

Norfolk Public Schools

Career and Technical High School Study

REPORT - MAY 01, 2015

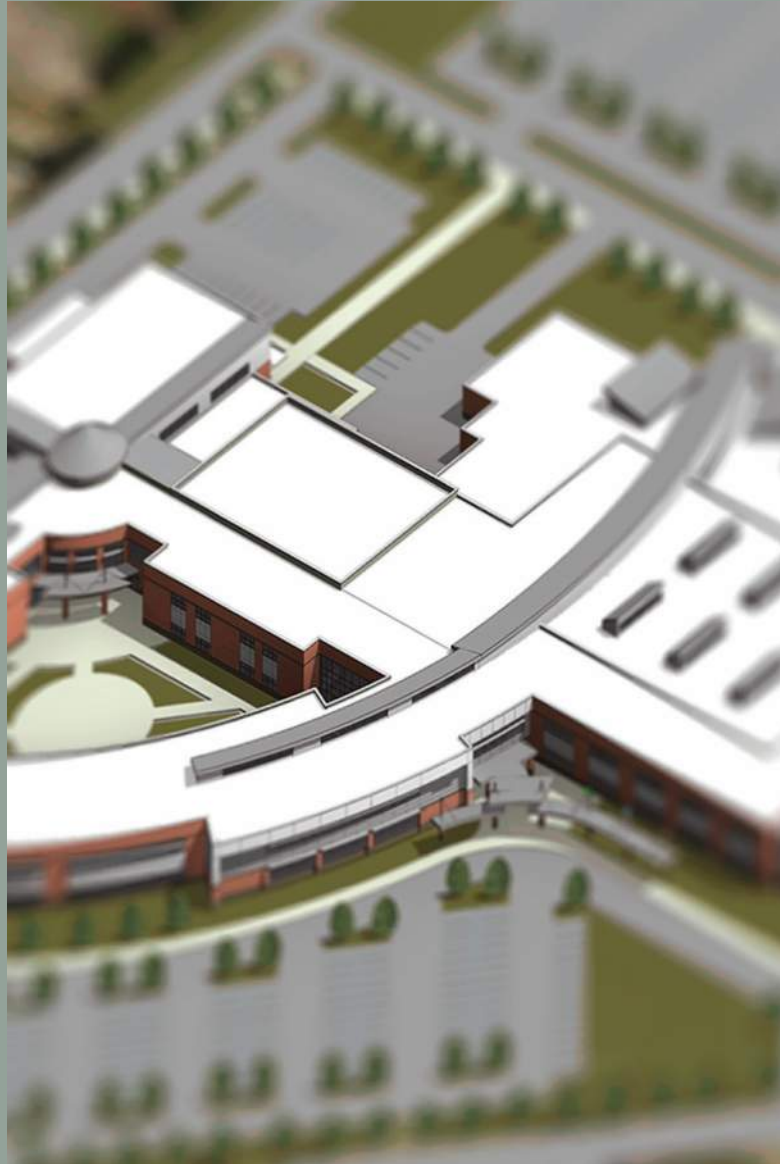




TABLE OF CONTENTS

Executive Summary Tab 1

Educational Program Tab 2

- CTE High School Program of Spaces

CTE High School Architectural Concept Tab 3

- Site Plan
- Floor Plans
- Aerial Perspectives
- Main Entrance Perspective

Cost Model..... Tab 4

Executive Summary

Starting in November of 2014, RRMM Architects, working together with Norfolk Public Schools, was tasked with the preparation of a second phase to the Career Technical Education High School Study. The original phase was completed in April of 2013.

The goals for the second phase of the study were:

- 1. Further refine the original study educational program for a state-of-the-art comprehensive career and technical high school.**
- 2. Develop a site layout concept that allows the existing Lake Taylor High School to remain in operation during the construction of the new facility. Consider new alternatives to those shown in Phase 1.**
- 3. Continue development of the preliminary architectural plan concept for the building developed in Phase 1.**
- 4. Develop an exterior rendering for the building suitable for public disclosure and promotion.**
- 5. Further refine the cost to construct the new CTE high school building and further validate costs based on updated square footage estimates.**

Process:

RRMM Architects and Norfolk Public Schools held meetings with stakeholders and members of local industry/businesses at the office of RRMM Architects, Dominion Enterprises and the Norfolk Technical Center. The attendees reviewed the first phase study program and architectural concept and discussed aspects of the various academies including differing modes of student learning and collaboration. The notion of shared use of spaces and student collaboration was a constant theme in the discussions. Comments, ideas and suggestions received during these meetings helped inform the refinement of the program and a completely new architectural concept. The new architectural concept was presented to all committee and guest participants at the Norfolk Slover Library on April 16, 2015. The group's response was very positive with few comments during the meeting or as submitted through a special email account set up to receive comments.

Concept:

Following the initial round of meetings, an **Architectural Concept for the new CTE High School** facility was developed and refined.

The Concept for the new facility is approximately 304,000 ft². The existing Lake Taylor high school will stay in operation while the new facility is being built. The existing high school will then be torn down and new site developments including roads, playing fields and parking areas will be built in its current location.

The original study proposed the construction of the new building behind (to the east) of the existing Lake Taylor High School. This location had its benefits in allowing the existing school and all adjacent playing fields to remain in operation during construction of the new facility. However, given the narrow constraints of the available land between existing high school building and interstate I-64 to the east, the plan diagram that was developed resulted in a long, linear and inefficient layout. The resulting plan had long travel distances to key parts of the building among other deficiencies brought on by the site constraints.

In this study phase, RRMM decided to pursue an alternate site location for the new building onsite in order to create a more efficient building and site layout and maximize the ability to provide the numerous access points to the building required by the comprehensive high school and CTE programs. The resulting positioning on the site places the building closer (and more visible) to the entrance to the Lake Taylor site and provides better opportunities for natural daylighting into the majority of the rooms due to its primarily north and south facing facades. With the new layout, the location of all playing fields is consolidated with the new fields placed adjacent to the existing fields after construction is completed. Several playing fields will be temporarily unavailable and a temporary access road for bus and car traffic to the rear of the existing high school building will be required during construction.

