



Michael Zuba, AICP
Milone and MacBroom



James Barrett, AIA, LEED
principal in charge
community outreach advocate



Paul Moore, AIA
educational planner



David Dickson, ASLA
Milone and MacBroom



Tracy Brennan-Spaulding
Leach Cost Consulting



Doug Lajoie, PE
CES Consulting Engineers



Project Team

School District Resources



ELEMENTARY SCHOOL

Birch Grove ES

Built 1999 / 2003 Renovation
72,949 sf;
Grades PK-2; 522 Students

INTERMEDIATE SCHOOL

Tolland Intermediate

Built 1971 / 1974 Renovation
109,126 sf; 8 Portable CRs
Grades 3-5; 617 Students

MIDDLE SCHOOL

Tolland Middle School

Built 1966 / 1983 Renovation
136,531 sf;; 2 Portable CRs
Grades 6-8; 688 Students

HIGH SCHOOL

Tolland High School

Built 2006
230,000 sf;
Grades 9 – 12; 848 Students

Intermediate School

Middle School

High School

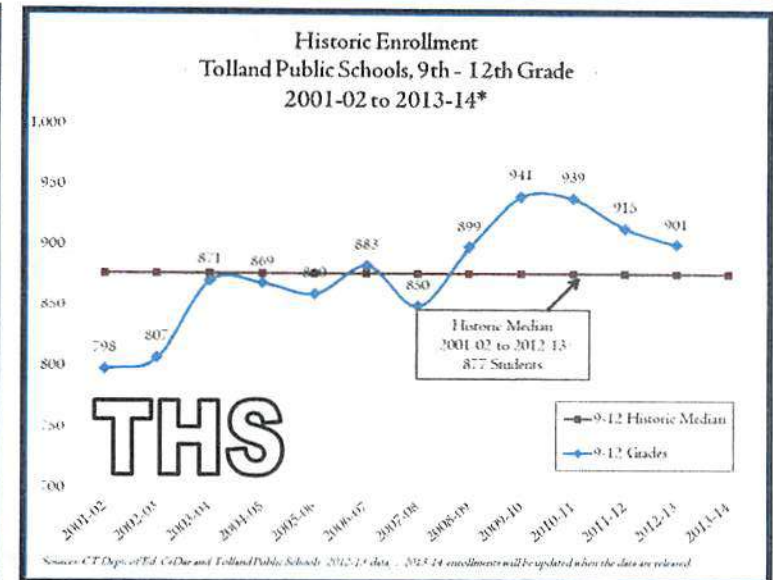
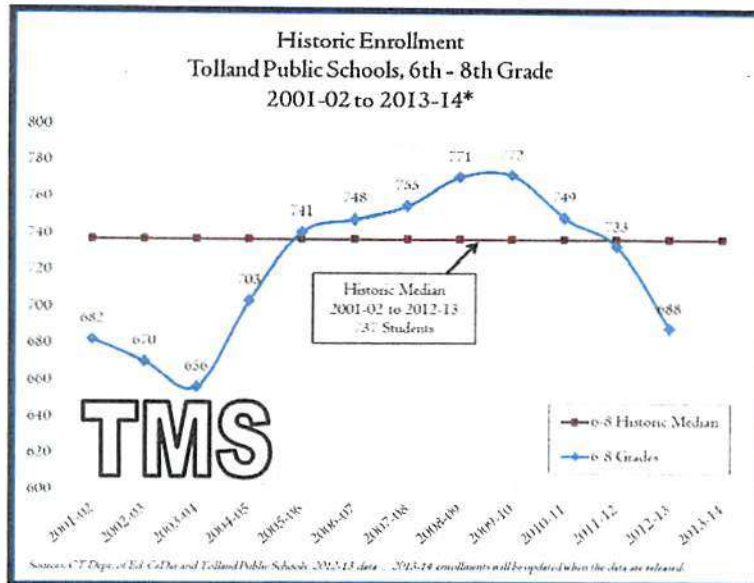
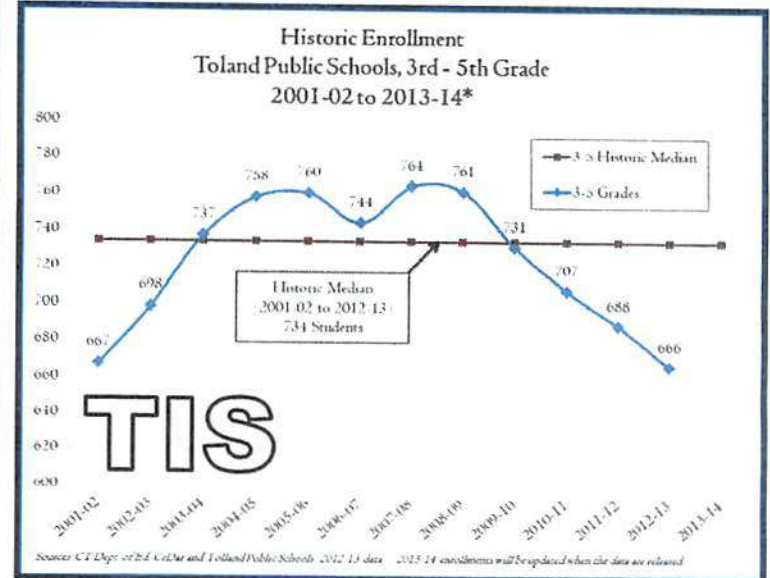
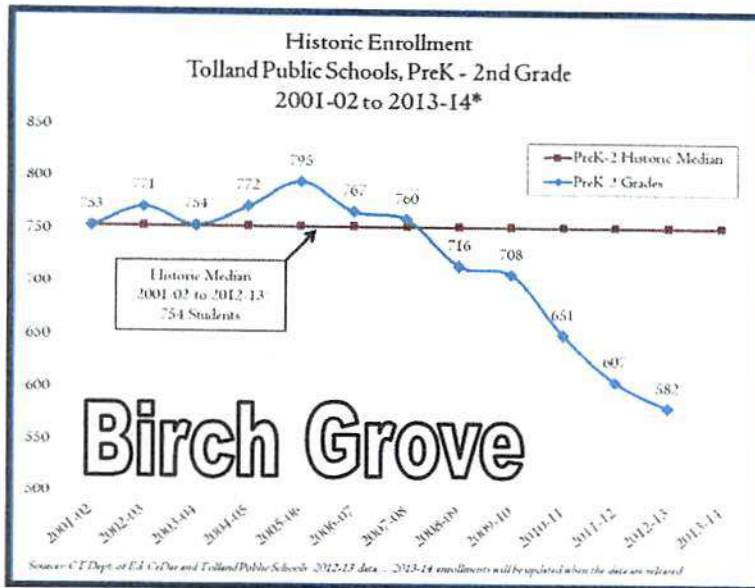
Birch Grove School

TOLLAND



CRITICAL ISSUES

1. Declining enrollments are coming
2. Higher maintenance costs may be expected for older buildings
3. Schools will have excess space
4. State reimbursement is available
5. A long range plan is needed



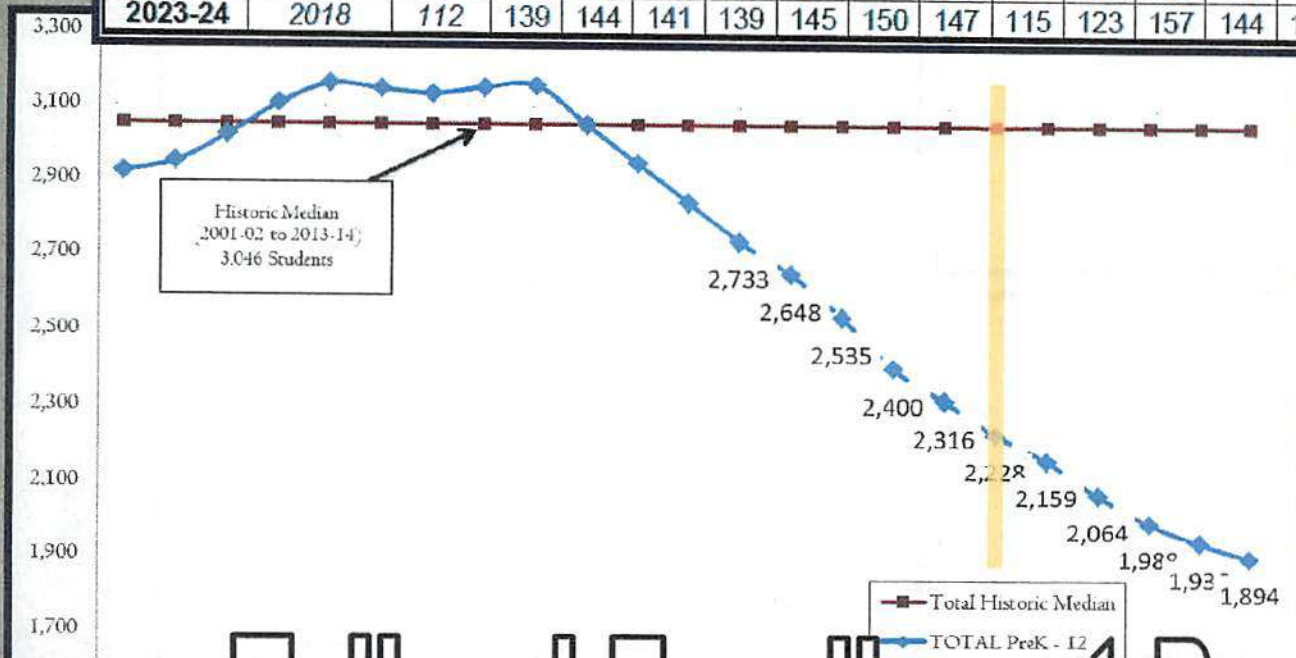
Tolland Enrollments BY SCHOOL



Tolland Enrollment Projections by Grade (2014-15 to 2021-22)

