

		Alternative 1: “Do Nothing”	Alternative 2: TDM (Transportation Demand Management) TSM (Transportation Systems Management) Improved existing roadways	Alternative 3: TDM TSM Improved existing roadways New or improved transit services	Alternative 4: TDM TSM New roadways/transitways New or improved transit services																																																
TRANSPORTATION																																																					
Level of service – to address congestion concerns on the transportation network through improvements to maximize levels-of-service operations		<ul style="list-style-type: none"> Least potential to address congestion concerns as this scenario has the highest travel times, is the least reliable with the majority of the screenlines having volume/capacity ratios substantially greater than 1.0 and experiences the most congestion on its highway network. 	<ul style="list-style-type: none"> Low potential to address congestion concerns as this scenario does not improve travel time nor does it address the transportation system congestion. 	<ul style="list-style-type: none"> Moderate potential to address congestion concerns and travel reliability. 	<ul style="list-style-type: none"> Most potential to address congestion concerns as this scenario has the lowest travel times, is the most reliable with all of the screenlines having volume/capacity ratios less than 1.0, experiences the least congestion on its highway network and provides travellers with greater flexibility of mode choice. 																																																
Reliability	Quantitative measure of 2021 A.M. peak hour southbound demand level of service crossing selected east-west screenlines.	<p>Summary of A.M. peak hour SB volume/capacity ratios at selected screenlines indicate that this alternative results in much higher demands than committed capacity resulting in significant congestion and therefore an unstable and unreliable transportation service.</p> <table border="1"> <thead> <tr> <th>Screenlines</th> <th>Volume/Capacity</th> </tr> </thead> <tbody> <tr> <td>S of Nashville Road:</td> <td>1.10</td> </tr> <tr> <td>S of Major Mackenzie Drive:</td> <td>1.12</td> </tr> <tr> <td>S of Rutherford Road:</td> <td>1.19</td> </tr> <tr> <td>S of Langstaff Road</td> <td>1.31</td> </tr> <tr> <td>S of Highway 7</td> <td>0.90</td> </tr> </tbody> </table>	Screenlines	Volume/Capacity	S of Nashville Road:	1.10	S of Major Mackenzie Drive:	1.12	S of Rutherford Road:	1.19	S of Langstaff Road	1.31	S of Highway 7	0.90	<p>The further widening of north-south arterial roadways beyond the widening proposed in the committed plan along with the provision of TDM and TSM indicate that the selected east-west screenlines will be operating over capacity, although not to the same extent as Alternative 1. The volume/capacity ratios indicate an unstable and unreliable transportation service.</p> <table border="1"> <thead> <tr> <th>Screenlines</th> <th>Volume/Capacity</th> </tr> </thead> <tbody> <tr> <td>S of Nashville Road:</td> <td>0.86</td> </tr> <tr> <td>S of Major Mackenzie Drive:</td> <td>1.05</td> </tr> <tr> <td>S of Rutherford Road:</td> <td>1.06</td> </tr> <tr> <td>S of Langstaff Road</td> <td>1.20</td> </tr> <tr> <td>S of Highway 7</td> <td>0.86</td> </tr> </tbody> </table>	Screenlines	Volume/Capacity	S of Nashville Road:	0.86	S of Major Mackenzie Drive:	1.05	S of Rutherford Road:	1.06	S of Langstaff Road	1.20	S of Highway 7	0.86	<p>Increased transit mode split together with the transportation service improvements noted in Alternative 2 start to accommodate the corridor demands as the east-west screenlines are basically operating at capacity. The volume/capacity ratio indicates an unstable transportation service.</p> <table border="1"> <thead> <tr> <th>Screenlines</th> <th>Volume/Capacity</th> </tr> </thead> <tbody> <tr> <td>S of Nashville Road:</td> <td>0.78</td> </tr> <tr> <td>S of Major Mackenzie Drive:</td> <td>0.95</td> </tr> <tr> <td>S of Rutherford Road:</td> <td>0.96</td> </tr> <tr> <td>S of Langstaff Road</td> <td>1.09</td> </tr> <tr> <td>S of Highway 7</td> <td>0.84</td> </tr> </tbody> </table>	Screenlines	Volume/Capacity	S of Nashville Road:	0.78	S of Major Mackenzie Drive:	0.95	S of Rutherford Road:	0.96	S of Langstaff Road	1.09	S of Highway 7	0.84	<p>The provision of the Highway 427 extension along with transportation infrastructure improvements, TDM, TSM and increased transit mode split result in the east-west screenlines operating at good levels of service which in turn provides for a stable and reliable transportation service.</p> <table border="1"> <thead> <tr> <th>Screenlines</th> <th>Volume/Capacity</th> </tr> </thead> <tbody> <tr> <td>S of Nashville Road:</td> <td>0.88</td> </tr> <tr> <td>S of Major Mackenzie Drive:</td> <td>0.74</td> </tr> <tr> <td>S of Rutherford Road:</td> <td>0.76</td> </tr> <tr> <td>S of Langstaff Road</td> <td>0.81</td> </tr> <tr> <td>S of Highway 7</td> <td>0.75</td> </tr> </tbody> </table>	Screenlines	Volume/Capacity	S of Nashville Road:	0.88	S of Major Mackenzie Drive:	0.74	S of Rutherford Road:	0.76	S of Langstaff Road	0.81	S of Highway 7	0.75
