



Anglophone West School District (ASD-W) *Multi-year infrastructure planning*

Leo Hayes High School Overcrowding

New Brunswick Department of Education
and Early Childhood Development (EECD)

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Executive Summary (1 of 3)

Background:

The District notes that the north side of Fredericton is projected to continue to grow in the future. Leo Hayes High School is a P3* school built in 2000 on the north side, and is currently over design capacity with 1,747 students enrolled in 2014-15. This makes it the second largest high school in the province, with Fredericton High School being the largest with 1,909 students. Leo Hayes High has eight mobile classrooms attached to the end of the school to help address the current capacity issue. Some students are being bused to Fredericton High to take shop classes.

Objective:

With the high school on the north side over capacity, the District is looking for an infrastructure plan to take to the District Education Council (DEC). The plan needs to address the projected future enrolment and pedagogical needs of the north side, while considering the potential to utilize space of nearby under capacity high schools. The review was initiated to analyze various scenarios and provide recommendations for infrastructure planning.

*P3 – Public-Private Partnership.

Executive Summary (2 of 3)

Three multi-year infrastructure planning options were reviewed for ASD-W to address the current overcrowding at Leo Hayes High School (LHHS):

- ▶ **Scenario 1 (new wing addition to LHHS)** is not recommended at this time based on projected* declining student enrolment to 2022, and due to potential school boundary changes (scenario 2), which makes better usage of existing infrastructure.
- ▶ **Scenario 2 (potential school boundary changes)** is recommended to utilize space at three high schools with projected* declining student enrolment (Fredericton High, Nackawic Senior High and Stanley Regional High). Fredericton High is the province's largest high school and is currently undergoing a multi-million dollar mid-life upgrade. LHHS would not require a new wing addition.
- ▶ **Additional factor reviewed** (cost of busing shop class students to Fredericton High): this is considered a cheaper option than building a new shop class at LHHS.

Recommend school boundary changes at Durham Bridge to the north (scenario 2a), Keswick Valley Memorial split to the west (scenario 2e) and South of Princess Margaret Bridge split to the south (scenario 2d) – this combination removes the most students from LHHS. There are other school boundary options included within the appendices for consideration that could be reviewed with the DEC.

*Projections are based on EECDC Policy and Planning Summary Statistics (ASD-W district does not have population forecasting software).

Executive Summary (3 of 3)

“Grandfathering” of the students currently attending LHHS and living within the potential school boundary changes is possible, based on enrolment projections*, and would limit the negative impact of changing high schools.

LHHS is currently over maximum capacity and there are students attending out of zone (62% of these are coming from Fredericton High School boundary). ASD-W Guidelines for Inter-District School Placement notes a consideration to attend the school is “*there is space in the school for which attendance is sought*” and “*permission is on a year-by-year basis and students may be required to return to their zoned school should circumstances change*”. Recommend reviewing all out-of-zone students at LHHS and returning any possible students to their boundary school.

Should new school boundaries be adopted at LHHS, recommend reevaluating a new school wing at a later point in time (by 2021) to verify that enrolment projections* have not been exceeded (when the enrolment is expected to start increasing again).

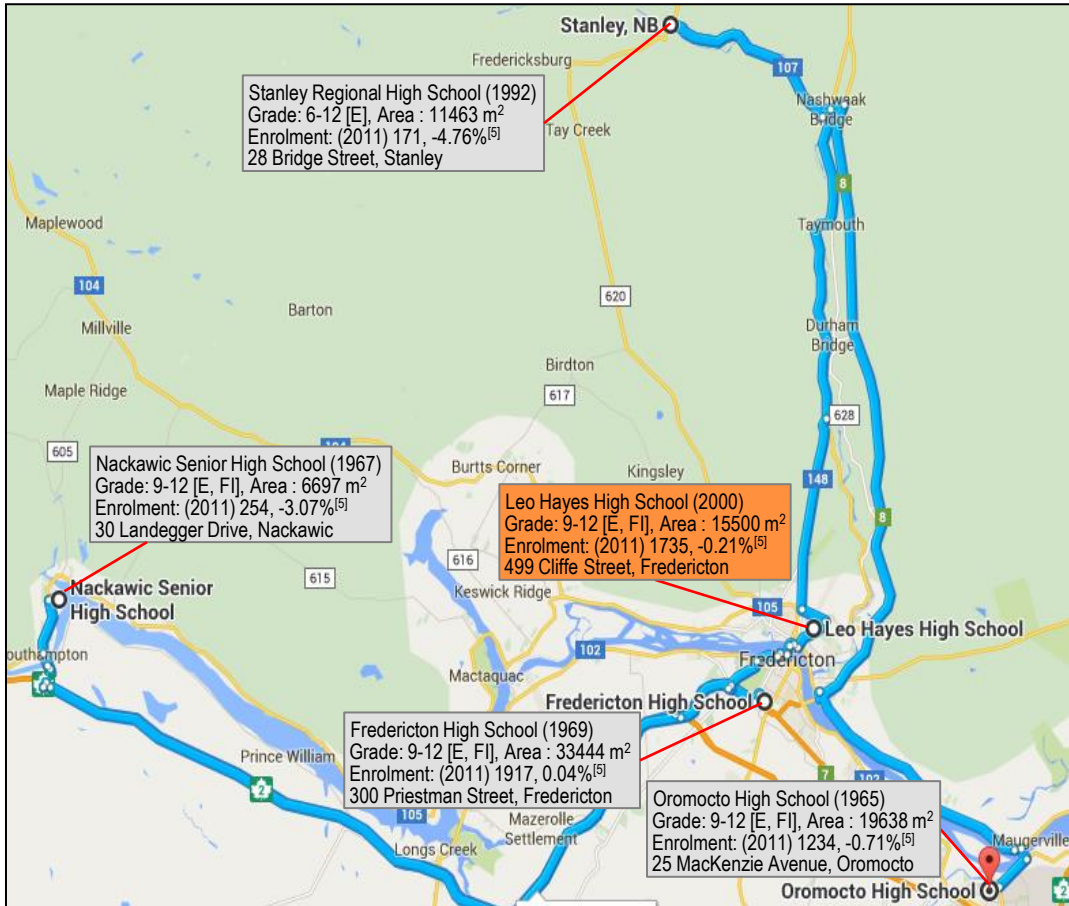
Should new school boundaries not be adopted, LHHS projected enrolment* is decreasing and mobiles are currently used to address the overcrowding. Recommend reforecasting the enrolment projections* again in 2018 to confirm accuracy. This would leave time for planning and construction of a new wing, should circumstances change or enrolment forecast is found to be under estimated.

*Projections are based on EECD Policy and Planning Summary Statistics (ASD-W district does not have population forecasting software).

Context – ASD-W has initiated a review of Leo Hayes High School to identify multi-year infrastructure planning options

- ▶ Target schools are five high schools in the greater Fredericton area
- ▶ Leo Hayes High is a newer P3, 9-12 high school built in 2000
- ▶ The District noted that Leo Hayes High enrolment currently exceeds the building capacity and there are 8 modular classrooms attached to the school. Fredericton's north side (Leo Hayes' catchment area) is projected to continue to grow
- ▶ The District also noted that teachers who do not have a dedicated home classroom are required to teach in other teachers' dedicated home classrooms displacing those teachers during their preparation periods
- ▶ These issues are leading to overcrowding and classes being taught in modular rooms, which is not the optimum learning environment for students and staff. Some of the curriculum is being delivered in "out-of-norm" spaces
- ▶ Some students are being bused to Fredericton High School for shop class
- ▶ According to the District, specialty space has been reduced, the space for visiting professionals is "chopped up", and space has been taken from the resource rooms and the library

Subject schools are in close enough proximity to alter the school boundaries to address the overcrowding at Leo Hayes High



High schools in the greater Fredericton area

Subject schools – year built

- Leo Hayes High (9 to 12 – 2000)
- Fredericton High (9 to 12 – 1969)
- Nackawic High (9 to 12 – 1967)
- Oromocto High (9 to 12 – 1965)
- Stanley Regional High (6 to 12 – 1992)

Leo Hayes High School age:

15 years

Average age of the other 4 high schools:

42 years

Context – Over the past 5 years, historical enrolment has been increasing at Leo Hayes and Nackawic, while decreasing in the other schools in scope

- ▶ Aggregate floor area is 86,742 m², or 22.5% of district total of 384,999 m²
- ▶ Asset age ranges from 15 years (Leo Hayes High) to 50 years (Orმოcto High)
- ▶ Total 2014-15 enrolment for the 5 high schools under scope is 5,225 students:
 - ▶ From 2010 to 2014, enrolment declined by 2.5% (annual average decline of 0.62%)

Enrolment History					
School	2010	2011	2012	2013	2014
Oromocto High School	1,249	1,234	1,195	1,159	1,160
Stanley Regional High School	181	171	161	147	148
Nackawic Senior High School	256	254	251	254	261
Fredericton High School	1,935	1,917	1,916	1,900	1,909
Leo Hayes High School	1,736	1,735	1,756	1,784	1,747
Total Enrolment of Schools:	5,357	5,311	5,279	5,244	5,225

- ▶ For Leo Hayes High between 2010 to 2014, the enrolment grew by 0.67% (annual average growth of 0.17%)
- ▶ For the remaining schools in scope, enrolment has declined at an annual average of 1%
- ▶ The District noted that there is potential to better balance high school utilization within the greater Fredericton area through school boundary changes

Context – Average FCI* is fair for the four non-P3 schools, while Leo Hayes High is rated good

- ▶ Replacement value for all 5 schools is approximately \$233.3M
 - ▶ Based on current floor area and replacement cost of \$2,690/m²
- ▶ Average asset conditions are rated fair for the 4 non-P3 schools at 0.07, based on FCI* ranges recommended in the APPA Book of Knowledge (2009) for Facilities Management:

School	FCI*	Rated Condition
Nackawic Senior High school	0.11	Poor
Fredericton High school	0.10	Fair
Oromocto High school	0.03	Good
Stanley Regional High school	0.02	Good
Average School Condition	0.07	Fair

Note: EECD has no deferred maintenance at Leo Hayes, as it is a P3 school owned by Brunswick Learning. Site visit confirmed that Leo Hayes is in good condition. Fredericton High had \$8.8M identified for repairs, but this is being addressed with a mid-life upgrade project currently underway (completion of the work is scheduled for 2018).

- ▶ Note: FCI is a measure for Facility Planners to equate the amount of deferred maintenance to the space of a building for comparison. A rating of *Poor* or *Fair* does not mean a building is unsafe or unfit for use. Older buildings often have more deferred maintenance than newer buildings. (e.g. The deferred maintenance can require upgrades to modern heating, ventilation and control systems that did not exist when the building was constructed).
- ▶ Deferred maintenance total was identified as \$13.2M in the EECD School Physical Plant Status Report for the 4 non-P3 schools.

*FCI: Facility Condition Index with the following ranges: Poor (>0.10), Fair (0.05 to 0.10) and Good (<0.05).

Consultations between the District, EECD and EY narrowed the scope to 2 possible scenarios

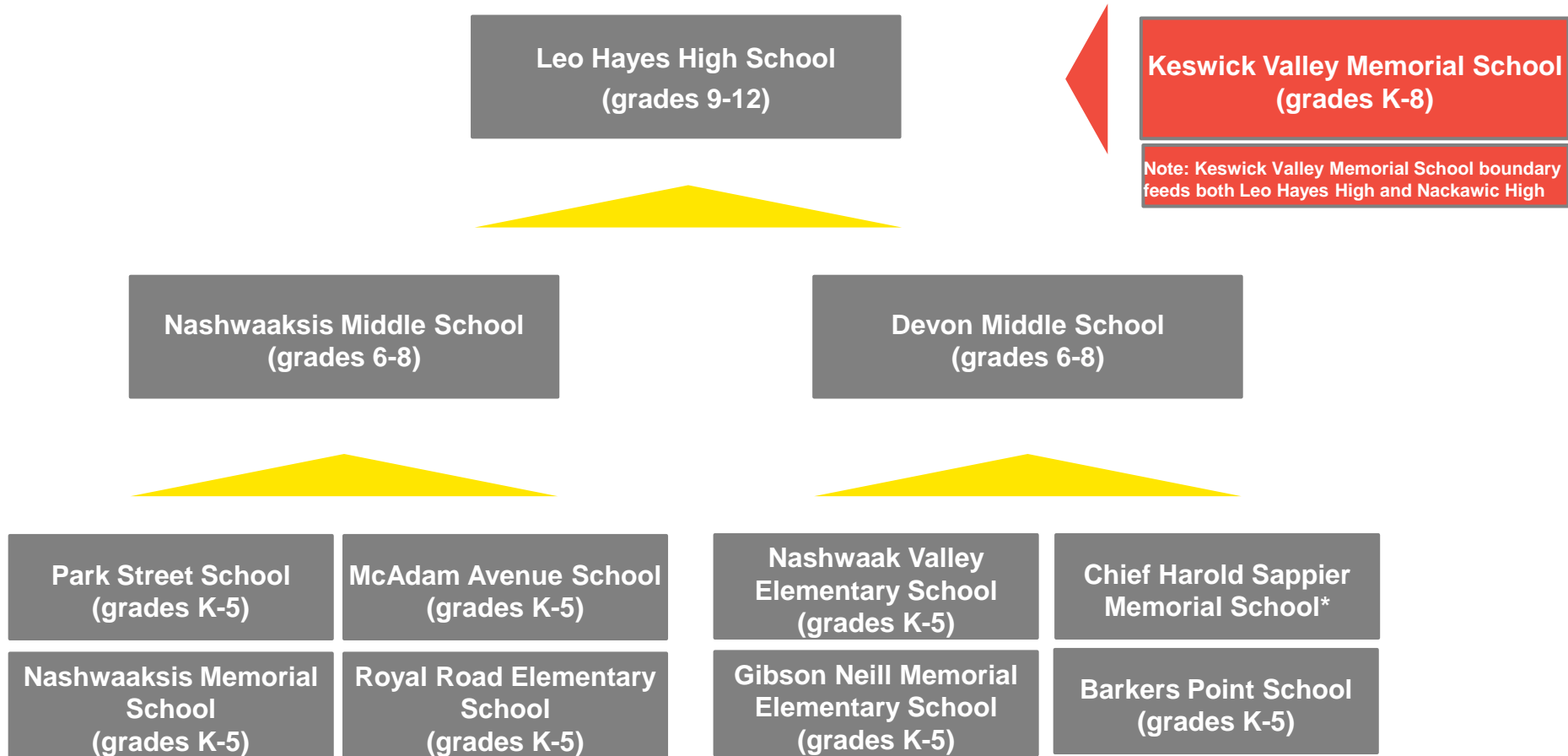
The following scenarios were included within the infrastructure planning for the Leo Hayes High School overcrowding issue:

- **Scenario 1:** new wing addition for Leo Hayes High School. The P3 contract with Brunswick Learning would have to be opened and negotiations held to determine the increase in operational costs paid for the school to offset the capital costs of the addition (See appendix B for details).
- **Scenario 2:** potential school boundary changes to balance utilization at schools within the scope (including those out-of-zone students attending Leo Hayes High) (See appendices C to I for details).

Note: Historical enrolments and projections for Leo Hayes High can be found in appendix A and a note on the new north side Francophone school related to the projections is contained in appendix K.

Appendix A – Leo Hayes High feed schools and their recent historical enrolments

Overview of schools that feed to Leo Hayes High School



*Chief Harold Sappier Memorial is a St. Mary's First Nation school in Fredericton

Source: Leo Hayes, Nashwaaksis Middle, and Devon Middle feed school listings available on the <http://web1.nbed.nb.ca> website.