PK-12th

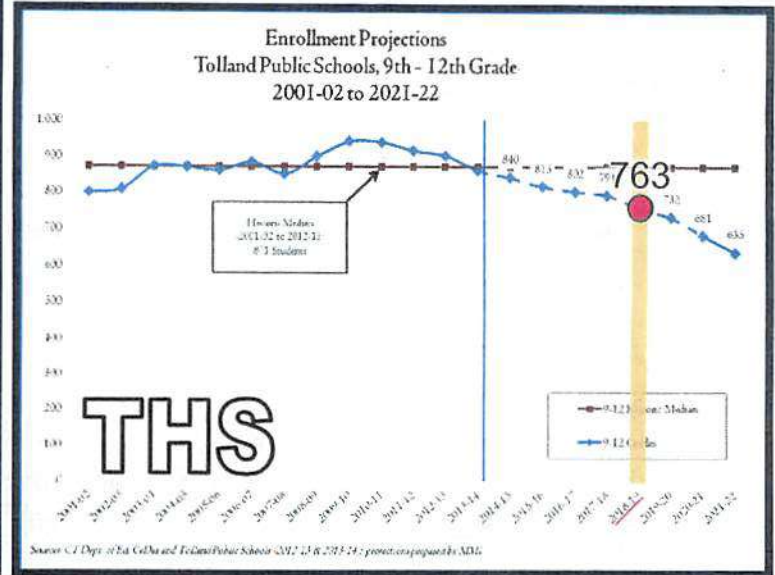
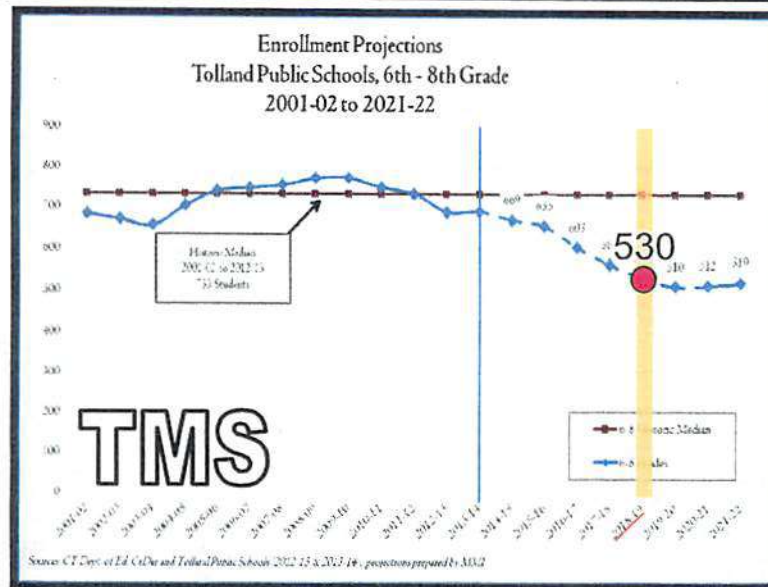
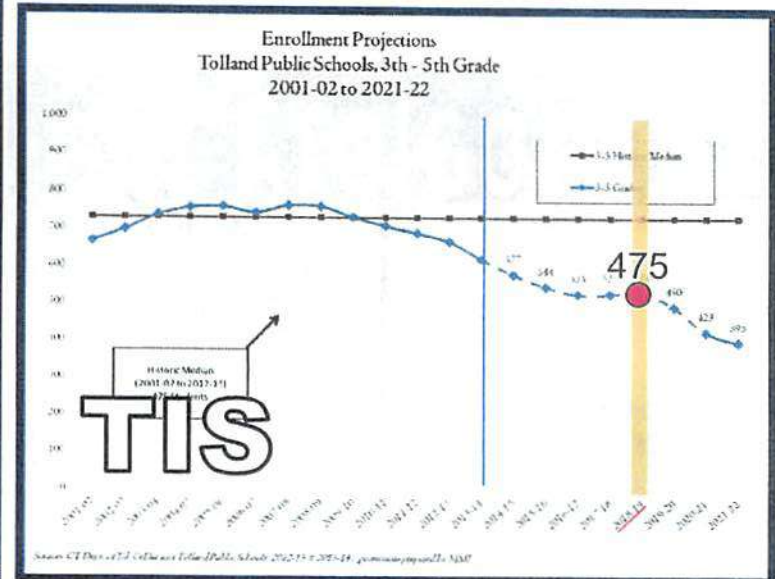
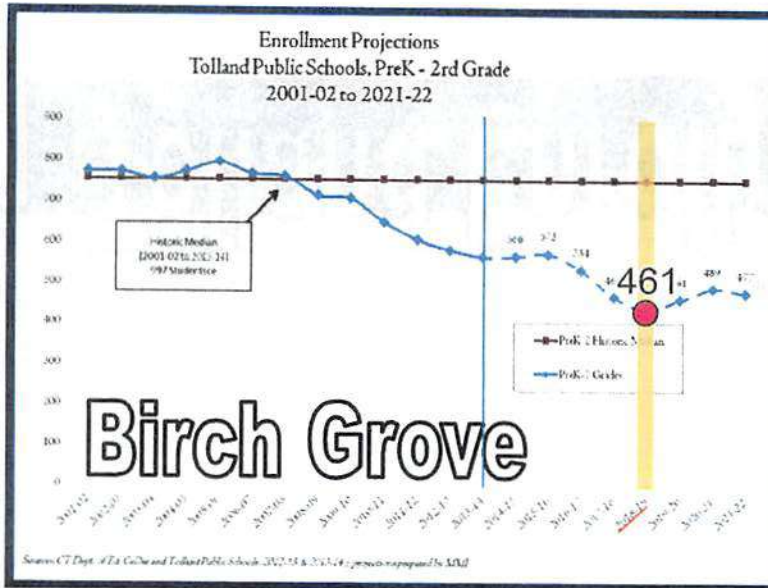
School Year	Birth Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	Total	Percent Change
2014-15	2009	138	171	168	172	184	191	203	221	239	210	216	199	222	204	48	2,648	-3.1%
2015-16	2010	99	123	177	171	172	183	189	200	220	234	192	208	202	215	48	2,535	-4.3%
2016-17	2011	91	113	127	179	170	172	181	187	200	216	215	185	211	196	48	2,400	-5.3%
2017-18	2012	116	144	117	129	179	170	170	179	186	197	198	207	188	204	48	2,316	-3.5%
2018-19	2013	117	146	149	118	128	179	168	168	179	183	180	191	210	182	48	2,228	-3.8%
2019-20	2014	112	139	150	151	118	128	177	166	168	176	168	173	193	203	48	2,159	-3.1%
2020-21	2015	107	133	144	153	150	118	127	175	166	165	161	161	176	187	48	2,064	-4.4%
2021-22	2016	109	135	137	146	152	150	117	125	175	163	151	155	164	170	48	1,988	-3.7%
2022-23	2017	112	139	139	139	146	152	149	115	125	171	149	145	157	158	49	1,936	-2.6%
2023-24	2018	112	139	144	141	139	145	150	147	115	123	157	144	147	152	50	1,894	-2.1%



Test Options
using
enrollments
at **2018-19**

Tolland Enrollment Projections





Enrollment Projections BY SCHOOL



Facilities Assessment

facility utilization study



KEY COMPONENT of ASSESSMENT

- **Access Improvements**
accessibility, ADA / CT Code compliance...
- **Building Improvements**
foundation, structure, roof construction...
- **Building MEP**
plumbing fixtures, life safety, electrical...
- **Interior Spaces**
interior finishes, space utilization, fixtures...

Birch Grove: 15 years old

TIS: 43 years old

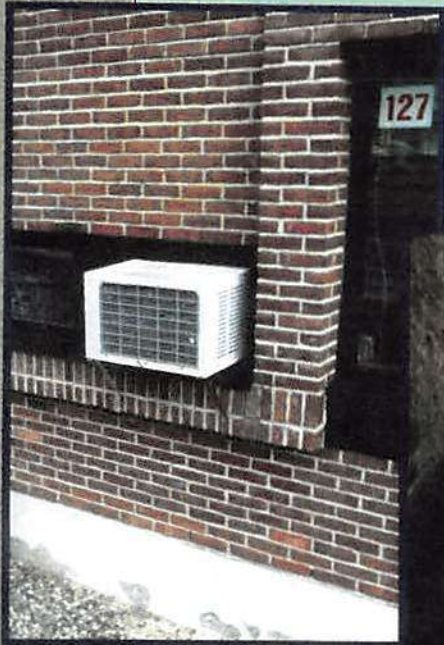
TMS: 48 years old

THS: 8 years old



Facilities Assessment

facility utilization study



System Priority 1 to 4 (1-Health & Safety, 2-High Medium, 4-Low)	System Rating 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruct (Year)	Projected Replacement (Year)	Quantity	Unit Price	Current Replacement Cost	REMARKS
							Built in year: 2006 Addition Built in yr:
							Part of Honeywell project
						00.00	
						00.00	New energy efficient boilers
						00.00	
						00.00	
						00.00	

- Division 16 - Electrical
- General Electrical (Starters
- Electrical Service / Distribu
- Transformer
- Lighting - General
 - Classroom Lighting
 - Gymnasium Lighting
 - Corridor Lighting
- Emergency Lighting
- Communication Systems
- Technology Systems
- Fire Alarm System
- Clock System

	1	4					
	1	4	2006	2026	230,000	\$3.00	
	4	4	2006	2026	230,000	\$2.00	
						\$	
						\$	55 per sf



Facilities Assessment

facility utilization study



Existing

RENOVATE AS NEW is a project category defined by the state...