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Travel times	Assessment of 2021 A.M. peak hour network travel times between selected destinations to determine the effectiveness of transportation service improvements.	<p>Year 2021 A.M. peak hour southbound travel times based on committed road improvements:</p> <table border="1"> <tbody> <tr> <td>Bolton to Highway 427/401:</td> <td>31 min</td> </tr> <tr> <td>CPR Vaughan Intermodal Facility to Highway 427/401:</td> <td>22 min</td> </tr> </tbody> </table> <p>These travel times are approximately 20% longer than existing conditions.</p>	Bolton to Highway 427/401:	31 min	CPR Vaughan Intermodal Facility to Highway 427/401:	22 min	<p>The provision of TDM and TSM measures in conjunction with further improvements to the existing roadways do not address the system capacity and therefore there are no improvements to travel times noted in Alternative 1.</p>	<p>Incorporating transit mode split with TDM and TSM begins to improve the level of service throughout the corridor, which could improve travel times by upwards of 10%.</p>	<p>Year 2021 A.M. peak hour SB travel times based on the extension of Highway 427:</p> <table border="1"> <tbody> <tr> <td>Bolton to Highway 427/401:</td> <td>26 min</td> </tr> <tr> <td>CPR Vaughan Intermodal Facility to Highway 427/401:</td> <td>16 min</td> </tr> </tbody> </table> <p>Resulting travel times are similar to what is experienced today.</p>	Bolton to Highway 427/401:	26 min	CPR Vaughan Intermodal Facility to Highway 427/401:	16 min																																								
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Network congestion	Assessment of congestion on Highway 50, Highway 27 and Highway 7 roadway sections (both directions) during the 2021 A.M. peak hour (roadway links operating with volume/capacity ratios greater than 0.9).	<p>Over 50% of the defined roadway sections are congested (21 km of roadway).</p>	<p>The provision of TDM, TSM and further improvements to the existing roadways result in approximately 40% of the defined roadway sections operating in a congested state (17 km of roadway).</p>	<p>Increased transit mode split together with Alternative 2 improvements result in approximately 30% of the defined roadway sections operating in a congested state (12 km of roadway).</p>	<p>The provision of the extension of Highway 427 with road improvements, TDM, TSM and transit mode split provides a significant improvement (150%) over the Alternative 1 congestion levels as approximately 20% of the Highway 7, Highway 27 and Highway 50 road sections operate at congested levels (11 km of roadway).</p>																																																

Criteria/Measure		Alternative 1: “Do Nothing”	Alternative 2: TDM (Transportation Demand Management) TSM (Transportation Systems Management) Improved existing roadways	Alternative 3: TDM TSM Improved existing roadways New or improved transit services	Alternative 4: TDM TSM New roadways/transitways New or improved transit services
Infrastructure requirements – to minimize infrastructure requirements while addressing operational problems on the transportation network		<ul style="list-style-type: none"> Least potential to address infrastructure requirements and operational problems with no alternative routes for trucking movements. 	<ul style="list-style-type: none"> Low potential to address infrastructure requirements and operational problems with no alternative routes for trucking movements. 	<ul style="list-style-type: none"> Moderate potential to address infrastructure requirements and operational problems with no alternative routes for trucking movements. 	<ul style="list-style-type: none"> Most potential to address infrastructure requirements and operational problems as well as providing an alternative route for trucking movements.
Roadway section utilization	Assessment of congestion on Highway 50, Highway 27 and Highway 7 roadway sections (both directions) during the 2021 A.M. peak hour (roadway links operating with volume/capacity ratios greater than 0.9) to reflect link utilization.	Over 50% of the roadway sections are significantly utilized (congested).	The provision of TDM, TSM and further improvements to the existing roadways result in approximately 40% of the roadway sections being significantly utilized (congested).	Increased transit mode split together with Alternative 2 improvements result in approximately 30% of the roadway sections being significantly utilized (congested).	The provision of the extension of Highway 427 with road improvements, TDM, TSM and transit mode split provides a significant improvement (150%) over Alternative 1 congestion levels as approximately 20% of the Highway 7, Highway 27 and Highway 50 road sections being significantly utilized (congested).
