ONE-WAY NETWORK AND RAIL GRADE-SEPARATION CONCEPT

Downtown Port Coquitlam Circulation Project

Campaign Policy and Preliminary Technical Concept

PURPOSE OF THIS PAPER

A public policy concept for testing a paired one-way downtown circulation network, a new grade-separated crossing of the CPKC rail yard, coordinated transit-priority treatments, and a wider accessible walking and cycling connection. It is intended to be technically informed, not to replace professional engineering design, traffic modelling, rail engineering, property review, accessibility design, or regulatory approvals.

Prepared for PoCo Forward

September 2026 | pocoforward.ca | info@pocoforward.ca

Executive Summary

The One-Way Network and Rail Grade-Separation Concept is a campaign policy proposal for reorganizing circulation through downtown Port Coquitlam rather than trying to force more opposing traffic through the existing Shaughnessy Street underpass. The concept creates a paired directional network, redirects northbound traffic approaching from southern Shaughnessy Street east along Wilson Avenue, adds a new station-side rail overpass, reconnects to Shaughnessy through a northern Lions Way extension, and uses coordinated signals and transit-priority treatments to manage the loop.

The problem is documented in the City's own 2024 Master Transportation Plan. The CP/CPKC rail line and yard are described as Port Coquitlam's largest mobility barrier. The Shaughnessy Street underpass is the most central downtown crossing, but it is a two-lane arterial that is often congested with vehicles and transit. The same plan describes heavy pedestrian use on a narrow sidewalk and no existing accommodation for cyclists or other wheeled users. [1]

The City's current planning direction also recognizes that simply adding vehicle lanes to the existing underpass is not an attractive solution: the Master Transportation Plan states that widening it for additional vehicle lanes would introduce more traffic into an already constrained downtown corridor, would be very costly, and could not be achieved without complete replacement of the underpass. [1] This proposal accepts that constraint and instead tests a second downtown rail crossing combined with a one-way circulation strategy.

POLICY ACTION PROPOSED

Direct staff to undertake a corridor-level feasibility study and traffic microsimulation of the one-way network, Wilson Avenue redistribution, northern connector, station-side grade separation, bus-priority operation, and accessible walking/cycling connection. The feasibility study should compare the concept with the existing network and with lower-cost operational alternatives before any construction commitment is made.

What the concept is trying to achieve

- Increase directional capacity through downtown by using existing street width more efficiently, while recognizing that intersection capacity - not lane count alone - determines the actual network benefit.
- Create a new grade-separated route across the rail yard so downtown circulation is less dependent on a single two-lane underpass.
- Redirect northbound traffic from southern Shaughnessy Street east toward the station-side crossing, then back west to Shaughnessy from the north.
- Give buses priority at selected merges and signals without creating a bus-only corridor; general traffic, transit, walking and cycling remain part of the same project.
- Provide a wide, separated walking and cycling facility on the new overpass so people using wheelchairs, mobility devices, strollers and bicycles have a substantially more comfortable rail crossing option.
- Coordinate this downtown project with the separate Pitt River Gateway Interchange concept so traffic can be redistributed before it reaches Broadway Street, Coast Meridian Road and the downtown core.
- Preserve local access to downtown businesses and civic destinations while reducing the amount of through traffic competing for the same constrained approaches.

Screening-level cost context

For policy screening, this paper uses an indicative 2026 total project range of approximately $120 million to $200 million. That is a total-project range, not a forecast of the amount Port Coquitlam property taxpayers or businesses would pay. The largest component is the rail-yard overpass and approaches; surface-street conversion, signals, transit-priority works, the northern connector, active-transportation facilities, property/utility allowances and rail construction constraints make up the balance. The funding strategy should be built around TransLink, federal public-transit programs and provincial participation before any residual municipal share is defined. Section 11 sets out the procurement and funding channels.
[4][5][6][7][10][11][12][13]

Concept Figure 1 - Downtown One-Way Network and Rail Grade Separation



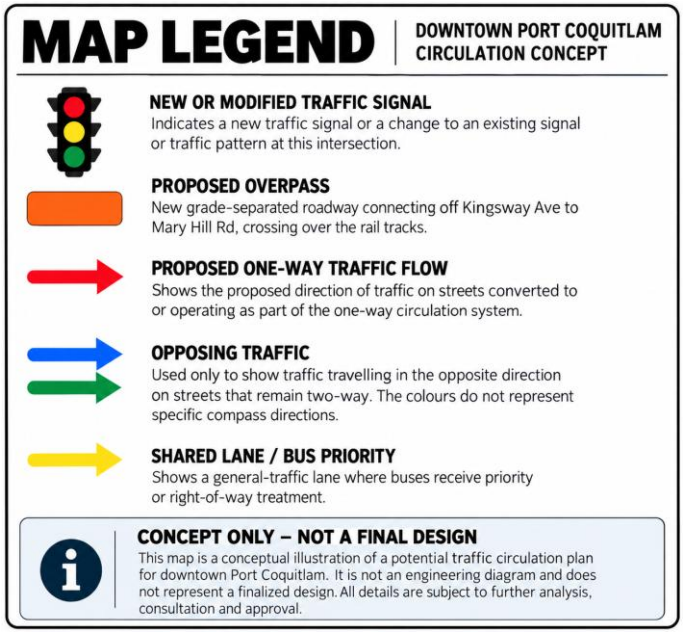

Figure is conceptual and not to scale. Signal icons represent a new signal, a modified signal, or a material traffic-pattern change. The orange alignment illustrates the proposed grade-separated crossing; final road geometry, lane allocation and property requirements remain subject to engineering.