The floor plan layout, organized along three main circulation spines surrounding an exterior courtyard, unifies the building's four CTE academies and other various comprehensive high school spaces while allowing the numerous required exterior access points to the different CTE spaces. The circulation spines are sized wide to create spaces for informal student learning and collaboration, to give space for display of student projects, and to allow clear vistas into the various CTE labs/classrooms. Labs, classrooms and other spaces lining these circulation spines have glass walls and storefront allowing for transparency and visibility. Key is the notion of having the CTE activities on display for the students and visitors to the building.

The building's main entrance and public entrance open up into a multipurpose Commons area which will be used for student dining but also for events open to the public including Hackathons and other

public exhibits in addition to traditional high school functions such as basketball games or auditorium events. CTE public use spaces are located adjacent to the Commons (which is designed along the lines of a public mall). These public use spaces include the Credit Union, Student Store, Bistro, Cosmetology, Early Childhood, Public Restaurant and Veterinary labs. Abundant display walls line the Commons Area and also the Bus Drop-off/Student Entrances points. The public access to these spaces as well as the “mall-like” feel will give students an environment from which to experience practical, real-world experiences.

The building’s Main Administration, Guidance and Clinic suites are located on one of the circulation spines leading into the Commons area. This places them adjacent to the main entrance while giving them separation from the noisier Commons area, Auditorium and Gymnasium. The CTE Administration suite is located central to the building adjacent to the Main Administration suite but has its own entrance.

The resulting floor plan layout incorporates comments received through the meetings, including a shared “Maker Space” located central to the Trades and Industry Academy and the Stem Academy. Other multipurpose spaces capable of supporting a diverse range of activities include the Forum, Exterior Courtyard and Gymnasium. The Trades courtyard, another exterior multipurpose area, is located along northwest line of the building and is the primary exterior access point for the Trades and Industry Labs, while remaining out of sight from the main entrance to the building. Overhead coiling doors are provided in the walls separating the Trades and Industry Academy and STEM Academy labs, facilitating collaboration and allowing a shared project to be moved from one lab to another. The related classrooms for each CTE lab are typically located off of a corridor allowing for shared use of the classrooms, if required.

RRMM Architects received assistance from Diversified Educational Systems in refining the educational program, developing layouts for many of the CTE labs and classrooms and with preliminary equipment costs. This support was vital to fine tuning the size and layout of spaces at such an early stage in the project. Please refer to **Tab 3** for more information on the **Architectural Concept**.

Cost Model (including soft costs): Although still at the study level, we believe we have been able to completely redevelop the building and site design and maintain similar pricing to our original Phase 1 estimates. Accordingly, based on today’s dollars, the new Facility **Total Project Cost is approximately \$83,754,410**. Please refer to **Tab 4** for additional information.

Career Technical Education High School Study

Norfolk Public Schools

We would like to express our gratitude to all of those involved with the successful completion of the study, including but not limited to the Norfolk Public Schools administration and staff, the Norfolk Public Schools Board, the Greater Norfolk Council members, and Diversified Education Systems for all of their efforts during the study process. Kenyetta Goshen and Barry Bishop and our private business partners were invaluable in providing critical information and assistance during the preparation of this study.

NPS - CTE HIGH SCHOOL

May 1, 2015

Program of Spaces: 1600 Student High School, Grades 9-12

	NEW RECOMMENDED			ROOM CAPACITY	TOTAL ACADEMIC CAPACITY	EXTERIOR ACCESS REQUIRED	NOTES
DESCRIPTION OF SPACE	Qty	Space	Total (SF)				
TRADES AND INDUSTRIAL TECHNOLOGY ACADEMY							
Architecture & Construction							
Building Trades Lab	1	3,100	3,100	20	20	X	
Teacher station (included in lab above)							
Storage	1	280	280				
Related classrooms for building trades	1	600	600				
Electrical Lab	1	1,400	1,400	20	20	X	
Teacher station (included in lab above)							
Storage	1	100	100				
Related classrooms for electrical	1	600	600				
HVAC Lab	1	3,100	3,100	20	20	X	Includes area for sheet metal.
Teacher station (included in lab above)							
Storage	1	100	100				
Related classrooms for HVAC	1	600	600				
Welding Suite	1	3,110	3,110	20	20	X	Requires (20) - 5'x5' welding booths. Gas storage directly exterior to lab.
Teacher station (included in lab above)							
Storage	1	380	380				
Related classrooms for welding	1	600	600				
Maritime Trades							
Ship Repair/Shipfitting Lab	1	3,100	3,100	20	20	X	
Coatings & Applications (included in lab above)							
Port Operations (included in lab above)							
Mariner (included in lab above)							
Storage (included in lab above)	1						
Related classrooms for Maritime Trades	1	600	600				
Advanced Manufacturing and Automation							
Engineering Technology Lab	1	3,100	3,100	20	20	X	
Computer Integrated Manufacturing							
CNC Machinist - include in M&A space							
Storage (included in lab above)	1						
Related Classrooms for M & A	1	600	600				
Automotive Technology							
Auto Body Lab	1	4,600	4,600	20	20	X	5 bays total, for painting, prepping with frame machine, lift, 2 flat bays. Storage, special ventilation, compressors - ideally outside. Own classroom with large windows to the lab.
Teacher station for Auto Body Lab	1						
Storage for Auto Body Lab	1	320	320				Shared between auto body and auto mechanics.
Related classrooms for Auto Body Lab	1	864	864				
Auto Mechanics Lab	1	4,660	4,660	20	20	X	6 bays with a central drive aisle including 2 alignment lifts, 6 rotary style lifts. Customer and storage vehicle parking outside
Teacher station for Auto Mechanics Lab	1						
Storage for Auto Mechanics Lab	1	320	320				Shared between auto body and auto mechanics.
Related classrooms for Automotive Technology	1	1,080	1,080				

