<u>Request for Qualifications</u>

For:

Design and Construction Consulting Services for
White Mountains Community College
LITTLETON CAMPUS RENOVATION AND EXPANSION at
646 Union Street, Littleton, NH
Project # WMC21-01

Purpose: The Community College System of New Hampshire is seeking qualifications from interested parties to provide **Design, Planning and Construction Consulting Services** involved in removal of a 4,000 SF structure and the creation of a new 10,000 SF two floor **Advanced Technology building addition**. The new building will house academic programming to include Diesel Heavy Equipment, Industrial Mechanics, IT, and a small Welding Lab.

For more details see attached:
Appendix A: WMCC Littleton Existing Building Assessment
Appendix B: WMCC Littleton Conceptual Programming and Design Study

The consultant will assist The Community College System of New Hampshire in developing, planning, performance criteria, specifications, construction low bid documents and construction administration according to the Community College System of New Hampshire and all applicable code requirements. Applicants must be registered to do business in the State of New Hampshire. Applicants must have experience with Chapter 155-A New Hampshire Building Code Section 155-A:13 Building Requirements for State Funded Buildings.

Total Design, Construction, Permitting, Testing, Furnishing and Equipment, etc. has an estimated budget of $450,000 for Mechanical Electrical Plumbing replacements; additional funding may come for energy improvements and roof replacement. Further funding, of approximately $5 million, is being sought for the construction of the new building. Construction and Substantial Completion is expected to be phased over time however a portion of the funding will need to be spent within a year.

The consultant will assist the Community College System of NH in providing or coordinating professional design services for: Architectural, Structural, Civil, Mechanical, Electrical, possible Commissioning, Geotechnical, testing, planning, working with energy consultant evaluations and CCSNH for energy monies to be included, preparation of construction documents, coordination of building systems, construction administration, and on-site observation for various projects. Types of services required may include a complete design or any combination of the above for both new and existing facilities. Applicants for the design contract must be registered Architects and/or Engineers in New Hampshire.

Sub-consultants shall include but not limited to: Structural, Electrical, Mechanical, and Civil (Permitting NHDES Alteration of Terrain).

Response Instructions: Interested organizations must submit the attached STATEMENT OF QUALIFICATIONS FORM.

Applicants must be Registered Professional Engineers or Architects in the State of New Hampshire.

Proposal Inquires: All inquiries concerning this request shall be made electronically to: Matthew Moore P.E., Director of Capital Planning and Development, Community College System of New Hampshire, Email: memoore@ccsnh.edu

Proposal Due Date: Monday, April 19, 2021 at 2:00pm All submissions shall be sent, **send electronically via email to: memoore@ccsnh.edu** of the information above must be dated and signed by the submitter and must be received by Matthew Moore P.E., Director of Capital Planning and Development, Community College System of New Hampshire, 26 College Drive, Concord, New Hampshire, 03301-7407.

Evaluation and Award of Contract: All responses will be reviewed by the Selection Committee. The Selection Committee shall evaluate the submissions and shall be composed of White Mountains Community College Representatives and a CCSNH Representative. The **RFQ** process is a procedure allowing the Community College System to award the contract for Consulting Services to the submitters whose qualifications best meet the interest of the Community College System. Scoring points we will determine are listed in the Statement of Qualifications form below. Interviews with submitters may be held if needed to determine the firm that best meets the needs of the Community College System of NH.

ADDENDUM:
In the event it becomes necessary to add to or revise any part of this RFQ prior to the scheduled submittal date, the addendum will be posted to the CCSNH website at https://www.ccsnh.edu/about-ccsnh/bidding-rfp/ Before your submission, always check the website for any addenda that may have been issued which would affect the RFQ.

Any change, correction, or deviation to this RFQ must be addressed in a written addendum. Verbal changes will not be allowed.

SITE VISITS: To schedule a site visit email Melanie Robbins, Director of Academic Centers, directly to schedule to look at the building. Email is best, mrobbins@ccsnh.edu, otherwise the phone number, 603.342.3093. You will need to complete the attached Health Assessment for Covid-19 and have a temperature scan when you arrive.

ADDITIONAL PROJECT REQUIREMENTS:

a) CAD based design documents are to be generated for the schematic design, final design and finished (as-built) project. CAD based drawings to become the property of CCSNH for their use.
b) Power and cable requirements are to be included in the design.

The Community College System of New Hampshire reserves the right to waive any and all informalities in its best interest.

Request for Qualifications
For:
Design and Construction Consulting Services for
LITTLETON CAMPUS RENOVATION AND EXPANSION
At White Mountains Community College, Littleton, NH
Project # WMC21-01

STATEMENT OF QUALIFICATIONS FORM

(Maximum of SEVEN Pages for scoring purposes), additional information may supplement this form.

Qualifications to perform the work: Designer must have a minimum of three (3) years' experience within the last five (5) years with design and construction of projects of similar scope and complexity within New Hampshire.

Proposal Instructions: Each response must include the following information:

1) NAME OF FIRM SUBMITTING PROPOSAL:
Name, address, phone/fax, website, email of the Firm.

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2) Brief history and description of firm. *(Include area of expertise and list past pertinent Projects) (Score up to 15 Points)*

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3) List of key personnel to be assigned to this project. (Include recent, with time employed

With firm)

a) Project Manager____

b) Architect in Charge____

4) List and qualifications of sub consultants to be used on the Project*. (Include resume with past projects, and those done with the firm)*

a) Mechanical designer:

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b) Structural designer:

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c) Electrical designer:

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d) Civil Designer:

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5) Provide detail of experience with the State Energy Code, Section 155-A:13 Building Requirements for State Funded Buildings. (Score up to 10 Points)

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6) Doing Business as: Individual_____ Partnership ___ Corporation___
In State of ______________________

7) Provide a brief description of the firm's approach to project designing and implementation. (Score up to 10 Points)

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8) Provide a brief description of related areas of expertise and experience. (Score up to 15 Points)

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RELATED PROJECTS (FIVE MAXIMUM USING THESE FORMS)

(Score up to 10 points for each of the five related projects)

1) NAME OF REFERENCE PROJECT:____

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Location of Project:____

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Date work performed:____

Description of Project:____

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Approx. Contract Value:____

Name of Owner:____

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Address:____

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Contact Information:____

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OTHER PERTINENT PROJECT INFORMATION:____________________________________

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2) NAME OF REFERENCE PROJECT:____

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Location of Project:____

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Date work performed:____

Description of Project:____

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Approx. Contract Value:____

Name of Owner:____

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Address:____

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Contact Information:____

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OTHER PERTINENT PROJECT INFORMATION:______________________________________

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3) NAME OF REFERENCE PROJECT:____

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Location of Project:____

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Date work performed:____

Description of Project:____

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Approx. Contract Value:____

Name of Owner:____

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Address:____

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Contact Information:____

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OTHER PERTINENT PROJECT INFORMATION:__________________________________

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4) NAME OF REFERENCE PROJECT:____

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Location of Project:____

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Date work performed:____

Description of Project:____

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Approx. Contract Value:____

Name of Owner:____

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Address:____

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Contact Information:____

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OTHER PERTINENT PROJECT INFORMATION:___________________________________

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5) NAME OF REFERENCE PROJECT:____

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Location of Project:____

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Date work performed:____

Description of Project:____

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Approx. Contract Value:____

Name of Owner:____

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Address:____

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Contact Information:____

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OTHER PERTINENT PROJECT INFORMATION:____________________________________

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END OF DESIGN QUALIFICATION FORM

Appendix A

WMCC Littleton
Existing Building Assessment

646 UNION STREET
LITTLETON, NH 03431

11/25/2020

Warrenstreet
Planning | Landscapes | Architecture | Interiors
30 1990-2020 YEARS OF CARING COMMUNITY DESIGN

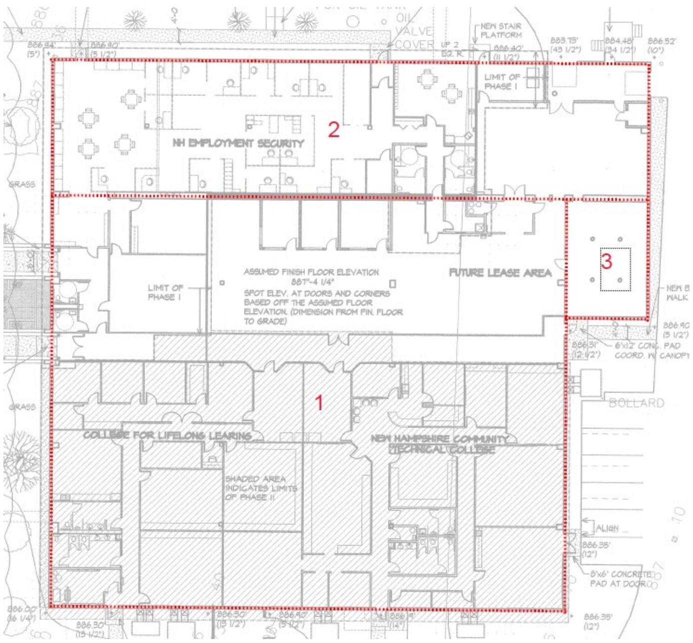
Table of Contents

Background and Study Brief

History of 646 Union Street

The building was built as a manufacturing facility by Littleton Coin in 1972. The original structure is indicated as Section 1 in the diagram below. This building is a pre-engineered metal building with a single ridgeline oriented east-west on the site. The first addition, labeled Section 2 below, is a second pre-engineered building that matches the ridge and roof slopes of the original building. The third addition is believed to have been built in 1995 and is a wood bearing wall and joist structure that continues the roof slopes of the earlier buildings. The building was converted to business use in 2000 and has had a variety of tenants. Current tenants include WMCC, New Hampshire Employment Security and a Head Start daycare facility.

The site has a second metal building behind the primary structure that was built in 1988 which currently houses a gym.



Building Areas and Square Footages:
Section 1 – Original Metal Building – 18,750 sf
Section 2 – Metal Building Addition – 6,960 sf
Section 3 – Wood Framed Addition – 840 sf

FIGURE 1: EXISTING BUILDING AREAS

Study Request

White Mountain Community College (WMCC) engaged Warrenstreet Architects (WAI) to provide a two part study to analyze the site's ability to accommodate a proposed new Diesel Heavy Equipment Technology facility and to review the existing building as part of their due diligence process prior to purchasing the building.

Study Process

WAI has been on site to document the existing conditions of the building and to review the existing program. Meetings with key personnel were held to determine the site and building needs of the new diesel program. Warrenstreet then developed and reviewed a series of schematic site designs options with WMCC. A site option was identified during this process which indicated that the addition of the diesel program to the site was a viable option.

As part of the existing building assessment, Warrenstreet contracted with Yeaton Associates PC, who was a former tenant of the building, to review the mechanical and electrical systems conditions, and with T.F. Moran to review the existing building structural system and previous structural reports. T.F. Moran was also engaged by WAI for the initial zoning and Shoreline Protection Act study and to assist I the development of site plan options.

Site Evaluation

Zoning

The parcel of land is split by three zones; Commercial-I zone in the front half of the lot, Residential-I zone in the rear half, and a small section of Industrial zone in the southeast corner. The northern portion (approximately 80%) of the main building is located in the C-I zone, with the remainder of that building and nearly all of the remaining developed portion of the lot in the R-I zone. However, the current Town Appraisal Card for the property lists C-I classification for the entire property. The educational use is permitted in both C-I and R-I zones by Special Exception. The ordinance does not require a specific buffer setback between C-1 and R-1 zones but the Planning Board may require a buffer or screening between commercial and residential uses. The existing development complies with all current dimensional requirements. Any expansion of the existing use would need to obtain a Special Exception and comply with the following requirements:

C-I = Setbacks: Front 40'/Side 25'/Rear 25' - Height 35'/3 stories
R-I = Setbacks: Front 25'/Side 10'/Rear 25' - Height 35'/2.5 stories

Shoreland Protection Act / FEMA

The Shoreland Water Quality Protection Act, originally named the Comprehensive Shoreland Protection Act (CSPA) establishes minimum standards for use and development of shorelands adjacent to the state's public water bodies. The Shoreland Act limits the amount of clearing and construction of new impervious surfaces within 250' of the protected water body, in this case the Ammonoosuc River. This limit is indicated on the site plan and any development within this area must be permitted through the NHDES Shoreland Bureau. Within 150' of the river, 25% of the area must be maintained as natural woodland. Within 50' of the river, all natural ground cover is to remain undisturbed, subject to certain exceptions. As part of the permit application process, since the property abuts a Designated River, the river's Local Advisory Committee must be notified of the proposed project.

Review of the town GIS system and FEMA, the site does have a Regulatory Floodway on the southeastern corner of the site along the river. This floodway does not extend to either of the two existing structures, but it does impact the corner of the parking lot in this area. FEMA FIR Mette Map has been included below to illustrate the floodway.

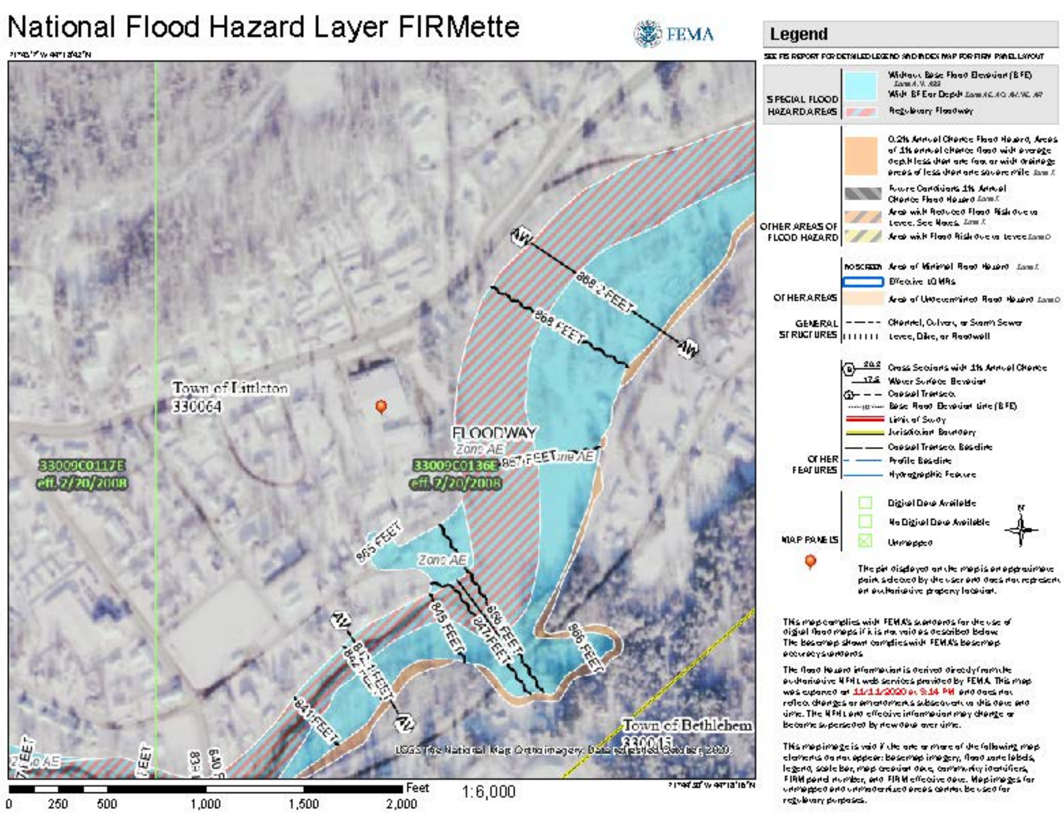


FIGURE 2: FEMA FIRMETTE MAP OF SITE

State Building Code / IBC 2015 – Height and Area

The existing building is well within the allowed height and area for its Use and Construction Type. We observed that the primary building use under IBC 2015 is B, Business, and its construction type is 5B, non-rated, combustible construction. The determining factor for the combustible construction type is the second addition that was constructed of wood. The building is sprinklered. As a result, the following table indicates actual vs allowed by code for each.

Height in Stories (Act / Max): 1 / 3
Height in Feet (Act / Max): 27 / 60
Building Area footprint (Act / Max): 26,844 / 42,750

This building does not quality as an unlimited area building due to its type 5B construction type and the placement of the gym building encroaches on the 60 foot clear buffer around the building. There are other options to increase the over-all building area should future needs arise, the removal of the last wooden addition would allow the building to meet the requirements for construction type 2B which would allow the building to be expanded to a 109,250 sf of Business Use.

