



NEW HAVEN PUBLIC SCHOOLS

Memorandum

Date: 8/26/2022

To: Dr. Tracey, and Members of the Board of Education

From: Michelle Bonora, Principal Adult Education Center
Toni Walker, Assistant Principal Adult Education Center
Thomas Lamb, Chief Operating Officer
Jeffery McGrath, ABM NE Regional Manager
Jay Brotman, Managing Partner Svigals + Partners

RE: New Haven Adult & Continuing Education Center Potential Program Relocation

Program Description:

*The New Haven Adult & Continuing Education Center is proposing a Multi-Purpose Community Facility project that will invest capital assets designed to directly enable **work, education, and health monitoring.***

The New Haven Adult and Continuing Education Center will become a community learning hub that serves the New Haven Community as we provide a comprehensive academic, health monitoring, workforce training and career counseling programs. Adult learners will be offered equitable opportunities to experience high-quality education as they acquire both employable and life-long learning skills. Having a successful model that offers High School Credit, G.E.D., Citizenship, National External Diploma, ESOL, as well as Dual Credit programs with area institutes of higher education, we are in an excellent position to offer a wider range of courses, degrees, certifications, and credentialing attainment.

Work:

All adult learners will be exposed to meaningful and relevant workforce counseling, career skill development, on-site training, and off-site learning experiences. The benefits of our model will have a vast impact on individuals, communities, as well as on local and state departments and agencies. The center will offer immersion and contextual learning and real-life scenarios in virtual and live simulation STEM labs. The facility will include the most inclusive, updated technology systems and solutions



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through secure and compliant platforms. Graduates will have multiple opportunities to become gainfully employed leading to financial stability and thriving households.

Co-located spaces for critical partnerships with educational entities and community organizations such as Gateway Community College, Workforce Alliance, and American Job Center will provide students convenient access and ensure smooth transitions to post-secondary opportunities. On site partnerships remove physical barriers to transition students to job opportunities while providing revenue streams for additional programs.

Education:

New Haven Adult & Continuing Education Center will directly enable education by providing adult learners with high quality programs to earn high school credentials and to become productive citizens in school, in the workforce, and in their communities. Each adult learner will be provided with individualized, targeted academic, social, emotional, educational and health support they need as they proceed through our programs. Our model offers High School Credit, G.E.D., Citizenship, National External Diploma, ESOL, as well as Dual Credit programs with area institutes of higher education. Adult learners will have access to a wide range of courses, degrees, certifications and credentials.

We are positioned to expand our current program to include education and training for high demand industries, inclusive of manufacturing, health care services, life science and IT/Business. Specialized content curricula and embedded mindfulness in daily practice will assure a campus of peace and tolerance. We will continue to build upon our evidence-based practices that will enhance this trajectory through immersion, digital and contextualized learning within our STEM labs. Adult learners will have access to programs through seamless on-site and virtual platforms. Professional development around evidence-based practices aligned to curriculum, instruction and assessment will be the norm. The teaching model will be inclusive of educators and experts from the high demand fields. Through a collaborative model, educators and partners will work toward ensuring that career path experiences are aligned to relevant mentorships and internships that will facilitate opportunities for meaningful employment.

Health Monitoring:

The New Haven Adult & Continuing Education will provide services to monitor an individual's health, including physical and behavioral health elements. Our model is designed to promote the 5 Factors of Perfect Human "Health" which include Mental, Emotional, Physical, Financial and Behavior Health. In collaboration with area partners including City of New Haven Department of Health, Yale New Haven Hospital, Cornell Scott Hill Health Center, Connecticut Mental Health Center, we will integrate health support services to reduce barriers of participation in education and workforce training.

- On site mental health assessments, screenings, and sessions
- Telemedicine spaces to ensure students have adequate privacy
- Social emotional lessons advancing resilience through reflective and restorative practices, mindfulness activity, peace, coping skills, values.
- Physical Health services offered through the Yale Community Health Van and include screenings, testing, etc.



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- Classroom lesson content will integrate selfcare, healthy habits for eating, hydrating, and moving, and prioritize feeling good.
- Courses offered to support development of emotional intelligence, financial management, and mental health.

Program History:

New Haven Adult & Continuing Education Center has proudly served the residents of New Haven for over 30 years. Since 2002, over 48,000 students have attended state mandated courses including high school credentialing, English as a Second Language, Citizenship and GED preparation courses. During this time, approximately 3,800 adult learners have earned a high school diploma. In 2022, annual enrollment exceeded 1,300 students. Students range in ages from 17 - 70 and include individuals from over 80 countries who speak 23 diverse languages. Based on the Connecticut State Department of Education Local Profile from 2022, 58% of students are unemployed and seek immediate employment.

Recommendation:

The administrative team for New Haven Adult Education strongly recommends 130 Orchard Street as the new home for Adult Education. We believe this location will best serve the current and future needs for students, programs, and city residents.

The proposed building design includes evidence-based practices aligned with current research on the adult learner, the needs of society, and the knowledge of challenging business and industry needs.

- Central, Visible, Equitable Access:
 - Distance, location, and parking matter to students. In a recent student survey, 78.8% of students rated physical proximity to school as “very important” to ensuring consistent attendance. Student enrollment and retention are key metrics used to measure overall success of Adult Education programs.
 - Enrollment and retention, particularly students traveling from Fair Haven, would be at risk of declining if the program was placed at further distance in the community.
 - A highly visible location naturally increases community awareness of FREE programs available for all city residents.
 - Centrally located to Gateway community College, Yale University, Yale New Haven Hospital, Cornell Scott Hill Health Center, and other essential partners.
- Revenue Producing Partnerships:
 - Workforce Alliance, Regional Work for Board is a division of Connecticut State Department of Labor.
 - Co-locating with Workforce Alliance/American Job Center will allow our students seamless access to training and workforce development programs.
 - Workforce Alliance, along with the other Regional Workforce Boards in CT, are forecasted to receive millions in funding from Career Connect, a new program from the CT Office of Workforce Strategy. Integrating services would not only offer generational impact to our students and families, but it would also become the statewide model for collaboration for adult ed's and workforce boards.



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- The partnership with Workforce Alliance/American Job Center is ONLY available at 130 Orchard Street. Please see attached support memo from Bill Villano, CEO/President of Workforce Alliance.
- Current planning includes 4 full time employees relocating to 130 Orchard Street. The test-fit design includes a community partner suite which offers a separate entrance and collaboration area.
- Student Survey
 - 81 Former, Current and Future Students Responded
 - **71.6%** of Students indicated 130 Orchard Street would best meet their needs compared with **28.4%** selecting 188 Bassett Street.
 - Student comments include concerns about distance from their homes, the central location of Orchard Street, better parking options and more.
 - New Location Student Survey
- Academic Design & Considerations
 - Classroom spaces are large enough to incorporate flexible seating arrangements and adult collaboration.
 - Preliminary designs include larger hallways, open atriums, and student collaboration areas.

Project Construction Costs Review:

Both the 188 Basset Street location and the 130 Orchard Street locations are very early in the design process. Looking at each of these locations with the information that we currently have we can make some preliminary project cost projections. Project costs have many variables that can and will need to be addressed during the design process to meet project budgetary needs. Design creep can escalate costs if the design process is not managed fully with checks and balances in place. Really working through the design process with a construction cost estimator, the architect, program leadership and the engineering team to reduce project costs where possible as well as keep project cost on target, and reducing change orders will contain project cost overrun. These steps would apply to both buildings. Types and level of finishes in all areas can be evaluated to help reduce project costs. Areas that can be value engineered include:

- a. Layout and building demo. How and if this can be reduced.
- b. HVAC engineering and system design. What options and systems can be used at a reduced cost with the same level of operation and efficiency needed for the building.
- c. Electrical and Plumbing design and material selection
- d. Life Safety System design and system selection
- e. Flooring- Vinyl Tile / Sheet Carpet / Carpet Squares
- f. Ceiling- Drop/sheetrock/other
- g. Window replacement types
- h. Lighting types, systems, spacing and location design

In a 2017 report produced by Connecticut's Department of Administrative Services (DAS), through its Office of School Construction Grants Review, administers the state's school building projects grant program, which awards grants to municipalities for school construction and renovations (CGS § 10-282 et seq). DAS reported that it uses a \$360 per square foot estimate for school construction costs, plus soft costs. It estimates soft costs at 17% of construction costs for a renovation and at 15% for new construction. According to DAS, examples of soft costs include construction management, legal fees, site



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preparation and development costs, equipment and furnishing costs specific to the construction, and professional fees for financial consultants. Soft costs will vary greatly depending on the need for each location

Using this information, we can see the construction project cost estimations based on per square foot numbers from this report at both Basset Street and Orchard Street are very close at a 2% or \$419,760 difference.

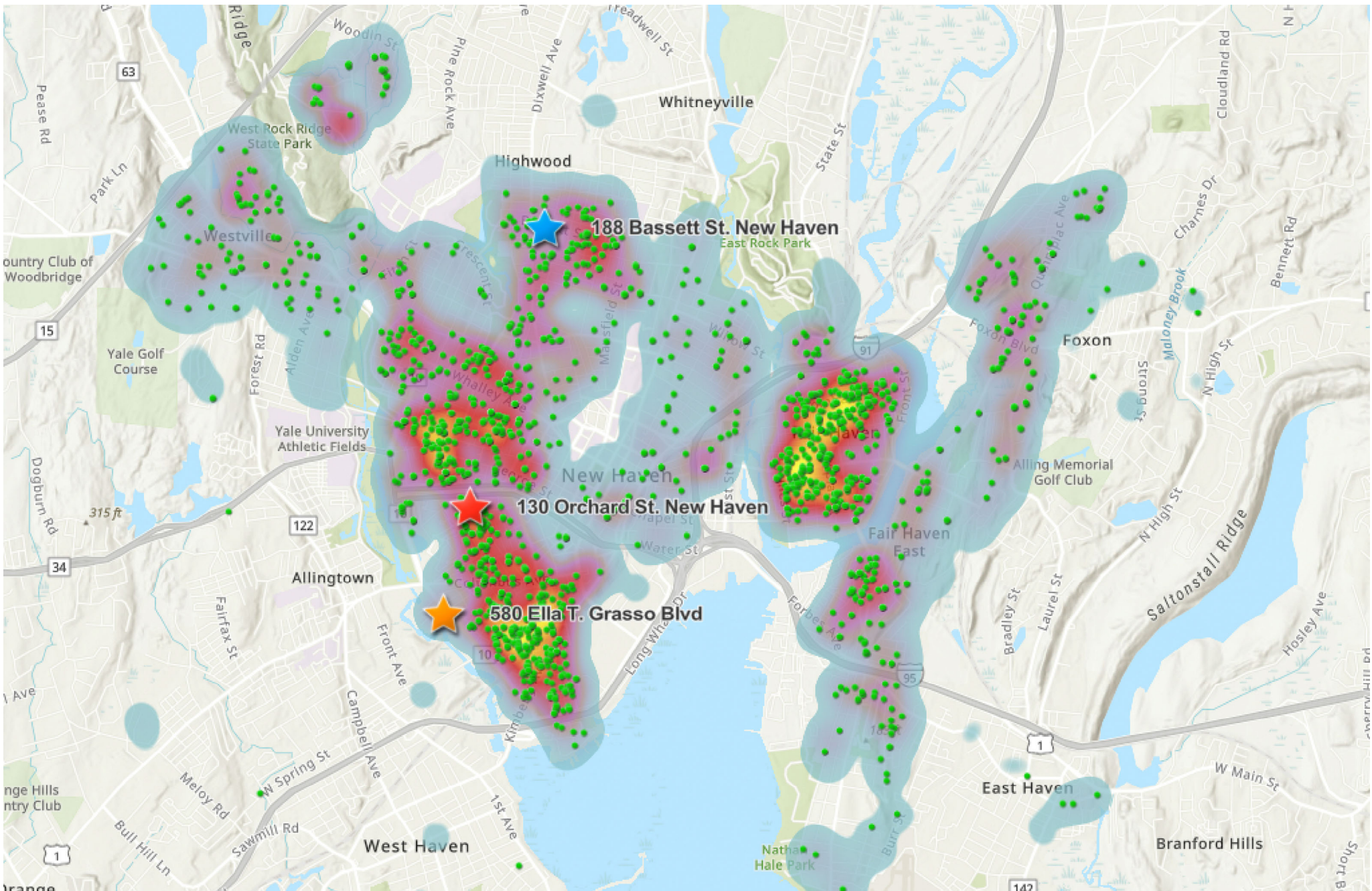
Orchard Street Building cost considerations:

- 58,000 Total Sq. Ft. x \$360 per = \$20,880,000
- 34,455 + 16,662 = 51,117 x 360 = \$18,402,00
- 6,917 square feet in additions/new construction
- In a July 2022 report, cost estimations to be increased by 8.2%
- An additional \$29.50 per sq ft. = \$389.50 per sq ft. 58,000 x \$389.50 = \$22,591,000

Bassett Street Building cost considerations:

- 56,834 Total Sq. Ft. x \$360 per = \$20,460,240
- To accommodate for inflation cost estimations to be increased by 8.2%
- An additional \$29.50 per sq ft. = \$389.50 per sq ft. 56,834 x 389.5 = \$22,136,843
- Funding from grant will not cover costs of community space at this location. How will this be funded? This space does not meet the grant requirement for work, education and health space.
- Does not include costs to procure additional parking lots as part of the building parking plan.

