

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. Rows include Fourth Floor (Classrooms, Administrative Offices), Third Floor (Classrooms, Administrative Offices), Second Floor (Classrooms, Media Center, Administrative Offices), and First Floor (Classrooms, Cafeteria, Gymnasium, Auditorium, Administrative Offices).

CONSTRUCTION CLASSIFICATION

CONSTRUCTION TYPE IB

ALLOWABLE HEIGHT AND AREA LIMITATIONS TABLE 503

Table with 3 columns: GROUP, ALLOWABLE AREA AND STORES, AREA PER FLR HEIGHT. Shows unlimited area for groups 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, FIRE RESISTANCE RATING (HOURS), CONSTRUCTION CLASSIFICATION TYPE IB. Elements include structural frame, bearing walls, non-bearing walls, floor construction, and roof construction.

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 MSBC Section 1018.1, Exception 4 as summarized in Table 1a, (1018.1, 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 actual height of 62'-0" and total floor area of 236,495 sq ft.

PLUMBING FIXTURE CALCULATIONS

- GENERAL: Students population= 1225, Academics 75%-80% (3rd & 4th), Electives 20%-25% (1st & 2nd).
Daytime Use: Students population= 1225, Academics 75%-80% (3rd & 4th), Electives 20%-25% (1st & 2nd).
Night use: Auditorium = 600 seats (as per page 153 item (h) in 248 CMR).
Staff Population = 175.
Kitchen Staff = 8 (1st Floor).
Cafeteria = seating for 350 (table and chairs) 1st Floor.
Student Locker Rooms = 50.
Staff Locker Rooms = 285.

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 various room types like accessory storage, classrooms, exercise rooms, etc.

MEANS OF EGRESS - REQUIRED EGRESS WIDTHS AND LENGTHS

Table with 3 columns: EGRESS TYPE, EGRESS WIDTH OR LENGTH, MSBC SECTION. Lists requirements for stairways, 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 907.0, 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)

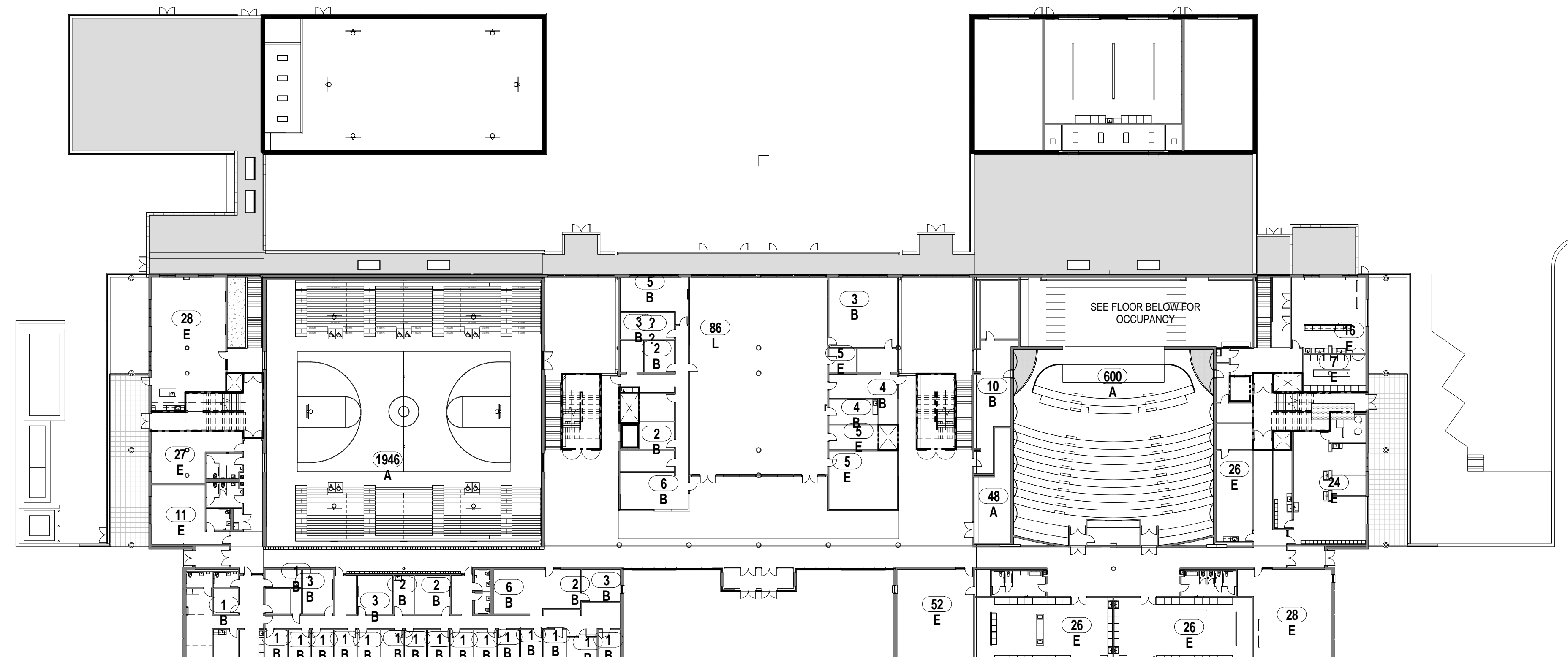
CLIMATE ZONE: 5A (PER TABLE 301.1 IECC 2009)