2015 International Building Code (IBC) - Height and Area Calculations

Use and Occupancy Classification — **General Building Heights and Areas** — **Mixed-occupancy, single story building**

Primary Use(s):			Allowable Building Height	Allowable Number of Stories	Allowable Area Factor					
Business (B)	Primary Use	Office	60'	3	36,000	Square Feet	Footprint	=	26,844	Square Feet
Assembly (A-3)	Not Used	Classrooms > 750	60'	2	24,000	Square Feet	Perimeter	=	678	Linear Feet
Education	Not Used	Daycares < 100	60'	2	38,000	Square Feet	Frontage	=	678	Linear Feet
Mixed Occupancy:		Yes					Height	=	27	Feet (Total Height)
Separated:		Nonseparated					Stories	=	1	Feet
Construction Type:		VB					Average Grade Plane (AGP)	=	-	
Sprinklers:		Yes								

Business (B)	Allowable:	Existing		Calculations:											
Height:	60'	27	Feet	Tabular Area	At	=	36,000 Square Feet								
Number of Stories:	3	1	Stories	Sprinkler Increase	NS	=	9,000 Square Feet								
Area of Use B			Square Feet	Frontage	F	=	678 Linear Feet					w = Minimum 20 feet			
First Floor	-	19,404	Square Feet	Perimeter	P	=	678 Linear Feet								
Second Floor	-	0	Square Feet	Width	W	=	(L1 x w1 + L2 x w2. . .)/F			=	678	x	30	/	678
-	-		Square Feet	**Width**	W	=	20,340	+	0	/	678	=	30		
-	-		Square Feet	Frontage Increase Ca	If	=	1.00	-	0.25	*	W/30				
Footprint	-	26,844	Square Feet	**Perimeter increase**	If	=	1.00	-	0.25	*	1.00	=	75%		
Total Perimeter	-	678	Linear Feet	Area Calculation	Aa	=	At	+	NS	*	If				
Frontage Perimeter	-	678	Linear Feet	**Allowable Area**	Aa	=	36,000	+	9,000	*	75%	=	42,750	SF	

FIGURE 3: IBC 2015 HEIGHT AND AREA CALCULATIONS, CONSTRUCTION TYPE 5B

2015 International Building Code (IBC) - Height and Area Calculations

Use and Occupancy Classification — **General Building Heights and Areas** — **Mixed-occupancy, single story building**

Primary Use(s):			Allowable Building Height	Allowable Number of Stories	Allowable Area Factor					
Business (B)	Primary Use	Office	75'	4	92,000	Square Feet	Footprint	=	26,844	Square Feet
Storage (S-1)	Accessory Use	General Storage				Square Feet	Perimeter	=	678	Linear Feet
Assembly (A-3)	Not Used	General Storage / Accessory				Square Feet	Frontage	=	678	Linear Feet
Mixed Occupancy:		No					Height	=		Feet (Total Height)
Separated:		Nonseparated					Stories	=	1	Feet
Construction Type:		IIB					Average Grade Plane (AGP)	=	-	
Sprinklers:		Yes								

Business (B)	Allowable:	Existing		Calculations:											
Height:	75'	27	Feet	Tabular Area	At	=	92,000 Square Feet								
Number of Stories:	4	1	Stories	Sprinkler Increase	NS	=	23,000 Square Feet								
Total Building Area:		26,844	Square Feet	Frontage	F	=	678 Linear Feet					w = Minimum 20 feet			
First Floor	-	26,844	Square Feet	Perimeter	P	=	678 Linear Feet								
Second Floor	-		Square Feet	Width	W	=	(L1 x w1 + L2 x w2. . .)/F			=	678	x	30	/	678
-	-		Square Feet	**Width**	W	=	20,340	+	0	/	678	=	30		
-	-		Square Feet	Frontage Increase Ca	If	=	1.00	-	0.25	*	W/30				
Footprint	-	26,844	Square Feet	**Perimeter increase**	If	=	1.00	-	0.25	*	1.00	=	75%		
Total Perimeter	-	678	Linear Feet	Area Calculation	Aa	=	At	+	NS	*	If				
Frontage Perimeter	-	678	Linear Feet	**Allowable Area**	Aa	=	92,000	+	23,000	*	75%	=	109,250	SF	

FIGURE 4: IBC 2015 HEIGHT AND AREA CALCULATIONS, CONSTRUCTION TYPE 2B

Exterior Envelope

Roof Assembly

The existing building is a pre-engineered metal building that was appropriate for its original industrial purpose, but has been retrofitted over time to accommodate new uses. As will be described in depth later in this report, the building's structural system is insufficient for the local snow loads. The inadequacy of the building structure results in limitations to the roof replacement options and limitations to improvements to the roof's thermal envelope. In addition, the snow removal operations that are required as part of the snow load monitoring program should be expected to continue for the life of the building.

The original roof was over-framed with the current metal roof surface to provide an insulated cavity , however the retrofit assembly and the resulting thermal breaks within the system has led to winter condensation on the roofing members and damaged ceilings and evidence of mold growth below. The age of the currently existing metal roof surface is not known, but it was in place prior to a renovation design by EH Danson Architects dated in the year 2000. It's assumed that the current roof is from the 1995 wood framed addition, making it likely 25 years old at the writing of this report. Metal roofs are typically expected to last between 40 and 50 years, however, regular snow removal operation could be expected to shorten the life of the roof.

Due to the structural conditions of the roof, there are limited options for replacement. We recommend that a system is chosen that can withstand the building movement and the repeated mechanical snow removal required for the life of the building. The building code also requires that the re-roofing materials cannot increase the dead load on the existing system more than 3 pounds without providing structural upgrades to meet current loading requirements.
The attached Tirey Structural Report indicates that there are two metal roofs on this building with an insulated 6" cavity between them. We believe that this could allow for several re-roofing options in coming years, to summarize:

A – Replace Metal Roof in Kind	Remove the 'upper' metal roof from the over-frame purlins while using the original structural metal roof below as a work surface allowing the replacement of this metal roofing. Although this may be the most expensive re-roofing plan, it would provide a metal finish that would stand up to shoveling much better than a membrane system. (The structural capacity of the 'sub-roof' would have to be confirmed)	$14.63 / SF $392,727
B – Replace both layers of Metal roof with Insulated metal Panels	In order to be able to support an new Insulated Metal Panel roofing system, We would need to remove the two existing system to accommodate the weight of the new system based on the existing building code. This approach would provide a superior, continuously insulated roofing system and require further analysis to determine if the system can be installed within the confines of the existing building code and withstand the current deflection that the roof is experiencing on a yearly basis.	$21.2 / SF $571,777
C – Replace Metal Roof with EPDM Membrane	Remove the upper roof and purlins which would remove 2.7 psf of dead load from the structure and allow us to install 3" of fluted insulation over the original roof and a fully adhered membrane roof, like a 90 mil EPDM membrane. This would probably improve the insulating characteristics and the EPDM would flex with the existing structure, but you will risk punctures with future snow removal. (The structural capacity of the 'sub-roof' would have to be confirmed)	$9 / SF $241,596
D – Coat Existing Metal Roof	Coat existing roof with a spray applied liquid elastomeric roofing similar to the Garland product in the following link. This is the least expensive, but least durable system when considering the future snow removal requirement. https://www.garlandco.com/products/coatings-primers	$4.75 / SF $127,509

Based on our opinion, the options A and B are both worthy of consideration. Option A would provide the most durable and long-lasting assembly but would do little to improve the thermal performance of the roof. Option B would be the most balance approach providing a good, flexible waterproof membrane and increased thermal resistance without thermal bridging but would have some susceptibility to physical damage. I do not feel that option C could be considered a long-term durable solution.

Exterior Wall Assembly

The existing metal siding appears to be original to the 1972 construction and subsequent additions. Some of the metal siding panels, especially on the original 1972 portion appear to have been painted in the past and this finish is currently in a deteriorating condition. The exterior walls are constructed with a system of purlins supporting the exterior metal siding. There are fiberglass batts faced with a vapor barrier in-between the purlins. This system has the same thermal bridging issues that are present with the roof assembly and is very typical in pre-engineered building construction. The areas that we were able to observe, mostly above ceiling locations, were in good condition and do not require immediate concerns from a construction standpoint but it will not provide the energy efficiency that current buildings are expected to attain. Should the owner prefer to upgrade this system to capture some energy efficiency, there are several methods that could be used.

A – Metal Insulated Panels	Replace single skin metal siding with insulated metal panels. This option would increase the thermal envelope of the existing building significantly, and eliminate thermal breaks within the wall. However, this is the most costly option and potentially would have a long return on investment since the largest portion of the building envelope is roof rather than wall.	\$23.25 / SF \$215,318
B – Replace Siding in Kind	Replace existing metal siding with new metal siding to match the existing. This would be primarily an aesthetic upgrade, and would contribute no improvements to the thermal envelope.	\$16.15 / SF \$149,565

Structural Reports

Structural Review, TFMoran, dated November 9,2020

Roof Capacity Evaluation, Tirey & Associates, P.C, dated March 17, 2008

November 9, 2020

Zachary Brock, AIA
Warrenstreet Architects, Inc.
27 Warren Street
Concord, NH 03301

Re: Structural Review
646 Union Street
Andover, MA

Dear Mr. Brock,

As requested, we have visited the above referenced facility to perform a visual inspection of the existing structure. The purpose of our review was to gather enough information to provide an opinion on the condition of the existing structure and the feasibility of adding an additional floor.

The existing building is a single-story Pre-Engineered Metal Building (PEMB), which was originally built for the Littleton Coin and Stamp Company in 1972. The current building has a footprint of approximately 26,800sf. According to their website the original building was 19,000sf, which indicates that at least one addition has been added since the original construction.

As part of our review we were provided a structural report by Jeff Tirey, PE dated March 17, 2008 which indicated that there were two additions to the original building. The first addition was steel frame construction and the second addition was timber frame construction. The date of the additions is unknown.

According to Mr. Tirey the roof capacity of the different sections of the building vary from 15 to 22.5 psf and he recommended some minimal reinforcing to bring the minimum capacity up to 22.5. It is not clear if the reinforcing was performed and should be confirmed by field staff. The required snow load capacity of the building is approximately 53.9 psf. Based on his analysis the roof, best case, only has 42% of the required capacity which is clearly undersized.

In his report Mr. Tirey recommends full scale reinforcing or a monitoring program which would require shoveling whenever the existing roof load exceeded the 22.5 psf threshold. It is our understanding that the monitoring program was implemented and has been followed for several years. If further reinforcing is not provided, then the monitoring program will need to continue for the remaining life of the building.

Based on this information, addition of a second floor would be difficult. If a second floor were to be added it would require new lateral systems, additional columns & footings and a new second floor and roof built over the existing roof. The original columns could be used as part of the platform but would most likely require reinforcing. In addition, a geotechnical investigation and exposure of representative foundations would be required to calculate foundation load capacities.

48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-4836
www.tfmoran.com

At the time of our visit most of the existing structure was covered by architectural finishes so were only able to observe small areas. Based on items visible at the time of our visit, the existing structure appears to be in adequate condition. No deficiencies were observed or indicated by the local building staff, other than the requirement for snow load monitoring.

If you have any questions or wish to discuss this issue further, please feel free to contact our office.

Sincerely,
TFMoran, Inc.

Paul E. Sbacchi, PE
Principal

TIREY & ASSOCIATES, P.C.
CONSULTING STRUCTURAL ENGINEERS

Littleton Area Learning Center
c/o Mr. Jon Freeman, President
Northern Community Investment Corp.
347 Portland St.
St. Johnsbury VT 05819

RE: Littleton Area Learning Center - Roof Load Capacity Evaluation, Littleton, NH

Dear Jon:

At your request, we have performed a load capacity evaluation for the roof structure of the existing building called the Littleton Area Learning Center, located on Union St. in Littleton, NH. The purpose of this evaluation is to establish the snow load that can be safely carried by the structure. For purposes of this report, the side of the building facing Union St. is called the north side.

Existing Structure Description

The building is comprised of an original (pre-engineered) metal building, a metal building addition on the east side of the original building and a small wood framed addition on the south side, just to the west of the east addition. The original single story metal building, which we will call section 1, is approximately 150 ft. in the north-south direction and 125 ft. in the east-west direction. The metal building addition on the east side of the original building, which we will call section 2, is approximately 40 ft. in the east-west direction and 174 ft. in the north-south direction. The wood framed addition on the south side, which we will call section 3, is approximately 24 ft. in the north-south direction and 35 ft. in the east-west direction. The roof plane for all three sections of the building are co-planer, with the ridge of this low slope roof forming a continuous line from east to west. While the original roof was a screwed down metal roof, a standing seam overlay roof was added on top of the original roof to address leakage problems.

Section 1 is framed with 10 3/8" deep Z-purlins @ 3'-4" o/c spanning 25 ft and supporting the original screwed down metal roof. The purlins are supported by custom fabricated steel girders which span in the north-south direction. There are three girder spans of about 50 ft. each per frame line. The two interior columns supporting the girder are steel pipe columns while the two end columns are tapered steel I-shaped columns. There are 5 bays of 25 ft. each to create the 125 ft. width of this section of the building. The purlins are simply supported at their ends, i.e., they are not continuous across the top of the girders. Purlin braces from some of the purlins to the bottom flange of the girders provide lateral bracing for the bottom flange where it is, or may be, in compression due to bending. The east and west gable end walls of this section have C-section light gage cold rolled beams spanning 20 ft, supporting the purlins. Columns in these walls are also C-section light gage cold rolled members.

Section 2 is framed with 8 1/4" deep Z-purlins @ 3'-4" o/c spanning 20 ft and supporting the original screwed down metal roof. The purlins are supported by a custom fabricated steel girder

P.O. Box 639, 512 Meadow St., Littleton, NH 03561
Tel:603-444-6211 Fax:603-444-0314
e-mail: tirey@tireype.com

frame which spans in the north-south direction. There are 6 girder bays of varying span lengths. The ridgeline is not centered on the overall length of the frame, but is located to match the ridgeline of the original Section 1. The two end columns of the frame are tapered I-shaped columns while the remainder of the interior columns are fabricated I-shaped sections. There are 2 bays of 20 ft. each to create the 40 ft. width of this section of the building. The purlins are simply supported at their ends, i.e., they are not continuous across the top of the girders. Purlin braces from some of the purlins to the bottom flange of the girder provide lateral bracing for the bottom flange where it is, or may be, in compression due to bending. The east and west gable end walls of this section have C-section light gage cold rolled beams spanning 20 ft, supporting the purlins. Columns in these walls are also C-section light gage cold rolled members.

Section 3 was the last addition to the occupied space of the building. It is framed with 2x8 @ 2'-0" o/c wood roof joists spanning east-west. The joists are supported by 2-2x8 wood beams spanning in the north-south direction. Pipe columns support the wood beams.

The newer standing seam metal roof overlay was added on top of the existing roof without any strengthening of the roof. The overlay system weighs about 2.7 psf (pounds per square foot) and has a ventilation space above the 5" - 6" of fiberglass insulation laid on top of the original roof. The ventilation space changes the thermal performance characteristics of the roof and the associated load requirements.

Steel samples were cut from one purlin in each of sections 1 and 2 and sent for testing to determine yield strength, tensile strength and the ASTM classification of steel. Tests were performed by Thielsch Engineering, Inc. of Cranston, RI. A copy of their test report is attached to this report.

We have determined that the original building, Section 1, was constructed in 1972 based on information provided by David Sundman of Littleton Coin Co.

Building Roof Loads

The total gravity load that is imposed on the roof is made up of the dead load of the building structure (roofing, insulation, purlins, hung ceiling, sprinkler system, mechanical systems, etc.) plus the snow loads. When evaluating the roof load capacity, we determine the total safe load capacity of the framing and then deduct the dead load of the structure to arrive at the snow load capacity. The overall capacity is determined by the weakest component in the structure.

Any time dead load is added to the roof structure without changing the framing system to accommodate the added weight, the snow load capacity of the structure decreases by the same amount as the added dead load. That has happened with this building.

Snow loads and other building characteristics used to design a roof structure have changed over time. There is a marked difference in the load values used before the oil crisis and embargoes of the late 1970's and after that time. Whereas before the oil crisis insulation values in roofs was relatively low, significant heat loss through the roof minimized the snow accumulation on the roof and kept the actual snow load at lower levels. Post oil crisis, insulation values were increased significantly thereby reducing heat loss, permitting greater accumulation of snow and creating higher snow loads on the roof. The thermal characteristics of the roof as well as the surrounding terrain also influence the load.

The current methodology for determining the snow load applied to a roof starts with a *ground snow load* at the site specific elevation and modifies that value by a thermal factor, an importance factor, an exposure factor and a constant of 0.7 to arrive at the *flat roof snow load.* For a low slope roof like this one (1:12 pitch), there is no adjustment to the *flat roof snow load* for the slope. The flat roof design snow load using the current building code yields a **flat roof design snow load of 53.9 psf,** which is the actual load value used to design the roof structure. Current code also requires that the roof be designed for higher unbalanced snow loads resulting from snow being blown from one side of the roof ridge to the other. Codes in effect at the time this building would have been designed did not require that this low slope roof be designed for unbalanced loads.

Load Capacity Analysis Results

Section 1 of the building has a **safe uniform, balanced snow load capacity of 22.6 psf**. The capacity is controlled by the light gage cold rolled purlins. Section 2 of the building has a **safe uniform, balanced snow load capacity of 17.1 psf**. The capacity of this section is controlled by the 8" deep interior columns supporting the girders. Section 3 of the building has a **safe uniform, balanced snow load capacity of 15 psf**. The capacity of this section is controlled by the 2-2x8 roof beams.

The fact that the columns of section 2 limit the capacity of that area is a concern. Failure of one or more of the columns will cause a rapid, progressive collapse of this section of the building. It is feasible to reinforce the steel columns by welding plates onto the steel flanges to increase the cross sectional area and associated member properties. This action would change the capacity limiting member from the columns to the purlins, which have a snow load capacity of **22.6 psf**. While this does not seem like a significant improvement in the load capacity, it represents both a 32% increase and changes the likely failure point under excessive load to the secondary purlin framing. Loss of a purlin is not as likely to precipitate a rapid collapse failure that loss of a column would yield. This is an important point in the overall safety evaluation of the building.

The question that arises is why does the building have such a low snow load capacity? The answer lies in the dead weight of the roof and building systems supported by the roof. We have seen historically that the metal building industry carries relatively low dead loads for buildings. In addition to the weight of the original metal roof and purlins, they frequently added only 1 to 3.5 psf of additional dead load. This building has additional dead loads of approximately 8.7 psf due to the added roof, hung ceiling and mechanical systems hung from the roof. If we add the 8.7 psf to the 22.6 psf of capacity for the purlins, there is just over 30 psf of original snow load capacity. Based on past experience and examination of similar metal buildings, a 30 psf snow load would have been a typical design load used for this age building.

Recommendations

The building currently has a relatively low snow load capacity compared to current requirements. Insulation which has been added into the roofing system drives the structure to a thermal performance level that is closer to today's insulating standards than those that existed before the 1970's oil crisis. Therefore, it is my opinion that the current snow load capacity is deficient.