1. Existing Problem and Design Rationale

1.1 The rail yard is a structural constraint, not a signal-timing problem

Port Coquitlam's downtown street network is split by a large active railway yard. The City describes the rail line and yard as both a major economic/employment generator and the largest barrier to mobility through Port Coquitlam. [1] The transportation problem therefore cannot be solved solely by retiming one intersection. Any serious long-term concept has to address how people cross the rail corridor.

The existing Shaughnessy Street underpass performs several roles at once: downtown gateway, transit corridor, vehicle crossing and pedestrian connection. It has only two vehicle lanes. The City states that it is often congested with vehicles and transit, while the sidewalk is narrow and heavily used and there is no existing cycling accommodation. [1]

1.2 Why not simply widen the Shaughnessy underpass?

The City's Master Transportation Plan is explicit that adding vehicle lanes at the Shaughnessy crossing is undesirable because it would introduce additional traffic into the already constrained downtown corridor. It also states that widening would be very costly and would require complete replacement of the existing underpass. [1]

This concept therefore takes a network approach: retain the existing underpass, change how downtown traffic is distributed, and add a new grade-separated route elsewhere across the rail yard. That creates an alternative crossing without requiring all incremental capacity to be forced through the existing portal.

1.3 Existing City investments should be incorporated, not discarded

Kingsway Avenue is already undergoing phased work to improve traffic flow, signals, lane configuration, pedestrian accessibility and active transportation. Phase 2 was completed in 2025 and Phase 3 is under construction in 2026-27. The City identifies Kingsway as a vital part of TransLink's Major Road Network and says the corridor studies considered traffic performance, truck traffic, queuing, property access and signal operations. [2] Any downtown circulation study should use the as-built Kingsway configuration as its base condition.

2. Proposed Operating Concept

The concept is a paired one-way circulation system supported by a new rail crossing. The central idea is to separate the dominant directions of travel across different links rather than continue splitting limited road width between opposing flows at every point.

2.1 Primary counterclockwise circulation loop

- Traffic approaching downtown northbound on southern Shaughnessy Street would be redirected east at Wilson Avenue instead of continuing north through the existing underpass.
- Wilson Avenue would become a much more important eastbound distributor than it is today. Its lane allocation, signal timing, turn storage and property access would require a full redesign rather than a signage-only change.
- Traffic would continue toward the station-side Kingsway/Mary Hill corridor and use the proposed grade-separated overpass to cross the CPKC rail yard.
- At the north landing, a new connector would link the overpass to the Lions Way/Shaughnessy area. This intersection is a major design node and would require new signal control and substantial geometry changes.
- Traffic would then approach downtown from the north on the complementary one-way route, completing the loop.
- Local downtown streets would continue to provide property, business and civic access; the feasibility study would determine which local movements remain two-way and which are modified.

2.2 One-way operation is a tool, not the objective

FHWA guidance notes that one-way streets can increase capacity, reduce turning and pedestrian-vehicle conflict delay, permit transit-routing improvements and simplify signal progression. It also cautions that one-way systems can increase speeds, increase travel distance for some trips and affect business access if they are poorly designed. [8] Those trade-offs are why this proposal should be evaluated as a paired network with access management, speed control and pedestrian design - not as a simple instruction to change signs.

KEY TECHNICAL DISTINCTION

Where a two-lane two-way street currently provides one lane in each direction, conversion can make two lanes available to the dominant direction. That doubles directional lane supply on that segment, but it does not automatically double corridor capacity. The real capacity is governed by downstream intersections, signal green time, turns, bus stops, pedestrian phases, merge areas and queue storage. The project must be tested through network microsimulation before any capacity percentage is claimed.

3. Street and Intersection Changes to Test

Location	Conceptual role	Engineering issue to resolve
Shaughnessy St. north of Wilson	Primary southbound one-way leg	Use available pavement for same-direction movement; retain safe local access and pedestrian crossings.
Wilson Ave. east of Shaughnessy	Primary eastbound distributor	Major lane/signal reconfiguration; bus-priority opportunities; turning and property access must be redesigned.
Station-side Kingsway/Mary Hill approach	Feed to new overpass	Coordinate bus loop, station access, general traffic and active transportation.
New rail overpass	One-way grade-separated crossing	Test 2- and 3-lane options; 3-lane option may use a flexible bus/HOV/shared priority lane rather than bus-only operation.
North overpass landing	New signalized distribution node	Critical merge/turn storage point; must prevent queues from spilling back onto the bridge.
Lions Way extension / connector	Return route to Shaughnessy	New road connection that closes the one-way pair and distributes traffic back toward downtown from the north.
Shaughnessy / Lions Way	Northern control point	Signal change and transit-priority integration; existing MTP already identifies a southbound bus queue-jump opportunity here. [1]
Local downtown streets	Access network	Retain business, civic, emergency and resident access; prevent the one-way system from creating unnecessary local detours.

