



Transportation Corridor Study Policy

Review and Recommendations

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Introduction

Background

The City conducts a number of different types of planning studies intended to identify the long-, medium-, and short-term needs of the city's transportation infrastructure. At the highest level is the Calgary Transportation Plan (CTP) which sets out the objectives with which all studies must align. Corridor studies are then conducted on specific transportation routes within the city network. A transportation corridor study is a long-term transportation system analysis which examines the current and future transportation planning needs and is typically completed 10 to 30 years in advance of construction to determine the general elements of the roadway (i.e., number of lanes, cycling facilities, intersection configurations, etc.), the required right-of-way, and associated land impacts. **Figure 1** illustrates the transportation planning spectrum and where corridor studies fit in.

Although long-term in nature, corridor studies can impact both current and future citizens in a number of different ways. In the past, corridor studies were conducted with an eye towards achieving the engineering objectives of the study – determination of roadway requirements and

right-of-way. However, it has become apparent that this strategy does not place an appropriate amount of emphasis on the impacts of roadway planning studies on adjacent communities and citizens. Recognizing this, The City identified a need to create a policy guiding the way corridor studies are conducted to ensure that the process incorporates appropriate levels of collaborative engagement with the general public and impacted stakeholders in an open and transparent manner throughout the planning process.

Direction was provided by Council in 2012 to create a Corridor Study Terms of Reference Policy which would address (but not be limited to):

- The preservation of community integrity
- The identification of community improvements
- The minimization of the negative impacts of corridor improvements on communities
- The establishment of clear definitions and corridor study outcomes at the beginning of the process
- The provision of the establishment of options and staging of corridor alternatives utilizing criteria such as community impacts, cost/benefit, traffic optimization and feasibility

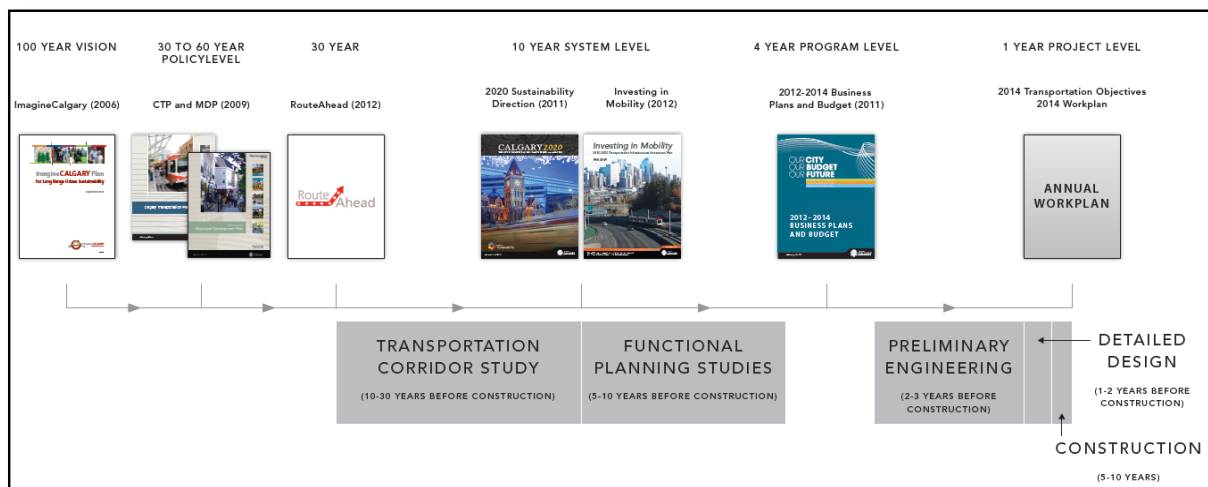


Figure 1 – Planning Spectrum and Timeframes

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- And to develop a new community engagement and communications approach which collaborates with stakeholders using the engage! policy.

The project team tasked with developing the Corridor Study Policy undertook a literature review, examined a number of case studies, conducted a jurisdictional survey, and worked closely with Calgarians to understand past experiences and priorities and to collaboratively create a draft policy document.

The policy was approved by Council in 2014.

Policy Summary

The Transportation Corridor Study Policy was approved in 2014 following significant public engagement. The policy clarifies what may or may not be undertaken as part of a Transportation Corridor Study.