Current construction projects across Connecticut and the country are seeing unprecedented complications with obtaining construction materials and supplies. These logistical issues will have an unpredictable impact on construction timeline. This will impact overall project costs to accommodate. Much of the design process will need to take not only the cost of product into consideration but the availability and lead time of material.





CONNECTED AND COMMITTED TO CHANGE

Survey Data

Research is being conducted by the New Haven Adult & Continuing Education Center into the location preferences for a new school site. Future, current, and former students were asked their opinions via social media, email and text blasts.

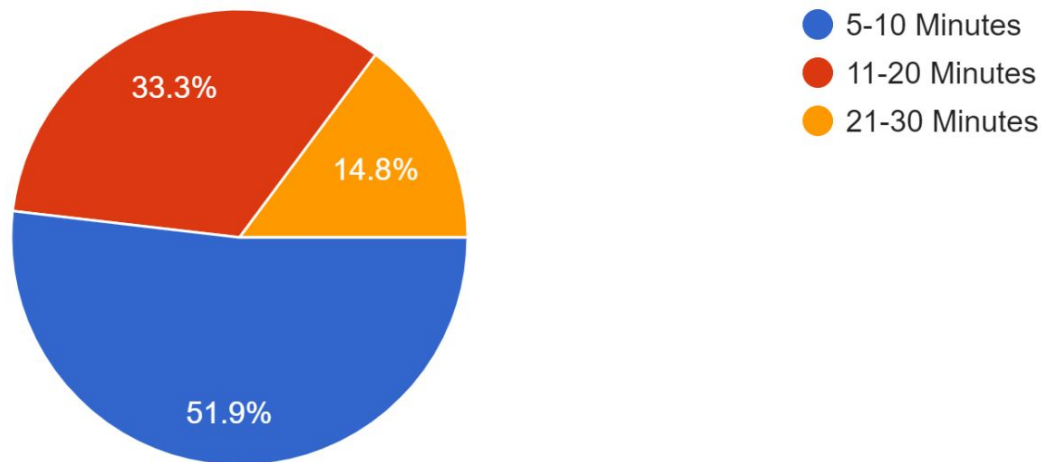
As of 8/26/22, 81 Students Responded:



Question # 1:

What is the average amount of time you would spend traveling to New Haven Adult Education for classes?

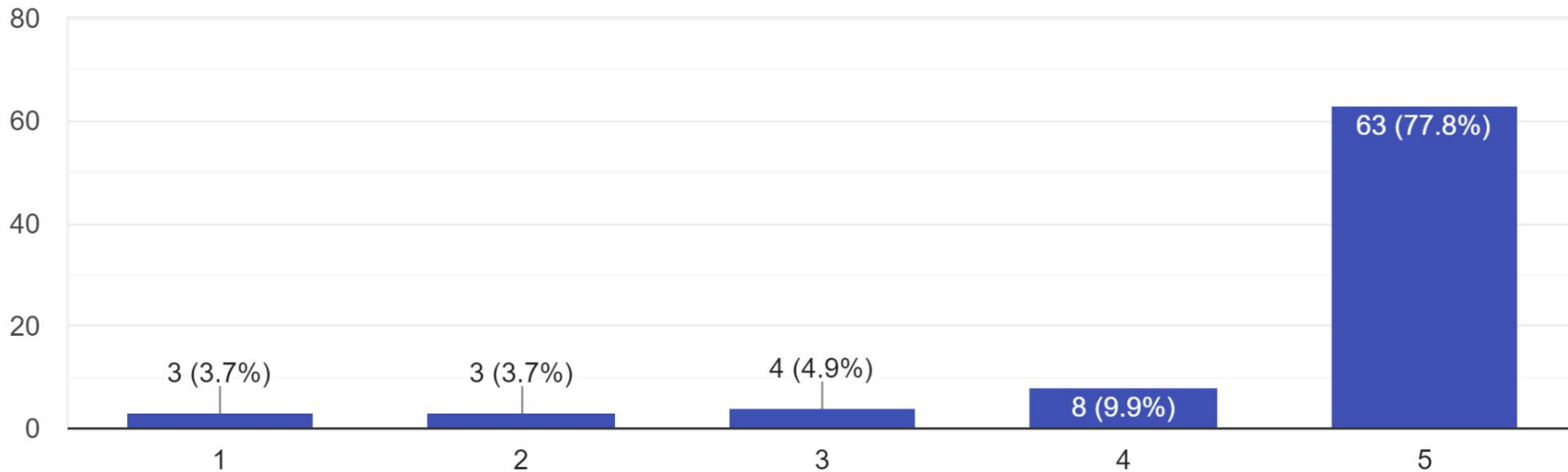
81 responses



Question # 2

How important is your physical proximity to school to ensure consistent attendance?

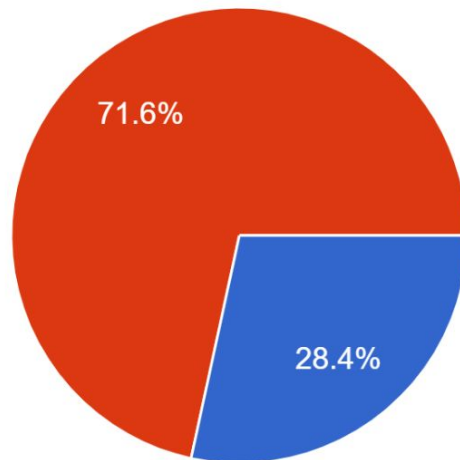
81 responses



Question # 3:

Which location for New Haven Adult Education would be more suitable to meet your needs? (Click on the map links to see larger maps)

81 responses



- 188 Bassett St -- <https://goo.gl/maps/g4df2mNrtTUSJWBJ7>
- 130 Orchard Street -- <https://goo.gl/maps/AVeR2DYeU9JuVoE38>



Please share any comments regarding a new location for New Haven Adult Education at 188 Bassett Street or 130 Orchard Street.

- 130 orchard street
- Okay
- 130 orchard street
- Both locations are easy for students to attend. Bus route easy access. However I'm Bassett St location, parking may be quite limited.
- The closer the better to get to school. Especially in winter time.
- In the place that it is, it is super good, I do not want them to change places
- Close to me
- No comments
- Closer and less traffic
- 188 Bassett st
- 130 orchard St perfect for me
- I need to be in a Safe community and a close to my neighborhood.



Please share any comments regarding a new location for New Haven Adult Education at 188 Bassett Street or 130 Orchard Street.

- 188 Basset Street, was originally bought in hopes of new business development. As 130 Orchard Street is currently located not in the greatest neighborhoods and is being used as an Elementary School. I would say the 188 building has more space, potential, and a fresh start.
- Bassett is very close to home
- Great idea
- Bassett is close to home
- Yes closer
- The school should consider safety, parking lot and transportation for the staff and students also check the old Gateway community college building at Long Wharf that would be great building
- It's great this location for me because I can go to ingles class let me know please when is the next period to start



Please share any comments regarding a new location for New Haven Adult Education at 188 Bassett Street or 130 Orchard Street.

- Neither really much more accessible to me . But this location would be easier to get to considering the roads and traffic
- It is very important to me, because it is closer to me
- I think the one on Bassett street might be more encouraging and inspiring because they'll be near both an elementary school AND a college, and a high school just down the road.
- Personally I choose Orchard street that is closer to downtown New Haven.
- Neither, Remodel current Facility with easy access to transportation and highway
- I already get online classes
- Basset street is dangerous at night time .!!
- I'm Kayode a former student who thinks the location shouldn't change in the near future
- Good things for everyone
- 130 Orchard Street is good



Please share any comments regarding a new location for New Haven Adult Education at 188 Bassett Street or 130 Orchard Street.

- More safer environment
- I don't know I have never been over there to school .
- Please stay in the same place.
- It's still a bit far
- Near for me
- I think it would be great for it to be in several small locations.
- 188 Bassett street is way too dangerous and riddle with drugs in that one concentrated area. 130 orchard street would be the safer option for staff and students.
- 130 Orchard Street is good
- 130 orchard is closed to my house. Thank you 😊
- Hamden High School has a Ged program and Fellowship there is not one on Whaley or near Whalley ave.



To: Michelle Bonora

From: Bill Villano 

Date: August 5, 2022

Re: Office Space

I am writing as a follow up to the conversations we have had regarding colocation of Workforce Alliance and Adult Ed staff. As you know, we have had difficulty finding space that could accommodate us and /or space that was within our collective budgets.

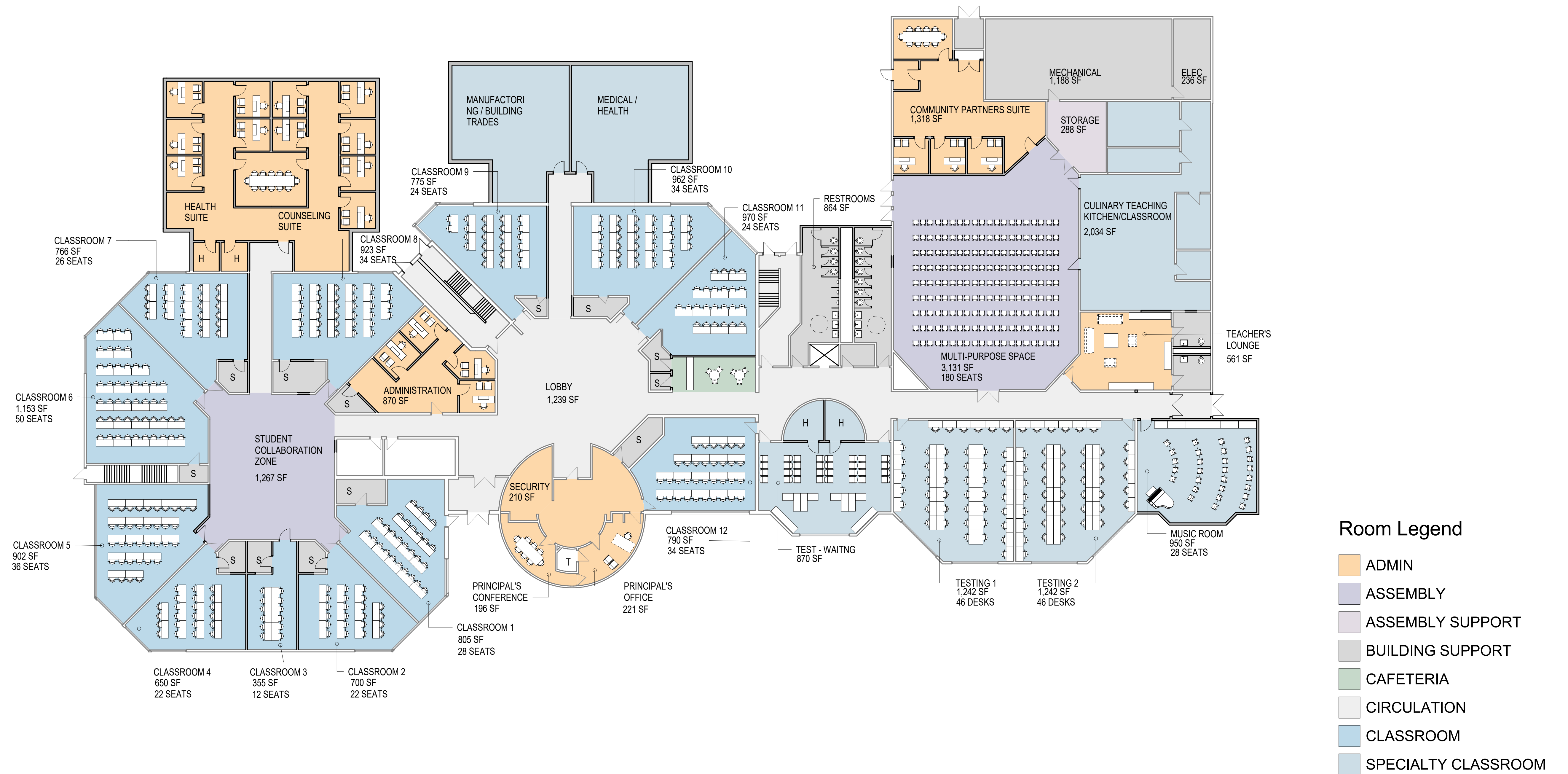
It is my understanding that you are exploring space at the Strong School building which would have additional square footage that might accommodate some American Job Center (AJC) staff. We are looking to create three or four satellite AJC offices in New Haven and are very interested in the possibility of being collocated with you in the Strong School location.

