



Woodland School District PreK-8 Space Use Plan

March 2014

TABLE OF CONTENTS

- Chapter 1: Introduction
- Chapter 2: Educational Programs
- Chapter 3: Enrollment Projections
- Chapter 4: Capacity and Utilization
- Chapter 5: Condition of Facilities
- Chapter 6: Space Use and Improvement Options
- Appendix A: Detailed Building Condition Evaluation Forms



1.0 Introduction

1.1 Community Background

Woodland, Washington is located approximately 20 miles north of Vancouver, Washington. It is located in both Cowlitz and Clark Counties. The city has a population of approximately 5,625 but serves a larger surrounding area. Much of Woodland's economy centers on education, health care, manufacturing, and construction. Many residents commute to the proximate cities of Vancouver and nearby Portland, Oregon.

At the last U.S. Census, Woodland was approximately 79% white and 17% Latino. Some years ago, according to interviews with District leaders, the residences of the Latino population was concentrated in one area of town. As new schools were constructed, the District achieved racial balance by keeping the entire school district as one attendance area. According to recent interviews, again with District leaders, there is now more racial balance in the different geographic areas of the District.

The Woodland community continues to grow. This growth has required the District to install approximately 20 portable classrooms in order to house student growth as well as important special services. A recent bond issue authorized the construction of a new high school which will reduce the need for portable classrooms at the downtown campus.

1.2 <u>School District Information</u>

The Woodland School District has approximately 2,200 students in grades K-12. It is governed by an elected school board. The board hires a superintendent to serve as its chief executive officer. The educational programs are offered in five "categories" of school organizational types: (1) one PK-5 elementary school, (2) one PK-3 primary school, (3) one 4-6 intermediate school, (4) one 7-8 junior high school, and (5) two 9-12 senior high schools (one is an alternative high school).

The activities of the District are guided by its stated goals.

1.2.1 Mission Statement

The goal of the school district shall be to provide opportunities for all students to develop specific academic and technical skills and knowledge essential to meeting four student learning goals:

1. Read with comprehension, write with skill, and communicate effectively and responsibly in a variety of ways and settings;





- 2. Know and apply the core concepts and principles of mathematics; social, physical, and life sciences; civics and history; geography; arts; and health and fitness;
- 3. Think analytically, logically, and creatively, and to integrate experience and knowledge to form reasoned judgments and solve problems; and
- 4. Understand the importance of work and how performance, effort, and decisions directly affect future career and educational opportunities.

1.3 <u>Purpose of Study</u>

Preceding this study, the Woodland School District passed a bond to construct a new 9-12 high school on a new site. The vacated senior high school, as well as the other District schools, will be available for continued use as educational facilities. With the new high school coming on line in the fall of 2015, the District may not need the current portable classrooms and would like to minimize their use if possible.

The Woodland School Board has taken seriously its charge to protect and preserve the school facility assets owned by the community and to ensure that their educational mission is supported by appropriate, cost-effective facilities. The District is now reviewing its current grade configuration based on the advent of the new 9-12 facilities combined with a diminishing need for a single, "stratified" attendance area.

Therefore, the Board determined that they needed a data-driven plan to help develop a future grade configuration plan for the District that would place students in functionally adequate spaces while minimizing portable classroom use.

In commissioning this study, the Superintendent had several guidelines:

- The consultants were to provide the District with a set of grade configuration options developed by independent, third-party professionals.
- The consultants were to coordinate their work with the Superintendent and a "sounding" committee or similar group.
- The work of the consultants and the committee was to demonstrate how best to
 organize existing facilities and improve the "match" between students and the
 educational adequacy of existing learning spaces.
- The work of the consultants and the committee had to demonstrate a plan for effective and efficient use of facilities, especially given recent "tightening" of school finance trends.



1.4 <u>Methodology and Plan of Work</u>

Prior to the commencement of the planning effort, a detailed plan of work was developed. The many sub-tasks were grouped under the following major work tasks:

- a. Project Initiation
- b. Current and Projected Educational Programs
- c. Review Enrollment Projections
- d. Capacity Analysis
- e. Facility Assessments
- f. Space Use and Improvement Options
- g. Space Use and Improvement Plan

The methodology used for this project primarily fell into three categories: (1) the gathering of information and data, (2) the analysis of that information and data, and (3) the development of options for improving use of facilities based on the data and analysis.

The study team consisted of two individuals with collective experience in architecture, school facility planning, school administration, school finance, and school operations.

1.5 Data Sources

Data and information was collected from a variety of sources including, but not limited to:

- a. School District policies and procedures,
- b. Physical condition reports,
- c. Floor plans or diagrams of school facilities,
- d. Description of program uses of facilities,
- e. Grade configuration information,
- f. Student enrollment histories and District projections,
- g. School class size protocols, and
- h. Miscellaneous websites



2.0 EDUCATIONAL PROGRAMS

2.1 Educational Programs

The Woodland School District offers a comprehensive set of educational programs and services to be supported by their facilities. In addition to thorough basic education classes in language arts, mathematics, social studies and science, the Woodland Schools offer electives in a variety of program areas. The District offers programs in music, art, physical education, computer skills, and library services. It also offers a variety of remedial and special needs programs. The facilities that house these programs need to be adequate to deliver an educational program that is diverse and comprehensive. Exhibit 2-1 provides a comprehensive overview of the educational programs and the present space assignments.

EXHIBIT 2-1 WOODLAND SCHOOL DISTRICT EDUCATIONAL PROGRAMS AND PRESENT SPACE ASSIGNMENTS

Support Programs	Primary	Intermediate	Middle School
General Classrooms	Yes and No	Yes	Yes and No
Instruction in reading,	Some designed	Designed space	Some designed
writing, mathematics, and	space and no space		space and no space
social studies	 portables 		- portables
Kindergarten and Pre-K	No	NA	NA
Instruction in reading,	No space – mostly		
writing, mathematics, and	portables, some		
social studies	adapted space		
Music	No	No	Yes and No
General music	No space - portables	No space	Designed space –
instruction; vocal and			Instrumental (at HS)
instrumental music			Adapted space -
instruction.			Vocal
Art	No	Yes	No
Instruction and hands-on	No space	Adapted space	No space
activities for both two and			
three dimensional art			
Physical Education	Yes	Yes	Yes
Activity, movement, and	Designed space	Designed space	Designed space
instructional space			
Library	Yes	Yes	Yes
Large collection and	Designed space	Designed space	Designed space
reference access to all			
students / classrooms			



Support Programs	Primary	Intermediate	Middle School
Computer Lab	Yes	Yes	Yes
Separate lab space with	Designed space	Designed space and	Designed space
10–30 computer stations		adapted space	
and monitors/ printers			
Severe/Profound (Life	No	Yes	Yes
Skills) Special Educ.	No space - portables	Adapted space	Designed space
Alternative placement for			(at HS)
IEP designated students			
Resource Classroom	No	Yes	Yes
Individual IEP or Title I	No space - portables	Designed space	Designed space
support and specifically			
designed instruction.			
English Language	No	Yes	NA
Learners	No space - portables	Designed space	
Specifically designed			
programs for English			
language instruction			
and/or support			
Science	NA	NA	Yes
Hands-on lab science			Designed space and
instruction			adapted space
Metals and Wood Shop	NA	NA	Yes
Hands-on lab and			Designed Space
classroom instruction	N	N	
Behavior Intervention	Yes	Yes	NA
Individual and small	Adapted space	Adapted space	
group therapy	Vaa	Vaa	Vee
School Psychologist	Yes	Yes	Yes
and SLP Offices	Adapted space	Designed space	Adapted space
Individual testing,			
therapy, teacher support,			
parent conferencing			

Source: Woodland School District, 2013

Key: Designed Space – A full-sized space specifically designed for this program or use.

Adapted Space – A space (usually smaller) reclaimed or adapted from other use to the needs of this program/ use.

Shared Space – The program/ use shares this spaces with another program/ use. No Space – The program may exist, but without a specific space; portable.





3.0 ENROLLMENT PROJECTIONS

This chapter is devoted to reviewing community growth issues, historical enrollment data, computerized enrollment projection models and estimating the impact of future enrollments on the capacity of elementary and middle school buildings. The consulting team has used both qualitative and quantitative information to develop the projections. A variety of enrollment projection models have been used as a means of looking at future growth in different ways. Because most of these models use historical information as the basis for projections, the Woodland School District is encouraged to update these projections annually. Information from local agencies will be useful in this endeavor.

3.1 <u>Historical Data</u>

Exhibit 3-1 details the enrollment history for Woodland School District for K-12 students. Exhibit 3-2 charts the data shown in Exhibit 3-1.

	08 - 09	09 - 10	10 - 11	11 - 12	12 - 13	13 - 14
K	153	147	157	140	178	153
1	181	148	149	166	141	180
2	146	178	148	153	168	146
3	148	142	176	154	163	179
4	156	146	153	176	161	162
5	161	154	147	150	180	178
6	175	160	154	159	149	179
7	171	178	161	162	159	165
8	182	173	180	166	170	159
9	216	228	214	218	192	187
10	185	198	171	185	222	195
11	165	149	169	145	144	181
12	166	132	129	153	139	160
K-5	945	915	930	939	991	998
6-8	528	511	495	487	478	503
9-12	732	707	683	701	697	723
Total	2,205	2,133	2,108	2,127	2,166	2,224

EXHIBIT 3-1 WOODLAND SCHOOL DISTRICT ENROLLMENT HISTORY

Source: OSPI, Woodland School District, 2013





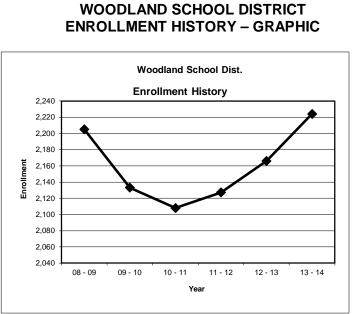


EXHIBIT 3-2

Source: Teater Consulting, 2013

3.2 <u>Enrollment Projection Methodology</u>

To identify trends and prepare for adequate spaces, materials and supplies, and teaching staff, school leaders use several methods of projecting enrollment. Among the most commonly used models are average percentage growth, cohort survival, linear regression, and student-per-household models. It is important to note that all enrollment projection models provide only estimates of future populations. Because no one model is foolproof, school leaders should consider more than one method.

3.2.1 Average Percentage Growth

The average percentage growth model calculates future school enrollment growth based on the historical average growth. This model multiplies the historical average percentage increase times the prior year enrollment to project future enrollments.

3.2.2 Linear Regression Model

Linear regression is a mathematical approach to estimating an unknown future value of a variable by performing calculations on known historical values. Once calculated, several future values for different future dates can then be plotted to provide a "regression line" or "trend line". There are many types of regression formulas. A straight-line model to estimate future enrollment values was chosen here, a model that finds the "best fit" based on the historical data.





3.2.3 Cohort Survival Model

The cohort survival method calculates the growth or decline in a grade level over a period of ten years based on the ratio of students who attend each of the previous years, the "survival rate". This ratio is then applied to the incoming class to calculate the trends in that class as it "moves" or graduates through the school system. For example, if history shows that between the first and second grades, the classes for the last ten years have grown by an average of 3.5%, then the size of incoming classes for the next ten years are calculated by multiplying them by 103.5%. If the history shows a declining trend, the multiplying factor will be less than 100%. The cohort survival model accounts for the net effect of students transferring in and out of school for any reason. For example, if 15 students transfer out of the public school system into a charter school and 20 students transfer in as a result of a new business in town, the net effect is five additional students. This increase in students will be reflected in the "survival" rate.

The consulting team used linear regression to project kindergarten enrollments. There is a second model for projecting kindergarten based on the correlation between historical birth rates (natality rates) and actual kindergarten enrollments. The consulting team did not use this model because the small number of kindergarten students did not allow statistical reliability.

3.3 <u>Enrollment Projections</u>

3.3.1 Percentage Increase Enrollment Projections

Exhibit 3-3 is a table detailing the projected enrollments calculated by averaging the enrollment increases and decreases over the last five years. (Because the last few years of enrollment have shown increases after a few years of decreases, the consulting team believes this may be an underestimate of future enrollments. This model will become more predictive when the enrollment pattern stabilizes.) Exhibit 3-4 is a graphical representation of the table.





