

FORT YORK PEDESTRIAN AND CYCLE BRIDGE EVALUATION OF ALTERNATIVE ALIGNMENT DESIGN CONCEPTS				
	Alignment #1	Alignment #2	Alignment #3	Alignment #4
Environmental:				Preferred Concept
• Impact on Archaeological Resources	The extent of potential archaeological impact is consistent for all 4 alternative design concepts. A Stage 2 Assessment is proposed to be completed.	The extent of potential archaeological impact is consistent for all 4 alternative design concepts. A Stage 2 Assessment is proposed to be completed.	The extent of potential archaeological impact is consistent for all 4 alternative design concepts. A Stage 2 Assessment is proposed to be completed.	The extent of potential archaeological impact is consistent for all 4 alternative design concepts. A Stage 2 Assessment is proposed to be completed.
• Impact on Natural Environment (Vegetation)	Option 1 and 2 are equal with approximately the greatest impact on vegetation and are the least desirable options.	Option 1 and 2 are equal with approximately the greatest impact on vegetation and are the least desirable options.	All areas of disturbance could not be inventoried. There is no conclusion of overall impact for comparison.	Least impact on vegetation and the most desirable option.
• Impact on Built Heritage Environment	No impact on Built Heritage Resources in the area.	No impact on Built Heritage Resources in the area.	No impact on Built Heritage Resources in the area.	No impact on Built Heritage Resources in the area.
• Impact on Cultural Heritage Environment	The Garrison Common is within the Fort York National Historic Site and Heritage Conservation District designations and is impacted by the bridge touchdown, ramps and connecting trails. The extent of potential impact is, for the most part, generally equal for all 4 alternative design concepts.	The Garrison Common is within the Fort York National Historic Site and Heritage Conservation District designations and is impacted by the bridge touchdown, ramps and connecting trails. The extent of potential impact is, for the most part, generally equal for all 4 alternative design concepts.	The Garrison Common is within the Fort York National Historic Site and Heritage Conservation District designations and is impacted by the bridge touchdown, ramps and connecting trails. The extent of potential impact is, for the most part, generally equal for all 4 alternative design concepts.	The Garrison Common is within the Fort York National Historic Site and Heritage Conservation District designations and is impacted by the bridge touchdown, ramps and connecting trails. The extent of potential impact is, for the most part, generally equal for all 4 alternative design concepts.
Planning and Land Use:				Preferred Concept
• Compatibility with Fort York and Garrison Common Open Space Planning Objectives	Provides a direct connection from the southerly bridge touchdown to the future Fort York Visitor Information Centre, and offers a central link to the Garrison Common "parkland". Is generally compatible with the Planning Objectives of the Fort York historic site.	Provides a direct connection from the southerly bridge touchdown to the future Fort York Visitor Information Centre, and offers a central link to the Garrison Common "parkland". Is generally compatible with the Planning Objectives of the Fort York historic site.	Does not provide a visual "connection" to the future Fort York Visitor Information Centre, but offers a more direct and inviting link to the future pathway along the north side of the Fort, to the Bathurst Street entrance. Is generally compatible with the Planning Objectives of the Fort York historic site.	Provides both a visual and physical connection to the future Fort York Visitor Information Centre, while offering a direct and inviting link to the future pathway along the north side of the Fort, to the Bathurst Street entrance. Is generally compatible with the Planning Objectives of the Fort York historic site.
• Connectivity to Toronto Waterfront	Provides a direct connection to Fort York Boulevard – pedestrians and cyclists could continue across Lakeshore towards the Toronto Waterfront.	Provides a direct connection to Fort York Boulevard – pedestrians and cyclists could continue across Lakeshore towards the Toronto Waterfront.	Directs pedestrians and cyclists towards Fort York.	Provides a moderately direct connection to Fort York Boulevard – pedestrians and cyclists could continue across Lakeshore towards Toronto Waterfront.