Elementary feed schools to Nashwaaksis Middle School – Nashwaaksis Memorial School has seen enrolment growth, while the other schools are generally declining

Park Street school							
Total Enrolment by Grade							
Enrolment Year	K	1	2	3	4	5	Total
2010-11	72	59	83	73	83	76	446
2011-12	53	73	61	83	73	83	426
2012-13	62	57	75	70	84	77	425
2013-14	67	63	58	80	70	83	421
2014-15	68	64	63	51	78	71	395
McAdam Avenue school							
Total Enrolment by Grade							
Enrolment Year	K	1	2	3	4	5	Total
2010-11	18	17	11	17	13	22	98
2011-12	19	19	18	11	18	13	98
2012-13	11	14	17	13	13	17	85
2013-14	12	11	14	17	13	11	78
2014-15	16	10	14	11	17	15	83
Nashwaaksis Memorial school							
Total Enrolment by Grade							
Enrolment Year	K	1	2	3	4	5	Total
2010-11	49	37	26	46	34	33	225
2011-12	37	49	37	33	39	41	236
2012-13	51	30	42	26	31	31	211
2013-14	43	49	32	42	27	32	225
2014-15	45	43	48	36	41	34	247
Royal Road Elementary school							
Total Enrolment by Grade							
Enrolment Year	K	1	2	3	4	5	Total
2010-11	51	42	57	56	52	44	302
2011-12	69	63	56	73	68	65	394
2012-13	80	71	70	55	82	74	432
2013-14	64	75	70	64	59	81	413
2014-15	72	55	80	67	62	55	391

Note: Douglas Elementary closed in September 2011 and the students were moved to Royal Road Elementary School. This explains the growth seen in grade levels at Royal Road between 2010 and 2011.

Recent historical enrolments at the elementary feed schools

- Park Street School (PS) feeds approximately 38% of the Nashwaaksis Middle School student population
- PS has seen an average annual decrease of 3.0% in enrolment since 2010, with some growth in grade level from one year to another
- McAdam Avenue (MA) feeds approximately 8% of the Nashwaaksis Middle School student population
- Nashwaaksis Memorial School (NMEM) feeds approximately 20% of the student population to Nashwaaksis Middle School
- NMEM has seen an increase in enrolment since 2010, with no growth in grade levels from one year to another
- Royal Road School (RR) feeds approximately 34% of the student population to Nashwaaksis Middle School
- RR growth seen after September 2011 is attributed to the amalgamation of Douglas Elementary School

Source: EECD Policy and Planning Summary Statistics.

Elementary feed schools to Devon Middle School – Gibson Neill Memorial and Nashwaak Valley schools experiencing enrolment growth, while Barkers Point School has no growth

Nashwaak Valley Elementary School							
Total Enrolment by Grade							
Enrolment Year	K	1	2	3	4	5	Total
2010-11	27	22	14	13	12	13	101
2011-12	19	28	20	14	13	13	107
2012-13	21	23	29	16	17	14	120
2013-14	20	23	20	26	17	17	123
2014-15	17	23	21	19	25	19	124

Gibson Neill Memorial Elementary School							
Total Enrolment by Grade							
Enrolment Year	K	1	2	3	4	5	Total
2010-11	91	85	89	85	74	92	516
2011-12	79	93	88	88	83	70	501
2012-13	88	85	96	87	86	79	521
2013-14	101	97	85	97	95	90	565
2014-15	120	107	91	89	100	91	598

Note: Gibson Neill Memorial Elementary School opened in 2013. This new school was an amalgamation of South Devon School and Alexander Gibson School (both of these schools' enrolment numbers were combined for the years prior to 2013 in the table above).

Barkers Point School							
Total Enrolment by Grade							
Enrolment Year	K	1	2	3	4	5	Total
2010-11	63	52	54	45	71	65	350
2011-12	53	62	59	58	48	71	351
2012-13	54	47	61	56	52	45	315
2013-14	76	59	47	63	47	50	342
2014-15	59	71	61	47	58	55	351

Note: Chief Harold Sappier Memorial is a First Nation school in Fredericton and the school's student enrolment is not summarized in EECD Policy and Planning Summary Statistics. Comparing EECD Policy and planning statistics for the feed elementary schools to Devon Middle School, it was estimated the number of students coming from Chief Harold Sappier Memorial was between 0-12 students per year. This was assumed to be included within the growth across the school boundary of 2.5% and 5% estimates for the enrolment projections of Leo Hayes High.

Source: EECD Policy and Planning Summary Statistics.

Recent historical enrolments at the elementary feed schools

- Nashwaak Valley Elementary School (NV) feeds approximately 12% of the student population to Devon Middle School
- NV has seen an average annual increase of 5.4% in enrolment since 2010, with no growth in grade level from one year to the next
- Gibson Neill Memorial Elementary School (GN) feeds approximately 54% of the student population to Devon Middle School
- GN has seen an average annual increase of 6.1% in enrolment since 2012, with some growth in grade level from one year to the next
- The strong enrolment growth of GN was noted during scoping with the District
- Barkers Point School (BPS) feeds approximately 34% of the student population to Devon Middle School
- BPS has seen no growth in enrolment since 2010, with no growth in grade levels from one year to the next

Based on the elementary enrolments, Leo Hayes enrolment will start increasing when these students reach high school

Total of All Elementary Feed Schools to Nashwaaksis Middle							
Total Enrolment by Grade							
Enrolment Year	K	1	2	3	4	5	Total
2010-11	190	155	177	192	182	175	1,071
2011-12	178	204	172	200	198	202	1,154
2012-13	204	172	204	164	210	199	1,153
2013-14	186	198	174	203	169	207	1,137
2014-15	201	172	205	165	198	175	1,116

Total of All Elementary Feed Schools to Devon Middle							
Total Enrolment by Grade							
Enrolment Year	K	1	2	3	4	5	Total
2010-11	181	159	157	143	157	170	967
2011-12	151	183	167	160	144	154	959
2012-13	163	155	186	159	155	138	956
2013-14	197	179	152	186	159	157	1,030
2014-15	196	201	173	155	183	165	1,073

Note: The total enrolment of all elementary feed schools to the middle schools is calculated by adding the Nashwaaksis Middle School and the Devon Middle elementary feed schools together.

Total of All Elementary Feed Schools to the Middle Schools							
Total Enrolment by Grade							
Enrolment Year	K	1	2	3	4	5	Total
2010-11	371	314	334	335	339	345	2,038
2011-12	329	387	339	360	342	356	2,113
2012-13	367	327	390	323	365	337	2,109
2013-14	383	377	326	389	328	364	2,167
2014-15	397	373	378	320	381	340	2,189

Note: This excludes the Chief Harold Sappier Memorial. These students were assumed to be included within the growth across the school boundary of 2.5% and 5% estimates for the enrolment projections of Leo Hayes High (as noted on page 14 of this report).

Recent historical enrolments at the elementary feed schools

- Total enrolment at all feed schools to Nashwaaksis Middle School increased between 2010-2012, and then started declining again
- The growth in grade levels from one year to the next from 2010 is attributed to the amalgamation of Douglas Elementary School with Royal Road Elementary School
- The total enrolment at all feed schools to Devon Middle School increased by 11% between 2010 and 2014
- There is some evidence of growth in grade levels from one year to the next
- The total enrolment of all the elementary students feeding into Leo Hayes High School is increasing at an average annual rate of 1.8%
- Based on elementary enrolments, Leo Hayes enrolment will start increasing when these students reach high school

Overall middle school enrolment in the Leo Hayes High catchment area has been decreasing since 2010 – some indication of individual grade growth at Devon Middle School

Nashwaaksis Middle school								
Enrolment Year	Total Enrolment by Grade				French Immersion Program			
	6	7	8	Total	6	7	8	Total
2010-11	201	232	265	698	99	117	126	342
2011-12	195	200	236	631	101	93	118	312
2012-13	199	197	193	589	109	101	94	304
2013-14	202	192	193	587	119	104	94	317
2014-15	207	197	200	604	118	113	97	328

Devon Middle school								
Enrolment Year	Total Enrolment by Grade				French Immersion Program			
	6	7	8	Total	6	7	8	Total
2010-11	186	176	136	498	88	74	26	188
2011-12	174	191	181	546	71	85	71	227
2012-13	160	174	189	523	83	73	84	240
2013-14	138	170	181	489	77	81	72	230
2014-15	169	147	174	490	75	75	84	234

Portion of Keswick Valley Memorial school to Leo Hayes High								
Enrolment Year	Total Enrolment by Grade				French Immersion Program			
	6	7	8	Total	6	7	8	Total
2010-11	19	12	13	44	-	-	-	-
2011-12	18	19	12	49	-	-	-	-
2012-13	20	18	19	57	-	-	-	-
2013-14	13	20	18	51	-	-	-	-
2014-15	16	13	20	49	-	-	-	-

Note: Portion of Keswick Valley Memorial School to attend Leo Hayes was estimated by the boundary split analysis numbers provided through Versatrans for 2014-15. (Estimated at 60% of the grade enrolment)

Total of All Middle Feed Schools to Leo Hayes High								
Enrolment Year	Total Enrolment by Grade				French Immersion Program			
	6	7	8	Total	6	7	8	Total
2010-11	406	420	414	1,240	187	191	152	530
2011-12	387	410	429	1,226	172	178	189	539
2012-13	379	389	401	1,169	192	174	178	544
2013-14	353	382	392	1,127	196	185	166	547
2014-15	392	357	394	1,143	193	188	181	562

- ## Recent historical enrolments at middle feed schools
- Nashwaaksis Middle School (NMS) feeds approximately 53% of the student population to Leo Hayes High
 - NMS has seen an average annual decrease of 3.4% in enrolment since 2010
 - NMS has no evidence of enrolment increase as students progress in grade level from one year to the next (an indicator of students not moving into the catchment after kindergarten enrolment)
 - Devon Middle School (DMS) feeds approximately 43% of the student population to Leo Hayes High
 - DMS has seen a drop in enrolment since 2012, but the school has seen some growth in grade levels from one year to the next starting in 2013
 - Keswick Valley Memorial feeds approximately 4% of the student population to Leo Hayes High
 - Overall middle school enrolment has been decreasing since 2010

Source: EECD Policy and Planning Summary Statistics and ASD-W school transportation software – Versatrans.



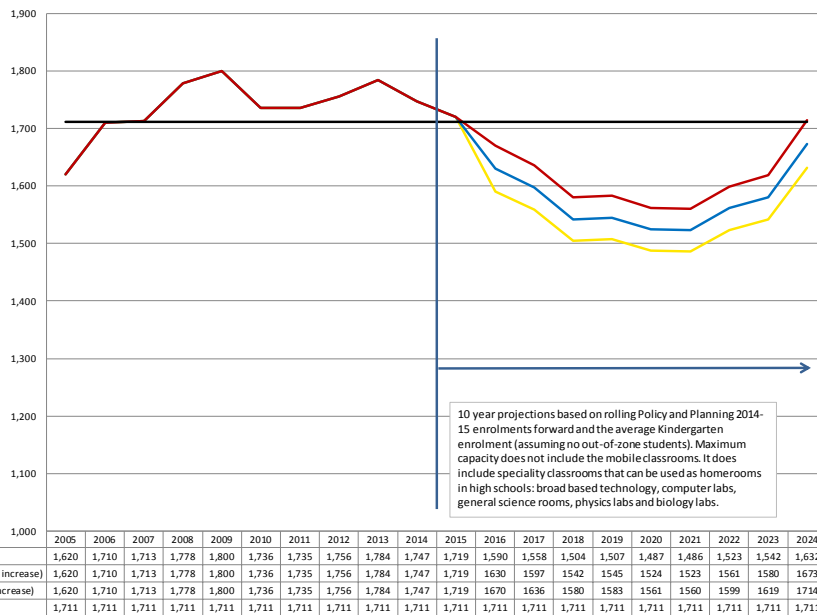
Leo Hayes High School projected enrolment will decline, based on the current middle school population and start increasing again by 2022, based on the current elementary

Leo Hayes High school						
Total Enrolment by Grade						
Enrolment Year	9	10	11	12	Grads	Total
2005-06	401	408	445	365	1	1,620
2006-07	466	405	455	378	6	1,710
2007-08	435	443	445	385	5	1,713
2008-09	472	428	530	341	7	1,778
2009-10	428	467	488	413	4	1,800
2010-11	404	419	506	401	6	1,736
2011-12	434	414	460	421	6	1,735
2012-13	446	428	469	408	5	1,756
2013-14	424	456	503	393	8	1,784
2014-15	408	424	486	429	-	1,747

Enrolment forecast for Leo Hayes High School

- Leo Hayes High (LHHS) School's peak enrolment was in 2009-10 (1,800 students)
- The 2014-15 enrolment is currently at 1,747 students, and the school has 8 mobiles to address the overcrowding issue
- Excluding out-of-zone students, LHHS enrolment will decline until 2022, based on current enrolment in the feed middle schools, which have been declining
- LHHS enrolment will start increasing when the current elementary students reach high school, as elementary students enrolment has been increasing (as previously noted)
- Based on the 10-year forecast of the 2014-15 enrolments, LHHS would have 1,632 students by 2024-25
- Adding 2.5% growth to the 2024-25 forecast brings the projection to 1,673, and with 5% growth to the projection is 1,714
- Applying the growth to the entire catchment area for LHHS is conservative (growth is mostly at a few elementary schools)

Enrolment Forecast (Leo Hayes High school)



10 year projections based on rolling Policy and Planning 2014-15 enrolments forward and the average Kindergarten enrolment (assuming no out-of-zone students). Maximum capacity does not include the mobile classrooms. It does include specially classrooms that can be used as homerooms in high schools: broad based technology, computer labs, general science rooms, physics labs and biology labs.

Note: The projection does not include any out-of-zone students, which are assumed to be going to the high school within the school boundary they live in.

Source: EECD Policy and Planning Summary Statistics (ASD-W district does not have population forecasting software).

Leo Hayes High School has 42 out-of-zone students attending the school in 2015-16 – recommend returning students to their boundary schools going forward (if possible)

Schools Boundaries for Out-of-Zone Students at Leo Hayes (2015-16 Total Enrolment)

School Name	9	10	11	12	Total
Central New Brunswick Academy	-	-	-	1	1
Fredericton High school	6	3	7	10	26
Harvey High school	-	3	-	-	3
Nackawic Senior High school	-	-	2	1	3
Oromocto High school	1	2	2	-	5
Stanley Regional High school	-	2	2	-	4
Total for Out-of-Zone Students (2015):	7	10	13	12	42
Total for Out-of-Zone Students (2016):	-	7	10	13	30
Total for Out-of-Zone Students (2017):	-	-	7	10	17
Total for Out-of-Zone Students (2018):	-	-	-	7	7

Out-of-zone students attending Leo Hayes High School

- Leo Hayes High (LHHS) has 42 out-of-zone students registered to attend the school in 2015-16 (at time of the review, down from 56 in 2014-15)
- LHHS is currently over maximum capacity and out-of-zone students are still attending (62% (26/42) of the students coming from Fredericton High School)
- As noted in the Guidelines for Inter-District School Placement, there are justifiable reasons for the change in schools (e.g. Stanley Regional High is the only high school in this review that does not have a French Immersion program)
- Additionally, the placement is on a year-by-year basis and can be changed if circumstances change
- Recommend reviewing all out-of-zone students at LHHS and return any students to their boundary school that can be (due to the space limitations at the school)
- Limit future LHHS out-of-zone students

ASD-W: Guidelines for Inter-District School Placement:

District Statement: “A system of zones, as amended from time to time, shall be used as the basic plan for deciding the school which a pupil may attend within the District. Parents or guardians may be given permission by the Senior Education Officer to place their child(ren) in a school other than the school(s) in their zone, subject to conditions”.

