

CODE SUMMARY

APPLICABLE CODES

THE GENERAL FIRE PROTECTION / LIFE SAFETY FEATURES AND SYSTEMS BASED UPON THE REQUIREMENTS OF HUDSON, MA. THE FOLLOWING CODES ARE APPLICABLE TO THIS PROJECT:

- ACCESSIBILITY MASS. ARCHITECTURAL ACCESS BOARD (MAAB), 521-CMR.
BUILDING MASSACHUSETTS STATE BUILDING CODE (MSBC), 780 CMR EIGHTH EDITION.
ELECTRICAL MASS. ELECTRICAL CODE, 527 CMR, 12.00.
ELEVATORS MASS. ELEVATOR REGULATIONS, 524 CMR (LATEST EDITION).
FIRE PREVENTION MASSACHUSETTS FIRE PREVENTION REGULATIONS (MFRP), 527 CMR.
MECHANICAL INTERNATIONAL MECHANICAL CODE, AS ADOPTED AND AMENDED BY THE MSBC.
PLUMBING MASS. FUEL GAS AND PLUMBING CODES, 248 CMR.
OTHER NATIONAL FIRE PROTECTION (NFPA) STANDARDS, AS REFERENCED BY THE MSBC AND THE MFRP.

USE AND OCCUPANCY CLASSIFICATIONS

THE BUILDING INCLUDES MORE THAN ONE USE GROUP AND SHALL BE DESIGNATED AS A MIXED USE PER MSBC SECTION 508. USE GROUPS WILL BE NON-SEPARATED MIXED USES PER MSBC 508.3

THE BUILDING CONTAINS THE FOLLOWING SPECIFIC USES PER MSBC 302:

Table with 4 columns: FLOOR, FUNCTION, USE GROUP CLASSIFICATION, SECTION. Lists classrooms and administrative offices across four floors.

CONSTRUCTION CLASSIFICATION

CONSTRUCTION TYPE IB

ALLOWABLE HEIGHT AND AREA LIMITATIONS TABLE 503

Table with 3 columns: GROUP, STORIES, AREA PER FLR. Shows unlimited height and area for Group E, B, A-1, A-2, A-3, A-4.

FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS) - TABLE 601

Table with 3 columns: BUILDING ELEMENT, CONSTRUCTION CLASSIFICATION TYPE IB, and hours. Lists structural frame, bearing walls, etc.

NOTES:

Provide a one-hour fire rated roof assembly except provide an unrated roof assembly where every part of the roof construction is 20 feet or more above any floor immediately below. (T-601, Note b)

Provide unenclosed floor openings for stairs serving as required exit access paths from the Ground Floor in accordance with requirements of MSBC Section 1016.1, Exception 4 as summarized in Table 1a, (1016.1, Exception 4, 1021.1, Exception 3)

Provide other unenclosed floor openings not serving as part of the required means of egress between the Lower and Ground Floors and between the Second and Third Floors in accordance with MSBC Section 708.2, Exception 7 as summarized in Table No. 1b, (708.2)

ACTUAL HEIGHT AND AREAS

Table with 7 columns: USES, MOST STRINGENT USE, CONSTRUCTION CLASSIFICATION, ALLOWABLE HEIGHT (FT), ACTUAL HEIGHT (FT), TOTAL ACTUAL FLOOR AREA IN BUILDING, ACTUAL TOTAL BUILDING HEIGHT. Shows 62'-0" height and 236,495 sq ft area.

PLUMBING FIXTURE CALCULATIONS

GENERAL: Students population= 1225, Academics 75%-80% (3rd & 4th), Electives 20%-25% (1st & 2nd). Daytime Use, Night use, Staff Population = 175, Kitchen Staff = 8 (1st Floor), Cafeteria = seating for 350 (table and chairs) 1st Floor. Includes fixture counts for lavatories, water closets, urinals, showers, etc.

LEGEND

- 1 HOUR RATED PARTITION, 2 HOUR RATED PARTITION, EGRESS, OCCUPANT LOAD OCCUPANT TYPE, TRAVEL DISTANCE, 1 HR RATED CEILING

MEANS OF EGRESS

MEANS OF EGRESS - MAXIMUM FLOOR AREA ALLOWANCES - TABLE 1004.1.1

Table with 3 columns: FUNCTION OF SPACE, FLOOR AREA IN SF PER OCCUPANT, PLAN DESIGNATION. Lists accessory storage, classrooms, assembly areas, etc.

MEANS OF EGRESS - REQUIRED EGRESS WIDTHS AND LENGTHS

Table with 3 columns: EGRESS TYPE, EGRESS WIDTH OR LENGTH, MSBC SECTION. Lists stairway, other egress components, common paths, etc.

