



ADMINISTRATIVE REPORT

Report Date: July 13, 2011
Contact: J. Dobrovolny/
B. Toderian
Contact No.: 604.873.7331/
604.873.7698
RTS No.: 08807
VanRIMS No.: 08-2000-20
Meeting Date: July 26, 2011

TO: Standing Committee on Transportation and Traffic
FROM: Director of Planning and General Manager of Engineering Services
SUBJECT: Viaducts and False Creek Flats Planning: Eastern Core Strategy

RECOMMENDATION

- A. That Council receive for information this report back on the initial work relating to transportation impacts, soils contamination and a structural review for the Georgia and Dunsmuir Viaducts Review (Phase I), as detailed in Appendix A;
- B. That Council direct staff to undertake analysis of land use, cost, development potential and structural reconfiguration options for the Georgia and Dunsmuir viaducts in the context of an integrated transportation and land use approach to the Eastern Core, all within existing budgets, generally in accordance with the *Eastern Core Strategy* work program as outlined in Appendix B; and
- C. That Council direct staff to report back with policy directions for the Eastern Core, including a Terms of Reference for the next phase of more detailed land use and transportation planning for the area.

GENERAL MANAGER'S COMMENTS

The General Manager of Community Services recommends APPROVAL of the foregoing.

COUNCIL POLICY

False Creek North Official Development Plan (1990)

Industrial Lands Policies (1995)

Greater Vancouver Regional Growth Strategy - (2011)

Metropolitan Jobs and Economy Land Use Plan: Issues and Directions (2007)

Rezoning Policy for “High Tech” Sites in the False Creek Flats (2009)

Northeast False Creek: Directions for the Future (2009)

Greenest City 2020 Action Plan (2011)

SUMMARY

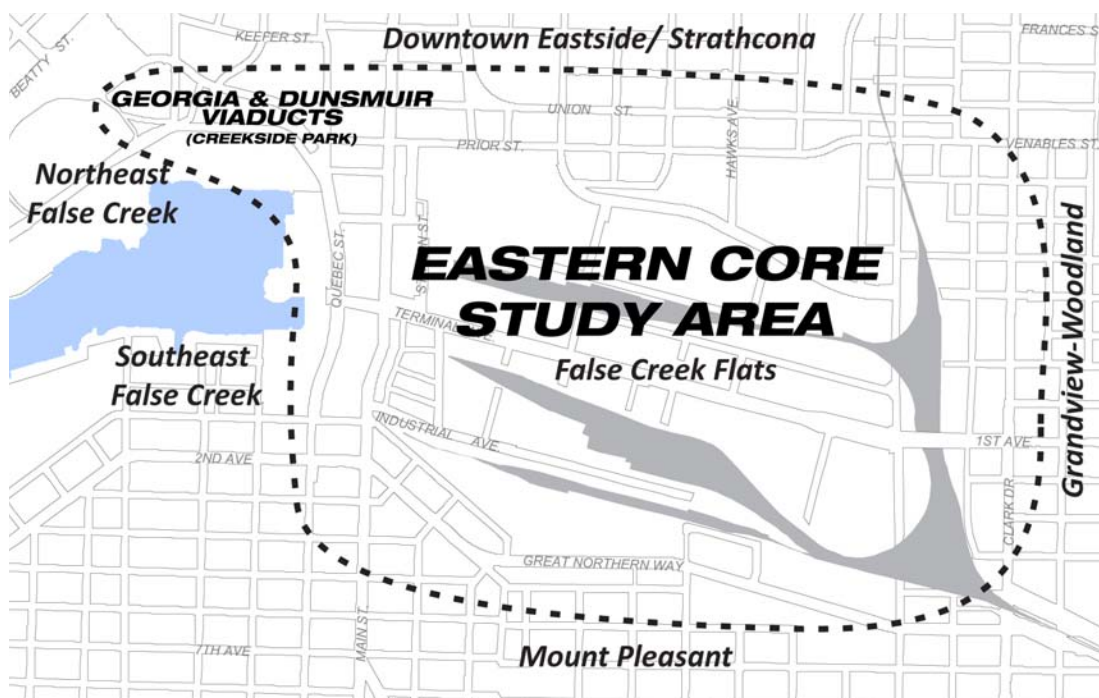
The initial analysis from the first phase of the Georgia and Dunsmuir Viaducts Study revealed that the transportation impacts from the partial or longer term complete removal of the structures are manageable provided there continues to be investment in transit, walking and cycling improvements to accommodate current travel demand and future growth.

This report recommends that the next phase of work on the future of the viaducts acknowledges that the structures are part of a larger transportation and land use network stretching east from Northeast False Creek to Clark Drive in an area known as the Eastern Core (see Map 1 below). The report recommends proceeding with more detailed analysis of the viaducts’ removal or reconfiguration, as well as resulting land uses and development potential for the viaducts’ lands, as part of a “big picture” look at the Eastern Core through the proposed *Eastern Core Strategy*.

The content and timing of work done on the *Eastern Core Strategy* will include:

- Detailed land use and transportation options for the viaducts which will be included in the public consultation for the Transportation Plan Update (early 2012) and reported back to Council following consultation in Spring 2012;
- Staff recommendations on comprehensive planning principles and policy directions for future transportation and land use planning in the larger Eastern Core area (for Council’s consideration by summer 2012).

Figure 1: Map of the Eastern Core



BACKGROUND

In November 2009, Council directed staff to undertake a study to review the potential options for the removal or modification of the Georgia and Dunsmuir viaducts. The current viaducts, built in the 60's to replace the original viaducts, were constructed with two structures to bypass the tidal lands and industrial and rail uses below. This design was based on these viaducts becoming the first phase of a larger freeway network that was planned. Today the viaducts create a physical and visual barrier in this area of the city.

In June 2010, Council endorsed undertaking the first phase of the study to examine the potential transportation, soils, and structural impacts of removing some or all of the viaducts, with more detailed land use planning and public consultation to follow in a future phase. The primary goal of this first phase was to determine if the transportation, soils, and/or structural impacts would be feasible under various capacity reduction strategies.

Since that time, City Staff have engaged a consultant to review key transportation, soils and structural issues related to viaducts reconfiguration and removal (summarized below), and have conducted limited public consultation in the form of a public forum at SFU Harbour Centre. There continues to be significant public interest in decisions related to the viaducts, and continued interest from the public in discussing considerations of land use, future development potential and urban design in the broader context beyond the immediate area of the viaducts. This is particularly true given the land use and transportation linkages of these structures to the False Creek Flats and surrounding neighbourhoods.

DISCUSSION

1) Results of the Initial Assessment of the Georgia and Dunsmuir Viaducts

The City retained consultants to conduct an initial review of the Georgia and Dunsmuir viaducts assessing potential transportation impacts, soils contamination at a high level, and structural feasibility of modifying the viaducts. A brief description of the work is included below, and more detail is provided in Appendix A.

In summary, the Georgia and Dunsmuir viaducts assessment indicates:

- That there are a number of options to modify the viaducts structurally,
- That the transportation impacts of modifying the viaducts can be managed, and
- That although there is soils contamination in the area that the conditions are manageable.

