

# APPENDIX E

New DCC No.	ID	Name	Ranking	Timeframe	2015 Detailed Cost Est.	Summary Sheet Scope	Summary Sheet Rationale	Summary Sheet Policy Context
97	118	Boxwood Rd (Northfield to East Wellington)	1	Short Term	\$5,531,590	<ul style="list-style-type: none"> <li>This is one phase of a larger project and includes intersection improvements only.</li> <li>Left turn bay and approach improvements on East Wellington Road.</li> <li>In already constructed segments of Boxwood Rd, work within curb faces, modify paint to develop travel/bike lanes and construct sidewalk on one side.</li> </ul>	<ul style="list-style-type: none"> <li>Boxwood Rd forms an alternative major road corridor parallel and west of Bowen Rd from E. Wellington Rd to the Boxwood Connector at Northfield Rd. This corridor reduces traffic demand on Bowen Rd, particularly during peak periods.</li> <li>City-wide growth, development along the corridor and diversion from Bowen Rd will drive future traffic growth.</li> <li>Develop core elements of a minor collector roadway as traffic volumes increase.</li> <li>Development of pedestrians and cycling facilities will be appropriate as traffic volumes increase.</li> </ul>	<ul style="list-style-type: none"> <li>The extension of Boxwood Rd south between Dufferin Cres and East Wellington Rd is identified in the Transportation Master Plan - Major Road Project "V" and will further reduce traffic demand on Bowen Rd south of Dufferin Cres as well as at the intersection of Dufferin Cres/Bowen Rd.</li> <li>Boxwood Road forms part of the "Off-Bowen Bikeway" identified within Appendix A of the Transportation Master Plan.</li> </ul>
98	122	Jingle Pot / Westwood Intersection Upgrades	2	Short Term	\$1,124,016	<ul style="list-style-type: none"> <li>Signalization of Jingle Pot Rd/Westwood Rd intersection including approach upgrades.</li> <li>All approached should be developed to a minor collector cross-section, with sidewalk, street lighting, and bike lanes.</li> <li>No parking on approaches to the intersection.</li> </ul>	<ul style="list-style-type: none"> <li>Jingle Pot Rd is the primary access to the Westwood and College Heights area as well as a urban reserve area north of Jingle Pot Road.</li> <li>Volumes at the intersection of Westwood Rd/Jingle Pot Rd have been increasing due to both development in College Heights and areas to the north along Westwood Rd and beyond the City limits. Safety performance is degrading with higher volumes.</li> <li>Signalization of the intersection will assist traffic from Westwood (particularly southbound left turns) reducing delays and improving safety performance.</li> </ul>	<ul style="list-style-type: none"> <li>Intersection signalization and upgrades is identified in the Transportation Master Plan - Major Road Project "Y" and improve safety at the intersection.</li> <li>Both Jingle Pot Rd and Westwood Rd have been identified as future cycling routes with bike lanes.</li> </ul>
99	119	Boxwood Connector	3	Phased - Short/Med Term	\$16,808,723	<ul style="list-style-type: none"> <li>Develop Northfield Rd - 5-lane arterial.</li> <li>Develop Boxwood Connector - 2/3/4-lane minor collector.</li> <li>Bowen Rd / Northfield Rd - Intersection upgrades.</li> <li>Develop Rosstown Rd to a 2-lane minor collector standard. Turning movement restriction from Rosstown Rd to Bowen Rd.</li> <li>Boxwood Rd/ Rosstown Rd - Roundabout.</li> <li>Boxwood Rd/ Northfield Rd - Intersection upgrades.</li> <li>Beban Park connector / Bowen Rd - new traffic signal.</li> <li>Bike lanes throughout except on Bowen Rd; new multiuse trail connecting Beban Park to Northfield Rd.</li> <li>Consideration of improved transit priority / passenger facilities.</li> </ul>	<ul style="list-style-type: none"> <li>Bowen Road is the third largest north-south corridor in the City after the Parkway and Island Hwy and Northfield Rd is a major east-west link between Island Hwy, Bowen Rd and the Parkway.</li> <li>The intersection of Bowen Rd / Northfield Rd is at capacity during weekday afternoons.</li> <li>Proposed improvements will increase capacity through the node formed by the intersections of Northfield, Boxwood and Bowen roads.</li> <li>As a major node in the City's street network, linking Northfield, Bowen, the Parkway and Island Hwy; traffic volumes are expected to grow with population growth.</li> <li>New road links will reduce turning movements at the intersection of Bowen Rd / Northfield Rd.</li> <li>Within City intersections, Bowen Rd/ Northfield Rd has the highest number of collisions; intersection improvements are</li> </ul>	<ul style="list-style-type: none"> <li>Identified in the Nanaimo Transportation Master Plan - Major Road Project "O".</li> <li>Identified in the Nanaimo Transportation Master Plan as crossing of three cycling corridors; Off-Bowen Route along Boxwood, Rosstown roads, Northfield Bikeway and multiuse trail connection between Parkway and E&amp;N Trail via Dorman &gt; Beban Park &gt; Boxwood Connector &gt; Northfield.</li> <li>Bowen Road is a future RapidBus corridor.</li> </ul>

New DCC No.	ID	Name	Ranking	Timeframe	2015 Detailed Cost Est.	Summary Sheet Scope	Summary Sheet Rationale	Summary Sheet Policy Context
101	115	Rock City Rd (Labieux to DBR)	4	Medium Term	\$10,953,737	<ul style="list-style-type: none"> <li>Develop a 2-lane minor collector road with left turn lanes at Country Club Dr (north) and Glen Eagle with bike lanes in both directions.</li> <li>DCC does not include a cost for on-street parking but would become part of future developments frontage works and services.</li> <li>Roundabout at Labieux Rd/Kenworth Rd/Rock City Rd.</li> <li>Signalization of Rock City Rd/Departure Bay Rd and includes improvement to all approaches.</li> <li>Signalization of Island Hwy / Rock City and includes improvement to all approaches with rail crossing costs.</li> </ul>	<ul style="list-style-type: none"> <li>The intersection of Bowen / Norwell / Island Hwy operates near capacity on weekday afternoons.</li> <li>The connection of Rock City Road south across Island Hwy and through to Bowen Rd will create an alternative crossing of the highway to Bowen Rd/Norwell Rd.</li> <li>Project will support adjacent development west of Island Hwy as well as city-wide mobility.</li> <li>Project will coordinate with Boxwood Connector improvements.</li> </ul>	<ul style="list-style-type: none"> <li>Identified in the Nanaimo Transportation Master Plan - Major Road Project "L".</li> </ul>
71	132	Cranberry Connector	4	Short Term	\$6,168,624	<ul style="list-style-type: none"> <li>Develop a 2-lane minor collector, including bike lanes, boulevard, street tree street lighting and sidewalks on one side.</li> <li>Develop a roundabout at Cranberry Ave.</li> <li>Context sensitive cross section within wetland - no parking.</li> <li>On street parking is excluded from the DCC but would be expected as works and services through development along the west side.</li> </ul>	<ul style="list-style-type: none"> <li>Cranberry Ave is the only major road access to the Cinnabar Valley. Access to shopping at Southgate requires a short trip on Island Hwy; driving congestion at Cranberry Ave and Tenth St.</li> <li>Traffic growth is projected to continue with future development growth.</li> <li>Proposed improvements create a new link between Cranberry Ave and Tenth Street, reducing traffic demand at Island Hwy/Cranberry and Tenth/Cranberry and keeping local trips to commercial services within the City road network.</li> <li>Boulevards , sidewalks, bike lanes, and street lighting to improve safety for all road users under higher traffic volume conditions.</li> <li>Proposed roundabout at Cranberry Ave will support higher turning volumes.</li> </ul>	<ul style="list-style-type: none"> <li>Identified in the Nanaimo Master Transportation Plan - Major Road Project "JJ".</li> <li>Identified as new major road linkage in Chase River Neighbourhood Plan.</li> </ul>
49	120	Northfield Rd (Parkway to Boxwood Connector)	5	Medium Term	\$6,168,624	<ul style="list-style-type: none"> <li>Develop 4-5 lane arterial with rural shoulder (south side) and concrete curb gutter + Boulevard + Multiuse Pathway (north side).</li> <li>No parking on either side of Northfield Rd.</li> </ul>	<ul style="list-style-type: none"> <li>Northfield Rd is an important east-west arterial linking Boxwood and Bowen roads to the Parkway.</li> <li>City-wide growth is expected to drive future traffic growth to/from the Parkway.</li> <li>Widening of Northfield Rd to four lanes will likely be triggered by double left turn lanes southbound on the Parkway and improvements to Northfield Rd.</li> <li>Multi-use pathway on the north side of Northfield Rd will service City wide multi-use trail network connecting Parkway and E&amp;N trail corridors.</li> </ul>	<ul style="list-style-type: none"> <li>Intersection upgrades at Northfield / Parkway and widening of Northfield is identified in the Transportation Master Plan - Major Road Project "I" and improve capacity.</li> </ul>

New DCC No.	ID	Name	Ranking	Timeframe	2015 Detailed Cost Est.	Summary Sheet Scope	Summary Sheet Rationale	Summary Sheet Policy Context
110	134	Pearson Bridge Intersection Upgrades	6	Development	\$6,102,000	<ul style="list-style-type: none"> <li>Comox Rd/Hwy 1 intersection upgrade, widen Comox Rd by one lane on the west approach.</li> <li>Laning adjustments on Pearson Bridge to facilitate bicycles between Comox Rd and Stewart Ave/Vancouver Ave; facilitate cyclists on Comox and possible MUP on Terminal.</li> <li>Stewart Ave/Terminal Ave intersection upgrade with the addition of a southbound left turn lane from Terminal Ave to Stewart Ave.</li> <li>Stewart Ave/Terminal Ave intersection upgrade with the addition of a southbound left turn lane from Terminal Ave to Stewart Ave.</li> <li>Improvements are not well defined but could require the re-laning of the Pearson Bridge and reconfiguration of the intersection of Stewart Ave/Terminal.</li> <li>Improvement concept should be developed in advance of development of adjacent parcels.</li> </ul>	<ul style="list-style-type: none"> <li>Terminal Ave at Pearson Bridge carries 34,000 vehicles per day; this segment of Terminal Ave is under Ministry jurisdiction.</li> <li>Traffic growth projected with continued City-wide growth and development from the Downtown south.</li> <li>From the north; traffic disperses (to Comox&gt;Wallace and Comox&gt;Front) into the Downtown at the intersection of Comox Rd/Terminal Ave. The intersection is near capacity during existing afternoon peak period conditions and SB left-turn is one of two accesses to Downtown from north.</li> <li>The intersection of Comox Rd/Terminal Ave governs the capacity of the surrounding road network; delays at intersection expected to grow in the future.</li> <li>Sidewalks, bike lanes and street lighting to improve safety for all road users under higher traffic volume conditions.</li> <li>Traffic growth strongly correlated with growth in the</li> </ul>	<ul style="list-style-type: none"> <li>Identified in the Nanaimo Master Transportation Plan - Major Road Project "AA".</li> </ul>
109	116	Bowen Rd / Island Hwy Intersection Upgrades	7	Medium Term	\$3,411,079	<ul style="list-style-type: none"> <li>Widen Bowen Rd to a 6-lane cross section (double left turn lanes + 4 through travel lanes) at Island Hwy; rail crossing upgrades.</li> </ul>	<ul style="list-style-type: none"> <li>In congestion during peak pm periods at Island Hwy / Bowen Rd / Norwell Dr this project would increase capacity at this important intersection.</li> <li>Supported by improvements at Rock City Road / Island Hwy.</li> </ul>	<ul style="list-style-type: none"> <li>Identified in the Nanaimo Transportation Master Plan - Major Road Project "M".</li> </ul>
103	103.1	Hammond Bay Rd (Nottingham to DBR)	8	Phased - Med/Long Term	\$11,171,625	<ul style="list-style-type: none"> <li>Guidance from Hammond Bay Mobility Study (HBMS)</li> <li>Develop a 2-lane minor collector (Reduced X section from HBMS) cross section that includes a bike lane on high side, shared travel lane and paved shoulder on low side, curb and gutter, sidewalk on at least one side and street lighting.</li> <li>Maximize through lane capacity by developing left turn lanes at intersecting roads that provide access into adjacent neighbourhoods and/or where traffic safety is an concern. (Nottingham Dr, Stephenson Point Rd)</li> <li>Turning movement restrictions could be considered at Linley Rd.</li> </ul>	<ul style="list-style-type: none"> <li>Hammond Bay is the only major road access to the Hammond Bay / Stephenson Point corridor between Rutherford Rd and Departure Bay Rd.</li> <li>Volumes in this segment are significant and traffic growth is projected to continue with future development south of Oakridge Dr.</li> <li>Upgrade costs are expected to be high due to terrain and constrained corridor - therefore reduced road cross section.</li> <li>Hammond Bay Mobility Study recommended retaining two lane cross section with additional north-south links.</li> </ul>	<ul style="list-style-type: none"> <li>Identified in Nanaimo Transportation Master Plan - Major road project 'H'.</li> </ul>

