



# City of Port Moody

## Report/Recommendation to Council

Date: February 3, 2022  
Submitted by: Engineering and Operations Department – Infrastructure Engineering Services Division  
Subject: Moray Street Traffic Calming Study and Pilot Project

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### Purpose

To obtain Council endorsement of the proposed traffic calming pilot design for Moray Street between St. Johns Street and Brookmount Avenue.

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### Recommended Resolution(s)

**THAT the proposed traffic calming pilot design for Moray Street between St. Johns Street and Brookmount Avenue be endorsed as recommended in the report dated February 3, 2022 from the Infrastructure Engineering Services Division regarding Moray Street Traffic Calming Study and Pilot Project;**

**AND THAT the additional budget requirement of \$30,000 be forwarded to the Finance Committee for identification of a funding source;**

**AND THAT staff report back on the findings of the monitoring period, including public feedback about the project after one year.**

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### Executive Summary

City Council directed staff to complete a traffic study and concept design with public consultation for Moray Street, which is a collector road linking Port Moody and Coquitlam. The City conducted an online survey, which noted that residents and through traffic have different priorities for the road. However, both groups of respondents cited speeding traffic as a concern. The City also engaged with HUB Cycling and the City of Coquitlam.

A “toolbox” of traffic calming measures was reviewed and a pilot traffic calming design, using curb extensions, lateral shifts, on-street parking, a marked crosswalk at Pinda Drive (supplemented by a pedestrian-activated flashing light), and medians was devised to slow traffic and create a more comfortable walking environment. The pilot design does not include cycling facilities, for which there is not enough room to pilot without sacrificing other measures that will also be beneficial. Following a recommendation of the Transportation Committee, staff will continue to explore alternative cycling connections as the pilot proceeds.

A collection of temporary measures is proposed to implement the pilot design. Staff recommend implementing the pilot and monitoring its effectiveness this year, after which time staff can report back for future direction. Staff recommend funding a portion of the pilot implementation through the 2022 Neighbourhood Traffic Calming Program, and identifying a funding source for the remainder.

## Background

The City has an existing Neighbourhood Traffic Calming Policy (11-5460-02) which outlines screening and procedures for traffic calming projects. To help improve the ability to effectively prioritize and deliver traffic calming projects, staff brought an alternative traffic calming approach, endorsed by the Transportation Committee, to Council in February 2021.

At its February 9, 2021 meeting, City Council resolved:

### RC21/077

*THAT requests for Traffic Calming Initiatives be reviewed, prioritized, and initiated as outlined in the report dated December 16, 2020, from the General Manager of Engineering and Operations regarding Moray Street Traffic Concerns and Proposed Traffic Calming Initiative Approach;*

*AND THAT a traffic calming study and concept design with public consultation be completed for Moray Street, including consideration of:*

- *reversing lane positioning, placing parking along eastern (sidewalk) side;*
- *adding a pedestrian crossing at Pinda Drive (stop sign, push-button lights, signal); and*
- *installing temporary curb bulges at key intersections, similar to Noons Creek Drive;*

*AND THAT a speed reader board or speed feedback lights be temporarily installed in the southbound direction on Moray Street in the interim;*

*AND THAT the budget requirement of up to \$30,000 for the Moray Street traffic calming initiative and up to \$3,000 for installation of speed feedback lights be referred to the Finance Committee for identification of a funding source.*

City staff procured speed feedback lights for the southbound direction, which were installed in July 2021. Through 2021, the City retained ISL Engineering and Land Services Limited (“ISL”) to conduct the traffic calming study and design project, including a review of current conditions, preparation of alternatives and evaluation, and leading public and stakeholder engagement.

## Discussion

### Current Conditions

Moray Street is a collector road connecting St. Johns Street to Thermal Drive in the City of Coquitlam. The road carries significant traffic throughout the day, totaling about 7,000 vehicles, much of which is regional traffic. Many vehicles also exceed the 30 km/h posted speed limit of the road. There is sidewalk along both sides of the road between St. Johns Street and Pinda Drive, but only along the east side of the road between Pinda Drive and Brookmount Avenue.