There are two ways to address this deficiency. The first alternative is to upgrade the building structure to the required capacity. This alternative is extremely costly, disruptive to building operations and tenant occupancy, and involves not only the superstructure but the foundations as well. We do not recommend this alternative because of these factors.

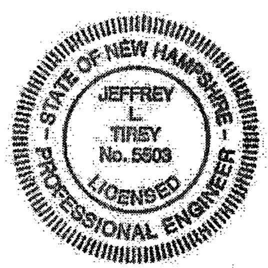
The second alternative is to establish a snow load monitoring program that is used to determine when snow needs to be removed from the roof. Based on the known capacity of the three sections of the building, a passive, visual gauge system can be installed on the roof. This gauge system would have depth gauges that are used to determine if any action is required based on the snow depth. Different actions are required for different depths of snow, including the possible sampling and weighing of the snow and removal of snow from the roof. We established just such a monitoring program for the gym roof of the K-12 school in Concord, VT two years ago. A monitoring program permits you to take action only when it is required to maintain safety of the building. This helps to keep operating expenses lower and does not require a large capital investment in structural upgrades. **We recommend that you establish a snow load monitoring program for this building to determine when action is required to maintain safety of the building structure and its occupants.** With a written procedure in place and on file with the Littleton Fire Department, we believe that you can safely occupy the building with the approval of the Town.

We also recommend that the I-shaped interior columns in Section 2 that support the girder be reinforced to increase their load capacity so that they are no longer the weakest component of the roof structure. Finishes will need to be removed to access the columns to install new steel plates and perform welding. Finishes will then need to be re-installed. This limited structural reinforcing will improve the overall safety of this section of the building.

We can assist you in the establishment of the recommended snow load monitoring system and written procedures and design of column reinforcements, although these services are beyond the scope of our agreement for this evaluation. We would welcome the opportunity to put this program together for you if you wish.

Please call if you have any questions or we can be of further assistance.

Truly Yours,



Jeffrey L. Tirey, P.E., SECB

jlt

Enclosure

TIREY & ASSOCIATES, P.C.
CONSULTING STRUCTURAL ENGINEERS

March 17, 2008

Littleton Area Learning Center Roof - Snow Load Monitoring Procedures and Actions

1. Install sixteen (16) snow depth monitor devices (SDM) at locations indicated on SKS-02.

2. On the morning after a snowfall but no less than once per week, determine the depth of snow on the roof by which rods are still exposed on each of the sixteen SDM. Record the depth of snow for each SDM for each date of depth determination.

3. If the depth of snow for all sixteen of the SDMs is less than or equal to 12", then no action is required until the next reading unless snow falls and increases the depth of snow on the roof.

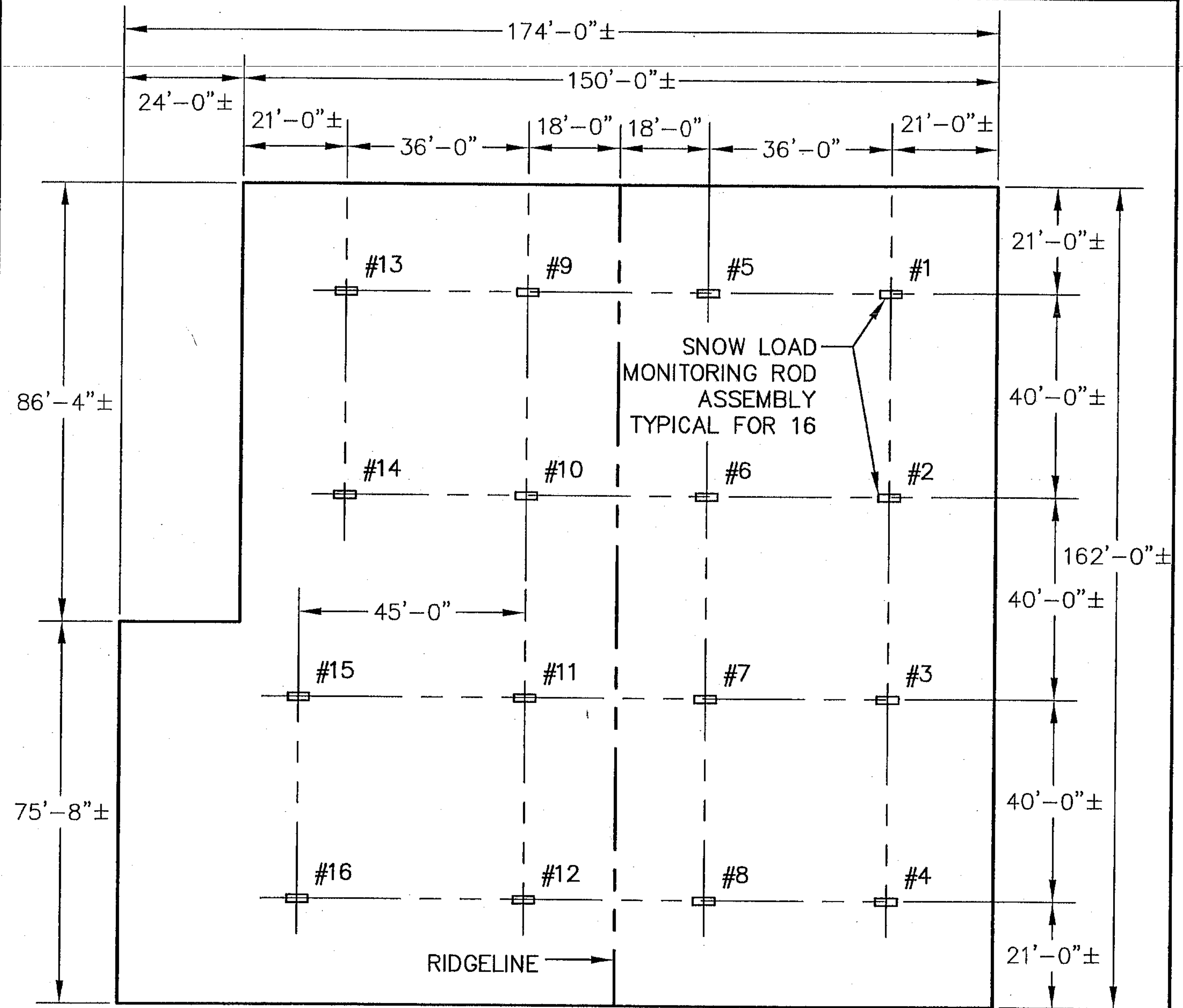
4. If a pair of SDMs on a line perpendicular to the ridgeline both have snow depths greater than 16" (tangerine orange rods covered), sample snow adjacent to the SDMs to determine the weight on a pounds per square foot (psf) basis. If two adjacent SDMs on one side of the ridgeline both have snow depths greater than 16" (tangerine orange rods covered), sample snow adjacent to the SDMs to determine the weight on a pounds per square foot (psf) basis. If the snow depth at any one SDM is 2 times or more than the depth at any of the adjacent SDMs and the deeper snow is more than 16" deep (tangerine orange rods covered), sample snow adjacent to the SDM with deep snow to determine the weight on a pounds per square foot (psf) basis.

   If the weight of the snow is less than or equal to 22.5 psf, no action is required.
   If the weight of the snow is greater than 22.5 psf, vacate the building and remove all but 2"± of snow from the roof where the depth is greater than 16".
   <u>If all rods on either side of the roof ridgeline are covered, vacate the building and remove the snow from the roof</u>.

5. Snow sampling procedure: Samples should be taken within a 5' radius of the SDM, in an undisturbed area and not in the same location as previous samples. Measure depth of snow to the nearest 1/4" using a thin straightedge ruler or yardstick and record the depth. Push sampler down through depth of snow and ice until the sampler is in contact or almost in contact with the metal roofing. Dig snow from around sides of sampler down to the metal roof without damaging the roofing. Slide thin, flat sheet metal plate (e.g., a flat cookie sheet) under the bottom of the sampler to contain snow from falling out of the bottom of the sampler. Empty sampler contents into a pre-weighed bucket and weigh bucket and contents. Deduct bucket weight to determine contents weight and enter onto spreadsheet at appropriate SDM location and date. The cross sectional area of the sampler must be calculated and entered onto the spreadsheet using units of square inches. The sampler is recommended to be round stove pipe of either 6" or 8" diameter. The sampler lenngth should not be less than 3'-0".

6. Snow removal procedures: **NEVER REMOVE SNOW FROM A HIGHER ROOF AND PLACE IT ON A LOWER ROOF**. Always start snow removal from the eaves and gable ends of the building working toward the interior of the field of the roof. Do not create piles of snow on the roof. Leave 1" - 2" of snow on top of the metal roofing to prevent damage to the roofing. Do NOT use metal shovels or scoops or shovels with metal edges. ALWAYS exercise care and appropriate and/or required safety precautions to avoid snow removal personnel falling off the roof. The owner or snow removal contractor shall be solely responsible for all safety precautions and programs associated with removal of snow from the roof.

P.O. Box 639, 512 Meadow St., Littleton, NH 03561
Tel:603-444-6211 Fax:603-444-0314
e-mail: tirey@tireype.com



ROOF PLAN FOR MONITORING SYSTEM

NOT TO SCALE

NOTES:

1. PLACE ROD ASSEMBLIES WITH LONG DIMENSION PARALLEL TO ROOF STANDING SEAMS.
2. PLACE TALLEST ROD AT UPSLOPE END OF ASSEMBLY.
3. PLACE ASSEMBLIES BETWEEN STANDING SEAMS OF ROOF, FLAT ON THE ROOF PAN.

SKS-01

JOB #207.074.3
LITTLETON AREA LEARNING CENTER
SNOW MONITORING SYSTEM
LITTLETON, NEW HAMPSHIRE
03-17-08

TIREY & ASSOCIATES, P.C.
CONSULTING STRUCTURAL ENGINEERS
P.O. BOX 839, LITTLETON, NH 03561
Telephone: (603) 444-6211 Fax: (603) 444-0314
E-mail: tirey@tireype.com
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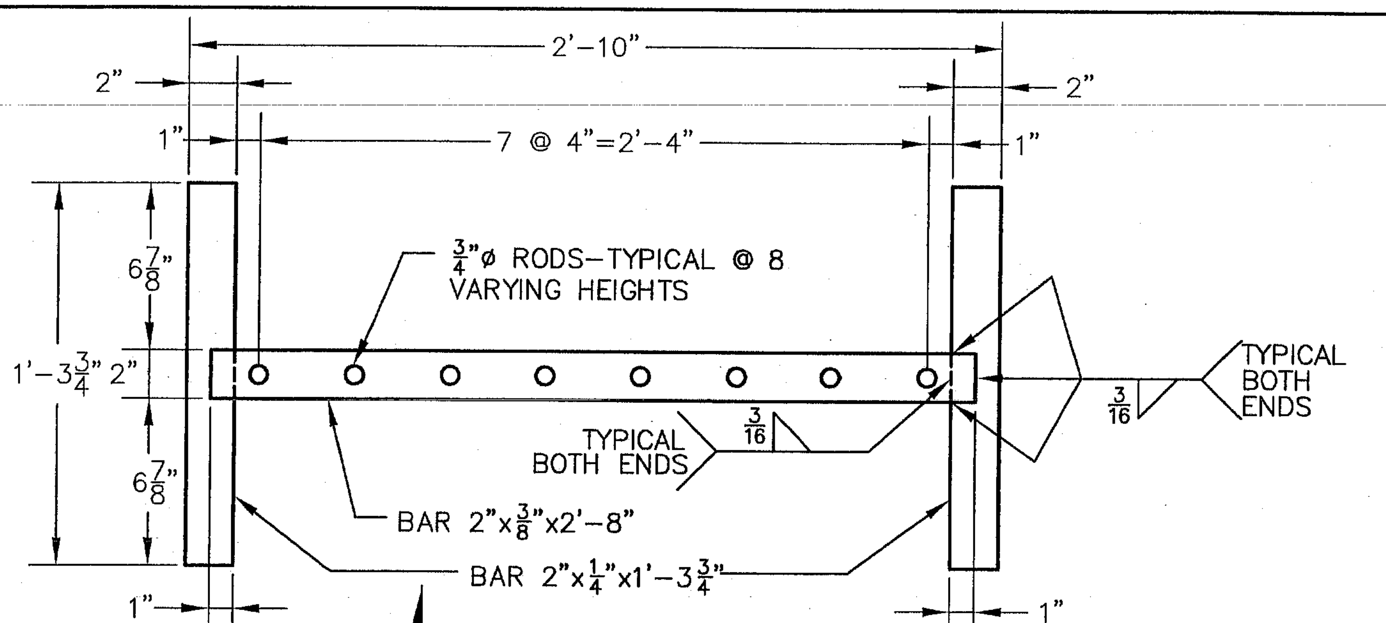
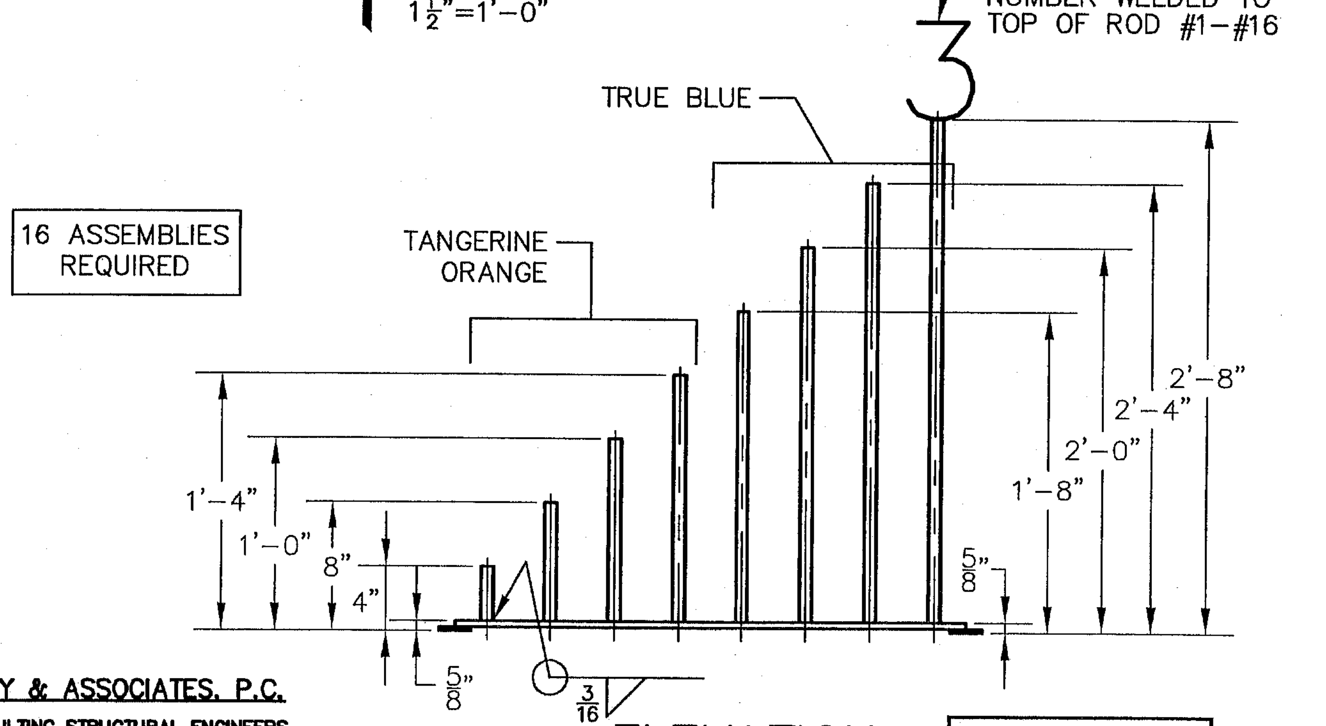


PLAN VIEW

$1\frac{1}{2}$"=1'–0"



ELEVATION

1"=1'–0"

TIREY & ASSOCIATES, P.C.

CONSULTING STRUCTURAL ENGINEERS

P.O. BOX 639, LITTLETON, NH 03561

Telephone: (603) 444-6211 Fax: (603) 444-0314

E-mail: tirey@tireype.com

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SKS–02

JOB #207.074.3

LITTLETON AREA LEARNING CENTER

SNOW MONITORING SYSTEM

LITTLETON, NEW HAMPSHIRE

03–17–08

NOTES:

1. STEEL FOR BARS AND RODS SHALL CONFORM TO ASTM A36.
2. WELDING ELECTRODES SHALL BE E70XX.
3. CLEAN ALL STEEL AFTER FABRICATION TO MEET THE REQUIREMENTS OF SSPC–SP6, COMMERCIAL BLAST CLEANING.
4. PAINT ALL STEEL WITH TNEMEC SERIES 10 MODIFIED ALKYD PRIMER AT 2.0–3.5 MILS DRY FILM THICKNESS, GRAY OR WHITE COLOR. PAINT THE BOTTOM SUPPORT BARS AND THE SHORTEST 4 RODS WITH 2 COATS OF TNEMEC SERIES 1029 ENDURATONE ACRYLIC POLYMER PAINT AT 2.0 – 3.0 MILS DRY FILM THICKNESS PER COAT, COLOR TANGERINE ORANGE SAFETY. PAINT THE LONGEST 4 RODS WITH 2 COATS OF TNEMEC SERIES 1029 ENDURATONE ACRYLIC POLYMER PAINT AT 2.0–3.0 MILS DRY FILM THICKNESS PER COAT, COLOR TRUE BLUE SAFETY.

NOTES:

1. REMOVE CEILING TILES, CEILING TRACK, GYPSUM BOARD WALL FINISH, BLOCKING AND WALL STUDS AS REQUIRED TO PROVIDE FULL ACCESS TO THE COLUMN TO PERFORM THE REINFORCING WORK.