The City of Calgary will:

- Undertake Transportation Corridor Studies to facilitate long term growth of the City based on the goals and objectives of the CTP.
- Use a multifaceted communications approach to communicate with stakeholders.
- Conduct the appropriate level of engagement based on the classification of the corridor, impact to the surrounding community and the engage! policy.
- Provide clear definitions of desired outcomes and tradeoffs for the movement of all transportation modes.
- Work with stakeholders to identify existing and potential issues along a transportation corridor.
- Use the issues identified and work with stakeholders to develop concepts for improvements to a transportation corridor,
- Seek to develop concepts that:
 - Preserve the integrity of adjacent communities
 - Identify community improvements
 - Minimize negative impacts on adjacent land uses and open spaces

- Include a 'do nothing' concept
- Include staging and prioritizing both interim and ultimate solutions

- Communicate the approximate timelines and possible triggers for each potential concept for improvement

The City will not:

- Review the classification of the transportation corridor as part of the transportation corridor study process.

Stakeholders will:

- Have an opportunity to participate in an active two way process to develop and evaluate concepts.
- Have an opportunity to understand the issues and/or need for a transportation corridor study.
- Have the ability to follow up on the corridor study process through various engagement and communication tactics.

An accompanying document entitled '2014 Interim Transportation Corridor Study Guidelines' was also created to foster an understanding of the process followed in the undertaking of transportation corridor studies by The City. Its purpose is to supplement the Transportation Corridor Study Policy and facilitate the implementation of appropriate engagement throughout the course of a project.

Purpose of Review

The purpose of this review is to examine the application of the Transportation Corridor Study Policy in the 4 years since its approval and to identify any required amendments or updates to enhance its benefit. This review will consist of addressing the following three items:

1. Amending the policy if required.
2. Updating the Interim Guidelines as necessary to be considered Complete.
3. Understanding the implications of the policy on work plans and resourcing.

Methodology

In order to complete the review of the Transportation Corridor Study Policy and develop the recommendations within this report, ten projects were examined which have been undertaken since the start of development of the policy. As well, project team members including project managers, communications leads and engagement specialists provided feedback and input on the study processes and outcomes. Lastly, where available, reports from external consultants were used to measure outcomes and provide project details.

Overview of Case Studies

Ten studies were initiated and substantially completed since the Transportation Corridor Study Policy began development in 2012. These projects were used as case studies to examine the effects of the policy on project outcomes and to identify any correlations between policy effectiveness and type of corridor being examined. The following sections and figures are intended to demonstrate the diversity of projects undertaken; detailed case analyses are provided in subsequent sections of the report.

The ten projects examined were:

1. Crowchild Trail Corridor Study (17 Avenue S to 24 Avenue N)
2. Shaganappi Trail North Corridor Study
3. McKnight Blvd Transportation Study (Deerfoot Trail to Barlow Trail)
4. 16 Avenue NE Corridor Study (Deerfoot Trail to Barlow Trail)
5. 17 Avenue SE Corridor Study (Stoney Trail to East City Limits)
6. Deerfoot Trail Study
7. Glenmore Trail East Study
8. Sarcee Trail / Richmond Road Interchange Study
9. Shaganappi Trail South Study
10. 50 Avenue SW Corridor Study (Crowchild Trail to 14A Street)

Corridor studies can be undertaken on any roadway, regardless of classification. The majority of the corridors identified within the CTP fall into the categories of Livable Streets (Parkways, Urban Boulevards or Neighbourhood Boulevards), Arterial Streets or Skeletal Roads. **Figure 2** illustrates the types of roadways captured within the ten case studies.

Project	Skeletal Road	Arterial Street	Urban Boulevard	Parkway
Crowchild Trail	✓			
Shaganappi Trail N	✓	✓		
McKnight Blvd	✓			
16 Avenue NE	✓			
17 Avenue SE			✓	✓
Deerfoot Trail	✓			
Glenmore Trail East	✓			
Sarcee Tr/Richmond Rd	✓	✓	✓	
Shaganappi Trail S	✓	✓	✓	
50 Avenue SW				✓

Figure 2 – Case Study Road Classifications

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The Transportation Corridor Study Policy was developed in response to concerns from the public, in part regarding the need to be more mindful of the impacts of road studies on the adjacent communities. The need to understand the context of

the surrounding land uses and community fabric forms a basis of the policy. Figure 3 illustrates the variety of adjacent land use typologies found along the case study corridors.