Consideration of requested placement may be approved for part of the school year or full school year if:

- There is space in the school for which attendance is sought
- The move does not seriously affect the class that the child would normally attend
- The parents/guardians provide their own transportation for their child
- The move is consistent with other policy
- The move serves a justifiably defined need or purpose

Also: permission is year-by-year basis and students may be required to return to their zoned school should circumstances change

Source: ASD-W school transportation software – Versatrans and “Request for Inter-District School Placement” at <http://web1.nbed.nb.ca/sites/ASD->

Appendix B – Scenario 1 details (new school wing addition for Leo Hayes High)

Scenario 1: New school wing addition for Leo Hayes High School to relieve current overcrowding – new wing of 8 classrooms would replace the 8 onsite mobile classrooms



New school wing addition – Leo Hayes High

- Leo Hayes High School (LHHS) had a total enrolment of 1,747 students in 2014-15, utilizing 8 mobile classrooms in addition to the original structure
- LHHS is the province's second largest high school (Fredericton High School has 1,909 students, and the third largest is Oromocto High School at 1,160)
- Planning Guidelines for Educational Facilities notes that regular-sized high schools have 500 or more students
- District 23 (Central Okanagan) in British Columbia note in their Educational Facility Planning that high schools are generally sized between 1,200 and 2,000 (1,500 being their optimum size)
- Adding a new wing is within the noted sizing parameters
- EECD Infrastructure Planning notes that classroom wings or clusters generally consist of 6-8 classrooms (this would replace the 8 onsite mobile classrooms)

Source: Google Maps and EECD Policy and Planning Summary Statistics.

Scenario 1: New school wing addition for Leo Hayes High School to relieve current overcrowding – additional supporting space required for the new wing addition

Leo Hayes High is a P3 school.

The following additional space requirements for the new wing are based on EECD Planning Guidelines for Educational Facilities.

Class “D” estimate is only to approximate the magnitude of the construction costs. The actual changes to the school and the increase in operational fees paid to the P3 provider would have to be negotiated.

School Grade Levels:	9-12
Number of Students:	1,747
Space Type	Total Area (m²)
8 Classrooms and associated work areas	711
Chemistry Lab and preparation room	127
Multi-purpose room	280
Ancillary Space, Change Rooms and Showers for Physical Education	110
Broad Based Technology Lab (BBT)	250
Upgrade Wood Shop	175
Metal/Auto Shop	300
Sub Total (m ²):	1,953
Systems and Services (m ²):	918
Grand Total (m ²):	2,871
Estimated Construction Cost/m ² :	\$2,690
Estimated Construction Cost:	\$7.7M
Land Purchase (depending on cost of land and location):	-
Total Estimated Cost:	\$7.7M

Note: Class “D” estimate (± 30%) based on the EECD Planning Guidelines for Educational Facilities, as an estimate for this report only.

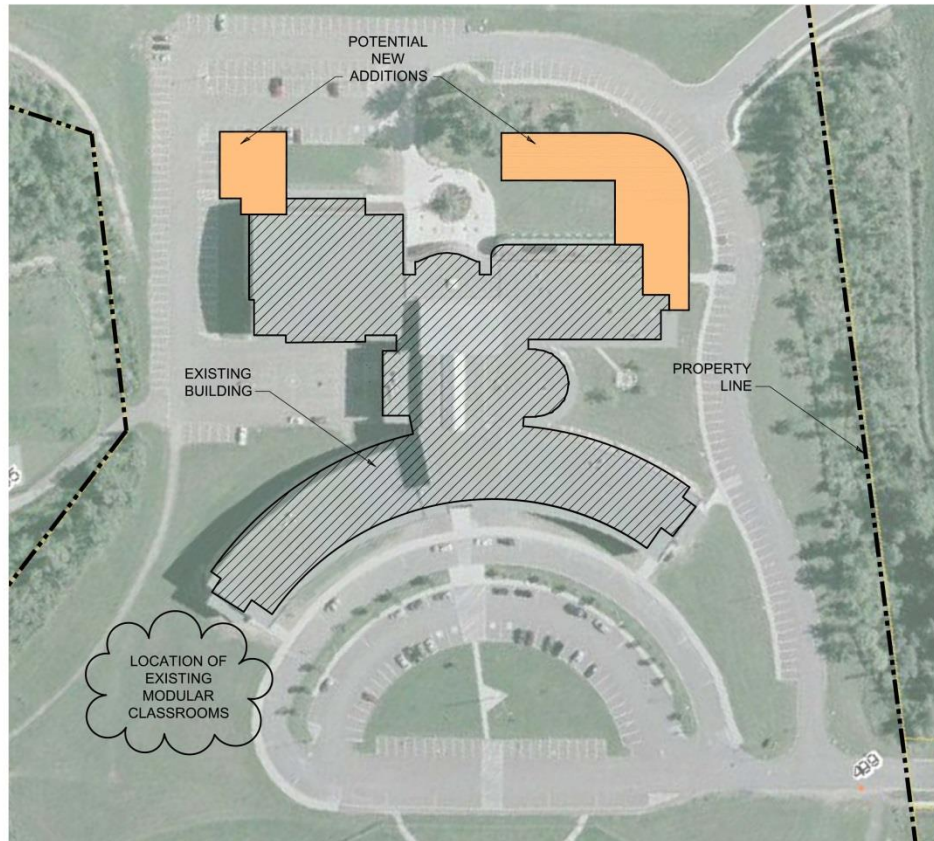
Cost estimates will be adjusted when the EECD Infrastructure and project team establish the actual space allocation for the school addition.

Source: EECD Planning Guidelines for Educational Facilities and site visit to school.

New school wing addition – Leo Hayes High

- The space requirements for the new school wing addition are based on the 2014-15 student enrolment (1,747)
- Enrolment projections for the school can be found in Appendix A
- Enrolment is projected to decline until 2022, based on the current enrolment in feed middle schools
- Worst case scenario (5% growth to the enrolment projection) estimates 1,714 students at Leo Hayes High by 2024-25
- Based on the anticipated declining enrolment to 2022 and the potential of school boundary changes, a new school wing addition is not recommended now
- Previous EECD capital projects have taken approximately 3-4 years from project start to finish
- Recommend reviewing enrolment projections in 2018 to determine if a new wing would be preferable then (leaving time for construction)

Scenario 1: New school wing addition for Leo Hayes High School (site confirmation of space) – conceptual footprint shows new addition fits the lot



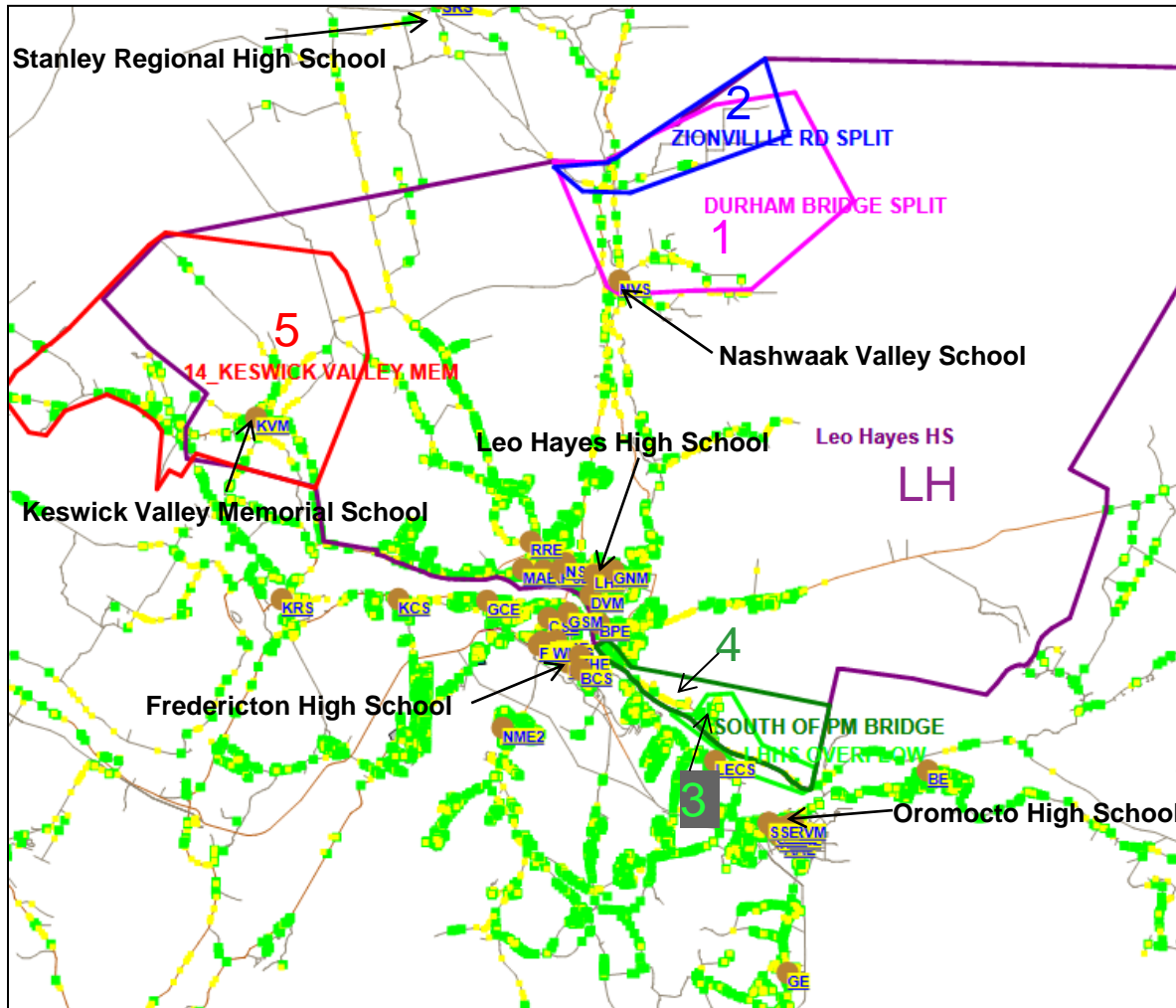
Note: there is potential to build in the area where the modular classrooms are, however, the mobiles would have to be moved to another location during construction of an addition.

New school wing addition – Leo Hayes High

- Conceptual footprint of a two-story extension to Leo Hayes High School based on EECD Planning Guidelines for Educational Facilities and 2014-15 enrolment projections
- Site appears to have sufficient space for extensions
- Topography (bedrock/elevations) should be verified before proceeding
- Conceptual drawing illustrates new additions could be built on both the northeast and northwest corners of the current structure
- This would require an amendment to the contract with the P3 owner
- These additions would eliminate the need to bus students to Fredericton High School for shop classes (see Scenario 3 for financial implications)

Appendix C – Scenario 2 details (Leo Hayes High overview of potential school boundary divisions)

Scenario 2: Overview of five potential boundary changes for the Leo Hayes High School catchment area – for review



Leo Hayes school boundary review:

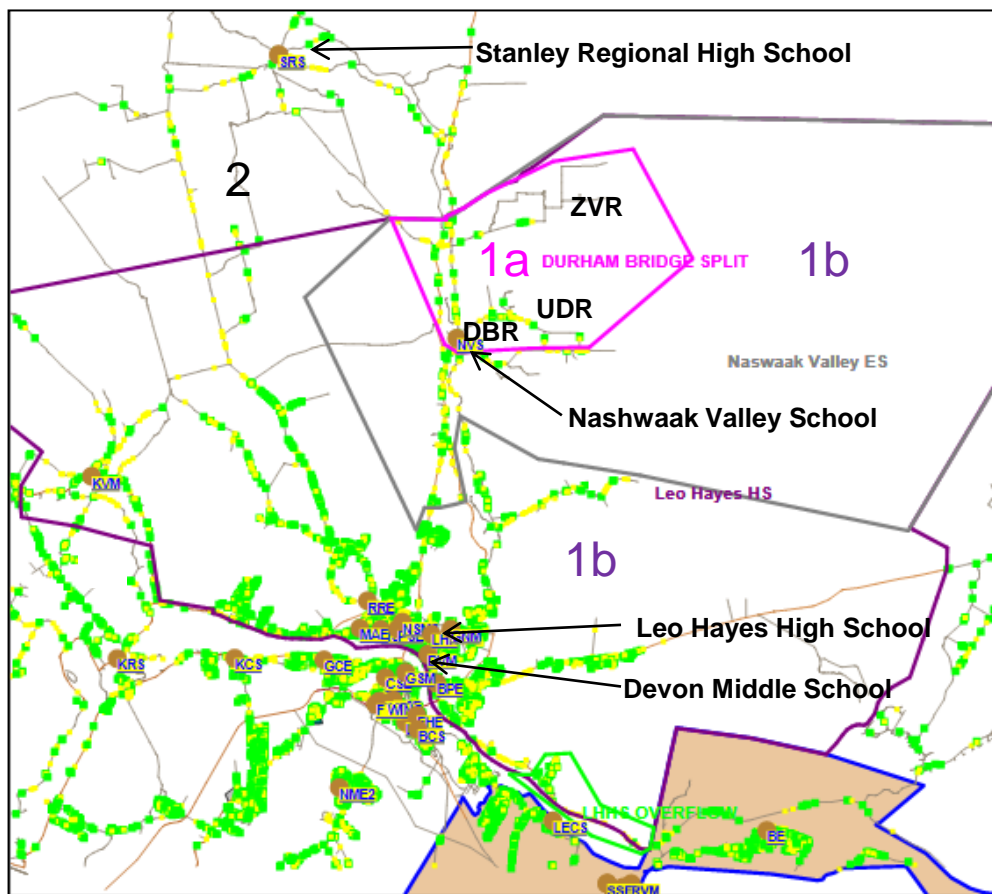
Map of five potential boundary divisions under review for this study.