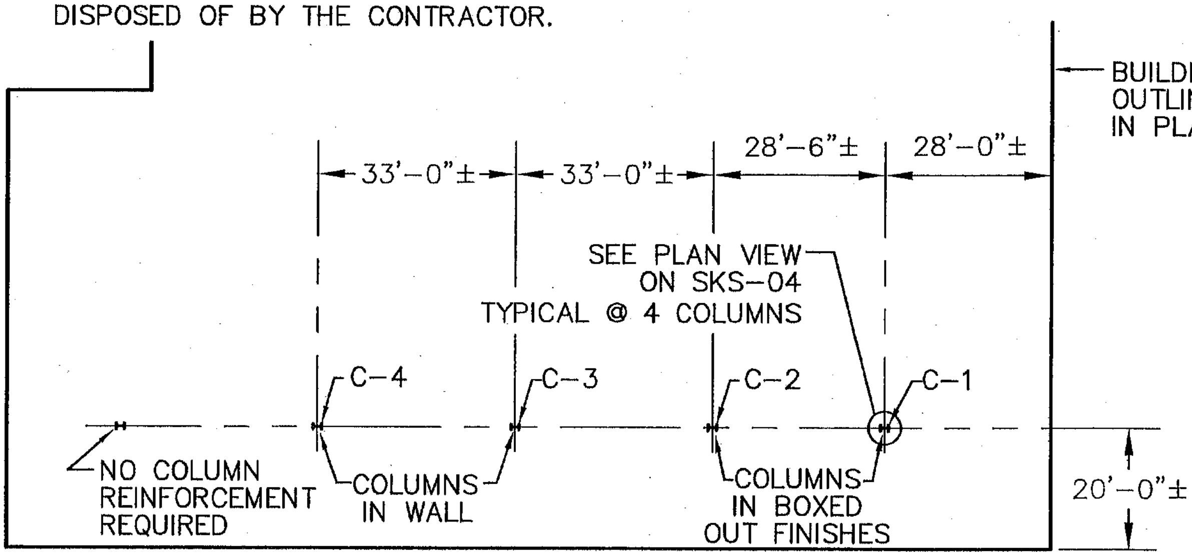
2. PERFORM ALL FIELD WELDING OPERATIONS AFTER THE CLOSE OF NORMAL BUSINESS HOURS FOR THE TENANT IN THE SPACE WHERE THE WORK IS TO BE PERFORMED. COORDINATE WITH THE OWNER AND TENANT REGARDING ALL SECURITY SYSTEMS NEEDS AND MAINTENANCE.

3. PROVIDE DUCTED EXHAUST SYSTEMS STARTING FROM IMMEDIATELY ADJACENT TO THE FIELD WELDING WORK TO REMOVE SMOKE AND FUMES DIRECTLY TO THE OUTDOORS. DETERMINE IF THE FIRE ALARM SYSTEM NEEDS TO BE TEMPORARILY DEACTIVATED DURING WELDING OPERATIONS. IF SO, COORDINATE ANY TEMPORARY FIRE ALARM DEACTIVATION WITH THE OWNER, ALL TENANTS AND THE LOCAL FIRE DEPARTMENT.

4. PROTECT THE INTERIOR AREAS OF THE BUILDING FROM WELDING SPARKS AND FIRE.

5. FOLLOWING COMPLETION OF ALL COLUMN REINFORCEMENT WORK AND ANY REQUIRED INSPECTIONS BY THE OWNER'S ENGINEER, RECONSTRUCT ALL COLUMN ENCLOSURES AND WALLS BACK TO THEIR ORIGINAL CONDITION USING SIMILAR MATERIALS. ALL PAINTING SHALL INCLUDE PRIME PAINTING ON NEW GYPSUM BOARD AND TWO TOP COATS TO MATCH THE EXISTING COLORS. NEW PAINT SHALL BE EXTENDED AND COMPLETED ON NEW REPLACEMENT WORK AND BACK TO THE NEAREST ADJACENT INSIDE OR OUTSIDE WALL CORNER.

6. ALL DEBRIS AND TRASH SHALL BE REMOVED FROM THE WORK SPACE AND DISPOSED OF BY THE CONTRACTOR.



COLUMN LOCATIONS REQUIRING REINFORCEMENT

NOT TO SCALE

SKS-03

TIREY & ASSOCIATES, P.C.

CONSULTING STRUCTURAL ENGINEERS
P.O. BOX 639, LITTLETON, NH 03561
Telephone: (603) 444-6211 Fax: (603) 444-0314
E-mail: tirey@tireype.com

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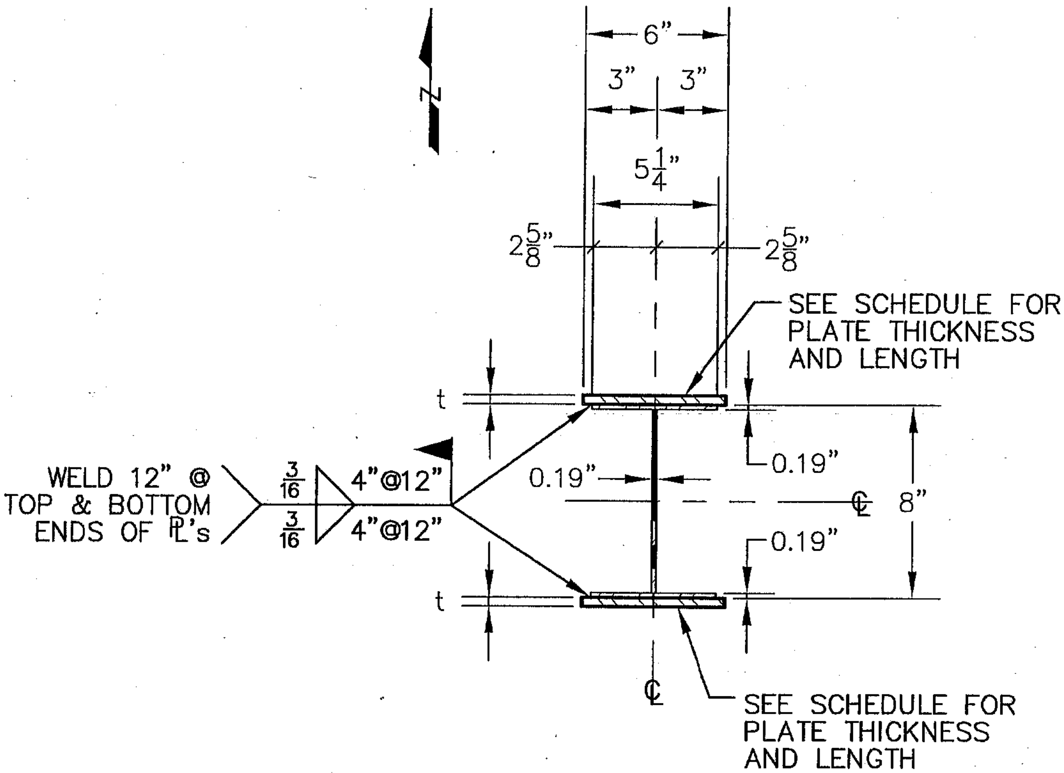
LITTLETON AREA LEARNING CENTER
SNOW MONITORING SYSTEM
LITTLETON, NEW HAMPSHIRE
03-17-08



COLUMN MARK	℄ SIZE		
	WIDTH	THICKNESS (t)	LENGTH–V.I.F.
C–1	6"	$\frac{1}{4}$"	12'–5$\frac{1}{2}$"±
C–2	6"	$\frac{3}{8}$"	14'–10"±
C–3	6"	$\frac{3}{8}$"	15'–0$\frac{1}{4}$"±
C–4	6"	$\frac{1}{4}$"	12'–3"±

PLATE SHALL BE ASTM A572, GRADE 50.
WELDING ELECTRODES SHALL BE E70XX, LOW HYDROGEN.
DO NOT PAINT PLATES.

PLAN DETAIL

SCALE: 1$\frac{1}{2}$"=1'–0"

SKS–04

TIREY & ASSOCIATES, P.C.
CONSULTING STRUCTURAL ENGINEERS
P.O. BOX 639, LITTLETON, NH 03561
Telephone: (603) 444–6211 Fax: (603) 444–0314
E-mail: tirey@tireypc.com ©COPYRIGHT, 2008

JOB #207.074.3
LITTLETON AREA LEARNING CENTER
SNOW MONITORING SYSTEM
LITTLETON, NEW HAMPSHIRE
03–17–08

LITTLETON AREA LEARNING CENTER
SNOW DEPTH AND LOAD MONITORING DATA

DATE OF OBSERVATION	SDM#	DEPTH, IN INCHES	MEASURED WEIGHT - POUNDS	UNIT WEIGHT - PSF	IS ROOF CAPACITY EXCEEDED?	ACTION REQUIRED	SNOW DENSITY - PCF
SAMPLE	**1**	10.0	10.0	28.6	YES	REMOVE SNOW	34.4
SAMPLE	**2**	6	6	17.2	NO	NONE	34.4
SAMPLE	**3**	3	3	8.6	NO	NONE	34.4
SAMPLE	**4**	18	18	51.6	YES	REMOVE SNOW	34.4
SAMPLE	**5**	12	12	34.4	YES	REMOVE SNOW	34.4
SAMPLE	**6**	13	13	37.2	YES	REMOVE SNOW	34.4
SAMPLE	**7**	15	15	43.0	YES	REMOVE SNOW	34.4
SAMPLE	**8**	5	5	14.3	NO	NONE	34.4
SAMPLE	**9**	7	7	20.1	NO	NONE	34.4
SAMPLE	**10**	3	3	8.6	NO	NONE	34.4
SAMPLE	**11**	2	2	5.7	NO	NONE	34.4
SAMPLE	**12**	4	6	17.2	NO	NONE	51.6
SAMPLE	**13**	6	6	17.2	NO	NONE	34.4
SAMPLE	**14**	7	7	20.1	NO	NONE	34.4
SAMPLE	**15**	25	16	45.8	YES	REMOVE SNOW	22.0
SAMPLE	**16**	6	6	17.2	NO	NONE	34.4

PREPARED BY **TIREY & ASSOCIATES, P.C., LITTLETON, NH**

LITTLETON AREA LEARNING CENTER
SNOW DEPTH AND LOAD MONITORING DATA

DATE OF OBSERVATION	SDM#	DEPTH, IN INCHES	MEASURED WEIGHT - POUNDS	UNIT WEIGHT - PSF	IS ROOF CAPACITY EXCEEDED?	ACTION REQUIRED	SNOW DENSITY - PCF
	1			0.0	NO	NONE	NOT CALC'D
	2			0.0	NO	NONE	NOT CALC'D
	3			0.0	NO	NONE	NOT CALC'D
	4			0.0	NO	NONE	NOT CALC'D
	5			0.0	NO	NONE	NOT CALC'D
	6			0.0	NO	NONE	NOT CALC'D
	7			0.0	NO	NONE	NOT CALC'D
	8			0.0	NO	NONE	NOT CALC'D
	9			0.0	NO	NONE	NOT CALC'D
	10			0.0	NO	NONE	NOT CALC'D
	11			0.0	NO	NONE	NOT CALC'D
	12			0.0	NO	NONE	NOT CALC'D
	13			0.0	NO	NONE	NOT CALC'D
	14			0.0	NO	NONE	NOT CALC'D
	15			0.0	NO	NONE	NOT CALC'D
	16			0.0	NO	NONE	NOT CALC'D

Mechanical and Electrical Report

Mechanical and Electrical infrastructure Facility Assessment by Yeaton Associates, Inc, dated November 4, 2020.

Mechanical and Electrical Infrastructure Facility Assessment

Client Name:	**Community College System of New Hampshire**
Project Name:	**White Mountain Community College (WMCC)**
Project Location:	**646 Union Street – Littleton, New Hampshire**
Document Date:	**November 24, 2020**
YA Project #:	**20074ME**

Introduction

Yeaton Associates, Inc. has been engaged by Warrenstreet Architects, Inc. to assess existing mechanical and electrical infrastructure that currently serves two (2) buildings located at 646 Union Street in Littleton, New Hampshire.

One building totals approximately 25,700 square feet across a single level and houses White Mountain Community College (12,000 square feet) along with NH Employment Security, AHEAD and other tenants. The other building is approximately 4,000 square feet and is currently used as a (leased) fitness center.

White Mountain Community College in Littleton is looking to expand their educational offerings and has requested assistance with assessing the buildings and infrastructure to assist in the decision making process.

646 Union Street, Littleton, New Hampshire

General Observations

Yeaton Associates has provided engineering services at the subject facility for many years, including when the original owner, Littleton Stamp & Coin Company, was located there. Yeaton also leased a suite in the subject facility for a year during 2019 into 2020. As a result, we offer the following knowledge as general, and hopefully helpful, information.

- The original metal building has envelope insulation details that do not provide thermal breaks between steel framing members. As a result, condensation develops on roof framing members and other miscellaneous locations that lead to water dripping.

- Fiberglass batt insulation has been laid on top of suspended ceilings throughout the facility which has been disturbed over the years and no longer provides a consistent plane of insulation.

- The fiberglass batt absorbs dripping water resulting from condensation in the (cold) attic space which leads to sagging and discolored ceiling tiles, as well as mold growth.

- The existing steel roof framing members are not appropriate to support roof mounted air handling equipment.

- The building's thermal envelope in general may be considered inefficient.

- Exhaust fumes from idling diesel vehicles in the parking lot, primarily on the west side of the facility, contaminate outdoor air intake to ground mounted air handling units requiring closure of intake dampers.

- The existing free standing 4,000 square foot building currently used as a fitness center was originally constructed as a manufacturing facility and, as a result, has a dedicated 480 volt, 3 phase electrical service. Sewer from the subject facility is pumped, not gravity, and is the building is heated by a single oil fired hot air furnace fed from a 275 gallon above ground storage tank.

Yeaton Associates, Inc. | Bedford, New Hampshire | Littleton, New Hampshire | T: 603.444.6578

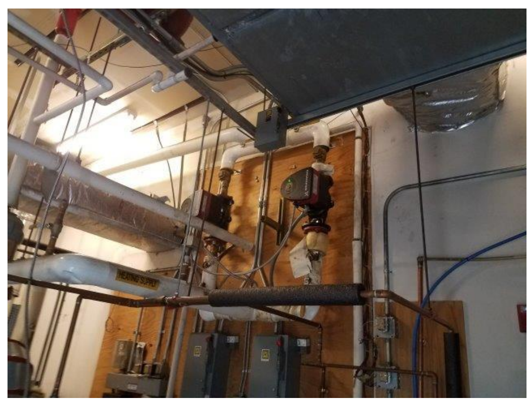
Existing Mechanical

❖ Existing Heating, Ventilating and Air Conditioning (HVAC) Systems

1. The subject facility is heated by two (2) oil fired Burnham model V905A sectional cast iron boilers each rated for 562,000 Btuh net capacity. Fuel oil that serves the boilers is stored in an old single wall steel construction 1,000 gallon capacity underground tank located immediately outside of the boiler room. Condition of the existing tank is unknown, and certainly warrants inspection and possible replacement as part of any property purchase plan.

   A relatively new fuel oil transfer pump housed in the boiler room feeds oil to the two (2) boilers and a domestic water heater. The two (2) boilers are sized to provide essentially 66% redundancy and are programmed for lead/lag/automatic alternation operation. Hot water generated by the boiler plant is circulated by means of relatively new variable speed inline pumps programmed for lead/lag/automatic alternation operation. The heating hot water system is automatically reset in response to outside air temperature through a dedicated boiler plant digital controller. Hydronic heating terminals serving the building include fin-tube radiation, cabinet heaters, ducted heating coils and air handling unit hot water coils, all fit-up with digital control valves.

   Fuel oil consumption for fiscal years 2019 and 2020 average 7,147 gallons annually, or 0.28 gallons per square foot per year, which is surprising low considering the building's insulation shortcomings. However, we suspect that outside air introduced through the existing HVAC systems is minimal which would help to explain the rather conservative annual fuel consumption.



2. Ventilation for the facility is accomplished by six (6) packaged air conditioning units set on grade and three (3) indoor air handling units, along with a number of exhaust fans that extract air from toilet rooms, janitor closets and other miscellaneous spaces. Five of the six packaged air conditioning units are very old at this point and time and will likely need replacement within the next five years or so.

3. Air conditioning is provided to specific areas throughout the building by means of the packaged air conditioning units that reside on grade noted above, along with multiple ductless split air conditioning systems. The existing air conditioning systems for the most part utilize R-22 refrigerant which is being phased out of production due to environmental impact. As mentioned previously, several of the air conditioning systems are nearing the end of rated service life and replacement cost should be factored into any property purchase plan.

❖ Plumbing Systems

1. The existing sanitary drainage waste and vent system is in good condition and should prove relatively simple to rework to accommodate building renovations.

2. Both water and sewer connect to municipal services.

3. Plumbing fixtures are aged in some cases, but in good and operating condition throughout the facility.

4. The domestic hot water generation plants are in good condition.

❖ Fire Protection System

1. The entire facility is protected by a NFPA-13 compliant automatic sprinkler system that appears to be in good condition and is regularly serviced, maintained and tested.

2. The Littleton Fire Department does routine inspections of the facility, including the sprinkler system.

Existing Electrical

❖ Existing Service Entrance

1. The existing electrical service is an 800 (+/-) ampere, 120/208V, three phase, four wire main service. Individual utility meters serve main circuit breaker panels that feed multiple panelboards throughout the facility. The switchgear is manufactured by Square D.