Development of the Transportation Corridor Study Policy began in 2012, with Council approval of the final draft occurring in 2014. During that time, ongoing projects were modified as the learnings of the policy became apparent; after approval of the

policy, all new projects were initiated under the guidance of the policy. **Figure 4** depicts the timelines of the ten case studies, showing initiation, completion and any re-scoping due to policy development.

Project	Standard Industrial	Established Residential	Inner City	Major Activity Center	Green Space	Greenfield	Neighbourhood Corridors	Community Activity Center	Urban Corridor
Crowchild Trail		✓	✓	✓					
Shaganappi Trail N		✓	✓	✓					
McKnight Blvd	✓								
16 Avenue NE	✓	✓							
17 Avenue SE						✓			✓
Deerfoot Trail	✓	✓			✓				
Glenmore Trail East						✓			
Sarcee Trail/Richmond Rd		✓						✓	
Shaganappi Trail S			✓	✓			✓		
50 Avenue SW			✓		✓				

Figure 3 – Case Study Land Use Typologies

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Figure 4 – Case Study Timelines





Analysis

The case studies provide details related to each project's alignment with the Transportation Corridor Study Policy, the successes and lessons learned for each project and the overall engagement process undertaken. This section of the review is intended to synthesize the trends observed from the ten case studies and identify any areas of improvement or recommendations for policy amendment.







Alignment with Policy Points

Understanding how well the case study projects have achieved alignment with the Transportation Corridor Study Policy's main points indicates both the appropriateness of the policy points and their relative impact on project success. **Figure 5** provides a summary of the case studies' alignment, engagement budget (as a percentage of the overall consultant budget), project duration and highlights of successes and lessons learned.

Figure 5 – Case Study Summary

Project	Overall Policy Alignment	Engagement Budget (%)	Project Duration (months)	Notes
McKnight Blvd		36%	48	<ul style="list-style-type: none"> The inclusion of the 'do-nothing' option allowed stakeholders to provide informed feedback on the highest value investment decision The formation of an Advisory Group would be more appropriate on a project with complex issues and differing interest groups
16 Avenue NE		18%	54	<ul style="list-style-type: none"> There was little focus on short-term improvements or communicating the impacts of the 'do-nothing' option Original stakeholder list didn't include some adjacent communities; the stakeholder list was later expanded
Crowchild Trail		55%	32	<ul style="list-style-type: none"> The development of the engagement process was stakeholder-driven so there was a high level of satisfaction with the process Communication focused on building line-of-sight between engagement and technical progress
17 Avenue SE		26%	19	<ul style="list-style-type: none"> Very fluid engagement plan to respond to changes in stakeholder interest levels throughout the project Clear definition of project boundaries and what elements/decisions were not included in the study scope

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Project	Overall Policy Alignment	Engagement Budget (%)	Project Duration (months)	Notes
50 Avenue SW		35%	18	<ul style="list-style-type: none"> Clearly defined benefits and trade-offs of accommodating various users in a retro-fit situation were communicated The short-term plan developed to address numerous community concerns was well-received
Shaganappi Trail S		45%	36	<ul style="list-style-type: none"> The short-term plan was developed in close collaboration with local residents based on their desire to understand and influence impacts to their neighbourhood Significant work was done to adjust the engagement plan throughout the project to respond to stakeholder needs
Glenmore Trail East		17%	30	<ul style="list-style-type: none"> Little information was shared regarding staging information and timelines Key stakeholders were closely involved in concept refinement to minimize impacts
Deerfoot Trail		17%	Ongoing	<ul style="list-style-type: none"> Partnership with Alberta Transportation resulted in a communications/engagement plan that was acceptable to both authorities Significant participation in online events is appropriate given the length and breadth of the corridor
Shaganappi Trail N		21%	36	<ul style="list-style-type: none"> Scope of engagement was revised post Policy approval and better reflected stakeholder needs Project team was responsive in examining alternative technical solutions when faced with significant stakeholder concerns regarding impacts on the community
Sarcee Tr / Richmond Rd		10%	30	<ul style="list-style-type: none"> Engagement level was appropriate given work had previously been done to confirm interchange need The evaluation criteria reflected the benefits and tradeoffs of different modes



Strong alignment



Moderate alignment



Weak alignment

Policy Point 1: Use of a multi-faceted communications approach

In general, the projects all had fair to strong alignment with this policy point. The breadth of communications and engagement tactics available to project staff, and the variety used, is reflected in the reach achieved. Public feedback reflected an appreciation for the variety of communications outlets as well as the balance of in-person and online opportunities. As well, the varied use of traditional open houses, community pop-up events, workshops and select stakeholder groups as appropriate was well received.

