

School Efficiency Data and Observations – Fairbanks North Star Borough School District



Shannon Bingham, Western Demographics, Inc.

9/21/21 – *Site Work Conducted in SY 2019/20*

Executive Summary

Western Demographics, Inc. (Western) was hired during the 2019-2020 school year to conduct a school efficiency study that would evaluate school condition and utilization data and identify potential opportunities for savings. The work was interrupted by the pandemic and has been reactivated for final consideration in the Fall of 2021. In the event that the Board of Education decides to continue this work, a stakeholder steering committee would be identified to examine the data presented in summary form in this report. The data, collected by Shannon Bingham of Western, is presented for consideration, but does not represent recommendations from Western or the administration. The eventual stakeholder committee is intended to address the issues and data and make recommendations to the Board regarding the potential for action. The information presented is informative to the committee process and is intended as a starting point for consideration of the school efficiency issue and any potential opportunities for savings that might result. The "State of the District" is presented in summary form below so that the facts related to school efficiency factors are easy to understand.

School Condition - Most FNSB schools are in excellent condition and many are improving as resources become available. The report evaluates them against each other according to the following factors:

- Major systems (HVAC, Roof, Pavement, Electrical, Plumbing, Windows, Communications)
- Age
- Recent investment

Several District Schools Have Lower Major Systems Condition Scores

- **Elementary** – Ann Wien, Crawford, Anderson, Arctic Light, Recent roof issues have added Joy to the list
- **Middle School** – Tanana, Ben Eielson Jr. / Sr.
- **High School** – Lathrop

Opportunities for Savings - Several strategies are available to allow potential savings:

- Consider the relocation of programs in leased facilities to district-owned buildings
- Consider combining facilities with significant amounts of available space into fewer buildings

School Utilization - The ratio of enrollment vs. capacity or utilization is the common metric for efficiency. Many District schools fall below 70 percent utilization. The Alaska DEED's office's school utilization rates identified clusters of schools with available space:

- **Elementary - Eielson AFB Area** – Anderson, Crawford
- **Elementary - North Pole Area** - Midnight Sun, North Pole, Ticasuk Brown
- **Elementary - Central Fairbanks** - Anne Wien, Denali, Hunter, Joy
- **Middle School** – Randy Smith, Ryan, Tanana



Operations Department Condition Ratings

The Operations Department staff evaluated the schools during the 2019-2020 school year based on major systems function and repair need.

Upper Grouping	Middle Grouping	Lower Grouping
Ladd K-8	Joy K-8	Anderson
Midnight Sun ES	Pearl Creek ES	Arctic Light
Nordale ES	TK Brown ES	Crawford
University Park ES	Two Rivers	Hunter ES
North Pole MS	Randy Smith MS	North Pole ES
Ryan MS	Tanana MS	Salcha ES
North Pole HS	Hutchison HS	Anne Wien ES
Denali ES	West Valley HS	Weller ES
Barnette		Woodriver ES
		Eielson Jr. / Sr.
		Lathrop HS
		Howard Luke

School condition ratings vary throughout the district based on the following evaluation based on major systems function. These rankings were established via polling the Operations Department techs and managers.

- HVAC
- Roof
- Pavement
- Turf
- Electrical
- Plumbing
- Windows
- Communications

- Recent roof issues have moved Joy into the Lower Grouping

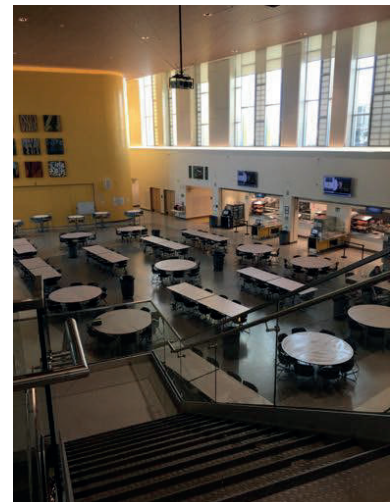


Age

The Operations Department staff evaluated the schools during the 2019-2020 school year based on age.

