

CONSTRUCTION SITE SAFETY AND ACCOUNTABILITY

Impact Assessment

Recommendation

1. That the June 18, 2024, Urban Planning and Economy report UPE01993, be received for information.
2. That Attachment 5 of the June 18, 2024, Urban Planning and Economy report UPE01993 remain private pursuant to section 27 (privileged information) of the *Freedom of Information and Protection of Privacy Act*.

Requested Action	Information Only		
ConnectEdmonton's Guiding Principle	ConnectEdmonton Strategic Goals		
CONNECTED This unifies our work to achieve our strategic goals.	Urban Places		
City Plan Values	LIVE. THRIVE. PRESERVE. CREATE.		
City Plan Big City Move(s)	A Rebuildable City	Relationship to Council's Strategic Priorities	Conditions for Service Success Economic Growth
Corporate Business Plan	Serving Edmontonians		
Council Policy, Program or Project Relationships	<ul style="list-style-type: none"> • City Policy C450B - Policy to Encourage the Designation and Rehabilitation of Municipal Historic Resources in Edmonton 		
Related Council Discussions	<ul style="list-style-type: none"> • June 18, 2024, Urban Planning and Economy report UPE02150, Allocation of Enforcement or Compliance Resources 		

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Previous Council/Committee Action

At the July 12, 2023, Urban Planning Committee meeting, the following motion was passed:

That Administration provide a report including the following:

1. The impacts of prescribed involvement of professional engineers for excavations within 3m of a property line and more than 1.2m deep, including cost and scheduling implications and the number of residential developments that would be impacted.
2. The impacts of prescribing mandatory shoring for excavations within 3m of a property line and more than 1.2m deep, including cost and scheduling implications and the number of residential developments that would be impacted.
3. The process required to establish a fund to repair damage to properties arising from adjacent residential developments and potential funding approaches, including a potential bond program.
4. The impacts and required resources of streamlining and centralizing infill complaints and inquiries to the City.

Part 4 of the motion is addressed in the June 18, 2024 Urban Planning and Economy report UPE02150 Allocation of Enforcement or Compliance Resources.

At the October 16-20, 23, 2023, City Council Public Hearing, the following motion was passed:

That Administration provide, as part of the UPE report UPE01993, Construction Site Safety and Accountability - Impact Assessment, options to provide greater or increased protection of heritage homes adjacent to sites undergoing construction or demolition.

At the October 24/25, 2023, City Council meeting, the following motion was passed:

That Administration provide as an attachment, to the UPE01993 Construction Site Safety and Accountability - Impact Assessment report, the specific roles and responsibilities involved in the construction process (i.e. from permitting to occupancy) and identify what changes or improvements have taken place in the last 20 years for the following:

- A. a permit applicant (owner),
- B. associated professionals and parties with the project, and
- C. the City, as the Authority Having Jurisdiction for the administration of the *Safety Codes Act*.

Executive Summary

- As development in redeveloping communities increases, Administration is acting on a robust strategy to ensure safe building activity and addressing issues and complaints.
- Administration is creating a new centralized framework for the intake, administration, and actioning of residential development complaints and is developing two new compliance tools, the Project Implementation Plan (PIP) and the Construction Accountability Program (CAP).
- The PIP includes guidance for applicants in creation of a detailed project plan which they will be held responsible to execute, while the CAP provides a framework for Administration to

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refuse permits for repeated non-compliance. In addition to providing assurances to builders, adjacent residents and Administration, these measures will also increase protection of heritage structures.

- 2022 and 2023 data shows a downward trend in infill complaints, compliance issues and Safety Codes Orders.
- A jurisdictional scan found few municipalities with specific rules for excavations.
- Requiring Professional Involvement (PI) for all excavations deeper than 1.2 metres will significantly increase the demand for engineering services, and increase construction project timelines and costs. Professional Involvement will not eliminate all excavation issues.
- Mandatory shoring on excavations deeper than 1.2 metres would apply to nearly all residential construction. The additional costs and time required for implementing shoring are significant, increasing construction costs and timelines.
- Administration advises against a fund or bond program due to feasibility limitations, complexity, along with significant legal and financial implications and potential project delays and complications.

REPORT

The City Plan sets a vision to support a population of two million people. Edmonton's local construction industry will need to build homes to provide places for this population to live and with a target of 50 per cent to occur in redeveloping neighbourhoods, the number of neighbourhoods experiencing construction will increase. With that, the City needs a robust strategy to ensure safe building activity and addressing issues and complaints.

