

PREFERRED SOLUTION

PREFERRED SOLUTION SPACE SUMMARY

3.3.4 - **b**

Preliminary Notes to the Initial Space Summary

July 8, 2020

Northeast Metro Tech

In the absence of an MSBA template for Career Technical Vocational Schools, DRA has taken the liberty to modify the MSBA Guidelines column of the “Proposed Space Summary- High Schools” template in the following ways:

1. In addition to the cell for “Proposed Student Capacity / Enrollment” (highlighted in yellow), a cell has been added for “Full- Time Equivalent (FTE) Academic Students”. This modification is required in order to more accurately reflect the unique schedule of Northeast Metro Tech (and most all other CTE schools) and to more appropriately determine the academic space requirements.

At Northeast Metro Tech, students have an alternating schedule consisting of one week in traditional academic subjects (English, Math, Social Studies, Science, etc.) and one week in their Career Technical program (“shop”). During the academic week, students have a typical six-period day. During their shop week they spend the entire day in their shop, (except for Gym, lunch and other occasional electives). Therefore, at any one time approximately one half of the student population is in academic classrooms and one half is in shop.

At Northeast Metro Tech, the student population is divided approximately in half by pairing 9th with 11th graders, and pairing 10th with 12th graders. This usually results in slightly unequal groupings, so the largest cohort is typically slightly more than fifty percent of the total enrollment. For the purposes of this Space Summary form, we have calculated the **Full-Time Equivalent (FTE)** academic population to be equal to **53%** of the total enrollment.

This added cell has been highlighted in a tan color.

2. The Space Summary form has also been modified by substituting this newly created “Full-Time Equivalent” academic enrollment figure for the “Proposed enrollment” in the formula contained in the cells related to the following academic spaces, including:

General Classrooms

Teacher Planning spaces

Science Labs

Prep Rooms

Self-Contained SpEd Rooms

Self-Contained SpEd Toilet Rooms

Resource Rooms

Small Group Rooms

Library Reading Room

In each of these rows the cell containing the substitution has been highlighted with a tan color.

3. The “**Vocations & Technology**” category has also been modified to more accurately reflect the nature of a Career Technical/ Vocational school. The formula for the line for “Technology/ Engineering Rooms” has been deleted (Number of Rooms = 0). In its place is an itemized listing of the individual career technical programs that Northeast Metro Tech will be offering. In the column “Room NFA” the cell contains a link to a formula from the Massachusetts Department of Elementary and Secondary Education, Chapter 74 Manual guidelines for area per pupil for each CTE program.

In the column listing the “# of rooms” the number “1” has been added to reflect one “shop” for each program (this represents a **total** space allowance for each program; this will ultimately be sub-divided among shop space, storage, office, etc.).

The total student population has been allocated to each CTE program according to the projected enrollment distribution recently approved by the Northeast Metro Tech School Committee.

These cells that have been added or modified are highlighted in tan color cells.

Other than the above, no other modifications have been made to the “MSBA Guidelines” section of the Proposed Space Summary Form.

Northeast Metro Tech	Existing Conditions		
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals
CORE ACADEMIC SPACES			29,600
(List classrooms of different sizes separately)			
Classroom - General	797	26	20,710
Teacher Planning/ Workrooms-- 136, 136A, 210C	253	3	760
Small Group Seminar/ Collaborative Space			
Science Classroom / Lab	1,340	1	1,340
Prep Room	280	1	280
Science Classrooms incl STEM	814	8	6,510
Central Chemical Storage Rm	0	0	0
Language Lab/ Distance Learning	0	0	0
SPECIAL EDUCATION			2,900
(List classrooms of different sizes separately)			
Self-Contained SPED			
Self-Contained SPED Toilet			
Resource Room - 124E,127C Learning Center	115	2	230
Small Group Room - 124D	160	1	160
Tutoring/ Assessment			
SpEd Office - 124A,124B,124C,126B,127B Dir+2 asst.	206	5	1,030
SpEd Conference Room			
SpEd Classrooms - 126A,127A	740	2	1,480
ART & MUSIC			0
Art Classroom - 25 seats			
Art Workroom w/ Storage & kiln			
Band - 50 - 100 seats			
Chorus - 50 - 100 seats			
Ensemble			
Music Practice			
Music Storage			
VOCATIONS & TECHNOLOGY			94,540
Technology/Engineering Rooms- PLTW			
Automotive Collision Repair			9,190
Automotive Technology			10,090
Business Office Technology (2200sf min)			4,240
Carpentry			8,520
Cosmetology			3,920
Culinary Arts			5,120
Dental Assisting			1,620
Design & Visual Communications			7,170
Drafting & Design			4,460
Early Childhood Education (1500sf min)			2,800
Electrical Technology			7,790
Health Assisting			4,160
HVAC Technology			6,120
Metal Fabrication			7,120
Plumbing & Pipefitting			8,160
Robotics & Automation			4,060
new-Biotechnology			
new-Marketing (2200sf min)			
new-Medical Assisting			
HEALTH & PHYSICAL EDUCATION			14,150
Gymnasium - 174	8,110	1	8,110
PE Alternatives - 171 Fitness Center & Weights	1,140	1	1,140
Gym Storeroom - 170C	120	1	120