Upper Grouping	Middle Grouping	Lower Grouping
Crawford	Arctic Light	Anderson
Denali ES	Joy K-8	Barnette
Hunter ES	Ladd K-8	Midnight Sun ES
Nordale ES	TK Brown ES	Pearl Creek ES
North Pole ES	University Park ES	Salcha ES
Randy Smith MS	Anne Wien ES	Two Rivers
Ryan MS	Lathrop HS	Weller ES
Eielson Jr. / Sr.	Howard Luke	Woodriver ES
Hutchison HS		North Pole MS
West Valley HS		Tanana MS
		North Pole HS

The age groupings were based on the average age of facilities including an adjustment for additions and renovations. Three evenly-sized groupings were developed.



Recent Investment

The Operations Department staff evaluated the schools during the 2019-2020 school year based on recent investment.

Upper Grouping	Middle Grouping	Lower Grouping
Anderson	Arctic Light	Crawford
Joy K-8	North Pole ES	Denali ES
Ladd K-8	Weller ES	Hunter ES
Midnight Sun ES	Eielson Jr. / Sr.	Nordale ES
Pearl Creek ES	West Valley HS	Anne Wien ES
Salcha ES		Randy Smith MS
TK Brown ES		Ryan MS
Two Rivers		Hutchison HS
University Park ES		Lathrop HS
Woodriver ES		Howard Luke
North Pole MS		
Tanana MS		
North Pole HS		
Barnette		

The district has continued to invest in its facilities regardless of their age. In addition to periodic large projects, on-going maintenance has been very effective. The grouping shown here is based on the relative expenditure grouped by extent.



2020 -21 DEED School Utilization

2020-2021 FNSBSD DEED CAPACITIES WITH FALL 2021 ENROLLMENTS				
SCHOOL	GROSS SQ.FT.	FALL 2021 ENROLLMENT	DEEDCAPACITY	UTILIZATION
Anderson Elementary	43,996	263	372	71%
Anne Wien Elementary	63,532	317	553	57%
Arctic Light Elementary	68,272	439	576	76%
Barnette Elementary	54,895	402	427	94%
Crawford Elementary	63,532	268	553	48%
Denali Elementary	49,210	275	422	65%
Hunter Elementary	59,812	322	520	62%
Joy Elementary	60,642	330	503	66%
Ladd Elementary	63,455	376	540	70%
Midnight Sun Elementary	61,686	334	537	62%
Nordale Elementary	49,210	290	422	69%
North Pole Elementary	57,154	332	495	67%
Pearl Creek Elementary	62,982	386	548	70%
Salcha Elementary	14,406	67	82	82%
Ticasuk Brown Elementary	63,761	396	556	71%
Two Rivers Elementary	22,200	76	99	77%
University Park Elementary	64,699	333	564	59%
Weller Elementary	65,259	377	569	66%
Woodriver Elementary	64,408	412	561	73%
SUB TOTAL		5995	8899	67%
North Pole Middle	113,306	526	685	77%
Randy Smith Middle	74,589	277	422	66%
Ryan Middle	104,270	405	626	65%
Tanana Middle	101,069	305	602	51%
SUB TOTAL		1513	2335	65%
Ben Eielson Jr./Sr. High	103,200	339	616	55%
Hutchison High School	87,190	379	510	74%
Lathrop High	234,412	883	1421	62%
Howard Luke				
North Pole High	156,362	615	946	65%
West Valley High	216,884	889	1314	68%
HS SUB TOTAL		3105	4807	65%
GRAND TOTALS		10,613	16,041	66%

The Alaska State DEED office has developed school utilization percentages based on their capacities. Many schools have space available with percent utilization values ranging from 50 to 70 percent as shown in the table.



Condition Indicators Ranked in Descending Order, by School Level

The Operations Department staff evaluations are shown here in descending order.