·							
	08 - 09	09 - 10	10 - 11	11 - 12	12 - 13	13 - 14	l
K	153	147	157	140	178	153	
1	181	148	149	166	141	180	
2	146	178	148	153	168	146	
3	148	142	176	154	163	179	
4	156	146	153	176	161	162	
5	161	154	147	150	180	178	
6	175	160	154	159	149	179	
7	171	178	161	162	159	165	
8	182	173	180	166	170	159	
9	216	228	214	218	192	187	
10	185	198	171	185	222	195	
11	165	149	169	145	144	181	
12	166	132	129	153	139	160	
K-5	945	915	930	939	991	998	
6-8	528	511	495	487	478	503	
9-12	732	707	683	701	697	723	
Total	2,205	2,133	2,108	2,127	2,166	2,224	Averages
K-5		-3.17%	1.64%	0.97%	5.54%	0.71%	1.14%
6-8		-3.22%	-3.13%	-1.62%	-1.85%	5.23%	-0.92%
9-12		-3.42%	-3.39%	2.64%	-0.57%	3.73%	-0.20%
Total		-3.27%	-1.17%	0.90%	1.83%	2.68%	0.20%

EXHIBIT 3-3 WOODLAND SCHOOL DISTRICT PERCENTAGE INCREASE MODEL

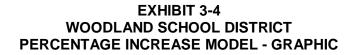
Projection

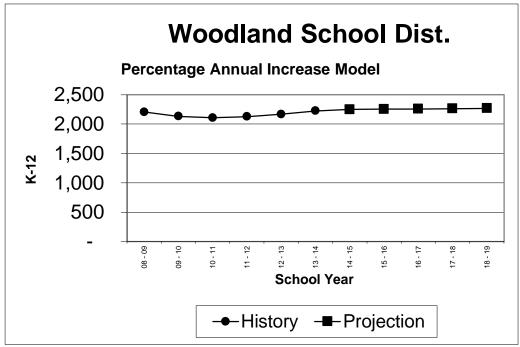
	14 - 15	15 - 16	16 - 17	17 - 18	18 - 19	
K-5	1,009	1,021	1,032	1,044	1,056	
6-8	509	504	499	495	490	
9-12	731	730	728	727	725	
Total	2,249	2,254	2,258	2,262	2,267	
Sourcey Tester Consulting, 2012						

Source: Teater Consulting, 2013









Source: Teater Consulting, 2013

3.3.2 <u>Regression Enrollment Projections</u>

Exhibit 3-5 is a table detailing the projected enrollment using the regression model and based on the historical enrollments for the last six years. This model shows a flat or slightly decreasing pattern in future enrollments. The consulting team believes this model, should be considered only when the enrollment pattern stabilizes. Presently, with the historical decrease and subsequent increase make this model less useful. Exhibit 3-6 is a graphical representation of the table data.





	08 - 09	09 - 10	10 - 11	11 - 12	12 - 13	13 - 14
K	153	147	157	140	178	153
1	181	148	149	166	141	180
2	146	178	148	153	168	146
3	148	142	176	154	163	179
4	156	146	153	176	161	162
5	161	154	147	150	180	178
6	175	160	154	159	149	179
7	171	178	161	162	159	165
8	182	173	180	166	170	159
9	216	228	214	218	192	187
10	185	198	171	185	222	195
11	165	149	169	145	144	181
12	166	132	129	153	139	160
K-5	945	915	930	939	991	998
6-8	528	511	495	487	478	503
9-12	732	707	683	701	697	723
Total	2,205	2,133	2,108	2,127	2,166	2,224

EXHIBIT 3-5 WOODLAND SCHOOL DISTRICT LINEAR REGRESSION MODEL

Projection

1 10 00 00 00 00 00 00 00 00 00 00 00 00					
	14 - 15	15 - 16	16 - 17	17 - 18	18 - 19
K-5	1,003	1,018	1,032	1,046	1,061
6-8	477	471	464	457	451
9-12	701	700	698	697	695
Total	2,182	2,188	2,194	2,200	2,206
Total	2,182	2,188	2,194	2,200	2,206

Source: Teater Consulting, 2013





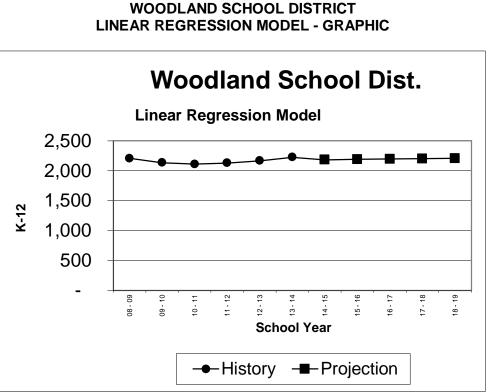


EXHIBIT 3-6

Source: Teater Consulting, 2013

3.3.3 Cohort Survival Enrollment Projections

Exhibit 3-7 is a table detailing the projected enrollments using the cohort survival method based on the enrollment over the last six years and using a linear regression model for the kindergarten projection. This model shows an increase in student enrollment, but like the other models, is somewhat influenced by the decline in enrollment five to six years ago. Therefore, the consulting team believes this is the best of the three models, but it is probably an underestimate of future enrollments. Exhibit 3-8 is a graphical representation of the table data.

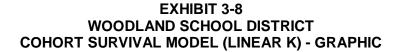


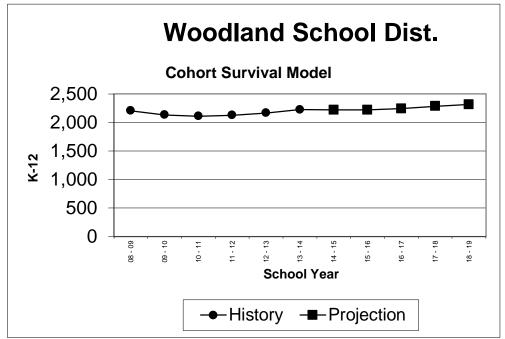


EXHIBIT 3-7			
WOODLAND SCHOOL DISTRICT			
COHORT SURVIVAL MODEL (LINEAR K)			

	08 - 09	09 - 10	10 - 11	11 - 12	12 - 13	13 - 14	Avg. %	14 - 15	15 - 16	16 - 17	17 - 18	18 - 19
K	153	147	157	140	178	153	Survival	162	164	167	169	171
1	181	148	149	166	141	180	101.13%	155	164	166	169	171
2	146	178	148	153	168	146	101.16%	182	157	166	168	171
3	148	142	176	154	163	179	102.65%	150	187	161	170	172
4	156	146	153	176	161	162	102.07%	183	153	191	164	174
5	161	154	147	150	180	178	102.05%	165	187	156	195	167
6	175	160	154	159	149	179	101.26%	180	167	189	158	197
7	171	178	161	162	159	165	103.65%	186	187	173	196	164
8	182	173	180	166	170	159	102.07%	168	190	191	177	200
9	216	228	214	218	192	187	119.15%	189	200	226	228	211
10	185	198	171	185	222	195	91.30%	171	173	183	206	208
11	165	149	169	145	144	181	82.01%	160	140	142	150	169
12	166	132	129	153	139	160	92.82%	168	149	130	132	139
K-5	945	915	930	939	991	998		997	1,012	1,007	1,035	1,026
6-8	528	511	495	487	478	503		534	544	553	531	561
9-12	732	707	683	701	697	723		688	662	681	716	727
K-12	2,205	2,133	2,108	2,127	2,166	2,224		2,219	2,218	2,241	2,282	2,314

Source: Teater Consulting, 2013





Source: Teater Consulting, 2013



3.4 Summary

The consulting team used three different enrollment projection models to estimate future enrollments. Each model emphasizes different types of analysis of data, and therefore is limited in its effectiveness as a predictive tool. Two models, the percentage increase model and the regression model, emphasize only historical data. These models are quite effective predictors if there significant "ups and downs" in enrollment history or have no future indication of unusual community growth or decline.

Other models use both historical enrollments but also take into account student mobility patterns and the effects of the kindergarten enrollment rates in prior years. The cohort survival model is perhaps the best known predictive tool using this type of analysis of data. However, like the percentage increase model and the regression model, the cohort survival model loses its predictive capabilities in communities that experience, or are expected to experience, more rapid growth or decline.

One model predicts flat enrollments or slight increases. The other two models predict that enrollments will grow. Of those two, the cohort survival model predicts greater growth. Based on all the available information, the consulting team believes that the Woodland School District should use the Cohort Survival model using a linear regression for kindergarten (OSPI model) to develop a "minimum" level of facilities to house students. If the economy continues to recover and perform well, an addition 1% growth above that predicted by the cohort survival model would not be unusual. The District should revisit this model in October 2014 when new fall enrollment data is available.



4.0 CAPACITY AND UTILIZATION

The capacity of a school building is driven by four main factors: (1) the physical size of the instructional spaces, (2) the class size limits, (3) the schedule of uses, and (3) the programs that are offered by the school. Because capacity formulas often apply different "weights" to these factors, one can find a number of capacity definitions across the country. For the Woodland School District, a single method of calculating capacity was used – the "instructional space model". This brings both consistency and clarity to the process of determining capacity.

Once capacity is determined, it can be compared to enrollments or projected future enrollments. This comparison produces a "utilization factor" that is discussed later in this chapter.

4.1 Capacity Analysis

Each school in the District underwent an analysis to determine its capacity. School capacity, or the number of students a building is designed to reasonably accommodate, is largely driven by the number of students assigned to each class, the number of square feet in the classroom, the number of periods in the schedule, where teacher preparation periods occur, and number of programs offered.

4.1.1 <u>Methodology</u>

Existing building capacity information was gathered though analysis of building floor plans and interviews of district personnel. The calculations required a variety of information:

- a. plans, maps, diagrams, and drawings of existing buildings
- b. information regarding the numbers of teaching spaces and their uses
- c. square footage information for each school
- d. interviews with staff

Many "special needs" programs require smaller class sizes with more area per student, specialized utilities and equipment, and space for specialists to serve their needs. Examples of the programs needing different spaces include programs for the cognitively impaired, learning disabled, seriously emotionally impaired, speech and hearing therapy, Title I (remedial reading and mathematics), ELL, science, PE, and music.

Capacity is then calculated by multiplying the number of teaching spaces by type (e.g. kindergarten rooms, primary grade rooms, intermediate grade rooms, special education rooms, PE teaching spaces, music rooms, secondary general classrooms, art rooms, etc.) times the class size limit as stated in the negotiated agreement. The sum of the products in elementary schools would be multiplied by a "scheduling factor." Scheduling factors are used to reflect the fact that not every classroom can be scheduled to have a



"perfect fit" of students in the attendance zone when compare to capacity standards. For elementary schools, a scheduling factor of 95% reflects this imperfect fit. In addition, the District must account for the practice of having each middle school and high school teacher use their classrooms, without students, for their preparation period. At the middle school level, the enrollment would be multiplied by 83% to reflect the planning period for each teacher in a six period instructional day (5 teaching periods \div 6 total periods = 83% scheduling factor).

4.1.2 Current Capacity Standards

The consultants used the instructional space model of calculating capacity which is based on an actual count of the different types of classrooms and their maximum enrollment. Often, general classrooms have a greater capacity than special learning classrooms (e.g., Special education classrooms have lower enrollments due to the legal requirements of handicapped education laws.) Based on Woodland School District practices for classroom enrollment sizes, we have used these values:

Kindergarten	=	23 students
Grade 1	=	23 students
Grades 1-6	=	25 students
Grades 7-8	=	32 students (160 total per day)
Life Skills	=	8 students
Title I, Resource	=	12 students

Exhibit 4-1 details the different types of spaces and their capacity for the K-5 program. Please note that many special learning spaces (computer lab, music, P.E., etc.) do not have student capacity for K-5 because the students are counted in their home rooms. These special learning spaces are used for "pull-out" programs.



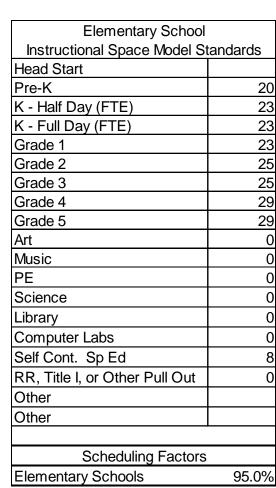


EXHIBIT 4-1 K-5 SPACE STANDARDS CHART

Source: Woodland School District, 2013

Exhibit 4-2 details the capacity standards for grades 6-8. The special learning spaces for the Middle School do have capacity since the school is on a six period schedule. Computer labs are assumed to be "open labs" half the time. Therefore, their capacity drops from 30 to 15. Pull-out programs have smaller class sizes.



WOODLAND Public Schools

Where Community & Learning Connect

Middle School					
Instructional Space Model Standards					
Grade 6	29				
Grades 7-8	32				
Art	32				
Business Labs	32				
Computer Labs	16				
Music	32				
PE	32				
Science	32				
Library	0				
CTE	32				
Self Cont. Sp Ed	8				
RR, Title I, or Other Pull Out	12				
Other	0				
Other	0				
Scheduling Factors					
Middle Schools 83.09					
Sources Mandland School District 2012					

EXHIBIT 4-2 6-8 SPACE STANDARDS CHART

Source: Woodland School District, 2013

4.1.3 Current Capacity

In order to obtain the numbers of each classroom type, the consulting team analyzed a simple floor plan of each school. Once the number of classrooms for each type of space was determined, the capacity for each school was calculated by multiplying the number of spaces (for each space type) times the capacity value from the capacity standards charts (See Exhibits 4-1 and 4-2.)