Structural Review

The structural review of the viaducts indicated that the majority of the structure is in reasonably good condition. The section that crosses Main Street requires some minor retrofits in the short term and there are some other maintenance and repairs that are required. It is estimated that the viaducts would have a remaining services life of 40+ years with approximately \$5 million in maintenance costs and \$5 million in seismic upgrades over this timeframe. A summary of the anticipated repair costs is provided in Appendix A.

A review of the potential to remove sections of the viaducts was undertaken and it was determined that sections would best be removed at the expansion joint locations, generally located at every 3rd or 4th column. The structures can be removed at other locations as well

but this approach would require some structural modifications. Therefore from a structural perspective there are several viable removal scenarios.

Transportation Assessment

The transportation review assessed the potential impacts of removing vehicle capacity by modifying the viaducts. The assessment concluded that due to the reduction in vehicle volumes entering the downtown over the past 15 years, there is available vehicle capacity on adjacent streets to accommodate some of the diverted traffic.

Three capacity reduction scenarios were examined ranging from a 20% reduction to a 100% reduction in viaduct capacity. The analysis indicated that a 20% reduction would have minimal diversion of traffic. The 100% reduction scenario would require additional transit infrastructure such as the Hastings B-Line, Evergreen Line and the UBC line to be in place in order to attract trips and accommodate future growth in travel to the downtown by non-auto modes. In addition, the 100% removal scenario would require alternate cycling and truck routes.

Soils Review

A review of the soil conditions beneath the viaducts bounded by Carrall, Gore, Pacific Boulevard and Expo Boulevard was undertaken to get a better understanding of the potential contamination in the area. A significant portion of this land was created by fill with the western portion of the study area falling within a region known to have contained heavy industry, including a manufactured gas plant. The review of soils contamination indicated that the cost of full remediation to a residential standard would be in the range of \$4 -8 million dollars.

2) The Value of an Integrated *Eastern Core Strategy*

To develop a vision for the future of the viaducts there are a number of elements that benefit significantly from being examined in a larger context, particularly for any complete removal configuration. It is recommended that these be assessed within the context of an overall strategy for the Eastern Core.

The proposed study area for the *Eastern Core Strategy* includes the neighbourhoods which surround the eastern basin of False Creek. The study area boundary is not intended to be a hard line, as illustrated in the conceptual depictions in Figures 1 and 2. A strategic and integrated approach is recommended for this area due to the planning processes that are proposed or are currently underway including the following:

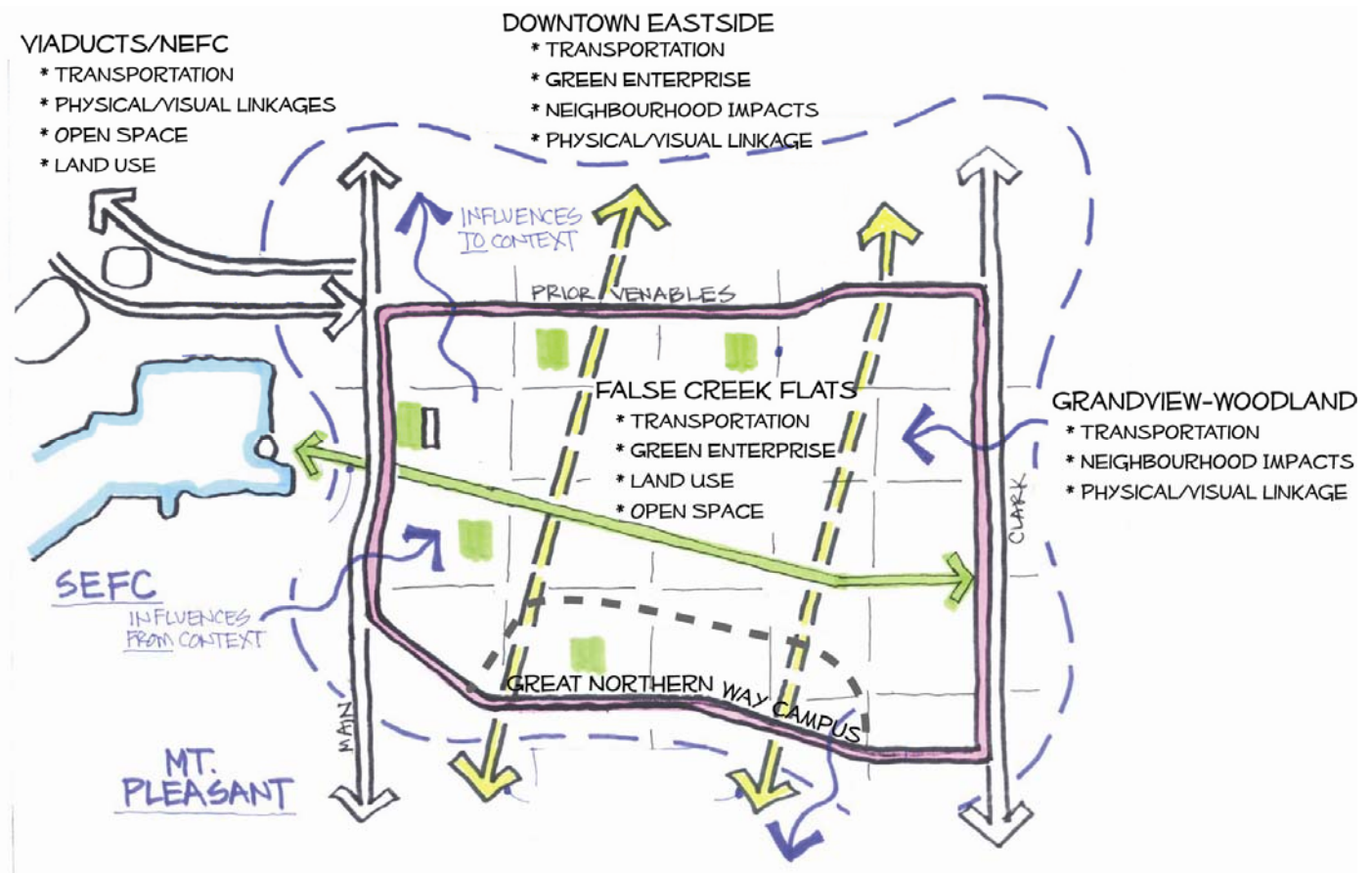
- Transportation Plan Update
- Northeast False Creek High Level Review and rezoning applications / possible Creekside Park reconfiguration
- False Creek Flats land use and transportation planning / Green Enterprise Zone study
- Planning for Neighbourhood Energy Utility expansion in Eastern False Creek
- Great Northern Way Campus Planning
- Grandview-Woodland Community Vision
- Downtown Eastside Local Area Plan

These areas all have overlapping transportation and land use considerations that are best addressed in the context of an overall strategy for the Eastern Core. A decision to remove the viaducts will have impacts on goods movement and cycling routes through the False Creek

Flats. Furthermore, alternative transportation routes can not be developed without understanding potential impacts and opportunities resulting from development of related sites, such as the Providence lands or Great Northern Way Campus. The transportation and land use issues in the Eastern Core are fundamentally linked.