• Connectivity to Stanley Park	Provides for an extension of Stanley Park, creating a continuous parkland link from existing Stanley Park to Fort York.	Provides for an extension of Stanley Park, creating a continuous parkland link from existing Stanley Park to Fort York.	Provides for an extension of Stanley Park, creating a continuous parkland link from existing Stanley Park to Fort York.	Provides for an extension of Stanley Park, creating a continuous parkland link from existing Stanley Park to Fort York.
• Compatibility with proposed Strachan Avenue railway overpass (Metrolinx)	Will accommodate a potential 'touchdown' point in the Ordinance Street Triangle. The potential for a pedestrian connection across Strachan Avenue, to East Liberty Street, should be considered during the design of the Strachan Avenue overpass.	Will accommodate a potential 'touchdown' point in the Ordinance Street Triangle. The potential for a pedestrian connection across Strachan Avenue, to East Liberty Street, should be considered during the design of the Strachan Avenue overpass.	Will accommodate a potential 'touchdown' point in the Ordinance Street Triangle. The potential for a pedestrian connection across Strachan Avenue, to East Liberty Street, should be considered during the design of the Strachan Avenue overpass.	Will accommodate a potential 'touchdown' point in the Ordinance Street Triangle. The potential for a pedestrian connection across Strachan Avenue, to East Liberty Street, should be considered during the design of the Strachan Avenue overpass.
• Compatibility with future plans for Ordinance Street Triangle lands	City plans for redevelopment of Ordinance lands are uncertain. Concept will provide for pedestrian access to these lands to accommodate future linkages to linkages to Liberty Village and other sites.	City plans for redevelopment of Ordinance lands are uncertain. Concept will provide for pedestrian access to these lands to accommodate future linkages to Liberty Village and other sites.	City plans for redevelopment of Ordinance lands are uncertain. Concept will provide for pedestrian access to these lands to accommodate future linkages to Liberty Village and other sites.	City plans for redevelopment of Ordinance lands are uncertain. Concept will provide for pedestrian access to these lands to accommodate future linkages to Liberty Village and other sites.
• Integration with Proposed Pathways at Garrison Common/Fort York	Integrates well with the future east-west pathway north of the Fort to Bathurst Street, as well as links to the Visitor Information Centre and Strachan Avenue. "Landscaped Plaza" nodes are possible.	Integrates well with the future east-west pathway north of the Fort to Bathurst Street, as well as links to the Visitor Information Centre and Strachan Avenue. "Landscaped Plaza" nodes are possible.	Is least desirable in terms of integration with future pathway systems at Garrison Common and Fort York. End point of south touchdown pathway/ramp is too close to Fort entrance.	Provides the best concept for integration with proposed pathways at Garrison Common and Fort York. Through a potential "landscaped plaza" at the foot of the south ramp, trails extend to the west, south and east in a fluid fashion.
• Impact on Garrison Common	Greatest impact on Garrison; Common, more or less equal to Alternative 2.	Greatest impact on Garrison Common; more or less equal to Alternative 1.	Least impact on Garrison Common, as the touchdown zone is furthest east. However, this is offset somewhat by the proximity of the south ramp to the Fort.	Modest impact on Garrison Common: Slightly less than Alternatives 1 and 2, but slightly more than Alternative 3.
• Connectivity with Proposed Fort York Visitor Information Centre	Provides an excellent view of the Information Centre from the bridge, and the end path leads directly to the Centre.	Provides an excellent view of the Information Centre from the bridge, and the end path leads directly to the Centre.	Is the least desirable in terms of connectivity to the Visitor Centre. Alignment tends to direct users away from the Centre.	Provides a smooth but "flowing" connection to the Visitor Centre, offering good visibility from the bridge and a trail that passes through a landscaped plaza, before connecting to the Centre.
• Property Impacts	No direct impact on private property. North side of bridge is close to corner of Epstein lands.	No direct impact on private property. North side of bridge is close to corner of Epstein lands.	No direct impact on private property. North side of bridge is closest to corner of Epstein lands, of all 4 alternatives.	No direct impact on private property. North side of bridge is furthest away from corner of Epstein lands.