New DCC No.	ID	Name	Ranking	Timeframe	2015 Detailed Cost Est.	Summary Sheet Scope	Summary Sheet Rationale	Summary Sheet Policy Context
106	113	Hammond Bay Rd / Highway 19A Intersection Upgrades	9	Medium Term	\$1,551,366	<ul style="list-style-type: none"> <li>Widen Hammond Bay Rd to a 6-lane cross section (2x left turn lanes + 4-through lanes) at Hammond Bay Rd/Island Hwy.</li> <li>Reconstruct both right turn channelization islands on the south side of intersection to accommodate new travel lane configuration.</li> <li>Double left turn lane from southbound Island Hwy to eastbound Hammond Bay Rd; utilize existing gored out area for second left turn lane.</li> <li>Accommodate bikes along HBR.</li> </ul>	<ul style="list-style-type: none"> <li>The Island Hwy / Hammond Bay Rd intersection is the heart of the Woodgrove Mobility hub. Future development within the hub, the north end in general, city-wide and regionally ,will all drive traffic growth at this important intersection.</li> <li>Currently the intersection operates near capacity during the PM peak period.</li> <li>In response to traffic growth along Island Hwy / Hammond Bay Rd /Aulds Rd this project would increase capacity at this important intersection through widening on Hammond Bay Rd / Aulds Rd and opening already pre-built double left turn bays on Island Hwy.</li> </ul>	<ul style="list-style-type: none"> <li>Supports increasing mobility and transportation options for residents.</li> <li>Supported by Calinda Road extension (removes turns from HBR/Island Hwy intersection).</li> </ul>
90	125	Third St (Wakesiah to Pine)	10	Development / Medium Term	\$6,638,162	<ul style="list-style-type: none"> <li>Develop a 3-lane minor collector cross section with left turn lanes at intersecting collector roads.</li> <li>Signalization of Third St at Howard Ave and improvements to approaches.</li> <li>DCC project include re-profiling Third St.</li> <li>Parking excluded from DCC cost estimate but would be part of development frontage works and services.</li> </ul>	<ul style="list-style-type: none"> <li>Third St is a major road linking Downtown, Pine and Wakesiah to the Parkway. It, along with Bruce Ave, Fifth and Wakesiah Ave are the primary major roads within the Harewood neighbourhood.</li> <li>Traffic growth is projected to continue with future development in Harewood and Downtown but not sufficiently to trigger widening to four lanes.</li> <li>Future development of a new road from Fourth to Third within VIU will reduce traffic at Wakesiah / Third intersection.</li> <li>Strategy to maximize throughput of two lanes by completing cross section and adding left-turn bays throughout.</li> <li>Sidewalks, bike lanes, and street lighting to improve safety for all road users under higher traffic volume conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Signalization of Howard / Third identified in the Nanaimo Transportation Master Plan - Major Road Project "EE".</li> </ul>
81	124	Wakesiah Ave (Bowen to Fifth)	11	Long Term	\$7,645,976	<ul style="list-style-type: none"> <li>Develop a 2-lane minor collector with left turn lanes throughout the corridor.</li> <li>Parking excluded from DCC cost estimate but would be part of development frontage works and services.</li> <li>Complete multi-use trail from Third to Fifth streets.</li> </ul>	<ul style="list-style-type: none"> <li>Wakesiah Ave is a major north-south arterial linking to Bowen Rd in the north, Third and Fifth streets in Harewood and servicing VIU. It, along with Bruce Ave, Fifth and Third streets are the primary major roads within the Harewood neighbourhood.</li> <li>Traffic growth is projected to continue with future development in Harewood but not sufficiently to trigger widening to four lanes.</li> <li>Development of a future connection from Fourth to Third St in VIU is assumed to reduce future traffic growth at the intersection of Wakesiah / Third.</li> <li>Strategy is to maximize throughput of two lanes by completing cross section and adding left-turn bays throughout.</li> <li>Sidewalks, bike lanes, and street lighting to improve safety for all road users under higher traffic volume conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Improvements to the Wakesiah Ave corridor part of Nanaimo Transportation Master Plan - Major Road Project "Z".</li> </ul>

New DCC No.	ID	Name	Ranking	Timeframe	2015 Detailed Cost Est.	Summary Sheet Scope	Summary Sheet Rationale	Summary Sheet Policy Context
70.0	127.1	Bruce Avenue (Third to Eighth)	12	Phased - Short/Med Term	\$12,768,893	<ul style="list-style-type: none"> <li>Develop a 2/3-lane Minor Collector cross section with left turn lanes at 4th, Harewood, 5th, 6th, 7th, 8th).</li> <li>Signalization of Fourth, Fifth and (Eighth or Seventh) with improvements to intersection approaches.</li> <li>Parking excluded from DCC cost estimate but would be part of development frontage works and services.</li> </ul>	<ul style="list-style-type: none"> <li>Bruce Ave is the major north-south road through the Harewood neighbourhood. It, along with Wakesiah Ave, Fifth and Third Street are the primary major roads within the neighbourhood.</li> <li>Proposed commercial developments at Eighth and Fifth as well as redevelopment of higher density residential and commercial along the corridor will be supported by proposed improvements.</li> <li>Strategy to maximize throughput of two lanes by completing cross section, adding left-turn bays at major intersections.</li> <li>Sidewalks, bike lanes and street lighting to improve safety for all road users under higher traffic volume conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Improvements to Bruce Avenue identified in the Harewood Neighbourhood Plan.</li> <li>Intersection signalization and upgrades at Bruce and Fifth / Fourth identified in the Transportation Master Plan - Major Road Project "FF" / "GG" .</li> </ul>
102	137	Fifth St (Wakesiah to Bruce)	13	Medium Term	\$5,437,968	<ul style="list-style-type: none"> <li>Minor Collector - 3 Lanes between Bruce and Howard.</li> <li>Minor Collector - 2 Lanes between Howard and Wakesiah Ave approaches.</li> <li>Parking excluded from DCC cost estimate but could be part of development frontage works and services.</li> <li>Consider transit facility improvements as part of rapid bus corridor (Route 40).</li> </ul>	<ul style="list-style-type: none"> <li>Fifth St is a east-west major road linking Bruce and Wakesiah to the Parkway. It, along with Bruce Ave, Third and Wakesiah Ave are the primary major roads within the Harewood neighbourhood.</li> <li>Traffic growth is projected to continue with future development in Harewood but not sufficiently to trigger widening to four lanes. Redevelopment of higher density residential and commercial along the corridor, as identified in the Harewood Neighbourhood Plan, will be supported by proposed improvements.</li> <li>Strategy to maximize throughput of two lane by completing cross section and adding left-turn bays.</li> <li>Sidewalks, bike lanes, and street lighting to improve safety for all road users under higher traffic volume conditions.</li> <li>On-street parking will support street fronting retail.</li> </ul>	<ul style="list-style-type: none"> <li>Improvements to Fifth Street identified in the Harewood Neighbourhood Plan.</li> <li>Intersection signalization and upgrades at Bruce and Fifth identified in the Transportation Master Plan - Major Road Project "GG" .</li> </ul>
107	138.2	E&N Trail (Seventh to Parkway Trail)	14	Medium Term	\$7,520,837	<ul style="list-style-type: none"> <li>Start / End trail head improvements (Kiosk)</li> <li>Hard surface urban multiuse trail.</li> <li>Lighting in isolated segments.</li> <li>Significant costs for railway crossing improvements (2-crossings) assume active railway corridor.</li> <li>Significant bicycle/pedestrian structure crossing Chase River.</li> </ul>	<ul style="list-style-type: none"> <li>Development both in South Harewood, the Cinnabar Valley and potentially in the Sandstone area will significantly increase travel from the south to the rest of the City.</li> <li>Multiuse trail connection to these development areas will support mode shift and sustainable transportation goals while mitigating demand on road network.</li> <li>Scope would be hard surface multiuse trail with consideration for lighting where isolated for user safety and winter operations.</li> </ul>	<ul style="list-style-type: none"> <li>Extension of the E&amp;N Trail along the length of the City is a long term City and regional goal.</li> <li>Extension of the E&amp;N Trail and increasing the use of sustainable transportation modes is a goal of the Transportation Master Plan.</li> <li>Extension of the E&amp;N Trail is identified as an objective of the Harewood Neighbourhood Plan to improve connections to the Downtown (page 41).</li> </ul>

New DCC No.	ID	Name	Ranking	Timeframe	2015 Detailed Cost Est.	Summary Sheet Scope	Summary Sheet Rationale	Summary Sheet Policy Context
38	109	Uplands Dr (Hammond Bay to Cedar Grove)	15	Development	\$1,979,371	<ul style="list-style-type: none"> <li>Develop 2/3-lane minor collector cross section with left turn lane at Parkway / Green Thumb development.</li> <li>No parking on east side.</li> <li>Parking on west side excluded from DCC cost estimate and would be part of developments frontage works and services.</li> <li>Intersection modifications at Hammond Bay Rd and Uplands Dr to accommodate capacity at Uplands Dr / Hammond Bay Rd.</li> <li>Addition road dedication along the west side of Uplands Dr will be taken at the DP/rezoning or Subdivision stage.</li> </ul>	<ul style="list-style-type: none"> <li>Uplands Dr is a key north-south arterial in the north part of the City running east of and parallel to Island Hwy.</li> <li>Traffic growth is projected to continue with adjacent development as well as wider City-wide growth; widening to four lanes is not anticipated but may be required dependent on development scale for the "green thumb" site &gt; site study to determine.</li> <li>Completion of cross section where incomplete will seek to maximize the capacity of a 2 lane cross section with left turn lanes and/or other intersection improvements at significant side street accesses.</li> </ul>	<ul style="list-style-type: none"> <li>Identified in the Nanaimo Transportation Master Plan - Major Road Project "D".</li> </ul>
108	112	Uplands Dr (Emerald-DBR) / DBR (Mexicana-Rock City)	15	Medium Term	\$5,259,708	<ul style="list-style-type: none"> <li>Develop a 2/3-lane minor collector with left turn lanes at Emerald Dr and Villa Rd.</li> <li>Signalization at Departure Bay Road and upgrade Departure Bay Rd from Uplands Dr to Aaby Plc to a 3-lane minor collector.</li> <li>Parking excluded from DCC cost estimate but would be part of development frontage works and services.</li> </ul>	<ul style="list-style-type: none"> <li>Uplands Dr is a key north-south arterial in the north part of the City running east of and parallel to Island Hwy.</li> <li>Upgrades on Uplands, Rutherford to Emerald are complete, remaining upgrades to Departure Bay Rd</li> <li>Signalization at Departure Bay is proposed to improve access to/from DBR and improve safety.</li> <li>Works in coordination with Rock City Road improvements to reroute traffic around Country Club Mobility Hub.</li> </ul>	<ul style="list-style-type: none"> <li>Identified in the Nanaimo Transportation Master Plan - Major Road Project "L".</li> </ul>
111	104	Departure Bay Rd (HBR to Montrose)	16	Long Term	\$10,495,577	<ul style="list-style-type: none"> <li>Develop 2-lane minor collector, bike lanes in both directions, concrete curb gutter and sidewalk, street trees and street lighting.</li> <li>Develop left turn lanes at significant neighbourhood access points.</li> <li>Parking excluded from DCC cost estimate but would be part of development frontage works and services.</li> </ul>	<ul style="list-style-type: none"> <li>Departure Bay is the only major road access to the Hammond Bay / Stephenson Point / Departure Bay corridor to or from the south.</li> <li>Traffic growth is projected to continue with development but not sufficiently to trigger widening to four lanes.</li> <li>Strategy is to maximize throughput of two lane by completing cross section; adding left-turn bays throughout.</li> </ul>	<ul style="list-style-type: none"> <li>Nanaimo Transportation Master Plan - Major Road Project "W" is within the limits of this project.</li> </ul>

New DCC No.	ID	Name	Ranking	Timeframe	2015 Detailed Cost Est.	Summary Sheet Scope	Summary Sheet Rationale	Summary Sheet Policy Context
100	108	Rutherford / Nelson Intersection Upgrade	16	Phased - Short/Med Term	\$2,053,000	<ul style="list-style-type: none"> <li>Develop Rutherford Rd to a minor collector cross-section with left turn bays at intersecting roads Oliver Road to Hammond Bay Road.</li> <li>Improve safety performance on Rutherford Hill.</li> <li>No on-street parking on Rutherford Hill.</li> <li>Signalization at Brookwood Dr and Vanderneuk Rd.</li> <li>Phased multi-lane roundabout at Nelson Rd including approaches and access to Linley Valley West (~150m).</li> </ul>	<ul style="list-style-type: none"> <li>Rutherford Rd forms an important north-south major road linking Linley Valley / Lost Lake development areas to Hammond Bay Rd/Uplands Dr and linking Uplands Dr and Hammond Bay Rd to each other.</li> <li>Traffic growth is projected to continue due to adjacent development and city-wide growth but not sufficiently to trigger widening to four lanes.</li> <li>Completion of cross section where incomplete will seek to maximize the capacity of 2-lane cross section with left turn bays at significant neighbourhood accesses and signals/roundabout at Brookwood Dr, Nelson Rd and Vanderneuk Rd.</li> <li>Grades and alignments on the Rutherford Hill segments are less than ideal and improvements will improve safety for all users as volumes increase.</li> </ul>	<ul style="list-style-type: none"> <li>Rutherford Rd is identified in the Nanaimo Transportation Master Plan - Major Road Project - Rutherford Road Hill / Project "F" - Primary objective is to improve safety and complete the ultimate road to service future traffic volumes.</li> </ul>
100	108.1	Rutherford Rd (Hammond Bay to Uplands)	16	Phased - Short/Med Term	\$7,946,230	<ul style="list-style-type: none"> <li>Develop Rutherford Rd to a minor collector cross-section with left turn bays at intersecting roads Oliver Road to Hammond Bay Road.</li> <li>Improve safety performance on Rutherford Hill.</li> <li>No on-street parking on Rutherford Hill.</li> <li>Signalization at Brookwood Dr and Vanderneuk Rd.</li> <li>Phased multi-lane roundabout at Nelson Rd including approaches and access to Linley Valley West (~150m).</li> </ul>	<ul style="list-style-type: none"> <li>Rutherford Rd forms an important north-south major road linking Linley Valley / Lost Lake development areas to Hammond Bay Rd/Uplands Dr and linking Uplands Dr and Hammond Bay Rd to each other.</li> <li>Traffic growth is projected to continue due to adjacent development and city-wide growth but not sufficiently to trigger widening to four lanes.</li> <li>Completion of cross section where incomplete will seek to maximize the capacity of 2-lane cross section with left turn bays at significant neighbourhood accesses and signals/roundabout at Brookwood Dr, Nelson Rd and Vanderneuk Rd.</li> <li>Grades and alignments on the Rutherford Hill segments are less than ideal and improvements will improve safety for all users as volumes increase.</li> </ul>	<ul style="list-style-type: none"> <li>Rutherford Rd is identified in the Nanaimo Transportation Master Plan - Major Road Project - Rutherford Road Hill / Project "F" - Primary objective is to improve safety and complete the ultimate road to service future traffic volumes.</li> </ul>
14	139	Norwell / Jingle Pot / Island Hwy Intersection Upgrades	17	Medium Term	\$3,440,299	<ul style="list-style-type: none"> <li>Develop a 3-lane minor collector cross section with bike lanes in both directions, left turn lanes at Shenton Rd, Wellington Rd and Island Hwy.</li> <li>On street parking is not included in scope but could form developments works and services.</li> <li>Signalization of Jingle Pot Rd/Shenton Rd / Wellington Rd and approaches upgrades; incorporate E &amp; N trail crossing.</li> <li>Rail crossing improvements.</li> </ul>	<ul style="list-style-type: none"> <li>Provides access to Island Hwy, to the Country Club mobility hub and industrial/residential areas to the west of the E&amp;N between Bowen Rd and Mostar Rd.</li> <li>The current intersection configuration lacks left turn bays and has no signal at Wellington Rd/Shenton Rd; delays anticipated to increase with additional volume.</li> <li>Future development and city-wide traffic increases along Island Hwy are expected to increase traffic demand at this intersection.</li> <li>Improvements will increase capacity at this node and reduce delays.</li> </ul>	<ul style="list-style-type: none"> <li>Identified in the Nanaimo Master Transportation Plan - Major Road Project "J".</li> </ul>