2. The service is fed from a utility pad mounted transformer located on the current property.

❖ Existing Panelboards and Branch Circuits

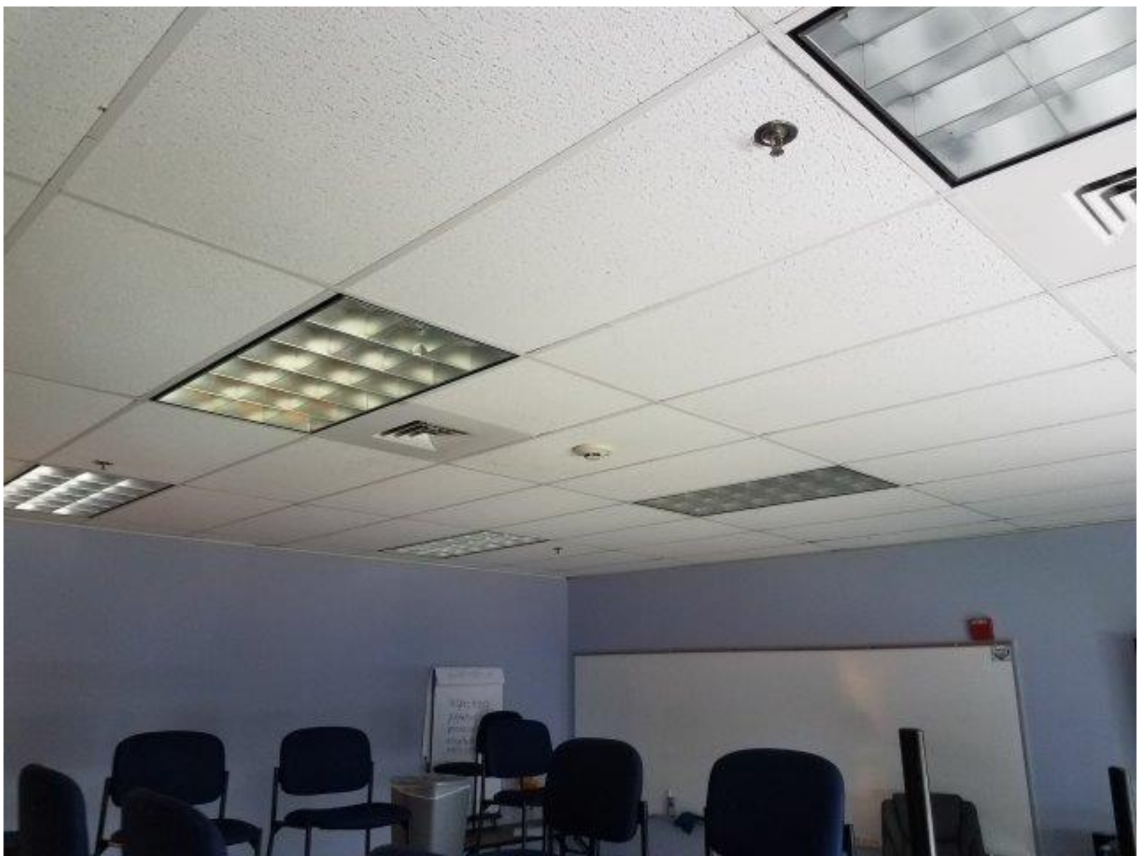
1. Panelboards are installed throughout the facility with many being original and others added over the years to accommodate tenant spaces. Panelboards amperage ratings vary, but are 120/208V, three phase, four wire. The panels appear to be in good shape and in some cases candidates for expansion as extra circuit breakers are available. The panels are labeled with typed directory cards and in some cases have spare capacity available for future circuits.

2. The circuit breakers within panelboards feed various branch circuits throughout the building, as well as HVAC equipment

3. All areas of the building are provided with general purpose 120V receptacles. The coverage appears adequate as there are not many power strips used to compensate for lack of receptacle locations.

❖ Existing Lighting

1. Existing interior lighting systems are a mixture of recessed and surface mounted fluorescent and LED lighting fixtures. The majority of the fixtures are provided with 4' fluorescent T8 lamps. Some surface mounted fixtures have replacement lamps installed. The existing lighting may be maintained, but replacement and new lighting fixtures should be LED type.



2. Exterior lighting is a mixture for building mounted fixtures and site fixtures mounted on poles. Fixtures are in good conditions.

❖ Existing Fire Alarm System

1. The existing panel fire alarm system is a conventional zone type. The panel is aged at this point and should be reviewed by a licensed fire alarm installer to assess continued service.

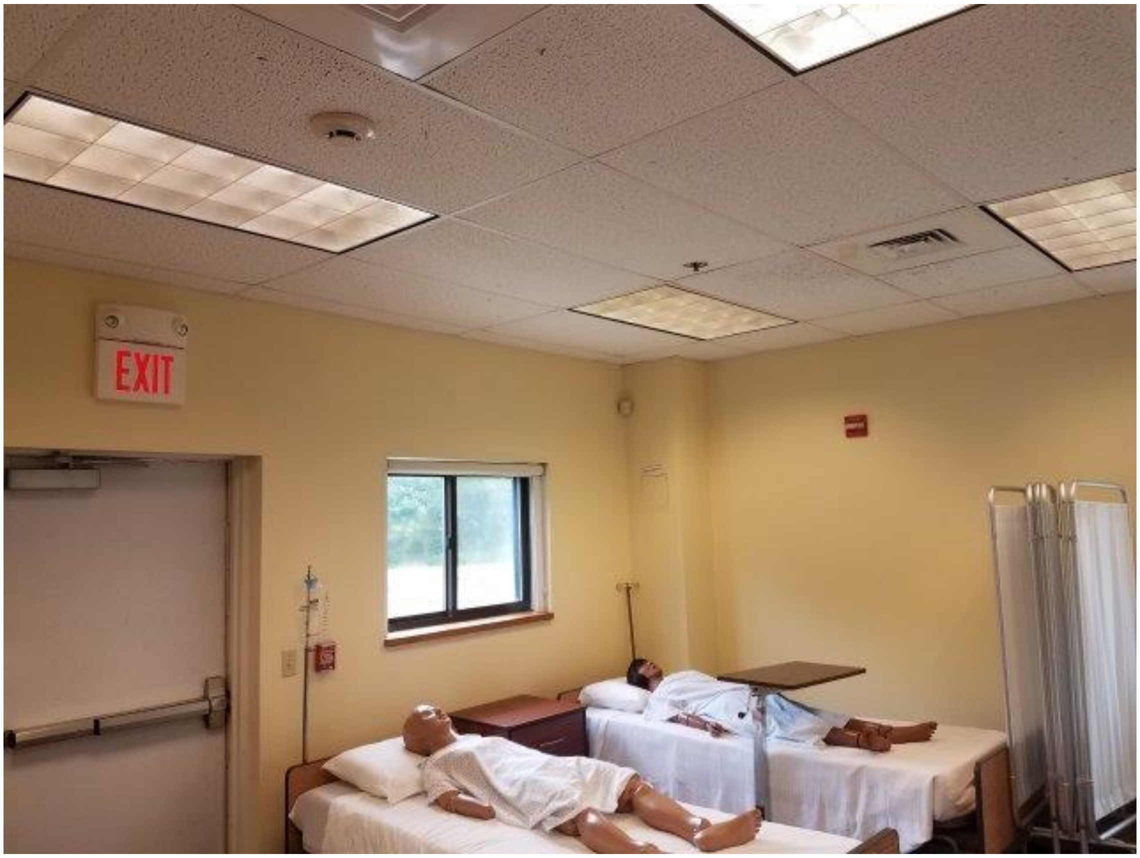
2. The existing fire alarm system utilizes horn/strobe notification signals. The existing horn strobe devices are ADA type for the most part which meet current codes. These devices may have to be replaced with new devices as part of future renovations.

3. The automatic sprinkler system is provided with required flow, tamper and pressure switches.

4. System smoke and heat detectors are provided throughout the facility. There is a remote annunciator at the main entry and exterior mounted key box. All devices appear to be in good condition.

❖ **Existing Emergency Lighting**

1. The emergency lighting is provided by self-contained emergency lighting products and exit signs with integral batteries and chargers, designed to provide 90 minutes of emergency illumination.



❖ **Existing Tel/Com and Security Systems**

1. The telephone/cable service enters the building in the northwest corner of the facility and associated conduits and hardware appear to be in good condition.

2. The servers for Tel/Com and security systems are located in a single space and additional patch panels/equipment are located out in the building.
3. Wall devices are recessed for the most part with some added locations utilizing surface non-metallic boxes and raceways.

Closing

The existing electrical, plumbing and automatic sprinkler systems that serve the subject facility are in fairly good condition and should prove capable of reliable service into the future as well as meeting expansion/modification needs associated with building renovations at relatively modest costs. However, the existing HVAC systems will require upgrade in the not too distant future to achieve code compliant ventilation and provide better comfort conditions throughout the building.

Given this fact, if the purchase of 646 Union Street is considered feasible by WMCC and taken to the next step, money should be carried in the financial analysis for the installation of new HVAC systems within the next five (5) years or so.

The most cost effective HVAC systems upgrade strategy would be replacement of the existing air handling units in kind with new current technology units. However, undoubtedly some rework of existing ductwork located above the ceiling within the building will also be required to address floor plan changes. The existing systems are very simple with respect to controls, but have a history of uneven temperatures in the areas served. As a result, enhanced controls should also be considered necessary as part of any HVAC upgrades. We feel that replacement in kind of existing air handling units, along with modest ductwork modifications and control enhancements for the 25,700 square foot facility could run in the $450,000 range.

Given the building's diverse use and solar loads, replacement of the existing systems with air source heat pump technology Variable Refrigerant Flow (VRF) systems in tandem with Energy Recovery Units (ERU's) to address ventilation requirements would be a very good and energy efficient HVAC upgrade strategy. The ERU's could be located to prevent the intake of diesel fumes which have been an issue at the subject site. A phased approach to installation could be done for the subject upgrade, but it would be far more disruptive than the alternative outlined above. We feel the cost of the VRF and ERU's HVAC upgrade for the 25,700 square foot facility could run in the $1,000,000 (+) range.

End of Report

Yeaton Associates, Inc. | Bedford, New Hampshire | Littleton, New Hampshire | T: 603.444.6578

Conclusion

The site has potential for future growth and a strong connection to the community and the river system within Littleton. The limitations along the east side of the river's edge is mitigated by the existing impervious surfaces that are present. The zoning allows for expansion along the west and south sides of the building with little prescriptive limitations to the residential neighborhood. The current site usage has had a negative affect on the building since the west side houses most of the mechanical systems alongside the Diesel program training lot.

The building at 646 Union Street has significant shortcomings that are inherent to its industrial heritage. The structural system, from roof to footings, was not designed for snow loads. The 1970 era building envelope was poorly insulated. Neither of these items probably affected the original industrial tenant who was more interested in shedding excess heat from their machinery and therefore, melting any excess snow from the roof. Today, these failings are magnified by an added insulated roof and an energy conscious business use. As a result, the building will require the roof to be shoveled throughout the winter and condensation from thermal bridging will continue to rain on occasions within the building.

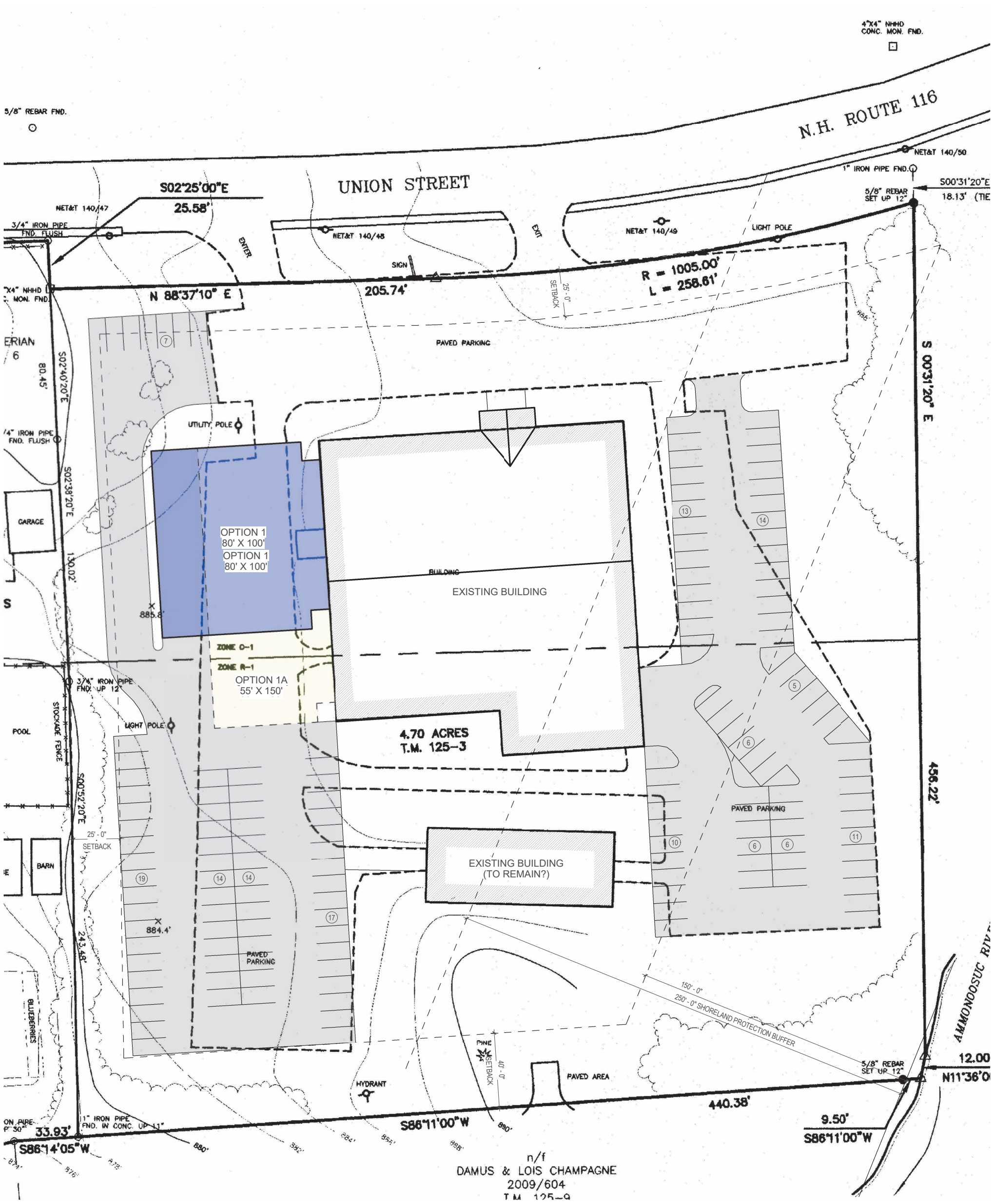
Currently, the existing mechanical system is not operating within code compliance. The system is in full recirculation mode without fresh air being introduced due to the air handler's equipment ground mounted location adjacent to the Diesel program's training lot. Evaluation of the efficiency of the existing system is limited by it's current operation. This condition is reversible through manipulation of controls and balancing the system once the diesel exhaust situation is remedied. The existing equipment is of an age that would suggest replacement in approximately five years and the issues regarding fresh air would need to be resolved at that time to install a new code compliant system.

Except for the structural deficiencies, the other issues identified can be overcome. It was suggested in 2008, and confirmed in this report, that the structural deficiencies would be extremely costly and disruptive to correct and therefore are not recommended to be completed. The current snow load monitoring program should be maintained indefinitely.

Attachements

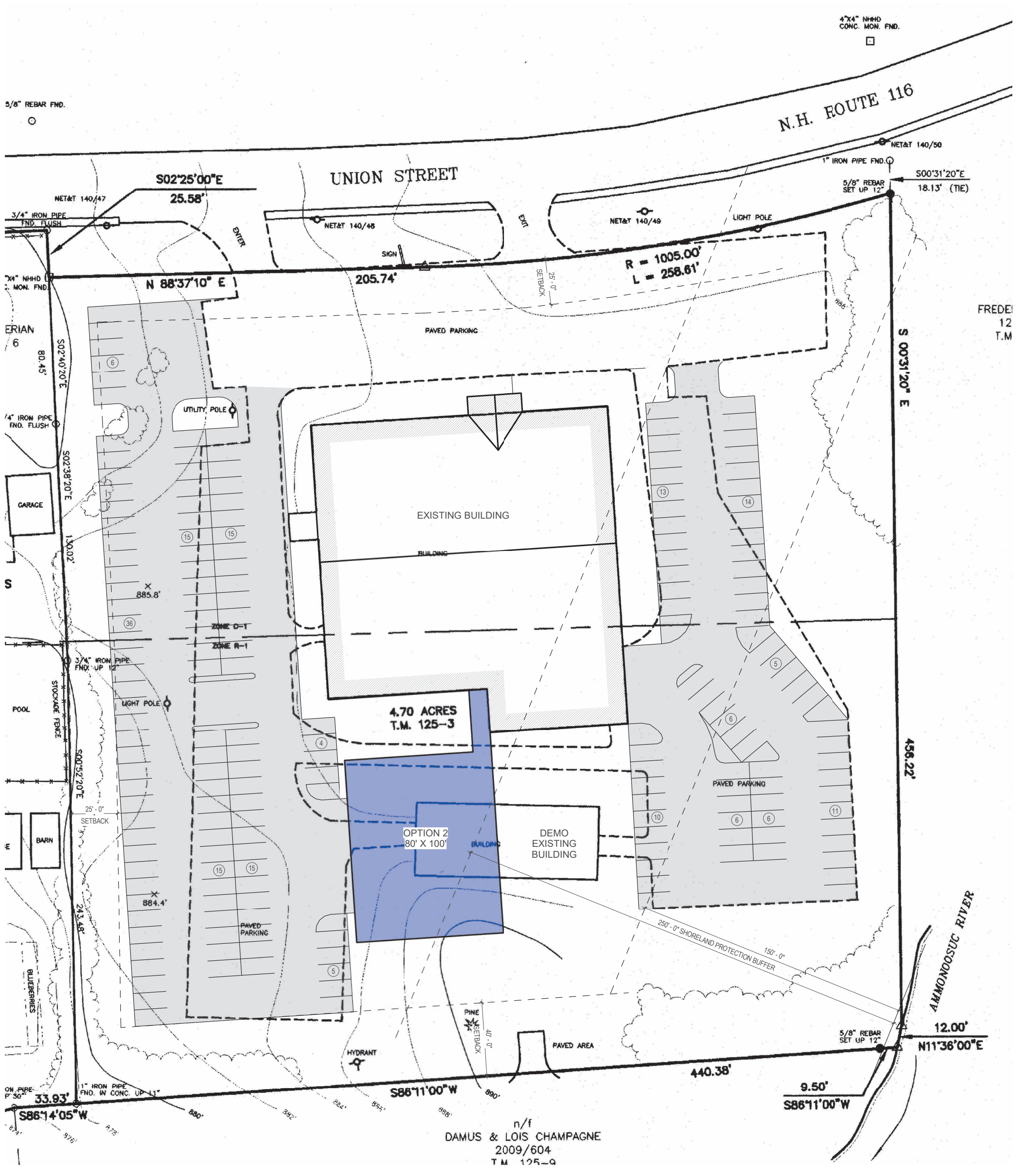
Options #1,2 & 3 for the site location of a potential Diesel Heavy Equipment Technology Program building at the Littleton campus.

