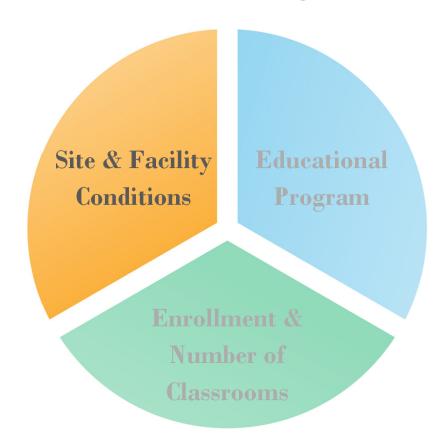
Underwood & Ward Facility & Enrollment Study Existing Facilities Assessment

June 13, 2023

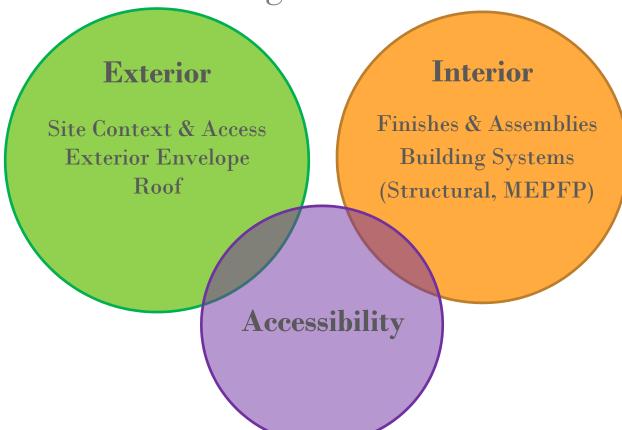


NPS Facilities Goal: Planning for the Future





What are we evaluating?

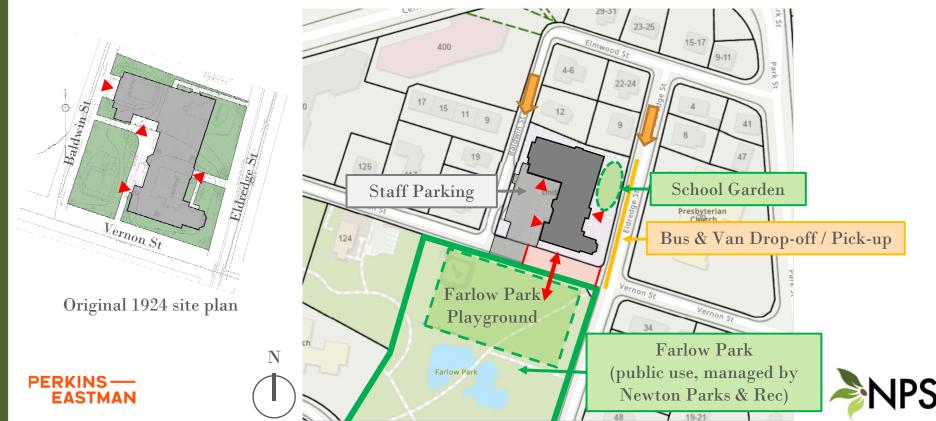






Underwood Elementary

Site Context & Access



Underwood Elementary Site Context & Access

- 1 acre site, building footprint is ³/₄ of site, parking about ¹/₄
- Located within NRHP Farlow & Kenrick Park Historic District
- School does not have dedicated play space, shares Farlow Park playground with public
- Part of Vernon Street permanently closed for easier access, additional parking
- Main entrance on Eldredge St



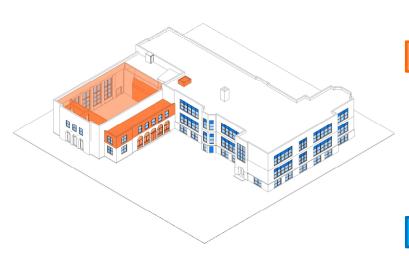








Underwood Elementary Building Evolution





School opens, features assembly hall, boys & girls playrooms in basement, coal storage rooms

1978

New cafeteria, art and music classrooms in basement Assembly hall/gym partitioned, stage converted to library Assembly hall loggia enclosed to create new lobby New toilet rooms

New elevator replaces part of stairwell Office mezzanine added above gym and lobby