New DCC No.	ID	Name	Ranking	Timeframe	2015 Detailed Cost Est.	Summary Sheet Scope	Summary Sheet Rationale	Summary Sheet Policy Context
75	131	Cranberry Ave (Extension to Island Hwy)	18	Medium Term	\$7,624,618	<ul style="list-style-type: none"> <li>Develop a 2/3-lane minor collector with left turn lane at gas station/Moose Hall access. Include concrete curb gutter and sidewalk, bike lanes in both directions, street trees and street lighting.</li> <li>Widen to 4/5 Lanes approaching Hwy 1 to support dual left turns inbound/outbound.</li> <li>Relocate hydro poles where required.</li> <li>Double left in/out of Cranberry Ave at Hwy 1 which will require widening Hwy 1.</li> <li>Roundabout at Extension Rd/Cranberry Ave</li> <li>Parking excluded from DCC cost estimate but would be part of development frontage works and services.</li> </ul>	<ul style="list-style-type: none"> <li>Cranberry Ave is the only major road access to the Cinnabar Valley with growth rate of ~3+%/year.</li> <li>Traffic growth is projected to continue with future development growth; Sandstone could add 50% more units to the valley over existing conditions.</li> <li>The intersection of Hwy 1/Cranberry Ave is reaching capacity, particularly for left turns, during the am peak.</li> <li>Proposed improvements would increase the capacity of the intersection of Cranberry Ave / Island Hwy with widening on Cranberry Ave support intersection expansion.</li> <li>Sidewalks, bike lanes, and street lighting to improve safety for all road users under higher traffic volume conditions.</li> <li>Proposed roundabout at Cranberry Ave / Extension Rd will improve access to neighbourhood/school.</li> </ul>	<ul style="list-style-type: none"> <li>Identified in the Transportation Master Plan - Major Road Project "KK".</li> <li>Improved access to Island Highway key concept within Chase River Neighbourhood Plan.</li> <li>Works in coordination with Cranberry Connector - Transportation Master Plan - Major Road Project "JJ"</li> </ul>
8	117	Northfield Rd (Boundary to Sarnia)	27	Long Term	\$3,000,000	<ul style="list-style-type: none"> <li>Develop a 3-lane minor collector with left turn lanes throughout. Includes concrete curb gutter and sidewalk, bike lanes in both directions, street trees and street lighting.</li> <li>Roundabout/Signalization at Dorman Rd.</li> <li>On street parking is not included in the cost of DCC but would form part of developments frontage works and services.</li> </ul>	<ul style="list-style-type: none"> <li>Identified in the Nanaimo Transportation Master Plan - Major Road Project "N".</li> <li>Northfield Rd is an important east-west arterial major road linking Island Hwy, the Parkway, the Northfield Industrial Area and adjacent neighbourhoods.</li> <li>City-wide growth and redevelopment along the corridor is expected to drive future traffic growth.</li> <li>Traffic growth is not projected to be sufficient to trigger widening to four lanes, however completion of cross section where incomplete will seek to maximize the capacity of 2 lane cross section adding left turn bays throughout and traffic signals /roundabout at Dorman Rd.</li> <li>Sidewalks, bike lanes and street lighting to improve safety for all road users under higher traffic volume conditions.</li> </ul>	The project described above has a large scope. The funds specified are for intersection improvements only.



New DCC No.	ID	Name	Ranking	Timeframe	2015 Detailed Cost Est.	Summary Sheet Scope	Summary Sheet Rationale	Summary Sheet Policy Context
105	111	Calinda (Enterprise to HBR)	23	Development	\$4,784,858	<ul style="list-style-type: none"> <li>Develop 3-lane minor collector widening to 5-lanes on approach to Island Hwy.</li> <li>Improve intersection connection at Island Hwy and intersection connection at Hammond Bay Rd.</li> <li>Parking excluded from DCC cost estimate but would be part of development frontage works and services.</li> <li>Road dedication is part of the development of the land.</li> </ul>	<ul style="list-style-type: none"> <li>Construction of Calinda between Hammond Bay Rd and Island Hwy will complete a partial ring road around the Woodgrove Mobility Hub from Metral Dr to Applecross Rd.</li> <li>This road will be intended to service the future Green Thumb site and divert traffic away from the intersection of Hammond Bay Rd/ Island Hwy.</li> <li>Supporting street fronting development will require on-street parking.</li> </ul>	<ul style="list-style-type: none"> <li>Identified in the Nanaimo Transportation Master Plan - Major Road Project "C".</li> </ul>



## 2016 Transportation DCC Project Review

Project ID	118	DCC 97
Project Name	Boxwood Rd (Northfield to East Wellington)	
Timeframe	Short Term	

Project Scope	Length	1.8 km
<ul style="list-style-type: none"><li>• This is one phase of a larger project and includes intersection improvements only.</li><li>• Left turn bay and approach improvements on East Wellington Road.</li><li>• In already constructed segments of Boxwood Rd, work within curb faces, modify paint to develop travel/bike lanes and construct sidewalk on one side.</li></ul>		

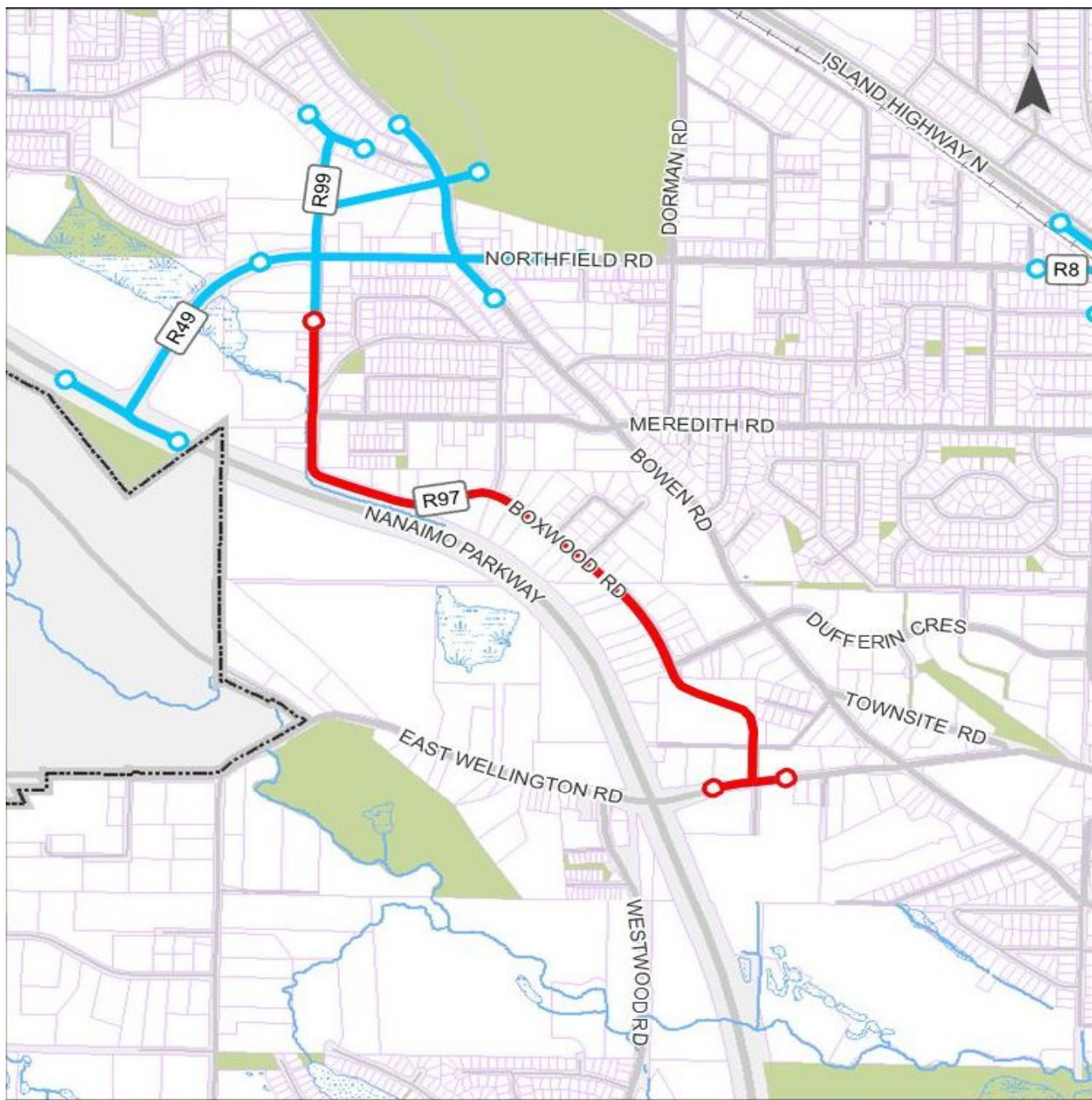
### Project Rationale

- Boxwood Rd forms an alternative major road corridor parallel and west of Bowen Rd from E. Wellington Rd to the Boxwood Connector at Northfield Rd. This corridor reduces traffic demand on Bowen Rd, particularly during peak periods.
- City-wide growth, development along the corridor and diversion from Bowen Rd will drive future traffic growth.
- Develop core elements of a minor collector roadway as traffic volumes increase.
- Development of pedestrians and cycling facilities will be appropriate as traffic volumes increase.

### Policy Context

- The extension of Boxwood Rd south between Dufferin Cres and East Wellington Rd is identified in the Transportation Master Plan - Major Road Project "V" and will further reduce traffic demand on Bowen Rd south of Dufferin Cres as well as at the intersection of Dufferin Cres/Bowen Rd.
- Boxwood Road forms part of the "Off-Bowen Bikeway" identified within Appendix A of the Transportation Master Plan.

Costing / Funding		Estimate Class:	D/PL/PL
Total Estimated Project Cost	\$5,531,590		
Funding Assumptions			
Existing Population Funding	\$0	0%	
DCC Funding	\$5,531,590	100%	
Total City Funding	\$5,531,590		
External Partner Funding	\$0	0%	
Total Funding	\$5,531,590		



## City of Nanaimo

Transportation DCC  
Project R97  
Boxwood Road  
(Northfield to  
East Wellington)

Geoprocessing: V. Baur, GeoDepartment, Date: 2017-05-08, Project: DCC (R97) DCC R97.mxd

### Legend

- Project Limits
- Other DCC Projects

Published: May 8, 2017



1:15,000



#### DISCLAIMER

This map is intended for general information only. The City of Nanaimo makes no representation or warranty, ~~express or implied~~, the accuracy or completeness of the information presented and assumes no responsibility for any damage, loss or injury resulting from the use of this product.

Note: Project scopes are conceptual and would be refined through preliminary and final design.

**Project 118 Estimate Summary DCC Project 97**

<b>Item</b>	<b>Description</b>	<b>Estimate Class</b>	<b>Estimated Cost</b>
1	• Boxwood Rd, E. Wellington to Northfield include new road form Dufferin Cres to E. Wellington Rd and from south of Meredith Rd to Northfield Rd, McElhanney , June 2015.	D	\$ 4,739,123
2	• Sidewalk on one side of existing Boxwood Rd, Dufferin Cres to Meredith, CoN , June 2015.	D	\$ 300,000
3	• Left turn bay development on E. Wellington Rd, CoN Staff, June 2015.	D	\$ 450,000
<b>Total Project Cost</b>			
2017 Estimate Update			\$ 5,531,588

## 2016 Transportation DCC Project Review

Project ID	122	DCC 98
Project Name	<i>Jingle Pot / Westwood Intersection Upgrades</i>	
Timeframe	<i>Short Term</i>	

Project Scope	Length	0.3 km
---------------	--------	--------

- Signalization of Jingle Pot Rd/Westwood Rd intersection including approach upgrades.
- All approached should be developed to a minor collector cross-section, with sidewalk, street lighting, and bike lanes.
- No parking on approaches to the intersection.

### Project Rationale

- Jingle Pot Rd is the primary access to the Westwood and College Heights area as well as a urban reserve area north of Jingle Pot Road.
- Volumes at the intersection of Westwood Rd/Jingle Pot Rd have been increasing due to both development in College Heights and areas to the north along Westwood Rd and beyond the City limits. Safety performance is degrading with higher volumes.
- Signalization of the intersection will assist traffic from Westwood (particularly southbound left turns) reducing delays and improving safety performance.

### Policy Context

- Intersection signalization and upgrades is identified in the Transportation Master Plan - Major Road Project "Y" and improve safety at the intersection.
- Both Jingle Pot Rd and Westwood Rd have been identified as future cycling routes with bike lanes.

Costing / Funding		Estimate Class:	D
Total Estimated Project Cost	\$1,124,016		
Funding Assumptions			
Existing Population Funding	\$562,008	50%	
DCC Funding	\$562,008	50%	
Total City Funding	\$1,124,016		
External Partner Funding	\$0	0%	
Total Funding	\$1,124,016		





## Project 118 Estimate Summary

Item	Description	Estimate Class	Estimated Cost
1	<ul style="list-style-type: none"><li>• Signalization of Jingle Pot Rd and Westwood Rd and laning improvements on all approaches; minor collector standard.</li><li>• CoN Staff , June 2015.</li></ul>	D	\$1,124,016
Total Project Cost			1.1M



## 2016 Transportation DCC Project Review

Project ID	119	DCC 99	Old DCC # 85/86
Project Name	<i>Boxwood Connector</i>		
Timeframe	<i>Phased - Short/Med Term</i>		

<b>Project Scope</b>	Length	0.0 km
----------------------	--------	--------

- Develop Northfield Rd - 5-lane arterial.
- Develop Boxwood Connector - 2/3/4-lane minor collector.
- Bowen Rd / Northfield Rd - Intersection upgrades.
- Develop Rosstown Rd to a 2-lane minor collector standard. Turning movement restriction from Rosstown Rd to Bowen Rd.
- Boxwood Rd/ Rosstown Rd - Roundabout.
- Boxwood Rd/ Northfield Rd - Intersection upgrades.
- Beban Park connector / Bowen Rd - new traffic signal.