Left-turn lane utilization	Assess opportunity to reduce left-turn movements and resulting operational issues on Highway 50 between Nashville Road and Highway 7 for the 2021 A.M. peak hour southbound flows.	Upwards of 2,700 southbound left-turn movements made from Highway 50 requiring approximately 8 left-turn lanes (including 2 dual left-turn lanes).	The provision of TDM and TSM does not reduce the number of left-turn vehicles on Highway 50, which are approximately 2,700 requiring approximately 8 left-turn lanes (including 2 dual left-turn lanes).	The provision of transit mode split with the Alternative 2 improvements reduce the number of left-turn vehicles on Highway 50 to approximately 2,400 requiring approximately 7 left-turn lanes (including 1 dual left-turn lane).	The provision of the extension of Highway 427 with road improvements, TDM, TSM and transit mode split results in the number of left-turn vehicles on Highway 50 of approximately 2,300 requiring approximately 7 left-turn lanes (including 1 dual left-turn lane).
Truck facility utilization	Assessment focuses on 2021 A.M. peak hour truck movement on major north-south roadways, South of Rutherford.	Approximately 2/3rd of the truck volumes utilize Highway 50, which impacts the overall operation and safety of Highway 50. Highway 50: 635 trucks 65% Highway 27: 335 trucks 35%	There is no change to forecast truck volumes.	There is no change to forecast truck volumes.	Approximately 45% of the truck movements are shifted to the Highway 427 extension, with approximately 25% trucks using Highway 50. The redistribution of trucks with the larger percentage focussed to Highway 427 improves the operations and safety of both Highway 50 and Highway 27. Highway 50: 245 trucks 25% Highway 427: 440 trucks 46% Highway 27: 275 trucks 29%
Green smart – auto reduction – to minimize environmental impacts in support of the Province’s green strategy through optimizing the use of existing transportation corridors or planned network improvements and reducing auto vehicle utilization		<ul style="list-style-type: none"> Least potential to reduce auto vehicle utilization and hence environmental impacts as this alternative is not focussed on TDM, TSM or transit mode split measures. 	<ul style="list-style-type: none"> Minor potential to reduce auto vehicle utilization and hence environmental impacts as this alternative supports TDM and TSM measures. 	<ul style="list-style-type: none"> Moderate potential to reduce auto vehicle utilization and hence environmental impacts as this alternative supports TDM, TSM and transit mode split measures. 	<ul style="list-style-type: none"> Most potential to reduce auto vehicle utilization and hence environmental impacts as this alternative supports TDM, TSM and transit mode split opportunities that are increased with the provision of a transitway and a transportation network that provides for stable and reliable transportation service.
TDM/TSM	Potential to reduce the number of vehicles on the road network through TDM measures (ride sharing, walking and cycling, telecommuting, transit-oriented development, smart growth) and TSM measures (operational improvement).	TDM and TSM measures are not implemented to a degree that would result in a noticeable reduction of auto vehicle utilization.	Ride sharing, telecommunication and smart growth can reduce the number of vehicles by 5%.	Ride sharing, telecommunication and smart growth can reduce the number of vehicles by 5%.	Ride sharing, telecommunication and smart growth can reduce the number of vehicles by 5%.

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Transit mode split	Assessment of higher transit usage through the provision of higher-order transit corridors as well as infrastructure expansion improvements for transit services (e.g. transitway), improvements to existing services	Increase in transit mode split limited due to forecast congestion levels on arterial roadways.	Increase in transit mode split limited due to forecast congestion levels on arterial roadways.	The provision of improved transit services on further widened roadways has a potential to increase to approximately 10% for the planned industrial area adjacent to the Highway 427 corridor.	The provision of new or improved transit services has a potential to increase beyond the 10% due to the increased service opportunities provided by a transitway as well as the provision of a transportation network that provides for stable and reliable transportation service.
Accessibility – to maximize accessibility to new development and provide connectivity to existing transportation systems		<ul style="list-style-type: none"> Least potential to provide adequate access to existing and new development due to significant network congestion, limited truck access and limited access to Highway 427. 	<ul style="list-style-type: none"> Least potential to provide adequate access to existing and new development due to significant network congestion, limited truck access and limited access to Highway 427. 	<ul style="list-style-type: none"> Least potential to provide adequate access to existing and new development due to significant network congestion, limited truck access and limited access to Highway 427. 	<ul style="list-style-type: none"> Most potential to provide adequate access to existing and new development due to a good network level of service, improved truck access and access to GTA freeway system.