Undertaking the *Eastern Core Strategy* is an opportunity to create a coherent and comprehensive vision of land use and transportation directions for the area as a whole, thus helping to ensure the successful implementation of all of the community planning processes. Figure 2 depicts the general issues by area and conceptually illustrates the intent to knit areas together with an overall strategy.

Figure 2. Eastern Core Challenges and Opportunities



3) Overview of the proposed *Eastern Core Strategy*

The *Eastern Core Strategy*, described in detail in Appendix B, will be completed over a nine month period and will create a platform for the detailed planning needed to create various options for the Georgia and Dunsmuir viaducts, as well as to create a coherent vision for future planning in the broader area around the viaducts.

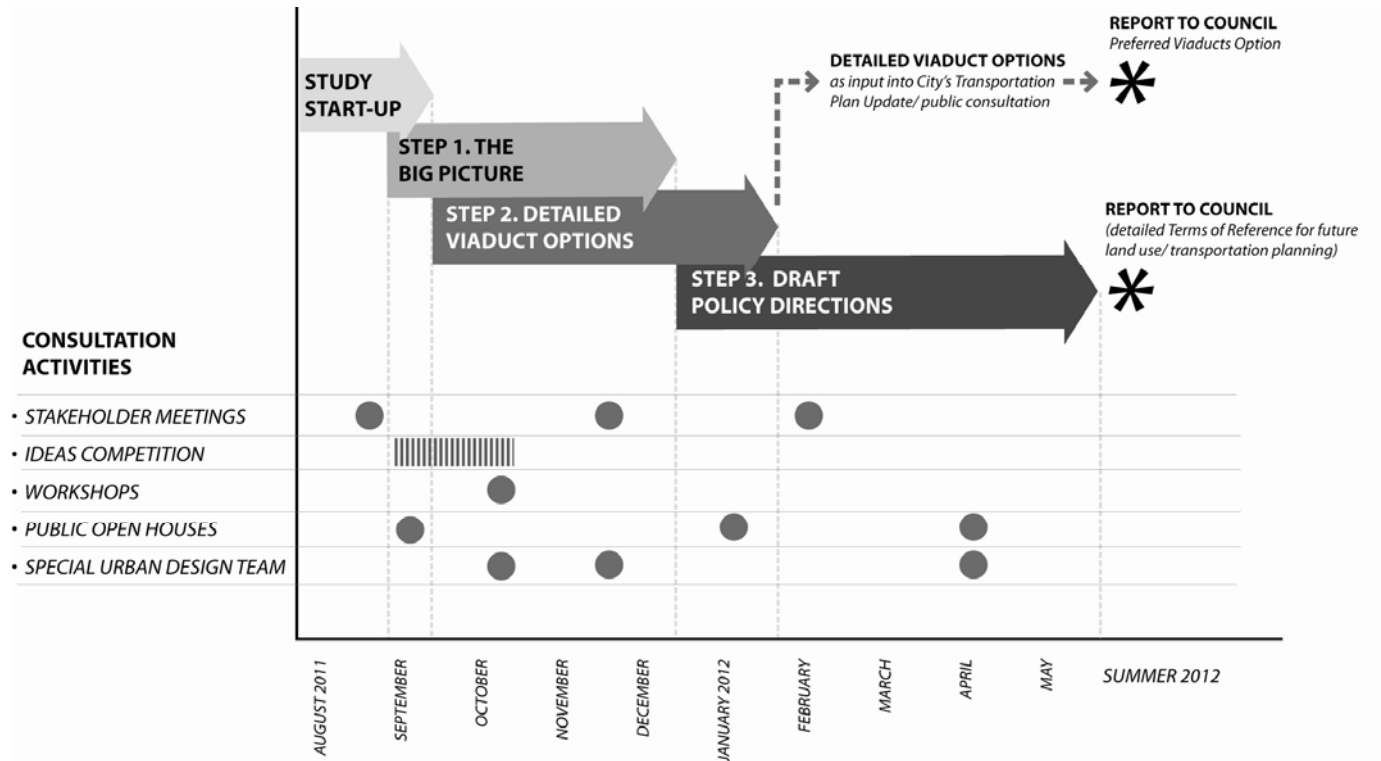
The strategy and timeline is described in detail in Appendix B, but some of the key outcomes include:

- An initial comprehensive high level look at land use, urban design opportunities, parks/open space and transportation connections (pedestrian, cycling, goods movement, vehicle and rail) across the Eastern Core.
- Detailed future scenarios for the reconfiguration and potential long-term removal of the viaducts, including land use, urban design considerations, development potential/costs, and potential impacts for connectivity in Northeast False Creek, including reconfiguration of Creekside Park. These options will feed into the City's Transportation Plan Update.
- A flexible and strategic approach to managing complex land use and transportation issues, while allowing individual area planning initiatives to proceed without delay.
- The creation of a coherent and comprehensive set of planning principles to guide future detailed land use and transportation planning in the Eastern Core.

These key outcomes will be achieved through the following processes:

- Extensive and innovative public engagement on the viaducts and the Eastern Core, including an "ideas competition" for all interested members of the public and professionals.
- Involvement of a locally and internationally recognized Special Urban Design Team to provide high level guidance on urban design and development issues and opportunities across the Eastern Core.

Figure 3: Eastern Core Strategy Timeline



FINANCIAL IMPLICATIONS

To complete the planning and engineering work outlined above an interdepartmental staff team comprised of a Planner II, a Civil Engineer II, a Planning Analyst and an Engineering Assistant III is required, with management by existing senior staff. The planning team can be reallocated from existing permanent positions until late spring 2012. Two new engineering staff positions are needed for the duration of this project.

It is estimated that the temporary staffing, consultancies (primarily related to urban design and development economics in the viaducts area), and other costs for the study will be \$468,875 as outlined in Appendix B. The source of funds is available from remaining funds from the approved 2011 Streets Capital Budgets, Georgia and Dunsmuir Viaducts Study.

CONCLUSION

Staff recommend that Council approve the development of the *Eastern Core Strategy: Viaducts and False Creek Flats Planning* work program that will ensure strategic alignment of planning and transportation initiatives in the Eastern Core, and allow detailed conceptual planning for the removal or partial removal of the Georgia and Dunsmuir Viaducts to proceed.

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Appendix A: Georgia and Dunsmuir Viaducts Phase I Review

Background

The first Georgia viaduct, completed in 1915, was built to connect the eastern part of the City to the Downtown core. The railway yards and industrial area below created a barrier and the viaduct created a way to remove this barrier with a relatively flat connection to the bluff of the downtown.

Due to structural problems and ongoing maintenance issues Vancouver residents voted to replace the viaduct in the 60's with a design that included two structures and continued to pass over the industrial lands of Northeast False Creek below. This viaduct design was based on it becoming the first phase of a larger freeway network that was planned.

In the late 1960s opposition led to the rejection of the freeway plan for Vancouver and today the only remnant of the freeway proposal is the eastern portion of the viaducts.