### Project Rationale

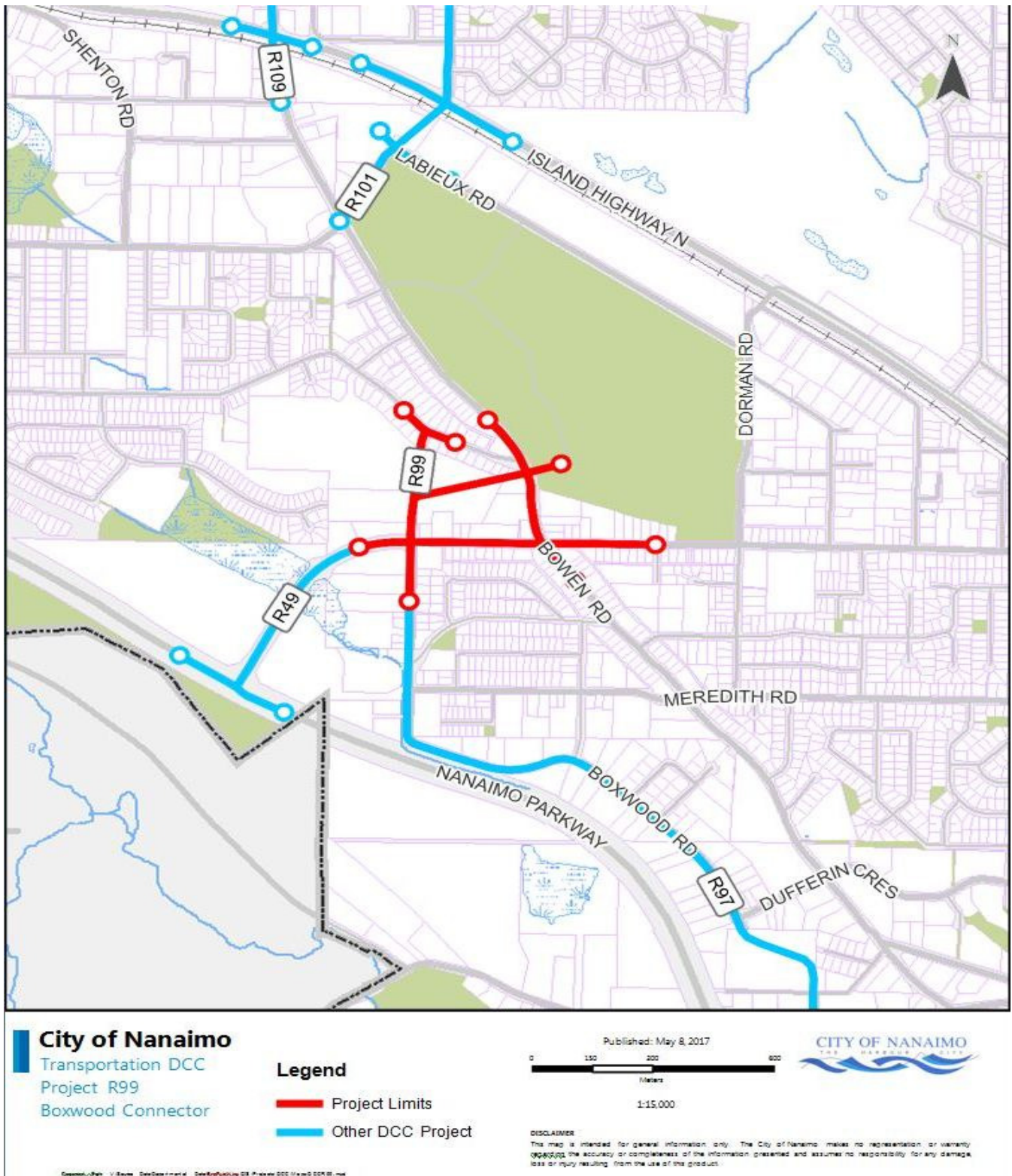
- Bowen Road is the third largest north-south corridor in the City after the Parkway and Island Hwy and Northfield Rd is a major east-west link between Island Hwy, Bowen Rd and the Parkway.
- The intersection of Bowen Rd / Northfield Rd is at capacity during weekday afternoons.
- Proposed improvements will increase capacity through the node formed by the intersections of Northfield, Boxwood and Bowen roads.
- As a major node in the City's street network, linking Northfield, Bowen, the Parkway and Island Hwy; traffic volumes are expected to grow with population growth.
- New road links will reduce turning movements at the intersection of Bowen Rd / Northfield Rd.
- Within City intersections, Bowen Rd/ Northfield Rd has the highest number of collisions; intersection improvements are expected to reduce collision rates.

### Policy Context

- Identified in the Nanaimo Transportation Master Plan - Major Road Project "O".
- Identified in the Nanaimo Transportation Master Plan as crossing of three cycling corridors; Off-Bowen Route along Boxwood, Rosstown roads, Northfield Bikeway and multiuse trail connection between Parkway and E&N Trail via Dorman > Beban Park > Boxwood Connector > Northfield.
- Bowen Road is a future RapidBus corridor.

### Costing / Funding Estimate Class: C

Total Estimated Project Cost	\$16,808,723	
Funding Assumptions		
Existing Population Funding	\$8,404,361	50%
DCC Funding	\$8,404,361	50%
Total City Funding	\$16,808,723	
External Partner Funding	\$0	0%
Total Funding	\$16,808,723	



Note: Project scopes are conceptual and would be refined through preliminary and final design.

## Project 131 Estimate Summary

Item	Description	Estimate Class	Estimated Cost
1	<b>Phase 1:</b> Bowen Rd / Northfield Rd intersection micro surfacing, CoN Staff , June 2015.	C	\$ 100,000
2	<b>Phase 2:</b> <ul style="list-style-type: none"> <li>• Extend Boxwood north to Rosstown with a roundabout midway;</li> <li>• Close the intersection of Rosstown and Bowen;</li> <li>• A new roadway (Boxwood Connector) will run from the new roundabout east to the new intersection with Bowen Road,</li> </ul> McElhanney, 16539 Boxwood Connector, September 2015.	C	\$ 12,387,270
3	<b>Phase 3:</b> <ul style="list-style-type: none"> <li>• Reconstruct Northfield from west of Boxwood to east of Bowen,</li> </ul> McElhanney, 16539 Boxwood Connector, September 2015.	C	\$ 4,040,481
<b>Total Project Cost</b>			<b>\$ 16.8 M</b>

Updated cost estimate \$16,808,723

Allocated to growth is \$8,404,361

## 2016 Transportation DCC Project Review

Project ID	108	DCC 100
Project Name	Rutherford / Nelson Intersection Upgrade	
Timeframe	Phased - Short/Med Term	

Project Scope	Length	0.0 km
<ul style="list-style-type: none"><li>● Develop Rutherford Rd to a minor collector cross-section with left turn bays at intersecting roads Oliver Road to Hammond Bay Road.</li><li>● Improve safety performance on Rutherford Hill.</li><li>● No on-street parking on Rutherford Hill.</li><li>● Signalization at Brookwood Dr and Vanderneuk Rd.</li><li>● Phased multi-lane roundabout at Nelson Rd including approaches and access to Linley Valley West (~150m).</li></ul>		

### Project Rationale

- Rutherford Rd forms an important north-south major road linking Linley Valley / Lost Lake development areas to Hammond Bay Rd/Uplands Dr and linking Uplands Dr and Hammond Bay Rd to each other.
- Traffic growth is projected to continue due to adjacent development and city-wide growth but not sufficiently to trigger widening to four lanes.
- Completion of cross section where incomplete will seek to maximize the capacity of 2-lane cross section with left turn bays at significant neighbourhood accesses and signals/roundabout at Brookwood Dr, Nelson Rd and Vanderneuk Rd.
- Grades and alignments on the Rutherford Hill segments are less than ideal and improvements will improve safety for all users as volumes increase.

### Policy Context

- Rutherford Rd is identified in the Nanaimo Transportation Master Plan - Major Road Project - Rutherford Road Hill / Project "F" - Primary objective is to improve safety and complete the ultimate road to service future traffic volumes.

Costing / Funding	Estimate Class:		D/PC/C/PL/PC
Total Estimated Project Cost	\$2,053,000		
Funding Assumptions			
Existing Population Funding	\$513,250	25%	
DCC Funding	\$1,539,750	75%	
Total City Funding	\$2,053,000		
External Partner Funding	\$0	0%	
Total Funding	\$2,053,000		





**Project 108 Estimate Summary**

<b>Item</b>	<b>Description</b>	<b>Estimate Class</b>	<b>Estimated Cost</b>
1	Hammond Bay Rd to Vanderneuk Rd, McElhanney, June 2015.	D	
2	Signalization of Vanderneuk Dr, CoN Staff, June 2015.	PC	
3	Linley Point Connector & roundabout; includes future multi-laned expansion cost, Linley Valley West Access, Staff Report, 5220.01.c2243August 2016.	C	\$ 2,053,000
4	Rutherford Road - Oliver Rd to Nelson Rd, CoN Staff, June 2015.	PL	
5	Signalization of Brookwood Dr, CoN Staff, June 2015.	PC	
<b>Total Project Cost</b>			<b>\$ 2.1 M</b>

## 2016 Transportation DCC Project Review

Project ID	108.1	DCC 100
Project Name	<i>Rutherford Rd (Hammond Bay to Uplands)</i>	
Timeframe	<i>Phased - Short/Med Term</i>	

Project Scope	Length	#N/A
<ul style="list-style-type: none"> <li>● Develop Rutherford Rd to a minor collector cross-section with left turn bays at intersecting roads Oliver Road to Hammond Bay Road.</li> <li>● Improve safety performance on Rutherford Hill.</li> <li>● No on-street parking on Rutherford Hill.</li> <li>● Signalization at Brookwood Dr and Vanderneuk Rd.</li> <li>● Phased multi-lane roundabout at Nelson Rd including approaches and access to Linley Valley West (~150m).</li> </ul>		

Project Rationale
<ul style="list-style-type: none"> <li>● Rutherford Rd forms an important north-south major road linking Linley Valley / Lost Lake development areas to Hammond Bay Rd/Uplands Dr and linking Uplands Dr and Hammond Bay Rd to each other.</li> <li>● Traffic growth is projected to continue due to adjacent development and city-wide growth but not sufficiently to trigger widening to four lanes.</li> <li>● Completion of cross section where incomplete will seek to maximize the capacity of 2-lane cross section with left turn bays at significant neighbourhood accesses and signals/roundabout at Brookwood Dr, Nelson Rd and Vanderneuk Rd.</li> <li>● Grades and alignments on the Rutherford Hill segments are less than ideal and improvements will improve safety for all users as volumes increase.</li> </ul>

Policy Context
<ul style="list-style-type: none"> <li>● Rutherford Rd is identified in the Nanaimo Transportation Master Plan - Major Road Project - Rutherford Road Hill / Project "F" - Primary objective is to improve safety and complete the ultimate road to service future traffic volumes.</li> </ul>

Costing / Funding	Estimate Class:		D/PC/C/PL/PC
Total Estimated Project Cost	\$7,946,230		
Funding Assumptions			
Existing Population Funding	\$1,986,558	25%	
DCC Funding	\$5,959,673	75%	
Total City Funding	\$7,946,230		
External Partner Funding	\$0	0%	
Total Funding	\$7,946,230		







**Project 108 Estimate Summary**

<b>Item</b>	<b>Description</b>	<b>Estimate Class</b>	<b>Estimated Cost</b>
1	Hammond Bay Rd to Vanderneuk Rd, McElhanney, June 2015.	D	\$ 5,915,230
2	Signalization of Vanderneuk Dr, CoN Staff, June 2015.	PC	\$ 610,200
3	Linley Point Connector & roundabout; includes future multi-laned expansion cost, Linley Valley West Access, Staff Report, 5220.01.c2243August 2016. See 108 Construction 2017	C	\$ 2,050,000
4	Rutherford Road - Oliver Rd to Nelson Rd, CoN Staff, June 2015.	PL	\$ 1,017,000
5	Signalization of Brookwood Dr, CoN Staff, June 2015.	PC	\$ 406,800
<b>Total Project Cost</b>			<b>\$ 10.0 M</b>

## 2016 Transportation DCC Project Review

Project ID 132 DCC 71

Project Name *Cranberry Connector*

Timeframe *Short Term*

Project Scope	Length	0.9 km
---------------	--------	--------

Length 0.9 km

- Develop a 2-lane minor collector, including bike lanes, boulevard, street tree street lighting and sidewalks on one side.
- Develop a roundabout at Cranberry Ave.
- Context sensitive cross section within wetland - no parking.
- On street parking is excluded from the DCC but would be expected as works and services through development along the west side.

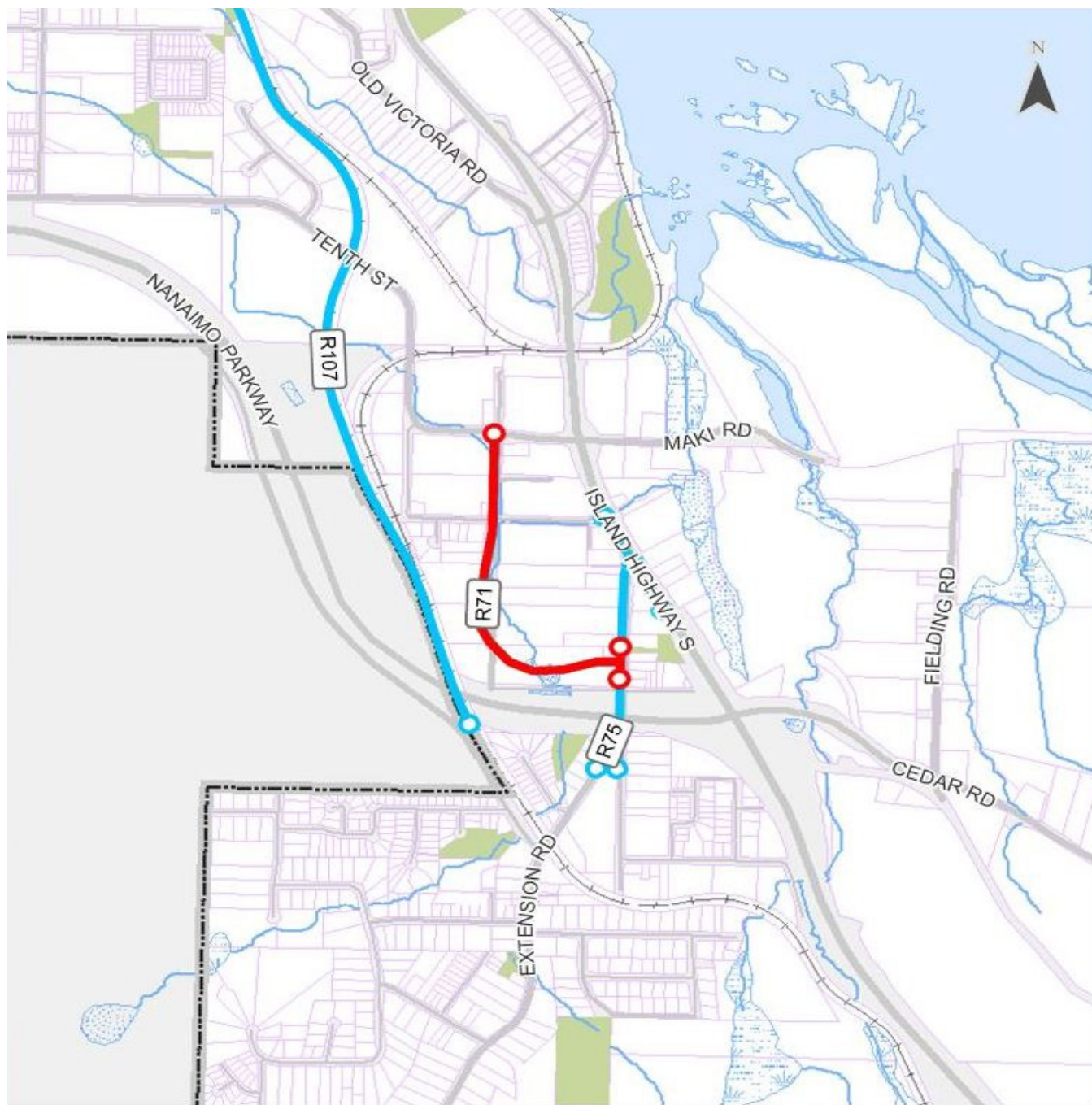
## Project Rationale

- Cranberry Ave is the only major road access to the Cinnabar Valley. Access to shopping at Southgate requires a short trip on Island Hwy; driving congestion at Cranberry Ave and Tenth St.
- Traffic growth is projected to continue with future development growth.
- Proposed improvements create a new link between Cranberry Ave and Tenth Street, reducing traffic demand at Island Hwy/Cranberry and Tenth/Cranberry and keeping local trips to commercial services within the City road network.
- Boulevards , sidewalks, bike lanes, and street lighting to improve safety for all road users under higher traffic volume conditions.
- Proposed roundabout at Cranberry Ave will support higher turning volumes.