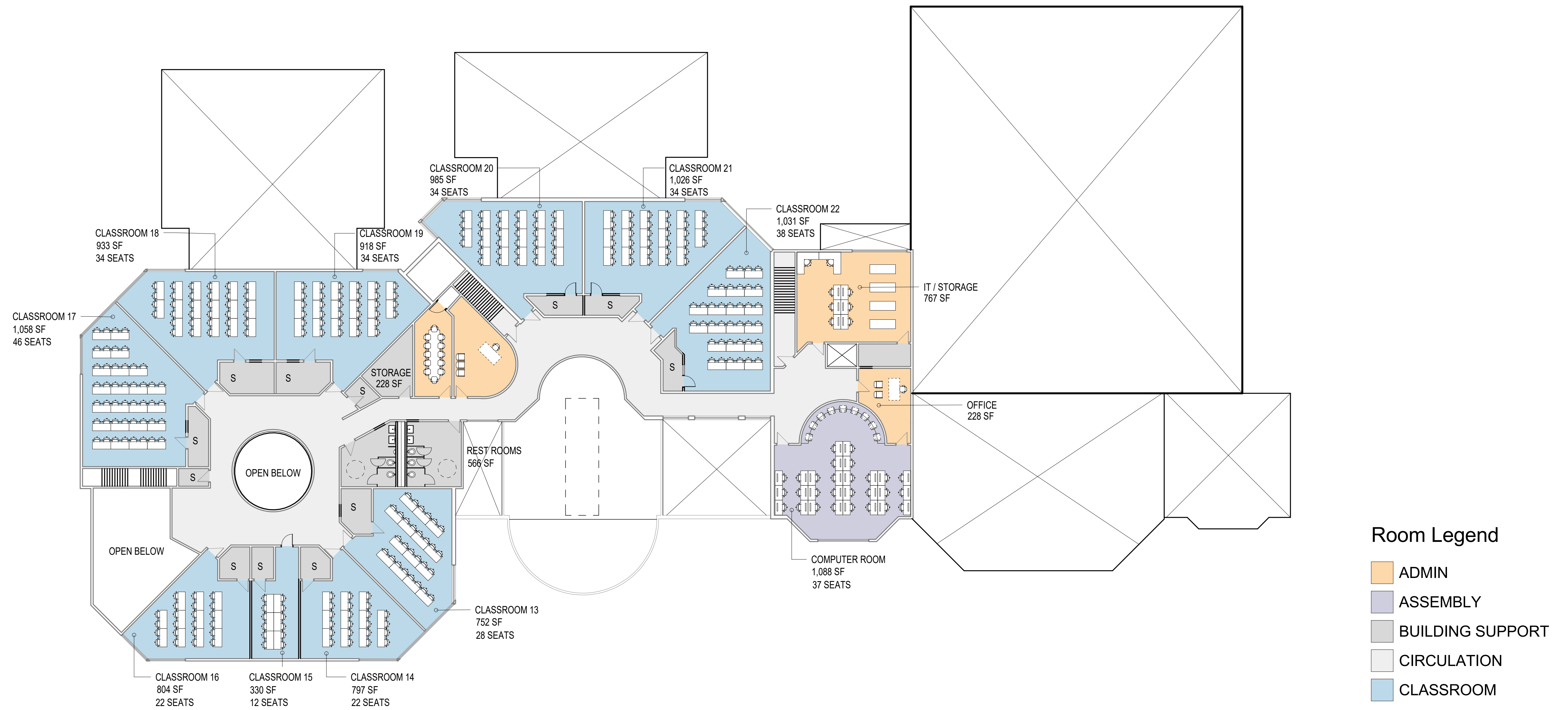
I was told that the old welfare site on Bassett Street may also be a possible relocation site for Adult Ed. I can tell you that when we went out to bid for colocation sites with the Department of Labor, Bassett Street was one of the respondents that we looked at. Given a number of layout and design issues, coupled with limited parking, that location was eliminated as a possible site for colocation. If the Bassett Street site is selected as your relocation option, we would not be interested in having a presence there.

I look forward to continued discussions on a new site and to the possibility of having an AJC presence with Adult Ed.

Delivering Employment Solutions

Serving the communities and businesses of Bethany, Branford, Chester, Clinton, Cromwell, Deep River, Durham, East Haddam, East Hampton, East Haven, Essex, Guilford, Haddam, Hamden, Killingworth, Madison, Meriden, Middlefield, Middletown, Milford, New Haven, North Branford, North Haven, Old Saybrook, Orange, Portland, Wallingford, West Haven, Westbrook, and Woodbridge. **A CTWorks Partner.**

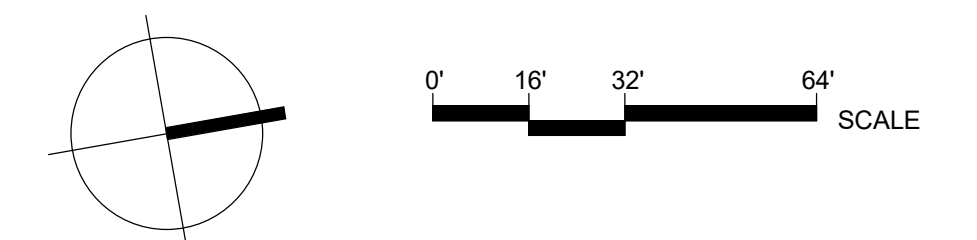


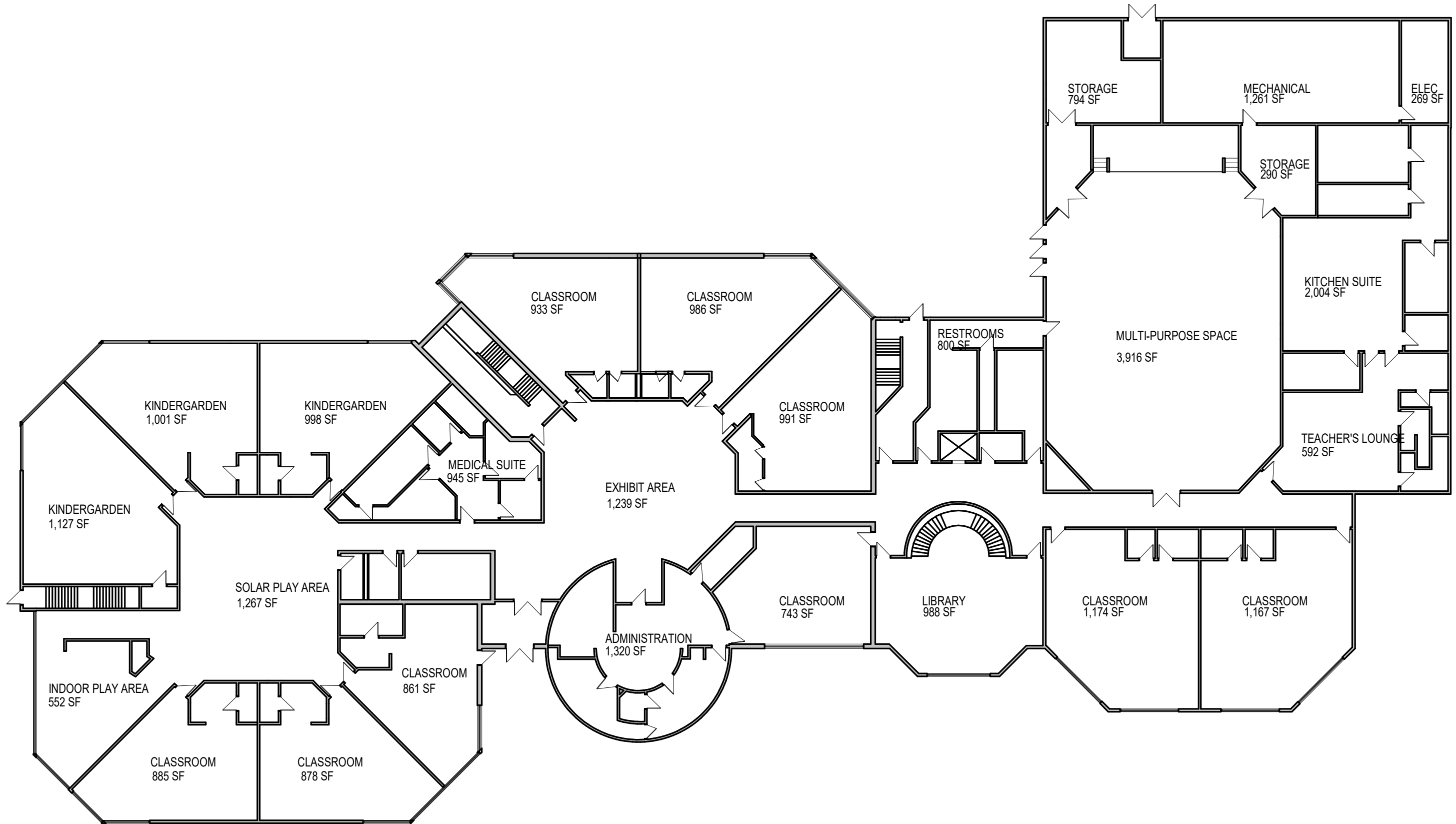


Room Legend

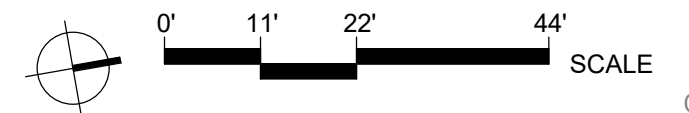
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- ASSEMBLY
- BUILDING SUPPORT
- CIRCULATION
- CLASSROOM

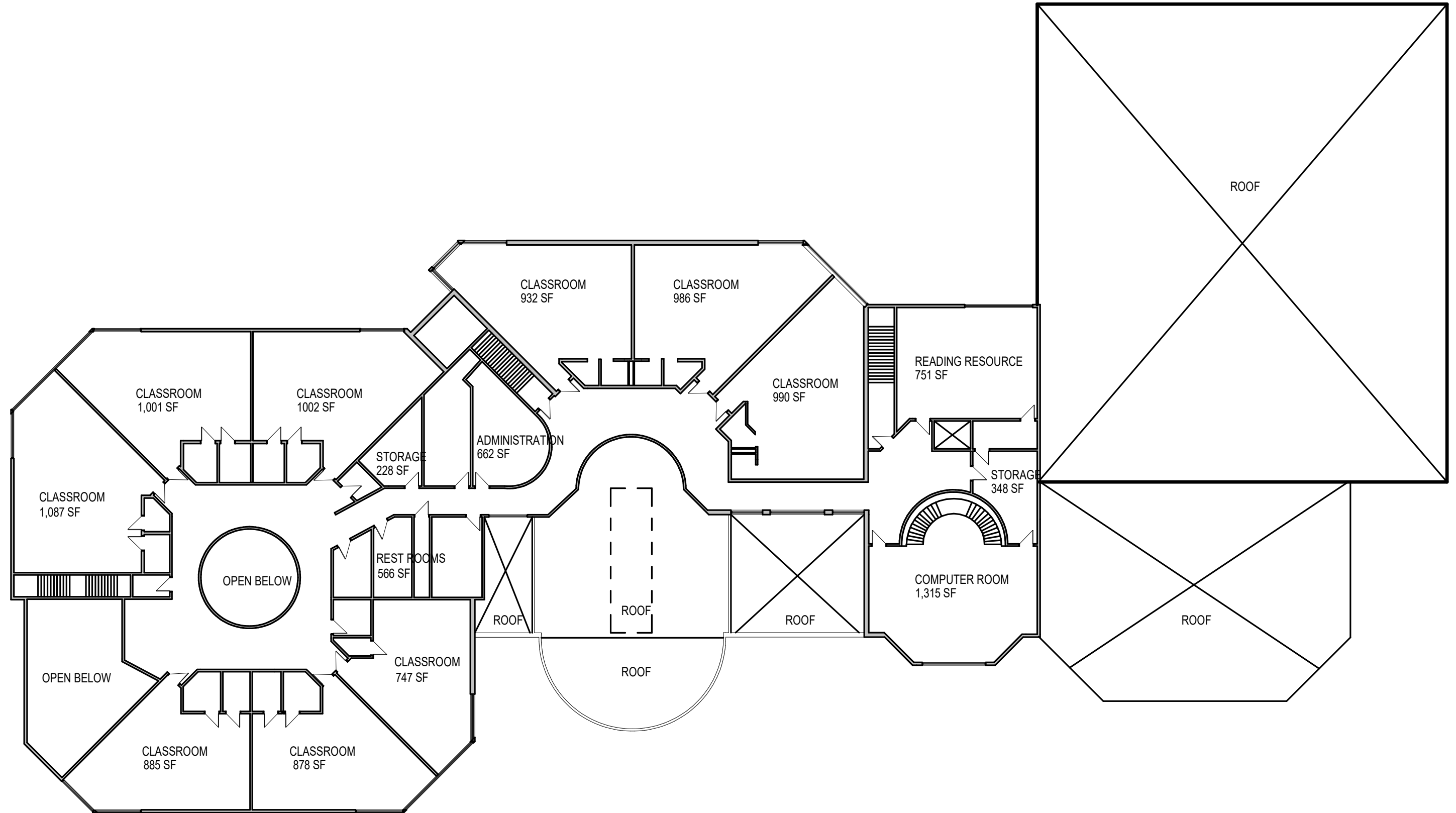
SECOND FLOOR PROGRAM PLAN
VINCENT MAURO SCHOOL



