

The 2015 International Building Code (IBC) is the first edition of that code that requires all new schools, and new additions to existing schools, to have tornado shelters. This applies to any construction classified as Educational (Group E) if the occupant load is at least 50 people and the construction is located within a certain zone, which is roughly a third of the continental U.S.

At its meeting on May 26, 2017, the Ohio Board of Building Standards adopted the rule changes identified as Amendments Group 93. These rule amendments were adopted with an effective date of November 1, 2017.

**STORM SHELTER Worksheet**

	Enter Grade Configuration	7-12		See Note 1.
Student Enrollment	Enter ELEMENTARY SCHOOL Student Enrollment	0		See Note 2.
	Enter MIDDLE SCHOOL Student Enrollment	123		See Note 2.
	Enter HIGH SCHOOL Student Enrollment	253		See Note 2.
	TOTAL Student Enrollment	386		
	TOTAL Teacher/Staff Enrollment	112		See Note 3.
	TOTAL BUILDING Enrollment	498		See Note 4.
	AVERAGE SAFE ROOM AREA DEVELOPED - ADDITIONAL PREMIUM CALCULATION	3,968		See Note 5.
	NEW CONSTRUCTION - ADDITIONAL PREMIUM / SF FOR SAFE ROOM CONSTRUCTION (C)		\$ 249,525	See Note 6.
	RENOVATION - ADDITIONAL PREMIUM / SF FOR SAFE ROOM CONSTRUCTION (C)		\$ 15,000	See Note 6.
	PEER REVIEW COSTS		\$ 25,000	See Note 8.
	ADDITIONAL TEST AGENCY COSTS		\$ 25,000	See Note 9.
	TOTAL ADDITIONAL PREMIUM COSTS		\$ 289,525	

- Note 1. Enter grade configuration.
- Note 2. Enter Student Enrollments for ES, MS, and HS.
- Note 3. TOTAL Teacher/Staff enrollment based upon facility size, number of students served, quantity of teaching stations, quantity of administration, support, and building staff from bracketing worksheet.
- Note 4. TOTAL BUILDING Enrollment. Sum of student, teacher, and staff enrollment.
- Note 5. AVERAGE SAFE ROOM AREA DEVELOPED - ADDITIONAL PREMIUM CALCULATION
- Note 6. Select either safe room provided in RENOVATION or NEW CONSTRUCTION.
- Note 7. Calculated additional premium per square foot for safe room construction.
- Note 8. Fixed PEER REVIEW COSTS.
- Note 9. Fixed ADDITIONAL TEST AGENCY COSTS.

**OHIO BUILDING CODE - SECTION 423  
STORM SHELTERS**

**423.1 General.** In addition to other applicable requirements in this code, storm shelters shall be constructed in accordance with ICC 500.  
**423.1.1 Scope.** This section applies to the construction of storm shelters constructed as separate detached buildings or constructed as safe rooms within buildings for the purpose of providing safe refuge from

**423.2 Definitions.** The following terms are defined in Chapter 2:

**STORM SHELTER.**

**Community** storm shelter.

**Residential** storm shelter.

**423.3 Critical emergency operations.** In areas where the shelter design wind speed for tornados in accordance with Figure 304.2(1) of ICC 500 is 250 MPH, 911 call stations, emergency operation centers and fire, rescue, and law enforcement facilities.  
**Exception:** Buildings meeting the requirements for shelter design in ICC 500.

**423.4 Group E occupancies.** In areas where the shelter design wind speed for tornados is 250 MPH in accordance with Figure 304.2(1) of ICC 500, all Group E occupancies with an aggregate occupant load of 50 or more.  
**Exceptions:**

1. Group E day care facilities.
2. Group E occupancies accessory to places of religious worship.
3. Buildings meeting the requirements for shelter design in ICC 500.

**ADMINISTRATION AND OVERSIGHT**

- > ICC 500 includes provisions for peer review and special inspection, structural observations during construction, quality assurance plans, and contractor responsibilities. The standard also specifies the information
- > Labeling requirements are provided, including that labels required on impact-protective devices must be clear. Signage requirements for storm shelters are also provided.