Operations Department Trade and Tech Ratings of Building Systems	Nordale ES	Denali ES	Hunter ES	Joy K-8	Ladd K-8	North Pole ES	Salcha ES	TK Brown ES	Two Rivers	University Park ES	Midnight Sun ES	Pearl Creek ES	Weller ES	Woodriver ES
Condition Score 3 to 1 with 3 = Best	3	3	3	2	1	1	2	1	2	1	1	1	2	1
Age - Combined Score	3	3	3	2	2	3	1	2	1	2	1	1	1	1
Recent Investment Score	1	1	1	3	3	2	3	3	3	3	3	3	2	3
Percentage Utilization - DEED 2018	3	2	2	2	3	3	3	3	3	2	3	3	3	3
Combined Score (Highest = best)	10	9	9	9	9	9	9	9	9	8	8	8	8	8

Operations Department Trade and Tech Ratings of Building Systems	Arctic Light	Anderson	Anne Wien-	Crawford
Condition Score 3 to 1 with 3 = Best	1	1	1	1
Age - Combined Score	2	1	2	3
Recent Investment Score	2	3	1	1
Percentage Utilization - DEED 2018	2	1	2	1
Combined Score (Highest = best)	7	6	6	6

Operations Department Trade and Tech Ratings of Building Systems	North Pole MS	Ryan MS	Randy Smith MS	Tanana MS	Eielson Jr. / Sr.
Condition Score 3 to 1 with 3 = Best	2	3	2	1	1
Age - Combined Score	1	3	3	1	3
Recent Investment Score	3	1	1	3	2
Percentage Utilization - DEED 2018	3	1	2	2	1
Combined Score (Highest = best)	9	8	8	7	7

Operations Department Trade and Tech Ratings of Building Systems	Hutchison HS	West Valley HS	North Pole HS	Lathrop HS
Condition Score 3 to 1 with 3 = Best	3	3	3	1
Age - Combined Score	3	3	1	2
Recent Investment Score	1	2	3	1
Percentage Utilization - DEED 2018	3	2	2	2
Combined Score (Highest = best)	10	10	9	6

The ratings are broken down by level here. Anne Wien and Joy have planned improvements with Wien having \$23M in improvements and Joy having \$18M focusing on its roof.

Education Program Opportunities and Impacts

There are education program implications associated with potential efficiency actions and school combinations.

Level of Service – Education Support – Leadership has evaluated the potential for larger programs at the elementary and middle school level to potentially result in a higher staff per student ratio and therefore a higher level of service and found little opportunity for improvement. Given the already high level of instructional support staffing in the central Fairbanks schools, based on the 45% free and reduced lunch rates, there would be little improvement in level of service if schools were combined. Some specialists serving multiple buildings might have better schedules with fewer locations to service. Level of service was not explored in the North Pole or Eielson AFB areas.

Course Offerings – Combining schools may enable slightly better elective opportunities in the elementary schools if the central Fairbanks elementary schools were larger. The potential to improve course offerings at the middle school seems more clear. A larger student body and faculty would allow flexibility to offer a richer and broader scope of course offerings in Fairbanks middle schools.

Special Education – Special Education program loading would be a concern in the central Fairbanks elementary schools with school combinations as there are four Intensive Resource (4 total classrooms) and two preschool classrooms (2 total classrooms) at AWE and JOY. These classrooms often require different equipment/facilities than a typical classroom. There is little concern regarding special education issues associated with a middle school combination in Fairbanks.

Title 1 Funding Impacts – The higher levels of free and reduced lunch in the central Fairbanks schools would probably result in Title 1 status being retained at the elementary level with a school combination, but Ryan MS has been identified as on threshold and a change in the student body may put its funding status at risk. Further analysis of student body make-up is required.