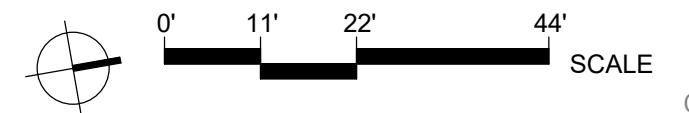


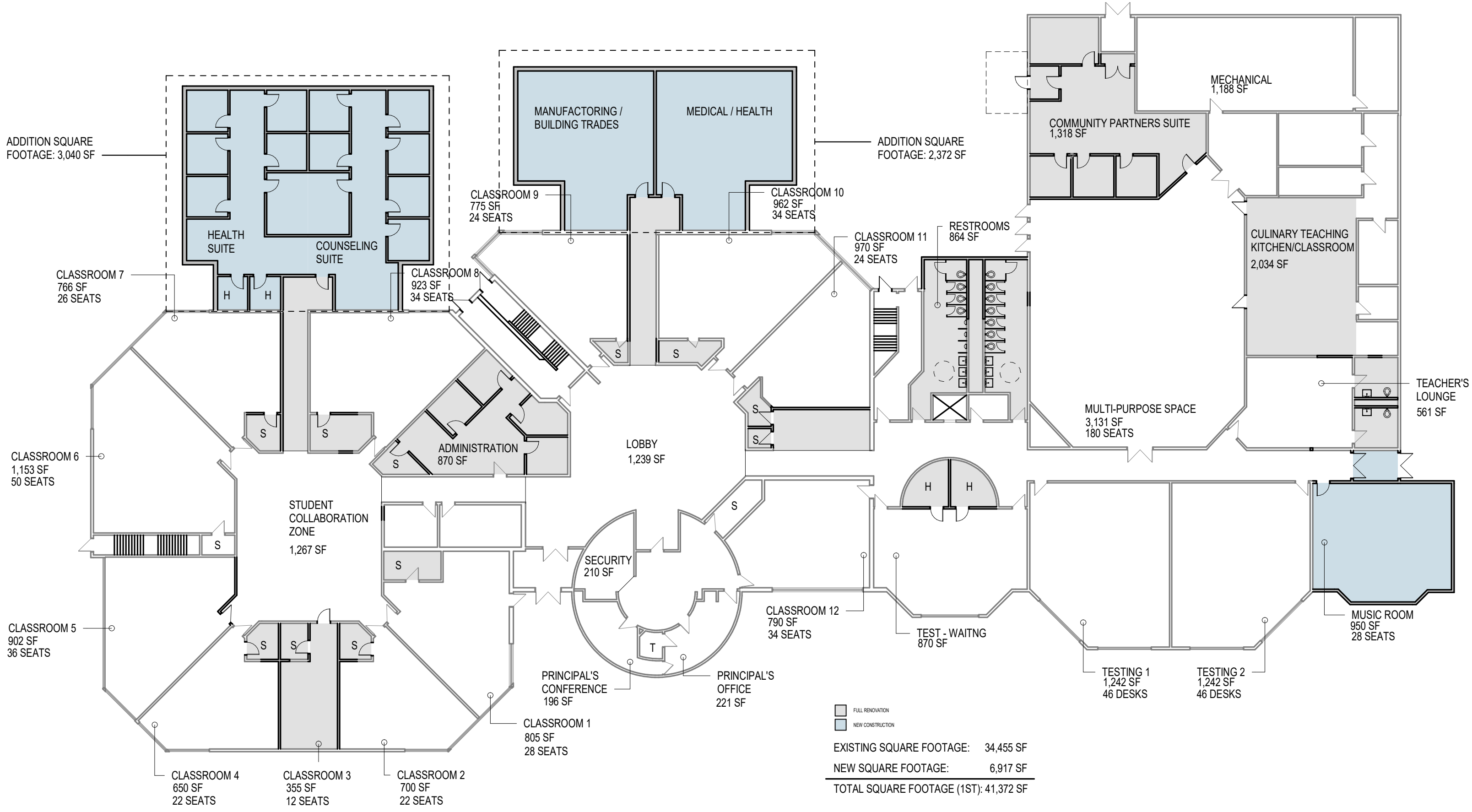
EXISTING FIRST FLOOR PLAN
VINCENT MAURO SCHOOL



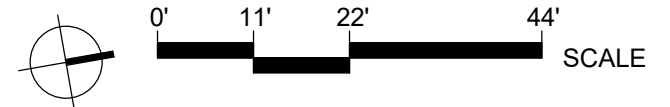


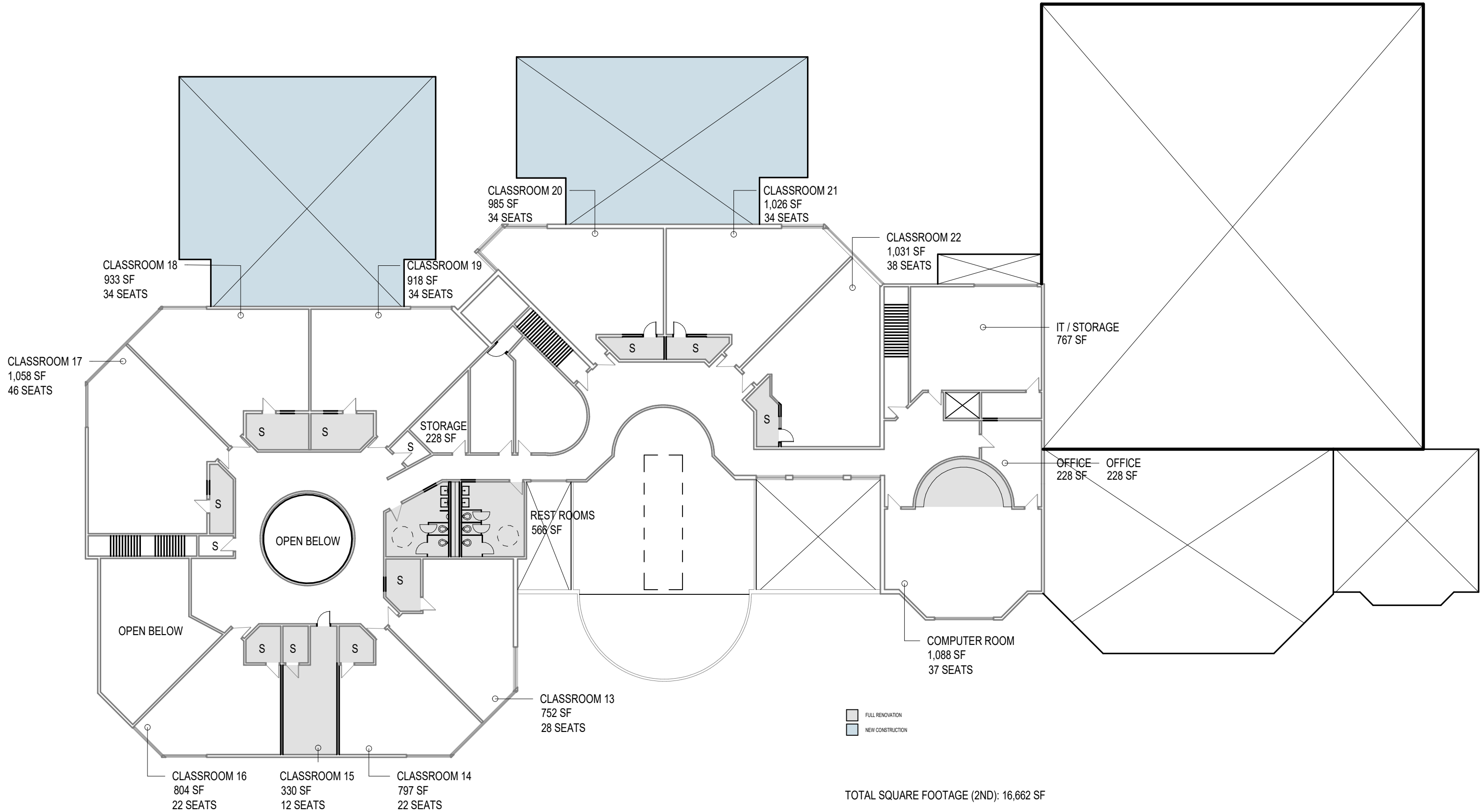
EXISTING SECOND FLOOR PLAN
VINCENT MAURO SCHOOL





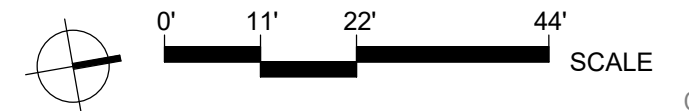
PROPOSED FIRST FLOOR PLAN
 VINCENT MAURO SCHOOL