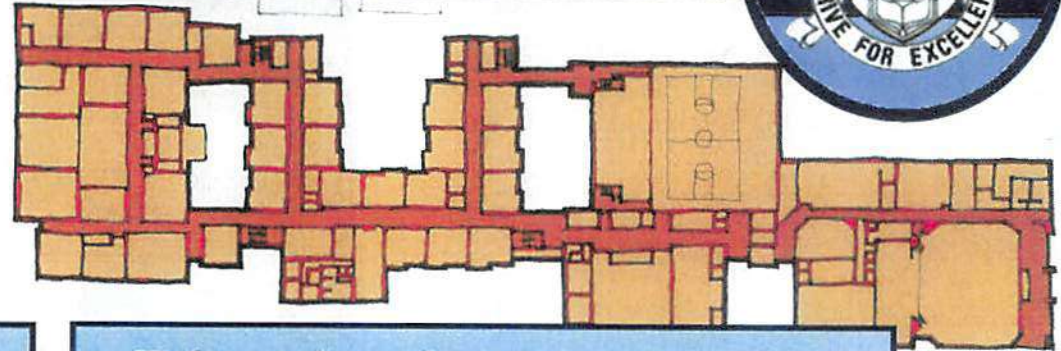
Renovate as New

Renovations work to improve (partial list):

- Structure
- Architectural finishes
- Roof
- Windows
- Handicapped accessibility
- Mechanical systems
- Plumbing
- Electrical system
- Fire protection
- Security system
- Communications
- Technology system
- Fixtures
- Furniture
- Site elements

Space Needs Assessment

facility utilization study

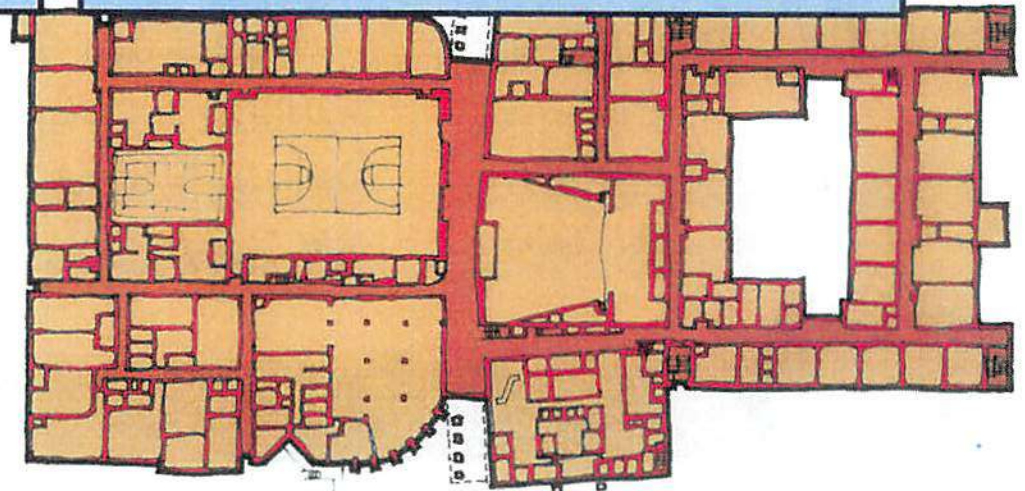
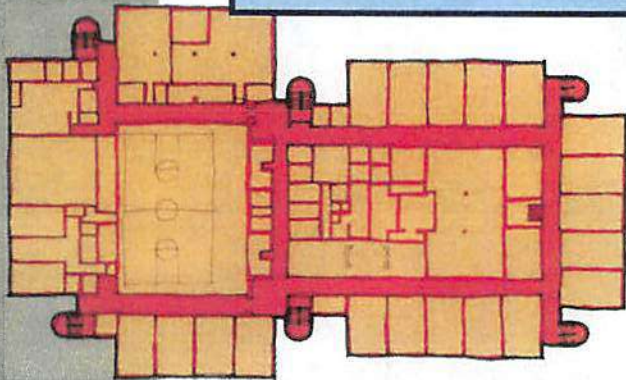


- Classroom size
target: 20 students per CR

- Educational program
shared spaces, Special Ed areas, etc.

- Classroom count
building capacity, flexibility

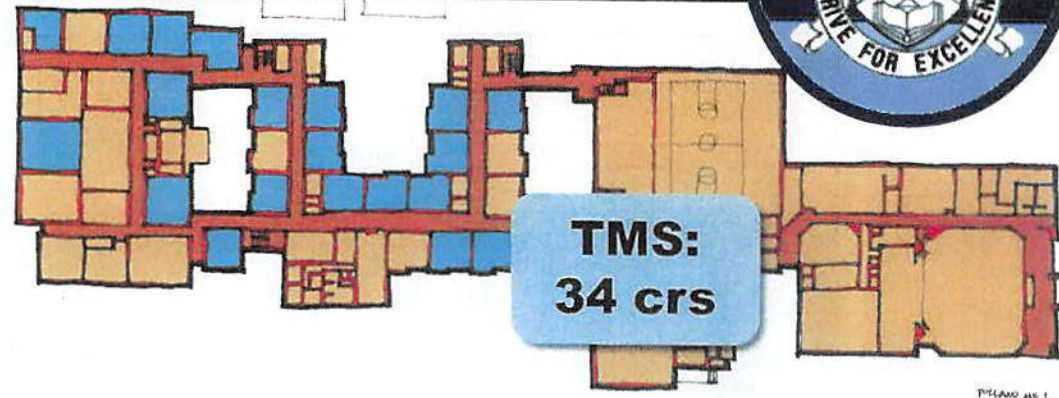
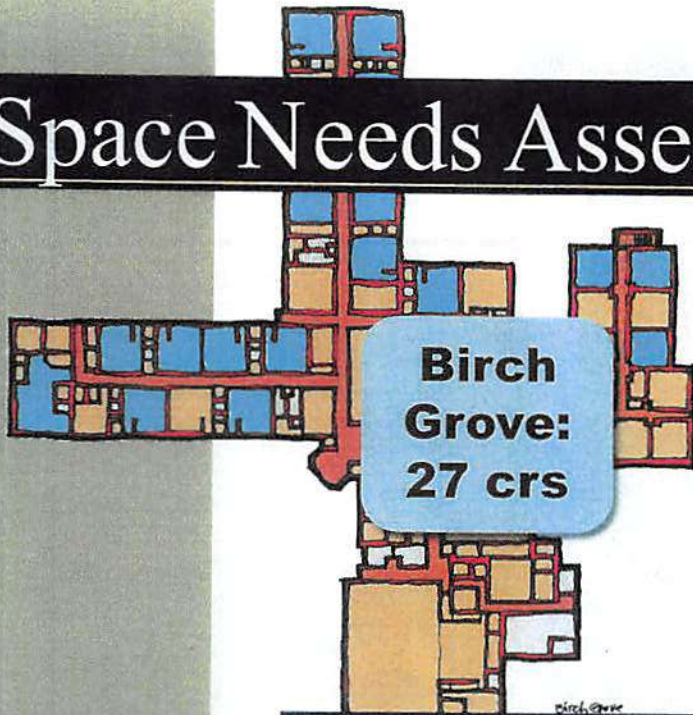
- Potential changes
grade reconfiguration, modular CR's, full-day K



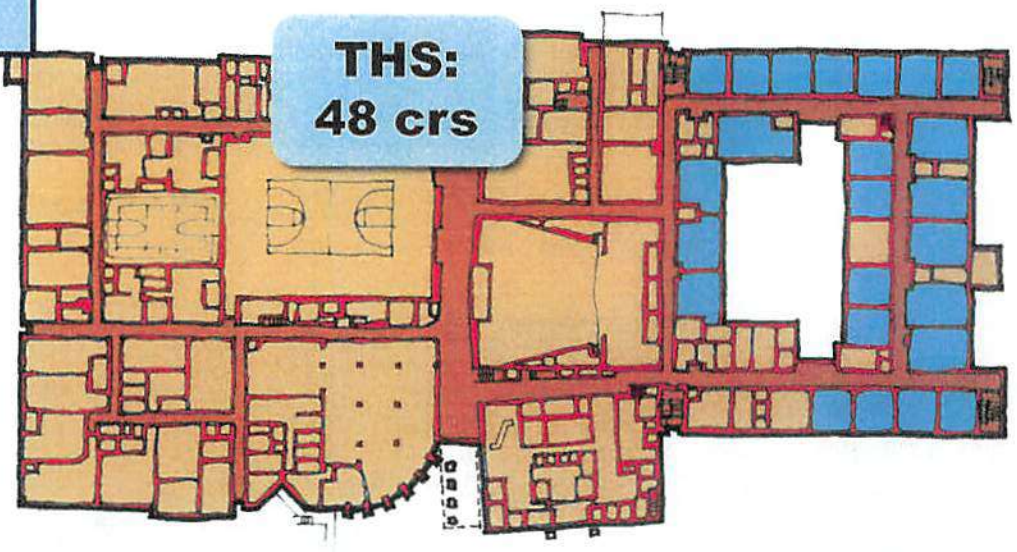
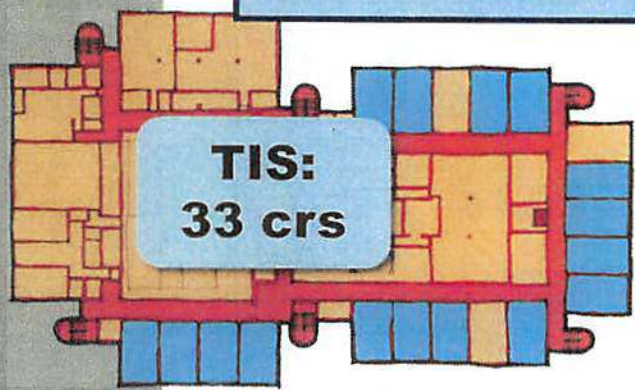
D·R·A