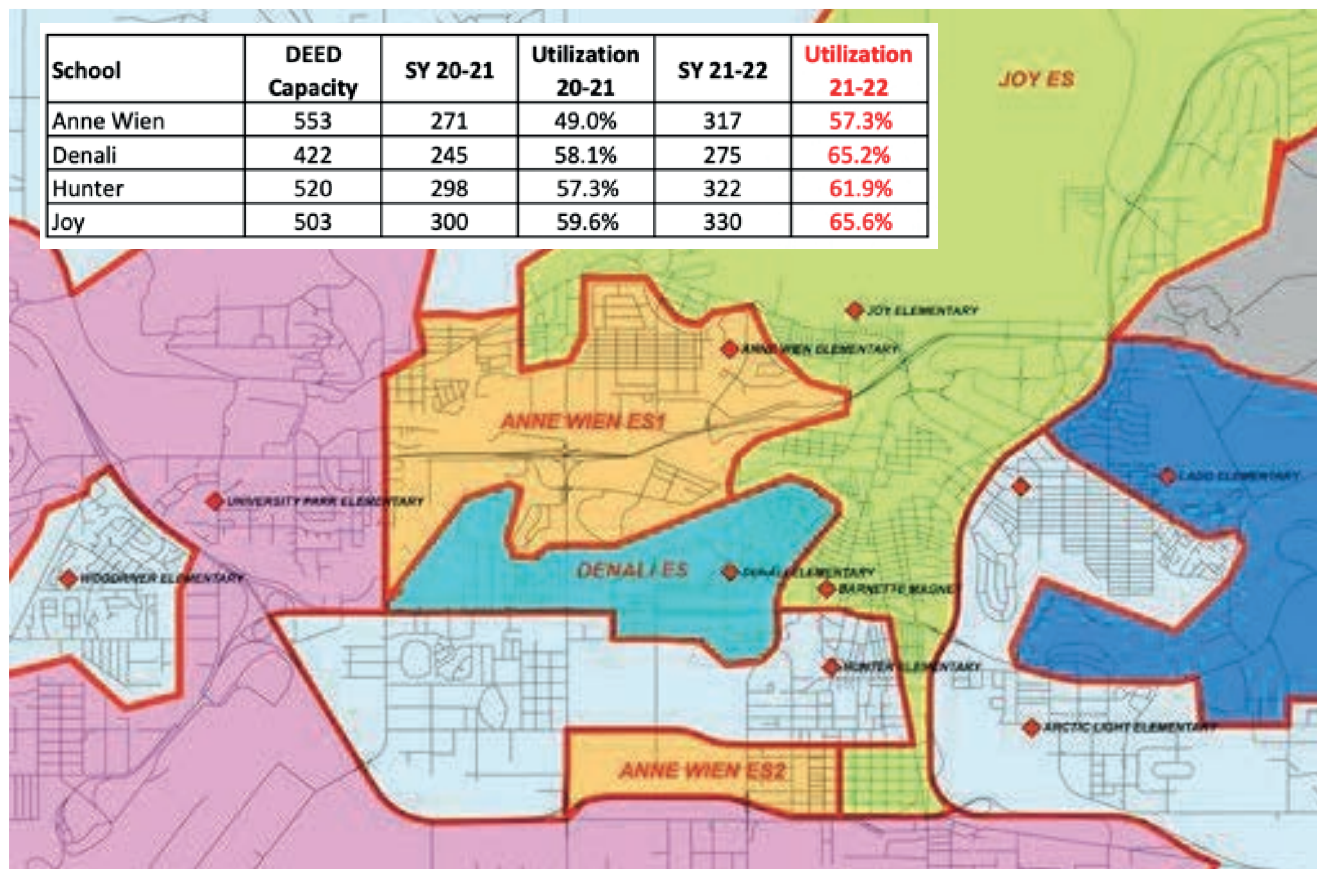
Potential Savings From Combinations – There is the potential to save approximately \$855,820 per year from an elementary combination including the adjustment for small school funding. The potential for annual savings from a middle school combination is \$1,214,986.

Transportation Impacts - Transportation impacts of school combinations are under review. In general, fewer locations results in savings, but the broad distribution of students in some areas is a concern.