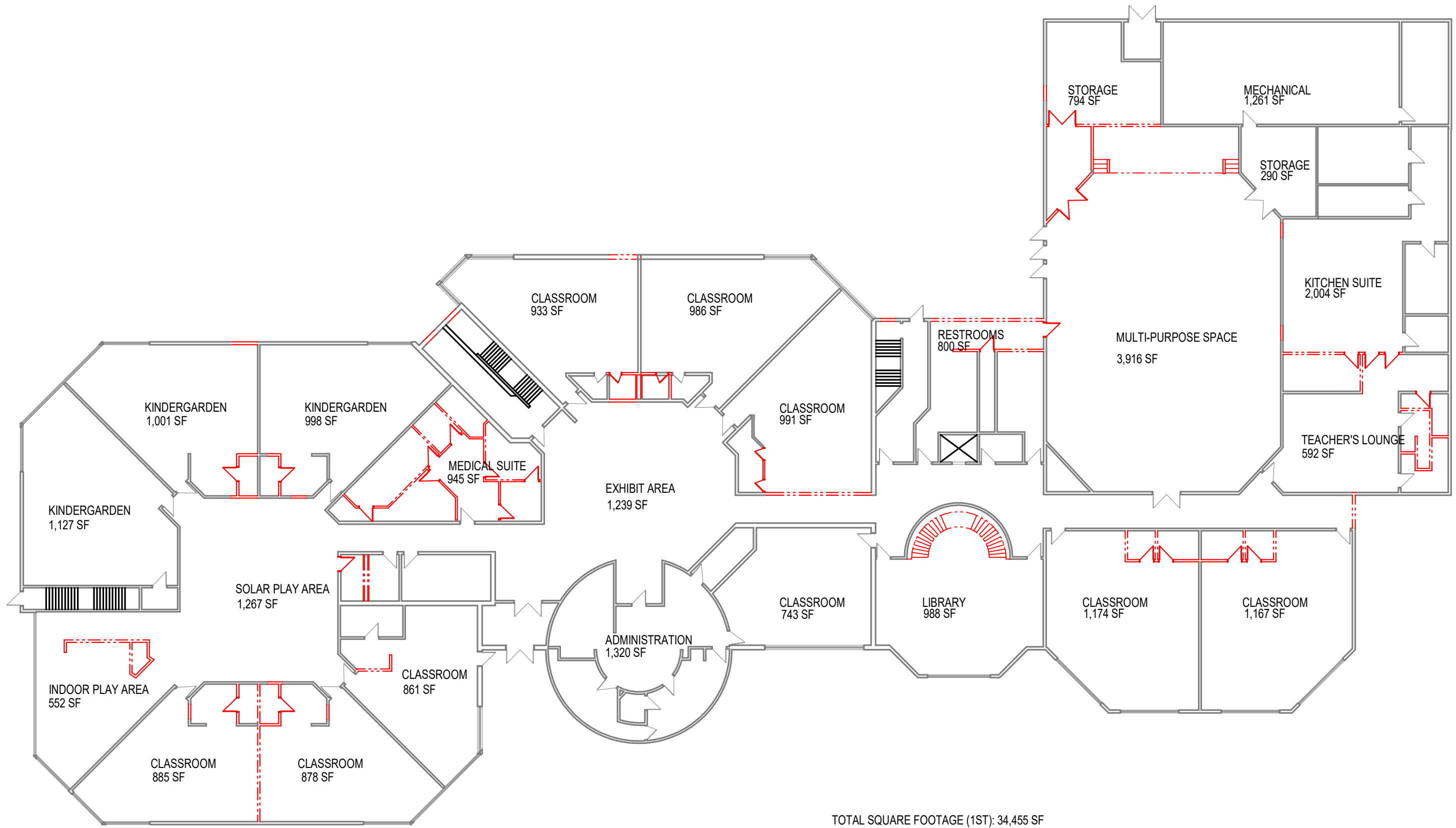


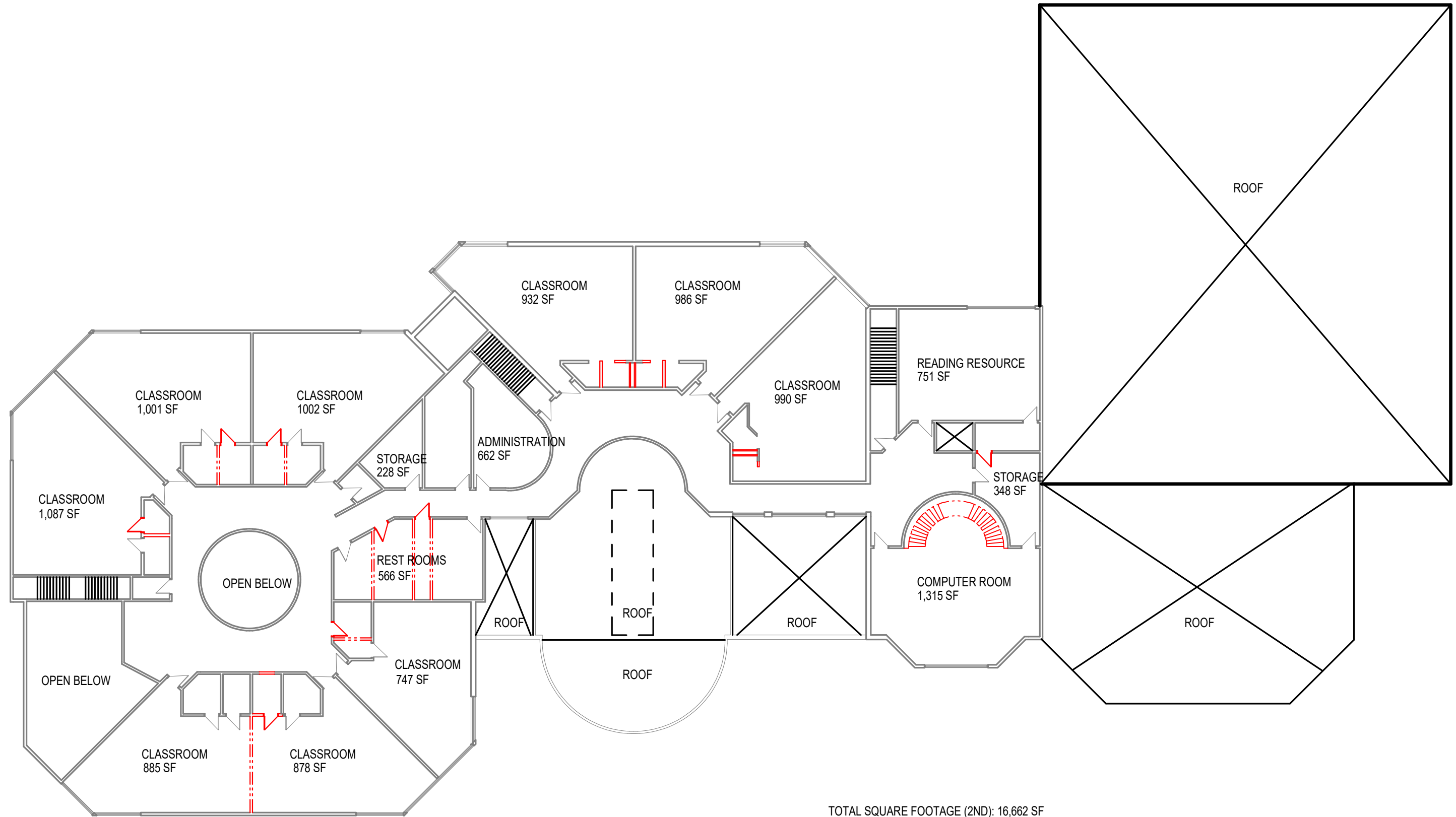


TOTAL SQUARE FOOTAGE (2ND): 16,662 SF

PROPOSED SECOND FLOOR PLAN
VINCENT MAURO SCHOOL

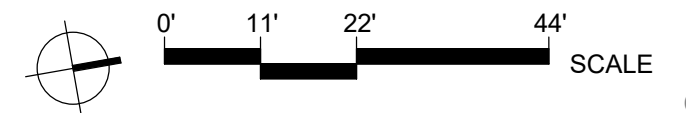


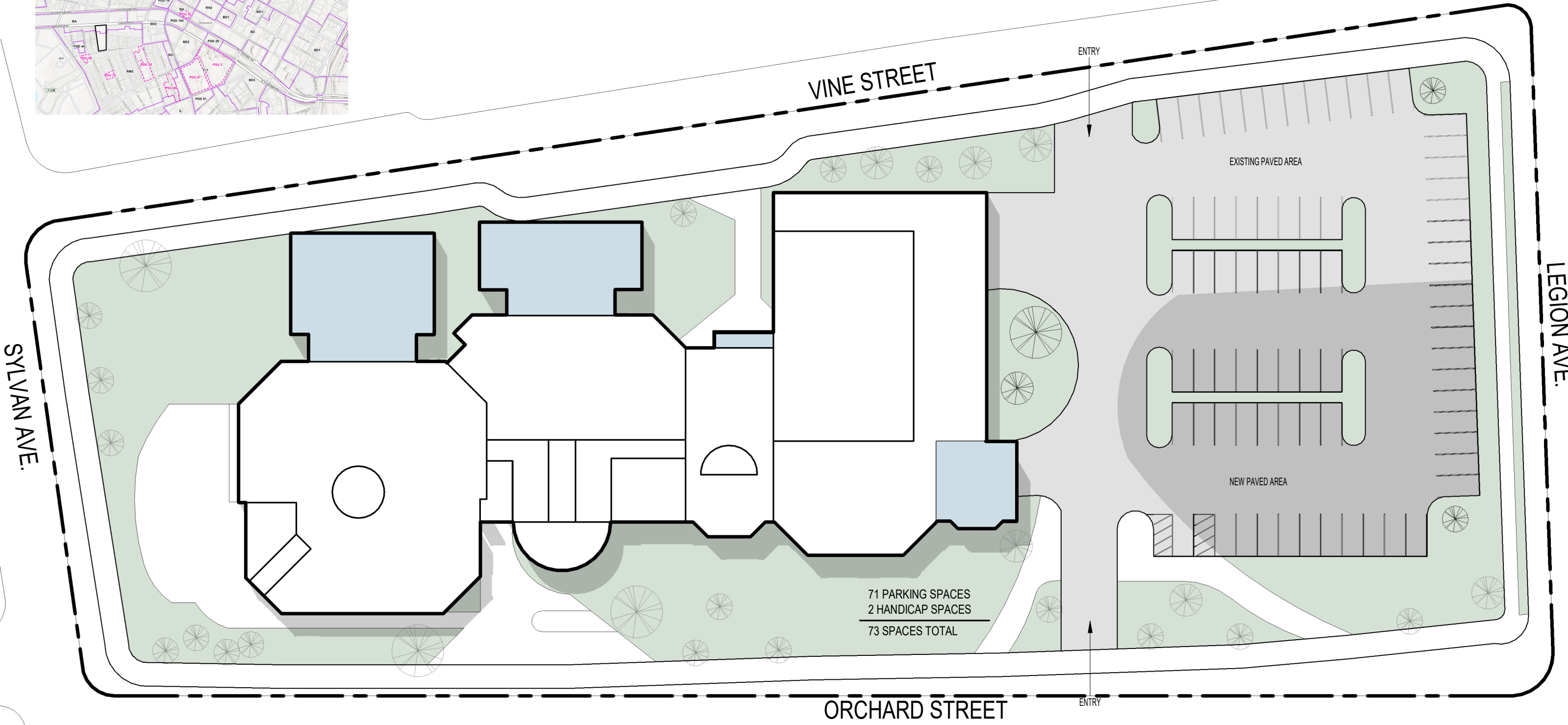
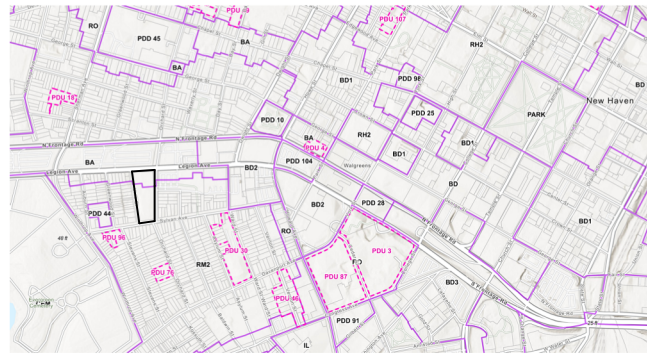


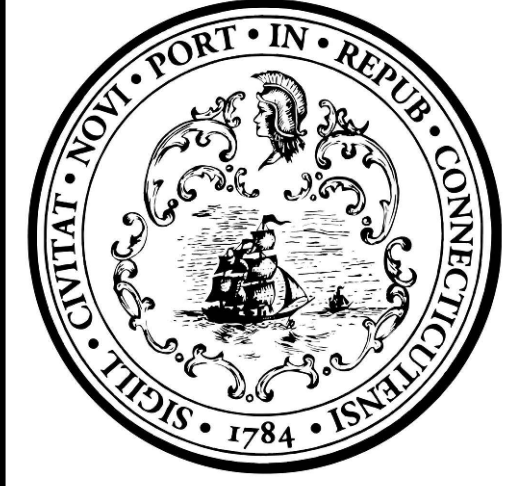
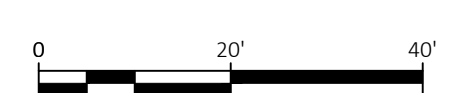
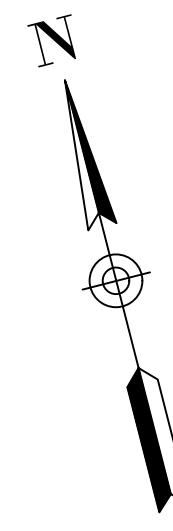


TOTAL SQUARE FOOTAGE (2ND): 16,662 SF

SECOND FLOOR DEMO PLAN
VINCENT MAURO SCHOOL





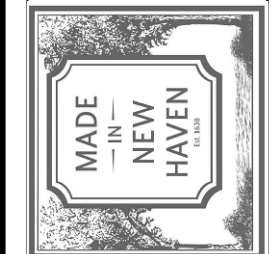


No.	Revision/Issue	Date



CITY OF NEW HAVEN
DEPARTMENT OF ENGINEERING

THE HONORABLE JUSTIN M. ELICKER, MAYOR
GIOVANNI ZINN, P.E., CITY ENGINEER



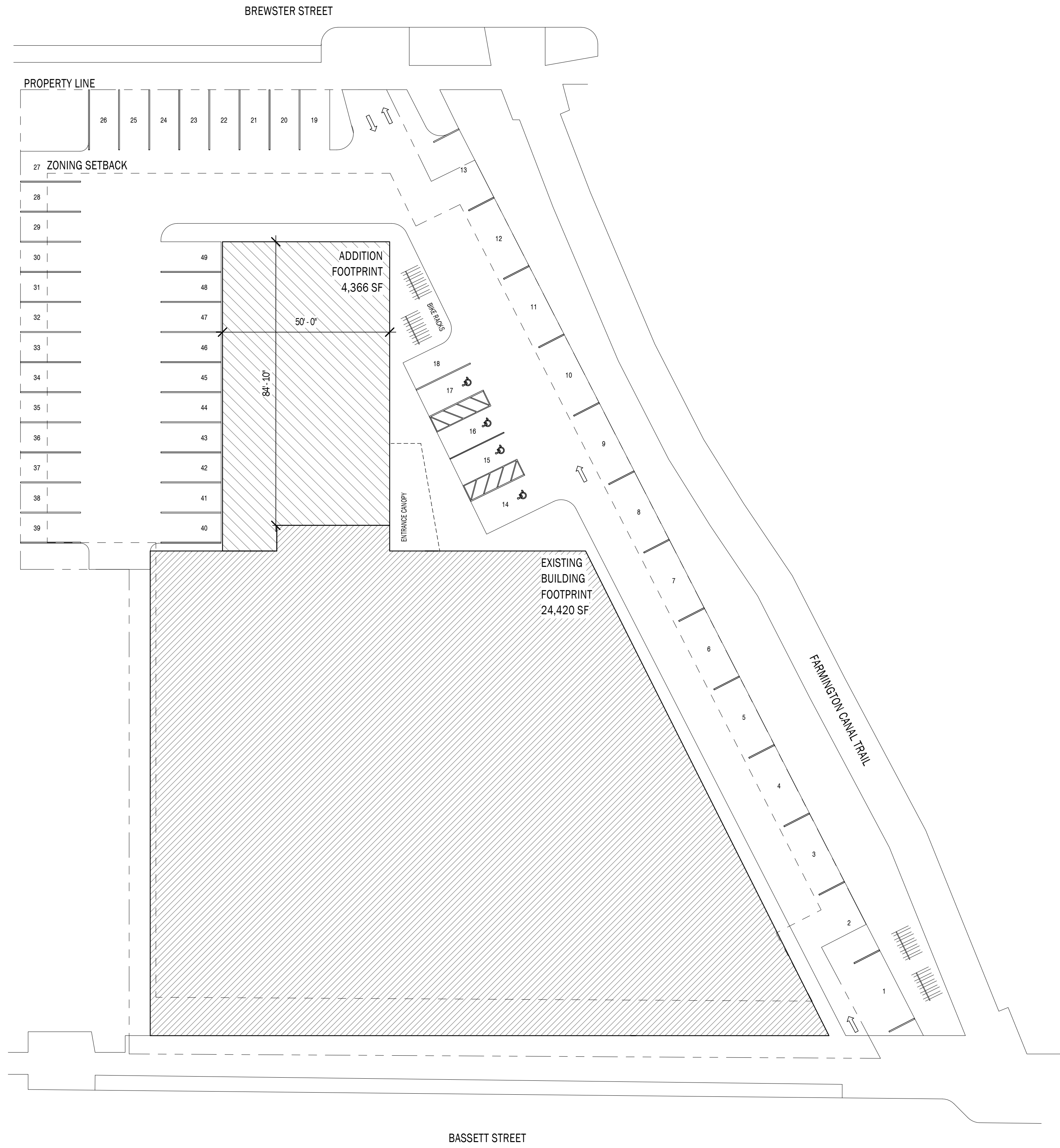
Project Name and Address
**188 BASSETT ST
AUXILIARY
PARKING LOT**

Drawn By: **A. WEBER**
Designed By: **A. WEBER**
Date: **7/22/2021**
Project Number: **--**

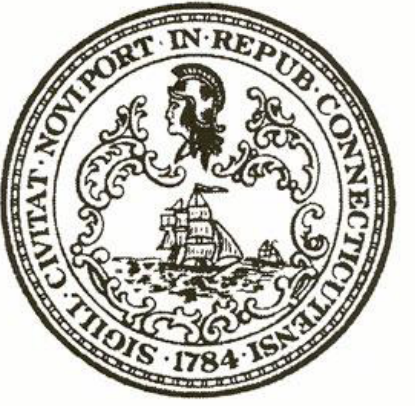
Professional Seal

Sheet Title
SITE PLAN
Sheet Number

SP-1



1 SITE PLAN
1" = 20'-0"



NO.	DESCRIPTION	DATE



CITY OF NEW HAVEN
DEPARTMENT OF ENGINEERING

THE HONORABLE JUSTIN M. ELICKER, MAYOR
GIOVANNI ZINNI, P.E., CITY ENGINEER

PROJECT NAME AND ADDRESS
ADULT EDUCATION
188 BASSETT STREET

DRAWN BY MAK	DESIGNED BY MAK
PROJECT PHASE CONCEPTUAL DESIGN	
DATE 23 AUGUST 2022	
PROJECT NUMBER 21-131-03	

PROFESSIONAL SEAL

SHEET TITLE
SITE PLAN

SHEET NUMBER
A-0



AGC
THE CONSTRUCTION
ASSOCIATION

FEB

2022

CONSTRUCTION INFLATION ALERT

Two years after the coronavirus pandemic struck, the U.S. construction industry is still experiencing multiple impacts. Unprecedented increases in materials costs, supply-chain disruptions, and an increasingly tight labor market have made life difficult for contractors and project owners alike.