Moray Street was repaved in 2020, and the City took the opportunity to implement minor traffic calming measures and other changes. These included restriping the road to reduce the width of travel lanes, adding painted medians and turning bays near St. Johns Street, and adding a southbound painted bike lane. While these changes did result in a measurable reduction in the observed traffic speeds, the community raised a number of concerns about those changes, ultimately leading to the traffic calming study being launched. The concerns included the lack of a marked crosswalk at Pinda Drive, an uncomfortable walking environment along the east side sidewalk because of the proximity of the driving lane, and continued speeding by traffic.

### Initial Engagement

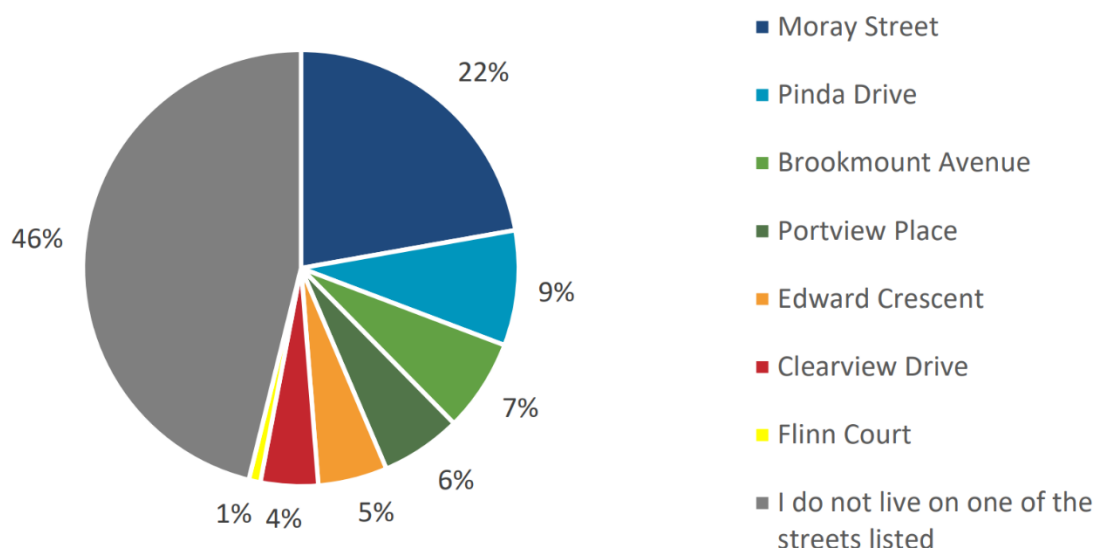
The City conducted an initial round of public engagement by mailing a postcard to all residents between Moray Street and Clearview Drive, including residences along Moray Place, and placing roadside signage along Moray Street, in July 2021. The postcard and signage invited the public to complete an online survey using the City's Engage Port Moody platform. Paper surveys were made available to those who preferred to respond in that format. Respondents were invited to answer questions about topics such as:

- How they use Moray Street;
- What issues they experience;
- What is important to them;
- What changes they hope to see on the street;
- Open-ended responses to elaborate on the above topics.

In total, about 120 responses were recorded. While a small majority of respondents indicated they live on Moray Street or in the surrounding neighbourhood, nearly half indicated they did not live in the study area, as shown in Figure 1 below.