FIRE DETECTION SYSTEMS AND ALARM SYSTEMS

THE BUILDING WILL BE EQUIPPED WITH FULLY AUTOMATIC FIRE DETECTION, ALARM AND COMMUNICATION SYSTEMS. THE SYSTEM INCLUDES THE FOLLOWING FIRE DETECTION FEATURES (MSBC 907.6, 907.5, 907.2.1.1, 907.2.3-EXCEPTION 2):

- MANUAL STATIONS AT EXITS, HVAC EQUIPMENT SMOKE DETECTORS, SPRINKLER WATER FLOW AND SWITCHES, ELEVATOR MACHINE ROOM SMOKE DETECTORS

EMERGENCY AND STANDBY POWER

THE BUILDING WILL BE EQUIPPED WITH EMERGENCY POWER IN ACCORDANCE TO MSBC 907.6.2, NFPA 72, 1011.5.3, 1006.3 FOR THE FOLLOWING:

- EXIT SIGNS, EMERGENCY LIGHTS, ELEVATOR CAR LIGHTING, FIRE ALARM AND COMMUNICATIONS SYSTEMS

ELEVATORS

ONE ELEVATOR WILL BE SIZED TO ACCOMMODATE AN AMBULANCE GURNEY IN ITS HORIZONTAL POSITION (80 INCHES BY 54 INCHES MINIMUM DIMENSIONS).

ACCESSIBILITY

AS IDENTIFIED BY THE CRITERIA IN MSBC 1101.1, (WITHIN THE MASSACHUSETTS AMENDMENTS TO THE IBC 2009), THE ENTIRE BUILDING WILL BE MADE TO COMPLY WITH THE REQUIREMENTS OF MAAB CMR 521. NORMAL HANDICAPPED ACCESSIBLE AND VAN PARKING SPACES WILL BE PROVIDED IN ACCORDANCE WITH MAAB CMR 521.

ENERGY CONSERVATION

BUILDING SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE INTERNATIONAL ENERGY CONSERVATION CODE 2009 (IECC 2009) WITH MASSACHUSETTS AMENDMENTS WHERE APPLICABLE (MSBC 1301.1.1 WITHIN THE MASSACHUSETTS AMENDMENTS TO THE IBC 2009)

WITHIN USE GROUPS E, THE ENTIRE AREA OF SLAB ON GRADE SHALL BE INSULATED WITH A MINIMUM OF R10 RIGID INSULATION (MSBC 502.2.6.1 WITHIN THE MASSACHUSETTS AMENDMENTS TO THE IBC 2009)

A CONTINUOUS AIR BARRIER WILL BE PROVIDED (MSBC 502.4.3 WITHIN THE MASSACHUSETTS AMENDMENTS TO THE IBC 2009)

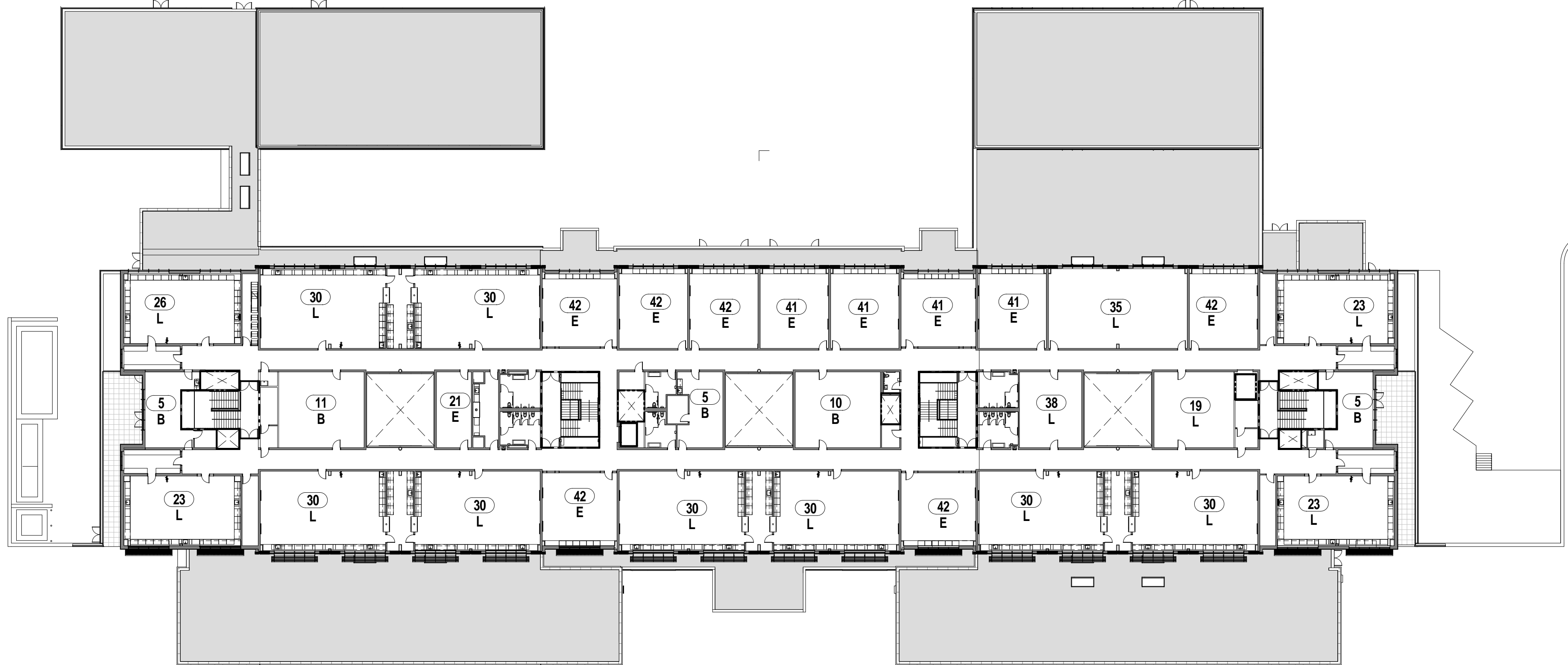
CLIMATE ZONE: 5A (PER TABLE 301.1 IECC 2009)