	NEW RECOMMENDED			ROOM CAPACITY	TOTAL ACADEMIC CAPACITY	EXTERIOR ACCESS REQUIRED	NOTES
DESCRIPTION OF SPACE	Qty	Space	Total (SF)				
Automotive Technology Common Spaces							
Customer waiting area	1	820	820	4		X	Shared between auto body and auto mechanics.
Male and Female Locker Rooms	2	360	720				Shared between auto body and auto mechanics.
Laundry Room	1	100	100				Shared between auto body and auto mechanics.
Wash Room (included in each lab)	2						Shared between auto body and auto mechanic. Each lab will also have its own wash station.
Computer Labs (basic and for drafting/CAD)	1	1,220	1,220	25	25		Used for all programs.
General Academic							
English	2	725	1,450	25	50		
Math	1	725	725	25	25		
Social Studies	1	725	725	25	25		
Foreign Language	1	725	725	25	25		
Science Lab	2	1,200	2,400	25	50		
1 Prep Room	1	300	300				
Computer Lab	1	800	800	25	25		
Research/Project Classroom	1	460	460	10	10		
Teacher Workroom	1	800	800				
Teacher Toilet	2	70	140				
Teacher Storage	1	100	100				
Asst Principal Office	1	125	125				
Guidance Counselor Office	1	120	120				
Waiting area/Reception	1	200	200				
Locker Area	2	400	800				
TOTALS			45,944		395		
HEALTH, MEDICAL AND HUMAN SERVICES ACADEMY							
Medical Services							
Nursing Lab	1	2,000	2,000	20	20		Includes minimum of 6 beds, skills area and medical simulation area. One mannequin could do multiple simulations. Move to technology and away from textbooks.
Teacher Station (Included in SF above)							
Storage (Included in SF above)							
Nursing Labs - Related classrooms	2	720	1,440	25	50		
Allied Health Classrooms	2	820	1,640	25	50		
Phlebotomy (sharing classrooms above)							
EKG Tech (sharing classrooms above)							
Medical Assistant (sharing classrooms above)							
Lab Tech (sharing classrooms above)							
Surgical Tech (sharing classrooms above)							
Pharmacy Technician Lab	1	1,250	1,250	20	20		Larger classroom with hoods. Doesn't require unique configuration, just equipment. Requires a lot of counter space. Includes commercial pharmacy counter setup.
Dental Services							
Dental Lab Suite	1	1,620	1,620	20	20		
Dental classroom	1	680	680				
Veterinary Services							
Veterinary Lab and Suite	1	1,450	1,450	20	20	X	
Small waiting room (included in SF above)	1						
Office space (included in SF above)	1						
Grooming (included in SF above)	1						
Cage Area (included in SF above)	1					X	
Storage (included in SF above)	1					X	
Related classroom	1	600	600				
Health Informatics							
Electronic Health Records Specialist Lab	1	890	890	25	25		Configured as a computer lab.

	NEW RECOMMENDED			ROOM CAPACITY	TOTAL ACADEMIC CAPACITY	EXTERIOR ACCESS REQUIRED	NOTES
DESCRIPTION OF SPACE	Qty	Space	Total (SF)				
Law and Public Safety							
Public Safety / EMT Lab	1	3,500	3,500	20	20	X	
Storage	1	100	100				
Related classroom	1	610	610				
Related classroom	1	270	270				
Criminal Justice Lab classroom	1	1,230	1,230	20	20		Classroom theory space large enough to accommodate a variety of functions including forensic science, K-9, SWAT or fingerprinting.
Storage	1	100	100				
Personal Care Services							
Cosmetology (Barber & Beauty) Lab	1	1,280	1,280	20	20		Single lab space with layout to encompass all functions rather than separate rooms, including customer waiting area. 20 stations minimum including, shampoo bowls, dryers, common locker, etc. Requires a public access point, but not necessarily outdoor space.
Waiting	1	100	100				
Teacher Area	1	100	100				
Laundry	1	150	150				
Storage	1	100	100				
Related classroom	1	600	600				
Early Childhood Education							
Pre-school (Lab)	1	975	975	20	20	X	Lab space for 20 children. Requires adjacent exterior play area.
Workspace for Teacher, Teacher's Asst. & HS teacher	1	300	300				
Kitchenette	1	100	100				Located inside of pre-school lab area
Laundry	1	100	100				Small closet off of kitchenette
Observation area	1	50	50				Small room, 1/3 of hallway-sized, with an intercom
Storage	1	200	200				
Children's restroom	1	70	70				
Related classroom	1	735	735				
ROTC							Locate either with Health Academy or in the Physical Education area.
ROTC Lab	1	1,000	1,000	25	25		
ROTC Teacher Office	1	125	125				
Cadet Office	1	100	100				
ROTC Storage	1	180	180				
General Academic							
English	2	725	1,450	25	50		
Math	1	725	725	25	25		
Social Studies	1	725	725	25	25		
Foreign Language	1	725	725	25	25		
Science Lab	2	1,200	2,400	25	50		
1 Prep Room	1	300	300				
Computer Lab	1	800	800	25	25		
Research/Project Classroom	1	460	460	10	10		
Teacher Workroom	1	800	800				
Teacher Toilet	2	70	140				
Teacher Storage	1	100	100				
Asst Principal Office	1	125	125				
Guidance Counselor Office	1	120	120				
Waiting area	1	200	200				
Locker Area	2	400	800				
TOTALS			33,515		520		