3.1 Signal strategy

The traffic-light icons on the concept map are not intended to prescribe a final signal layout. Each icon marks an intersection where a new signal, a modified phase plan, transit priority, turn restrictions, or a substantial change in traffic pattern is expected. Signal warrants, cycle lengths, offsets and phasing must be based on observed turning counts and the future network model.

The intent is to use signals mainly to meter merges and distribute traffic at the ends of the one-way pair, rather than repeatedly stop opposing through movements inside the core. That is a traffic-operations hypothesis to test, not an assumed outcome.

4. Grade-Separated Rail Crossing

4.1 Functional cross-section

The overpass should be tested as a one-way multimodal structure rather than a conventional two-way arterial bridge. A reasonable screening exercise is to compare a two-lane option with a three-lane option. The three-lane version could consist of two general-purpose lanes and one flexible priority lane that operates as bus-priority/HOV/shared capacity by time of day or signal phase, rather than a permanently exclusive bus lane.

The City's Master Transportation Plan already identifies bus-priority tools such as approach lanes, queue jumps, signal upgrades, peak-hour bus lanes and turn restrictions. It also specifically identifies a southbound queue jump on Shaughnessy at Lions Way, bus lanes on Wilson between Shaughnessy and Donald, and peak-hour bus-lane opportunities on Wilson and Shaughnessy. [1] The proposed overpass can therefore be studied as an extension of an existing transit-priority policy direction rather than a separate transit concept.

4.2 Rail engineering constraints

- The structure would cross an active CPKC rail yard, so the rail clearance envelope, pier exclusion zones, crash protection, electrification allowances if applicable, drainage, construction windows and maintenance access must be established with CPKC before a preferred alignment is selected.
- Longer spans may be justified to reduce the number of piers within the rail operating envelope, even if superstructure cost increases.
- Construction staging must maintain railway operations. Temporary works over or beside active tracks can materially affect schedule and cost.
- The bridge profile should use the longest practical approaches to control grade, maintain sight distance and provide comfortable bus operation. Final grades are an engineering outcome; this paper does not assume a rail clearance height.
- The south landing must preserve Port Coquitlam Station and bus-loop operations; the north landing must provide enough queue storage so a downstream red signal cannot back traffic onto the bridge.

4.3 Concept-level roadway criteria to test

Design item	Screening direction
Operating speed	Urban approach / bridge design should emphasize reliable flow rather than freeway speed; test approximately 40-50 km/h design conditions where geometry permits.
Bridge lanes	Compare 2 lanes one-way versus 3 lanes one-way; reserve ability to prioritize buses/HOV without making the entire crossing transit-only.
Active transportation	Target a physically separated multi-use facility; 4 m is a reasonable screening width because the City itself recommends a 4 m minimum for its separate active-transportation tunnel concept at Shaughnessy. [1]
Approach grades	Keep grades moderate for buses, winter operations, accessibility interfaces and sight distance; confirm through survey and vertical profile design.
Barriers / separation	Provide physical separation between traffic and the multi-use path and appropriate rail/road containment systems.
Drainage / flood resilience	Coordinate with downtown drainage, rail-yard drainage and flood-resilience work in the broader Coquitlam River area.

5. Transit Priority Without Excluding General Traffic

The project is intended to serve cars and buses in the same network, with targeted priority for transit rather than a blanket bus-only road. That distinction matters: a bus can bypass or receive an early signal while the underlying lane still serves general traffic or HOV users when priority is not being exercised.

The City's MTP states that congestion directly affects bus speed and reliability and identifies queue jumps, approach lanes, signal upgrades and peak-hour bus lanes. The City's 2024 plan referenced then-current TransLink cost sharing; the current 2026 Bus Speed & Reliability Program is broader and can fund eligible studies, pilots and capital transit-priority projects, with up to 100% TransLink funding for high-priority projects. That does not make the general-purpose portion of the bridge automatically eligible. [1][10]

5.1 Priority treatments to evaluate

- Queue-jump or early-release signal phases at the north and south bridge approaches.
- A flexible third bridge lane that can operate as a priority/HOV/shared lane by time of day or demand.
- Downtown one-way priority lane: test whether one lane on the one-way Wilson/Shaughnessy pair can operate as a bus-priority/HOV/shared lane during the periods when transit delay is highest. This would extend transit priority into the downtown core rather than ending it at the bridge. The City's existing Master Transportation Plan already identifies bus-lane and queue-jump opportunities on Wilson and Shaughnessy. [1]

- Transit signal priority at Wilson/Shaughnessy, the station-side bridge approach, the north landing and Lions Way/Shaughnessy.
- Bus-stop placement that avoids blocking the principal through lane where practical.
- Direct connection to the Port Coquitlam Station bus loop without requiring buses to circulate through unnecessary downtown blocks.
- Performance targets based on person throughput and bus travel-time reliability, not only vehicle counts.