BUILDING ENVELOPE REQUIREMENTS: OPAQUE ASSEMBLIES (TABLE 502.2(1), IECC 2009)

Table with 3 columns: ROOFS, WALLS ABOVE GRADE, WALLS BELOW GRADE, SLAB ON GRADE FLOORS, OPAQUE DOORS. Lists insulation and U-value requirements.

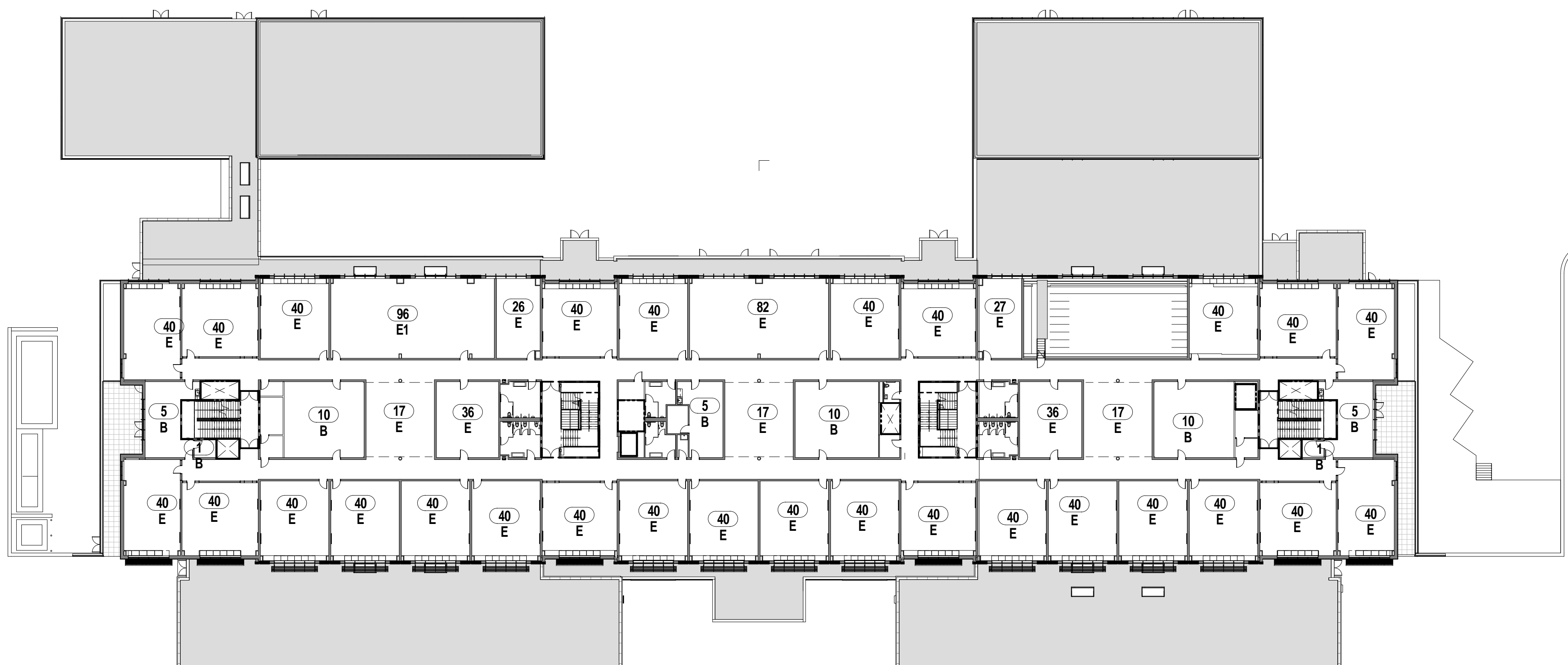
BUILDING ENVELOPE REQUIREMENTS: FENESTRATION (TABLE 502.3, IECC 2009)

Table with 3 columns: METAL FRAMING WITH OR WITHOUT THERMAL BREAK, SHGC - ALL FRAME TYPES, SKYLIGHTS (5% MAXIMUM). Lists U-factor and SHGC requirements.



FOURTH FLOOR CODE PLAN

1/32" = 1'-0"



THIRD FLOOR CODE PLAN

1/32" = 1'-0"

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Project information footer including Architect (omr architects), Consulting Engineer, Registration, Project Name (Concord-Carlisle Regional High School), Title (500 Walden Street), Issue Submissions table, and Date (August 15, 2012).