	NEW RECOMMENDED			ROOM CAPACITY	TOTAL ACADEMIC CAPACITY	EXTERIOR ACCESS REQUIRED	NOTES
DESCRIPTION OF SPACE	Qty	Space	Total (SF)				
BUSINESS AND INFORMATION TECHNOLOGY ACADEMY							
Computer Information Technology & Support							
Computer Repair Lab	1	1,000	1,000	20	20		IT lab for hardware side of the house.
Network Operations (included in lab above)							Include in hardware IT lab.
Gaming (included in lab above)							Include in hardware IT lab.
Advanced Programming Lab	1	1,120	1,120	25	25		IT lab for software side of the house. Part of computer lab should be hived off explicitly as a 'safe space' for testing.
Computer Information Systems Lab	1	1,160	1,160	25	25		
Web Design (included in lab above)							
Microsoft IT Academy (included in lab above)							
Cisco Academy (included in lab above)							
Financial Services, Marketing & Management							
Classroom	1	735	735	25	25		Uses traditional classroom space.
Culinary Arts							Culinary arts program runs 3 years. First year basic introduction. Students will run a café & full fledged restaurant and will do banquets & catering.
Café (Bistro)	1	800	800				Locate along public circulation area.
Training kitchen - Lab	1	1,300	1,300	20	20	X	Requires delivery access. Includes instructional area.
Restaurant kitchen	1	200	200	20	20	X	Requires delivery access.
Restaurant front room	1	1,600	1,600				Serves up to 100.
Related Classroom	2	600	1,200				
Storage area - dry goods, freezer, etc.	1	400	400				
Laundry	1	250	250				
Male and Female Locker Rooms	2	250	500				
General Academic							
English	2	725	1,450	25	50		
Math	1	725	725	25	25		
Social Studies	1	725	725	25	25		
Foreign Language	1	725	725	25	25		
Science Lab	2	1,200	2,400	25	50		
1 Prep Room	1	300	300				
Computer Lab	1	800	800	25	25		
Research/Project Classroom	1	460	460	10	10		
Teacher Workroom	1	800	800				
Teacher Toilet	2	70	140				
Teacher Storage	1	100	100				
Asst Principal Office	1	125	125				
Guidance Counselor Office	1	120	120				
Waiting area	1	200	200				
Locker Area	2	400	800				
TOTALS			20,135		345		

	NEW RECOMMENDED			ROOM CAPACITY	TOTAL ACADEMIC CAPACITY	EXTERIOR ACCESS REQUIRED	NOTES
DESCRIPTION OF SPACE	Qty	Space	Total (SF)				
ENGINEERING, DESIGN AND TECHNOLOGY (STEM) ACADEMY							
Modeling & Simulation, Innovation & Research							
Computer Lab	1	1,310	1,310	25	25		
Prototyping Lab	1	1,310	1,310	25	25		Large space including areas for fabrication and manufacturing. Separate areas for programming, lego teams, testing, etc.
Computer-Aided Drafting and Engineering							
Computer Labs	1	1,250	1,250	25	25		Layout configured as a common computer lab.
Robotics							
Multiple Purpose Lab	1	3,520	3,520	20	20	X	
<i>Pre-robotics (included in lab above)</i>							Large space for robotics including a smaller area for innovation & research. Does not require same ventilation amount as automation and construction.
<i>Robotics (included in lab above)</i>							Include in same space as pre-robotics.
Related classroom	1	600	600				
Maker Space	1	1,900	1,900			X	Space is available to be shared between all academies.
General Academic							
English	2	725	1,450	25	50		
Math	1	725	725	25	25		
Social Studies	1	725	725	25	25		
Foreign Language	1	725	725	25	25		
Science Lab	2	1,200	2,400	25	50		
1 Prep Room	1	300	300				
Computer Lab	1	800	800	25	25		
Research/Project Classroom	1	460	460	10	10		
Teacher Workroom	1	800	800				
Teacher Toilet	2	70	140				
Teacher Storage	1	100	100				
Asst Principal Office	1	125	125				
Guidance Counselor Office	1	120	120				
Waiting area	1	200	200				
Locker Area	2	400	800				
TOTALS			19,760		305		
MISCELLANEOUS							
Student Store	1	560	560				Locate in close proximity to public entrance.
Display Area	7	50	350				Locate along public corridors.
Graphics Lab	1	1,230	1,230	25	25		
Graphics Storage	1	380	380				
Forum with stage	1	1,740	1,740	100			Square footage includes stage. Flat floor. Space is available to be shared between all academies. Could have direct access to exterior courtyard.
Credit Union	1	400	400				Part of Business and It Academy and should be located in close proximity to public mall.
Security Office	2	160	320				Distrubuted around the buildnig at key entrance points to the building.
TOTALS			4,980		25		
MUSIC DEPARTMENT							
Music Technology Room	1	1,800	1,800	25	25		
Storage	1	540	540				
Music Technology Room	1	1,000	1,000	25	25		
Storage	1	250	250				
TOTALS			3,590		50		
AUDITORIUM							
Seating Area	1	9,100	9,100	800			
Stage - Including Wings	1	2,610	2,610				
Boys Dressing Rooms / Toilets	1	260	260				
Girls Dressing Rooms / Toilets	1	260	260				
Receiving/Scene Shop/Storage	1	650	650			X	
Control Room	1	520	520				
Ticket Booth	1	100	100				
TOTALS			13,500				