## Policy Context

- Identified in the Nanaimo Master Transportation Plan - Major Road Project "JJ".
- Identified as new major road linkage in Chase River Neighbourhood Plan.

Costing / Funding	Estimate Class D		D
Total Estimated Project Cost	\$6,168,624		
Funding Assumptions			
Existing Population Funding	\$1,542,156	25%	
DCC Funding	\$4,626,468	75%	
Total City Funding	\$6,168,624		
External Partner Funding	\$0	0%	
Total Funding	\$6,168,624		



## City of Nanaimo

Transportation DCC  
Project R71  
Cranberry Connector

### Legend

- Project Limits
- Other DCC Project



#### DISCLAIMER

This map is intended for general information only. The City of Nanaimo makes no representation or warranty regarding the accuracy or completeness of the information presented and assumes no responsibility for any damage, loss or injury resulting from the use of this product.

Copyright © 2017. All Rights Reserved. Data by City of Nanaimo. Project R71 Cranberry Connector.

Note: Project scopes are conceptual and would be refined through preliminary and final design.

**Project 132 Estimate Summary DCC 71**

Item	Description	Estimate Class	Estimated Cost
1	<ul style="list-style-type: none"><li>• Develop a 2-lane minor collector between 10th St and Cranberry Ave; includes bike lanes, boulevard, street tree street lighting and sidewalks on one side.</li><li>• Develop a roundabout at Cranberry Ave.</li><li>• CoN Staff June 2015.</li></ul>	D	\$6,168,624
<b>Total Project Cost</b>			<b>\$6.2M</b>

## 2016 Transportation DCC Project Review

Project ID	115	DCC 101
Project Name	Rock City Rd (Labieux to DBR)	

Timeframe *Medium Term*

Project Scope	Length	1.5 km
---------------	--------	--------

- Develop a 2-lane minor collector road with left turn lanes at Country Club Dr (north) and Glen Eagle with bike lanes in both directions.
- DCC does not include a cost for on-street parking but would become part of future developments frontage works and services.
- Roundabout at Labieux Rd/Kenworth Rd/Rock City Rd.
- Signalization of Rock City Rd/Departure Bay Rd and includes improvement to all approaches.
- Signalization of Island Hwy / Rock City and includes improvement to all approaches with rail crossing costs.

## Project Rationale

- The intersection of Bowen / Norwell / Island Hwy operates near capacity on weekday afternoons.
- The connection of Rock City Road south across Island Hwy and through to Bowen Rd will create an alternative crossing of the highway to Bowen Rd/Norwell Rd.
- Project will support adjacent development west of Island Hwy as well as city-wide mobility.
- Project will coordinate with Boxwood Connector improvements.

## Policy Context

- Identified in the Nanaimo Transportation Master Plan - Major Road Project "L".

Costing / Funding	Estimate Class		C, D
Total Estimated Project Cost	\$10,953,737		
Funding Assumptions			
Existing Population Funding	\$2,363,434	21%	
DCC Funding	\$7,090,303	63%	
Total City Funding	\$9,453,737	84%	
External Partner Funding	\$1,500,000	16%	
Total Funding	\$10,953,737		





**Project 115 Estimate Summary**

<b>Item</b>	<b>Description</b>	<b>Estimate Class</b>	<b>Estimated Cost</b>
1	Rock City Rd Labiuex Rd to Glen Eagle Rd, Rock City Road Extension Project Functional Design Report, McElhanney, January 2015.	C	\$ 5,902,576
2	Rock City Rd, Glean Eagle to DBR, Include signals at DBR and approach improvements. CoN Staff, November 2015	D	\$ 4,868,060
<b>Total Project Cost</b>			<b>\$11.0M</b>

## 2016 Transportation DCC Project 14

Project ID	139	DCC 14
Project Name	Norwell / Jingle Pot / Island Hwy Intersection Upgrades	
Timeframe	Medium Term	

Project Scope	Length	0.0 km
---------------	--------	--------

- Develop a 3-lane minor collector cross section with bike lanes in both directions, left turn lanes at Shenton Rd, Wellington Rd and Island Hwy.
- On street parking is not included in scope but could form developments works and services.
- Signalization of Jingle Pot Rd/Shenton Rd / Wellington Rd and approaches upgrades; incorporate E & N trail crossing.
- Rail crossing improvements.

### Project Rationale

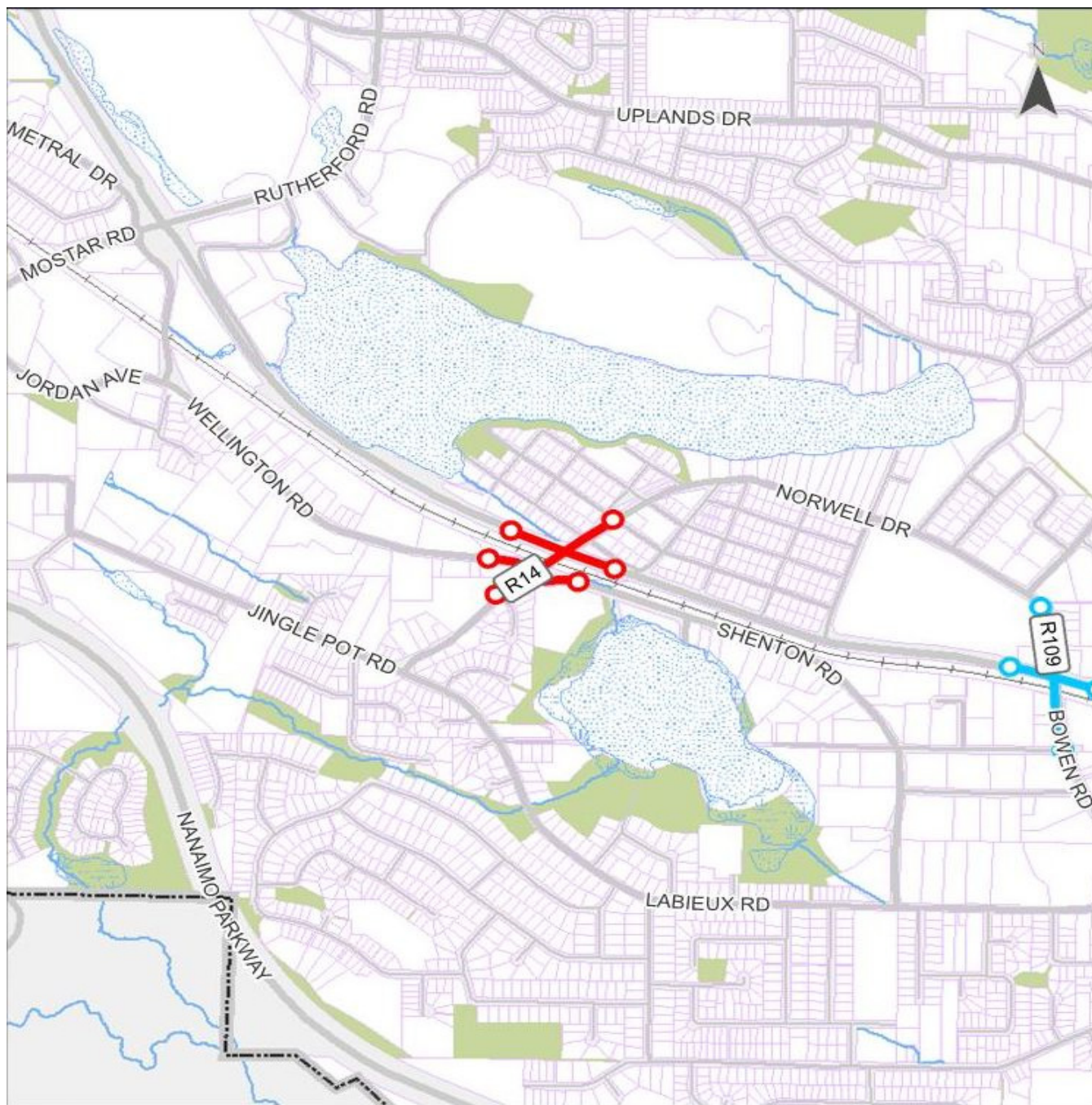
- Provides access to Island Hwy, to the Country Club mobility hub and industrial/residential areas to the west of the E&N between Bowen Rd and Mostar Rd.
- The current intersection configuration lacks left turn bays and has no signal at Wellington Rd/Shenton Rd; delays anticipated to increase with additional volume.
- Future development and city-wide traffic increases along Island Hwy are expected to increase traffic demand at this intersection.
- Improvements will increase capacity at this node and reduce delays.

### Policy Context

- Identified in the Nanaimo Master Transportation Plan - Major Road Project "J".

Costing / Funding	Estimate Class D		D
Total Estimated Project Cost	\$3,440,299		
Funding Assumptions			
Existing Population Funding	\$1,135,299	33%	
DCC Funding	\$1,169,702	34%	
Total City Funding	\$2,305,001	67%	
External Partner Funding	\$1,135,299	33%	
Total Funding	\$3,440,300		





## City of Nanaimo

Transportation DCC  
Project R14  
Norwell / Jingle Pot /  
Hwy 19A  
Intersection Upgrades

### Legend

- Project Limits
- Other DCC Project

Published: May 8, 2017



1:15,000



**DISCLAIMER**  
This map is intended for general information only. The City of Nanaimo makes no representation or warranty regarding the accuracy or completeness of the information presented and assumes no responsibility for any damage, loss or injury resulting from the use of this product.

Note: Project scopes are conceptual and would be refined through preliminary and final design.

**Project 139 Estimate Summary DCC Project 14**

<b>Item</b>	<b>Description</b>	<b>Estimate Class</b>	<b>Estimated Cost</b>
1	<ul style="list-style-type: none"><li>• Develop a 3-lane minor collector cross section with left turn lanes at Shenton Rd, Wellington Rd and Island Hwy. Signalization of Jingle Pot Rd/Shenton Rd / Wellington Rd and approaches upgrades; incorporate E &amp; N trail crossing.</li><li>• CoN Staff June 2015.</li></ul>	D	\$ 3,440,300
<b>Total Project Cost</b>			<b>\$3.4M</b>

## 2016 Transportation DCC Project 70

Project ID                      127.1                      DCC 70  
Project Name                      *Bruce Avenue (Third to Eighth)*

Timeframe                      *Phased - Short/Med Term*

Project Scope	Length	2.4 km
---------------	--------	--------

- Develop a 2/3-lane Minor Collector cross section with left turn lanes at 4th, Harewood, 5th, 6th, 7th, 8th).
- Signalization of Fourth, Fifth and (Eighth or Seventh) with improvements to intersection approaches.
- Parking excluded from DCC cost estimate but would be part of development frontage works and services.

### Project Rationale

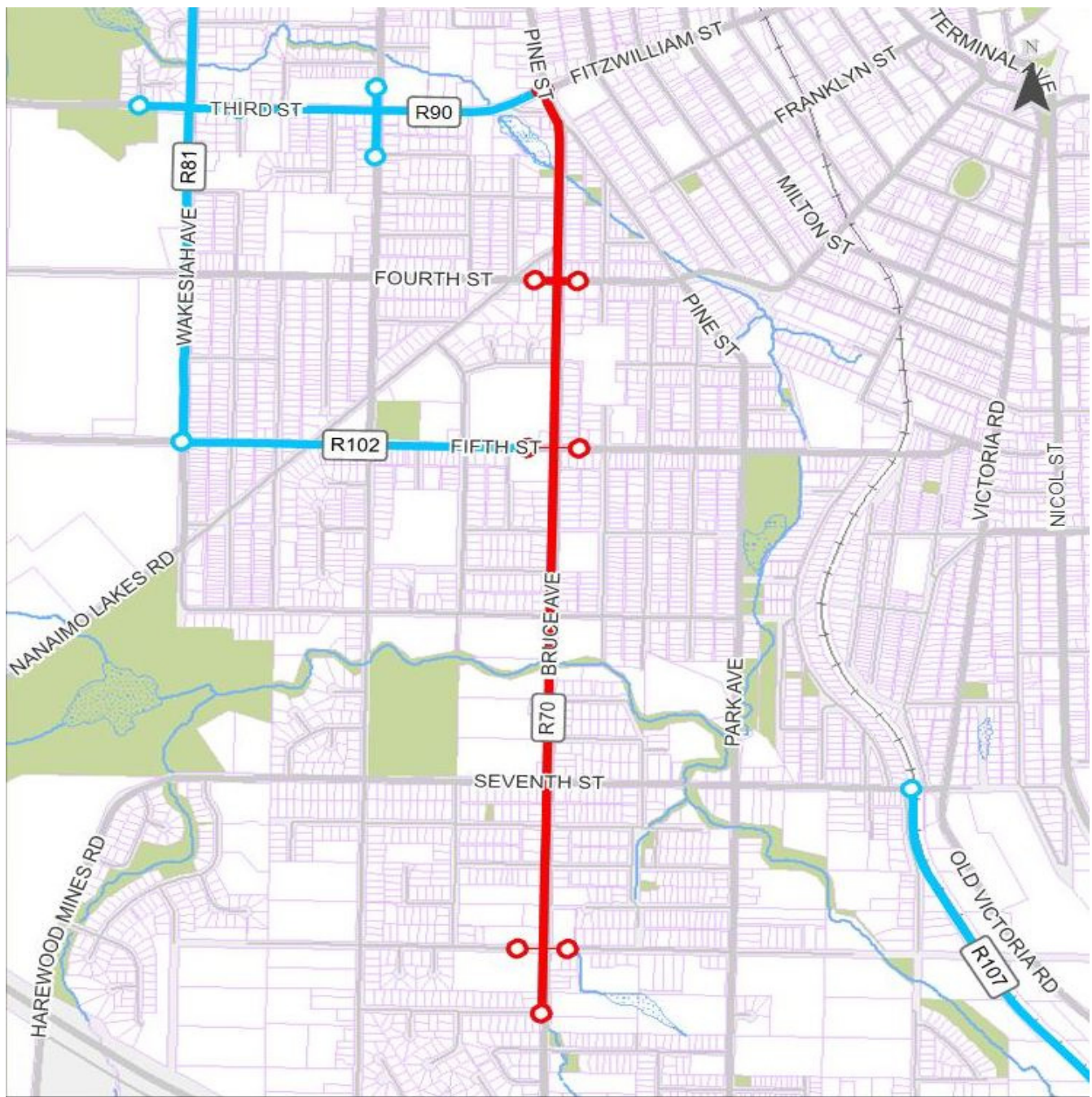
- Bruce Ave is the major north-south road through the Harewood neighbourhood. It, along with Wakesiah Ave, Fifth and Third Street are the primary major roads within the neighbourhood.
- Proposed commercial developments at Eighth and Fifth as well as redevelopment of higher density residential and commercial along the corridor will be supported by proposed improvements.
- Strategy to maximize throughput of two lanes by completing cross section, adding left-turn bays at major intersections.
- Sidewalks, bike lanes and street lighting to improve safety for all road users under higher traffic volume conditions.