Space Needs Assessment

facility utilization study



▪ Classroom count
building capacity, flexibility





ICON	FAMILY LABEL	DESCRIPTION
	A Do Nothing	DO NOTHING means deciding to continue using the four TPS buildings for the same programs with no improvement projects. Upgrades and repairs are undertaken in reaction to deteriorating conditions as needed. Continues half-day kindergarten program.
	B Add Full-Day K	Uses the four TPS educational facilities with Full-Day Kindergarten added to Birch Grove
	C Renovations	Renovations of Middle, TIS, Birch Grove
	D Renovation Add / Demo	Renovations of Middle, TIS, Birch Grove with additions / demolition as needed.
	E Close a School	Consider closure of Middle School / TIS
	F New Building(s)	Consider Replacement of Middle School, TIS, Birch Grove

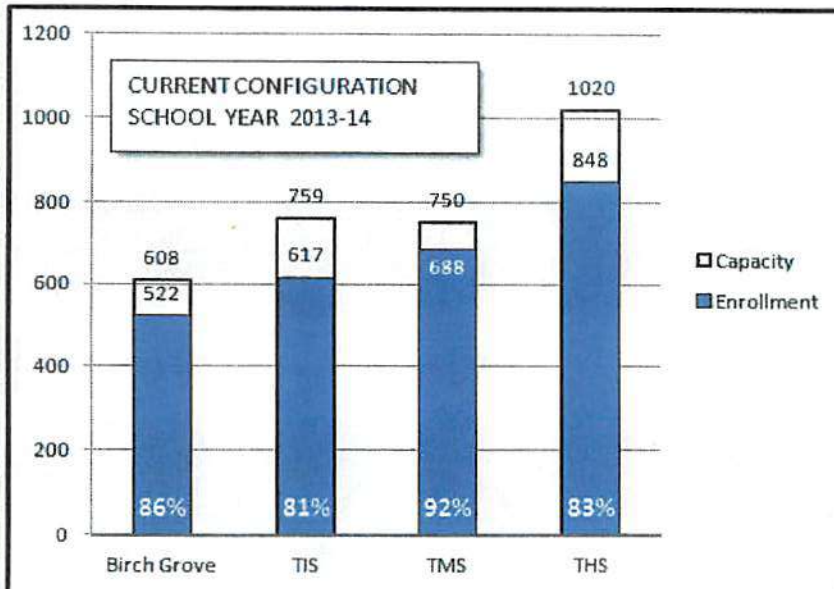


Families of Options



Current School Year

PK	K	1	2	3	4	5	6	7	8	9	10	11	12
School Year 2013-14		CURRENT CONFIGURATION											
Birch Grove Elementary School- Capacity K-2: 608; PK: 3 CR's Enrollment Gr. PK=48, 3 CR's Gr. K-2=522, 24 CR's Half-day K			Tolland Intermediate- Capacity 3-5: 759 Enrollment Gr. 3-5=617, 33 CR's			Tolland Middle School- Capacity 6-8: 750 Enrollment Gr. 6-8=688 34 CR's			Tolland High School- Capacity 9-12 (85%): 1020 Enrollment Gr. 9-12=848, 48 CR's				



LEGEND

- Birch Grove Building
- Tolland Intermed. Building
- Tolland Middle Sch. Building
- Tolland High Sch. Building

**16-26 students / cr
Half-day K (until fall
2014)**

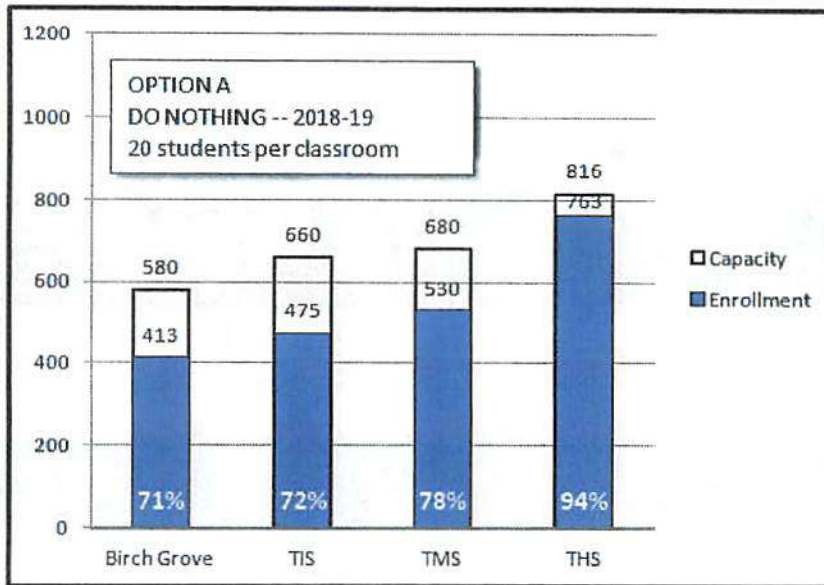


Option A

Do Nothing Option

20 students / cr
Half-day K continued
Repairs as required

PK	K	1	2	3	4	5	6	7	8	9	10	11	12
School Year 2018-19			DO NOTHING*										
Birch Grove Elementary School- Capacity K-2: 580, 24 CR's; PK: 3 CR's Enrollment Gr. PK=48, 3 CR's Gr. K-2=413, 18 CR's Half-day K			Tolland Intermediate- Capacity 3-5: 660, 33 CR's Enrollment Gr. 3-5=475, 24 CR's			Tolland Middle School- Capacity 6-8: 680, 34 CR's Enrollment Gr. 6-8=530, 28 CR's			Tolland High School- Capacity 9-12 (85%): 816, 48 CR's Enrollment Gr. 9-12=763, 45 CR's				
*NOTE: Schools capacity based on 20 students per classroom. (All options)													



	BG	TIS	TMS	THS
Close				
Maint	✓	✓	✓	✓
Captl Plan				
Reno				
Addn				

REIMBURSEMENT LOW OR NO REIMB'T



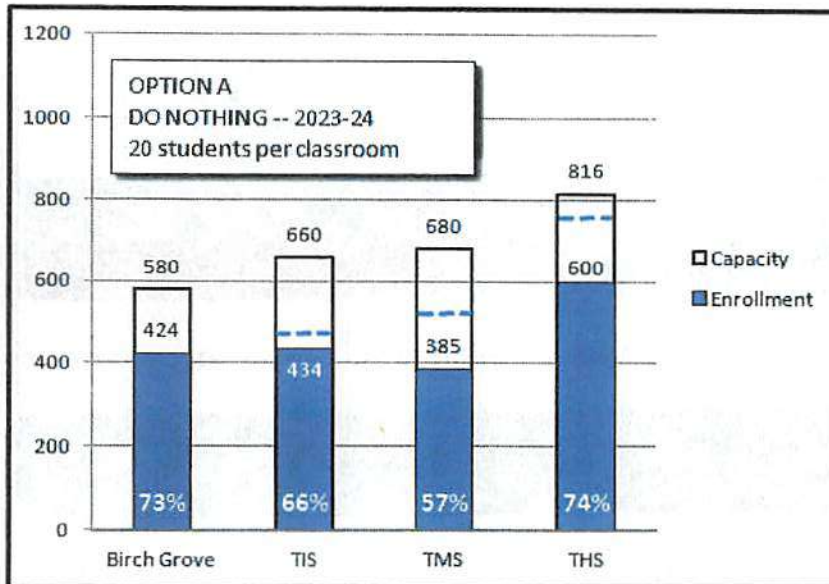
Option A

Do Nothing Option

Looking ahead:
2023-24

20 students / cr
Half-day K continued
Repairs as required

PK	K	1	2	3	4	5	6	
School Year 2018-19		DO NOTHING*						
<p>Birch Grove Elementary School- Capacity K-2: 580, 24 CR's; PK: 3 CR's</p> <p>Enrollment Gr. PK=48, 3 CR's Gr. K-2=413, 18 CR's Half-day K</p>		<p>Tolland Intermediate- Capacity 3-5: 660, 33 CR's</p> <p>Enrollment Gr. 3-5=475, 24 CR's</p>			<p>Tolland Middle School- Capacity 6-8: 680, 34 CR's</p> <p>Enrollment Gr. 6-8=530, 28 CR's</p>		<p>Tolland High School- Capacity 9-12 (85%): 816, 48 CR's</p> <p>Enrollment Gr.9-12=763, 45 CR's</p>	
*NOTE: Schools capacity based on 20 students per classroom. (All options)								