Today the area around the viaducts has a much different context then when they were built. The railway yards have been removed and the industrial areas are no longer present. They still provide a gently sloping east/west connection from Main Street to the downtown which provides a good connection for bikes and goods movement that is not present otherwise in this area, however they create a barrier for the area below and for linkages between Chinatown, Gastown and Strathcona to False Creek.

Planning is currently underway for the Northeast False creek area and an update of the City's Transportation plan is in the early stages of consultation. It is important to develop a vision for this area that fits with the new context and develops a vision for the Georgia and Dunsmuir viaducts so that they can be incorporated into these plans.

In order to progress towards this vision, Council endorsed a two phased approach. The first phase would examine the transportation impacts of removing some or all of the viaducts and determine if there were any transportation reasons why the viaducts should not be modified in some form. If there are no transportation "show stoppers" then phase two would examine the land use and configuration scenarios. This report provides an overview of the phase one analysis.

Georgia and Dunsmuir Viaducts Assessment

Phase one of the study is intended to assess the transportation impacts on transportation capacity through removal of some or all of the viaducts structures and what conditions would need to be in place to accommodate various capacity reduction scenarios. This phase did not involve any consultation with residents or stakeholders.

Staff retained Halcrow Consulting through a competitive bidding process to undertake the technical studies for this project, and Halcrow subsequently retained two sub-consultants to undertake soils and structural reviews. Preliminary reports from these consultants are now being finalized.

Transportation Review

A data collection program was undertaken as part of the transportation review to get a better understanding of the traffic characteristics of the Georgia and Dunsmuir viaducts. A summary is provided below.

Current Traffic Characteristics

The Georgia and Dunsmuir viaducts are not currently heavily used by pedestrians, but with the addition of the separated bike facility there are approximately 2,000 cyclist trips using the Dunsmuir viaduct bike lane on a peak summer day. A survey of cyclists and pedestrians using the viaducts indicates that most cyclists and pedestrians are travelling between Downtown and the neighbourhoods just east of the viaducts, namely Strathcona and Grandview-Woodland.

There are no transit services currently on the viaducts; however, the Expo SkyTrain Line runs adjacent to the western ends of the structures.

There are approximately 160 heavy trucks (truck with three or more axels) and 800 light trucks (Cube van with two axles) that use the Georgia and Dunsmuir viaducts on a daily basis. The number of light trucks has remained relatively constant since 1996, but the number of heavy trucks has dropped by approximately 50%.

Combined, the viaducts carry approximately 43,000 vehicles per day, with over 44% of these originating from the eastern half of Vancouver. The distribution of origins for vehicle traffic using the Dunsmuir viaduct during the AM peak period is provided in Figures 1 & 2 below.

Figure 1: Origins of vehicle traffic on Dunsmuir Viaduct during AM Peak

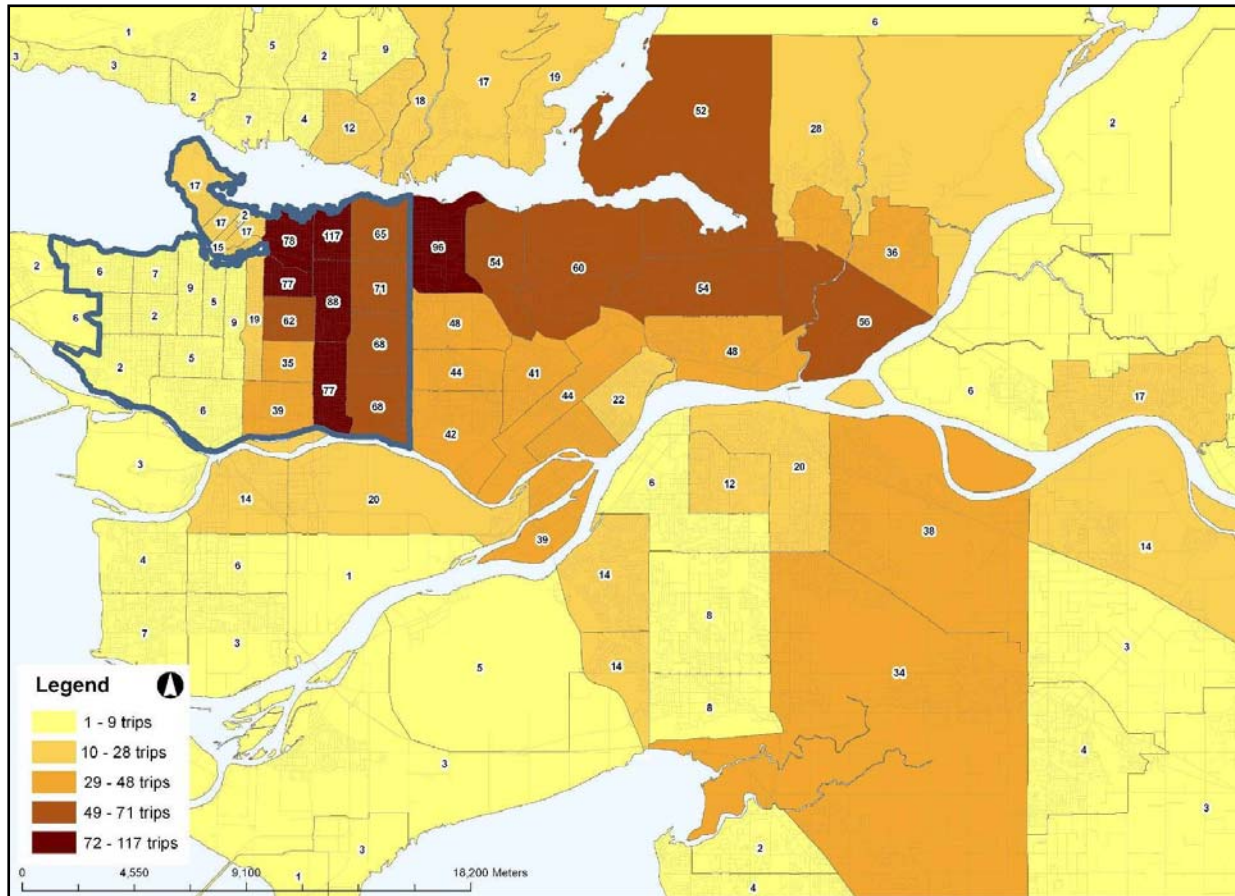
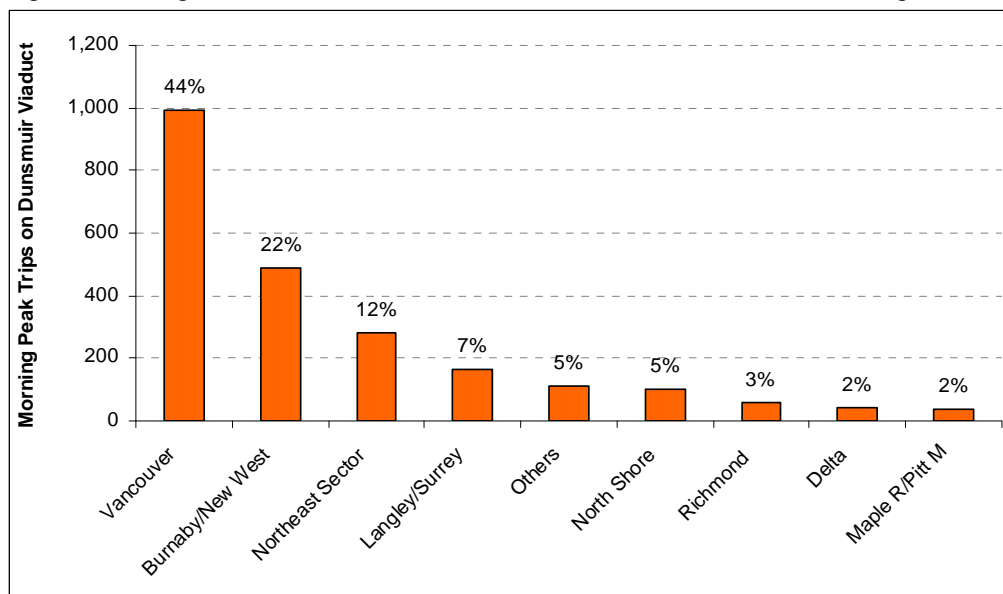