Beginning in March 2021, the Associated General Contractors of America (AGC) has posted several editions of the *Construction Inflation Alert*, a document to inform project owners, government officials, and the public about these impacts on construction. The current version is the fifth update of that Alert—an indication that the situation is far from “normal.”

Although the overall economy posted exceptionally strong growth in 2021 and appears to be headed for further expansion, the construction industry has experienced a much more uneven recovery. Until recently, lagging demand for numerous types of nonresidential construction prevented many contractors from fully passing on their added costs. Successive outbreaks of Covid-19 have disrupted production and delivery of goods, labor availability, and the mix of projects. This combination of supply chain bottlenecks, unpredictable costs and delivery times, and smaller bid price increases threatens to push some firms out of business.

This report is intended to provide all parties with better understanding of the current situation, the impact on construction firms and projects, its likely course in the next several months, and possible steps to mitigate the damage. The document will be revised to keep it timely as conditions change; download it at [AGC Construction Inflation Alert | Associated General Contractors of America](#).

Please send comments and feedback to AGC of America’s chief economist, Ken Simonson, ken.simonson@agc.org.

www.agc.org

Record cost increases

Contractors experienced record increases for materials costs in 2021. While some costs have subsided in recent months, others have continued to rise or have become volatile in both directions—a threat in its own way.

Around the middle of each month, the Bureau of Labor Statistics (BLS) posts producer price indexes (PPI) for thousands of products and services at www.bls.gov/ppi. Most of these are based on the prices that sellers say they charged for a specific item on the 11th day of the preceding month. Producers include manufacturers and fabricators, intermediaries such as steel service centers and distributors, and providers of services ranging from design to trucking.

BLS aggregates these prices into index numbers that cover an entire category of products, such as a weighted average of all concrete products, as well as indexes for the mix of goods and services purchased by industries such as construction. The index readings themselves do not translate into a price found in the market, but the percentage change in an index number from one period to another indicates the amount of price increase or decrease that has occurred.

The PPI for inputs to new nonresidential construction is a weighted average of the goods and services purchased for every type of new construction other than housing. It does not include a contractor's own labor costs, equipment purchases, or direct imports but does cover an importer's or distributor's markup on imported goods.

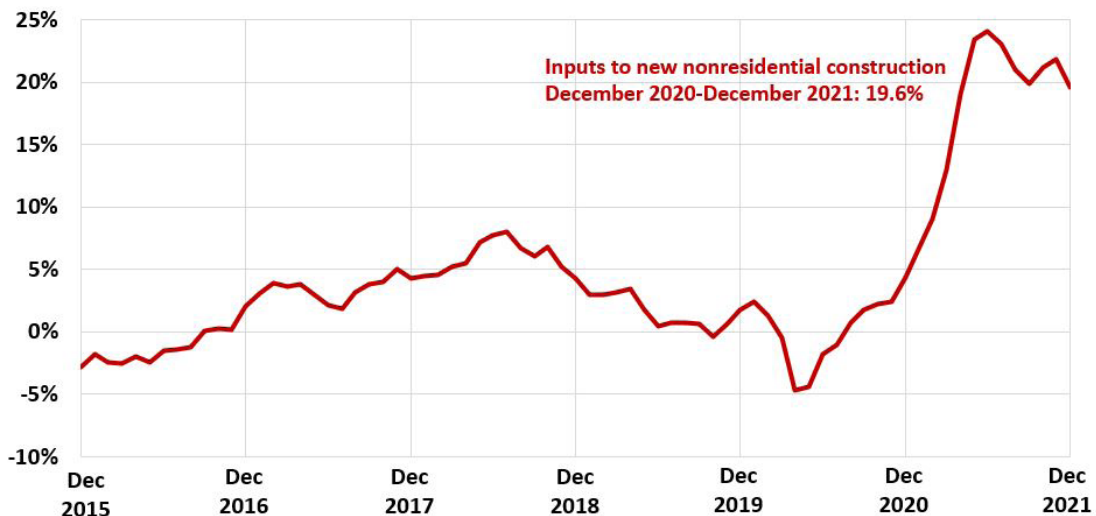
This index rose by a record amount in 2021. As shown in Figure 1, the index soared 24.1% from June 2020 to June 2021 before moderating slightly. From December 2020 to December 2021, the increase still totaled 19.6%—a huge jump from the 4.4% rise posted in 2020 and the 1.8% gain in 2019.

24.1%
The producer price index soared 24.1% from June 2020 to June 2021. By December, the increases had moderated slightly but still totaled 19.6% for the year.

Figure 1

Change in prices for inputs to construction

Year-over-year change in PPI, 2015 - 2021, not seasonally adjusted



Source: Bureau of Labor Statistics, producer price indexes, www.bls.gov/ppi

No category of construction has escaped the extreme cost escalation. BLS posts PPIs for inputs to highways and streets; commercial, healthcare, industrial, power and communications, education and vocational, and other miscellaneous nonresidential structures; and for single- and multifamily construction. From December 2020 to December 2021, the increases in these input cost indexes ranged from 14.6% for new multifamily construction to 20.7% for commercial structures.

Contributors to runaway costs

What has contributed to these extreme cost increases? In brief: nearly everything, as shown in Table 1. From December 2020 to December 2021, the PPI for steel mill products more than doubled, rocketing up 127.2%. There were double-digit increases in the PPIs for plastic construction products, 34.0%; aluminum mill shapes, 29.8%; copper and brass mill shapes, 23.4%; gypsum products, 20.7%; lumber and plywood, 17.6%; architectural coatings (paint), 13.9%; and asphalt felts and coatings, 11.8%.

Even items that did not end the year with double-digit gains had unusually large increases. The PPI for concrete products jumped 8.5% from December 2020 to December 2021, the largest rise in 15 years. The index for flat glass also posted an 8.5% gain (from November 2020 to November 2021), a 40-year high, before finishing the year with an increase of 7.3%.

In addition to materials that go into structures, prices for items and services used by contractors soared. For instance, contractors pay for huge amounts of diesel fuel—purchased directly to run contractors’ own trucks and offroad equipment, as well as indirectly in the freight charges or explicit fuel surcharges for myriad deliveries of goods and equipment, and the hauling away of dirt, debris, and equipment. The PPI for diesel fuel leaped 54.9% from December 2020 to December 2021, while the index for truck transportation of freight climbed 17.7%.

Contractors also paid much more for equipment and parts. The PPI for construction machinery and equipment jumped 10.1% in 2021, and the index for truck and bus (including off-the-highway) pneumatic tires rose 11.2%.

As shown in Table 1, all of these increases far exceeded the changes a year earlier.

\$3.95
The retail price of diesel fuel reached a nearly 8-year high of \$3.95 per gallon on February 7, an increase of \$1.15 or 41% from one year earlier.

Table 1

Price increases for construction inputs
Year-over-year change in December PPI

Construction materials	2020	2021
Steel mill products	5.2%	127%
Plastic construction products	5.4%	34%
Aluminum mill shapes	-1.7%	30%
Copper and brass mill shapes	24%	23%
Gypsum products	3.6%	21%
Lumber and plywood	37%	18%
Architectural coatings	1.9%	14%
Asphalt felts and coatings	2.1%	12%
Used by contractors		
Diesel fuel	-2.8%	55%
Truck transport of freight	2.2%	18%
Construction machinery and equipment	1.1%	10%
Truck and offroad tires	0.3%	11%

Source: Bureau of Labor Statistics, producer price indexes, www.bls.gov/ppi

What happened to bid prices?

The extreme runup in so many input costs caused financial hardship for many contractors and subcontractors, especially for those whose purchases are concentrated in materials with extra-steep increases. Eighty-four percent of the contractors in the 2022 AGC/Sage Construction Hiring and Business Outlook Survey reported their firms had incurred unanticipated costs in 2021.

BLS posts several PPIs for new nonresidential construction and for subcontractors' pricing. Since every construction project is unique, it is not possible to collect prices for identical construction "products" in the same way as for most goods and services. Instead, the agency creates "bid price" PPIs (BLS refers to them as output price indexes) through a two-step process. Each quarter it receives data from construction cost-estimating firms as to the cost of a package of installed components or "assemblies" of a particular nonresidential building. Every month BLS asks a fixed group of contractors the amount of overhead and profit they would charge to erect that building. BLS combines the answers from a set of contractors to create PPIs for new warehouse, school, office, industrial, and healthcare building construction, along with a weighted average of these building types for an overall index for new nonresidential building construction. There are also indexes for maintenance and repair and for all types of nonresidential work performed by concrete, electrical, roofing, and plumbing contractors.

Figure 2

Change in prices for new nonresidential construction inputs vs. bid prices

Year-over-year change in PPIs, Sep 2020 – Dec 2021, not seasonally adjusted

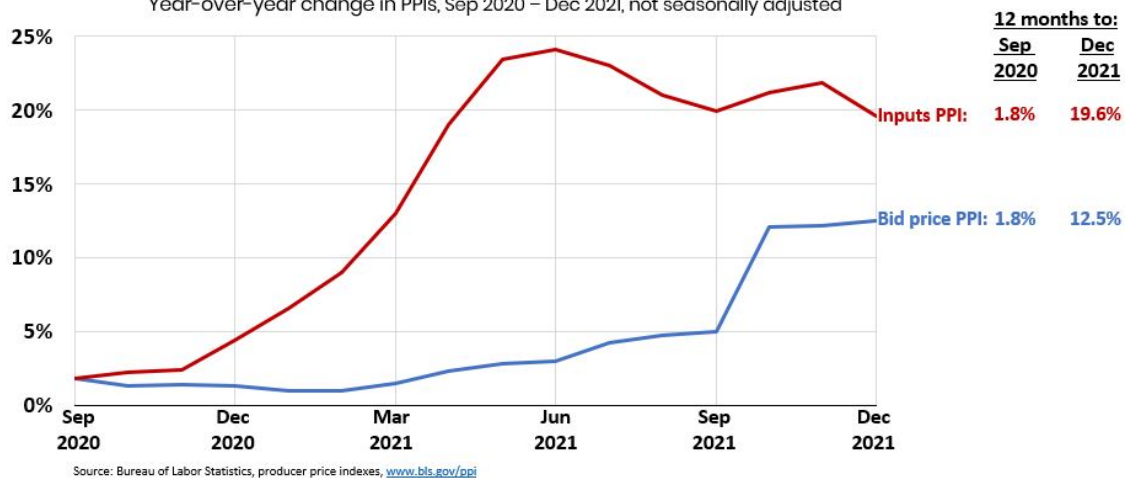


Figure 2 shows how the gap between input costs and bid prices widened dramatically beginning in September 2020. In that month, both price indexes increased 1.8% from the year-earlier level. Then, through mid-2021, the year-over-year increase in input costs outran the rise in bid prices by larger amounts each month. As noted above, input prices moderated in the second half of 2021, while bid prices rose more than in past years. But the 12.5% annual increase through December in the bid price PPI was far short of the 19.6% input-price increase. As a result, contractors were absorbing more and more of the cost increases.

Moreover, the bid-price index only indicates the price contractors propose for new starts. On projects for which they had already submitted a bid or begun work, contractors were stuck with paying elevated materials prices that they could not pass on.

Tariffs have also driven up some prices. In November, the Commerce Department doubled the tariff on Canadian softwood lumber from 9% to 18%. The 25% tariff on steel and 10% tariff on aluminum imposed by President Trump have largely been left in place so far by President Biden. In addition, President Trump imposed tariffs on thousands of products from China but created an exclusion process that enabled some items not produced in the U.S. to be imported without the tariff. The Biden administration largely suspended the exclusions, adding to the number of items with tariff-induced price increases.

Volatility vs. continuous cost increases

Despite the steep increase in most input prices last year, several of them slowed or reversed course during 2021. Price indexes for diesel fuel and lumber each more than doubled from mid-2020 to mid-2021 before ending the year higher by “only” 55% and 18%, respectively. The PPI for copper and brass mill shapes had a year-over-year gain of 65% earlier in 2021 but wound up “only” 23% higher than in December 2020.