Note: The attached site plans were developed to prove the feasibility of developing a Diesel program on this site. The scope of the project is based on a 8,500 sf facility modeled after a CAT prototype.



SITE CONCEPT 1

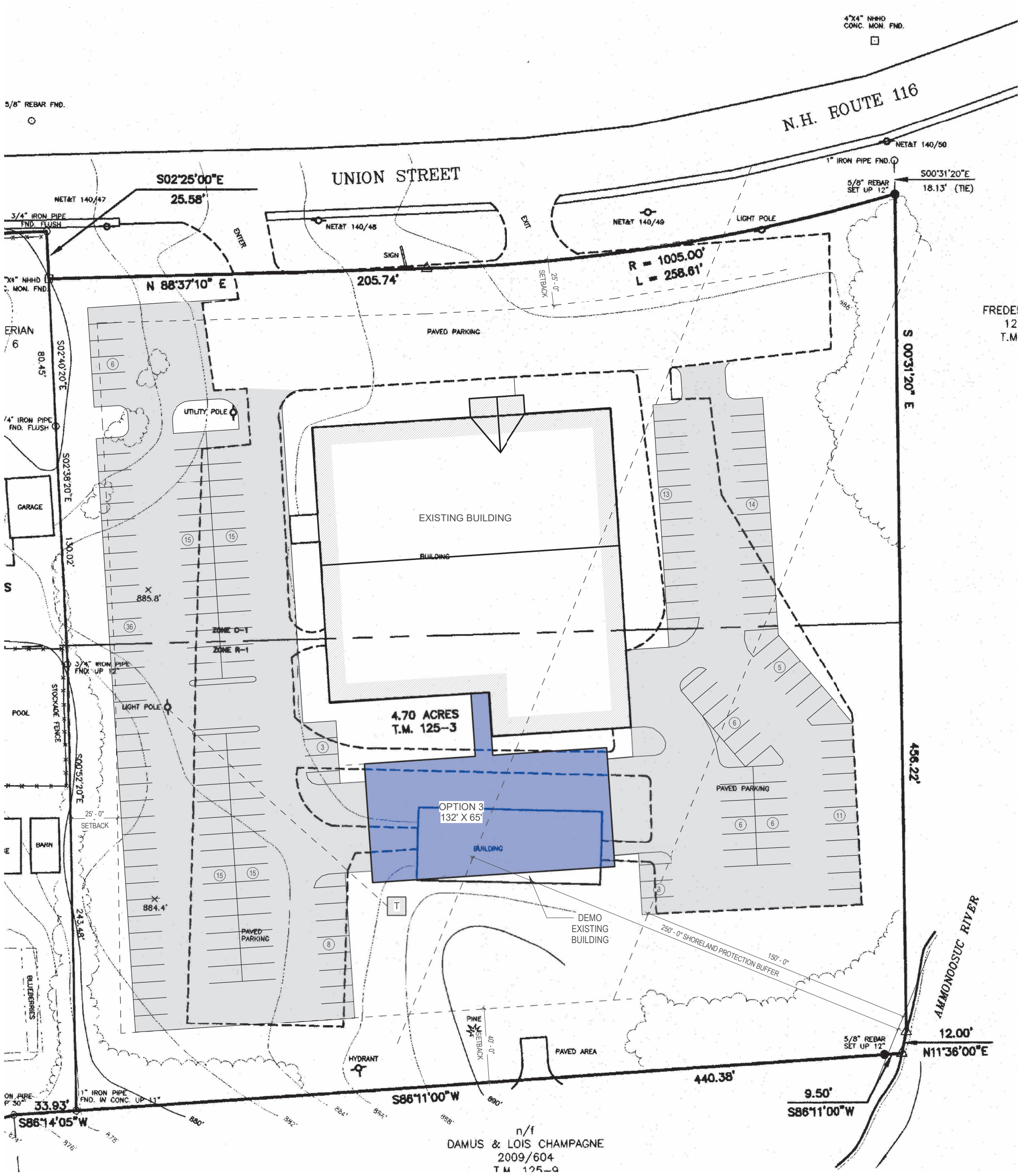
1" = 30'-0"



SITE CONCEPT 2
1" = 30'-0"

WHITE MOUNTAIN COMMUNITY COLLEGE
646 UNION STREET
LITTLETON, NH 03561
9/28/2020

WARRENSTREET
An Architecture & Engineering Design Cooperative



SITE CONCEPT 3

1" = 30'-0"

Appendix B

ADVANCED TECHNOLOGY LABORATORY

WHITE MOUNTAINS COMMUNITY COLLEGE
646-648 UNION STREET
LITTLETON, NH

Conceptual Programming and Design Study

December 4, 2020

Colby Co. Project Number: 2020-192

Prepared For:

White Mountains Community College
2020 Riverside Drive
Berlin, NH 03570

Prepared By:

Sustainable
Structural
Mechanical
Fire Protection
Electrical
Civil
Controls
Architecture

COLBY COMPANY, LLC
CCE
engineering & design

47A York St
Portland, Maine
04101 USA
colbycoengineering.com

Index of Sheets

SECTION 1

BUILDING SPACE ANALYSIS

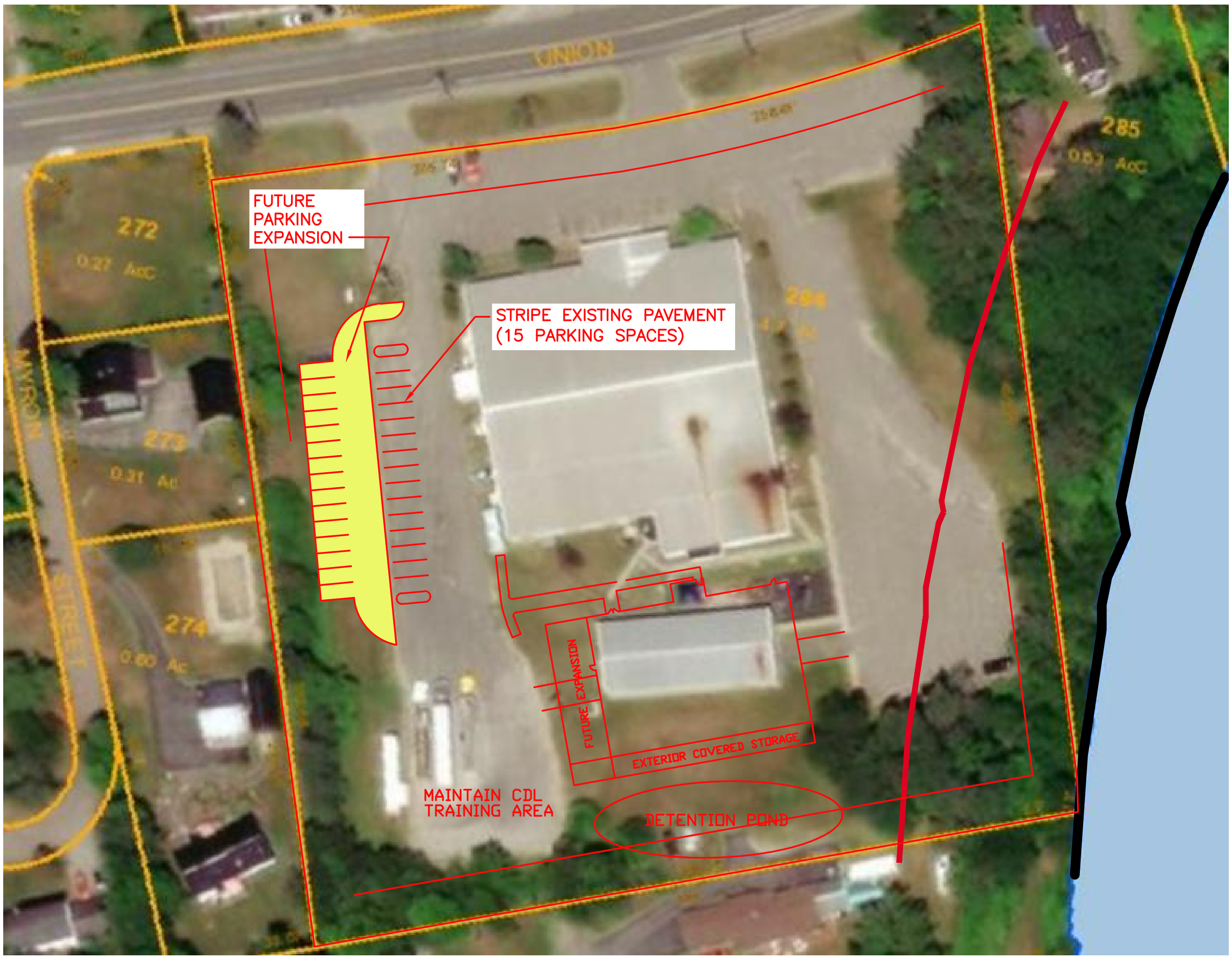
WMCC - ADVANCED TECHNOLOGY LABORATORY PROGRAMMING STUDY

December 4, 2020

ROOM TAG	LEVEL	AREA PROVIDED (SF)	OCCUPANCY TYPE	OCCUPANT LOAD FACTOR SF/FACTOR# (IBC)	OCCUPANT LOAD	WMCC 11/5/20 PPT (SF)	WMCC 11/30/20 PPT (SF)
			FIRST FLOOR				
101	Stair 1	**176**	**BUSINESS**	100	2	250	250
102	Stair 2	**195**	**BUSINESS**	100	2	0	250
103	Elevator	**59**	**BUSINESS**	100	1	0	100
104	Entry	**284**	**BUSINESS**	100	3	300	300
105	Men's Restroom	**115**	**BUSINESS**	100	1	200	50
106	Women's Restroom	**115**	**BUSINESS**	100	1	200	50
107	Locker Room & Wash Sinks	**221**	**LOCKER**	50	4	0	375
108	Lab Space	**638**	**CLASSROOM**	20	32	950	625
109	Tool Crib	**202**	**STORAGE**	300	1	475	250
110	Hydraulic & Engine Lab	**1006.5**	**VOCATIONAL TRAINING**	50	20	750	1000
111	Open Workspace / Flexible Space	**1650**	**VOCATIONAL TRAINING**	50	33	2250	1950
112	Heavy Equipment Bay	**1800**	**VOCATIONAL TRAINING**	50	36	1500	1800
113	Alignment Bay	**1250**	**VOCATIONAL TRAINING**	50	25	750	1250
114	Welding & Fabrication	**1000**	**VOCATIONAL TRAINING**	50	20	875	1000
115	General Storage	**625**	**CLASSROOM**	20	31	750	750
116	Custodial Closet	**26**	**BUSINESS**	100	0	0	50
	Circulation	**37.5**	**BUSINESS**			0	0
	Compressor Room	**0**	**STORAGE**	300	0	0	75
	Classroom	**0**				750	0
	TOTAL FIRST FLOOR AREA	**9400**			**212**	**10000**	**10125**
			EXTERIOR PROGRAM				
117	Exterior Covered Storage	**1420**	**STORAGE**	N/A	N/A	0	0
118	Equipment Pad	**96**					
			SECOND FLOOR				
201	Stair 1	**176**	**BUSINESS**	100	2	250	250
202	Stair 2	**195**	**BUSINESS**	100	2	0	250
203	Elevator	**59**	**BUSINESS**	100	1	0	100
204	Restroom	**60**	**BUSINESS**	100	1	0	0
205	Restroom	**60**	**BUSINESS**	100	1	0	0
206	IT Closet	**62**	**BUSINESS**	300	0	0	0
207	Conference Room	**250**	**ASSEMBLY**	15	17	0	0
208	IT/Manufacturing Innovation Lab	**309**	**BUSINESS**	50	6	330	500
209	Office 1	**117**	**BUSINESS**	100	1	0	0
210	Office 2	**117**	**BUSINESS**	100	1	0	0
211	Multi-Purpose Room	**1100**	**ASSEMBLY**	15	73	1250	1250
212	Hall / Mezzanine	**563**	**BUSINESS**	15	38	745	500
213	Compressor Room	**225**	**STORAGE**	300	1	0	
214	Mechanical Room	**480**	**STORAGE**	300	2	0	
215	Electrical Room	**265**	**STORAGE**	300	1	0	
216	Mezzanine Storage	**655**	**STORAGE**	300	2	0	
	TOTAL SECOND FLOOR AREA	**4693**			**149**	**2575**	**2850**
	TOTAL FIRST FLOOR AREA (SF)	**9400**		**TOTAL OCCUPANT LOAD**	**212**	**10000**	**10125**
	TOTAL SECOND FLOOR AREA (SF)	**4693**		**TOTAL OCCUPANT LOAD**	**149**	**2575**	**2850**
	TOTALS	**14093**			**361**	**12575**	**12975**
	Expansion Area	**Limited by site on ground floor, or by common path of 100' before 2nd egress is available on second floor**					
	New program introduced						
TOTAL EDUCATIONAL AREAS		**10286 SF**					
TOTAL SUPPORT/CIRCULATION AREAS		**3371 SF**					
TOTAL EXTERIOR STORAGE AREAS		**1514 SF**	**15513**				
POSSIBLE EXPANSION AREA		**2185 SF**					

SECTION 2

PRELIMINARY SITE PLAN



SITE SKETCH

SCALE: 1" = 100'-0"

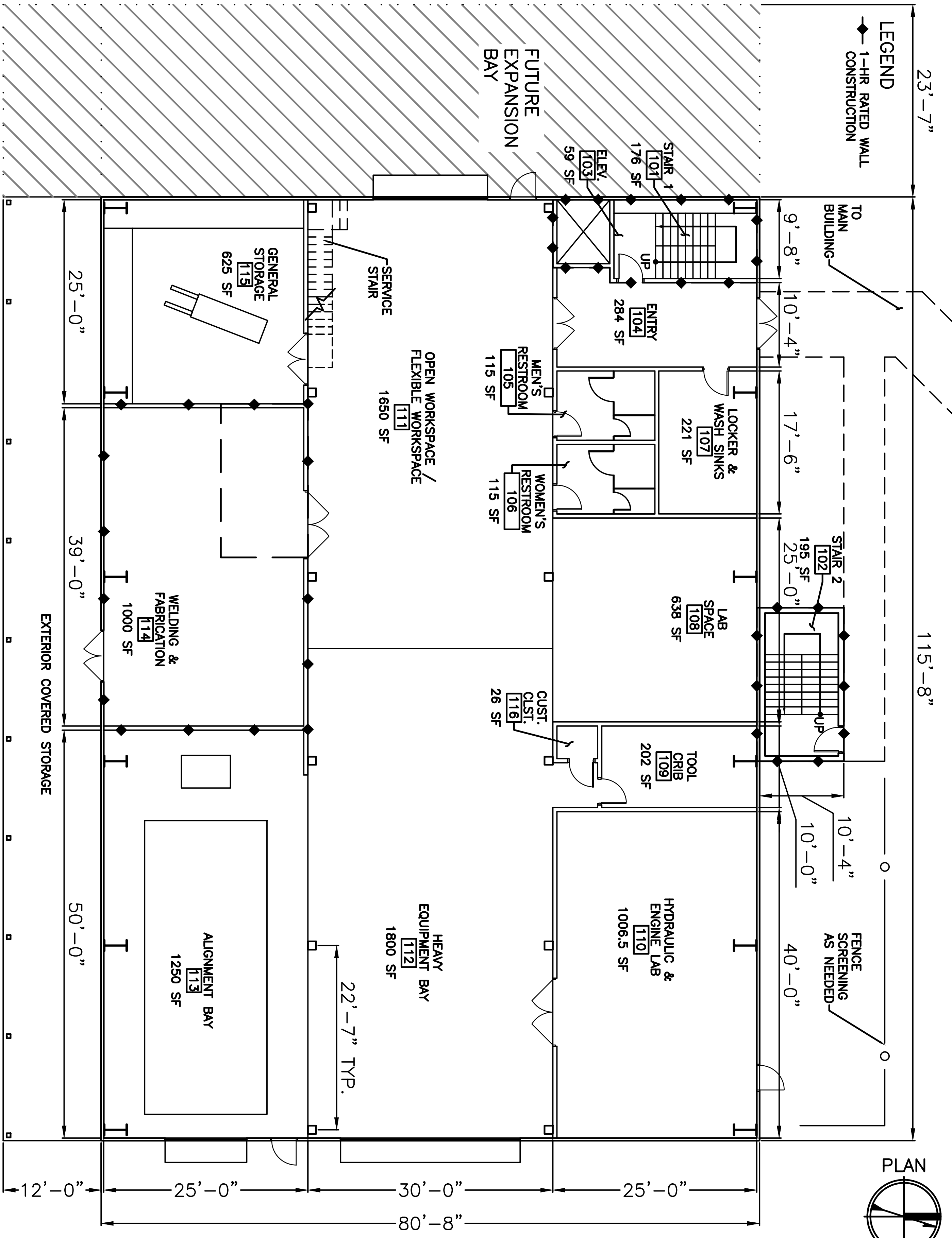
DECEMBER 4, 2020

PRELIMINARY
PROGRAMING & DESIGN
for
White Mountains
Community College

47A York St
Portland, ME
04101
207.553.7753

SECTION 3

PRELIMINARY BUILDING PLANS



GROUND FLOOR PLAN

SCALE: 1/16" = 1'–0"

