

## Attachment 6: Common Stakeholder Interests and Mitigation

### Introduction

Administration has reviewed the What We Heard Report (Attachment 5), summarized the results from engagement sessions, including common stakeholders' interests, and identified ways some of these can be addressed and mitigated through the planning and design process. Specific responses have been provided to address stakeholder common interests by presenting additional information, identifying potential solutions and sharing additional scopes of work that are planned to be included as part of the Green Line work program.

### Interest-Response Matrix

Public engagement took place from January 29 to April 30, 2020 and included a series of in-person and online engagement opportunities to share additional details about the updated Stage 1 alignment with focus on the Centre Street, Bow River Crossing, Downtown Core and Beltline areas.

In March, four open houses events were hosted in communities where changes to the alignment are being proposed, including the Beltline, Eau Claire, Chinatown and Crescent Heights. In addition, six pop-up information sessions and five drop-in storefronts were held in February and March along the entire future Green Line route from North Pointe to Seton. In total, engagement events were attended by nearly 1,300 Calgarians and over 4,200 comments were collected.

Input gathered through these engagement events was compiled and analyzed to identify common stakeholder interests. Common interests are organized by focus area and categorized under general themes to which a response and/or potential mitigation measure has been identified. Focus areas include:

**Centre Street:** specifics to Centre Street alignment (Centre Street N from 7 Avenue N to 16 Avenue N), includes surfaces stations at 9 Avenue N and 16 Avenue N.

**Bow River Crossing:** specifics to new bridge over Bow River (abutment at Eau Claire Promenade to abutment and transition onto Centre Street N), includes existing Centre Street Bridge.

**Downtown Core:** specifics to Downtown alignment (2 Street S.W. from Bow River to 9 Avenue S.W.), includes stations at 7 Avenue S.W. and 2 Avenue S.W.

**Beltline:** specifics to Beltline alignment (11 Avenue S from Elbow River to 2 Street S.W.), includes underground alignment and stations at Centre Street S and 4 Street S.W.

## Common stakeholder interests and our response: Centre Street N

| Interest:   | Response:   |
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| <p><b>Desire to include a station at 9 Avenue N as part of updated Stage 1 alignment</b></p>        | <p>The Green Line team is recommending that a station at 9 Avenue N be included as part of the updated Stage 1 alignment.</p> <p>An evaluation of this station concluded it will provide added connections to the community and area businesses and enable opportunities for future transit-oriented development.</p>   |
| <p><b>Movement of local traffic and increased short cutting through the community</b></p>           | <p>The project has identified planning and design objectives to:</p> <ul style="list-style-type: none"> <li>• Manage vehicle access for local residents and businesses</li> <li>• Minimize impacts to existing properties and businesses</li> </ul> <p>The mobility network in Crescent Heights will change with a surface-running LRT on Centre Street. A Community Traffic Review and Plan will be developed to address changes to the mobility network, which may include additions and modifications to existing community traffic-calming measures.</p> <p>The recommendation for a middle-running LRT configuration on Centre Street will help manage local traffic concerns as this provides a balance between left-turn access and train operations without significant impacts on local community traffic.</p> |
| <p><b>Loss of roadway capacity on Centre Street and impacts to surrounding mobility network</b></p> | <p>Operating Green Line as a surface-running LRT on Centre Street will reduce the number of vehicular lanes from four to two. It is expected that Centre Street will shift from a commuter route to one that provides more local circulation and access for businesses and residents.</p> <p>It is expected that traffic volumes will drop on Centre Street as drivers move to alternate routes, such as Edmonton Trail, Deerfoot Trail, 14 Street N.W. and 10 Street N.W.</p> <p>A Community Traffic Review will be undertaken for the area to examine existing traffic patterns, determine which alternate routes will receive more traffic, and develop strategies to manage impacts.</p>  |
| <p><b>Desire for improved pedestrian safety &amp; more comfortable pedestrian environment</b></p>   | <p>The project has identified planning and design objectives to:</p> <ul style="list-style-type: none"> <li>• Provide public realm that prioritizes pedestrian experience along corridor</li> <li>• Provide pedestrian connectivity across corridor.</li> </ul> <p>Streetscape improvements will be included as part of Green Line and will include new sidewalks up to building face (pending agreement with private land owners), pedestrian oriented street lighting, opportunities for tree planting, and new furniture such as benches, bike racks and waste and recycling bins. Pedestrian safety and connectivity across the corridor will be improved by providing signals at all pedestrian crosswalks.</p>  |