### Policy Context

- Improvements to Bruce Avenue identified in the Harewood Neighbourhood Plan.
- Intersection signalization and upgrades at Bruce and Fifth / Fourth identified in the Transportation Master Plan - Major Road Project "FF" / "GG" .

Costing / Funding	Estimate Class		D
Total Estimated Project Cost	\$12,768,893		
Funding Assumptions			
Existing Population Funding	\$6,384,446	50%	
DCC Funding	\$6,384,446	50%	
Total City Funding	\$12,768,893		
External Partner Funding	\$0	0%	
Total Funding	\$12,768,893		





## City of Nanaimo

Transportation DCC

Project R70

Bruce Avenue

Third to Eighth

### Legend

- Project Limits
- Other DCC Project

Published: May 8, 2017



1:15,000



#### DISCLAIMER

This map is intended for general information only. The City of Nanaimo makes no representation or warranty regarding the accuracy or completeness of the information presented and assumes no responsibility for any damage, loss or injury resulting from the use of this product.

Copyright © 2017 City of Nanaimo. All Rights Reserved. Data by Google Maps. Project R70 is a conceptual project. No project is intended to be built.

Note: Project scopes are conceptual and would be refined through preliminary and final design.

**Project 127.1 Estimate Summary DCC Project 70**

<b>Item</b>	<b>Description</b>	<b>Estimate Class</b>	<b>Estimated Cost</b>
1	<ul style="list-style-type: none"><li>• Develop a 2/3-lane Minor Collector cross section with left turn lanes at 4th, Harewood, 5th, 6th, 7th, 8th). Signalization of Fourth, Fifth and (Eighth or Seventh) with improvements to intersection approaches.</li><li>• McElhanney, June 2015.</li></ul>	D	\$ 12,768,893
<b>Total Project Cost</b>			<b>\$12.8M</b>

## 2016 Transportation DCC Project 102

Project ID	137	DCC 102
Project Name	Fifth St (Wakesiah to Bruce)	

Timeframe *Medium Term*

Project Scope	Length	1.0 km
---------------	--------	--------

Length	1.0 km
--------	--------

- Minor Collector - 3 Lanes between Bruce and Howard.
- Minor Collector - 2 Lanes between Howard and Wakesiah Ave approaches.
- Parking excluded from DCC cost estimate but could be part of development frontage works and services.
- Consider transit facility improvements as part of rapid bus corridor (Route 40).

## Project Rationale

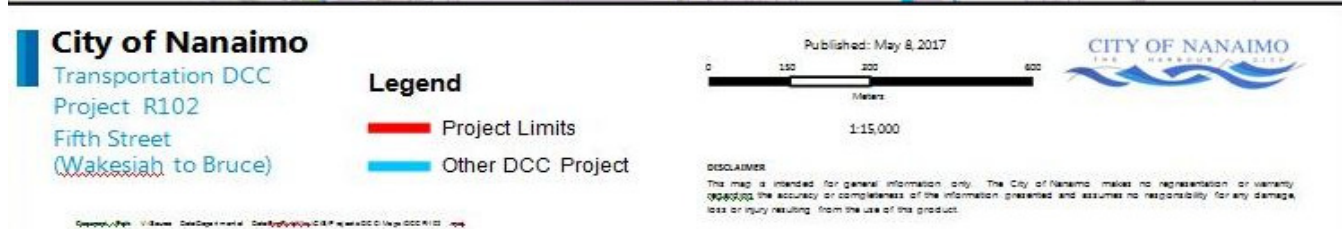
- Fifth St is a east-west major road linking Bruce and Wakesiah to the Parkway. It, along with Bruce Ave, Third and Wakesiah Ave are the primary major roads within the Harewood neighbourhood.
- Traffic growth is projected to continue with future development in Harewood but not sufficiently to trigger widening to four lanes. Redevelopment of higher density residential and commercial along the corridor, as identified in the Harewood Neighbourhood Plan, will be supported by proposed improvements.
- Strategy to maximize throughput of two lane by completing cross section and adding left-turn bays.
- Sidewalks, bike lanes, and street lighting to improve safety for all road users under higher traffic volume conditions.
- On-street parking will support street fronting retail.

## Policy Context

- Improvements to Fifth Street identified in the Harewood Neighbourhood Plan.
- Intersection signalization and upgrades at Bruce and Fifth identified in the Transportation Master Plan - Major Road Project "GG" .

Costing / Funding	Estimate Class D		D
Total Estimated Project Cost	\$5,437,968		
Funding Assumptions			
Existing Population Funding	\$2,718,984	50%	
DCC Funding	\$2,718,984	50%	
Total City Funding	\$5,437,968	100%	
External Partner Funding	\$0	0%	
Total Funding	\$5,437,968		





**Project 137 Estimate Summary DCC Project 102**

Item	Description	Estimate Class	Estimated Cost
1	<ul style="list-style-type: none"><li>• Develop a 2/3-lane Minor Collector cross section with left turn lanes at Wakesiah Howard and Bruce).</li><li>Signalization of Bruce Ave with transit facility improvements as part of Rapid Transit. Parking excluded from DCC.</li><li>• CoN Staff June 2015.</li></ul>	D	\$ 5,437,968
<b>Total Project Cost</b>			<b>\$5.4M</b>



## 2016 Transportation DCC Project 103 and 104

Project ID                      *103.1*                      DCC 103  
 Project Name                      *Hammond Bay Rd (Nottingham to DBR)*

Timeframe                      *Phased - Med/Long Term*

<b>Project Scope</b>	Length                      1.9 km
----------------------	------------------------------------

- Guidance from Hammond Bay Mobility Study (HBMS)
- Develop a 2-lane minor collector (Reduced X section from HBMS) cross section that includes a bike lane on high side, shared travel lane and paved shoulder on low side, curb and gutter, sidewalk on at least one side and street lighting.
- Maximize through lane capacity by developing left turn lanes at intersecting roads that provide access into adjacent neighbourhoods and/or where traffic safety is an concern. (Nottingham Dr, Stephenson Point Rd)
- Turning movement restrictions could be considered at Linley Rd.

### Project Rationale

- Hammond Bay is the only major road access to the Hammond Bay / Stephenson Point corridor between Rutherford Rd and Departure Bay Rd.
- Volumes in this segment are significant and traffic growth is projected to continue with future development south of Oakridge Dr.
- Upgrade costs are expected to be high due to terrain and constrained corridor - therefore reduced road cross section.
- Hammond Bay Mobility Study recommended retaining two lane cross section with additional north-south links.

### Policy Context

- Identified in Nanaimo Transportation Master Plan - Major road project 'H'.

Costing / Funding	Estimate Class D		D
Total Estimated Project Cost	\$11,171,625		
Funding Assumptions			
Existing Population Funding	\$2,792,906	25%	
DCC Funding	\$8,378,719	75%	
Total City Funding	\$11,171,625	100%	
External Partner Funding	\$0	0%	
Total Funding	\$11,171,625		



## City of Nanaimo

Transportation DCC  
Project R103 & R104  
Hammond Bay Road  
(Nottingham to DBR)

### Legend

- Project Limits
- Other DCC Project

Published: May 8, 2017



1:15,000



#### DISCLAIMER

This map is intended for general information only. The City of Nanaimo makes no representation or warranty regarding the accuracy or completeness of the information presented and assumes no responsibility for any damage, loss or injury resulting from the use of this product.

Document Path: \\S:\Users\Geo\Documents\2017\Projects\R103 & R104\R103 & R104\Map\Map\_03\_18\_17.mxd

Note: Project scopes are conceptual and would be refined through preliminary and final design.

# Project 103.1 Estimate Summary DCC Project 103 (PH 1) and 104 (Ph 2)

Item	Description	Estimate Class	Estimated Cost
1	<ul style="list-style-type: none"> <li>Develop a 2-lane minor collector cross-section that includes bike lanes on the high side and paved shoulder on the low side; curb gutter, sidewalk, and street lighting on at least one side. Guidance from Hammond Bay Mobility Study.</li> <li>McElhanney June 2015.</li> </ul>	D	Phase 1 \$1,020,000 Phase 2 \$11,171,625
<b>Total Project Cost</b>			<b>\$12.2M</b>

Phase 1 is in 2017

Phase 2 is expected in 2027

Phase 1 DCC is \$765,000

Phase 2 DCC is \$8,378,719

## 2016 Transportation DCC Project 90

Project ID	125	DCC 90
Project Name	Third St (Wakesiah to Pine)	

Timeframe *Development / Medium Term*

Project Scope	Length	0.7 km
---------------	--------	--------

- Develop a 3-lane minor collector cross section with left turn lanes at intersecting collector roads.
- Signalization of Third St at Howard Ave and improvements to approaches.
- DCC project include re-profiling Third St.
- Parking excluded from DCC cost estimate but would be part of development frontage works and services.

## Project Rationale

- Third St is a major road linking Downtown, Pine and Wakesiah to the Parkway. It, along with Bruce Ave, Fifth and Wakesiah Ave are the primary major roads within the Harewood neighbourhood.
- Traffic growth is projected to continue with future development in Harewood and Downtown but not sufficiently to trigger widening to four lanes.
- Future development of a new road from Fourth to Third within VIU will reduce traffic at Wakesiah / Third intersection.
- Strategy to maximize throughput of two lanes by completing cross section and adding left-turn bays throughout.
- Sidewalks, bike lanes, and street lighting to improve safety for all road users under higher traffic volume conditions.

## Policy Context

- Signalization of Howard / Third identified in the Nanaimo Transportation Master Plan - Major Road Project "EE".

Costing / Funding	Estimate Class D		D
Total Estimated Project Cost	\$6,638,162		
Funding Assumptions			
Existing Population Funding	\$1,659,541	25%	
DCC Funding	\$4,978,622	75%	
Total City Funding	\$6,638,162		
External Partner Funding	\$0	0%	
Total Funding	\$6,638,162		





Note: Project scopes are conceptual and would be refined through preliminary and final design.

Project 125 Estimate Summary DCC Project 90

Item	Description	Estimate Class	Estimated Cost
1	<ul style="list-style-type: none"><li>• Develop a 2/3 lane minor collector cross-section, signalization of Third and Howard and re-profiling Third St.</li><li>• CoN Staff June 2015.</li></ul>	D	\$ 6,638,162
Total Project Cost			\$6.6M

## 2016 Transportation DCC Project 38

Project ID	109	DCC 38
Project Name	Uplands Dr (Hammond Bay to Cedar Grove)	
Timeframe	Development	

Project Scope	Length	0.8 km
---------------	--------	--------

- Develop 2/3-lane minor collector cross section with left turn lane at Parkway / Green Thumb development.
- No parking on east side.
- Parking on west side excluded from DCC cost estimate and would be part of developments frontage works and services.
- Intersection modifications at Hammond Bay Rd and Uplands Dr to accommodate capacity at Uplands Dr / Hammond Bay Rd.
- Addition road dedication along the west side of Uplands Dr will be taken at the DP/rezoning or Subdivision stage.

### Project Rationale

- Uplands Dr is a key north-south arterial in the north part of the City running east of and parallel to Island Hwy.
- Traffic growth is projected to continue with adjacent development as well as wider City-wide growth; widening to four lanes is not anticipated but may be required dependent on development scale for the "green thumb" site > site study to determine.
- Completion of cross section where incomplete will seek to maximize the capacity of a 2 lane cross section with left turn lanes and/or other intersection improvements at significant side street accesses.

### Policy Context

- Identified in the Nanaimo Transportation Master Plan - Major Road Project "D".

Costing / Funding	Estimate Class		D
Total Estimated Project Cost	\$1,979,371		
Funding Assumptions			
Existing Population Funding	\$0	0%	
DCC Funding	\$1,979,371	100%	
Total City Funding	\$1,979,371	100%	
External Partner Funding	\$0	0%	
Total Funding	\$1,979,371	100%	







**Project 109 Estimate Summary DCC Project 38**

<b>Item</b>	<b>Description</b>	<b>Estimate Class</b>	<b>Estimated Cost</b>
1	● Develop 2/3-lane minor collector cross section with left turn lane at Parkway / Green Thumb development. Intersection modifications at Hammond Bay Rd and Uplands Dr to accommodate capacity at Uplands Dr / Hammond Bay Rd. CoN Staff, June 2015.	D	\$ 1,979,371
<b>Total Project Cost</b>			<b>\$2.0M</b>

## 2016 Transportation DCC Project 105

Project ID	111	DCC 105
Project Name	Calinda (Enterprise to HBR)	
Timeframe	Development	

Project Scope	Length	0.5 km
<ul style="list-style-type: none"><li>• Develop 3-lane minor collector widening to 5-lanes on approach to Island Hwy.</li><li>• Improve intersection connection at Island Hwy and intersection connection at Hammond Bay Rd.</li><li>• Parking excluded from DCC cost estimate but would be part of development frontage works and services.</li><li>• Road dedication is part of the development of the land.</li></ul>		

### Project Rationale

- Construction of Calinda between Hammond Bay Rd and Island Hwy will complete a partial ring road around the Woodgrove Mobility Hub from Metral Dr to Applecross Rd.
- This road will is intended to service the future Green Thumb site and divert traffic away from the intersection of Hammond Bay Rd/ Island Hwy.
- Supporting street fronting development will require on-street parking.

### Policy Context

- Identified in the Nanaimo Transportation Master Plan - Major Road Project "C".

Costing / Funding	Estimate Class		D
Total Estimated Project Cost	\$4,784,858		
Funding Assumptions			
Existing Population Funding	\$909,123	19%	
DCC Funding	\$2,775,218	58%	
Total City Funding	\$3,684,341	77%	
External Partner Funding	\$1,100,517	23%	
Total Funding	\$4,784,858		



Note: Project scopes are conceptual and would be refined through preliminary and final design.