Figure 1: Respondent residence location

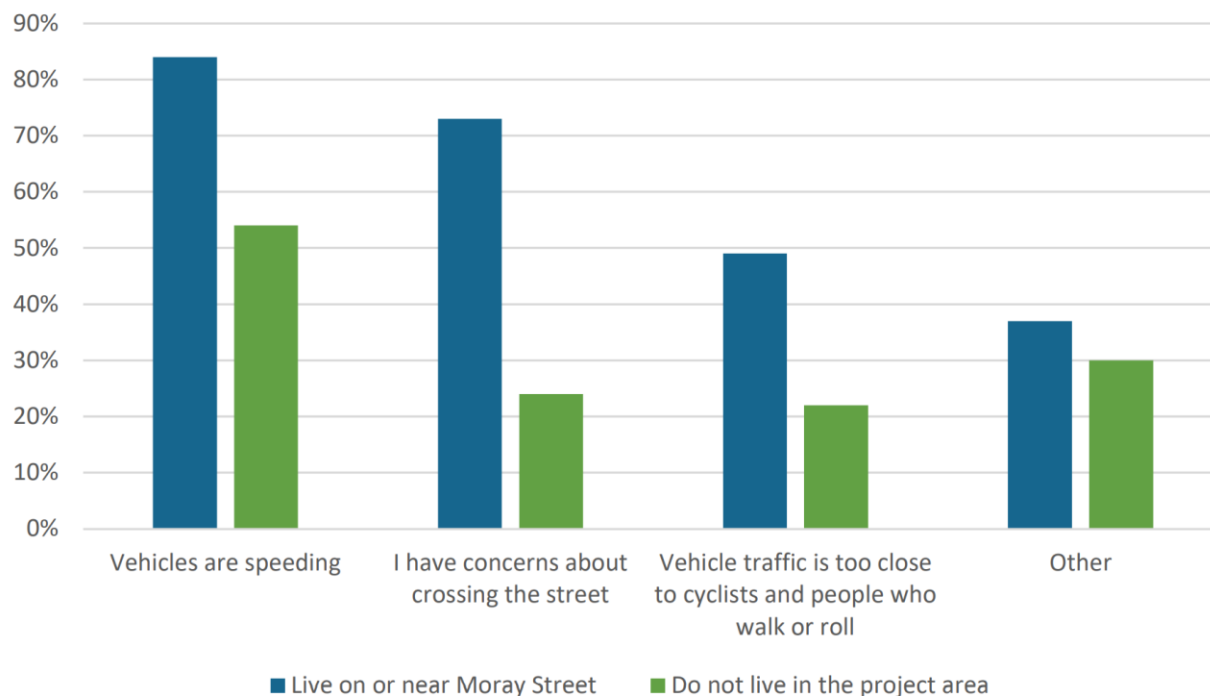
DO YOU CURRENTLY LIVE ON OR NEAR MORAY STREET?



Respondents were asked to identify challenges they experience when using Moray Street. More respondents living close to Moray Street identified challenges with speeding vehicles,

concerns when trying to cross the street, and how close vehicles are to people walking, biking, or rolling on the sidewalk. While respondents not living in the project area generally reported lower rates of these concerns, a majority nevertheless identified speeding vehicles as a concern, as shown in Figure 2 below.

Figure 2: Challenges faced when using Moray Street.



Respondents were asked to rank from 1 (least important) to 4 (most important) a series of considerations regarding the question, “Thinking of your experience on Moray Street, how important to you are the following elements?” The ranking of the elements varied significantly depending on respondents’ area of residence, with those living near Moray Street ranking safety of vulnerable users (walking, cycling, and rolling) and reducing vehicle speeds as highly important, while those living outside the project area not having strong preferences, as shown in Figure 3 below.

The long-form responses generally recapitulated the above points, but several respondents also mentioned the loss of on-street parking from the 2020 restriping plan as a particular concern. Respondents also questioned whether the painted bike lane represented the best use of space given the low number of people they observed cycling.

In addition to the general public, the project team also discussed the project with HUB Cycling and the City of Coquitlam. The project team used these responses, and the more detailed feedback provided through the survey, to establish the need to slow traffic and improve comfort for vulnerable road users such as people walking and cycling, while retaining the ability of Moray Street to accommodate vehicles and provide the connection between Port Moody and Coquitlam.

Figure 3: Ranking of considerations



### Toolbox of Traffic Calming Measures

The project team generally applied Transportation Association of Canada guidelines when selecting appropriate traffic calming measures. Table 1 below summarizes the traffic calming measures that were reviewed and implementation considerations that determined whether they were applied to Moray Street.

Table 1: Toolbox of Traffic Calming Measures

Traffic Calming Measure	Implementation Considerations	Carried Forward?
<b>Speed humps</b>	<ul style="list-style-type: none"> <li>Reduce speed and volume</li> <li>Relatively inexpensive</li> <li>Not recommended for steep grades</li> </ul>	No: Steep grade of Moray Street exceeds guideline for safe application
<b>Raised crosswalks</b>	<ul style="list-style-type: none"> <li>Similar to speed humps</li> <li>Improve driver yielding and pedestrian comfort</li> </ul>	No: Steep grade of Moray Street exceeds guideline for safe application
<b>Curb extensions</b>	<ul style="list-style-type: none"> <li>Reduce vehicle speed by narrowing the road</li> <li>Reduce pedestrian conflicts</li> <li>Potential loss of on-street parking</li> </ul>	Yes

