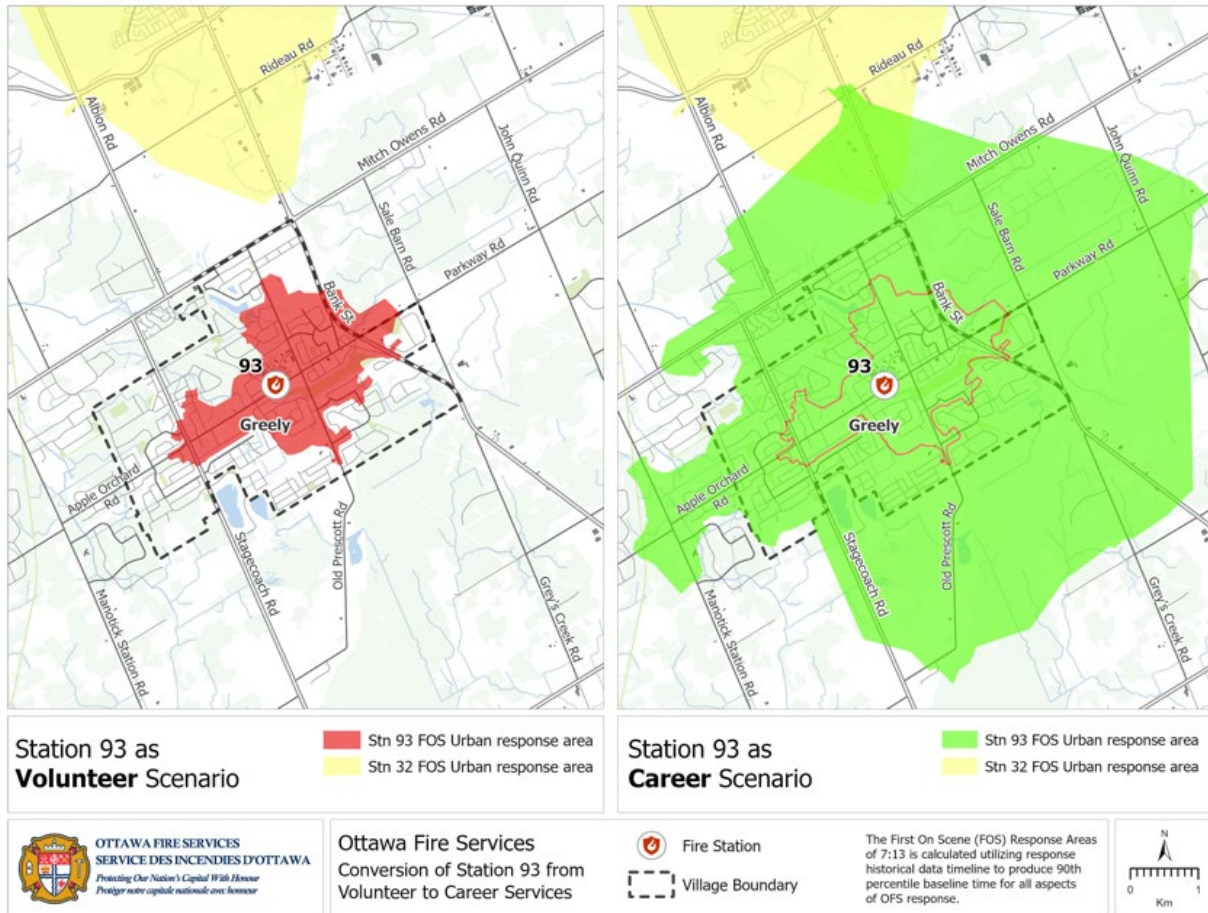
In the case of Station 93, the same rationale applies as Station 94 above. That is, the expansion of the current station will accommodate career staffing to ensure fire services can meet increased demand, particularly in Greely.