5.2 Existing transit context

Port Coquitlam Station is already a major transfer point. The September 7, 2026 TransLink timetable confirms that routes 159, 160, 170, 173, 174, 175 and 188 have materially different relationships to the station and the proposed one-way network. The route-specific operating supplement therefore treats them separately rather than assuming every route should use the new overpass. In particular, the 159, 160, 173 and 174 are the strongest candidates for an outbound/northbound overpass treatment. Route 170 primarily serves the south/east side of the city and should generally remain south of the rail yard unless modelling shows a clear operational benefit. Route 175 does not rely on the Shaughnessy underpass. Route 188 does use Shaughnessy, but only on the segment south of Wilson between Pitt River Road and Wilson; it does not use the rail underpass. [3]

5.3 Explored fare-free downtown circulator

The counterclockwise one-way network also creates a simple path for a possible fare-free downtown circulator: Port Coquitlam Station -> new overpass -> Lions Way/Shaughnessy -> downtown -> Wilson Avenue -> Port Coquitlam Station. This is an explored service option, not a promised TransLink route. Its purpose would be short local trips, station connections and easier circulation through the civic/commercial core without requiring a car for every movement.

A permanent fare-free service would require a separate operating and fare arrangement. Port Coquitlam has experience arranging complimentary event shuttles, and TransLink provided a free hourly shuttle between Coquitlam Central and the Port Coquitlam Community Centre in March 2025, but a daily circulator would be a materially different operating commitment. A pilot should test ridership, cycle time, accessibility, operating cost, transfer value and whether the service duplicates existing routes before any permanent commitment. [14]

6. Walking, Cycling and Accessibility

The new crossing should solve an accessibility problem as well as a traffic problem. The City describes heavy pedestrian use on the existing Shaughnessy underpass sidewalk, calls that sidewalk narrow, and notes there is no existing accommodation for cyclists or other wheeled users. [1]

The concept therefore includes a wide, protected walking and cycling facility tied into the station/bus-loop area. The objective is enough usable width for people to pass comfortably when using wheelchairs, mobility scooters, strollers or bicycles, rather than forcing those users into a narrow shared pinch point.

This overpass connection does not have to replace the City's separate active-transportation tunnel concept at Shaughnessy. The MTP recommends a feasibility study for a 4 m wide, 3 m high active-transportation tunnel east of the existing underpass. [1] The two ideas can be evaluated as complementary: one improves the existing central crossing, while the proposed bridge creates a second accessible route and adds network redundancy.

6.1 Accessibility requirements for feasibility

- Continuous protected width across the full rail crossing, with no squeeze points at bridge barriers, stairs, bus facilities or signal poles.
- Accessible grades and landings, including practical connections to the bus loop and downtown sidewalk network.

- Clear separation between people walking/cycling and high-volume one-way traffic.
- Lighting, sightlines, winter maintenance and personal-security design appropriate for a long elevated crossing.
- Wayfinding that makes the new route intuitive for station users and downtown visitors.

7. Relationship to the Pitt River Gateway Interchange

This downtown project is intended to be evaluated together with the separate Pitt River Gateway Interchange concept. The two projects solve different parts of the same network problem: the Gateway concept changes how traffic enters and leaves Port Coquitlam from Lougheed Highway, while the downtown concept changes how traffic is distributed around the rail barrier and city centre.

7.1 Network hypothesis to test

- The Pitt River Gateway can provide a stronger route into the four-lane Pitt River Road corridor, reducing the need for some trips to approach Port Coquitlam through Broadway Street, Coast Meridian Road or the downtown underpass.
- The downtown one-way pair can move remaining central traffic through a more directional network and provide a second grade-separated rail crossing.
- Together, the concepts may redistribute traffic before it reaches the most constrained downtown blocks and provide alternate routes when incidents or rail operations affect one corridor.
- The combined effect on Broadway, Coast Meridian, Shaughnessy, Kingsway, Wilson and Mary Hill must be quantified through a city-wide origin-destination model; this report does not assign an unsupported percentage reduction.

WHY THIS MATTERS

The transportation value is not the bridge by itself. The value, if modelling confirms it, is a connected network in which trips have more than one practical gateway and more than one practical rail crossing. That is a resilience and distribution strategy, not simply a capacity project.

8. Traffic Modelling and Engineering Work Required

The concept is sufficiently defined to justify modelling, but not sufficiently defined for design. A credible feasibility study should evaluate the entire downtown network rather than model the overpass as an isolated link.