	BG	TIS	TMS	THS
Close				
Maint	✓	✓	✓	✓
Captl Plan				
Reno				
Addn				

LOW OR NO REIMB'T
REIMBURSEMENT

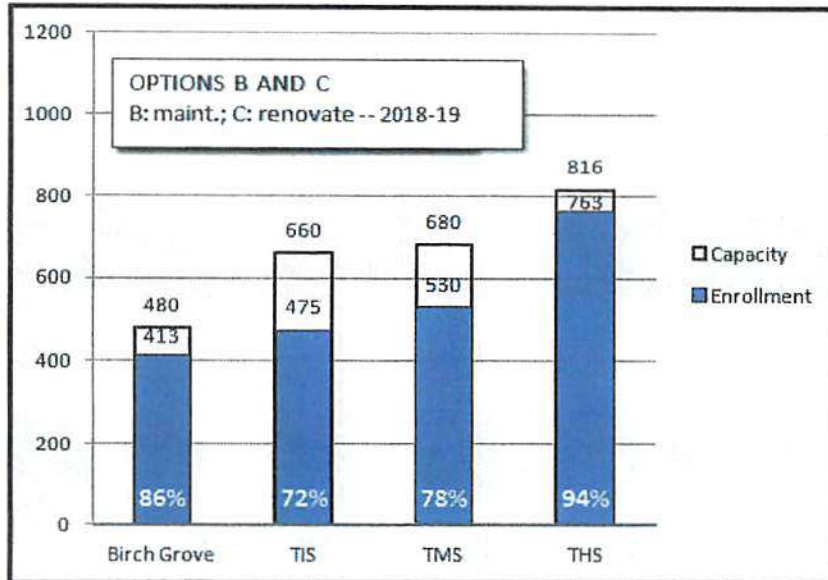


Option B

Planned Maintenance & Full-Day Kindergarten

**20 students / cr
Full-day K**

PK	K	1	2	3	4	5	6	7	8	9	10	11	12		
School Year 2018-19		B = PLANNED MAINTENANCE & FULL-DAY K; C = RENOVATED PROACTIVELY & FULL-DAY K													
Birch Grove Elementary School- Capacity K-2: 480, 24 CR's; PK: 3 CR's RENOVATED				Tolland Intermediate- Capacity 3-5: 660, 33 CR's RENOVATED				Tolland Middle School- Capacity 6-8: 680, 34 CR's RENOVATED				Tolland High School- Capacity 9-12 (85%): 816, 48 CR's			
Enrollment Gr. PK=48, 3 CR's Gr. K-2=413, 22 CR's Full-day K				Enrollment Gr. 3-5=475, 24 CR's				Enrollment Gr. 6-8=530, 28 CR's				Enrollment Gr. 9-12=763, 45 CR's			
*NOTE: Schools capacity based on 20 students per classroom. (All options)															



	BG	TIS	TMS	THS
Close				
Maint				
Captl Plan	✓	✓	✓	✓
Reno				
Addn				

REIMBURSEMENT LOW OR NO REIMB'T

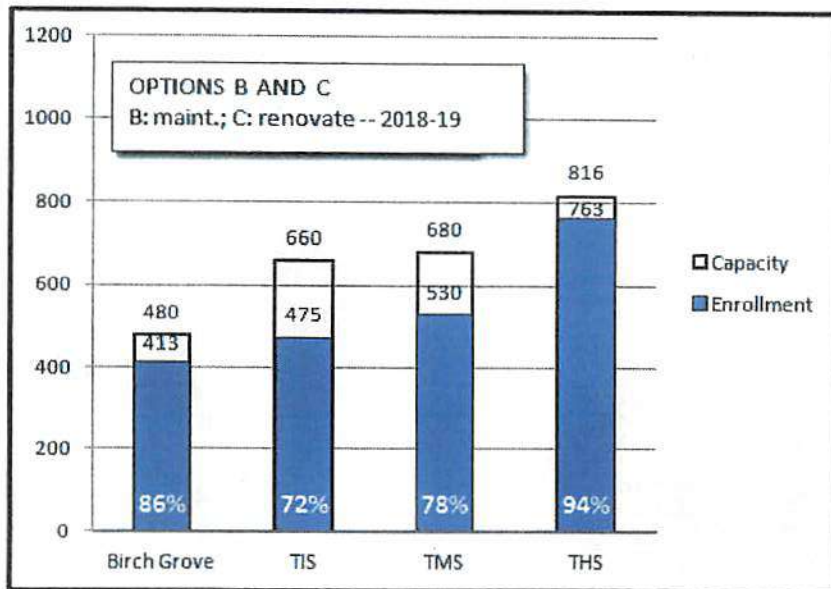


Option C

Renovated Proactively & Full-Day Kindergarten

20 students / cr
Full-day K

PK	K	1	2	3	4	5	6	7	8	9	10	11	12
School Year 2018-19		B = PLANNED MAINTENANCE & FULL-DAY K; C = RENOVATED PROACTIVELY & FULL-DAY K											
<p>Birch Grove Elementary School- Capacity K-2: 480, 24 CR's; PK: 3 CR's RENOVATED</p> <p>Enrollment Gr. PK=48, 3 CR's Gr. K-2=413, 22 CR's Full-day K</p>		<p>Tolland Intermediate- Capacity 3-5: 660, 33 CR's RENOVATED</p> <p>Enrollment Gr. 3-5=475, 24 CR's</p>			<p>Tolland Middle School- Capacity 6-8: 680, 34 CR's RENOVATED</p> <p>Enrollment Gr. 6-8=530, 28 CR's</p>			<p>Tolland High School- Capacity 9-12 (85%): 816, 48 CR's</p> <p>Enrollment Gr.9-12=763, 45 CR's</p>					
*NOTE: Schools capacity based on 20 students per classroom. (All options)													



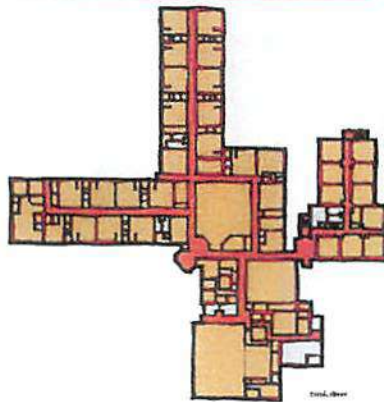
	BG	TIS	TMS	THS
Close				
Maint				
Captl Plan	✓			✓
Reno		✓	✓	
Addn				