Legend

- LH. Leo Hayes High School boundary
- 1. Durham Bridge: proposed division of Leo Hayes High boundary to be included in Stanley Regional High boundary
- 2. Zionville Road: proposed division of Leo Hayes High boundary to be included in Stanley Regional High boundary
- 3. Portobello Drive: proposed division of Leo Hayes High boundary to be included in Oromocto High boundary
- 4. South of PM Bridge: proposed division of Leo Hayes High boundary to be included in Fredericton High boundary
- 5. Keswick Valley Memorial: proposed division of Leo Hayes High boundary to be included in Nackawic Senior High boundary

Appendix D – Scenario 2a details (potential Durham Bridge school boundary change)

Scenario 2a: Potential Leo Hayes school boundary change was selected for review in the northern part of the school boundary (Durham Bridge to Stanley Regional High)



Legend
 1a. Proposed division of Leo Hayes school boundary to be included in Stanley Regional High boundary
 1b. Proposed division of Leo Hayes school boundary to remain as Leo Hayes boundary
 2. Existing Stanley Regional High School boundary

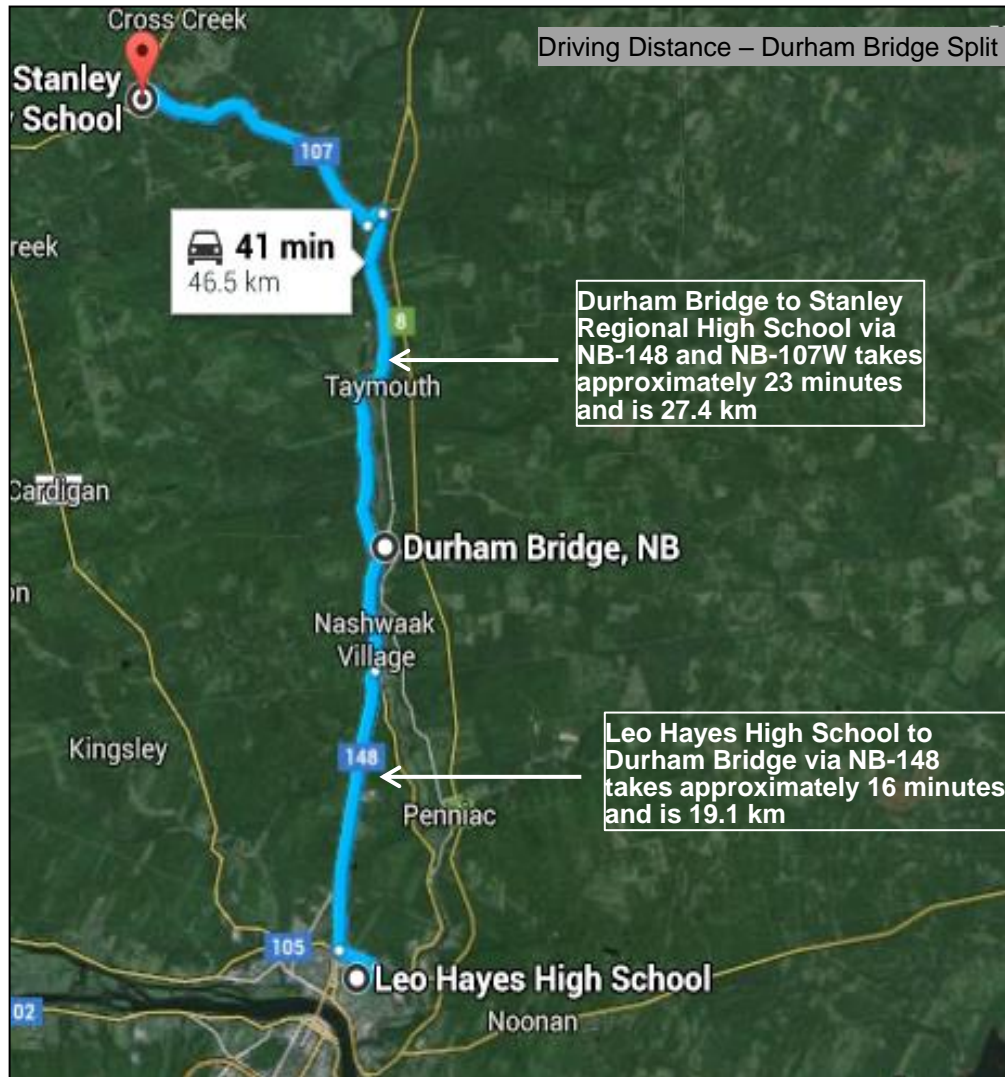
- ## Potential school boundary change – Durham Bridge
- Proposed division of Leo Hayes High School boundary noted as the Durham Bridge Split (1a)
 - There is a natural boundary at the Durham Bridge Road (DBR) consisting of a bridge over the Nashwaak River
 - This division also includes Upper Durham Road (UDR) in the southern region of the boundary and Zionville Road (ZVR) in the northern region of the boundary
 - In the proposed boundary division, the Durham Bridge Split (1a) students would attend Stanley Regional High and the remainder of the boundary would attend Leo Hayes high (1b)
 - Students in the proposed Durham Bridge Split (1a) attend Nashwaak Valley School (K-5) and Devon Middle School (6-8), which means they would go to a different high school than their peers at Devon Middle School

Source: ASD-W school transportation software - Versatrans.

Note: Stanley Regional High School does not have a French Immersion program (these students would attend Leo Hayes High).



Scenario 2a: Potential Leo Hayes school boundary change – Durham Bridge closer to Leo Hayes High than Stanley Regional High (extra 7 minute drive)



Source: Google Maps.

- ## Potential school boundary change – Durham Bridge
- The distance from Durham Bridge in the new school boundary to Stanley Regional High School via NB-148 and NB-107W was found to be 27.4 km (approximately a 23 minute drive)
 - The distance from Durham Bridge in the new school boundary to Leo Hayes High was found to be 19.1 km (approximately a 16 minute drive)
 - The potential boundary split at Durham Bridge is approximately 8.3 km further (approximately a 7 minute drive) to Stanley Regional High than it is to Leo Hayes High
 - District noted that this is would most likely add approximately 20 minutes to the bus route run (one way, including the bus stop time)
 - As noted previously, the bridge over the Nashwaak River acts as a natural boundary point to create the new division in the school boundary

Scenario 2a: Potential Leo Hayes school boundary change – Durham Bridge boundary split to Stanley Regional High is viable based on 2014-15 enrolments

(K-5, 6-8) Schools that Durham Bridge Split Attend by Grade Level (2014-15 Total Enrolment)

School Name	K	1	2	3	4	5	6	7	8	Total
Nashwaak Valley school	9	9	13	12	16	10	-	-	-	69
Stanley Elementary school	-	-	-	-	1	-	-	-	-	1
Devon Middle school	-	-	-	-	-	-	7	6	8	21
Total for Durham Bridge Split:	9	9	13	12	17	10	7	6	8	91

Durham Bridge Split Attending Leo Hayes High (2014-15 Total Enrolment)

School Name	9	10	11	12	Total
Leo Hayes High school	8	14	19	11	52
Total for Durham Bridge Split:	8	14	19	11	52

Total Enrolment by Grade Level for Stanley Regional High (2014-15)

School Name	6	7	8	9	10	11	12	Total
Stanley Regional High school	21	20	16	25	25	16	25	148
Total for Stanley Regional	21	20	16	25	25	16	25	148

Summary of combining Durham Bridge boundary split students from Leo Hayes High to Stanley Regional High:

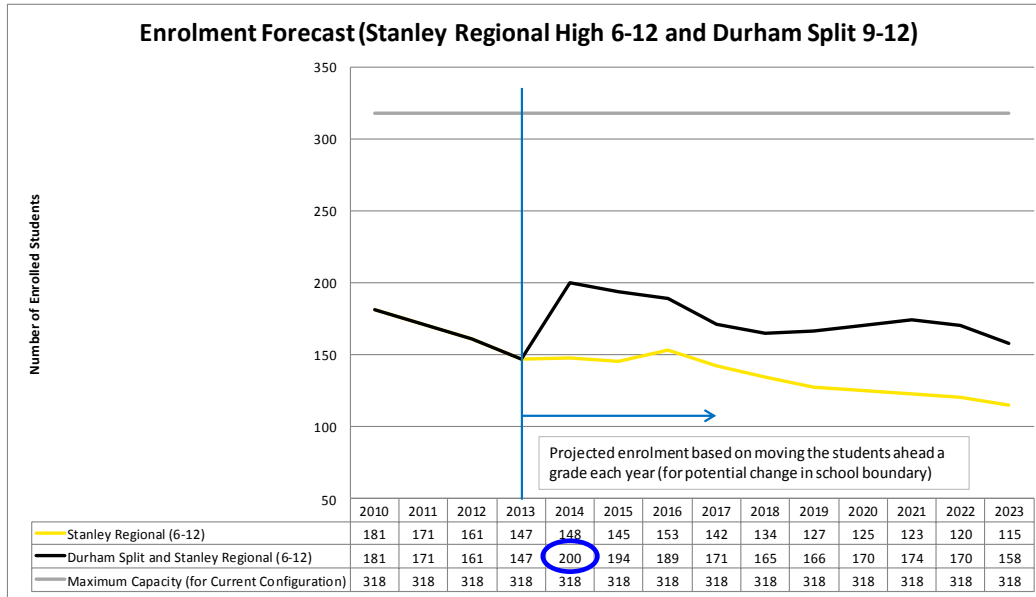
Grades	Size Limit	Classroom Enrolments - Homerooms (2014-15)				Total	Space Requirements		
		Regular Program					French Immersion	Class Rooms	Maximum Capacity
6	28	21				21	1	28	
7	29	20				20	1	29	
8	29	16				16	1	29	
9	29	17	16			33	2	58	
10	29	20	19			39	2	58	
11	29	18	17			35	2	58	
12	29	18	18			36	2	58	
Potential Homerooms	29					0		0	
		Stanley Regional High (6-12)				148	Total:		
		Durham Split (9-12)				52	200	11	318
		Projected Utilization:						62.9%	

Note: This does not include any potential for utilizing combined classes.

Potential school boundary change – Durham Bridge

- In 2014-15, there were 143 students living in the Durham Bridge boundary split (91 in grades K-8, and 52 attending Leo Hayes High School)
- In 2014-15, Stanley Regional High had a total enrolment of 148 students in 6-12
- There were 11 homerooms confirmed at Stanley Regional High during a site visit for grades 6-12, including the high school computer lab and broad based technology
- Based on 2014-15 enrolments, the 200 students from the Durham Bridge boundary split and Stanley Regional High School would have enough capacity (63%) and classrooms (11) for the current grade distribution of students

Scenario 2a: Potential Leo Hayes school boundary change – Durham Bridge boundary split to Stanley Regional High is viable based on enrolment projections until 2023

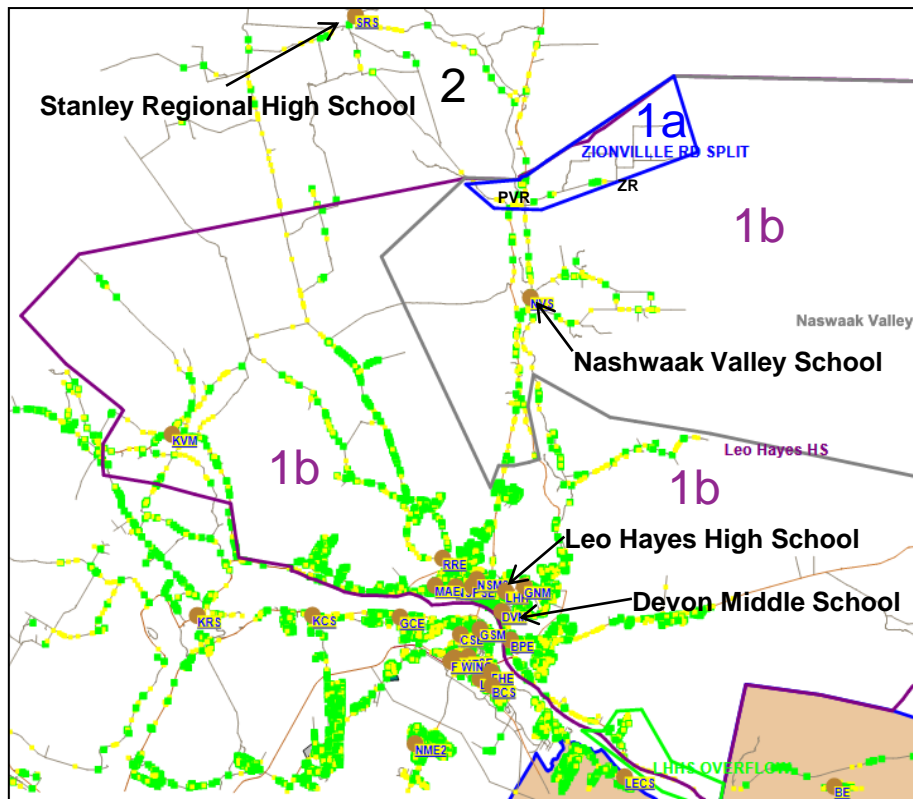


- ## Potential school boundary change – Durham Bridge
- Enrolment projections for Stanley Regional High indicate that the school will continue to decline in enrolment
 - Stanley Regional High (6-12) enrolment would be at its highest level in 2014-15, with the amalgamation of 9-12 students from Leo Hayes High living in the Durham Bridge boundary split
 - Based on 2014-15 enrolment forecasts, the Durham Bridge School boundary split option moving to Stanley Regional High School is a viable option
 - The number of students removed from Leo Hayes High would range from 29 to 52, depending on the year selected for a potential school boundary change
 - However, it is noted that school boundary changes are often viewed negatively by parents

Projected Durham Bridge Split Attending Leo Hayes High					
Year	9	10	11	12	Total
2014	8	14	19	11	52
2015	8	8	14	19	49
2016	6	8	8	14	36
2017	7	6	8	8	29
2018	10	7	6	8	31
2019	16	10	7	6	39
2020	12	16	10	7	45
2021	13	12	16	10	51
2022	9	13	12	16	50
2023	9	9	13	12	43

Appendix E – Scenario 2b details (potential Zionville Road school boundary change)

Scenario 2b: Potential Leo Hayes school boundary change was selected for review in the northern part of the school boundary (Zionville Road to Stanley Regional High)



Legend

1a. Proposed Zionville Road division of Leo Hayes school boundary to be included in Stanley Regional High School boundary

1b. Existing Leo Hayes School boundary to remain as Leo Hayes school boundary

2. Existing Stanley Regional High School boundary

Potential school boundary change – Zionville Road

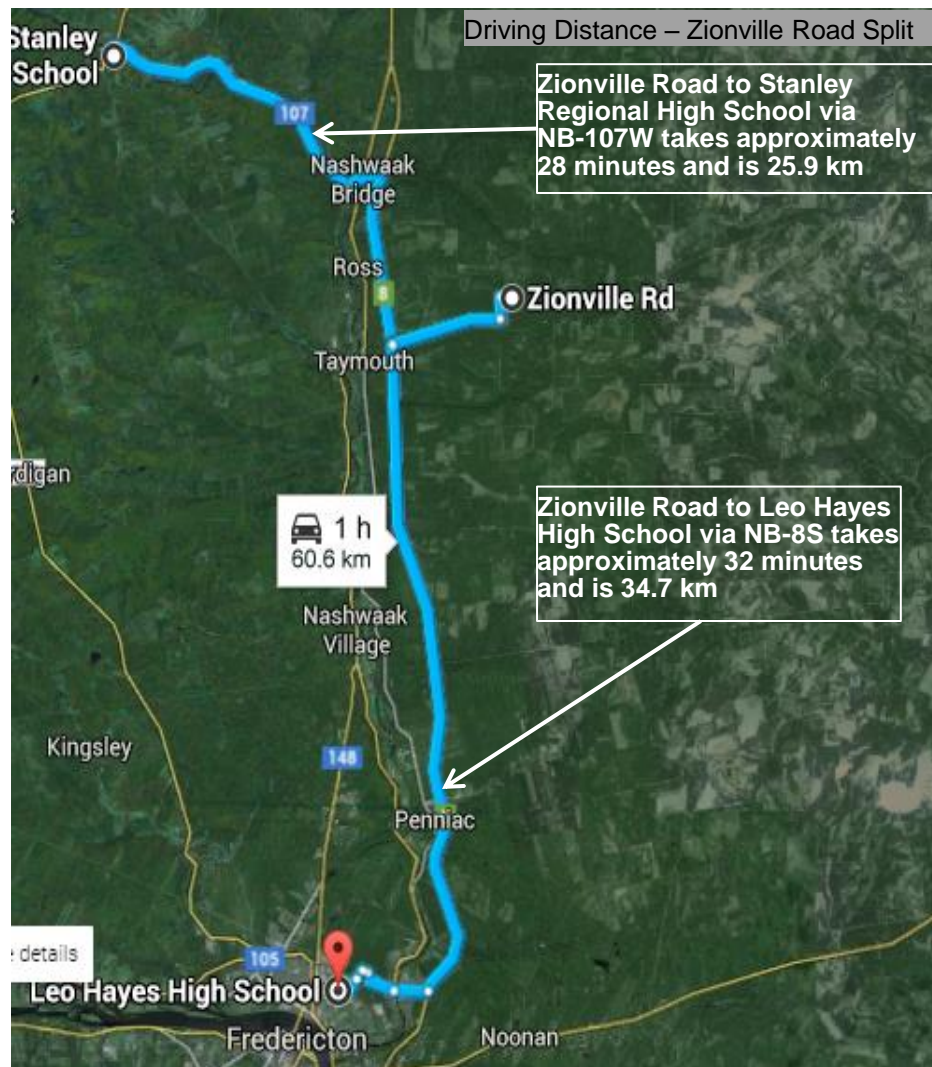
- Proposed division of Leo Hayes High School boundary noted as Zionville Road split (1a)
- There is a natural boundary at the Pleasant Valley Road (PVR) bridge crossing the Nashwaak River
- The boundary includes Zionville with bus stops on the Zionville Road (ZR)
- In the proposed boundary division, the Zionville Road (1a) students would attend *Stanley Regional High (2) and the remainder of the boundary would attend Leo Hayes High (1b)
- Students in the proposed Zionville Road split (1a) attend Nashwaak Valley School (K-5) and Devon Middle School (6-8), which means they would go to a different high school than their peers at Devon Middle School
- Note: Zionville boundary split (scenario 2b) is a smaller section of the Durham Bridge boundary split (scenario 2a) and either one can be an option (not both scenarios)

Source: ASD-W school transportation software - Versatrans.

