ROCHESTER SCHOOL DISTRICT
East Rochester Elementary School

February 19, 2013
Program & Design Study

LAVALLEE I BRENSINGER ARCHITECTS

East Rochester Elementary School

February 19, 2013

East Rochester School Program Based on Existing Building Size

Education Program Areas

Course/Subject	Actual (current) # Students	# Students accomodated without additions	# Students sent to East Rochester	Max Students/ Teaching Space	Utilization (90%)	# of Sections	Required Teaching Spaces (adjusted)	Number of Appropriately sized spaces in existing building	Required additional spaces	Notes
Preschool	190			12	0.90	17.59	**8**	1	7	95 students are in Pre-school now- plus population increase achieve 50% integration. NOTE: See pre-school program on page 98.
ASD Program	12			12	0.90	1.11	**1**	1	0	
Kindergarten	41	50	-9	18	0.90	3.09	**3**	1	2	Can absorb some Students
1st Grade	33	55	-22	20	0.90	3.06	**3**	1	2	Can absorb some Students
2nd Grade	44	40	4	22	0.90	2.02	**2**	1	1	4 to Nancy Loud
3rd Grade	49	40	9	22	0.90	2.02	**2**	1	1	9 to Maple Street? Or Build additonal Classroom
4th Grade	60	45	15	25	0.90	2.00	**2**	1	1	15 to Nancy Loud
5th Grade*	51	45	6	25	0.90	2.00	**2**	0	2	6 to Nancy Loud
Total Enrollment	278	275	3				**14**			

Core Program Areas

Space	Student Access Per week (periods)		# of Students Served	# of Classes/wk	Calculated SF of Space (Per Standards)	Periods per week Offered***	# Spaces Required	Number of Appropriately sized spaces in existing building (or size of existing space)	Required additional spaces	Notes
Computer Lab	1		275	23		30	**0.8**	1	See Revised plans	Could be relocated to allow for adequate sized Media Center
Art	1		225	23		30	**0.8**	0		
Music	1		225	11		30	**0.4**	0		Stage not counted since it is not acoustically sealed for Instruction
Physical Education	1		225	23		15	**1.5**	2952		Could be satisfied through dividing curtain
Media Center	1		275	23	1100	30	**0.8**	750		
Cafeteria	5		275	20	1031	15	**1.3**	2952		
Special Education Student Areas*	5		52	131		30	**4.4**	6		Calculations assume 2 students/area
Intervention / Small Group Areas**	5		55	92		30	**3.1**	4		Calculations assume 3 students/area
Professional Areas										(1) Conference Room for 12 , (1) staff break room, (1) Professional Development / Staff room, (1) building sotrage area

* 23% of students identified to receive special services by District Special Education .

** 25% of students identified to receive Tier 2 or Tier 3 Intervention (Title 1) instruction

*** Standard 8 period day, allowing for no specials during first and last periods.

Dept of Ed allowable:	Age Group	Enrollment	SF/Pupil	Utilization	Total Building (NSF)	
For New Construction	Grade 1-5	237	120	0.90	31,600	
Does not include Preschool and ASD programs	Kindergarten - Trans	41	150	0.90	6,833	
					38,433	Total Allowable by NH DOE standards for new construction

Existing Analysis / Capacity

Current Enrollment					**373**	
Current Building Size (gsf)					34,412	Excluding Portables
Estimated Building Capacity Based solely on size of building	Based on Average NH School Construction of 120sf/student for Grades 1-5 and 150sf/student in K @ 90% Utilization				248	
	# Classrooms*	Max Seats/ Classroom **	Utilization (90%)	Utilized Seats	Theoretical Student Capacity	
Education Areas Capacity	14	22	0.9	277.2	**277**	
Specialty Classrooms (Art.Music, Cpu, Etc)	1	20	0.9	18		See notes below
Current Utilization / Capacity					**134.56%**	