For each school, once the capacity was determined, it was multiplied by a scheduling factor. Scheduling factors are used to reflect the fact that not every classroom can be scheduled to have a "perfect fit" of the maximum enrollment standards and the District's practice of having Middle School teachers use their classrooms without students for their preparation period. These scheduling factors have been used:

Elementary	=	95%
Middle School	=	83%



WOODLAND Public Schools

Where Community & Learning Connect

Examples of the calculations for both elementary and secondary schools are detailed in Exhibits 4-3 and 4-4.

EXHIBIT 4-3 SAMPLE ELEMENTARY SCHOOL CAPACITY CALCULATION

Example				
K-1 Classrooms	3 X 23 =	69		
2-3 General Classrooms	9 X 25 =	225		
4-5 General Classrooms	6 X 29 =	174		
PE, Music, and Art Rooms	3 X 0 =	-		
Special Pull-Out Classrooms	2 X 0 =	-		
		468 X	95% =	445

Source: Teater Consulting, 2013

EXHIBIT 4-4 SAMPLE MIDDLE SCHOOL CAPACITY CALCULATION

Example:					
General Classrooms	8 X 32 =	256			
Music and PE Classrooms	2 X 32 =	64			
Computer Labs	1 X 16 =	16			
Resource Rooms	2 X 12 =	24			
Special Education Classrooms	1 X 8 =	8			
		368	Х	83% =	305

Source: Teater Consulting, 2012

Using the capacity standards from the tables in Exhibits 4-1 and 4-2 and the methodologies demonstrated in Exhibits 4-3 and 4-4, the capacities for each school have been calculated. For these calculations, the consulting team has assumed that each elementary school will have the nationally more typical PK-5 grade configuration and the middle school will have the nationally more typical 6-8 configuration. (Only one elementary school will have the PK program.) If another grade configuration is used, the calculations and totals will change. Exhibit 4-5 shows the results of the calculations.



	Yale Elementary			
		Room		
	# Rooms	Capacity	Subtotal	
Head Start		0	-	
Pre-K		20	-	
K Half Day		23	-	
K Full Day	0.5	23	12	
Grade 1	0.5	23	12	
Grade 2	0.5	25	13	
Grade 3	0.5	25	13	
Grade 4	0.5	29	15	
Grade 5	0.5	29	15	
Art		0	-	
Music		0	-	
PE		0	-	
Science		0	-	
Library		0	-	
Computer Labs		0	-	
Self Cont. Sp Ed		8	-	
RR, Title I, Pull Out		0	-	
Other		0	-	
Other		0	-	
Total Room Count	3		77	
	95%			
Instructional Space Model Capacity =			73	

WOODLAND **Public Schools**

Where Community & Learning Connect

EXHIBIT 4-5

	Woodland Primary			
		Room		
	# Rooms	Capacity	Subtotal	
Head Start		0	-	
Pre-K	0	20	-	
K Half Day	0	23	-	
K Full Day	3	23	69	
Grade 1	3	23	69	
Grade 2	3	25	75	
Grade 3	3	25	75	
Grade 4	2	29	58	
Grade 5	2	29	58	
Art	1	0	-	
Music	1	0	-	
PE	1	0	-	
Science	0	0	-	
Library	1	0	-	
Computer Labs	1	0	-	
Self Cont. Sp Ed	1	8	8	
RR, Title I, Pull Out	3	0	-	
Other		0	-	
Other		0	-	
Total Room Count	25		412	
Scheduling Factor =			95%	
Instructional Space Model Capacity = 391				

Woodland Intermediate				
	# Rooms	Capacity	Subtotal	
Head Start		0	-	
Pre-K	1	20	20	
K Half Day		23	-	
K Full Day	3	23	69	
Grade 1	3	23	69	
Grade 2	3	25	75	
Grade 3	3	25	75	
Grade 4	3	29	87	
Grade 5	3	29	87	
Grade 6		29	-	
Art	1	0	-	
Music	1	0	-	
PE	1	0	-	
Science	0	0	-	
Library	1	0	-	
Computer Labs	1	0	-	
Self Cont. Sp Ed	1	8	8	
RR, Title I, Pull Out	3	0	-	
Other		0	-	
Other		0	-	
Total Room Count	490			
	95%			
Instructional Space Model Capacity = 466				

	Woodland Middle		
	Room		
	# Rooms	Capacity	Subtotal
Grade 6	9	29	261
Grades 7-8	13	32	416
Art	2	32	64
Business Labs	0	32	-
Computer Labs	3	16	48
Music	2	32	64
PE	2	32	64
Science	3	32	96
Library	1	0	-
CTE	1	32	32
Self Cont. Sp Ed	1	8	8
RR/T-1 Pull Out	4	12	48
Other		0	-
Other		0	-
Total Room Count	41		1,101
	83%		
Instructional Space Model Capacity = 914			

SCHOOL CAPACITIES

Source: Teater Consulting, LLC, 2013



4.2 <u>Enrollment vs. Capacity</u>

In order for schools to fully meet their educational goals, capacity and enrollment must be matched. When capacity exceeds enrollment (under-utilization) capital expenditures may be reduced or facilities removed from inventory. When enrollment exceeds capacity (over-utilization) capital expenditures may need to be increased. The formula for calculating utilization is "**enrollment ÷ capacity = utilization**."

The current K-5 total enrollment of 998 exceeds the total elementary capacity (current elementary schools) of 930. Using the formula above, the total current elementary utilization is 107%. The projected future utilization indicates that the elementary schools will continue to be "overcrowded" unless the District takes corrective action. Future growth estimates to 1,035 students will overutilization the elementary schools to 111% within the next five years.

The secondary school, when vacated by grades 9-12, will be underutilized, and considerable space will remain unused, even by a 6-8 middle school. Assuming we use a 6-8 grade configuration, the current 6-8 enrollment of 503 is less than the current secondary facility capacity of 914. The total utilization of the current secondary facility (assuming the grade 9-12 students were removed to a new school) is 55%. Future growth estimates to 561 students will only bring utilization to 61% within the next five years unless the District takes corrective action.

Exhibit 4-6 is a table showing the current enrollments, current capacities, current utilization, and the future utilization factors when projected enrollments are stated. Exhibits 4-7 and 4-8 are graphic representations of K-5 enrollment-capacity and 6-8 enrollment-capacity.

Site	Capacity	Current Enrollment	Current Utilization	Projected High Enrollment by 2019	Projected High Utilization by 2019
Yale Elementary	73				
Woodland Primary	391				
Woodland Intermediate	466				
Current K-5 Total	930	998	107%	1,035	111%
Woodland Middle School	914	503	55%	561	61%

EXHIBIT 4-6 CURRENT FACILITY UTILIZATION

Source: Teater Consulting, LLC, 2013



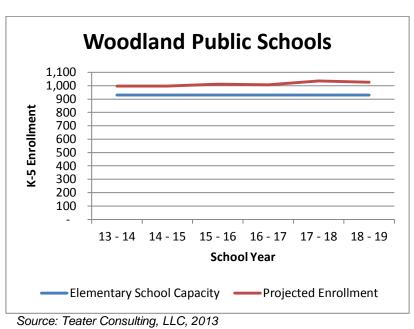
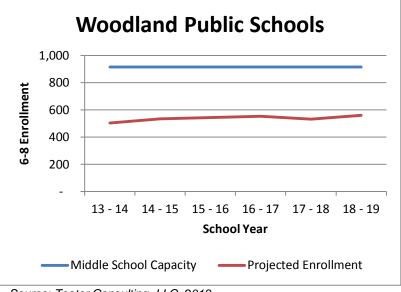


EXHIBIT 4-7 CURRENT K-5 ENROLLMENT-CAPACITY

EXHIBIT 4-8 CURRENT 6-8 ENROLLMENT-CAPACITY



Source: Teater Consulting, LLC, 2013





5.0 CONDITION OF FACILITIES

5.1 Educational Adequacy

The consulting team walked through each of the existing facilities to determine how well it supported the educational program. The team examined the educational adequacy (sizes, adjacencies, utilities, and other features) of each space.

The educational adequacy review describes how well the facility supports the staff as they implement the educational program in each space. School spaces are "tools" that exist for an educational function. Therefore, the design features in a school can make it much easier for educators to accomplish their educational mission. Conversely, if schools are absent these design features, the job of providing an adequate education in those facilities can be compromised. Analysis of educational adequacy is not a clinical, objective effort. It requires an understanding of the educational program being delivered as well as the application of professional judgment to varying pedagogical conditions. For this project, the following areas were reviewed:

- Site,
- General Classrooms
- Special Learning Spaces
 - Early Childhood-Kindergarten (elementary school only)
 - Specials Needs (special education, Title I, ELL, SLP, etc.)
 - Computer labs
 - Physical Education
 - Music
 - Library
 - Visual Arts
 - Science
 - Career Technical Education (secondary only)
 - Performing Arts
- Support Spaces
 - Administration
 - Student Services
 - Staff Support
 - Food Service
 - Custodial-Maintenance





For each of the above functional spaces, the consulting team reviewed the schools across several recognized categories and identified them as follows:

- The proper size of spaces
- Adjacencies (appropriate spatial relationships)
- Utilities, technology, fixed equipment, surfaces, and storage

The review of each school produced the following comments that help clarify any deficiencies or cite special circumstances:

Woodland Primary School

- The many portable classrooms have overloaded the core spaces.
- PT/OT services are being held in a recaptured space in a locker room.
- Center-Based Learning programs are in portables and lack the desired integration with the regular education programs.
- Several remedial programs are in portable classrooms with less-than-ideal access to regular classrooms.
- The original music room has been converted to a cafeteria space.
- One kindergarten section is being held in an undersized room.
- Most kindergarten programs are in portables.
- The Pre-K Handicapped program is in a portable classroom. The more isolated portable classrooms make it more difficult for the Pre-K and other kindergarten classrooms to work together.
- The teacher preparation area is in a recaptured library area.
- One of the Title I pull-out spaces is in a recaptured library area.
- Most of the Title I spaces are in cubicles built in the hallways.
- The office has no good support spaces (conference room, storage, work room, etc.)
- Storage space is lacking throughout the school.
- The portable classrooms are right next to a street. This adjacency has students walking to and from automobiles without proper pedestrian controls.
- Because of the crowded conditions and alternate use of space compared to the original design, a number of instruction areas lack natural light.

Woodland Intermediate School

- The music space has been converted to a technology lab.
- The "behavior program" is using a large unused classroom.
- The library has air quality issues due to excessive solar heat gain.
- The art program is being conducted in a carpeted space without adequate storage, sinks, and plumbing.
- The art space has air quality issues due to excessive solar heat gain.
- The Center-Based Learning program is not adjacent to a restroom.





Yale Elementary School

• The cafeteria area is not adjacent to the kitchen area.

Secondary School Complex

- The many portable classrooms have overloaded the core spaces.
- The middle school choir is in a small space with insufficient ceiling height.
- The cafeteria needs chair and table storage.
- Some student lockers do not have slanted tops to prevent accumulation of clutter.
- The middle school office is undersized and lacks a work room.
- The sight lines from the middle school office and the high school office to their respective school entrances are limited.
- One counseling office lacks natural light.
- One science room lacks the utilities necessary to conduct lab science.
- There is no PE office. PE storage is not adjacent to the instructional space.
- The maintenance shop lacks a storage system to organize the many parts and tools used in the program. There is no natural light in this space.

5.2 <u>Physical Assessment</u>

The physical condition of each school facility was assessed during the Study and Survey conducted in 2012. The physical condition assessments consider a number of factors including the major components (e.g. exterior building systems, interior building systems, mechanical systems, and safety/building codes systems). Each of these major components is further broken down and each sub-component is scored. The key for the physical assessment is detailed in Exhibit 5-3 and the scores in Exhibit 5-4. The detailed assessment for each school can be found in Appendix A.

EXHIBIT 5-1 KEY FOR PHYSICAL ASSESSMENT AND SITE ASSESSMENT RATINGS

90+	Good: The building and/or a majority of its systems are in good condition and only require routine maintenance.
65-89	Fair: The building and/or some of its systems are in fair condition
	and require minor repair.
40-64	Poor: The building and/or a significant number of its systems are in
	poor condition and require major repair or renovation.
Below 40	Unsatisfactory: The building and/or a majority of its systems should
	be considered for replacement.