**Project 111 Estimate Summary DCC Project 105**

<b>Item</b>	<b>Description</b>	<b>Estimate Class</b>	<b>Estimated Cost</b>
1	<ul style="list-style-type: none"><li>• Develop 3-lane minor collector widening to 5-lanes on approach to Island Hwy. Parking excluded from DCC cost estimate but would be part of development frontage works and services. Road dedication is part of the development of the land.</li><li>• McElhanney, July 2015.</li></ul>	D	\$ 4,784,858
<b>Total Project Cost</b>			<b>\$4.8M</b>

## 2016 Transportation DCC Project 75

Project ID	131	DCC 75
Project Name	Cranberry Ave (Extension to Island Hwy)	

Timeframe *Medium Term*

Project Scope	Length	0.9 km
---------------	--------	--------

Length	0.9 km
--------	--------

- Develop a 2/3-lane minor collector with left turn lane at gas station/Moose Hall access. Include concrete curb gutter and sidewalk, bike lanes in both directions, street trees and street lighting.
- Widen to 4/5 Lanes approaching Hwy 1 to support dual left turns inbound/outbound.
- Relocate hydro poles where required.
- Double left in/out of Cranberry Ave at Hwy 1 which will require widening Hwy 1.
- Roundabout at Extension Rd/Cranberry Ave
- Parking excluded from DCC cost estimate but would be part of development frontage works and services.

## Project Rationale

- Cranberry Ave is the only major road access to the Cinnabar Valley with growth rate of ~3+%/year.
- Traffic growth is projected to continue with future development growth; Sandstone could add 50% more units to the valley over existing conditions.
- The intersection of Hwy 1/Cranberry Ave is reaching capacity, particularly for left turns, during the am peak.
- Proposed improvements would increase the capacity of the intersection of Cranberry Ave / Island Hwy with widening on Cranberry Ave support intersection expansion.
- Sidewalks, bike lanes, and street lighting to improve safety for all road users under higher traffic volume conditions.
- Proposed roundabout at Cranberry Ave / Extension Rd will improve access to neighbourhood/school.

## Policy Context

- Identified in the Transportation Master Plan - Major Road Project "KK".
- Improved access to Island Highway key concept within Chase River Neighbourhood Plan.
- Works in coordination with Cranberry Connector - Transportation Master Plan - Major Road Project "JJ"

Costing / Funding		Estimate Class:	D
Total Estimated Project Cost		\$7,624,618	
Funding Assumptions			
Existing Population Funding	\$1,448,678	19%	
DCC Funding	\$4,269,786	56%	
Total City Funding	\$5,718,464	75%	
External Partner Funding	\$1,906,155	25%	
Total Funding	\$7,624,619		







**Project 131 Estimate Summary   DCC Project 75**

<b>Item</b>	<b>Description</b>	<b>Estimate Class</b>	<b>Estimated Cost</b>
1	<ul style="list-style-type: none"><li>• Develop a 2/3-lane minor collector with left turn lane at gas station/Moose Hall access. Widen to 4/5 Lanes approaching Hwy 1 to support dual left turns inbound/outbound and dual left in/out of Cranberry Ave at Hwy 1 which will require widening Hwy 1. Roundabout at Extension Rd/Cranberry Ave. Parking excluded from DCC cost estimate but would be part of development frontage works and services.</li><li>• CoN Staff, November 2015.</li></ul>	D	\$ 7,624,618
<b>Total Project Cost</b>			<b>\$7.6M</b>

## 2016 Transportation DCC Project 106

Project ID	113	DCC 106
Project Name	Hammond Bay Rd / Highway 19A Intersection Upgrades	
Timeframe	Medium Term	

Project Scope	Length	0.3 km
<ul style="list-style-type: none"><li>● Widen Hammond Bay Rd to a 6-lane cross section (2x left turn lanes + 4-through lanes) at Hammond Bay Rd/Island Hwy.</li><li>● Reconstruct both right turn channelization islands on the south side of intersection to accommodate new travel lane configuration.</li><li>● Double left turn lane from southbound Island Hwy to eastbound Hammond Bay Rd; utilize existing gores out area for second left turn lane.</li><li>● Accommodate bikes along HBR.</li></ul>		

Project Rationale
<ul style="list-style-type: none"><li>● The Island Hwy / Hammond Bay Rd intersection is the heart of the Woodgrove Mobility hub. Future development within the hub, the north end in general, city-wide and regionally ,will all drive traffic growth at this important intersection.</li><li>● Currently the intersection operates near capacity during the PM peak period.</li><li>● In response to traffic growth along Island Hwy / Hammond Bay Rd /Aulds Rd this project would increase capacity at this important intersection through widening on Hammond Bay Rd / Aulds Rd and opening already pre-built double left turn bays on Island Hwy.</li></ul>

Policy Context
<ul style="list-style-type: none"><li>● Supports increasing mobility and transportation options for residents.</li><li>● Supported by Calinda Road extension (removes turns from HBR/Island Hwy intersection).</li></ul>

Costing / Funding	Estimate Class:		PL
Total Estimated Project Cost	\$1,551,366		
Funding Assumptions			
Existing Population Funding	\$517,122	33%	
DCC Funding	\$517,122	33%	
Total City Funding	\$1,034,244		
External Partner Funding	\$517,122	33%	
Total Funding	\$1,551,366		



**Project 113 Estimate Summary DCC Project 106**

<b>Item</b>	<b>Description</b>	<b>Estimate Class</b>	<b>Estimated Cost</b>
1	<ul style="list-style-type: none"><li>• Widen Hammond Bay Rd to a 6-lane cross section (2x left turn lanes + 4-through lanes) at Hammond Bay Rd/Island Hwy. Reconstruct both right turn channelization islands on the south side of intersection to accommodate new travel lane configuration. Double left turn lane from southbound Island Hwy to eastbound Hammond Bay Rd; utilize existing gored out area for second left turn lane. Accommodate bikes along HBR.</li><li>• CoN, August 2016.</li></ul>	D	\$ 1,551,366
<b>Total Project Cost</b>			<b>\$1.6M</b>

## 2016 Transportation DCC Project 107

Project ID 138.2 DCC 107  
Project Name E&N Trail (Seventh to Parkway Trail)

Timeframe Medium Term

Project Scope Length 3.2 km

- Start / End trail head improvements (Kiosk)
- Hard surface urban multiuse trail.
- Lighting in isolated segments.
- Significant costs for railway crossing improvements (2-crossings) assume active railway corridor.
- Significant bicycle/pedestrian structure crossing Chase River.

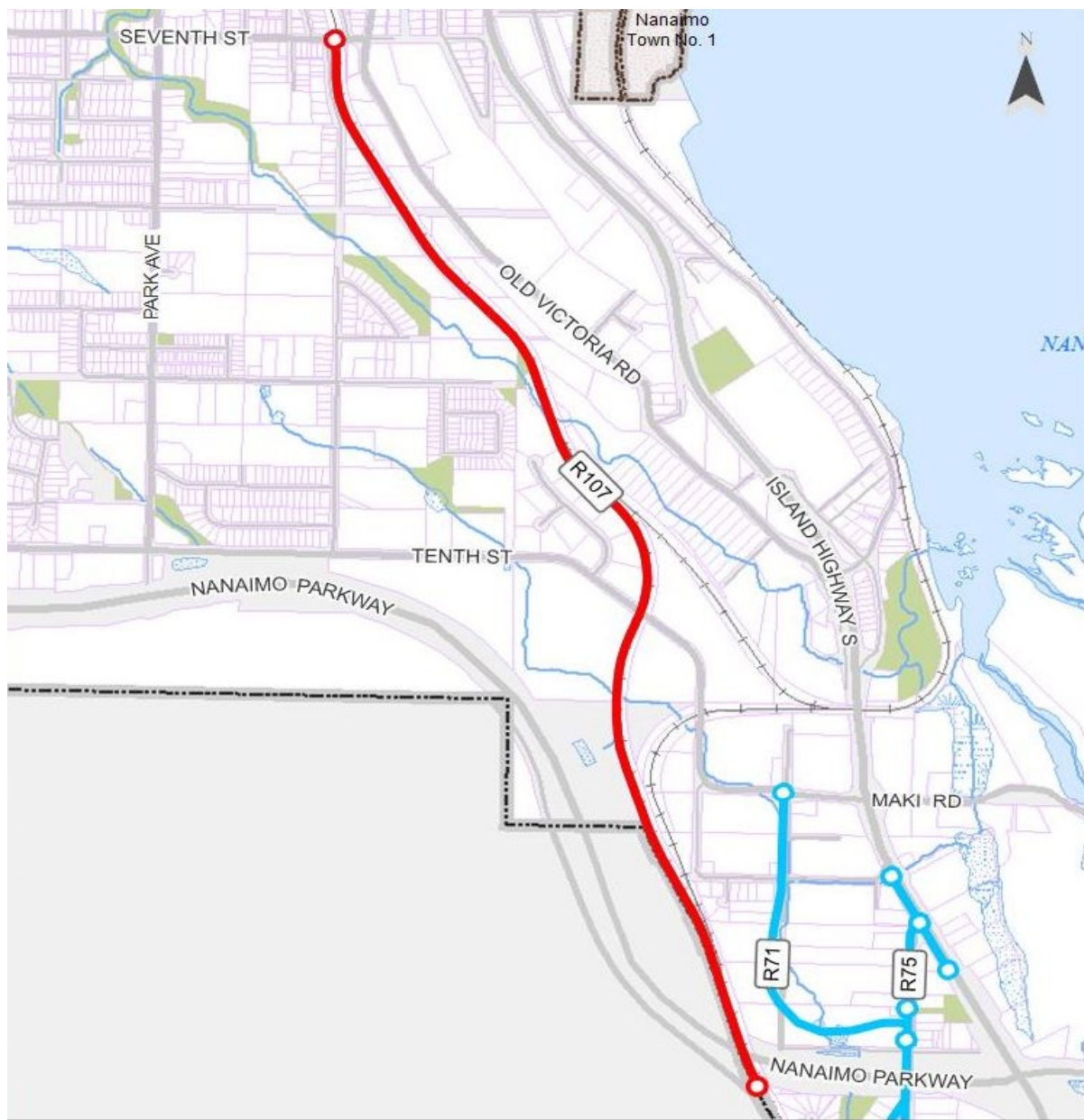
### Project Rationale

- Development both in South Harewood, the Cinnabar Valley and potentially in the Sandstone area will significantly increase travel from the south to the rest of the City.
- Multiuse trail connection to these development areas will support mode shift and sustainable transportation goals while mitigating demand on road network.
- Scope would be hard surface multiuse trail with consideration for lighting where isolated for user safety and winter operations.

### Policy Context

- Extension of the E&N Trail along the length of the City is a long term City and regional goal.
- Extension of the E&N Trail and increasing the use of sustainable transportation modes is a goal of the Transportation Master Plan.
- Extension of the E&N Trail is identified as an objective of the Harewood Neighbourhood Plan to improve connections to the Downtown (page 41).

Costing / Funding	Estimate Class: D		PL
Total Estimated Project Cost	\$7,520,837		
Funding Assumptions			
Existing Population Funding	\$1,504,167	20%	
DCC Funding	\$4,512,502	60%	
Total City Funding	\$6,016,670	80%	
External Partner Funding	\$1,504,167	20%	
Total Funding	\$7,520,837		



## City of Nanaimo

Transportation DCC  
Project R107  
E&N Trail  
(Seventh to Parkway Trail)

### Legend

- Project Limits
- Other DCC Project



#### DISCLAIMER

This map is intended for general information only. The City of Nanaimo makes no representation or warranty regarding the accuracy or completeness of the information presented and assumes no responsibility for any damage, loss or injury resulting from the use of this product.

Note: Project scopes are conceptual and would be refined through preliminary and final design.



**Project 138.2 Estimate Summary DCC Project 107**

<b>Item</b>	<b>Description</b>	<b>Estimate Class</b>	<b>Estimated Cost</b>
1	<ul style="list-style-type: none"><li>• Develop a 3 metre wide hard surface trail between 7th Street and McKewon Way.</li><li>• CoN Staff, November 2015.</li></ul>	D	\$ 7,520,837
<b>Total Project Cost</b>			<b>\$7.5M</b>

## 2016 Transportation DCC Project 108

Project ID **112** DCC 108  
Project Name ***Uplands Dr (Emerald-DBR) / DBR (Mexicana-Rock City)***

Timeframe ***Medium Term***

**Project Scope** Length **0.9 km**

- Develop a 2/3-lane minor collector with left turn lanes at Emerald Dr and Villa Rd.
- Signalization at Departure Bay Road and upgrade Departure Bay Rd from Uplands Dr to Aaby Plc to a 3-lane minor collector.
- Parking excluded from DCC cost estimate but would be part of development frontage works and services.

### Project Rationale

- Uplands Dr is a key north-south arterial in the north part of the City running east of and parallel to Island Hwy.
- Upgrades on Uplands, Rutherford to Emerald are complete, remaining upgrades to Departure Bay Rd
- Signalization at Departure Bay is proposed to improve access to/from DBR and improve safety.
- Works in coordination with Rock City Road improvements to reroute traffic around Country Club Mobility Hub.

### Policy Context

- Identified in the Nanaimo Transportation Master Plan - Major Road Project "L".

Costing / Funding	Estimate Class		D
Total Estimated Project Cost	\$5,259,708		
Funding Assumptions			
Existing Population Funding	\$2,629,854	50%	
DCC Funding	\$2,629,854	50%	
Total City Funding	\$5,259,708	100%	
External Partner Funding	\$0	0%	
Total Funding	\$5,259,708		



Note: Project scopes are conceptual and would be refined through preliminary and final design.

**Project 112 Estimate Summary**

Item	Description	Estimate Class	Estimated Cost
1	<ul style="list-style-type: none"><li>• Complete Uplands Dr, Emerald to Departure Bay Rd to a 2/3 lane minor collector standard.</li><li>• Complete Departure Bay Rd between Uplands and Adby to a 3-lane minor collector standard.</li><li>• CoN Staff, November 2015.</li></ul>	D	\$ 5,259,708
Total Project Cost			\$5.3M

**DCC Project 108**

## 2016 Transportation DCC Project 109

Project ID	116	DCC 109
Project Name	<i>Bowen Rd / Island Hwy Intersection Upgrades</i>	
Timeframe	<i>Medium Term</i>	

Project Scope	Length	0.0 km
<ul style="list-style-type: none"><li>Widen Bowen Rd to a 6-lane cross section (double left turn lanes + 4 through travel lanes) at Island Hwy; rail crossing upgrades.</li></ul>		

### Project Rationale

- In congestion during peak pm periods at Island Hwy / Bowen Rd / Norwell Dr this project would increase capacity at this important intersection.
- Supported by improvements at Rock City Road / Island Hwy.

### Policy Context

- Identified in the Nanaimo Transportation Master Plan - Major Road Project "M".

Costing / Funding	Estiamte Class		PL
Total Estimated Project Cost	\$3,411,079		
Funding Assumptions			
Existing Population Funding	\$852,770	25%	
DCC Funding	\$852,770	25%	
Total City Funding	\$1,705,540	50%	
External Partner Funding	\$1,705,540	50%	
Total Funding	\$3,411,080		







**DCC Project 109 Estimate Summary DCC Project 109**

<b>Item</b>	<b>Description</b>	<b>Estimate Class</b>	<b>Estimated Cost</b>
1	<ul style="list-style-type: none"><li>• Widen Bowen Rd to a 6-lane cross section (double left turn lanes + 4 through travel lanes) at Island Hwy; rail crossing upgrades.</li><li>• CoN Staff, January 2016.</li></ul>	852769.75	\$ 3,411,080
<b>Total Project Cost</b>			<b>\$3.4M</b>

## 2016 Transportation DCC Project 49

Project ID	120	DCC 49
Project Name	Northfield Rd (Parkway to Boxwood Connector)	
Timeframe	Medium Term	

Project Scope	Length	0.5 km
---------------	--------	--------

- Develop 4-5 lane arterial with rural shoulder (south side) and concrete curb gutter + Boulevard + Multiuse Pathway (north side).
- No parking on either side of Northfield Rd.