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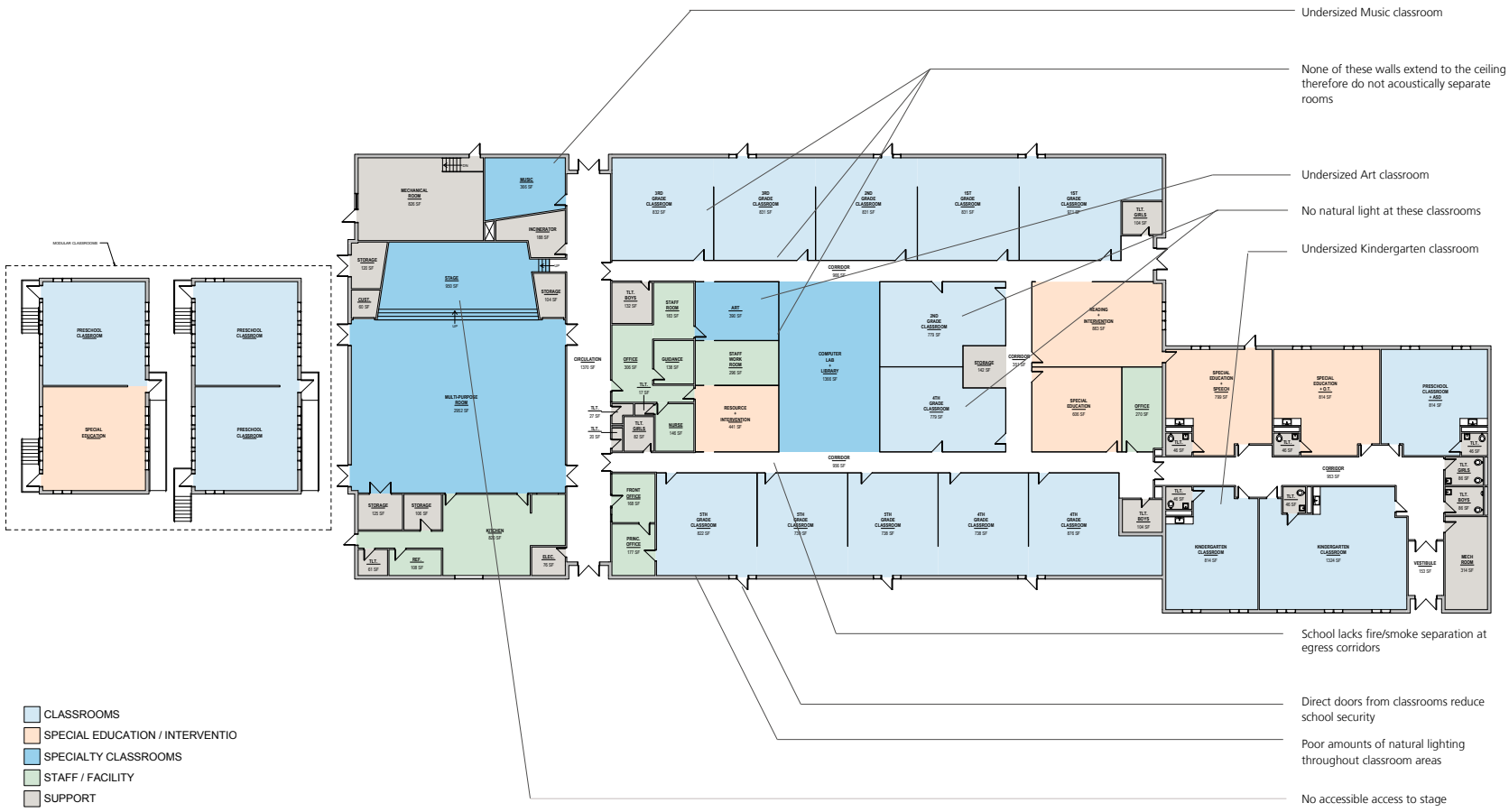

SUPPORTING RESEARCH

ACOUSTICS:

As much as 60% of classroom learning activities typically involve listening to, and participating in, spoken communications with the teacher and other students. It would be fully expected, therefore, for disruption of this communication to affect students' scholastic achievement.