19

1989

Exterior window replacement

2020-2022

Nurse suite reconfigured for Covid

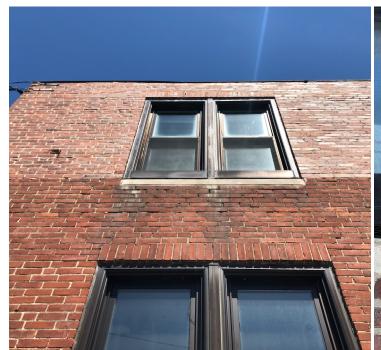






Underwood Elementary

Exterior Envelope











Underwood Elementary Roof













Underwood Elementary Accessibility

- 1 accessible building entrance at grade, remote from main office
- Granite steps, interior stairs are barriers for other entrances/exits
- Ramp handrails are not 521 CMR compliant, landings are smaller than 5 feet in some areas, clear width narrower than 4 feet at library
- Elevator is small and does not accommodate a stretcher
- Certain floors cannot be reached by wheelchair (library, music loft)
- Boys & girls toilet rooms have floor level challenges and raised platforms at stalls; staff toilet rooms do not meet minimum room size for turning radius, do not have accessible fixtures
- Push/pull side clearance conflicts observed at multiple doors, size of some door leaves less than 3 feet
- Casework does not allow knee space at sinks







Underwood Elementary Accessibility









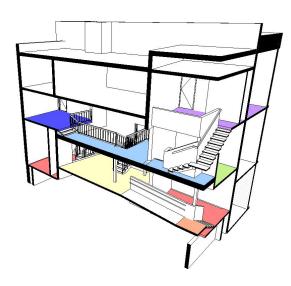


Underwood Elementary Accessibility









Library section

Level 7

Level 6

Level 5

Level 4

Level 3

Level 2

Level 1





Underwood Elementary Interior Finishes & Assemblies

- Floor, wall, and ceiling finishes at end of life
- Casework original to 1978 renovation, not accessible
- Water damage from roof leaks, floor/ceiling in gym damaged
- Signs of rust on stair finishes and under carriages
- Fire-ratings undefined, wire-glass no longer accepted by code as fire-rating
- Appliances and fixtures are dated
- Guardrails are only 36" at stairs, library, loft

















Underwood Elementary Building Systems

- Structure is in good condition, minor cracks observed in slab and foundation walls
- Mechanical system lacks reliable, consistent temperature control throughout school
- AC is limited to main office; steam piping at gym has failed
- School does not have a fire sprinkler system
- Plumbing fixtures are dated, some not accessible
- Piping is in poor condition, roof drainage does not appear adequate
- Main electrical service and power system are old and limited especially for future upgrades
- Main power and emergency power systems are co-located within custodian office with difficult access
- Kitchen sink does not have required grease trap, art sinks do not have solids interceptor
- Main water service does not have reduced pressure backflow preventer







Ward Elementary Site Context Cochituate Floodplain & Aqueduct ROW Wetland Buffer Ward Park Commonwealth Ward Park Golf Course 20ft Grade public use, managed by Change Newton Parks & Rec) Car Drop-off / Pick-up Staff Parking School Garden **Tennis Courts** Bus & Van Drop-off / Pick-up Original 1928 site plan Playground N PERKINS —

Overlook Park

EASTMAN

Ward Elementary Site Context

- 3 acre hillside site, with 3.5 acre public use Ward Park to north
- School has dedicated playground and tennis courts, both are maintained by Newton Parks & Rec, controlled by NPS
- Main entrance on Dolphin Road, one way street in residential neighborhood
- Easements at the edge of property, ROW within park



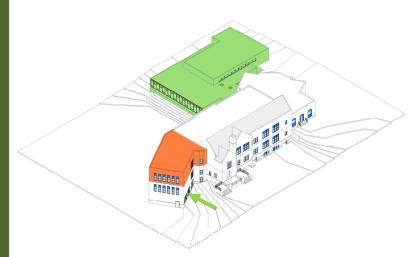








Ward Elementary Building Evolution





School opens, featuring dedicated kindergarten and assembly hall



1949

Second floor added above assembly hall/classroom wing



1956

Gymnasium/multi-purpose room & classroom addition Assembly hall converted to classrooms in basement



1986

Exterior window replacement (except for some basement windows)



Additional classrooms, cafeteria in basement Specialized services moves to library Nurse suite reconfigured for Covid