LOW OR NO REIMB'T
REIMBURSEMENT

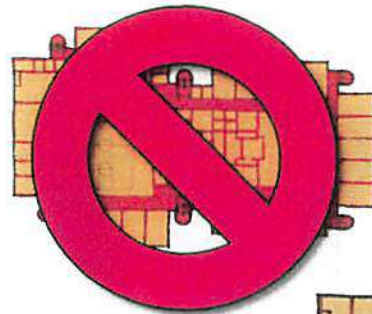




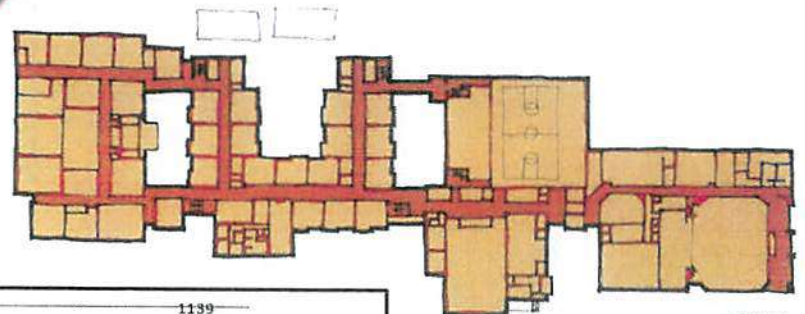
Option E1



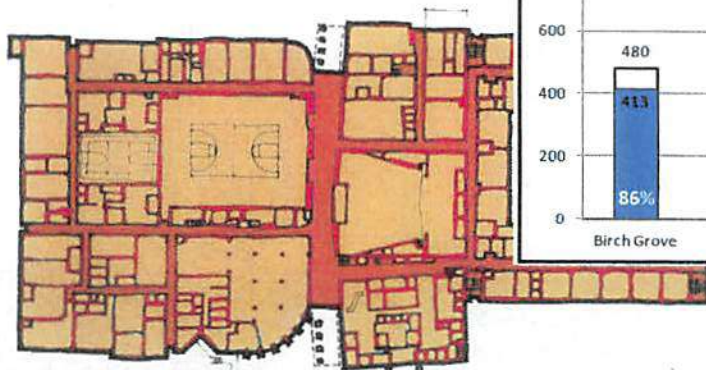
Birch Grove



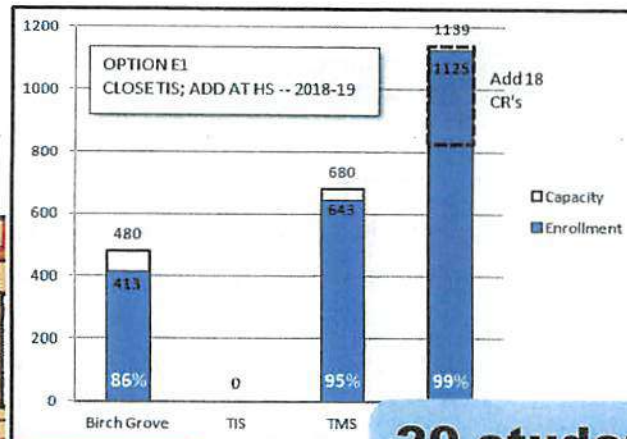
TIS



TMS



THS

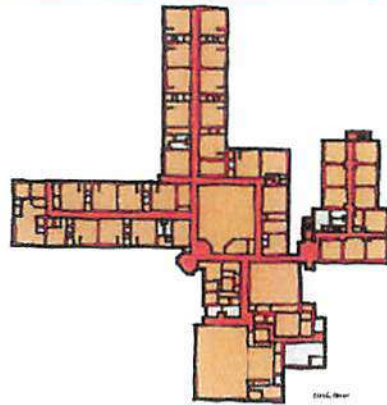


**20 students / cr
Close TIS**

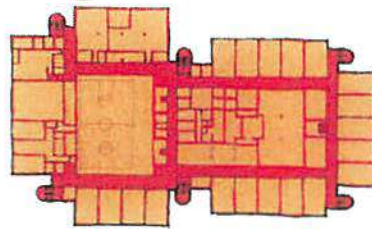
Year 2018-19



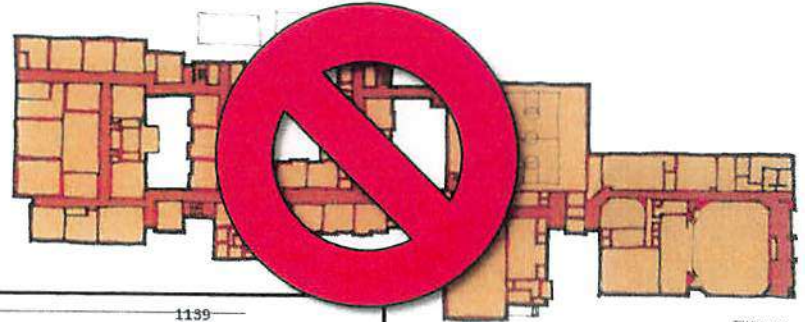
Option E2



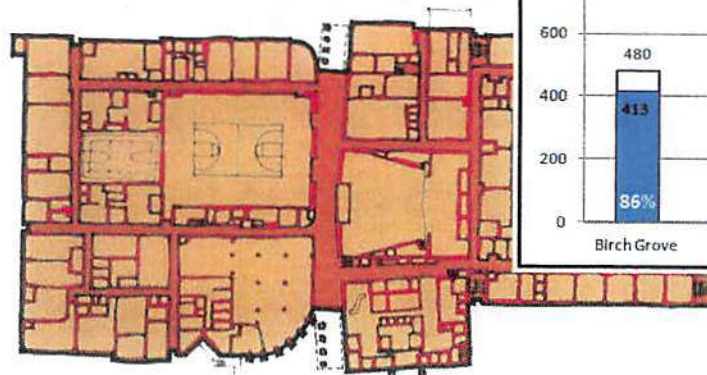
Birch Grove



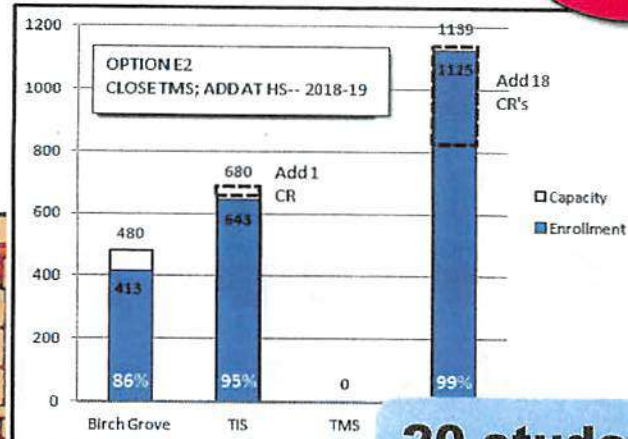
TIS



TMS



THS



**20 students / cr
Close TMS**

Year 2018-19

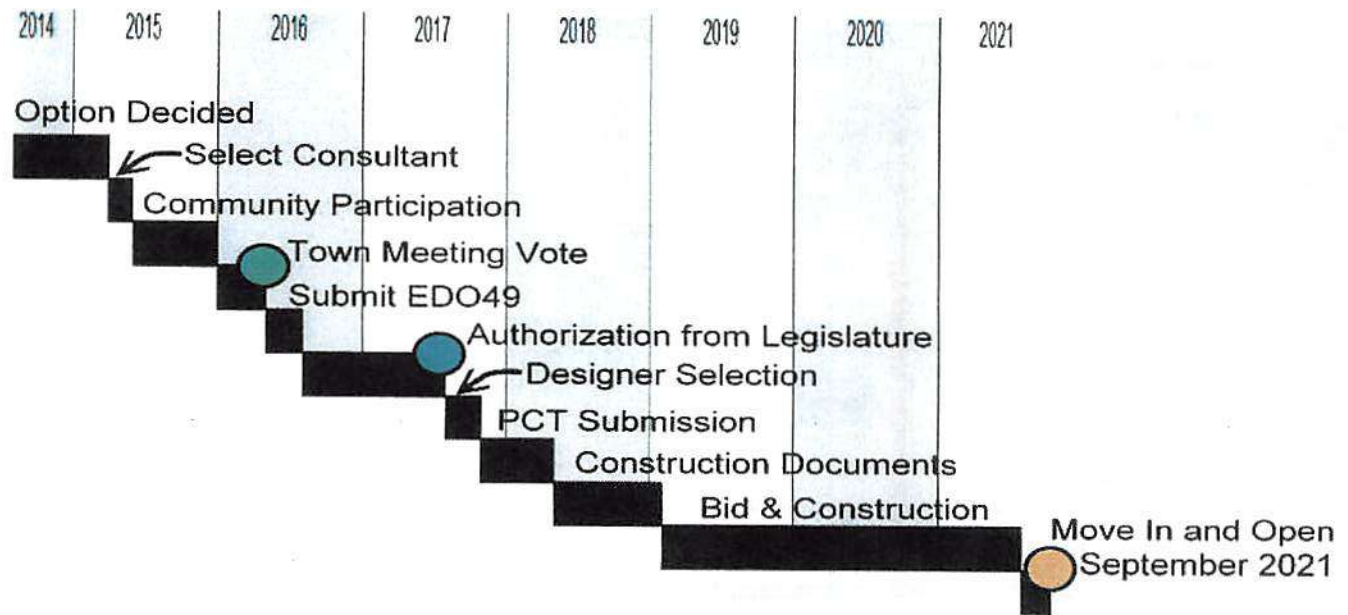


**Option E
Close a School**

The option to close a school didn't make sense, because it would require a school-sized addition at another building.



Option E Close a School



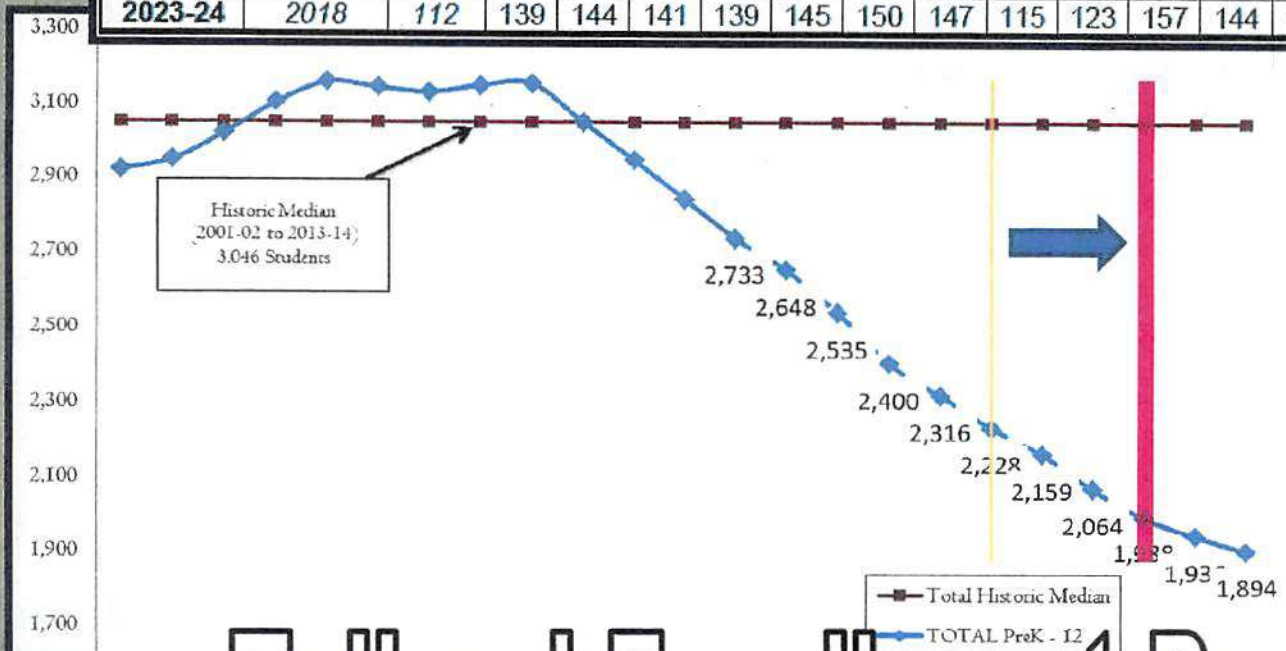
Then we generated a project timeline, finding a more realistic date for completion would be **2021.**



Tolland Enrollment Projections by Grade (2014-15 to 2021-22)

PK-12th

School Year	Birth Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	Total	Percent Change
2014-15	2009	138	171	168	172	184	191	203	221	239	210	216	199	222	204	48	2,648	-3.1%
2015-16	2010	99	123	177	171	172	183	189	200	220	234	192	208	202	215	48	2,535	-4.3%
2016-17	2011	91	113	127	179	170	172	181	187	200	216	215	185	211	196	48	2,400	-5.3%
2017-18	2012	116	144	117	129	179	170	170	179	186	197	198	207	188	204	48	2,316	-3.5%
2018-19	2013	117	146	149	118	128	179	168	168	179	183	180	191	210	182	48	2,228	-3.8%
2019-20	2014	112	139	150	151	118	128	177	166	168	176	168	173	193	203	48	2,159	-3.1%
2020-21	2015	107	133	144	153	150	118	127	175	166	165	161	161	176	187	48	2,064	-4.1%
2021-22	2016	109	135	137	146	152	150	117	125	175	163	151	155	164	170	48	1,988	-3.7%
2022-23	2017	112	139	139	139	146	152	149	115	125	171	149	145	157	158	49	1,936	-2.6%
2023-24	2018	112	139	144	141	139	145	150	147	115	123	157	144	147	152	50	1,894	-2.1%