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| <p><b>Impacts to businesses from surface-running LRT and Green Line construction activities</b></p>             | <p>The project has identified planning and design objectives to:</p> <ul style="list-style-type: none"> <li>Minimize impacts to existing properties and businesses</li> </ul> <p>On-street parking will be removed with the introduction of a surface-running LRT on Centre Street. A Business Access, Loading and Parking Plan will be developed to explore potential solutions to support local businesses. This plan may look at changes to on-street parking on adjacent avenues and new opportunities for off-street short-term parking.</p> <p>Green Line will be developing a Community and Business Support Program to help businesses plan for and manage the potential impacts of construction.</p> |
| <p><b>Increased noise, crime &amp; social disorder due to LRT</b></p>   | <p>Public safety and security are important to The City. Crime Prevention Through Environmental Design (CPTED) principles, which considers how structures, spaces, lighting and presence of people can help to address safety and security concerns, will guide the design of LRT stations and the streetscape.</p> <p>Calgary Transit is committed to keeping customers safe when using Transit services and employs a variety of resources and tools to ensure station areas are monitored 24-hours, seven days a week, and access to immediate help is just a text or call away.</p>   |
| <p><b>Desire for increased capacity and frequent, reliable transit service to communities further north</b></p> | <p>The ultimate goal is to build the complete Green Line from north of Stoney Trail to south of Seton. The recommendation being made is based on the current available budget and allows for continuing to build the Green Line in stages as funding becomes available. We continue to explore all funding opportunities to expand Green Line LRT construction for future stages. Should funding become available sooner than anticipated, then this could create opportunities to enable quicker, more cost effective and community-focused expansion.</p>   |

## Common stakeholder interests and our response: Bow River Crossing

| Interest:  | Response:   |
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| <p><b>Environmental impacts on Prince’s Island Park and the constructed wetland and lagoon</b></p> | <p>The project has identified planning and design objectives to:</p> <ul style="list-style-type: none"> <li>• Minimize environmental impact.</li> <li>• Mitigate construction impact to users of Prince’s Island Park and surrounding areas.</li> </ul> <p>Impacts to the constructed wetland and lagoon can be mitigated through bridge planning and design. Environmental Specialists provided input into the initial bridge planning and recommended that the bridge minimize its footprint within the constructed wetland.</p> <p>Additional environmental studies will be completed as part of the bridge planning and design process to ensure that the bridge design and construction plans minimize environmental impacts and meet municipal, provincial and federal regulatory requirements relating to fish habitat, wildlife and other environmental considerations.</p> <p>During construction there will be temporary disturbance to vegetation and wildlife habitat. Construction activities will be managed to reduce impacts in the area, and The City will restore the surrounding natural area.</p> |
| <p><b>Bridge impact on river pathway users</b></p>   | <p>The Green Line team has identified a planning and design objective to:</p> <ul style="list-style-type: none"> <li>• Provide continued functionality and experience of the river pathway and Prince’s Island Park.</li> </ul> <p>Connectivity along the Bow River Pathway will be maintained through the LRT bridge design. Should the bridge design impact the existing pathway, The City will mitigate by replacing or rerouting any affected sections.</p> <p>The City is recommending that the new LRT bridge include a multi-use pathway for pedestrians and cyclists, which will provide a new connection across the Bow River.</p> <p>The Green Line team is working closely with The City’s Eau Claire Promenade team to understand potential impacts of the LRT bridge crossing over the river pathway and explore measures to mitigate impacts to function, experience and aesthetics of the pathway.</p>   |
| <p><b>Bridge alignment and geotechnical considerations</b></p>                                     | <p>The project has identified planning and design objectives to:</p> <ul style="list-style-type: none"> <li>• Incorporate flexibility for thoughtful bridge architecture options.</li> </ul> <p>The bridge is needed to cross the Bow River and connect between 2 Street S.W. and Centre Street N, and the configuration requires curves in the bridge alignment. The shape (radii) of these curves are constrained by the operating requirements of the LRT.</p>   |