The large majority of Edmonton builders complete projects without incidents or complaints; however, unforeseen incidents happen. Occasionally, construction is undertaken without due care and attention and minimum standards are not met. Some neighbours of construction have also experienced property damage and/or unsafe or non-compliant sites.

Residents can report construction related complaints to the City by calling 311. Complaints are assigned to the relevant team(s) within the City. These complaints are tracked and made available through the Infill Compliance Dashboard. The dashboard reflects a downward trend in complaints and orders in recent years. In 2022, there were 404 complaints, decreasing to 167 in 2023. There were 43 Safety Codes Orders required in 2022, decreasing to 20 in 2023. Of the 20 orders in 2023, four were related to excavations. Safety Codes Orders are issued when cooperative attempts to gain compliance fail, and are legally binding with penalties for non-compliance including fines and the potential for imprisonment.

This downward trend in incidents is positive, and is attributable to numerous factors, including builder care and education, Administration compliance activities and public awareness of the issue.

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Mandatory Professional Involvement and/or Shoring for Excavations

Parts 1 and 2 of the motion specify consideration of excavations within 3 metres of a property line that are greater than 1.2 metres deep, and the number of residential developments that would be impacted.

If implemented with this criteria, professional involvement and mandatory shoring would be required for every project that is to include a typical basement across the City. The vast majority of new homes include a basement requiring excavation deeper than 1.5 metres. Some building types that do not involve deep excavations, such as backyard homes, would not be affected.

Professional Involvement

Professional Involvement (PI) refers to Professional Engineers or Architects who oversee elements of construction projects. Professional Involvement is employed by the owner or constructor to reduce excavation failures by assessing risks and prescribing mitigation measures. Professional Involvement mandates the involvement of an ethically bound professional to plan and site check a construction site. Although engineers must review field implementations according to approved plans, they do not dictate construction methods used by contractors.

Requiring PI for excavations would increase demand for engineering services in Edmonton. The seasonal nature of construction in Edmonton concentrates demand for excavation services into the warmer months, which may cause PI demand to exceed capacity. In addition, requiring PI would not completely eliminate excavation failures.

Costs for PI can vary depending on the scope of services and if a geotechnical report is required. Estimates obtained through surveyed local industry sources range from \$2,000 to \$10,000 per project depending on the complexity and would likely add 2-4 weeks to construction timelines.

Additional information relating to professional involvement is in Attachment 1.

Mandatory Shoring

A jurisdictional scan found that very few municipalities have excavation regulations. Ottawa mandates professional-engineered shoring for excavations deeper than 1.2 metres and within 3 metres of property lines, with clearly defined responsibilities for the engineers. For similar excavations, North Vancouver, British Columbia requires assurance letters from a geotechnical engineer through a policy introduced in 2019 following increased excavation failures due to more intense storms, particularly on steeper slopes. Manitoba requires shoring for excavations over 1.5 metres only under specific risk conditions. No other jurisdictions were found with similar widespread requirements.

In Edmonton, excavations are typically dug to 1.5 metres or deeper to ensure adequate basement height. Shoring, which involves placing temporary supports to prevent cave-ins, varies in technique and cost. Current shoring requirements are in Attachment 2.

Administration surveyed industry, contractors and other jurisdictions in Q4 2023 to inform the following estimates, which have also been further reviewed by City Professional Engineering staff.

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The cost of shoring and associated engineering for a typical single family home in Edmonton ranges from \$30,000 to \$50,000, while non-engineered shoring for a typical 40 foot wall house on two sides would cost approximately \$32,000. Implementing mandatory shoring extends construction timelines by 2-4 weeks, depending on the project's complexity.

Mandatory shoring would reduce, but not eliminate all risks to adjacent properties during construction. Excavation failures can still occur through the shoring process, and damage can also be caused by other mechanisms during construction.

Additional information relating to shoring is in Attachment 2.

Fund for Property Damage Mitigation

Disputes that arise relating to property damage from residential developments are between the two neighboring property owners. If one property owner causes loss or damage to their neighbor, the dispute is between them and the City is not a party to the private dispute.

The City's role regarding residential development disputes is related to the issuing of the required permits for the development and building as well as inspections for compliance and utilizing enforcement tools as necessary. These tools include Safety Codes and *Municipal Government Act* orders.

Residents have access to a number of funding sources in the event of damages to their properties such as their home insurance and/or the contractor's insurance and performance bonds through well established insurance and surety industries as well as the adjudication systems in Alberta.

