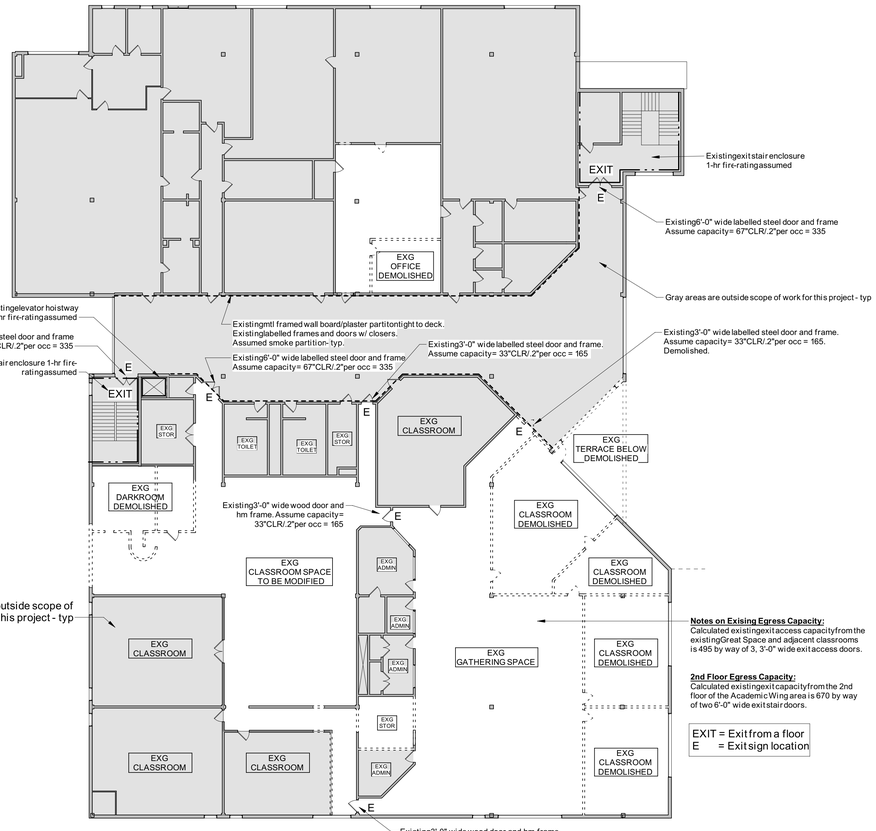
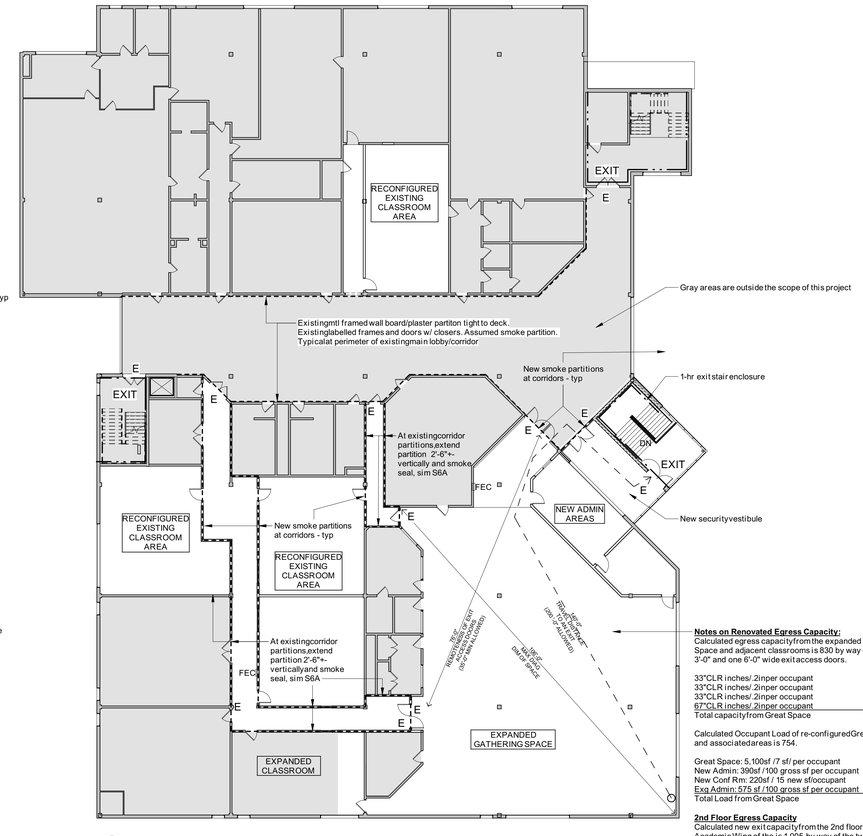