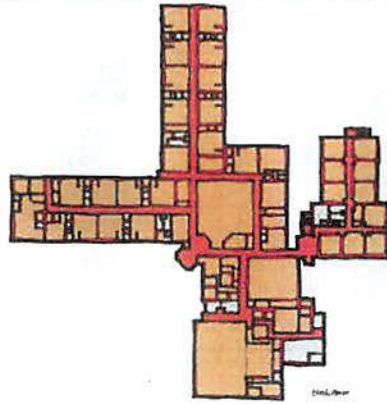
Develop a new Option E4. Test with enrollments at **2021-22**

Tolland Enrollment Projections





Option E4

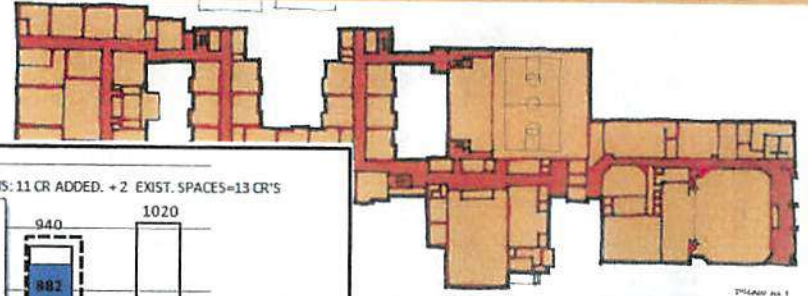


Birch Grove

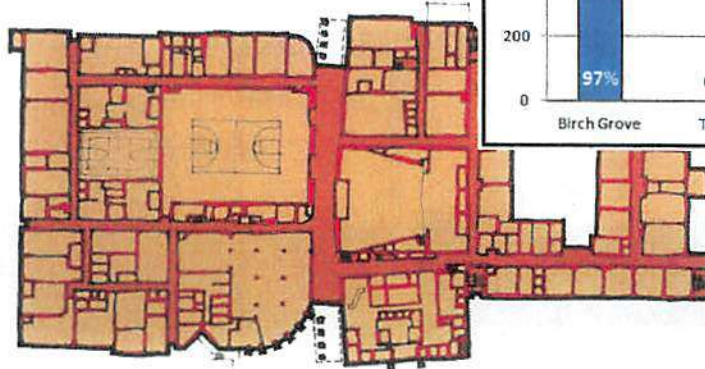


TIS

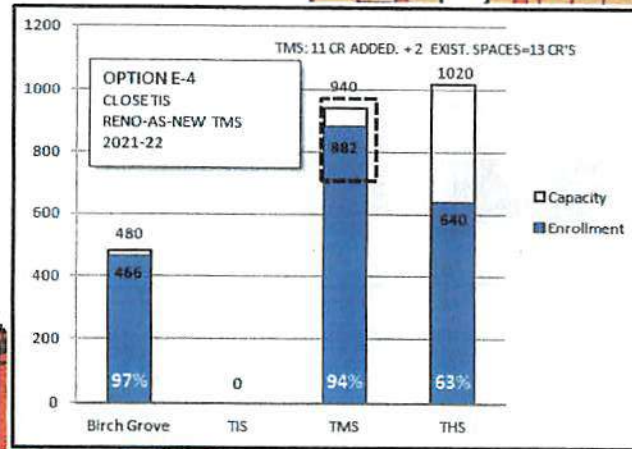
This can be done adding 11 classrooms to TMS



TMS



THS



20 students / cr
Full-day K
Reno/add to TMS
2021 completion
Close TIS

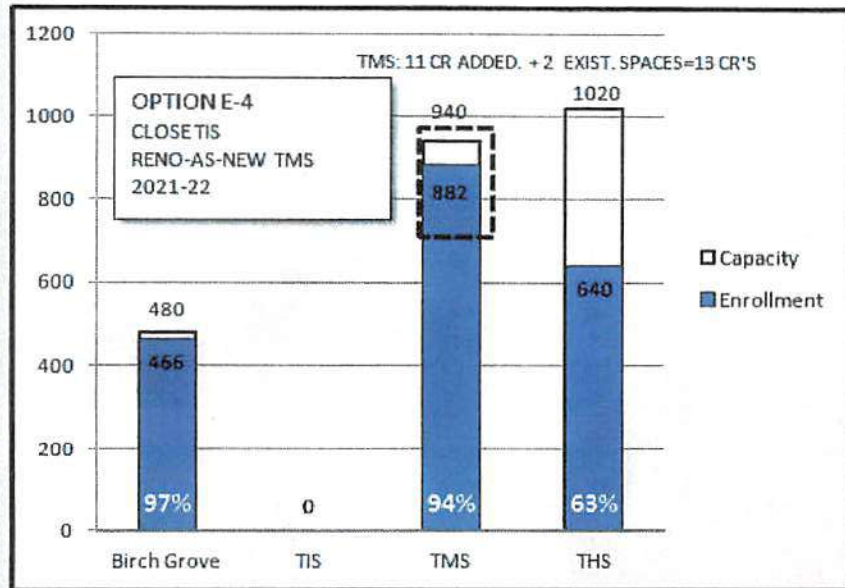


Option E4

Close TIS; Add at TMS

20 students / cr
Full-day K
Reno/add to TMS
2021 completion
Close TIS

PK	K	1	2	3	4	5	6
School Year 2021-22			E-4 CLOSE TIS; RENO-AS-NEW AND ADD AT TMS				
<p>Birch Grove Elementary School- Capacity K-2: 480, 22 CR's; PK: 3 CR's</p> <p>Enrollment Gr. PK=48, 3 CR's Gr. K-2=418, 22 CR's Full-day K</p>			<p>Tolland Middle School- Capacity 3-8: 940</p> <p>Enrollment Gr. 3-8=882 34 CR's + ADD 11 CR + 2 exist. CR's 47 CR's</p>			<p>Tolland High School- Capacity 9-12 (85%): 1020</p> <p>Enrollment Gr.9-12=640, 48 CR's</p>	
*NOTE: Schools capacity based on 20 students per classroom. (All options)							