8.1 Required traffic scenarios

- Existing weekday AM and PM peak conditions using current 2026 road geometry and recently completed Kingsway changes.
- Opening-year scenario for the downtown concept by itself.
- Combined scenario including the Pitt River Gateway Interchange.
- 10-year and 20-year growth scenarios consistent with municipal and regional forecasts.
- Rail-event and incident scenarios that test loss of a crossing or abnormal queue conditions.
- West Coast Express / station peak periods and major event conditions.
- Bus-priority scenarios comparing two-lane and three-lane bridge operations.

8.2 Performance measures

Measure	What to test
Network travel time	Total travel time and delay by origin-destination pair, not only one intersection.
Queue length	95th-percentile and maximum queues; check for spillback into upstream intersections and onto the bridge.
Intersection performance	Volume-to-capacity, control delay and cycle failure at Shaughnessy/Wilson, station-side approach, north landing and Lions Way/Shaughnessy.
Transit reliability	Bus travel time, variability, queue bypass benefit and station access.
Person throughput	People moved per hour by car, bus, walking and cycling where data permit.

Measure	What to test
Safety conflicts	Turning conflicts, lane-change/weaving areas, pedestrian exposure and emergency access.
Network redistribution	Change in volumes on Broadway, Coast Meridian, Kingsway, Mary Hill, Shaughnessy and Pitt River Road.
Local access	Business/property access changes and additional circulation distance for local trips.

8.3 Why microsimulation is necessary

One-way networks can simplify signal progression, but they can also move a bottleneck downstream if signal timing and turn storage are not designed as a system. FHWA guidance specifically notes both the capacity/progression advantages of one-way networks and the need to examine surrounding circulation and safety. [8] A microsimulation model should therefore be the main screening tool before geometric design advances.

9. Safety, Local Access and Emergency Operations

9.1 Safety benefits to test

- Reduced opposing-flow conflict on converted one-way segments.
- Fewer complex turn phases at selected intersections if movements are redistributed.
- Elimination of an at-grade road-rail conflict for the new crossing because the bridge is fully grade separated.
- Improved pedestrian/cycling separation on the new bridge.
- Reduced reliance on the narrow Shaughnessy underpass for every central cross-rail trip.

9.2 Safety risks that must be designed out

- Higher speeds that can occur on wide one-way streets; signal progression and lane geometry should target an urban operating speed rather than maximize speed.
- Longer or less intuitive local routes for some drivers, especially during the transition period.
- Queue spillback at the north overpass landing or Wilson approach.
- Weaving near the station/bus-loop interface if bridge traffic and local access are combined too late.
- Pedestrian crossing distance on widened one-way approaches; curb extensions, refuge and shorter crossing stages may be necessary.
- Emergency response routes during bridge closures, rail incidents or major downtown events.

9.3 Business and property access

A one-way conversion can improve through movement while making some local trips less direct. The feasibility study should inventory every driveway, loading area, on-street parking zone and business-access movement on affected blocks. Where a movement is removed, the replacement route should be explicit. The policy objective is better circulation without sacrificing the accessibility of the downtown businesses the project is meant to support.

10. Alignment With Existing Transportation Policy

The concept is not contained in the current Master Transportation Plan, but several of its underlying problems and tools are already recognized in City policy.

Existing direction	Public-plan evidence	How this concept differs/adds
Shaughnessy underpass constraint	City: two-lane arterial, often congested with vehicles/transit, narrow heavily used sidewalk, no cycling accommodation. [1]	Concept: do not widen for more vehicles; add a second grade-separated crossing and redistribute traffic.
Transit priority	City: queue jumps, signal upgrades and peak-hour bus lanes; specific opportunities on Shaughnessy and Wilson. [1]	Concept: integrate priority/HOV/shared bridge lane and signal priority into general traffic network.
Kingsway operations	City: current lane and intersection upgrades intended to improve flow, safety and accessibility. [2]	Concept: incorporate current Kingsway works as base geometry and connect them to the broader loop.

Existing direction	Public-plan evidence	How this concept differs/adds
Walking/wheeling	City: safe, direct and comfortable routes for walking/wheeling are an MTP objective. [1]	Concept: wide protected facility on the new crossing, tied to station and downtown.
Road-network review	City: MTP calls for identifying routes and improvements that facilitate efficient movement of vehicles, goods and people. [1]	Concept: evaluate downtown as a network rather than a single intersection.

10.1 A point of departure from current planning

The current MTP focuses on improving the existing Shaughnessy crossing for active transportation rather than increasing vehicle capacity there. This concept agrees with the first half of that diagnosis - the existing crossing is constrained - but proposes a more ambitious network response: build a second rail crossing and use a directional street pair to distribute traffic. That difference is precisely what the feasibility study should test.

11. Preliminary Cost and Funding Framework

Capital cost is relevant to transparency and delivery, but this policy concept does not begin by asking for the cheapest intervention. It begins by asking what downtown transportation network should be tested for the next several decades, then what combination of municipal, regional, rail, provincial and federal funding would be required if the benefits are demonstrated.