	NEW RECOMMENDED			ROOM CAPACITY	TOTAL ACADEMIC CAPACITY	EXTERIOR ACCESS REQUIRED	NOTES
DESCRIPTION OF SPACE	Qty	Space	Total (SF)				
PHYSICAL EDUCATION							
Gymnasium	1	12,820	12,820	60	60		1,600 Seats (2 teaching stations)
Sound System Control Room	1	140	140				
Auxiliary Gym	1	8,100	8,100	30	30		1 teaching station
Wrestling Room	1	2,110	2,110				
Weight Room	1	1,160	1,160				
Training Room	1	400	400				
Training Room Storage	1	160	160				
Health Classrooms	2	900	1,800	30	60		One room divisible by operable panel partition
Boys PE Locker Room	1	1,230	1,230			X	
Boys Showers (included in Locker Room SF)	1						
Boys Toilets (included in Locker Room SF)	1						
Girls PE Locker Room	1	1,230	1,230			X	
Girls Showers (included in Locker Room SF)	1						
Girls Toilets (included in Locker Room SF)	1						
Boys Team Lockers	1	890	890			X	
Girls Team Lockers	1	890	890			X	
PE Offices	2	310	620				
Coaches Offices	2	310	620				
Storage	2	550	1,100				
Laundry	1	160	160				
Athletic Director / A.D. Storage	1	160	160				
Concessions (in Bistro)	1						Included as part of Bistro
TOTALS			33,590		150		
MEDIA CENTER							
Reading Room	1	5,050	5,050				Includes lounge area with Barnes type and layout.
Media Center Work Room	1	300	300				
Conference Room / Professional Library	1	300	300				
AV Workroom/Storage/Head end	1	660	660				
Media Spec.Office	2	200	400				
Professional Library	1	200	200				
Electronic Classroom (Distance Learning)	1	900	900	25	25		
TV Studio	1	450	450				
Laptop Carts Storage	1	60	60				
TOTALS			8,320		25		
ADMINISTRATION							
Public Space	1	350	350				
General Office	1	450	450				
Principal's Office/Toilet/closet	1	200	200				
Asst Principals' Office w/ closet	4	125	500				
Secretary Bookkeeper's Office	1	300	300				
Record Room	1	400	400				
Mail Room	1	150	150				
Storage Supplies	1	200	200				
Storage/Books	1	1,000	1,000				
Duplicating/Workroom	1	300	300				
Conference Room	1	400	400				
Attendance Office	1	300	300				
Toilets	2	85	170				
TOTALS			4,720				
GUIDANCE							
Counselor's Offices	4	120	480				
Waiting	1	300	300				
Record Room/Vault	1	500	500				
Resource (Career Center)	1	150	150				
Conference Room	1	200	200				
Toilet	1	70	70				
TOTALS			1,700				

	NEW RECOMMENDED			ROOM CAPACITY	TOTAL ACADEMIC CAPACITY	EXTERIOR ACCESS REQUIRED	NOTES
DESCRIPTION OF SPACE	Qty	Space	Total (SF)				
CTE ADMINISTRATION							
Waiting	1	150	150				Suite requires proximity to public entrance.
Director	1	200	200	1			
Reception	1	200	200	2			
Cubicle Area	1	2,260	2,260	6			Cubicles for 2 senior coordinators, 1 adult education coordinator, 3 miscellaneous staff.
GED Office	2	150	300	2			
Nighttime CTE Office	1	150	150	1			
Breakroom - CTE	1	300	300	1			
Breakroom - GED	1	300	300	1			
Toilet	2	70	140				
TOTALS			4,000				
CLINIC							
Reception / Waiting Room	1	125	125				
Examining Room	1	126	126				
Boys Rest Room	1	59	59				
Girls Rest Room	1	59	59				
Nurses Office	1	100	100				
Isolation Room/Testing Area	2	63	126				
Recovery Areas	4	40	160				
Common Travel Areas	1	362	362				
Clinic Storage	1	90	90				
TOTALS			1,207				
CAFETERIA AND KITCHEN							
Student Dining	1	13,000	13,000	600			
Teacher Dining	1	600	600				
Kitchen	1	2,560	2,560				
Serving Area - Windows/Lines	6	310	1,860				
Receiving - Loading	1	430	430			X	
Dry Food Storage	1	300	300				
Refrigerator/Freezer	1	360	360				
Staff locker/rest area	1	200	200				
Dishwashing Area	1	230	230				
Garbage and Trash Rooms	1	150	150				
Mop Closet	1	100	100				
Vending Machine Area	1	260	260				
Dietician's Office	1	120	120				
Table / Chair Storage	1	160	160				
Beverage Cooler	1	100	100				
TOTALS			20,430				
CUSTODIAL FACILITIES							
Workshop/Receiving	1	660	660			X	
Custodial Facilities	4	80	320				
TOTALS			980				
MECHANICAL AND ELECTRICAL							
Main Mechanical / Electrical Rooms	1	1,900	1,900			X	
Mechanical	2	570	1,140				
Elevator Equip Room	1	100	100				Number of elevators can vary relative to building layout.
Local/Elec/Comm Hubs	8	100	800				Number of hubs can vary relative to building layout.
TOTALS			3,940				
NET BUILDING AREA							
Circulation, Construction, Public Restrooms		38%	83,718		1,815		Includes circulation, construction, general restroom areas. Excludes main electrical rooms, mechanical rooms and custodial facilities.
TOTAL GROSS SQUARE FEET BLDG AREA AND BUILDING CAPACITY			304,029		1,634		Total Capacity at 90% Efficiency



SITE PLAN

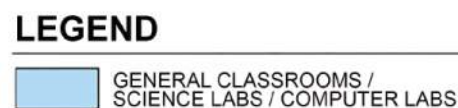
**Norfolk Public Schools
Career and Technical Education High School**

MAY 01, 2015



0' 25' 50' 100' 200'