Note: Stanley Regional High School does not have a French Immersion program (these students would attend Leo Hayes High).



Scenario 2b: Potential Leo Hayes school boundary change – Zionville Road closer to Stanley Regional High than to Leo Hayes High (less 4 minutes on drive)



Source: Google Maps.

Potential school boundary change – Zionville Road

- The distance from the approximate mid-point of the Zionville Road within the new school boundary to Stanley Regional High School via NB-107W was found to be 25.9 km (approximately a 28 minute drive)
- The distance from the approximate mid-point of the Zionville Road within the new school boundary to Leo Hayes High via NB-8S was found to be 34.7 km (approximately a 32 minute drive)
- The potential boundary split at Zionville Road is approximately 8.8 km shorter (approximately a 4 minute drive) to Stanley Regional High than it is to Leo Hayes High
- As noted previously, the bridge over the Nashwaak River acts as a natural boundary point to create the new division in the school boundary

Scenario 2b: Potential Leo Hayes school boundary change – Zionville Road boundary split to Stanley Regional High is viable based on 2014-15 enrolments

(K-5, 6-8) Schools that Zionville Road Split Attend by Grade Level (2014-15 Total Enrolment)

School Name	K	1	2	3	4	5	6	7	8	Total
Nashwaak Valley school	1	3	3	6	5	2	-	-	-	20
Devon Middle school	-	-	-	-	-	-	4	0	3	7
Total for Zionville Road Split:	1	3	3	6	5	2	4	0	3	27

Zionville Road Split Attending Leo Hayes High (2014-15 Total Enrolment)

School Name	9	10	11	12	Total
Leo Hayes High school	3	2	7	8	20
Total for Zionville Road Split:	3	2	7	8	20

Total Enrolment by Grade Level for Stanley Regional High (2014-15)

School Name	6	7	8	9	10	11	12	Total
Stanley Regional High school	21	20	16	25	25	16	25	148
Total for Stanley Regional	21	20	16	25	25	16	25	148

Summary of combining Zionville Road boundary split students from Leo Hayes High to Stanley Regional High:

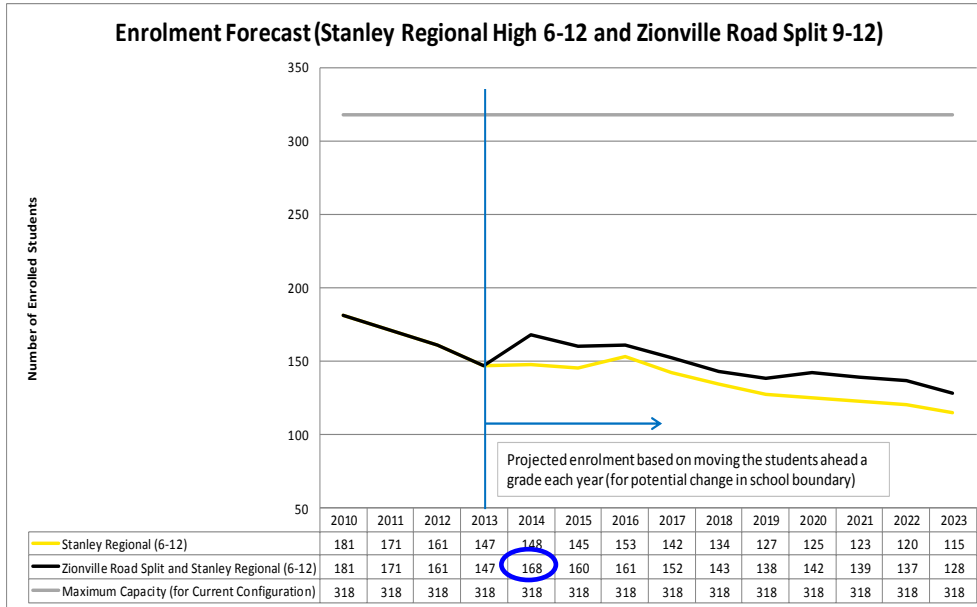
Grades	Size Limit	Classroom Enrolments - Homerooms (2014-15)							Space Requirements		
		Regular Program				French Immersion	Total	Class Rooms	Maximum Capacity		
6	28	21						21	1	28	
7	29	20						20	1	29	
8	29	16						16	1	29	
9	29	28						28	1	29	
10	29	27						27	1	29	
11	29	23						23	1	29	
12	29	17	16					33	2	58	
Potential Homerooms	29							0	3	87	
Stanley Regional High (6-12)				148				Total:	168	11	318
Zionville Road Split (9-12)				20	Projected Utilization:				52.8%		

Note: this does not include any potential for utilizing combined classes.

Potential school boundary change – Zionville Road

- In 2014-15, there were 47 students living in the Durham Bridge boundary split (27 in grades K-8 and 20 attending Leo Hayes High School)
- In 2014-15, Stanley Regional High had a total enrolment of 148 students in 6-12
- There were 11 homerooms confirmed at Stanley Regional High during a site visit for grades 6-12, including the high school computer lab and broad based technology
- Based on 2014-15 enrolments, the 168 total students from the Zionville Road boundary split and Stanley Regional High School would have enough capacity (53%) and classrooms (8/11) for the current grade distribution of students

Scenario 2b: Potential Leo Hayes school boundary change – Zionville boundary split to Stanley Regional High is viable based on enrolment projections until 2023

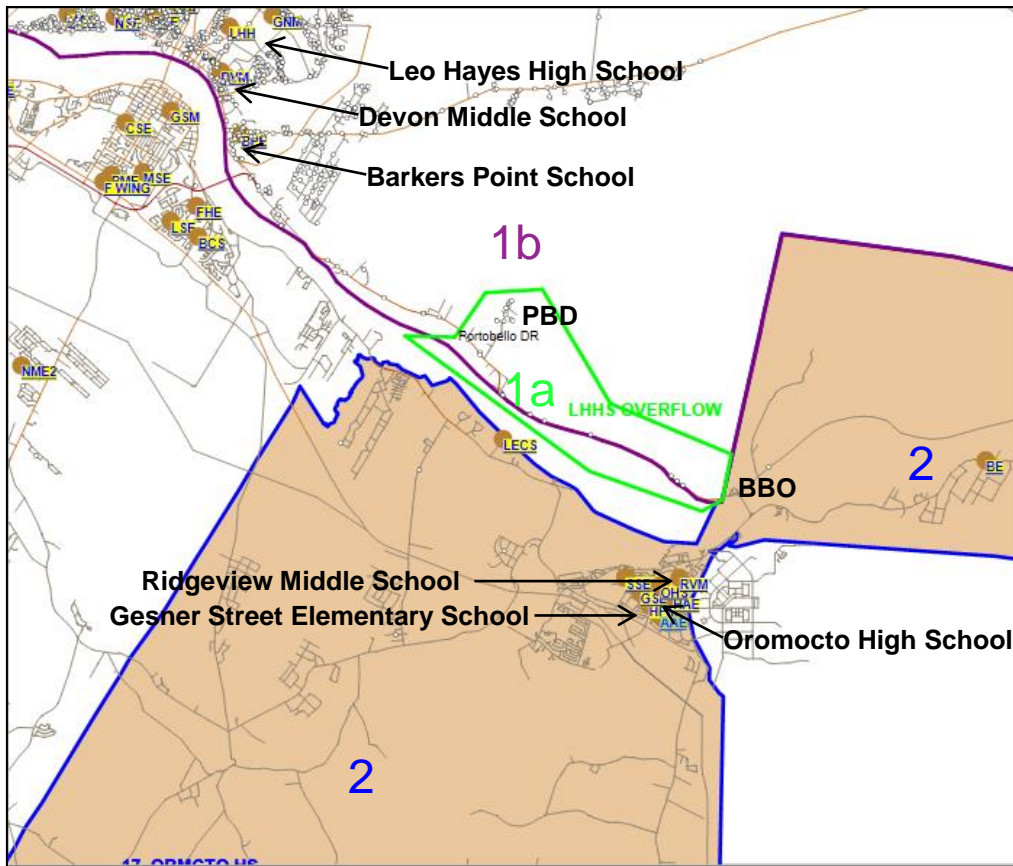


- ## Potential school boundary change – Zionville Road
- Enrolment projections for Stanley Regional High indicate that the school will continue to decline in enrolment
 - Stanley Regional High (6-12) enrolment would be at its highest in 2014-15, with the amalgamation of 9-12 students from Leo Hayes High living in the Zionville Road split
 - Based on 2014-15 enrolment forecasts, the Zionville Road school boundary split moving to Stanley Regional High School is a viable option
 - The number of students removed from Leo Hayes High would range from 8-20 depending on the year selected for a potential school boundary change
 - However, it is noted that school boundary changes are often viewed negatively by parents

Projected Zionville Road Split Attending Leo Hayes High					
Year	9	10	11	12	Total
2014	3	2	7	8	20
2015	3	3	2	7	15
2016	-	3	3	2	8
2017	4	-	3	3	10
2018	2	4	-	3	9
2019	5	2	4	-	11
2020	6	5	2	4	17
2021	3	6	5	2	16
2022	3	3	6	5	17
2023	1	3	3	6	13

Appendix F – Scenario 2c details (potential Portobello Drive school boundary change)

Scenario 2c: Potential Leo Hayes school boundary change selected for review in the southern part of the school boundary (Portobello Drive to Oromocto High)



Legend

1a. Proposed Portobello Drive division of Leo Hayes High School boundary to be included in Oromocto High School boundary

1b. Existing Leo Hayes High School boundary to remain as Leo Hayes High School boundary

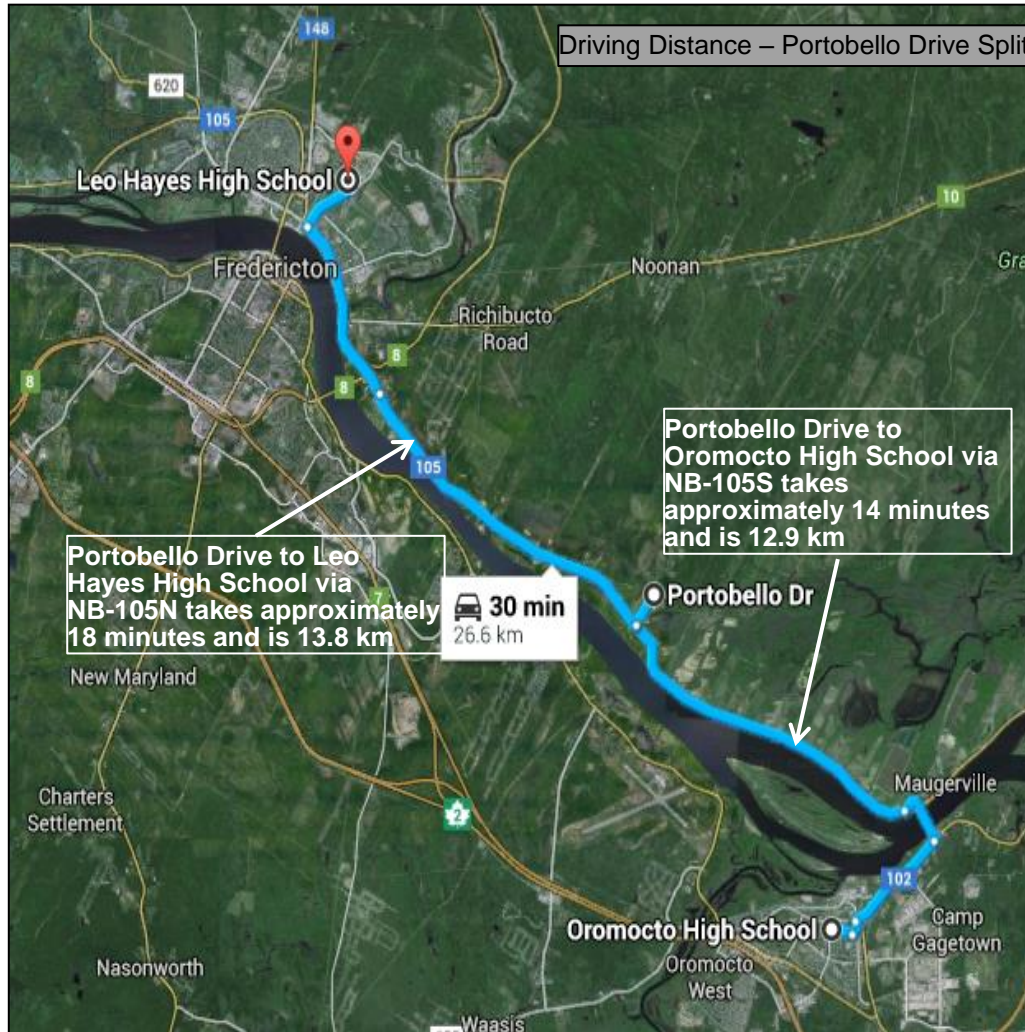
2. Existing Oromocto High School boundary to remain as Oromocto High School boundary

- ## Potential school boundary change – Portobello Drive
- Proposed division of Leo Hayes High School boundary noted as the Portobello Drive split (1a)
 - New school boundary would start in the west at Portobello Drive (PBD)
 - New school boundary would end in the east at the Burton Bridge On-ramp (BBO), connecting with the existing Oromocto High School boundary (2)
 - The Portobello Drive split is bounded to the south by the current Oromocto boundary (2) and includes the NB-105S to Maugerville
 - In the proposed boundary division, the Portobello Drive (1a) students would attend Oromocto High (2) and the remainder of the boundary would attend Leo Hayes High (1b)
 - Students in the proposed split (1a) attend Barkers Point (K-5) and Devon Middle (6-8), and they could attend Gesner Street and Ridgeview Middle

Source: ASD-W school transportation software - Versatrans.