11.1 Screening-level 2026 cost range

Component	Screening range	Basis / note
Feasibility, survey, traffic model, rail/bridge concept, business case	$2M - $4M	Includes network microsimulation, topographic survey, geotechnical screening, rail interface and option evaluation.
Surface street conversion and civil works	$6M - $12M	Wilson/Shaughnessy/Lions Way corridor changes, curb work, markings, signs, turn pockets, local access and utility adjustments.
Signals, ITS and transit-priority equipment	$3M - $7M	Multiple new/modified signals. Port Coquitlam budgeted about $400,000 for a single new signal at Nicola/Hawkins in its 2024-25 plan, providing a local order-of-magnitude reference. [4]
Northern connector / Lions Way extension	$5M - $12M	New municipal road connection, property/utility allowance and intersection works; final cost highly site-dependent.
Rail-yard overpass and approaches	$90M - $145M	One-way 2-3 lane structure, retaining works, rail protection, approaches and separated walking/cycling facility. Range informed by comparable Lower Mainland/BC grade-separation projects, not a quantity take-off. [5][6][7]
Active transportation / station tie-ins	$3M - $8M	Protected path, accessibility interfaces, lighting, wayfinding and bus-loop connections where not included in bridge package.
Project contingency / rail staging / escalation allowance	$15M - $30M	Early-stage allowance for unknown utilities, property, CPKC requirements, staging and design development.

Working total: approximately $120 million to $200 million in 2026 dollars. The ranges overlap and some elements may be bundled; they should not be summed as if they were a contractor estimate. The purpose is to establish the likely order of magnitude for policy discussion.

11.2 Comparable cost context

Port Coquitlam has previously delivered major grade-separated infrastructure: the City reports the Coast Meridian Overpass as a $134 million project. [5] In 2026, B.C. awarded a $74.2 million contract for replacement of a CPKC rail overpass on Highway 1 near Langley. [6] Transport Canada records Lower Mainland road-rail projects in the tens of millions of dollars, including the Harris Road Underpass/Kennedy Road Overpass program. [7] These projects are not directly comparable, but they demonstrate why a multi-lane urban rail-yard crossing should be treated as a major regional infrastructure project rather than a normal municipal road job.

11.3 Funding and procurement principles

Port Coquitlam should lead the local network case, but the $120M-$200M screening range should never be presented as a municipal tax bill. The bridge, transit-priority, active-transportation and local-road components have different beneficiaries and different funding pathways.

TransLink should be engaged before concept design is fixed. Its 2026 Local Government Funding Programs include Bus Speed and Reliability, Major Road Network/Bike, structure, walking-to-transit and cycling programs. The 2026 Bus Speed and Reliability program can fund studies, pilots and capital transit-priority projects and permits up to 100% TransLink funding for high-priority projects. However, ordinary added roadway capacity is not automatically eligible; the transit-priority components must be defined clearly. [10]

CPKC should be at the table from the beginning because rail clearances, construction staging and property interfaces are critical to both cost and procurement. Rail requirements should be resolved before a bridge procurement package is issued.

Federal and provincial participation should be pursued at the business-case stage, not after detailed design. The Canada Public Transit Fund provides long-term federal support through Baseline Funding and Metro-Region Agreements; TransLink was allocated more than $663 million in Baseline Funding over ten years and up to $1.529 billion over ten years for Metro Vancouver under the Metro-Region Agreement stream, subject to applicable agreements and project eligibility. These are regional funding envelopes, not automatic grants to this project. [11][12]

The Province should be approached as a direct capital partner for the rail crossing and transit infrastructure. Recent provincial support for TransLink includes $312 million in operating funding for the 2025 Investment Plan, while earlier provincial capital participation supported regional transit expansion. Those commitments do not earmark money for this concept, but they demonstrate that major Metro Vancouver transit projects are routinely structured as multi-government partnerships. [13]

Property, utility, development and other beneficiary contributions should be assessed only where a direct project benefit can be demonstrated. They should not substitute for senior-government and regional funding of infrastructure whose benefits extend beyond Port Coquitlam.

11.4 Funding stack by project component

The most credible funding strategy is component-based. A program that can pay for a bus queue jump may not pay for a general-purpose bridge lane, and a federal transit envelope is accessed through regional planning rather than as a direct municipal grant. The feasibility study should therefore separate eligible scopes instead of assuming one funding source will cover the entire project.

- **Transit-priority studies, signals and queue bypass:** TransLink Bus Speed and Reliability Program; potentially very high cost share for qualifying high-priority projects. [10]
- **Bridge transit-priority lane and station interface:** TransLink Investment Plan / Local Government Funding Programs and, if accepted into the regional capital plan, Canada Public Transit Fund Baseline or Metro-Region Agreement funding. [10][11][12]
- **Walking/cycling and station access:** TransLink walking/cycling cost-share programs and relevant Canada Public Transit Fund active-transportation components, subject to intake and eligibility. [10][11]
- **Core rail overpass/general road capacity:** Direct municipal, regional and provincial capital partnership, with federal participation only where a program and approved business case fit the scope; do not assume transit programs will fund general-purpose capacity.
- **Fare-free circulator operations:** Separate operating/fare funding. Capital grant programs should not be treated as a source for permanent daily service hours. A pilot could be delivered through a TransLink partnership or municipal procurement, but the operating subsidy and fare treatment must be explicit. [14]

12. Governance and Stakeholder Framework

The project cannot be designed by one department in isolation. The proposed governance model is an open project table: define the problem and evaluation criteria jointly, then test alternatives before selecting a preferred alignment.