Ward Elementary Exterior Envelope













Ward Elementary Roof









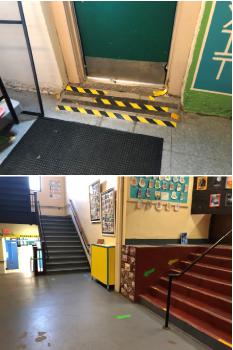




Ward Elementary Accessibility

- 1 accessible building entrance at grade near gym, remote from main office, 1 building entrance at grade in basement, but threshold is steep
- Site walkway from parking to playground appears steeper than 1:20
- Granite stairs, interior stairs are barriers for other entrances/exits
- There is no elevator first, second, and library floors are inaccessible
- Boys & girls toilet rooms have floor level challenges and raised platforms at stalls, no accessible stalls in some; staff toilet rooms do not meet minimum room size for turning radius, or have accessible fixtures
- Floor level changes at the library and staff lounge
- Push/pull side clearance conflicts observed at multiple doors, size of some door leaves less than 3 feet
- Casework does not allow knee space at sinks







Ward Elementary Accessibility













Ward Elementary Interior Finishes & Assemblies

- Floor, wall, and ceiling finishes at end of life (some ceilings/lighting have been replaced in the last few years)
- Water damage from roof leaks
- Most built in casework is original, hardware not operable, other casework not accessible
- Signs of rust on stair finishes and under carriages
- Fire-rated shafts at stairs not defined, wire-glass no longer accepted by code as fire-rating
- Appliances and fixtures are dated
- Guardrails are only 36" at stairs

















Ward Elementary

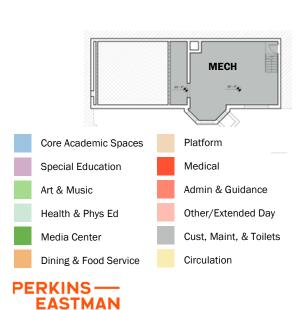
Building Systems

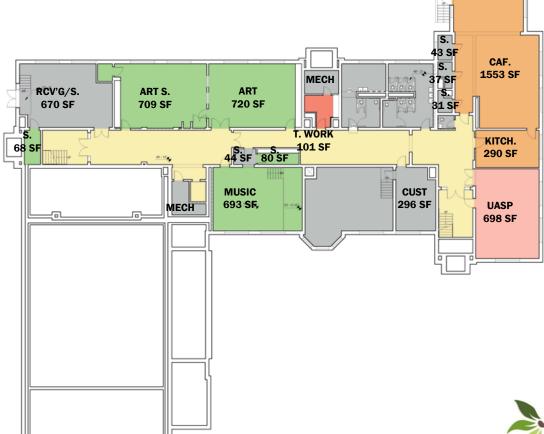
- Structure is in good condition, minor cracks observed in slab and foundation walls
- Mechanical system lacks reliable, consistent temperature control throughout school
- AC is limited to a few window units
- One boiler is non-functional, the other does not have a back-up
- School does not have a fire sprinkler system
- Plumbing fixtures are dated, some not accessible
- Piping is in poor condition, roof drainage does not appear adequate
- Main electrical service and power system are old and limited especially for future upgrades, door missing from electrical room
- Kitchen sink does not have required grease trap, art sinks do not have solids interceptor
- Main water service does not have reduced pressure backflow preventer