SUMMART OF PHISICAL ASSESSMENT RATINGS					
School	Physical Condition Score	Description			
Woodland Primary School	47.38	Poor			
Woodland Intermediate School	62.55	Fair			
Yale Elementary School	53.65	Fair/Poor			
Middle School	58.87	Fair/Poor			
Existing High School	53.67	Fair/Poor			

EXHIBIT 5-2 SUMMARY OF PHYSICAL ASSESSMENT RATINGS

Source: ESD 112, 2012



6.0 SPACE USE AND IMPROVEMENT OPTIONS

The information in the previous chapters provides a rich bank of information that can be used to generate options for improving the learning environment for students in grades PreK-8 in the Woodland Schools. The consulting team developed three options for consideration. The team endeavored to keep the high quality educational program as the prime "driver" for each option.

6.1 Option A

This option has a PreK-3 school at both the existing Primary School and the existing Intermediate School. All grades 4-6 would be housed in the existing Middle School, and all 7-8 in the existing High School. The pros and cons for this option are detailed in Exhibit 6-1.

Pros	Cons
District moves toward neighborhood	Some schools may not have enough space
primary schools	for some of the special learning spaces
	(e.g. ELL, art, and behavioral)
Potential conflict in setting attendance	The present WIS has six unused spaces
zones is reduced.	while the 4-6 school has four portables
	classrooms
Grade configuration is uniform throughout	There is no expansion room for
the grades and is better for special	Kindergarten.
services.	
Parents may have a choice of schools in	Some grade 5-6 portables would be
Grades PreK-3.	required.
Portables could be nearly eliminated.	
Most "hallway" remedial services at the	
Primary School can be relocated to rooms.	
Freed "hallway" space can be more flexibly	
used for other educational activities.	
Numerous spaces currently being used for	
other purposes can be restored to their	
proper designed use.	
Grades 7-8 will have better access to CTE	
spaces	
The District Office would not have to be	
relocated.	
Potential transportation savings	

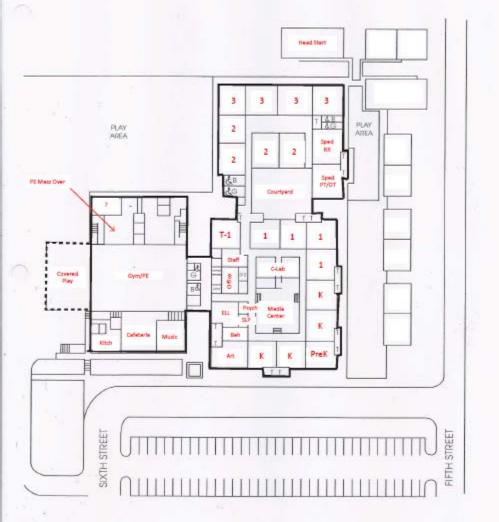
EXHIBIT 6-1 PROS AND CONS FOR OPTION A





Exhibits 6-2 through 6-5 show the space uses by school for Option A.

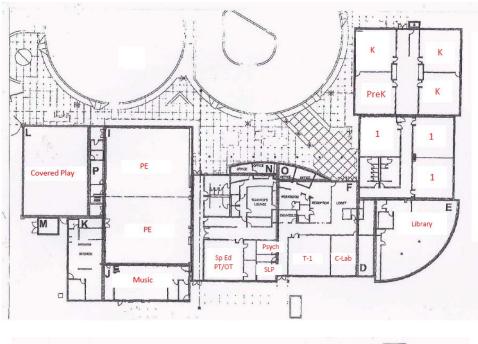
EXHIBIT 6-2 SPACE USES FOR OPTION A (PRESENT PRIMARY SCHOOL)

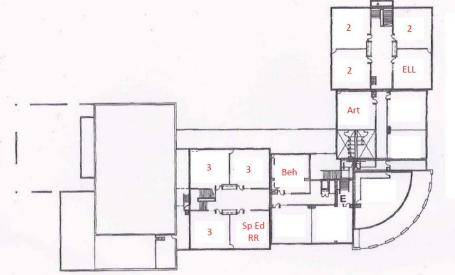








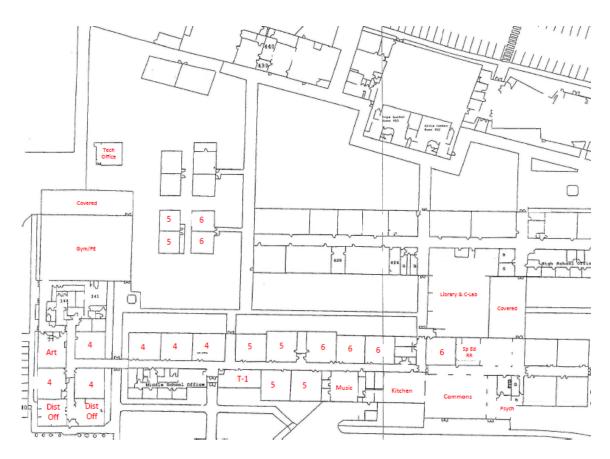






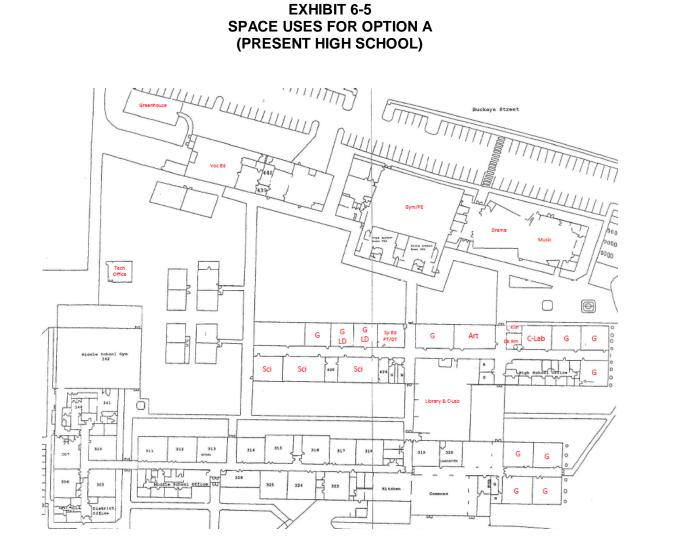












Source: Educational Service District 112, 2014



6.2 Option B

This option has a grade 1-5 school at both the existing Primary School and the existing Intermediate School. PreK-K would be housed in some of the existing Middle School, and all grades 6-8 in the balance of the existing Middle School and the High School. The pros and cons for this option are detailed in Exhibit 6-6.

Pros	Cons
District moves toward neighborhood primary schools	There is a transition after the first year.
Fewer school-to-school transitions than present model.	Library and cafeteria sharing may be more difficult.
Provides a good grade configuration for the instructional model.	Specialist for younger grades may find access more difficult.
The grade configuration is good for special education services.	
There is one extra classroom in the present WPS.	
Schools appear to have enough space for all of the special learning spaces	
Potential conflict in setting attendance zones is reduced.	
Grade configuration is uniform throughout the grades.	
Parents may have a choice of schools in Grades 1-5.	
Portables could be eliminated or nearly eliminated.	
Most "hallway" remedial services at the Primary School can be relocated to rooms.	
Freed "hallway" space can be more flexibly used for other educational activities.	
Numerous spaces currently being used for other purposes can be restored to their	
proper designed use. Grades 7-8 will have better access to CTE	
spaces	
Future grade configurations might be easier	

EXHIBIT 6-6 PROS AND CONS FOR OPTION B



Pros	Cons
The District Office would not have to be relocated.	
Potential transportation savings	

Source: Educational Service District 112, 2014

Exhibits 6-7 through 6-10 show the space uses by school for Option B.

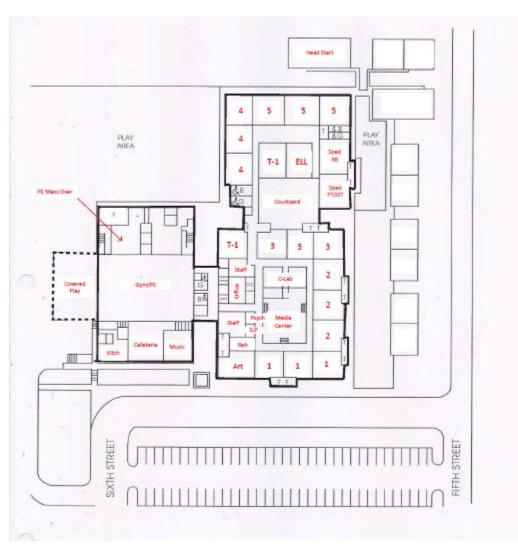
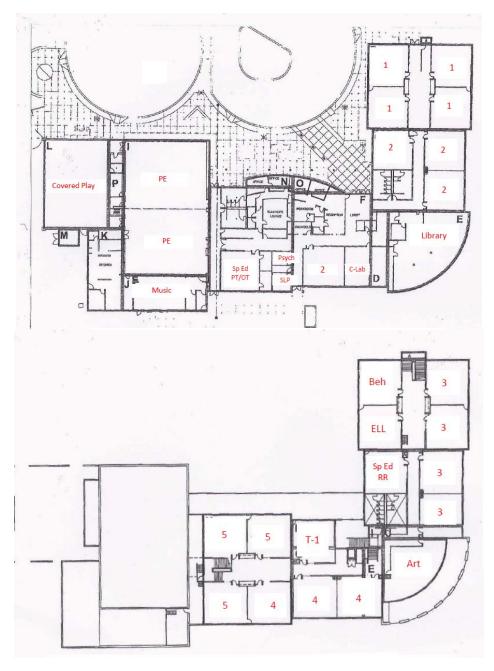


EXHIBIT 6-7 SPACE USES FOR OPTION B (PRESENT PRIMARY SCHOOL)





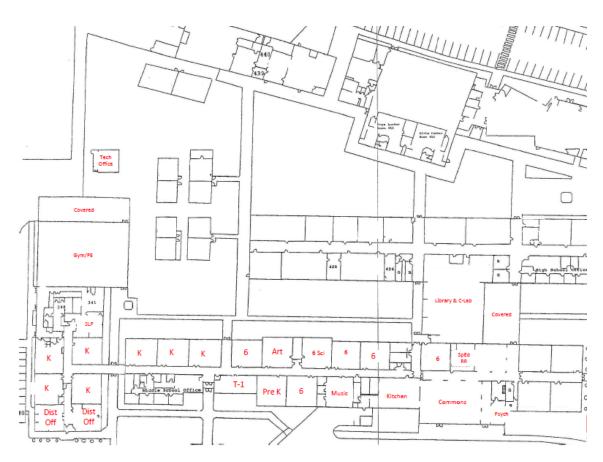
EXHIBIT 6-8 SPACE USES FOR OPTION B (PRESENT INTERMEDIATE SCHOOL)







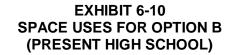


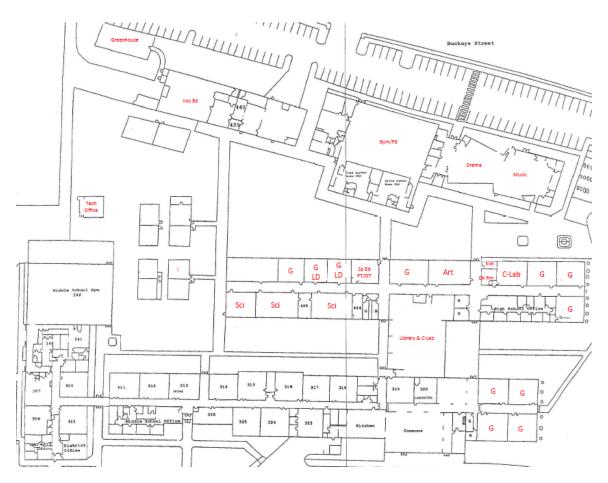


Source: Educational Service District 112, 2014









Source: Educational Service District 112, 2014



6.3 Option C

This option has a PreK-4 school at both the existing Primary School and the existing Intermediate School. A new grade 5-8 Middle School would be established with grades 5-6 housed in the existing Middle School space and grades 7-8 housed in the existing High School space. The pros and cons for this option are detailed in Exhibit 6-11.