Grade Reconfiguration in Fairbanks – The potential effects of converting Fairbanks to the K-5, 6-8, 9-12 grade configuration are also a consideration. North Pole and the Eielson area already use this configuration. This change was explored and found to improve middle school utilization by adding 6th grade to the current grade 7 and 8 middle schools. This would, however, worsen elementary school utilization by reducing the size of all schools using the K-6 format. This option remains a consideration, but is hampered by long-term traditions. Approximately two-thirds of Alaskan elementary schools use the K-6 grade configuration. Changes to this configuration have been difficult in other communities.

Central Fairbanks Elementary Schools with Available Space

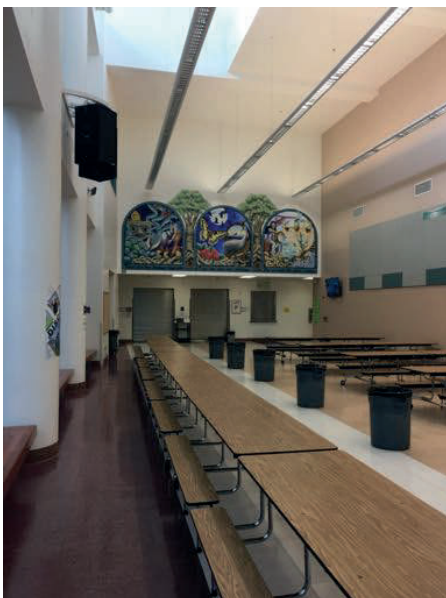
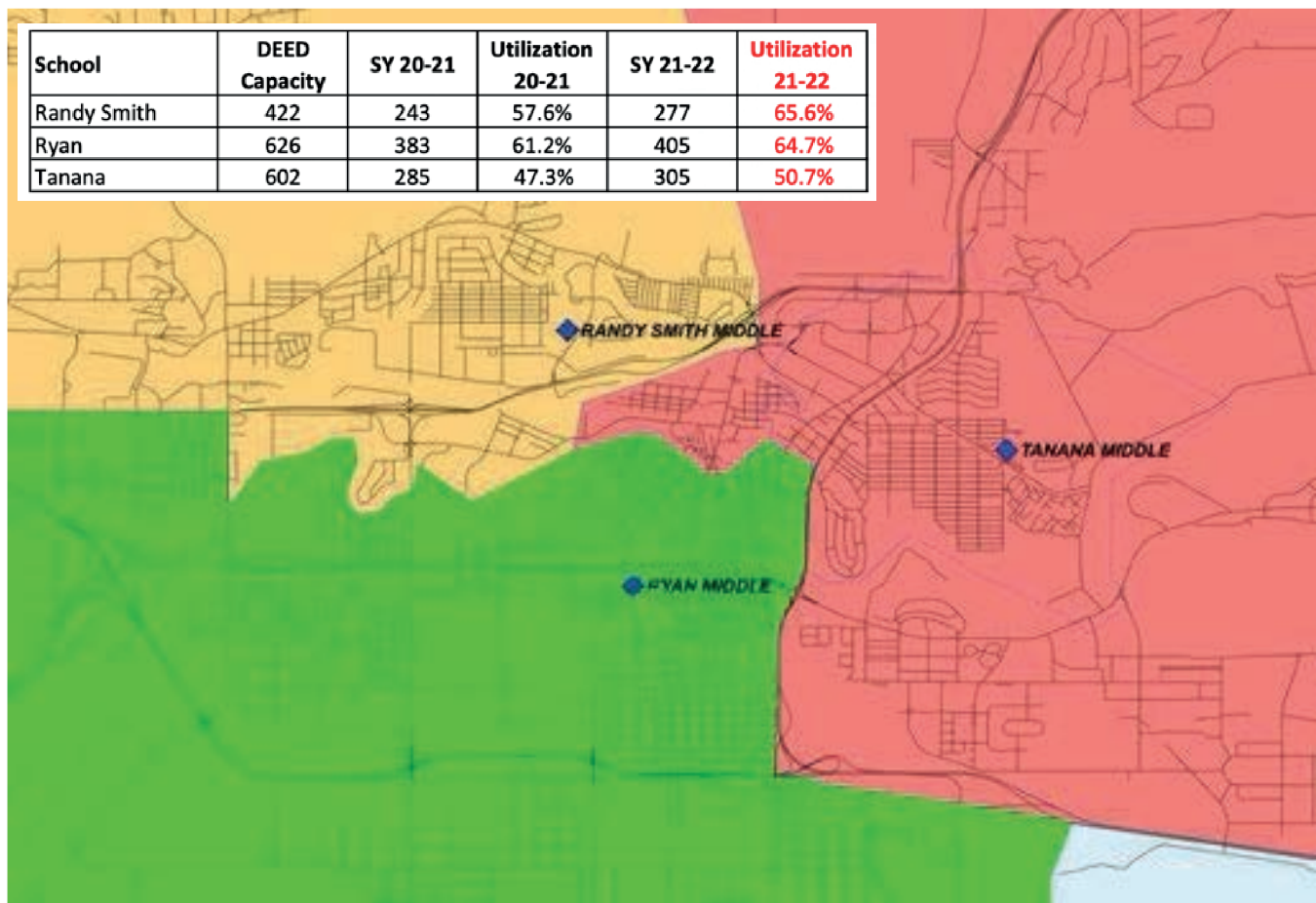
The following map and table illustrates the boundary and space available in central Fairbanks elementary schools.