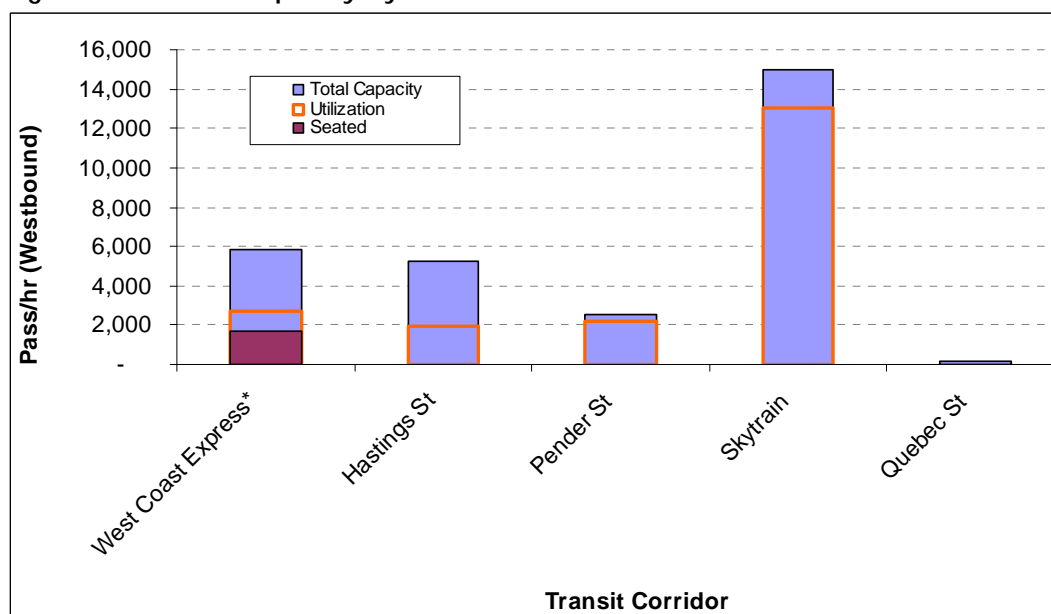
Figure 2: Origins of vehicle traffic on the Dunsmuir viaduct during AM Peak



Available Capacity Assessment

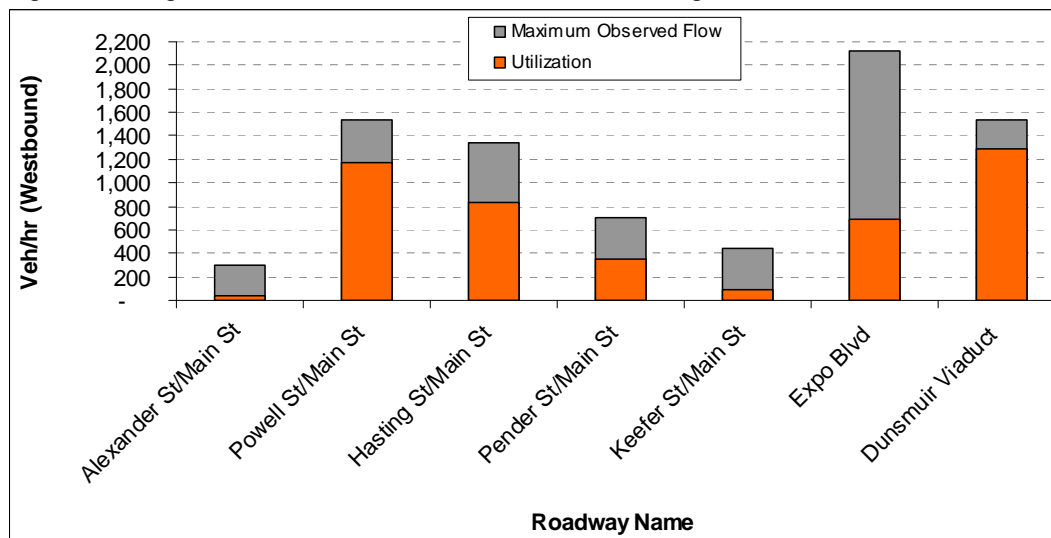
In order to assess the potential for people who currently drive to divert to transit an assessment of the transit capacity was undertaken. The schedules for each bus route were used in combination with bus capacities provided by TransLink. The analysis indicates that for the transit facilities that enter the downtown from the east, Hastings Street has some residual capacity, but buses on Pender street are operating near capacity, the West Coast Express is operating at full seated capacity and the SkyTrain is operating near capacity. This indicates that except for some routes on Hastings Street there is little capacity to attract additional transit riders under current conditions. Figure 3 below provides a summary of the available transit capacity by street.

Figure 3: Transit capacity by street across the downtown neck



In order to assess the potential to accommodate diversion of vehicles on adjacent streets an assessment of the available roadway capacity was undertaken. The Olympics provided an opportunity to determine the capacity of the streets entering the downtown. Due to the closure of the Georgia viaduct, Dunsmuir viaduct, Pacific Boulevard and Expo Boulevard the streets across the downtown neck were operating at capacity at some points. Permanent traffic counters were installed to monitor traffic patterns that were continuously counting the vehicle volumes. From these counts the highest observed volume was obtained for each street. The analysis indicates that there is additional vehicle capacity on the roadways entering the downtown from the east, particularly on Pacific Boulevard, Expo Boulevard. Figure 4 provides a summary of the 2010 traffic volumes and the highest observed traffic flow for each street.

Figure 4: Highest observed traffic volumes crossing the downtown neck



The transportation review concludes that there is unused road capacity during peak periods on most of the parallel arterial streets, such as Expo and Pacific Blvds, Pender St, Hastings St, Cordova St and Water/Powell Sts. These parallel streets could accommodate some diverted traffic generated from partial or complete removal of the viaducts. There is also some additional transit capacity on Hastings Street.