Underwood – Lower Floor



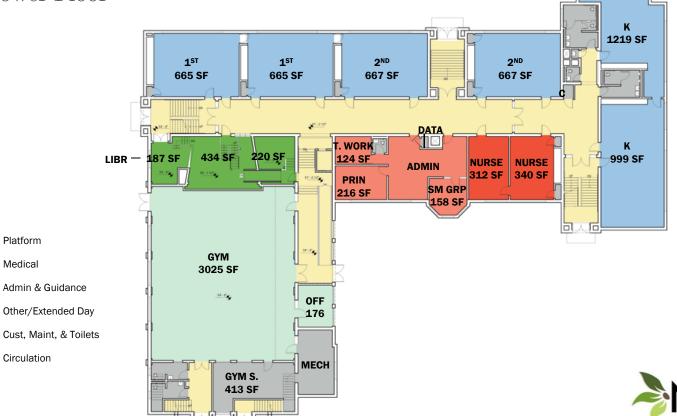


Platform

Medical

Circulation

Underwood – Lower Floor





Core Academic Spaces

Special Education

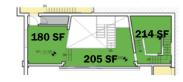
Health & Phys Ed

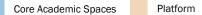
Dining & Food Service

Media Center

Art & Music

Underwood – Lower Floor





Special Education Medical

Art & Music Admin & Guidance

Health & Phys Ed Other/Extended Day

Other/Extended Day

Media Center Cust, Maint, & Toilets

Dining & Food Service Circulation

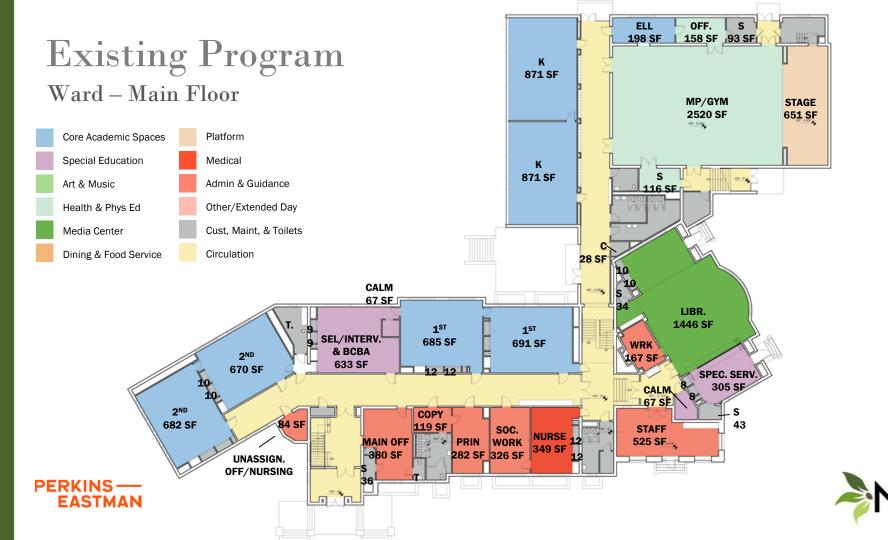
PERKINS — EASTMAN

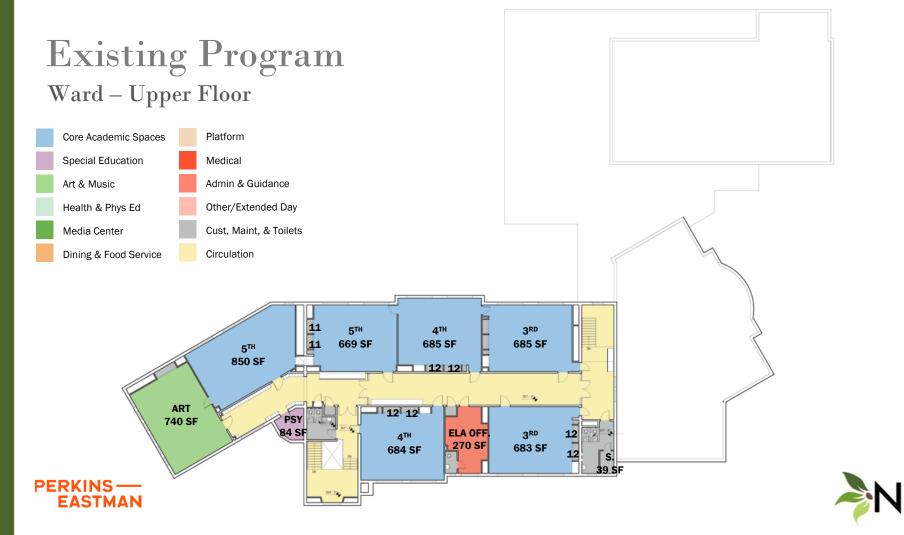


SEL/INTERV &



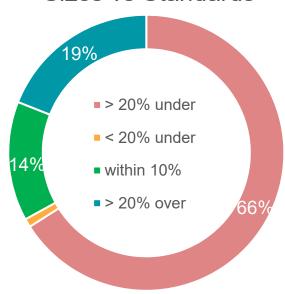




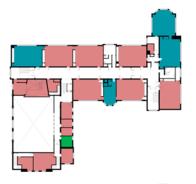


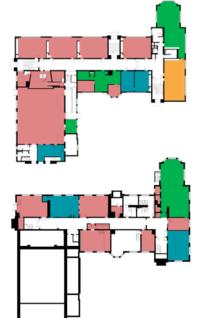
Existing Space Sizes Underwood

Sizes vs Standards

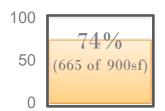








Classroom Size



Spaces Missing

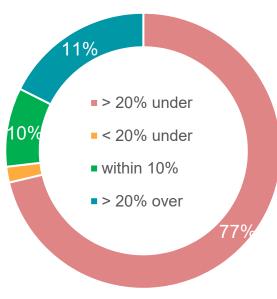
- Learning Center(s)
- Breakout Spaces
- Stage
- 4 Offices (shared)
- Nursing Room