	BG	TIS	TMS	THS
Close		✓		
Maint				
Captl Plan	✓			✓
Reno			✓	
Addn			✓	

REIMBURSEMENT LOW OR NO REIMB'T

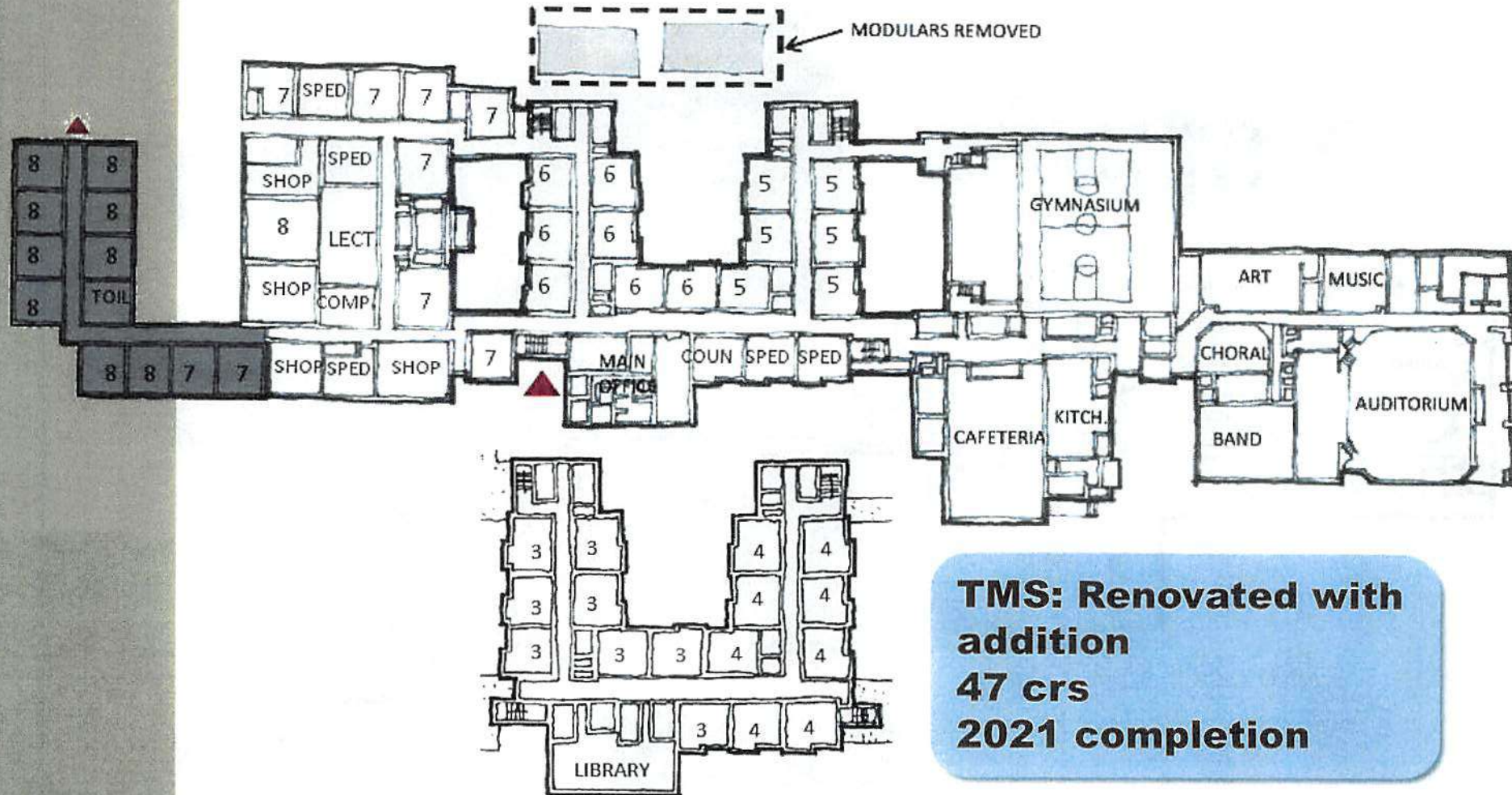




Option E4

Close TIS; Add at TMS

Test Fit Plan -- TMS

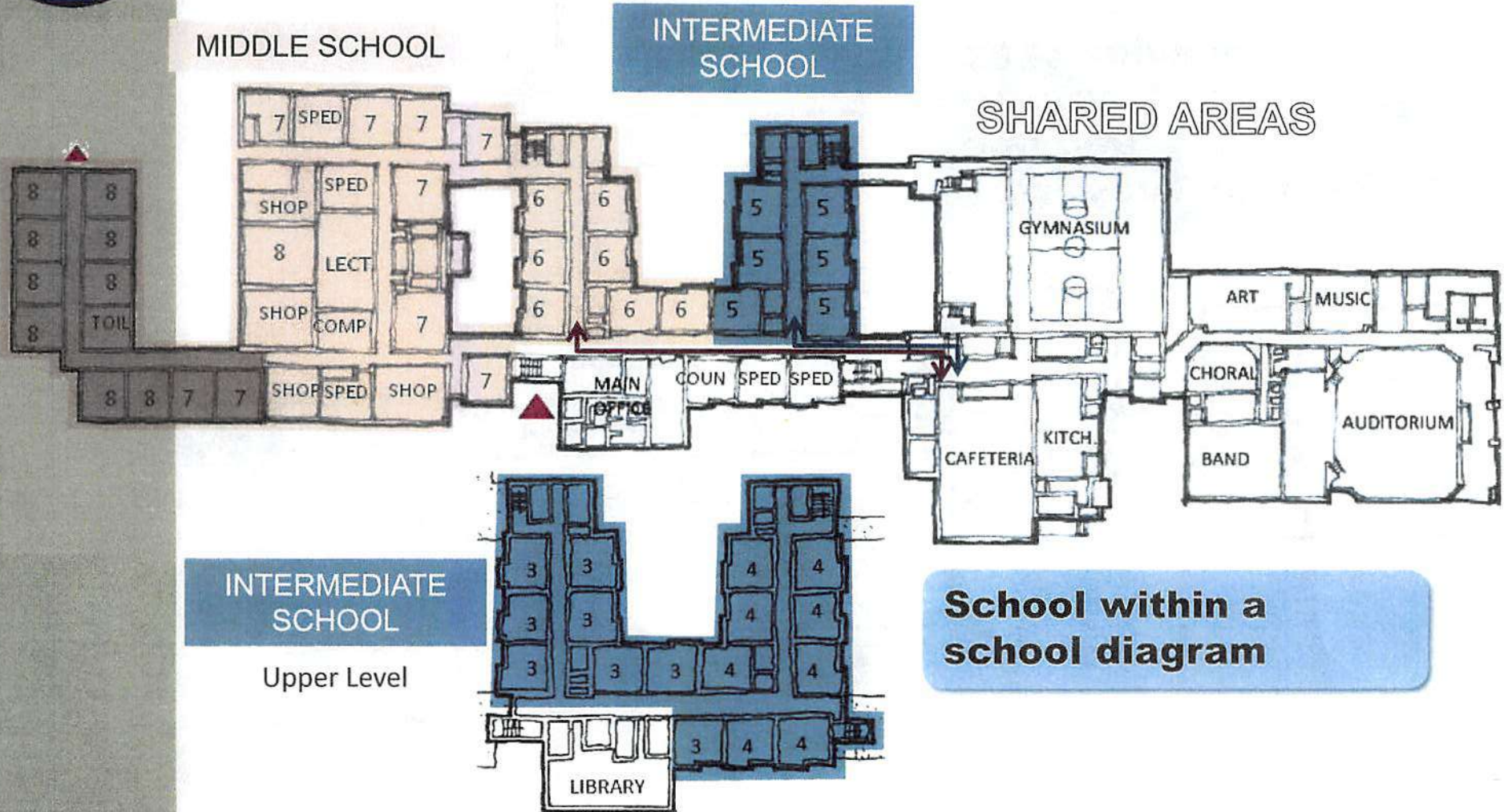




Option E4

Close TIS; Add at TMS

School within a school -- TMS





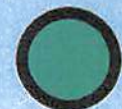
PROS AND CONS Comparison of Options

Option
B

Option
C

Option
E4

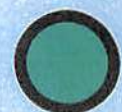
Efficient: Good match between capacity and projected enrollments



Flexible: Able to accommodate enrollment fluctuations



Promotes Change: Finds solutions outside the status quo



Reimbursible: Project could meet standards for state reimbursement

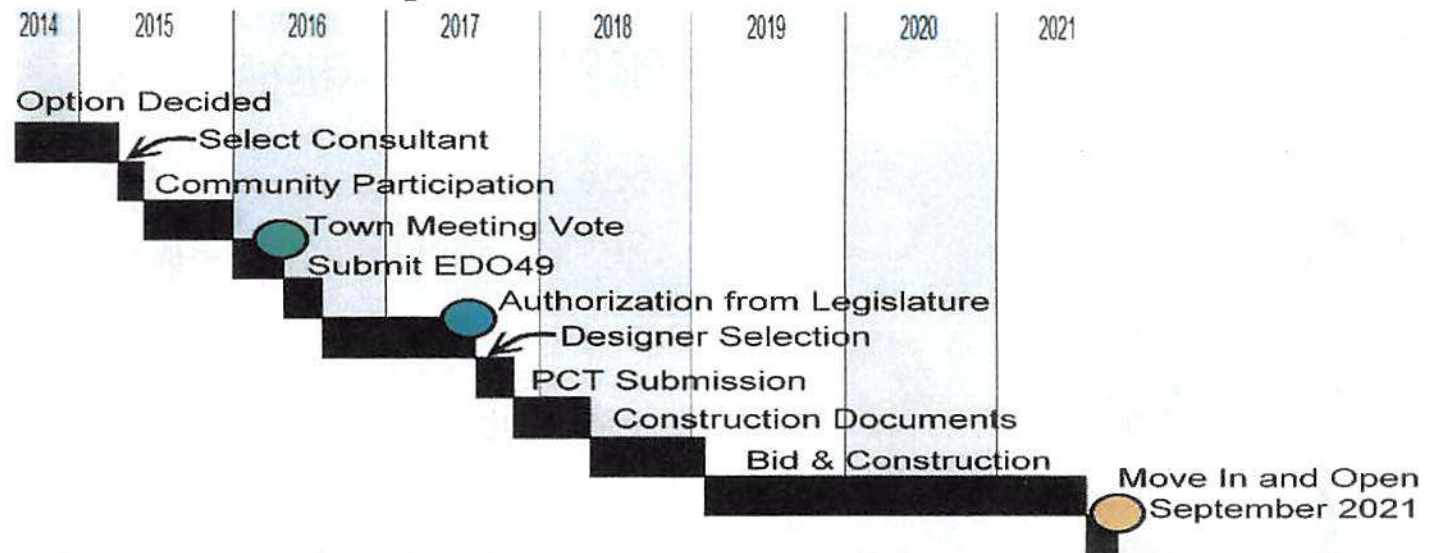


Pros and cons for Options

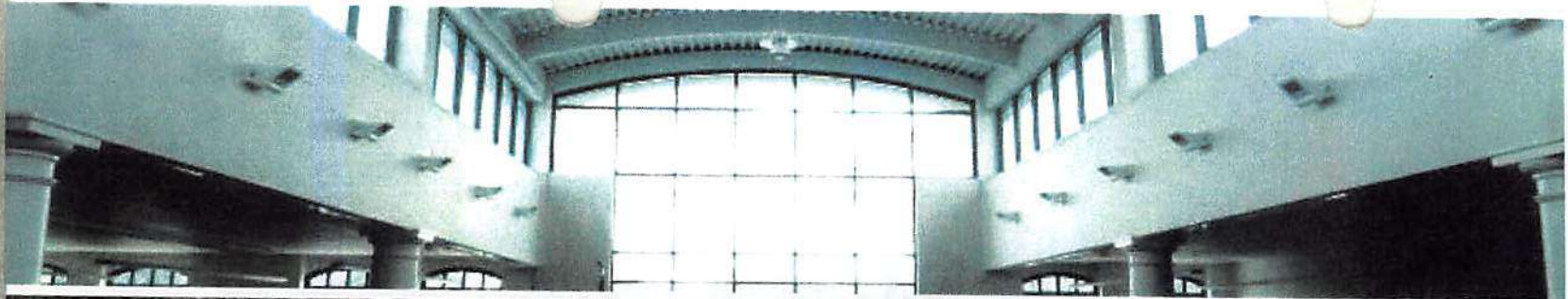


• **State reimbursement for Tolland: 50% on “Renovate as New” and 40% on new construction.**

• **Timeline for reimbursable project: 2021 completion.**



• **Potential uses for extra space: Magnet school or SPED magnet District offices**



Next Steps



Hicks Conference Room A

7:30 p.m.



Board of Education