Projections show that by 2030, Greely's population growth and development will be reaching an urban density requirement for fire services. As is the case with Station 94, modeling demonstrates that changing from volunteer to career response would increase the area where the Council-approved service standard is met and reduce the pressure on neighbouring stations, thereby improving service to residents.

Moving to a career deployment model and calculating an urban response time of 7 minutes and 13 seconds at Station 93, Ottawa Fire Services will have the urban response capability of reaching a population of 11,480 residents, encompassing 5,205 households and businesses within the village. The proposed deployment of career resources can cover a 48 square kilometer response area.

The proposed changes are designed to address service demand and the significant growth and development anticipated in the area between 2030 and 2034, with projections estimating an increase of nearly 1,500 residents and about 450 new households and businesses. The associated costs will include investments in renovations to the existing fire station and additional personnel to ensure that fire services can effectively meet increasing service demand. Map 2 shows the current volunteer response area of coverage for Station 94 and the proposed response area of coverage if converted to an urban deployment model with career staff.

Map 2 – Greely Ottawa South/East Station 93



Funding Strategy

The two fire stations have been identified in the 2024 City-wide and Area Specific Development Charges Background Study. The plan is to monitor growth and development and, with station expansions approved through the annual budget process as funding is needed. Key aspects of the strategy include:

- For Station 94 (5669 Manotick Main Street), funding for expansion is expected to be considered in the 2027 budget, with associated staffing requirements to be addressed as part of the 2028 budget.

- Similarly, for Station 93 in Ottawa South/East (6891 Parkway Road), funding for expansion is anticipated in the 2030 budget, with associated staffing requirements to be addressed as part of the 2032 budget.

Final costs and timing for both projects will be based on factors such as future growth trends, population density, station evaluations, site assessments, and compliance with design and Building Code standards. By expanding existing fire stations instead of building new ones, the City is projected to save an estimated \$9 million in capital costs associated with land acquisition and new construction.

Other Findings

As the population of an area increases, so does the likelihood of emergency incidents. More people mean more homes, businesses, and infrastructure that are susceptible to fires and emergencies. Growth has led to an increase in fire and emergency incidents, such as construction-related hazards, electrical faults, human error, and extreme weather events like storms, floods, and wildfires. Urban expansion and community development necessitate continuous data review to address ongoing growth, development, and intensification. By planning for these changes, Ottawa Fire Services can better allocate resources.

The research, along with geographic information systems modeling of all existing fire stations conducted for this study, clearly demonstrates that Ottawa Fire Services continues to provide comprehensive and effective fire suppression, rescue, and emergency medical services to all communities in Ottawa. This means that the strategic placement of fire stations, along with the allocation of personnel and equipment, ensures that emergency incidents are managed promptly and efficiently across the city. The findings did, however, indicate a future need to adjust station locations in Ottawa South and Ottawa South/East as outlined within this report. Ottawa Fire Services will continue to monitor growth in all communities across urban, suburban and rural areas. The recommendations in the report have been carefully considered to maintain service levels and aim to enhance public safety.

As the city continues to grow and evolve, conditions may change, potentially requiring further resource deployment or investment. This study reflects our best estimate based on the information currently available. Factors such as population growth, new residential and commercial developments, and changes in infrastructure may all affect the demand for fire and emergency services. While the current recommendations are well-founded, it's important to remain flexible and responsive to future developments.

FINANCIAL IMPLICATIONS

Funding for the two fire stations will be considered in future budgets as outlined in the report. Any adjustments to the 2024 City-wide and Area Specific Development Charges Background Study based on scope changes are expected to be addressed in future development charge background studies. Updates to the funding strategy, based on these studies, will be considered in future budgets.

LEGAL IMPLICATIONS

There are no legal implications in approving the information in this report.

COMMENTS BY THE WARD COUNCILLOR(S)

There are no comments from Ward Councillors as this report is city-wide in nature.

ADVISORY COMMITTEE(S) COMMENTS

There are no comments from Advisory Committees.