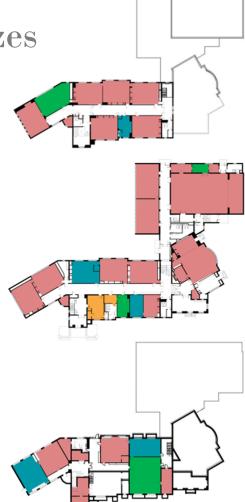
Existing Space Sizes

Ward

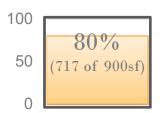
Sizes vs Standards



PERKINS — EASTMAN



<u>Classroom Size</u>

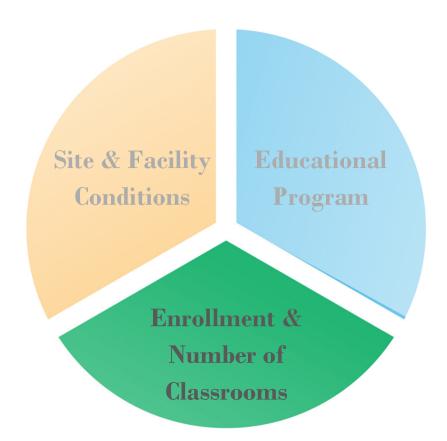


Spaces Missing

- Learning Center(s)
- Breakout Spaces
- Conference Space
- 2 Offices (shared)