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

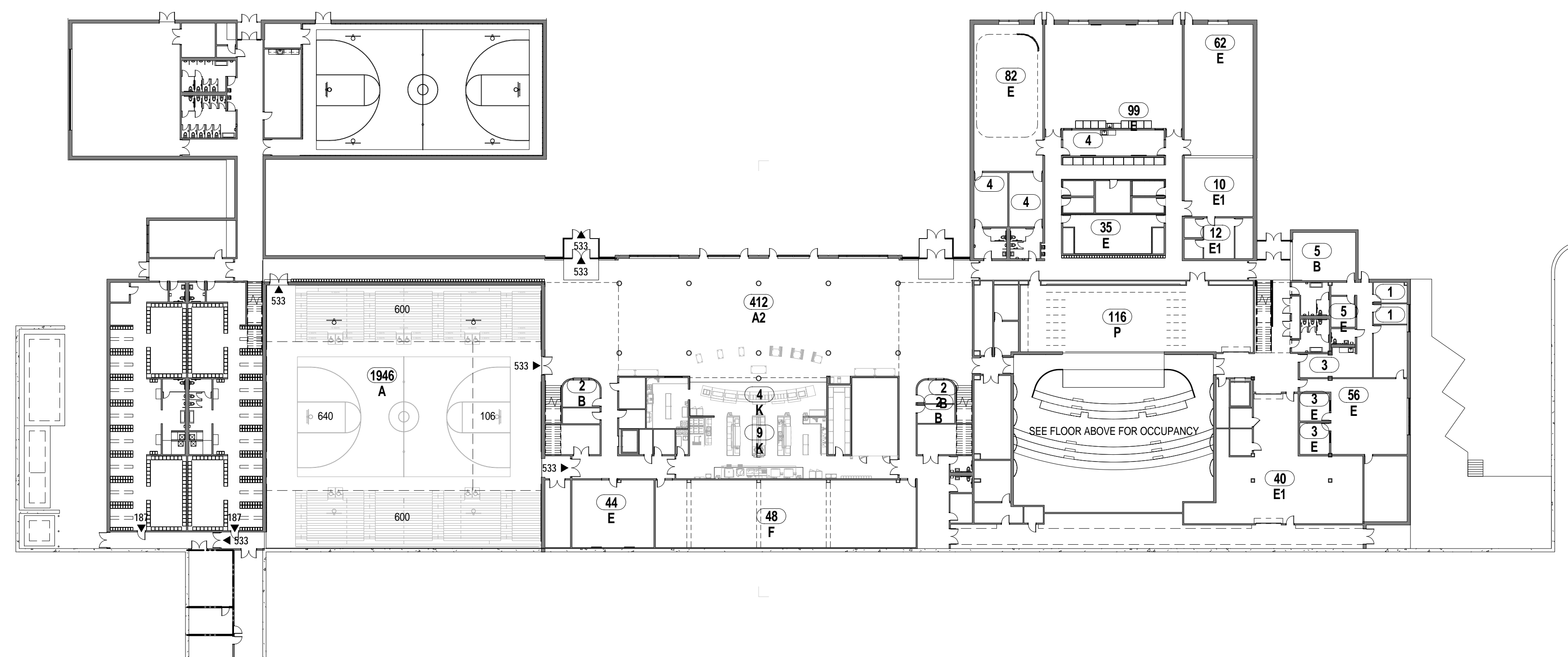
Table with 3 columns: ROOFS, WALLS ABOVE GRADE, WALLS BELOW GRADE, SLAB ON GRADE FLOORS, UNHEATED SLABS, OPAQUE DOORS, SWINGING DOORS, ROLL-UP OR SLIDING DOORS. Lists required and provided R and U values.

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

Table with 3 columns: METAL FRAMING WITH OR WITHOUT THERMAL BREAK, CURTAINWALL/STOREFRONT U-FACTOR, ENTRANCE DOOR U-FACTOR, ALL OTHER U-FACTOR, SHGC - ALL FRAME TYPES, SKYLIGHTS (% MAXIMUM). Lists required and provided U and SHGC values.



2 SECOND FLOOR CODE PLAN 1/32" = 1'-0"



1 FIRST FLOOR CODE PLAN 1/32" = 1'-0"

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Project information footer including Architect (omr architects inc), Consulting Engineer, Registration (Design Development Submission), Project Name (Concord-Carlisle Regional High School), Title (First and Second Floor Code Plans), Issue Date (8/15/2012), and Drawing No. (G2.1).