Network congestion	Assessment of congestion on Highway 50, Highway 27 and Highway 7 roadway sections (both directions) during the 2021 A.M. peak hour (roadway links operating with volume/capacity ratios greater than 0.9).	Over 50% of the roadway sections are congested.	The provision of TDM, TSM and further improvements to the existing roadways result in approximately 40% of the roadway sections operating in a congested state.	Increased transit mode split together with Alternative 2 improvements result in approximately 30% of the roadway sections operating in a congested state.	The provision of the extension of Highway 427 with road improvements, TDM, TSM and transit mode split provides a significant improvement (150%) over Alternative 1 congestion levels as approximately 20% of the Highway 7, Highway 27 and Highway 50 road sections operate at congested levels.
Maximize development access	Assessment of the degree that the specific alternative maximizes access to existing and proposed development.	Planned road improvements do not address the congestion issues and restrict access to Highway 427 with one interchange.	Marginal reduction in travel demand from TDM and TSM does not resolve congestion issues and the planned network restricts access to Highway 427 with one interchange.	Increased transit ridership along with TDM and TSM starts to address the congestion issues; however, the planned network restricts access to Highway 427 with one interchange.	Alternative addresses congestion issues and provides for a new roadway corridor with increased opportunities to access Highway 427, which maximizes access to both existing and new developments.
Truck network access	Assessment of the transportation system to provide truck access to existing and new development.	North-south truck corridors limited to Highway 50 and Highway 27 with Highway 50 carrying approximately 65% of the truck flows. The number of trucks along the congested arterial limits accessibility to existing and new development.	There is no impact to truck network access.	There is no impact to truck network access.	Truck travel is more evenly distributed to three north-south corridors which allow the transportation system to provide good service and accessibility to new and existing developments. There is improved access to CPR Vaughan Intermodal Facility with the addition of a new roadway and the opportunity for a new terminal entrance from Major Mackenzie Drive accessing the new roadway.
Inter-regional travel/Network connectivity	Assessment of the degree that the alternative provides access to the GTA freeway system.	Development access limited to the GTA freeway system with a single interchange at Highway 7.	Development access limited to the GTA freeway system with a single interchange at Highway 7.	Development access limited to the GTA freeway system with a single interchange at Highway 7.	Development access maximized to the GTA freeway system with the addition of at least three additional Highway 427 interchanges.

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Alternative modes of transportation – to maximize a more balanced transportation system through the provision of opportunities for modal choices		<ul style="list-style-type: none"> Least potential to provide for a balanced transportation system. 	<ul style="list-style-type: none"> Least potential to provide for a balanced transportation system. 	<ul style="list-style-type: none"> Moderate potential to provide for a balanced transportation system. 	<ul style="list-style-type: none"> Most potential to provide for a balanced transportation system.
Longer distance transit and local transit	Assessment of the degree that the alternative supports the development of a transitway that can connect to proposed Bus Rapid Transit systems in adjacent Regions or Municipalities and along the Highway 407 corridor.	The committed road network improvements do not address long distance transit requirements and because of network congestion issues, only partially addresses local transit service.	The committed road network improvements do not address long distance transit requirements and because of network congestion issues, only partially addresses local transit service.	The committed road network improvements partially address long distance transit requirements and with reduced congestion levels, it begins to address local transit services.	The provision for a new transitway along with a reliable and stable transportation service addresses both the long distances and local transit requirements.
HOV initiatives	Assessment of the degree that the alternative supports the implementation of Higher Occupancy Vehicle initiatives.	Congestion levels and the limited number of north-south facilities minimize HOV opportunities.	Congestion levels and the limited number of north-south facilities minimize HOV opportunities.	HOV opportunities improve with the transportation system operating at capacity.	A new transportation corridor along with good transportation network level of service maximizes opportunities for HOV.
Implementation – to maximize the freedom and flexibility in implementing a wide range of long-term transportation system opportunities		<ul style="list-style-type: none"> Least potential to provide the flexibility to implement a wide range of long range transportation system opportunities. 	<ul style="list-style-type: none"> Least potential to provide the flexibility to implement a wide range of long range transportation system opportunities. 	<ul style="list-style-type: none"> Moderate potential to provide the flexibility to implement a wide range of long range transportation system opportunities. 	<ul style="list-style-type: none"> Most potential to provide the flexibility to implement a wide range of long range transportation system opportunities.