NPS Facilities Goal: Planning for the Future





Space Summary / Comparison

			EXIS	TING]	(NPS	OJEC 5-Year = :	TÉD 2027/28)	l							PROGI	RAMC	OMPAR	SON (AS DES	IG
Elementary Schools		NDERWO 21 studer		1	WARD 94 studer	vts	1		CATIONA 5-414 stu		1	A	NGIER (CI	Os) ts	ZE 4	RVAS (C 90 studer	Ds) rts	° 4	ABOT (CE	Os) nts	COU 4	NTRYSIDE 65 studen	E (Fi
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	area totals	1	ROOM NFA ¹	# OF RM	s area totals	1	ROOM NFA ¹	# OF RMS	area	ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	to
CORE ACADEMIC SPACES			10,590			10,155	1			19,100	1			22,734			24,600			26,266			21
Pre-Kindergarten w/ toilet Kindergarten w/ toilet General Classrooms	1,100 665	2	2,200 6,650	870 717	2 10	1,740 7,165	avg. avg.	1,125 900	4 14	4,500 12,600		1,131 925	4 18	4,524 16,650	1,200 925	4 20	4,800	1,257 986	4 20	5,028 19,720	1,125 900	4 17	
Project Areas (breakout)	_	12	0		12		1	25	18 18	450		see s	m. group /	reading	see sr	24 n. group /	reading	see st	24 m. group / i	reading	88	21 6	Н
STE Rouris Grade 3-0 STE Storage			°			- 8				-				c			- 8			8			Ē
ELL Program	665 410	1	665 410	200 775	1	200	2	300 925	1	300		298 925	1	298	150 900	1	150	316 638	1	316 638	300 925	1	Е
Reading/Literacy Center Literacy Specialists Math Coach	665	1	685	275	1	275	3	175	1	175	ı	161 176	1	161	125 125	1	125	248	1	248	175	1	
Math Coach SPECIAL EDUCATION	W	thin ELL re	1,525	W	ithin Lit ro	2,306	1	150	1	3,876	1	176	-1	4,703	125	-1	4.350	316	-1	316 5,151	150	-1	-
(List rooms of different sizes separately)			1,020			2,000	1	per 202	3 NPS Sp	Ed. Ovrvw	i		Achieve			STRIDE			STRIDE			SPARK	Ľ
Self-Contained SPED - toilet			0	_		-	3		0	-	1	925	1	925	900	1	900	430	3	1,290	900	2	F
Special Education CR (learning center) Special Education Teacher (inclusion) Small Group / Reading (breakout) OT / PT	200	1	200	890		890		450 250 125 325	2 2 3	900 500 375 650		470 238 121 511	2 1 7	940 238 847 511	450 150 125 450	2 1 6	900 150 750 450	434 477 140 413	2 1 7	968 477 980 413	450 200 125 325	2 2 6	Ē
Sensory Calm Room (1 por academic floor)	200	-	200	66	-	65	1	100	-	- 30		100	-	212	100	-	700	100	-	200	100	-	Е
Speech + Language Team Specialist + IED Conf (12 artists)	235	within OT	215	305	-	300		150 400	11	150	ı	296 428	11	296 428	150	2	300	305 300	1	305	150	2	F
Psychologist (office, testing, storage) Social WorkerMetco (office, testing, conf)	105	hin SEL/in	105	85 325	1	85 325	1	150	1	150	ı	155	1	155	150	1	150	164 154	1	164	150	1	
BCBA SEL / Intervention	V	thin inclus	ion	WS	hin SEL/in	terv. 635		150		150		151	-	151	150	_	150	154		134	150 150	1	⊏
Tutor SPED Asst Dir (Bridge Off at Franklin)	140	1	635	635	1	631	1	150	1	150	ı			- 8			-			0	150	1	⊏
ART & MUSIC	105	-	2,275			1,635	1			2,500	1			2,608			2,725	_		2,587			- 5
Art Classroom - 25 seats Art Workroom w/ Storage & kiln	720 740	1	720	740 80	1	740	1	1,000	1	1,000	1	1,000	1	1,000	1,000	1	1,000	988 191	1	988	1,000	1	Г
Music Classroom / Lg Grp - 25-50 seats	690	1	690	765	1	765	á	1,200	1	1,200	ı	1,168	1	1,168	1,200	1	1,200	1,226	1	1,226	1,200	1	
Music Practice / Ensemble (+ storage) HEALTH & PHYSICAL EDUCATION	125	1	125 3,610	50	1	2,890	4	75	2	6,300	1	162	1	6,105	150	2	6,300	153	1	6,118	75	3	٠.
Gymnasium	3,025	1	3,025	2,520	1.	2,520	5	6,000	1	6,000	1	5,809	1	5,809	6,000	1	6,000	5,834	1	5,834	6,000	1	$\overline{}$
Gym Storeroom Health Instructor's Office w/ Shwtr & Tit	410 175	1	410 175	160	1	160	avg.	150	-	150	ı	176	-	176	100	1	100	147	1	137	150	1	F
MEDIA CENTER			1,585			1,670	1			2,452				2,770			2,875			2,810			- 2
Media Center / Reading Room DINING & FOOD SERVICE	1,585	1	2,130	1,670	-	2,760	comb.	2,452	1	6,198	formula	2,770	-	6,321	2,875	-	6,663	2,810	-	7,108	2,763	1	-
Cafeteria / Dining Stage	1,550	-1	1,550	1,285	1	1,285	1	2,970	1	2,970	formula	3,035 950	1	3,035	3,200	1	3,200	3,386	1	3,386	3,035	1	Ε
Chair / Table / Equipment Storage Kitchen	290	-1	200	300	-1	300	1	332 1.696	1	1.696	formula formula	408 1.460	1	1.460	363 1.600	1	363	381	1	381 1.841	360 1,460	1	Е
Staff Lunch Room	290	1	290	525	1	525	3	200	1	200	formula	234	2	468	250	2	500	250	2	500	250	2	
MEDICAL Medical Suite Toilet	_		650	_		375		60	-	510	ı	73	1	569	60	1	510	54	-	733	60	1	
Nurses' Office / Wating Room Examination Room / Resting	310	1	310	375	1	375	1	250 100	1	250	1	306	1	306	250 100	1	250	101	1	101	250 100	1 2	=
ADMINISTRATION & GUIDANCE	545		1,085			900	1	100		2,130				2,305		_	2,515	200		2,626	100	-	1
General Office / Waiting Room / Toilet Teachers' Mail and Time Room	485 125	1	485 125	380 120	1	380 120	3	675 inclu	ded in ger	n. office	scaled	750 inc		ffice 750	680 inc	in gen. c	office 680	458 inc	in gen. o	458 flice	660 inc	in gen. of	lice
Duplicating Room Records Room	in	cluded ab	ove 0		cluded abo	ove (3	80	ded in ger	80	ı		l in gen. c	79		in gen. c	ffice 60	127	1 1	127	80	I, in gen. of	fice
Principal's Office of Conference Area Principal's Secretary / Waiting	215	1	215	280	1	280	4	300 inclu	ded in ger	300 office	1	301 inc	l in gen. o	301 ffice	300 inc	in gen. o	300	305 inc	I in gen. o	305 mce	300 inc	I in gen. or	tice
Assistant Principal's Office Supervisory / Spare Off (after school pgm)			0			1 3	1	125	1	125	1	117	1	117	125	1	125	121	1	121	125	1	Ē
Conference Room	160	1	160				1	200	1	200		218	1	218	200	1	200	247	1	247	220	1	=
Guidance Office Guidance Storeroom			8	35	1	35	á			1	ı			- 6			1 8	200	- 4	200			
Teachers' Work Room Staff Nursing room	100	-1	100	85	thin staff lu	inch Br		200 100	2	400		206	2	412	250	2	500	161	2	322	200	2	\vdash
CUSTODIAL & MAINTENANCE			1,185			1,015	1			1,750	1			1,795			1,865			2,157			1
Custodian's Office Custodian's Workshop			8				1	150	1	150	ı	102	- 1	102	125	- 1	125	106 175	1	106	100	1	Ē
Custodian's Storage Rocycling Room / Trash	148	8	1,185	145	7	1,015	avg.	500 700	1	500 700	l	583 712	1 1	583 712	147 660	3 1	440 880	63 1,327	4	252 1,327	580 760	1	F
Receiving and General Supply Storeroom			0			- 9	1	75	luded in a	above 157	I	78	cluded abi	0V0	200	luded ab	ove 400	81	cluded abo	81	75	cluded abo	we
Network / Telecom Room			0			-		250	1	250	ı	232	1 3	232	250	1	250	216	- 1	216	250	î	
OTHER After School Program	700	1	700	625	1	625		250	1	250 250		incl.	in adminis	ration	incl.	n adminis	tration.	incl.	in administ	tration	250	1	
Auditorium/Lobby/Stage & Fan Room District Storage & Shop							1	\equiv															Ε
Total Building Net Floor Area (NFA) Proposed Student Capacity / Enrollment			25,335 221			24,330 194	Oct. '22			45,066 396				49,900 465			52,403 490			55,556 480			50
NON-PROGRAMMED SPACES						44 200	1		% of GFA	22,532			% of GFA	25,060		% of GFA	26,397		% of GFA	27,778		% of GFA	25
Total Building Gross Floor Area (GFA)* Grossing factor (GFA/NFA)			41,000 1.62			1.82	per 201	9 Captal As	sessment	1.50	NFA x1.5	1		74,960			78,900 1.50			93,334 1.50			-7
							1				1												