DECEMBER 4, 2020

0 8' 16' 32'

SCALE: 1/16" = 1'–0"

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CCE
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Portland, ME
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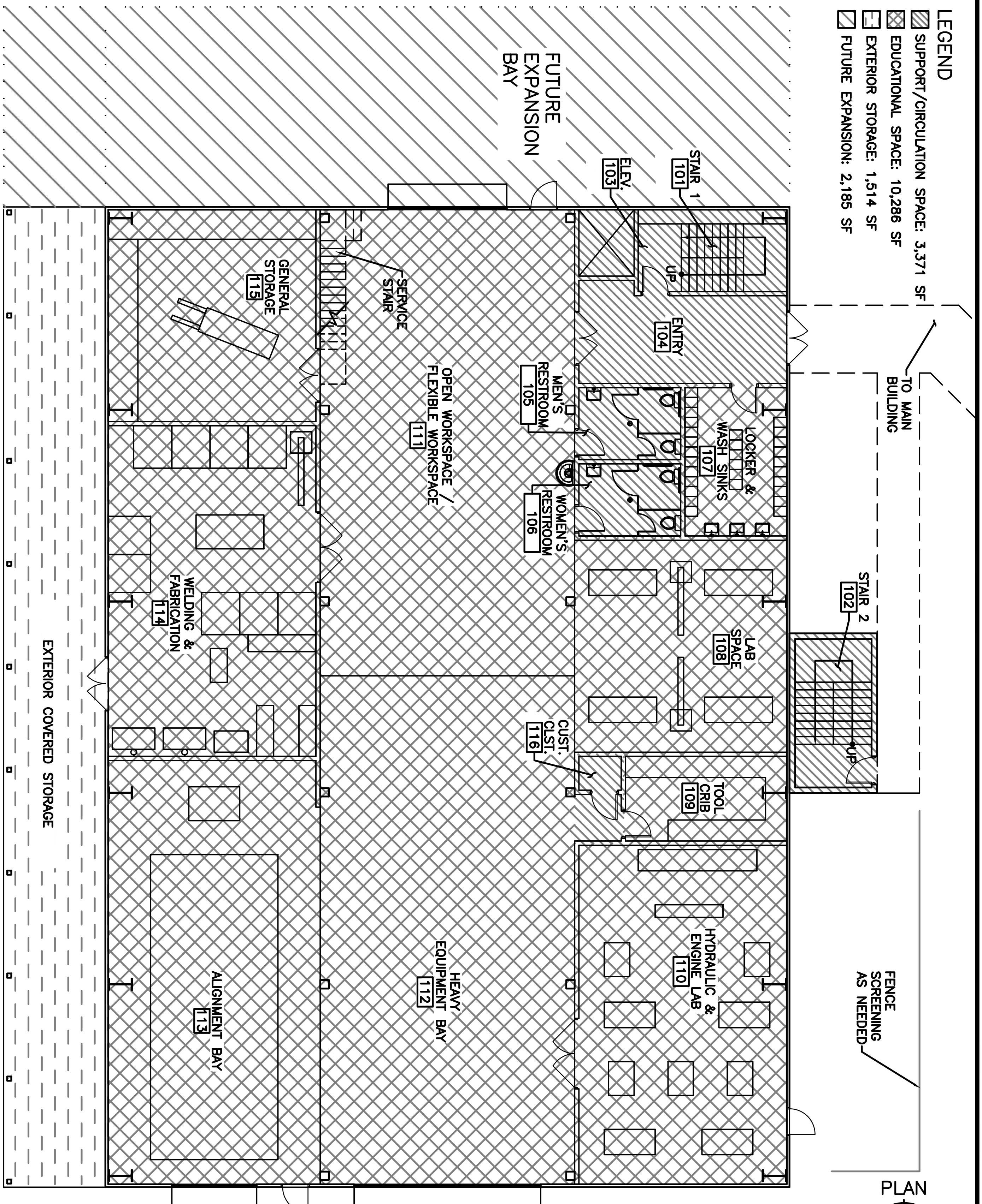
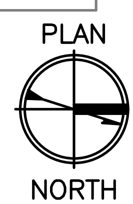
207.553.7753





GROUND FLOOR PLAN

SCALE: 1/16" = 1'-0"

DECEMBER 4, 2020

0 8' 16' 32'

SCALE: 1/16" = 1'-0"

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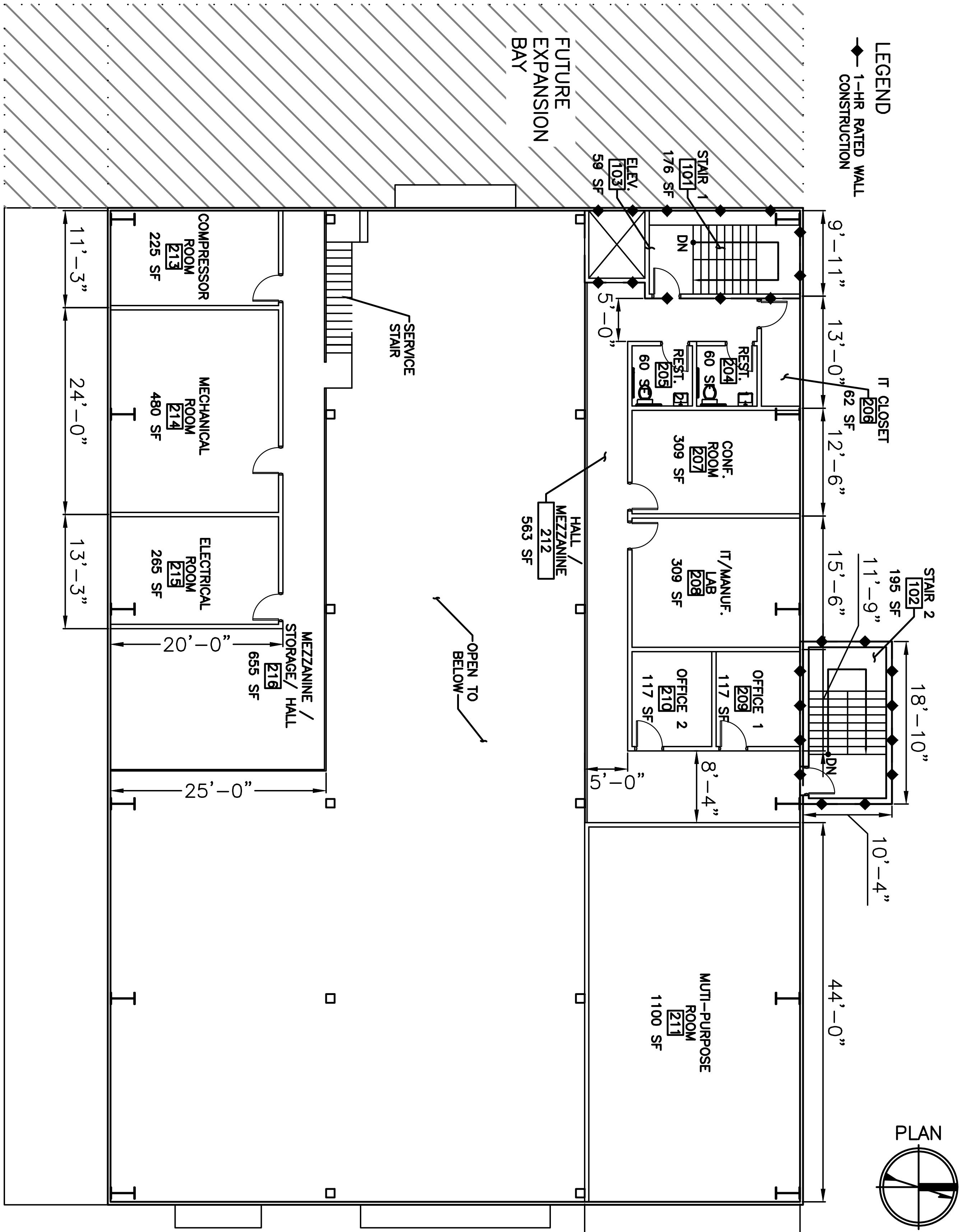

SECOND FLOOR PLAN

SCALE: 1/16" = 1'-0"

0 8' 16' 32'

SCALE: 1/16" = 1'-0"

DECEMBER 4, 2020

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White Mountains Community College

COLBY COMPANY LLC engineering & design
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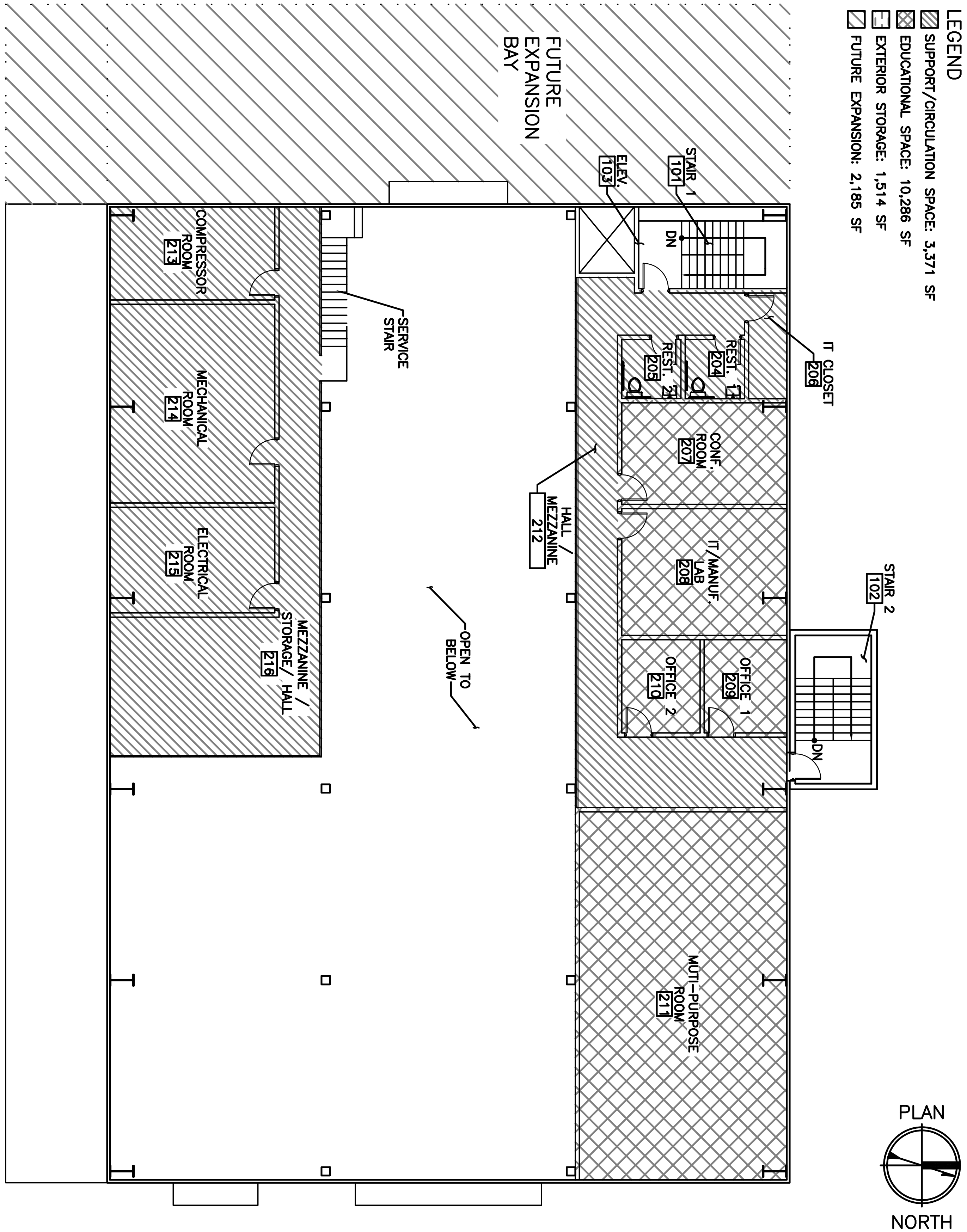


SECOND FLOOR PLAN

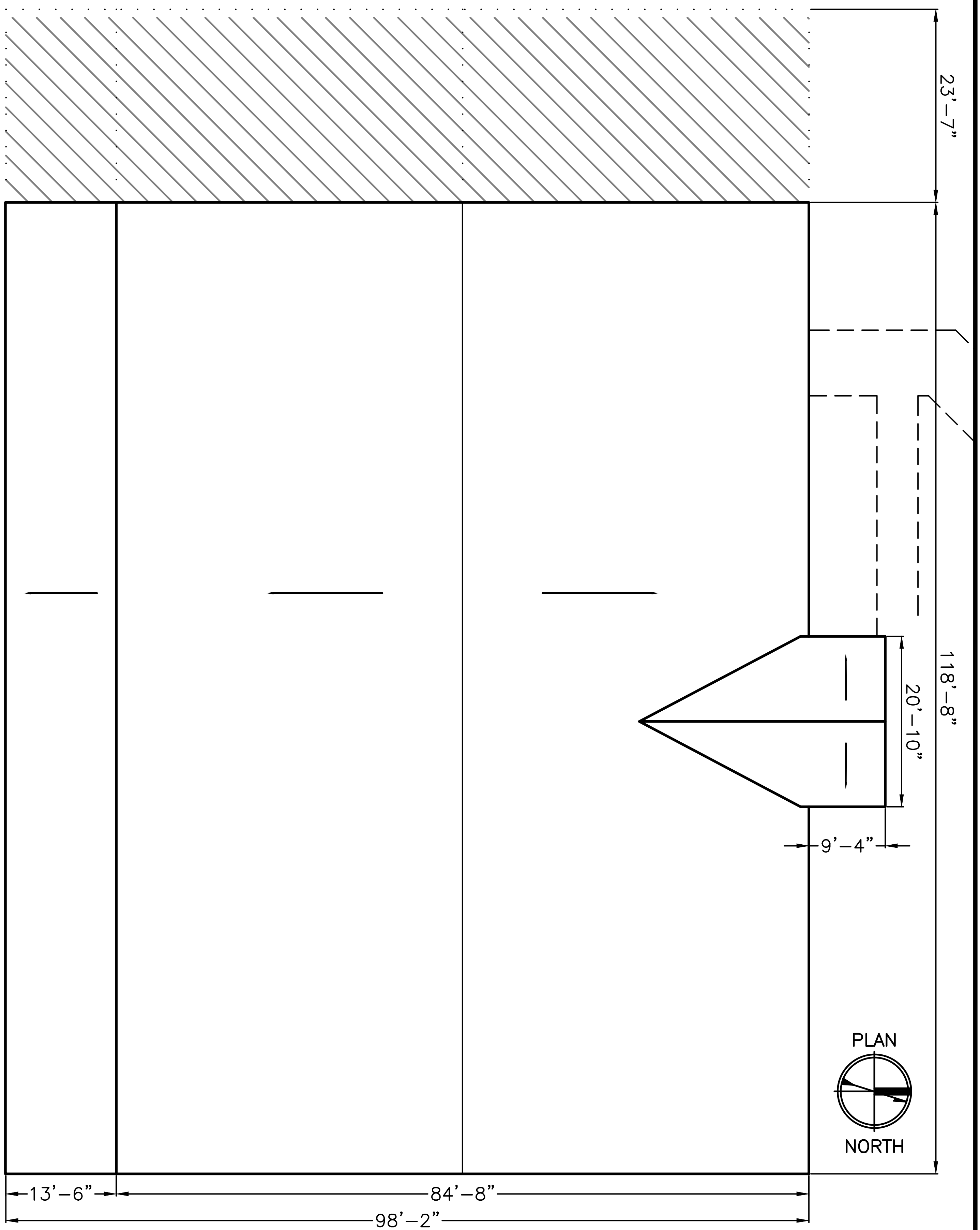
SCALE: 1/16" = 1'-0"

0 8' 16' 32'

SCALE: 1/16" = 1'-0"

DECEMBER 4, 2020

PRELIMINARY PROGRAMING & DESIGN for White Mountains Community College	COLBY COMPANY LLC CCE engineering & design	47A York St Portland, ME 04101 207.553.7753



0 8' 16' 32'

SCALE: 1/16" = 1'–0"

ROOF PLAN

SCALE: 1/16" = 1'–0"