Travel Trends to Downtown

Since 1996 counts have been undertaken to determine the number of people entering the downtown by travel mode. Comparing these counts between 1996 and 2011 indicates that the total number of people entering the downtown has increased but the number of vehicles has decreased.

Vehicle volumes along the downtown neck have decreased in both the AM and PM peak periods. The majority of the increase in trips to the downtown has been accommodated by transit. With fewer vehicles on the road there is an ability to remove some of the vehicle carrying capacity entering the downtown. One form of vehicle capacity reduction would be to remove some or all of the Georgia and Dunsmuir viaducts.

Capacity reduction scenarios

A transportation review of the impacts of three viaduct capacity removal scenarios was undertaken for the following:

- Removal of 20%
- Removal of 50%
- Removal of 100%

The transportation analysis was conducted using two methods to evaluate the various levels of capacity reduction

- 1) Using a transportation model that uses future land use and population forecasts
- 2) Using traffic count information and observed maximum volumes on adjacent streets

The analysis is summarized in Figure 5 below.

Figure 5: Summary of capacity reduction scenarios

Scenario	Description	Implementation requirements	Walking /Cycling	Goods Movement	Time Horizon
20% Reduction	A 20% reduction in capacity could entail removing portions of the viaducts at the east end such as bringing them down to grade at Main St.	<ul style="list-style-type: none"> • minimal diversion of existing trips • the majority of new trips to downtown continues to be accommodated by walking cycling and transit. 	<ul style="list-style-type: none"> • Walking cycling connections continue along Dunsmuir. • Connection to the Dunsmuir Viaduct can be improved with changes to intersection at Main St. 	<ul style="list-style-type: none"> • Goods movement can continue to use the Georgia and Dunsmuir viaducts with minimal change • New connection along Malkin Ave to Clark Drive and reclassification of Prior to Collector is possible. 	5 yrs
50% Reduction	A 50% reduction in capacity could entail <i>removing one of the viaducts and converting the remaining structure to a two-way road</i>	<ul style="list-style-type: none"> • some diversion of existing trips to adjacent routes or transit • growth in trips to the downtown would need to be accommodated by walk, cycle and transit which may require implementation of current planned transit investments such as the Hastings B-Line, Evergreen Line and UBC line and improvements to walk and cycle routes to encourage trips to happen by these modes. 	<ul style="list-style-type: none"> • Walking cycling connections continue along Dunsmuir. • Connection to the Dunsmuir Viaduct could be improved with more changes to intersection at Main St. 	<ul style="list-style-type: none"> • Goods movement can continue to use the Dunsmuir viaduct with reduced capacity. • New connection along Malkin Ave to Clark Drive and reclassification of Prior to Collector is possible. 	5-10 yrs
100% Reduction	<i>A 100% reduction in capacity would entail complete removal as a transportation link.</i>	<ul style="list-style-type: none"> • Requires significant diversion of existing trips to transit which would require implementation of planned transit investments such as Hastings B-Line, Evergreen Line and UBC line, capacity increases on the Expo line and improvements to walk and cycle routes • Requires increases in trips to the downtown to continue to be accommodated by walk, cycle and transit. 	<ul style="list-style-type: none"> • Review of cycle connections to the downtown required due to removal of Dunsmuir bike facility 	<ul style="list-style-type: none"> • Review of Goods movement connections to the downtown required to replace removal of Georgia and Dunsmuir 	10-15yrs

Soils Review

The land beneath the viaducts bounded by Carrall, Gore, Pacific Boulevard and Expo Boulevard was reviewed to get a better understanding of the potential contamination in the area. This was conducted by Golder Associates by reviewing the historic uses in the area, reviewing previous reports and conducting 12 borehole investigations.

This land area was created by significant amounts of fill and the western portion of the study area also falls within an area that is known to have contained heavy industry including a manufactured gas plant. The activities and wastes associated with this former gas plant have significantly influenced the environmental conditions in the area, and will be an important factor in future remediation planning.

A high level review of the soils contamination in the area indicates that the soils remediation costs for this area are likely in the range of \$4 -8 million dollars if the full area was remediated to a residential standard.

Structural Review

The structural review of the viaducts indicates that the majority of the structure is currently in reasonably good condition. The section that crosses Main Street requires some minor retrofits in the short term and there are some other maintenance and repairs that are required. The annualised bridge lifecycle maintenance cost (based on 1% of replacement costs) is approx \$600,000/annum. Maintenance costs are generally related to replacement and patching of railings, guard rails, expansion joints and the repair/ replacement of the roadway surface (asphalt, waterproofing membrane and concrete bridge deck). The structures meet the design and loading standards at the time of construction, but do not meet current seismic design standards. Having said that and due to the nature of the structural system (girders built into pier caps), the structure should perform relatively well in an earthquake. A summary of the anticipated costs to maintain the structure are provided below:

- Yearly maintenance costs ~\$25, 000 per year
- Short Term retrofits ~\$200,000
- Maintenance required in next 5+ years ~\$1 million (barrier rehabilitation)
- Maintenance required in the next 15+ years - \$3 million (deck and joint rehabilitation)
- Seismic upgrades ~\$5 million

If the viaducts were retained it is estimated with the above maintenance they would have a remaining service life of 40+ years.

A review of the potential to remove sections of the viaducts was undertaken and it was determined that sections would best be removed at the expansion joint locations, generally located at every 3rd-4th column. The structures can be removed at other locations as well but will require some minor structural modifications. Therefore from a structural perspective there are a large number of removal scenarios.

Next Steps

In order to develop a preferred land use and transportation concept for the reconfiguration or potential removal of the viaducts there are a number of elements that need to be examined in a larger context, particularly for any complete removal configuration.

- Cycling connections to the downtown will need to be examined to see how the Adanac bikeway can connect to the downtown with a relatively level grade
- Goods movement routes out to Clark Drive in the east and as far South as Great Northern Way would need to be examined in the context of the surrounding land use
- Land Use changes surrounding the viaducts and along Prior should be examined

In order to assess these it is recommended that an overall strategy for the eastern core be undertaken. This would develop potential concepts and evaluate the benefits for land use and urban design.

Appendix B: Eastern Core Strategy: Viaducts and False Creek Flats - Terms of Reference

STUDY OBJECTIVE:

To develop policy directions for the Eastern Core to guide detailed land use and transportation planning for the Georgia and Dunsmuir Viaducts and False Creek Flats area.