GENERAL ADMINISTRATION /
SECURITY

**BUILDING SERVICES /
RESTROOMS / ELEC / MECH**

 CIRCULATION

 PHYSICAL EDUCATION /
ATHLETICS AUDITORIUM / FORUM /
AUDIO TECHNOLOGY

FACULTY DINING / SERVING LINE / KITCHEN / CAFETERIA

 MEDIA CENTER

CTE ACADEMIES



TRADES AND INDUSTRY
TECHNOLOGY ACADEMY

 BUSINESS AND INFORMATION
TECHNOLOGY ACADEMY HEALTH AND MEDICAL
SCIENCES ACADEMY STEM ACADEMY

MAY 01, 2015



Norfolk Public Schools
The cornerstone of a proudly diverse community



LEGEND

GENERAL CLASSROOMS /
SCIENCE LABS / COMPUTER LABS

GENERAL ADMINISTRATION /
SECURITY

BUILDING SERVICES /
RESTROOMS / ELEC / MECH

CIRCULATION

PHYSICAL EDUCATION /
ATHLETICS

AUDITORIUM / FORUM /
AUDIO TECHNOLOGY

FACULTY DINING / SERVING LINE /
KITCHEN / CAFETERIA

MEDIA CENTER

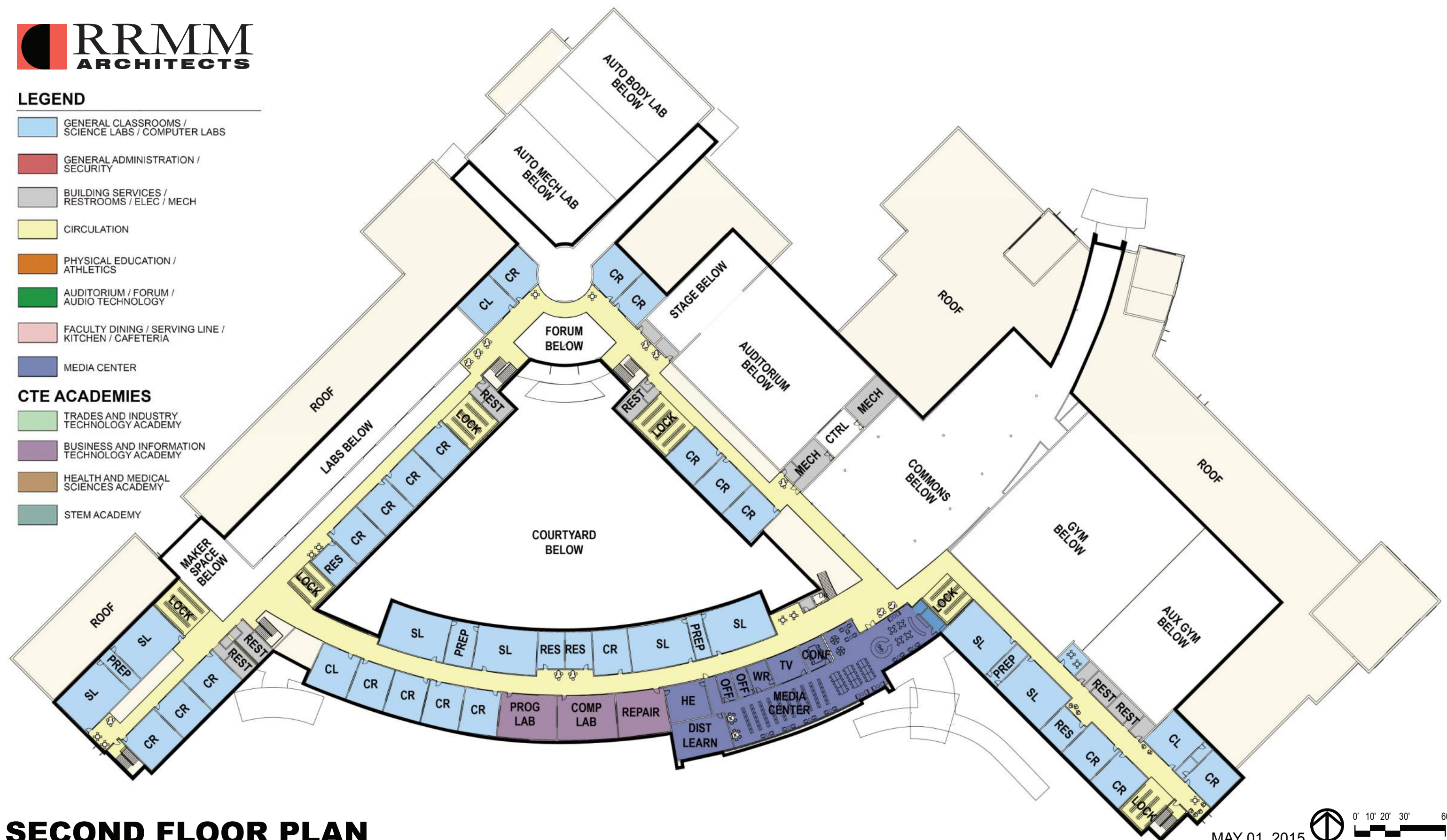
CTE ACADEMIES

TRADES AND INDUSTRY
TECHNOLOGY ACADEMY

BUSINESS AND INFORMATION
TECHNOLOGY ACADEMY

HEALTH AND MEDICAL
SCIENCES ACADEMY

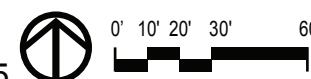
STEM ACADEMY



SECOND FLOOR PLAN

Norfolk Public Schools
Career and Technical Education High School

MAY 01, 2015





SOUTH FACE AERIAL PERSPECTIVE

MAY 01, 2015

**Norfolk Public Schools
Career and Technical Education High School**





NORTH FACE AERIAL PERSPECTIVE

**Norfolk Public Schools
Career and Technical Education High School**

MAY 01, 2015





MAIN ENTRY PERSPECTIVE

**Norfolk Public Schools
Career and Technical Education High School**

MAY 01, 2015



SITE PLAN

Norfolk Public Schools
Career and Technical Education High School

MAY 01, 2015



0' 25' 50' 100' 200'