	r to MSPA	MSB/	A Guidelines nal Program & Space Standard
	TO MODA	Gi	uidelines)
ROOM NFA ¹	# OF RMS	area totals	Comments
		18,100	
1,200 1,200 950			1.100 SF min - 1.300 SF max
	4	4,800 13,300	1,100 SF min - 1,300 SF max 1,100 SF min - 1,300 SF max; 2 sinks min. req 500 SF min - 1,000 SF max; 2 sinks min. req
950	14	13,300	900 SF min - 1,000 SF max; 2 sinks min. req
	18		
_			
1,080	Refer to	STEG	ridelines for Additional informational infor
120	Refer to	STEG	udelines for Additional informat
		4,530	
		4,000	
950	3	2,850	900-1,200 SF equal to surrounding classrooms
60	3		The second secon
500	2	1,000	1/2 size Geni. Clim.
500	-	500	1/2 size Gerál Clim
		500	
_			
		2.676	
1,000	1	2,575	assumed schedule 2 times / week / student
150	1		
1,200	1	1,200	assumed schedule 2 times / week / student
75	3	225	
		6,300	Excess PE Spaces Policy 6000 SF Min. Size
6,000	1	6,000	6000 SF Min. Size
150	1	150	
100		2,452	
2,452	-1	2,452	
		6,198	
2,970 1,000		2,970	2 seatings - 15GF per seat
	-	337	
1.696	1	332 1,696 200	1 600 SF for first 200 + 1 SF/student Add1
200	1	200	20 SF/Occupant
	-	510	
60 250	-	250 200	
100	2	200	
		2,111	
348 100	1	348 100	
150	-	150	
110	1	110	
375	1	375	
125	1 0	125	
120 250 150	1	120 250	
250	1	250 150	
35	1	150	
348	1	348	
	_		
		1,996	
150		150 375	
375 375	1	375	
	- 1		
232 264 200	1	232 264	
200	1	264	
2.00		0	
		-	
_			
		44,772	
		44,772 396	Enter grade enrollments below
		44,772 396	Enter grade enrollments below
		44,772 396 66,845	Enter grade enrollments below