Pros	Cons
District moves toward neighborhood schools	Potential conflict in setting attendance zones
Students in the PreK-4 school would have one less transition.	At least one PreK-4 school may need some portables for some of the special learning spaces (e.g. PreK, ELL, and behavioral)
Grade configuration is uniform throughout the grades and is better for special services.	There is no expansion room for Kindergarten.
Parents may have a choice of schools with of a District-wide attendance zone.	
Portables could be reduced.	
Most "hallway" remedial services at the Primary School can be relocated to rooms.	
Freed "hallway" space can be more flexibly used for other educational activities.	
The WIS would have two an open space for expansion for two programs.	
Numerous spaces currently being used for other purposes can be restored to their proper designed use.	
Grades 7-8 will have better access to CTE	
spaces	
The District Office would not have to be relocated.	
Potential transportation savings	

EXHIBIT 6-11 PROS AND CONS FOR OPTION C



WOODLAND Public Schools Where Community & Cearning Connect

Exhibits 6-12 through 6-14 show the space uses by school for Option C.

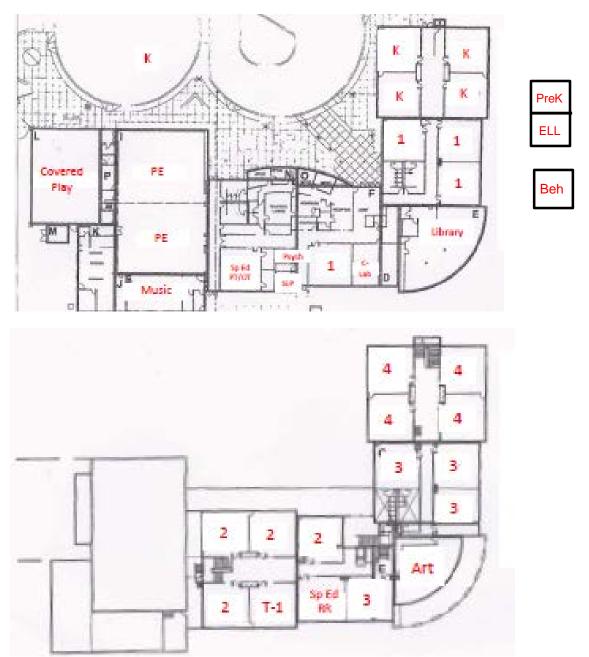
EXHIBIT 6-12 SPACE USES FOR OPTION C (PRESENT PRIMARY SCHOOL)





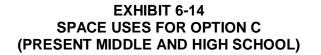


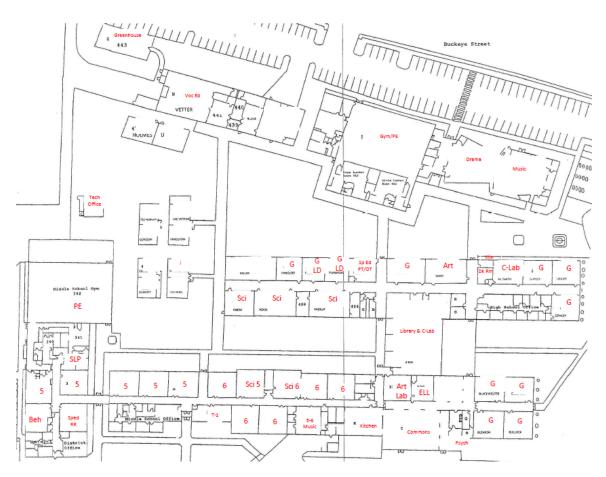












Source: Educational Service District 112, 2014



APPENDIX "A": DETAILED BUILDING CONDITION EVALUATION FORMS



Woodland
Primary School
CSG Team
ESD 112 Construction Services Group
12/1/2011



							Overall BCA Score:	47.38	MASHINGTON .		
Building Profile Type:		1	1	Eler	1	ry School -	Single Story				
Component	E	G	F	Р	U	N/A	Component Score	BCA Score	Component Description		
A10 - Foundations A1010 - Standard Foundation			x			1	60%	2.32 2.32	Wall and column foundations, footings and bases, perimeter insulation,		
A20 - Walls							11	0.00	perimeter drainage, waterproofing		
A2020 - Walls for subgrade enclosure						N/A	N/A	N/A	Standard, one story concrete or masonry basement foundation wall,		
A40 - Slabs on Grade							11	2.44	typically including footing, re-enforcement, etc.		
A4010 - Standard Slabs on Grade			х				60%	2.44	Standard reinforced concrete slab on grade with typical stem wall		
A4040 - Pits and Bases						N/A	N/A	N/A	including footing, waterproofing, footing drains, etc. Concrete or masonry pier pads, trenches, equipment pads and pits.		
A60 - Building Subdrainage						1	II	0.48			
A6010 - Building Subdrainage			х			1	60%	0.48	Footing drains, and underground drains from downspouts.		
B10 - Superstructure						1	1 1	0.00			
B1010 - Floor Construction						N/A	N/A	N/A	Floors constructed with dimensional lumber, wood joists, post & beam w/decking, pre-stressed concrete, metal & concrete, etc.		
B1020 - Roof Construction							Not Rated	Not Rated	Roofs constructed with dimensional lumber, wood trusses, pre-stressed		
B1080 - Stairs						N/A	N/A	N/A	concrete, metal & concrete, etc. Standard construction stairs made of wood, concrete, metal, masonry,		
B20 Exterior Vertical Enclosures						1		5.25	etc.		
B2010 - Exterior Walls				х			30%	2.64	Exterior walls constructed of concrete, masonry, dimensional siding,		
B2020 - Exterior Windows			х				60%	2.30	sheathing, troweled on surfacing, etc. Various exterior glazing in wood, vinyl, aluminum, steel, etc. SS,		
P2050 Exterior Dears and Grilles			x				60%	0.20	insulated; normal, wired, laminated, etc.; fixed or operable. Includes all types of exterior doors including wood, metal, roll up, lock		
B2050 - Exterior Doors and Grilles								0.29	hardware, door closers, etc.		
B2070 - Exterior Louvers and Vents			x				60%	0.03	All types of exterior louvers and vents including wood, metal, vinyl, etc. in- cluding operable type.		
B30 - Exterior Horizontal Enclosures B3010 - Roofing			x			1	60%	4.31	Includes all types of roof coverings including composite, membrane,		
-								3.70	metal, etc., and related materials.		
B3020 - Roof Appurtenances			х				60%	0.15	Includes antennas, cupolas, signs, HVAC units, exhaust fans, etc.		
B3060 - Horizontal Openings/Penetrations			х				60%	0.01	Includes chimneys and flues, ducts, vent pipes, internal drains, skylights		
B3080 - Overhead Exterior Enclosures			х				60%	0.45	Includes awnings, covered areas, gazebos, play sheds, etc.		
C10 - Interior Construction						1	1 1	5.77			
C1010 - Interior Partitions				х			30%	1.16	Includes GWB on wood or metal studs, masonry, CMU, operable walls, etc.		
C1020 - Interior Windows			х				60%	0.60	Includes door lites, interior partition windows, etc.		
C1030 - Interior Doors			x				60%	0.71	All types of interior doors including wood, metal, roll up, rest room		
C1040 - Interior Grilles and Grates			x				60%	0.03	partition doors, accordion, lock hardware, door closers, etc Includes all types of interior grills & grates		
C1060 - Raised floor construction			x				60%	0.03	Includes raised access flooring, platforms, stages, etc.		
C1070 - Suspended Ceiling Const.			х				60%	3.23	Includes all types of suspended ceilings.		
C20 - Interior Finishes				V		1	2007	4.50			
C2010 - Wall Finishes				х			30%	0.99	All types of interior wall finishes such as brick or masonry, GWB w/pain GWB w/wall coverings, CAB, wainscoting, chair rails, etc.		
C2020 - Interior Fabrications			х				60%	0.06	Includes plaster wall finishes, metal fabrications, column covers, ornamental woodwork, plastic and stone fabrications, cornice, base,		
C2030 - Flooring			х				60%	3.39	All types of interior flooring including concrete, carpet, vinyl, laminate, VCT & vinyl tile, ceramic and porcelain tile, wood, etc.		
C2040 - Stair Finishes			х			N/A	60%	0.00	All types of stair finishes including paints and epoxies, concrete, rubber,		
C2050 - Ceiling Finishes				х			30%	0.06	metal, etc. Includes open ceilings, painted GWB, acoustical tile, suspended ceilings,		
D10 - Conveying							I	0.00	etc.		
D1010 - Vertical Conveying Systems						N/A	N/A	N/A	Includes elevators, dumb waiters, handicap lifts, etc.		
D20 - Plumbing Fixtures						1	II	9.45			
D2010 - Domestic Water Distribution		x				1	90%	7.59	Includes supply piping, fixtures, water heaters, fixtures, backflow device		
D2020 - Sanitary Drainage			х				60%	1.80	mixing valves, etc. All sanitary waste systems including drains, traps, clean outs, venting,		
D2030 - Building Support Plumbing Systems			х				60%	0.06	grinder pumps, disposals, etc. Includes sewer/septic systems, fire loops, etc.		
			^								
D2050 - General Services Compressed Air						N/A	N/A	N/A	Includes compressed air systems for fire sprinkler systems, pneumatic controls, voc ed, etc.		
D30 - HVAC						1	Not Dated	6.82	Includes natural gas, propane, oil, etc.		
D3010 - Facility Fuel Systems							Not Rated	Not Rated	• • • • •		
D3020 - Heating Systems			х				60%	6.52	All heating systems including steam, hot water boilers, heat pumps, electric, bio mass, etc.		
D3030 - Cooling Systems							Not Rated	Not Rated	Includes heat pumps, bio mass, chillers, cooling towers, etc.		
D3050 - Facility HVAC Dist. System			x				60%	0.18	Includes supply and return ducting, plenums, piping, valves, controls, et		
D3060 - Ventilation			x				60%	0.12	Includes supply and exhaust ducting, plenums, piping, valves, controls,		
D40 - Fire Protection						I		2.34	natural ventilation, etc.		
D401 - Fire Protection D4010 - Fires Suppression		x					90%	2.34	Includes extinguishing systems, kitchen hoods, sprinkler systems, etc.		
D4030 - Fire Suppression Specialties		x					90%	0.01	Includes fire extinguishers, cabinets, etc.		
		~				I					
D50 - Electrical D5010 - Facility Power Generation							Not Rated	0.68 Not Rated	Includes generators and associated equipment, etc.		
D5020 - Electrical Service and Distribution			х				60%	0.68	Includes transformers, vaults, mains and sub-main panels, EMT, wiring,		
			^						motors, etc.		
D5030 - General Purpose Electrical Power						1	Not Rated	Not Rated	Includes sub-main to branch panel wiring; branch panels; etc.		

D5040 - Lighting			Not Rated	Not Rated	All facets of lighting including fixtures, bulbs, ballasts, lenses, CFC's, tube: switches, HPS, MV, sensors, controls; etc.
D60 - Communication				1.08	
D6010 - Data Communications	x		60%	0.30	Includes internet connection, wireless, servers, distribution, etc.
D6020 - Voice Communications	x		60%	0.30	Includes phone systems, land lines, radio systems, intercoms, etc.
D6030 - Audio-Video Communication	x		60%	0.36	Includes cable, satellite, projectors, DVR's, distribution, etc.
D6060 - Distributed Comm/Monitoring	x		60%	0.12	Includes clock systems, enhanced audio, paging, public address, etc.
D70 - Electronic Safety and Security				0.48	
D7010 - Access Control and Intrusion Defection	x		60%	0.30	Includes keypads, electronic locks, coding systems, card readers, etc.
D7030 - Electronic Surveillance	x		60%	0.12	Includes cameras, motion sensors, DVR's, etc.
D7050 - Detection and Alarm	х		30%	0.06	All types of fire alarms systems and components including smoke detectors, heat detectors, strobes and horns, auto dialers, etc.
D80 - Integrated Automation				0.06	
D8010 - Integrated Automation Facility Controls	x		60%	0.06	Includes systems and components for controlling building systems such a HVAC, lighting, irrigation, security, etc. DDC
E10 - Equipment				0.31	
E1010 - Vehicle and Pedestrian Equipment	x	N/A	60%	0.00	Includes vehicle repair equipment; parking gates and meters; loading dock equipment; pedestrian gates; etc.
E1030 - Commercial Equipment	x		60%	0.18	All types of commercial equipment such as vending, laundry, safes, janitorial, photography, office, food storage & service, etc.
E1040 - Institutional Equipment	x		60%	0.07	Includes all types of institutional equipment such as library, audio/visual, laboratory, vocational, art, etc.
E1070 - Entertainment and Recreational Equipment	x		60%	0.06	Includes all types of entertainment and recreational equipment such as theater, music, athletic, etc.
E1090 - Other Equipment			Not Rated	Not Rated	Includes all types of other equipment such as dumpsters, recycling, composting, compacting, agricultural, etc.
E20 - Furnishings			•	1.08	
E2010 - Fixed Furnishings	x		60%	1.02	Includes all types of fixed furnishings such as art, walk off mats, grills, window treatments, casework, bleachers, lockers, etc.
E2050 - Movable Furnishings	x		60%	0.06	All types of movable furnishings such as bookshelves, cafeteria tables, kitchen warmers, servine carts, office. classroom, etc.