Difference to MSBA Guidelines		
ROOM NFA1	# OF RMS	area totals
		3,750
	3	2,550
	-29	300
	0	-
	0	-
	0	-
	0	-
	0	-
	1	900
		-2,290
	-6	(5,700)
	-6	(360)
	1	1,900
	1	500
		-6,700
	-2	(2,400)
	-2	(300)
	-1	(1,500)
	-1	(1,500)
	-1	(200)
	-4	(300)
	-1	(500)
		350
	0	-
	0	-
	0	-
	0	-
	0	-
	0	-
	0	-
	0	-
	0	350
	0	-
	0	-
	0	-
	0	-
	0	-
	0	-
	0	-
	0	-
		0
	0	(200)
	1	-
	0	-

MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines) see also accompanying Notes to Space Summary for highlighted revisions			
ROOM NFA ¹	# OF RMS	area totals	Comments
		46,670	
850	33	28,050	825 SF min - 950 SF max
100	33	3,300	
500	4	2,000	
1,440	8	11,520	3 x 85% ut=20 Seats-1 per /day/student
200	8	1,600	
200	1	200	
		9,060	
950	6	5,700	825-950 SF equal to surrounding classrooms
60	6	360	
500	3	1,500	1/2 size Genl. Clrm.
500	3	1,500	1/2 size Genl. Clrm.
		6,700	
1,200	2	2,400	Assumed use - 25% Population - 5 times/week
150	2	300	
1,500	1	1,500	Assumed use - 25% Population - 5 times/week
1,500	1	1,500	
200	1	200	
75	4	300	
500	1	500	
		125,857	
1,440	1	1,440	Assumed use - 100% Population - 5 times/week; 825 SF - 2,000 SF
6,783	1	6,783	
12,833	1	12,833	
2,567	1	2,567	
10,500	1	10,500	
5,833	1	5,833	
5,833	1	5,833	
6,583	1	6,583	
5,133	1	5,133	
4,473	1	4,473	
1,650	1	1,650	
12,600	1	12,600	
5,833	1	5,833	
9,333	1	9,333	
7,467	1	7,467	
8,400	1	8,400	
5,133	1	5,133	
5,133	1	5,133	
2,493	1	2,493	
5,833	1	5,833	
		25,160	Excess PE Spaces Policy
12,000	1	12,000	
3,000	1	3,000	
300	1	300	

Proposed Space Summary - High Schools

1,600 Students

Northeast Metro Tech			
Existing Conditions			
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals
Locker Rooms - Boys / Girls w/ Toilets	3,940	1	3,940
Satelite Locker Rooms			
Phys. Ed. Storage & Closets - 172G,172H, 172N	115	2	230
Athletic Director's Office - 172C (including S/T)	140	1	140
PE Instructor & Coach Offices w/ Shower & Toilet	115	2	230
Health CR/ Team Meeting Room			
Trainer 172I	240	1	240
MEDIA CENTER			2,910
Media Center / Reading Room 174A	2,150	1	2,150
Workroom 174C	400	1	400
Office, Conf.,printer- 174B,174D, 174E	120	3	360
Small Group Rooms			
Project Room/ TV studio/ Storage			
AUDITORIUM / DRAMA			1,630
(Auditorium) Presentation/ Performance Space			
Stage - 119B	1,510	1	1,510
Auditorium Storage - 119T	120	1	120
Make-up / Dressing/ Green Rooms			
Controls / Lighting / Projection			
DINING & FOOD SERVICE			12,280
Cafeteria / Student Lounge / Break-out - 119A	7,440	1	7,440
Chair / Table Storage - 119S,119U, 119V	300	1	300
Scramble Serving Area - 119P	420	1	420
Satelite Serving Area			
Kitchen - 119C, 119D, 119E, 119F, 119G, 119H,	4,120	1	4,120
Satelite Kitchen			
Staff Lunch Room		0	
MEDICAL			800
Medical Suite Toilets - 178D, 178E	45	2	90
Nurses' Office / Waiting Room 178A, 178B	650	1	650
Interview/ Exam Room	0	0	0
Resting	30	2	60
ADMINISTRATION & GUIDANCE			7,410
General Office / Waiting / Tlt 175,175A,175H, 12	870	1	870
Teachers' Mail and Time Room 175K ??	240	1	240
Duplicating Room			
Records Room (Vault) 175E	190	1	190
Principal's Office w/ Conf. Area & Tlt - 175F, 175	360	1	360
Principal's Secretary / Waiting - 175M	70	1	70
Assistant Principal's Office - AP1 - 101,101B	470	1	470
Assistant Principal's Offices - Voc.Deans, Academic Prog. Coordinator 175R, 175S, 133	123	3	370
Supervisory & Paraprofessional Offices; incl: Attendance, Reception 175B, 175C, 175D, 183	155	4	620
Department Head Offices 163B, 187A, 187B, 187C,188, 189, 201A	134	7	940
Safety Resource Officer	100	1	100
In-House Suspension 139	340	1	340
Conference Rooms - 175N, 180	440	2	880
Guidance/ Adj, Psych., Diversity Offices - 175O,	126	8	1,010
Guidance Waiting Room - 175P	280	1	280
Guidance Storeroom	0	0	0
Career Center/ Classroom - 112	670	1	670
Records Room			
Teachers' Work Rm, Dig.Lrn'g Mgr(w/ Media Ctr)			