"The Impact of Classroom Acoustics on Scholastic Achievement" Louis C. Sutherland a and David Lubman

It was found that **children in the lower grades exposed to a noisy classroom were three or four months behind in reading scores** relative to the children in a quieter classroom and as much as 11 months behind for the higher grades

"The Impact of Classroom Acoustics on Scholastic Achievement" Louis C. Sutherland a and David Lubman

Earthman and Lemasters (1997) reported three key findings: that higher student achievement is associated with schools that have less external noise, that outside noise causes increased student dissatisfaction with their classrooms, and that excessive noise causes stress in students.

"Effects of School Facility Quality on Teacher Retention" National Clearinghouse for Educational Facilities

Review of a series of studies in the United States between 1980 and 1986 concluded there are significant increases in blood pressure associated with schools being near noisy urban streets

"The Relationship between Environmental Quality of School Facilities and Student Performance" Jeffery A. Lackney, Ph.D., A.I.A

UPDATED SPACE:

Pupils housed in a modern school building (or well renovated school building) have significantly more positive attitudes toward school than do pupils housed in a much older building.

"Influence of the School Environment on Student and Teacher Attitudes" University of Geogia

Educational building conditions were hampering student performance, and estimated that improved facilities could lead to a **5.5% to 11% improvement on standardized tests.**

"The Relationship between Environmental Quality of School Facilities and Student Performance" Jeffery A. Lackney, Ph.D., A.I.A.

DAYLIGHTING:

Students with daylight in their classrooms (from windows and skylights) perform **20 to 25% better on reading and math tests** than students without access to daylight. The same study shows that students in classrooms with larger window areas progress up to 20% faster than their counterparts in rooms with smaller window areas

Heschong Mahone Group

AIR QUALITY:

Absenteeism was reduced in schools by twenty percent as relative humidity in the facilities was increased from twenty-two to thirty-five percent.

"Do School Facilities Affect Academic Outcomes?" National Clearinghouse for Educational Facilities