Norfolk Public Schools
The cornerstone of a proudly diverse community



LEGEND

GENERAL CLASSROOMS /
SCIENCE LABS / COMPUTER LABS

GENERAL ADMINISTRATION /
SECURITY

BUILDING SERVICES /
RESTROOMS / ELEC / MECH

CIRCULATION

PHYSICAL EDUCATION /
ATHLETICS

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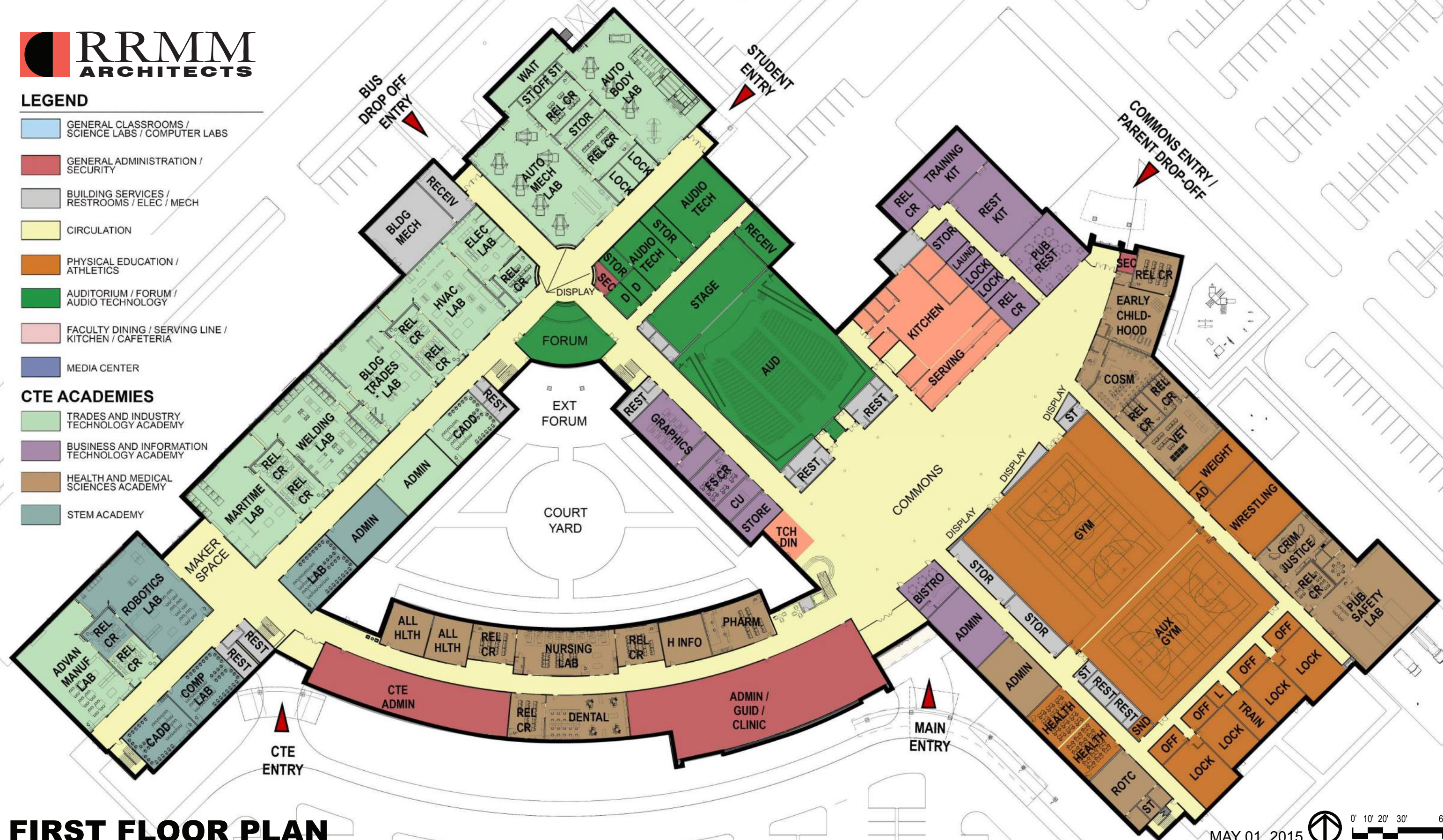
CTE ACADEMIES

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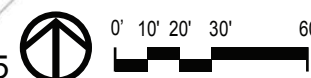
STEM ACADEMY