The four elementary schools in central Fairbanks have significant available space and several are in the lower condition categories. Given the proximity of the schools, Joy, Anne Wien, Denali and Hunter could combine into three facilities with Anne Wien and Joy being the best candidates for combination given condition and location.

Central Fairbanks Middle Schools with Available Space

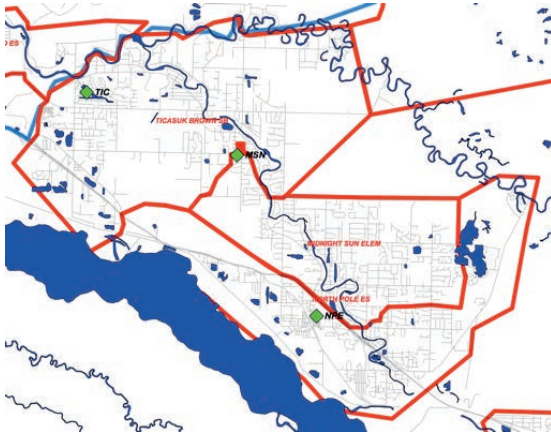
The following map and table illustrates the boundary and space available in central Fairbanks middle schools.



The three central Fairbanks middle schools could be combined into two facilities. Tanana is the best candidate given its condition, but its location serving the east side of the district (east of the Steese Hwy.) and also serving Ft. Wainwright, make a change impactful to military and east side families. However, most students from these areas eventually attend Lathrop High. This illustrates the unique feature of the Fairbanks area to have three middle schools feeding two high schools. A combination of the middle schools has the potential to create a unified feeder pattern where two middle schools could concisely feed two high schools.

North Pole Elementary Schools with Available Space

The following map and table illustrates the boundary and space available in the North Pole area elementary schools.



The North Pole area is served by three elementary schools with utilization holding generally in the 60th percentile. Although there is space available, a combination into two elementary schools would result in utilization rates approaching 100% and require careful boundary management.

School	DEED Capacity	SY 20-21	Utilization 20-21	SY 21-22	Utilization 21-22
Midnight Sun	537	273	50.8%	334	62.2%
North Pole	495	269	54.3%	332	67.1%
Ticasuk Brown	556	286	51.4%	396	71.2%

Eielson Area Elementary Schools with Available Space

The following map and table illustrates the boundary and space available in the Eielson area elementary schools.