PROPOSED								
Existing to Remain/Renovated			New			Total		
ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	area totals
		0	3,145	2	6,290		2	6,290
			780	2	1,560		2	1,560
		0	300	1	300		1	300
		0	180	1	180		1	180
		0	200	4	800		4	800
			750	1	750		1	750
			180	1	180	+	1	180
		0			5,200			5,200
		0	4,030	1	4,030		1	4,030
		0	250	1	250			250
			150	1	150		1	150
			107	3	320		3	320
			450	1	450		1	450
		0			10,400			10,400
		0	7,500	1	7,500		1	7,500
		0	1,600	1	1,600		1	1,600
		0	500	1	500		1	500
		0	300	2	600		2	600
		0	200	1	200		1	200
		0			13,300			13,300
		0	4,000	2	8,000		2	8,000
		0	550	1	550		1	550
		0	600	1	600		1	600
			300	1	300		1	300
		0	2,600	1	2,600		1	2,600
			600	1	600		1	600
		0	325	2	650		2	650
		0			1,410			1,410
		0	60	2	120		2	120
		0	247	3	740		3	740
		0	100	3	300		3	300
		0	63	4	250		4	250
		0			8,780			8,780
		0	800	1	800		1	800
		0	100	1	100		1	100
		0	200	1	200		1	200
		0	200	1	200		1	200
		0	250	1	250		1	250
		0	125	1	125		1	125
		0	150	2	300		2	300
		0	150	3	450		3	450
		0	120	4	480		4	480
		0	120	7	840		7	840
		0	120	1	120		1	120
		0	340	1	340		1	340
		0	450	2	900		2	900
		0	150	10	1,500		10	1,500
		0	100	1	100		1	100
		0	100	1	100		1	100
			950	1	950		1	950
			225	1	225		1	225
			800	1	800		1	800

Difference to MSBA Guidelines		
ROOM NFA1	# OF RMS	area totals
	1	(2,670)
	0	(200)
	0	30
	3	550
		0
	0	(1,170)
	0	250
	1	150
	3	320
	1	450
		0
	0	-
	0	-
	0	-
	0	-
	0	-
		600
	1	-
	0	-
	0	-
	1	300
	0	(300)
	1	600
	1	-
		0
	1	60
	2	490
	-1	(100)
	-3	(450)
		2,985
	0	-
	0	-
	0	-
	0	-
	0	-
	0	(125)
	0	-
	1	150
	1	150
	3	360
	7	840
	1	120
	1	340
	1	450
	2	300
	0	-
	0	-
	0	400
	0	-
	0	-

MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines) see also accompanying Notes to Space Summary for highlighted revisions			
ROOM NFA ¹	# OF RMS	area totals	Comments
8,960	1	8,960	5.6 sf/student total
500	1	500	
150	1	150	
250	1	250	
		5,200	
5,200	1	5,200	
		10,400	Excess Auditorium Spaces Policy
7,500	1	7,500	2/3 Enrollment @ 10 SF/Seat - 750 seats MAX
1,600	1	1,600	
500	1	500	
300	2	600	
200	1	200	
		12,700	
8,000	1	8,000	3 seatings - 15SF per seat
550	1	550	
600	1	600	
2,900	1	2,900	1600 SF for first 300 + 1 SF/student Add'l
650	1	650	20 SF/Occupant
		1,410	
60	1	60	
250	1	250	
100	4	400	
100	7	700	
		5,795	
800	1	800	
100	1	100	
200	1	200	
200	1	200	
375	1	375	
125	1	125	
150	1	150	
150	2	300	
120	1	120	
450	1	450	
150	8	1,200	
100	1	100	
100	1	100	
550	1	550	
225	1	225	
800	1	800	