CONSULTATION

Ottawa Fire Services consulted with community members, stakeholders, and internal departments during the study period. Public engagement included a survey from December 4, 2023, to January 4, 2024, which emphasized the importance of maintaining service standards, while internal consultations involved departments such as Infrastructure, Planning, Public Works, and Financial Services to ensure coordination. Ottawa Fire Services also engaged local councillors, the Rural Summit III, the Ontario Professional Fire Fighters Association, and the Rural Fire Advisory Committee to gather diverse input, ensuring the study's recommendations align with community needs and industry best practices.

ACCESSIBILITY IMPACTS

The proposed future expansion of Fire Stations 93 and 94, as described in the report, will meet all necessary accessibility-related requirements within the City's accessibility legislative framework, including the Design of Public Spaces standard of the Accessibility for Ontarians with Disabilities Act, 2005, the Ontario Building Code, and the City's Accessibility Design Standards.

Additionally, through the proposed expansion of these fire stations, which will result in the increase of fire service resources to their ever-growing respective communities,

residents of Ottawa, including persons with disabilities, will receive faster and more efficient emergency-related response when required.

ASSET MANAGEMENT IMPLICATIONS

The report impacts the City's physical assets by recommending changes that affect the cost of operating and maintaining current and future fire station assets. The report aims to align with the guiding principles of the City's Comprehensive Asset Management Policy and ensure a thorough consideration with the City's Asset Management Plan and the Long-Range Financial Plan. The proposed approach for the renovations, expansion and staffing has been planned in two distinct phases for the next 10 years to address the two facility projects. The report sets out specific funding amounts will be sought through the annual budget process in the year in which the funding is needed.

DELEGATION OF AUTHORITY IMPLICATIONS

Ottawa Fire Services reports annually to the Emergency Preparedness and Protective Services Committee on the use of delegated authority, as described in Section 18 of Schedule F of the Delegation of Authority By-law (2024-265).

There are no new delegated authority requirements associated with this report.

ECONOMIC IMPLICATIONS

There are no economic implications associated with this report.

ENVIRONMENTAL IMPLICATIONS

There are no environmental implications associated with this report.

INDIGENOUS, GENDER AND EQUITY IMPLICATIONS

Ottawa Fire Services is committed to the Corporate Diversity and Inclusion Plan. Recognizing that vulnerable populations are disproportionately impacted by emergencies, Ottawa Fire Services incorporates an equity, diversity and inclusion lens into its emergency response and outreach and education work. Gender and equity programs delivered by Ottawa Fire Services are described in the Ottawa Fire Services Annual Report to Committee and Council.

RISK MANAGEMENT IMPLICATIONS

There are risk implications. These risks have been identified and explained in the report.

RURAL IMPLICATIONS

Fire Stations 93 and 94 will continue to serve the rural communities surrounding Greely and Manotick and the proposed future expansions will result in a more efficient assembly time of an effective response force. The recommendations in the report present no adverse impacts to public safety.

TECHNOLOGY IMPLICATIONS

There are no technology implications associated with this report.

TERM OF COUNCIL PRIORITIES

Council has deemed “a city that has affordable housing and is more liveable for all” and “a city that is green and resilient as two of four priorities in the [2023-2026 Term of Council Priorities report](#). The recommendations in this report directly align with strategic objectives 7 and 19 outlined in those respective priorities.

- Strategic objective 7: improve emergency response times - align emergency response times with community needs (7a)
- Strategic objective 19: increase resiliency to extreme weather and changing climate conditions – strengthened community capacity for climate preparedness and emergency response.

SUPPORTING DOCUMENTATION

Document 1 - Service demands by district and fire station based on call type.

Document 2 – Ottawa Fire Services Community Risk Assessment/Standards of Cover (CRA/SOC)

Document 3 - Supporting graphics for Ottawa Fire Services Station Location Study

DISPOSITION

Ottawa Fire Services will action any direction received as part of consideration of this report.