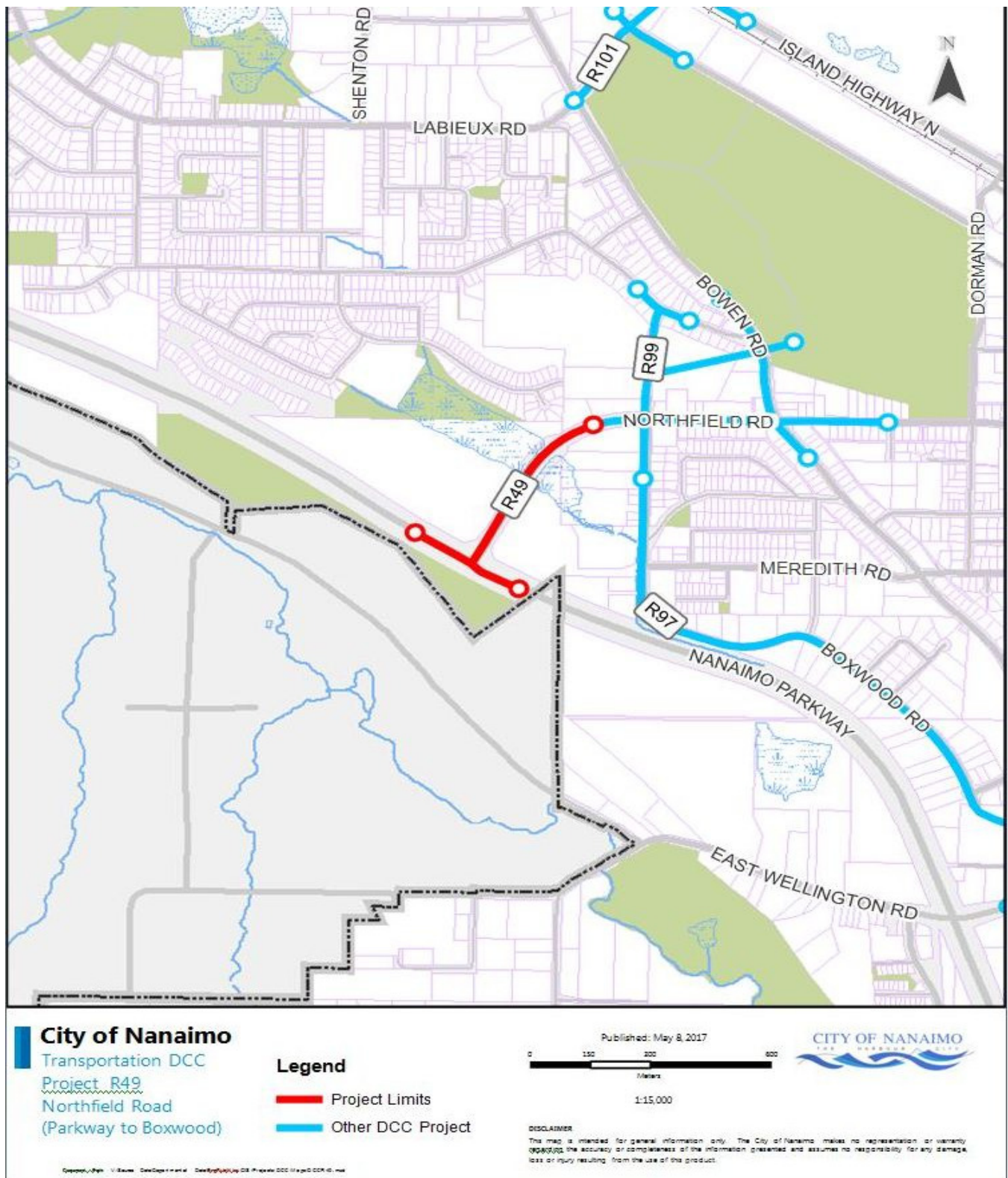
### Project Rationale

- Northfield Rd is an important east-west arterial linking Boxwood and Bowen roads to the Parkway.
- City-wide growth is expected to drive future traffic growth to/from the Parkway.
- Widening of Northfield Rd to four lanes will likely be triggered by double left turn lanes southbound on the Parkway and improvements to Northfield Rd.
- Multi-use pathway on the north side of Northfield Rd will service City wide multi-use trail network connecting Parkway and E&N trail corridors.

### Policy Context

- Intersection upgrades at Northfield / Parkway and widening of Northfield is identified in the Transportation Master Plan - Major Road Project "I" and improve capacity.

Costing / Funding	Estimate Class D		D/PL
Total Estimated Project Cost	\$6,168,624		
Funding Assumptions			
Existing Population Funding	\$2,467,449	40%	
DCC Funding	\$2,467,449	40%	
Total City Funding	\$4,934,899	80%	
External Partner Funding	\$1,233,725	20%	
Total Funding	\$6,168,624		



Note: Project scopes are conceptual and would be refined through preliminary and final design.

**Project 120 Estimate Summary DCC Project 49**

<b>Item</b>	<b>Description</b>	<b>Estimate Class</b>	<b>Estimated Cost</b>
1	<ul style="list-style-type: none"><li>• Develop 4-5 lane arterial with rural shoulder (south side) and concrete curb gutter + Boulevard + Multiuse Pathway (north side). No parking on either side of Northfield Rd.</li><li>• McElhanney, July 2015.</li></ul>	D	\$ 6,168,624
<b>Total Project Cost</b>			<b>\$6.2M</b>

## 2016 Transportation DCC Project 110

Project ID                      134                      DCC 110  
 Project Name                      *Pearson Bridge Intersection Upgrades*

Timeframe                      *Development*

<b>Project Scope</b>	Length	0.0 km
----------------------	--------	--------

- Comox Rd/Hwy 1 intersection upgrade, widen Comox Rd by one lane on the west approach.
- Laning adjustments on Pearson Bridge to facilitate bicycles between Comox Rd and Stewart Ave/Vancouver Ave; facilitate cyclists on Comox and possible MUP on Terminal.
- Stewart Ave/Terminal Ave intersection upgrade with the addition of a southbound left turn lane from Terminal Ave to Stewart Ave.
- Stewart Ave/Terminal Ave intersection upgrade with the addition of a southbound left turn lane from Terminal Ave to Stewart Ave.
- Improvements are not well defined but could require the re-laning of the Pearson Bridge and reconfiguration

### Project Rationale

- Terminal Ave at Pearson Bridge carries 34,000 vehicles per day; this segment of Terminal Ave is under Ministry jurisdiction.
- Traffic growth projected with continued City-wide growth and development from the Downtown south.
- From the north; traffic disperses (to Comox>Wallace and Comox>Front) into the Downtown at the intersection of Comox Rd/Terminal Ave. The intersection is near capacity during existing afternoon peak period conditions and SB left-turn is one of two accesses to Downtown from north.
- The intersection of Comox Rd/Terminal Ave governs the capacity of the surrounding road network; delays at intersection expected to grow in the future.
- Sidewalks, bike lanes and street lighting to improve safety for all road users under higher traffic volume conditions.
- Traffic growth strongly correlated with growth in the Downtown.

### Policy Context

- Identified in the Nanaimo Master Transportation Plan - Major Road Project "AA".

Costing / Funding	Estimate Class D		PC
Total Estimated Project Cost	\$6,102,000		
Funding Assumptions			
Existing Population Funding	\$2,440,800	40%	
DCC Funding	\$2,440,800	40%	
Total City Funding	\$4,881,600	80%	
External Partner Funding	\$1,220,400	20%	
Total Funding	\$6,102,000		







**Project 134 Pearson Bridge DCC 110**

<b>Item</b>	<b>Description</b>	<b>Estimate Class</b>	<b>Estimated Cost</b>
1	<ul style="list-style-type: none"> <li>Comox Rd/Hwy 1 intersection upgrade, widen Comox Rd by one lane on the west approach. Laning adjustments on Pearson Bridge to facilitate bicycles between Comox Rd and Stewart Ave/Vancouver Ave; facilitate cyclists on Comox and possible MUP on Terminal. Stewart Ave/Terminal Ave intersection upgrade with the addition of a southbound left turn lane from Terminal Ave to Stewart Ave. Stewart Ave/Terminal Ave intersection upgrade with the addition of a southbound left turn lane from Terminal Ave to Stewart Ave. Improvements are not well defined but could require the re-laning of the Pearson Bridge and reconfiguration of the intersection of Stewart Ave/Terminal. Improvement concept should be developed in advance of development of adjacent parcels. CoN Staff Lump Sum Estimate No Concept.</li> </ul>	PC	\$ 6,102,000
<b>Total Project Cost</b>			<b>\$6.1M</b>

## 2016 Transportation DCC Project 81

Project ID                      124                      DCC 81  
Project Name                      *Wakesiah Ave (Bowen to Fifth)*

Timeframe                      *Long Term*

Project Scope	Length	2.0 km
---------------	--------	--------

- Develop a 2-lane minor collector with left turn lanes throughout the corridor.
- Parking excluded from DCC cost estimate but would be part of development frontage works and services.
- Complete multi-use trail from Third to Fifth streets.

### Project Rationale

- Wakesiah Ave is a major north-south arterial linking to Bowen Rd in the north, Third and Fifth streets in Harewood and servicing VIU. It, along with Bruce Ave, Fifth and Third streets are the primary major roads within the Harewood neighbourhood.
- Traffic growth is projected to continue with future development in Harewood but not sufficiently to trigger widening to four lanes.
- Development of a future connection from Fourth to Third St in VIU is assumed to reduce future traffic growth at the intersection of Wakesiah / Third.
- Strategy is to maximize throughput of two lanes by completing cross section and adding left-turn bays throughout.
- Sidewalks, bike lanes, and street lighting to improve safety for all road users under higher traffic volume conditions.

### Policy Context

- Improvements to the Wakesiah Ave corridor part of Nanaimo Transportation Master Plan - Major Road Project "Z".

Costing / Funding	Estimate Class		D
Total Estimated Project Cost	\$7,645,976		
Funding Assumptions			
Existing Population Funding	\$0	0%	
DCC Funding	\$7,645,976	100%	
Total City Funding	\$7,645,976		
External Partner Funding	\$0	0%	
Total Funding	\$7,645,976		



Note: Project scopes are conceptual and would be refined through preliminary and final design.

**Project 126 Estimate Summary    DCC Project 81**

<b>Item</b>	<b>Description</b>	<b>Estimate Class</b>	<b>Estimated Cost</b>
1	R81 - R2-A 3 or 5 lane standard at \$1800/mult cross section	D	\$ 7,645,976
<b>Total Project Cost</b>			<b>\$7.6M</b>

## 2016 Transportation DCC Project 111

Project ID	104	DCC 111
Project Name	<i>Departure Bay Rd (HBR to Montrose)</i>	
Priority	<i>Departure : Not Recommended for inclusion in DCC Bylaw</i>	
Timeframe	<i>Long Term</i>	

Project Scope	Length	1.6 km
<ul style="list-style-type: none"> <li>• Develop 2-lane minor collector, bike lanes in both directions, concrete curb gutter and sidewalk, street trees and street lighting.</li> <li>• Develop left turn lanes at significant neighbourhood access points.</li> <li>• Parking excluded from DCC cost estimate but would be part of development frontage works and services.</li> </ul>		

### Project Rationale

- Departure Bay is the only major road access to the Hammond Bay / Stephenson Point / Departure Bay corridor to or from the south.
- Traffic growth is projected to continue with development but not sufficiently to trigger widening to four lanes.
- Strategy is to maximize throughput of two lane by completing cross section; adding left-turn bays throughout.

### Policy Context

- Nanaimo Transportation Master Plan - Major Road Project "W" is within the limits of this project.

Costing / Funding	Estimate Class		D
Total Estimated Project Cost	\$10,495,577		
Funding Assumptions			
Existing Population Funding	\$2,623,894	75%	
DCC Funding	\$7,871,683	25%	
Total City Funding	\$10,495,577		
External Partner Funding	\$0	0%	
Total Funding	\$10,495,577		





Note: Project scopes are conceptual and would be refined through preliminary and final design.

**Project 104 Estimate Summary    DCC Project 111**

<b>Item</b>	<b>Description</b>	<b>Estimate Class</b>	<b>Estimated Cost</b>
1	<ul style="list-style-type: none"><li>● Develop 2-lane minor collector, bike lanes in both directions, concrete curb gutter and sidewalk, street trees and street lighting.</li><li>● Develop left turn lanes at significant neighbourhood access points.</li><li>● Parking excluded from DCC cost estimate but would be part of development frontage works and services.</li></ul>	D	\$ 10,495,577
<b>Total Project Cost</b>			<b>\$10.5M</b>

## 2016 Transportation DCC Project 8

Project ID	117	DCC 8
Project Name	Northfield Rd (Boundary to Sarnia)	

Timeframe *Long Term*

Project Scope	Length	1.3 km
---------------	--------	--------

Project Scope	Length	1.3 km
---------------	--------	--------

- Develop a 3-lane minor collector with left turn lanes throughout. Includes concrete curb gutter and sidewalk, bike lanes in both directions, street trees and street lighting.
- Roundabout/Signalization at Dorman Rd.
- On street parking is not included in the cost of DCC but would form part of developments frontage works and services.

## Project Rationale

- Identified in the Nanaimo Transportation Master Plan - Major Road Project "N".
- Northfield Rd is an important east-west arterial major road linking Island Hwy, the Parkway, the Northfield Industrial Area and adjacent neighbourhoods.
- City-wide growth and redevelopment along the corridor is expected to drive future traffic growth.
- Traffic growth is not projected to be sufficient to trigger widening to four lanes, however completion of cross section where incomplete will seek to maximize the capacity of 2 lane cross section adding left turn bays throughout and traffic signals /roundabout at Dorman Rd.
- Sidewalks, bike lanes and street lighting to improve safety for all road users under higher traffic volume conditions.

## Policy Context

The project described above has a large scope.

The funds specified are for intersection improvements only.

Costing / Funding	Estimate Class		D/PL
Total Estimated Project Cost	\$3,000,000	Estimate Class:	D/PL
Funding Assumptions : Intersection Improvements Only			
Existing Population Funding	\$750,000	75%	
DCC Funding	\$2,250,000	25%	
Total City Funding	\$3,000,000		
External Partner Funding	\$0	0%	
Total Funding	\$3,000,000		





Note: Project scopes are conceptual and would be refined through preliminary and final design.