<b>Traffic Calming Measure</b>	<b>Implementation Considerations</b>	<b>Carried Forward?</b>
<b>Lane narrowing</b>	<ul style="list-style-type: none"> <li>Implemented through pavement markings</li> <li>Vehicles may drive outside of their own lane without physical separation</li> </ul>	Yes
<b>Lateral shift / chicanes</b>	<ul style="list-style-type: none"> <li>Reduces speed through a lateral shift in the centreline</li> <li>Impact on on-street parking depends on implementation</li> </ul>	Yes
<b>On-street parking</b>	<ul style="list-style-type: none"> <li>Parked vehicles can reduce feeling of lane width and provide a buffer between traffic and the sidewalk</li> <li>May reduce visibility at pedestrian crossings</li> </ul>	Yes
<b>Raised median islands</b>	<ul style="list-style-type: none"> <li>Can reduce lane widths and improve separation between opposite directions of traffic</li> <li>May restrict access to driveways and parking</li> </ul>	Yes
<b>Sidewalk extension / textured crosswalks</b>	<ul style="list-style-type: none"> <li>Can emphasize pedestrian priority</li> <li>May provide a false sense of pedestrian security</li> </ul>	No
<b>On-road pavement marking “signage” (e.g. “SLOW” painted in the road)</b>	<ul style="list-style-type: none"> <li>Some potential for speed reductions</li> <li>Requires regular maintenance</li> <li>Less effective in winter months because of snow coverage</li> </ul>	No

#### Proposed Traffic Calming Design

The proposed traffic calming design is shown in **Attachment 1** and includes the following elements summarized in Table 2 below:

Table 2: Summary of proposed Moray Street traffic calming elements

<b>Location</b>	<b>Traffic calming measures</b>	<b>Potential benefits</b>
<b>Brookmount Avenue</b>	<ul style="list-style-type: none"> <li>Lateral shift to the west with raised centre median and curb extensions</li> <li>Reduced lane widths</li> </ul>	Lateral shift will help to slow traffic, improve sight lines for vehicles exiting Brookmount Avenue, and provide a location for a potential crosswalk if warranted in the future (coordination with City of Coquitlam required). The raised centre median will help ensure vehicles remain in their travel lane.
<b>Brookmount Avenue to Portview Place</b>	<ul style="list-style-type: none"> <li>On-street parking on west side</li> <li>Curb extension on east side</li> </ul>	On-street parking will provide an amenity to residents. The curb extension on the east side will buffer the sidewalk from traffic.
<b>Portview Place</b>	<ul style="list-style-type: none"> <li>Curb extensions</li> </ul>	Curb extensions will reduce the travel lane width and slow traffic in this potential conflict area.
<b>Portview Place to Pinda Drive</b>	<ul style="list-style-type: none"> <li>On-street parking on both sides</li> </ul>	On-street parking will provide an amenity to residents and buffer the east side sidewalk from traffic.

<b>Location</b>	<b>Traffic calming measures</b>	<b>Potential benefits</b>
<b>Pinda Drive</b>	<ul style="list-style-type: none"> <li>• Marked crosswalk with pedestrian-activated rectangular rapid flashing beacons (RRFBs)</li> <li>• Lateral shift to the west with raised centre median and curb extensions</li> </ul>	Curb extensions will reduce the travel lane width and slow traffic in this potential conflict area. The marked crosswalk will improve the pedestrian connectivity in the area, and the RRFBs should improve vehicle yielding rates to pedestrians. The raised centre median will help ensure vehicles remain in their travel lane.
<b>Pinda Drive to Flinn Court</b>	<ul style="list-style-type: none"> <li>• On-street parking on west side</li> <li>• Curb extension on east side</li> </ul>	On-street parking will provide an amenity to residents. The curb extension on the east side will buffer the sidewalk from traffic.
<b>Flinn Court</b>	<ul style="list-style-type: none"> <li>• Curb extensions</li> </ul>	Curb extensions will reduce the travel lane width and slow traffic in this potential conflict area.
<b>Flinn Court to Moray Place</b>	<ul style="list-style-type: none"> <li>• Lateral shift to the east for southbound traffic with curb extension and median</li> <li>• Curb extension on east side</li> <li>• Improve conflict between BC Hydro pole and east sidewalk</li> </ul>	The lateral shift to the east will help to slow southbound traffic and establish the left turn bay into Moray Place. The curb extension on the east side will buffer the sidewalk from traffic. Addressing the conflicting hydro pole will enable an appropriate sidewalk width on the east side.
<b>Moray Place / Shoppers Drug Mart Driveway</b>	<ul style="list-style-type: none"> <li>• East side curb extension and lane restriping</li> </ul>	The east side curb extension and lane restriping will relocate the left turn bays into Moray Place and Shoppers Drug Mart opposite one another, improving sight lines for vehicles turning into Shoppers Drug Mart and discouraging vehicles from using the Moray Place left turn bay to queue for St. Johns Street.
<b>Moray Place to St. Johns Street</b>	<ul style="list-style-type: none"> <li>• Potential raised median in current painted median</li> </ul>	The existing painted median could host an added raised median to improve traffic separation at the intersection.
<b>Entire corridor</b>	<ul style="list-style-type: none"> <li>• Improved illumination</li> </ul>	An additional 12 streetlight poles, and relocation of one light pole, were recommended to improve illumination to City standards.