Requesting input from the public and stakeholders at project initiation allows the project team to adjust the engagement process and scope to address the specific desires of the affected stakeholder groups and the public, in a project-specific manner. This does result in difficulties with delineating a project scope in the pre-planning and pre-procurement stages of the project, however, and can result in a misalignment of anticipated and actual budgets and scope.

The process has worked well on projects where the preferred consultant has a strong understanding of the Transportation Corridor Study Policy, the importance of structuring the engagement process correctly and has demonstrated flexibility in adjusting the project scope to reflect the learnings of the initial engagement events.

Policy Point 2: Appropriate level of engagement based on classification of corridor, impact to surrounding community and engage! policy

Alignment with this policy point is critical to the success of the project. The 'appropriate level of engagement' is a highly subjective statement and requires the project team (encompassing project manager, communications and engagement staff and consultant) outline clearly at the pre-planning stage the project objectives and anticipated extent of impacts of potential recommendations, as well

as have substantial insight into area stakeholders' interests and a strong understanding of risk factors such as other previous or ongoing projects in the area.

Although this policy point is deliberately non-prescriptive, the case studies provide additional insight into how the 'appropriate level of engagement' can be determined for a specific project. The McKnight Blvd Transportation Study is an example of a project where the level of engagement was higher than necessary for the level of complexity and impact of the project, and interest and involvement of stakeholders waned as the project progressed. The Crowchild Trail Corridor Study, on the other hand, demonstrates how the original scope assumed a level of engagement based primarily on the road classification and neglected to account for the influence of impacts on the surrounding communities on the engagement requirements of stakeholders. The revised scope of the Crowchild Trail Corridor Study was much better aligned with stakeholder needs, reflected an understanding of the influence of community impacts on the level of interest and involvement of stakeholders, and the outcome was much more positive in terms of the level of understanding and acceptance of the recommendations.

Policy Point 3: Provide clear definitions of desired outcomes and tradeoffs for all modes

This policy point reflects both the changing nature of the scope of corridor studies in terms of accommodating the users of a variety of transportation modes and the importance of communicating the necessity of balancing the interests of a variety of perspectives. Previously, transportation corridor studies focused primarily on the needs of vehicles, and 'balance' was reflected generally in cost and land versus mobility. Today, we examine corridor studies from the perspective of improving travel choices, and need to more clearly reflect the tradeoffs between modes as well as associated impacts such as cost, land and environment.

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The Shaganappi Trail North Corridor Study provides an example of outlining how the incorporation of enhanced mobility for vehicles would affect the adjacent communities and where a balance of needs was required. The 50 Avenue S.W. Corridor Study very clearly outlined the opportunities for each concept in terms of accommodating the various modes of travel, and allowed stakeholders to understand that, in a retrofit situation, not all modes can be accommodated to the highest degree without associated land and cost impacts. Clearly outlining the balance of perspectives resulted in the public and stakeholders reaching a level of acceptance with recommendations while feeling informed as to the tradeoffs.

In previous studies, stakeholder dissatisfaction often resulted from a perception, at the completion of the study, that they hadn't fully understood the impacts or tradeoffs of the recommendations, and that they would have made a different choice or provided different input had they seen the complete picture. Alignment with this policy point has diminished the frequency of this issue at project completion.

Policy Point 4: Work with stakeholders to identify existing and potential issues

In general, the case study projects have shown strong alignment with this policy point. Of equal importance to working with stakeholders to identify existing and potential issues in the early stages of the project is following through on addressing the issues raised as the project progresses, where possible, and explaining why they are not addressed if they cannot be. This is known as answering 'if not, why not'. Without providing that line of sight for stakeholders, the recommendations at project completion may be seen as not reflective of stakeholder concerns, misaligned with their understanding of the project objectives and can lead to a feeling of 'why did you bother asking?'.