Government transportation service improvement initiatives	Assessment of existing and future government transportation service initiatives to support the implementation of a range of transportation improvements.	Transportation service improvement opportunities limited to Regional and Municipal transportation initiatives.	Transportation service improvement opportunities limited to Regional and Municipal transportation initiatives.	Transportation service improvement opportunities limited to Regional and Municipal transportation initiatives.	Transportation service improvement opportunities are maximized with the opportunity of implementing all three levels of government (Provincial/Regional/Municipal) transportation initiatives.
Dedicated transitway	Assessment of opportunities to implement dedicated transitway systems in order to maximize transportation system service flexibility.	No opportunity to provide for higher order transitway service within existing Municipal road allowances.	No opportunity to provide for higher order transitway service within existing Municipal road allowances.	No opportunity to provide for higher order transitway service within existing Municipal road allowances.	Maximizes the opportunity to provide for higher order transitway service within a dedicated transit right of way.
Freeway terminus location	Assessment of the degree that terminus locations support long-term development.	Freeway terminus at Highway 7 restricts the access opportunities to the planned development lands.	Freeway terminus at Highway 7 restricts the access opportunities to the planned development lands.	Freeway terminus at Highway 7 restricts the access opportunities to the planned development lands.	The provision of a Highway 427 extension terminus at Major Mackenzie Drive maximizes access opportunities to the long term development and CPR Vaughan Intermodal Facility by providing interchanges at Langstaff Road, Rutherford Road and Major Mackenzie Drive.
Staging opportunities	Assessment of the degree that allows for staged implementation of the improvements with minimal impacts on existing operations.	Construction activity to be undertaken with the transportation network operating under congested traffic flow conditions which results in significant impacts to vehicle travel times.	Construction activity to be undertaken with the transportation network operating under congested traffic flow conditions which results in significant impacts to vehicle travel times.	Construction activity to be undertaken with the transportation network operating at capacity traffic flow conditions which results in significant impacts to vehicle travel times.	Good transportation system level of service provides the opportunity to develop staging plans for construction activity that minimizes the impacts to vehicle travel times.

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Criteria/Measure				
Transportation Assessment Summary	Least addresses transportation criteria: The planned and committed road improvements do not address the existing operational issues at the Highway 7/Highway 427 interchange nor do these improvements provide adequate network level of service and travel time reliability for access to the new development areas or the CPR Vaughan Intermodal Facility. This alternative limits the opportunities for the development of a balanced transportation system.	Marginally addresses transportation criteria: Widening of arterial roads beyond the committed network along with the provision of TDM and TSM does not resolve the network congestion especially for north-south travel which impacts the overall commuter travel times, system reliability and limits commercial vehicle accessibility to the proposed development lands and the CPR Vaughan Intermodal Facility.	Moderately addresses transportation criteria: The provision of new and improved transit services supporting increased transit ridership in conjunction with TDM, TSM and improved roadways advances a balanced transportation system. However, roadway congestion, overall commuter travel times, unstable transportation service and limited commercial vehicle access to the proposed development lands and the CPR Vaughan Intermodal Facility limit the effectiveness of this alternative.	Best addresses transportation criteria: The provision of a new freeway inclusive of a transitway along with improved TDM, TSM and transit mode split maximizes accessibility to the proposed development lands and the CPR Vaughan Intermodal Facility. This alternative provides for a balanced transportation system while addressing operational and congestion management for the 15-year planning horizon time period.