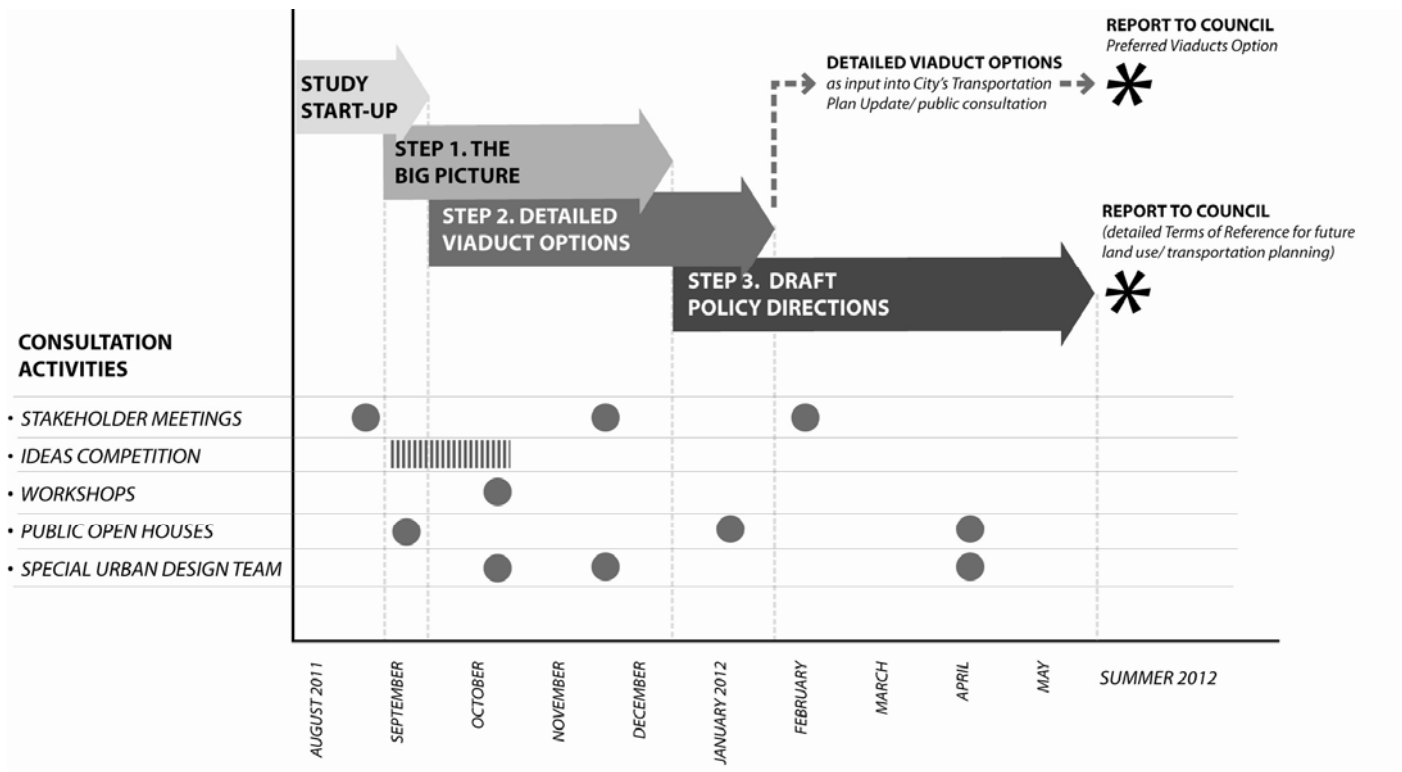
PRODUCTS:

1. Comprehensive Planning Principles and Policy Directions for Eastern Core
2. Detailed Land Use and Transportation Options for the Viaducts

STUDY TIMELINE:

The study will take approximately nine months to complete from the establishment of the City staff team, as outlined below. Arriving at the *Eastern Core Strategy* will be an iterative and overlapping process, with work on the big picture look at the Eastern Core (Step 1), Georgia and Dunsmuir viaducts concept planning (Step 2), and refinement and completion of the Eastern Core principles and policy directions (Step 3) proceeding in a coordinated manner.

Figure 1: Eastern Core Strategy Timeline



PROCESS AND SCOPE:

Study Start-up

To prepare for the study staff will undertake the following work:

- Prepare background material on the Eastern Core, including mapping that profiles the existing conditions:
 - Land uses and densities, zoning
 - Transportation conditions, pedestrian and cycling network
 - Area form, character, and heritage features
 - Recreational and community facilities
 - Opportunities and constraints (recently completed development, functional roles of transportation e.g. rail)
 - Underground conditions
 - Flood-prone areas
- Launch project website.

Step 1: Big Picture Look at the Eastern Core

This step involves staff, stakeholders, a Special Urban Design Team, and the broader public contributing ideas and issues for the Eastern Core.

The objective of Step 1 will be to arrive at high level principles and directions in each issue area.

Issues and Scope

Land use	<ul style="list-style-type: none"> • Land use role of sub-areas within broader city context, noting the importance of retaining and enhancing city-serving employment, transportation functions, and Regional obligations through the Regional Growth Strategy; • Open space patterning; opportunities for recreational and community facilities.
Transportation	<ul style="list-style-type: none"> • Opportunities for walking, cycling and transit connections connecting to the city-wide and regional networks; • Goods movement routes and vehicular network taking into account various viaducts options; • Rail footprint scenarios.
Urban Design	<ul style="list-style-type: none"> • Significant view corridors; • Physical and visual connectivity; • Special opportunities: gateways, linkages between waterfront and surrounding areas, heritage and civic landmarks.
Sustainability	<ul style="list-style-type: none"> • Preservation of opportunities for innovations

	<p>associated with Greenest City Action Plan, Green Enterprise Zone, Energy Utilities, etc</p> <ul style="list-style-type: none"> • Climate Change Adaptation approaches, given long-range projects of sea-level rise and increased flooding from greater precipitation and storm events
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This will be accomplished through the following steps:

1. Staff will meet with a broad range of stakeholders in the Eastern Core to understand the current situation, constraints, needs, and goals. These meetings will help inform the briefing materials provided for visioning work.
2. Staff will organize (with partners) an “Ideas Competition” which is envisioned as an open ideas competition where the public at large can contribute ideas and issues for the Eastern Core area. (see: Public Consultation for more details). This process will be “directed” by challenging submitters to show how their ideas address and reflect existing identified city goals and Council directions.
3. Multi-stakeholder Eastern Core visioning workshops will be held, including representatives from relevant COV departments, major stakeholder groups in the Eastern Core, and the Special Urban Design Team. Staff and the Special Urban Design Team will provide expertise and assistance with design, drawing, etc. The product of these workshops will be draft principles and directions (with options that will be examined in more detailed planning steps).

Step 2: Detailed Viaducts Planning

Overlapping with Step 1, this step focuses on staff and urban design consultants undertaking more detailed planning for the Georgia and Dunsmuir Viaducts, developing land use, cost, development potential and structural reconfiguration concept options within the framework of the preliminary *Eastern Core Strategy*.

Issues and Scope (By Option)

Land use	<ul style="list-style-type: none"> • Increased development potential and/or recreational uses.
Transportation	<ul style="list-style-type: none"> • Cycling connections, particularly the Adanac Bikeway to downtown with a relatively level grade; • Goods movement routes; • Assess potential diverted traffic.