ISL has provided a preliminary cost estimate to implement these changes on a permanent basis of about \$720,000: \$460,000 for implementation and a 50% contingency factor of \$230,000. Improving the streetlighting represents almost half the cost, at \$220,000. The pilot implementation will enable the City to learn which measures are most effective and refine the design, creating opportunities to reduce this cost. Possible development activity in the area may also help to fund the proposed changes.

#### Pilot Design

ISL has recommended a variety of temporary measures to implement the proposed traffic calming pilot, as shown in **Attachment 2**, which include:

- White plastic delineators to establish the proposed curb locations;
- Yellow plastic curb units to establish the proposed raised centre medians;
- Pavement markings and signage;
- Implementation of the marked crosswalk at Pinda Drive, including the RRFBs.

The cost estimate to implement the pilot measures, including removal of the existing pavement markings, is about \$70,000, which includes a small contingency amount of \$2,000.

### Cycling

The southbound painted bike lane and the northbound “sharrow” markings were added in 2020 to reduce vehicle lane widths and provide a facility for people cycling. However, survey respondents generally did not indicate an uptake for cycling. Discussions with City of Coquitlam staff also indicated no interest in establishing cycling facilities along Coquitlam’s section of Moray Street / Thermal Drive. On the contrary, the City of Coquitlam indicated a long-term direction to avoid these roads, with a preference for an alignment involving Clearview Drive / Park Crescent and Corona Crescent. The BC Active Transportation Design Guide also recommends protected bike lanes or multi-use pathways along roads with traffic volumes like Moray Street. However, the road is not currently wide enough to implement protected bike lanes or a multi-use path without sacrificing other proposed traffic calming elements.

Given the above reasons and heading into the proposed pilot implementation, the cycling facilities have not been included at this time because they would be costly and challenging to implement successfully and, given current usage patterns and connectivity, would benefit the least number of people.

### Further Engagement

The City hosted a public information session on October 21, 2021 to obtain community feedback about the proposed design. About 30 members of the public attended the virtual online session. There was general support expressed for the proposed design, although residents had questions about how various measures might be implemented, which were answered during the session. One design change arising out of the session was the conversion of proposed on-street parking on the east side of Moray Street between Brookmount Avenue and Portview Place to more curb extensions, when it was pointed out there are no properties fronting the east side of Moray Street in that section.

One attendee also highlighted the lack of sidewalk on the west side of Moray Street south of Pinda Drive. A sidewalk on this side is recommended as a long-term improvement on Moray Street, but due to high cost and impact it is not recommended for the conceptual traffic calming design or pilot.

### Transportation Committee

The draft design was brought to the Transportation Committee on November 17, 2021. Committee members generally supported the project but noted the lack of cycling facilities in the design is a problem that needs continued exploration. The committee suggested continued emphasis on pedestrian safety and potential examination of encroachment onto City property, or re-examining on-street parking on Moray Street, as potential ways to create more space for additional sidewalks, cycling facilities, or multi-use paths. The Committee passed the following resolution:



TC21/036

*THAT the Transportation Committee endorse the Draft Moray Street Traffic Calming concept plan for a pilot project as presented on November 17, 2021, subject to consideration of:*

- *provisions for future enhanced bike and pedestrian facilities on Moray St.; and*
- *identification of current or future alternative cycling options.*

Regarding the Transportation Committee's recommendation to consider current or future alternative cycling options, from a routing perspective there are three alternative ways of reaching Clearview Drive that appear to be possible, as shown in Figure 4 below:

1. Via St. Johns Street;
2. Via Moray Street, Pinda Drive, Edward Crescent and an existing pathway connection;
3. Via Moray Street and Brookmount Avenue.