ECONOMY				
The degree to which the alternative supports the need to move people and goods to achieve the identified economic activities outlined in the provincial Growth Plan and local/regional official plans	<ul style="list-style-type: none"> Poor – does not provide the transportation capacity to support the intensification identified in the Growth Plan or official plans 	<ul style="list-style-type: none"> Poor – places long distance and truck traffic on the arterial road network which will increase the cost of moving goods and negatively effect local access to businesses for workers and consumers 	<ul style="list-style-type: none"> Poor – places long distance and truck traffic on the arterial road network which will increase the cost of moving goods and negatively effect local access to businesses for workers and consumers 	<ul style="list-style-type: none"> High – places long distance and truck traffic on the highway network which will result in the efficient movement of goods and reduce conflicts on the local road network (i.e. improve safety) to improve local access to businesses for workers and goods
The ability of the alternative to provide enhanced service to the CPR Vaughan Intermodal Facility	<ul style="list-style-type: none"> Poor – does not provide adequate transportation service to the CPR Vaughan Intermodal Facility and will limit expansion abilities 	<ul style="list-style-type: none"> Poor – does not provide adequate transportation service to the CPR Vaughan Intermodal Facility and will limit expansion abilities 	<ul style="list-style-type: none"> Poor – does not provide adequate transportation service to the CPR Vaughan Intermodal Facility and will limit expansion abilities 	<ul style="list-style-type: none"> High – provides the required transportation service to the CPR Vaughan Intermodal Facility and facilitates planned expansion
Economy Assessment Summary	Poor – Will limit the ability of the area to achieve the economic objectives outlined in the Growth Plan and the official plans. Will not enhance service to the CPR Vaughan Intermodal Facility.	Poor – Will limit the ability of the area to achieve the economic objectives outlined in the Growth Plan and the official plans. Will provide some enhanced service to the CPR Vaughan Intermodal Facility but will limit overall development.	Poor – Will limit the ability of the area to achieve the economic objectives outlined in the Growth Plan and the official plans. Will provide some enhanced service to the CPR Vaughan Intermodal Facility but will limit overall development.	High – Will facilitate the ability of the area to achieve the economic objectives outlined in the Growth Plan and the official plans. Will provide the best service to the CPR Vaughan Intermodal Facility and allow full development of the facility.

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SOCIO-ECONOMIC ENVIRONMENT AND LAND USE				
The degree to which the alternative supports the transportation needs to move people and goods in support of the land use objectives identified in the Growth Plan and local/regional official plans	<ul style="list-style-type: none"> • Poor – does not provide the transportation capacity to support the intensification identified in the Growth Plan or official plans 	<ul style="list-style-type: none"> • Poor – does not provide the transportation capacity to support the intensification identified in the Growth Plan or official plans 	<ul style="list-style-type: none"> • Poor – does not provide the transportation capacity to support the intensification identified in the Growth Plan or official plans 	<ul style="list-style-type: none"> • High – provides the transportation capacity to support the intensification identified in the Growth Plan or official plans
Potential nuisance effects (increased noise, air quality, etc.) on future residential areas	<ul style="list-style-type: none"> • High Potential Effect – increased congestion closer to residential areas and higher potential for traffic infiltration 	<ul style="list-style-type: none"> • Moderate Potential Effect – increased congestion closer to residential areas and higher potential for traffic infiltration 	<ul style="list-style-type: none"> • Moderate Potential Effect – increased congestion closer to residential areas and higher potential for traffic infiltration 	<ul style="list-style-type: none"> • Low Potential Effect – reduces congestion and the potential for traffic infiltration on local roads. Planned future uses in the vicinity of a new facility are anticipated to be commercial and industrial which are less sensitive to these nuisance effects
Potential barrier effects to local communities	<ul style="list-style-type: none"> • Moderate Potential Effect – will not physically change how people access their community, but increased congestion will affect local movements 	<ul style="list-style-type: none"> • Moderate Potential Effect – increased lanes of traffic on local arterial roads will affect individual access and could cause greater perceived barriers between communities 	<ul style="list-style-type: none"> • Moderate Potential Effect – increased lanes of traffic on local arterial roads will affect individual access and could cause greater perceived barriers between communities 	<ul style="list-style-type: none"> • Low Potential Effect – will not physically change how people access their community (as grade separations will be provided) and will not increase congestion on local roads
Potential direct effects to individual properties	<ul style="list-style-type: none"> • Low Potential Effect – will not require additional properties 	<ul style="list-style-type: none"> • Moderate to High Potential Effect – will result in frontage impacts to many properties that are currently developed. This could have high impacts on the use and enjoyment of properties or high effects to existing business operations (loss of parking, access, circulation etc.) 	<ul style="list-style-type: none"> • Moderate to High Potential Effect – will result in frontage impacts to many properties that are currently developed. This could have high impacts on the use and enjoyment of properties or high effects to existing business operations (loss of parking, access, circulation etc.) 	<ul style="list-style-type: none"> • Moderate to High Potential Effect – will result in back-lot impacts and some displacements at interchange locations. However, the area is in transition and many of the planned developments are being designed under the assumption that a 427 freeway extension will be constructed