1,600 *Students*

Northeast Metro Tech		Existing Conditions	
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals
CUSTODIAL & MAINTENANCE			9,950
Custodian's Office - 137G, 019FB	230	2	460
Custodian's Workshop & Toilet - 137, 137G	2,240	1	2,240
Custodian's Storage - 194A, 194B, 194C, 192C, 19	35	12	420
Recycling Room / Trash - 119O	80	1	80
Receiving and General Supply - 137A, 137E	725	2	1,450
Storeroom - 137B, 137C, 137D, 137E, 137F, 01	164	7	1,150
Network - Telecom Room & Offices - 177A, 77B	216	5	1,080
Maintenance Storage & Staff Lunch / Lounge - 1	439	7	3,070
OTHER			9,980
Other (specify): Bank 192G (Bus. Tech)	80	1	80
School Store (Bus. Tech)			
Adult Ed Offices & Storage 185, 185A, 186, 186A	90	5	450
Superintendent's Office & Tlt - 178A	470	1	470
Superintendent's Assistant			
Business Office suite, HR 175AA, 175BB, 175CC	150	7	1,050
Maintenance Garage (out-building)			
Field Maintenance Garage & Storage (out-building)			
Concession/ Public Toilets (out-building)			
Pool, Office, Storage, & Mechanical	7,930	1	7,930
Total Building Net Floor Area (NFA)			186,150
Proposed Student Capacity / Enrollment			
NON-PROGRAMMED SPACES			
Other Occupied Rooms (list separately)			
Unoccupied MEP/FP Spaces			
Unoccupied Closets, Supply Rooms & Storage Rooms			
Toilet Rooms			
Circulation (corridors, stairs, ramps & elevators)			
Remaining ³			
Total Building Gross Floor Area (GFA) ² (including outbuildings)			239,444
Grossing factor (GFA/NFA)			1.29

PROPOSED								
Existing to Remain/Renovated			New			Total		
ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	area totals
		0			3,950			3,950
		0	150	1	150		1	150
		0	375	1	375		1	375
		0	375	1	375		1	375
		0	400	1	400		1	400
		0	550	2	1,100		2	1,100
		0	1,350	1	1,350		1	1,350
		0	200	1	200		1	200
			0	0	0			
		0			7,235			7,235
		0	300	1	300		1	300
			300	1	300		1	300
			450	1	450		1	450
			250	1	250		1	250
			125	1	125		1	125
			150	7	1,050		7	1,050
			1,800	1	1,800		1	1,800
			1,560	1	1,560		1	1,560
			1,400	1	1,400		1	1,400
			7,930	0	0		0	0
		0			258,832			258,832
	% of GFA	0		% of GFA	129,416		% of GFA	129,418
	#DIV/0!			0%			0%	
	#DIV/0!			0%			0%	
	#DIV/0!			0%			0%	
	#DIV/0!			0%			0%	
	#DIV/0!			0%			0%	
	#DIV/0!			0%			0%	
	#DIV/0!			0%			0%	
	#DIV/0!	0		33%	129,416		33%	129,418
		0			388,248			388,250
	-				1.50			1.50

Difference to MSBA Guidelines		
ROOM NFA1	# OF RMS	area totals
		1,125
	0	-
	0	125
	0	-
	0	-
	1	550
	0	450
	0	-
		7,235
	1	300
	1	300
	1	450
	1	250
	1	125
	7	1,050
	1	1,800
	1	1,560
	1	1,400
	0	-
		7,055
		Full-T
		10,585

MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines) see also accompanying Notes to Space Summary for highlighted revisions			
ROOM NFA ¹	# OF RMS	area totals	Comments
		2,825	
150	1	150	
250	1	250	
375	1	375	
400	1	400	
550	1	550	
900	1	900	
200	1	200	
		0	
		251,777	
Equivalent Academic students:		848	162
Total students		1,600	225
			Non-Programmed space areas are required to be included in the following submittals:
			Schematic Design Submittal
			Design Development Submittal
			60% Construction Documents
			90% Construction Documents
			Final Construction Documents
		377,665	360,000
		1.50	1.50

¹ Individual Room Net Floor Area (NFA) net square

² **Total Building Gross Floor Area (GFA)** Includes the entire building gross square footage measured from the outside face of exterior walls


³ **Remaining** Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total Building Gross Floor Area and area not accounted for above.

Architect Certification

I hereby

Name of Architect Firm: Drummey Rosane Anderson, Inc.

Name of Principal Architect: Carl Franceschi

Signature of Principal Architect: 

Date: December 21, 2020