Urban Design	<ul style="list-style-type: none"> • Physical, visual and psychological barrier between Northeast False Creek and the existing neighbourhoods to the north (Chinatown, International Village, Gastown, Strathcona and the Downtown Eastside), including better access from these existing neighbourhoods to the False Creek waterfront and False Creek Flats; • Impacts of SkyTrain Guideway; • Street and block patterns including opportunities for improving public realm; • Opportunities for improved usability and livability of buildings adjacent to existing viaducts structures and Prior Street; • Opportunities to better connect existing parks (e.g. Andy Livingstone park) and existing and new waterfront park space in Northeast False Creek; • Better urban design, retail continuity/viability and pedestrian environment on Main Street (where applicable).
Structural/Costs	<ul style="list-style-type: none"> • Assess feasibility of all changes • Estimate deconstruction/construction costs

Viaduct Concept Options

Building on the Phase 1 transportation, soils and structural review of viaducts options, the study team (including staff and urban design consultants) will generate land use, urban design, and street network options for the Viaducts based on 20, 50, and 100% capacity reduction scenarios. The options studied to date for transportation impacts have included:

1. Alter the viaducts so they come down to the Main Street intersection - maintain the viaducts up to Main Street.
2. Keep Dunsmuir viaduct, Remove the Georgia viaduct - this would involve connecting Georgia Street to Dunsmuir with two way operation of Dunsmuir. This potentially could serve as the goods movement route into and out of the downtown, with the cycling facility maintained.
3. Complete removal of both viaducts - This would involve complete removal of both Dunsmuir and Georgia viaducts with either a connection between Georgia and Dunsmuir or cul-de-sacs.
4. Removal of both viaducts with consideration of elevating/re-aligning the SkyTrain guideway to normalize the grid. Option 2 removes enough of the viaduct structure to also consider realignment of the SkyTrain guideway. This would involve raising the SkyTrain to allow for a roadway to pass under the SkyTrain to connect Pacific Boulevard to Prior Street.

As noted in Appendix B, there are a large number of structural removal options as sections can be removed at expansion joints located every 3rd-4th column. Other options will likely emerge through work on the *Eastern Core Strategy*, "Ideas Competition", or in the course of detailed viaducts planning.

Staff will undertake a review of the initial range of viaducts options, with the objective of arriving at 2-3 feasible options. This will be accomplished by:

- Special Urban Design Team review with staff, via workshop or via design brief package;
- Staff meetings with stakeholders; and
- Broader public review, via open houses.

The viaducts land use and transportation options will be integrated into the Draft Transportation Plan Update by Spring 2012. Staff will prepare a recommendation for a preferred Viaducts Concept Plan having considered further public input through this process.

Step 3: Refine and Complete the Eastern Core Strategy

In this step, staff will deal with any outstanding work and/or issues to be resolved related to the *Eastern Core Strategy* and prepare a policy directions report for Council adoption.

Staff will also prepare a Terms of Reference (TOR) for further detailed planning work for the False Creek Flats area for Council's consideration. The scope of work will address more specific sub-area land use, built form, transportation and sustainability policy work (which may involve further conceptual planning work and/or changes to district schedules and guidelines).

At the end of this step, the refined *Eastern Core Strategy* will be reviewed by the broader public through open houses for comment.

At this point Council will make a decision about the *Eastern Core Strategy* policy directions.

PUBLIC CONSULTATION:

Through the major steps of the study, staff will consult with a broad range of stakeholder groups including local residents, business associations, transportation groups (including goods movement), development interests (large property owners and development associations), government agencies (e.g. Translink and the Port), and other interested parties (e.g. Vancouver Economic Development Commission (VEDC), Vancouver City Planning Commission (VCPC)). Representatives of the major stakeholder groups will be invited to participate in the Eastern Core Visioning workshops in Step 1, along with the external advisors and city staff.

The role of stakeholders invited to the workshops will be to:

1. Represent the perspectives of their interest group, and help provide a communication link to that group.
2. To provide information and contribute to creative problem-solving.

In steps 2 and 3, staff may meet one on one with stakeholder groups, or organize multi-stakeholder group meetings to solicit input/review.

Broader Public Consultation

As identified in the description of the process, broader public consultation will include the “Ideas Competition” at the outset of the study and public open houses. The intent of the “Ideas Competition” is to open the ideas process to the public at large in a non-traditional and creative way, capturing ideas and issues that might be integrated into Eastern Core policy directions at an early stage, and generating excitement about the study.

The competition will build upon the learning of the previous “FormShift” competition (see: RTS 08088 “FormShift Vancouver Competition Winners” report) for the Climate Change Action Plans and EcoDensity Charter. It will include a design brief, registration, jury panel (comprised of staff, local and non-local urban designers/architects), and prizes. Submitters will be challenged to show how their ideas address and reflect city goals and Council directions.

Public open houses will also be held in Step 2 (primarily to review initial viaducts concept options) and Step 3. The public will also have an opportunity to review a short-list of viaduct concept options via the parallel Draft Transportation Plan update process in Step 3.

SPECIAL URBAN DESIGN TEAM/CONSULTANT ROLE:

Staff propose creative and strategic outside expertise to augment staff in several areas:

1. Special Urban Design Team - Staff will select a combination of local and non-local (external) urban design experts to serve as study advisors in a team based approach. The role of the advisors will be to work with staff to generate *Eastern Core Strategy* principles and policy directions, provide independent 3rd party advice to supplement staff and advisory board advice, and to review work at critical milestones.
2. Urban Design Consultants for Georgia and Dunsmuir Viaduct Concept Options - Urban Design Consultants will work with staff on much more detailed work on the Viaducts land use, structural, and street network concept options.
3. Transportation consultant - Following up on Phase 1 Viaducts work, there will be a check-back review of viaducts options with an assessment of impacts to each mode, and volumes of traffic diverted to alternative routes.
4. Structural consultant - Following up on Phase 1 Viaducts work, there may be a need to have the structural consultant review Viaducts options and provide a feasibility assessment.
5. Facilitation - There may be a need for consultant facilitation skills either at the multi-stakeholder workshops or to help resolve issues after the workshops have generated the draft major directions.

BUDGET:

The Eastern Core Strategy Study will cost a maximum of \$468,875 including capital surcharge and contingency allowances (\$171,250 in temporary City Staff; \$215,000 in consultancies; and \$40,000 for consultation costs).

Source of funds will be the existing budget approved for the Viaducts study.

BUDGET ESTIMATE - Staff and Resources

STAFFING - Salary and Benefits (9 months)

Planner II		(Permanent Staff)
Planning Analyst		(Permanent Staff)
Civil Engineer		\$90,000
EA III		\$56,250
Computer/Office		\$25,000
	<i>Subtotal</i>	<i>\$171,250</i>

CONSULTANTS

Engineering (structural, traffic, etc)		\$60,000
Real Estate/Financial		\$20,000
Urban Design		\$100,000
Advisor Review		\$35,000
	<i>Subtotal</i>	<i>\$215,000</i>

OTHER COSTS

Public Consultation ¹		\$40,000
Contingency	10%	\$42,625
	<i>Subtotal</i>	<i>\$82,625</i>

TOTAL ***\$468,875***

1. Includes an Ideas Competition, Public Open Houses, Stakeholder Workshops