Woodland
Yale Elementary
CSG Team
ESD 112 Construction Services Group
12/1/2011



							Overall BCA Score	53.65	MASHINGTO
Building Profile Type:				Ele	menta	ry School -	Single Story		
Component	E	G	F	Р	U	N/A	Component Score	BCA Score	Component Description
A10 - Foundations						1		2.32	
A1010 - Standard Foundation			x				60%	2.32	Wall and column foundations, footings and bases, perimeter insulation, perimeter drainage, waterproofing
A20 - Walls A2020 - Walls for subgrade enclosure						N/A	N/A	0.00	Standard, one story concrete or masonry basement foundation wall,
-						N/A	N/A	N/A	typically including footing, re-enforcement, etc.
A40 - Slabs on Grade A4010 - Standard Slabs on Grade			х			1	60%	2.44 2.44	Standard reinforced concrete slab on grade with typical stem wall
									including footing, waterproofing, footing drains, etc.
A4040 - Pits and Bases						N/A	N/A	N/A	Concrete or masonry pier pads, trenches, equipment pads and pits.
A60 - Building Subdrainage A6010 - Building Subdrainage			x			1	60%	0.48 0.48	Footing drains, and underground drains from downspouts.
						Į			
B10 - Superstructure B1010 - Floor Construction						N/A	N/A	0.00 N/A	Floors constructed with dimensional lumber, wood joists, post & beam
B1020 - Roof Construction							Not Rated	Not Rated	w/decking, pre-stressed concrete, metal & concrete, etc. Roofs constructed with dimensional lumber, wood trusses, pre-stressed
B1080 - Stairs						N/A	N/A	N/A	concrete, metal & concrete, etc. Standard construction stairs made of wood, concrete, metal, masonry,
						N/A	NA		etc.
B20 Exterior Vertical Enclosures B2010 - Exterior Walls			x			1	60%	7.89 5.27	Exterior walls constructed of concrete, masonry, dimensional siding,
			x						sheathing, troweled on surfacing, etc.
B2020 - Exterior Windows							60%	2.30	Various exterior glazing in wood, vinyl, aluminum, steel, etc. SS, insulated; normal, wired, laminated, etc.; fixed or operable.
B2050 - Exterior Doors and Grilles			х				60%	0.29	Includes all types of exterior doors including wood, metal, roll up, lock hardware, door closers, etc.
B2070 - Exterior Louvers and Vents			x				60%	0.03	All types of exterior louvers and vents including wood, metal, vinyl, etc. in- cluding operable type.
B30 - Exterior Horizontal Enclosures								4.31	
B3010 - Roofing			х				60%	3.70	Includes all types of roof coverings including composite, membrane, metal, etc., and related materials.
B3020 - Roof Appurtenances			х				60%	0.15	Includes antennas, cupolas, signs, HVAC units, exhaust fans, etc.
B3060 - Horizontal Openings/Penetrations			х				60%	0.01	Includes chimneys and flues, ducts, vent pipes, internal drains, skylights,
B3080 - Overhead Exterior Enclosures			х				60%	0.45	etc. Includes awnings, covered areas, gazebos, play sheds, etc.
C10 - Interior Construction						1		6.90	
C1010 - Interior Partitions			х				60%	2.32	Includes GWB on wood or metal studs, masonry, CMU, operable walls,
C1020 - Interior Windows			х				60%	0.60	etc. Includes door lites, interior partition windows, etc.
C1030 - Interior Doors			х				60%	0.71	All types of interior doors including wood, metal, roll up, rest room
C1040 - Interior Grilles and Grates			x				60%	0.03	partition doors, accordion, lock hardware, door closers, etc Includes all types of interior grills & grates
C1060 - Raised floor construction							Not Rated	Not Rated	Includes raised access flooring, platforms, stages, etc.
C1070 - Suspended Ceiling Const.			х				60%	3.23	Includes all types of suspended ceilings.
C20 - Interior Finishes C2010 - Wall Finishes			x			1	60%	5.56 1.99	All types of interior wall finishes such as brick or masonry, GWB w/pain
									GWB w/wall coverings, CAB, wainscoting, chair rails, etc.
C2020 - Interior Fabrications			х				60%	0.06	Includes plaster wall finishes, metal fabrications, column covers, ornamental woodwork, plastic and stone fabrications, cornice, base,
C2030 - Flooring			х				60%	3.39	All types of interior flooring including concrete, carpet, vinyl, laminate, VCT & vinyl tile, ceramic and porcelain tile, wood, etc.
C2040 - Stair Finishes						N/A	N/A	N/A	All types of stair finishes including paints and epoxies, concrete, rubber,
C2050 - Ceiling Finishes			х				60%	0.12	metal, etc. Includes open ceilings, painted GWB, acoustical tile, suspended ceilings,
D10 - Conveying						1		0.00	etc.
D1010 - Vertical Conveying Systems						N/A	N/A	N/A	Includes elevators, dumb waiters, handicap lifts, etc.
D20 - Plumbing Fixtures								6.92	
D2010 - Domestic Water Distribution			х				60%	5.06	Includes supply piping, fixtures, water heaters, fixtures, backflow device mixing valves. etc.
D2020 - Sanitary Drainage			х				60%	1.80	All sanitary waste systems including drains, traps, clean outs, venting,
D2030 - Building Support Plumbing Systems			х				60%	0.06	grinder pumps, disposals, etc. Includes sewer/septic systems, fire loops, etc.
D2050 - General Services Compressed Air						N/A	N/A	N/A	Includes compressed air systems for fire sprinkler systems, pneumatic
D30 - HVAC								6.67	controls, voc ed, etc.
D301 - HVAC D3010 - Facility Fuel Systems							Not Rated	Not Rated	Includes natural gas, propane, oil, etc.
D3020 - Heating Systems			x				60%	6.52	All heating systems including steam, hot water boilers, heat pumps,
D3030 - Cooling Systems							Not Rated	Not Rated	electric, bio mass, etc. Includes heat pumps, bio mass, chillers, cooling towers, etc.
D3050 - Facility HVAC Dist. System				х			30%	0.09	Includes supply and return ducting, plenums, piping, valves, controls, et
D3060 - Ventilation				х			30%	0.06	Includes supply and exhaust ducting, plenums, piping, valves, controls, natural ventilation, etc.
D40 - Fire Protection								0.00	
D4010 - Fires Suppression					x		0%	0.00	Includes extinguishing systems, kitchen hoods, sprinkler systems, etc.
D4030 - Fire Suppression Specialties					x		0%	0.00	Includes fire extinguishers, cabinets, etc.
D50 - Electrical								6.49	
D5010 - Facility Power Generation							Not Rated	Not Rated	Includes generators and associated equipment, etc.
DE020 Electrical Consistence of Distribution			х				60%	0.68	Includes transformers, vaults, mains and sub-main panels, EMT, wiring,
D5020 - Electrical Service and Distribution									motors, etc.

D5040 - Lighting	x		90%	7.55	All facets of lighting including fixtures, bulbs, ballasts, lenses, CFC's, tube switches, HPS, MV, sensors, controls; etc.
D60 - Communication				1.62	
D6010 - Data Communications	х		90%	0.45	Includes internet connection, wireless, servers, distribution, etc.
D6020 - Voice Communications	х		90%	0.45	Includes phone systems, land lines, radio systems, intercoms, etc.
D6030 - Audio-Video Communication	x		90%	0.54	Includes cable, satellite, projectors, DVR's, distribution, etc.
D6060 - Distributed Comm/Monitoring	x		90%	0.18	Includes clock systems, enhanced audio, paging, public address, etc.
D70 - Electronic Safety and Security				0.60	
D7010 - Access Control and Intrusion Defection	х		60%	0.30	Includes keypads, electronic locks, coding systems, card readers, etc.
D7030 - Electronic Surveillance	×		60%	0.12	Includes cameras, motion sensors, DVR's, etc.
D7050 - Detection and Alarm	х		90%	0.18	All types of fire alarms systems and components including smoke detectors, heat detectors, strobes and horns, auto dialers, etc.
D80 - Integrated Automation		•		0.06	
D8010 - Integrated Automation Facility Controls	х		60%	0.06	Includes systems and components for controlling building systems such a HVAC, lighting, irrigation, security, etc. DDC
E10 - Equipment				0.92	
E1010 - Vehicle and Pedestrian Equipment	x	N/A	60%	0.00	Includes vehicle repair equipment; parking gates and meters; loading dock equipment; pedestrian gates; etc.
E1030 - Commercial Equipment	x		60%	0.18	All types of commercial equipment such as vending, laundry, safes, janitorial, photography, office, food storage & service, etc.
E1040 - Institutional Equipment	х		60%	0.68	Includes all types of institutional equipment such as library, audio/visual, laboratory, vocational, art, etc.
E1070 - Entertainment and Recreational Equipment	x		60%	0.06	Includes all types of entertainment and recreational equipment such as theater, music, athletic, etc.
E1090 - Other Equipment			Not Rated	Not Rated	Includes all types of other equipment such as dumpsters, recycling, compositing, compacting, agricultural, etc.
E20 - Furnishings				1.08	
E2010 - Fixed Furnishings	х		60%	1.02	Includes all types of fixed furnishings such as art, walk off mats, grills, window treatments, casework, bleachers, lockers, etc.
E2050 - Movable Furnishings	x		60%	0.06	All types of movable furnishings such as bookshelves, cafeteria tables, kitchen warmers, serving carts, office, classroom, etc.

Woodland
Intermediate School
CSG Team
ESD 112 Construction Services Group
12/1/2011