C5 EXISTING/DEMOFLOOR PLAN - LEVEL 2
1/16" = 1'-0"

Notes on Exising Egress Capacity:
Calculated existing exit access capacity from the existing Great Space and adjacent classrooms is 495 by way of 3, 3'-0" wide exit access doors.

2nd Floor Egress Capacity:
Calculated existing exit capacity from the 2nd floor of the Academic Wing area is 670 by way of two 6'-0" wide exit stair doors.

EXIT = Exit from a floor
E = Exit sign location



A5 LEVEL 2 - LIFE SAFETY FLOOR PLAN
1/16" = 1'-0"

Notes on Renovated Egress Capacity:
Calculated egress capacity from the expanded Great Space and adjacent classrooms is 830 by way of three 3'-0" and one 6'-0" wide exit access doors.

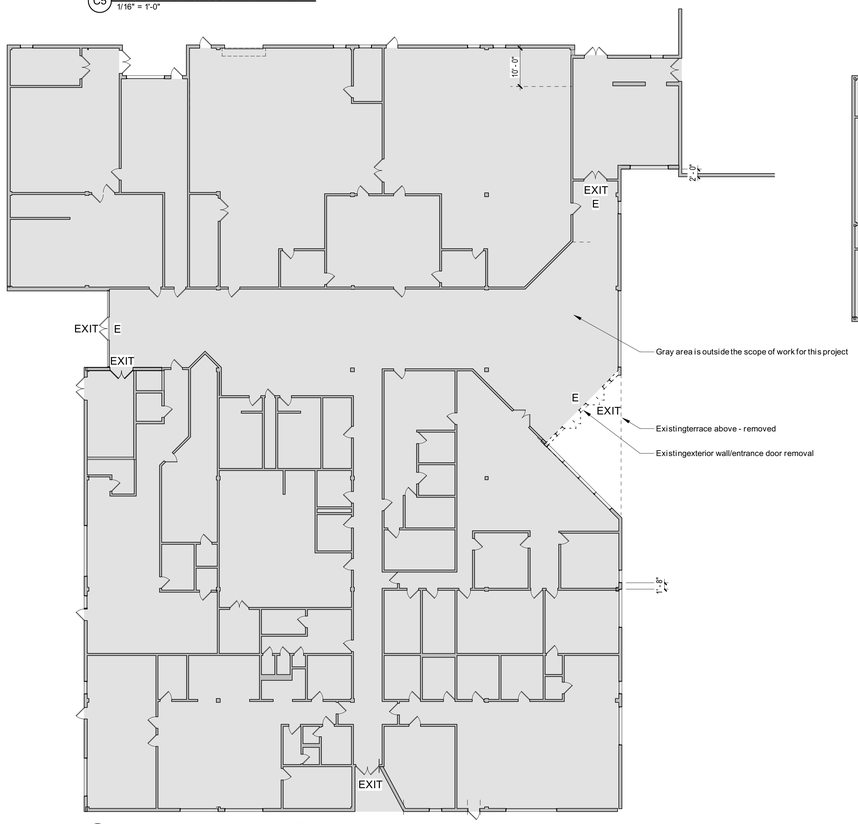
33"CLR inches/.2 in per occupant	= 165
33"CLR inches/.2 in per occupant	= 165
33"CLR inches/.2 in per occupant	= 165
67"CLR inches/.2 in per occupant	= 335
Total capacity from Great Space	= 830

Calculated Occupant Load of re-configured Great Space and associated areas is 754.