Scenario 2c: Potential Leo Hayes school boundary change – Portobello Drive is approximately the mid-point between Leo Hayes High and Oromocto High (within 1 km)



Source: Google Maps

Potential school boundary change – Portobello Drive

- Students from the boundary split (at Portobello Drive) are 12.9 km (approximately 14 minute drive) from Oromocto High School via NB-105S (11.9 km from Ridgeview Middle School and 13.3 km to Gesner Street Elementary)
- Students from the boundary split (at Portobello Drive – where the majority of the students live) are 13.8 km (approximately 18 minute drive) from Leo Hayes High via NB-105N (11.8 km from Devon Middle School and 10.2 km from Barkers Point School)

Scenario 2c: Potential Leo Hayes school boundary change – Portobello Drive boundary split to Oromocto High is viable based on 2014-15 enrolments

(K-5, 6-8) Schools that Portobello Drive Split Attend by Grade Level (2014-15 Total Enrolment)

School Name	K	1	2	3	4	5	6	7	8	Total
Barkers Point school	6	6	4	4	6	3	-	-	-	29
Devon Middle school	-	-	-	-	-	-	3	1	7	11
Total for Portobello Drive Split:	6	6	4	4	6	3	3	1	7	40

Portobello Drive Split Attending Leo Hayes High (2014-15 Total Enrolment)

School Name	9	10	11	12	Total
Leo Hayes High school	4	10	7	8	29
Total for Portobello Drive Split:	4	10	7	8	29

Total Enrolment by Grade Level for Oromocto High (2014-15)

School Name	9	10	11	12	Grads	Total
Oromocto High school	283	268	319	290	0	1,160
Total for Oromocto High:	283	268	319	290	0	1,160

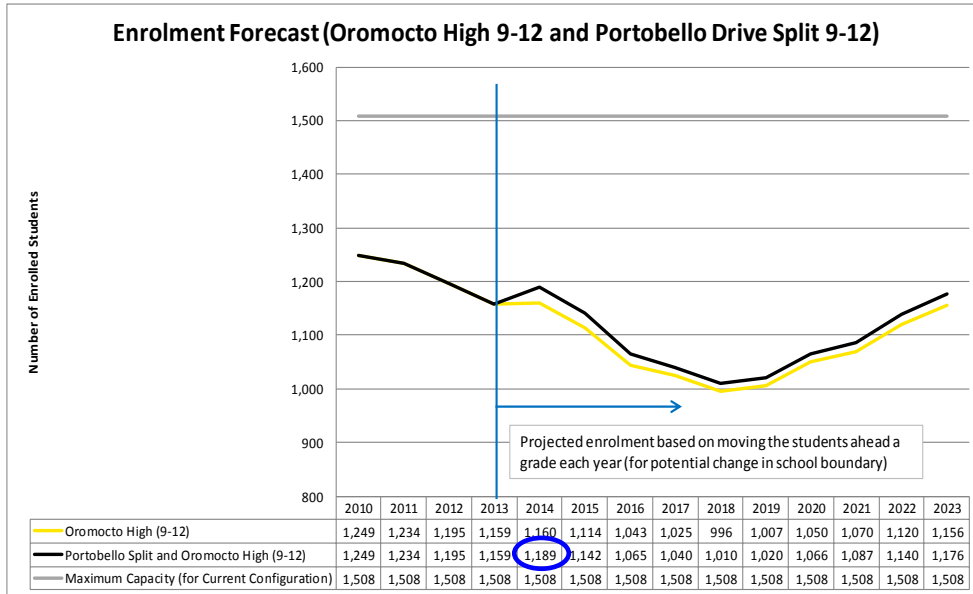
Potential school boundary change – Portobello Drive

- In 2014-15, there were 69 students living in the Portobello Drive boundary split (40 in grades K-8 and 29 attending Leo Hayes High School)
- In 2014-15, Oromocto High had a total enrolment of 1,160 students
- There were 52 homerooms confirmed at Oromocto High during a site visit for grades 9-12, including the high school computer labs, broad based technology, general science room, physics lab and biology lab
- Based on 2014-15 enrolments, the 1,189 total students from the Portobello Drive boundary split and Oromocto High School would have sufficient capacity (79%) and classrooms (44/52) for the current grade distribution of students

Summary of combining Portobello Drive boundary split students from Leo Hayes High to Oromocto High:

Grades	Size Limit	Classroom Enrolments (2014-15)											Space Requirements		
		Regular Program								French Immersion			Total	Class Rooms	Maximum Capacity
9	29	27	27	27	27	26	26	26	26	25	25	25	287	11	319
10	29	29	29	29	29	29	29	29	29	25	25	25	278	10	290
11	29	29	29	29	29	29	29	29	29	22	22	21	326	12	348
12	29	28	28	28	28	28	27	27	27	25	24		298	11	319
Potential Homerooms	29												0	8	232
Oromocto High (9-12)										1,160	Total:		1,189	52	1,508
Portobello Drive Split (9-12)										29	Projected Utilization:			78.8%	

Scenario 2c: Potential Leo Hayes school boundary change – Portobello Drive boundary split to Oromocto High is viable based on enrolment projections to 2023



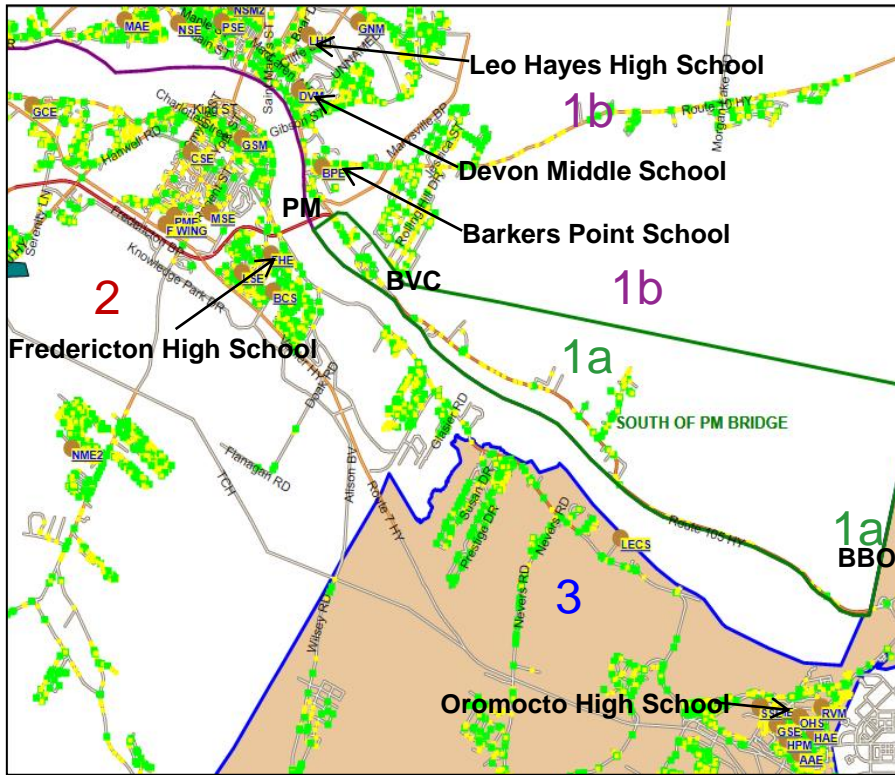
Projected Portobello Drive Split Attending Leo Hayes High

Year	9	10	11	12	Total
2014	4	10	7	8	29
2015	7	4	10	7	28
2016	1	7	4	10	22
2017	3	1	7	4	15
2018	3	3	1	7	14
2019	6	3	3	1	13
2020	4	6	3	3	16
2021	4	4	6	3	17
2022	6	4	4	6	20
2023	6	6	4	4	20

- ## Potential school boundary change – Portobello Drive
- Enrolment projections for Oromocto High indicate that the school will continue to decline in enrolment until 2019, when it will start to increase going forward (based on current student populations in elementary feed schools)
 - Oromocto High (9-12) enrolment would be at its highest in 2014-15, with the amalgamation of 9-12 students from Leo Hayes High living in the Portobello Drive split
 - Based on 2014-15 enrolment forecasts, the Portobello Drive school boundary split moving to Oromocto High School is a viable option
 - The number of students removed from Leo Hayes High would range from 29 to 13, depending on the year selected for a potential school boundary change
 - However, it is noted that school boundary changes are often viewed negatively by parents

Appendix G – Scenario 2d details (potential South of PM Bridge school boundary change)

Scenario 2d: Potential Leo Hayes school boundary change was selected for review in the southern part of the school boundary (South of Princess Margaret (PM) Bridge to FHS)



Legend

1a. Proposed South of PM Bridge division of Leo Hayes High School boundary to be included in Fredericton High School boundary

1b. Existing Leo Hayes High School boundary to remain as Leo Hayes High School boundary

2. Existing Fredericton High School boundary to remain as Fredericton High School boundary

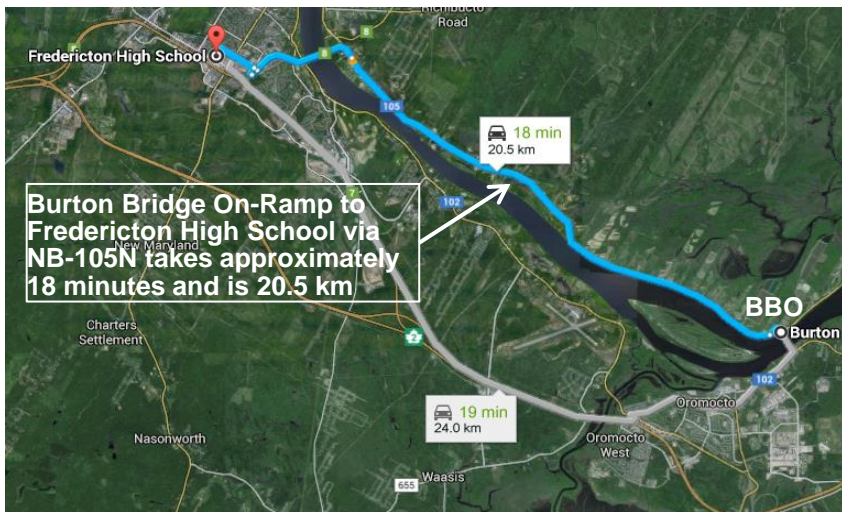
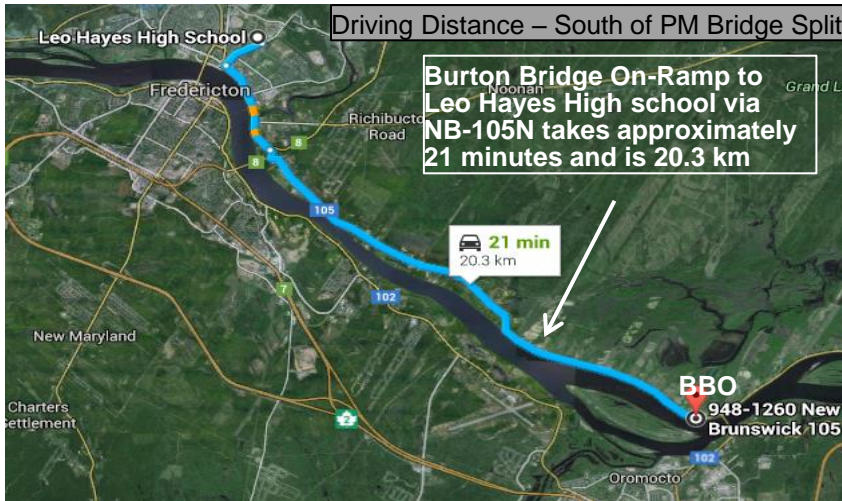
3. Existing Oromocto High School boundary to remain as Oromocto High School boundary

Potential school boundary change – South of PM Bridge

- Proposed division of Leo Hayes High School boundary noted as South of PM Bridge (1a)
- Western end of the new boundary split is the Princess Margaret Bridge (PM)
- Students living south of the PM along NB-105S would be included in the South of PM Bridge boundary (1a), connecting to current school boundary (3)
- Eastern boundary of the split ends at the Burton Bridge On-ramp (BBO), boundary (3)
- In the proposed boundary division, the South of PM Bridge students (1a) would attend Fredericton High School (FHS)
- Students from the South of PM Bridge split (1a) attend Barkers Point School (K-5) and Devon Middle School (6-8), which means they would go to a different high school than their peers at Devon Middle School
- Note: South of PM Bridge boundary split (scenario 2d) contains the students in the Portobello boundary split (scenario 2c) and either one can be an option (not both scenarios)

Source: ASD-W school transportation software - Versatrans.

Scenario 2d: Potential Leo Hayes school boundary change – South of PM Bridge is approximately the same distance going to either Leo Hayes High or Fredericton High



Potential school boundary change – South of PM Bridge

- Students from the furthest point east in the boundary split (Burton Bridge On-Ramp – BBO) are 20.3 km (approximately 21 minute drive) from Leo Hayes High School via NB-105N
- Students from the furthest point east in the boundary split (BBO) are 20.5 km (approximately 18 minute drive) from Fredericton High School via NB-105N
- The traditional northern school boundary for Fredericton High has been the Saint John River, with the students on the north side of Fredericton attending Leo Hayes High
- The proposed boundary split crosses the Saint John River, however, this is the only way to develop a boundary scenario utilizing the additional capacity at Fredericton High

Scenario 2d: Potential Leo Hayes school boundary change – South of PM Bridge boundary split to Fredericton High is viable based on 2014-15 enrolments

(K-5, 6-8) Schools that South of PM Bridge Split Attend by Grade Level (2014-15 Total Enrolment)

School Name	K	1	2	3	4	5	6	7	8	Total
Barkers Point school	9	8	11	5	11	9	-	-	-	53
Devon Middle school	-	-	-	-	-	-	10	4	12	26
Total for South of PM Bridge Split:	9	8	11	5	11	9	10	4	12	79

South of PM Bridge Split Attending Leo Hayes High (2014-15 Total Enrolment)

School Name	9	10	11	12	Total
Leo Hayes High school	12	12	14	13	51
Total for South of PM Bridge Split:	12	12	14	13	51

Total Enrolment by Grade Level for Fredericton High (2014-15)

School Name	9	10	11	12	Grads	Total
Fredericton High school	468	448	488	505	0	1,909
Total for Fredericton High:	468	448	488	505	0	1,909

Potential school boundary change – South of PM Bridge

- In 2014-15, there were 130 students living in the South of PM Bridge boundary split (79 in grades K-8 and 51 attending Leo Hayes High School)
- In 2014-15, Fredericton High had a total enrolment of 1,909 students
- There were 89 homerooms confirmed at Fredericton High during a site visit for grades 9-12, including the high school computer labs, broad based technology, general science room, physics lab and biology lab
- Based on 2014-15 enrolments, the 1,960 total students from the South of PM Bridge boundary split and Fredericton High School would have enough capacity (76%) and classrooms (71/89) for the current grade distribution of students

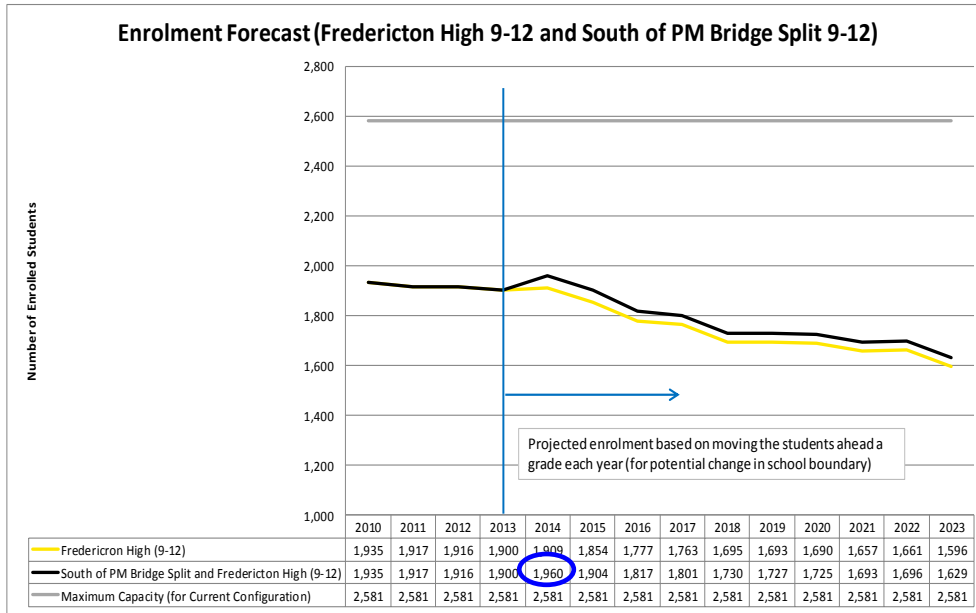
Summary of combining South of PM Bridge boundary split students from Leo Hayes High to Fredericton High:

Classroom Enrolments (2014-15)

Space Requirements

Grades	Size Limit	Regular Program												French Immersion				Total	Class Rooms	Maximum Capacity
9	29	29	29	28	28	28					29	28	28	28	480	17	493			
		29	28	28	28	28					28	28	28							
10	29	27	27	27	27	27	27				28	27	27	460	17	493				
		27	27	27	27	27					27	27	27							
11	29	28	28	28	28	28	28				28	28	28	502	18	522				
		28	28	28	28	28	27				28	28	27							
12	29	28	28	27	27	27	27	27	27		28	27		518	19	551				
		28	28	27	27	27	27	27			27	27								
Potential Homerooms	29													0	18	522				
Fredericton High (9-12)											1,909	Total		1,960	89	2,581				
South of PM Bridge Split (9-12)											51	Projected Utilization:			75.9%					

Scenario 2d: Potential Leo Hayes school boundary change – South of PM Bridge boundary split to Fredericton High is viable based on enrolment projections until 2023



Potential school boundary change – South of PM Bridge

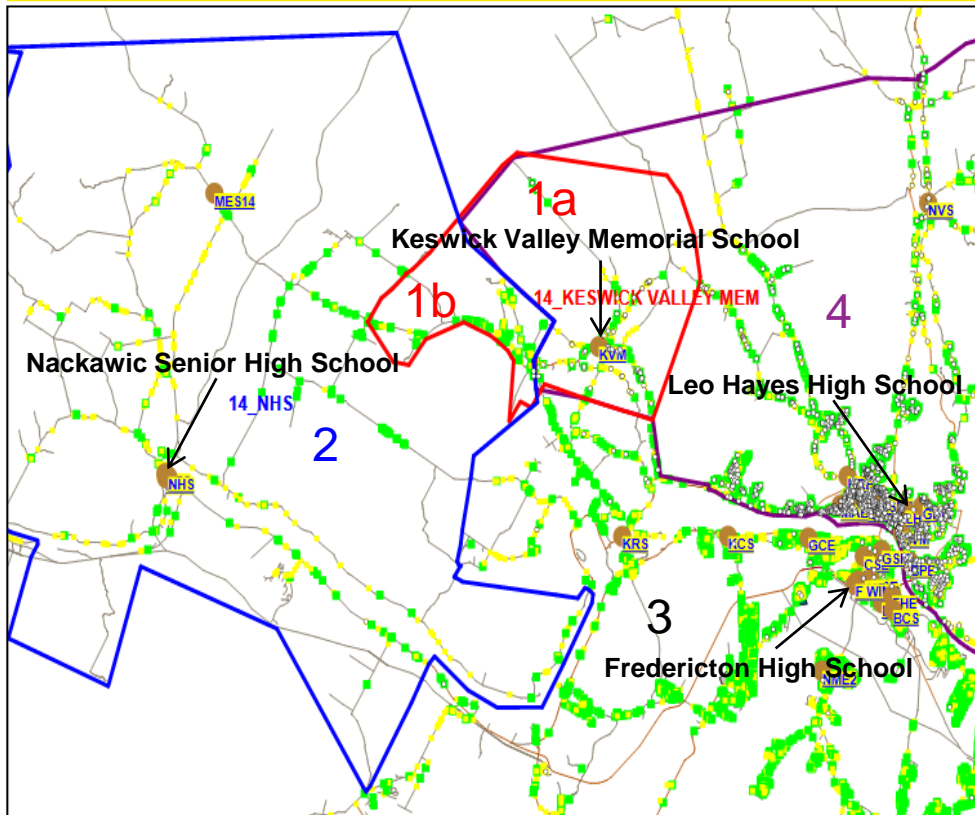
- Enrolment projections for Fredericton High indicate that the school will continue to decline in enrolment
- Fredericton High (9-12) enrolment would be at its highest in 2014-15, with the amalgamation of 9-12 students from Leo Hayes High living in the South of PM Bridge split
- Based on 2014-15 enrolment forecasts, the South of PM Bridge school boundary split moving to Fredericton High School is a viable option
- The number of students removed from Leo Hayes High would range from 51 to 33, depending on the year selected for a potential school boundary change
- However, it is noted that school boundary changes are often viewed negatively by parents

Projected South of PM Bridge Split Attending Leo Hayes High

Year	9	10	11	12	Total
2014	12	12	14	13	51
2015	12	12	12	14	50
2016	4	12	12	12	40
2017	10	4	12	12	38
2018	9	10	4	12	35
2019	11	9	10	4	34
2020	5	11	9	10	35
2021	11	5	11	9	36
2022	8	11	5	11	35
2023	9	8	11	5	33

Appendix H – Scenario 2e details (potential Keswick Valley Memorial school boundary change)

Scenario 2e: Potential Leo Hayes school boundary change was selected for review in the western part of the school boundary (Keswick Valley Memorial to Nackawic)



Legend

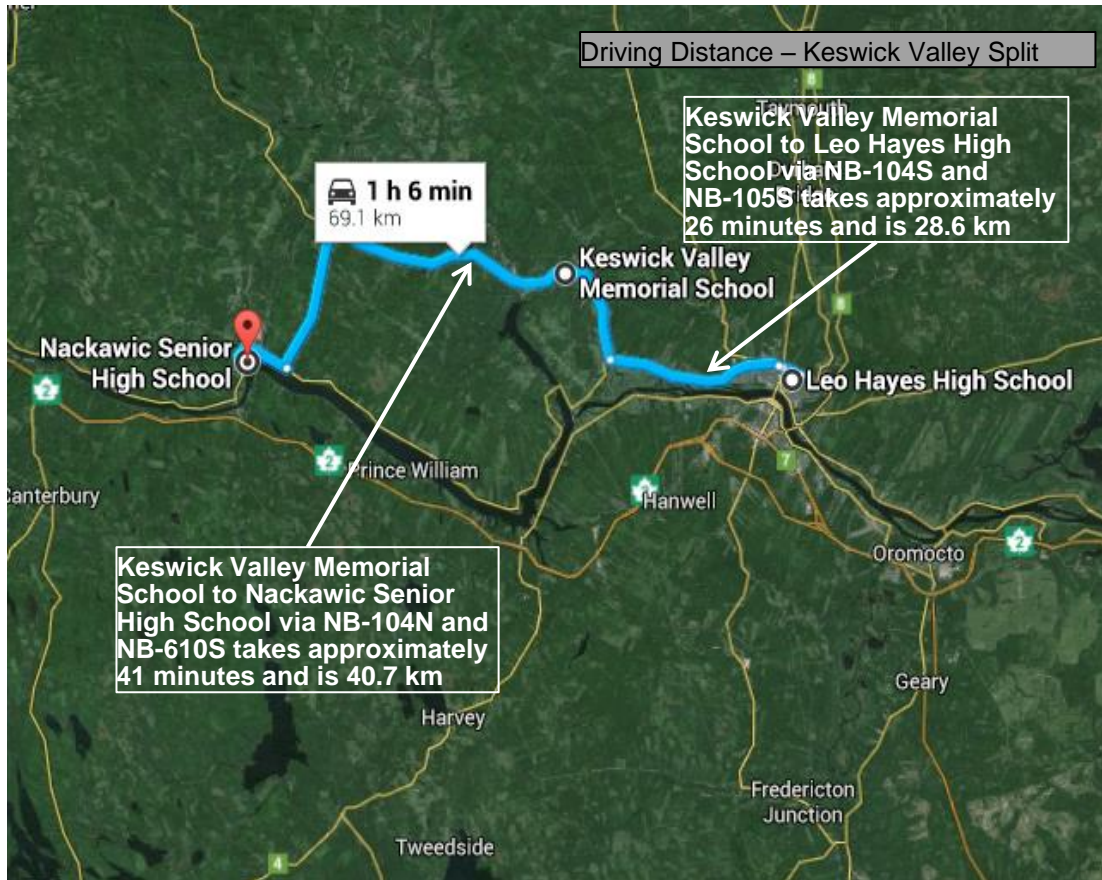
- 1a. and 1b: Keswick Valley Memorial School boundary proposed to move to Nackawic Senior High School boundary
- 2: Present Nackawic Senior High School boundary
- 3: Present Fredericton High School boundary
- 4. Present Leo Hayes High School boundary

Potential school boundary change – Keswick Valley Memorial (KVM)

- Proposed division of Leo Hayes High School boundary noted as the Keswick Valley Memorial split (1a)
- Presently, a portion of the KVM (K-8) school boundary (1a) is within the Leo Hayes High School boundary (4) and the other section (1b) is within the Nackawic Senior High School boundary (2)
- This proposed boundary change will see the entire KVM (K-8) school boundary (1a and 1b) moved back to Nackawic Senior High School (as it did before Leo Hayes High School was built in 2000)
- Moving the Keswick Valley Memorial split (1a) back to Nackawic Senior High would mean that all students in KVM (K-8) would attend the same high school in the future

Source: ASD-W school transportation software - Versatrans.

Scenario 2e: Potential Leo Hayes school boundary change – Keswick Valley Memorial split is closer to Leo Hayes High than it is to Nackawic Senior High (by approximately 12 km)



Potential school boundary change– Keswick Valley Memorial (KVM)

- KVM (K-8) school is about the mid-point within the southern half of the Keswick Valley Memorial split
- KVM (K-8) school is 40.7 km (approximately 41 minute drive) from Nackawic Senior High School via NB-104N and NB-610S
- KVM (K-8) school is 28.6 km (approximately 26 minute drive) from Leo Hayes High School via NB-104S and NB-105S
- The potential boundary split at Keswick Valley Memorial is approximately 12.1 km further (approximately 15 minutes) to Nackawic Senior High than it is to Leo Hayes High
- Students living in the school boundary to the north of KVM have further to travel than noted above

Note: In discussing the effects of the boundary change on school busing, the District noted that buses already serve the area because of the split in the zone (two high schools). It is likely that busing costs would be reduced since there would be no duplication of service within the zone (despite the further distance to Nackawic).

Source: Google Maps

Scenario 2e: Potential Leo Hayes school boundary change – Keswick Valley Memorial boundary split to Nackawic Senior High is viable based on 2014-15 enrolments

(K-8) Schools that Keswick Valley Memorial Split Attend by Grade Level (2014-15 Total Enrolment)

School Name	K	1	2	3	4	5	6	7	8	Total
Keswick Valley Memorial school*	19	18	13	17	16	14	16	13	20	146
Total for Keswick Valley Memorial Split:	19	18	13	17	16	14	16	13	20	146

*Note: Enrolment of the Keswick Valley Memorial (K-8) students living in the Keswick Valley Memorial school boundary split has been estimated as 60% of the student enrolment in each grade at the school (based on Versatrans statistics for 9-12 in the boundary split).

Schools that Keswick Valley Split Attended by Grade Level (2014-15 Total Enrolment)

School Name	9	10	11	12	Total
Leo Hayes High school	18	19	12	13	62
Nackawic Senior High school	0	0	1	1	2
Total for Keswick Valley Split:	18	19	13	14	64

Total Enrolment by Grade Level for Nackawic Senior High (2014-15)

School Name	9	10	11	12	Grads	Total
Nackawic Senior High school	66	60	80	55	-	261
Total for Nackawic Senior High:	66	60	80	55	0	261

Summary of combining Keswick Valley Memorial boundary split students from Leo Hayes High to Nackawic Senior High:

Classroom Enrolments (2014-15)

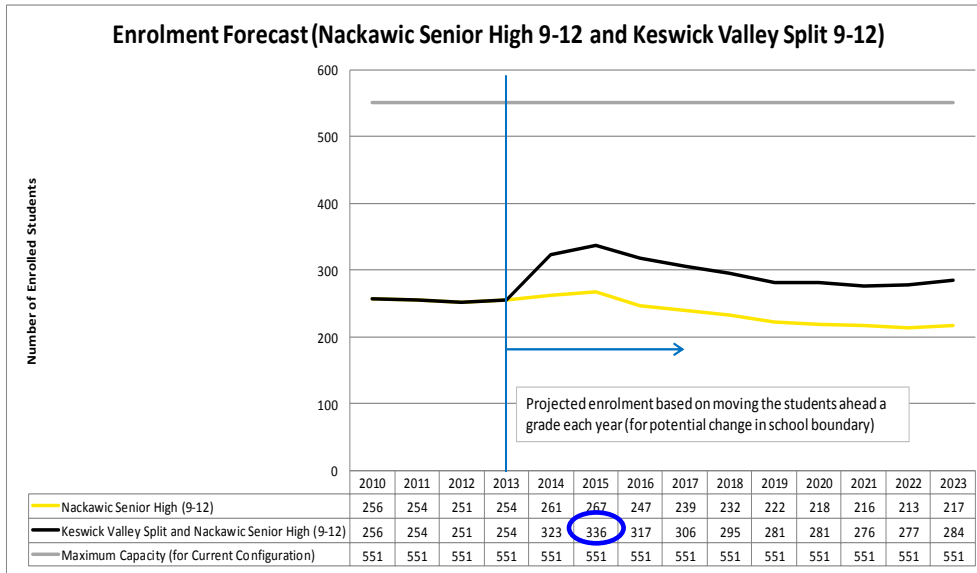
Space Requirements

Grades	Size Limit	Classroom Enrolments (2014-15)						Space Requirements				
		Regular Program			French Immersion			Total	Class Rooms	Maximum Capacity		
9	29	21	21	20			22		84	4	116	
10	29	29	29				21		79	3	87	
11	29	26	26	25			15		92	4	116	
12	29	28	28				12		68	3	87	
Potential Homerooms	29								0	5	145	
		Nackawic Enrolment			261			Total:		323	19	551
		Keswick Valley Split Enrolment			62			Projected Utilization:		58.6%		

Potential school boundary change – Keswick Valley Memorial (KVM)

- In 2014-15, there were 208 students living in the Keswick Valley boundary split (146 in grades K-8 and 62 attending Leo Hayes High School)
- In 2014-15, Nackawic Senior High had a total enrolment of 261 students
- There were 19 homerooms confirmed at Nackawic Senior High during a site visit for grades 9-12, including the high school computer labs, broad based technology, general science room, and biology lab
- Based on 2014-15 enrolments, the 323 total students from the Keswick Valley Memorial boundary split and Nackawic Senior High School would have sufficient capacity (59%) and classrooms (14/19) for the current grade distribution of students

Scenario 2e: Potential Leo Hayes school boundary change – Keswick Valley Memorial boundary split to Nackawic High is viable based on enrolment projections until 2023



Projected Keswick Valley Memorial Split Attending Leo Hayes High

Year	9	10	11	12	Total
2014	18	19	12	13	62
2015	20	18	19	12	69
2016	13	20	18	19	70
2017	16	13	20	18	67
2018	14	16	13	20	63
2019	16	14	16	13	59
2020	17	16	14	16	63
2021	13	17	16	14	60
2022	18	13	17	16	64
2023	19	18	13	17	67

Note: Enrolment of the Keswick Valley Memorial (K-8) students living in the Keswick Valley Memorial school boundary split has been estimated as 60% of the student enrolment in each grade at the school (based on Versatrans statistics for 9-12 in the boundary split).