Potential effect on agricultural lands	<ul style="list-style-type: none"> • Low Potential Effect – will not require additional properties 	<ul style="list-style-type: none"> • Low Potential Effect – few agricultural operations are present in the area. In the future many of these operations are planned to be redeveloped for industrial and commercial uses 	<ul style="list-style-type: none"> • Low Potential Effect – few agricultural operations are present in the area. In the future many of these operations are planned to be redeveloped for industrial and commercial uses 	<ul style="list-style-type: none"> • Low Potential Effect – few agricultural operations are present in the area. In the future many of these operations are planned to be redeveloped for industrial and commercial uses
Potential effect on resource consumption (aggregates and energy)	<ul style="list-style-type: none"> • Moderate Potential Effect – although this alternatives reduced the need for aggregates, congestion will increase energy consumption 	<ul style="list-style-type: none"> • Moderate Potential Effect – some additional construction will increase the need for aggregate, congestion will increase energy consumption 	<ul style="list-style-type: none"> • Moderate Potential Effect – some additional construction will increase the need for aggregate, congestion will increase energy consumption 	<ul style="list-style-type: none"> • Moderate Potential Effect – additional construction will increase the need for aggregate, reduced congestion will decrease energy consumption
Potential effect on heritage properties and archaeological resources	<ul style="list-style-type: none"> • Low Potential Effects – will not require additional properties 	<ul style="list-style-type: none"> • Moderate Potential Effects – most heritage properties are located along existing roads and have the potential to be 	<ul style="list-style-type: none"> • Moderate Potential Effects – most heritage properties are located along existing roads and have the potential to be 	<ul style="list-style-type: none"> • Moderate Potential Effects – most heritage properties are located along existing roads and have the potential to be

	Alternative 1: “Do Nothing”	Alternative 2: TDM (Transportation Demand Management) TSM (Transportation Systems Management) Improved existing roadways	Alternative 3: TDM TSM Improved existing roadways New or improved transit services	Alternative 4: TDM TSM New roadways/transitways New or improved transit services
Criteria/Measure		directly or indirectly affected. Some properties with the potential for archaeological resources may be affected by road expansion	directly or indirectly affected. Some properties with the potential for archaeological resources may be affected by road expansion	directly or indirectly effected at interchange locations. Some properties with the potential for archaeological resources may be affected by new roadway construction
Socio-Economic Environment and Land Use Assessment Summary	Moderate to High Potential Effect – Although this alternative minimizes direct effects (i.e., individual properties, heritage, archaeology), it results in moderate to high potential effects due to the inability of it to provide the service required to meet the visions identified in the Growth Plan and Official Plans and the impacts of congestion (i.e., increased noise, air emissions, access constraints, traffic infiltration).	Moderate to High Potential Effect – This alternative results in moderate potential direct effects (i.e., individual properties, heritage, archaeology), moderate potential effects due to the inability of it to provide all the service required to meet the visions identified in the Growth Plan and Official Plans and moderate potential effects due to the impacts of increased congestion (i.e., increased noise, air emissions, access constraints, traffic infiltration).	Moderate to High Potential Effect – This alternative results in moderate potential direct effects (i.e., individual properties, heritage, archaeology), moderate potential effects due to the inability of it to provide all the service required to meet the visions identified in the Growth Plan and Official Plans and moderate potential effects due to the impacts of increased congestion (i.e., increased noise, air emissions, access constraints, traffic infiltration).	Low to Moderate Potential Effect – This alternative results in moderate potential direct effects (i.e., individual properties, heritage, archaeology), however it provides all the service required to meet the visions identified in the Growth Plan and Official Plans and reduces the potential effects of increased congestion (i.e., increased noise, air emissions, access constraints, traffic infiltration).
NATURAL ENVIRONMENT				
Potential effects to Species at Risk (SAR)	<ul style="list-style-type: none"> No to Low Potential Effect – no additional habitat will be impacted 	<ul style="list-style-type: none"> Low Potential Effect – few SAR are located in the study area given the agricultural/industrial character of the area. In addition, potential impacts to habitat are limited to fringe effects. 	<ul style="list-style-type: none"> Low Potential Effect – few SAR are located in the study area given the agricultural/industrial character of the area. In addition, potential impacts to habitat are limited to fringe effects. 	<ul style="list-style-type: none"> Low Potential Effect – few SAR are located in the study area given the agricultural/industrial character of the area. It is anticipated that significant effects can be avoided during route generation or through design mitigation.
Potential effect to designated natural areas (ESA, ANSI, Wetlands, Natural Heritage System)	<ul style="list-style-type: none"> No to Low Potential Effect – no additional habitat will be impacted 	<ul style="list-style-type: none"> Low Potential Effect – few designated areas are located in the study area given the agricultural/industrial character of the area. Potential effects are limited to fringe effects. 	<ul style="list-style-type: none"> Low Potential Effect – few designated areas are located in the study area given the agricultural/industrial character of the area. Potential effects are limited to fringe effects. 	<ul style="list-style-type: none"> Low to Moderate Potential Effect – few designated areas are located in the study area given the agricultural/industrial character of the area. It is anticipated that significant effects can be avoided during route generation or through design mitigation.