Administration has performed a high level assessment of City-led funding options and associated considerations as outlined in Attachment 3 and does not recommend these options be considered. A summary of key findings are included in this section.

Bond Program - A bond is a tri-party contractual arrangement between the Contractor (Principal), Project Owner/Obligee (e.g. Residential Developer) and the Bond Issuer/Surety. The bond will provide protection for the project owner in the event of their contractor's default in performing their contract obligations where the Surety steps in as a guarantor.

In a scenario where there are damages to the neighbouring properties due to a residential development, the neighbouring property owners have limited protections under this option since they are not a party to the bond agreement. Third party damages are a risk that is better protected under the contractor's liability insurance that is responsible for the damages.

A City-led bond option is neither feasible nor effective in providing financial assistance to the neighbouring property owners for losses due to residential development and therefore not recommended. Such a program, even if feasible, would require extensive specialized resources and funds while posing significant legal and financial implications/risks to the City.

Funding Program - If Council wishes to establish a funding program to provide financial assistance to property owners in these situations, the funding would need to be offered through

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a grant program. A grant program offers a tool to compensate impacted residents where there is otherwise no legal obligation to do so. Although there is no prohibition against creating such a grant program, it would create a new precedent and expectations that are not currently required.

The creation of such a program would also require significant resources and tax levy burden for grant program creation and its ongoing management given the large volume of residential developments at the City, with potentially limited public value. Similar to a bonding program, this option would involve the City in private disputes and potentially duplicate efforts that are handled through the insurance, surety and adjudication systems in substantiating the damages to ensure no overcompensation is made through the grant program at the cost of the taxpayers' funds. This option is also not recommended.

Additional Protections for Heritage Buildings

Buildings which are designated as Municipal Historic Resources have legal protections which buildings without this designation do not. This includes items such as protection from demolition, and restrictions for alterations that would change the character of the home. There are numerous factors which determine if a building is suitable for the Municipal Historic Resource designation. These include historic significance, architecture & design, context, degree of alteration, and current condition. The age of the building is only one factor and a building may not qualify as a Municipal Historic Resource solely based on age.

The *Safety Codes Act* and its associated regulations do not include provisions specific to heritage buildings or buildings of a specific age.

To regulate construction beyond the requirements of the National Building Code (Alberta Edition) (NBC(AE)) near heritage buildings, Administration would need to determine what tools are available, including the possibility of regulating activities through bylaws. The goal would be to look for a holistic approach to apply to all construction activities, including roadway, utility and infrastructure construction with the goal of protecting Heritage Buildings.

The full implementation of the PIP, as described below, will improve protection of heritage buildings from construction projects regulated by the *Safety Codes Act*, as the PIP requires that constructors plan appropriately when building adjacent to designated heritage structures.

Project Implementation Plan (PIP)

In response to increased infill construction, and to support The City Plan, Administration is working to develop tools to assist both existing residents and builders to be good neighbours and increase compliance at construction sites, without creating regulatory burdens which increase housing costs. The Project Implementation Plan (PIP) will guide applicants through education and proper planning, and streamline enforcement measures where required. The PIP will be a condition of permit issuance, and will assist permit applicants and all associated parties understand their roles and responsibilities, make a plan to operationalize a safe site, and provide enforceable expectations for the entire construction team.

This plan applies to all phases of a project from demolition to completion where work may directly impact adjacent and adjoining private and public properties. The PIP requires a builder to

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document an excavation and protection strategy possibly including shoring and other protective measures, and promotes communication with neighbours.

The PIP is a multi-jurisdictional document, allowing Safety Codes Officers and bylaw enforcement to more readily hold the constructor, owner, and/or permit holder accountable for any issues that arise on or around the site.

The PIP is currently public facing and being field tested with full implementation targeted by Q4 2024.

Construction Accountability Program (CAP)

To address holding builders accountable, Administration is developing and will implement the Construction Accountability Program (CAP) program in Q1 2025. CAP will be an equitable and legally sound process to refuse building permits to those who repeatedly create non-compliant conditions at construction sites, or consistently and repeatedly provide poor quality building permit applications which consume unreasonable and non-equitable levels of City resources.