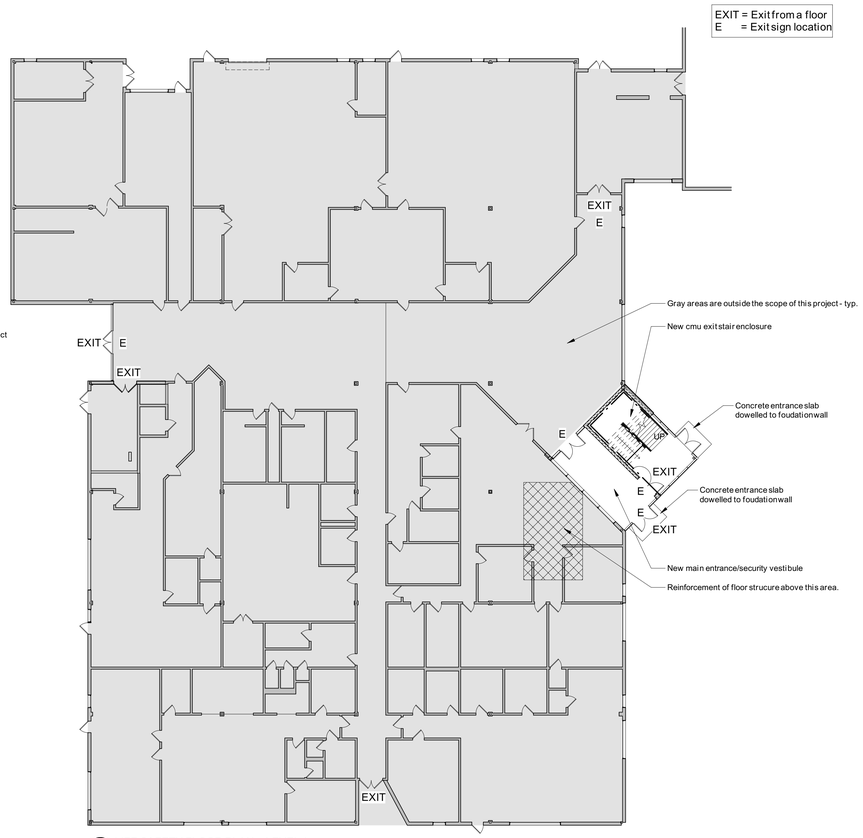
Great Space: 5,100sf /7 sf/ per occupant	= 729
New Admin: 390sf /100 gross sf per occupant	= 4
New Conf Rm: 220sf / 15 new sf/occupant	= 15
Exg Admin: 575 sf /100 gross sf per occupant	= 6
Total Load from Great Space	= 754

2nd Floor Egress Capacity
Calculated new exit capacity from the 2nd floor of the Academic Wing of the is 1,005 by way of the two existing 6'-0" exit stair doors and one new 6'-0" exit stair door at the proposed addition.

EXIT = Exit from a floor
E = Exit sign location



C4 EXISTING/DEMO FLOOR PLAN - LEVEL 1
1/16" = 1'-0"



A4 LIFE SAFETY FLOOR PLAN - LEVEL 1
1/16" = 1'-0"

Description of the Existing School:
The existing building houses the PATHS and Casco Bay High School programs. The school building was designed and constructed in the early 1970. Its primary structural frame is constructed with wide-flange steel beams and columns and steel bar joists. Framed floor decks are corrugated steel forms with concrete fill. Roof deck is fiber cement plank. Exterior walls are 10"-wide double-wythe brick, separated by 1" if rigid insulation and an air cavity.

Original interior partitions are steel vertical truss-style studs with plaster-coated, gypsum wall board finish

The building is fully protected by a monitored, fully supervised fire suppression system.

The building is three stories in height, with all floor levels at or above the primary level of exit discharge.

Description of the Proposed Project:
1. Partial renovation/reconfiguration of Casco Bay High School instructional areas on Second Floor.
2. Addition of an enclosed egress stair connecting the 1st and 2nd Floors.
3. Entrance stair tower is designed to accommodate future extens to existing 3rd floor.

The building has two distinct areas -- an acadamic wing and a shop/vocational. This project renovates part of the 2nd floor of the academic wing occupied by Casco Bay High School and constructs a new, 2-story entrance/exit stair tower at the existing main entrance to the building.