Anderson and Crawford are configured as a primary / intermediate school split with grades K-2 in Anderson and grades 3-5 in Crawford. Both schools share a common boundary. A combination of Anderson into Crawford is possible, but the combined school utilization rate would approach 96%.

School	DEED Capacity	SY 20-21	Utilization 20-21	SY 21-22	Utilization 21-22
Anderson	372	215	57.8%	263	70.7%
Crawford	553	216	39.1%	268	48.5%

Potential to Incorporate Externally Leased Program Spaces into District-owned Facilities

The District currently leases two non-district-owned facilities for use for district programs. Even though these facilities are well-established and mostly appropriate for the necessary activities, these could be incorporated into district-owned facilities. The potential savings could be approximately \$389,000 annually.

External Facility Leases

<u>Program</u>	<u>Location</u>	<u>Annual Cost</u>	<u>Expiration</u>
CEC	Food Bank	\$ 81,850	6/30/22
BRIDGE	Old Food Land	\$ 307,027	8/15/24
Total External Lease Cost		\$ 388,877	

Bridge Facility



Career Education Center



Conclusion / Findings

The school efficiency study has found that the District has available space and has identified strategies for savings including incorporating externally leased facilities in district-owned facilities and combining schools that have available space. In general, the district is widely dispersed and schools are well-spaced, but as enrollment has declined utilization rates have fallen. Clusters of schools in central Fairbanks, North Pole and in the Eielson AFB area have been examined and evaluated as to their potential for school combinations. The task force exploring the school efficiency issue may wish to consider the following findings along with others that will flow from their examination of the District.

Combining Programs in Leased Space into District-owned Facilities - The District leases the space used by the Bridge and Career Education Center programs. The annual lease costs of approximately \$389,000 could be saved if these programs were combined into district-owned facilities with compatible environments. The movement of these programs would result in physical and operational changes for the receiving locations and these effects have not been analyzed.

School Combinations - Elementary - The four elementary schools in central Fairbanks have space available and several are in the lower condition categories. Given the proximity of the schools, Joy, Anne Wien, Denali and Hunter could be combined into three facilities. There would be little improvement in instructional support level of service and a mild improvement in elective course offerings. Education leaders who were consulted indicated that the current high level of Title 1 service in all four schools would result in little improvement with more staff in fewer buildings. Joy and Anne Wien are ranked in relatively poorer condition than the other schools. Other school combination clusters have been identified in North Pole (North Pole ES, Midnight Sun, Ticasuk Brown) and in the Eielson Area (Anderson, Crawford). These combinations are feasible, but would result in schools with higher utilization rates. Impacts on specialized programs in these two latter clusters have not been evaluated.

School Combinations - Middle School - The three central Fairbanks middle schools could be combined into two facilities given their enrollments and capacities. Tanana has been identified as the leading candidate given its condition and age. Tanana's location serving the east side of the Fairbanks area (east of the Steese Hwy., serving Ft. Wainwright), will have a significant effect on east side families although these families eventually attend Lathrop HS and family transportation patterns may already be aligned to address this fact. Academic opportunities may improve with larger middle schools given the larger faculty and student body. Education leaders who were consulted indicated that a larger school might foster richer course offerings and more electives than those offered by the current three small middle school programs.

High School Boundaries - Tanana MS students eventually attend Lathrop HS based on the school boundary, and Randy Smith students attend West Valley. Ryan students are split between West Valley and Lathrop. The combination of a middle school might force partial reconsideration of the high school boundaries in order to create alignment between middle and high school as it would be better for the Tanana area to be split north / south between Lathrop and WVHS instead of Ryan given the geography of the boundary. The resulting configuration would have Ryan students attend Lathrop and Randy Smith students attend West Valley exclusively.

Other Issues - The combination of programs would have some budgetary benefits, but other significant impacts. Factors such as student ride times and convenience would be impacted and have been noted in this report. Moving specialized programs have significant impacts especially for children with special needs.