Party	Primary role / interest
City of Port Coquitlam	Project lead; streets, signals, local access, land, utilities, public engagement and integration with MTP.
TransLink / Coast Mountain Bus Company	Bus routing, station/bus-loop operation, transit priority, Major Road Network considerations and possible funding.
CPKC	Rail clearances, track/yard operations, construction staging, property and long-term railway requirements.
Province of B.C.	Regional transportation coordination, funding, regulatory support and interfaces where provincial roads/programs are affected.
Federal government / Transport Canada	Rail and trade-corridor context, possible infrastructure funding, federal rail considerations.
Relevant First Nations	Early engagement on land, cultural, archaeological and community interests; participation should begin before a preferred design is fixed.
City of Coquitlam / Metro Vancouver	Regional network and land-use effects; coordination where travel patterns and regional facilities are affected.
Residents, businesses, accessibility users and emergency services	Local access, construction impacts, safety, wayfinding, loading/parking, emergency response and practical usability.

12.1 First decision for the project table

The first joint decision should not be bridge architecture. It should be the evaluation framework: which traffic movements must improve, which bus travel-time targets matter, what local access must be preserved, what rail operating envelope is protected, what accessibility standard is required, and which network corridors are expected to receive relief.

Procurement caution: grant eligibility should influence packaging, not the core transportation objective. The City should not lock itself into a bridge geometry simply to fit a funding program, and it should not issue construction procurement before CPKC requirements, regional route decisions and funding agreements are sufficiently mature.

13. Principal Risks and Unanswered Questions

Risk	Why it matters	Required response
Traffic redistribution	The one-way loop could reduce delay at one location while increasing it elsewhere.	Model the full downtown network and combined Pitt River Gateway scenario before selecting geometry.
North landing bottleneck	A poorly designed signal could back traffic onto the new bridge.	Provide adequate storage, turn lanes and coordinated timing; test 95th-percentile queues.
Wilson Avenue impacts	Major directional change can affect driveways, parking and cross-street access.	Complete block-by-block access and loading inventory and business consultation.
Rail constructability	CPKC yard operations may limit pier locations and construction windows.	Begin rail engineering early; evaluate long spans and staged construction.
Property acquisition	New connector/approaches may require land.	Complete cadastral and property-impact screening before fixing alignment.
One-way speed risk	Extra same-direction width can encourage speeding.	Use urban design speed, signal progression, lane widths and pedestrian treatments to manage speed.
Transit/general-traffic conflict	Priority lane could become ineffective if it is simply another queued lane.	Define operating rules, signal priority and enforcement/HOV periods during feasibility.
Accessibility grade	Long elevated crossing can be difficult if approaches are too steep.	Set accessibility and cycling grade criteria early and use longer approaches if required.
Cost escalation	Rail structures have significant uncertainty before design.	Use progressive cost estimates at 10%, 30%, 60% design with risk register and contingency.
Public comprehension	A circulation loop can be confusing during transition.	Use clear wayfinding, staged commissioning and public education before conversion.

14. Proposed Implementation Roadmap

The concept can move forward in stages. The early phases are primarily analytical and collaborative; they do not require a commitment to build the bridge.

Stage	Indicative timing	Output
Phase 1 - Problem definition and data	0-6 months	Traffic counts, origin-destination data, bus performance, pedestrian/cycling counts, access inventory, rail operating requirements, survey and constraints mapping.
Phase 2 - Network microsimulation	6-12 months	Model existing network, surface-only one-way option, one-way + overpass option, two- versus three-lane bridge, and combined Pitt River Gateway scenario.
Phase 3 - Concept engineering / business case	12-24 months	Bridge alignments, rail coordination, geotechnical/environmental screening, property impacts, active transportation profile, 10-20% design and Class D/C cost estimates.
Phase 4 - Joint preferred concept	18-30 months	Stakeholder review, funding strategy, public engagement, selected operating plan and staged implementation decision.
Phase 5 - Detailed design and approvals	30+ months	CPKC agreements, property, utilities, accessibility, environmental/archaeological review, detailed design, procurement and construction staging.

14.1 Early actions that can proceed before bridge funding

- Collect turning-movement and queue data at Wilson/Shaughnessy, station-side approaches, Lions Way/Shaughnessy and affected Kingsway/Mary Hill intersections.
- Ask TransLink to participate in a downtown bus-priority operational study using the MTP opportunities already identified.
- Begin a CPKC technical workshop to establish the feasible bridge envelope before public expectations harden around a specific alignment.
- Test surface-only signal and one-way changes in simulation so their independent benefits are understood.
- Coordinate with the Pitt River Gateway concept so both projects use the same regional traffic assumptions and horizon years.