Historical Context:				Preferred Concept
• Harmony with Historic Garrison Creek Alignment	Is not sympathetic to the original alignment of Garrison Creek.	Mild curvature of structure provides some "relief" from a straight bridge, but is not sympathetic to the original alignment of Garrison Creek.	Mild curvature of structure provides some "relief" from a straight bridge, but is not sympathetic to the original alignment of Garrison Creek.	Alternative 4 was created to capture the historic relevance of the Garrison Creek alignment. Design concept is in complete harmony with known data on the alignment of the creek, north of Fort York.
• Proximity of South Touchdown to Fort York Entrance	Alternatives 1, 2 and 4 are essentially the same distance away from the Fort York entrance.	Alternatives 1, 2 and 4 are essentially the same distance away from the Fort York entrance.	Alternative 3 is about 80 meters closer to the Fort than alternatives 1, 2 and 4, while the south end ramp terminus is another 110 meters.	Alternatives 1, 2 and 4 are essentially the same distance away from the Fort York entrance. However, the south end ramp terminus is about 40 meters closer to the Fort than for alternative 1 and 2.
• Proximity of South Touchdown to Garrison Military Cemetery	South bridge abutment is about 130 meters away from the stone wall entrance to the cemetery.	South bridge abutment is about 140 meters away from the stone wall entrance to the cemetery.	South bridge abutment is about 210 meters away from the stone wall entrance to the cemetery.	South bridge abutment is about 100 meters away from the stone wall entrance to the cemetery.
• Vista Opportunities:				
o Northerly to Stanley Park and the Niagara Neighbourhood	View to Stanley Park would be "thru" the central line of the bridge, with supplementary views to the northeast. Views to the northwest are somewhat limited. The truss structure design would hamper the views from the bridge in all cases.	Sightlines to Stanley Park and the northeast are enhanced over Alternative 1, while any views to the northwest are again limited. The truss design would hamper vista views to Stanley Park but be enhanced with the arch design.	This alternative provides the best vista views to Stanley Park and lands to the Niagara neighbourhood. Views to the northwest are essentially restricted. No major differences between the truss and arch designs because of the acute angle of the structure alignment.	Views to Stanley Park would be limited to points on the north side of the bridge, particularly with the truss design. Opportunities to see "thru" the arch structure may be available at various points along the bridge, including views to the northwest and northeast.

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	Vista views to the west are excellent, especially with the arch bridge design. Alignment of structure enhances opportunities to view these current and historic land uses.	Vista views to the west are, for the most part, similar to the views for alternative 1, although enhanced somewhat due to the "concave" alignment.	Vista views, to land uses west of the structure, are enhanced under this alternative, especially to Garrison Common, the Military Cemetery and the Princes' Gates (southwest).	Vista views are variable as pedestrians and cyclists cross the structure, due to its geometry. It offers continual change to the horizon views, making the trip more interesting for users.	
	Views to the Visitor Information Centre and other points of interest are limited, especially with the truss design. Users would typically have to look "thru" the structure due to its alignment.	Views to the Visitor Information Centre are limited, although there would be modest improvement in the views to the Princes' Gates and the Waterfront. Slight improvement over alternative 1.	Views to the Visitor Information Centre and other southerly points of interest are vastly improved under this alignment, due to the "flat curvature" of the structure. It is the best of the 4 alternatives.	Views to the Visitor Information Centre and southerly points of interest are variable as users cross the bridge, due to its geometry. The arch bridge design would enhance viewing opportunities with this alignment, while the truss design would be severely detrimental.	
	Vista views to Fort York and the Toronto Skyline are excellent, with both the truss and arch structure types.	Vista views to Fort York and the Toronto Skyline are excellent, with both the truss and arch structure types.	Vista views of Fort York are somewhat reduced, over alternatives 1 and 2, due to the "flat" alignment of the structure. Views to the Toronto Skyline are not affected significantly when compared to alternatives 1 and 2.	Vista views to Fort York and the Toronto Skyline are variable as pedestrians and cyclists cross the structure, due to its geometry. It enhances the trip by offering continual change to the viewing opportunities, while not restricting, in any way, the total easterly view.	