FIRST FLOOR PLAN

Norfolk Public Schools
Career and Technical Education High School

MAY 01, 2015



LEGEND

GENERAL CLASSROOMS /
SCIENCE LABS / COMPUTER LABS

GENERAL ADMINISTRATION /
SECURITY

BUILDING SERVICES /
RESTROOMS / ELEC / MECH

CIRCULATION

PHYSICAL EDUCATION /
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AUDITORIUM / FORUM /
AUDIO TECHNOLOGY

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MEDIA CENTER

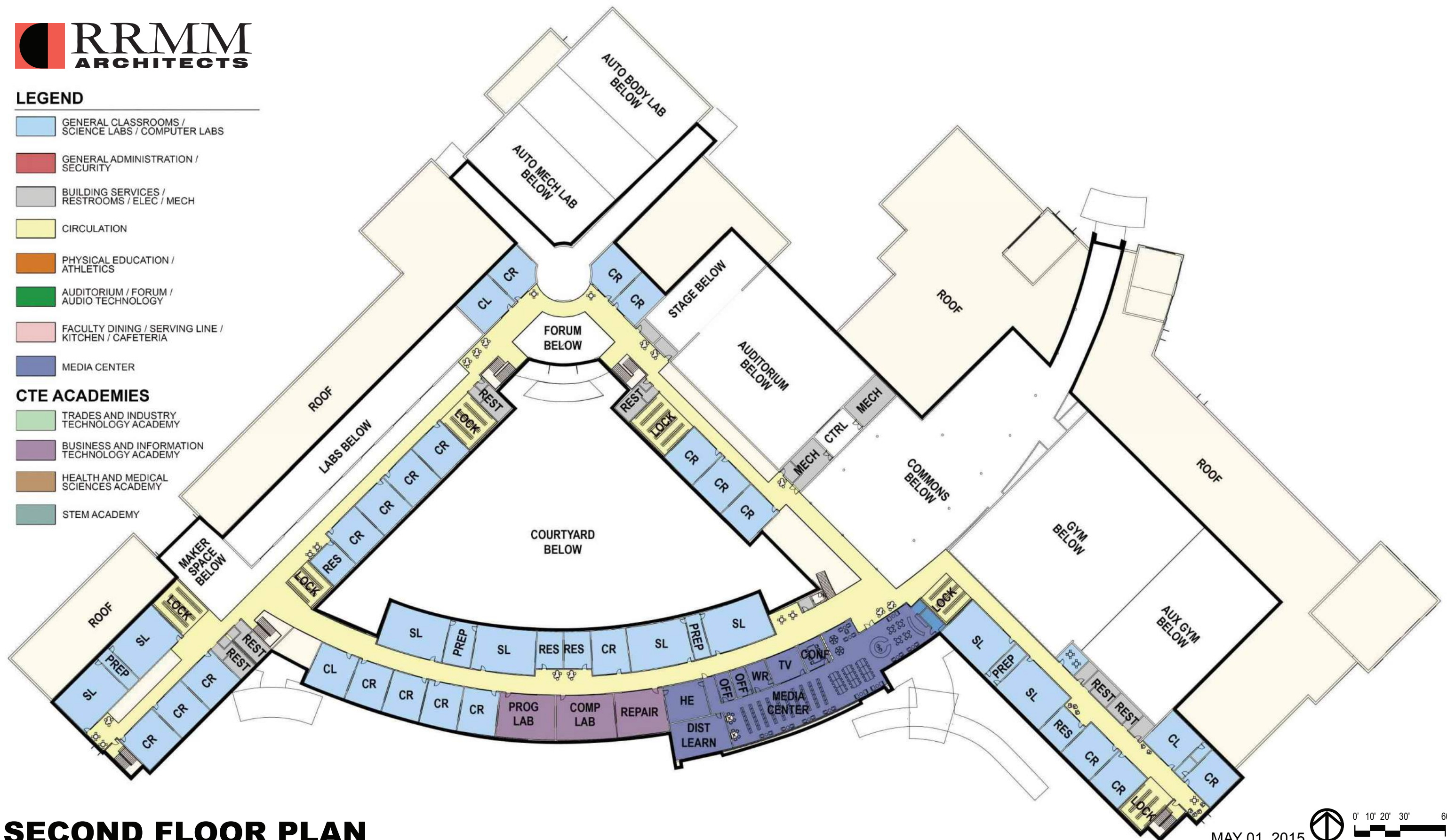
CTE ACADEMIES

TRADES AND INDUSTRY
TECHNOLOGY ACADEMY

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HEALTH AND MEDICAL
SCIENCES ACADEMY

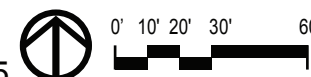
STEM ACADEMY



SECOND FLOOR PLAN

Norfolk Public Schools
Career and Technical Education High School

MAY 01, 2015





SOUTH FACE AERIAL PERSPECTIVE

Norfolk Public Schools
Career and Technical Education High School

MAY 01, 2015





NORTH FACE AERIAL PERSPECTIVE

**Norfolk Public Schools
Career and Technical Education High School**

MAY 01, 2015





MAIN ENTRY PERSPECTIVE

MAY 01, 2015

**Norfolk Public Schools
Career and Technical Education High School**



Date: 5/1/2015

Norfolk Public Schools - Career and Technical Education High School
Phase 2 Study - New Norfolk CTE High School

Construction Costs (Hard Costs)	Factors	Unit	Costs
Exceptional Site Costs Allowance (signalized entry)	1	LS	\$-00
Exceptional Site Costs Allowance (Turn lanes & off-site imp., etc.)	1	LS	\$-00
Exceptional Site Costs Allowance (building demo.)	1	LS	\$-00
General Site Costs	1	LS	\$6,091,873
New Building Costs	304,000	\$ 190.55	\$57,927,200
Special Condition Cost - Hazmat Removal	1	LS	\$1,822,070
Special Condition Cost - Exist HS Demolition	1	LS	\$646,057
Total Construction Cost			\$66,487,200

Construction Contingency	Factors	Unit	Costs
Contingency Factor	5%	PCT	\$3,324,360
Construction Cost Grand Total (w/ Contingency)			\$69,811,560

Miscellaneous Project Costs (Soft Costs)	Factors	Unit	Costs
Site Acquisition	1	LS	\$-00
Surveys (partial topo as needed)	1	LS	\$30,000
Geotechnical Studies (soil borings allowance)	1	LS	\$25,000
Septic Drain Field Design	-00	LS	\$-00
Utility Connection Fees	-00	LS	\$-00
Power and Lighting (Va. Power allowance)	1	LS	\$60,000
City Reviews/Inspections, (Bldg. Permit Incl. in bldg. Costs)	1	LS	\$25,000
Construction Testing and Special Inspections	0.70%	PCT	\$465,410
A/E, Commissioning, Environmental., etc.	9.00%	PCT	\$5,983,848
Technology Allowance (varies per re-use, quality, etc.)	3.50%	PCT	\$2,327,052
Loose Furn. & Equip. Allowance (varies per re-use, quality, etc.)	7.50%	PCT	\$4,986,540
Printing, Advertising & Misc. Reproduction	1	LS	\$40,000
Miscellaneous Soft Costs Total			\$13,942,850

Total Project Cost (Today's Dollars)	\$83,754,410
Total Project Cost (with 3% Escalation - 1 year)	\$86,267,043
Total Project Cost (with 3% Escalation - 2 years)	\$88,855,054
Total Project Cost (with 3% Escalation - 3 years)	\$91,520,706

Escalation of one year at 3%. This will vary depending on economy.
 These are preliminary numbers only and not detailed estimates.



1317 EXECUTIVE BOULEVARD, SUITE 200, CHESAPEAKE, VIRGINIA 23320 T: 757.622.2828 F: 757.622.2430
9097 ATLEE ROAD, SUITE 101, MECHANICSVILLE, VIRGINIA 23116 T: 804.277.8987 F: 804.277.8991
28 CHURCH AVENUE SW, ROANOKE, VIRGINIA 24011 T: 540.344.1212 F: 540.344.1321
WWW.RRMM.COM