DECEMBER 4, 2020

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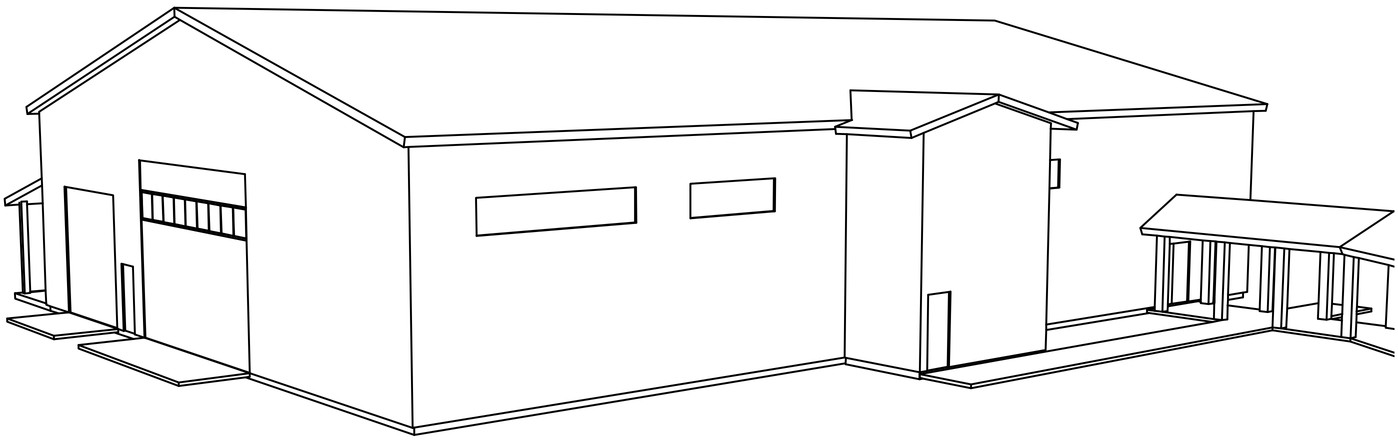

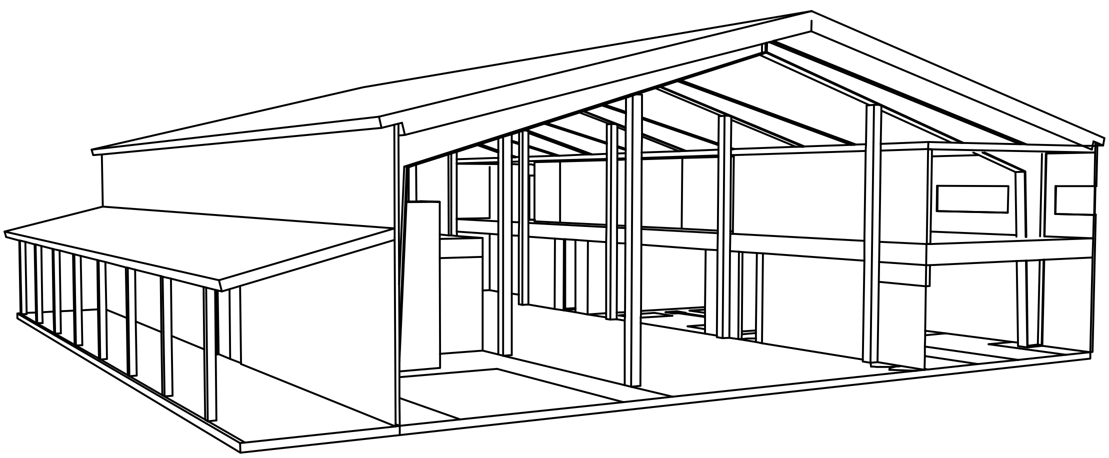

BUILDING VIEWS

NTS

DECEMBER 4, 2020

PRELIMINARY
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Community College

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207.553.7753

SECTION 4

ANTICIPATED PROJECT SCHEDULE

Sustainable
Structural
Mechanical
Fire Protection
Electrical
Civil
Controls
Architecture

COLBY COMPANY, LLC
CCE
engineering & design

47A York St
Portland, Maine
04101 USA
colbycoengineering.com

White Mountains Community College
Advanced Technology Laboratory

Anticipated Project Schedule

Date: 12-4-2020

Scoping Documents and Approvals Schedule

Deliverables

1. Building Space Analysis
2. Preliminary Site Plan
3. Preliminary Building Plans
4. Anticipated Design and Construction Schedule
5. Preliminary Cost Estimate

Programming & Funding & WMCC Sr. Management Approvals

1. Scoping Meeting	11-18-2020
2. Scoping and Deliverables Meeting	11-24-2020
3. Scoping and Deliverables Meeting	12-01-2020
4. CCE Draft Submission to WMCC Team for Review	12-04-2020
5. WMCC Comments to CCE	12-11-2020
6. CCE Final Submission to WMCC for Presentation	12-14-2020
7. Presentation to Legislature (CCSNH Board)	12-21-2020
8. WMCC Feedback and Comments to CCE	12-28-2020
9. CCE Draft Submission to WMCC for State Submission	TBD
10. January WMCC Submission to State	TBD
11. Funding Approval	06-30-2021
12. Utilities & Studies	

   a. Survey
   b. Geotechnical Borings & Report
   c. Hydrant Flow Test
   d. Sanitary
   e. Potable Water
   f. Propane/Natural Gas
   g. Electrical Power
   h. IT/Communications/Security
   i. Compressed Air
   j. Welding Gases
   k. Backup Power/Generator

Consultant Request for Proposal

1. Advertise RFP	12-21-2020

2. Receive RFP proposals 01-18-2021
3. CCSNH Board Committee RFP approval 01-21-2021
4. Final Contract & Notice to Proceed 02-01-2021

Design Schedule (Assumed start date: February 15, 2021)

1. Design Kickoff Meeting 02-15-2021
2. Schematic Design Phase 02-15-2021 thru 04-09-2021
   a. SD Team Meeting #1 02-23-2021
   b. SD Team Meeting #2 03-09-2021
   c. Confirmation of Program Meeting
   d. Meeting with Educators
   e. Finalize Code Study
   f. Finalize Fire protection and Egress
   g. Meeting with AHJ
   h. Finalize Equipment Layout and Utility Needs
   i. Review Future Needs Alternatives/Capabilities
   j. CCE Design QC Period
   k. SD Submission to WMCC for Review/Comment
   l. WMCC Comments to CCE
   m. WMCC/CCE Meeting – NTP with Design Development
3. Design Development Phase 04-09-2021 thru 06-18-2021
   a. WMCC/CCE Meeting
   b. Progress Floor Plans and Details
   c. Selection of finishes and
4. Construction Documents Phase 06-18-2021 thru 08-16-2021
5. State Fire Marshal Office plan review and approval (30 days) 09-17-2021

Permitting Schedule

1. Town of Littleton – Preliminary Planning Board Review
2. Town of Littleton – Planning Board Submission
3. Town of Littleton – Planning Board Meeting
4. Town of Littleton – Planning Board Follow up
5. NH DES – Alteration of Terrain Permit – Meeting
6. NH DES – Alteration of Terrain Permit - Submission
7. NH DES – Alteration of Terrain Permit – Anticipated Approval

Construction Phase (assume prior to bidding construction contract CCSNH Board Committee approval)

1. Bidding and Contractor Selection Period 08-30-2021 thru 10-04-2021
2. Contract/Insurance 10-04-2021 thru 10-18-2021
3. Notice to Proceed 10-20-2021
4. Construction (note: extra for winter conditions) 10-20-2021 thru 05-25-2022
   a. Mobilization
   b. Site Work

c. Underground Utilities
d. Foundations
e. Building Erection
f. Building Closed in (Siding & Roofing)
g. Interior Slabs
h. Set Crane
i. Interior Wall Framing
j. Electrical Rough in
k. Mechanical Rough in
l. Plumbing Rough in
m. Fire protection Rough in
n. Set Major Equipment
    i. Set Jib Cranes
    ii. Install Elevator
o. Finishes
    i. Interior walls
    ii. Mechanical
    iii. Plumbing
    iv. Electrical
    v. IT/Comm./Security
p. Start-up and Testing
q. Commissioning/Turnover
r. Training
s. Demobilization
t. Warranty Transfer and Closeout

SECTION 5

PRELIMINARY COST ESTIMATE

PROJECT TITLE: White Mountains Community College Advanced Technology Laboratory	ESTIMATED BY: Colby Company Engineering, LLC	Date: 12/4/2020
	SUBMISSION STATUS: WMCC Review	
PROJECT LOCATION: Littleton, NH	COST ESTIMATE: Preliminary	

	Total Material Cost	Total Labor Cost	Engineering Estimate Total Cost
Site Work	$356,500.00	$299,500.00	$656,000.00
Building Estimate	$2,710,875.00	$2,216,625.00	$4,927,500.00
Mechanical	$45,000.00	$55,000.00	$100,000.00
Electrical	$125,000.00	$100,000.00	$225,000.00
Subtotal:	***$3,237,375.00***	***$2,671,125.00***	***$5,908,500.00***
MARKUPS:			
Subcontractor OH&P: 10%	$0.00	$0.00	$0.00
Subtotal:	**$3,237,375.00**	***$2,671,125.00***	**$5,908,500.00**
Contractor OH&P: 10%	$0.00	$0.00	$0.00
Subtotal:	**$3,237,375.00**	**$2,671,125.00**	**$5,908,500.00**
Design: 10%	*$323,737.50*	*$267,112.50*	*$590,850.00*
Contingency: 15%	$485,606.25	$400,668.75	$886,275.00
Permitting Allowance			$35,000.00
Total:	***$3,722,981.25***	***$3,071,793.75***	
TOTAL:			***$7,420,625.00***

PROJECT TITLE: White Mountains Community College Advanced Technology Laboratory	ESTIMATED BY: Colby Company Engineering, LLC	Date: 12/4/2020
	SUBMISSION STATUS: WMCC Review	
PROJECT LOCATION: Littleton, NH	COST ESTIMATE: Preliminary	

	Quantity		Mat'l/Equipment Cost		Labor Cost		Engineering Estimate	
	Number	Unit	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total
Geotechnical Study	1	LS			$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00
Site Survey	1	LS			$ 7,500.00	$ 7,500.00	$ 7,500.00	$ 7,500.00
				-		-	-	-
Erosion Control Systems	1	LS	$ 3,500.00	$ 3,500.00	$ 3,500.00	$ 3,500.00	$ 7,000.00	$ 7,000.00
Earthwork/Paving/Signage	1	LS	$120,000.00	$120,000.00	$ 80,000.00	$ 80,000.00	$ 200,000.00	$ 200,000.00
Septic System	1	LS	$ 25,000.00	$ 25,000.00	$ 25,000.00	$ 25,000.00	$ 50,000.00	$ 50,000.00
Stormwater System - Detention Pond/Piping	1	LS	$ 45,000.00	$ 45,000.00	$ 35,000.00	$ 35,000.00	$ 80,000.00	$ 80,000.00
Landscaping	1	LS	$ 8,000.00	$ 8,000.00	$ 3,500.00	$ 3,500.00	$ 11,500.00	$ 11,500.00
Demolish Exst Building	4000	SF	$ 10.00	$ 40,000.00	$ 12.00	$ 48,000.00	$ 22.00	$ 88,000.00
Utility Service Entrances								
Water Service	1	LS	$ 10,000.00	$ 10,000.00	$ 12,000.00	$ 12,000.00	$ 22,000.00	$ 22,000.00
Fire Protection Service	1	LS	$ 20,000.00	$ 20,000.00	$ 20,000.00	$ 20,000.00	$ 40,000.00	$ 40,000.00
Electrical Service/Comm./Tel/Data - Duct bank	1	LS	$ 15,000.00	$ 15,000.00	$ 20,000.00	$ 20,000.00	$ 35,000.00	$ 35,000.00
Transformer & Concrete Pad	1	LS	$ 70,000.00	$ 70,000.00	$ 35,000.00	$ 35,000.00	$ 105,000.00	$ 105,000.00
Subtotal				**$ 356,500.00**		**$ 299,500.00**		**$ 656,000.00**

PROJECT TITLE: White Mountains Community College Advanced Technology Laboratory			ESTIMATED BY: Colby Company Engineering, LLC				Date: 12/4/2020		
			SUBMISSION STATUS: WMCC Review						
PROJECT LOCATION: Littleton, NH			COST ESTIMATE: Preliminary						
	Quantity		Mat'l/Equipment Cost		Labor Cost		Engineering Estimate		
	Number	Unit	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total	
Building									
Building	14,100	SF	$ 125.00	$ 1,762,500	$ 125.00	$ 1,762,500	$ 250.00	$ 3,525,000	
Bridge Crane	1	LS	$ 45,000.00	$ 45,000	$ -	$ -	$ 45,000.00	$ 45,000	
Gantry Cranes	3	EA	$ 20,000.00	$ 60,000	$ -	$ -	$ 20,000.00	$ 60,000	
Equipment and Furnishings (1st and 2nd Floors)	12,975	SF	$ 65.00	$ 843,375	$ 35.00	$ 454,125	$ 100.00	$ 1,297,500	
Equipment	1	LS		$ -		$ -	$ -	$ -	
Equipment - Welding	1	LS		$ -		$ -	$ -	$ -	
Equipment - Diesel	1	LS		$ -		$ -	$ -	$ -	
Equipment - Alignment Shop	1	LS		$ -		$ -	$ -	$ -	
Tooling	1	LS		$ -		$ -	$ -	$ -	
Specialty Lifts	1	LS		$ -		$ -	$ -	$ -	
Hoods and Special HVAC Equipment	1	LS		$ -		$ -	$ -	$ -	
Furnishings									
Furnishings	1	LS		$ -		$ -	$ -	$ -	
Subtotal				**$ 2,710,875**		**$ 2,216,625**		**$ 4,927,500**	

PROJECT TITLE: White Mountains Community College Advanced Technology Laboratory	ESTIMATED BY: Colby Company Engineering, LLC	Date: 12/4/2020
	SUBMISSION STATUS: WMCC Review	
PROJECT LOCATION: Littleton, NH	COST ESTIMATE: Preliminary	

	Quantity		Mat'l/Equipment Cost		Labor Cost		Engineering Estimate	
	Number	**Unit**	**Unit Cost**	**Total**	**Unit Cost**	**Total**	**Unit Cost**	**Total**
Move/Connect WMCC Eqpt: Berlin to Littleton	1	LS	$ 20,000	$ 20,000	$ 30,000	$ 30,000	$ 50,000	$ 50,000
New HVAC & Controls System	included		$ -	$ -	$ -	$ -	$ -	$ -
Misc. Specialty Mechanical Scope	1	LS	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 50,000	$ 50,000
Subtotal				**$ 45,000**		**$ 55,000**		**$ 100,000**

PROJECT TITLE: White Mountains Community College Advanced Technology Laboratory	ESTIMATED BY: Colby Company Engineering, LLC							Date: 12/4/2020	
	SUBMISSION STATUS: WMCC Review								
PROJECT LOCATION: Littleton, NH	COST ESTIMATE: Preliminary								
	Quantity		**Mat'l/Equipment Cost**		**Labor Cost**		**Engineering Estimate**		
	Number	**Unit**	**Unit Cost**	**Total**	**Unit Cost**	**Total**	**Unit Cost**	**Total**	
New Electrical System	included		-	-	-	-	-	-	
Misc. Specialty Scope	1	LS	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 20,000	$ 20,000	
Emergency Stand-by Generator	1	LS	$ 100,000	$ 100,000	$ 75,000	$ 75,000	$ 175,000	$ 175,000	
Specialty IT/Educational Video Systems	1	LS	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 30,000	$ 30,000	
Subtotal				**125,000**		**100,000**		**225,000**	

COMMUNITY COLLEGE
system of New Hampshire

Safer at Home Universal Guidelines
COVID-19 Visitor Screening

In compliance with the Safer at Home universal guidelines enacted by the State of New Hampshire on August 12, 2020, CCSNH visitors who have been scheduled to enter a CCSNH facility must be screened daily prior to entering the facility. This screening must be completed only on days when visitors are scheduled to come onsite. Please complete the following screening information and return the completed form to the CCSNH employee with whom you have arranged your visit. The information collected will be used only for the purpose of maintaining safe and healthy business operations and shall be maintained as confidential.

Section 1.

Visitor Name:______________________ Date: ____________

CCSNH Institution: WMCC Time:____________ AM/PM

Reason for Visit:______________________

Section 2.

1. I attest that I have taken and recorded my temperature prior to arriving at work and that my temperature was:

   [ ] 100.4 degrees Fahrenheit or lower. [ ] Higher than 100.4 degrees Fahrenheit

2. Have you been in close contact with a confirmed or suspected case of COVID-19 within the last 14 days?
   (Close contact is defined as: a) being within 6 feet of a known or suspected COVID-19 case for greater than 15 minutes; close contact can occur while caring for, living with, visiting, or sharing a healthcare waiting area or room with a known or suspected COVID-19 case; or b) having direct contact with infectious secretions of a COVID-19 case (e.g., being coughed on)) **NOTE:** Healthcare workers caring for COVID-19 patients while wearing appropriate personal protective equipment should answer "no" to this question.) [ ] Yes [ ] No

3. Have you had a fever or felt feverish in the last 24 hours? [ ] Yes [ ] No

4. Are you experiencing any new respiratory symptoms including a runny nose, nasal congestion, sore throat, cough, or shortness of breath? [ ] Yes [ ] No

5. Are you experiencing any new muscle aches, chills, and severe fatigue? [ ] Yes [ ] No

6. Are you experiencing any new gastrointestinal symptoms (nausea, vomiting, or diarrhea)? [ ] Yes [ ] No

7. Have you experienced any new changes in your sense of taste or smell? [ ] Yes [ ] No

8. Have you traveled in the past 14 days internationally (outside of the U.S.), by cruise ship, or outside of New England (NH, VT, RI, CT, MA, and ME)? [ ] Yes [ ] No

If you answered yes to any of the questions above or have a temperature that exceeds 100.4 degrees Fahrenheit, you will not be permitted to enter a CCSNH facility. Please contact PJ Cyr, Safety & Security Supervisor, for further information, at 603-342-3022, or pcyr@ccsnh.edu.

Section 3. I attest that I have answered the above information truthfully. I understand that any falsification of information may be grounds for corrective action, which may include exclusion from CCSNH facilities.

______________________ ____________

Signature of CCSNH Visitor Date