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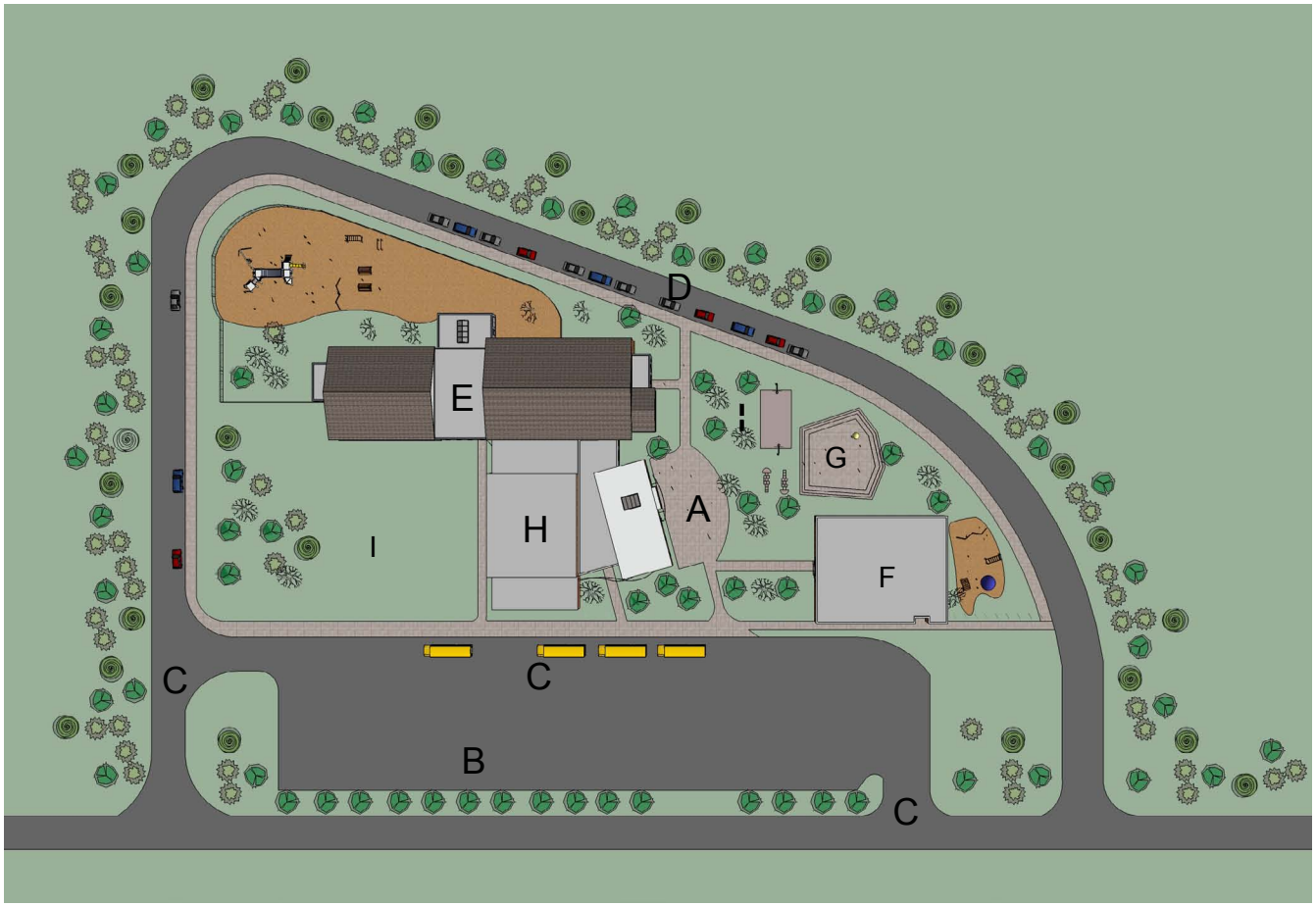

A — NEW MAIN ENTRANCE AND COURTYARD

B — NEW STAFF AND VISITOR PARKING

C — NEW BUS ENTRANCE/EXIT AND DROP OFF

D — PARENT DROP OFF

E — NEW K-5 CLASSROOM ADDITION

F — RENOVATED PRESCHOOL

G — OPTIONAL OUTDOOR CLASS-ROOM/COMMUNITY VENUES

H — RENOVATED CORE AREA

I — FUTURE EXPANSION AREA (CURRENT PORTABLE AREA)