Prices for each of these items have recently turned higher again. The futures price for lumber, as traded on the CME commodities exchange, tripled from a low in October to early January before partially retreating later in the month. The futures price for copper moved higher in January. The retail price of diesel fuel, as reported each Monday by the Energy Information Administration, reached a nearly eight-year high of \$3.95 per gallon on February 7, an increase of \$1.15 per gallon or 41% from one year earlier. These changes are likely to show up in PPIs in early 2022, and the fuel price increase will likely spread to higher prices for trucking, especially for deliveries of heavy items such as ready-mix concrete and rebar.

As of early February, it does not appear likely that input prices will set new records in 2022. But wide swings in both directions may continue. Such volatility can be as risky to contractors’ solvency as a steady change. Firms may submit bids based on the assumption that current prices will hold or slip further, only to be caught by a new upswing. And owners may pressure contractors to pass along recent price declines, not recognizing that current prices may not reflect the price a contractor already committed to pay for materials or the price it will pay months later when it places an order. There have also been recent cases of suppliers refusing to quote firm prices until time of shipment, at which point prices may greatly exceed the current price.

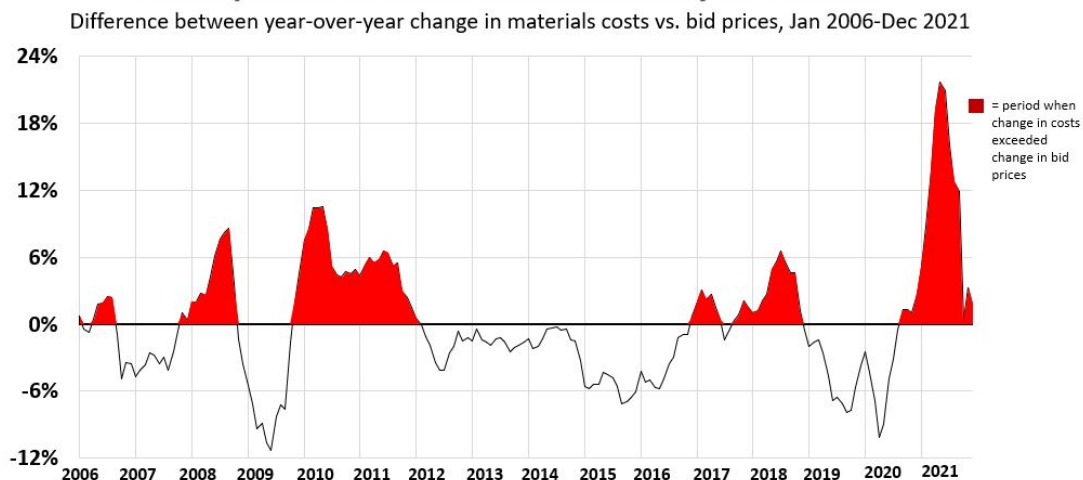
When will bid prices catch up?

There is no fixed relationship between input costs and bid prices. For every firm and time period, the relationship depends on specific market conditions and expectations.

However, it is possible to look at past relationships. Figure 3 shows the difference between the year-over-year change in the PPI for materials costs for goods inputs to construction and the bid price index for new warehouses (the longest time series available).

Figure 3

Cost squeeze on contractors can last two years or more



Source: Source: Bureau of Labor Statistics, www.bls.gov/ppi, producer price indexes for goods inputs to construction (material costs) and new warehouse construction (bid prices)

The areas in red indicate periods in which the year-over-year change in the PPI for inputs to construction exceeded the PPI for new nonresidential building construction—specifically, warehouses. (Similar patterns exist for the other new-construction “bid price” indexes: the PPIs for new school, office, industrial and healthcare buildings.)

Materials costs outran bid prices for as long as 27 months from late 2009 to early 2012 and for nearly 24 months from late 2016 to late 2018. The current gap hasn’t lasted as long—yet—but the peak was twice as high as in previous episodes, indicating the pain for contractors was that much more intense.

Supply-chain issues

From the first days of the pandemic, availability and delivery times for materials have been never-ending headaches for construction firms. Problems began as early as February 2020, when factories in China and northern Italy were shut down, causing shortages of items as diverse as elevator parts, floor tiles, and kitchen appliances.

The following month, as the U.S. economy went into a steep dive, construction firms canceled orders and suppliers lost workers to Covid-19 or shut to comply with governors’ edicts. When orders rebounded, there were not enough workers, ships, port berths, containers, chassis, or trucking, rail, and warehouse workers to produce and move goods.

Adding to these pandemic-induced problems, a series of unusual mishaps interfered with output or delivery of numerous goods. The biggest impact for construction came from the deep freeze in Texas in February 2021 that damaged all of the petrochemical plants producing resins for a host of construction plastics. Damage to the electrical grid in Louisiana from Hurricane Ida last summer further interfered with the production of some plastics inputs. Wildfires and mudslides in British Columbia and soggy conditions in the Southeast have affected lumber production. The blockage of the Suez Canal and the abrupt closure of an Interstate highway bridge across the Mississippi River in 2021 are further examples of “one-off” events that have disrupted the supply chain.

Construction has also been affected by the much-publicized shortage of computer chips. Not only is the industry a major buyer of pickup trucks that are in short supply, but deliveries of construction equipment also have been held up by a lack of semiconductors.

With so many factors contributing to delays, it is not surprising that 72% of the respondents to AGC’s outlook survey reported that projects took longer than anticipated last year. As a result, 44% report that their firms are putting longer completion times into bids or contracts.

So far, there is little sign that the supply chain will consistently improve in 2022. While the lead time for some items has shortened, deliveries for many materials remain delayed or unpredictable. Dealers and contractors continue to report being informed shortly before an expected delivery that the item will not arrive for months or the quantity will be less than expected—and needed. Other items have shown up unexpectedly early, without warning, causing problems when they cannot be used, installed, or stored onsite.

273,000
Construction job openings at the end of 2021 totaled 273,000, a jump of nearly 30% from the end of 2020.

Worker availability

The construction industry lost 1.1 million employees from February to April 2020—a 15% decline in just two months and nearly half as many as in the industry’s five-year downturn from 2006 to 2011. While both residential and nonresidential construction employment rebounded somewhat in May 2020, employment stalled for more than a year after that among nonresidential firms—general and specialty trade contractors plus civil and heavy engineering construction firms. During that period, thousands of experienced workers moved into residential construction (homebuilding and remodeling), found jobs in other sectors, or left the workforce completely.

Nonresidential employment grew strongly in the last four months of 2021. But job openings increased even faster. Openings at the end of 2021 totaled 273,000, a jump of nearly 30% from the end of 2020, according to BLS’s Job Openings and Labor Turnover Survey. The total exceeded the 220,000 employees hired in December, implying that construction firms would have added twice as many workers as they were able to, if there had been enough qualified applicants.

In order to attract, retain, and bring back workers, construction firms are raising pay. Average hourly earnings in construction rose 5.8% from February 2021 to January 2022 for “production and nonsupervisory employees”—mainly hourly craft workers. But the average for such workers in the overall private sector climbed 6.9%. The implication is that construction companies will have to raise pay even more in the coming months to remain competitive.

What can contractors and owners do?

While contractors cannot unplug ports or rescind tariffs, they can provide project owners with timely and credible third-party information about changes in relevant material costs and supply-chain snarls that may impact the cost and completion time for a project that is underway or for which a bid has already been submitted.

Owners can authorize appropriate adjustments to design, completion date, and payments to accommodate or work around these impediments. Nobody welcomes a higher bill, but the alternative of having a contractor go out of business because of impossible costs or timing is likely to be worse for many owners.

For projects that have not been awarded or started, owners should start with realistic expectations about current costs and the likelihood of increases. They should provide potential bidders with accurate and complete design information to enable bidders to prepare bids that minimize the likelihood of unpleasant surprises for either party.

Owners and bidders may want to consider price-adjustment clauses that would protect both parties from unanticipated swings in materials prices. Such contract terms can enable the contractor to build in a smaller contingency to its bid, while providing the owner an opportunity to share in any savings from downward price movements (which are likely at some point, particularly for long-duration projects). The ConsensusDocs set of contract documents (www.consensusdocs.org) is one source of industry-standard model language for such terms. The ConsensusDocs website includes a price escalation resource center (<https://www.consensusdocs.org/price-escalation-clause/>).

The parties may also want to discuss the best timing for ordering materials and components. Buying items earlier than usual can provide protection against cost increases. But purchase before use entails paying sooner for the items; potentially paying for storage, security against theft and damage; and the possibility of design changes that make early purchase unwise.

Conclusion

The construction industry is in the midst of a period of exceptionally steep and fast-rising costs for a variety of materials, compounded by major supply-chain disruptions and a shortage of available workers—a combination that threatens the financial health of many contractors. No single solution will resolve the situation, but there are steps that government officials, owners, and contractors can take to lessen the pain.

Federal trade policy officials can act immediately to end tariffs and quotas on imported products and materials. With many U.S. mills and factories already at capacity, bringing in more imports at competitive prices will cool the overheated price spiral and enable many users of products that are in short supply to avoid layoffs and shutdowns.

Officials at all levels of government should review all regulations, policies, and enforcement actions that may be unnecessarily driving up costs and slowing importation, domestic production, transport, and delivery of raw materials, components, and finished goods.

Owners need to recognize that significant adjustments are probably appropriate regarding the price or delivery date of projects that were awarded or commenced early in the pandemic or before, when conditions at suppliers were far different. For new and planned projects, owners should expect quite different pricing and may want to consider building in more flexibility regarding design, timing, or cost-sharing.

Contractors need, more than ever, to closely monitor costs and delivery schedules for materials and to communicate information with owners, both before submitting bids and throughout the construction process.

Materials prices do eventually reverse course. Owners and contractors alike will benefit when that happens. Until then, cooperation and communication can help reduce the damage.

AGC resources

This document will be updated if market conditions warrant. Check <https://www.agc.org/learn/construction-data/agc-construction-inflation-alert> for the latest edition.

The AGC website, www.agc.org, has a variety of resources available to contractors, owners, and others wanting to know more about the construction industry.

AGC posts tables showing changes in PPIs and national, state, and metro construction employment each month at <https://www.agc.org/learn/construction-data>

AGC's Data DIGest is a weekly one-page summary of economic news relevant to construction. Subscribe at https://store.agc.org/Store/Store/StoreLayouts/Item_Detail.aspx?iProductCode=4401 or email chief economist Ken Simonson at ken.simonson@agc.org.

Construction documents are available for viewing and purchase from ConsensusDocs at www.consensusdocs.org, including the price escalation resource center, www.consensusdocs.org/price-escalation-clause/

Location:

CONSTRUCTION CONTRACTS;



Cost of Public Construction Projects in Connecticut and Selected Other States

By: Terrance Adams, Principal Analyst

September 15, 2017 | 2017-R-0206

Issue

Compare the cost of public construction projects in Connecticut with those in Massachusetts, New Jersey, and New York.

Summary

To research this issue, we sought information about three types of projects: (1) school construction projects, (2) state public works projects generally, and (3) transportation projects. This report discusses our findings for each of these project types. Additionally, it summarizes key findings from secondary sources we reviewed, as well as observations we received from the Connecticut Construction Industries Association (CCIA) and some of its member contractors.

Our approach to researching this issue consisted of contacting (1) Connecticut's Department of Administrative Services (DAS) and Department of Transportation (DOT), and their counterpart agencies in the three other states; (2) *School Planning and Management*, a magazine that covers, among other topics, current issues in school construction; and (3) CCIA. Additionally, we conducted an extensive review of secondary sources concerning the costs of public construction projects. Data sources are noted in the report where applicable. Generally the data were provided (1) directly by the responding agencies or (2) in reports published by the agencies or outside entities.

Generally, for the reasons described in the report, we were unable to obtain primary data or secondary research that allowed us to directly compare Connecticut project costs with the costs in other states. Principally, these reasons include (1) the high number of variables that affect project

costs (e.g., materials costs and site topography) and (2) a lack of standardization in how states calculate project costs. However, we were able to obtain federal government data on bridge replacement unit costs, making cost comparisons across the four states for this type of transportation project feasible.

School Construction

Response from DAS

DAS, through its Office of School Construction Grants Review, administers the state's school building projects grant program, which awards grants to municipalities for school construction and renovations ([CGS § 10-282 et seq.](#)). DAS reported that it uses a \$360 per square foot estimate for school construction costs, plus soft costs. It estimates soft costs at 17% of construction costs for a renovation and at 15% for new construction. According to DAS, examples of soft costs include construction management, legal fees, site preparation and development costs, equipment and furnishing costs specific to the construction, and professional fees for financial consultants.

2014 Report by School Building Projects Advisory Council

A 2014 report by the School Building Projects Advisory Council examines Connecticut's school construction process and includes some procedural comparisons with Massachusetts, New York, and New Jersey. For example, the report notes that Connecticut, unlike the other three states, neither procures nor oversees procurements for design and construction services for local school districts.

With respect to costs, the report notes that school construction costs in Connecticut increased significantly from 2000 to 2012. Table 1 below shows the cost (in current dollars) for new school construction (1998 to 2013) and renovations (1998 to 2011), as well as the number of projects in each year.