These potential routing options have various considerations:

1. Cycling facilities on St. Johns Street are being examined as part of Phase 2 of the ongoing St. Johns Street Redesign Project.
2. Existing pathway connection between Edward Crescent and Clearview Drive is narrow, dark, and has stairs.
3. Need for cyclists to access Brookmount Avenue safely from Moray Street.

Staff recommend that these different options continue to be explored during the traffic calming pilot such that an improved cycling connection can be considered for permanent implementation or a long-term future initiative.

Monitoring

The success of the traffic calming measures will need to be determined at the end of the pilot period around November of this year. Monitoring should include collection and comparison of detailed before and after traffic speed and volume data. This should be accompanied by a simplified online survey near the end of the pilot to engage respondents and obtain detailed feedback about the perceived effectiveness of the traffic calming pilot.

**Other Option(s)**

ISL has completed the work for which they were retained by the City. If Council does not wish to endorse proceeding with the implementation of the pilot design, staff could continue to refine the design as time and resources permit. A potential resolution for this alternative might be:

THAT Council receive for information the proposed traffic calming pilot design for Moray Street between St. Johns Street and Brookmount Avenue as recommended in the report dated February 3, 2022 from the Infrastructure Engineering Services Division regarding Moray Street Traffic Calming Study and Pilot Project.

AND THAT staff report back with an updated traffic calming design to address the following comments:

- [List of comments]

Figure 4: Moray Street Area Cycling Opportunities



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## Financial Implications

The approved 2022–2025 Capital Plan includes a Neighbourhood Traffic Calming Program budget of \$60,000 per year for the cost of traffic calming studies, designs, and pilot implementation. Generally, staff are allocating \$20,000 to designs and studies, and \$40,000 to pilot implementation.

While the \$70,000 cost estimate for the pilot implementation exceeds the City's annual traffic calming pilot allocation, it reflects the unique challenge of calming higher traffic volumes on a long section of steep road for which less expensive traffic calming measures, such as speed humps, are inappropriate to use. Also, the marked crosswalk at Pinda Drive with pedestrian-activated flashing beacons is a significant component of the overall cost that would not normally be included in other traffic calming projects, but is again required because of location and traffic volume. Staff have been working with ISL to reduce this cost estimate as much as possible, and some previously proposed traffic calming devices, such as planter boxes, were therefore removed from the project.

Staff recommend funding this project with \$40,000 from the 2022 Neighbourhood Traffic Calming Program and identifying a funding source for the remaining \$30,000. Remaining funds in this year's traffic calming program budget can be used for completing a traffic calming study and design at the next highest priority traffic calming initiative candidate location.

## Communications and Civic Engagement Initiatives

The City conducted public engagement on this project, led by ISL in collaboration with City, as detailed in the Discussion section of this report.

## Council Strategic Plan Objectives

The public engagement for this project aligned with Council's Strategic Plan objective of providing the public with transparent and open government, and opportunities to provide input on City issues. The proposed traffic calming pilot design aligns with the objective of providing people with a variety of options to move through and around Port Moody safely and efficiently.

## Attachment(s)

1. Moray Street Traffic Calming Design
2. Moray Street Traffic Calming Pilot Design

## Report Author

Geoffrey Keyworth, P.Eng.  
Transportation Engineer

## Report Approval Details

Document Title:	Moray Street Traffic Calming Study and Pilot Project.docx
Attachments:	- Attachment 1 - Moray Street Traffic Calming Design.pdf - Attachment 2 - Moray Street Traffic Calming Pilot Design.pdf
Final Approval Date:	Mar 14, 2022

This report and all of its attachments were approved and signed as outlined below:

Rosemary Lodge, Manager of Communications and Engagement - Mar 11, 2022 - 2:01 PM

Paul Rockwood, General Manager of Finance and Technology - Mar 11, 2022 - 2:52 PM

Tim Savoie, City Manager - Mar 14, 2022 - 4:03 PM