Applicants will be advanced on a scale as they incur infractions. As applicants progress up the scale (incur more infractions), Administration will provide education, information, and other guidance to assist the applicant in avoiding unsafe conditions, or poor applications, in an effort to enable success and reduce the risk of permit refusal. Should an applicant reach the top of the scale, Administration will refuse to issue any new permits until the applicant has completed mandatory training with the City, at the applicant's expense. Applicants who have reached the permit refusal threshold and completed the mandatory training, may also have conditions placed on subsequent permits, including the possibility of mandatory shoring or Professional Involvement (PI) if warranted by infraction history.

Administration is exploring data sharing agreements with the provincial builder registry to more readily identify those associated with problem builds, and to ensure the appropriate party is held accountable. The intention of the program will be to have all parties involved (including corporations and their directors) linked to non-compliance.

This approach will only impact those who are non-compliant or consuming significant City resources, without impacting applicants that are constructing to regulations.

Roles and Responsibilities in Construction

Attachment 4 details the roles and responsibilities for construction directed in the October 24/25, 2023 motion.

Budget/Financial Implications

The 2023-2026 approved operating budget does not include the resources that would be required to administer a bond program for damage to adjacent properties during construction. Additional legal resources would also be required as cashing bonds involves a legal process, which also has associated costs for the complainant and Administration.

If the Council wishes to establish a funding program to provide financial assistance in these situations, the funding would need to be offered through a grant program. A grant program

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offers a tool to compensate impacted residents where there is otherwise no legal obligation to do so. Although there is no prohibition against creating such a grant program, it would create a new precedent and expectations that are not currently required by law. Unless the program was structured so that grants were set at a fixed amount, it would be difficult to estimate the total cost of the grant program. The 2023-2026 approved operating budget does not include funding for such a grant program, nor the resources required to administer the program.

For the reasons stated above in the report, neither of these options are recommended.

Legal Implications

The *Safety Codes Act* (SCA) explicitly empowers Safety Codes Officers (SCO's) employed by an accredited organization to refuse permits, and a person may appeal the refusal to the Safety Codes Council. The SCA also empowers SCO's to include terms and conditions in a permit, empowering the PIP program as a permit condition for all projects in the city. Additional legal considerations are outlined in Private Attachment 5.

Community Insight

At the July 12, 2023 Urban Planning Committee meeting, Edmontonians shared personal anecdotes relating to the impact of excavations in their neighbourhoods. Residents expressed concerns such as damage to adjacent property from excavations and dust from demolition.

Residents also shared that a fast resolution of construction site safety issues is important to them. Regulatory or legal processes, such as stop work orders, or pursuing damages in court, takes time and resources. While these processes are ongoing, work is halted, and the unsafe condition remains until the process is complete.

Local industry sources, including umbrella associations and individual businesses were consulted to determine estimates on services and products outlined in this report and to discuss potential options to the excavation concerns.

GBA+

The City is responsible for administering the *Safety Codes Act*, however, the Act itself does not explicitly consider GBA+. The approach the City takes to administration of the Act is the opportunity to apply a GBA+ lens to the current state and to potential changes.

Development of the PIP and CAP programs included intentional focus on equity for residents while ensuring the City is fulfilling its mandate as regulator of most construction activities. In particular, the PIP and CAP programs will ensure that all constructors are incentivized and disincentivized equally, not allowing a fine only approach to be absorbed by the well capitalized. Also, The PIP and CAP programs will have minimal impact on the cost of housing overall, and ensure every neighbourhood, builder and neighbour is protected equitably against unsafe construction activities.

The CAP program follows the 4E model of escalation. If a builder commits infractions the first step is education, then working with the builder directly, before any enforcement action.

Administration's goal is to ensure compliance with applicable bylaws and legislation, and this

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model works with builders to bring them into compliance, rather than simply applying fines and other enforcement measures as a first course of action.

A bond program would require a homeowner to go through a legal process to collect a bond for damaged property. This process can be time consuming and expensive, which could have a greater impact on lower income individuals.

Environment and Climate Review

Requiring mandatory shoring and/or Professional Involvement for all projects would increase greenhouse gas emissions from the production of additional materials, transportation of materials to site, emissions from travel to the construction site, and then disposal of materials as shoring is a temporary construction measure.

The use of the PIP and CAP program are non-material measures which do not have emissions associated with their implementation, making them the lower emission choice.

Attachments

1. Mandatory Professional Involvement Additional Information
2. Mandatory Shoring Cost and Impact Additional Information
3. Additional Financial and Legal Considerations
4. Roles and Responsibilities in Construction
5. Private - Legal Implications for the Construction Accountability Program