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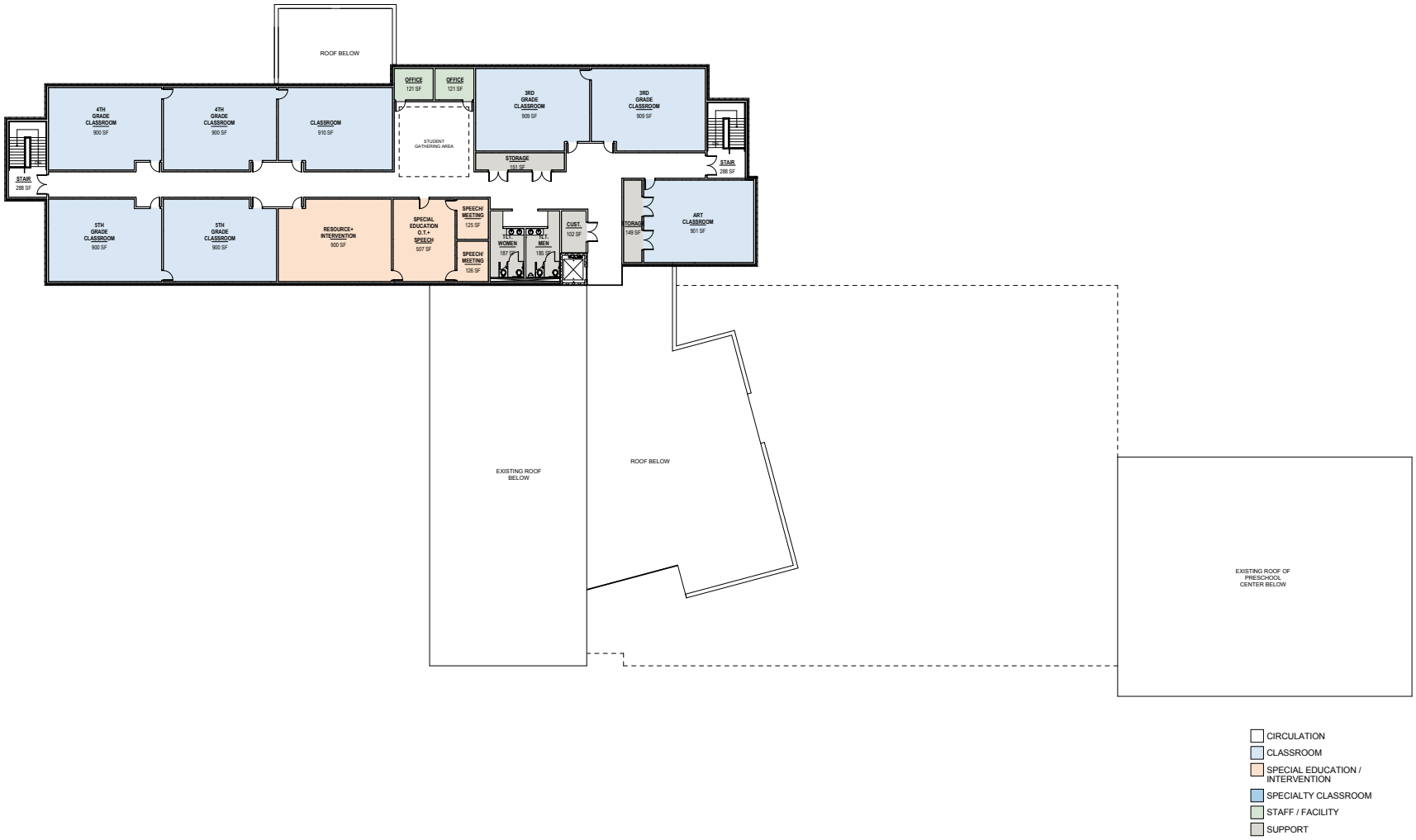

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AERIAL PERSPECTIVE

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NEW MAIN ENTRANCE

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NEW CLASSROOM WING

SCOPE SUMMARY

EXISTING SCHOOL AREA: 34,412 GSF
DEMOLISHED AREA: 20,000 GSF
PROPOSED SCHOOL AREA AFTER IMPROVEMENTS: 49,866 GSF
(Plus Potential Mechanical Penthouse Areas)

ADDED AREAS: (1) Added K-5 classroom, (3) Added Pre-School classrooms, student gathering areas (mixed use education areas), Mechanical Space.

ADEQUATELY SIZED / INCREASED AREAS: Music Room, Art Room, **Classrooms**, Special Education Spaces, Media Center and CPU lab, Faculty and Admin areas, and Pre-school.

ESTIMATE OF PROBABLE COSTS

NEW CONSTRUCTION AND RENOVATION: $7,942,700
DEMOLITION: $91,500
SITEWORK: $1,004,300

TOTAL CONSTRUCTION ESTIMATE: $10,230,000
(Including CM Fees, Insurance, Builders Risk, P&P Bond, and CM Contingency)

TOTAL PROBABLE PROJECT COST $13.1M
(Including 28% soft costs)
Soft costs include: owner's contingency, engineering and design fees, legal and administrative fees, furnishing and equipment not part of the building systems, utility connection charges, and permitting fees.