Table 1: Cost per Square Foot of Connecticut School Construction Projects

Year	New Construction		Renovations	
	Cost per Square Foot	Number of Projects	Cost per Square Foot	Number of Projects
1998	\$284.60	3	\$117.52	6
1999	204.32	6	162.75	6
2000	230.08	7	187.55	6
2001	232.75	8	196.65	4

Year	New Construction		Renovations	
	Cost per Square Foot	Number of Projects	Cost per Square Foot	Number of Projects
2002	295.21	7	184.22	15
2003	294.31	5	192.31	8

2004	297.92	9	260.53	5
2005	360.11	8	202.28	8
2006	427.52	13	284.22	3
2007	418.97	4	70.55	2
2008	402.52	11	340.03	4
2009	433.95	6	276.62	5
2010	474.28	4	359.48	3
2011	440.66	4	258.54	1
2012	495.54	2	N/A	N/A
2013	457.56	12	N/A	N/A

Source: School Building Projects Advisory Council (February 2014)

The report, which does not provide any cost data from the other states, notes that there is no standard method for reporting on school construction costs. For example, it states that when comparing costs in different states, “it is unclear whether the cost is at time of bid, or at construction completion, whether it includes change orders, hard costs, and soft costs, as well as other variables that form a basis for a valid comparison across different states.”

The report is available [here](#).

Outreach to Other States

We contacted the Massachusetts School Building Authority (MSBA), New Jersey Schools Development Authority (SDA), and the New York State Department of Education’s (NYSED) Office of Facilities Planning.

Massachusetts. MSBA provided us with historical data on the per square foot reimbursement rates that it pays to school districts, as shown in Table 2. (The rate has increased by 4.5% in each of the previous four years.) The authority noted that this rate is often lower than the per square foot cost of a particular project, but increasing it to match actual project costs would limit the number of projects it could fund.

Table 2: MSBA Reimbursement Data

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Fiscal Year	Reimbursement (Per Square Foot)*
09-14	\$275
15	287
16	299
17	312
18	326

Source: MSBA

*Includes new building plus eligible site costs

New Jersey. According to SDA's [biannual reports](#), its average per-square foot cost for constructing new elementary schools was \$301 from October 2016 through March 2017 (two projects), \$270 from April 2016 through September 2016 (one project), and \$267 from October 2015 through March 2016 (one project).

New York. NYSED informed us that it does not track per square foot costs for new construction or renovations in a way that would produce meaningful results. For example, its renovation cost data includes the cost of the renovation and the size of the entire building, rather than the size of the area being renovated.

Costs of projects administered by the New York City Construction Authority are tracked by the [New York City's Mayor's Management Report](#). According to the 2016 report, the authority's average new construction price per square foot in FY 16 was \$657 for elementary schools and \$573 for intermediate schools.

School Planning & Management Report

School Planning & Management is a magazine that covers various education-related topics, including school construction. It previously published an annual report that, among other things, compared school construction costs in different regions of the country.

The magazine's final such report, published in February 2015, analyzed construction cost data for 2014. Table 3 below compares school construction costs in New England (Region 1) with those in New Jersey, New York, and Pennsylvania (Region 2).

Table 3: 2014 New School Construction Costs Per Square Foot

<i>Region</i>	<i>Elementary</i>	<i>Middle</i>	<i>High</i>

Region 1 (CT, ME, MA, NH, RI, VT)	\$400.36	\$371.59	\$387.75
Region 2 (NJ, NY, PA)	235.36	250.93	333.33

Source: 20th Annual School Construction Report, School Planning & Management (February 2015)

We contacted *School Planning & Management* to inquire about whether it had any state-level data available. The magazine referred us to the report's author, who spoke with us by phone. He did not have any state-level data available, but his general impression was that school construction costs in Connecticut, Massachusetts, New York, and North Jersey were in the "same ballpark," with the costs in South Jersey being lower. Additionally, he noted that the Region 2 data was influenced by relatively lower costs in Pennsylvania, whereas most of the Region 1 data is from Connecticut and Massachusetts.

State Public Works Projects Generally

Response from DAS

DAS, through its Division of Construction Services, has charge and supervision of most capital building projects administered by the state. In developing an estimate of a project's costs, DAS takes into account various factors, including construction type, materials, size, and program complexity. The department noted that it administers a wide range of projects and, thus, cost estimates vary significantly based on the type of project. For example, it may estimate costs of \$150 per square foot for a storage building, but a complex research laboratory may have estimated costs of \$400 per square foot or more.

More information on DAS's procedures for estimating costs is available in the department's [Consultants Procedure Manual](#) (see specifically Section 3.5 et seq).

Outreach to Other States

We contacted the Massachusetts Division of Capital Asset and Management Maintenance, within the Executive Office for Administration and Finance; New Jersey's Division of Property Management and Construction, within the Department of the Treasury; and the New York Office of General Services. We will update the report if we receive information from these agencies.

Transportation Projects

Response from DOT

DOT administers state transportation projects. The department reported that it was not aware of any research comparing the costs of rail or transit projects across the four states. With respect to highway and bridge project costs, DOT was aware of only one specific metric for which there was comparative data across the four states: replacement unit costs for structurally deficient bridges.

The data measures the replacement costs for bridges constructed with federal funds; states must report these costs to the Federal Highway Administration (FHWA). They must separately report data for bridges on the National Highway System (NHS) and bridges not on the NHS. (NHS consists of the Interstate Highway System and other roads important to the nation's economy, defense, and mobility.)

Tables 4 (for NHS bridges) and 5 (for non-NHS bridges) below show replacement unit costs (in current dollars) for structurally deficient bridges. According to FHWA, average unit cost is calculated by dividing the total cost of eligible items by the total deck area of the new replacement bridges. The data includes all replaced highway bridges let or awarded during the applicable fiscal year.

Table 4: Replacement Unit Costs of Structurally Deficient Bridges: NHS Bridges

State	2014 Costs Collected in 2015	2015 Costs Collected in 2016	2016 Costs Collected in 2017	Cost Used for 2016 Estimates
Connecticut	\$299	\$375	\$442	\$372
Massachusetts	208	469	440	373
New Jersey	243	419	638	434
New York	206	311	287	268

Source: [FHWA](#)

Table 5: Replacement Unit Costs of Structurally Deficient Bridges: Non-NHS Bridges

State	2014 Costs Collected in 2015	2015 Costs Collected in 2016	2016 Costs Collected in 2017	Cost Used for 2016 Estimates
Connecticut	\$702	\$480	\$439	\$541
Massachusetts	383	424	460	423
New Jersey	(not reported)	(not reported)	489	489
New York	220	302	288	270

Source: [FHWA](#)

Outreach to Other States

We contacted the Massachusetts Department of Transportation, New York State Department of Transportation, and New Jersey Department of Transportation. Below we describe the information we received from New Jersey. We will update this report if we receive information from Massachusetts or New York.

New Jersey. The New Jersey Department of Transportation (NJDOT) provided us with a copy of a [transportation project cost study](#) conducted by Rutgers University's Voorhees Transportation Center and published in May 2016. According to the study, the average cost to plan, construct, operate, and maintain one mile of roadway under NJDOT jurisdiction was \$183,757 between FYs 10 and 14, excluding debt service. When debt service is included, the average per-lane mile cost increases to \$212,927.

The study also found that about 59% of total transportation-related expenditures are for activities not directly associated with planning, constructing, operating, or maintaining roads and bridges under NJDOT's jurisdiction. Among the excluded expenditures are (1) grants and other expenditures related to the NJDOT local aid program and other grants made to local governments; (2) capital project and operating support to NJ TRANSIT; (3) debt service on bonds issued to finance transportation projects; (4) funds passed through to other entities; and (5) expenditures associated with NJDOT's Bureau of Aeronautics, Office of Maritime Resources, and activities related to rail freight planning.

Other Research

In addition to the outreach described above, we also (1) conducted an extensive review of secondary sources concerning the costs of public construction projects and (2) contacted CCIA. Findings from each of these approaches are described separately below.

Review of Secondary Sources

Much of the research we found describes the challenges with producing direct cost comparisons across states, even for the same type of project. With respect to paving, for example, a number of factors affect the cost, including differences in urban versus rural job sites, differences in soil and topography, possible labor or materials cost differences, and traffic volume differences, among others.

Below we describe a selection of this research for school construction projects, transportation projects, and correctional facilities.

School Construction. In 2016 Montgomery County's (MD) Office of Legislative Oversight issued a [report](#) examining local elementary school construction costs in Maryland and detailing the various factors that comprise these costs. Table 6 lists factors identified in the report as influencing school construction costs:

Table 6: Factors Influencing School Construction Costs

<i>Factor</i>	<i>Examples</i>
Procurement policies and practices	<ul style="list-style-type: none"> ● Prevailing wage and set-aside requirements ● Project delivery methods ● Use of add-alternates (additional work items that may be added to a project if bids are received below the budgeted amount)

Site costs and stormwater management regulations	<ul style="list-style-type: none"> ● Geographic location ● Site conditions (e.g., soil condition and utilities) ● Environment ● Stormwater management regulations
High performance building mandates	<ul style="list-style-type: none"> ● Requiring LEED (Leadership in Energy and Environmental Design) certification
School design practices	<ul style="list-style-type: none"> ● Educational specifications ● Building size ● Level of community involvement in the design process ● Use of school buildings for non-educational programs ● Use of prototype school designs
Market conditions	<ul style="list-style-type: none"> ● Labor and materials costs

Source: Montgomery County (MD) Office of Legislative Oversight

Transportation Projects. In a [2014 report](#), the Washington State Joint Transportation Committee analyzed cost drivers and efficiency initiatives in Washington transportation projects. Among things, the report examines whether the state's transportation project costs differed from those in other states (see pp. 26-33 of the report).

The report describes the challenges associated with making these comparisons. It notes that several factors that affect project costs, including labor, materials, and the construction sector's competitive environment, are beyond the control of the contracting agency. It also notes that project-level comparisons are difficult to make because comparable projects are “nearly impossible to find.”

According to the report, it can also be challenging to compare project costs within the same state: “Even comparing project costs within [Washington]'s program results in a wide range of overall costs and cost per lane mile as a result of the specific characteristics of individual projects, such as soil conditions, mitigation requirements, need for new right of way, connection to existing highway system, topography and slopes, and drainage requirements.”

Correctional Facility Construction. In March 2013, the consulting firm MGT of America submitted a [report](#) to the State of New Hampshire concerning the cost of constructing a new correctional facility. Among other things, the report examined benchmarks for correctional facility construction costs (see pp. 15-16 of the report).

MGT reported that it found limited available data for correction facility construction costs since 2000. It also noted that average construction cost per bed can vary widely even among facilities that house the same classification of offenders. For example, MGT found that the cost per bed of a maximum security state facility constructed in Illinois in 2003 was roughly \$97,000, while the cost per bed of a federal maximum security facility constructed in Kentucky in 2002 was roughly \$248,000.

Outreach to CCIA

CCIA is a member organization that represents various segments of Connecticut's construction industry. Because some members work in neighboring states, we contacted the association and asked whether (1) it had any comparative cost data for Connecticut and the three other states or (2) the association or any of its members had any observations, even if anecdotal, of any project cost similarities or differences across the four states.

We spoke with CCIA's president, who also forwarded our inquiry to selected CCIA members. We received responses from three of these members (one by phone and two by email).

Neither CCIA nor its members had any data comparing project costs in Connecticut with costs in the three other states. Collectively, the respondents offered several observations, as shown in Table 7.

Table 7: Observations Provided by CCIA and its Members

Category	Response
Labor	Multiple respondents reported that labor rates in Connecticut are slightly lower than those in Boston, Rhode Island, central Massachusetts, New York City, and Albany One respondent reported that (1) labor unions in Connecticut are more flexible than those in Massachusetts and (2) work rules in Connecticut are less restrictive than those in Massachusetts
Materials	One respondent reported that materials prices are generally higher in Connecticut than they are in Massachusetts and Rhode Island; a different respondent reported that materials costs in Connecticut are roughly equivalent to the Boston area
Miscellaneous costs	One respondent reported that costs of workers comp, insurance, and subcontractor quotes are roughly equivalent to the Boston area
Equipment tax	One respondent reported that Connecticut's equipment tax must be taken into account and causes confusion among contractors
Bonding	One respondent noted that Connecticut's nonresident contractor bond requirement (CGS §12-430(7)) can increase costs (Massachusetts has a similar requirement)
Cost estimates	Multiple respondents reported that (1) estimating project costs is not straightforward: factors include labor, materials, equipment, and subcontractors and (2) these costs may vary even within the same state
Contracting agency	Multiple respondents reported that past experience with the contracting agency can also affect a bidder's pricing: if an agency has a track record of administering projects in a fair and efficient manner, it is usually able to obtain more favorable pricing from bidders (because the bidders can price a lower amount of risk into their bids)

Additional Resources

Connecticut Department of Administrative Services: [*Consultants Procedure Manual*](#). September 2016.

Connecticut School Building Projects Advisory Council: [*Report*](#). February 2014.

Federal Highway Administration: [*Bridge Replacement Unit Costs 2016*](#). June 2017.

Montgomery County (MD) Office of Legislative Oversight: [*New School Construction Costs*](#). November 2016.

New Hampshire Department of Administrative Services and Department of Corrections: [*Final Report: Correctional Facilities RFP Evaluations*](#). March 2013.

Rutgers University, Alan M. Voorhees Transportation Center: [*The Cost of Roadway Construction, Operations and Maintenance in New Jersey*](#). May 2016.

Washington State Joint Transportation Committee: [*Efficiencies in the Construction and Operation of State Transportation Projects*](#). January 2014.

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