Preferred Concept					
• Bridge Aesthetics	The straight alignment offers the least interesting alternative design, in terms of aesthetics. The arch design greatly enhances the "aesthetic feel" of the bridge, in comparison to the truss design type.	The slight curve of alternative 2 improves on the aesthetic impact of the bridge design, compared to alternative 1. The arch design is superior in aesthetics to the truss design.	The long, graceful curve of alternative 3 enhances the "aesthetic impression" of the bridge design. It is, subjectively, better than alternatives 1 and 2. The arch design remains superior in aesthetics to the truss option.	The "S" layout of alternative 4 offers a departure from the typical configuration of pedestrian/cycle bridge design, creating an aesthetically pleasing and innovative design. This design works well with an arch superstructure, while a truss design would detract from it overall architectural objectives of "symmetry and flow".	
• Ramp Configuration and Location at Garrison Common (South)	Switchback ramp will intrude significantly into the prime vegetative park area of Garrison Common.	Switchback ramp will intrude significantly into the prime vegetative park area of Garrison Common.	Ramp will not intrude into the prime Garrison Common parkland, but parallels the rail property line in the existing Fort York Nursery area. Least impact of the 4 alternatives.	Bridge touchdown and ramp configuration will be located in the prime Garrison Common parkland, but attempts to "hug" the rail property line will help to mitigate the impacts compared to alternatives 1 and 2.	
• Ramp Configuration and Location at Stanley Park Extension (North)	Bridge touchdown and ramp configuration will be "central" to the Stanley Park extension, consuming a large part of the park.	Bridge touchdown and ramp configuration is schematically within the west part of the Stanley Park extension, thereby allowing for more open space use in the east part of the park. Subjectively better than alternatives 1 and 3.	Bridge touchdown and ramp configuration will be "central" to the Stanley Park extension, consuming a large part of the park.	Bridge touchdown and ramp configuration is schematically within the west part of the Stanley Park extension, thereby allowing for more open space use in the east part of the park. Subjectively better than alternatives 1 and 3.	
• Accessibility Options to Ordnance (Triangle) Lands	All alternatives are, subjectively, equal in terms of offering accessibility to the Ordnance Lands, if and when the proponent determines that access is desirable.	All alternatives are, subjectively, equal in terms of offering accessibility to the Ordnance Lands, if and when the proponent determines that access is desirable.	All alternatives are, subjectively, equal in terms of offering accessibility to the Ordnance Lands, if and when the proponent determines that access is desirable.	All alternatives are, subjectively, equal in terms of offering accessibility to the Ordnance Lands, if and when the proponent determines that access is desirable.	
• Constructability	Straight forward construction, although working over rail corridors will require contract special provisions within the performance specifications.	Straight forward construction, although working over rail corridors will require contract special provisions within the performance specifications. The slight curvature in the alignment is not considered a major constructability issue.	Construction may be slightly more challenging in comparison to alternatives 1 and 2, due to the "skew angle" of the bridge over the rail corridors, especially the south tracks. Contract special provisions will be required within the performance specifications. The gradual curvature of the alignment is not considered a major constructability issue.	Construction may be subjectively more challenging due to the "S" geometry of the bridge. As with the other alternatives, working over the rail corridors will require contract special provisions within the performance specifications.	
• Suitability of Alignment to "Truss" versus "Arch" Structure	Suitable to either the truss or arch structure options.	Suitable to either the truss or arch structure options.	Suitable to either the truss or arch structure options.	The arch design is preferable for this alternative, due to the "S" alignment. The truss option would work, from an engineering perspective, but would be undesirable from an architectural and aesthetics perspective.	
• Structure Length	Approximately 220 meters	Approximately 235 meters	Approximately 305 meters	Approximately 232 meters	