- This project does NOT include any work in the shop/vocational wing.
- This project does NOT include any work in the 3rd floor of the academic wing.
- Work on the 1st floor of the academic wind is limited to
  - A. construction of the new entrance/stair tower
  - B. reinforcement of a small area of existing 2nd floor framing above
  - C. and consruction of a few small mechanical chases that connect the second floor to the first floor.

Note on Use of the Instructional Spaces:
The current Gathering Space is used on a daily basis for small or large, teacher or student-lead group educational activities that are not compatible with conventional classrooms spaces. The Gather Space is also used for school-wide Casco Bay High School meetings. Student population is capped at 400 for teh program. The enlarged Gathering Space will continue to be used in this same manner.

MUBEC Code Analysis Summary:
IEBC 2009
- Compliance Method: Work Area Compliance Method (101.5.2)
- Work Area: 2nd Floor Area as indicated at left are less than 50% of the aggregate building area.
- Work does not result in a chage of occupancy.
- Classification of Work: Alteration -- Level 2 (404)
- Level 2 Alterations are permitted without requiring the entire building to comply with IECC requirements.

IBC 2009
- New Construction is designed to comply with IBC 2009.
- Exit Enclosure (connecting 2 floor levels):

	Required	Provided
	1-hr fire barrier	1-hr fire barrier

- Travel Distance Limitations (Educational):

	Max Allowed	Provided
Distance to an Exit	250 ft	<250 ft
Common Path of Travel	75 ft	<75 ft
Dead end	50 ft	<50 ft

- Interior Finish Classification (Educational):

	Min Required	Designed
Exit Enclosures	B	A
Corridors	C	A
Spaces	C	A

IECC 2009
- Building enclosure components at new construction comply with Perscriptive Requirements in Chapter 5.

	Required	Provided
Roofs (IEAD)	max U-0.048	U-0.036
Above Grade Walls	max U-0.064	U-0.056
Slabs on Grade	max F-0.540	F-0.360
Fenestration	max U-0.45	
Entrance Doors	max U-0.80	

Building Envelope Component Descriptions:
Roof Assembly:
Fully adhered EPDM, low slope, internally drained, 2 layers 2.5" poly isocyanurate roof insulation (R-5.6/inch), top layer tapered to slope 1/4", and with 1/2" high density poly-iso cover board (R2.5) continuous above concrete deck. Self-adhering vapor retarder applied to top of concrete. Assembly U factor U-0.036 per ASHRAE 90.1, Table A.2.2.3. Roof deck above stair enclosure is fire-retardand treat plywood to facilitate future expansion.

Above Grade Wall Assembly:
Rainscreen wall assembly consisting of fully grouted 8" cmu with continuous, fluid-applied AVB, 3.5" continuous dual-density mineral fiberboard insulation (R-4.3/inch), 1" air cavity and metal wall panel siding. Assembly U-Factor = 0.056 per ASHRAE 90.1, Table A3.3.3.1.

Slab on Grade Concrete Floor Assembly:
4" concrete slab on grade, 2" XPS insulation (R-5/inch) under entire slab, sheet vapor retarder, 4" concrete slab. Assembly F-Factor = F0.360 per ASHRAE 90.1, Table S6.3.1.

NFPA-101 2009 COMPLIANCE SUMMARY
Construction Type
- Existing: Type II (0,0,0) with occasional dimension lumber partition infill
- New: Type II (0,0,0) - non-combustibe, unprotected.

Occupancy
- Educational with Assembly and use related to Educational function and accessory business (admin) use. No change of occupancy is proposed.

Travel Distance Limitations:

	Max Allowed	Provided
Distance to an Exit	200 ft	<200 ft
Common Path of Travel	100 ft	<100 ft
Dead end	50 ft	50 ft

Building Rehabilitation (Chapter 43)
- Rehabilitation Work Category: *Modification* per Section 43.2.2.1.3

Interior Finish Classification:

	Min Required	Designed
Exit Enclosures	A	A
Exit Access Components	A or B	A
Spaces	A, B or C	A

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CASCO BAY HIGH SCHOOL EXPANSION
196 Allen Avenue
Portland, ME

No.	Date	Description
		Revision Schedule

JOB NO. 17056

DRWN. CHK
Checker

SCALE:

ISSUE
BID DOCUMENTS
March 20, 2018

TITLE
Life safety Plan

SHEET
A002