There were two key lessons learned on the case study projects related to this policy point. The first was mentioned above – the importance of addressing the issues raised or providing an explanation as to why they could not be

addressed. The importance of communicating that the concerns were heard by the project team cannot be understated.

The second lesson learned is related to the importance of outlining project constraints early in the project. Being open and transparent as to why certain topics/issues may be 'off the table' can go a long way to fostering an environment of trust and communication between the project team and the stakeholders and public. The 50 Avenue S.W. Corridor Study clearly stated at the project outset that no modifications to the Crowchild Trail interchange would be considered. This helped focus stakeholders on identifying issues and concerns that the project team had the ability to address. Similarly, the Crowchild Trail Corridor Study was clear from the project outset that a reclassification of the roadway would not be considered and this helped alleviate stakeholder frustration.

Policy Point 5: Develop concepts that preserve the integrity of adjacent communities, identify community improvements, minimize negative impacts, include a 'do nothing' concept, include staging/prioritization for interim and ultimate solutions

In general, the case study projects achieved varying levels of alignment with this policy point. In most cases, an understanding of the need to minimize negative impacts was recognized, although 'negative impacts' can be subjective as well. The balance of minimizing negative impacts while still achieving project objectives can be difficult if stakeholders and the public do not support the project objectives in the first place. An example of this is the incorporation of bike facilities which may reduce opportunities for other roadway elements (e.g., green boulevards or travel lanes) or increase land requirements or costs. For stakeholders who do not clearly see the benefits of accommodating cyclists, they may feel that negative impacts have not been minimized to the fullest extent possible. This occurred on the 16 Avenue N.E. Functional Planning Study where the incorporation of bike lanes was not seen as

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outweighing the associated impacts of additional required right-of-way.

The inclusion of a 'do nothing' concept was generally well received on the case study projects. As part of the McKnight Blvd Transportation Study, stakeholders and the public provided informed feedback that they saw the highest value in waiting for long-term grade separation improvements at some locations, rather than achieving limited benefits through short-term investment, regardless of the scale of cost. On the 50 Avenue S.W. Corridor Study and the South Shaganappi Study, public and stakeholder feedback changed from a belief that no changes or investment were needed to an understanding that there is a cost associated with 'doing nothing' and that a higher overall value could be achieved through making more appropriate investment decisions.

In general, most of the case study projects were able to provide staging and prioritization scenarios for interim and ultimate solutions.

Policy Point 6: Communicate timelines / triggers for each concept

Alignment with this policy point was moderate for most of the case study projects. Although there is a clear desire from stakeholders and the public to really understand timelines associated with study recommendations, the long term, unfunded and unapproved nature of corridor studies results in difficulties providing this information with any degree of accuracy.

A long term project such as the 17 Avenue S.E. (East of Stoney Trail) Corridor Study, for example, is almost wholly dependent on adjacent development occurring for funding and implementation. While the project team was able to share a possible staging scenario, there was no certainty on timing. For stakeholders and the public who have invested time in participating in the project, this can result in frustration over not having a sense of when, if at all, the recommendations will be realized.

Although the case studies highlight the difficulties associated with strong alignment to this policy point as written, alternative messaging was found to help the public and stakeholders. For example, although the 17 Avenue S.E. Corridor Study project team could not communicate specific timelines for implementation, an explanation of 'next steps' throughout the project gave stakeholders an understanding of The City's prioritization, funding and implementation processes. The project team shared that, upon approval at the corridor study level, projects are evaluated against each other based on items such as need, availability of right-of-way, readiness for construction, etc. Once funding is secured, the project then moves into preliminary design, detailed design and finally construction. This process outline allows stakeholders to understand that its appearance on the Investing in Mobility list and the initiation of preliminary design are indicators that the project is moving forward.

Conclusions

This review was undertaken to determine:

1. Any required amendments to the Policy.
2. Required updates to the Interim Guidelines.
3. The implications of the Policy on work plans and resourcing.

Policy Amendments

The primary objective of the Transportation Corridor Study Policy was to outline The City's commitment to stakeholders and the public regarding the engagement process to be followed during corridor studies and to provide consistency in the type of information and analysis that would be undertaken and shared.