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|   | <p>Through the next stages of planning, The City will conduct detailed technical investigations and studies to refine the bridge alignment and configuration, including the shape of the curve.</p>  |
| <p><b>Bridge impact on the views of adjacent residents</b></p>  | <p>The project has identified planning and design objectives to:</p> <ul style="list-style-type: none"> <li>• Minimize impacts to existing residential and commercial properties.</li> <li>• Minimize impacts to views.</li> </ul> <p>The City has been evaluating different bridge types and producing photo renderings from different viewpoints to understand how views may be affected. The renderings have demonstrated that simple bridge types can minimize the impact to some views. The next stage of bridge planning will provide opportunities for citizens to inform bridge architectural design objectives.</p>   |
| <p><b>LRT operation on the bridge creating noise that affects park and pathway users and adjacent residents</b></p> | <p>The project has identified planning and design objectives to:</p> <ul style="list-style-type: none"> <li>• Provide continued functionality and experience of the river pathway and Prince’s Island Park</li> <li>• Minimize impacts to existing residential and commercial properties.</li> </ul> <p>Green Line’s low-floor LRT system is expected to be quieter and generate less vibration than the existing Calgary LRT system. The project has adopted internationally recognized guidelines to help evaluate the potential effects noise and vibration from transit systems.</p> <p>A series of measures will be implemented to mitigate noise and vibration, including undertaking noise and vibration studies to identify where mitigation measures might be required and installation of special track systems and other noise and vibration abatement measures. In addition, specifications for our new light rail vehicles (LRVs) will outline requirements to make the LRVs quieter than Calgary’s existing fleet.</p> |

## Common stakeholder interests and our response: Downtown

| Interest:  | Response:   |
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| <p><b>Impacts on local traffic, access and circulation</b></p>                   | <p>The project has identified planning and design objectives to:</p> <ul style="list-style-type: none"> <li>Minimize impacts to the mobility network.</li> </ul> <p>The Green Line team responded to concerns expressed by area businesses and property owners by revising the plan of the 2 Avenue S.W. station area by moving the portal and station out of the road right-of-way and integrating the LRT infrastructure directly into the future Eau Claire Market redevelopment site.</p> <p>By integrating the station into the redevelopment site, there will be no impacts to the existing road network in this area and therefore no changes to local traffic, access or circulation.</p>                                     |
| <p><b>Reduced quality of life due to safety and visual impacts of LRT</b></p>    | <p>Public safety and security are important to The City. Crime Prevention Through Environmental Design (CPTED) principles, which consider how structures, spaces, lighting and presence of people can help to address safety and security concerns, will guide the design of LRT stations and the streetscape.</p> <p>Locating 2 Avenue S.W. station out of the roadway and into an adjacent redevelopment site moves the station further away from area residences, thereby reducing the visual impact and providing an opportunity for an integrated redevelopment.</p>   |
| <p><b>Impacts due to noise &amp; vibration from LRT operations</b></p>           | <p>Green Line's low-floor LRT system is anticipated to be quieter and generate less vibration than the existing Calgary LRT system. The project has adopted internationally recognized guidelines to help evaluate the potential effects of noise and vibration from transit systems.</p> <p>A series of measures will be implemented to mitigate noise and vibration, including undertaking noise and vibration studies to identify where mitigation measures might be required and installation of special track systems and other noise and vibration abatement measures. In addition, specifications for our new light rail vehicles (LRVs) will outline requirements to make the LRVs quieter than Calgary's existing fleet.</p> |
| <p><b>Residential property values decreasing due to proximity to station</b></p> | <p>In many cities, Calgary included, high density residential developments experience a positive uplift in property values when new rapid transit stations are built within close proximity to a development.</p>   |

## Common stakeholder interests and our response: Beltline

| Interest:   | Response:  |
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| <p><b>Interest in improved public realm &amp; the roadway and sidewalks</b></p> | <p>The Green Line Project Team has identified planning and design objectives to:</p> <ul style="list-style-type: none"> <li>• Locate stations to support the vision of the Rivers District Master Plan.</li> <li>• Explore opportunities to integrate station entrances into adjacent developments.</li> </ul> <p>The public realm and streetscape will be reinstated in areas where LRT construction is anticipated to create disturbances to both the roadway and existing streetscape.</p> <p>Within the Beltline, this will include areas around the Centre Street S and 4 Street S.E. stations, and potentially in areas where construction will occur above-ground. Public realm improvements within the Rivers District will incorporate the vision of the Rivers District Master Plan.</p> |
| <p><b>Underground station design, safety and security</b></p>                   | <p>Public safety and security are important to The City. Crime Prevention Through Environmental Design (CPTED) principles, which considers how structures, spaces, lighting and presence of people can help to address safety and security concerns, will guide the design of LRT stations and the streetscape to mitigate against undesirable activities, including crime and graffiti.</p> <p>Stations will be appropriately sized to accommodate peak passenger volumes and event loading requirements.</p>   |
| <p><b>Negative impacts during construction</b></p>                              | <p>Our contractors will be required to manage construction dust, noise and debris, similar to other City of Calgary construction projects.</p> <p>The City will be developing a Community and Business Support Program to help businesses plan for and manage the potential impacts of construction.</p> <p>The Green Line project team will be working with Calgary Municipal Land Corporation and other area stakeholders to manage the potential impacts of concurrent construction projects in the Beltline, such as the Event Centre and BMO expansion, among others.</p>   |