Potential school boundary change – Keswick Valley Memorial (KVM)

- Enrolment projections for Nackawic Senior High indicate that the school will start to decline after 2015
- Nackawic Senior High (9-12) enrolment would be at its highest in 2015-16, with the amalgamation of 9-12 students from Leo Hayes High living in the Keswick Valley Memorial split
- Based on 2014-15 enrolment forecasts, the Keswick Valley Memorial school boundary split moving to Nackawic Senior High School is a viable option
- The number of students removed from Leo Hayes High would range from 59 to 70, depending on the year selected for a potential school boundary change
- However, it is noted that school boundary changes are often viewed negatively by parents

Appendix I – Scenario 2 summary details (potential school boundary change combinations for Leo Hayes High)

Scenario 2 Summary: Potential Leo Hayes school boundary changes – combination 1 redistributes the most students and reduces the number of homerooms required by 8

Combination 1 of the potential school boundary changes includes the Durham Bridge split to the north (scenario 2a), the Keswick Valley Memorial split to the west (scenario 2e) and South of PM Bridge split (scenario 2d) to the south of the Leo Hayes school boundary:

Combination 1: Durham Bridge / Keswick Valley Memorial / South of PM Bridge Students within Boundary Changes (Based on 2014-15 Actuals)					
Boundary Split	9	10	11	12	Total
Durham Bridge (2a)	8	14	19	11	52
Keswick Valley Memorial (2e)	18	19	12	13	62
South of PM Bridge (2d)	12	12	14	13	51
Combination 1 Subtotal	38	45	45	37	165

Note: Durham Bridge students would now attend Stanley Regional High, Keswick Valley Memorial students would now attend Nackawic Senior High and the South of PM Bridge students would now attend Fredericton High.

Combination 1: Students Remaining at Leo Hayes High after Boundary Changes (Based on 2014-15 Actuals)					
Boundary Total	9	10	11	12	Total
Leo Hayes High School (A)	408	424	486	429	1,747
Combination 1 Subtotal (B)	38	45	45	37	165
Students Remaining (A-B)	370	379	441	392	1,582

Based on the current grade distribution of students, combination 1 would reduce the number of homeroom classrooms required at Leo Hayes by 8.

Potential school boundary change – Leo Hayes summary

- Combination 1 of the proposed boundary splits moves the most students out of Leo Hayes High (165 based on 2014-15 enrolments)
- Projected enrolment at Leo Hayes High would be 1,582 students (based on 2014-15 enrolments)
- This would reduce the amount of homerooms required at Leo Hayes by 8 (the current number of mobiles at the school), with the potential to move the out-of-zone students as well
- Additionally, this combination of boundary scenarios sends students to three high schools with declining enrolment projections
- This includes Fredericton High, which is the province’s largest high school and is currently undergoing a mid-life upgrade

Scenario 2 Summary: Potential Leo Hayes school boundary changes – combination 2 redistributes the 3rd most students and reduces the number of homerooms required by 7

Combination 2 of the potential school boundary changes include the Zionville split to the north (scenario 2b), the Keswick Valley Memorial split to the west (scenario 2e) and South of PM Bridge split (scenario 2d) to the south of the Leo Hayes school boundary:

Combination 2: Zionville Road / Keswick Valley Memorial / South of PM Bridge Students within Boundary Changes (Based on 2014-15 Actuals)					
Grade	9	10	11	12	Total
Zionville Road (2b)	3	2	7	8	20
Keswick Valley Memorial (2e)	18	19	12	13	62
South of PM Bridge (2d)	12	12	14	13	51
Combination 2 Subtotal	33	33	33	34	133

Note: Zionville Road students would now attend Stanley Regional High, Keswick Valley Memorial students would now attend Nackawic Senior High and the South of PM Bridge students would now attend Fredericton High.

Combination 2: Students Remaining at Leo Hayes High after Boundary Changes (Based on 2014-15 Actuals)					
Boundary Total	9	10	11	12	Total
Leo Hayes High School (A)	408	424	486	429	1,747
Combination 2 Subtotal (B)	33	33	33	34	133
Students Remaining (A-B)	375	391	453	395	1,614

Based on the current grade distribution of students, combination 2 would reduce the number of homeroom classrooms required at Leo Hayes by 7.

Potential school boundary change – Leo Hayes summary

- Combination 2 of the proposed boundary splits moves the third most students out of Leo Hayes High (133 based on 2014-15 enrolments)
- Projected enrolment at Leo Hayes High would be 1,614 students (based on 2014-15 enrolments)
- This would reduce the amount of homerooms required at Leo Hayes by 7 (there are currently 8 mobiles at the school), with the potential to move the out-of-zone students as well
- Additionally, this combination of boundary scenarios sends students to three high schools with declining enrolment projections
- This includes Fredericton High, which is the province’s largest high school and is currently undergoing a mid-life upgrade

Scenario 2 Summary: Potential Leo Hayes school boundary changes – combination 3 redistributes the 2nd most students and reduces the number of homerooms required by 7

Combination 3 of the potential school boundary changes includes the Durham Bridge split to the north (scenario 2a), the Keswick Valley Memorial split to the west (scenario 2e) and Portobello Drive split (scenario 2c) to the south of the Leo Hayes school boundary:

Combination 3: Durham Bridge / Keswick Valley Memorial / Portobello Drive Students within Boundary Changes (Based on 2014-15 Actuals)					
Grade	9	10	11	12	Total
Durham Bridge (2a)	8	14	19	11	52
Keswick Valley Memorial (2e)	18	19	12	13	62
Portobello Drive (2c)	4	10	7	8	29
Combination 3 Subtotal	30	43	38	32	143

Note: Durham Bridge students would now attend Stanley Regional High, Keswick Valley Memorial students would now attend Nackawic Senior High and the Portobello Drive students would now attend Oromocto High.

Combination 3: Students Remaining at Leo Hayes High after Boundary Changes (Based on 2014-15 Actuals)					
Boundary Total	9	10	11	12	Total
Leo Hayes High School (A)	408	424	486	429	1,747
Combination 3 Subtotal (B)	30	43	38	32	143
Students Remaining (A-B)	378	381	448	397	1,604

Based on the current grade distribution of students, combination 3 would reduce the number of homeroom classrooms required at Leo Hayes by 7.

Potential school boundary change – Leo Hayes summary

- Combination 3 of the proposed boundary splits moves the second most students out of Leo Hayes High (143 based on 2014-15 enrolments)
- Projected enrolment at Leo Hayes High would be 1,604 students (based on 2014-15 enrolments)
- This would reduce the amount of homerooms required at Leo Hayes by 7 (there are currently 8 mobiles at the school), with the potential to move the out-of-zone students as well
- Additionally, this combination of boundary scenarios sends students to two high schools with declining enrolment projections (Stanley Regional High and Nackawic Senior High)
- Oromocto High is projected to decline in enrolment, but will start increasing by 2019
- This combination does not utilize the extra capacity of Fredericton High, which is the province's largest high school

Scenario 2 Summary: Potential Leo Hayes school boundary changes – combination 4 redistributes the 4th most students and reduces the number of homerooms required by 4

Combination 4 of the potential school boundary changes includes the Zionville Road split to the north (scenario 2b), the Keswick Valley Memorial split to the west (scenario 2e) and Portobello Drive split (scenario 2c) to the south of the Leo Hayes school boundary:

Combination 4: Zionville Road / Keswick Valley Memorial / Portobello Drive Students within Boundary Changes (Based on 2014-15 Actuals)					
Grade	9	10	11	12	Total
Zionville Road (2b)	3	2	7	8	20
Keswick Valley Memorial (2e)	18	19	12	13	62
Portobello Drive (2c)	4	10	7	8	29
Combination 4 Subtotal	25	31	26	29	111

Note: Zionville Road students would now attend Stanley Regional High, Keswick Valley Memorial students would now attend Nackawic Senior High and the Portobello Drive students would now attend Oromocto High.

Combination 4: Students Remaining at Leo Hayes High after Boundary Changes (Based on 2014-15 Actuals)					
Boundary Total	9	10	11	12	Total
Leo Hayes High School (A)	408	424	486	429	1,747
Combination 4 Subtotal (B)	25	31	26	29	111
Students Remaining (A-B)	383	393	460	400	1,636

Based on the current grade distribution of students, combination 4 would reduce the number of homeroom classrooms required at Leo Hayes by 4.

Potential school boundary change – Leo Hayes summary

- Combination 4 of the proposed boundary splits moves the fourth most students out of Leo Hayes High (111 based on 2014-15 enrolments)
- Projected enrolment at Leo Hayes High would be 1,636 students (based on 2014-15 enrolments)
- This would reduce the amount of homerooms required at Leo Hayes by 4 (there are currently 8 mobiles at the school), with the potential to move the out-of-zone students as well
- Additionally, this combination of boundary scenarios sends students to two high schools with declining enrolment projections (Stanley Regional High and Nackawic Senior High)
- Oromocto High is projected to decline in enrolment, but will start increasing by 2019
- This combination does not utilize the extra capacity of Fredericton High, which is the province's largest high school

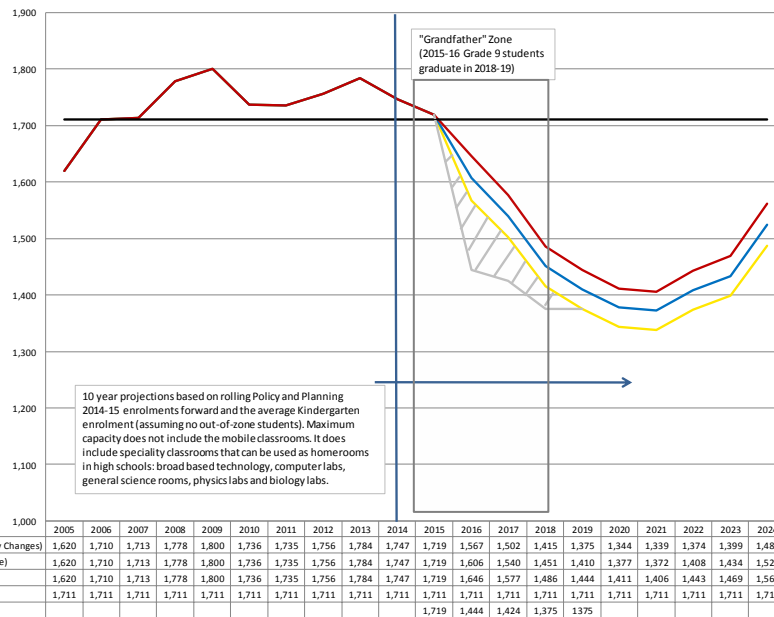
Recommend combination 1 of boundary changes (Durham Bridge, Keswick Valley Memorial and South of PM Bridge) to free space at Leo Hayes High and utilize available space

Leo Hayes High school						
Total Enrolment by Grade						
Enrolment Year	9	10	11	12	Grads	Total
2005-06	401	408	445	365	1	1,620
2006-07	466	405	455	378	6	1,710
2007-08	435	443	445	385	5	1,713
2008-09	472	428	530	341	7	1,778
2009-10	428	467	488	413	4	1,800
2010-11	404	419	506	401	6	1,736
2011-12	434	414	460	421	6	1,735
2012-13	446	428	469	408	5	1,756
2013-14	424	456	503	393	8	1,784
2014-15	408	424	486	429	-	1,747

Enrolment forecast for Leo Hayes High School

- Leo Hayes High (LHHS) school's peak enrolment was in 2009-10 (1,800 students)
- Excluding out-of-zone students, LHHS enrolment will decline until 2022 based on the current enrolment in the feed middle schools, which have been declining
- Based on optimizing the space at three high schools that have declining enrolment projections and freeing up the most classrooms space at LHHS – recommend implementing combination 1 boundary changes (Durham Bridge, Keswick Valley Memorial and South of PM Bridge splits)
- Based on the projected enrolment decline, it would be possible to “grandfather” those students in the boundary change area who already attend LHHS
- Applying an optimistic 5% growth to the entire 2024-25 enrolment projection is 1,561 students after boundary changes
- Recommend reevaluating new wing later (by 2021) with these boundary changes

Enrolment Forecast (Leo Hayes High School - Less Potential Combination 1 School Boundary Changes)



Note: The projection does not include any out-of-zone students, which are assumed to be going to the high school within the school boundary they live in.

Source: EECD Policy and Planning Summary Statistics (ASD-W district does not have population forecasting software).

Appendix J – Shop class busing review details (cost of busing students to Fredericton High compared to cost of a new shop class)

Scenario 3: Review of busing shop class students to Fredericton High – Cost of busing is much cheaper than a new shop addition, recommend staying with status quo

The following shop class space requirements are based on EECD Planning Guidelines for Educational Facilities.

Class “D” estimate is only to approximate the magnitude of the construction costs. The actual increase in operational fees paid to the P3 provider would have to be negotiated.

School Grade Levels:	9-12
Number of Students:	1,747
Space Type	Total Area (m²)
Upgrade Wood Shop	175
Metal/Auto Shop	300
Sub Total (m ²):	475
Systems and Services (m ²):	223
Grand Total (m ²):	698
Estimated Construction Cost/m ² :	\$2,690
Estimated Construction Cost:	\$1.9M
Land Purchase (depending on cost of land and location):	-
Total Estimated Cost:	\$1.9M

Note: Class “D” estimate (± 30%) based on the EECD Planning Guidelines for Educational Facilities, as an estimate for this report only.

Cost estimates will be adjusted when the EECD Infrastructure and project team establish the actual space allocation for the school addition.

Estimated Cost of Busing Shop Students from Leo Hayes High			
(A) Estimated km/Day	(B) Estimated Days of Travel	(C) Cost of Busing per km	Total Estimated Cost of Busing (AxBxC)
24	180	\$0.81	\$3,500

Note: Assuming the bus driver is paid as part of their normal hours and that travel for the shop students is outside of the normal bus operating hours for taking students to school. The estimated km/day is based on the bus making two return trips from Leo Hayes, as noted by the District.

Source: EECD Planning Guidelines for Educational Facilities and ASD-W school transportation software – Versatrans..

Cost of busing shop class students to Fredericton High

- Leo Hayes High does not have a Metal/Auto Shop and the Wood Shop is smaller than recommended in the Planning Guidelines
- Some Leo Hayes High students are being bused to Fredericton High for shop class
- Class “D” estimate of the construction costs for a new Metal/Auto Shop and to upgrade the Wood Shop to Planning Guideline is \$1.9M
- The approximate annual cost of busing the shop students is \$3,500 per year including gas and maintenance costs
- Even with estimating the building to last 100 years, the total cost of busing would be \$350K
- Leo Hayes High is a P3 school, so a new shop addition would have to be negotiated
- The cost of busing is much cheaper than a new shop addition, recommend not to build a school addition only for shop space

Appendix K – New Francophone school for north side of Fredericton

New Francophone K-8 school scheduled to open September 2015 on Fredericton's north side – some Francophone students attending Leo Hayes High feed schools may switch

View of new Francophone K-8 school scheduled to open September 2015 on Fredericton's North Side (corner of Eco Terra Drive and Noble Street):



EECD Infrastructure Planning noted that *a recent study compiled for the new Francophone school indicated that there are 875 “ayants droits” living on the north side. These students have the right to choose to enter the Francophone school system if they wish. Given the data and projections in the study, it is possible that somewhere in the range of 20-30 fewer students could be attending LHHS beginning in the 2016-17 school year. That could equate to 80-120 fewer students attending the school by 2019-20.*

Source: Google Maps and http://www2.gnb.ca/content/gnb/en/multimedia/mmrenderer.2013.07.2013-07-02_3.jpg.html

New Francophone K-8 school for north side

- On 2 July 2013, the Minister of Education and Early Childhood Development announced the location for a new K-8 Francophone school on Fredericton's north side
- The school is scheduled to open in September 2015
- It was noted that Fredericton's two existing Francophone schools (École des Bâtisseurs and École Sainte-Anne) were at maximum capacity at the time
- There is potential for some Francophone students who may have been attending Leo Hayes High feed schools to switch to the new school, making the current projections more conservative
- This could potentially lower the enrolment projections for Leo Hayes High noted within this report

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