LINCOLN-ELIOT (DD) 396-414 target





Space Summary / Comparison

	Existing							
Elementary Schools	Undrwd	Ward						
Students	NFA ¹ 221 totals	NFA 194 totals						
Classrooms	12	11 11						
Special Special Color of different alone reportably: Educ. 50 Color Education of the color o	1500 sf	2300 sf						
Art Rooms	200 1 201 65 w. 1 OT 215 1 211 105 1 101 within SEL firetry.	600 1 8 65 1 3 305 1 3						
Music Rooms	720 721 1 125 1 12	740 1,63 80 7765 1 7 50 1 2,69						
Health / Wellness	3000 sf	2500 sf						
Media Center	1600 sf	1700 sf						
Cafeteria / Kitchen	2100 sf	2800 sf						
Admin / Nurse	1800sf	1300 sf						
Mitter School Program Auditorium Lobby/Stage & Fan Room Custodial Polymet Stoodial Polymet Stoodial Polymet Stoodial Polymet Stoodial Polymet Stoodial Polymet Stoodial	1200 sf	1000 sf						
ON-PROGRAMMED SPACES Total Building Gross Floor Area (GFA)	41,000	44,3						

	Pr		ram 114
Н	1,126	4	4,500
П		18	450
	175	900	ef
П	per 3 (JŲU	31
		1	
П			
	1,000	1	
П		1 2	
Н			
H	6	000	sf
Ш			
П	2	500	610
	675	JUU	2,130 675
П			
	62	200	sf
П			
	-00	600	1,760 150
	75 250	500	3 1
H	250		
I	-18	300	sf

-ANGIER (SDe)	ZERVAS (CDe)	- CAROT (CDs)	L COLINTRYSIDE (ES)	LINCOLNER (CD)	- Franklin #Sh -	MSBA Cui	delines
Angier	Zervas	Cabot	ROOM	ROOM area	ROOM area	MSBA Guid II	rogram & Space Standa nes)
NFA ¹ 465 totals	NFA ¹ 490 totals	NFA 480 tota	NFA ¹ 465 totals	396-414	396-414	NFA ¹ 396 totals	SF min - 1,200 SF max
1,131 4 4,524 925 18 16,650 see sin 224 reading	1,200 4 4,80 925 20 18,50 See Sr 2²⁴ / reading	24 made	88 21 525 0 0 0 0 0 0 0 0	1,157 3 3,472 908 15 13,626 174 18 522	1,125 4 4,500 900 14 12,600 see sm 18 reading	1,200 4 4,800 1,10 950 14 13,300 15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Achieve +3800 sf	Stride +3500 sf	Stride +3900 sf			Bridge +4200 sf	4500 sf	
121 7 647 511 1 511 106 2 212 296 428 1 256 428 1 455 155 1 155 151 1 55	100 1 20 100 1 30 190 1 30 190 1 15 150 1 15	140 7 413 1 100 2 305 11 300 11 164 1	3 525 2 650 0 100 300 5 150 4 300 0 400 4 350 4 150 1 150 4 150 1 150 0 150 1 150	248 1 248 476 1 476 95 3 3 28 141 2 48 141 3 84 140 1 440 160 1 60 167 1 60	1.5 0 755 28 2 575 100 4 400 250 4 200 400 400 150 1 150 1 150 1 0	1	
1,000 1,000 178 1,100 1,168 1,168 162 1 162 6,106	1,000 1,000 150 1,000 150 1,200 1 1,200 150 2 30 6,300	2,5 0 960 1 1 0 191 1 1 1 1,226 1 1, 1 153 1 6,1	0 150 1 150 0 0 0 0 1 2,675 2 1,000 1 150 10 1 150 1 150 10 1,200 1 1,200 3 75 3 225 1 6,300	307 1 307 0 0 0 2,484 901 901 72 2 1 143 1,298 1 1,298 1 142 1 142 5,908	150 1 150 150 2 300 150 2 300 2,575 1,000 4 1,000 150 1 150 1,200 1 1,300 113 2 225 6,300	1,000 2,676 100 150 150 1200 1 1200 1 1200 1 1200 1 1200 1 1200 1 1200 1 1200 1 1 1200 1 1 1 1	
6000 sf	6000 sf	6000 sf	6000 sf	6000 sf	6000 sf	6000 sf	
2800 sf	2900 sf	2800 sf	2800 sf	2700 sf	2700 sf	2500 sf	
6300 sf	6700 sf	7100 sf	6400 sf	5900 sf	6200 sf	6200 sf	
2900 sf	3000 sf	3400 sf	2300 sf	3100 sf	2700 sf	2700 sf	
1800 sf	1900 sf	2200 sf	1800 sf	900 sf	1600 sf	2000 sf	r grade enrollments below
% of GFA 25,060 74,960 1,50	% or GPA 26,397 78,80	% of OFA 27,7	5 % of GFA 25,129 54 75,682	% of GFA 32,606 94,949	% or GPA 23,330 69,990	66,845	