The Transportation Corridor Study Policy has changed the way The City approaches corridor studies in two ways:

1. The defined scope of the technical work undertaken has been consistently broadened to include short-term improvements that provide near-immediate benefit, and the inclusion of 'do-nothing' options that provide a basis for understanding the benefit of transportation infrastructure investments.
2. The Transportation Corridor Study Policy allows us to better scope the amount, type and timing of engagement that will be required for the success of the project, but has also provided a commitment for fluidity during the project, and responsiveness to stakeholder needs.

One of the outstanding questions during the creation of the Policy in 2014 was whether it should be more prescriptive in terms of outlining the 'appropriate' level of engagement based on corridor type. The benefit of a more prescriptive approach would be the transparency of the process for stakeholders, consistency across similar types of projects, and the setting and meeting of expectations. However, given the wide

variety of factors which individualize each corridor study, regardless of corridor type (see Figure 3: Case Study Land Use Typologies), such a prescriptive approach would likely result in a lack of responsiveness to stakeholder needs and an increase in unresolved issues throughout the project.

The development of the ten case studies used in this review should provide additional information which practitioners can use to inform the case-by-case determination of 'appropriate' levels of engagement, without the need for a prescriptive policy.

Conclusion: The Transportation Corridor Study Policy, as approved, achieves its objectives and no amendments are necessary.

Updates to 2014 Interim Transportation Corridor Study Guidelines

The 2014 Interim Transportation Corridor Study Guidelines supplement the Transportation Corridor Study Policy and provide detailed information regarding the technical and engagement processes undertaken when completing a corridor study. Their aim is to provide practitioners, stakeholders and the public with a consistent understanding of the commitments The City has made regarding engagement on corridor studies, and to provide suggestions for implementing appropriate engagement which aligns with the Transportation Corridor Study Policy.

The Guidelines were developed through examination of case studies of projects completed prior to the development of the Policy and were intended to provide guidance on filling in engagement gaps that were identified in those projects. Projects completed subsequent to the Policy's approval provide examples of how the Policy was implemented and what level of 'appropriate' engagement was determined based on project type. Categorizing the case study projects by road type and land use provides relevant information for use on similar projects.

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As such, the case studies used in this review would enhance the application of the Guidelines for future transportation corridor studies.

Conclusion: Update the 2014 Interim Transportation Corridor Study Guidelines by:

- **Replacing the 2014 case studies with those developed as part of this review**
- **Including a section summarizing this review and its conclusions**
- **Updating the title to 2018 Transportation Corridor Study Guidelines**
- **Updating the document to reflect current City of Calgary branding and report templates**

Work Planning and Resourcing

The case studies highlight the effectiveness of the Policy and the successes seen on projects post-implementation in terms of transparency, stakeholder acceptance and minimization of unresolved issues at project close. In order to implement the Policy, changes have been made to both work planning and resourcing of projects. In general, both budget and schedule of projects have increased since the Policy's approval. The additional and enhanced engagement being undertaken has budget implications. A typical transportation corridor study, before Policy implementation, would see approximately 10% of the consultant's budget being used for engagement. Our case studies show that more recent projects are allocating between 20% and 30% of the consultant budget towards engagement. As a result, overall project budgets have increased.

In addition, the need to provide an appropriate level of engagement as well as working with stakeholders early in the project process to identify existing issues has led to the use of 3 to 5 phase engagement strategies rather than the 2 to 3 phases previously accounted for. Project schedules are now primarily driven by the need to appropriately time engagement and communication activities. There are specific times

of the year which less suitable for engagement activities, such as during summer and Christmas holidays. In addition, the feedback obtained during engagement phases must be synthesized and interpreted for inclusion in the technical work being undertaken by the project team. The result is that there may be times throughout the project where work cannot advance until the next phase of engagement is undertaken. In general, corridor studies are taking anywhere from 24 to 42 months to complete. Prior to the Policy implementation, a more typical project duration would be 18 to 30 months.

Understanding the implications of implementation of the Policy requires that extended project timelines and budgets be accommodated during annual work plan and budgeting exercises.

Conclusion: Work planning and project resourcing should account for longer project timelines and increased budgets to align with the Transportation Corridor Study Policy.