							Overall BCA Score	62.55	MASHINGTO*	
Building Profile Type:			-	Eler	nenta	ry School -	Multi-Story			
Component	E	G	F	Р	U	N/A	Component Score	BCA Score	Component Description	
A10 - Foundations A1010 - Standard Foundation			х			1	60%	0.80 0.80	Wall and column foundations, footings and bases, perimeter insulation	
			~				0070		perimeter drainage, waterproofing	
A20 - Walls A2020 - Walls for subgrade enclosure						N/A	N/A	0.00 N/A	Standard, one story concrete or masonry basement foundation wall,	
A40 - Slabs on Grade								1.22	typically including footing, re-enforcement, etc.	
A4010 - Standard Slabs on Grade			х				60%	1.22	Standard reinforced concrete slab on grade with typical stem wall	
A4040 - Pits and Bases							Not Rated	Not Rated	including footing, waterproofing, footing drains, etc. Concrete or masonry pier pads, trenches, equipment pads and pits.	
A60 - Building Subdrainage								0.48		
A6010 - Building Subdrainage			x			1	60%	0.48	Footing drains, and underground drains from downspouts.	
B10 - Superstructure						1	1	9.11		
B1010 - Floor Construction			х				60%	6.07	Floors constructed with dimensional lumber, wood joists, post & bean	
B1020 - Roof Construction			x				60%	2.47	w/decking, pre-stressed concrete, metal & concrete, etc. Roofs constructed with dimensional lumber, wood trusses, pre-stresse	
B1080 - Stairs			x				60%	0.56	concrete, metal & concrete, etc. Standard construction stairs made of wood, concrete, metal, masonry	
								7.85	etc.	
B20 Exterior Vertical Enclosures B2010 - Exterior Walls			x			1	60%	5.20	Exterior walls constructed of concrete, masonry, dimensional siding,	
B2020 - Exterior Windows			x				60%	2.36	sheathing, troweled on surfacing, etc. Various exterior glazing in wood, vinyl, aluminum, steel, etc. SS,	
									insulated; normal, wired, laminated, etc.; fixed or operable.	
B2050 - Exterior Doors and Grilles			х				60%	0.25	Includes all types of exterior doors including wood, metal, roll up, lock hardware, door closers, etc.	
B2070 - Exterior Louvers and Vents			х				60%	0.03	All types of exterior louvers and vents including wood, metal, vinyl, et in- cluding operable type.	
B30 - Exterior Horizontal Enclosures						1		2.93		
B3010 - Roofing			х				60%	2.32	Includes all types of roof coverings including composite, membrane, metal, etc., and related materials.	
B3020 - Roof Appurtenances			х				60%	0.15	Includes antennas, cupolas, signs, HVAC units, exhaust fans, etc.	
B3060 - Horizontal Openings/Penetrations			х				60%	0.01	Includes chimneys and flues, ducts, vent pipes, internal drains, skylight	
B3080 - Overhead Exterior Enclosures			x				60%	0.45	etc. Includes awnings, covered areas, gazebos, play sheds, etc.	
C10 - Interior Construction						1	1	7.13		
C1010 - Interior Partitions			х				60%	2.61	Includes GWB on wood or metal studs, masonry, CMU, operable walls	
C1020 - Interior Windows			x				60%	0.60	etc. Includes door lites, interior partition windows, etc.	
C1030 - Interior Doors			x				60%	0.66	All types of interior doors including wood, metal, roll up, rest room	
C1040 - Interior Grilles and Grates			х				60%	0.03	partition doors, accordion, lock hardware, door closers, etc Includes all types of interior grills & grates	
			^							
C1060 - Raised floor construction							Not Rated	Not Rated	Includes raised access flooring, platforms, stages, etc.	
C1070 - Suspended Ceiling Const.			х				60%	3.23	Includes all types of suspended ceilings.	
C20 - Interior Finishes						1	2	6.94		
C2010 - Wall Finishes			х				60%	2.11	All types of interior wall finishes such as brick or masonry, GWB w/pai GWB w/wall coverings, CAB, wainscoting, chair rails, etc.	
C2020 - Interior Fabrications			х				60%	0.06	Includes plaster wall finishes, metal fabrications, column covers, ornamental woodwork, plastic and stone fabrications, cornice, base,	
C2030 - Flooring			х				60%	4.41	All types of interior flooring including concrete, carpet, vinyl, laminate	
C2040 - Stair Finishes			х				60%	0.24	VCT & vinyl tile, ceramic and porcelain tile, wood, etc. All types of stair finishes including paints and epoxies, concrete, rubbe	
C2050 - Ceiling Finishes			x				60%	0.12	metal, etc. Includes open ceilings, painted GWB, acoustical tile, suspended ceiling:	
-			~				00/0		etc.	
D10 - Conveying D1010 - Vertical Conveying Systems			x			1	60%	0.35 0.35	Includes elevators, dumb waiters, handicap lifts, etc.	
D20 - Plumbing Fixtures							=	5.36		
D2010 - Domestic Water Distribution		×				1	90%	4.02	Includes supply piping, fixtures, water heaters, fixtures, backflow device	
D2020 - Sanitary Drainage			х				60%	1.28	mixing valves, etc. All sanitary waste systems including drains, traps, clean outs, venting,	
									grinder pumps, disposals, etc.	
D2030 - Building Support Plumbing Systems			х				60%	0.06	Includes sewer/septic systems, fire loops, etc.	
D2050 - General Services Compressed Air						N/A	N/A	N/A	Includes compressed air systems for fire sprinkler systems, pneumatic controls, voc ed, etc.	
D30 - HVAC								3.93		
D3010 - Facility Fuel Systems							Not Rated	Not Rated	Includes natural gas, propane, oil, etc.	
D3020 - Heating Systems			х				60%	3.54	All heating systems including steam, hot water boilers, heat pumps, electric, bio mass, etc.	
D3030 - Cooling Systems							Not Rated	Not Rated	Includes heat pumps, bio mass, chillers, cooling towers, etc.	
D3050 - Facility HVAC Dist. System		x					90%	0.27	Includes supply and return ducting, plenums, piping, valves, controls, e	
D3060 - Ventilation			х				60%	0.12	Includes supply and exhaust ducting, plenums, piping, valves, controls,	
						1	I		natural ventilation, etc.	
D40 - Fire Protection D4010 - Fires Suppression		х					90%	2.51 2.50	Includes extinguishing systems, kitchen hoods, sprinkler systems, etc.	
D4030 - Fire Suppression Specialties		x					90%	0.01	Includes fire extinguishers, cabinets, etc.	
		^					50%			
D50 - Electrical D5010 - Facility Power Generation							Not Rated	9.66 Not Rated	Includes generators and associated equipment, etc.	
D5020 - Electrical Service and Distribution		x					90%	0.90	Includes transformers, vaults, mains and sub-main panels, EMT, wiring	
									motors, etc.	
D5030 - General Purpose Electrical Power		Х					90%	1.21	Includes sub-main to branch panel wiring; branch panels; etc.	

				_	
D5040 - Lighting	Х		60%	5.00	All facets of lighting including fixtures, bulbs, ballasts, lenses, CFC's, tube
200 Communication				1.62	switches, HPS, MV, sensors, controls; etc.
D60 - Communication					
D6010 - Data Communications	х		90%	0.45	Includes internet connection, wireless, servers, distribution, etc.
D6020 - Voice Communications	х		90%	0.45	Includes phone systems, land lines, radio systems, intercoms, etc.
D6030 - Audio-Video Communication	x		90%	0.54	Includes cable, satellite, projectors, DVR's, distribution, etc.
D6060 - Distributed Comm/Monitoring	х		90%	0.18	Includes clock systems, enhanced audio, paging, public address, etc.
D70 - Electronic Safety and Security		1 1		0.60	
D7010 - Access Control and Intrusion Defection	х		60%	0.30	Includes keypads, electronic locks, coding systems, card readers, etc.
D7030 - Electronic Surveillance	x		60%	0.12	Includes cameras, motion sensors, DVR's, etc.
D7050 - Detection and Alarm	x		90%	0.18	All types of fire alarms systems and components including smoke detectors, heat detectors, strobes and horns, auto dialers, etc.
D80 - Integrated Automation		•		0.06	detectors, near detectors, strobes and norms, auto dialers, etc.
D8010 - Integrated Automation Facility Controls	х		60%	0.06	Includes systems and components for controlling building systems such HVAC, lighting, irrigation, security, etc. DDC
E10 - Equipment		•		0.31	
E1010 - Vehicle and Pedestrian Equipment	x	N/A	60%	0.00	Includes vehicle repair equipment; parking gates and meters; loading dock equipment; pedestrian gates; etc.
E1030 - Commercial Equipment	x		60%	0.18	All types of commercial equipment such as vending, laundry, safes, janitorial, photography, office, food storage & service, etc.
E1040 - Institutional Equipment	х		60%	0.07	Includes all types of institutional equipment such as library, audio/visual laboratory, vocational, art, etc.
E1070 - Entertainment and Recreational Equipment	x		60%	0.06	Includes all types of entertainment and recreational equipment such as theater, music, athletic, etc.
E1090 - Other Equipment			Not Rated	Not Rated	Includes all types of other equipment such as dumpsters, recycling, composting, compacting, agricultural, etc.
E20 - Furnishings				1.08	
E2010 - Fixed Furnishings	х		60%	1.02	Includes all types of fixed furnishings such as art, walk off mats, grills, window treatments, casework, bleachers, lockers, etc.
E2050 - Movable Furnishings	х		60%	0.06	All types of movable furnishings such as bookshelves, cafeteria tables, kitchen warmers, serving carts, office, classroom, etc.

Woodland
Middle High School
CSG Team
ESD 112 Construction Services Group
12/1/2011



									Overall BCA Score:	58.87	MASHINGTOT
Building Profile Type:	Building Profile Type: Middle/Junior High School - Single Story										
Component	E	6	3	F	Р	U	- T	N/A	Component Score	BCA Score	Component Description
A10 - Foundations										2.70	
A1010 - Standard Foundation				x					60%	2.70	Wall and column foundations, footings and bases, perimeter insulation, perimeter drainage, waterproofing
A20 - Walls A2020 - Walls for subgrade enclosure							1	N/A	N/A	0.00 N/A	Standard, one story concrete or masonry basement foundation wall,
A40 - Slabs on Grade										2.70	typically including footing, re-enforcement, etc.
A4010 - Standard Slabs on Grade				х					60%	2.70	Standard reinforced concrete slab on grade with typical stem wall
A4040 - Pits and Bases								N/A	N/A	N/A	including footing, waterproofing, footing drains, etc. Concrete or masonry pier pads, trenches, equipment pads and pits.
A60 - Building Subdrainage							1			0.72	
A6010 - Building Subdrainage				х					60%	0.72	Footing drains, and underground drains from downspouts.
B10 - Superstructure							1		1 1	0.00	
B1010 - Floor Construction								N/A	N/A	N/A	Floors constructed with dimensional lumber, wood joists, post & beam w/decking, pre-stressed concrete, metal & concrete, etc.
B1020 - Roof Construction									Not Rated	Not Rated	Roofs constructed with dimensional lumber, wood trusses, pre-stressed concrete, metal & concrete, etc.
B1080 - Stairs								N/A	N/A	N/A	Standard construction stairs made of wood, concrete, metal, masonry, etc.
B20 Exterior Vertical Enclosures B2010 - Exterior Walls				x			1		60%	8.09 5.40	Exterior walls constructed of concrete, masonry, dimensional siding,
											sheathing, troweled on surfacing, etc.
B2020 - Exterior Windows				х					60%	2.36	Various exterior glazing in wood, vinyl, aluminum, steel, etc. SS, insulated; normal, wired, laminated, etc.; fixed or operable.
B2050 - Exterior Doors and Grilles				х					60%	0.30	Includes all types of exterior doors including wood, metal, roll up, lock hardware, door closers, etc.
B2070 - Exterior Louvers and Vents				х					60%	0.03	All types of exterior louvers and vents including wood, metal, vinyl, etc. in- cluding operable type.
B30 - Exterior Horizontal Enclosures B3010 - Roofing					x		-		30%	1.97 1.35	Includes all types of roof coverings including composite, membrane,
·					^						metal, etc., and related materials.
B3020 - Roof Appurtenances				х					60%	0.15	Includes antennas, cupolas, signs, HVAC units, exhaust fans, etc.
B3060 - Horizontal Openings/Penetrations				х					60%	0.02	Includes chimneys and flues, ducts, vent pipes, internal drains, skylights, etc.
B3080 - Overhead Exterior Enclosures				х					60%	0.45	Includes awnings, covered areas, gazebos, play sheds, etc.
C10 - Interior Construction C1010 - Interior Partitions				x			1		60%	7.52 3.00	Includes GWB on wood or metal studs, masonry, CMU, operable walls,
											etc.
C1020 - Interior Windows				х					60%	0.60	Includes door lites, interior partition windows, etc.
C1030 - Interior Doors				х					60%	0.66	All types of interior doors including wood, metal, roll up, rest room partition doors, accordion, lock hardware, door closers, etc
C1040 - Interior Grilles and Grates				х					60%	0.03	Includes all types of interior grills & grates
C1060 - Raised floor construction								N/A	N/A	N/A	Includes raised access flooring, platforms, stages, etc.
C1070 - Suspended Ceiling Const.				х					60%	3.23	Includes all types of suspended ceilings.
C20 - Interior Finishes									, ,	7.71	
C2010 - Wall Finishes				х					60%	2.52	All types of interior wall finishes such as brick or masonry, GWB w/paint GWB w/wall coverings, CAB, wainscoting, chair rails, etc.
C2020 - Interior Fabrications				х					60%	0.06	Includes plaster wall finishes, metal fabrications, column covers, ornamental woodwork, plastic and stone fabrications, cornice, base,
C2030 - Flooring				х					60%	5.01	All types of interior flooring including concrete, carpet, vinyl, laminate, VCT & vinyl tile, ceramic and porcelain tile, wood, etc.
C2040 - Stair Finishes								N/A	N/A	N/A	All types of stair finishes including paints and epoxies, concrete, rubber, metal, etc.
C2050 - Ceiling Finishes				х					60%	0.12	Includes open ceilings, painted GWB, acoustical tile, suspended ceilings,
D10 - Conveying							1			0.00	etc.
D1010 - Vertical Conveying Systems								N/A	N/A	N/A	Includes elevators, dumb waiters, handicap lifts, etc.
D20 - Plumbing Fixtures D2010 - Domestic Water Distribution		,					1		90%	6.29 4.95	Includes supply piping, fixtures, water heaters, fixtures, backflow device
			•								mixing valves, etc.
D2020 - Sanitary Drainage				х					60%	1.28	All sanitary waste systems including drains, traps, clean outs, venting, grinder pumps, disposals, etc.
D2030 - Building Support Plumbing Systems				х					60%	0.06	Includes sewer/septic systems, fire loops, etc.
D2050 - General Services Compressed Air								N/A	N/A	N/A	Includes compressed air systems for fire sprinkler systems, pneumatic controls, voc ed, etc.
D30 - HVAC D3010 - Facility Fuel Systems									Not Rated	3.78 Not Rated	Includes natural gas, propane, oil, etc.
				~							
D3020 - Heating Systems				х					60%	3.54	All heating systems including steam, hot water boilers, heat pumps, electric, bio mass, etc.
D3030 - Cooling Systems									Not Rated	Not Rated	Includes heat pumps, bio mass, chillers, cooling towers, etc.
D3050 - Facility HVAC Dist. System)	K						90%	0.18	Includes supply and return ducting, plenums, piping, valves, controls, etc
D3060 - Ventilation				х					60%	0.06	Includes supply and exhaust ducting, plenums, piping, valves, controls, natural ventilation, etc.
D40 - Fire Protection							- 1			3.16	
D4010 - Fires Suppression		>							90%	3.15	Includes extinguishing systems, kitchen hoods, sprinkler systems, etc.
D4030 - Fire Suppression Specialties		>	ĸ						90%	0.01	Includes fire extinguishers, cabinets, etc.
D50 - Electrical D5010 - Facility Power Generation							1		Not Rated	9.94 Not Rated	Includes generators and associated equipment, etc.
D5020 - Electrical Service and Distribution		>							90%	1.04	Includes transformers, vaults, mains and sub-main panels, EMT, wiring, motors, etc.
D5030 - General Purpose Electrical Power)	ĸ						90%	1.35	Includes sub-main to branch panel wiring; branch panels; etc.