Potential effects to groundwater	<ul style="list-style-type: none"> No to Low Potential Effect – no additional effects are likely 	<ul style="list-style-type: none"> Low Potential Effect – moderate increases in impervious areas and minor new construction. It is anticipated that these effects can be effectively mitigated through appropriate stormwater management practices and construction 	<ul style="list-style-type: none"> Low Potential Effect – moderate increases in impervious areas and minor new construction. It is anticipated that these effects can be effectively mitigated through appropriate stormwater management practices and construction 	<ul style="list-style-type: none"> Moderate Potential Effect – increases in imperious areas and minor new construction. It is anticipated that these effects can be effectively mitigated through appropriate stormwater management and construction practices

	Alternative 1: “Do Nothing”	Alternative 2: TDM (Transportation Demand Management) TSM (Transportation Systems Management) Improved existing roadways	Alternative 3: TDM TSM Improved existing roadways New or improved transit services	Alternative 4: TDM TSM New roadways/transitways New or improved transit services
Criteria/Measure		practices	practices	
Potential effects to surface water	<ul style="list-style-type: none"> No to Low Potential Effect – no additional effects are likely 	<ul style="list-style-type: none"> Low Potential Effect – no new crossings required however moderate increases in impervious areas and some culvert/bridge extension will be required. It is anticipated that these effects can be effectively mitigated through appropriate stormwater management, design and construction practices 	<ul style="list-style-type: none"> Low Potential Effect – no new crossings required however moderate increases in impervious areas and some culvert/bridge extension will be required. It is anticipated that these effects can be effectively mitigated through appropriate stormwater management, design and construction practices 	<ul style="list-style-type: none"> Moderate Potential Effect – new crossings will be required and there will be increases in impervious areas. It is anticipated that significant effects can be avoided during route generation or through design mitigation such as appropriate stormwater management, design and construction practices
Potential effects to aquatic habitat	<ul style="list-style-type: none"> No to Low Potential Effect – no additional effects are likely 	<ul style="list-style-type: none"> Low Potential Effect – no new crossing required however moderate increases in impervious areas and some culvert/bridge extension will be required. It is anticipated that these effects can be effectively mitigated through appropriate stormwater management, design and construction practices 	<ul style="list-style-type: none"> Low Potential Effect – no new crossing required however moderate increases in impervious areas and some culvert/bridge extension will be required. It is anticipated that these effects can be effectively mitigated through appropriate stormwater management, design and construction practices 	<ul style="list-style-type: none"> Moderate Potential Effect – new crossings will be required and there will be increases in impervious areas. It is anticipated that significant effects can be avoided during route generation or through design mitigation such as appropriate stormwater management, design and construction practices
Potential effects to terrestrial features	<ul style="list-style-type: none"> No to Low Potential Effect – no additional effects are likely 	<ul style="list-style-type: none"> Low Potential Effect – few designated areas are located in the study area given the agricultural/industrial character of the area. Potential effects are limited to fringe effects 	<ul style="list-style-type: none"> Low Potential Effect – few designated areas are located in the study area given the agricultural/industrial character of the area. Potential effects are limited to fringe effects 	<ul style="list-style-type: none"> Moderate Potential Effect – few designated areas are located in the study area given the agricultural/industrial character of the area. It is anticipated that significant effects can be avoided during route generation or through design mitigation
Natural Environment Assessment Summary	No to Low Potential Effect – No additional effects are likely.	Low Potential Effects – Low potential effects to natural features given that many of the potential effects are fringe impacts to previously disturbed features. It is anticipated that these effects can be effectively mitigated.	Low Potential Effects – Low potential effects to natural features given that many of the potential effects are fringe impacts to previously disturbed features. It is anticipated that these effects can be effectively mitigated.	Moderate Potential Effects – Moderate potential effects to natural features. It is anticipated that significant effects can be avoided during route generation or through design mitigation.
TECHNICAL FEASIBILITY				
Ability to achieve minimum technical requirements at a reasonable construction/implementation cost	<ul style="list-style-type: none"> Not applicable 	<ul style="list-style-type: none"> High – expanded roadways would be designed and constructed to meet current standards at reasonable cost levels 	<ul style="list-style-type: none"> High – expanded roadways would be designed and constructed to meet current standards at reasonable cost levels 	<ul style="list-style-type: none"> High – new roadways would be designed and constructed to meet current standards, but at a higher cost than the other alternatives