15. Policy Position and Conclusion

Downtown Port Coquitlam has a physical constraint that ordinary signal timing cannot remove: a large active rail yard divides the street network, and the most central crossing is a two-lane underpass. The City's own planning documents acknowledge congestion at that crossing, a narrow pedestrian condition, the absence of cycling accommodation and the difficulty of adding more vehicle lanes. [1]

The One-Way Network and Rail Grade-Separation Concept proposes testing a different network architecture rather than widening the existing bottleneck. Its key moves are a paired directional circulation system, a major reallocation of Wilson Avenue, a new station-side grade-separated rail crossing, a northern Lions Way connection, transit priority within general traffic, and a wide protected walking/cycling facility.

The concept should not be treated as a finalized engineering drawing. Its value at this stage is that it is specific enough to model. The appropriate policy commitment is therefore to test it rigorously against the existing network and other feasible alternatives, publish the results, and decide on a preferred long-term downtown transportation plan based on measured performance, safety, accessibility, rail compatibility and regional network effects.

What a successful feasibility result would need to demonstrate

- Meaningful reduction in delay and queueing without simply moving the bottleneck to another intersection.
- Improved bus travel-time reliability and a workable priority-lane operating plan.
- Better accessible walking/cycling connectivity across the rail barrier.
- No unacceptable interference with CPKC operations or future rail requirements.

- Maintained or improved access for downtown businesses, residents, civic facilities and emergency services.
- Measurable redistribution benefits on Shaughnessy, Broadway, Coast Meridian, Kingsway and the wider network when evaluated with the Pitt River Gateway concept.
- A transparent funding and delivery plan proportionate to the regional benefits of the project.

Sources and References

Sources are cited in the report by bracketed number. Web sources were reviewed in September 2026. Cost figures are used only as order-of-magnitude comparators; they are not direct estimates for the proposed project.

[1] City of Port Coquitlam, Master Transportation Plan (November 2024), especially Sections 10.5 Shaughnessy Street Underpass, 11.6 Transit Priority Improvements, Kingsway corridor material and road-network objectives. Source link

[2] City of Port Coquitlam, Kingsway Avenue Upgrades - current project scope and 2026 Phase 3. Source link

[3] TransLink, 2026 Port Coquitlam-area schedules and route information, including station-area Wilson/Shaughnessy/Mary Hill routings. Source link

[4] City of Port Coquitlam, 2024-2028 Financial Plan - local capital references including approximately $400,000 for a new Nicola/Hawkins traffic signal and $3.4 million for Kingsway road improvements. Source link

[5] City of Port Coquitlam, New Community Centre Brings Amenities, Excitement to Port Coquitlam - identifies the Coast Meridian Overpass as a $134 million project. Source link

[6] Province of British Columbia, June 10, 2026 information bulletin - $74.2 million contract for replacement of a CPKC rail overpass on Highway 1 near Langley. Source link

[7] Transport Canada, Projects funded by the National Trade Corridors Fund - Lower Mainland road/rail grade-separation comparators including Harris Road/Kennedy Road and related projects. Source link

[8] U.S. Federal Highway Administration, A Toolbox for Alleviating Traffic Congestion and Enhancing Mobility - one-way street benefits, trade-offs and implementation considerations. Source link

[9] City of Port Coquitlam, 2026-2027 Capital Program - current transportation and infrastructure program context. Source link

[10] TransLink, 2026 Local Government Funding Programs and Bus Speed & Reliability Program Guidelines - eligible studies, pilots and capital transit-priority projects; up to 100% TransLink funding for high-priority BSR projects, subject to program rules. Source link

[11] Government of Canada, Canada Public Transit Fund - Baseline Funding for TransLink: more than $663 million over ten years beginning in 2026, for eligible transit and active-transportation infrastructure. Source link

[12] Government of Canada, Canada Public Transit Fund - Metro-Region Agreement allocation for Metro Vancouver: up to $1.529 billion over ten years beginning in 2026, subject to funding agreements and eligible regional projects. Source link

[13] Province of British Columbia, April 10, 2025 - $312 million provincial operating contribution supporting TransLink's 2025 Investment Plan and targeted service expansion; cited as partnership context, not project-specific funding. Source link

[14] City of Port Coquitlam, March 6, 2025 - free hourly TransLink shuttle between Coquitlam Central Station and Port Coquitlam Community Centre during a busy event weekend; cited only as a local fare-free shuttle precedent. Source link

Technical disclaimer

This document is a campaign policy concept. It is not prepared, signed or sealed by a professional engineer and is not suitable for construction, procurement, property acquisition or regulatory approval. Road alignments, signal locations, lane configurations, bridge geometry, rail clearances, accessibility grades, costs and traffic effects are preliminary screening concepts only. A professional multidisciplinary team and affected agencies would be required to verify all technical assumptions.