D5040 - Lighting	х		90%	7.55	All facets of lighting including fixtures, bulbs, ballasts, lenses, CFC's, tube switches, HPS, MV, sensors, controls; etc.
D60 - Communication				1.62	
D6010 - Data Communications	х		90%	0.45	Includes internet connection, wireless, servers, distribution, etc.
D6020 - Voice Communications	х		90%	0.45	Includes phone systems, land lines, radio systems, intercoms, etc.
D6030 - Audio-Video Communication	x		90%	0.54	Includes cable, satellite, projectors, DVR's, distribution, etc.
D6060 - Distributed Comm/Monitoring	x		90%	0.18	Includes clock systems, enhanced audio, paging, public address, etc.
D70 - Electronic Safety and Security				0.60	
D7010 - Access Control and Intrusion Defection	х		60%	0.30	Includes keypads, electronic locks, coding systems, card readers, etc.
D7030 - Electronic Surveillance	x		60%	0.12	Includes cameras, motion sensors, DVR's, etc.
D7050 - Detection and Alarm	х		90%	0.18	All types of fire alarms systems and components including smoke detectors, heat detectors, strobes and horns, auto dialers, etc.
D80 - Integrated Automation				0.06	
D8010 - Integrated Automation Facility Controls	х		60%	0.06	Includes systems and components for controlling building systems such a HVAC, lighting, irrigation, security, etc. DDC
E10 - Equipment				1.04	
E1010 - Vehicle and Pedestrian Equipment	x	N/A	60%	0.00	Includes vehicle repair equipment; parking gates and meters; loading dock equipment; pedestrian gates; etc.
E1030 - Commercial Equipment	x		60%	0.18	All types of commercial equipment such as vending, laundry, safes, janitorial, photography, office, food storage & service, etc.
E1040 - Institutional Equipment	х		60%	0.68	Includes all types of institutional equipment such as library, audio/visual laboratory, vocational, art, etc.
E1070 - Entertainment and Recreational Equipment	х		60%	0.18	Includes all types of entertainment and recreational equipment such as theater, music, athletic, etc.
E1090 - Other Equipment			Not Rated	Not Rated	Includes all types of other equipment such as dumpsters, recycling, compositing, compacting, agricultural, etc.
E20 - Furnishings				0.96	
E2010 - Fixed Furnishings	х		60%	0.90	Includes all types of fixed furnishings such as art, walk off mats, grills, window treatments, casework, bleachers, lockers, etc.
E2050 - Movable Furnishings	x		60%	0.06	All types of movable furnishings such as bookshelves, cafeteria tables, kitchen warmers, serving carts, office, classroom, etc.

Woodland
Present High School
CSG Team
ESD 112 Construction Services Group
12/1/2011



							Overall BCA Score	53.67	MASHINGTOT
Building Profile Type:					High S	chool - Sin	gle Story		
Component	E	G	F	Р	U	N/A	Component Score	BCA Score	Component Description
A10 - Foundations A1010 - Standard Foundation			х			1	60%	2.40 2.40	Wall and column foundations, footings and bases, perimeter insulation,
			~				0076	0.00	perimeter drainage, waterproofing
A20 - Walls A2020 - Walls for subgrade enclosure						N/A	N/A	0.00 N/A	Standard, one story concrete or masonry basement foundation wall,
A40 - Slabs on Grade						1	1	2.70	typically including footing, re-enforcement, etc.
A4010 - Standard Slabs on Grade			х				60%	2.70	Standard reinforced concrete slab on grade with typical stem wall
A4040 - Pits and Bases						N/A	N/A	N/A	including footing, waterproofing, footing drains, etc. Concrete or masonry pier pads, trenches, equipment pads and pits.
A60 - Building Subdrainage						1	1	0.72	
A6010 - Building Subdrainage			х				60%	0.72	Footing drains, and underground drains from downspouts.
B10 - Superstructure B1010 - Floor Construction						N/A	N/A	0.00 N/A	Floors constructed with dimensional lumber, wood joists, post & beam
						170			w/decking, pre-stressed concrete, metal & concrete, etc.
B1020 - Roof Construction							Not Rated	Not Rated	Roofs constructed with dimensional lumber, wood trusses, pre-stresses concrete, metal & concrete, etc.
B1080 - Stairs						N/A	N/A	N/A	Standard construction stairs made of wood, concrete, metal, masonry, etc.
B20 Exterior Vertical Enclosures B2010 - Exterior Walls			x			1	60%	7.96 4.92	Exterior walls constructed of concrete, masonry, dimensional siding,
B2020 - Exterior Windows			x				60%	2.77	sheathing, troweled on surfacing, etc. Various exterior glazing in wood, vinyl, aluminum, steel, etc. SS,
									insulated; normal, wired, laminated, etc.; fixed or operable.
B2050 - Exterior Doors and Grilles			x				60%	0.24	Includes all types of exterior doors including wood, metal, roll up, lock hardware, door closers, etc.
B2070 - Exterior Louvers and Vents			х				60%	0.03	All types of exterior louvers and vents including wood, metal, vinyl, etc. in- cluding operable type.
B30 - Exterior Horizontal Enclosures B3010 - Roofing			x			1	60%	3.32 2.70	Includes all types of roof coverings including composite, membrane,
·									metal, etc., and related materials.
B3020 - Roof Appurtenances			х				60%	0.15	Includes antennas, cupolas, signs, HVAC units, exhaust fans, etc.
B3060 - Horizontal Openings/Penetrations			х				60%	0.02	Includes chimneys and flues, ducts, vent pipes, internal drains, skylights etc.
B3080 - Overhead Exterior Enclosures			х				60%	0.45	Includes awnings, covered areas, gazebos, play sheds, etc.
C10 - Interior Construction C1010 - Interior Partitions			х			1	60%	8.26 3.00	Includes GWB on wood or metal studs, masonry, CMU, operable walls,
									etc. Includes door lites, interior partition windows, etc.
C1020 - Interior Windows			х				60%	1.20	
C1030 - Interior Doors			х				60%	0.73	All types of interior doors including wood, metal, roll up, rest room partition doors, accordion, lock hardware, door closers, etc
C1040 - Interior Grilles and Grates			х				60%	0.03	Includes all types of interior grills & grates
C1060 - Raised floor construction						N/A	N/A	N/A	Includes raised access flooring, platforms, stages, etc.
C1070 - Suspended Ceiling Const.			х				60%	3.30	Includes all types of suspended ceilings.
C20 - Interior Finishes						1		5.22	
C2010 - Wall Finishes			х				60%	1.50	All types of interior wall finishes such as brick or masonry, GWB w/pair GWB w/wall coverings, CAB, wainscoting, chair rails, etc.
C2020 - Interior Fabrications			х				60%	0.06	Includes plaster wall finishes, metal fabrications, column covers, ornamental woodwork, plastic and stone fabrications, cornice, base,
C2030 - Flooring			х				60%	3.54	All types of interior flooring including concrete, carpet, vinyl, laminate, VCT & vinyl tile, ceramic and porcelain tile, wood, etc.
C2040 - Stair Finishes						N/A	N/A	N/A	All types of stair finishes including paints and epoxies, concrete, rubber
C2050 - Ceiling Finishes			х				60%	0.12	metal, etc. Includes open ceilings, painted GWB, acoustical tile, suspended ceilings,
D10 - Conveying								0.00	etc.
D1010 - Vertical Conveying Systems						N/A	N/A	N/A	Includes elevators, dumb waiters, handicap lifts, etc.
D20 - Plumbing Fixtures						1		5.09	
D2010 - Domestic Water Distribution		x					90%	3.87	Includes supply piping, fixtures, water heaters, fixtures, backflow device mixing valves, etc.
D2020 - Sanitary Drainage			х				60%	1.16	All sanitary waste systems including drains, traps, clean outs, venting, grinder pumps, disposals, etc.
D2030 - Building Support Plumbing Systems			х				60%	0.06	Includes sewer/septic systems, fire loops, etc.
D2050 - General Services Compressed Air							Not Rated	Not Rated	Includes compressed air systems for fire sprinkler systems, pneumatic controls, voc ed, etc.
D30 - HVAC						I		2.58	
D3010 - Facility Fuel Systems							Not Rated	Not Rated	Includes natural gas, propane, oil, etc.
D3020 - Heating Systems			х				60%	2.34	All heating systems including steam, hot water boilers, heat pumps, electric, bio mass, etc.
D3030 - Cooling Systems							Not Rated	Not Rated	Includes heat pumps, bio mass, chillers, cooling towers, etc.
D3050 - Facility HVAC Dist. System		х					90%	0.18	Includes supply and return ducting, plenums, piping, valves, controls, et
D3060 - Ventilation			x				60%	0.06	Includes supply and exhaust ducting, plenums, piping, valves, controls, natural ventilation, etc.
D40 - Fire Protection						1		2.35	
D4010 - Fires Suppression		х					90%	2.34	Includes extinguishing systems, kitchen hoods, sprinkler systems, etc.
D4030 - Fire Suppression Specialties		Х					90%	0.01	Includes fire extinguishers, cabinets, etc.
D50 - Electrical						1		9.04	
D5010 - Facility Power Generation							Not Rated	Not Rated	Includes generators and associated equipment, etc.
D5020 - Electrical Service and Distribution		Х					90%	1.04	Includes transformers, vaults, mains and sub-main panels, EMT, wiring, motors, etc.
D5030 - General Purpose Electrical Power		х				1	90%	0.90	Includes sub-main to branch panel wiring; branch panels; etc.

D5040 - Lighting	x	90%	7.10	All facets of lighting including fixtures, bulbs, ballasts, lenses, CFC's, tube switches, HPS, MV, sensors, controls; etc.
D60 - Communication			1.62	
D6010 - Data Communications	х	90%	0.45	Includes internet connection, wireless, servers, distribution, etc.
D6020 - Voice Communications	х	90%	0.45	Includes phone systems, land lines, radio systems, intercoms, etc.
D6030 - Audio-Video Communication	x	90%	0.54	Includes cable, satellite, projectors, DVR's, distribution, etc.
D6060 - Distributed Comm/Monitoring	х	90%	0.18	Includes clock systems, enhanced audio, paging, public address, etc.
D70 - Electronic Safety and Security		. I	0.60	
D7010 - Access Control and Intrusion Defection	X	60%	0.30	Includes keypads, electronic locks, coding systems, card readers, etc.
D7030 - Electronic Surveillance	x	60%	0.12	Includes cameras, motion sensors, DVR's, etc.
D7050 - Detection and Alarm	x	90%	0.18	All types of fire alarms systems and components including smoke detectors, heat detectors, strobes and horns, auto dialers, etc.
D80 - Integrated Automation			0.06	
D8010 - Integrated Automation Facility Controls	X	60%	0.06	Includes systems and components for controlling building systems such a HVAC, lighting, irrigation, security, etc. DDC
E10 - Equipment			1.10	
E1010 - Vehicle and Pedestrian Equipment	x	60%	0.06	Includes vehicle repair equipment; parking gates and meters; loading dock equipment; pedestrian gates; etc.
E1030 - Commercial Equipment	x	60%	0.18	All types of commercial equipment such as vending, laundry, safes, janitorial, photography, office, food storage & service, etc.
E1040 - Institutional Equipment	x	60%	0.68	Includes all types of institutional equipment such as library, audio/visual, laboratory, vocational, art, etc.
E1070 - Entertainment and Recreational Equipment	x	60%	0.18	Includes all types of entertainment and recreational equipment such as theater, music, athletic, etc.
E1090 - Other Equipment		Not Rated	Not Rated	Includes all types of other equipment such as dumpsters, recycling, composting, compacting, agricultural, etc.
E20 - Furnishings			0.66	
E2010 - Fixed Furnishings	X	60%	0.60	Includes all types of fixed furnishings such as art, walk off mats, grills,
E2050 - Movable Furnishings	x	60%	0.06	window treatments, casework, bleachers, lockers, etc. All types of movable furnishings such as bookshelves, cafeteria tables, kitchen warmers, servine carts, office, classroom, etc.